

# IN THE SUPREME COURT OF TEXAS

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No. 98-0578  
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E. H. BRAINARD, II, CAROLYN ROGERS, NANCY BRISCOE, BOONE PICKENS, BEA PICKENS, MORRISON CATTLE COMPANY, J. A. WHITTENBURG, III, FRANCES W. KLEIN, JACK F. TURNER, DIANE E. BOWES, AND J. A. WHITTENBURG, IV, ET AL.,  
PETITIONERS

v.

THE STATE OF TEXAS AND THE GENERAL LAND OFFICE OF THE STATE OF TEXAS,  
RESPONDENTS

=====  
ON PETITION FOR REVIEW FROM THE  
COURT OF APPEALS FOR THE SEVENTH DISTRICT OF TEXAS  
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**Argued on February 10, 1999**

JUSTICE HANKINSON delivered the opinion of the Court.

Today we resolve a boundary dispute between the State of Texas and thirty owners of lands bounded by the Canadian River as it flows through Roberts and Hutchinson Counties in the Panhandle. The parties disagree about whether conditions on the Canadian River that were brought about or influenced by the closing of the Sanford Dam in 1965 should be considered by surveyors in marking the present-day gradient boundary of the Canadian River. The State contends that the location of the gradient boundary between the State's riverbed and the private riparian land must be determined by the last "natural" bed of the Canadian River, as it existed before the operation of Sanford Dam. The Landowners argue that the location of the gradient boundary must be marked along the "present" bed of the Canadian River, as it exists today.

In the trial court, each side filed a motion for summary judgment on the boundary issue, relying on its own survey. The trial court ruled that the Landowners, as riparian owners, were “entitled to have their land abut and be washed by the present flow of water, as established by . . . a gradient boundary survey done under present conditions on the Canadian River, and not as of a date before Sanford Dam was closed.” After further proceedings, the trial court rendered judgment declaring that the Landowners’ survey marked the boundary between the State’s riverbed and the riparian tracts. In addition, the court awarded the Landowners attorney’s and surveyor’s fees under the Frivolous or Unreasonable Claims Act and the Declaratory Judgments Act. The court of appeals reversed the trial court’s final judgment, remanded the boundary question for trial by jury, and rendered judgment that the legislative resolution granting the Landowners permission to sue barred them from recovering attorney’s and surveyor’s fees. 968 S.W.2d 403, 410.

We disagree with the court of appeals that the boundary dispute in this case presents a fact question. The differences between the parties’ surveys (and, in particular, their chosen river banks) are based on conflicting legal theories that we must resolve. Because the doctrines of riparian ownership, including accretion, reliction, and erosion,<sup>1</sup> may apply to changes in a river’s course due to artificial as well as natural causes, we hold that changes brought about or influenced by an artificial structure, such as a dam, must be considered in marking the gradient boundary of a river, so long as the riparian owner does not cause or contribute to the artificial influence. We therefore conclude that a survey of the disputed area must account for present, i.e., post-dam, conditions on the Canadian River. We further conclude that the trial court did not err when it rendered judgment declaring that

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<sup>1</sup>As explained in more detail below, “riparian” means belonging or relating to the bank of a river or stream. “Accretion” and “reliction” generally refer to the gradual addition to land caused by the action of water upon the land, while “erosion” refers to the gradual wearing away of the land.

the Landowners' survey marks the gradient boundary of the Canadian River in the disputed area. We agree with the court of appeals, however, that the legislative resolution bars the Landowners from recovering their attorney's and surveyor's fees. For these reasons, we affirm in part and reverse in part the court of appeals' judgment, and reinstate in part the trial court's judgment declaring that the Landowners' survey correctly marks the boundary between the State's riverbed and the riparian tracts.

### **Background**

The Canadian River begins in the Sangre de Cristo Mountains in northeastern New Mexico and traverses the Texas Panhandle, including Hutchinson and Roberts Counties, before joining the Arkansas River in eastern Oklahoma. In 1962, the United States Bureau of Reclamation began construction of Sanford Dam under the authority of the Texas Board of Water Engineers and in cooperation with the Canadian River Municipal Water Authority (CRMWA), a political subdivision of the State of Texas. Sanford Dam was built primarily to create a water supply for city members of the CRMWA and also to provide flood controls for the region. The dam is situated on the Canadian River about fourteen miles upstream from the nearest property involved in the boundary dispute.

Upon the completion of Sanford Dam in 1965, the flood gates were closed. In 1968, the CRMWA took over the operation and maintenance of Sanford Dam from the United States Bureau of Reclamation. Since 1965, no controlled release of the impounded waters has occurred.

Closing the Sanford Dam reduced the flow of the river water and encouraged the growth of more vegetation in the river channel. As the court of appeals noted, the narrowing of the general width of the flowing water in the river downstream from Sanford Dam caused confusion and uncertainty about the location of the boundary between the State's riverbed and the Landowners'

riparian tracts. 968 S.W.2d at 405. Before this case, there had never been a gradient boundary survey in the disputed area.

In 1985, the General Land Office (GLO) advertised for proposals from licensed state land surveyors to conduct “a survey of the Canadian River.” The GLO announced in the *Texas Register* that it intended to determine the “historical gradient line prior to any changes in the river caused by dams or other man-made alterations.” 10 Tex. Reg. 4244 (Oct. 29, 1985). On the same page, the GLO also requested surveyors to submit proposals to conduct “a gradient boundary line survey” along the Red River, but the GLO described that surveying project differently. Along the Red River, the GLO’s survey would be conducted “in accordance with any direction provided by the United States Supreme Court.” *Id.*

In 1987, the GLO Commissioner, Garry Mauro, wrote to the Landowners, notifying them that Darrell Shine and other GLO representatives would commence surveying the boundaries of the Canadian River. The Commissioner attached to the letter a position paper explaining the State’s standpoint on the boundary issue. According to the position paper:

From the time the land abutting the Canadian River was patented, the state has owned the riverbed . . . . As the river changed naturally, the boundary between state and private land moved along with any resulting changes in the gradient boundary. When the floodgates of the Sanford Dam were closed in 1965 the river began to change noticeably. But the boundary between state and private land did not change with it because the changes were caused by the dam and other human activity. The legal boundary remains as it was prior to construction of the dam.

In light of this view, the position paper also stated that the project would “survey the riverbed . . . to determine where the gradient boundary of the Canadian River was prior to construction of the dam.”

The GLO's position paper provides the seminal statement of the State's "artificial change" theory, which gives rise to this boundary dispute. The artificial change theory posits that conditions on a river that are influenced by human activity, such as the closing of Sanford Dam, need not be considered by surveyors marking the gradient boundary of the river. The Landowners, who disagreed with the State's position, met with GLO officials to protest the announced survey. They requested that the State file an action so that both sides could obtain judicial review of the State's "artificial change" theory before the State undertook the survey. The Commissioner refused, and Shine commenced his survey work.

Pursuant to Senate Concurrent Resolution 165, 71st Leg., R.S., 1989 Tex. Gen. Laws 5909 (SCR 165), the Landowners sued the State and the GLO in Roberts County to establish the boundary of the Canadian River. Shortly after the Landowners brought this action, they moved for partial summary judgment asking the trial court to rule the State's artificial change theory incorrect as a matter of law. The State responded by filing a cross-motion for summary judgment, requesting the trial court to decree the gradient boundary marked by Shine as the correct boundary of the Canadian River. Alternatively, the State requested that the trial court apply the artificial change theory to avoid divesting the State of title to the bed of the Canadian River as it existed before the operation of Sanford Dam. The trial court did not rule on either side's original motions for summary judgment. Instead it granted the Landowners time to secure a gradient boundary survey, thus allowing them to plead a specific boundary line. The Landowners retained surveyor W.C. Wilson, Jr., to conduct their survey.

Again, the parties filed cross-motions for summary judgment. The Landowners asked the trial court to rule that, as a matter of law, the boundary must be marked by a gradient boundary survey

done under present conditions on the Canadian River, not conditions before Sanford Dam was closed. Their survey stated that the width of the riverbed is approximately 20 to 50 feet. On the other hand, the State urged the trial court to rule that, as a matter of law, the change in the flow of the Canadian River resulting from the operation of Sanford Dam did not affect title to the riverbed and that the State's survey, based on the last natural bed of the Canadian River, marked the correct boundary of the Canadian River. The State's survey concluded that the width of the riverbed was approximately 3400 feet. After a hearing, the trial court rejected the State's artificial change theory as a matter of law. The trial court ordered that "the riparian owners are entitled to have their land abut and be washed by the present flow of water, as established by . . . a gradient boundary survey done under present conditions on the Canadian River, and not as of a date before Sanford Dam was closed."

The Landowners then moved the trial court, under Texas Rule of Civil Evidence 104(a) and this Court's decision in *E.I. Dupont de Nemours and Co. v. Robinson*, 923 S.W.2d 549 (Tex. 1995), to rule the State's survey inadmissible on the grounds that it was based on the artificial change theory and it did not mark the gradient boundary along the water-washed banks that serve to confine the present flow of the Canadian River in the disputed area. After a venue change to Hutchinson County, the trial court ruled the State's survey inadmissible. The trial court also struck the testimony of two other expert witnesses, Stanley A. Schumm and James Estes, offered by the State to buttress its survey.

