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Liability of Highway Departments for Damages Caused by Stormwater Runoff

This report was prepared under NCHRP Project 20-6, "Legal Problems Arising out of Highway Programs," for which the Transportation Research Board is the agency coordinating the research. The report was prepared by Larry W. Thomas. James B. McDaniel, TRB Counsel for Legal Research Projects, was the principal investigator and content editor.

THE PROBLEM AND ITS SOLUTION

State highway departments and transportation agencies have a continuing need to keep abreast of operating practices and legal elements of specific problems in highway law. This report is a new paper, which continues NCHRP's policy of keeping departments up-to-date on laws that will affect their operations.

In the past, papers such as this were published in addenda to *Selected Studies in Highway Law* (*SSHL*). Volumes 1 and 2 of *SSHL* dealt primarily with the law of eminent domain and the planning and regulation of land use. Volume 3 covered government contracts. Volume 4 covered environmental and tort law, inter-governmental relations, and motor carrier law. Between addenda, legal research digests were issued to report completed research. The text of *SSHL* totals over 4,000 pages comprising 75 papers. Presently, there is a major rewrite and update of *SSHL* underway. Legal research digests will be incorporated in the rewrite where appropriate.

Copies of *SSHL* have been sent, without charge, to NCHRP sponsors, certain other agencies, and selected university and state law libraries. The officials receiving complimentary copies in each state are the Attorney General and the Chief Counsel and Right-of-Way Director of the highway agency. The intended distribution of the updated *SSHL* will be the same.

APPLICATIONS

When there is excessive stormwater runoff, the consequences can be immediate and devastating—resulting in the flooding of adjacent lands. Typically, three basic common law rules govern liability for stormwater flow: the civil law rule, which prohibits interference with the natural flow of surface water; the common enemy rule, under which each property owner can fight the water problem the best way it can; and the reasonable use rule, which permits a property owner to make "reasonable" alterations to protect against excessive stormwater runoff.

This research report provides a reference document that describes various approaches state departments of transportation have used in dealing with stormwater problems. The report also analyzes which states follow which rules. It should provide a useful reference for attorneys, risk managers, and engineers.

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Liability of Highway Departments for Damages Caused by Stormwater Runoff

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INTRODUCTION

Highways have to be designed and located so as to minimize stormwater runoff. If there is excessive or accelerated runoff, property adjacent to the highway may be flooded and heavily damaged. Moreover, runoff from the construction or modification of highway drainage systems and related structures may invade and endanger protected wetlands. Streams and rivers may become polluted by oil residue, salt, or other toxins from storm runoff.

The highway authority is subject to the same rules of law for liability for stormwater runoff as are private property owners. Although cases hold that surface water from higher land may drain onto lower land,[1] the law applicable to adjacent landowners and highway authorities differs among the 50 states and the District of Columbia. There are three basic rules that govern liability for surface water runoff: (1) the common enemy rule, (2) the civil law rule, and (3) the rule of reasonable use. The first two rules are often modified, with the principal modification being the requirement that the landowner's or highway authority's action must not be unreasonable. That is, the courts often engraft onto the common enemy or civil law rule a reasonableness standard.

This study was necessitated by the growing awareness of the potential for governmental liability for stormwater runoff. One commentator observed some years ago that "[m]ost of the highway drainage damage litigation has arisen because of the failure of public officials to properly control surface water."[2] The cases demonstrate that there have been significant claims against transportation agencies for surface water runoff. For instance, in *Locklin v. City of Lafayette*, discussed below, lower level property owners sued five transportation-related agencies in California (the City of Lafayette, Contra Costa County, the Contra Costa County Flood Control District, the California Department of Transportation, and the Bay Area Rapid Transit [BART] District), for damages caused by highway construction and BART construction. One task of the study was to survey the states to learn whether they had adopted measures to mitigate claims from runoff. The survey was limited to state highway departments.

This article discusses the general rules applicable to liability for surface water runoff, reviews the states' responses to the survey, and discusses the applicable liability rule in each state. Cases are included that concern increased or accelerated runoff, diversion or interruption of natural watercourses, creation of artificial watercourses, and other situations arising from stormwater runoff. The article also discusses the results of the survey in regard to the states' claims experience for alleged damages to wetlands, streams, and rivers and the survey's findings on the measures states are using to mitigate or avoid potential claims.

I. COMMON LAW RULES GOVERNING LIABILITY FOR SURFACE WATER RUNOFF

A. Introduction

In *Locklin v. City of Lafayette*,[3] although it was a case involving riparian waters, the Supreme Court of California ruled that public agencies, including the City and the California Department of Transportation, were not liable in tort or inverse condemnation for damage to downstream riparian property caused by the discharge of surface waters into a natural watercourse that abutted the property. The court did rule that when alterations or improvements on upstream property discharge an increased volume of surface water into a natural watercourse, causing downstream property damage, the responsible public entity may be held liable. Thus, the governmental entity may be held liable in inverse condemnation for downstream damage caused by an increased volume or velocity of surface waters discharged into a natural watercourse due to public works projects or to improvements on publicly owned land. The *Locklin* case illustrates the potential for significant claims against transportation agencies, whether the runoff is being discharged onto adjacent property or into a natural watercourse. In general, the material discussed herein deals primarily, however, with stormwater runoff onto adjacent property.

As suggested in the earlier Mahon article, as well as by the *Locklin* case, the number of claims against transportation departments for stormwater runoff may be on the increase. Although the experience of each state responding to the survey is discussed in Part Two, Table I shows how the state highway and transportation departments responded to the survey's question as to whether claims had increased in the most recent 5-year period. Thirty-seven states responded. Twenty-six states reported or implied that in the preceding 5-year period (1991-1996), the number of claims had remained about the same; eight reported more claims; and three reported fewer claims.

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[1] San Gabriel Valley Country Club v. Los Angeles County, 182 Cal. 392, 188 P. 554 (1920) and Archer v. Los Angeles, 19 Cal. 2d 19, 119 P.2d 1 (1941).

[2] MASON J. MAHON, SELECTED STUDIES IN HIGHWAY LAW at 895.

[3] 7 Cal. 4th 327, 27 Cal. Rptr. 2d 613, 867 P.2d 724 (1994).

TABLE I. STATES REPORTING THE SAME, MORE, OR FEWER CLAIMS FOR STORMWATER RUNOFF, 1991–1996

STATE	SAME OR NOT STATED	MORE	FEWER	NUMBER OF CLAIMS PER YEAR (IF PROVIDED)
Alabama		X		
Alaska				
Arizona	X			
Arkansas	X			2
California	X			35 actions, 1995–1996
Colorado	X			
Connecticut	X			
Delaware	X			
District of Columbia				
Florida	X			5–10 cases per year
Georgia	X			
Hawaii	X			
Idaho				
Illinois				
Indiana	X			2 cases in last 5 years
Iowa			X	4 cases in last 5 years
Kansas		X		5 cases in last 10 years
Kentucky				
Louisiana		X		12 cases in last 5 years
Maine				
Maryland		X		2 claims in last 5 years
Massachusetts	X			
Michigan				
Minnesota			X	23 claims, 1987–1991, 20 claims 1992–1996
Mississippi	X			5 claims in last 5 years
Missouri	X			3 claims in last 5 years
Montana	X			1 to 2 cases per year
Nebraska	X			
Nevada	X			Very few cases
New Hampshire	X			
New Jersey	X			
New Mexico		X		
New York	X			
North Carolina	X			1–12 cases per year
North Dakota				
Ohio				
Oklahoma		X		
Oregon		X		
Pennsylvania				
Rhode Island	X			
South Carolina				
South Dakota		X		
Tennessee	X			
Texas	X			
Utah				
Vermont	X			
Virginia			X	
Washington				
West Virginia				
Wisconsin	X			
Wyoming	X			
Territories				
Virgin Islands				
Puerto Rico				
Guam				No claims reported

B. Definitions of Surface Water and Natural Watercourses

Surface water is defined as water that is diffused over the surface of the land or that is contained in depressions in the land resulting from rain, snow, or water that rises to the surface from springs below ground. After surface water has become part of a stream in a watercourse, the runoff is no longer defined as surface water.[4]

A natural watercourse is a channel with a defined bed and banks through which water normally passes as a body or stream during the seasons and at the times when streams in the region usually flow. Alterations to a natural watercourse, such as the construction of conduits or other improvements in the bed of the stream, do not affect its status as a natural watercourse. Once surface water has become part of a stream in a watercourse, the courts no longer recognize it as surface water.[5]

As for natural watercourses, the traditional view appears to be that an upper riparian owner has the right for a reasonable purpose to discharge surface waters, including those whose volume was increased as a result of development, into a natural watercourse, regardless of whether the watercourse was inadequate to accommodate the increased flow and flooded downstream property. The riparian owner may improve the channel even if the accelerated flow causes downstream damage.[6] The downstream riparian owner is deemed to take the property subject to an easement or servitude. The downstream owner has to accept the flow of whatever water that is carried onto or through the property in a natural watercourse.

