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Texas Tech Law Review

Winter, 2004

37 Tex. Tech L. Rev. 1

LENGTH: 56659 words

ARTICLE: THE **RULE OF CAPTURE** IN TEXAS-STILL SO MISUNDERSTOOD AFTER ALL THESE YEARS

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The authors wish to dedicate this article to the late Professor Corwin W. Johnson, Edward Clark Centennial Professor Emeritus at the University of Texas School of Law, who passed away in late July 2004. Professor Johnson exhibited an unyielding work ethic, sharing his knowledge and wisdom on the development of groundwater law in Texas at the Texas Water Development Board's Groundwater Symposium: 100 Years of the Rule of Capture: From East to Groundwater Management, just one month prior to his passing. Were it not for his tireless and dedicated efforts over some six decades to discern and describe the field of Texas water law and then to pass on his passion and keen insight on the topic to over half a century of law students at the University of Texas, this article and many others would not have been possible.

SUMMARY:

... June 13, 2004 marked the one hundredth anniversary of the recognition of the English common law rule of capture by the Supreme Court of Texas (Court) in *Houston & Texas Central Railway Co. v. East*. ... The seminal passage in the Digest, as far as modern groundwater law is concerned, is based on the writings of both Ulpian and Marcellus and is translated to read: "Next, Marcellus writes that no action, not even the action for fraud, can be brought against a person who, while digging on his own land, diverts his neighbor's water supply. ... Despite the clarity and regularity with which Texas courts have defined the rule of capture as an absolute, freely alienable, corporeal right of ownership in groundwater located beneath a landowner's property, and despite the fact that the Texas Legislature has passed no statute that is intended to impair the ownership and property rights in groundwater, nor imposed upon groundwater the

laws and administrative rules relating to surface water, the term "rule of capture" has caused-and continues to cause-much confusion in the legal community. ... Notwithstanding Aristotle's learned opinion, the preceding pages of this article demonstrate that the rule of capture in Texas has always guaranteed and continues to guarantee, the landowner a vested private property right in the groundwater beneath the landowner's property. ...

TEXT:

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I. Introduction

June 13, 2004 marked the one hundredth anniversary of the recognition of the English common law rule of capture by the Supreme Court of Texas (Court) in *Houston & Texas Central Railway Co. v. East*.ⁿ¹ During the one hundred years since *East* was decided, the public,ⁿ² the Texas Legislature (Legislature),ⁿ³ the Attorney General,ⁿ⁴ both stateⁿ⁵ and federal courts,ⁿ⁶ as well [*4] [*5] [*6] [*7] [*8] as numerous commentatorsⁿ⁷ and treatisesⁿ⁸ have relied upon the rule of capture [*9] [*10] [*11] [*12] [*13] and have evaluated its merits ad infinitum.ⁿ⁹ Indeed, the rule of capture and its underpinnings were the subject of learned analysis long before *East* was handed down in 1904,ⁿ¹⁰ not only in England,ⁿ¹¹ but also throughout the United States, both at the federalⁿ¹² and state levels,ⁿ¹³ including Texas.ⁿ¹⁴

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To better serve as an easy reference for landowners, legislators, jurists, and academics, this article catalogues, in laborious detail, much if not all of the pertinent jurisprudential authority, legal commentary, and legislative enactments dealing with the legal categorization and management of groundwater in Texas.ⁿ¹⁵ This disquisition reveals that, despite the many academic jeremiads lamenting the rule of capture,ⁿ¹⁶ Texas courts have shown remarkable consistency in their interpretation and application of itⁿ¹⁷ and have recognized exceptions only in very rare circumstances.ⁿ¹⁸ In addition, despite the voluminous amount written, no treatise, article, comment, or note has ever truly traced the origin of the rule of capture back to its source and then followed it forward to the present day,ⁿ¹⁹ and the authors of this article are now painfully aware as to why this is so. However, this article undertakes the difficult task of explicating this history becauseⁿ²⁰-before any significant, foundational changes to the rule of capture are considered by the Legislature or by the courtsⁿ²¹-the authors believe that a full understanding of the doctrine, its origins, interpretations, applications, and current viability is [*15] imperative in order to ascertain exactly what rights the rule of capture has historically conferred and currently guarantees Texas landowners.

The rule of capture is one of the most well-developed areas of law of any kind in Texas-spanning some twenty statutes, approximately fifty cases,ⁿ²² and premised upon the recognition and adoption of the entire body of English common law,ⁿ²³ which itself adopted en masse the whole of the Roman law pertaining to water.ⁿ²⁴ Altogether, the rule of capture is a doctrine solidly founded upon the compilation of roughly 1600 years of property law.ⁿ²⁵

As a group, the coauthors of this article are well-suited to undertake such an analysis of the rule of capture, because they hold opposing views on groundwater management.ⁿ²⁶ One of the authors advocated the abolishment of the rule of capture in Texas in favor of the adoption of the doctrine of correlative rights,ⁿ²⁷ while the others have been longtime, staunch supporters of the rule of capture.ⁿ²⁸ Despite the contrasting positions, however, the authors agree: (1) that the rule of capture is a misnomer that has been misconstrued, almost since its inception;ⁿ²⁹ (2) that the rule of capture, for over 1600 years,ⁿ³⁰ has guaranteed a property right in groundwater,ⁿ³¹ vesting at the moment of ownership of the overlying land;ⁿ³² and (3) that substantially altering the rule of capture one hundred years after its implementation presents considerable takings implications for the state.ⁿ³³

II. Ancient Legal History and Development ⁿ³⁴

While some have traced property rights back "to the original gift of the creator," the authors do not presume to attach such a divine origin to the rule [*16] of capture. ⁿ³⁵ The authors do not even seek the "general consent of mankind" as the Supreme Court of Connecticut did in *Roath v. Driscoll* in stating that "each person must be left to enjoy any natural advantage belonging to his own land; and water, appearing and standing, either naturally or by artificial means, but never constituting a running stream, is such a natural advantage." ⁿ³⁶ The authors merely attempt to trace the concept of groundwater ownership back to its earliest mortal origins. ⁿ³⁷ Throughout the last two thousand years, the rule of capture has not only been recognized, it has been expressly described as a property right, vesting at the moment of ownership of the property, not-as the name might suggest-at the moment of capture. ⁿ³⁸ Indeed, no other property doctrine exists which could have been devised from the foundational texts of the Romans other than the rule of capture.

A. Greek Law

The first known codifications of law arose between 2100 and 1728 B.C. ⁿ³⁹ Within one millennia of these first formal recognitions of law, the Greeks began to refine and develop the law as it then existed, ⁿ⁴⁰ and their advancements of both legal and scientific understanding bore a direct influence on later Roman Law and, in turn, on that of Western Europe. ⁿ⁴¹

The Greeks differentiated written law from unwritten law, viewing written law as more authoritative because of its fixed nature. ⁿ⁴² Most Greek scholars bent their considerable intellects towards the vagaries of property law, ⁿ⁴³ and some even wrote specifically on water ownership. ⁿ⁴⁴ During the time of the Greek poet Homer, who is believed to have lived circa 1000 B.C., ⁿ⁴⁵ every free person had the right to alienate and dispose of property without limitation. ⁿ⁴⁶ Homer may have the distinction of being the first legal scholar ⁿ⁴⁷ [*17] to describe the field of groundwater law, ⁿ⁴⁸ at least as it developed in Europe and later in America. He believed that spring water not only flowed from the ocean, but was returned to it as well through subterranean channels. ⁿ⁴⁹ This theory is known as the Oceanus theory, and Homer first coined the term in Book 21 of the *Iliad*, where he wrote of "'the deep-flowing Oceanus, from which flow all rivers and every sea and all springs and deep wells.'" ⁿ⁵⁰

However, Homer may not have been the first to posit the Oceanus theory. A passage from *Ecclesiastes*, widely thought to have been written by Solomon around the tenth century B.C., ⁿ⁵¹ envisions much the same hydrological relationship:

All streams flow into the sea,

yet the sea is never full.

To the place the streams come from,

there they return again. ⁿ⁵²

Thales, who was born in 640 B.C., was described by Aristotle as the founder of Greek Philosophy because he resisted the age-old practice of attributing mythical explanations to events in favor of divining a physical commonality instead. ⁿ⁵³ He was also a devotee of the Oceanus theory ⁿ⁵⁴-built on Homer's first inklings of the existence of

something akin to aquifersⁿ⁵⁵ but greatly expanded the concept to encompass the notion that the entire earth rested on water.ⁿ⁵⁶ Thales placed a paramount value on water, believing it to be the "first principle of all things . . . from [which] all things come, and to it they all return."ⁿ⁵⁷ Aristotle, who is believed to have lived between 384 and 322 B.C., introduced a new hydrologic theory, now referred to as the condensation theory, which more closely approximates a modern understanding of the hydrologic cycle.ⁿ⁵⁸ In *Meteorologica*, he explained the precepts of the theory by stating that:

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[T]he air surrounding the earth is turned into water by the cold of the heavens and falls as rain . . . [and] . . . the air which penetrates and passes the crust of the earth also becomes transformed into water owing to the cold which it encounters there. The water coming from the earth unites with rain water to produce rivers. The rainfall alone is quite insufficient to supply the rivers of the world with water.ⁿ⁵⁹

B. Roman Law

While the Greek contribution to modern groundwater law centered more around the first organized legal understanding of property ownership and the scientific underpinnings of hydrology, the Romans expanded upon the Greek foundational concepts by recording them in the Twelve Tables, exploring their effects juristically, and later codifying the newly-formed Roman common law in the Theodosian Code and the Digest of Justinian.ⁿ⁶⁰

1. The Twelve Tables

Although Romulus founded Rome in 753 B.C.,ⁿ⁶¹ the first Roman codification of the law was not undertaken until 462 B.C. and it was not completed until eleven years later in 451 B.C.ⁿ⁶² This first written code is referred to as the Twelve Tables after the twelve bronze tablets upon which it was inscribed.ⁿ⁶³ A commission, charged with the task of "writing down the laws," produced the Twelve Tables in order to settle authoritatively many controversial cases that had arisen under the application of the unwritten, customary law of the time.ⁿ⁶⁴ The Twelve Tables were so crucial to the later development of modern property law that they have been called "the foundation of modern Western jurisprudence."ⁿ⁶⁵

This section reviews the Twelve Tables because they contain an early instance of written water law, perhaps the first in the Western world.ⁿ⁶⁶ The Twelve Tables provided a remedy when one party's diversion of rain water resulted in injury to another party's land.ⁿ⁶⁷ The Twelve Tables also contained **[*19]** four servitudes, defined as "rights vested in a person as owner of one piece of land over another piece, effective not only against its owner, but against all."ⁿ⁶⁸ Notably, of the four earliest defined servitudes, one of them concerned water—that of "aquaeductus"—which made the land over which a Roman aqueduct was constructed "servire" to, or burdened by, the existence and maintenance of the aqueduct.ⁿ⁶⁹

2. The Early Jurists

The next major advancement in the evolution of Roman law came around the first century B.C., when a system of nationally renowned jurists interpreted the original Twelve Tables and the many edicts of the Roman emperors.ⁿ⁷⁰ Written legal critiques of these jurists were given authoritative weight and were actually followed by Roman judges of the day, thereby becoming legally binding as well.ⁿ⁷¹ These juristic writings became one of the major sources of Roman jurisprudence for the next five hundred years until the Theodosian Code was drafted in 438 A.D.ⁿ⁷² Indeed,

they were deemed so important that they were eventually catalogued and made the basis of Justinian's complete recodification of Roman Law in 533 A.D. ⁿ⁷³

3. The Theodosian Code

The Roman Empire split in two during the fourth century A.D. ⁿ⁷⁴ between the time of Domitius Ulpianus, a famed first century A.D. jurist commonly referred to as Ulpian, ⁿ⁷⁵ and the Emperor Theodosius II. ⁿ⁷⁶ Two distinct yet [*20] connected empires resulted, which were ruled from two capitals- Constantinople in the East and Rome in the West-until the fall of the Western Empire in 476 A.D. ⁿ⁷⁷

Theodosius II issued a decree at Constantinople on March 26, 429 A.D. appointing a commission of nine scholars to collect and combine all of the previous imperial edicts, constitutions, and the three then-existing codes -Gregorianus, Hermogenianus, and Theodosianus ⁿ⁷⁸-and then to publish them together in one single code. ⁿ⁷⁹ The Theodosian Code, as it is now known, was completed nine years later and was formally adopted by the Empire on Christmas Day, 438 A.D. ⁿ⁸⁰

The Theodosian Code provides a glimpse of the precursory knowledge of water and water rights present during this period. ⁿ⁸¹ Specifically, in Book XV, concerning public works, the bulk of the discussion concerning water deals primarily with aqueducts-their use, care, and penalties for the illegal diversion of water from them. ⁿ⁸² However, in Section 7 of Book XV, an edict issued by Augustus to "Asterius, Count of the Orient" on November 1, 397 A.D. decreed that "ancient water rights that are established by long ownership shall remain the property of the several citizens and not be disturbed by any innovation. Thus each man shall obtain the amount that he has received by ancient right and by custom lasting to the present day." ⁿ⁸³ This passage is crucial to the author's analysis in that it appears to be the very first alignment of water rights with the concept of property rights. ⁿ⁸⁴ Significantly, this imperial recognition of property rights in water was issued contemporaneously with many other provisions in the Theodosian Code that expressly dealt with usufructory rights. ⁿ⁸⁵ This leads to the conclusion that the Romans intentionally thought of water owned by its citizens as a vested property right and not merely as a right to use or capture the water. ⁿ⁸⁶

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4. The Digest of Justinian

a. Mechanics of Formulation

After the fall of the Western Empire in 476 A.D., ⁿ⁸⁷ the Roman Empire survived for nearly another century, albeit confined to its eastern imperial boundaries. ⁿ⁸⁸ Justinian I became emperor of the remaining eastern half of the Empire on April 1, 527 A.D. ⁿ⁸⁹ and ruled until 565 A.D. ⁿ⁹⁰ Almost immediately after taking power, Justinian set about reforming Roman law, which had become cluttered with many codes, constitutions, edicts, juristic writings, responsa, and the like. ⁿ⁹¹ In February 528 A.D., ⁿ⁹² Justinian undertook this Herculean effort by appointing a ten-member commission to compile and update the many imperial constitutions. ⁿ⁹³ The Commission successfully issued a code fourteen months later ⁿ⁹⁴ in April 529 A.D., ⁿ⁹⁵ but it was replaced in 534 A.D. by a second code because the inordinate amount of legislation passed during the intervening years had already made the first code obsolete. ⁿ⁹⁶ Then, on December 15, 530 A.D., ⁿ⁹⁷ Justinian began organizing and recodifying the remaining legal texts, mainly the juristic writings, into both a legal textbook for students, the Institutes of Justinian (Institutes), ⁿ⁹⁸ and the Digest of Justinian (Digest)-sometimes referred to as the Pandects, ⁿ⁹⁹ which was a comprehensive codification of all prior juristic literature, ⁿ¹⁰⁰ including the Theodosian Code. ⁿ¹⁰¹ Justinian gave instructions to one of his trusted legal advisors to [*22] organize another commission to accomplish this task, and the result was a sixteen-member body comprised of

some of the greatest legal minds of the day.ⁿ¹⁰² Justinian's aim in this pursuit was not to alter or even modernize the old writings, but to conflate them and make the law less unwieldy.ⁿ¹⁰³ As such, Justinian instructed the commission to delete only that which was obsolete or superfluous.ⁿ¹⁰⁴ This goal of staying true to the original texts was evidenced by the express citation to each jurist's work in the Digest.ⁿ¹⁰⁵ Throughout the following three years, the Commission accomplished the monumental task of reducing some 3,000,000 lines of legal text, taken from around 2000 separate books,ⁿ¹⁰⁶ to just some 150,000 lines comprised of 800,000 wordsⁿ¹⁰⁷ eventually included in the Digest.ⁿ¹⁰⁸ The result of this labor was the issuance of the Institutes and the Digest on December 30, 533 A.D.ⁿ¹⁰⁹

b. Groundwater-Related Juristical Excerpts

The writings of several jurists helped to develop both Roman water law, and, later, water law in Europe and in the United States.ⁿ¹¹⁰

i. Marcellus's Writing

The most pertinent jurist to the exploration of current groundwater law is Marcus Claudius Marcellus, who died in 45 B.C. and was a contemporary of Cicero.ⁿ¹¹¹ The seminal passage in the Digest, as far as modern groundwater law is concerned, is based on the writings of both Ulpian and Marcellus and is translated to read: "Next, Marcellus writes that no action, not even the action for fraud, can be brought against a person who, while digging on his own land, diverts his neighbor's water supply."ⁿ¹¹² This responsa was not groundbreaking when it was first issued, but it became vitally important later when it was included in the Digestⁿ¹¹³ and, thereafter, cited by the British court in *Acton v. Blundell*.ⁿ¹¹⁴ Because the rule of capture in Texas is uniquely traced [*23] back to *Acton*, which expressly based the bulk of its reasoning on Marcellus's passage in the Digest, this passage is the most ancient, direct source of the rule of capture.ⁿ¹¹⁵ Accordingly, the import of this excerpt from the Digest, originally written some 2050 years ago, cannot be overstated in light of the development of an entire body of law based on this one writing.ⁿ¹¹⁶

ii. Other Jurists' Writings

While only one passage from the Digest is expressly relied upon some thirteen centuries later by the British court in *Acton v. Blundell* to justify the adoption of the concept of absolute ownership,ⁿ¹¹⁷ the Digest is replete with groundwater law commentary from several Roman jurists.ⁿ¹¹⁸ The writings of these jurists may have even been acknowledged and referred to in *Acton*ⁿ¹¹⁹ as well.ⁿ¹²⁰

aa. Ulpian

One of the most celebrated jurists during antiquity was Ulpian.ⁿ¹²¹ Not only do his works form the basis for approximately one thirdⁿ¹²² to one halfⁿ¹²³ of the Digest, the name Ulpian was almost synonymous with Roman law in general during the Middle Ages.ⁿ¹²⁴ While Ulpian reprinted many of the earlier jurists' works on water law,ⁿ¹²⁵ he also added some of his own commentary as well. He applied Trebatius's liability writings to well interference and even [*24] subsidence,ⁿ¹²⁶ he modified Trebatius's assertion of hot springs liability by stating that a landowner who fails to protect himself against an anticipated injury has only himself to blame,ⁿ¹²⁷ and he added to Proculus's text-which espoused nonliability for a landowner who carries out work legally on his own property-by applying this concept to the diversion of water.ⁿ¹²⁸ Ulpian was among five noted jurists whose writings were made authoritative due to their inclusion in the Law of Citations,ⁿ¹²⁹ which was issued in 426 A.D.ⁿ¹³⁰ He is also considered to be one of the three "principal writers on water law" featured in the Digest.ⁿ¹³¹ After Ulpian's death in 228 A.D.,ⁿ¹³² the study and

development of Roman law went into decline until the publication of the Theodosian Code in the fifth century A.D. ⁿ¹³³

In Section 3 of Book 53 in his *Ad Edictum*, Ulpian declares that "anyone who fails to protect himself in advance . . . against anticipated injury [by work carried out on neighboring land] has only himself to blame." ⁿ¹³⁴ While this section refers only to work done on public land which might harm a nearby private landowner, ⁿ¹³⁵ it does-whatever the original intention-presciently and fairly describe the "pump or be pumped" *modus operandi* required under the rule of capture as it later developed in England and, thereafter, in Texas. ⁿ¹³⁶ In fact, as is discussed later, this passage may have been cryptically referred to in the court's decision in *Acton v. Blundell* as well. ⁿ¹³⁷

Other excerpts from Ulpian in the *Digest* are not as obscure in their reference to private property rights where water is concerned. ⁿ¹³⁸ Specifically, one excerpt reads:

Again, let us consider when injury is held to be caused; for the stipulation covers such injury as is caused by defect of house, site, or work. Suppose that I dig a well in my house and by doing so I cut off the sources of your well. Am I liable? Trebatius says that I am not liable on a count of anticipated injury since I am not to be thought of as having caused you injury as a result of any defect in the work that I carried out, seeing that the matter [*25] is one in which I was exercising my rights. However, if I dig so deeply on my land that one of your walls cannot stand upright, a stipulation against anticipated injury will become operative. ⁿ¹³⁹

This passage is notable for several reasons. First, it recounts Trebatius's early assertion that if a landowner's work is the kind that he has a right to do, and he completes his work without defect, no action can lie against him. ⁿ¹⁴⁰ This is the essence of the rule of capture currently in effect today in Texas. ⁿ¹⁴¹ Next, Ulpian expands upon this concept by applying it specifically to what is now known as well interference, saying that no liability attaches to a landowner whose development of groundwater causes another landowner's well to become dry. ⁿ¹⁴² This description of events not only tracks what purportedly occurred between Bart Sipriano, Harold and Doris Fain, and Ozarka Natural Spring Water Co. exactly 1466 years later, it even predicts the decision reached by the Court in the case as well. ⁿ¹⁴³

Ulpian even conceives of land subsidence problems caused by overpumping and thereby foretells the Texas Supreme Court's ruling in *Friendswood Development Co. v. Smith-Southwest Industries, Inc.* ⁿ¹⁴⁴ In the last sentence of this passage in the *Digest*, Ulpian allows for an action if a neighbor's walls cannot stand upright because of the depth to which a landowner has dug his well. ⁿ¹⁴⁵

bb. Quintas Mucius

Quintas Mucius was a jurist who reached the zenith of his influence during his service as Consul around 95 B.C. ⁿ¹⁴⁶ He propounded the same thoughts on groundwater-caused injury as did his contemporary, Marcellus, ⁿ¹⁴⁷ writing that a downstream property owner would have no recourse against a [*26] spring owner who diverts or uses the water before it reaches the downstream property owner's land. ⁿ¹⁴⁸

cc. Vitruvius

Another Roman scholar named Vitruvius, who lived from around 80 B.C. until 20 B.C., was not a jurist per se, but he developed a new hydrologic theory -now called the Percolation theory. ⁿ¹⁴⁹ His theory revealed-for the first time in Western thought-the manner in which rain and snow that falls on the mountains percolates through the rock strata to the

base of the hills, and then reemerges as streams and springs in the plains.ⁿ¹⁵⁰ By being the first to describe the role that groundwater plays in the hydrologic cycle, "Vitruvius set the foundation of modern hydrogeology."ⁿ¹⁵¹

dd. Trebatius

Another jurist that helped to develop later Roman writings concerning water law was Trebatius, who lived from 84 B.C. to 4 A.D.ⁿ¹⁵² In Book 53 of Ulpian's *Ad Edictum*, Ulpian specifically cites Trebatius when stating that "[t]he same Trebatius holds that somebody who sustains harm from a flow of hot water can bring an action to ward off rainwater. This is incorrect since hot water is not rainwater."ⁿ¹⁵³ As Ulpian points out, Trebatius might have been somewhat enthusiastic in his interpretation of the original Twelve Tables when he drafted this passage regarding hot springs,ⁿ¹⁵⁴ but whatever the accuracy of Trebatius's application of a tort action to damage caused by hot springs, it appears that Ulpian corrected this legal assertion by adding a short, yet direct, rebuke to the idea.ⁿ¹⁵⁵ Later in Book 81, and more applicable to the tenets of the rule of capture, Trebatius determined that a landowner is not liable for injury to a neighboring landowner due to work done on the original landowner's property, provided that the work was not defective nor was done pursuant to a right held by the original landowner.ⁿ¹⁵⁶ This passage is significant because, as mentioned above, the lack of liability incurred by a landowner under Trebatius's formulation is precisely analogous to the liability [*27] limitations afforded a modern landowner under the rule of capture currently in effect in Texas.ⁿ¹⁵⁷

ee. Seneca

Lucius Annaeus Seneca was a Roman statesman believed to have lived between 4 B.C. and 65 A.D.ⁿ¹⁵⁸ During the reign of Emperor Augustus, Seneca was an influential jurist who worked tirelessly to align his *responsa* with that of the other jurists, thereby making his own *de facto* authority.ⁿ¹⁵⁹ He, like Aristotle before him,ⁿ¹⁶⁰ was an adherent to the Condensation theory and believed that rainfall alone could not account for all the water present in rivers and surface watercourses.ⁿ¹⁶¹ He posited that groundwater must originate from three possible sources: (1) moisture being continuously forced out by the Earth itself, (2) air within the soil being condensed by the darkness and cold of the strata, or (3) the Earth slowly converting itself to water.ⁿ¹⁶²

ff. Pomponius

Pomponius was another first century A.D. jurist who, along with Ulpian, was one of the "principal writers on water law" that appear in the *Digest*.ⁿ¹⁶³ His contributions to groundwater law mainly center around his commentaryⁿ¹⁶⁴ describing the legal theories of Quintus Mucius Scaevola from more than a century earlier.ⁿ¹⁶⁵ Specifically, Pomponius wrote of Quintus Mucius's earlier *responsa*, recounting that:

If water which has its sources on your land bursts onto my land and you cut off those sources with the result that the water ceases to reach my land, you will not be considered to have acted with force, provided that no servitude was owed to me in this connection, nor will you be liable to the interdict against force or stealth.ⁿ¹⁶⁶

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Here Pomponius and Quintus Mucius made clear that the Romans thought of groundwater as rightly belonging to the landowner on whose land it emerged, a position the Texas Supreme Court adhered to some 1500 years later in *Texas Co. v. Burkett*.ⁿ¹⁶⁷

gg. Proculus

The last jurist whose works bore some influence on the later development of groundwater law was Proculus, who was active in the first century A.D. ⁿ¹⁶⁸ His writings were held in such high regard around 27 A.D. that one of the two dominant schools of judicial thought in Rome—the more liberal and interpretative school—was named after him. ⁿ¹⁶⁹ In Book 81 of Ulpian's *Ad Edictum*, he cites to Proculus when he relates that:

Proculus says that when somebody carries out work legally on his own property, even if he has made an undertaking to this neighbor against anticipated injury, nonetheless, he is not bound by this stipulation; for example, if you have buildings next to buildings of mine and you increase their height in accordance with your rights or if you divert my water supply by means of a canal, open or closed, on a field of yours, even though in the latter case you deprive me of my water and in the former case you block my light, nonetheless, no action is available to me under this stipulation; the grounds for this are that a person who prevents somebody from enjoying an advantage which he has hitherto enjoyed should not be held to be causing injury, there being a great difference between the causing of injury and the prevention of enjoyment of an advantage previously enjoyed. I consider Proculus's view to be correct. ⁿ¹⁷⁰

This excerpt from Proculus, which was endorsed by Ulpian, subtly describes the fine point on which the rule of capture today faces much of its blunt opposition. ⁿ¹⁷¹ It succinctly defines why a landowner is not liable to his [*29] neighbor for diverting his water or blocking out his light; because the landowner is merely preventing his neighbor from enjoying an advantage he previously enjoyed, the landowner is not injuring him outright. ⁿ¹⁷²

iii. Construction Together

Charged with drafting the *Institutes* and the *Digest*, while under explicit instructions not to abrogate previous codes, edicts, and juristical writings, the Commission had the authority and instruction to choose the best view, regardless of the number or name of jurists adhering to it, and to eliminate all contradictions and dissensions therefrom. ⁿ¹⁷³ This effort to harmonize Roman law is apparent even in the groundwater-related passages. ⁿ¹⁷⁴ The excerpts from Marcellus, Pomponius, Proculus, Quintus Mucius, Trebatius, and Ulpian combined almost seamlessly to negate any action against a landowner for rightful, non-defective work done on his land, even if it resulted in the loss of stream flow, loss of a well, or other damage to a neighbor's property. ⁿ¹⁷⁵

This conceptual alignment in the juristic passages is most apparent in the hot springs musing of Trebatius. ⁿ¹⁷⁶ His writing goes against the grain of the general trend of landowner immunity from liability (in all but subsidence injuries), and thus, Ulpian curtly rebukes his view, saying it "is incorrect." ⁿ¹⁷⁷ The whole of the *Digest*, taking all of the juristical writings together, makes it apparent that the Romans viewed groundwater as an element of property. ⁿ¹⁷⁸ Accordingly, when a landowner exercised his rights in a non-defective manner, even at the expense of neighboring landowners, such work did not give rise to any action for damages, especially in instances where the damage was anticipated and the damaged neighbor did nothing to protect against it. ⁿ¹⁷⁹

III. Recent Legal History and Development

The following section of this article has direct precedential value on present-day water law in Texas. ⁿ¹⁸⁰ Roman and—to a lesser extent—Greek law were instrumental in influencing much of the law throughout Western Europe [*30] almost a millennia later, ⁿ¹⁸¹ including the laws of Spain and England. The laws of Spain bear powerfully upon Texas jurisprudence today because of Texas' former colonial status to the Spanish Crown, ⁿ¹⁸² and although Britain never

actually held title to Texas soil,ⁿ¹⁸³ the Texas Republic expressly recognized and adopted English common law in 1840, thus, making English views on groundwater ownership rights important to twenty-first century landowners.ⁿ¹⁸⁴

The Court ably recounted the land patent history of Texas in the case of *Miller v. Letzerich*, wherein it explained that:

Lands in Texas have been granted by four different governments, namely, the Kingdom of Spain, the Republic of Mexico, the Republic of Texas, and the State of Texas. Many millions of acres of land were granted by Spain, Mexico, and the Republic of Texas prior to the adoption by the latter of the common law of England as the rule of decision in 1840.ⁿ¹⁸⁵

A. Spanish Law

Spain laid legal claim to Mexico, and subsequently present-day Texas, when Hernan Cortes discovered New Spain in 1518.ⁿ¹⁸⁶ Spanish Texas was essentially rectangular in shape, with the coastal strip stretching from modern-day Corpus Christi, Texas, to Lake Charles, Louisiana, surrounded by the Nueces and Calcasieu Rivers and extending from that point inland to the Medina River slightly west of the City of San Antonio to the Arroyo Hondo, just west of Natchitoches.ⁿ¹⁸⁷ This area, added to the rest of the northern frontier of New Spain south of the Nueces River, stretched more than 2000 miles from east to west and almost 1500 miles from north to south, encompassing some 960,000 square miles in total.ⁿ¹⁸⁸ Almost two hundred years after Cortes landed in Mexico, Texas was officially formed in 1691 when the governor of Coahuila y Texas was named the governor of Texas independently.ⁿ¹⁸⁹

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Spanish law governing Texas is contained in two distinct, yet related sources: (1) *Las Siete Partidas* (*Partidas*), compiled in 1265 by King Alfonso Xⁿ¹⁹⁰ which governed peninsular Spain,ⁿ¹⁹¹ and (2) the *Recopilacion de Leyes de los Reynos de las Indias* (*R.I.*), promulgated in 1681ⁿ¹⁹² which governed New Spain.ⁿ¹⁹³ The drafting of the *R.I.* was a monumental task that distilled over 400,000 *cedulas* down to just under 6400 provisions.ⁿ¹⁹⁴ Both of these codes were authoritative in New Spain because of a passage in the *R.I.* that provided that "when colonial law [was] silent on a topic, one must look to the laws of peninsular Spain."ⁿ¹⁹⁵

The *Partidas*, in turn, were founded upon the works of Justinian.ⁿ¹⁹⁶ The influence of Roman law upon that of Castillian Spain was so great that the Institutes of Justinian formed the "substance[] of civil law instruction at the Spanish and [Colonial]ⁿ¹⁹⁷ universities," and even furnished the text.ⁿ¹⁹⁸ Some commentators have surmised that the *Corpus Juris Civilis* (comprised of Justinian's Institutes, Digest, and second Code)ⁿ¹⁹⁹ "was not a formal source of [*32] the law of [the] Indies . . . either directly or by reference," however, the Court "has uniformly held that . . . the law as declared in *Las Siete Partidas*, . . . was taken almost bodily from the Roman Law; and, more particularly, from the Institutes" ⁿ²⁰⁰

However, as great as Justinian's influence was over its promulgation, the *Partidas* were much more than just a "[p]oor copy of the pandects of Justinian."ⁿ²⁰¹ The *Partidas* were a modification, not a recitation, of Justinian's writings in that they were "modified by custom and usage in medieval Spain," and Justinian's texts were only used to clarify the corresponding provisions of the *Partidas*.ⁿ²⁰² While the whole of peninsular Spain was governed by the *Partidas*, they themselves were supplemented by provincial codes and laws enacted in each region of the country.ⁿ²⁰³

In particular, one such provincial code was the *Constitutiones de Cataluna*, which governed thirteenth century

Cataluna and provided that "live springs" belonged, not in common, but to the lords of the land "without impediment or contradiction from anybody." ⁿ²⁰⁴ This ownership right was described as exclusive and hostile to others. ⁿ²⁰⁵

Indeed, New Spain and the entirety of Colonial Spain were the private property of the King, ⁿ²⁰⁶ and ownership of land could only be achieved by virtue of a grant from the Crown. ⁿ²⁰⁷ One example of such a royal grant was exemplified by the territorial gift made to Hernan Cortes on July 6, 1529, ⁿ²⁰⁸ which expressly ceded title to the "running, stagnant, and percolating waters" found thereon. ⁿ²⁰⁹

The grant to Cortes made imminent sense in context with the provisions of the Partidas, which plainly mandated that springs and waters that originated on land went with it in sale. ⁿ²¹⁰ Justinian's influence on landowner immunity [*33] from water injury liability is evident in New Spain as well, in that a colonial landowner was allowed to pump water from a well without royal permission. ⁿ²¹¹ Interestingly, the only limitations imposed on the use of water originating on private property were that it could not be used maliciously or merely to deny access to a neighboring landowner. ⁿ²¹² This may be the first instance of the modern-day restriction on the rule of capture against malicious injury that is recognized in Texas. ⁿ²¹³

Some have propounded that Spanish and Mexican land grants did not carry with them any implied grants of property rights in groundwater. ⁿ²¹⁴ However, the authority cited for this proposition is based on the lack of implied irrigation rights in perennial ⁿ²¹⁵ or nonperennial ⁿ²¹⁶ streams as incidents of Spanish and Mexican land grants. ⁿ²¹⁷ By the time of Spanish possession of Texas, surface water and groundwater regulation had developed along separate legal paths for about a thousand years. ⁿ²¹⁸ Therefore, any usufructory legal rights granted under a sovereign's surface water laws (e.g., implied irrigation rights in perennial and nonperennial streams) were inapposite to the property rights in groundwater that had accrued to individual landowners. ⁿ²¹⁹

B. Mexican Law

Mexico achieved its independence from Spain on September 28, 1821, ⁿ²²⁰ and Stephen F. Austin obtained the Mexican Emperor's approval for the Austin Colony just two years later on February 18, 1823. ⁿ²²¹

After its independence, Mexico retained much of the same water law that existed under Spanish rule. ⁿ²²² What new legislation the Mexican Republic [*34] enacted did not elaborate on nor modify groundwater law, but it did concern the law of flowing waters, as was ably and exhaustively recounted by former Chief Justice Jack Pope in *State v. Valmont Plantations*. ⁿ²²³

One Mexican scholar, in describing Spanish colonial land grants with and without water rights, framed the existence of a private property right in groundwater as follows: "Private property in waters not only existed, but the legislation of [the] Indies fostered the reduction of unappropriated waters to private ownership," revealing that private ownership of water was not only possible, but encouraged. ⁿ²²⁴ The express grants of springs described in early twentieth century Mexico also aided the private ownership of water. ⁿ²²⁵