The Landowners filed a final motion for partial summary judgment, asking the trial court to declare that the present-day gradient boundary, as described in the Landowners' survey, marked the boundary in the disputed area. After another hearing, the trial court concluded that under its legal rulings regarding Sanford Dam and the record presented, there were no genuine issues of material

fact. Consequently, the trial court announced that it would render judgment declaring that the Landowners' survey marked the boundary between the State's riverbed and the riparian tracts.

The Landowners then moved for an award of attorney's and surveyor's fees under the Frivolous or Unreasonable Claims Act, TEX. CIV. PRAC. & REM. CODE § 105.002, and the Declaratory Judgments Act, TEX. CIV. PRAC. & REM. CODE § 37.009. The trial court granted the Landowners' motion, specifically finding that "the actions of the GLO of the State of Texas have been unreasonable" under the Frivolous Claims Act, and that "it is equitable and just" for the Landowners to recover attorney's fees and costs under the Declaratory Judgments Act.

On another change of venue to Collingsworth County, the court held a jury trial to determine the Landowners' fees and costs. The trial court accepted the jury's verdict, fixing the sums of \$144,000 as surveyor's fees, \$350,000 as attorney's fees for trial, \$15,000 as attorney's fees for an appeal to the court of appeals, and \$5,000 as attorney's fees for an appeal to the Supreme Court. After granting the Landowners' post-trial motion for prejudgment interest, the trial court rendered a final judgment decreeing recovery by the Landowners from the GLO of \$238,507.73 as surveyor's fees and \$579,706.29 as attorney's fees, along with an additional \$15,000 for an appeal to the court of appeals and \$5,000 for an appeal to this Court. The final judgment also established the boundary of the Canadian River as depicted in the Landowners' survey.

On appeal, the State charged the trial court with error in granting summary judgment for the Landowners because their survey was premised on incorrect legal principles, and because fact questions existed about the survey's correctness. The State also claimed that the trial court erred in holding the testimony of the State's witnesses inadmissible and in denying the State's motion for summary judgment because, as a matter of law, the State's survey correctly located the boundary of

the Canadian River. Finally, the State charged the trial court with error in awarding the Landowners attorney's and surveyor's fees and prejudgment interest. The Landowners raised three cross-points, presented conditionally in the event of a reversal, challenging the trial court's change of venue from Roberts County to Hutchinson County.

The court of appeals did not reach the artificial change theory issue. Rather, it held that the trial court erred by ruling the State's survey inadmissible for two reasons. First, according to the court of appeals, the State's survey appeared to qualify as a present-day gradient boundary survey because Shine allegedly used present data in conjunction with historic data. 968 S.W.2d at 409. Second, the court of appeals concluded that the trial court erroneously granted summary judgment for the Landowners on the basis that they had a right to have their land abut and be washed by the present flow of water. *Id.* According to the court of appeals, the Landowners did not have such a right because "the gradient boundary is determined by the bank of the river, not by the water in the river." *Id.* (quoting Stiles, *The Gradient Boundary—The Line Between Texas and Oklahoma Along the Red River*, 30 TEXAS L. REV. 305, 310 (1952)). Therefore, the Landowners' objection to Shine's survey was more properly directed to its weight rather than its admissibility. 968 S.W. 2d at 409. Finally, the court of appeals held that because the trial court should have admitted the Shine survey, an "issue of material fact [exists] as to whether either survey, or neither of them, is correct." *Id.* at 410. Thus, the court of appeals reversed the summary judgment and remanded the cause for a factual determination of the correct gradient boundary. *Id.*

The court of appeals also reversed and rendered judgment that SCR 165 barred the Landowners from recovering attorney's and surveyor's fees. *Id.* at 410. On rehearing, the court of appeals concluded, sua sponte, that the Landowners' action was a trespass to try title action for which

attorney's fees are not authorized. The court of appeals further ruled that the GLO's actions were not "unreasonable" within the meaning of TEX. CIV. PRAC. & REM. CODE § 105.002. 968 S.W.2d at 414. Thus, the court of appeals reversed the part of the judgment decreeing the Landowners' recovery of attorney's and surveyor's fees and rendered judgment that the Landowners take nothing by their action for those fees. *Id.*

Finally, on the Landowners' conditional cross-points on venue, the court of appeals affirmed the trial court's order changing venue of the case from Roberts County to Hutchinson County on the State's claim under Texas Rule of Civil Procedure 257 that the State could not receive a fair and impartial trial in Roberts County. 968 S.W.2d at 411-13. Both parties filed petitions for review.

### **The Boundary Dispute**

The essential question before this Court is whether either the Landowners' or the State's survey uses the correct methodology to mark the gradient boundary of the Canadian River in the disputed area. We disagree with the court of appeals that this is a fact question. In this case, the differences between the parties' surveys (and, in particular, their chosen river banks) are based on conflicting legal theories that must be resolved by this Court. The unusual facts of this case require us to determine the validity of the artificial change theory in light of the accepted method for determining the boundary between state riverbed and riparian land and in light of traditional rules of riparian ownership.

From the inception of this case, the State's claim to the disputed land has been premised on the view that any change in the boundary of the Canadian River that is caused by human activities does not divest the State of title to the bed of the Canadian River as it existed in its unaffected condition. In support of this artificial change theory, the State relies upon a 1971 attorney general

opinion, which concluded that the construction of Sanford Dam would have no effect on the boundary between the State's Canadian Riverbed and private property:

The fact that man has altered the course and flow of the navigable stream by a dam does not alter the ownership of the former river bed, as the bed existed before the alteration. *Ray vs. State*, 153 S.W.2d 660 (Tex. Civ. App. 1941, error ref. w.o.m.); *City and County of Dallas [Levee Improvement] District vs. Carroll*, 263 S.W.2d 307 (Tex. Civ. App. 1953, error ref., n.r.e.); *Wilemon vs. City and County of Dallas [Levee Improvement] District*, 264 S.W.2d 543 (Tex. Civ. App. 1953, error ref., n.r.e.).

Op. Tex. Att'y Gen. No. M-953 (1971). The State contends that although the attorney general opinion is persuasive rather than controlling legal authority, the law, policy, and reasoning underlying this opinion are sound and well established, and further the property rule favoring continued ownership of state riverbeds.

The State's contention that the gradient boundary survey conducted by Shine is correct as a matter of law appears to be firmly tied to the artificial change theory. Earlier in the case, the State's Motion for Summary Judgment read:

As a matter of law, changes in the amount of water flow and the nature of that water flow in the Canadian River as a result of the closing of the flood gates of Sanford Dam in 1965 cannot shift the legal gradient boundary of the Canadian River . . . . An examination of the transparent overlay of [Shine's survey] reveals that it conforms to the last natural river bed of the Canadian River prior to the closing of the Sanford Dam in 1965.

The State continues to advance this argument before this Court.

The State's second, and more recent, argument is that because the changes effected in the Canadian Riverbed by Sanford Dam were "sudden" and "clearly discernable," there can be no change in state ownership of the bed. Citing the 1971 attorney general opinion, the State argues that riverbed

changes effected by large public works, such as Sanford Dam, are “inherently abrupt and cannot change title to the land affected.” In making this argument, the State points to traditional rules of riparian ownership, which provide that changes in land inure to the riparian owner only if they are “gradual and imperceptible.”

The Landowners contend that the artificial change theory is wrong. In particular, they argue that the construction and operation of Sanford Dam did not suspend or otherwise affect the application of normal rules of law for determining the boundaries of riparian lands. According to the Landowners, there is no exception to the rules of riparian ownership for changes in a river influenced by dams or other man-made works, except for structures constructed by riparian owners themselves. The Landowners’ assertions imply that because the State’s survey sets out to find “a historical gradient line prior to any changes in the river caused by dams or other man-made alterations,” it effectively disregards present changes in the riverbed that divest the State of title to the disputed land. Thus, the State’s survey is premised on an incorrect theory of law.

The Landowners argue that the artificial change theory has been rejected by the United States Supreme Court, this Court, and other courts throughout the nation. They point to several cases in particular for the proposition that accreted and relicted land along a river vests in the riparian owner regardless of whether the changes in a river’s course or water flow are due to natural or artificial causes. The Landowners also urge that the authorities the State cites in support of its artificial change theory are based on a rule of law, sometimes called the “landfill” rule, that does not apply here, or are otherwise irrelevant. Finally, the Landowners assert that a rule that does not distinguish between natural and artificial changes in a river boundary is the only approach that accords with the rationale

of riparian boundary law and the concept that the State's ownership of navigable riverbeds follows the flow of the water.

The Landowners also contend that the State's second argument is misguided. According to the Landowners, even if the operation of the Sanford Dam reduced the water flow in the Canadian River, such an effect is not necessarily sudden and abrupt. They argue, therefore, that the traditional rules of riparian ownership do not conclusively preclude a change of ownership.