A riparian landowner has the right to collect surface water and discharge it at a location or locations other than where natural runoff would enter the watercourse. The above rules appear to apply regardless of whether the jurisdiction in question is a common enemy or civil rule jurisdiction.[7]

C. Types of Claims Asserted for Stormwater Runoff

As discussed in the Mahon article, it appears that many claims for stormwater runoff caused by a governmental agency are filed in inverse condemnation for a taking or damaging of private property. However, claimants also sue the departments for nuisance, negligence, or other tort, such as strict liability. The survey sought to ascertain the types of actions used by claimants in runoff cases.

As seen in Table II, 27 states responded that claimants sued in inverse condemnation, but 14 of those states replied that claimants also sued for nuisance and/or negligence. Nineteen states replied that claimants sued for negligence. Only 13 states identified inverse condemnation as the sole remedy used by claimants.

II. LIABILITY RULE IN EACH STATE FOR STORMWATER RUNOFF CLAIMS

For the reader's convenience, the liability rule for each state is summarized in Table III; however, it is important to note that the courts often have modified the strict common enemy and civil law rules without going so far as to reject them completely in favor of the rule of reasonable use.

Eleven states and the District of Columbia still follow the common enemy rule, sometimes with modification; 17 follow the civil law rule, again sometimes with a rule of reason modification; and 23 have adopted the rule of reasonable use in regard to the use of one's property and control or expulsion of stormwater.

The next three sections summarize information obtained from a survey of the states and research on case law to determine the applicable liability rule in each state for stormwater runoff claims. These sections report information provided by responding states, note the applicable liability rule in each state, and discuss one or more illustrative cases, particularly, where available, involving transportation agencies.

III. STATES FOLLOWING THE COMMON ENEMY RULE

According to common law under the common enemy rule, the owner of land over which surface water flowed from a higher elevation has the right to obstruct the flow of the water, to turn it back, or to divert it onto the land of another owner without incurring liability for any damage that might occur.[8] However, as noted, many courts have applied a reasonableness test to the landowner's action to reduce the harsh impact of the rule.

Arkansas

Arkansas reports that in the past 5 years some claims have been filed with the Arkansas Claims Commission relating to stormwater runoff. The State Highway and Transportation Department reports that the state follows the common enemy rule.[9] Although the state has immunity under Article 5, Section 20, of the state constitution, claims may be made with the Arkansas Claims Commission. In Arkansas, claimants allege inverse condemnation, nuisance, negligence, or other

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[4] *Id.* at 623.

[5] *Id.*; *see* San Gabriel Valley Country Club v. Los Angeles County, 182 Cal. 392, 188 P. 554 (1920).

[6] Bauer v. County of Ventura, 45 Cal. 2d 276, 283, 289 P.2d 1 (1955).

[7] Locklin at 626. As stated, the foregoing discussion sets forth what appears to have been the traditional view, particularly in California under Archer v. City of Los Angeles, 19 Cal. 2d 19, 119 P.2d 1 (1941).

[8] Keys v. Romley, 64 Cal. 2d 396, 400-401, 50 Cal. Rptr. 273, 412 P.2d 529, 531-532 (1966).

[9] McCoy v. Bd. of Directors of Plum Bayou Levee Dist., 95 Ark. 345, 129 S.W. 1097 (1910); *see also* Smith v. Cruthis, 255 Ark. 217, 499 S.W.2d 852 (1973).

TABLE II. BASIS OF PLAINTIFFS' CLAIMS: INVERSE CONDEMNATION, NUISANCE, NEGLIGENCE OR OTHER

STATE	INVERSE CONDEMNATION	NUISANCE	NEGLIGENCE OR OTHER
Alabama	X		
Alaska			
Arizona	X	X	X
Arkansas	X	X	X
California	X	X	X[10]
Colorado		X	
Connecticut	X		
Delaware	X		
D. C.			
Florida	X		
Georgia	X	X	X
Hawaii			X
Idaho			
Illinois	X	X	
Indiana	X	X	X
Iowa	X		X
Kansas	X		
Kentucky			
Louisiana			
Maine			
Maryland	X		X
Massachusetts		X	
Michigan			
Minnesota			X
Mississippi			
Missouri	X	X	X[11]
Montana	X	X	X
Nebraska	X		
Nevada	X	X	X
New Hampshire			X
New Jersey	X	X	X
New Mexico		X	X
New York			X
North Carolina	X		
North Dakota			
Ohio			
Oklahoma	X		
Oregon	X	X	X
Pennsylvania			
Rhode Island			X
South Carolina			
South Dakota	X		
Tennessee	X		
Texas			
Utah			
Vermont	X		
Virginia	X		X
Washington			
West Virginia			
Wisconsin	X		
Wyoming	X		
Territories			
Virgin Islands			
Puerto Rico			
Guam			

[10] California has a statutory basis for negligence of a public entity for allowing the existence of a dangerous condition of public property.

[11] Plaintiffs in Missouri commonly allege nuisance and negligence in their pleadings, but plaintiffs normally elect to submit their cases to juries on the inverse condemnation theory, and, thus, abandon tort theories due to the statutory cap on liability ($100,000 per claimant; $1,000,000 per occurrence) applicable to tort actions against public entities in Missouri.

TABLE III. SUMMARY OF LIABILITY RULE IN EACH STATE: COMMON ENEMY, CIVIL LAW, OR REASONABLE USE DOCTRINE

STATE	COMMON ENEMY RULE	CIVILIAN LAW RULE	RULE OF REASONABLENESS
Alabama		X	
Alaska			X
Arizona		X	
Arkansas	X		
California			X
Colorado		X	
Connecticut			X
Delaware			X
D. C.	X		
Florida			X
Georgia		X	
Hawaii			X
Idaho		X	
Illinois			X
Indiana	X		
Iowa		X	
Kansas		X	
Kentucky			X
Louisiana		X	
Maine	X		
Maryland		X	
Massachusetts			X
Michigan		X	
Minnesota			X
Mississippi	X		
Missouri			X
Montana			X
Nebraska	X		
Nevada			X
New Hampshire			X
New Jersey			X
New Mexico		X	
New York			X
North Carolina			X
North Dakota			X
Ohio			X
Oklahoma	X		
Oregon		X	
Pennsylvania		X	
Rhode Island			X
South Carolina	X		
South Dakota		X	
Tennessee		X	
Texas		X	
Utah			X
Vermont	X		
Virginia			X
Washington	X		
West Virginia		X	
Wisconsin			X
Wyoming	X		
Territories			
Virgin Islands			
Puerto Rico			
Guam			

tort-type claims against the government defendant for stormwater runoff damage.

In *Scroggin v. City of Grubbs*,[12] an inverse condemnation case, the city planned, designed, and constructed a flood control levee to protect itself from river flooding. Property owners alleged that the levee caused their lands to be a holding pond and a means of flow for flood waters diverted from the city. The court affirmed the chancery court's finding that the levee did not result in a taking by the city in inverse condemnation. The court agreed that the increase in the water level caused by the levee was *de minimis*, and did not necessarily damage the property. The court cited *McCoy v. Board of Directors of Plum Bayou Levee District*,[13] in which the court applied a modification of the common enemy rule.[14] The *McCoy* court held that the levee district had the right to construct a levee to prevent the escape of flood water from a river onto surrounding lowlands, even though such action resulted in the flooding of other land situated between the river and the levee, unless the district could avoid the injury by reasonable effort and expense.