C. English Law

English common law is central to this article's analysis because the Roman law pertaining to waters-as stated by Justinian-was expressly incorporated into the common law of England by Henry de Bracton, Justice of the King's Central Court-or King's Bench as it is sometimes referred ⁿ²²⁶- around the middle of the thirteenth century. ⁿ²²⁷ The common law of England was, in turn, expressly adopted and recognized by the Republic of Texas as part of the fledgling Republic's first congressional acts. ⁿ²²⁸

The first English case to address the ownership of percolating waters was *Hammond v. Hall* in 1840. ⁿ²²⁹ While the court did not ultimately reach the merits of the underground water arguments because the claim was not yet ripe, it did recognize that the "question [pertaining to drainage of one well by another, deeper well]. . .was said never to have been discussed before, namely, whether a right or easement could be claimed with respect to subterranean water." ⁿ²³⁰ In its opinion, the court expressly recognized Marcellus's writing in the Digest by quoting the original Latin phrasing, which translated to read that "no action . . . can be brought against a person who, while digging on his own land, diverts his neighbor's water supply." ⁿ²³¹

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Just three years after the *Hammond* decision, the Exchequer Chamber Court heard the case of *Acton v. Blundell*, ⁿ²³² the first judicial declaration of the modern rule of capture. ⁿ²³³ In *Acton*, a coal mining company dug coal pits to such a depth as to deprive the neighboring cotton mill owner of his supply of well water. ⁿ²³⁴

More fascinating than the facts underlying the dispute are some of the excerpts of the oral argument delivered in the case, which are reprinted in the English Reports version of the opinion. ⁿ²³⁵ *Acton's* counsel began by acknowledging that "water is the party's as long as it is on his land, as every thing is his that is above or below it." ⁿ²³⁶ He then showed advanced knowledge of hydrogeologic interconnectivity for the time and stated that "all water is originally underground, and this very stream may at some distance be on the level with and flow along the surface." ⁿ²³⁷ *Acton's* counsel, however, may have gone too far after this point in his argument when he cited as controlling authority only cases where surface water was at issue. ⁿ²³⁸ In addition, at the end of his surface water recitation, he mistakenly included a citation to Marcellus's writings in the Digest; ⁿ²³⁹ at that point, one of the justices on the panel-Justice Maule-interrupted him and responded, "It appears to me that what Marcellus says is against you. The English of it I take to be this: if a man digs a well in his own field, and thereby drains his neighbour's, he may do so, unless he does it maliciously." ⁿ²⁴⁰ Justice Maule's interjection was important, not just for revealing the centuries of existing law on groundwater that were overlooked by *Acton's* counsel, but also for being one of the first enunciations of the malicious injury restriction imposed on the rule of capture. ⁿ²⁴¹ The exchange continued as *Acton's* attorney cited to further English law adjudicating surface watercourses until Justice Maule again posed a pointed question, asking whether subterranean water could be legally defined as a watercourse. ⁿ²⁴² *Acton's* counsel replied that "the term 'watercourse[s]' [whether subterranean or surface] must apply to all streams," but the court did not reach this point in **[*36]** its decision. ⁿ²⁴³ This exchange, however, is again important because it appears to be the first recognition-or at the very least, an inkling-of the definitional and legal distinction between percolating groundwater and underground streams. ⁿ²⁴⁴

In the end, *Blundell's* counsel must have persuaded the panel by basing his argument on the Roman authorities recounted in Justinian's works instead of on English surface water law opinions. ⁿ²⁴⁵ In his response, *Blundell's* attorney delineated the parameters of the now-famous maxim, *damnum absque injuria*, ⁿ²⁴⁶ stating that in order "[t]o constitute a violation of that maxim, there must be *injuria* as well as *damnum*. ⁿ²⁴⁷ There are many cases in which a man may lawfully use his own property so as to cause damage to his neighbour, so as it be not *injuriousum*." ⁿ²⁴⁸ He then described the analogous situation where a wall built by one neighbor on his own land that blocks out the light of another is not held to be injurious. ⁿ²⁴⁹ *Blundell's* counsel took this example almost verbatim from the Digest, wherein Ulpian quotes Proculus for the proposition that buildings increased in height such that they block the light reaching a neighbor's land result in "no action [for injury being] available" to the neighbor. ⁿ²⁵⁰

The inclusion of this analogy in the court's opinion is especially insightful because it alluded to other unnamed Roman jurists when forming the precedential basis of the court's opinion.ⁿ²⁵¹ In the same paragraph that the court cited to the Digest and its recital of Marcellus's writing, the court added that "[t]he authority of one at least of the learned Roman lawyers [that is, Marcellus] appears decisive upon the point in favour of the defendants; of some others the opinion is expressed with more obscurity."ⁿ²⁵²

The fact that the court included excerpts from oral argument which specifically cite to other sections in the Digest, and more specifically, other sections that explicitly reference actions relating to groundwater diversion,ⁿ²⁵³ [*37] indicates that the Acton court took other juristical writings into account in formulating what is commonly considered to be the first modern groundwater law opinion.ⁿ²⁵⁴ This is logical considering the wealth of legal thought concerning subterranean waters in the Digest, which was available to the Acton justices.ⁿ²⁵⁵ Chief Justice Tindal elaborated on the relationship of the Roman law to that of England, stating that while "[t]he Roman law forms no rule, binding in itself, upon the subjects of these realms [i.e., Britain]," in the absence of direct authority on point from British courts, "the fruit of the researches of the most learned men, the collective wisdom of ages and the groundwork of the municipal law of most of the countries in Europe" should not be cast aside lightly.ⁿ²⁵⁶

The Chief Justice, in delivering the opinion of the court, admonished Acton's counsel for basing his entire case on legal precedents governing surface water, holding that "the case now under discussion does not fall within the rule which obtains as to surface streams, nor is it to be governed by analogy therewith."ⁿ²⁵⁷ He then concluded the opinion by holding that the case before them was:

[N]ot to be governed by the law which applies to rivers and flowing streams, but that it rather falls within that principle, which gives to the owner of the soil all that lies beneath his surface; that the land immediately below is his property, whether it is solid rock, or porous ground, or venous earth, or part soil, part water; that the person who owns the surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure; and that if, in the exercise of such right, he intercepts or drains off the water collected from underground springs in his neighbour's well, this inconvenience to his neighbour falls within the description of *damnum absque injuri*, which cannot become the ground of an action.ⁿ²⁵⁸

The holding in this case is important because it creates the foundation for the modern application of the rule of capture, and it defines the rights guaranteed by the rule as well.ⁿ²⁵⁹ The Acton court clearly went out of its way to declare groundwater a property right by elaborating that not only does "the owner of the soil" own "all that lies beneath his surface," but that there is not even a legal distinction between the "rock, . . . ground, . . . earth, or . . . water" underlying the land.ⁿ²⁶⁰

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D. Pre-East American Law

1. Pre-Acton Law

The Acton court has rightfully received most of the credit for the formulation of the rule of capture, but it has gone almost unnoticed that the precepts of the doctrine were first laid down by an American court in March of 1836, the same year that some 190 militiamen were slaughtered in an old crumbling Spanish mission just outside of San Antonio de Bexar.ⁿ²⁶¹ In *Greenleaf v. Francis*, the Massachusetts Supreme Court held—rather presciently—that a defendant's action of lawfully digging a well in his own ground, although "prejudicial to the plaintiff, [was] *damnum absque injuria*."ⁿ²⁶²

In fact, the earliest recorded usage of the maxim in modern western jurisprudence occurred the year before Greenleaf, in *Mahan v. Brown*, though there the maxim was written in English and not in Latin.ⁿ²⁶³ The Mahan court held that no action could lie against a defendant who had built a high fence for the sole purpose of obstructing the lights of his neighbor's house.ⁿ²⁶⁴ One possible reason for this first usage of the *damnum* maxim may have been that it was based, at least in part, on Ulpian's edict concerning Proculus, who wrote that no action could lie for blocking a neighbor's lights as a result of the height of a structure built on one's own land.ⁿ²⁶⁵ The New York Supreme Court of Judicature even used the same reasoning as Proculus, holding that "[t]he refusal or discontinuance of a favor gives no cause of action."ⁿ²⁶⁶

Similarly, the Greenleaf court arrived at the identical conclusion that the Acton court did seven years later because they both based their decisions on Roman law, even on the same excerpt from the Digest.ⁿ²⁶⁷ Both courts referred to the same passage taken from Ulpian's critique of Proculus's property formulations,ⁿ²⁶⁸ which explained how no liability could attach to a landowner who built a wall so high that it blocked out the light from a neighbor's [*39] home.ⁿ²⁶⁹ The Greenleaf court did not actually cite to Justinian's source text, but to two later commentaries,ⁿ²⁷⁰ both of which translated Justinian's Pandects into more modern terminology.ⁿ²⁷¹ The interpretative nature of these texts is revealed in the additional explanation added to Proculus's original property rights writing, cautioning that an aggrieved landowner "ought to have placed his lights so as to be out of danger of this inconvenience, which he had no right to hinder, and which he might have easily foreseen."ⁿ²⁷² This addition seems to have been taken or interpreted from Ulpian's warning that "anyone who fails to protect himself in advance [of work carried out on neighboring land] . . . against anticipated injury has only himself to blame."ⁿ²⁷³

Another noteworthy aspect of the Greenleaf opinion is that it, and not Acton, is the first court opinion to describe the "absolute dominion" of the landowner over everything lying within the soil.ⁿ²⁷⁴

Additionally, the Greenleaf court clearly held that groundwater is a property right belonging to the surface owner by concluding that "[e]very one has the liberty of doing in his own ground whatsoever he pleases, even although it should occasion to his neighbour some other sort of inconvenience."ⁿ²⁷⁵

2. Post-Acton Law

After *Acton v. Blundell*ⁿ²⁷⁶ and *Greenleaf v. Francis*ⁿ²⁷⁷ were decided, American state supreme courts relied upon them when confronted with groundwater law cases and uniformly held that the English rule conferred a property right upon the owner of the surface estate.ⁿ²⁷⁸ Only the decisions that are significant to the development of the rule of capture are examined below.

Seven years after the Acton decision, the Connecticut Supreme Court in *Roath v. Driscoll* held that "[w]ater, whether moving or motionless in the earth, is not, in the eye of the law, distinct from the earth."ⁿ²⁷⁹ This view of groundwater rights plainly follows the Acton court's approach of not [*40] distinguishing between earth and subterranean water.ⁿ²⁸⁰ The Roath court further clarified the property rights inherent in groundwater by holding that "the nature of the right itself, [must allow] each person [to] be left to enjoy any natural advantage belonging to his own land; and water, appearing and standing, . . . is such a natural advantage."ⁿ²⁸¹

In 1855, the Supreme Court of Vermont, in *Chatfield v. Wilson*, cited to Greenleaf, Acton, and Roath in ruling that a nonbeneficial use of well water causing damage to a neighbor fell within the *damnum absque injuria* protection.ⁿ²⁸²

That same year, the Supreme Court of Pennsylvania addressed the groundwater issue as well in *Wheatley v. Baugh*, becoming the first court to attach the *cujus est solum ejus est usque ad coelum et ad infernos* maxim to the groundwater law lexicon.ⁿ²⁸³ It is worth noting, however, that the *Greenleaf* court was actually the first court to ascribe the meaning of this maxim to groundwater without using the latin phrasing so prevalent now, by stating that "there is nothing in the case at bar which limits or restrains the owners of these estates . . . from having the absolute dominion of the soil, extending upwards and below the surface so far as each pleases."ⁿ²⁸⁴

In its decision, the *Wheatley* court cited to Jean Domat, a French legal scholar whose legal commentary on Roman law was prevalent at the beginning of the seventeenth century.ⁿ²⁸⁵ The *Wheatley* court specifically cited to Domat's writings that carved out a malicious injury exception to the groundwater laws set forth by Justinianⁿ²⁸⁶ and also cited to Domat's version of Proculus's darkened light analogy.ⁿ²⁸⁷ The court further referred to another provision from Domat's commentary that provided that a landowner "may dig for water on his own ground, and if he should thereby drain a well or spring in his neighbour's ground, he would be liable to no action of damages on that score."ⁿ²⁸⁸ This is consistent with Marcellus's writing, cited in *Acton*,ⁿ²⁸⁹ stating that "no action . . . can be brought against a person who, while digging on his [*41] own land, diverts his neighbor's water supply"ⁿ²⁹⁰ and Trebatius's excerpt which ponders, "suppose that I dig a well in my house and by doing so I cut off the sources of your well. Am I liable? Trebatius says that I am not liable"ⁿ²⁹¹

In 1861, the Supreme Court of Ohio, in *Frazier v. Brown*,ⁿ²⁹² waded into the groundwater law fray and became forever linked with Texas jurisprudence. Forty-three years later, the Texas Supreme Court, in *Houston & Texas Central Railway Co. v. East*, quoted selectively from the *Frazier* decision.ⁿ²⁹³ This connection was mainly due to two overly descriptive phrases used by Justice Brinkerhoff, who authored the *Frazier* opinion.ⁿ²⁹⁴ First the court held that "the law recognizes no correlative rights in respect to underground waters percolating, oozing or filtrating through the earth."ⁿ²⁹⁵ Then, in an attempt to bolster its earlier description of water movement, the court depicted subterranean water as "so secret, occult and concealed that" any attempt to manage it would result in "hopeless uncertainty."ⁿ²⁹⁶ While these statements were fairly precise for 1861,ⁿ²⁹⁷ they have gained notoriety in modern debates over groundwater, as some suggest that scientific advancements have taken much of the "mystery" out of groundwater.ⁿ²⁹⁸ Nevertheless, the *Frazier* court held that "[percolating water] is to be regarded as part of the land itself, to be enjoyed absolutely by the proprietor within whose territory it is."ⁿ²⁹⁹

E. Texas Law

In the preceding pages, this article has reviewed the historical development of the rule of capture up until its recognition in Texas one hundred years ago.ⁿ³⁰⁰ As applied in Texas, the rule of capture has several important legal distinctions and parameters that are reviewed below.ⁿ³⁰¹

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1. Caselaw

"The story of water law in Texas is also the story of its droughts."ⁿ³⁰² This could not be more true than in *Houston & Texas Central Railway Co. v. East* -the seminal groundwater law case in Texas.ⁿ³⁰³ For the five years immediately preceding 1901-the year *Houston & Texas Central Railway* dug a sixty-six foot well near the corner of Owings Street and Lamar Avenue in Denison, Texas-strong evidence exists that Grayson County suffered a moderate to severe drought.ⁿ³⁰⁴ While it cannot be known for sure one hundred years after the fact, the combination of the drought and the *Houston & Texas Central Railway* well operating just across the street likely had a pronounced negative effect on W.A. East's household well.ⁿ³⁰⁵ So began the saga of the rule of capture in Texas.ⁿ³⁰⁶

Several years later, documented droughts in 1910 and 1917 spurred the passage of Article XI, Section 59 of the Texas Constitution,ⁿ³⁰⁷ which is commonly referred to as the "Conservation Amendment,"ⁿ³⁰⁸ imposing the duty to preserve Texas's natural resources on the Texas Legislature.ⁿ³⁰⁹ Then, during the sustained drought of the 1950s, the seminal groundwater cases of *City of Corpus Christi v. City of Pleasanton*ⁿ³¹⁰ and *Pecos County Water Control & Improvement District No. 1 v. Williams* were decided.ⁿ³¹¹

Texas caselaw developed two critical areas that exempt groundwater or its use from the rule of capture.ⁿ³¹² The first area is definitional and removes certain types of groundwater from the purview of the rule of capture.ⁿ³¹³ The second area addresses groundwater that is subject to the rule of capture but is exempt from its governance because of the manner of use to which it is applied.ⁿ³¹⁴

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a. Legal Definitional Boundaries

i. Underground Streams

In order for groundwater to be governed by the rule of capture in Texas, it must be percolatingⁿ³¹⁵ and not part of an underground stream, which is defined as having all the "characteristics of surface water courses, such as beds, banks forming a channel, and a current of water."ⁿ³¹⁶ Any groundwater that is part of an underground stream is automatically deemed state-owned water.ⁿ³¹⁷ However, all groundwater in Texas is assumed to be percolating.ⁿ³¹⁸

The Court clarified the percolation assumption in its 1927 decision in *Texas Co. v. Burkett* by reasoning that if groundwater was not either "add[ing] perceptibly to the general volume of water in the bed of [a] stream" (underflow), or "of sufficient magnitude to be of any value to riparian proprietors" (underground streams), it had to be considered percolating.ⁿ³¹⁹ Further, "the mere fact that the wells of one man dried up springs or the wells of another, neither proves nor indicates a well defined channel of underground water."ⁿ³²⁰

Some commentators, in their youth and inexperience, have written that "if otherwise percolating or artesian waters form or appreciably contribute to the source or path of a surface stream, then they are also subject to state ownership,"ⁿ³²¹ basing this assumption on the Court's decision in *Fleming v. Davis*.ⁿ³²² However, *Fleming* and its companion case, *Tolle v. Correth*,ⁿ³²³ can be distinguished on a very simple ground: both were decided according to surface water law doctrines because both cases involved the diversion of springwater after it had emerged from the ground.ⁿ³²⁴ Because the springwater was no longer subterranean, its use was governed by surface water doctrines [*44] and not by the rule of capture, which had not even been adopted at that time of the *Fleming* decision.ⁿ³²⁵

Bartley v. Sone is another case sometimes cited as authority for the proposition that the rule of capture is not "applicable to springs which form the source of a flowing stream or which add perceptibly to the flow of water in a stream."ⁿ³²⁶ This case is distinguishable both factually and legally.ⁿ³²⁷ In *Denis v. Kickapoo Land Co.*, the Third Court of Appeals distinguished *Bartley* on legal grounds.ⁿ³²⁸ The court explained that the San Antonio court's reliance on a mere implication from the *Burkett* court's holding, in which the court mused about whether the springs at issue "added perceptibly to the general volume of water in the [streambed],"ⁿ³²⁹ was misplaced.ⁿ³³⁰ Because even the springs at issue in *Bartley* were held to be percolating, any inference that groundwater could be subject to riparian principles simply because it might feed a surface stream was "obiter dicta and not a holding."ⁿ³³¹ In addition, the *Bartley* case is factually dissimilar to a typical groundwater law case in that it, like *Fleming* and *Tolle* before it, dealt with appropriation of springwater after it had emerged from the ground.ⁿ³³²

A renowned water law commentator from the early twentieth century, C.S. Kinney, succinctly described the English rule's relationship to surface waters by reasoning that:

Percolating waters tributary to springs were treated the same as all other percolating waters as a part of the soil where found and belonged absolutely to the owner thereof, who could do what he pleased with them, even though in abstracting the water it dried up the springs, to which the water was tributary, on the land of another. And it is immaterial that the springs so supplied with water were the sources of a stream or surface water course upon which riparian rights had vested, provided that the water was intercepted while it was still percolating through the soil before it had reached the surface of the ground at the springs. ⁿ³³³

Finally, it should be pointed out that for all the legal haranguing about underground streams, no Texas appellate court has ever found or recognized one. ⁿ³³⁴ The reason for this is probably twofold. First, an underground [*45] watercourse with bed, banks, and a current of flow is antithetical to the hydrogeological realities of aquiferous water. ⁿ³³⁵ Second, courts are generally reluctant to "open Pandora's box" by finding such a stream in Texas, ⁿ³³⁶ which would exempt it and all it touches from the rule of capture. ⁿ³³⁷ The difficulty and absurdity of applying developed legal terminology to the actual hydrogeological behavior of subterranean water is evidenced by the following exchange in *Cantwell v. Zinser* ⁿ³³⁸ between the appellant's counsel and the appellee:

Q. You don't contend there is one big stream of water up there? A. Anyone that looks in there can see where the water has channeled its way. . . .

. . . .

Q. You think that this water coming into Jim's sump is in an oozing condition? A. Very slow, yes.

Q. Would you call it percolating? A. Yes, and oozing. ⁿ³³⁹

ii. Underflow of Surface Streams

The underflow of surface streams "is the subsurface portion of a watercourse, the whole of which comprises waters in close association both on and beneath the surface." ⁿ³⁴⁰ This concept can be divided into two categories: (1) gaining streams and (2) losing streams. ⁿ³⁴¹ Gaining streams are characterized by the water table lying at roughly the same elevation or higher than the level of water flowing in the stream itself. ⁿ³⁴² Conversely, in a losing stream, the water level of the water table is typically lower than the water level of the stream, or even the streambed itself. ⁿ³⁴³

Like underground streams, "underflow" of surface streams is not percolating groundwater subject to the rule of capture, but is instead "the [*46] property of the state." ⁿ³⁴⁴ Although underflow, by its nature, could be more easily located ⁿ³⁴⁵-and because no peculiar method of water movement, such as oozing or filtrating, needs to be found-Texas courts might have had considerably less difficulty finding stream underflow to exist than they have underground streams; however, this assumption is wrong. ⁿ³⁴⁶ In fact, "[v]ery little mention of underflow of streams is made in the Texas decisions on water rights." ⁿ³⁴⁷

b. Legal Exceptions to the Rule of Capture

i. Malice

As this article previously mentions, ⁿ³⁴⁸ one of the earliest stipulations attached to the rule of capture both in Britain and in New Spain was the prohibition against malicious injury. ⁿ³⁴⁹ In practical Texas jurisprudential application, however, legal findings of "malice" are a rarity. ⁿ³⁵⁰ In order to find that a landowner "maliciously [took] water for the sole purpose of injuring [his] neighbor," the complainant must prove affirmatively that no other possible explanation for why the defendant was draining the complainant's property other than malicious spite exists. ⁿ³⁵¹ Some commentators propose that proving such a level of intent in a court of law is impossible. ⁿ³⁵²

ii. Waste

One of the most controversial limitations put on the use of percolating waters is the waste restriction. ⁿ³⁵³ As with the other exceptions to, and exemptions from, the rule of capture, the Texas judiciary has shown little inclination to find waste. ⁿ³⁵⁴

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This reluctance among the courts is most famously exemplified in the Court's decision in *City of Corpus Christi v. City of Pleasanton*. ⁿ³⁵⁵ In that case, the Lower Nueces River Supply District was under contract to furnish groundwater it pumped to the City of Corpus Christi some 118 miles away. ⁿ³⁵⁶ At full capacity, the Nueces wells pumped approximately ten million gallons of water per day into the Nueces River, which flows into Lake Corpus Christi. ⁿ³⁵⁷ From there, a natural channel conducted the water to a settling basin at Calallen. ⁿ³⁵⁸ The evidence at trial showed that sixty- three to seventy-four percent of the water discharged into the Nueces River never reached Corpus Christi due to losses from evaporation, transpiration, and seepage. ⁿ³⁵⁹ The Court found that the Legislature, when it enacted two statutes allowing for the transport of groundwater via "river, creek or other natural water course or drain, superficial or underground channel, [or] bayou," ⁿ³⁶⁰ certainly conceived that some of the water might be lost in transport and "could hardly have intended that what it had approved as legal should become illegal." ⁿ³⁶¹ Justice Calvert ⁿ³⁶² also noted the Court's holding was supported by Texas common-law traditions when he wrote, "We know of no common-law limitation of the means of transporting the water to the place of use. Neither do we know of any judicial modification in this state of the rule of the East case." ⁿ³⁶³

Justice Griffin, in his dissent, rebuked this approach by encapsulating the majority's reasoning that even though only twenty-five percent of the transported water reaches its destination, "this use is a lawful use; therefore, argues the majority, no waste occurs. The same reasoning would hold no waste occurs if only [.0001% of the water] reach[es its] destination if this [.0001%] is used lawfully." ⁿ³⁶⁴

The Court also distinguished the Austin Court of Appeals's opinion in *Cantwell v. Zinser*, which suggested that waste might be found when extracted groundwater is stored in a leaky, earthen tank, ⁿ³⁶⁵ holding that because *Cantwell* had no writ history, there was "no basis for such a modification [to the rule of capture]." ⁿ³⁶⁶

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iii. Negligent Subsidence

The exception to the rule of capture for negligence is a very limited and relatively recent one. ⁿ³⁶⁷ In 1978, the Court was forced to address the issue of subsidence due to groundwater production. ⁿ³⁶⁸ Subsidence occurs when an aquifer is overdrafted intensely and long enough to drain a sufficient quantity of the water out of the aquiferous soil

strata, weakening the structural latticework of the soil by leaving air in place of the water.ⁿ³⁶⁹ This causes the drained soil to collapse, thereby lowering each higher level of soil sediment up to the surface.ⁿ³⁷⁰

In 1973, several landowners in Harris County, including Smith-Southwest Industries, brought suit against Friendswood Development Co. and its parent company, Exxon Corp., alleging that withdrawals of large quantities of groundwater on nearby lands caused severe subsidence on their land.ⁿ³⁷¹ That same year, and probably not by coincidence, the 63rd Legislature amended the original 1949 legislation, enabling the creation of groundwater districts to include subsidence control among the list of purposes for which a district could be created to address.ⁿ³⁷²

In 1975, during the 64th Session, the Legislature created the first underground water conservation district specifically tasked to manage the emerging subsidence issues present in Harris County.ⁿ³⁷³ The constitutionality of this district was promptly challenged in *Beckendorff v. Harris-Galveston Coastal Subsidence District*ⁿ³⁷⁴ on the grounds that the Conservation Amendment to the Texas Constitutionⁿ³⁷⁵ did not specifically "authorize the creation of a conservation and reclamation district for the purpose of controlling subsidence."ⁿ³⁷⁶ However, the court upheld the district's constitutionality.ⁿ³⁷⁷ The court reasoned that a conservation aim of the Conservation Amendment was the "control . . . [of] flood waters,"ⁿ³⁷⁸ which was also listed among the purposes for creating the district.ⁿ³⁷⁹

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In 1978, the Friendswood suit finally made its way up to the Court after two consecutive legislative sessions in which the Water Code was amended.ⁿ³⁸⁰ The Court granted the writ of error and took the groundbreaking step of substantively modifying the rule of capture by adding negligent subsidence to malice and waste, as the three exceptions to the use of groundwater, which would otherwise be protected under the blanket protection of the English rule,ⁿ³⁸¹ as adopted by the Court in *Houston & Texas Central Railway Co. v. East*.ⁿ³⁸²

The addition of negligence as a ground of recovery in subsidence cases made the Court's holding extremely narrow, however, allowing for liability to a landowner only where the "negligent, willfully wasteful, or . . . malicious[ly] injur[ious]" withdrawal of groundwater was the "proximate cause of the subsidence of the land of others."ⁿ³⁸³ Notably, because exceptions to the rule of capture previously existed for waste and malice, any pumping of groundwater solely for malicious or wasteful motives would already subject such drilling to liability, whether or not it resulted in subsidence on neighboring lands.ⁿ³⁸⁴ So in actuality, the inclusion of proximately caused, negligent subsidence to the list of liability exceptions was mainly an academic change.ⁿ³⁸⁵

The Friendswood opinion was not the first time the Court toyed with the imposition of negligence as a common law limitation.ⁿ³⁸⁶ In 1936, in *Turner v. Big Lake Oil Co.*, the Court held that "the law imposes upon all persons to use due care in the use of their property or the conduct of their business to avoid injury to others."ⁿ³⁸⁷ The Court expressed this notion in the context of imposing some liability on land use "[i]n the absence of some positive law forbidding or regulating the keeping or use of the thing."ⁿ³⁸⁸ This idea of positive law appears to be drawn from the U.S. Supreme Court's proposal of a "negative community,"ⁿ³⁸⁹ discussed at length below.ⁿ³⁹⁰ Some commentators have attempted to draw a connection between the discussions of negligence in the *Turner* and *Friendswood* decisions, but such a link is tenuous at best.ⁿ³⁹¹ The *Friendswood* opinion directly distinguished *Turner* by explaining that:

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The problem [with] those cases [including *Turner*], none of which related to ground water withdrawals, [is that they] involved liability for the unreasonable use of correlative property rights or the balancing of legal and equitable rights between property owners. This is a concept which was deliberately rejected with respect to withdrawals of underground water when this Court adopted [in *East*] the common law rule that such rights are not correlative, but are

absoluteⁿ³⁹²

Finally, in recognition of the substantive change to the common law rule of capture adopted by the Court in *Friendswood* and consistent with Justice Calvert's admonition in the *City of Corpus Christi* decision that the people of Texas, having adopted the Conservation Amendment, had directed the Legislature to pass all laws necessary to protect Texas's natural resources,ⁿ³⁹³ the Court made the application of its holding concerning liability for negligently caused subsidence prospective.ⁿ³⁹⁴

2. Attorney General Opinions

The Office of the Attorney General has addressed the rule of capture intermittently for over sixty years.ⁿ³⁹⁵ Despite, or perhaps due to, this long history, the Attorney General has been less than consistent on what exactly a landowner owns under the rule of capture.ⁿ³⁹⁶

On August 22, 1940, the Attorney General took the perplexing position that "regardless of where the ownership may rest, the public at large has more need for the use of large underground reservoirs of water contained within strata than even of its surface streams."ⁿ³⁹⁷ The Attorney General reached this conclusion by citing almost exclusively to California caselaw,ⁿ³⁹⁸ which had adopted the correlative rights doctrine by that time.ⁿ³⁹⁹ The Attorney General attempted to "clarify" groundwater law in Texas by designing a complex scheme that purported to distinguish between different classes of percolating waters, leaving only groundwater that moved through the soil profile solely by [*51] force of gravity as the single type of underground water subject to the rule of capture.ⁿ⁴⁰⁰ The Attorney General justified this approach by explaining that he:

[B]elieve[d] the science of hydrology, that is, the study of underground waters [had] advanced . . . to a degree of certainty as to warrant some measure of discrimination on the part of the courts, requiring them to abandon the [general percolation presumption] and to distinguish the different types of percolating water.ⁿ⁴⁰¹

The opinion went on to chide that "[w]e cannot believe that our courts would hold [groundwater found in soil strata] constitute[s] percolating water[] within the sense that that term is ordinarily used, that is, diffused percolation."ⁿ⁴⁰² The "scientific" location of water not contained within soil strata would indeed be challenging to find.ⁿ⁴⁰³

By 1987, however, the Attorney General had turned away from California's correlative rights and began focusing his analysis on the law promulgated in, of all places, Texas.ⁿ⁴⁰⁴ In his opinion, the Attorney General held that "under Texas law, landowners have 'absolute ownership' of percolating groundwater beneath their lands."ⁿ⁴⁰⁵ The Attorney General went on to state that:

The right of landowners to groundwater beneath their land is an incident to their ownership of the land—a part of the land. Because groundwater is considered to be the property of the overlying landowner . . . [the landowner] may withdraw it regardless of the effect of the withdrawal on other wells or the reasonableness of the use to which it is put.ⁿ⁴⁰⁶

The Attorney General then distinguished the absolute ownership doctrine from the doctrine of riparian rights in surface water by writing that "[u]nlike the riparian landowner's right to non-flood waters, however, a landowner's 'absolute ownership' right to groundwater may not be characterized . . . as . . . 'usufructory.'"ⁿ⁴⁰⁷

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IV. Current Application in Texas

Several snappy quotes have been cited in various publications, all used as clever commentary on the rule of capture. ⁿ⁴⁰⁸ Among these are Benjamin Franklin's attributed quote, stating "[w]hen the well is dry, we know the worth of water;" ⁿ⁴⁰⁹ Mark Twain's observation that "[w]hiskey is for drinking and water is for fighting over;" ⁿ⁴¹⁰ former Speaker of the U.S. House Jim Wright's admonition on the importance of water, "[t]he crisis of our diminishing water resources is just as severe (if less obviously immediate) as any wartime crisis we have ever faced. Our survival is just as much at stake as it was at the time of Pearl Harbor, or the Argonne, or Gettysburg or Saratoga;" ⁿ⁴¹¹ former Governor George W. Bush's comment on groundwater regulation, "[w]ater can be war;" ⁿ⁴¹² Oliver Wendell Holmes's famous critique of precedential value, which is often applied definitively to the rule of capture, which reads:

It is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV. It is still more revolting if the grounds upon which it was laid down have vanished long since, and the rule simply persists from blind imitation of the past[;] ⁿ⁴¹³

a more blunt definition of stare decisis, "Latin[] for 'We stand by our past mistakes,'" ⁿ⁴¹⁴ and Mohamar Ghadafi's surprisingly sane observation that "[w]ater is more valuable than oil; water is life." ⁿ⁴¹⁵

While not as catchy, the authors attempt in this section of the article to elaborate on the current state of groundwater regulation in Texas beyond the conditions hinted at above. ⁿ⁴¹⁶

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A. The Term "Rule of Capture" Is an Unfortunate Misnomer

Despite the clarity and regularity with which Texas courts have defined the rule of capture as an absolute, freely alienable, corporeal right of ownership in groundwater located beneath a landowner's property, ⁿ⁴¹⁷ and despite the fact that the Texas Legislature has passed no statute that is intended to impair the ownership and property rights in groundwater, ⁿ⁴¹⁸ nor imposed upon groundwater the laws and administrative rules relating to surface water, ⁿ⁴¹⁹ the term "rule of capture" has caused-and continues to cause- much confusion in the legal community. ⁿ⁴²⁰ Admittedly, it is a misnomer. ⁿ⁴²¹ Some reviewers have even lamented the spread of the use of the term, describing it as supporting the "dangerous and . . . unjustified inference drawn by some from the use of this expression." ⁿ⁴²² The term has also inspired "[l]awyers . . . [to] glibly talk[] about the rule of capture and its sinister influence," and has even stirred some to consider it "a sort of inherent disease." ⁿ⁴²³ In reality, the rule of capture has gone by many names in Texas, including the "English rule," "English doctrine," "absolute ownership rule," "Texas capture rule," "Texas rule," "law of capture," "law of the biggest pump," "big pump theory," "common law doctrine," and the "common law rule." ⁿ⁴²⁴

Testaments to the befuddlement that the term rule of capture has caused within the legal community over the last hundred years are evidenced by several instances where, even though the Court famously and unambiguously adopted the English rule in *East*, some reviewers, jurists, and even the Court itself has intimated that *East* did not adopt the English rule at all. ⁿ⁴²⁵ One commentator opined that *East* "really follows the American rule of reasonable and beneficial use . . . , although the case is sometimes cited as following the English rule without any modifications or limitations whatever." ⁿ⁴²⁶ The San Antonio Court of Appeals erroneously cited *East* for the proposition that "[i]t is now settled in this state . . . that owners of the soil have no rights in subsurface waters . . . as against neighbors who may withdraw them by wells or other excavations, even though this withdrawal by the one results in the destruction of the

other's water supply." ⁿ⁴²⁷ Less than four months later, the Court itself spontaneously cited East for allowing neighboring landowners the [*54] "correlative right to appropriate, through like methods of drainage, the gas and oil underlying the tracts adjacent to his own." ⁿ⁴²⁸ This was an errantly- worded opinion directly and wholly in contravention with the Court's earlier pronouncement in *Houston & Texas Central Railway Co. v. East* ⁿ⁴²⁹ and the subsequent opinions of *Texas Co. v. Burkett*, ⁿ⁴³⁰ *City of Corpus Christi v. City of Pleasanton*, ⁿ⁴³¹ *Friendswood Development Co. v. Smith-Southwest Industries, Inc.*, ⁿ⁴³² *Barshop v. Medina County Underground Water Conservation District*, ⁿ⁴³³ and *Sipriano v. Great Spring Waters of America, Inc.* ⁿ⁴³⁴

