

# Liability for Drainage Damage

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• The modernization of existing highways and the construction of new State and Interstate highways has in recent years greatly increased the number and variety of highway drainage legal problems in Iowa.

Drainage claims come into the office intermittently the year around. After investigation, some are disposed of by corrective action. Of those that are rejected, only a small number result in actual litigation. Fortunately, of those cases that have gone to trial, none to date have resulted in any spectacular success for the landowners' attorneys.

This relative lack of success has not created complacency. We have drainage cases in the office at present that could result in some extremely unfortunate precedents.

In prior AASHO legal affairs meetings, a number of excellent articles on limited aspects of the highway drainage law field have been presented. However, there is a need for further work. It is submitted that a highway drainage law study would be a commendable project for a Highway Research Board special report similar in general design to its Special Report 21, "Relocation of Public Utilities Due to Highway Improvement."

I have prepared a brief outline for discussion of various considerations relating to the liability of State highway departments for drainage claims, and have made some comments to indicate the scope and significance of its subdivisions. My purpose is to review the subject generally without resort to case citation and point up the general nature and extent of State highway departments' drainage legal problems. While I discussed some legal principles, I have not in-

tended that such is to be more than suggestive and generally introductory.

## BASIS OF STATE HIGHWAY DEPARTMENTS' DUTY AS TO DRAINAGE

### *Federal and State Constitutions*

It is elementary that all landowners are protected by constitutional provisions against a "taking" of their property. In drainage matters, this has served as a basis for both inverse condemnation and mandamus actions to condemn.

There are a large number of State constitutions that additionally provide that a landowner's property shall not be "damaged" without compensation. In these latter States, the scope of the highway authority's liability would therefore be generally broader.

Several fairly recent Iowa cases indicate that the word "taking" in our State constitution is being equated to some degree with "damaged." It is probable in the future that there will be less distinction between the cases in the various States on such basis.

### *Statute Law*

There are basically two categories of statutes that might concern State highway departments as to drainage. The first are statutes that specifically state the duties of the State highway departments in relation to drainage and the construction and maintenance of highways. The other are code provisions that either specifically or generally provide statutory remedies for the landowner.

In some States the statutes might be found to be nothing more than a codification of existing case law. In

others they may well add drainage burdens on the State highway department not borne by private landowners. (Obviously, consultation of one's own State code is basic.)

### *Case Law*

The case law of drainage is important in those instances where statute law either does not exist or cannot be applied. Generally such law will be based in part on either a civil or common law origin or a modification thereof to best fit the conditions of a particular State.

The civil law rule provides that the owner of the upper or dominant tenement has a right to discharge water in its normal course to the lower or servient tenement; and that it is the duty of both owners not to divert water from the natural direction of its flow to the material detriment of either.

The strict common law or "common enemy" rule provides that an owner can embank or protect his property against flood waters or surface waters even though this may divert it from the direction it would naturally flow. However, under such rule one could not protect himself against the flow of a natural watercourse with a bed and banks with a constant or an intermittent stream located thereon.

A State highway department's duties may well be affected to the extent that either of these two general categories of case law has been accepted by the high court of a particular State.

In municipalities, even in those States following civil law rule, a landowner has been found to have a right to bring his lot to the grade of an established street or highway even though it may mean the blocking of a natural watercourse and the turning of such including surface waters back upon the highway. The practical remedy of the city is to cause a storm sewer system to be installed and to assess the costs against such landowner.

## GENERAL CLASSIFICATIONS OF DRAINAGE AFFECTING HIGHWAYS

Most, if not all, of a highway department's drainage problems will involve one of five classifications of waters following. A determination of the nature of the drainage involved is generally basic to finding the correct legal principle applicable. In one respect or another, the office has been involved in problems involving all of the following classifications of drainage.

### *Natural Watercourse*

A natural watercourse could be defined as a reasonably well-defined channel with a bed, bank, or sides, and a current, although the water flow may be small and not continuous.

### *Artificial Watercourse*

Artificial watercourses are similar in characteristics to a natural watercourse, except as the term implies, they are man made. As against a landowner, road ditches might be established in legal effect as natural drainage ditches by either acquisition or prescription. It has been held that, even though a highway commission has acquired the right by prescription or otherwise to divert water out of its natural course by means of an artificial watercourse, it may subsequently restore the drainage to its former natural channel. Artificial drainage ditch channels established pursuant to statute are a common type of artificial watercourse in many areas.