District of Columbia

The District of Columbia follows the common enemy rule. In *Ballard v. Ace Wrecking Co.*,[15] demolition work and grading of property led to an action to recover for damage caused by a runoff of water, mud, and debris. The court held that defendant Ace had no legal duty to the plaintiff: "Surface water is a common enemy which may be repelled or deflected onto the land of other proprietors, provided such deflection is the result of an ordinary use of the land and is not accomplished by means of channels, ditches or other extraordinary construction."[16]

Indiana

The State Department of Transportation reports only two litigated claims in the last 5 years. The department has seen claims for inverse condemnation, nuisance, negligence, and strict liability for damage caused by stormwater runoff. There is a limit of $300,000 per incident applicable to negligence claims against the department.

Indiana adheres to the common enemy rule.[17] In *Pickett v. Brown*,[18] the appeals court affirmed the trial court's ruling that the common enemy doctrine precluded plaintiff's recovery. In Indiana, "[u]nder the common-enemy doctrine, it is not unlawful to accelerate or increase the flow of surface water by limiting or eliminating ground absorption or changing the grade of the land."[19] The court noted that the only judicially recognized exception in Indiana is that one may not collect or concentrate surface water and cast it, in a body, upon his neighbor.

Maine

Maine follows the common enemy rule. In *Johnson v. Whitten*,[20] the court affirmed a judgment for the defendant in a case involving abutting landowners. The Johnsons alleged that their land flooded after Whitten deposited fill on his own land that interfered with the natural drainage from the plaintiffs' land. The court ruled that "[a]bsent an artificial collection of water which is discharged, Maine law recognizes no liability as arising, per se, merely from the obstruction, or diversion, of the natural drainage of surface water."[21] The court also ruled that

> Any proprietor of land may control the flow of mere surface water over his own premises, according to his own wants and interests, without obligation to any proprietor either above or below....He may prevent surface water from coming upon his land according to its accustomed flow, whether flowing thereon from a highway or any adjoining land. He may prevent its passing from his land in its natural flow....He may erect structures upon his land as high as he pleases.[22]

Mississippi

Mississippi reports that it has had five claims in the past 5 years, mostly involving negligible sums. One claim concerned a city reservoir. Since claims usually are for inverse condemnation, there is no basis, judicial or statutory, for asserting any immunity of the department. For the same reason, there are no applicable statutory caps on damages. (There is a $50,000 limit, expected to be increased, for damages in tort actions.) The state is generally immune from punitive damages.

The state adheres to the common enemy rule. However, in *Hall v. Wood*,[23] the court wrote that "Each property owner's use and enjoyment of his property must be shielded from unreasonable interference by others—these 'others' ranging from the faceless sovereign to one's next door neighbor."[24] In Mississippi, "the

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[12] 318 Ark. 648, 887 S.W.2d 283 (1994).

[13] 95 Ark. 345, 129 S.W. 1097 (1910).

[14] Boyd v. Greene County, 7 Ark. App. 110, 644 S.W.2d 615 (1983). (Remanded for a determination of whether the property owner, in defending against surface water, had unnecessarily inflicted damage on others while justifiably preventing surface water from flowing onto his land.)

[15] 289 A.2d 888 (1972).

[16] *Id.* at 890, quoting United States v. Shapiro, Inc., 92 U.S. App. D.C. 91, 902, 202 F.2d 459, 460 (1953).

[17] Cloverleaf Farms, Inc. v. Surratt, 169 Ind. App. 554, 349 N.E.2d 731 (1976). The state supreme court reasserted the common enemy doctrine in Argyeland v. Haviland, 435 N.E.2d 973, 976-77 (Ind. 1982).

[18] 569 N.E.2d 706 (Ind. 1991).

[19] *Id.* at 707.

[20] 384 A.2d 698 (Maine 1978).

[21] *Id.* at 700.

[22] *Id.* at 700-701 (quoting Morrison v. Bucksport & Bangor R. R., 67 Maine 353, 355-56 (1877)).

[23] 443 So. 2d 834 (Miss. 1983).

[24] *Id.* at 839.

law has repeatedly recognized and imposed upon upper landowners substantial duties and obligations toward lower landowners."[25] The court noted that an upper landowner may put his lands to reasonable uses even though as a proximate result waters flood lower landowners, provided the harm is not unreasonable or unnecessarily severe.[26] Further, where two methods of disposing of excess water are available to an upper landowner, one of which will damage the lower lands of his neighbor and the other will not, the upper landowner, absent prohibitive expense, must use the latter alternative.[27]

Nebraska

The Nebraska Attorney General's Office reports that there has been no increase in claims relating to stormwater runoff in the past 5 years. Most commonly, plaintiffs seek recovery in inverse condemnation. The state adheres to the common enemy rule.[28] However, in *Gruber v. County of Dawson*,[29] Gruber sued Dawson County because of water pooling on his property as a result of the county's paving of the road adjoining his land. The court held that the landowner had established that a natural drainageway traversed the road carrying water from a higher to a lower estate. The court further held that the county negligently failed to take the relevant rainfall patterns into account when designing the drainage systems when paving the county road. The failure to make proper provision for the flow of water is "in itself evidence that it was not properly constructed, regardless of the principles upon which it was built."[30]

Oklahoma

The Oklahoma Department of Transportation reports that it has had no claims for stormwater runoff in the past 5 years. The department considers stormwater runoff to be water falling on and running off the road. The department reports an increase in both tort and inverse condemnation claims for flooding, which the department considers to be rising water, backed-up water, or diverted water.

On construction projects, the department may assert that the contractor is liable for stormwater damage. The department's experience is that claims are brought in inverse condemnation. Moreover, in negligence cases the department asserts immunity for conditions on roadways prior to October 1, 1985. The department reports that there is a $25,000 property damage limit in tort cases, a fact that explains why most cases are filed as inverse condemnation cases. Besides contending there has been no taking or damaging of the property, the department may assert as defenses that the claim is for a mere natural condition, was caused by the act of a third party, was caused by a contractor, or was the result of a prior existing condition.

The state follows the common enemy rule as modified by the rule of reason.[31]

South Carolina

The South Carolina Department of Transportation reports that South Carolina adheres to the common enemy rule.[32] Unless exempted under S.C. Code Ann. Section 48-14-40, no person may engage in a land-disturbing activity without first submitting a stormwater management and sediment control plan to the South Carolina Department of Health and Environmental Control and obtaining a permit to proceed.[33] The phrase "stormwater management" means a system of vegetative or structural measures, or both, that controls the increased volume and rate of stormwater runoff caused by man-made changes to the land.[34]

Vermont

Vermont continues to follow the common enemy rule.[35] The department has experienced claims in inverse condemnation, nuisance, negligence and other tort-type claims relating to stormwater runoff. For tort claims, there is a limited waiver of sovereign immunity.[36]

Washington

The state of Washington is a common enemy rule jurisdiction.[37] In *Hoover v. Pierce County*,[38] Hoover insti-

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[25] *Id.*

[26] *Id.*

[27] *Id.* at 840.

[28] Gledhill v. State, 123 Neb. 726, 243 N.W. 909 (1932); Shotkoski v. Pnososki, 219 Neb. 213, 362 N.W.2d 59 (1985). In Nu-Dwarf Farms, Inc. v. Stratbucker Farms, Ltd., 238 Neb. 395, 470 N.W.2d 772 (1991), the court observed that diffused surface waters are treated as a common enemy (subject to the rule requiring necessity and absence of negligence) until they are channeled into a natural drainageway, at which point the notion of a natural servitude comes into play, prohibiting obstruction of the drainageway to the detriment of others.

[29] 232 Neb. 1, 439 N.W.2d 446 (1989).

[30] *Id.* at 453, quoting Belsky v. County of Dodge, 220 Neb. 76, 85, 369 N.W.2d 46, 53 (1985).

[31] 51 Okla. Stat. § 155.1; *see* Iven v. Roder, 431 P.2d 321 (Okla. 1967); and Morain v. City of Norman, 863 P.2d 1246 (Okla. 1993) (Open, paved, drainage ditch maintained by the city was inadequate to protect the plaintiffs and their property against flooding under the minimum requirements of a city ordinance.)