The most recent judicial discussion of the rule of capture comes from the Austin Court of Appeals in an opinion issued in 2004 in *City of San Marcos v. Texas Commission on Environmental Quality*, ⁿ⁴³⁵ wherein the court held that the absolute ownership rule adopted in East relieved a landowner from "tort liability" for adverse impacts to a neighboring landowner's wells that result from pumping. ⁿ⁴³⁶ The third court went on to state that a "landowner can [only] assert absolute ownership over groundwater by drilling a water well and capturing it." ⁿ⁴³⁷ The court based its view on an 1805 New York intermediate court opinion that discussed the rule of capture in the context of the "possession of hunted wild animal[s]." ⁿ⁴³⁸

1. Confusion with Feroe Naturae

The use of the word "capture" logically implies the exertion of dominion over something not owned, or more precisely, the act of "tak[ing] into one's possession or control" ⁿ⁴³⁹ This similarity of terminology has led to analogizing the rule of capture to the seizing of wild game, or feroe naturae. ⁿ⁴⁴⁰ The origin of this analogy is explained "as an expression of derision by critics of the old analogy to wild animals." ⁿ⁴⁴¹ Indeed, even the U.S. Supreme Court made this error, albeit while quoting a nineteenth century Pennsylvania case [*55] -*Westmoreland & Cambria Natural Gas Co. v. De Witt*-where it stated that "[w]ater and oil, and still more strongly gas, may be classed by themselves, if the analogy be not too fanciful, as minerals feroe naturae. In common with animals, and unlike other minerals, they have the power and the tendency to escape without the volition of the owner." ⁿ⁴⁴² This quote reveals one ground on which to distinguish both courts' interpretation of water's subterranean nature-water has never been considered a mineral since the time of Justinian. ⁿ⁴⁴³

The U.S. Supreme Court also belied the confusion between the terminology "absolute ownership" and "capture" when it quoted the Westmoreland opinion in describing groundwater as "'belong[ing] to the owner of the land, and . . . a part of it, so long as [the groundwater is] on or in it,'" while citing the same opinion as requiring capture for a property interest to accrue. ⁿ⁴⁴⁴ The U.S. Supreme Court elaborated further on the feroe naturae comparison, explaining that "[i]t [is] true as to both animals feroe naturae and gas and oil, therefore, that wilst the right to appropriate and become the owner exists, proprietorship does not take being until the particular subjects of the right become property by being reduced to actual possession." ⁿ⁴⁴⁵ The High Court further postulated that "things which are feroe naturae belong to the 'negative community;' in other words, [they] are public things subject to the absolute control of the state." ⁿ⁴⁴⁶ This holding was a fairly drastic departure from the High Court's earlier pronouncement on the subject, wherein it decided that:

Petroleum gas and oil are substances of a peculiar character They belong to the owner of the land, and are part of it, so long as they are on it or in it, or subject to his control, but when they escape and go into other land, or come under another's control, the title of the former owner is gone. If an adjoining owner drills his land and taps a deposit of oil or gas, extending under his neighbor's field, so that it comes into his well, it becomes his property. ⁿ⁴⁴⁷

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Other commentators have been misled by the confusion in terminology inspired by the rule of capture.ⁿ⁴⁴⁸ In 2000, one author stated that "the rule of capture [was] based upon . . . [a] legal concept that ownership is derived from gaining control over the property and reducing it to possession."ⁿ⁴⁴⁹

Another reviewer correctly described how the legal theory of capture of wild animals arose in England in the context of land ownership, whereby a hunter could not claim ownership of a stag or fox "until possession [of it] was actually taken . . . by virtue of capture," but thereafter mistakenly assumed that English courts applied this form of the rule of capture to groundwater.ⁿ⁴⁵⁰

As examined above, in *Acton v. Blundell*, the Exchequer Chamber court did not refer to the capture of wild animals or even capture for that matter.ⁿ⁴⁵¹ The underpinnings of the *Acton* decision rested instead on the Digest of Justinian and the passage from Marcellus in particular, neither of which made reference to the capture of wild game, *feroe naturoe*.ⁿ⁴⁵² However, both did expressly refer to the maxim *damnum absque injuria*,ⁿ⁴⁵³ the tenets of which were first described by Proculus and Ulpian.ⁿ⁴⁵⁴

Another commentator made the same troubled assumption about the *Acton* court, stating that the British courts "compared underground liquids and gas to wild animals that roam across the surface. Wild birds and animals belong to no one until killed or captured, according to the rules of state. This concept is sometimes referred to as *ferae [sic] nuturae* or free in nature."ⁿ⁴⁵⁵

Some scholars have not tied a theoretical concept of capture to that of *feroe naturoe* but instead have simply surmised that, because water can migrate out from under one's boundary and no action will lie once it exits, water must be reduced to actual possession before it can be owned.ⁿ⁴⁵⁶ In the context of water marketing, one commentator wrote that "the [Texas] landowner does not hold title to specific units of water beneath his land . . . [*57] [but he or she] may 'reduce groundwater to ownership' by pumping it."ⁿ⁴⁵⁷ Gould, in his work on waters, posited that "[p]etroleum [and] oil, . . . like water, . . . is not the subject of property, except while in actual occupancy, and a grant of either water or oil is not a grant of the soil or of anything for which ejectment will lie."ⁿ⁴⁵⁸ Our Commission of Appeals Court quoted this passage from Gould with approval in *Prairie Oil & Gas Co. v. State*, but only the judgment of the opinion was later adopted by the Court.ⁿ⁴⁵⁹ The Court did, however, appear to go astray in the early case of *Bender v. Brooks*, where it held that owners of land had "no specific title to the oil therein until it from the earth."ⁿ⁴⁶⁰ This holding was later clarified in *Right of Way Oil Co. v. Gladys City Oil*, where the Court held that oil in place was, in fact, capable of ownership, but the title to such oil becomes more definite upon the oil's extraction.ⁿ⁴⁶¹ One writer summed up his approximation of the absolute ownership doctrine by stating that "it is obvious that one cannot claim absolute ownership in something so fleeting as groundwater."ⁿ⁴⁶² Yet another described the confusion generated by the meanings of capture versus absolute ownership by reasoning that the right did not confer:

a property right in the form of an affirmative privilege on the part of one landowner to capture the oil or gas of his neighbor. Such a conception would seem utterly inconsistent with the ownership theory. The true view . . . is that, instead of an affirmative privilege to capture, there is merely a negative freedom from liability for drainage because practical considerations render the giving of a cause of action for drainage undesirable.ⁿ⁴⁶³

2. Clarification from Texas Oil and Gas Caselaw

This last statement was made shortly after the U.S. Supreme Court's decision in *Ohio Oil* and mirrors the High Court's description of a "negative community" made up of "public things subject to the absolute control of the [*58] State."ⁿ⁴⁶⁴ In a landmark decision, the Court in *Texas Co. v. Daugherty*ⁿ⁴⁶⁵ rebutted both the wild animal and public

community analogies by holding that:

[T]he analogy between deposits of oil and gas and things *ferae naturae* is, at best, a limited one. The difference between them is that things *ferae naturae* are public property, and all have an equal right to reduce them to possession and ownership, while the right to the oil and gas beneath his land is an exclusive and private property right in the landowner, inhering in virtue of his proprietorship of the land, and of which he may not be deprived without a taking of private property. ⁿ⁴⁶⁶

Justice Phillips went further in a masterful explanation for the Court on how an exclusive property right could accrue to a migratory substance, especially when no action could be had against a neighbor who captures such a substance and draws it away from the original landowner's borders:

Because of the fugitive nature of oil and gas, some courts, emphasizing the doctrine that they are incapable of absolute ownership until captured and reduced to possession and analogizing their ownership to that of things *ferae naturae*, have made a distinction between their conveyance while in place and that of other minerals, holding that it created no interest in the realty. But it is difficult to perceive a substantial ground for the distinction. . . . Is the possibility of their escape to render them while in place incapable of conveyance, or is their ownership while in that condition, with the exclusive right to take them from the land, anything less than ownership of an interest in the land? Conceding that they are fluent in their nature and may depart from the land before brought into absolute possession, will it be denied that, so long as they have not departed, they are a part of the land? . . . The opposing argument is founded entirely upon their peculiar property, and therefore the risk of their escape. But how does that possibility alter the character of the property interest which they constitute while in place beneath the land? The argument ignores the equal possibility of their presence, and that the parties have contracted upon the latter assumption In other words, the question . . . reduces itself to this: If the oil and gas, the subject of the conveyance, are in fact not beneath or within the land, and are therefore not capable of being reduced to possession, the conveyance is of no effect. But if they have not departed and are beneath it, they are as a part of the realty; and their conveyance while in place. . . . is consequently the conveyance of an interest in the realty. . . . While they lie within the ground as a part of the realty, is the ownership of the realty to be denominated, as to them, a mere license to appropriate, as distinguished from an absolute [*59] property right in the corpus of the land? With the land itself capable of absolute ownership, everything within it . . . is likewise capable of ownership, so long as it constitutes a part of it. If these minerals are a part of the realty while in place, as undoubtedly they are, upon what principle can the ownership of the property interest, which they constitute while they are beneath or within the land, be other than the ownership of an interest in the realty? ⁿ⁴⁶⁷

The Court again addressed the fallacy of the wild-game analogy in 1948, recognizing that "[t]here is no oil or gas producing state today which follows the wild-animal analogy to its logical conclusion that the landowner has no property interest in the oil and gas in place." ⁿ⁴⁶⁸

3. How Water Law Is Analogous to Oil and Gas Law

The following sections explain how the preceding expositions on oil and gas law apply to water, which-unlike oil and gas-has never been considered a mineral. ⁿ⁴⁶⁹

First, as explained below, the doctrines of oil and gas law and water law in Texas derive from the same source: the Court's adoption of the rule of capture in *East* ⁿ⁴⁷⁰ and from the Acton court's promulgation of the English rule. ⁿ⁴⁷¹ In this sense, oil and gas law is an offshoot of groundwater law, but oil and gas law developed more quickly because of the rapidity with which an oil and gas market emerged. ⁿ⁴⁷² Such a market is only now emerging with respect to the

development of groundwater law.ⁿ⁴⁷³ As such, because the doctrine evolved from groundwater law originally, evaluations of the rule of capture as it applies to oil and gas in place are necessarily linked to the rule of capture as it applies to groundwater in place.ⁿ⁴⁷⁴

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Second, while groundwater has never been held to be part of the mineral estate, it has repeatedly been held to be a real property right.ⁿ⁴⁷⁵ Further, courts have held that groundwater in place is indistinguishable from the soil.ⁿ⁴⁷⁶ Therefore, the Court's admonishments in Daugherty concerning the ownership of elements in the soil are directly applicable to groundwater in, and as a part of, the soil as well.ⁿ⁴⁷⁷

4. The Rules of Capture and Absolute Ownership Are Similar, Yet Distinct Property Regimes

The last area where oil and gas law provides much needed insight, which concerns the difference in terminology between the rule of capture and the doctrine of absolute ownership, is one of the oldest and most intriguing distinctions as well.ⁿ⁴⁷⁸ *Brown v. Humble Oil & Refining Co.* is "one of the basic cases recognizing private ownership of oil and gas in place."ⁿ⁴⁷⁹ In it, the Court cited to *Houston & Texas Central Railway Co. v. East* as the earliest enunciation of the "law of capture" in Texas but cited to Daugherty as the earliest case "recogniz[ing] the ownership of oil and gas in place."ⁿ⁴⁸⁰

In *Humble Oil*, the Court made clear that it viewed the two doctrines as distinct by holding that "[b]oth rules are subject to regulation under the police power of a state."ⁿ⁴⁸¹ Just under a decade after the *Humble Oil* decision, the Court reaffirmed the distinction between the rules of capture and absolute ownership in *Corzelius v. Harrell*.ⁿ⁴⁸² The Court, however, linked the two concepts by explaining that "[t]he rule in this State recognizes the ownership of oil and gas in place, and gives to the lessee a determinable fee therein. It is also held that such rule should be considered in connection with the law of capture, which is recognized as a property right."ⁿ⁴⁸³

In *Friendswood Development Co. v. Smith-Southwest Industries, Inc.*, the Court again confirmed the view that the rules of capture and absolute ownership are two distinct property theories.ⁿ⁴⁸⁴ Justice Daniel distinguished between the ownership theory espoused in *Humble Oil* and the law of capture established in *East* by stating that "[o]ther writers have traced both the Texas ownership and capture theories to the English rule relating to underground [*61] [and] percolating waters."ⁿ⁴⁸⁵ Lest there be any remaining ambiguity, the Court again described the theories as discrete concepts in 1983, calling the right to capture a "corollary to absolute ownership of groundwater."ⁿ⁴⁸⁶

However, where the Court in *Friendswood* and *Humble Oil* cited to *East* as the source of the rule of captureⁿ⁴⁸⁷ and the *Humble Oil* decision looked to Daugherty as the genesis of the absolute ownership doctrine,ⁿ⁴⁸⁸ the Court in *City of Sherman v. Public Utility Commission* characterized *East*, not Daugherty, as adopting "[t]he absolute ownership theory."ⁿ⁴⁸⁹ In fact, in *East* the word "capture" is never even mentioned.ⁿ⁴⁹⁰ Instead, the "person who owns the surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure" language from *Acton v. Blundell*ⁿ⁴⁹¹ is quoted, and the term "absolute owner" is first used by the Court.ⁿ⁴⁹² Alternatively, in Daugherty, the Court departed on a long discourse describing both capture and ownership concepts.ⁿ⁴⁹³ Nevertheless, it appears that as late as twenty years ago, the Court viewed these two doctrines as separate and distinct property regimes, which were commingled and perhaps so closely tied to each other that cases originating each view had become somewhat interchangeable.ⁿ⁴⁹⁴ Accordingly, while the rules of capture and absolute ownership are indeed separate theories, both are derived from the English rule.ⁿ⁴⁹⁵

B. What Does a Texas Landowner Own Under the Rule of Capture?

Many allege that Texas is the "lone holdout" in the United States to still govern its groundwater resources under the rule of capture.ⁿ⁴⁹⁶ The allegation is not precisely accurate.ⁿ⁴⁹⁷ Several states still adhere to some version of the [*62] rule of capture, including Connecticut, Indiana, Louisiana, Maine, and Rhode Island.ⁿ⁴⁹⁸ But, what may be fairly said is that Texas follows the most conservative, and historically consistent, interpretation of the rule of capture.ⁿ⁴⁹⁹

1. The Rule of Capture Confers a Vested Property Right in the Overlying Landowner

Precisely what right the rule of capture-as it is currently applied in Texasⁿ⁵⁰⁰-guarantees a landowner is the seminal question the authors seek to answer in this article. This article traces the rule of capture from its inception as scattered threads of Roman juristic musings, through its later interpretations in Spanish and English jurisprudence, and into the early American courts as a recognized and distinct body of law.ⁿ⁵⁰¹ This article documents how each of these early sources treated groundwater as an element of the soil conferring upon the overlying landowner a vested real property right in groundwater.ⁿ⁵⁰² The authors now pick up the legal trail of the doctrine as it meanders through the federal courts, Texas courts, and the Texas Legislature and attempt to discern what exactly a Texas landowner can call his own.ⁿ⁵⁰³

a. Federal Recognition

The federal courts have kept their relative distance from Texas groundwater law.ⁿ⁵⁰⁴ However, in 1966, the Western District Court in Austin was forced to intervene after the Legislature passed a statute prohibiting the [*63] exportation of groundwater outside of Texas.ⁿ⁵⁰⁵ The details of the case are of little importance here, but the court's characterization of Texas groundwater law is particularly enlightening.ⁿ⁵⁰⁶

The federal court began by recounting the development of the *damnum absque injuria* doctrine, and then held that "[t]his right to enter upon the land and appropriate underground percolating waters is an interest in real estate, and may be exercised by the landowner or made the subject of an independent grant of ownership."ⁿ⁵⁰⁷ The court went on to recognize that "after the water has been appropriated, the landowner, his lessee or assign, has the right to sell the water to others for use off of the land and outside the basin where produced, just as he could sell any other species of property."ⁿ⁵⁰⁸ The court then explained that "[t]hese rights, although not codified, have been generally recognized by statute as property rights of sufficient character for ownership."ⁿ⁵⁰⁹ Last, the court reasoned that "the general law of the State of Texas . . . [is that] water that has been withdrawn from underground sources [is] personal property subject to sale and commerce."ⁿ⁵¹⁰

b. The Legislature

In 1993, the Legislature enacted the Edwards Aquifer Authority Act, which was one of the first legislative adjustments to the rule of capture.ⁿ⁵¹¹ Under the Act, for the first time, aquifer-wide withdrawal caps were imposed on landowners, but the Legislature nevertheless recognized the property right inherent in groundwater.ⁿ⁵¹² The statute expressly stated that "[t]he [L]egislature intends that just compensation be paid if implementation of this article causes a taking of private property . . . in contravention of the Texas or federal constitution."ⁿ⁵¹³ This provision for the payment of takings claims is explicitly included to redress the possibility that production withdrawal caps under section 1.14 of the Act would effect a taking of the "private property" rights of landowners within the Authority's boundaries.ⁿ⁵¹⁴ If the Legislature did not accept or agree with the Court in its decision in *Houston & Texas Central Railway Co. v. East*ⁿ⁵¹⁵ and its progeny,ⁿ⁵¹⁶ as well as with the common [*64] law of Englandⁿ⁵¹⁷ that the rule of capture confers a vested property right in groundwater to the overlying landowner, why would a takings provision have been included in the first statute to cap groundwater withdrawals?

Following the passage of Senate Bill 1 (S.B. 1) in 1997,ⁿ⁵¹⁸ and Senate Bill 2 (S.B. 2)ⁿ⁵¹⁹ in 2001, legislative involvement in groundwater law issues has become much more pronounced.ⁿ⁵²⁰ Thus far, the most important provision to Texas property owners is contained in section 36.002 of the Texas Water Code, entitled "Ownership of Groundwater."ⁿ⁵²¹ This provision states that "[t]he ownership and rights of the owners of the land and their lessees and assigns in groundwater are hereby recognized, and nothing in this [Water Code] shall be construed as depriving or divesting the owners or their lessees and assigns of the ownership or rights" ⁿ⁵²² This portion of the provision shows legislative recognition of the entirety of the East rule of capture and its progeny.ⁿ⁵²³

Sections 36.001 and 36.002, while crucial to protecting landowners' property claims to the "water . . . below" their land,ⁿ⁵²⁴ do not expressly term the right as one in property.ⁿ⁵²⁵ However, the recent passage of H.B. 803 during the 78th session reveals legislative acceptance of a property right in groundwater.ⁿ⁵²⁶ In the bill, the Legislature amended the Property Code to allow a "political subdivision"ⁿ⁵²⁷ to condemn land for the purpose of "acquiring rights to groundwater,"ⁿ⁵²⁸ but also required such a subdivision to pay damage claims to private landowners whose property rights in groundwater underlying their land are taken.ⁿ⁵²⁹

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Several aspects of this bill are important to note. First, and most obvious, this amendment was made to the Property Code, leading to the inescapable conclusion that the Legislature—in its wisdom—considered groundwater to be a property right.ⁿ⁵³⁰ Further, the bill text does not refer to the right to capture groundwater, the right to explore for groundwater, or the right to use groundwater, as the right now capable of being condemned and for which compensation must be paid.ⁿ⁵³¹ Instead, the bill expressly references groundwater,ⁿ⁵³² which the Water Code defines as "water percolating below the surface of the Earth."ⁿ⁵³³ This is as clear a reference to the corpus of the water itself as the Legislature is likely to elucidate. Newly-enacted section 21.0421 goes even further than the condemnation statute.ⁿ⁵³⁴ First, subsection (a), explicitly terms groundwater "as property apart from the land in addition to the local market value of the real property."ⁿ⁵³⁵ The bill then refers to the object of the condemnation proceedings described in section 21.0121 as "fee title of real property."ⁿ⁵³⁶ In section 21.0421(c)(2), the Legislature again confirms the property rights inherent in groundwater by describing "the market value of the groundwater rights as property apart from the land at the time of the hearing."ⁿ⁵³⁷

As one commentator recently summarized the enactment of H.B. 803, "this treatment of groundwater rights as a component of property to be considered and valued apart from the land itself is entirely inconsistent with the idea that the property owner has no compensable ownership right."ⁿ⁵³⁸ Further, if Texas landowners possess no vested real property right in the subterranean water beneath their land, the authors rhetorically ask for what purpose would H.B. 803 have been studied, drafted, and enacted by the Legislature originally?ⁿ⁵³⁹

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c. Supreme Court of Texas

Given the monolithic consistency with which the has Court construed the rule of capture,ⁿ⁵⁴⁰ the Court's very first opinion addressing the rule—*Houston & Texas Central Railway Co. v. East*—not surprisingly defined the rights conferred by it as ones in land.ⁿ⁵⁴¹ The Court unambiguously held that:

An owner of soil may divert percolating water, consume or cut it off, with impunity. It is the same as land, and cannot be distinguished in law from land. So the owner of land is the absolute owner of the soil and of percolating water, which is a part of, and not different from, the soil.ⁿ⁵⁴²

Next, in the context of an oil and gas case, the Court delivered a brilliantly- nuanced opinion by the Court's first

Justice named Phillips in *Texas Co. v. Daugherty*, which explained that the rule of capture conferred

[a] vested interest in the minerals in the ground, forming in their natural state a part of the land, with absolute dominion over them while in that state, and with the further unlimited right to their appropriation, plainly constitute property and all that is recognized in proprietorship, and equally amount to an interest in the land itself. ⁿ⁵⁴³

The first chance the Court had to re-evaluate its reasoning in *East* arose in *Texas Co. v. Burkett*. ⁿ⁵⁴⁴ In *Burkett*, the Court decided instead to continue the jurisprudential path it began almost a quarter of a century before, declaring non-percolating groundwater to be "the exclusive property of [the landowner], who had all the rights incident to them that one might have as to any other species of property." ⁿ⁵⁴⁵

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The Court next addressed the rule of capture in another oil and gas case, *Brown v. Humble Oil Refining Co.*, and held that the "law of capture . . . [creates] a property right." ⁿ⁵⁴⁶

One of the most sweeping statements the Court has ever used on the topic came when the Court adopted the opinion of the Commission of Appeals in the case of *Evans v. Ropte*. ⁿ⁵⁴⁷ In that opinion, the Commission surmised that "[i]t seems to be almost universally recognized that a right created by a grant to enter upon land and take and appropriate the waters of a spring or well thereon amounts to an interest in real estate In all events, it is an interest in land." ⁿ⁵⁴⁸

In *Corzelius v. Harrell*, the Court simply reaffirmed that "the law of capture . . . is recognized as a property right." ⁿ⁵⁴⁹

Then in 1948, the Court expanded its holding from *Humble Oil* in the case of *Elliff v. Texon Drilling Co.*, wherein it concluded that the absolute rule of ownership made the substances located "beneath the soil . . . part of the realty." ⁿ⁵⁵⁰

A few years later in *City of Corpus Christi v. City of Pleasanton*, the Court undertook its first major re-examination of the rule of capture in the twenty-eight years since its decision in *Burkett*, and it remained steadfast to the property rights enunciations from its earlier groundwater law cases. ⁿ⁵⁵¹ In *City of Corpus Christi*, the Court resolutely acknowledged that:

[P]ercolating waters are regarded as the property of the owner of the surface who may, "in the absence of malice, intercept, impede, and appropriate such waters while they are upon his premises, and make whatever use of them he pleases, regardless of the fact that his use cuts off the flow of such waters to adjoining land, and deprives the adjoining owner of their use." ⁿ⁵⁵²

In *Sun Oil Co. v. Whitaker*, the Court reiterated that "[w]ater, unsevered expressly by conveyance or reservation, has been held to be a part of the surface estate." ⁿ⁵⁵³

Five years after *Sun Oil Co.*, the Court next addressed the groundwater property rights of Texas landowners in the landmark case of *Friendswood Development Co. v. Smith-Southwest Industries, Inc.*, where it confirmed that **[*68]** "ownership of underground water comes with ownership of the surface; it is part of the soil." ⁿ⁵⁵⁴

Almost twenty years elapsed between the Court's seminal decision in *Friendswood* and its next significant opportunity to address property rights in groundwater beneath the surface of his land.ⁿ⁵⁵⁵ In 1996, the Court issued its decision in *Barshop v. Medina County Underground Water Conservation District*,ⁿ⁵⁵⁶ upholding the constitutionality of the Edwards Aquifer Authority Act,ⁿ⁵⁵⁷ which created the Edwards Aquifer Authority and authorized it to issue permits and to regulate production of groundwater from the Edwards Aquifer.ⁿ⁵⁵⁸ The tale of the formation of the Edwards Aquifer Authority, and the role the federal bench played in the saga, is important to the examination of exactly what interest a Texas landowner holds in the water beneath his land.ⁿ⁵⁵⁹

In 1991, the Sierra Club sued the U.S. Secretary of the Interior in the Midland U.S. District Court "alleging that the Secretary . . . had allowed takings of endangered species by not ensuring water levels in the Edwards Aquifer adequate to sustain the flow of Comal and San Marcos Springs."ⁿ⁵⁶⁰ The trial began in November 1992 in Midland, Texas and was presided over by the late Judge Lucius D. Bunton III,ⁿ⁵⁶¹ who ruled in favor of the Sierra Clubⁿ⁵⁶² on February 1, 1993, exactly twenty days after the 73rd Legislature convened in Austin.ⁿ⁵⁶³

As part of his ruling, Judge Bunton threatened the State with the "blunt axes" of federal interventionⁿ⁵⁶⁴ if the Texas Legislature did not adopt a management plan that limited withdrawals from the Edwards Aquifer by the end of the Legislative Session.ⁿ⁵⁶⁵ If the Legislature failed to act in time, Judge Bunton would allow the Sierra Club to return to his court and seek additional remedies—namely the regulation of the aquifer by the United States Fish and Wildlife Service (USFWS), subjecting it to federal control.ⁿ⁵⁶⁶ Not surprisingly, the Legislature passed the Edwards Aquifer Authority Act just one day before Judge Bunton's deadline expired.ⁿ⁵⁶⁷

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The Edwards Aquifer Authority Act imposed an aquifer-wide cap on annual total groundwater production from the Aquifer of 450,000 acre-feetⁿ⁵⁶⁸ of water per year through calendar year 2007,ⁿ⁵⁶⁹ dropping to 400,000 acre-feet per year thereafterⁿ⁵⁷⁰ until the cap is increased upon a determination that "additional water supplies are safely available from the aquifer."ⁿ⁵⁷¹ To implement the objectives of the legislation, the Edwards Aquifer Authority was authorized to adopt regulations and issue permits limiting the amount of groundwater a landowner could produce.ⁿ⁵⁷²

In 1995, a group of plaintiffs, led by the Medina County Underground Water Conservation District, brought a facial constitutional challenge to the Edwards Aquifer Authority Act.ⁿ⁵⁷³ The District brought the suit against the individual directors, including San Antonio businessman Phil Barshop, and the State of Texas was joined as a necessary party.ⁿ⁵⁷⁴ The district court subsequently ruled that the Edwards Aquifer Authority Act was unconstitutional, and the State perfected a direct appeal to the Court.ⁿ⁵⁷⁵

The introduction to the Court's opinion recounted the long legal history of the rule of capture:

This case concerns [ground]water rights in Texas. The clash between the property rights of landowners in the water beneath their land and the right of the State to regulate [that] water for the benefit of all is more than a century old. This case presents another chapter in this ongoing battle.ⁿ⁵⁷⁶

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But, the Barshop "chapter" of the story of the rule of capture in Texas proved to be anticlimactic.ⁿ⁵⁷⁷

The plaintiffs's central claim was that the Edwards Aquifer Authority Act constituted an unconstitutional deprivation of the affected landowner's vested property rights in the groundwater beneath their land.ⁿ⁵⁷⁸ The plaintiffs's

claims were founded on the Court's adoption of the rule of capture in Eastⁿ⁵⁷⁹ and its subsequent reaffirmation of the doctrine in East's progeny,ⁿ⁵⁸⁰ which all steadfastly rejected the "correlative rights" or "reasonable use" theories of groundwater ownership followed in other jurisdictions.ⁿ⁵⁸¹ The State defended the constitutionality of the Act on the theory that "until the water is actually reduced to possession, the right is not vested and no taking occurs."ⁿ⁵⁸² Under the State's defense, there could be no constitutional taking under the Act for landowners "who ha[d] not previously captured [ground]water."ⁿ⁵⁸³

The Court noted that the parties "fundamentally disagree[d] on the nature of the property rights affected" by the Edwards Aquifer Authority Act, and that it had not had occasion to previously address "the point at which [ground]water regulation [by the state] unconstitutionally invades the property rights of landowners."ⁿ⁵⁸⁴ Ultimately however, the Court sidestepped the issue.ⁿ⁵⁸⁵ Instead, the Court addressed the plaintiffs' "facial challenge" to the constitutionality of the Edwards Aquifer Authority Act and held the plaintiffs "ha[d] not established that the Act is unconstitutional on its face."ⁿ⁵⁸⁶ Having resolved the issue on the basis of the narrow constitutional question presented, the Court found it unnecessary "to definitively resolve the clash between property rights in [ground]water and regulation of [ground]water."ⁿ⁵⁸⁷

The Court's next consideration of the rule of capture came in 1999 in *Sipriano v. Great Spring Waters of America, Inc.*ⁿ⁵⁸⁸ In *Sipriano*, the plaintiffs sued Great Spring Waters of America, Inc., also known as Ozarka Spring Water Co., alleging that their wells became depleted after Ozarka began [*71] producing groundwater on a nearby tract of land.ⁿ⁵⁸⁹ The trial court granted Ozarka's motion for summary judgment based upon the protections afforded under the rule of capture, and both the Tyler Court of Appealsⁿ⁵⁹⁰ and the Court affirmed.ⁿ⁵⁹¹

Although squarely presented with the opportunity to overturn, or at least modify the nearly one hundred year-old doctrine, the Court declined to do so in *Sipriano*.ⁿ⁵⁹² Consistent with Justice Calvert's observation about the proper role of the Court vis-a-vis the Legislature in *City of Corpus Christi v. City of Pleasanton*, the Court declined the opportunity to usurp the legislative function of passing all laws necessary to preserve and conserve the natural resources of the state, including groundwater, as mandated under the Conservation Amendment of 1917.ⁿ⁵⁹³ Instead, the *Sipriano* court concluded that:

By constitutional amendment, Texas voters made groundwater regulation a duty of the Legislature. And by Senate Bill 1, the Legislature has chosen a process that permits the people most affected by groundwater regulation in particular areas to participate in democratic solutions to their groundwater issues. It would be improper for courts to intercede at this time by changing the common-law framework within which the Legislature has attempted to craft regulations to meet this state's groundwater-conservation needs. Given the Legislature's recent actions to improve Texas's groundwater management, we are reluctant to make so drastic a change as abandoning our rule of capture and moving into the arena of water-use regulation by judicial fiat. It is more prudent to wait and see if Senate Bill 1 will have its desired effect, and to save for another day the determination of whether further revising the common law is an appropriate prerequisite to preserve Texas's natural resources and protect property owners' interests.