### *Surface Waters*

Surface waters constitute a class of waters generally derived from falling rain or melting snow or that which rises to the surface in springs where the waters are in a state of general diffusion over the surface. Some legal literature characterizes as within the concept of surface water so-called "drainways." A "drainway" is a place where surface waters collect,

though not to such a well-defined extent as a watercourse.

#### *Flood Waters (Overflow or Escaped)*

Flood waters have been defined as those over the highest line of the ordinary flow of the stream. There are circumstances where surface waters and flood waters merge and raise a real question as to what the proper characterization should be.

#### *Subterranean Waters, Springs, Wells*

The most common forms of waters that might be affected by highway maintenance or construction would be those waters which ooze, seep, or percolate through the earth. The highway department on occasion has received complaints that the establishment of a new roadbed and heavy dirt fill across a problem drainage area has interfered with the area's subsurface drainage. We have also experienced a number of complaints that our grading for cuts has for one reason or another destroyed either a well or a spring.

### MAJOR HIGHWAY DRAINAGE AND LEGAL PROBLEMS

#### *Diversion*

A highway department would almost certainly be enjoined from diverting water from a natural watercourse to a landowner's material injury. In Iowa, the Code directs that highway authorities are not to "turn the natural drainage of the surface water to the injury of adjoining owners" and that it is their duty to "use strict diligence in draining the surface water from the public road in its natural channel." It is probable that not all States will have as high a duty as to diversion of surface water as ours, and especially a State that relies on common law principles.

Courts generally do not disapprove of diversion of water in highway engineering where the waters that are taken out of their natural course are later returned to such course without material injury to abutting landowners.

#### *Collection of Waters*

Any new highway to some extent will collect and concentrate surface water through necessary use of ditches, culverts, and other structures. Inherent in a strict sense is a degree of diversion. The collection of surface water has been recognized by the courts as an economic necessity in highway construction. They do impose limitations on such collection based both on its reasonableness under all the circumstances and on considerations of possible or prospective material damage to the landowner.

Though road ditches often provide a benefit to an owner by collecting and draining surface waters, the highway authority is generally not obligated to maintain such ditches in such condition that they drain the abutter's land better than if no highway were there.

#### *Acceleration and Increase of Water Runoff*

The collection of waters will to varying degrees accelerate their flow as do the concrete-surfaced beds of various structures. The establishment of hard-surfaced highways has a definite effect on increasing the amount of runoff. For the first few years after the construction or reconstruction of a highway there is some additional increase in water runoff and acceleration until erosion control practices become effective.

When highway right-of-way is acquired, either by negotiation or condemnation, it has been generally held that the highway department has acquired the right thereunder to collect the surface water that does not flow in well-defined channels; to the extent that the same is reasonably necessary to accommodate the same to the customary and usual mode of constructing a highway in such places, and to the extent reasonably necessary to so construct and maintain the road in a reasonable manner. All acceleration and increased runoff due to the same standards of construction would also be within the settlement by negotiation or condemnation.

### *Drainage Structure Size*

If highway departments are not to incur liability, the selection of the size of drainage structures must be made on the basis of as much evidence as is reasonably obtainable. Failure to select the proper size of structure could result in impounding, flooding, or diversion of waters.

Most courts would probably find that the highway department must design for the so-called "ordinary" rainfall and "ordinary" flood as contrasted with the so-called "extraordinary" rainfall or "extraordinary" flood. Such terminology is often of little actual assistance in the problem cases. It has been intimated that the highway department should design for the reasonably predictable rainfall or flood. Generally, "acts of God" would not create liability. Only a careful comparison of the facts of one case with another will give us a true representation of the concepts embodied in the terminology of the courts.

In Iowa the design department has been generally designing for a flood of a 50-year frequency. Where information is lacking on the history of the stream or watercourse, the design size is determined on histories of apparently similar streams or watercourses. If there is a reasonable history of the watercourse available, the design size is selected on such basis.

In recent years we have had floods of the 100-year or above frequency (which could happen two years in succession). These have not created any great complaint from landowners in connection with the highways, as apparently it has been considered that such floods were so great that any damage therefrom would happen in any event regardless of the highway structure. The cost of designing for such floods would make improving or establishing certain highways economically prohibitive. It would seem that a court would have to consider relative design costs in making any reasonable or practical rule of law or interpretation thereof in this area.