[32] Irwin v. Michelin Tire Corp., 341 S.E.2d 783, 784 (S.C. 1986); Williams v. Skipper, 325 S.E.2d 577 (S.C. App. 1985).

[33] S.C. CODE ANN. § 48-14-30 (A).

[34] S.C. CODE ANN. § 48-14-20.

[35] Villeneuve v. Powers, 158 Vt. 330, 609 A.2d 994 (1992).

[36] Tit. 12 §§ 5601-5606; $250,000 limit on tort damages. VT. STAT. ANN., tit. 12, § 5601(b).

[37] Morris v. McNicol, 83 Wash. 2d 491, 519 P.2d 7 (1974).

[38] 79 Wash. App. 427, 903 P.2d 464 (1995).

tuted an inverse condemnation action against Pierce County, claiming that a county roadway diverted surface waters onto the Hoovers' property. The court ruled that the Hoovers could not recover damages based on inverse condemnation, because any taking occurred before they purchased the property. Although Washington state law supports the proposition that a cause of action for a taking arises when additional governmental action occurs, here there was no additional governmental action by Pierce County after the installation of the culvert: "A new taking cause of action requires additional governmental action causing a measurable decline in market value."[39]

Wyoming

The Attorney General's Office reports that the number of claims has been about the same (one or two claims per year). Claims are brought in inverse condemnation, for nuisance, or for negligence. In Wyoming, inverse condemnation requires a permanent taking, not just temporary damage. If the claim is not made in inverse condemnation, then there may be governmental immunity pursuant to Wyo. Stat. Section 1-39-120. Pursuant to Wyo. Stat. Section 1-39-118, there is a limit on damages that may be awarded. Wyoming adheres to the common enemy rule.[40]

IV. STATES FOLLOWING THE CIVIL LAW RULE

Under the civil law rule, the owner of the higher land has an easement or servitude over a lower parcel, which allows the upper landowner to discharge surface waters as they naturally flow from the higher land onto the lower land of the servient owner.[41] The lower owner had no right to obstruct that flow. The upper owner is restricted in the sense that he or she is not allowed to gather the surface water by an artificial means and discharge the water onto the lower land in a greater volume or in a manner different from how the water would have been discharged naturally.[42] Again, many states have modified the civil law rule by requiring the respective landowners not to be unreasonable in their conduct.

Alabama

In Alabama, liability of the adjacent landowner for diverting or altering stormwater runoff is determined under the civil law rule.[43] The Alabama Department of Transportation relies on Section 14 of the Alabama Constitution as a basis for asserting immunity of the department to claims arising from stormwater runoff; however, claims usually are brought in inverse condemnation for which there is no immunity.

In *Robichaux v. AFBIC Development Co.*,[44] the court stated that it recognized the common law right of a lower landowner not to be injured by an upper landowner's interference with the natural drainage of surface water onto the lower property. "An alteration in the natural flow of surface water would be a wrongful interference with the lower landowner's possessory rights and could constitute trespass or nuisance."[45] However, in this case there was an easement giving the upper landowner the right to drain surface water across the lower landowner's property. The easement did not specify or restrict the amount of surface water that could be drained across the property. The court held that the drainage of additional surface water from developed properties through a pipe inside the existing natural ditch was merely that which was "reasonably necessary to effectuate the purpose of the easement."[46]

Arizona

Arizona's Attorney General's Office reports that it has had fewer claims for surface water runoff in the past 5 years; however, the highway department has adopted no specific measures to reduce such claims. Claims are usually brought in inverse condemnation or for negligence or other tort. Defenses asserted by the department include the right to protect state property from unnecessary surface water flow, that the claimant lived in a naturally flood-prone area, or that the claimant was contributorily negligent. Arizona reported no claims arising out of injury to the environment, the release of toxins into streams and rivers, or for violations of any federal or state laws on wetlands, parklands, or clean water.

Arizona follows the civil law rule.[47] In *Gillespie Land and Irrigation Co. v. Gonzalez*,[48] water flowing into a drainage system formed a pool at an intersection of a "wash" and a canal, either because the amount of water coming down the wash was more than could be contained in its banks, or because a flume and culvert constricted the flow. The waters overflowed the banks of the wash and breached a dike constructed along the west side of the wash, flooding some homes. Although the jury returned a verdict in favor of the owner of the waterway system, the trial court ordered a new trial and issued an injunction requiring enlargement of a flume, replacement of a culvert, and other action.

The Arizona Supreme Court agreed that a "landowner is not responsible for his diversion of or his failure to carry away flood waters, unless some other

[39] *Id.* at 470.

[40] Ladd v. Redle, 12 Wyo. 362, 75 P. 691 (1903).

[41] Los Angeles Cemetery Assoc. v. Los Angeles County, 103 Cal. 461, 37 P. 375 (1894).

[42] San Gabriel Valley Country Club v. Los Angeles County, 182 Cal. 392, 398, 188 P. 554 (1920).

[43] Anno., 93 A.L.R. 3d at 1207.

[44] 551 So. 2d 1017 (Ala. 1990).

[45] *Id.* at 1017.

[46] *Id.* at 1021.

[47] Southern Pac. Co. v. Proebstel, 61 Ariz. 412, 150 P.2d 81 (1944).

[48] 93 Ariz 152, 379 P.2d 135 (1963).

act contributes to their destructive effect."[49] The defendant could not be held liable for any failure of a flume to carry away more water than the natural capacity of the watercourse that flows into it.[50] On the other hand, a "landowner may not divert the natural waters of a stream in such a manner that these waters, combined with flood waters, cause damage to his neighbor."[51] The court set aside the injunction requiring, for example, the widening of a flume, because there was no legal duty of the landowner to carry away more than the natural bank-to-bank flow of water in the wash.

Colorado

No statistics on claims were available from the Colorado Department of Transportation. Claims generally are brought for nuisance, to which Colorado's Governmental Immunity Act[52] applies, including any applicable defenses thereunder. The department has had some claims alleging the release of toxins in groundwater, but it reports no other environmental-type claims concerning wetlands or parklands. The department has adopted an erosion control and stormwater guide to reduce claims for stormwater runoff.

Colorado is a civil-law rule jurisdiction. In *Hargreaves v. Skrbina*,[53] one of the issues concerned drainage problems caused by construction that raised the grade. The court held that the owners of the property, which was the dominant estate, had a right to have the water drain onto the property of the servient estate and therefore were entitled to injunctive relief to restore adequate drainage from their property.[54] In *Calvaresi v. Brannan Sand & Gravel Co.*,[55] the court held that Colorado had always followed the civil law rule and "[n]either the fact that the land concerned is urban rather than rural, nor the fact that the elevation on both properties has been lowered without materially altering the natural drainage flow, affords a rational basis for creating exceptions to the general rule."[56] The court pointed out that when a city makes improvements to a street, causing surface water to drain onto land below the level of the street, the "city is not bound to protect from surface waters those who may be so unfortunate as to own property which is below the general level of the street."[57]

Georgia

Georgia's Department of Transportation reports that claims are filed in inverse condemnation, for nuisance, negligence, or a combination of the foregoing. If a claim is filed in tort, there is a limit on damages.[58] Georgia's Department of Law also responded to the survey, advising that Georgia follows the civil law rule.[59] There is no judicial or statutory immunity from inverse actions, the primary form of action for surface water runoff cases in Georgia. Georgia's Tort Claims Act provides certain defenses for any cases that allege negligence. As the Law Department advises, although there is no limit for damages in an inverse condemnation action, there is a cap of $1 million per claim, or $3 million per occurrence, for any claims in tort.

Georgia reports that defenses to runoff claims include contending that the state's construction did not cause the problem or that the highway design was in accordance with established engineering principles. The department may seek indemnification from contractors for erosion-type claims.

Idaho

Idaho follows the civil law rule.[60] In *Burgess v. Salmon River Canal Co.*,[61] the plaintiffs alleged that the defendant was negligent in its release of water from the Salmon Falls Creek Reservoir. The canal company sued the Buhe Highway District and the Twin Falls Highway District alleging that the flooding was caused by their negligent design and construction of a highway crossing. A 10-foot culvert had insufficient carrying capacity. When the water that was released from Salmon Falls Dam reached the crossing, it backed up at the crossing, which became like an earthen dam and eventually collapsed.