We do not shy away from change when it is appropriate. We continue to believe that "the genius of the common law rests in its ability to change, to recognize when a timeworn rule no longer serves the needs of society, and to modify the rule accordingly." And *Sipriano* presents compelling reasons for groundwater use to be regulated. But unlike in *East*, any modification of the common law would have to be guided and constrained by constitutional [*72] and statutory considerations. Given the Legislature's recent efforts to regulate groundwater, we are not persuaded that it is appropriate today for this Court to insert itself into the regulatory mix by substituting the rule of reasonable use for the current rule of capture.ⁿ⁵⁹⁴

The Court's decision in Sipriano was made in clear recognition of what it described as "the Legislature's broad powers to regulate use of groundwater following the 1917 [Conservation] [A]mendment, even within the common-law tort framework established by the rule of capture." ⁿ⁵⁹⁵ The latter part of this statement has been misconstrued by some commentators who attempt to cite it as authority for the proposition that the rule of capture is a rule of tort law, rather than one of property law. ⁿ⁵⁹⁶ However these commentators fail to appreciate the ultimate decision of that opinion. The plaintiffs plead the case as a tort action, but their claims were dismissed on summary judgment because "Texas does not recognize [these] claims because Texas follows the rule of capture." ⁿ⁵⁹⁷ Not surprisingly, the Court affirmed the summary judgment dismissal, stating that "the sweeping change to Texas's groundwater law Sipriano urges this Court to make is not appropriate at this time." ⁿ⁵⁹⁸ In addition, the Court recognized that "any modification of the common law would have to be guided and constrained by constitutional and statutory considerations." ⁿ⁵⁹⁹

At least one member of the Court indicated that the Court's deference to the Legislature was not without limits however. ⁿ⁶⁰⁰ In what had the dulcet tones of a dissent, Justice Hecht stated plainly in his concurrence that "I agree with the Court that it would be inappropriate to disrupt the process created and encouraged by the 1997 legislation before they have had a chance to work. I concur in the view that, for now-but I think only for now-East should not be overruled." ⁿ⁶⁰¹

In 2002, the Court handed down a follow-up opinion to its earlier decision in Barshop v. Medina County Underground Water Conservation District, ⁿ⁶⁰² wherein it examined allegations of property "takings" involving the Edwards Aquifer Authority. ⁿ⁶⁰³ In Bragg v. Edwards Aquifer Authority, the Court was compelled to determine whether "certain actions of the . . . [Edwards Aquifer Authority] Act violate[d] provisions of the Private Real [*73] Property Rights Preservation Act." ⁿ⁶⁰⁴ A unanimous Court decided that the Edwards Aquifer Authority's duty to prevent waste was a "broader concept of preventing waste by conserving, protecting, and preserving the aquifer through the Legislature's designated permit system" "than the Braggs' contention" "that because they do not waste water, the [Edwards Aquifer Authority] could not have adopted its aquifer-wide rules pursuant to its statutory authority to prevent waste." ⁿ⁶⁰⁵

d. District Courts of Appeal

The earliest recorded Texas appellate case disposing of groundwater law issues was Toyaho Creek Irrigation Co. v. Hutchins, where, in 1899, the court surmised that "[i]t must certainly be held that the owner of lands owns also all ordinary springs and waters arising thereon." ⁿ⁶⁰⁶

Fifty years later, in Cantwell v. Zinser, the Austin Court of Appeals declared that prescriptive rights could not attach to springs by use of the streams the springs fed. ⁿ⁶⁰⁷

In 1954, the year before the Court's decision in City of Corpus Christi v. City of Pleasanton, ⁿ⁶⁰⁸ the El Paso Court of Appeals handed down a landmark decision addressing groundwater property rights in Pecos County Water Control & Improvement District No. 1 v. Williams, wherein it held that "[i]t seems clear to us that percolating or diffused and percolating waters belong to the landowner, and may be used by him at his will." ⁿ⁶⁰⁹ The court explained further that "the landowner owns the percolating water under his land . . . and such is based on a concept of property ownership." ⁿ⁶¹⁰ The situation reviewed in Pecos is especially instructive here as the downstream plaintiff was "admittedly attempting to assert title by prescription to waters 'upper' to them -in other words, to waters that [had] not, as yet reached them or crossed any lands owned by them." ⁿ⁶¹¹ Not only did the court resoundingly reject this assertion of a prescriptive right in groundwater, it affirmed that ownership of [*74] groundwater is a property right attaching to the surface owner. ⁿ⁶¹² The implication of this decision is that the rule of capture cannot merely guarantee a landowner a

usufructory right to explore his property for water to capture because the use-based prescriptive rights alleged in Pecos were held to be subservient to the inherent property rights of the landowner in the water underlying his land. ⁿ⁶¹³

The El Paso court in Pecos also provided the historical background that helped to delineate a Texas landowner's groundwater property rights, explaining that because "Texas came into the Union claiming ownership of her lands, [it] was not subject to the Desert Land Act, . . . and [so] . . . such lands, when patented as these have been to the defendants, carry with them as a property right the ownership of percolating underground water." ⁿ⁶¹⁴ This, coupled with the fact that approximately ninety-four percent of Texas is privately owned, explains why Texas is unique in its consistent application of the rule of capture. ⁿ⁶¹⁵

Twenty years later, in *Bartley v. Sone*, the San Antonio Court of Appeals decreed that "the owner of land owns the water under the surface, generally referred to by hydrologists as 'ground water.'" ⁿ⁶¹⁶

Another important appellate case in Texas groundwater law was the 1989 decision in *Denis v. Kickapoo Land Co.*, which confirmed that "groundwater percolating beneath the soil is the property of the owner of the surface," and it is "treated as part of the soil where found and belong[s] absolutely to the surface owner." ⁿ⁶¹⁷

e. Legal Commentary

The legal community has had no shortage of opinion on the rule of capture over the last century, but even the rule's critics have recognized the real property rights it conveys to overlying landowners. ⁿ⁶¹⁸

One of the first articles to recognize the groundwater property rights of landholders was published in 1948 and has the distinction of not only having been authored by the Dean of Stanford Law School, but also having been published as the first article, on the first page, in the first volume of the *Stanford Law Review*. ⁿ⁶¹⁹ In it, Dean Kirkwood addressed the ownership [*75] discussion from *Acton v. Blundell* ⁿ⁶²⁰ and framed it as "obviously asserting a doctrine of ownership of the corpus of the water by the owner of the overlying

land and recognizing the usual broad rights and privileges of use that accompany ownership." ⁿ⁶²¹

Four years later, two student authors at The University of Texas School of Law confirmed that "Texas courts are committed to the rule that, apart from statutory or contractual restriction, percolating water is the property of the landowner." ⁿ⁶²²

In 1973, Stephen E. Snyder explained that "the English rule gives each landowner absolute ownership of the water underlying his land." ⁿ⁶²³ Three years later, Roger Tyler wrote that "[t]he very law itself recognizes private ownership of the ground water." ⁿ⁶²⁴

In 1990, Karen Norris, in characterizing the "stagnant" state of Texas groundwater law, acknowledged that "Texas landowners, by virtue of their surface ownership, are vested with property rights in all underlying groundwater." ⁿ⁶²⁵

One year later, Eric Behrens and Matthew G. Dore acknowledged that in Texas the "presumption[] [is] that subsurface water is percolating groundwater, that it belongs to the owner of land where it is found, and that the owner may use the water for whatever purpose he desires." ⁿ⁶²⁶

In 1998, another reviewer asserted that "[i]n accordance with [the rule of capture], underground water is the exclusive property of the owner of the overlying land." ⁿ⁶²⁷

Cynthia DeLaughter next described "[t]he rule of capture as applied in Texas . . . [as guaranteeing that] the water under the land belongs to the landowner," and "[b]ecause groundwater is owned by the landowner, it qualifies as real property." ⁿ⁶²⁸

During the first few years of this decade, the erroneous notion began to be put forward that "[s]urface owners may or may not own the groundwater [beneath their lands]." ⁿ⁶²⁹ Some commentators, including a certain eager but naive former law student, ⁿ⁶³⁰ asserted that "Texas property owners do not own the water beneath their land. They own [instead] the right to search (drill) and [*76] to produce (capture) [groundwater] if found," and "nothing could be further from the truth" than the belief that "landowners . . . own the water beneath their property." ⁿ⁶³¹ This notion even pervaded some reviewers' interpretations of state statutes, somehow finding that section 36.002 of the Water Code mandates that "subsurface resource[s]" are only owned "by those who produce and capture" them. ⁿ⁶³² However, what section 36.002 does in fact mandate is that "[t]he ownership and rights of the owners of the land . . . in groundwater are hereby recognized, and nothing in this code shall be construed as depriving or divesting the owners. . . of the[ir] ownership or rights." ⁿ⁶³³

In 2002, in an article critiquing the reasoning the Acton and Eastcourts used to formulate the rule of capture and generally holding that the rule cannot guarantee a property right "in something so fleeting as groundwater," Eric Opiela quoted a Pennsylvania Supreme Court decision, which held that "[t]he owner of land on which a spring issues from the earth, has a perfect right to it against all the world." ⁿ⁶³⁴

In 2004, Chris Lehman published an article providing a broad overview of groundwater conservation districts after the implementation of S.B. 1 and 2. ⁿ⁶³⁵ Lehman described the doctrine of absolute ownership as "embod[ying] the premise of private ownership of groundwater accompanied by the right of unlimited use." ⁿ⁶³⁶

During the summer of 2004, a paper was presented at the TWDB's symposium recognizing the hundredth anniversary of the East decision, which argued that the "'rule of capture' . . . is a rule of property . . . , whether [the groundwater] is used or not." ⁿ⁶³⁷ The authors went on to state that "groundwater is considered the property of the owner of the surface estate." ⁿ⁶³⁸ The authors concluded by explaining that "the Texas Supreme Court has repeatedly endorsed the premise that landowners have a property right in groundwater located underneath their property." ⁿ⁶³⁹

f. Treatises

One of the earliest legal treatises portrayed the English rule as considering percolating water "a mere ingredient of the soil—one of the constituents of the soil, the corpus of [which was] real property." ⁿ⁶⁴⁰ The [*77] author, Samuel C. Wiel, described the unique corporeal characteristics of groundwater best by explaining that:

There is only one case in law in which water in its natural state is the subject of ownership, and that is the case of percolating water. A man is regarded as owning the percolating water while it is in his land. But other water in its natural state is subject only to the use of the man through whose land it flows. He has a right to its use, but is not regarded as having the title. ⁿ⁶⁴¹

Wiel concluded by reasoning that "[t]he word 'land' does not include running water; but does, under this rule, include percolating water." ⁿ⁶⁴²

One of the most prolific groundwater law authors—Wells A. Hutchins—stated that, under Texas law, "the owner of land is recognized as owning ground waters found therein." ⁿ⁶⁴³ He further explained that "ordinary percolating waters[] are the exclusive property of the owner of the land in which they occur and are subject to the same disposition as any other species of land." ⁿ⁶⁴⁴ In another publication, Hutchins asserted that "[p]ercolating waters 'belong' to the owners of overlying lands." ⁿ⁶⁴⁵

Professor C.S. Kinney's writings are also particularly instructive, confirming that:

Under the English rule of the common law, percolating waters tributary to springs were treated the same as all other percolating waters as part of the soil where found and belonged absolutely to the owner thereof, who could do what he pleased with them, even though in abstracting the water it dried up the springs, to which the water was tributary, on the land of another. And it is immaterial that the springs so supplied with water were the sources of a stream or surface water course upon which riparian rights had vested, provided that the water was intercepted while it was still percolating through the soil before it had reached the surface of the ground at the springs. ⁿ⁶⁴⁶

This passage builds upon the dominance of the groundwater property right over that of other usufructory rights discussed in *Pecos County Water Control & Improvement District No. 1 v. Williams*, ⁿ⁶⁴⁷ and extends the supremacy of the [*78] property right in groundwater over lesser rights attached to mere uses, even when those usufructory rights have vested. ⁿ⁶⁴⁸

2. Once Severed, Groundwater Is Personalty and an Article of Commerce

The federal judiciary has played only a minor role in the development of groundwater law in Texas. ⁿ⁶⁴⁹ However, one important instance is found in the case of *City of Altus, Oklahoma v. Carr* in 1966. ⁿ⁶⁵⁰ The basis of the case was a statute passed by the 59th Legislature forbidding the transport of groundwater outside the state unless specifically authorized by the Legislature. ⁿ⁶⁵¹ While recognizing that the right of a landowner to "appropriate underground percolating waters is an interest in real estate," ⁿ⁶⁵² the court concluded that, once pumped and withdrawn—and thereby severed from the surface estate—the groundwater becomes personalty, and as such, it is an article of commerce that can be subject to federal regulation under the Dormant Commerce Clause of the federal constitution. ⁿ⁶⁵³ The court found that the Texas statute imposed "an unreasonable burden upon interstate commerce," and held the act unconstitutional under the Dormant Commerce Clause. ⁿ⁶⁵⁴

The U.S. Supreme Court not only affirmed the result of the *City of Altus* case, ⁿ⁶⁵⁵ but it also went to great pains to affirm its reasoning some sixteen years later in *Sporhase v. Nebraska ex rel. Douglas*. ⁿ⁶⁵⁶ Therein, the High Court upheld the proposition that in Texas, once produced and reduced to possession at the well head, groundwater is personalty subject to interstate commerce regulation. ⁿ⁶⁵⁷

3. Title to Groundwater May Change Depending on Where it Is Stored or How it Is Transported

It is well-established in Texas that title to groundwater transfers to the State once the groundwater emerges to the surface as springflow and enters a watercourse. ⁿ⁶⁵⁸ In addition, a few other limited situations exist where the title to

groundwater may change, depending on the location of storage or the [*79] method of transport.ⁿ⁶⁵⁹ Although neither line of cases has developed an authoritative picture as to the resolution of these specialized ownership disputes, both are discussed here to clarify what right a landowner has to the underlying ground water, and how the use of that groundwater might affect its title.ⁿ⁶⁶⁰

a. Aquifer Storage and Recovery May Affect Title to Withdrawn Groundwater

"Aquifer Storage and Recovery" (ASR) is an industry term of art describing the subsurface storage of extracted groundwater, surface water, or treated wastewater effluent.ⁿ⁶⁶¹ ASR is a technology that, while long practiced in some jurisdictions,ⁿ⁶⁶² is relatively new to Texas.ⁿ⁶⁶³ The prevalence of ASR is mainly due to the desire "to avoid the expense of an artificial reservoir and to prevent the evaporation that attends surface water storage."ⁿ⁶⁶⁴ While there are many hydrogeological considerations attendant to ASR operations, this article focuses only on the legal implications raised.ⁿ⁶⁶⁵

i. Title Determined by Quantity

ASR appears to have entered the Texas legal scene in 1995, when both the Legislatureⁿ⁶⁶⁶ and the Austin Court of Appeals in *Texas Rivers Protection Ass'n (TRPA) v. Texas Natural Resource Conservation Commission*ⁿ⁶⁶⁷ first addressed its legal repercussions. In House Bill 1989,ⁿ⁶⁶⁸ the Legislature authorized the former Texas Natural Resource Conservation Commission (TNRCC)ⁿ⁶⁶⁹ to investigate the feasibility of aquifer storage and recovery projects by issuing temporary or term permits for pilot demonstration projects.ⁿ⁶⁷⁰

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Soon thereafter, the Austin court was called upon to review the TNRCC's issuance of a surface water rights permitⁿ⁶⁷¹ to the Upper Guadalupe River Authority in Kerrville, Texas, which authorized the underground storage of surface water using ASR technology, rather than the use of a conventional surface reservoir.ⁿ⁶⁷² The TNRCC's findings stated that stored water would move "no more than 120 feet per year," would "mix only minimally with native groundwater," and would "remain[] readily available for later use."ⁿ⁶⁷³ The court held that water was a "fungible commodity," and the permittee did not need to "extract from the aquifer the very same water molecules that it injected into the aquifer."ⁿ⁶⁷⁴ Instead, the permittee had only the duty to put the water "to a beneficial use."ⁿ⁶⁷⁵ Thus, the court reasoned the TNRCC was simply required to make "a determination that the quantity of water put into the aquifer can be recovered and put to such use."ⁿ⁶⁷⁶ To date, the TRPA case appears to be the only appellate case decided in which ASR issues have been litigated.ⁿ⁶⁷⁷

Notably, the Legislature did not alter the rule of capture in its passage of House Bill 1989ⁿ⁶⁷⁸ because the focus of the legislation was to clarify the State's authority to incorporate ASR technology, as a storage component, in permits authorizing the diversion and beneficial use of state-owned surface water.ⁿ⁶⁷⁹ In fact, the Legislature even went so far as to reaffirm the surface landowner's "existing property rights, including the rights of a landowner in groundwater."ⁿ⁶⁸⁰

ii. Title Determined by Intent

The only other developed area of Texas jurisprudence pertaining to storage in underground reservoirs is found in selected cases pertaining to natural gas.ⁿ⁶⁸¹ In one such case, *Lone Star Gas Co. v. Murchison*,ⁿ⁶⁸² the Dallas Court of Civil Appeals concluded that "[t]he pivotal issue in this case is whether title to natural gas, once having been reduced to

possession, is lost by [*81] the injection of such gas into a natural underground reservoir for storage purposes." n683 The Dallas court addressed this question using the same premise later introduced by the groundwater cases of *City of Altus, Oklahoma v. Carr* n684 and *Sporhase v. Nebraska ex rel. Douglas*, n685 that "[t]here can be no doubt that gas which has been produced is personal property." n686

The court began its analysis on the merits by theorizing that an owner of personalty "does not lose his title thereto by not having the property on his person or on his land unless there is abandonment, and abandonment requires an intent to abandon." n687 The court bolstered this line of reasoning by recounting that "[t]he doctrine of abandonment rests primarily on intention." n688 Because the opposite intent was present in the case, the Fifth Court of Appeals held that "[l]ogic and reason dictates . . . that in Texas, the owner of gas does not lose title thereof by storing the same in a well-defined underground reservoir." n689

An earlier federal case quoted extensively by the Texas court in *Lone Star Gas* was *White v. New York State Natural Gas Corp.* n690 The *White* court used much of the same reasoning as adopted by the court in *Lone Star Gas*, n691 which propounded that "[o]nce severed from the realty . . . gas and oil, like other minerals, become personal property." n692 In *White*, the court concluded by surmising that the "Supreme Court of Pennsylvania would hold that title to natural gas once having been reduced to possession is not lost by the injection of such gas into a natural underground reservoir for storage purposes." n693

In 1974, the Court solidified the law in Texas in the case of *Humble Oil & Refining Co. v. West*, wherein the Court considered the character of title and ownership of what it called "extraneous gas" that had been produced and then injected into an underground reservoir for purposes of storage prior to production of all the recoverable native gas. n694 The owner of the surface overlying the underground reservoir asserted ownership of the injected gas and the right to receive royalty payments at the time the gas was produced and recovered. n695

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The Court adopted the rationale articulated a decade earlier in the *Lone Star Gas* decision n696 that extraneous gas injected for storage by the producer retained its character as "personal property." n697 The Court affirmed the *Lone Star Gas* court's rejection in Texas of the doctrine of minerals *feroe nature*, and concluded that *Humble Oil's* ownership of the injected gas as personal property was not altered either upon injection into the reservoir or upon its subsequent production. n698

b. Riverflow Transport May Affect Title to Withdrawn Groundwater

The second situation in which title to groundwater may be affected by what is done after production is detailed in the line of Texas cases dealing with river transport of withdrawn groundwater. n699

i. Title Determined by Quantity

In *Denis v. Kickapoo Land Co.*, the Austin Court of Appeals utilized the same legal reasoning it relied on six years later in *TRPA*. n700 In *Denis*, the Austin court considered a landowner who withdrew groundwater at the wellhead before it emerged to the surface watercourse as springflow and, then, after measuring it, channeled the produced groundwater back into Kickapoo Creek. n701 From the point of discharge into the watercourse, the groundwater flowed downstream a little more than a mile, whereupon the landowner withdrew a similar amount as was contributed upstream, and used it for irrigation purposes. n702 The case was not decided on this legal distinction but, instead, on

whether the groundwater was state-owned because it contributed perceptibly to the flow of a creek. ⁿ⁷⁰³

The closest the Court has come to endorsing this theory was its examination of a riverflow transport case in *City of Corpus Christi v. City of Pleasanton*. ⁿ⁷⁰⁴ There, the City of Pleasanton sued the City of Corpus Christi and the Lower Nueces River Supply District because Pleasanton alleged that transporting withdrawn groundwater approximately 118 miles via a river flow was wasteful and, therefore, in violation of statutory prohibitions against the [*83] waste of water produced from artesian wells. ⁿ⁷⁰⁵ The Court upheld the City of Corpus Christi's right to transport extracted groundwater in any manner it saw fit because the Court stated it knew "of no common-law limitation of the means of transporting the water to the place of use." ⁿ⁷⁰⁶ The Court further reasoned that the two statutes at issue, which dealt with waste of artesian waters "recognized . . . the right of the owner or user of the water to transport it by any of the means enumerated" in the statute, which included "river[s], creek[s], or other natural water courses or drains." ⁿ⁷⁰⁷ Here too, the mentioning of the contribution of groundwater to surface streams as an extension of the commonlaw rule of capture, adopted in *Houston & Texas Central Railway Co. v. East* ⁿ⁷⁰⁸ and extended in *Texas Co. v. Burkett*, ⁿ⁷⁰⁹ was only corollary to the crux of the opinion, which hinged on the waste exception to the rule of capture. ⁿ⁷¹⁰

ii. Title Determined by Quality

In 2004, the Third Court of Appeals re-examined its holding in *Denis* ⁿ⁷¹¹ and the Court's holding in *City of Corpus Christi* ⁿ⁷¹² in the case of *City of San Marcos v. Texas Commission on Environmental Quality*. ⁿ⁷¹³ There, the court was asked to determine whether, "once discharged into a state watercourse, the [privately owned] groundwater became state water." ⁿ⁷¹⁴ In finding that groundwater-based effluent released into the San Marcos River had lost its character as private property and, therefore, had become state-owned, the Third Court centered its reasoning on two grounds. ⁿ⁷¹⁵ The first concerned the quality of the water discharged. ⁿ⁷¹⁶ The court found that the City of San Marcos was "flowing its previously-used groundwater into a river essentially for 'cleaning' purposes," ⁿ⁷¹⁷ whereby the effluent had to "adequately mix[]with [*84] the river water while flowing downstream." ⁿ⁷¹⁸ The court noted that this was "'the opposite of fungibility'" ⁿ⁷¹⁹ and that "[i]ntent does not trump physical reality in water law." ⁿ⁷²⁰ The second ground for the court's opinion is discussed below. ⁿ⁷²¹

iii. Title Determined by Control

The City of San Marcos court also based its opinion on its determination that privately-owned groundwater, once mixed with state-owned surface water, became state-owned, in part, on a theory of control. ⁿ⁷²²

The first Texas case that alluded to control as a determining factor of water ownership was *Harrell v. Vahlsing*. ⁿ⁷²³ In that case, landowners captured portions of surface water flow in a ditch maintained by a water control and improvement district. ⁿ⁷²⁴ The landowners based their "claim of title to the waters in the drainage ditch . . . upon the bold assertion that . . . they were the only persons physically able to do so." ⁿ⁷²⁵ The court rejected the landowners' argument, reasoning that it placed "undue emphasis upon mere physical position." ⁿ⁷²⁶

However, the Austin Court of Appeals in *City of San Marcos* relied not on *Vahlsing*, but on two subsequent cases. ⁿ⁷²⁷ In arriving at its conclusion, the third court characterized its own earlier decision in *Denis*, ⁿ⁷²⁸ and the Court's decision in *City of Corpus Christi*, ⁿ⁷²⁹ as being based on the "physical control of the captured property rather than on subjective intent to maintain ownership over it." ⁿ⁷³⁰ The court next cited an excerpt from a 1981 ruling by the TCEQ's predecessor, the Texas Water Commission, in which it concluded that:

"Private, percolating spring water which is allowed to enter into a watercourse and commingle with State water retains its private property characteristic[s] only if the landowner maintains control over the spring water and can identify it both as to amount and location in the watercourse. In the [*85] absence of this evidence, the private spring water which has been allowed to enter a State watercourse and commingle with State water therein will be presumed to have become state water." n731

The Austin court concluded by explaining that "unless the owner of discharged effluent can identify the location of the effluent in the watercourse -and divert it before it commingles with state water-it is presumed to become state water." n732 The court vacated the TCEQ's order granting the city's permit to transport its groundwater-based effluent upon concluding that the city had no common-law right to do so, and that the TCEQ lacked any explicit authority to grant a bed and banks permit for such an activity prior to 1997. n733

c. Conclusions to be Drawn

Two different rules appear to be developing in Texas, one dealing with the title of withdrawn groundwater reinjected into an aquifer via ASR, and another governing groundwater discharged into a watercourse. n734

i. Groundwater Reinjecting into an Aquifer

The only Texas appellate case to address the injection of water into an aquifer for storage purposes-albeit surface water-resolved the issue of title to the injected water by holding that the ownership of that water was immaterial, to some extent, as long as the same quantity of water could be traced back to the injector. n735 The Texas natural gas cases n736 followed the same line of reasoning that the federal courts utilized in relation to groundwater law. n737 The federal cases held that injected gas remains privately owned by the injector because it is transformed into personal property after the "original capture," and title can, therefore, only be lost by abandonment, which requires some overt expression of intent. n738

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ii. Groundwater Discharged into a Surface Stream

September 1, 1997 marked the effective date when S.B. 1 amended section 11.042 of the Water Code. n739 The amendment outlined the permit requirements for the use of Texas watercourses to transport groundwater and groundwater-based effluent. n740 Prior to this date, the use of a state water course as a means of transporting unused groundwater was governed by the common-law principles announced by the Court in *City of Corpus Christi v. City of Pleasanton*. n741 As noted earlier, the City of San Marcos had attempted to follow those principles when it proposed to transport treated groundwater-based effluent that it planned to discharge into the San Marcos River for delivery downstream to its point of beneficial use. n742 On appeal, the Austin Court of Appeals held that the common-law principles of the City of Corpus Christi decision were to be narrowly applied, and that these principles did not apply to the transport of groundwater-based effluent. n743 Although the court recognized the city's ownership of its effluent, the court concluded that the city "abandoned" its ownership when it discharged the effluent into the watercourse. n744 Because the parties stipulated that the S.B. 1 amendments to section 11.042 did not apply to the city's reuse project, the Austin court effectively "reserved" the questions relating to its holding concerning the transportation of treated effluent on a state watercourse pursuant to Section 11.042(b). n745

To the authors' knowledge, the City of San Marcos case is the only reported pre- S.B. 1 reuse project involving

groundwater issues. On September 10, 2004, the Court denied the City of San Marcos's Petition for Review. However, the final chapter in the City of San Marcos case is still literally being written as the City filed a motion for rehearing on September 27, 2004, to which the Court ordered a response by October 5, 2004. ⁿ⁷⁴⁶

Effective September 1, 1997, the Legislature empowered the TCEQ to issue permits authorizing the transport of groundwater-based effluent in Texas watercourses. ⁿ⁷⁴⁷ To the extent that the volume of wastewater sought to be discharged into the watercourse for transport and then recovered has been historically discharged, the TCEQ is authorized to impose "special conditions" [*87] if necessary to protect either: (i) an existing water right granted in reliance upon the use and availability or both of those return flows, or (ii) to maintain instream uses and fresh water inflows to bays and estuaries. ⁿ⁷⁴⁸

Irrespective of whether the effluent sought to be transported in the state watercourse has been historically discharged, or whether there is a new or increased volume of discharge, the owner of the groundwater-based effluent is required to account for the "carriage losses" in the volume of water discharged. ⁿ⁷⁴⁹ Specifically, the discharger must account for the volume of water lost through seepage, evaporation, and evapotranspiration in route between the point of discharge and the downstream point of diversion. ⁿ⁷⁵⁰

Because of the property rights that attach to the groundwater, an unresolved question raised by the S.B. 1 amendment is whether a taking occurs due to the imposition of these special conditions. ⁿ⁷⁵¹ On the face of the legislation, the special conditions being imposed will result in a reduction of the amount of groundwater or groundwater-based effluent that the owner can recover downstream. ⁿ⁷⁵² Moreover, the special conditions are being imposed for the benefit of third parties, namely downstream water rights holders and environmental interests or both, without just compensation to the owner of the groundwater or groundwater-based effluent. ⁿ⁷⁵³

C. Can the Legislature Modify the Rule of Capture?

Can what the Legislature giveth also be taken away? Aristotle certainly thought so, arguing that the proper function of a legislator was to create a disposition of putting private property to common use. ⁿ⁷⁵⁴ Notwithstanding Aristotle's learned opinion, the preceding pages of this article demonstrate that the rule of capture in Texas has always guaranteed and continues to guarantee, the landowner a vested private property right in the groundwater beneath the landowner's property. ⁿ⁷⁵⁵

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1. The Conservation Amendment of 1917

The genesis of the concept that the Legislature has the sole authority to amend or repeal the rule of capture begins with the passage of the Conservation Amendment to the Texas Constitution in 1917. ⁿ⁷⁵⁶ Section 59(a) of the amendment mandates that:

The conservation and development of all of the natural resources of this State . . . and the preservation and conservation of all such natural resources of the State are each and all hereby declared public rights and duties; and the Legislature shall pass all such laws as may be appropriate thereto. ⁿ⁷⁵⁷

From this delegation of power, the Court has consistently held that this amendment "made clear that in Texas,

responsibility for the regulation of natural resources, including groundwater, rests in the hands of the Legislature." n758 Indeed, Justice Hecht, in his concurring opinion in *Sipriano v. Great Spring Waters of America, Inc.*, meticulously described the instruction given to the Legislature by the people of Texas as not only giving the Legislature "the power but [also] the duty to 'pass all such laws as may be appropriate' for the conservation, development, and preservation of the State's natural resources, including its groundwater." n759

2. Ability of the Legislature to Modify Vested Property Rights Under the Police Power

Taken as a whole, the Court's authority on the issue of whether the Legislature can eliminate vested property rights indicates that it can do so -but only under the exercise of its police powers and not without constitutional "takings" implications. n760

In *Turner v. Big Lake Oil Co.*, the Court described the interest in rainwater that attaches to a landowner by holding that:

[T]he right of a landowner to the rainwater which falls on his land is a property right which vested in him when the grant was made. Being a [*89] property right, the Legislature is without power to take it from him or to declare it public property and subject by appropriation or otherwise to the use of another. n761

The Court again addressed this issue in *Barshop v. Medina County Underground Water Conservation District*, wherein it warned that "[e]ven the State concedes that without some provision protecting existing users from a complete shutdown of their wells, this Act would not survive constitutional scrutiny under the takings clause." n762

Additionally, the Court repeatedly confirmed that the Legislature "under its police power," is given broad discretion to legislate. n763 In fact, the Court has further elaborated that "[a]ll property is held subject to a valid exercise of the police power," n764 the constitutionality of which is judged by "[t]he necessity or reasonableness of [the] particular regulations imposed under the police power." n765

The Court has held this to be true even with regard to the Republic of Texas's adoption of the common law of England in 1840. n766 In *Harned v. E-Z Finance Co.*, the Court explained that "[o]ur very first statute declares that the common law of England, when not inconsistent with the Constitution and laws of this State, shall together with such Constitution and laws, be the rule of decision and shall continue in force until altered or repealed by the Legislature." n767

However, the Court has been equally clear that the Legislature's exercise of its police powers is subject to the constitutional protections against "takings" without just compensation when private property rights are involved. n768 If valid regulations, imposed under the rubric of the police power, abrogate vested property rights, "such rights may be recognized as a compensable 'taking' of private property." n769 Such takings are not proscribed by the Texas Constitution but "rather, [] merely require[] just compensation for the property taken." n770

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3. The Texas Supreme Court's Counterbalancing Respect for Vested Property Rights

In addition to the foregoing, the Court has repeatedly evinced a reluctance to stray from precedent, especially where

property rights are at stake.ⁿ⁷⁷¹ Forty-seven years after the Republic of Texas's adoption and recognition of the common law of England,ⁿ⁷⁷² the Court wrote that:

[W]here a decision has been made, adhered to and followed for a series of years, it will not be disturbed, except on the most cogent reasons, and it must be shown in such case that the former decisions are clearly erroneous; and, where property rights are shown to have grown up under the decision, the rule will rarely be changed for any reason.ⁿ⁷⁷³

The Court reaffirmed this view in 1954 when it held that "[w]e are not unmindful of the doctrine of stare decisis, based on public policy and sound legal administration, requiring that courts respect and adhere to prior judicial decisions. The law should be settled, so far as possible, especially where contract rights and rules of property have been fixed."ⁿ⁷⁷⁴

It is not apparent whether the Court has ever specifically defined what it meant by the usage of the terms "fixed" and "grown up under," but one could reasonably infer that one hundred years of caselaw might safely qualify.ⁿ⁷⁷⁵

4. Any Drastic Changes Made by the Legislature Would Have Significant Takings Implications

The Court showed amazing foresight in 1915 when it described the practical effect of altering the private property rights guaranteed by the rule of capture, explaining that the "right in the landowner, inhering in virtue of his proprietorship of the land . . . may not be deprived without a taking of private property."ⁿ⁷⁷⁶

From the preceding discussion, it is apparent that the Legislature possesses the power to alter the rule of capture in the exercise of its police power, should it choose to do so.ⁿ⁷⁷⁷ Indeed, the Court has repeatedly deferred [*91] to the Legislature on matters concerning groundwater legislation per the state separation of powersⁿ⁷⁷⁸ outlined in the Conservation Amendment.ⁿ⁷⁷⁹ In light of this deference, even though the Court jealously guards a landowner's vested property rights, groundwater law might conceivably be one of the rare situations where the Court might someday consider the alteration of property rights to be appropriate.ⁿ⁷⁸⁰

Nevertheless, even though the Legislature may constitutionally possess the power to alter or even overturn the rule of capture, exercising that power would likely expose the State to significant takings liability. Taking into account that around ninety-four percent of Texas land is privately held,ⁿ⁷⁸¹ the relative scale of the resulting takings liability could reach, on the low end, around \$ 24.5 billion dollars and over \$ 170 billion dollars on the higher end of the calculation.ⁿ⁷⁸² In a state that recently experienced one regularⁿ⁷⁸³ and four special sessionsⁿ⁷⁸⁴ over attempts to cope with the \$ 10 billion shortfall the State faced in 2003, a deficit anywhere from two to seventeen times that size caused by takings lawsuits would be a problematic issue to explain to a constituency.ⁿ⁷⁸⁵

5. The Rule of Capture Has Already Been Affected by the Legislature's Exercise of its Police Powers

While some refer to S.B. 1ⁿ⁷⁸⁶ as "revolutionary,"ⁿ⁷⁸⁷ and even as "the most exhaustive rewrite of Texas water law in the [preceding] thirty years,"ⁿ⁷⁸⁸ S.B. 2 is the legislation that directly confronted the tenets of the rule of capture more than any other Texas statute, before or since.ⁿ⁷⁸⁹

In the midst of the Legislature's consideration of S.B. 2, the Amarillo Court of Appeals handed down its decision in South Plains Lamesa Railroad, [*92] Ltd. v. High Plains Underground Water Conservation District No. 1, wherein it

held that the groundwater district at issue lacked the authority to regulate water withdrawals based on tract size.ⁿ⁷⁹⁰ The opinion issued on April 17, 2001 gave the Legislature a full forty days to amend legislation in S.B. 2 in order to allay the court's concerns.ⁿ⁷⁹¹ The Legislature accomplished the task by amending section 36.116 of the Water Code, n792 the amendment of which states that groundwater production may be regulated "based on acreage or tract size."ⁿ⁷⁹³ Notably, this association of production to acreage and tract size is a hallmark of correlative rights.ⁿ⁷⁹⁴

S.B. 2 also codified the authority of a groundwater district to regulate the spacing of water wells.ⁿ⁷⁹⁵ This type of power is another artifact of the correlative rights doctrine, which tempers one landowner's right to produce groundwater by a neighboring landowners' rights to do the same.