Each party asks this Court to hold that its survey designates the boundary line between the State's riverbed and the Landowners' riparian tracts in the contested area. The parties do not dispute that the Landowners are riparian owners.<sup>2</sup> Nor do they disagree that the State owns the bed of the Canadian River.<sup>3</sup>

The parties also do not dispute that a survey marking the boundary line must comport with the gradient boundary methodology, as defined by the United States Supreme Court in a series of cases entitled *Oklahoma v. Texas*. 260 U.S. 606 (1923); 261 U.S. 340 (1923); 265 U.S. 500 (1924). Our Court has adopted this approach for determining the line between public and private ownership along the banks of a navigable stream.<sup>4</sup> See *Mottl v. Boyd*, 286 S.W. 458, 467-68 (Tex. 1926);

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<sup>2</sup>The original patents from the State that conveyed the Landowners' riverfront surveys created riparian land. "Riparian" is defined as belonging or relating to the bank of a river or stream. BLACK'S LAW DICTIONARY 1327 (6th ed. 1990). A riparian owner, therefore, is one whose land is bounded by a river, and riparian rights are those that such an owner has to the use of the water, including access to it at all stages. *Mottl v. Boyd*, 286 S.W. 458, 468 (Tex. 1926). In Texas, riparian water rights are subject to a centrally administered adjudicative and licensing system. See TEX. WATER CODE §§ 11.301-.341. Riparian water rights are not at issue in this case.

<sup>3</sup>This position comports with Texas law that the State holds title to the riverbed when it conveys patents to private riparian lands. See *Maufrais v. State*, 180 S.W.2d 144, 148 (Tex. 1944); *State v. Bradford*, 50 S.W.2d 1065, 1069 (Tex. 1932).

<sup>4</sup>The parties do not dispute that the Canadian River is a navigable stream by statute. See TEX. NAT. RES. CODE § 21.001(3) ("'Navigable stream' means a stream which retains an average width of 30 feet from the mouth up.").

*Diversion Lake Club v. Heath*, 86 S.W.2d 441, 446-47 (Tex. 1935); *Maufrais v. State*, 180 S.W.2d 144, 147-48 (Tex. 1944). The methodology is also described by Colonel Arthur A. Stiles, one of the boundary commissioners appointed by the Supreme Court in *Oklahoma v. Texas*, in Stiles, *The Gradient Boundary — The Line Between Texas and Oklahoma Along the Red River*, 30 TEXAS L. REV. 305 (1952).

The gradient boundary methodology involves determining two basic factors: the location of the “key bank,” and the “gradient,” or rate of fall, of the water. According to the rules announced in *Oklahoma v. Texas*, and adopted by our Court in *Motl*, *Diversion*, and *Maufrais*, the bank along which to determine the gradient boundary of a navigable stream:

... is the water-washed and relatively permanent elevation or acclivity at the outer line of the river bed which separates the bed from the adjacent upland, whether valley or hill, and serves to confine the waters within the bed and to preserve the course of the river. . . .

*Oklahoma v. Texas*, 260 U.S. at 631-32; *see also Oklahoma v. Texas*, 261 U.S. at 341-42. This bank is typically “an accretion bank,” and “seldom an erosion or ‘cut bank.’” Stiles, *supra*, at 317. The boundary is “on and along the bank at the average or mean level attained by the waters in the periods when they reach and wash the bank without overflowing it.” *Oklahoma v. Texas*, 260 U.S. at 632; *see also Oklahoma v. Texas*, 261 U.S. at 342. This boundary line is defined as “a gradient of the flowing water in the river,” located halfway between the lowest level where the flowing water first touches the bank and the highest point where the water reaches the top of the bank without overflowing it. *Oklahoma v. Texas*, 265 U.S. at 497; *see Stiles, supra*, at 316. If the gradient boundary is marked properly along both sides of the river, then the land between the gradient boundary

lines constitutes the river's "bed." In *Motl v. Boyd*, this Court defined the "bed" of a navigable stream:

The bed of a stream is that portion of its soil which is alternatively covered and left bare as there may be an increase or diminution in the supply of water, and which is adequate to contain it at its average and mean stage during an entire year, without reference to the extra freshets of the winter or spring or the extreme drouths of the summer or autumn.

286 S.W. at 467 (citing *Oklahoma v. Texas*, 260 U.S. at 631); accord *Maufrais*, 180 S.W.2d at 147; *State v. Bradford*, 50 S.W.2d 1065, 1069 (Tex. 1932). The Supreme Court's definition of a river's "bed" in *Oklahoma v. Texas* contains additional language that does not appear in *Motl*:

When we speak of the bed we include all of the area which is kept practically bare of vegetation by the wash of the waters of the river from year to year in their onward course, although parts of it are left dry for months at a time; and we exclude the lateral valleys which have the characteristics of relatively fast land and usually are covered by upland grasses and vegetation, although temporarily overflowed in exceptional instances when the river is at flood.

260 U.S. at 632.

Additions to land are generally created by accretion or reliction. Accretion is "the process of increasing real estate by the gradual and imperceptible disposition by water of solid material, through the operation of natural causes so as to cause that to become dry land that was once before covered by water." *Butler v. Sadler*, 399 S.W.2d 411, 421 (Tex. Civ. App. — Corpus Christi 1966, writ ref'd n.r.e.); see also *Giles v. Basore*, 278 S.W.2d 830, 835 (Tex. 1955); *Natland Corp. v. Baker's Port, Inc.*, 865 S.W.2d 52, 57 (Tex. App. — Corpus Christi 1993, writ denied); *State v. Baxter*, 430 S.W.2d 547, 548 (Tex. Civ. App. — Waco 1968, writ ref'd n.r.e.).

Accreted land is of two kinds, one by alluvion and one by reliction or, as it is sometimes called, dereliction. *See Denny v. Cotton*, 22 S.W. 122, 124 (Tex. Civ. App. — El Paso 1893, writ ref'd). Accretion by alluvion is the gradual addition made to land by the washing of the water. *See County of St. Clair v. Lovington*, 90 U.S. 46, 56 (1874). Alluvion is the solid material, such as mud, deposited by the water. *Id.* at 66-67. Accretion by reliction is the gradual addition made to land by a recession of the water, as when the water shrinks below the usual water-mark. *See St. Clair*, 90 U.S. at 67; *Denny*, 22 S.W. at 124; *see also* TIFFANY REAL PROPERTY 3D ED. § 1219 (1975). Reliction is the uncovering of previously submerged land by a permanent recession of a body of water, rather than a mere temporary or seasonal exposure of the land. *See* THOMPSON ON REAL PROPERTY 5A § 2563 (1978).<sup>5</sup>

A riparian owner ordinarily loses title to land lost by erosion. “Erosion is the process of wearing away the land.” *Coastal Indus. Water Auth. v. York*, 532 S.W.2d 949, 952 (Tex. 1976); *Natland Corp.*, 865 S.W.2d at 57. Generally, as with accretion and reliction, erosion is effected gradually and imperceptibly. *See York*, 532 S.W.2d at 952.

Texas also follows the well-accepted rule that when the location of the margin or bed, which serves as a boundary, is changed suddenly and perceptibly, the line dividing the riparian tracts remains the former boundary, not the boundary created by the change. *See Maufrais*, 180 S.W.2d at 149. This sudden removal or deposit of riparian land is called avulsion. *See York*, 532 S.W.2d at 952; *City of Corpus Christi v. Davis*, 622 S.W.2d 640, 644 (Tex. App. — Austin 1981, writ ref'd n.r.e.); *Denny*, 22 S.W. at 124; *see also* THOMPSON ON REAL PROPERTY 5A § 2561 (1978); TIFFANY REAL PROPERTY

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<sup>5</sup>Typically, in Texas and elsewhere, the term accretion is used to refer to accretion by alluvion, and the term reliction is used to denote accretion by dereliction. For purposes of this opinion, and for consistency, we will use these terms in the same way.

3D ED. § 1219 (1975). Gains to or losses from land abutting a stream that take place by avulsion do not effect a change in ownership. See *York*, 532 S.W.2d at 952; *Denny*, 22 S.W. at 124. Avulsion also may arise from the sudden abandonment by a stream of its old channel and the creation of a new one. See *Denny*, 22 S.W. at 124; see generally *State v. R.E. Janes Gravel Co.*, 175 S.W.2d 739, 742 (Tex. Civ. App. — Austin 1943), modified in part on other grounds sub nom. *Maufrais v. State*, 180 S.W.2d 144 (Tex. 1944); *Grubstake Inv. Ass'n v. State*, 272 S.W. 527, 531 (Tex. Civ. App. — Austin 1925), rev'd on other grounds, 297 S.W. 202 (Tex. 1927); *Denny*, 22 S.W. at 124.

Texas follows the general rule that when the location of the margin or bed of a body of water that constitutes the boundary of a tract of land is gradually and imperceptibly changed or shifted by accretion, reliction, or erosion, the margin or bed of the body of water, as so changed, remains the boundary line of the tract, which is extended or restricted accordingly. See *Hancock v. Moore*, 146 S.W.2d 369, 370 (Tex. 1941); *Manry v. Robison*, 56 S.W.2d 438, 443-44 (Tex. 1932); *Tyler v. Gonzales*, 189 S.W.2d 519, 521-22 (Tex. Civ. App. — San Antonio 1945, writ ref'd w.o.m.); *Denny*, 22 S.W. at 124 (Tex. Civ. App. 1893, writ ref'd). The rule is long established that a change is “gradual and imperceptible” if ““though the witnesses may see, from time to time, that progress has been made, they could not perceive it while the progress was going on.”” *Denny*, 22 S.W. at 124 (quoting *St. Clair*, 90 U.S. at 68).