The trial court held that the highway districts were immune from liability pursuant to Idaho Code Section 6-904. The court held that the plan for reconstruction was approved in advance by the highway districts and that the plan complied with prevailing engineering standards. Even if the crossing did not meet engineering standards, the two districts' decision not to comply was based on budgetary concerns. Such a decision involved planning rather than operational activity and

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[49] *Id.* at 142.

[50] *Id.* at 144.

[51] *Id.* at 145.

[52] COLO. REV. STAT. § 24-10-101, *et seq.*

[53] 635 P.2d 221 (Colo. App. 1981), modified in 662 P.2d 1078.

[54] *Id.* at 226.

[55] 534 P.2d 652 (Colo. App. 1975).

[56] The owner of upstream property possesses a natural easement on land downstream for drainage of water flowing in its natural course.

[57] Calvaresi at 655, quoting Englewood v. Linkenheil, 146 Colo. 493, 362 P.2d 186 (1961). In Trinity Broadcasting of Denver, Inc. v. City of Westminster, 848 P.2d 916, 921 (Colo. 1993), the court acknowledged that "the saturation of land by surface water flooding or by groundwater, in the correct fact situations, can effect a taking of property." However, the court held that a taking did not occur when water leaked from a municipal water system storage tank into the groundwater, saturated the soil, and caused damage to the foundation of an adjacent building.

[58] Georgia Tort Claims Act, O.C.G.A. 50-21-1 to 50-21-37 (1996 Supp.)

[59] McMillen Dev. Corp. v. Bull, 228 Ga. 826, 188 S.E.2d 491 (1972).

[60] Smith v. King Creek Grazing Assoc., 105 Idaho 644, 671 P.2d 1107 (1983).

[61] 119 Idaho 299, 805 P.2d 1223 (1991).

was immune from liability under Idaho Code Section 6-904(1).

The Idaho Supreme Court disagreed and reversed. First, the experts did not testify on what the applicable engineering standard was at the relevant time; second, there was insufficient evidence that the highway districts approved the construction in advance, and, in any event, "[t]he decision [whether] to comply with engineering standards is not a discretionary act."[62] The court reversed summary judgments for the highway districts and remanded.

As for the canal company, the court held that "the civil law rule recognizes a servitude of natural drainage between adjoining landowners." However, the court held that there is a rule of reasonableness in the operation of a dam:

> The jury should be instructed that, while the operator of the dam must give primary consideration to the primary purpose for which the dam was constructed [storage of water for irrigation purposes], it must also give some consideration to other factors in the operation of the dam and the discharge therefrom.[63]

The court ordered a new trial since the jury was instructed only that the operator had a duty of flood control.

In *Burgess v. Salmon River Canal Co.*,[64] following the remand in *Burgess I*, the court affirmed the trial court decision, entered after a jury verdict, denying the appellant's third-party claim against the Twin Falls and Buhe Highway Districts.

Iowa

The Iowa Department of Transportation reports fewer claims in the past 5 years (1992-1996) than in the previous 5-year period. Highway construction activity caused the majority of the claims in the most recent period. Plaintiffs frequently alleged damages to crops from flooding. Although there were no specific measures taken to reduce the number of claims from stormwater runoff, the department reports that it has improved design and construction to provide proper drainage during construction, including silt fences and retaining structures. Most claims are for inverse condemnation or negligence. The department reports that Iowa follows a modification of the three basic liability rules as set forth in *Braverman v. Eicher*,[65] *Levy v. Iowa State Highway Comm'n*,[66] and *Connolly v. Dallas County, Iowa*.[67]

In *Maisel v. Gelhaus*,[68] the court, following the civil law rule, observed that in Iowa a plaintiff has the burden of proving that his or her land is the dominant estate and that the defendant's land is the servient estate; the relative elevation of the respective tracts determines which is the dominant and which is the servient estate. The natural flow of water cannot be interrupted by the servient owner so as to cause injury to the estate of the dominant owner.

Kansas

The Department of Transportation reports that in the past 10 years the department has had five lawsuits on runoff issues at three locations. Claims in four of the five cases were in excess of the state's statutory $500,000 per occurrence limitation on damages. The department asserts design immunity as a defense, as well as the defense of comparative negligence under Kansas Statutes Annotated 60-258a.

Kansas follows the civil law rule.[69] In *Clawson v. Garrison*,[70] among other things, "land shaping" by the plaintiff eliminated the lagoons on three quarters of her land. The surface water retention capability of the lagoons on the plaintiff's land was lost also because of the plaintiff's conversion to irrigated farming. Later, when there were heavy rains, the defendant engaged in self-help; she threw up an earthen dike on the land parallel to and immediately adjacent to the plaintiff's access road, which caused water to back up and stand in the crops on the plaintiff's land. The court held: "[w]e are satisfied the evidence indicates plaintiff's actions in leveling her land and in constructing the elevated access road with two culverts had the effect of accelerating and increasing the flow of surface waters onto defendant's land."[71]

The court held that "it appears plaintiff invited and precipitated the injury upon her own property. It was her action in leveling her land and establishing the elevated access road with culverts which precipitated defendants' retaliatory action."[72] The court affirmed the judgment below granting the defendants an injunction.

Louisiana

Louisiana reports that stormwater runoff is usually a local responsibility. However, Louisiana's Department of Transportation notes that it has had more claims in the past 5 years: plaintiffs filed 12 suits seeking about $100 million; there were several class-action suits. There was no liability in six actions, but six cases were still pending as of April 1997, for a total of about $65

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[62] Burgess at 1232.

[63] *Id.* at 1230.

[64] 127 Idaho 565, 903 P.2d 730 (1995).

[65] 238 N.W.2d 331 (Iowa 1976).

[66] 171 N.W.2d 530 (Iowa 1969).

[67] 465 N.W.2d 875 (Iowa 1991).

[68] 416 N.W.2d 81 (Iowa 1987).

[69] Baldwin v. City of Overland Park, 205 Kan. 1, 468 P.2d 168 (1970).

[70] 3 Kan. App. 2d 188, 592 P.2d 117 (1979).

[71] Clawson at 124. The court noted K.S.A. 24-105, which declares it to be unlawful "for a landowner or proprietor to construct or maintain a dam or levee which has the effect of obstructing or collecting and discharging with increased force and volume the flow of surface water to the damage of the adjacent owner or proprietor." *Id.* at 127.

[72] *Id.* at 128

vada's statutory immunity for discretionary action[150] and the statute's limit on damages in tort.[151]

New Hampshire

New Hampshire reports that it has had little experience with claims arising from storm water runoff. The relatively few claims have involved minor property damage resulting from culverts or other drainage structures that failed to operate properly. To date, such claims have been treated as standard negligence claims. The plaintiff is required to demonstrate constructive or actual notice on the part of the department of the condition that caused the flooding and the department's failure to act reasonably to correct the situation once it had notice.

Under New Hampshire law, the state retains significant sovereign immunity on issues related to the design and construction of its highways and associated drainage structures under the discretionary function exception in NHRSA 541-B:19 I.c.[152] Nonetheless, if the department fails to properly follow the design plan or negligently constructs the roadway or its drainage system, it would not have immunity.

New Hampshire follows the rule of reasonable use.[153] In *Dudley v. Beckey*,[154] the court noted that in New Hampshire,

> A landowner may manage or control diffused surface water in any manner, provided it is reasonable in light of the interest affected thereby....In determining whether the measures taken by the landowner to control or manage diffused surface water are reasonable, a court must consider the extent of the alteration of natural or existing runoff patterns, the importance and nature of the land and its use, and the foreseeability and magnitude of any resultant damage.[155]

New Jersey

There are no statistics available on whether the state's Department of Transportation has had more or less claims in the past 5 years. To minimize claims, the department's policies require that the roadway design preserve, to the greatest extent possible, the preconstruction surface flow pattern in a watershed. In addition, roadway design is required to minimize drainage impact consistent with the state's soil erosion and sediment control guidelines. Claims are filed based on inverse condemnation, nuisance, and negligence. If a claim is based on negligence, the department has a plan or design immunity defense, which is perpetual under its Tort Claims Act.[156] Although the department has had two lawsuits alleging damage to wetlands, the department prevailed on summary judgment (unpublished opinion) on the inverse condemnation claim, and plaintiffs dismissed the cause of action in tort.