Finally, S.B. 2 provided for the consideration of historic use in the promulgation of "any rules limiting groundwater production."ⁿ⁷⁹⁶ The term "historic use," however, is traditionally associated with the doctrine of prior appropriation, which places great emphasis on temporal precedence.ⁿ⁷⁹⁷

Each of the foregoing considerations—tract size, well spacing, and historic useⁿ⁷⁹⁸—is antitheticalⁿ⁷⁹⁹ to the unfettered right to capture and to absolute ownership of subterranean water.ⁿ⁸⁰⁰ One reviewer appraised the situation by stating that "when local regulation is in place, an essential ingredient of the rule of capture no longer exists."ⁿ⁸⁰¹ Put another way, the absolute ownership right is now not so absolute because "property owners no longer have an unrestricted right to the water beneath their land."ⁿ⁸⁰² As this article has shown, property rights in groundwater are unquestioned legally, but exactly what elements of ownership those rights confer are now less certain because, while a landowner "may still own the water, the removal of that water and how it may be used is subject to rules created by the [Groundwater Conservation Districts (GCDs)]."ⁿ⁸⁰³

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Some commentators have described the effect of GCD regulation as reducing the rule of capture to "a localized version of reasonable use."ⁿ⁸⁰⁴ Reasonable use, however, is too imprecise a label to apply because it can be further divided into its two constituent doctrines: the American rule and the Restatement rule.ⁿ⁸⁰⁵ The American rule is inapplicable to the current situation in Texas because it has strict restrictions against the use of withdrawn groundwater on nonoverlying land and, therefore, prohibits groundwater exports entirely.ⁿ⁸⁰⁶ In fact, the inverse of the American rule is currently alive and thriving in Texas.ⁿ⁸⁰⁷ In contrast, the Restatement rule strikes a closer comparison, as Justice Hecht forecasted in his concurrence in *Sipriano v. Great Spring Waters of America, Inc.*, wherein he advocated the adoption of the Restatement rule over the rule of capture.ⁿ⁸⁰⁸

Interestingly, the drafters of S.B. 2 likely had a copy of the Restatement in front of them because at least two of the provisions of the bill are taken almost verbatim from the Restatement itself.ⁿ⁸⁰⁹ First, the well spacing provision in section 36.116(a)(1) of the Water Codeⁿ⁸¹⁰ accomplishes the restriction against "unreasonable harm" to neighboring landowners laid out in section 858(1)(a) of the Restatement.ⁿ⁸¹¹ Similarly, the pumping limitations based on tract size found in section 36.116(a)(2)(b) of the Water Codeⁿ⁸¹² are directly analogous to the Restatement's restriction of groundwater withdrawals exceeding the "proprietor's reasonable share of the annual supply or total store of groundwater."ⁿ⁸¹³ Regardless of their source, these modifications are now a part of Texas statutory law.ⁿ⁸¹⁴

D. Criticisms of the Current Groundwater Conservation Districts

While much progress has been made in modernizing and improving GCDs, much remains to be done.ⁿ⁸¹⁵ The passage and enactment of S.B. 1 in 1997ⁿ⁸¹⁶ and S.B. 2 in 2001,ⁿ⁸¹⁷ heralded a monumental change in the purpose, [*94] promotion, and effectiveness of GCDs never before seen in Texas groundwater law.ⁿ⁸¹⁸ However, since the

heady days just after the enactment of S.B. 1 and S.B. 2, several problems have taken root. Indeed, some commentators have come to characterize the use of GCDs as "an inadequate response to a state-wide problem."ⁿ⁸¹⁹

An original and primary goal of the GCDs was to develop more local control of groundwater use and policy, which, ironically, now has proven to be quite problematic.ⁿ⁸²⁰ Localized decision-making tends to be inherently myopic, resulting in aquifer management schemes based on differing scientific assumptions and, at times, even differing underlying data, with little or no coordinated management among even the neighboring groundwater districts.ⁿ⁸²¹ This problem is exacerbated because GCD boundaries "rarely coincide with aquifer boundaries,"ⁿ⁸²² and instead are laid out entirely by legislative or municipal fiat, "typically follow[ing] county or political lines."ⁿ⁸²³ Variations in management from district to district, even within the same watershed, "promote[] inconsistency among management strategies, which ultimately results in overall [watershed] inefficiency."ⁿ⁸²⁴ The concern of some in the groundwater management community is that "[a]lthough local control appears to be better suited to accommodate multiple needs and uses, some doubt exists as to the practicality of a handful of [GCDs] attempting to collectively manage groundwater for the entire state."ⁿ⁸²⁵

The problems are further exacerbated as the number of GCDs increases.ⁿ⁸²⁶ As of the fall of 2004, eighty confirmed GCDs existed, with eight more pending.ⁿ⁸²⁷ The numbers of confirmed GCDs have doubled in the last five to ten years.ⁿ⁸²⁸ Moreover, despite the proliferation of local districts, no state agency has been given any enforceable oversight authority to ensure that the interest of the State as a whole is considered, or that the multitude of local management schemes are cohesive and can work together.ⁿ⁸²⁹

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V. Future Adjustments

The 79th Session of the Texas Legislature shows signs of being "a big water session."ⁿ⁸³⁰ During the interim, Lieutenant Governor David Dewhurst established the Senate Select Committee on Water Policy and an offshoot, the Interim Subcommittee on the Lease of State Water Rights, both of which were given a weighty list of charges.ⁿ⁸³¹ The Legislature will likely address issues related to the rule of capture and there may even be a "strong interest among a number of our senators to look at moving away from [it]."ⁿ⁸³² Members of the agricultural community—long some of the most ardent supporters of the rule of capture—are now, at least in the estimation of the Lieutenant Governor, "increasingly willing to look at [legislatively abolishing the rule of capture]."ⁿ⁸³³ Senator Robert Duncan,ⁿ⁸³⁴ who is also a member of both the Select Committee and its Subcommittee,ⁿ⁸³⁵ stated bluntly: "Agriculture needs to rethink its political position and strength with regard to water . . . [n]o longer can we pump all we want . . . [i]t makes no sense."ⁿ⁸³⁶ Even Land Commissioner Jerry Patterson has called on the Legislature to change the rule of capture,ⁿ⁸³⁷ describing it as "not suitable for the 21st century."ⁿ⁸³⁸ Commissioner Patterson advocates the adoption of a system of correlative rights instead.ⁿ⁸³⁹

Other issues that may be addressed during the 79th Session include: (1) the marketability and transferability of groundwater,ⁿ⁸⁴⁰ (2) historic use regulations imposed by GCDs,ⁿ⁸⁴¹ (3) "strengthening protections against third-party impacts from groundwater transfers,"ⁿ⁸⁴² (4) toughening "district powers [***96**] to protect landowners from water-level drawdown,"ⁿ⁸⁴³ (5) increasing "state oversight of [groundwater] districts,"ⁿ⁸⁴⁴ (6) "standardizing certain district procedures,"ⁿ⁸⁴⁵ (7) possible alterations in how GCDs are funded,ⁿ⁸⁴⁶ (8) due process and procedures in groundwater district hearings,ⁿ⁸⁴⁷ (9) uniformity in the methodologies used to determine groundwater availability and the total usable amount of groundwater in a groundwater district,ⁿ⁸⁴⁸ (10) use of export fees by local entities other than groundwater districts, (11) the applicability of conflict of interest laws to groundwater districts, and (12) the leasing of groundwater from State lands.ⁿ⁸⁴⁹

Clearly, the Legislature, never accused of excesses in subtlety, has made the reformation or the amendment of the rule of capture a chief priority during the 79th Session. ⁿ⁸⁵⁰

VI. Conclusion

That the rule of capture, so maligned and discredited throughout much of the nation today, traces its roots back to some of the greatest legal minds the world has ever known, including two Roman Emperors is startling. ⁿ⁸⁵¹

Even more impressive is that throughout the last 1600 years, ⁿ⁸⁵² the rule of capture has been consistently interpreted, applied, and implemented, including in more recent history by countries that have either claimed title to Texas soil or exerted influence over the development of Texas's jurisprudence. ⁿ⁸⁵³ That the property right conferred to a landowner in his groundwater by the rule of capture could have been forgotten, obscured, or doubted ⁿ⁸⁵⁴ is especially perplexing in light of the historical development of the rule and by its later interpretation and development in the Texas courts ⁿ⁸⁵⁵ and the Legislature. No doubt, much of the legal confusion has been due to the name of the rule itself, which connotes more of a usufructory concept than the corporeal ownership interest. ⁿ⁸⁵⁶ This is even evidenced by the inter- [*97] changeable terminology used to describe the rule of capture ⁿ⁸⁵⁷ and the overlooked existence of two distinct doctrines-the rule of capture and the absolute ownership theory-where the existence of only one is commonly understood. ⁿ⁸⁵⁸

As Roger Tyler noted some thirty years ago in his oft-cited article in the Texas Bar Journal, "no general statute appropriating all of the uncaptured underground waters can now be adopted in Texas without an eminent domain provision to guard against a taking of private waters without due process of law." ⁿ⁸⁵⁹

This article documents the Legislature's ability to make adjustments to our groundwater laws pursuant to its police powers and the authority granted it by the constitutional amendment to the Texas Constitution. ⁿ⁸⁶⁰ However, this article also reveals that the long legal history of the rule of capture clearly establishes it as being a property right, which generations of Texans have come to rely upon, ⁿ⁸⁶¹ and which is constitutionally protected against taking without just compensation. ⁿ⁸⁶²

In the end, the "overlay" of local GCDs, combined with the vested property rights conferred by the rule of capture, currently strike a delicate balance, albeit an uneasy truce, in the management of the state's groundwater resources. ⁿ⁸⁶³ However, as this article demonstrates the rule of capture and its 1600 years of development are surely worth protecting. ⁿ⁸⁶⁴

Legal Topics:

For related research and practice materials, see the following legal topics:
 TortsPremises Liability & PropertyGeneral Premises LiabilityDangerous ConditionsGeneral OverviewEnergy & Utilities LawExploration, Discovery & RecoveryRule of CaptureReal Property LawWater RightsGroundwater

FOOTNOTES:

n1 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904). To commemorate the occasion, the Texas Water Development Board (TWBD) hosted a symposium, which explored the rule of capture's history, examined the effects of its implications, and pondered its future. Symposium, 100 Years of the Rule of Capture: From East to Groundwater Management, Tex. Water Dev. Bd. Rep. 361, 1 (June 15, 2004), [http://www.twdb.state.tx.us/publications/reports/GroundWaterReports/GWReports/Report% 203 61/361 ROCindex.htm](http://www.twdb.state.tx.us/publications/reports/GroundWaterReports/GWReports/Report%20361/361ROCindex.htm) [hereinafter 100 Years of the Rule of Capture].

n2 Tex. Const. art. XVI, § 59 (amended 2003). This is also referred to as the Conservation Amendment. See George D. Braden, *The Constitution of the State of Texas: An Annotated and Comparative Analysis* 800 (1977).

n3 2000 to present: see, e.g., Act of May 28, 2003, 2000 to present 78th Leg., R.S., ch. 1032, 2003 Tex. Gen. Laws 2979 (relating to the acquisition of water rights by political subdivisions through the exercise of eminent domain and damage assessment during related condemnation proceedings); Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991 (enrolling S.B. 2); 1990-99: see, e.g., Act of May 28, 1999, 76th Leg., 1990-99 R.S., ch. 1331, 1999 Tex. Gen. Laws 4536 (creating thirteen groundwater conservation districts); Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610 (enrolling S.B. 1); Private Real Property Rights Preservation Act (PRPRPA), 74th Leg., R.S., ch. 517, 1995 Tex. Gen. Laws 3267; Act of May 18, 1995, 74th Leg., R.S., ch. 309, 1995 Tex. Gen. Laws 2693 (relating to the underground storage of appropriated surface water that is incidental to a beneficial use and its storage), see discussion infra Part IV.B.3.a; Act of May 30, 1993, 73d Leg., R.S., ch. 626, 1993 Tex. Gen. Laws 2350, amended by Act of May 16, 1995, 74th Leg., R.S., ch. 524, 1995 Tex. Gen. Laws 3280, Act of May 29, 1995, 74th Leg., R.S., ch. 261, 1995 Tex. Gen. Law 2505, Act of May 6, 1999, 76th Leg., R.S., ch. 163, 1999 Tex. Gen. Laws 634, Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991, Act of May 25, 2001, 77th Leg., R.S., ch. 1192, 2001 Tex. Gen. Laws 2696 [hereinafter Edwards Aquifer Authority Act] (providing legislation enabling and amending the Edwards Aquifer Authority); Act of May 27, 1991, 72d Leg., R.S., ch. 701, 1991 Tex. Gen. Laws 2506 (providing statutory guidance for the operation, creation, and administration of underground water conservation districts); 1980-89: see, e.g., Act of May 29, 1989, 71st Leg., 1980-89 R.S., ch. 936, 1989 Tex. Gen. Laws 3981 (enrolling a complete revision of Chapter 52 of the Tex. Water Code Ann. as Chapter 36 of the Tex. Water Code Ann.); Act of May 8, 1985, 69th Leg., R.S., ch. 133, 1985 Tex. Gen. Laws 617 (relating to conservation, subsidence control, recharge, and water quality protection of groundwater); 1970-79: see, e.g., Act of May 12, 1975, 64th Leg., 1970-79 R.S., ch. 284, 1975 Tex. Gen. Laws 672 (establishing the Harris- Galveston Coastal Subsidence District); Act of May 26, 1973, 63d Leg., R.S., ch. 598, 1973 Tex. Gen. Laws 1641 (adding subsidence control to the list of purposes for the creation of an underground water conservation district); 1960-69: see, e.g., Act of May 11, 1961, 57th Leg., 1960-69 R.S., ch. 493, 1961 Tex. Gen. Laws 1095 (relating to the closing or capping of open or uncovered wells); 1950-59: see, e.g., Act of April 9, 1959, 56th Leg., 1950-59 R.S., ch. 99, 1959 Tex. Gen. Laws 173 (creating the Edwards Underground Water District (EUWD)-predecessor to the Edwards Aquifer Authority); Act of May 24, 1955, 54th Leg., R.S., ch. 496, 1955 Tex. Gen. Laws 1239 (amending several sections of the 1949 act); 1940-49: see, e.g., Act of May 23, 1949, 51st Leg., 1940-49 R.S., ch. 306, 1949 Tex. Gen. Laws 559 (enabling the creation and organization of underground water conservation districts), repealed by Act of May 29, 1995, 74th Leg., R.S., ch. 933, 1995 Tex. Gen. Laws 4673; 1930-39: see, e.g., Act approved May 28, 1931, 42d 1930-39 Leg., R.S., ch. 261, 1931 Tex. Gen. Laws 432 (establishing the Texas State Board of Water Engineers), see *Bd. of Water Eng'rs v. McKnight*, 111 Tex. 82, 229 S.W. 301 (1921); Pre-1930: see, e.g., Act approved Jan. 20, 1840, 4th Pre-1930 Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-80 (Austin, Gammel Book Co. 1898) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)) (adopting and recognizing the common law of England).

n4 See *Op. Tex. Att'y Gen. No. DM-054* (1991) (stating section 28.011 of the Texas Water Code was a proper delegation of legislative authority to Texas Water Commission to manage groundwater resources) (overruling former *Op. Tex. Att'y Gen. No. O-3205-A* (1941)); *Op. Tex. Att'y Gen. No. JM-827* (1987) (stating the creation of the Anderson County Underground Water Conservation District did not work an unconstitutional taking without just compensation), cf. *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 625 (Tex. 1996) (rejecting a facial challenge to the constitutionality of the Edwards Aquifer Authority Act); *Op. Tex. Att'y Gen. No. V-1060* (1950) ("Section C, Article 7880-3c of the Texas Revised Civil Statutes, provides separate procedures for designating underground water reservoirs and creating underground water conservation districts and requires notice and hearing as a condition precedent to those designations and alterations of reservoir boundaries anticipated by the Act."); *Op. Tex. Att'y Gen. No. O-2402* (1940) (citing California courts, which by that time had adopted a correlative rights groundwater regulatory scheme, for the proposition that all percolating groundwater not moving solely by force of gravity is subject to public ownership).

n5 Supreme Court of Texas: see, e.g., *Bragg v. Edwards Supreme Court of Texas Aquifer Auth.*, 71 S.W.3d 729, 737-38 (Tex. 2002) (holding that because the regulatory actions under dispute were legislatively mandated, the Edwards Aquifer Authority was not required to perform a takings impact assessment as mandated under the PRPRPA); *FM Props. Operating Co. v. City of Austin*, 22 S.W.3d 868, 888 (Tex. 2000) (striking down a Water Code provision passed by the Legislature, which the Court found was an unconstitutional delegation of legislative power to private landowners), see Tex. Const. art XVI, § 59 (amended 2003); *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 83 (Tex. 1999) (declining to alter the rule of capture in light of the passage of S.B. 1); *Maple Run at Austin Mun. Util. Dist. v. Monaghan*, 931 S.W.2d 941, 947 (Tex. 1996) ("[A]ll Texans have an interest in protecting this State's natural resources . . ."), cf. Tex. Const. art XVI, § 59 (amended 2003) (expressly placing the duty to manage the State's natural resources in Texans' hands via the Legislature); *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996) (upholding the constitutionality of the Edwards Aquifer Authority, but declining to "definitively resolve the clash between property rights in water and regulation of water"); *In re Adjudication of the Water Rights in the Medina River Watershed of the San Antonio River Basin*, 670 S.W.2d 250, 252 (Tex. 1984) ("The primary source of the law of Colonial Spain is the *Recopilacion de las leyes de Indias* . . . [which] provides that when colonial law is silent on a topic, one must look to the laws of Peninsular Spain."); *City of Sherman v. Pub. Util. Comm'n of Tex.*, 643 S.W.2d 681, 686 (Tex. 1983) (reaffirming the *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978) decision, and the Court's adherence to the "absolute ownership theory"); *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*, 642 S.W.2d 438, 441 (Tex. 1982) ("The story of water law in Texas is also the story of its droughts."); *Quincy Lee Co. v. Lodol & Bain Eng'rs, Inc.*, 602 S.W.2d 262, 263-64 (Tex. 1980) (holding that a district formed under authority from Section 59, Article 16 of the Texas Constitution "can exercise no authority that has not been clearly granted by the Legislature"); *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978) (adding "negligence as a ground of recovery in subsidence cases"); *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) ("Water, unsevered expressly by conveyance or reservation, has been held to be a part of the surface estate."); *Shaddix v. Kendrick*, 430 S.W.2d 461, 464 (Tex. 1968) (reversing a decision that required county commissioners to pay the costs of advertising an underground water conservation district, which failed to be confirmed by the voters); *S. Pac. Co. v. Porter*, 160 Tex. 329, 334, 331 S.W.2d 42, 45 (1960) (reiterating that Texas adopted English common law); *Hawley v. Ground Water Conservation Dist. No. 2*, 157 Tex. 643, 643, 306 S.W.2d 352, 353 (1957) (per curiam) (upholding the court of appeals's finding that Article 7880-3c of the Texas Revised Civil Statutes, which excluded grazing tracts greater than a square mile in size from inclusion in district boundaries, was an unconstitutional discrimination between large and small landowners), see Tex. Const. art XVI, § 59 (amended 2003); *Bryson v. High Plains Underground Water Conservation Dist.*, 156 Tex. 405, 407, 297 S.W.2d 117, 120 (1956) (holding the district board was "not . . . a State Board or Commission, and appellant's attack upon its orders does not constitute grounds for a direct appeal to this Court"); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 294, 276 S.W.2d 798, 801 (1955) (recognizing "the only limitations . . . [to] the 'English' rule are that the owner may not maliciously take water for the sole purpose of injuring his neighbor . . . or wantonly and willfully waste it") (citations omitted); *McLendon v. City of Houston*, 153 Tex. 318, 322-23, 267 S.W.2d 805, 807 (1954) ("The law should be settled, so far as possible, especially where contract rights and rules of property have been fixed."), see discussion *infra* Part IV.C.3; *Harned v. E-Z Fin. Co.*, 151 Tex. 641, 649, 254 S.W.2d 81, 86 (1953) ("Our very first statute declares that the common law of England, when not inconsistent with the Constitution and laws of this State, shall together with such Constitution and laws, be the rule of decision and shall continue in force until altered or repealed by the Legislature."); *Elliff v. Texon Drilling Co.*, 146 Tex. 575, 582, 210 S.W.2d 558, 562 (1948) (theorizing that the rule of capture is actually "another way of recognizing the existence of correlative rights"), see discussion *infra* Part IV.B.1.c; *Corzelius v. Harrell*, 143 Tex. 509, 514, 186 S.W.2d 961, 964 (1945) (stating that the "law of capture . . . is recognized as a property right"); *State v. Balli*, 144 Tex. 195, 248, 190 S.W.2d 71, 99 (1944) ("The Spanish law was taken from the Institutes of Justinian . . ."); *Tri-City Fresh Water Supply Dist. No. 2 of Harris County v. Mann*, 135 Tex. 280, 285, 142 S.W.2d 945, 948 (1940) ("Governmental agencies, or bodies corporate such as . . . Districts . . . can exercise no authority that has not been clearly granted by the Legislature."); *Evans v. Ropte*, 128 Tex. 75, 79, 96 S.W.2d 973, 974 (1936) ("It seems almost universally recognized that a right created by a grant to enter upon land and take and appropriate the waters of a spring or well thereon amounts to an interest in real estate . . . In all events, it is an interest in land."); *Turner v. Big Lake Oil*, 128 Tex. 155, 170, 96 S.W.2d 221, 228 (1936) (declaring that: [T]he right of a landowner to the rainwater which falls on his land is a property right which vested in him when the grant was made . . . Being a property right, the Legislature is without power to take it from him or to declare it public property and subject by appropriation or otherwise to the use of another. Id.), see discussion *infra* Part IV.C.3; *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 305, 83 S.W.2d 935, 940 (1935) (citing *East* as authority for the "law of capture"); *Manry v. Robison*, 122 Tex. 213, 223, 56 S.W.2d 438, 442 (1932) ("The Roman law, including the Institutes of Justinian, was the basis of the Partidas and the laws of Spain and Mexico."); *Tex. Co. v. Burkett*, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927) (discussing the lack of restrictions against landowners exporting percolating groundwater off the land from which it was pumped); *Hoefs v. Short*, 114 Tex. 501, 505-11, 273 S.W. 785, 786-89 (1925) (defining the characteristics of a stream), see discussion *infra* Part III.E.1.a.i; *Stephens County v. Mid-Kan. Oil & Gas Co.*, 113 Tex. 160, 167-70, 254 S.W. 290, 292-93 (1923) (citing *East* as supporting correlative rights) ("But the owner of the surface is an owner downward to the centre . . . The air and the water he may use." (quoting *Hague v. Wheeler*, 27 A. 714, 719 (1893))), see discussion *infra* Parts III.C, III.D.2, IV.A.2-3; *Bd. of Water Eng'rs v. McKnight*, 111 Tex. 82, 90, 97, 229 S.W. 301, 303, 307 (1921) (invalidating statute that gave an administrative board the power to "adjudicate vested water rights" because it unconstitutionally attempted "to confer on persons belonging to the executive department powers which properly attach to another department [the judicial branch]"); *Tex. Co. v. Daugherty*, 107 Tex. 226, 237, 176 S.W. 717, 720 (1915) (declaring that: [T]he analogy between deposits of oil and gas and things *ferae naturae* is, at best, a limited one . . . [t]he difference between them is that things *ferae naturae* are public property, and all have an equal right to reduce them to possession and ownership, while the right to [capture] . . . is an exclusive and private property right in the landowner, [and] . . . may not be deprived without a taking of private property. Id.), see discussion *infra* Part IV.A.1; *East*, 81 S.W. at 280 (1904) (adopting the doctrine announced in *Acton v. Blundell*, 152 Eng. Rep. 1223 (1843)); *Texas Commission of Appeals*: see, e.g., *Prairie Oil & Gas Texas Commission of Appeals Co. v. State*, 231 S.W. 1088, 1090 (Tex. Comm'n App. 1921, judgm't adopted) (quoting John M. Gould, *A Treatise on the Law of Waters, Including Riparian Rights and Public and*

Private Rights in Waters Tidal and Inland § 291 (2d ed. 1891) for the proposition that "[p]etroleum, oil, . . . like water, . . . is not the subject of property, except while in actual occupancy, and a grant of either water or oil is not a grant of the soil or of anything for which ejectment will lie"), see discussion *infra* Part IV.A.2-3; District Courts of Appeal: see, e.g., *City of San Marcos v. District Courts of Appeal Tex. Comm'n on Envtl. Quality*, 128 S.W.3d 264, 270 (Tex. App.-Austin 2004, pet. denied) (asserting that "[t]he common-law rule of capture is based on the concept that ownership of a migratory resource occurs when one exerts control over it and reduces it to possession") (the City filed a motion for rehearing on September 27, 2004, and on October 5, 2004, the Court requested that the respondents file a response to the motion for rehearing); *Walton v. Phillips Petroleum Co.*, 65 S.W.3d 262, 272-74 (Tex. App.-El Paso 2001, pet. denied) (sustaining a summary judgment in favor of Phillips Petroleum because the landowner did not file his groundwater contamination suit within two years of the initial injury), overruled on other grounds by *In re Estate of Swanson*, 130 S.W.3d 144, 147 (Tex. App.-Amarillo 2001, pet. denied) (denying Apache's motion to abate and holding that the landowner could pursue suit in trial court of contamination of underlying aquifer, even though the Texas Railroad Commission already instituted administrative proceedings); *Senn v. Texaco, Inc.*, 55 S.W.3d 222, 225-26 (Tex. App.-Eastland 2001, pet. denied) (denying plaintiff's standing to bring suit because the alleged injury to the aquifer occurred prior to purchase); *S. Plains Lamesa R.R. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770, 779 (Tex. App.-Amarillo 2001, no pet.) (invalidating an underground water district's restriction of a landowner's "pumping of a disproportionate amount of water as it relates to the tract size" as "contrary to the rule of capture as applied to underground water in . . . East") (it is worth noting here that a possible explanation as to why no petition for review was filed by the district in this case is because the Court clearly reaffirmed the rule of capture just two years earlier in *Sipriano*); *Tex. Rivers Prot. Ass'n v. Tex. Natural Res. Conservation Comm'n (TRPA)*, 910 S.W.2d 147, 155 (Tex. App.-Austin 1995, writ denied) (dealing with injection of surface water into an aquifer, the court held that the only requirement needed to be fulfilled by the permittee was that the same "quantity of water put into the aquifer can be recovered and put to [a beneficial] use"), see discussion *infra* Part IV.B.4.a.i; *Creedmoor Maha Water Supply Corp. v. Barton Springs-Edwards Aquifer Conservation Dist.*, 784 S.W.2d 79, 85 (Tex. App.-Austin 1989, writ denied) (upholding the constitutionality of user fees charged by the district); *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 238-39 (Tex. App.-Austin 1989, writ denied) (reasoning that: Under the English rule of the common law, percolating waters tributary to springs were treated the same as all other percolating waters as a part of the soil where found and belonged absolutely to the owner thereof, who could do what he pleased with them, even though in abstracting the water it dried up the springs, to which the water was tributary, on the land of another . . . provided that the water was intercepted while it was still percolating through the soil before it had reached the surface of the ground at the springs.*Id.* (quoting C.S. Kinney, *A Treatise on the Law of Irrigation and Water Rights* 2167 (2d ed. 1912))); *In re The Contests of the City of Laredo to the Adjudication of Water Rights in the Middle Rio Grande Basin & Contributing Tex. Tributaries*, 675 S.W.2d 257, 259 (Tex. App.-Austin 1984, writ ref'd n.r.e.) (tracing the origin of Spanish law to that of the Romans, "and, more particularly, from the Institutes of Justinian"), see discussion *infra* Part III.A; *Beckendorff v. Harris-Galveston Coastal Subsidence Dist.*, 558 S.W.2d 75, 78-81 (Tex. Civ. App.-Houston [14th Dist.] 1977, writ ref'd n.r.e.) (upholding the constitutionality of the act creating the Harris-Galveston Coastal Subsidence District) (Beckendorff was the precursor court of appeals case to the Friendswood decision handed down one year later); *Lewis Cox & Son, Inc. v. High Plains Underground Water Conservation Dist. No. 1*, 538 S.W.2d 659, 663 (Tex. Civ. App.-Amarillo 1976, writ ref'd n.r.e.) (holding that underground water districts stand on the same footing as counties and that neither the statute of limitations, laches, nor estoppel was available to prevent enforcement of a spacing order delayed by seven years); *Bartley v. Sone*, 527 S.W.2d 754, 760 (Tex. Civ. App.-San Antonio 1974, writ ref'd n.r.e.) (presuming that the springs at issue were of such character that plaintiff had the right to use their waters for any purpose) (in dicta later distinguished by the Austin Court of Appeals in *Denis*, the court surmised that the rule of capture was "not applicable to springs which form the source of a flowing stream or which add perceptibly to the flow of water in a stream"), *Denis*, 771 S.W.2d at 238; *State v. Valmont Plantations*, 346 S.W.2d 853, 857 (Tex. Civ. App.-San Antonio 1961, writ granted) (recognizing that peninsular Spanish law "borrowed extensively from . . . Justinian's sixth century code"), *aff'd*, 163 Tex. 381, 383, 355 S.W.2d 502, 503 (1962), see discussion *infra* Part III.A; *Ground Water Conservation Dist. No. 2 v. Hawley*, 304 S.W.2d 764, 767 (Tex. Civ. App.-Amarillo 1957, writ ref'd n.r.e.) (holding a former statute unconstitutional that allowed district exemptions for large landowners, owners of more than 640 acres, and not for small landowners); *Pecos County Water Control & Improvement Dist. No. 1 v. Williams*, 271 S.W.2d 503 (Tex. Civ. App.-El Paso 1954, writ ref'd n.r.e.) (groundwater user had no liability to downstream appropriators for depletion of surface stream flow due to groundwater pumping); *Cantwell v. Zinser*, 208 S.W.2d 577, 579 (Tex. Civ. App.-Austin 1948, no writ) (amplifying East by recognizing that no right exists to "waste percolating water to the detriment of an adjoining owner"); *Aelvoet v. Schutz*, 181 S.W.2d 1011, 1013 (Tex. Civ. App.-San Antonio 1944, no writ) (upholding a deed that conveyed a one-half fee simple interest in a well, in addition to the water in it); *Farb v. Theis*, 250 S.W. 290, 292 (Tex. Civ. App.-San Antonio 1923, no writ) (upholding the absolute right to withdraw percolating ground water even though this withdrawal . . . results in the destruction of [another's] water supply").

n6 United States Supreme Court: see, e.g., *Sporhase v. United States Supreme Court Nebraska ex rel. Douglas*, 458 U.S. 941, 954 (1982) (finding that groundwater, once pumped, is an article of commerce); *Cappaert v. United States*, 426 U.S. 128, 143 (1976) ("[T]he United States can protect its water from subsequent diversion, whether the diversion is of surface or ground water." (albeit the Court so held while construing state law from a state that followed the prior appropriation doctrine)); *Hudson Water Co. v. McCarter*, 209 U.S. 349, 356-57 (1908) (stating "the constitutional power of the State to insist that its natural advantages shall remain unimpaired by its citizens is not dependent upon any nice estimate of the extent of present use or speculation as to future needs"), see discussion *infra* Part IV.B.1.a; *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 204 (1900) (construing an earlier decision that applied only to oil and gas to now include water and that all three "belong to the owner of the land, and are a part of it, so long as they are on or in it" (quoting *Brown v. Spillman*, 155 U.S. 665, 670 (1895))); United States Circuit Courts of Appeal: see, e.g., *United States Circuit Courts of Appeal Anthony v. Chevron USA, Inc.*, 284 F.3d 578, 583 (5th Cir. 2002) (reiterating that under Texas law, "the holder of an oil and gas lease . . . has the legal right . . . to use as much of the

surface estate as is reasonably necessary to comply with the terms of the lease and to carry out its purposes"), see discussion *infra* Parts III.E, IV; *Sierra Club v. City of San Antonio*, 112 F.3d 789, 794 (5th Cir. 1997) (citing *Barshop* as support for the principle that aquifer management satisfies constitutional, social, and economic demands to conserve water); *United States v. Shurbet*, 347 F.2d 103, 106 (5th Cir. 1965) (holding that an Ogallala aquifer irrigator was allowed to claim an income tax deduction under the federal cost depletion statute dealing with oil and gas wells); *Hendler v. United States*, 952 F.2d 1364, 1367 (Fed. Cir. 1991) (holding that the installation of groundwater monitoring wells, put in place to measure groundwater pollution, constituted a compensable taking); *United States District Courts*: see e.g., *Sierra Club United States District Courts v. Lujan*, No. MO-91-CA-069, 1993 WL 151353, at *34 (W.D. Tex. Feb. 1, 1993) (mandating that the Texas Legislature and the Texas Water Commission (one of the forerunners to the TCEQ) establish a conservation plan that abides by the tenets of the Endangered Species Act); *City of Altus, Okla. v. Carr*, 255 F. Supp. 828, 839 (W.D. Tex. 1966), *aff'd*, 385 U.S. 35 (1966) (holding that the Texas statute requiring legislative permission before the exportation of groundwater, which had been pumped from the ground for use in another state, was an unconstitutional burden upon interstate commerce).

n7 2000 to present: see, e.g., Jason T. Hill, Note, A 2000 to present Piece to a Different Puzzle: The Junior Priority Provision and its Place in the Texas Water Law Picture, 34 *Env'tl. L. J.* 290, 302 (2004) (erring in citing section 36.002 of the Texas Water Code as guaranteeing ownership of groundwater only to those who "produce and capture" it); Renea Hicks, Groundwater District Powers, in *Texas Water Law* ch. E1, E1-1 (2004) (surmising that Sipriano stands for the proposition that the rule of capture is "a tort law, not a property law, concept"); Russell S. Johnson, Groundwater Districts: Evolution or Revolution?, in *Texas Water Law* ch. E2, E2-1 (2004) [hereinafter *Evolution or Revolution?*] (quoting the East decision's use of language from *Pixley v. Clark*, 35 N.Y. 520, 527 (1866), wherein the Court agreed that: An owner of soil may divert percolating water, consume or cut it off, with impunity. It is the same as land, and cannot be distinguished in law from land. So the owner of land is the absolute owner of the soil of percolating water, which is a part of, and not different from, the soil. *Id.* (citations omitted)); Carolyn Ahrens, Water Resources in the 78th Legislative Interim, in *The Sixteenth Annual Texas Environmental Superconference* tab 7, 10 (2004) (recognizing the overlapping and conflicting use of the doctrines of the rule of capture, prior appropriation, and correlative use currently followed in Texas groundwater districts); Douglas G. Caroom & Susan M. Maxwell, The Rule of Capture - "If It Ain't Broke . . .", in *100 Years of the Rule of Capture*, *supra* note 1, at 45 (clarifying that the rule of capture grants the surface owner a vested property right in water; "so long as it is located beneath his land"); Gregory M. Ellis, The Future of the Rule of Capture, in *100 Years of the Rule of Capture*, *supra* note 1, at 92 ("Any attempt to quantify the water right as the area of the aquifer beneath the surface estate ignores the fact that the water flows."); Rhonda G. Jolley, Drafting Collateral Loan Documents for a Water Deal, in *The Changing Face of Water Rights in Texas 2004* tab 9, 1-2, 5 (Texas Bar CLE, 2004) (discussing the legal confusion surrounding the classification of groundwater rights as real or personal property); Robert E. Mace et al., Groundwater Is No Longer Secret and Occult-A Historical and Hydrogeologic Analysis of the East Case, in *100 Years of the Rule of Capture*, *supra* note 1, at 70 ("Although most (if not all . . .) modern hydrogeologists would likely agree that groundwater is no longer secret and occult, the devil is in the details."); Harry Grant Potter III, History and Evolution of the Rule of Capture, in *100 Years of the Rule of Capture*, *supra* note 1, at 92 ("Today, Texas stands alone as the only Western state that continues to follow the rule of capture."); Judon Fambrough, Look Before You Lease Groundwater, 67 *Tex. B.J.* 249, 249 (2004) (listing some areas to be wary of when executing a groundwater lease); Ronald Kaiser, Water Concerns in Texas: A Problem in Search of a Solution, 67 *Tex. 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1377, April 2000), <http://recenter.tamu.edu/pdf/1377.pdf> [hereinafter Publ'n 1377] (asserting that Texas landowners "do not own the water beneath their land"); 1990-99: see, e.g., Charles E. Gilliland, *Got Water? 1990-99 Tapping A New Texas Market*, 7 *Tierra Grande* 1-2 (Publication 1357, January 2000), <http://recenter.tamu.edu/pdf/1357.pdf> (quoting Justice Hecht's concurring opinion in *Sipriano*, 1 S.W.3d at 82); Charles E. Gilliland, *Before the Well Runs Dry*, 6 *Tierra Grande* 1, 3 (Publication 1270, January 1999), <http://recenter.tamu.edu/pdf/1270.pdf> (predicting the elimination of the rule of capture); David Hartman, Comment, *Risky Business: Vested Real Property Development Rights-The Texas Experience and Proposals for the Texas Legislature to Improve Certainty in the Law*, 30 *Tex. Tech L. Rev.* 297, 303 (1999) ("Abrogating [vested property] rights may be recognized as a compensable 'taking' of private property."); John R. 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there is no clearly defined standard for measurement of waste); Jacque L. Emel, *Groundwater Rights: Definition and Transfer*, 27 *Nat. Resources J.* 653, 661-65 (1987) (describing a "stock" and "flow" system of assigning property rights in a "common pool"); Corwin W. Johnson, *The Continuing Voids in Texas Groundwater Law: Are Concepts and Terminology to Blame?*, 17 *St. Mary's L.J.* 1281, 1288-89 (1986) [hereinafter *Continuing Voids*] (discussing how the terms "absolute ownership" and the "English rule" have been interchangeable in Texas jurisprudence); Paula K. Smith, *Coercion and Groundwater Management: Three Case Studies and a "Market" Approach*, 16 *Envtl. L.* 797, 807 (1986) ("Groundwater supplies are often linked to surface water supplies."), see discussion *infra* Part III.E.1.a; Hans W. 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Until man does, this Article is offered as a pair of kindergarten scissors with which to nick the Gordian knot."); Dudley D. Johnson, *An Optimal State Water Law: Fixed Water Rights and Flexible Market Prices*, 57 *Va. L. Rev.* 345, 374 (1971) ("The inability of existing systems to make users bear the true social cost of their activities has led to overuse, shortages, and nonmarket rationing."); Robert H. Steelhammer & John G. Garland, *Subsidence Resulting from the Removal of Ground Waters*, 12 *S. Tex. L.J.* 201, 213 (1970) ("With the ever increasing demand for land, the unique quality of each tract becomes more important and the law in this area as developed in the 1800's is no longer acceptable or realistic . . ."); 1960-69: see, e.g., Robert Emmet Clark, *Background 1960-69 and Trends in Water Salvage Law*, 15 *Rocky Mtn. Min. L. Inst.* 421, 461 (1969) (explaining that the waste concept is "poorly defined . . . hesitantly applied and rarely enforced"); Corwin W. Johnson, *Condemnation of Water Rights*, 46 *Tex. L. Rev.* 1054, 1071 (1968) ("It is hazardous to generalize about the existence of authority in Texas to condemn water rights for the purpose of acquiring a water supply. Litigation will probably be required to resolve many of the doubts."); Frank J. Trelease, *Policies for Water Law: Property Rights, Economic Forces, and Public Regulation*, 5 *Nat. Resources J.* 1, 26 (1965) ("If a water right is to serve its owner and the public effective[ly] as a right of property, it is essential that the right be sufficiently defined to identify the property and differentiate it from the property of others."); Richard S. Harnsberger, *Nebraska Ground Water Problems*, 42 *Neb. L. Rev.* 721, 727 (1963) ("Almost all of the contiguous seventeen Western states originally accepted the English rule by dictum or decision, but today only Texas appears to follow it."); Edgar S. 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Rev.* 138, 173 (1956) (explaining that under Spanish law, "the springs and sources of waters belong to him who owns the lands where they are located" (quoting Mariano Galvan Rivera, *Ordenanzas de Tierras y Aguas*, 158 (Mexico 1844))); Wells A. Hutchins, *Trends in the Statutory Law of Ground*