A riparian owner thus acquires title to all such additions or extensions to the land and loses title to portions of the land that are worn, washed away, or encroached upon by the water. See, e.g., *York*, 532 S.W.2d at 952; *Maufrais*, 180 S.W.2d at 148-49. The rights of the riparian to additions to land by accretion or reliction are vested property rights. See *St. Clair*, 90 U.S. at 68; *Manry*, 56 S.W.2d at 444.

Several rationales support the long-standing doctrine of accretion. One of these foundations derives from the Roman theory of accession, whereby just as the owner of a tree that produces fruit becomes the owner of the fruit, the owner of riparian land owns accreted land. Another proffered rationale is that when a body of water is a boundary between landowners, that body should remain the legal boundary even though it has changed its location. A third reason for the accretion doctrine is that when land is gained from a body of water by little and imperceptible degrees, as distinguished from sudden changes, the new land should go to the owner of the adjoining land under the maxim “de minimus non curat lex,” or “the law does not care for trifling matters.” Another justification is the “productivity theory,” which holds that the law, as a matter of policy, should favor productive uses of land, and that the riparian owner is in a better position than others to use accreted land. A fifth rationale is the “compensation theory”: because a riparian owner loses land through erosion, the owner should benefit from any addition to the land. The final, and perhaps most important, reason for the doctrine of accretion is to preserve the riparian quality of the upland. Indeed, this quality is recognized as being a valuable asset and a part of the ownership of riparian land. *See* Lundquist, *Artificial Additions to Riparian Land: Extending the Doctrine of Accretion*, 14 ARIZ. L. REV. 315, 322-24 (1972); Annotation, *Riparian Owner’s Right to New Land Created by Reliction or by Accretion Influenced by Artificial Condition Not Produced by Such Owner*, 63 A.L.R.3D 249, 258-60 (1975); *see also St. Clair*, 90 U.S. at 66-68; *Denny*, 22 S.W. at 124.

When the processes of accretion, reliction, and erosion are initiated, accelerated, or otherwise influenced by artificial structures, the usual rule that a riparian owner receives title to new lands formed as a result of those processes is not affected. *See, e.g., City of St. Louis v. Rutz*, 138 U.S. 226, 245 (1891); *St. Clair*, 90 U.S. at 66. Many jurisdictions follow this general rule. *See* Lundquist,

*supra*, at 326-27 (citing cases); 63 A.L.R.3D 249, 264-71 (1975) (same).<sup>6</sup> It applies to situations in which human activity has interfered with the currents of the waterway or the rate of flow of the water, thus causing an accretion or reliction when otherwise none would have occurred. See 63 A.L.R.3D at 257; Lundquist, *supra*, at 326.

The process that takes place as a result of such human activity is often referred to as “artificial accretion.” Lundquist, *supra*, at 326. Artificial accretion is unlike natural accretion only in so far as the start of the process is influenced by a change in water flow affected by an artificial rather than a natural cause. The process itself, however, is in fact natural, and, like natural accretion, occurs gradually and imperceptibly. *Id.* at 326-27.

This distinction between the artificial cause that sets the process of accretion in motion and the natural progress of the process itself provides the rationale for maintaining the usual rule of accretion in artificial interference cases. *Id.* at 327. In *County of St. Clair v. Lovington*, the United States Supreme Court held that the rule of alluvion applied despite the allegation that the accretion at issue was caused by artificial structures, including coal dykes:

It is insisted . . . that the accretion was caused wholly by obstructions placed in the river above, and that hence the rules upon the subject of alluvion do not apply. If the fact be so, the consequence does not follow . . . . The proximate cause was the deposits made by the water.

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<sup>6</sup>*United States v. Claridge*, 416 F.2d 933, 935 (9th Cir. 1969); *Littlefield v. Nelson*, 246 F.2d 956, 957 (10th Cir. 1957) (applying Oklahoma law); *Kansas v. Meriwether*, 182 F. 457, 463-64 (8th Cir. 1910); *Reads Landing Campers Ass’n, Inc. v. Township of Pepin*, 546 N.W.2d 10, 13 (Minn. 1996); *Lorusso v. Acapesket Improvement Ass’n, Inc.*, 564 N.E.2d 360, 367 (Mass. 1990); *Board of Trustees of the Internal Improvement Trust Fund v. Sand Key Assocs., Ltd.*, 512 So. 2d 934, 937 (Fla. 1987); *Lakeside Boating & Bathing, Inc. v. State*, 344 N.W.2d 217, 220 (Iowa 1984); *Honsinger v. State*, 642 P.2d 1352, 1354 & n.4 (Alaska 1982); *De Simone v. Kramer*, 252 N.W.2d 653, 657 (Wis. 1977); *Moore v. Kuljis*, 207 So. 2d 604, 614 (Miss. 1967); *Borough of Wildwood Crest v. Masciarella*, 240 A.2d 665, 666 (N.J. 1968); *Krumwiede v. Rose*, 129 N.W.2d 491, 496 (Neb. 1964); *Esso Standard Oil Co. v. Jones*, 98 So. 2d 236, 240 (La. 1957); *State ex rel. Duffy v. Lakefront East Fifty-Fifth St. Corp.*, 27 N.E.2d 485, 486 (Ohio 1940); *Brundage v. Knox*, 117 N.E. 123, 127 (Ill. 1917); *Adams v. Roberson*, 155 P. 22, 23 (Kan. 1916); *Tatum v. St. Louis*, 28 S.W. 1002, 1003 (Mo. 1894).

The law looks no further. Whether the flow of water was natural or affected by artificial means is immaterial.

90 U.S. at 66. Following the reasoning of *St. Clair*, the decision to apply the rule of accretion in a particular case is not governed by whether the change in water flow was affected by an artificial or natural source. Thus, a riparian owner may receive title to accreted land even though the process was influenced by changes in the channel or flow of a river caused by human activity.

There are, however, certain instances in which accreted land caused by an artificial condition does not inure to the riparian owner. A widely recognized exception to the general rule is that accretion does not belong to the owner of the land adjoining the water when the owner causes the accretion. *See, e.g., St. Clair*, 90 U.S. at 66 (river); *Burns v. Forbes*, 412 F.2d 995, 997 (3<sup>rd</sup> Cir. 1969) (tidewater swampland); *Jackson v. United States*, 56 F.2d 340, 342-43 (9<sup>th</sup> Cir. 1932) (ocean); *Kansas v. Meriwether*, 182 F. 457, 463 (8<sup>th</sup> Cir. 1910) (river); *see also* 63 A.L.R.3d at 265-95 (citing cases). For example, in Texas, a landowner may not acquire title to accreted land by artificially building up submerged land into dry land along his shoreline. *See Lorino v. Crawford Packing Co.*, 175 S.W.2d 410, 414 (Tex. 1943); *see also York*, 532 S.W.2d at 952 (citing *Lorino* for the proposition that a riparian owner may not acquire title through self-help by filling and raising the land level).

Texas has not yet addressed the artificial change theory in the context of an artificial structure, such as a dam, that merely affects the current or flow of a river so as to cause artificial accretion. There are, however, certain Texas cases that have rejected the artificial change theory in other contexts, such as when artificial underground drainage causes subsidence, which in turn results in the submergence of land, or when the dumping of dredged spoil onto land makes possible a gradual run off, which eventually creates dry land where land once was submerged. The Landowners cite *Coastal*

*Industrial Water Authority v. York*, 532 S.W.2d 949 (Tex. 1976), and *Natland Corp. v. Baker's Port, Inc.*, 865 S.W.2d 52 (Tex. App. — Corpus Christi 1993, writ denied), to support their claim that the artificial nature of Sanford Dam does not suspend the operation of traditional rules of riparian ownership.

In *York*, certain riparian owners, whose land was the subject of a condemnation suit by the water authority in charge of the Houston ship channel, sought a declaratory judgment that they were entitled to compensation for lands that had become submerged as a result of subsidence caused by the removal of underground waters by municipalities and industries. This Court framed the question as whether the submergence of land to which a riparian owner has title necessarily divests the owner of that title. 532 S.W.2d at 953. Affirming the court of appeals' judgment, we held that the submergence of the land at issue did not divest the riparian owners of title. *Id.* at 954. In doing so, we "place[d] no significance upon the relation between artificial and natural causes of [subsidence]." *Id.* at 952. We then reasoned that in the same way a riparian owner may not acquire title to submerged land through self-help by filling and raising the land level, a riparian owner does not lose title to submerged land resulting from the effects of subsidence caused by the activities of cities and industries over which the riparian owner has no control. *Id.*

In holding that submergence does not necessarily destroy a riparian owner's title, this Court in *York* reaffirmed the rules with respect to property gain and loss due to accretion and erosion. *Id.* at 952, 954. Specifically, the Court carefully distinguished between subsidence, which involves "no displacement of the submerged land in relation to the bed," and accretion and erosion, which, by "the result of the force of the waters," transport land beyond the owner's boundary. *Id.* Because the

submergence at issue involved “only a subsidence,” rather than a “transportation of the York land,” it did not destroy the title of the riparian owners. *Id.* at 954.