### COMMON PROBLEM LOCATIONS FOR HIGHWAY DRAINAGE ENGINEERING

Almost without exception, the drainage problems that have come into our office have been in four of the five following types of location. In those areas where there are pronounced watercourses or drainways, few drainage problems appear.

#### *Level Land with Poor Natural Drainage*

In areas of level land with poor natural drainage there is often a long history of private drainage disputes. When a new highway is established through such lands or an existing highway improved, it often irritates an already delicate situation. Extreme care has to be used in the engineering so that neither upper nor lower owners acquire a legitimate objection. In some locations, drainage structures will be merely "equalizers." There is the considerable problem in many locations of interfering with existing tile lines and subsurface drainage.

#### *River or Flood Bottom Lands*

In the case of rivers or flood bottom lands, practically all the same circumstances exist as in the previous category and the remarks thereon are generally applicable here. The problems are intensified where the surface water is supplemented by flood waters. Problems as to size of structures are common. As to complexity, this category would seem to have no rivals.

We have had one such long-standing problem involving the continuing maintenance and preservation of a certain road across the flood bottom of one of our interior rivers. This road leaves a city via a bridge across the main channel, which loops the bottomland through which it passes. Near the neck of the main channel loop, the road passes over an overflow bridge which marks a flood or overflow channel in the river. In times of high water, the ordinarily small stream in this overflow channel rises

to the bridge girders and has gone over or washed out other portions of the road.

About 8 years ago the overflow bridge was rebuilt and a long wing dam was built to protect the abutments of the bridge from washing out. The wing dam was to keep the force of the current directed toward midstream. Subsequently, a dozen landowners brought a mandamus action to condemn on the theory that such wing dam backed up water on their farm lands during high water, thereby taking portions of their properties.

In preparation for possible trial, we had engineers make various plats and hydraulic computations including backwater curves. Our own difficulties in determining the exact effect of such a wing dam led us to believe that the problems of evidence and proof for such plaintiffs were probably insurmountable. We forwarded numerous interrogatories to the plaintiffs which they apparently were unable to answer. This, together with the fact that a flood of 100-year frequency eventually washed out most of such wing dam led to dismissal of the action.

We are still left with the problem of maintaining this road and our present design is unsatisfactory. We have considered a number of alternate proposals. The city at the bend of the river objects to one of these proposals for fear that the river will establish a new channel across the neck of the loop at the overflow bridge, depriving them of the flow of the stream which they have used for various purposes. It is therefore incumbent on our designers to come up with a new construction plan that we can successfully defend in the event of an action by either the city or upper landowners.

#### *Suburban and "Exurban" Areas*

Those areas next to municipalities, designated as suburban, and those areas just beyond, recently tagged as "exurban," have intensified the drainage problems along the highways due

to increasing residential and commercial development. However, it is often the highway department which has more complaints against the landowners than vice versa because of the encroachment of land development on natural watercourses and drainways.

#### *Areas Conducive to High-Volume "Flash" Floods*

There are certain areas of Iowa where the scope of flash floods appears to be much greater than elsewhere. Extensive artificial drainage systems on valley plains combine with rapid runoff from ditches and gullies in neighboring hills that are devoid of sufficient erosion control cover to create an enormous rise in volume of water in a very short time. This problem is probably of much greater magnitude in portions of western United States.

#### *Areas Conducive to Excessive Silting*

The degree of silting has a very direct relation to soil types and land use. The problem of maintaining drainage structures and the danger of blocking natural watercourses is greatly increased in such problem soil areas unless maintenance is not considerably above average.

#### STATUS OF STATE IMMUNITY AS TO ACTIONS FOR DRAINAGE DAMAGE

Generally the doctrine of State immunity from tort action is being weakened either by legislative action or by court rulings based on constitutional arguments. In Iowa, the doctrine of sovereign immunity from tort still remains strong. Where an action sounds in tort there is little present possibility that it would succeed in our State.

In those various States that have recognized an action for "inverse condemnation" it is probable that the landowner will recover in many actions which formerly would have been considered as purely a "tort." One of the major issues in these States is what temporary invasions by water will come within such theory.