Water in the Western States, 34 Tex. L. Rev. 157, 166 (1955) (revealing that "the earliest legislation in the West concerning the rights of use of ground water was enacted in 1866 by the Territory of Dakota"); Hon. Joe R. Greenhill & Thomas Gibbs Gee, Ownership of Ground Water in Texas: The East Case Reconsidered, 33 Tex. L. Rev. 620, 623 (1955) (commenting the Court "apparently rejected" the Attorney General's findings in opinion No. 2402 by refusing writ n.r.e.), see supra text accompanying note 4; Edward P. Woodruff, Jr. & James Peter Williams, Jr., Comment, The Texas Groundwater District Act of 1949: Analysis and Criticism, 30 Tex. L. Rev. 862, 872, 874 (1952) (forecasting, even fifty-two years ago, that "serious problems [with local districts might] be occasioned by the bias and inertia of local officials" and calling instead for "a comprehensive groundwater code providing for statewide management by a central administrative board"); A.W. McHendrie, Underground Water Legislation, 23 Rocky Mtn. L. Rev. 439, 439-43 (1950) (urging legislative action to regulate underground water); 1940-49: see, e.g., William F. Hughes, Proposed 1940-49 Groundwater Conservation Measures in Texas, 1 Tex. J. of Sci. 35, 36 (1949) (describing how the scientific knowledge present at the time of Acton and East was "meager," but how "marked advances in groundwater hydrology" have been made since), see discussion infra Part IV.C.3; Marion Rice Kirkwood, Appropriation of Percolating Water, 1 Stan. L. Rev. 1, 2 (1948) ("The court [in Acton] is . . . obviously asserting a doctrine of ownership of the corpus of the water by the owner of the overlying land and recognizing the usual broad rights and privileges of use that accompany ownership."); A.W. McHendrie, The Law of Underground Water, 13 Rocky Mtn. L. Rev. 1, 4 (1940) (recognizing the academic debate as to whether the English Rule was "a rule at common law"); 1930-39: see, e.g., A. W. Walker, Jr., Property 1930-39 Rights in Oil and Gas and Their Effect Upon Police Regulation of Production, 16 Tex. L. Rev. 370, 375 (1938) (lamenting the rising prevalence of the term "law of capture"); David G. Thompson & Albert G. Fielder, Some Problems Relating to Legal Control of Use of Ground Waters, 30 J. Am. Water Works 1049, 1061-69 (1938) ("At the time when certain leading decisions were handed down, the physical laws that govern the occurrence and recovery of groundwater were not sufficiently understood, and the time was not ripe to propose legal viewpoints which today seem not only desirable but necessary."), see discussion infra Part IV.C.3; Robert E. Hardwicke, The Rule of Capture and Its Implications as Applied to Oil and Gas, 13 Tex. L. Rev. 391, 409 n.24 (1935) (East "really follows the American rule of reasonable and beneficial use . . . , although the case is sometimes cited as following the English rule without any modifications or limitations whatever." (emphasis added)); 1920-29: see, e.g., Samuel C. Wiel, Need of 1920-29 Unified Law for Surface and Underground Water, 2 S. Cal. L. Rev. 358, 362 (1929) ("[C]onnection between surface streams and groundwater is . . . never absent."), see discussion infra Part III.E.1.a.

n8 See Robert Glennon, Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters 35 (2002); Dan Tarlock, Law of Water Rights and Resources §§ 4.6-.7 (1998 ed., 2003 replacement vol.); Joseph L. Sax et al., Legal Control of Water Resources 343-459 (3d ed. 2000); Douglas G. Caroom & Lynn R. Sherman, Water Development and Water Rights, in 45 Texas Practice: Environmental Law §§ 13.1, .2, .23 (Jeff Civins et al. eds., 1997); R. David G. Pyne, Groundwater Recharge and Wells: A Guide to Aquifer Storage Recovery, §§ 1.4, 5.1-.3 (1995); Water and Water Rights §§ 20.02-.09 (Robert E. Beck ed., 1991 ed., 2003 replacement vol.); Michael C. Meyer, Water in the Hispanic Southwest: A Social and Legal History 1550-1850 3, 106-07 (1984); R. Allen Freeze & John A. Cherry, Groundwater §§ 8.1-13 (1979); R. Ward, Principles of Hydrology §§ 7.1-.22 (1975); William M. Champion, Ground Water Rights, in Wells A. Hutchins, 2 Water Rights Laws in the Nineteen Western States 631-64, 668-87 (1974) [hereinafter Water Rights Laws in the Nineteen Western States]; Wells A. Hutchins, The Texas Law of Water Rights 557-600 (1961) [hereinafter Texas Law]; Betty Eakle Dobkins, The Spanish Element in Texas Water Law 3-131 (1959); David Keith Todd, Ground Water Hydrology 297-306 (1959); C. F. Tolman, Ground Water 15-16 (1st ed. 1937); Kinney, supra note 5, at 2167; Samuel C. Wiel, 2 Water Rights in the Western States 743, 970-73 (3d ed. 1911); Henry Philip Farnham, 3 The Law of Water and Water Rights 2710-55 (1904); Gould, supra note 5, § 291.

n9 See supra notes 3-8 (providing a shelf-checker's definition of ad infinitum).

n10 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n11 See, e.g., *Chasemore v. Richards*, 157 Eng. Rep. 71, 81 (1857) (allowing the sinking of a well on one's own land, without malice, which produces underground water that would have flowed into an adjacent river); *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (1843) (originating the aptly named "English rule"); *Hammond v. Hall*, 59 Eng. Rep. 729, 731 (1840) (providing the first English case dealing with the property rights attendant to percolating waters, but in which the question of ownership of such waters was not reached).

n12 See, e.g., *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 211 (1900) (holding that the regulation of oil, gas, and water is left to the "lawful discretion of the legislature of the State").

n13 See, e.g., *Hanson v. McCue*, 42 Cal. 303, 309 (1871) (Hanson stands as an intriguing decision where the court held that: Water filtrating or percolating in the soil belongs to the owner of the freehold-like the rocks and minerals found there. It exists there free from the usufructuary right of others . . . The owner may appropriate the percolations and filtrations as he may choose, and turn them to profit if he can. Id. This came from a state that famously adopted the correlative rights doctrine thirty-two years later in *Katz v. Walkinshaw*, 74 P. 766 (Cal. 1903)); *Roath v. Driscoll*, 20 Conn. 533, 542-44 (1850) (citing *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117 (1836) and *Acton* in adopting a principle that allows "the owner of land [to] dig a well on any part thereof, notwithstanding he thereby diminishes the water in his neighbor's well" (quoting *Greenleaf*, 35 Mass. (18 Pick.) at 117)); *New Albany & Salem R.R. v. Peterson*, 14 Ind. 112, 114 (1860) (adopting expressly the *Acton* rationale of *damnum absque injuria*); *Greenleaf*, 35 Mass. (18 Pick.) at 122-23 (deciding a fascinating case that actually adopted the principle of *damnum absque injuria* seven years before the *Acton* decision, based on the writing of Jean Domat and John Ayliffe). *Contra Bassett v. Salisbury Mfg.*, 43 N.H. 569, 573-79 (1862) (rejecting expressly the tenets of absolute ownership, as laid out in *Acton*, and founding what is now known as the American branch of the Reasonable Use doctrine) *llage of Delhi v. Youmans*, 45 N.Y. 362, 363 (N.Y. 1871) ("But if merely prevent the water from reaching the spring or open, running stream, by intercepting its percolation or underground currents, by digging a well upon the defendant's own land, . . . this action will not lie."); *Pixley v. Clark*, 35 N.Y. 520, 527-32 (1866) (reviewing the *Acton*, *Chasemore*, *Chatfield v. Wilson*, 28 Vt. 49 (1855), and *Roath* decisions but deciding a flooding damages case on surface water law grounds); *Frazier v. Brown*, 12 Ohio St. 294, 311 (1861) ("[T]he law recognizes no correlative rights in respect to underground waters percolating, oozing or filtrating through the earth; and this mainly from considerations of public policy."), overruled by *Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324, 327 (Ohio 1984); *Wheatley v. Baugh*, 25 Pa. 528, 530, 532 (1855) (citing *Acton*, *Domat*, and *Justinian* as the reasoning for accepting the *maxim cuius est solum ejus est usque ad coelum et ad infernos*); *Chatfield*, 28 Vt. at 55 ("[W]ater, whether moving or motionless, in the earth, is not, in the eye of the law, distinct from the earth." (quoting *Roath*, 20 Conn. at 541)); *Ellis v. Duncan*, 21 Barb. 230, 235 (N.Y. Gen. Term 1855) (allowing a landowner to drain a spring on his own land which lowered the stream on his neighbor's land).

n14 See, e.g., *Groesbeck v. Golden*, 7 S.W. 362, 365 (Tex. 1887) ("[W]here property rights are shown to have grown up under the decision, the rule will rarely be changed for any reason . . ."), see discussion *infra* Part IV.C.3; *Tex. & Pac. Ry. v. Durrett*, 57 Tex. 48, 51 (1882) (ruling that an instrument that granted a railroad company "the use of the wood, timber, water, etc." was "an interest in land which could only be created by deed or grant"); *Fleming v. Davis*, 37 Tex. 173, 198 (1873) (describing the ownership interests of water once it has emerged from the ground via a spring); *Tolle v. Correth*, 31 Tex. 362, 365 (1868) (recognizing, some thirty-six years prior to *East*, that vested property rights are subject to the *maxim damnum absque injuria*), see discussion *infra* Part III.D.1; *Toyaho Creek Irrigation Co. v. Hutchins*, 21 Tex. Civ. App. 274, 282, 52 S.W. 101, 105 (1899, writ ref'd) ("It must certainly be held that the owner of lands owns also all ordinary springs and waters arising thereon.").

n15 See *supra* notes 1-8.

n16 See *supra* note 7.

n17 See, e.g., *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75 (Tex. 1999); *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n18 See *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 638 (Tex. 1996) (upholding the constitutionality of the Edwards Aquifer Authority); *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978)

(recognizing a limitation on the absolute ownership rule where an owner's negligent pumping of groundwater causes subsidence of neighboring land).

n19 See supra notes 8-9. Contra Norris, supra note 7, at 506-13 (footnoting the influence of Roman law upon that of the English but not describing it in great detail). See generally Greenhill & Gee, supra note 7.

n20 See supra notes 3-14.

n21 See Ahrens, supra note 7, at 10; Robert Elder, Jr., Senate to Tackle Pumping of Water, *Austin Am.-Statesman*, Nov. 13, 2003, at A1 (reporting the establishment of the Texas Senate Select Committee on Water Policy).

n22 See supra notes 3, 5.

n23 See Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-78 (Austin, Gammel Book Co. 1898) (recodified as amended at *Tex. Civ. Prac. & Rem. Code Ann.* § 5.001 (Vernon 2002)) (adopting and recognizing the common law of England).

n24 The English common law itself adopted the whole of the Roman water law before it. See Davenport & Canales, supra note 7, at 157.

n25 See discussion *infra* Parts II, III.A-D.

n26 See supra notes *-*** (noting the author's experience regarding the rule of capture).

n27 See Drummond, supra note 7, at 224; Caroom & Maxwell, supra note 7, at 60 n.87.

n28 See supra notes **, *** (noting the author's experience regarding the rule of capture).

n29 See discussion *infra* Part IV.A.

n30 Water rights were first aligned with property rights in 397 A.D. See Code Theod. 15.2.7 in *The Theodosian Code and Novels and Sirmondian Constitutions* 431 (Clyde Pharr et al. trans., 1952) [*hereinafter* Code Theod.]; discussion *infra* Part II.B.3.

n31 The authors acknowledge that "groundwater" is a sufficiently broad legal term that includes several forms of subterranean water. For purposes of this discussion, all "groundwater" discussed in this article refers to "water percolating below the surface of the earth." Tex. Water Code Ann. § 36.001(5) (Vernon 2000).

n32 See discussion *infra* Parts II, III.

n33 See discussion *infra* Part IV.C.4.

n34 Mr. Drummond's coauthors wish to recognize and congratulate him on the exhaustive research he performed to develop the thorough history of the legal foundation of our modern day rule of capture.

n35 Robert P. Burns, *Blackstone's Theory of the "Absolute" Rights of Property*, 54 U. Cin. L. Rev. 67, 75 (1985) (citing 2 William Blackstone, *Commentaries on the Laws of England* 2-3).

n36 *Roath v. Driscoll*, 20 Conn. 533, 542 (1850).

n37 See discussion *infra* Part II.A.

n38 See discussion *infra* Parts II-III.

n39 Steven M. Wise, *The Legal Thinghood of Nonhuman Animals*, 23 B.C. Envtl. Aff. L. Rev. 471, 477 (1996).

n40 George Toumbouros, *Parallel Legislations of England, U.S.A., France, Germany, Italy and Comparative Law: Volume I: The Laws of the Ancient Greece* 21 (1959).

n41 *Id.*

n42 Peter Stein, *Interpretation and Legal Reasoning in Roman Law*, 70 *Chi.-Kent L. Rev.* 1539, 1539-40 (1995).

n43 See Toumbouros, *supra* note 40, *passim*.

n44 Tyler, *supra* note 7, at 535; see Arthur Fairbanks, *The First Philosophers of Greece* 4 (1898).

n45 See Mace et al., *supra* note 7, at 66; Toumbouros, *supra* note 40 at 52.

n46 See Toumbouros, *supra* note 40, at 93. During this period, there were no laws in the literal sense that we understand today-organized into codes and constitutions-but instead there existed only defined ideas of what one must do and what one must not do. *Id.* at 297. The prevailing "legal" framework within which disputes were resolved during this time has been referred to as "voluntary arbitration." *Id.* at 298.

n47 At this stage of the development of western civilization, it appears that the distinct disciplines of engineering, philosophy, biology, art, mathematics, and law were not yet so disparate as they are today and were often pursued and mastered simultaneously by the leading pontificators of the day. *Id.* at 19-20.

n48 Tyler, *supra* note 7, at 535

n49 *Id.*

n50 Mace et al., *supra* note 7, at 66 (quoting Homer, *The Iliad*, Book 21).

n51 The Quest Study Bible, New International Version 911 (Marshall Shelley ed., 1994).

n52 Ecclesiastes 1:7; see Glennon, *supra* note 8, at 35.

n53 Fairbanks, *supra* note 44, at 1.

n54 Mace et al., *supra* note 7, at 66.

n55 Tyler, *supra* note 7, at 535.

n56 See Fairbanks, *supra* note 44, at 4.

n57 *Id.* at 5.

n58 Mace et al., *supra* note 7, at 66-67.

n59 *Id.* (quoting C.W. Fetter, Jr., *Historical Knowledge of Ground Water*, ¶ 16 (2001), at <http://www.appliedhydrogeology.com/history.htm>); see A.K. Biswas, *History of Hydrology* 61-69 (1970).

n60 See discussion *infra* Part II.B.

n61 Alan Watson, *The Law of the Ancient Romans* 10 (1970); see Pharr et al., *The Theodosian Code and Novels and Sirmundian Constitutions* xxiii (1952).

n62 See Watson, *supra* note 61, at 13.

n63 *Id.*

n64 See Stein, *supra* note 42, at 1540 (citations omitted).

n65 See Wise, *supra* note 39, at 492-93 (quoting Alan Watson, *Rome of the XII Tables: Persons and Property* 3 (1975)).

n66 See Watson, *supra* note 61, at 10.

n67 *Id.* at 27.

n68 See W.W. Buckland, *A Text-Book of Roman Law From Augustus to Justinian* 261-62 (3d ed. 1966).

n69 See *id.* at 261-63.

n70 See *id.* at 21-23; Watson, *supra* note 61, at 26-27.

n71 It is believed that the Emperor Augustus, who ruled from 31 B.C. to 14 A.D. and whose reign marked the end of the old Roman Republic and the beginning of the Roman Empire in 27 A.D., see Pharr et al., *supra* note 61, at xxiii, xxvi, issued the right of public response (referring to the Juristic Responses to the Imperial Edicts) to certain jurists, making their *responsa* binding. See Buckland, *supra* note 68, at 23. Apparently by the time of the rule of the Emperor Hadrian (117-138 A.D., see Watson, *supra* note 61, at 27) a difficulty arose where jurists of equal stature would issue conflicting opinions. See Buckland, *supra* note 68, at 23. Hadrian settled this quandary by making the *responsa* binding only if they were in agreement with each other. *Id.*

n72 See Pharr et al., *supra* note 61, at xvii.

n73 See Watson, *supra* note 61, at 93.

n74 See Pharr et al., *supra* note 61, at xxiv. This schism began around 305 A.D. under the rule of the Emperor Diocletian and was finalized in 395 A.D. during the reign of Theodosius I. *Id.*

n75 Ulpian is believed to have been born around 172 A.D. and was murdered by his own guards in 228 A.D. See Samuel Parsons Scott, *The Civil Law: Including The Twelve Tables, The Institutes of Gaius, The Rules of Ulpian, The Opinions of Paulus, The Enactments of Justinian, and the Constitutions of Leo* 14 (1932); Watson, *supra* note 61, at 90.

n76 Theodosius II ruled the Eastern Empire from 408-50 A.D. See Pharr et al., *supra* note 61, at xxiv, xxvi.

n77 *Id.* The Eastern Empire, founded by the Emperor Constantine in 330 A.D., survived until 1453 A.D. when the Turks captured Constantinople. See *id.*

n78 A.M. Honore, *The Background to Justinian's Codification*, 48 *Tul. L. Rev.* 859, 866 (1974).

n79 See *id.*; Pharr et al., *supra* note 61, at xvii.

n80 Pharr et al., *supra* note 61, at xvii.

n81 See discussion *supra* Part II.A.

n82 *Code Theod.* 15.2.

n83 *Code Theod.* 15.2.7.

n84 *Id.*

n85 Code Theod. 3.8.3, 3.9, 5.1.8, 8.12.8-9, 8.18.1, 8.18.3, 9.14.3.

n86 See Code Theod. 15.2.7.

n87 After the fall, Rome and Italy came, effectively if not actually, under barbarian rule. Honore, *supra* note 78, at 863.

n88 See Pharr et al., *supra* note 61, at xxiv.

n89 Honore, *supra* note 78, at 864. Justinian officially became emperor in April 527 A.D., but he was forced to share his reign until the death of the former emperor (his uncle Justin) on August 1, 527 A.D. *Id.* It should be noted here that the common recognition of April Fool's Day did not come into modern usage until much later, and so Justinian's initial ascension to the throne was not marred by irony. See David Johnson, April Fool's Day Has Serious Origins, at <http://www.infoplease.com/spot/aprilfools1.html> (last visited Oct. 27, 2004).

n90 See Pharr et al., *supra* note 61, at xxvi.

n91 See Buckland, *supra* note 68, at 40; Watson, *supra* note 61, at 92-93. "Responsa" is a term used to refer to the writings of the jurists, named so because the juristical writing was drafted mainly as a critique of or response to the Imperial Edicts. See *supra* note 71 and accompanying text.

n92 Honore, *supra* note 78, at 866; see Watson, *supra* note 61, at 92.

n93 Buckland, *supra* note 68, at 40; see Watson, *supra* note 61, at 92.

n94 Watson, *supra* note 61, at 92.

n95 Honore, *supra* note 78, at 866.

n96 Buckland, *supra* note 68, at 47; see Watson, *supra* note 61, at 93.

n97 Watson, *supra* note 61, at 92.

n98 See Buckland, *supra* note 68, at 28; Watson, *supra* note 61, at 93. The Institutes, although issued as an imperial statute, were actually intended as a rudimentary textbook for elementary legal education, akin to the level of a present-day first-year law casebook. See Buckland, *supra* note 68, at 28; Watson, *supra* note 61, at 17.

n99 Buckland, *supra* note 68, at 41.

n100 See *id.* at 40; Watson, *supra* note 61, at 92-93.

n101 Buckland, *supra* note 68, at 39-41.

n102 See *id.* at 41; Watson, *supra* note 61, at 91.

n103 See Buckland, *supra* note 68, at 41; Watson, *supra* note 61, at 92-93.

n104 Watson, *supra* note 61, at 92.

n105 See *id.* at 93.

n106 See Honore, *supra* note 78, at 866; Watson, *supra* note 61, at 92-93.

n107 Honore, *supra* note 78, at 879.

n108 See Watson, *supra* note 61, at 93

n109 *Id.*; see Buckland, *supra* note 68, at 40-41.

n110 See discussion *infra* Part II.B.4.b.i-iii.

n111 Colum. Encyclopedia 1752 (6th ed. 2000). Marcellus was made Curule Aedile in 56 B.C. (the sixth-highest elected office in Rome) and was named Consul five years later in 51 B.C. (the second-highest elected office in Rome). *Id.*

n112 See Dig. 39.3.1.12 (Ulpian, Ad Edictum 53) (as translated in 3 The Digest of Justinian 396 (Theodor Mommsen & Paul Krueger trans., Alan Watson ed., 1985)).

n113 See discussion *supra* Part II.B.4.a.

n114 *Acton v. Blundell*, 152 Eng. Rep. 1223 (1843); see discussion *infra* Part III.C.

n115 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149, 81 S.W. 279, 280 (1904); see *Acton*, 152 Eng. Rep. at 1235.

n116 See, e.g., *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999); *East*, 81 S.W. at 280; *Acton*, 152 Eng. Rep. at 1235.

n117 *Acton*, 152 Eng. Rep. at 1235.

n118 See Marcellus (Dig. 39.3.1.12 (Ulpian, Ad Edictum 53)); Pomponius (Dig. 39.3.21 (Pomponius, Quintus Mucius 32)); Proculus (Dig. 39.2.26 (Ulpian, Ad Edictum 81)); Trebatius (Dig. 39.2.24.12, 39.3.3.1 (Ulpian, Ad Edictum 81, Ad Edictum 53)), and Ulpian (Dig. 39.2.24.12, 2.26, 3.1.12, 3.3.1, (Ulpian, Ad Edictum 81, Ad Edictum 53)). One reviewer cited some thirty-eight jurists as being cited to "in the Pandects with respect to the law of water," though not all wrote specifically on groundwater law. See Eugene F. Ware, *Roman Water Law: Translated from the Pandects of Justinian* 23 (1905).

n119 Acton, 152 Eng. Rep. at 1235.

n120 See discussion *infra* Part III.C.

n121 See Watson, *supra* note 61, at 93. ("Ulpian was the most popular jurist."); Buckland, *supra* note 68, at 32-33.

n122 See Buckland, *supra* note 68, at 32 (stating that his edicts-he served as the Praefectus Praetorio for a time just before his murder at the hands of his own guards and, therefore, possessed the ability to issue edicts-accounted for nearly one third of Justinian's Digest).

n123 See Watson, *supra* note 61, at 93 (recounting that "about one half of the Digest comes from [Ulpian]").

n124 Buckland, *supra* note 68, at 33.

n125 Ulpian excerpted the earlier works on water law of Marcellus (Dig. 39.3.1.12 (Ulpian, Ad Edictum 53)); Proculus (Dig. 39.2.26 (Ulpian, Ad Edictum 81)); and Trebatius (Dig. 39.2.24.12, 39.3.3.1 (Ulpian, Ad Edictum 81, Ad Edictum 53)).

n126 See Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n127 See Dig. 39.3.3.1 (Ulpian, Ad Edictum 53).

n128 See Dig. 39.2.26 (Ulpian, Ad Edictum 81).

n129 See Watson, *supra* note 61, at 91; Buckland, *supra* note 68, at 32. This group of honored jurists was sometimes referred to as the "favoured five." See Buckland, *supra* note 68, at 32.

n130 See Watson, *supra* note 61, at 91; Honore, *supra* note 78, at 862.

n131 See Ware, *supra* note 118, at 23.

n132 See Watson, *supra* note 61, at 90.

n133 See *id.* at 90-91; see Buckland, *supra* note 68, at 33.

n134 Dig. 39.3.3.3 (Ulpian, Ad Edictum 53) (emphasis added).

n135 See *id.*

n136 See e.g., *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 75 (Tex. 1999); *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149, 81 S.W. 279, 280 (1904); *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (1843).

n137 See *Acton*, 152 Eng. Rep. at 1235; discussion *infra* Part III.C.

n138 See, e.g., Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n139 *Id.*

n140 See *id.*

n141 Sipriano, 1 S.W.3d at 75-76.

n142 See Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n143 See *id.*; Sipriano, 1 S.W.3d at 75. In Sipriano, the Court held that Ozarka was not liable to Sipriano or to the Fains for its groundwater production. Sipriano, 1 S.W.3d at 75. The authors do not purport to ascribe any Nostradamus-like abilities to Ulpian, but instead merely attempt to show the remarkable similarities between the ancient theoretical underpinnings of the rule of capture and its legal application and construction more than a millennia later.

n144 See Dig. 39.2.24.12 (Ulpian, Ad Edictum 81); *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978) (adding "negligence as a ground of recovery in subsidence cases").

n145 See Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n146 See Stein, *supra* note 42, at 1544; Alan Watson & Khaled Abou El Fadl, *Fox Hunting, Pheasant Shooting, and Comparative Law*, 48 *Am. J. Comp. L.* 1, 21 (2000).

n147 See discussion *supra* Part II.B.4.b.i.

n148 See Dig. 39.3.21 (Pomponius, Quintas Mucius 32).

n149 Mace et al., *supra* note 7, at 67.

n150 *Id.*

n151 *Id.*

n152 Watson & El Fadl, *supra* note 146, at 21.

n153 Dig. 39.3.3.1 (Ulpian, Ad Edictum 53).

n154 See Dig. 39.3.3.1 (Ulpian, Ad Edictum 53); discussion *supra* Part II.B.1.

n155 See Dig. 39.3.3.1 (Ulpian, Ad Edictum 53).

n156 Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n157 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999).

n158 See Seneca: *Thyestes, Phaedra, the Trojan Women, Oedipus, with Octavia 7* (E.F. Watling trans., 1966); see also Mace et al., *supra* note 7, at 67.

n159 See Buckland, *supra* note 68, at 24; *supra* note 71 and accompanying text.

n160 Mace et al., *supra* note 7, at 66; see also discussion *supra* Part II.A (reviewing Greek law).

n161 Tyler, *supra* note 7, at 535; see Mace et al., *supra* note 7, at 67.

n162 See Mace et al., *supra* note 7, at 67.

n163 See Ware, *supra* note 118, at 23.

n164 Dig. 39.3.21 (Pomponius, Quintus Mucius 32).

n165 See Stein, *supra* note 42, at 1544; Watson & El Fadl, *supra* note 146, at 21.

n166 Dig. 39.3.21 (Pomponius, Quintus Mucius 32).

n167 *Tex. Co. v. Burkett*, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927). The Court held that the percolating waters at issue "were the exclusive property of Burkett," that he "plainly had the right to grant access to them and the use of their waters for any purpose," and that he possessed "all the rights incident to them one might have to any other species of property." *Id.*

n168 Watson & El Fadl, *supra* note 146, at 25.

n169 See Stein, *supra* note 42, at 1545. Around 27 A.D., at the inception of the Empire, two contrasting schools of legal thought became dominant, the Proculians and the more conservative, textualist Sabinians. See *id.*; Buckland, *supra* note 68, at 27. Although the Proculians took their name from Proculus, the school was actually founded by Antistius Labeo (who was a republican-in the Roman sense) who died around 21 A.D. Watson & El Fadl, *supra* note 146, at 25; see Buckland, *supra* note 68, at 27. In fact, Proculus was a follower of Nerva, who was himself a follower of Labeo. Buckland, *supra* note 68, at 27.

n170 Dig. 39.2.26 (Ulpian, Ad Edictum 81) (emphasis added).

n171 See generally *supra* note 7 (highlighting the amount of opposition to the rule of capture in Texas).

n172 Dig. 39.2.26 (Ulpian, Ad Edictum 81).

n173 See Watson, *supra* note 61, at 92; Buckland, *supra* note 68, at 41.

n174 See discussion *supra* Part II.B.4.b.i-ii.

n175 See discussion *supra* Part II.B.4.b.i-ii.

n176 Dig. 39.3.3.1 (Ulpian, Ad Edictum 53).

n177 *Id.*; Dig. 39.2.26 (Ulpian, Ad Edictum 81).

n178 See discussion *supra* Part II.B.4.b.i-ii.

n179 See discussion *supra* Part II.B.4.b.

n180 See discussion *infra* Part III.A-E. "Where one government succeeds another over the same territory, in which rights of real property have been acquired, the preceding government is not a foreign government, whose laws must be proved in the courts of the succeeding government." *State v. Sais*, 47 Tex. 307, 318 (1877).

n181 See *Toumbouros*, *supra* note 40, at 21.

n182 See *Sais*, 47 Tex. at 318.

n183 *S. Pac. Co. v. Porter*, 160 Tex. 329, 334, 331 S.W.2d 42, 45 (1960).

n184 Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-78 (Austin, Gammel Book Co. 1898) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)) (adopting and recognizing the common law of England) (all subsequently discussed dates occur A.D., so the suffix will be dropped in all date references for ease of reading).

n185 Miller v. Letzerich, 121 Tex. 248, 253, 49 S.W.2d 404, 407 (1932) (citations omitted).

n186 Robert L. Dabney, Jr., Our Legal Heritage, in Two Parts: Part One: Texas-The Land of the Brave (1518 - 1821), 39 Hous. Law. 12, 14 (2002).

n187 Baade, supra note 7, at 26.

n188 Meyer, supra note 8, at 3.

n189 Andrew Walker, Mexican Law and the Texas Courts, 55 Baylor L. Rev. 225, 232 (2003).

n190 See Barber, supra note 7, at 639, 656-58. King Alfonso was also referred to as "Alfonso the Wise of Castile." Davenport & Canales, supra note 7, at 157. Additionally, there appears to be some dissension in the literature as to whether King Alfonso was designated "V" or "X." Barber, supra note 7, at 656; Meyer, supra note 8, at 106; Las Siete Partidas I (Samuel Parsons Scott trans., 1931). Like Justinian before him, Alfonso "the Learned" took up the compilation of the Partidas almost immediately after his ascension to the throne. See Las Siete Partidas, supra, at 1. Ironically, while the Digest took only roughly three years to complete, the Partidas took three times as long to finish: nine years. See *id.* at li n.21.

n191 In re Adjudication of Water Rights in the Medina River Watershed of the San Antonio River Basin, 670 S.W.2d 250, 252 (Tex. 1984). Indeed it was termed "the essence of the law of Peninsular Spain after 1348." State v. Valmont Plantations, 346 S.W.2d 853, 857 (Tex. Civ. App.-San Antonio 1961, writ granted), *aff'd*, 163 Tex. 381, 355 S.W.2d 502 (1962); see Las Siete Partidas, supra note 190, at lii-liii.

n192 Barber, supra note 7, at 657-58.

n193 Medina River, 670 S.W.2d at 252; Valmont, 346 S.W.2d at 860 n.13.

n194 Baade, supra note 7, at 30. Cedulas are defined as royal and special edicts. Valmont, 346 S.W.2d at 866.

n195 Medina River, 670 S.W.2d at 252 (quoting Book 2, Title 1, Law 1 of the R.I.).

n196 Some sources, including the Court, refer specifically to the Institutes as the foundational text. *State v. Balli*, 144 Tex. 195, 248, 190 S.W.2d 71, 99 (1944); *Manry v. Robinson*, 122 Tex. 213, 223, 56 S.W.2d 438, 442 (1932); Davenport & Canales, *supra* note 7, at 157. Additional sources refer only to "Justinian's sixth century code." See Valmont, 346 S.W.2d at 857. The court of civil appeals opinion was authored by a future chief justice of the Court and so impressed Justice Hamilton, who authored the Court's opinion adopting Justice Pope's lower court ruling, that he remarked, "it would serve no good purpose to write further on the subject" because Justice Pope's opinion was so "exhaustive and well documented." Valmont, 355 S.W.2d at 503. This statement may have referred to all three components of the *Corpus Juris Civilis* or to only the second Code itself. Other sources explicitly state that the *Partidas* was based on the *Corpus Juris Civilis*. Baade, *supra* note 7, at 31; Meyer, *supra* note 8, at 107; see *Las Siete Partidas*, *supra* note 190, at liv. Still other sources simply recount that the *Partidas* was derived from Roman law. See Barber, *supra* note 7, at 656; *Las Siete Partidas*, *supra* note 190, at lii, liv. The final group of authorities cite Spanish jurisprudence as arising from both the Institutes and the Pandects. See Davenport & Canales, *supra* note 7, at 158.

n197 Throughout the literature, the territories of New Spain are described interchangeably as colonial, ultramarine, or as the Indies. See, e.g., Medina River, 670 S.W.2d at 252; Baade, *supra* note 7, at 31-32.

n198 Baade, *supra* note 7, at 31-32; see *Las Siete Partidas*, *supra* note 190, at liii.

n199 Baade, *supra* note 7, at 31; see Watson, *supra* note 61, at 93.

n200 Davenport & Canales, *supra* note 7, at 157 (emphasis added); see *Las Siete Partidas*, *supra* note 190, at lii, liv.

n201 Davenport & Canales, *supra* note 7, at 158 (citation omitted).

n202 *Id.*

n203 *State v. Valmont Plantations*, 346 S.W.2d 853, 858 (Tex. Civ. App.-San Antonio 1961), *aff'd* 163 Tex. 381, 355 S.W.2d 502 (1962).

n204 *Id.* at 858 n.6.

n205 *Id.* at 858 n.7.