The *York* decision implies that if the submergence of land is caused by accretion or erosion, as opposed to subsidence, the riparian owner gains or loses title to the land accordingly. It does not, however, indicate whether the traditional rules of riparian ownership apply when the accretion or erosion that occurs in connection with the submergence of land is influenced by an artificial cause. Nonetheless, we find nothing in *York*’s limited holding that precludes the operation of the rules of accretion, reliction, and erosion to artificially influenced changes in a river channel.

The Landowners also point to a more recent Texas case in support of the proposition that title to artificially influenced accretion vests in the riparian owner when that owner has not caused or directly participated in the accretion. In *Natland*, a purchaser of property sued the seller for breach of warranty, fraud, and violations of the Deceptive Trade Practices Act based on title defects and undisclosed encumbrances against the property. 865 S.W.2d at 55. The State entered the suit seeking a declaratory judgment that it owned thirty-six acres of dry land added to the shoreline by the gradual migration of soil deposited by the Army Corps of Engineers while dredging the adjacent waterway. Specifically, the State argued that the eastern boundary of the property should be the shoreline as it existed before the additional acres of dry land were created, all of which had been submerged before the dredging activity of the Army Corps of Engineers.

Affirming the trial court’s summary judgment, the court of appeals in *Natland* ruled that the seller had acquired title to the dry land, despite the fact that an artificial condition had influenced the process of accretion. *See id.* at 58. The court relied on *York*’s interpretation of *Lorino v. Crawford Packing Co.*, 175 S.W.2d 410, 414 (Tex. 1943), a case in which this Court held that the owner of an

offshore oyster house who gradually built up a dry-land connection to the shore by continually dumping oyster shells into the water did not gain title to the dry land by accretion. Acknowledging that “[s]ome language in *Lorino* might suggest that any addition to the shoreline that has been influenced in the slightest by artificial means is not an accretion passing title to the upland owner,” the court in *Natland* pointed to *York*’s more narrow reading of *Lorino* that an upland owner may not acquire title through self-help by filling and raising the land level. 865 S.W.2d at 57. Thus, according to the *Natland* court, *Lorino* did not preclude the vendor from acquiring title to the land, even though the dredging activities had influenced the process of accretion. *Id.* at 58.

The *Natland* court also cited *York*, as well as two court of appeals cases, *State v. Baxter*, 430 S.W.2d 547 (Tex. Civ. App. — Waco 1968, writ ref’d n.r.e.), and *City of Corpus Christi v. Davis*, 622 S.W.2d 640 (Tex. App. — Austin 1981, writ ref’d n.r.e.), to support the view that “the artificial nature of additions to, or subtractions from, the shoreline is not necessarily determinative of the question of whether title shifts under the doctrines of accretion and erosion.” 865 S.W.2d at 57. In *Baxter*, an upland owner’s shoreline was extended over a number of years by the accumulation of sediment at the mouth of the Colorado River. This accumulation was accelerated by a public works project that destroyed a chain of rafts made of natural materials such as debris and silt, which had previously choked the river. The release of these materials into the stream caused the silt to be carried to the mouth of the river and deposited in the bay over a short period of time. Nonetheless, the Tenth Court of Appeals upheld the trial court’s finding that the accumulation was an accretion belonging to the upland owner. 430 S.W.2d at 548.

In *Davis*, upland owners sued the State over title to certain acres of submerged land that the city of Corpus Christi reclaimed as part of a public beach project. The city intervened, and the upland

owners sought damages from the city for the loss of littoral rights<sup>7</sup> in the land. Because the disputed acreage was covered by the sea at the beginning of the reclamation project, the upland owners had to overcome the presumption that the State held title to the land by proving that the total loss of the shoreline resulted from avulsive not erosive action. After assuming for purposes of the opinion that the doctrine of avulsion applied to tidal lands, the Third Court of Appeals held that the loss to the shoreline resulted from erosive not avulsive action. 622 S.W.2d at 646. Thus, the upland owners lost title to the disputed acreage. The court of appeals reached this result despite the fact that artificial structures, such as a ship channel and various breakwaters, had been erected that interfered with the process of accretion. *Id.* at 644. As *Natland* points out, “unchecked erosion was unnaturally allowed to divest the upland owners of their property.” 865 S.W.2d at 58.

The court in *Natland* surmised that the holdings in *Baxter* and *Davis* were inconsistent with an analysis of accretion or erosion that asked merely whether the process was uninfluenced by artificial means. We agree with *Natland*’s interpretation of *Baxter* and *Davis*. In both cases, the “direct causes” of the accretion or erosion were “the natural forces of the waters and currents on sediments and soil,” but “those natural forces had themselves been influenced by artificial means, such that but for man’s intervention nature would not have changed the shoreline in this way.” 865 S.W.2d at 58. In *Natland*, the court compared the relationship between the dredging activity and the formation of accreted land in its case to the occurrences in *Baxter* and *Davis*:

In the present case, the artificial process of dredging the channel and placing the spoils on land near the shore was followed by the natural drift of this material on to the submerged lands along the shore. Here, as in *Baxter* and *Davis*, an artificial condition merely facilitated the

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<sup>7</sup>“Littoral” means belonging to the shore. BLACK’S LAW DICTIONARY 934 (6th ed. 1990). A littoral owner is one whose land borders an ocean, sea, or lake. *Id.*

process of natural forces carrying soil to either build up or erode the land in question. The action of the Corps of Engineers of depositing spoil material upland does not prevent the upland owner from gaining title to land created by the gradual run-off of that material.

*Id.* at 58. Thus, relying on the principles suggested by *York*, *Baxter*, *Davis*, and *Lorino*, the court in *Natland* held that an upland owner may gain title to artificially induced accretion when that owner has not caused or directly participated in the artificial accretion. *Id.*

Although we do not agree with *Natland* that *York* speaks to whether the artificial nature of additions to or subtractions from the shoreline necessarily determines whether the rules of accretion and erosion apply so as to shift title, we nonetheless agree with its holding concerning artificially induced accretion. Moreover, despite several distinctions between the cases, *Natland*'s holding is relevant here. First, while the accretion in *Natland* was "point-induced," that is, caused by direct action such as filling or partially relocating the water at the point of the disputed land, the accretion here is merely "artificial," caused by the less direct means of a dam built fifteen to forty-five miles upstream from the disputed land. *See Lundquist, supra*, at 326-28 (discussing types of accretion).

*Natland*'s reasoning applies to both types of artificial conditions:

Every dam upstream creating a reservoir affects the building of a stream's delta, as every jetty into the Gulf of Mexico influences the currents traveling the shoreline carrying sand from one beach to the other. The distinction between wholly natural and artificially-influenced changes in the shoreline is unworkable as the sole criterion to determine the ownership of land along the shore.

865 S.W.2d at 58. Similarly, we do not place any significance on the distinction in this case.

Second, the distinction between littoral rights (concerning land abutting the shore), at issue in *Natland*, *Baxter*, and *Davis*, and riparian rights (concerning land abutting a river or stream), at issue here, is immaterial for purposes of relating the holding in *Natland* to this case because this case

concerns only riparian rights. *See State v. Balli*, 190 S.W.2d 71, 99-101 (Tex. 1944) (concluding that accretion by the sea was governed by same rules as accretion by rivers). Finally, *Natland* is consistent with the approach of a number of other jurisdictions, as well as the United States Supreme Court, which places no significance on the distinction between naturally and artificially influenced gains and losses. *See St. Louis*, 138 U.S. at 245; *St. Clair*, 90 U.S. at 66; *see also* 63 A.L.R.3d 249 (citing cases).

We also note that the three cases cited in the attorney general opinion, *see* Op. Tex. Att’y Gen. No. M-953 (1971), do not support the artificial change theory as applied in the context presented by the case before us. The State argues that *Ray v. State*, 153 S.W.2d 660 (Tex. Civ. App. — Austin 1941, writ ref’d w.o.m.), *City & County of Dallas Levee Improvement District v. Carroll*, 263 S.W.2d 307 (Tex. Civ. App. — Dallas 1953, writ ref’d n.r.e.), and *Wilemon v. City & County of Dallas Levee Improvement District*, 264 S.W.2d 543 (Tex. Civ. App. — El Paso 1953, writ ref’d n.r.e.), demonstrate that when a man-made dam alters the course and flow of a navigable stream, there is no change of ownership in the riverbed because the riverbed still exists as before the alteration. None of these cases, however, involved changes in the channel or flow of a river resulting from or affected by an artificial structure such as a dam. Rather, they all concerned the diversion of some water from the Trinity River to a new channel and the filling in of part of the old channel by the direct action of the City and County of Dallas Levee and Improvement District.