New Jersey follows the rule of reasonable use.[157]

New York

New York's Department of Transportation reports no discernible change in stormwater runoff claims in the past 5 years. Claims in New York, which follows the rule of reasonable use,[158] seem to be based primarily on negligence. The department asserts Section 54-a of the state's highway law as a defense to such claims. No claims were reported relating to damage to the environment, including claims for injury to wetlands or parklands.

In *Osgood v. Bucking-Reddy*,[159] the Appellate Division noted that in New York, a landowner is not liable for damages to abutting property from the flow of surface water brought on by improvements, provided that they are made in good faith in order to put the property to some rational use, and provided that the water is not drained into the other property by means of pipes or ditches.[160]

North Carolina

The North Carolina Department of Justice's Highway Division advises that the number of runoff claims per year (10 to 12) has remained about the same over the past 5 years. The state has sovereign immunity for stormwater claims, unless the court determines there has been a taking by inverse condemnation.

The state follows the rule of reasonable use. In *Pendergrast v. Aiken*,[161] after reviewing a number of prior decisions, the court "concluded that it had traditionally included elements of 'reasonable use' in its application of the civil law rule in an effort to accommodate change in the social and economic structure of society."[162]

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[150] NEV. REV. STAT. § 41.032.

[151] *Id.* § 41.035.

[152] DiFruscia v. N.H. Dep't of Public Works and Highways, 136 N.H. 202, 612 A.2d 1326 (1992).

[153] Micucci v. White Mountain Trust Co., 114 N.H. 436, 321 A.2d 573 (1974).

[154] 132 N.H. 568, 567 A.2d 573 (1989).

[155] Dudley at 574-575.

[156] N.J.S.A. 59:4-6.

[157] Armstrong v. Francis Corp., 20 N.J. 320, 120 A.2d 4 (1956). *See*, Sheppard v. Township of Frankford, 261 N.J. Super. 5, 6178 A.2d 666 (1992) (Error for the court to refuse injunctive relief after the jury's finding of the existence of a continuing nuisance caused by the drainage).

[158] Kossoff v. Rathgeb-Walsh, Inc., 3 N.Y.2d 583, 170 N.Y.S.2d 789, 148 N.E.2d 182 (1958); Musumeci v. State, 43 A.D.2d 288, 351 N.Y.S.2d 211 (4th Dept. 1974).

[159] 202 A.D.2d 920, 609 N.Y.S.2d 690 (1994).

[160] Osgood at 691.

[161] 293 N.C. 201, 236 S.E.2d 787 (1977).

[162] *Id.*

North Dakota

North Dakota follows the rule of reasonable use.[163] In *Martin v. Weckerly*,[164] the defendants failed to meet any of the four requirements of the reasonable use rule. That is, the defendants failed to show that there was a reasonable necessity for such drainage; that reasonable care had been taken to avoid unnecessary injury to the land receiving the surface water; that the benefit to the land drained outweighed the gravity of harm to the land receiving the surface water; and that "where practicable, it [had been] accomplished by reasonably improving and aiding the normal and natural system of drainage according to its reasonable carrying capacity" by a reasonable and feasible artificial drainage system.[165]

Ohio

Ohio follows the rule of reasonable use.[166]

In *Accurate Die Casting v. City of Cleveland*,[167] the court held that when a municipality superimposes its storm sewer system upon a natural watercourse, it must do so in a manner consistent with the rights of adjoining landowners; however, the construction of a 10-year storm sewer system did not result in the permanent, partial appropriation of the plaintiff's property. "The potential of plaintiff's property to flood at intervals of 'not substantially more than ten years,' however, does not constitute the frequent flooding required by the decisions of the Supreme Court."[168]

Rhode Island

The Department of Transportation does not report an increase in claims arising from surface water runoff. The department is using "detention basing" to control flow and is installing soil water repeaters and using absorbent pads in sensitive areas. The department reports that the most common basis for claims is negligence. The department, which has a judicially-based defense for immunity for the exercise of discretion, also asserts as defenses various exceptions to the statutory waiver of sovereign immunity, contributory negligence, or assumption of risk. The state's tort claims act limits tort claims to $100,000,[169] unless a special act is passed by the legislature increasing the limit.

Rhode Island follows the rule of reasonable use:[170]

> One known advantage of the rule is its flexibility. It can be applied in situations unthought of in the day when surface water was truly considered to be the common enemy. Unlike the civil-law rule, it will not hamper land development, and in contrast to the common-enemy rule, it permits a more equitable allocation of the costs of such improvements, for the owner improving his land must take into consideration the true cost of such development to the community.[171]

Utah

Utah follows the rule of reasonable use.[172]

Virginia

Virginia's Office of the Attorney General reports that although there are no statistical data available, there probably have been fewer claims since the incorporation of storm water management procedures into the Virginia Department of Transportation's highway plans.

Virginia follows a combination of the common enemy doctrine and the rule of reasonable use, that is, a Virginia Rule.[173] Typically, claims for stormwater runoff are brought in inverse condemnation or for negligence. The defenses the department may assert include the common enemy doctrine, the contention that the water was diverted to a natural drainway, or the defense that the action was reasonable. If a claim is brought in negligence, the office asserts also as a defense the current $100,000 statutory limit on damages in tort claims.

Wisconsin

The Wisconsin Department of Transportation has experienced the usual rate of claims for stormwater runoff over the past 5 years, with an average of about five per year. Cases are usually brought in inverse condemnation. If the claim is not filed as an inverse claim, then the department has a judicial basis for asserting immunity to claims arising from stormwater runoff.[174] Also, prior notice of a tort claim is a statutory requirement.

It appears that Wisconsin follows the reasonable use rule. In *Soo Line Railroad v. Commissioner of Trans-*

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[163] Jones v. Boeing Co., 153 N.W.2d 897 (N.D. 1967).

[164] 364 N.W.2d 93 (N.D. 1985).

[165] *Id.* at 95.

[166] McGlashan v. Spade Rockledge Terrace Condo Dev. Corp, 62 Ohio St. 2d 55, 402 N.E.2d 1196 (1980); and Kneier v. Ohio Dept. of Transp., 63 Ohio Misc. 2d 309, 629 N.E.2d 1090 (1992) (Plaintiffs did not show by a preponderance of the evidence that the department violated the requisite standard of care in designing and constructing I-271 and a drainage system.).

[167] 2 Ohio App. 3d 386, 442 N.E.2d 459 (1981).

[168] *Id.* at 464-65.

[169] R.I. Gov. Laws 9-31-1, *et. seq.*

[170] Butler v. Bruno, 115 R.I. 264, 341 A.2d 735 (1975).

[171] Butler at 741.

[172] Sanford v. Univ. of Utah, 26 Utah 2d 285, 488 P.2d 741 (1971) (Lower property owner had no right to maintain a dam that will back up water onto the upper landowner's property; On the other hand, a dominant tenement may not channel the natural flow of water into a small pathway so that the water enters upon the lands of the servient tenement with an unnatural destructive force.).

[173] McCauley v. Phillips, 216 Va. 450, 219 S.E.2d 854 (1975); Mullins v. Greer, 226 Va. 587, 311 S.E.2d 110 (1984).

[174] Van v. Town of Manitowoc Rapids, 150 Wis. 2d 929, 442 N.W.2d 557 (1989).

portation,[175] the court affirmed an order of the Commissioner requiring the railroad to install a 60-inch pipe in its track bed to alleviate upstream flooding. The court held that the applicable statute[176] requires upstream landowners to protect downstream owners and imposed liability on the upstream landowner where the upstream landowner failed to comply with that duty.[177] The court distinguished cases cited by the railroad that "arose under the now rejected 'common enemy' doctrine."[178]

VI. CLAIMS ARISING OUT OF SURFACE WATER RUNOFF INTO FEDERAL OR STATE PROTECTED WETLANDS OR INTO STREAMS OR RIVERS

One objective of the study was to ascertain the extent to which there are claims for surface water runoff into protected wetlands or for the release of toxins into streams or rivers.