n206 All of New Spain, including present-day Texas, was privately owned by the Crown of Castille by virtue of the Bull of Donation (also called the Bull *Inter Cetera*) of Pope Alexander VI, issued on May 4, 1493-twenty-five years before the discovery of New Spain. See *In re Adjudication of Water Rights in the Medina River Watershed of the San Antonio River Basin*, 670 S.W.2d 250, 253 (Tex. 1984); *Valmont*, 346 S.W.2d at 859.

n207 *Medina River*, 670 S.W.2d at 253; see *Baade*, *supra* note 7, at 70-71.

n208 See *Baade*, *supra* note 7, at 68. Some literature refers to Hernan Cortes as "Hernando." See *id.*

n209 *Medina River*, 670 S.W.2d at 253 (quoting the royal grant that transferred title to a large portion of Central Mexico to Hernan Cortes) (emphasis added); see *Baade*, *supra* note 7, at 67-68; *Continuing Voids*, *supra* note 7, at 1292.

n210 *Valmont*, 346 S.W.2d at 860 n.14 (citing Law 19, Title 32, Part 3 of the *Partidas* because the R.I. did not have a provision dealing explicitly with the alienation of groundwater property rights).

n211 See *Barber*, *supra* note 7, at 659.

n212 *Id.*

n213 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999) (clarifying that, absent malice, a landowner may pump unlimited quantities of water from under the landowner's property); see *Friendswood Dev. Co. v. Smith- Southwest Indus., Inc.*, 576 S.W.2d 21, 29 (Tex. 1978) (quizzically holding that the English rule limits "malicious malice"); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 294, 276 S.W.2d 798, 801 (1955) (ruling that the English rule does not encompass malice or wanton conduct); *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149-51, 81 S.W.2d 279, 281-82 (1904) (stating that absolute ownership rule forbids malice or wanton conduct); discussion *infra* Part III.E.1.b.i.

n214 *Continuing Voids*, *supra* note 7, at 1292.

n215 See Valmont, 346 S.W.2d at 855.

n216 See *In re Adjudication of Water Rights in the Medina River Watershed of the San Antonio River Basin*, 670 S.W.2d 250, 252-53 (Tex. 1984).

n217 See *Continuing Voids*, supra note 7, at 1292.

n218 The split began with the publication of the Digest in 533. See Watson, supra note 61, at 93; Buckland, supra note 68, at 41.

n219 See Watson, supra note 61, at 93; Buckland, supra note 68, at 41.

n220 See Baade, supra note 7, at 47. Other commentators have placed the date of Mexican independence on September 7, 1821. See Davenport & Canales, supra note 7, at 176.

n221 See Baade, supra note 7, at 48.

n222 *State v. Valmont Plantations*, 346 S.W.2d 853, 863 (Tex. Civ. App.-San Antonio 1961), aff'd 163 Tex. 381, 355 S.W.2d 502 (1962).

n223 *Id.* passim.

n224 *Id.* at 862 (quoting Enriquez, *Grandes Problemas Nacionales* 171 (1909)).

n225 *Id.* at 862-63 (citing Pena, *Propiedad Inmueble en Mexico* 146 (1921)).

n226 See *Encyclopaedia Britannica* 369 (11th ed. 1910).

n227 Davenport & Canales, *supra* note 7, at 157.

n228 See, e.g., Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-78 (Austin, Gammel Book Co. 1898)) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)) (adopting and recognizing the common law of England).

n229 *Hammond v. Hall*, 59 Eng. Rep. 729 (1840).

n230 *Id.* at 730 & n.1.

n231 Dig. 39.3.1.12 (Ulpian, *Ad Edictum* 53); *Hammond*, 59 Eng. Rep. at 730 n.2 (providing the untranslated version of this quote).

n232 *Acton v. Blundell*, 152 Eng. Rep. 1223 (1843).

n233 See *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999) (citing to *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149, 81 S.W. 279, 280 (1904), in which the Court adopted the reasoning of the *Acton* court in upholding a railroad company's right to pump groundwater).

n234 *Acton*, 152 Eng. Rep. at 1224-25.

n235 *Id.* at 1226-32.

n236 *Id.* at 1226.

n237 *Id.*

n238 See *id.* at 1227-28.

n239 *Id.* at 1226; see Dig. 39.3.1.12 (Ulpian, Ad Edictum 53).

n240 Acton, 152 Eng. Rep. at 1228.

n241 See discussion *infra* Part III.E.1.b.i. Malicious intent was later expressly referred to in Texas jurisprudence by the Court. See, e.g., *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 26 (Tex. 1978); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 292-94, 276 S.W.2d 798, 800-01 (Tex. 1955).

n242 Acton, 152 Eng. Rep. at 1229.

n243 *Id.* at 1229-30.

n244 See *id.* This was later alluded to in *Tex. Co. v. Burkett*, 117 Tex. 16, 29, 296 S.W. 273, 278 (1927).

n245 See Acton, 152 Eng. Rep. at 1230-32.

n246 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999) (defining the phrase as "an injury without a remedy").

n247 "Injuria" is defined as either an injury in the sense of an "affronting wrong," or as a derivative of "in jus, contrary to law." *Black's Law Dictionary* 801 (8th ed. 2004). "Damnum" is defined as "[a] loss; damage suffered." *Id.* at 420.

n248 Acton, 152 Eng. Rep. at 1230.

n249 Id.

n250 See Dig. 39.2.26 (Ulpian, Ad Edictum 81). It should be noted that this section of the Digest also explicitly refers to the lack of an action of one landowner (me) against another (you) who "divert[s] my water supply by means of a canal, open or closed, on a field of yours, even though . . . you deprive me of my water . . . no action is available to me under this stipulation." Id.

n251 See Acton, 152 Eng. Rep. at 1235.

n252 Id.

n253 See Dig. 39.2.26 (Ulpian, Ad Edictum 81).

n254 Acton, 152 Eng. Rep. at 1235.

n255 See discussion supra Part II.B.4.b.ii-iii; see also Ware, supra note 118, § 8 (listing the names of Roman jurists cited in the Digest with respect to water law).

n256 Id.

n257 Acton, 152 Eng. Rep. at 1234.

n258 Id. at 1235.

n259 See id.

n260 Id.

n261 See Opiela, *supra* note 7, at 88. Eric Opiela is one of the very few groundwater law commentators in the nation to have even mentioned *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117 (1836), much less that its *damnum absque injuria* formulation preceded the identical concept put forward in *Acton*. *Id.* Amelia Williams, *A Critical Study of the Siege of the Alamo and of the Personnel of Its Defenders*, 36 S.W. Hist. Q. 251, 265 (April 1933); Amelia Williams, *A Critical Study of the Siege of the Alamo and of the Personnel of Its Defenders*, 37 S.W. Hist. Q. 237, 237-38 (April 1934).

n262 *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117, 123 (1836).

n263 *Mahan v. Brown*, 13 Wend. 261, 265 (N.Y. Sup. Ct. 1835).

n264 *Id.* at 263-65.

n265 See Dig. 39.2.26 (Ulpian, *Ad Edictum* 81).

n266 *Mahan*, 13 Wend. at 265. Compare this language with that of Proculus where he describes the "great difference between the causing of injury and the prevention of enjoyment of an advantage previously enjoyed." Dig. 39.2.26 (Ulpian, *Ad Edictum* 81).

n267 See *Greenleaf*, 35 Mass. (18 Pick.) at 121-22; *Acton v. Blundell*, 152 Eng. Rep. 1223, 1230 (1843).

n268 See *Greenleaf*, 35 Mass. (18 Pick.) at 121-22; *Acton*, 152 Eng. Rep. at 1230.

n269 Dig. 39.2.26 (Ulpian, *Ad Edictum* 81).

n270 Jean Domat, *The Civil Law in its Natural Order* § 1047 (William Strahan trans., Luther S. Cushing ed. 1980) (1850); John Ayliffe, *A New Pandect of Roman Civil Law, As Anciently Established in That Empire and Now Received and Practiced in Most European Nations* 307 (Tho. Osborne, 1734).

n271 Greenleaf, 35 Mass. (18 Pick.) at 121-22.

n272 Domat, supra note 270, § 1047.

n273 Dig. 39.3.3.3 (Ulpian, Ad Edictum 53).

n274 See Greenleaf, 35 Mass. (18 Pick.) at 122.

n275 Id. at 121 (quoting Domat, supra note 270, § 1047).

n276 Acton v. Blundell, 152 Eng. Rep. 1223 (1843).

n277 Greenleaf, 35 Mass. (18 Pick.) at 117.

n278 See infra notes 279-99 and accompanying text.

n279 Roath v. Driscoll, 20 Conn. 533, 541 (1850).

n280 See id.; Acton, 152 Eng. Rep. at 1235.

n281 Roath, 20 Conn. at 542.

n282 Chatfield v. Wilson, 28 Vt. 49, 55, 58 (1855).

n283 *Wheatley v. Baugh*, 25 Pa. 528, 530 (1855). This maxim is defined as "[w]hoever owns the soil owns everything up to the sky and down to the depths." Black's Law Dictionary 1712 (8th ed. 2004). It too is often cited to the Acton court, but nowhere in that court's decision does this phrase appear. What is referred to in Acton is an excerpt from the oral arguments where Acton's counsel-strangely enough- referred to the maxim in English by stating that "[t]he water is the party's as long as it is on his land, as every thing is his that is above or below it." Acton, 152 Eng. Rep. at 1226. In the formal portion of the opinion the court also refers in passing to a "principle, which gives to the owner of the soil all that lies beneath [the] surface." *Id.* at 1235.

n284 *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117, 122 (1836).

n285 *Wheatley*, 25 Pa. at 532 (citing Domat, *supra* note 270, §§ 1047, 1581).

n286 See Domat, *supra* note 270, § 1047.

n287 See *id.*; Dig. 39.2.26 (Ulpian, Ad Edictum 81).

n288 *Wheatley*, 25 Pa. at 532 (citing Domat, *supra* note 270, § 1581).

n289 *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (1843).

n290 Dig. 39.3.1.12 (Ulpian, Ad Edictum 53).

n291 Dig. 39.2.24.12 (Ulpian, Ad Edictum 81).

n292 See *Frazier v. Brown*, 12 Ohio St. 294 (1861), overruled by *Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324, 327 (Ohio 1984).

n293 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149, 81 S.W. 279, 280-81 (1904) (quoting *Frazier*, 12 Ohio St. at 311).

n294 Frazier, 12 Ohio St. at 298.

n295 *Id.* at 311.

n296 *Id.*

n297 See Hill, *supra* note 7, at 302; Mace et al., *supra* note 7, at 69.

n298 See Mace et al., *supra* note 7, at 69; sources cited *supra* note 7.

n299 Hill, *supra* note 7, at 308.

n300 See discussion *supra* Parts I, II, III.A-D.

n301 See discussion *infra* Part III.E.1.

n302 *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*, 642 S.W.2d 438, 441 (Tex. 1982).

n303 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n304 See Mace et al., *supra* note 7, at 63, 80-81. Denison, Texas, is located in Grayson County. See *id.* at 63.

n305 *Id.* at 63, 82.

n306 See *id.*

n307 See *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996).

n308 Tex. Const. art. XVI, § 59 (amended 2003); see *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996).

n309 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 77 (Tex. 1999); see discussion *infra* Part IV.C.1.

n310 *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W.2d 798 (1955).

n311 *Pecos County Water Control & Improvement Dist. No. 1 v. Williams*, 271 S.W.2d 503 (Tex. Civ. App.-El Paso 1954, writ *ref'd n.r.e.*).

n312 See discussion *infra* Part III.E.1.a-b.

n313 See discussion *infra* Part III.E.1.a.

n314 See discussion *infra* Part III.E.1.b.

n315 See Tex. Water Code Ann. § 36.001 (Vernon 2000 & Supp. 2004).

n316 *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 236-37 (Tex. App.-Austin 1989, writ denied); see *Hoefs v. Short*, 114 Tex. 501, 507, 273 S.W. 785, 787 (1925); *Bartley v. Sone*, 527 S.W.2d 754, 760 (Tex. Civ. App.-San Antonio 1974, writ *ref'd n.r.e.*).

n317 See Tex. Water Code Ann. § 11.021 (Vernon 2000).

n318 See *Tex. Co. v. Burkett*, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927). This determination can often come down to a "battle of the experts." See *Shadwick*, *supra* note 7, at 663. In the absence of clear certainty, which is almost a given when dealing with groundwater, Texas courts have naturally chosen to err on the side of presumption of percolation. See *Burkett*, 296 S.W. at 278; accord *Denis*, 771 S.W.2d at 235.

n319 *Burkett*, 296 S.W. at 278; see discussion *infra* Part III.E.1.a.ii.

n320 *Pecos County Water Control & Improvement Dist. No. 1 v. Williams*, 271 S.W.2d 503, 507 (Tex. Civ. App.-El Paso 1954, writ ref'd n.r.e.).

n321 See *Drummond*, *supra* note 7, at 175, 211.

n322 See *Fleming v. Davis*, 37 Tex. 173, 201 (1873).

n323 *Tolle v. Correth*, 31 Tex. 362 (1868).

n324 *Fleming*, 37 Tex. at 192-93; *Tolle*, 31 Tex. at 363- 64; cf. *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 236-39 (Tex. App.-Austin 1989, writ denied) (holding that groundwater captured below the point at which spring emerged and returned to the stream could be transported downstream by owner).

n325 See *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n326 *Bartley v. Sone*, 527 S.W.2d 754, 760 (Tex. Civ. App.-San Antonio 1974, writ ref'd n.r.e.).

n327 See *infra* text accompanying notes 328-32.

n328 Denis v. Kickapoo Land Co., 771 S.W.2d 235, 238 (Tex. App.-Austin 1989, writ denied).

n329 Tex. Co. v. Burkett, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927).

n330 Denis, 771 S.W.2d at 238.

n331 Id.

n332 Bartley v. Sone, 527 S.W.2d 754, 756 (Tex. Civ. App.-San Antonio 1974, writ ref'd n.r.e.); see Fleming v. Davis, 37 Tex. 173, 192-93 (1873); Tolle v. Correth, 31 Tex. 362, 363-64 (1868).

n333 See Kinney, supra note 5, at 2167-68.

n334 See Barber, supra note 7, at 652 n.56 ("In Texas, such streams have never been found."); supra note 5. This includes the courts of appeals, the Commission of Appeals, and the Court.

n335 Aquifers are generally described as "geologic formations that store, transmit, and yield . . . water." Kaiser & Skillern, supra note 7, at 254. The water that might actually be found inside an aquifer, instead of being akin to a giant pool, or running stream, is actually composed of small amounts of water and air molecularly bonded to the soil particles in place. Id.; see Barber, supra note 7, at 652.

n336 See Tex. Co. v. Burkett, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927).

n337 See Behrens & Dore, supra note 7, at 194. "If such an exception exists to the application of the absolute ownership rule, it has the potential for swallowing up the rule itself, because in a very real sense all groundwater is linked to surface water." Id.

n338 Cantwell v. Zinser, 208 S.W.2d 577 (Tex. Civ. App.-Austin 1948, no writ).

n339 *Id.* at 578-79 (conforming the questions to the language present in *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 149, 81 S.W. 279, 280 (1904), and *Frazier v. Brown*, 12 Ohio St. 294, 303 (Ohio 1861), overruled by *Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324, 327 (Ohio 1984)).

n340 See *Wiel*, *supra* note 8, at 743.

n341 See *Sax et al.*, *supra* note 8, at 349.

n342 See *id.*

n343 See *id.* at 349-50.

n344 See *Tex. Water Code Ann.* § 11.021 (Vernon 2000) (defining state water); 30 *Tex. Admin. Code* § 297.1(55) (West 2004) (stating the TCEQ definition of underflow).

n345 By definition, underflow is located directly under most surface streams. See *Wiel*, *supra* note 8, at 743.

n346 See *Texas Law*, *supra* note 8, at 563-65.

n347 *Id.* at 564-65.

n348 See discussion *supra* Part III.A, C.

n349 *Acton v. Blundell*, 152 *Eng. Rep.* 1223, 1228 (1843).

n350 See *Shadwick*, *supra* note 7, at 663.

n351 *Id.* (alteration in original) (quoting *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 294, 276 S.W.2d 798, 801 (1955)); see *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999); *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 26 (Tex. 1978); *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 151, 81 S.W. 279, 282 (1904).

n352 See *Shadwick*, *supra* note 7, at 663.

n353 See *City of Corpus Christi*, 276 S.W.2d at 804 (Griffin, J., dissenting).

n354 See, e.g., *id.* at 803-04; *Pring & Tomb*, *supra* note 7, at 25-18.

n355 *City of Corpus Christi*, 276 S.W.2d at 804.

n356 *Id.* at 799-800.

n357 *Id.* at 800.

n358 *Id.*

n359 *Id.*

n360 *Id.* at 802 (quoting Tex. Rev. Civ. Stat. Ann. art. 7602 (Vernon 1925)).

n361 *Id.*

n362 Justice Calvert became chief justice of the Court six years later. See Office of Court Administration, Chief Justices Since 1945, at <http://www.supreme.courts.state.tx.us/history/cj.asp> (last visited Oct. 27, 2004) (listing Chief Justice Calvert's tenure as lasting from January 3, 1961 to October 4, 1972).

n363 City of Corpus Christi, 276 S.W.2d at 802.

n364 Id. at 804 (Griffin, J., dissenting).

n365 Cantwell v. Zinser, 208 S.W.2d 577, 578-79 (Tex. Civ. App.-Austin 1948, no writ).

n366 City of Corpus Christi, 276 S.W.2d at 802.

n367 See Friendswood Dev. Co. v. Smith-Southwest Indus., Inc., 576 S.W.2d 21, 30 (Tex. 1978).

n368 See id. at 21.

n369 See Todd, supra note 7, at 238. Overdrafting is a process by which water is withdrawn from an aquifer at a greater rate than that of the natural recharge. See Drummond, supra note 7, at 193.

n370 See Todd, supra note 7, at 238.

n371 Friendswood, 576 S.W.2d at 21-22.

n372 See Act of May 26, 1973, 63d Leg., R.S., ch. 598, 1973 Tex. Gen. Laws 1641.

n373 See Act of May 12, 1975, 64th Leg., R.S., ch. 284, 1975 Tex. Gen. Laws 672.

n374 Beckendorff v. Harris-Galveston Coastal Subsidence Dist., 558 S.W.2d 75 (Tex. Civ. App.- Houston [14th Dist.] 1977, writ ref'd n.r.e.).

n375 Tex. Const. art. XVI, § 59 (amended 2003); see Beckendorff, 558 S.W.2d at 78.

n376 Beckendorff, 558 S.W.2d at 78.

n377 *Id.*

n378 Tex. Const. art. XVI, § 59(a) (amended 2003).

n379 Act of May 12, 1975, 64th Leg., R.S., ch. 284, 1975 Tex. Gen. Laws 672.

n380 See *id.*; Act of May 26, 1973, 63d Leg., R.S., ch. 598, 1973 Tex. Gen. Laws 1641.

n381 See *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 29 (Tex. 1978).

n382 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W.279 (1904).

n383 *Friendswood*, 576 S.W.2d at 30; see *Cisneros*, *supra* note 7, at 1202-03.

n384 See *Friendswood*, 576 S.W.2d at 30; *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 293-94, 276 S.W.2d 798, 801 (1955).

n385 See *Friendswood*, 576 S.W.2d at 30.

n386 See *Turner v. Big Lake Oil Co.*, 128 Tex. 155, 96 S.W.2d 221 (1936).

n387 *Id.* at 223.

n388 *Id.* (quoting *Galveston, H. & S.A. Ry. v. Currie*, 100 Tex. 136, 147, 96 S.W.1073, 1077 (1906)).

n389 See *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 209 (1900).

n390 See discussion *infra* Part IV.A.1.

n391 See *Drummond*, *supra* note 7, at 216; *Todd*, *supra* note 7, at 253.

n392 *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 24 (Tex. 1978) (citing *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904)) (emphasis added).

n393 *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 296, 276 S.W.2d 798, 803 (1955) (holding that power certainly does not lie with the courts to usurp the legislative function); see *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 78 (Tex. 1999).

n394 *Friendswood*, 576 S.W.2d at 30.

n395 *Op. Tex. Att'y Gen. No. O-2402 1* (1940) (providing the first Attorney General opinion dealing directly with groundwater ownership).

n396 See *infra* notes 397-407 and accompanying text.

n397 Op. Tex. Att'y Gen. No. O-2402 1, 6 (1940).

n398 Id. passim.

n399 *Katz v. Walkinshaw*, 74 P. 766 (Cal. 1903) (adopting the correlative rights doctrine).

n400 Op. Tex. Att'y Gen. No. O-2402 1, 6 (1940).

n401 Id. at 5.

n402 Id. at 7.

n403 See Drummond, *supra* note 7, at 175, 177 (describing how all groundwater is contained in one kind of soil strata or another).

n404 See Op. Tex. Att'y Gen. No. JM-827 (1987).

n405 Id. at 3956 (quoting *City of Sherman v. Pub. Util. Co.*, 643 S.W.2d 681, 686 (Tex. 1983)).

n406 Id. at 3956-57.

n407 Id. at 3957 (quoting *City of Sherman*, 643 S.W.2d at 686).

n408 See *infra* notes 409-15 and accompanying text.

n409 Opiela, *supra* note 7, at 87, quoted in Sandra Postel, *Last Oasis: Facing Water Scarcity* 166 (1992); Miles, *supra* note 7, at 213, quoted in Postel, *supra*, at 166.

n410 *In Search of a Solution*, *supra* note 7, at 192 (quoting Mark Twain).

n411 Texas Water Foundation, *Every Drop Counts*, at <http://www.texaswater.org/default.htm> (last visited Oct. 27, 2004) (quoting the Honorable Jim Wright, then Speaker of the Texas House of Representatives).

n412 Miles, *supra* note 7, at 213 (quoting Homer Jones, *Water Wars*, *Tex. Bus.*, Feb. 1997, at 23).

n413 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 82 (Tex. 1999) (Hecht, J., concurring) (quoting Hon. Oliver Wendell Holmes, *The Path of the Law*, 10 *Harv. L. Rev.* 457, 469 (1897)); Shadwick, *supra* note 7, at 641 (quoting Holmes, *supra*); Cisneros, *supra* note 7, at 1203 (quoting Holmes, *supra*); Castleberry, *supra* note 7, at 514 (quoting Holmes, *supra*).

n414 James D. Gordon III, *A Dialogue About the Doctrine of Consideration*, 75 *Cornell L. Rev.* 987, 1000 n.93 (1990).

n415 Rick Storm, *Forum Speakers Tout Importance of Water to Panhandle's Future*, *Amarillo Globe-News*, June 15, 2002, http://amarillo.com/stories/061502/new_forum.shtml (quoting Mohamar Ghadafi).

n416 See discussion *infra* Part IV.A-D.

n417 See sources cited *supra* note 5.

n418 *Tex. Water Code Ann.* § 36.002 (Vernon Supp. 2004-05).

n419 Id. § 35.003 (Vernon 2000).

n420 See, e.g., Opiela, *supra* note 7, at 92; Continuing Voids, *supra* note 7, at 1288-90.

n421 See Continuing Voids, *supra* note 7, at 1288-90.

n422 A.W. Walker, *supra* note 7, at 375.

n423 Hardwicke, *supra* note 7, at 392.

n424 See sources cited *supra* notes 5, 7-8, 11-14.

n425 See Hardwicke, *supra* note 7, at 409 n.24; Stephens County v. Mid-Kan. Oil & Gas Co., 113 Tex. 160, 167, 254 S.W. 290, 292 (1923).

n426 Hardwicke, *supra* note 7, at 409 n.24.

n427 Farb v. Theis, 250 S.W. 290, 292 (Tex. Civ. App.- San Antonio 1923, no writ).

n428 Mid-Kan. Oil, 254 S.W. at 292.

n429 Houston & Tex. Cent. Ry. Co. v. East, 98 Tex. 146, 150, 81 S.W. 279, 281 (1904).

n430 Tex. Co. v. Burkett, 117 Tex. 16, 296 S.W. 273 (1927).

n431 *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 292-94, 276 S.W.2d 798, 800-01 (1955).

n432 *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978).

n433 *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 625-26 (Tex. 1996).

n434 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999).

n435 *City of San Marcos v. Tex. Comm'n on Envtl. Quality*, 128 S.W.3d 264 (Tex. App.-Austin 2004, pet. denied).

n436 *Id.* at 271.

n437 *Id.* at 270.

n438 *Id.* at 270-71; see discussion *infra* Part IV.A.1.

n439 *The New Oxford American Dictionary* 257 (2001).

n440 See *Westmoreland & Cambria Nat. Gas Co. v. De Witt*, 18 A. 724, 725 (Pa. 1889).

n441 A.W. Walker, *supra* note 7, at 375.

n442 *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 204 (1900) (quoting *Westmoreland*, 18 A. at 725).

n443 See *Robinson v. Robbins*, 501 S.W.2d 865, 867 (Tex. 1973); *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972); discussion *supra* Part II.B.4 (describing the various jurists' view that groundwater was owned by the holder of the surface estate).

n444 *Ohio Oil*, 177 U.S. at 204 (quoting *Westmoreland*, 18 A. at 725).

n445 *Id.* at 209.

n446 *Id.* at 208-09.

n447 *Brown v. Spillman*, 155 U.S. 665, 669-70 (1895).

n448 See *infra* notes 449-63 and accompanying text.

n449 *DeLaughter*, *supra* note 7, at 1477.

n450 See Technical Rep. 1469, *supra* note 7, at 6.

n451 See *Acton v. Blundell*, 152 Eng. Rep. 1223 (1843); see also *supra* Part III.C (discussing the history and rationale of *Acton*).

n452 See *Acton*, 152 Eng. Rep. at 1235.

n453 *Id.*

n454 See Dig. 39.2.26 (Ulpian, *Ad Edictum* 81).

n455 See Publ'n 1458, supra note 7, at 1.

n456 See Kaiser & Skillern, supra note 7, at 258 n.433 (theorizing that: [W]hile Texas groundwater law is characterized as an absolute right for the landowner, this is somewhat of a misnomer. A landowner does not have an absolute right to the water beneath his land, but only has an absolute right to capture it. The results of this rule can be illustrated with the following example. Suppose landowner A's property overlies the source of percolating groundwater that would normally flow under landowner B's property. Under the absolute ownership rule, landowner A can capture all of the percolating groundwater under his property, thereby depriving landowner B of any water and B is without any legal remedy. Id.); Ellis, supra note 7, at 91-92.

n457 Griffin & Boadu, supra note 7, at 279-80.

n458 Gould, supra note 5, at § 291; see *Prairie Oil & Gas Co. v. State*, 231 S.W. 1088, 1090 (Tex. Comm'n App. 1921, judgment adopted) (quoting *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 207 (1900)).

n459 Id. This type of Court approval: [I]s to be understood as having no further effect than to simply adopt the view of the Commission as to the determination to be made of the cause. It is not to be construed as an approval by the Supreme Court of the opinion of the Commission in the particular case, or the reasons given in the Commission's opinion for its conclusion. *McKenzie v. Withers*, 109 Tex. 255, 256, 206 S.W. 503, 503 (1918).

n460 *Bender v. Brooks*, 103 Tex. 335, 335, 127 S.W. 168, 170 (1910).

n461 *Right of Way Oil Co. v. Gladys City Oil*, 106 Tex. 94, 103, 157 S.W. 737, 740 (1913).

n462 See Opiela, supra note 7, at 92.

n463 See A.W. Walker, supra note 7, at 375.

n464 See *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 208-09 (1900) (quoting *Westmoreland & Cambria Nat. Gas Co. v. DeWitt*, 18 A. 724, 725 (Pa. 1890)).

n465 Tex. Co. v. Daugherty, 107 Tex. 226, 176 S.W. 717 (1915).

n466 Id. at 720.

n467 Id. at 719-20.

n468 Elliff v. Texon Drilling Co., 146 Tex. 575, 581, 210 S.W.2d 558, 561 (1948) (quoting A.W. Walker, supra note 7, at 371).

n469 See discussion supra Parts II-III.

n470 See Friendswood Dev. Co. v. Smith-Southwest Indus., Inc., 576 S.W.2d 21, 26 (Tex. 1978) (tracing how East was cited as the earliest case establishing the "law of capture" in Brown v. Humble Oil & Ref. Co., 126 Tex. 296, 83 S.W.2d 935 (1935) which itself was "one of the basic cases recognizing private ownership of oil and gas in place"); McCleskey, supra note 7, at 213 ("East influenced early oil and gas law as well as water law."); Greenhill & Gee, supra note 7, at 621 ("Beyond doubt the [East] decision influenced the formative stages of the Texas law of oil and gas as the courts developed the ownership- in-place rationale.").

n471 See Friendswood, 576 S.W.2d at 26 (tracing both the Texas ownership and capture rules back to the English rule as laid down in Acton v. Blundell, 152 Eng. Rep. 1223, 1235 (1843)).

n472 See McCleskey, supra note 7, at 213-14 (recounting how, after oil was accidentally discovered in Corsicana in 1894, the industry grew extremely quickly in the 1920s and 1930s).

n473 See id. at 216; Lehman, supra note 7, at 105; Drummond, supra note 7, at 217-23.

n474 See Friendswood, 576 S.W.2d at 26; McCleskey, supra note 7, at 213; Greenhill & Gee, supra note 7, at 621.

n475 See discussion infra Part IV.B.1.

n476 See, e.g., *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 150, 81 S.W. 279, 281 (1904); *Acton*, 152 Eng. Rep. at 1235.

n477 *Tex. Co. v. Daugherty*, 107 Tex. 226, 235-37, 176 S.W. 717, 719-20 (1915).

n478 See *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 83 S.W.2d 935 (1935).

n479 *Friendswood*, 576 S.W.2d at 26.

n480 *Humble Oil*, 83 S.W.2d at 940 (citing *East*, 81 S.W. at 279 and *Daugherty*, 176 S.W. at 719-20).

n481 *Id.*

n482 *Corzelius v. Harrell*, 143 Tex. 509, 514, 186 S.W.2d 961, 964 (1945).

n483 *Id.*

n484 *Friendswood*, 576 S.W.2d at 21.

n485 *Id.* at 26 (emphasis added).

n486 See *City of Sherman v. Pub. Util. Comm'n*, 643 S.W.2d 681, 686 (Tex. 1983).

n487 *Friendswood*, 576 S.W.2d at 26; *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 83 S.W.2d 935, 940 (1935). This characterization is perplexing because nowhere in the *East* opinion is the word "capture" found.

n488 Humble Oil, 83 S.W.2d at 940.

n489 Sherman, 643 S.W.2d at 686.

n490 See *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n491 *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (1843).

n492 *East*, 81 S.W. at 281.

n493 See *Tex. Co. v. Daugherty*, 107 Tex. 226, 234-37, 176 S.W. 717, 719-20 (1915).

n494 See Sherman, 643 S.W.2d at 686; *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 26 (Tex. 1978); *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 305, 83 S.W.2d 935, 940 (1935); *Daugherty*, 176 S.W. at 719-20; *East*, 81 S.W. at 280-82.

n495 See *Friendswood*, 576 S.W.2d at 26; *Humble Oil*, 83 S.W.2d at 940; *Daugherty*, 176 S.W. at 719-20; *East*, 81 S.W. at 280-82.

n496 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 82 (Tex. 1999) (Hecht, J., concurring); see Ahrens, *supra* note 7, at 3; Potter, *supra* note 7, at 1; Evans, *supra* note 7, at 496-97; McCleskey, *supra* note 7, at 212; Norris, *supra* note 7, at 498; Tyler, *supra* note 7, at 535; Harnsberger et al., *supra* note 7, at 727.

n497 See Tarlock, *supra* note 8, § 4.6; *Water and Water Rights*, *supra* note 8, §§ 21.05, 21.07; Caroom & Maxwell, *supra* note 7, at 41-42; Drummond, *supra* note 7, at 197.

n498 See Tarlock, *supra* note 8, § 4.6; *Water and Water Rights*, *supra* note 8, §§ 21.05, 21.07; Caroom & Maxwell, *supra* note 7, at 41-42; Drummond, *supra* note 7, at 197.

n499 See discussion *supra* Part III.E.

n500 For all the frenzied debate and defense of private property rights in groundwater over the years, it is worth noting that the State of Texas currently owns several thousand square miles of groundwater. This is because, while the vast majority of Texas is privately held, approximately six percent is not. See David J. Schmidly et al., *Texas Parks and Wildlife for the 21st Century: An Overview of the Texas Tech University Studies in Conservation and Recreation for the Coming Decades* 13 (Tex. Parks and Wildlife Dep't, 2001) at 13 (revealing that a little over ninety-four percent of the land area of Texas is privately owned). Of this six percent, less than half is owned by the federal government, with the remainder being held by one of the state land agencies. See *id.* In all, potentially just under sixteen thousand square miles of groundwater is owned in fee simple by the people of Texas. See John B. Ashworth & Janie Hopkins, *Aquifers of Texas* 9, 29 (Tex. Water Dev. Bd., Rep. 345, 1995) (There are approximately 262,017 square miles of land in Texas. *Tex. Almanac* 7 (1996-97 ed., 1995). Mathematically, six percent of 262,017 is roughly equal to 15,721 square miles of publicly-owned land overlying Texas aquifers. The practical computation of the total state-owned aquifer acreage is, of course, not quite this simplistic because not every inch of land area in Texas is underlain by an aquifer, major or minor, but the calculation is provided here more for illustration and sense of scale, than for precision).

n501 See discussion *supra* Parts II.B-III.D.

n502 See discussion *supra* Parts II.B-III.D.

n503 See discussion *infra* Part IV.B.1-3.

n504 See *City of Altus, Okla. v. Carr*, 255 F. Supp. 828 (W.D. Tex. 1966), *aff'd*, 385 U.S. 35 (1966).

n505 See *id.* at 840; discussion *infra* Part IV.B.4.a.

n506 See *City of Altus*, 255 F. Supp. at 840.

n507 *Id.* (citing to *Evans v. Ropte*, 128 Tex. 75, 96 S.W.2d 973 (1936)).

n508 *Id.* This excerpt was also referenced by the U.S. Supreme Court in *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 949 (1982).

n509 City of Altus, 255 F. Supp. at 840.

n510 Id.

n511 Act of May 30, 1993, 73d Leg., R.S., ch. 626, § 1, 1993 Tex. Gen. Laws 2350, 2360.

n512 See id. § 1.07, 1993 Tex. Gen. Laws 2350, 2356.

n513 Id.

n514 See id.

n515 Houston & Tex. Cent. Ry. Co. v. East, 98 Tex. 146, 81 S.W. 279 (1904).

n516 See discussion *infra* Part IV.B.1.c.

n517 See Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-78 (Austin, Gammel Book Co. 1898) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)).

n518 Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610. This was a "truly revolutionary" overhaul of groundwater law, strengthening and clarifying the powers of the groundwater conservation districts. See Lehman, *supra* note 7, at 107-10.

n519 Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991; see Lehman, *supra* note 7, at 110-14.

n520 See Lehman, *supra* note 7, at 107.

n521 Tex. Water Code Ann. § 36.002 (Vernon Supp. 2004-05).

n522 Id. "Groundwater" is defined in the preceding section as "water percolating beneath the surface of the earth." Id. § 36.001(5).

n523 See id. § 36.002. The rest of the section reads, "except as those rights may be limited or altered by rules promulgated by a district." Id.

n524 See id. § 36.001(5).

n525 See id. §§ 36.001, .002.