Each case primarily addresses the question of whether such public works activities constitute an abandonment of the State’s riverbed. Together, the cases generally hold that when a river changes its course and establishes a new bed or channel, and the change is brought about by man-made, artificial means for a public purpose authorized by law, the former bed, whether deemed useful for

the public project or filled in by someone other than the State, is not abandoned. *See Wilemon*, 264 S.W.2d at 548 (holding that “[a]s a matter of law the State had not abandoned the channel of the old river, since it was used for transmission and storage of storm waters”); *Carroll*, 263 S.W.2d at 309 (reversing the trial court’s finding of abandonment when “the undisputed evidence shows that the approved plan of reclamation here involved provides that the old river bed shall be used for the storage of storm waters”); *Ray*, 153 S.W.2d at 662-63 (stating that “[t]he mere fact that someone other than the State has by artificial means filled in this portion of the river bed does not change its status as river bed land.”).

We reject the State’s claim that the artificial change theory, as developed in these abandonment cases, dictates that the ownership of the riverbed, as it existed before the operation of Sanford Dam, cannot be altered. The issue in this case is whether conditions on the Canadian River that were brought about or influenced by Sanford Dam ought to be considered in determining the boundary line between the State’s riverbed and the Landowners’ riparian land. We are not presented with and do not resolve any question of abandonment. Whether the bed of a navigable stream has been abandoned by the State is a question of law or legislative action. *See Ray*, 153 S.W.2d at 663. The State suggests that there can be no such abandonment in light of the undisputed facts of this case. The Landowners, however, do not claim that the State has abandoned the land in dispute. Rather, in seeking to establish a boundary between the riverbed and the riparian land, the Landowners recognize that the State owns the bed of the Canadian River. Similarly, the State’s claim to the disputed land rests upon the acknowledgment that the Landowners hold title to the land up to the Canadian Riverbed. Thus, the way in which the issues have been developed and presented to this Court creates a boundary dispute, not an abandonment case.

We agree with the approach of the United States Supreme Court and many other jurisdictions that have rejected the artificial change theory in the context of an artificial structure that merely affects the current or flow of a river so as to cause artificial accretion. These courts reason that the fact that artificial means caused the accretion or reliction, in whole or in part, does not affect the usual rule that a riparian owner takes new land formed against the owner's tract, provided the owner does not contribute to the artificial cause. Allowing a riparian owner to gain title to new land formed by accretion or reliction that was influenced by artificial means comports with the policy rationales underlying the traditional doctrines of riparian ownership. Consequently, we see no reason to distinguish between naturally or artificially influenced accretion or reliction for purposes of determining whether new land formed by these processes vests in the riparian owner, so long as the owner does not cause or contribute to the artificial influence.

In this case, the government, not the Landowners, built and operated Sanford Dam, which, in turn, reduced the flow of water in the Canadian River. We therefore reject the artificial change theory as applied to the land at issue here. We further hold that the doctrines of riparian ownership, such as accretion, reliction, and erosion, may apply to changes in a river's course due to artificial as well as natural causes, including the reduction in the water flow of the Canadian River brought about by Sanford Dam.

We also reject the State's related contention that changed conditions in a river brought about or influenced by a public works project are inherently avulsive, or, in other words, do not alter the boundary between the State's riverbed and riparian lands. According to one commentator, "[b]y the great weight of authority . . . the operation of [a] dam has no legal effect on the doctrine of accretion and the latter remains in full force. While [a] dam, like any other man-made obstruction, may affect

the flow and currents of the river, the benefit of accretion and the detriment of erosion still fall where chance would have them.” Lundquist, *supra*, at 331-32. The fact that a dam influences the natural and gradual process of accretion does not take the change out of the general rule that the river boundary follows the change. *See Oklahoma v. Texas*, 265 U.S. at 499 (citing *St. Clair*, 90 U.S. 46); *see also St. Clair*, 90 U.S. at 68-69 (holding that rule of alluvion applies “where dykes and other defences are, and where they are not, necessary to keep the water within its proper limits.”).

We are particularly persuaded by the approach of other jurisdictions that have considered whether the effect of a government-built dam resulted in changes by avulsion or accretion. For example, in *Beaver v. United States*, 350 F.2d 4 (9<sup>th</sup> Cir. 1965), certain landowners challenged a condemnation proceeding filed by the United States to take a tract of land for use in a water project. The United States contended that the tract came to exist at its present location by accretion, which eroded the landowners’ south bank in Arizona and deposited soil on the United States’s north bank in California, so that the tract belonged to the United States. The landowners argued that the tract formed at its present location by avulsion, so that the boundary between state and private property was permanently fixed at the site before the change and, therefore, that the tract was still located in Arizona and was not lost by erosion. In particular, the landowners claimed that the Laguna Dam, built downstream by the government, increased the volume of silt and caused heavier cutting power in the river upstream, thus resulting in an avulsive change. The Ninth Circuit Court of Appeals upheld the trial court’s determination that the Laguna Dam was but an “insignificant factor” in the subsequent accretion to the north bank. Quoting the trial court, the court of appeals stated that “[t]here were many other natural factors which played a part in the erosion and accretion which took place.” 350 F.2d at 11. Consequently, the United States owned the tract at issue.

Other cases also support our conclusion that the effect of a government dam, or other public works structure, may result in accretion, reliction, or erosion, as opposed to avulsion. *See, e.g., United States v. Claridge*, 416 F.2d 933, 934-35 (9<sup>th</sup> Cir. 1969) (citing *Beaver* and holding that elimination of floods on Colorado River by Hoover Dam did not result in avulsive changes but rather any changes in river's course resulted from erosion and accretion); *Littlefield v. Nelson*, 246 F.2d 956, 958 (10<sup>th</sup> Cir. 1957) (applying Oklahoma law and ruling that influence of government revetment work on flow and course of river resulted in accreted land); *Solomon v. Sioux City*, 51 N.W.2d 472, (Iowa 1952) (concluding that when federal government's erection of dikes and jetties caused slowing down of current of stream so as to build up a tract of land within three years the change was by accretion); *see also Oklahoma v. Texas*, 265 U.S. at 498-99 (holding that wing dam placed in Red River by receiver was "at most a minor factor in producing" accretion to south bank, citing sand deposited behind dam by "winds in dry weather" and "water during rises," when, independently of dam, river washed away north bank and channel on south side soon filled with sand). Texas case law also indicates that the effect of the construction of a dam does not necessarily result in avulsive change. *See, e.g., Southwestern Portland Cement Co. v. Kezer*, 174 S.W. 661, 669-70 (Tex. Civ. App. — El Paso 1915, writ ref'd); *Pendery v. Panhandle Ref. Co.*, 169 S.W.2d 766, 773 (Tex. Civ. App. — Fort Worth 1943, writ ref'd w.o.m.). In light of these cases, we are unpersuaded by the State's argument that the doctrine of avulsion absolutely applies to the changes brought about by Sanford Dam so as not to alter the boundary of the Canadian Riverbed.

### **The Surveys**

We now consider whether either the State's or Landowners' survey establishes as a matter of law the boundary between the Canadian Riverbed and the riparian land in the disputed area. The

legislative resolution that gave the Landowners permission to sue the State so as to locate this boundary, SCR 165, did so particularly in light of changed conditions brought about by the operation of Sanford Dam. This type of situation calls for, and our holding requires, a present-day survey that marks the boundary as it exists today, rather than as of a date before Sanford Dam was closed.

The State's survey is premised on the artificial change theory, which proposes that the boundary between State riverbed and riparian land does not move with changes in a river influenced by an artificial cause, such as a dam. This approach is reflected in the GLO's advertised plan to determine the "historical gradient line prior to any changes in the river caused by dams or other man-made alterations." The record indicates that, even before the GLO announced its intention to hire a surveyor, Shine wrote to the Commissioner, "in response to [his] request," and proposed certain procedures to be used in connection with the project. Shine's proposal, based at least in part on plotting old aerial photographs of the river taken before the closing of Sanford Dam, was similar to an "historical" survey Shine had performed on another stretch of the Canadian River for J.M. Huber Corporation, which held an oil and gas lease from the GLO covering the State's riverbed immediately east of Sanford Dam. Shine admitted that he had not used the methodology he employed in this survey of the Canadian River in a gradient boundary survey on any other Texas river.

Moreover, as part of his survey work, Shine used data from the 1960s to "re-create a water line," due to the absence of significant amounts of water in the riverbed because of the dam. The result of using historical data appears to be that Shine marked the gradient boundary along old flood banks. Shine opined that the present-day Canadian River banks are basically the same as they were in 1965 when the Sanford Dam gates were closed. Shine marked the gradient boundary along lateral accretion banks formed and changed by pre-Sanford Dam flood waters; determined that those banks

could not have moved since the closing of Sanford Dam because the dam has prevented floods in the disputed area; and therefore concluded that the boundary today remains where it was before 1965 when the Sanford Dam was closed.

The State's expert, Stanley A. Schumm, a fluvial geomorphologist, testified that Shine's banks were "formed prior to the construction of the Sanford Dam when there were bankfull flows moving through the channel." He also explained that Shine's banks are the banks that would contain the "bank full discharge" of the Canadian River or, in other words, hold the Canadian River at "flood stage." Schumm further stated that the flowing water had reached Shine's banks before Sanford Dam was closed only once every four to five years during floods. Similarly, the affidavit of Robert J. Brandes, one of the State's experts in hydrology, indicates that, at best, once-a-year local floods could cause water in the Canadian River to reach Shine's banks for a short time.