STATUTE OF LIMITATIONS ON  
DRAINAGE MATTERS

*Basis for Prescriptive Rights*

Where a highway department has maintained a particular drainage condition for a period of time in violation of the drainage rights of a landowner, it may acquire a vested interest to preserve the same by prescription. Highway departments have as much right to rely on drainage ways so established as they do on a natural course.

*Determination of Time Period for Landowner's Remedies*

The period of limitations which would bar a landowner could well depend on the nature and theory of the remedy he seeks. An action for damages on a tort theory could well have a much shorter period of limitations than that required for a State to acquire prescriptive rights.

*Factual Basis for Start of Limitations Period*

To have the benefit of prescription, obviously it will be necessary to show when the prescriptive period started. The easiest situation is where there is simple, direct, and continued invasion of the owner's property rights by some type of water diversion.

Where there are intermittent water invasions, there are questions as to whether a single cause or successive causes of action arise. The answer probably depends on both the theory chosen by the owner and the attitude of the court as to whether it is a tort of a "taking." If the court finds it is taking, a further determinative issue is whether it shall be found to be temporary or permanent.

There is the situation also where there is a danger of possible or prospective invasion created by construction or reconstruction of a highway. A few years ago we had a question arise in this connection with Interstate construction in the Missouri River bottom in western Iowa. A landowner was located in the northeast quadrant of the Interstate and a

county road. To the north of him lay a large, diked drainage ditch. The attorney for the landowner complained that the construction of the Interstate grade left his client in a pocket and that given a certain degree of flood coming down the drainage ditch, it would overflow and his client would thereby suffer injury to his property. After investigation was made, it was agreed that though the contentions made by the landowner attorney were not out of the realm of possibility, that the probability of such happenings was very small and that the possibility of any danger to human life was practically non-existent. When the landowner's attorney became convinced that the statute of limitations would not start to run until the time of any first injury, he did not further press the matter.

NATURE OF LANDOWNER'S REMEDIES  
AGAINST HIGHWAY AUTHORITY FOR  
TEMPORARY OR PERMANENT  
DRAINAGE INJURY

*Statutory Actions*

In a number of States there are statutes providing for direct actions for damages against the State such as tort claims acts. These provisions will not be of general interest. However, where another State has a statute similar to your own, its interpretation may often be persuasive.

*Inverse Condemnation*

In inverse condemnation we have the landowner instituting a direct action against the State based on the theory that he has either temporarily or permanently lost certain of his property rights due to a drainage invasion contrary to his constitutional property rights.

Because our State still retains its full immunity from tort, it has been especially disturbing to find that there have been successful inverse condemnation actions involving a temporary invasion or trespass of waters. However, there are also such cases where the landowner's action

has failed because the court found that such temporary or isolated invasion was only a tort and not a taking in the constitutional sense.

Inverse condemnation action has the advantage to the landowner of requiring but one action to achieve his desired result. This area is well covered in the following two articles: Lindas, L.I., "Drainage-Inverse Condemnation" in report of Legal Affairs Committee, AASHO (Oct. 1961); and Lindas, L.I., "Ordinary vs. Inverse Condemnation" *Proc.*, AASHO, p. 52 (1957).

#### *Mandamus Action to Condemn*

Mandamus action to condemn is an equitable action based on the theory that there has been a taking of property as to which the alleged taker should be required to institute condemnation proceedings. Landowner's attorneys have used such procedure in our State where there has been drainage damage.

#### *Injunction*

Ordinary and mandatory injunctions are a common landowner's remedy. The former enjoins the highway department from taking a certain action while the latter requires it to abate a condition which it has created.

Where a clear statutory or drainage right is being violated to the landowner's material injury, equity courts will ordinarily grant an injunction to the landowner. When there is no substantial damage shown to the landowner, even though there is a technical diversion, courts of equity do not act.

Difficult questions are presented where the damage to the landowner is minor compared to the cost to the State to correct. It is probable that the landowner will find it easier to obtain an ordinary injunction restraining the highway department from certain acts as compared with obtaining an order to abate an already established structure or design at substantial expense.

#### *Other*

Our State's highway authorities have been given the right of summary abatement where a landowner blocks a natural watercourse that affects a highway. It is doubtful whether the courts would look with favor on a landowner so acting under most circumstances.

#### HIGHWAY DRAINAGE LAW PRACTICE AND PROCEDURE

#### *Burden of Proof*

It is probably universal that the burden of proof is on the landowner, at least initially, in all jurisdictions.