The Clean Water Act[179] was originally enacted by Congress on June 30, 1948, as the Federal Water Pollution Control Act. Section 1251(a) states that the act's objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Certain national policies are established by the act. In Section 1251(b), the act emphasizes that "It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources."

The act further provides in Section 1251(g) that "[i]t is the policy of Congress that the authority of each state to allocate quantities of water within its jurisdiction shall not be superceded, abrogated or otherwise impaired by this chapter."

The act itself does not specifically address control of or responsibility for surface water runoff. The act does declare, *inter alia*, that the goal is to eliminate the "discharge of pollutants" into navigable waters by 1985 and that the "discharge of toxic pollutants in toxic amounts" is prohibited. Under the act, it appears that Congress imposed the major responsibility for the control of water pollution on the states.[180] The varied topographies and climates in the country called for varied solutions in order to establish water quality standards within the states.[181] Under the act, enforcement is shared by the United States, the states, and their citizens.[182]

Pursuant to 33 C.F.R. Section 323.2, the term "waters of the United States" includes wetlands, which are further defined to mean "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adopted for life in saturated soil conditions."[183] As noted in a recent article, "The functional and ecological importance of wetlands, only recently understood and widely acknowledged, challenges the Clean Water Act with the task of protecting an extraordinarily delicate and sensitive natural resource."[184] Among the functions performed by wetlands are the conveyance and storage of floodwater, the prevention of erosion and saltwater intrusion, sediment control, and the providing of habitat for fish, shellfish, and waterfowl.

Neither the research on case law nor the survey demonstrated any significant claims arising out of stormwater runoff into protected wetlands or into rivers and streams. The few court decisions in this area involve questions of whether highway activity, such as drainage, can create an artificial wetland that then becomes a protected wetland. Claimants were sometimes concerned that the highway authority could create a protected wetland, thus subjecting the area to regulation.

For example, in *Hutchenson v. Town of Andover*,[185] there was some evidence that the defendant's drainage of surface water would have a harmful thermal effect on an existing wetland. The plaintiffs also argued that the continuing encroachment of drainage on their land would cause more of their property to fall within the regulatory authority of the town's wetlands commission and that the flow could create a regulated activity.

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[175] 170 Wis. 2d 543, 489 N.W.2d 672 (1992).

[176] At issue was section 88.87(2)(a) of the Wisconsin Statutes, which stated that

> [W]henever any county, town, city, village, railroad company or the department of transportation has heretofore constructed and now maintains or hereafter constructs and maintains any highway or railroad grade in or across any marsh, lowland, natural depression, natural watercourse, natural or man-made channel or drainage course, it shall not impede the general flow of surface water or stream water in any unreasonable manner.

Soo Line Railroad at 674.

[177] *Id.* at 676.

[178] *Id.*

[179] 33 U.S.C. section 1251, *et seq.*

[180] District of Columbia v. Schramm, 631 F.2d 854 (D.C. Cir. 1980) (The EPA's decision not to veto a state National Pollutant Discharge Elimination System (NPDES) permit is not reviewable in federal district court.).

[181] Mississippi Comm'n on Natural Resources v. Costle, 625 F.2d 1269 (1980) (Course of the Clean Water Act through Congress demonstrates emphasis Congress placed on giving responsibility to states and letting the Agency exercise discretion in supervising the NPDES program.).

[182] D. Hodas, Symposium: Environmental Federalism: Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be A Crowd When Enforcement Authority is Shared by the United States, the States, and their Citizens? 54 Md. L. Rev. 1552 (1995).

[183] United States v. City of Fort Pierre, 747 F.2d 464, 465 (8th Cir. 1984), citing 33 C.F.R. § 323.2 (c).

[184] MICHAEL G. DESMA, A SOUND OF THUNDER: PROBLEMS AND PROSPECTS IN WETLAND MITIGATION BANKING, 19 COLUM. J. ENVTL. L. 497 (1994).

[185] 1997 Conn. Supr. LEXIS 87 (1997).

Thus, an issue that may arise is whether government activity has created an artificial wetland that is protected just as a naturally created one. The case of *Citizens Disposal, Inc. v. Department of Natural Resources*[186] involved the issue of permission to use a particular parcel of land as a landfill because it had not met the requirements of the Wetland Protection Act.[187] In affirming the denial of the applicant's request for a permit, the court agreed that the land at issue was a wetland and that the parcel at issue was part of a wetland area. Whether the wetland was artificially created or was natural was not important within the meaning of the law: "The fact that the wetland was probably artificially created by a redirection of the drainage patterns when U.S. 23 was constructed does not alter the current value of the wetland."[188]

Each case depends on the circumstances, of course. There is authority stating that an area may not be subject to regulation if it was rendered a wetland by virtue of the government's own conduct. In *United States v. City of Fort Pierce*,[189] the Army Corps of Engineers claimed that the Fort Pierce Slough was a wetland within the jurisdiction of the Corps. The Corps contended that the city violated Sections 301 and 404 of the Clean Water Act[190] when the city failed to obtain a permit before constructing streets across the Slough. The Eighth Circuit reversed the district court's decision that the Slough was a wetland within the jurisdiction of the Corps and that the city's construction of two streets without a permit violated the act.

In reversing the judgment below, the court decided that the Slough was not a wetland because of the "peculiar facts and unique circumstances surrounding the Slough, its history, and its origin as a potential wetland."[191] Among the facts were that the area had been dry prior to 1968 when the Corps's own dredging activities caused surface water to become trapped in the Slough. The court held that the act did not authorize the Corps "to assert jurisdiction in a situation in which privately owned land, not otherwise within the Corps's jurisdiction, exhibits wetland characteristics only as an incidental result of unrelated river maintenance."[192] The court made it clear, however, that its holding was not meant to challenge the Corps's jurisdiction with regard to any other artificially created wetland-type environment.[193]

Occasionally, the wetlands question is one of valuation. In *West Jefferson Levee District v. Coast Quality Construction Corp.*,[194] the issue was the amount of compensation due the landowners when, at the time of the expropriation, almost all of the property was designated as wetlands under the Federal Clean Water Act. The court noted that in 1972 Congress passed the Federal Water Pollution Control Act Amendments,[195] renamed the Clean Water Act in 1977. The law gave the Corps of Engineers the regulatory power to prohibit the discharge of pollutants into navigable waters except as authorized by a permit. The court held that "in order to show their land should be valued based on a use to which the land was not being put at the time of the expropriation, the landowners herein must show it was reasonably probable they could have obtained the Section 404 and Section 10 permits from the Corps in the reasonably foreseeable future."[196] The landowners failed to meet their burden. The court, in reversing the lower court, determined that the property at the time of the expropriation had a value based on its highest and best use as non-permitted wetlands, which could only be used for recreational purposes.[197]

The survey sought to determine whether the departments had claims arising out of or alleging either (a) injury to the ecological balance or (b) release of toxins into streams and rivers. As seen in Table IV, only six states (Louisiana, Mississippi, New Mexico, Tennessee, Texas and Wisconsin) reported having any claims involving alleged injury to the ecological balance of streams, rivers, watersheds, or wetlands. Nine states (California, Illinois, Louisiana, Missouri, Mississippi, New Mexico, Tennessee, Texas, and Wisconsin) reported claims involving the alleged release of toxins into streams or rivers.

The survey also sought to assess whether the state highway departments had experienced claims for stormwater runoff related to any federal or state wetlands, parkland, clean water, or similar laws. Only seven states (Georgia, Illinois, Minnesota, Mississippi, Missouri, New Jersey, and New Mexico) reported any such claims, all of which, except one for which there is no reported decision, were settled.

VII. MEASURES ADOPTED BY THE STATES TO MITIGATE OR REDUCE CLAIMS FOR STORMWATER RUNOFF

As seen in Table VI, although many states reported undertaking specific measures to reduce runoff claims, 16 states reported that they had not adopted any spe-

[186] 172 Mich. App. 541, 432 N.W.2d 315 (1988), *app. denied* 432 Mich. 911, 444 N.W.2d 114.