The State's survey does not reflect changes in the Canadian River that occurred after the closing of Sanford Dam, so it cannot logically qualify as a present-day survey. Moreover, we have rejected the artificial change theory. Therefore, the State's survey is immaterial to this case.

On the other hand, the Landowners' survey is based on the notion that changes brought about or influenced by an artificial structure, such as a dam, ought to be considered in marking the gradient boundary of a river. Indeed, the Landowners' surveyor, Wilson, testified that a dam "doesn't make a difference" in the location of a present-day gradient boundary. Thus, the Landowners' survey is a present-day survey in so far as it takes into account the present (i.e., post-dam) conditions of the disputed area.

In order to be legally correct, however, the Landowners' survey must also comport with the gradient boundary methodology as defined in *Oklahoma v. Texas*, 260 U.S. 606 (1923), 261 U.S. 340

(1923), 265 U.S. 500 (1924), adopted by this Court in *Motl v. Boyd*, 286 S.W. 458 (Tex. 1926), and described by Colonel Arthur Stiles in *The Gradient Boundary — The Line Between Texas and Oklahoma Along the Red River*, 30 TEXAS L. REV. 305 (1952). These authorities indicate that the gradient boundary must be marked along the “water-washed” bank that “serves to confine the waters within the bed” at the “average” and “mean” level attained by the waters “when they reach and wash the bank without overflowing it.” See *Oklahoma v. Texas*, 260 U.S. at 631-32; 261 U.S. at 341-42; *Motl*, 286 S.W. at 467; Stiles, *supra*, at 313-14, 316. They also make clear that this “boundary bank,” which is coterminous with the river’s “bed,” cannot be a flood bank. See *Oklahoma v. Texas*, 260 U.S. 631 (the “bed” is defined “without reference to the extraordinary freshets of the winter or spring”); 260 U.S. 632 (“we exclude [from the bed] the lateral valleys . . . , although temporarily overflowed in exceptional instances when the river is at flood”); *Motl*, 286 S.W. at 467 (the “bed” is defined “without reference to the extra freshets of the winter or spring”); Stiles, *supra*, at 322 (“Flood stages [for purposes of locating the gradient boundary] were automatically eliminated by the Court in *Oklahoma v. Texas*.”)

After locating the proper boundary banks, the next step in determining the gradient boundary is to find the lowest “qualified” bank, which “[i]n almost every case . . . is an accretion bank.” Stiles, *supra*, at 317. The height of the boundary line is marked at the mid-height point of that bank, halfway between the lowest point where the flowing water first touches the bank and the highest point where the water reaches the top of the bank without overflowing it. *Oklahoma v. Texas*, 265 U.S. at 497; Stiles, *supra*, at 316. A plane established by the gradient of the surface of flowing water in the river is set at this height, or “bench mark,” and the gradient boundary line is recorded along the boundary bank (whether it be “an erosion bank here; an accretion bank there; and a transverse slope yonder”)

at the line where that plane intersects the ground at each point down the river. Stiles, *supra*, at 313; 318-21. Colonel Stiles wrote that “a gradient of the flowing water in the river [is] the only possible datum for locating this boundary upon the ground in thorough compliance with the requirements of the Court.” *Id.* at 308. Thus, when the water in the river is flowing at exactly the depth of the mid-height point, or bench mark, on the qualified bank, “the boundary is on the ground at the feather-edge of the water.” *Id.* at 310.

Our review of the record indicates that Wilson properly employed the gradient boundary methodology. The record contains the field notebook Wilson prepared while he performed his gradient boundary survey, which includes sketches of his “qualified banks,” as well as parts of Wilson’s deposition testimony. Wilson testified that the lowest qualified bank should contain the “normal flow” of the river, as described in the Stiles article. He also explained that the “normal flow” of the water bears directly on the selection of the lowest qualified bank because the gradient boundary methodology calls for a “water-washed” bank. Wilson’s testimony supports the conclusion that his chosen banks are in accordance with the gradient boundary methodology. This conclusion is further supported by the affidavit of Bryon L. Simpson, another gradient boundary surveyor, in which Simpson states that Wilson’s banks are “truly ‘qualified banks’ as described by Col. Stiles” and “meet all of the necessary requirements for determining the gradient boundary as described in *Oklahoma v. Texas*.” In light of this record and the fact that the trial court considered “all of the admissible affidavits, deposition testimony, exhibits and pre-trial hearing testimony,” we conclude that the Landowners’ survey comports with the gradient boundary methodology. We now look to whether the State raises any genuine issues of material fact about the survey’s correctness.

The State argues that the Landowners' boundary bank does not meet the criteria for a "qualified" bank because it is not formed by accretion, and that their boundary line excludes riverine vegetation rather than the upland grasses described by the Court in *Oklahoma v. Texas*. The State principally relies upon Shine's affidavit, in opposition to the Landowners' motion for summary judgment on the Landowners' survey, as well as the affidavits and testimony of Schumm, the fluvial geomorphologist, and James Estes, a botanist. The State also points to the affidavits of Brandes and Philip P. Bedient, both hydrologists.

For the most part, all of the State's evidence presumes the validity of the artificial change theory. Indeed, the specific evidence offered to rebut the Landowners' survey is tied to the notion that the "qualified" bank and, in turn, the boundary line, must be determined by the last "natural" bed of the Canadian River. This evidentiary attack is simply a reiteration of the State's legal argument that the gradient boundary of the Canadian River must be located along the banks that contained the river flow before the operation of Sanford Dam and that still contain it today during periods of heavy rain or flooding. The State's evidence, which, at best, essentially endorses an historical gradient boundary survey, is immaterial for purposes of determining whether the Landowners' survey qualifies as a gradient boundary survey. Shine also never proposed any alternative qualified bank or boundary line, and never explained how selecting another bank would materially change the gradient boundary line marked by the Landowners' expert. The State's evidence therefore raises no fact issues about the propriety of the Landowners' present-day gradient boundary survey. For these reasons, we conclude that the trial court properly granted summary judgment establishing the gradient boundary of the Canadian River in the disputed area as depicted in the Landowners' survey.

### **Attorney's and Surveyor's Fees**

We now consider whether the Landowners are entitled to recover attorney's and surveyor's fees in this case. The trial court rendered judgment against the GLO for the Landowners' reasonable attorney's and surveyor's fees under the Declaratory Judgments Act, TEX. CIV. PRAC. & REM. CODE § 37.009, which permits a trial court to award attorney's fees and costs when to do so would be "equitable and just," and the Frivolous Claims Act, TEX. CIV. PRAC. & REM. CODE § 105.002, which authorizes a trial court to award attorney's fees and costs against a state agency when the agency files an action that is "unreasonable." In its original opinion, the court of appeals reversed and rendered the fee award on the ground that the remedy provided by the resolution explicitly excluded damages and attorney's fees. 968 S.W.2d at 411, 413. On motion for rehearing, the court of appeals decided *sua sponte* that the Landowners were precluded from recovering attorney's and surveyor's fees under the Declaratory Judgments Act because their action was "a trespass to try title action, for which attorney's fees are not authorized." *Id.* at 414. Additionally, the court of appeals held that the Landowners were not entitled to attorney's and surveyor's fees under the Frivolous Claims Act because "the State's defense of its claimed ownership of the riverbed . . . was not an unreasonable defense" as a matter of law. *Id.*

The Landowners argue that the trial court did not abuse its discretion in awarding attorney's and surveyor's fees. According to the Landowners, the court of appeals erred on rehearing by reversing the judgment for such fees on the grounds that this action sounded in trespass to try title. The Landowners emphasize that both parties agree "this case is better characterized as a boundary action than as a trespass to try title suit."

The Landowners also argue that the court of appeals erred in its original holding that the resolution barred the Landowners from recovering attorney's and surveyor's fees. They contend that the only constitutional reading of SCR 165 is that the Legislature did not intend for the resolution itself to waive the State's immunity from liability for damages or attorneys' fees. That SCR 165 did not waive the State's immunity for fees is of no consequence, say the Landowners, because the Legislature waived the State's immunity for such fees in statutes of general application, such as the Declaratory Judgments Act and the Frivolous Claims Act. The Landowners insist that any attempt by the Legislature to bar the recovery of fees in this case, despite the existence of sections 105.002 and 37.009, would be unconstitutional because a legislative resolution cannot override, amend, or suspend laws of general application for a particular lawsuit.

The State responds that the court of appeals correctly reversed and rendered the trial court's award of attorney's and surveyor's fees. The State first argues that the resolution authorizing the Landowners to sue expressly limited the action to "settling the title dispute" and prohibited the Landowners from recovering damages or attorney's fees. SCR 165, then, failed to waive the State's sovereign immunity with respect to a claim for such fees. According to the State, when the Legislature gives consent to a plaintiff to sue the State, the plaintiff is bound by the limitations and remedies established by the Legislature.