#### *Measure of Damages*

Where the landowner's damages are to be determined by either condemnation or inverse condemnation, it is to be expected that the measure of damages will be determined by the principles of eminent domain applicable in the jurisdiction. In other circumstances such as under tort claims acts, varying tort measures would apparently apply.

#### *Nature of Landowner's Evidence*

Often landowner's evidence will consist of neighbors who testify that a particular drainage condition never existed prior to some type of action or construction work by the highway department. As Mr. Lindas of Oregon has indicated, this type of evidence is commonly given too much weight in spite of well-prepared engineering evidence that is in direct contradiction.

#### *State Highway Departments Procedure and Evidence*

The highway department attorney will generally receive a department file of correspondence in connection with any drainage problem with which he is involved. He will wish to interview all highway department employees who can make any positive contribution to a further understanding of the problem. Design depart-

ment engineers with the greatest background in drainage engineering will often have to be enlisted.

In connection with problems arising from road construction work, he may have to talk with the inspectors on the project and occasionally to representatives of the contractor. As to established highways, he may find that members of the maintenance force and road patrols have a substantial familiarization with the property and problem. Some drainage problems on existing highways will have a history going back many years. This may mean that retired employees may have to be sought out on occasion. Private citizens occasionally may be willing to give their observations.

Discovery proceedings of various

sorts, including oral depositions, may be basic to adequate preparation to meet the exact litigation claim of the landowners and their alleged proof.

Existing plans, including the cross-section sheets, and perhaps plans for such highway prior to its reconstruction, will be generally indispensable. In many cases survey crews will have to take additional elevations and perhaps plot them on a special trial drainage plat. In the face of testimony of the farmer's neighbors, it is difficult to be too well prepared.

Other sources in the gathering of relevant evidence may be the U. S. Weather Bureau, the U. S. Coastal and Geodetic Survey (Water Resources Division), the Corps of Engineers of the U. S. Army, and perhaps certain State agencies.

## DISCUSSION

*Canada.*—We have just recently re-established the rule in these drainage cases in Florida in a case called *Poe v. State Road Department*, 127 So.2d 898 (1961), that *res adjudicata* applies to recurrent claims arising from flooding. This may be an effective defense against such claims where the State builds its embankments but does not design them to anticipate the "7-year rain," so that the rain comes three years later and floods 10 acres of the back 40. The rule in this case refers to an earlier decision, I believe in Alabama, and another in Florida, holding that where the State has taken property from that landowner "he should have raised every issue that was reasonably known to him at the time of the original condemnation suit. Having failed to do that he is forever barred from recovering those damages in a subsequent action." Now, in this instance, Poe was the party to a condemnation action 6 years previously in which the State took part of his land for a highway, and in this action he did allege that the highway construction would endanger his land by flooding. So the jury in the condemnation case was

presumed to have taken this into account in his original condemnation award.

Whether this rule would apply to successors in interest in the land, or just to the landowner who was originally a part to the condemnation and retained his interest, I do not know.

*Montano.*—In Colorado the court has said that all damages, present and future, must be determined in the original condemnation proceedings. But they have also gone a little further and said with respect to claims due to negligence that it will be presumed there is no negligence if the highway project is shown to be properly constructed. Thus the rule that all damages must be awarded in the original proceedings bars any future claims unless they can show that there was actually negligence in the construction of the highway facility.

*R. E. Barrett.*—We have argued that the construction of highway has nothing to do with eminent domain since it is carried out under the police power. We try to keep out water damage claims by separating them from eminent domain, and handling



them as a type of injury that is not attributable to the taking and may not happen again.

*Thomson.*—There are two distinct theories on this question, as we have just heard, and I think that the possibilities of each should be explored. I am not aware that they have ever been compared and clarified.

*Banister.*—In Louisiana we have a practice of taking our deeds and reciting in them that the landowner waives any claims for damages past, present or future. That has never been tested in courts and I do not know whether it is of any value. I wonder if anyone else has tested any

similar waiver to see how strong it is.

*Carlson.*—In California we had a case along that line, and the court held that it covered only those damages that were reasonably foreseeable. We are afraid that this means we have to have another lawsuit to determine what is reasonably foreseeable.

*Thomson.*—In Iowa contracts we have a provision very similar to that but still we have the statutory mandate to drain the highways in their natural course of drainage. How those two will be read together and reconciled, I do not know.