[187] M.C.L. 281.701 *et seq*; M.S.A. 18.595 (51), *et seq*.

[188] Citizen's Disposal, Inc. at 320. See Samperi v. Inland Wetlands Agency, 1993 WL 27026 (Conn., July 27, 1993) (Plaintiffs proposed the use of an alternate road and culvert layouts to reduce the impact of a subdivision on wetlands); County of Freeborn by Tuveson v. Bryson, 309 Minn. 178, 243 N.W. 2d 316 (1976) (Minnesota Supreme Court enjoined the construction of a county highway that would destroy a marsh.) *See also*, N.J. STAT. ANN. §§ 13:9B-1 to 13:9B-30 (state permit required for development in wetlands).

[189] 747 F.2d 464 (5th Cir. 1984).

[190] 33 U.S.C.A. §§ 1311, 1344.

[191] City of Fort Pierre at 466.

[192] *Id.* at 467.

[193] *Id.*

[194] 640 So. 2d 1258 (La. 1994).

[195] 33 U.S.C.A. § 1251.

[196] West Jefferson Levee Dist. at 1280.

[197] *Id.* at 1295.

TABLE IV. CLAIMS FOR INJURY TO ECOLOGICAL BALANCE OR FOR RELEASE OF TOXINS INTO STREAMS AND RIVERS

STATE	ECOLOGICAL BALANCE	RELEASE OF TOXINS	COMMENTS
Alabama			
Alaska			
Arizona	No	No	
Arkansas	No	No	
California	No	Yes	
Colorado			
Connecticut			
Delaware	No	No	
D. C.			
Florida	No	No	
Georgia	No	No	
Hawaii	No	No	
Idaho			
Illinois	No	Yes	1 Claim
Indiana	No	No	
Iowa	No	No	
Kansas			
Kentucky			
Louisiana	Yes	Yes	
Maine			
Maryland	No	No	
Massachusetts	No	No	
Michigan			
Minnesota			
Mississippi	Yes	Yes	Wetlands and drinking water reservoir were salted
Missouri	No	Yes	
Montana	No	No	
Nebraska	No	No	
Nevada	No	No	
New Hampshire			
New Jersey	No	No	
New Mexico	Yes	Yes	
New York	No	No	
North Carolina	No	No	
North Dakota			
Ohio			
Oklahoma	No	No	
Oregon	No	No	
Pennsylvania			
Rhode Island	No	No	
South Carolina			
South Dakota	No	No	
Tennessee	Yes	Yes	
Texas	Yes	Yes	
Utah			
Vermont	No	No	
Virginia	No	No	
Washington			
West Virginia			
Wisconsin	Yes	Yes	
Wyoming	No	No	
Territories			
Virgin Islands			
Puerto Rico			
Guam			

TABLE V. CLAIMS FOR STORMWATER RUNOFF RELATED TO ANY FEDERAL OR STATE WETLANDS, PARKLAND, CLEAN WATER, OR SIMILAR LAWS

Alabama	
Alaska	
Arizona	No
Arkansas	No
California	
Colorado	
Connecticut	No
Delaware	No
District of Columbia	
Florida	No
Georgia	Yes[198]
Hawaii	No
Idaho	
Illinois	Yes[199]
Indiana	No
Iowa	No
Kansas	
Kentucky	
Louisiana	Yes
Maine	
Maryland	No
Massachusetts	No
Michigan	
Minnesota	Yes
Mississippi	Yes[200]
Missouri	Yes[201]
Montana	No
Nebraska	
Nevada	No
New Hampshire	
New Jersey	Yes
New Mexico	Yes
New York	No
North Carolina	
North Dakota	
Ohio	
Oklahoma	
Oregon	
Pennsylvania	
Rhode Island	
South Carolina	
South Dakota	
Tennessee	
Texas	No
Utah	
Vermont	
Virginia	
Washington	
West Virginia	
Wisconsin	
Wyoming	
Territories	
Virgin Islands	
Puerto Rico	
Guam	

[198] No litigation as all claims were resolved with the EPA, Army Corps of Engineers, or other regulatory agency.

[199] Some complaints with the Corps of Engineers were settled.

[200] City of Meridian v. MTC, not appealed or otherwise reported.

[201] One claim settled in which runoff allegedly damaged a freshwater stream.

TABLE VI. STATES REPORTING SPECIFIC MEASURES DESIGNED TO REDUCE INCIDENCE OF CLAIMS FOR STORMWATER RUNOFF

Alabama	Compliance with Clean Water Act
Alaska	
Arizona	No
Arkansas	Use of Design and Construction and Sediment Control Manual
California	Increased efforts to comply with federal Clean Water Act; applied for Statewide Storm Water Pollution Prevention Permit
Colorado	Adopted erosion control and stormwater guideline
Connecticut	No
Delaware	Rapid response to calls regarding drainage problems
D. C.	
Florida	Adherence to Florida Stat. Chapters 373 and 403 pertaining to stormwater management
Georgia	Emphasis on erosion control/public relations
Hawaii	No
Idaho	
Illinois	Revisions to drainage manual
Indiana	No
Iowa	Improvement of design and construction features to provide proper drainage during construction, including silt fences, retaining structures
Kansas	
Kentucky	
Louisiana	Updated design standards for current and new construction
Maine	
Maryland	No
Massachusetts	No
Michigan	
Minnesota	
Mississippi	No
Missouri	Departmental procedure to assess potential backwater damage due to a highway project
Montana	No
Nebraska	No
Nevada	No
New Hampshire	No
New Jersey	Policies requiring that the roadway design preserve, to the greatest extent possible, preconstruction surface flow pattern in the watershed or roadway design, consistent with state soil erosion and sediment control guidelines
New Mexico	
New York	No
North Carolina	Use of general drainage policies and practices of the department
North Dakota	
Ohio	
Oklahoma	No
Oregon	
Pennsylvania	
Rhode Island	Utilization of detention basin and other devices in sensitive areas
South Carolina	
South Dakota	
Tennessee	Section 209 project erosion and siltation guideline for road and bridge construction
Texas	No
Utah	
Vermont	No
Virginia	Including stormwater management in design of projects where required by law
Washington	
West Virginia	
Wisconsin	No
Wyoming	
Territories	
Virgin Islands	
Puerto Rico	
Guam	

cific measures. Several other states did not respond specifically to the question.

The measures mentioned are illustrated below but include reliance on or improvement in design and construction of highway structures, adoption of departmental policies or use of manuals concerning erosion or sediment control, adoption of erosion control and stormwater guidelines, rapid response to calls concerning drainage problems, prior assessment of potential backwater damage due to a highway project, and effective public relations.

CONCLUSIONS

There have been significant claims against highway agencies for damages from the runoff of surface water. The majority rule now is the rule of reasonable use, which requires each landowner to conduct himself or herself reasonably when dealing with runoff that affects abutting owners. Nevertheless, many states still adhere either to the common enemy or to the civil law rule. Frequently, however, the courts modify the latter doctrines by engrafting a rule of reason without adopting the rule of reasonable use. The rule of reasonable use, although more flexible, is less predictable.

The state-by-state discussion shows that most often claimants sue the governmental agency in inverse condemnation but frequently sue for negligence or nuisance for damage to property from stormwater runoff. Although some states report an increase in runoff claims, numerous states responded that the number of claims has been relatively constant. Many jurisdictions reported having very few such claims, and a few states even reported that they were experiencing fewer claims. Although many states indicated that they had adopted specific measures to reduce claims for runoff, some jurisdictions report that they have not adopted any specific measures to reduce claims.

Only a few states report any claims arising from alleged damage from highway-related stormwater runoff into wetlands or for the release of toxins into streams or rivers. There has been some litigation over the artificial creation of wetlands, but there appear to be no reported cases concerning the highway agency's alleged failure to control runoff flowing into wetlands, streams, or rivers due to highway projects or drainage.

In sum, the trends appear to be an increase in the number of claims in some states and the adoption by the courts of a rule of liability based on reasonable use. At present, there is a dearth of authority on liability under federal statutes of highway departments for failure to manage or control surface water runoff.

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