Second, the State argues that even if SCR 165 does not bar the recovery of attorney's and surveyor's fees, neither the Declaratory Judgments Act nor the Frivolous Claims Act authorizes a recovery of fees in this case because the subject matter at issue does not fall within the limited waiver of sovereign immunity found by implication in the Declaratory Judgments Act. The State does not,

however, defend the court of appeals' sua sponte holding that this action must be a trespass to try title action, and not a declaratory judgment action.

With regard to the Frivolous Claims Act, the State insists that its defense of claimed ownership of the riverbed is not, as a matter of law, an unreasonable defense but, to the contrary, is consistent with all authority on point and with an attorney general opinion. The State also argues that, because the Frivolous Claims Act provides a limited waiver of sovereign immunity, it should be strictly construed as authorizing awards of fees against a state agency for the misuse of governmental power.

The Landowners reply that the Declaratory Judgments Act and the Frivolous Claims Act do, in fact, allow for a recovery of attorney's and surveyor's fees. They claim that because the parties in this case sought declarations marking the boundary between riparian land conveyed by patents and the riverbed, it is within the Declaratory Judgments Act, which provides for declarations regarding deeds. TEX. CIV. PRAC. & REM. CODE § 37.004(a). The Landowners also argue that the court of appeals erred by reversing the trial court's ruling that the GLO's actions were "unreasonable" within the meaning of the Frivolous Claims Act. According to the Landowners, the court of appeals incorrectly viewed this question as one of law, subject to de novo review, rather than as one of mixed fact and law, subject to an abuse of discretion standard of review. Because the trial court based its ruling on its long experience with the case, the Landowners' motion for an award of fees under section 105.002, and an evidentiary hearing, the Landowners claim that the trial court did not abuse its discretion in awarding fees under section 105.002. Finally, the Landowners attack the State's strict construction of the Frivolous Claims Act, noting that this Court has never indicated that it must be strictly or narrowly construed.

We conclude that the trial court improperly rendered judgment against the GLO for the Landowners' attorney's fees and costs under the Declaratory Judgments Act. In their pleadings, the Landowners characterized this suit as a boundary dispute and a declaratory judgment action. Specifically, the Landowners asked for a declaratory judgment settling the boundary between their riparian lands and the State's riverbed along the lines marked by the Wilson survey. They also sought a declaratory judgment that the Shine survey did not mark the lawful boundary. The Landowners then moved for an award of attorney's fees and costs under the Declaratory Judgments Act. The trial court apparently acted pursuant to the Landowners' characterization of this suit as a boundary dispute and a declaratory judgment action.

In order to determine whether this suit is, in fact, a declaratory judgment action, we must interpret the legislative resolution that authorized the suit against the State. SCR 165 gave the Landowners permission to sue the State and the GLO "to determine and establish the boundary line between [Plaintiff's lands] and the Canadian River." The resolution stated:

[A]ny final judgment adjudicating the title dispute in a suit brought concerning title to boundaries of the Canadian River under this resolution shall be limited to settling the title dispute and may not authorize an award of monetary damages or attorney's fees.

Tex. S. Con. Res. 165, 71st Leg., R.S., 1989 Tex. Gen. Laws 5909. We find no language in the resolution indicating that the Legislature intended to authorize the Landowners to bring a claim under the Declaratory Judgments Act that could ultimately result in an attorney's fees award. Although we recognize that such a claim is certainly one way to resolve a boundary dispute, we read SCR 165 as limiting the suit to a judicial determination of the boundary in this case. This particular action contemplates the determination and establishment of the boundary line (as would a declaratory

judgment action), but not the award of damages or attorney's fees (as could a declaratory judgment action). Through its prohibition against an award of damages or attorney's fees, the resolution merely provides an additional condition to which the grant to sue was made subject. *See* TEX. CIV. PRAC. & REM. CODE § 107.004.

Contrary to the Landowners' viewpoint, SCR 165 does not unconstitutionally bar the recovery of attorney's fees in this case. The Landowners cite several cases for the proposition that a resolution may not override, amend, or suspend laws of general application, such as the Declaratory Judgments Act, for a particular lawsuit. In those cases, the resolution at issue either explicitly amended a specific statute or implicitly suspended a statute that always provided a right to the particular type of claimant. *See Caples v. Cole*, 102 S.W.2d 173, 176-77 (Tex. 1937) (holding that resolution could not construe and change provisions of act regulating sale and lease of school lands); *State v. Allstate Ins. Co.*, 654 S.W.2d 45, 47-8 (Tex. App. — Austin 1983, writ ref'd n.r.e.) (stating that resolution allowing action against State could not suspend force and effect of article providing right to post-judgment interest on “[a]ll judgments of the courts of this State.”); *Buford v. State*, 322 S.W.2d 366, 370 (Tex. Civ. App. — Austin 1959, writ ref'd n.r.e.) (holding that resolutions attempting to authorize suit against State could not override statute of limitations for such a suit). SCR 165, on the other hand, does not implicate the Declaratory Judgments Act. Specifically, the resolution neither mentions the Declaratory Judgments Act nor authorizes a suit that necessarily invokes its operation.

We also conclude that the trial court improperly rendered judgment against the GLO for the Landowners' attorney's and surveyor's fees under the Frivolous Claims Act. We have not had much occasion to interpret the Frivolous Claims Act. Nonetheless, we have held that chapter 105 permits attorney's fees only when a state agency asserts a claim that is “frivolous, unreasonable, or without

foundation,” and not when the state agency acts frivolously, unreasonably, or without foundation. *See Black v. Dallas Co. Child Welfare Unit*, 835 S.W.2d 626, 629-30 (Tex. 1992) (“[A]n award of attorney’s fees under the statute requires more than a finding that particular incidents of an agency’s conduct are frivolous, unreasonable, or without foundation.”).

This case arose out of a disagreement between the Landowners and the GLO about whether the State’s survey, conducted by Shine and recorded in the GLO office, was a proper survey of the Canadian River in the disputed area. The State consented to a lawsuit by the Landowners to determine the present-day gradient boundary. Now the Landowners urge this Court to reinstate the trial court’s award of attorney’s and surveyor’s fees on the ground that the State’s “actions” before and at trial were unreasonable.

Whether a state agency’s action is unreasonable within the meaning of section 105.002(1) is a mixed question of law and fact. We therefore review the trial court’s decision to award attorney’s and surveyor’s fees in this case for an abuse of discretion. *See Hall, Standards of Review in Texas*, 29 ST. MARY’S L.J. 351, 500 (1998). In applying this standard, we defer to the trial court’s factual determinations if they are supported by the evidence and review its legal determinations de novo. *Id.* Because there is no underlying factual dispute, this case presents only a legal issue.

Although the Landowners allege that the GLO deliberately attempted to substitute a historical boundary in place of a proper gradient boundary survey, there is no indication that the State’s defense at trial was unreasonable. An action may be deemed unreasonable for purposes of the Frivolous Claims Act when “the totality of the tendered evidence [fails] to demonstrate any arguable basis for the . . . claim.” *Attorney Gen. v. Johnson*, 791 S.W.2d 200, 202 (Tex. App. — Fort Worth 1990, writ denied). In defending its position, the State relied mainly upon an attorney general opinion and the

cases cited in the opinion. The State’s defense, therefore, cannot be said to be without arguable support. *Cf. Black*, 835 S.W.2d at 629-30 (holding that mother was entitled to recover fees when state agency held children illegally and without authority after judge refused to sign ex parte order, state agency never informed special master that judge had denied ex parte order, and state agency ignored district attorney’s assessment that case was “too weak to win”); *State v. Cartwright*, 874 S.W.2d 210, 219-20 (Tex. App. — Houston [14th Dist.] 1994, writ denied) (ruling that evidence supported award of attorney’s fees when attorney general filed notice of delinquency to enforce alleged child support order after notice had been dismissed twice with prejudice).

Moreover, the policy behind the Frivolous Claims Act does not support an award of attorney’s or surveyor’s fees in this case. “The purpose of chapter 105 is to afford an aggrieved citizen some remedy from a governmental agency for the misuse of governmental power.” *Black*, 835 S.W.2d at 629 n.5. Here, the State conducted its own survey and, as a defendant, disagreed with the results of the Landowners’ survey. The State was within its rights to disagree with the Landowners about the location of the boundary and to present a defense of claimed ownership to the riverbed. The fact that the State aggressively defended itself and eventually did not prevail in this case is not a misuse of governmental power as contemplated by the Frivolous Claims Act.

Because the Landowners are not entitled to attorney’s and surveyor’s fees under the Frivolous Claims Act, we need not decide whether the Frivolous Claims Act is implicated by the resolution. Due to our disposition of this case, we also need not address the Landowners’ conditional challenge to the trial court’s change of venue from Roberts County to Hutchinson County. We affirm in part the court of appeals’ judgment denying attorney’s and surveyor’s fees, reverse in part the court of

appeals' judgment, and reinstate in part the trial court's judgment declaring that the Landowners' survey correctly marks the boundary between the State's riverbed and the riparian tracts.

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Deborah G. Hankinson  
Justice

**OPINION DELIVERED:** October 7, 1999