n526 See Act of May 28, 2003, 78th Leg., R.S., ch. 1032, 2003 Tex. Gen. Laws 2979 (now codified at Tex. Prop. Code Ann. §§ 21.0121, .0421 (Vernon 2000 & Supp. 2004-05)).

n527 " Political subdivision" is defined in the Water Code as "a county, municipality, or other body politic or corporate of the state, including a district or authority created under Section 52, Article III, or Section 59, Article XVI [Conservation Amendment], Texas Constitution, a state agency, or a nonprofit water supply corporation created under Chapter 67." Tex. Water Code Ann. § 36.001(15) (Vernon 2000 & Supp. 2004- 05).

n528 See Tex. Prop. Code Ann. § 21.0121.

n529 See id. § 21.0421.

n530 See id. §§ 21.0121, .0421.

n531 See id. §§ 21.0121, .0421.

n532 See *id.* §§ 21.0121, .0421.

n533 Tex. Water Code Ann. § 36.001(5) (Vernon 2000 & Supp. 2004-05).

n534 See Tex. Prop. Code Ann. § 21.0421.

n535 *Id.* § 21.0421(a).

n536 *Id.* § 21.0421(a)(1).

n537 *Id.* § 21.0421(c)(2).

n538 See Caroom & Maxwell, *supra* note 7, at 46.

n539 See Tex. Gov't Code Ann. § 311.023 (Vernon 1998) (containing statutory construction "aids"). "An Act should be given a fair and sensible construction, in order to carry out the purposes for which it was enacted, and not be construed in such manner as to nullify or defeat its purposes." *Brazos River Conservation & Reclamation Dist. v. Costello*, 135 Tex. 307, 312, 143 S.W.2d 577, 580 (1940); see *City of Mason v. W. Tex. Utils. Co.*, 150 Tex. 18, 25-27, 237 S.W.2d 273, 278 (1951); *Sanchez v. Brandt*, 567 S.W.2d 254, 258 (Tex. Civ. App.-Corpus Christi 1978, writ ref'd n.r.e.); *Austin v. Collins*, 200 S.W.2d 666, 670 (Tex. Civ. App.-Fort Worth 1947, writ ref'd n.r.e.). As the Court declared in *Citizens Bank v. First State Bank*, Hearn, 580 S.W.2d 344, 348 (Tex. 1979), "It is recognized that a statute is to be construed with reference to its manifest object, and if the language is susceptible of two constructions, one of which will carry out and the other defeat such manifest object, it should receive the former construction." See *Nootsie Ltd. v. Williamson County Appraisal Dist.*, 925 S.W.2d 659, 662 (Tex. 1996) ("[W]e must reject interpretations of a statute that defeat the purpose of the legislation so long as another reasonable interpretation exists."); *Chevron Corp. v. Redmon*, 745 S.W.2d 314, 316 (Tex. 1987) (stating that statutes should not be construed in manner that renders their provisions meaningless or without effect); cf. *Sharp v. House of Lloyd, Inc.*, 815 S.W.2d 245, 249 (Tex. 1991) (stating that "a court must consider the entire act, its nature and object and the consequences that would follow from each construction").

n540 See, e.g., *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978); *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 296, 276 S.W.2d 798, 803 (1955); *Elliff v. Texon Drilling Co.*, 146 Tex. 575, 580, 210 S.W.2d 558, 561 (1948); *Corzelius v. Harrell*, 143 Tex. 509, 514, 186 S.W.2d 961, 964 (1945); *Evans v. Ropte*, 128 Tex. 75, 79, 96 S.W.2d 973, 974 (1936); *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 305, 83 S.W.2d 935, 940 (1935); *Tex. Co. v. Burkett*, 117 Tex. 16, 29, 296 S.W. 273, 278 (1927); *Tex. Co. v. Daugherty*, 107 Tex. 226, 236-37, 176 S.W. 717, 720 (1915); *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 150, 81 S.W. 279, 281 (1904).

n541 See East, 81 S.W. at 281.

n542 Id. (quoting Pixley v. Clark, 35 N.Y. 520, 527 (1866)).

n543 Daugherty, 176 S.W. at 720.

n544 Burkett, 296 S.W. at 278.

n545 Id.

n546 Brown v. Humble Oil & Ref. Co., 126 Tex. 296, 83 S.W.2d 935, 940 (1935).

n547 Evans v. Ropte, 128 Tex. 75, 96 S.W.2d 973 (1936).

n548 Id. at 974.

n549 Corzelius v. Harrell, 143 Tex. 509, 514, 186 S.W.2d 961, 964 (1945) (emphasis added).

n550 Elliff v. Texon Drilling Co., 146 Tex. 575, 580, 210 S.W.2d 558, 561 (1948).

n551 City of Corpus Christi v. City of Pleasanton, 154 Tex. 289, 276 S.W.2d 798 (1955).

n552 *Id.* at 803 (quoting Annotation, Subterranean or Percolating Waters, 55 A.L.R. 1390 (1928)).

n553 *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) (citing *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846 (Tex. Civ. App.-Amarillo 1960, writ ref'd, n.r.e.)).

n554 *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978).

n555 See *Barshop v. Medina County Underground Conservation Dist.*, 925 S.W.2d 618 (Tex. 1996).

n556 *Id.*

n557 Act of May 30, 1993, 73d Leg., R.S., ch. 626, § 1, 1993 Tex. Gen. Laws 2350, 2360.

n558 *Id.* § 2351; see *Barshop*, 925 S.W.2d at 623-24.

n559 See *Raiders*, *supra* note 7, at 273.

n560 *Fish that Roared*, *supra* note 7, at 856. Bruce Babbitt was the U.S. Secretary of the Interior at the time. See *Raiders*, *supra* note 7, at 274; *Fish that Roared*, *supra* note 7, at 856.

n561 *Raiders*, *supra* note 7, at 274.

n562 See *id.*; *Fish that Roared*, *supra* note 7, at 856.

n563 See 1993 Tex. Gen. Laws vol. I at iii.

n564 *Sierra Club v. Lujan*, No. MO-91-CA-069, 1993 WL 151353 (W.D. Tex. May 26, 1993) (not designated for publication) (citation omitted); see *Fish that Roared*, supra note 7, at 856.

n565 *Fish that Roared*, supra note 7, at 856.

n566 See *Raiders*, supra note 7, at 275; *Fish that Roared*, supra note 7, at 860.

n567 See Act of May 30, 1993, 73d Leg., R.S., ch. 626, § 1, 1993 Tex. Gen. Laws 2350, 2360; *Raiders*, supra note 7, at 276; *Fish that Roared*, supra note 7, at 860.

n568 An "acre-foot [of water] is the amount of water that would cover an acre of land to one foot, approximately 325,850 gallons." *Barshop v. Medina County Underground Conservation Dist.*, 925 S.W.2d 618, 624 n.1 (Tex. 1996); *Sax et al.*, supra note 8, at 18, 19 tbl. 1-6.

n569 Act of May 30, 1993, 73d Leg., R.S., ch. 626, § 1.14(b), 1993 Tex. Gen. Laws 2350, 2360.

n570 *Id.* § 1.14(c).

n571 *Barshop*, 925 S.W.2d at 624 (citing Edwards Aquifer Authority Act, supra note 3, § 1.14(d)).

n572 Act of May 30, 1993, 73d Leg., R.S., ch. 626, §§ 1.03, .16-.20, 1993 Tex. Gen. Laws 2350, 2360; see *Barshop*, 925 S.W.2d at 624-25. A complete analysis of the Edwards Aquifer Authority Act and the Court's analysis of the constitutional issues raised and unraised in *Barshop* is beyond the scope of this Article.

n573 *Barshop*, 925 S.W.2d at 623. Other plaintiffs included the Texas and Southwestern Cattle Raisers Ass'n, Russell Brothers Cattle Co., and Bruce Gilleland. *Id.* The District did not challenge the constitutionality of the Edwards Aquifer Authority Act as it was applied to any particular landowner and their right to produce the groundwater from beneath their land. *Id.* Under a facial challenge, the Court reviewed the Edwards Aquifer Authority Act to determine whether the statute, "by its terms, always operates unconstitutionally." *Id.* The Court did not consider whether the Edwards Aquifer Authority Act, when applied to a particular landowner, would operate unconstitutionally to "take" their rights in the groundwater in place or their right to produce the same. *Id.* at 623, 625-27.

n574 See *id.* at 623.

n575 *Id.*

n576 *Id.*

n577 Some have argued that federal preemption prompted by enforcement of the Endangered Species Act could possibly serve as a limitation to the rule of capture. 16 U.S.C.A. §§ 1531-44 (West 2000); see *Raiders*, *supra* note 7, at 274; *Fish that Roared*, *supra* note 7, at 856.

n578 *Barshop*, 925 S.W.2d at 625 (alleging the Edwards Aquifer Authority Act does more than "regulate use of the aquifer water; it actually deprives the landowner of a vested property right").

n579 *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n580 See *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21 (Tex. 1978); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W.2d 798 (1955); *Tex. Co. v. Burkett*, 117 Tex. 16, 296 S.W. 273 (1927).

n581 *Barshop*, 925 S.W.2d at 625.

n582 *Id.*

n583 *Id.*

n584 *Id.* at 625-26.

n585 *Id.* at 626.

n586 *Id.*

n587 *Id.* "Under a facial challenge, Plaintiffs must establish that the statute, by its terms, always operates unconstitutionally." *Id.* at 623.

n588 *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999).

n589 *Id.*

n590 *Fain v. Great Spring Waters of Am., Inc.*, 973 S.W.2d 327 (Tex. App.-Tyler 1998, no pet.), *aff'd sub nom. Sipriano*, 1 S.W.3d at 75.

n591 *Sipriano*, 1 S.W.3d at 76.

n592 *Id.* at 80.

n593 *Id.* at 77; see *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 296, 276 S.W.2d 798, 803 (1955) (stating that "the Legislature shall pass all such laws' . . . [n]o such duty was or could have been delegated to the courts" (quoting Tex. Const. art. XVI, § 59(a) (amended 2003))).

n594 *Sipriano*, 1 S.W.3d at 80 (citations omitted).

n595 *Id.* at 78.

n596 See Hicks, *supra* note 7, at E1-1.

n597 Sipriano, 1 S.W.3d at 76.

n598 *Id.* at 75.

n599 *Id.* at 80.

n600 See *id.* at 83 (Hecht, J., concurring).

n601 *Id.*

n602 Barshop v. Medina County Underground Water Conservation Dist., 925 S.W.2d 618 (Tex. 1996).

n603 See Bragg v. Edwards Aquifer Auth., 71 S.W.3d 729 (Tex. 2002).

n604 *Id.* at 730. The PRPRPA is codified as Tex. Gov't Code Ann. §§ 2007.001-.045 (Vernon 2003).

n605 Bragg, 71 S.W.3d at 735-36.

n606 Toyaho Creek Irrigation Co. v. Hutchins, 21 Tex. Civ. App. 274, 282-83, 52 S.W. 101, 105 (Tex. Civ. App.-1899, writ ref'd) (a "writ refused" designation before June 14, 1927 did not carry the same weight it carries since that date, namely that the judgment of the court of appeals was correct, all principles of law declared were correctly determined, and the binding effect of the decision was the same as one from the Court itself. Instead, a "writ refused" designation in 1899 meant that the Court might not even approve of the result reached by the court of appeals), see Tex. Rules of Form 84 App. A (Tex. L. Rev. eds., 9th ed.).

n607 Cantwell v. Zinser, 208 S.W.2d 577, 579 (Tex. Civ. App.-Austin 1948, no writ).

n608 City of Corpus Christi v. City of Pleasanton, 154 Tex. 289, 276 S.W.2d 798 (1955).

n609 Pecos County Water Control & Improvement Dist. No. 1 v. Williams, 271 S.W.2d 503, 505 (Tex. Civ. App.-El Paso 1954, writ ref'd n.r.e.).

n610 Id.

n611 Id. at 506.

n612 Id.

n613 See id.; Cantwell v. Zinser, 208 S.W.2d 577, 579 (Tex. Civ. App.-Austin 1948, no writ) (holding that no prescriptive right could attach to the springs at issue).

n614 Pecos, 271 S.W.2d at 506 (citations omitted).

n615 See Schmidly et al., supra note 500, at 13; discussion supra Part III.E.

n616 Bartley v. Sone, 527 S.W.2d 754, 760 (Tex. Civ. App.-San Antonio 1974, writ ref'd n.r.e.).

n617 Denis v. Kickapoo Land Co., 771 S.W.2d 235, 236 (Tex. App.-Austin 1989, writ denied).

n618 See sources cited supra note 7.

n619 See Kirkwood, *supra* note 7, at 1, n.*.

n620 *Acton v. Blundell*, 152 Eng. Rep. 1223, 1235 (1843).

n621 See Kirkwood, *supra* note 7, at 2.

n622 See Woodruff & Williams, *supra* note 7, at 865.

n623 See Snyder, *supra* note 7, at 290.

n624 See Tyler, *supra* note 7, at 536.

n625 See Norris, *supra* note 7, at 498.

n626 See Behrens & Dore, *supra* note 7, at 187.

n627 *Fish that Roared*, *supra* note 7, at 855.

n628 See DeLaughter, *supra* note 7, at 1477, 1479.

n629 Technical Rep. 1593, *supra* note 7, at 1.

n630 See Drummond, *supra* note 7, at 197 (inaccurately citing *Acton v. Blundell*, 152 Eng. Rep. 1223 (1843), as supporting the statement

that "no one owns the subsurface while in place [and] therefore, no property right accrues until someone pumps the water").

n631 See Publ'n 1377, *supra* note 7, at 1.

n632 See Hill, *supra* note 7, at 302.

n633 Tex. Water Code Ann. § 36.002 (Vernon Supp. 2004-05).

n634 See Opiela, *supra* note 7, at 92-93 (quoting *Wheatley v. Baugh*, 25 Pa. 528, 533 (1855)).

n635 See Lehman, *supra* note 7, at 101.

n636 *Id.* at 126.

n637 See Caroom & Maxwell, *supra* note 7, at 43.

n638 *Id.* at 44.

n639 *Id.* at 46.

n640 See Wiel, *supra* note 8, at 971-72.

n641 *Id.* at 972-73 (citations omitted).

n642 *Id.* at 973.

n643 See *Champion*, supra note 8, at 650; cf. *S. Tex. Water Co. v. Bieri*, 247 S.W.2d 268, 272 (Tex. Civ. App.-Galveston 1952, writ ref'd n.r.e.) (noting the state retains title to the corpus of the surface water and the permittee has only a usufructory right of use in the water).

n644 *Water Rights Laws in the Nineteen Western States*, supra note 8, at 746.

n645 *Ground Water Legislation*, supra note 7, at 417.

n646 See *Kinney*, supra note 5, at 2167-68.

n647 *Pecos County Water Control & Improvement Dist. No. 1 v. Williams*, 271 S.W.2d 503, 506 (Tex. Civ. App.-El Paso 1954, writ ref'd n.r.e.); see discussion supra Part IV.B.1.b.

n648 See *Kinney*, supra note 5, at 2167.

n649 See discussion supra Part IV.B.1.a.

n650 *City of Altus, Okla. v. Carr*, 255 F. Supp. 828 (W.D. Tex. 1966), aff'd, 385 U.S. 35 (1966).

n651 Act of May 28, 1965, 59th Leg., R.S., ch. 568, § 2, 1965 Tex. Gen. Laws 1245.

n652 *City of Altus*, 255 F. Supp. at 840.

N653 *Id.*

n654 *Id.*

n655 See *Carr v. City of Altus*, 385 U.S. 35 (1966).

n656 *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941 (1982).

n657 *Id.* at 949.

n658 See *Tex. Co. v. Burkett*, 117 Tex. 16, 28-29, 296 S.W. 273, 278 (1927); *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 238-39 (Tex. App.-Austin 1989, writ denied).

n659 See discussion *infra* Part IV.B.4.a-b.

n660 See discussion *infra* Part IV.B.4.a-b.

n661 See *McCarthy*, *supra* note 7, at 1; *Pyne*, *supra* note 8, at 6; *Sax et al.*, *supra* note 8, at 355-56.

n662 *Sax et al.*, *supra* note 8, at 431.

n663 *McCarthy*, *supra* note 7, at 1-2; see *Caroom & Sherman*, *supra* note 8, at 519; *Sax et al.*, *supra* note 8, at 356. See generally *Pyne*, *supra* note 8, at 169-208 (exploring the various geochemical processes present in groundwater systems).

n664 *TRPA*, 910 S.W.2d 147, 150 (Tex. App.-Austin 1995, writ denied); see *McCarthy*, *supra* note 7, at 2-4.

n665 See Sax et al., *supra* note 8, at 355-56. See generally Pyne, *supra* note 8, at 6, 18, 32-34.

n666 See Act of May 18, 1995, 74th Leg., R.S., ch. 309, 1995 Tex. Gen. Laws 2693.

n667 TRPA, 910 S.W.2d at 147.

n668 See 1995 Tex. Gen. Laws at 2693.

n669 TCEQ, Texas Commission On Environmental Quality, at <http://www.tceq.state.tx.us/about/tceqhistory.html> (last visited Oct. 27, 2004) (stating the TNRCC is now the TCEQ).

n670 Tex. Water Code Ann. § 11.153 (Vernon 2000); see Caroom & Sherman, *supra* note 8, at 519; Drummond, *supra* note 7, at 211-12. See generally Tex. Water Code Ann. §§ 11.153- .155 (addressing projects for storage of appropriated water in aquifers, permits to store appropriated water in aquifers, and aquifer storage pilot project reports).

n671 Tex. Water Code Ann. § 11.121.

n672 See TRPA, 910 S.W.2d at 151-52.

n673 *Id.* at 154-55.

n674 *Id.* at 155 (rebutting the control theory of title); see discussion *infra* Part IV.B.4.b.iii.

n675 See TRPA, 910 S.W.2d at 155.

n676 *Id.*

n677 See *id.* at 150-51.

n678 See Act of May 18, 1995, 74th Leg., R.S., ch. 309, 1995 Tex. Gen. Laws 2693.

n679 See Tex. Water Code Ann. § 11.021 (Vernon 2000) (defining "state water"); §§ 11.153-.155 (authorizing ASR). See generally Chapter 11 of the Texas Water Code (establishing the process for acquiring a permit to appropriate state water).

n680 Act of May 18, 1995, 74th Leg., R.S., ch. 309, 1995 Tex. Gen. Laws 2693.

n681 See *infra* notes 689-705 and accompanying text.

n682 *Lone Star Gas Co. v. Murchison*, 353 S.W.2d 870 (Tex. Civ. App.-Dallas 1962, writ ref'd n.r.e.).

n683 *Id.* at 877 (quoting *White v. N.Y. State Natural Gas Corp.*, 190 F. Supp. 342, 345 (W.D. Pa. 1960)).

n684 See *City of Altus, Okla. v. Carr*, 255 F. Supp. 828, 840 (W.D. Tex. 1966), *aff'd*, 385 U.S. 35 (1966).

n685 See *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 949 (1982).

n686 *Lone Star Gas*, 353 S.W.2d at 879.

n687 *Id.* (emphasis added).

n688 *Id.* (quoting 1 Tex. Jur. 10).

n689 *Id.*

n690 *White v. N.Y. State Natural Gas Corp.*, 190 F. Supp. 342, 345 (W.D. Pa. 1960); *Lone Star Gas*, 353 S.W.2d at 870.

n691 See *White*, 190 F. Supp. at 345-49; *Lone Star Gas*, 353 S.W.2d at 870.

n692 *White*, 190 F. Supp. at 347.

n693 *Id.* at 349. In the case, the federal court was construing Pennsylvania state law. *Id.* at 345.

n694 *Humble Oil & Ref. Co. v. West*, 508 S.W.2d 812, 813 (Tex. 1974).

n695 *Id.* at 813-14.

n696 *Lone Star Gas*, 353 S.W.2d at 872-82.

n697 *Humble Oil*, 353 S.W.2d at 817.

n698 *Id.*

n699 See discussion *infra* Part IV.B.3.b.i-iii.

n700 See *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 238-39 (Tex. App.-Austin 1989, writ denied); TRPA, 910 S.W.2d 147, 150 (Tex. App.-Austin 1995, writ denied).

n701 *Denis*, 771 S.W.2d at 236.

n702 *Id.*

n703 *Id.* at 238-39 (holding that groundwater was not state owned).

n704 *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 304, 276 S.W.2d 798, 808 (1955).

n705 *Id.* at 800.

n706 *Id.* at 802.

n707 *Id.*

n708 See *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 150, 81 S.W. 279, 281 (1904).

n709 See *Tex. Co. v. Burkett*, 117 Tex. 16, 25-28, 296 S.W. 273, 276-78 (1927).

n710 *City of Corpus Christi*, 276 S.W.2d at 802-04.

n711 See *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 236-38 (Tex. App.-Austin 1989, writ denied).

n712 See City of Corpus Christi, 276 S.W.2d at 798.

n713 City of San Marcos v. Tex. Comm'n on Envtl. Quality, 128 S.W.3d 264 (Tex. App.-Austin 2004, pet. denied) (the City filed a motion for rehearing on September 27, 2004, and on October 5, 2004, the Court requested that the respondents file a response to the motion for rehearing).

n714 City of San Marcos, 128 S.W.3d at 273-74. This case was unlike Denis, where the dispute was based on whether the groundwater contributed perceptibly to the flow of the creek. See Denis, 771 S.W.2d at 236. This case was also unlike City of Corpus Christi, where the issue was whether riverflow transportation of unused artesian water was wasteful. See City of Corpus Christi, 276 S.W.2d at 799.

n715 See infra notes 716-20, 722-33 and accompanying text.

n716 City of San Marcos, 128 S.W.3d at 275.

n717 Id.

n718 Id. at 276.

n719 Id. (quoting Brief for San Marcos River Foundation). This notion countered a basis of the court's earlier holding in TRPA, 910 S.W.2d 147, 155 (Tex. App.-Austin 1995, writ denied).

n720 City of San Marcos, 128 S.W.3d at 275 (quoting Brief for San Marcos River Foundation).

n721 See discussion infra Part IV.B.3.b.iii.

n722 See City of San Marcos, 128 S.W.3d at 277.

n723 See *Harrell v. Vahlsing*, 248 S.W.2d 762, 766-69 (Tex. Civ. App.-San Antonio 1952, writ ref'd n.r.e.).

n724 See *id.*

n725 *Id.* at 770.

n726 *Id.*

n727 See *City of San Marcos*, 128 S.W.3d at 277.

n728 See *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 235 (Tex. App.-Austin 1989, writ denied).

n729 See *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 292-95, 276 S.W.2d 798, 800-02 (1955).

n730 *City of San Marcos*, 128 S.W.3d at 277.

n731 *Id.* (quoting *In re Adjudication of the Salt Fork and Double Mountain Fork Watersheds of the Brazos I Segment in the Brazos River Basin*, Texas Water Comm'n, (Feb. 10, 1981)).

n732 *City of San Marcos*, 128 S.W.3d at 277. But see *Harrell v. Vahlsing*, 248 S.W.2d 762, 766-69 (Tex. Civ. App.-San Antonio 1952, writ ref'd n.r.e.).

n733 *City of San Marcos*, 128 S.W.3d at 279 (reserving the question of the TCEQ's authority post-1997).

n734 See discussion *infra* Part IV.B.3.c.i-ii.

n735 See TRPA, 910 S.W.2d 147, 155 (Tex. App.-Austin 1995, writ denied).

n736 See Humble Oil & Ref. Co. v. West, 508 S.W.2d 812, 818-19 (Tex. 1974); Lone Star Gas Co. v. Murchison, 353 S.W.2d 870, 880-82 (Tex. Civ. App.-Dallas 1962, writ ref'd n.r.e.).

n737 See Sporhase v. Nebraska ex rel. Douglas, 458 U.S. 941, 949 (1982); City of Altus, Okla. v. Carr, 255 F. Supp. 828, 840 (W.D. Tex. 1966), aff'd, 385 U.S. 35 (1966).

n738 See Lone Star Gas, 353 S.W.2d at 879.

n739 Tex. Water Code Ann. § 11.042 (Vernon 2000).

n740 Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610.

n741 City of Corpus Christi v. City of Pleasanton, 154 Tex. 289, 276 S.W.2d 798 (1955).

n742 City of San Marcos v. Tex. Comm'n of Env'tl. Quality, 128 S.W.3d 264, 266 (Tex. App.- Austin 2004, pet. denied).

n743 Id. at 273-74, 279.

n744 Id. at 276-77.

n745 Id. at 279.

n746 Texas Judiciary Online, Case Search Results on Case # 04-0164, at <http://www.supreme.courts.state.tx.us/opinions/Case.asp?FilingID=24738> (last visited Nov. 9, 2004) (motion for rehearing pending in Cause No. 04- 0164).

n747 Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610.

n748 Tex. Water Code Ann. § 11.042(b) (Vernon 2000).

n749 Id.

n750 Id.

n751 Id.

n752 Id.

n753 Id.; see Tex. Const. art. V, § 1.

n754 Aristotle, Aristotle's Politics § 1263b, at 44- 45 (Hippocrates G. Apostle & Lloyd P. Gerson trans., 1986).

n755 See discussion *supra* Parts II, III, IV.A-B.

n756 See Tex. Const. art. XVI, § 59 (amended 2003).

n757 Id. § 59(a).

n758 Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 77 (Tex. 1999); see Bragg v. Edwards Aquifer Auth., 71 S.W.3d 729, 731 (Tex. 2002); FM Props. Operating Co. v. City of Austin, 22 S.W.3d 868, 875-76 (Tex. 2000); City of Corpus Christi v. City of Pleasanton, 154 Tex. 289, 295-96, 276 S.W.2d 798, 803 (1955); see also Corzelius v. Harrell, 143 Tex. 509, 511-13, 186 S.W.2d 961, 963-64 (1945) (recognizing the Legislature's authority to enact laws to regulate the state's natural resources-oil and gas in this case-pursuant to the authority created by the 1917 passage of the Conservation Amendment).

n759 Sipriano, 1 S.W.3d at 81 (Hecht, J., concurring) (quoting Tex. Const. art. XVI, § 59).

n760 See infra notes 761-70 and accompanying text.

n761 Turner v. Big Lake Oil Co., 128 Tex. 155, 170, 96 S.W.2d 221, 228 (1936).

n762 Barshop v. Medina County Underground Water Conservation Dist., 925 S.W.2d 618, 629 (Tex. 1996).

n763 Tex. Boll Weevil Eradication Found., Inc. v. Lewellen, 952 S.W.2d 454, 461 (Tex. 1997).

n764 R.R. Comm'n of Tex. v. Rowan Oil Co., 152 Tex. 439, 445, 259 S.W.2d 173, 176 (1953).

n765 Tex. State Bd. of Barber Exam'rs v. Beaumont Barber College, Inc., 454 S.W.2d 729, 732 (Tex. 1970).

n766 See Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, The Laws of Texas 1822-1897, at 177, 177-78 (Austin, Gammel Book Co. 1898) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)).

n767 Harned v. E-Z Fin. Co., 151 Tex. 641, 649, 254 S.W.2d 81, 86 (1953).

n768 Hartman, supra note 7, at 303.

n769 *Id.*

n770 *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 628 (Tex. 1996).

n771 See, e.g., *John G. & Marie Stella Kennedy Mem'l Found. v. Dewhurst*, 90 S.W.3d 268, 281 (Tex. 2002); *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 29 (Tex. 1978); *Southland Royalty Co. v. Humble Oil & Ref. Co.*, 151 Tex. 324, 249 S.W.2d 914, 915 (1952).

n772 See Act approved Jan. 20, 1840, 4th Cong., R.S., reprinted in 2 H.P.N. Gammel, *The Laws of Texas 1822-1897*, at 177, 177-78 (Austin, Gammel Book Co. 1898) (recodified as amended at Tex. Civ. Prac. & Rem. Code Ann. § 5.001 (Vernon 2002)).

n773 *Groesbeck v. Golden*, 7 S.W. 362, 365 (Tex. 1887).

n774 *McLendon v. City of Houston*, 153 Tex. 318, 322-23, 267 S.W.2d 805, 807 (1954).

n775 See *Houston & Tex. Cent. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

n776 *Tex. Co. v. Daugherty*, 107 Tex. 226, 237, 176 S.W. 717, 720 (1915).

n777 See discussion *supra* Part IV.C.2.

n778 See discussion *supra* Part IV.C.1.

n779 See Tex. Const. art. XVI, § 59 (amended 2003).

n780 See *Groesbeck v. Golden*, 7 S.W. 362, 365 (Tex. 1887).

n781 See Schmidly et al., *supra* note 500, at 13.

n782 See Technical Rep. 1469, *supra* note 7, at 22 (recording the permanent acquisition prices paid in West Texas as low as \$ 100 per acre-foot and also listing Edwards Aquifer permanent acquisition prices of around \$ 700 per acre-foot).

n783 See Texas Senate News, 78th Regular Session Opens, <pmark> 1 (Jan. 14, 2003), at <http://www.senate.state.tx.us/75r/Senate/Archives/Arch03/p011403a.htm>; Rep. Larry Phillips, 78th Legislative Session Opens, <pmark> 2 (Jan. 19, 2003), at <http://www.house.state.tx.us/news/release.php?id=40>.

n784 See Senate Gavels in Fourth Special Session, Texas Senate News, <pmark> 1, at <http://www.senate.state.tx.us/75r/Senate/Archives/Arch04/p042004a.htm> (last visited Oct. 27, 2004).

n785 See Comptroller's Biennial Revenue Estimate Outlines Budgetary Challenges: The 78th Legislature Faces a Total Shortfall of \$ 9.9 Billion, Texas Senate News, <pmark> 1, at <http://www.senate.state.tx.us/75r/Senate/Archives/Arch03/p011303a.htm> (last visited Oct. 27, 2004).

n786 See Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610.

n787 See Lehman, *supra* note 7, at 107.

n788 See Hubert & Bullock, *supra* note 7, at 54.

n789 See Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991.

n790 *S. Plains Lamesa R.R. v. High Plains Underground Water Conservation Dist. No. 1*, 2 S.W.3d 770, 779-80 (Tex. App.- Amarillo 2001, no pet.).

n791 See Act of May 27, 2001, 77th Leg., R.S., ch. 966, § 13.06, 2001 Tex. Gen. Laws 1991, 2084.

n792 See Caroom & Maxwell, *supra* note 7, at 47.

n793 Tex. Water Code Ann. § 36.116(a)(2)(B) (Vernon 2000 & Supp. 2004-05).

n794 See Kaiser & Skillern, *supra* note 7, at 267.

n795 Tex. Water Code Ann. § 36.116(a)(1).

n796 Tex. Water Code Ann. § 36.116(b).

n797 See Kaiser & Skillern, *supra* note 7, at 267.

n798 § 36.116.

n799 See discussion *supra* Parts II, III, IV.A-B.1.

n800 See discussion *supra* Part IV.A.4.

n801 See Lehman, *supra* note 7, at 128.

n802 *Id.*

n803 Id.; see discussion supra Parts II, III.

n804 Lehman, supra note 7, at 132 (quoting DeLaughter supra note 7, at 1465 n.46).

n805 See Drummond, supra note 7, at 198-200. The Restatement rule is named after the Restatement, Second, of Torts § 858, promulgated in 1979. See Restatement (Second) of Torts § 858 (1979).

n806 Drummond, supra note 7, at 198.

n807 See In Search of a Solution, supra note 7, at 190; Lehman, supra note 7, at 123-25; Drummond, supra note 7, at 217- 22.

n808 Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 83 (Tex. 1999) (Hecht, J., concurring).

n809 See infra notes 810-13 and accompanying text.

n810 See Tex. Water Code Ann. § 36.116(a)(1) (Vernon 2000 & Supp. 2004-05).

n811 See Restatement (Second) of Torts § 858(1)(a) (1979).

n812 See Tex. Water Code Ann. § 36.116(a)(2)(B).

n813 See Restatement (Second) of Torts § 858(1)(b).

n814 See Tex. Water Code Ann. § 36.116.

n815 See Lehman, *supra* note 7, at 106.

n816 See Act of June 1, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610.

n817 See Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991.

n818 See Lehman, *supra* note 7, at 107.

n819 Kaiser & Skillern, *supra* note 7, at 295.

n820 See Lehman, *supra* note 7, at 103.

n821 See *id.* at 118-23; *In Search of a Solution*, *supra* note 7, at 191 (describing the current problem areas in GCDs that need to be addressed by the 79th Legislature).

n822 Lehman, *supra* note 7, at 121.

n823 *Id.*

n824 *Id.* at 117.

n825 *Id.* at 119.

n826 See Caroom & Maxwell, *supra* note 7, at 49.

n827 Id.

n828 Caroom & Maxwell, *supra* note 7, at 49; In Search of a Solution, *supra* note 7, at 191.

n829 See Texas Water Code §§ 36.052, 36.301, 36.3011, 36.302, 36.303, 36.305; compare *id.* with Texas Water Code §§ 12.081 and 12.082 and 12.083 and 49.001(1) and 49.002.

n830 Elder, *supra* note 21, <pmark> 9 (quoting Mary Kelley, attorney at the Austin office of Environmental Defense).

n831 See Senate Committee on Water Policy, Select, at <http://www.senate.state.tx.us/75r/senate/commit/c750/c750.htm> (last visited Oct. 27, 2004) [hereinafter Senate Committee on Water Policy]; Subcommittee on the Lease of State Water Rights, Interim, at <http://www.senate.state.tx.us/75r/senate/commit/c755/c755.htm> (last visited Oct. 27, 2004) [hereinafter Subcommittee on the Lease of State Water Rights]; Ahrens, *supra* note 7, at Attachment 3.1.

n832 Elder, *supra* note 21, <pmark> 2 (quoting Lt. Governor Dewhurst).

n833 See *id.* <pmark> 7 (quoting Lt. Governor Dewhurst).

n834 See Paul Burka & Patricia Kilday Hart, The Best and Worst, *Tex. Monthly*, July 2001, at 76; The Best & Worst Legislators, *Tex. Monthly*, July 2003, at 98.

n835 See Senate Committee on Water Policy, *supra* note 831; Subcommittee on the Lease of State Water Rights, *supra* note 831.

n836 It's Time for Texas to Re-examine 'Rule of Capture', *Austin-Am. Statesman*, November 16, 2003, <pmark> 5.

n837 Robert Elder Jr., Official Gets Deep Into Water Policy, *Austin-Am. Statesman*, Dec. 2, 2003, at D1.

n838 Id. (quoting Land Commissioner Jerry Patterson).

n839 Id.

n840 See Ahrens, *supra* note 7, at 10.

n841 Id.

n842 Id.

n843 Id.

n844 Id.

n845 Id.

n846 See *In Search of a Solution*, *supra* note 7, at 191- 92; Lehman, *supra* note 7, at 116.

n847 See *Evolution or Revolution?*, *supra* note 7, at E2- 12 to -13.

n848 See *id.*

n849 See Subcommittee on the Lease of State Water Rights, *supra* note 831; Ahrens, *supra* note 7, at Attachment 3.1; Hon. Jerry Patterson, Texas General Land Office, *100 Years is Too Long: the Rule of Capture Turns 100* (2003).

n850 See supra notes 830-49 and accompanying text.

n851 See discussion supra Part II.

n852 See Code Theod. 15.2.7 (stating that water rights were first aligned with property rights in 397 A.D.); discussion supra Part II.B.3.

n853 See discussion supra Part III.A-D.

n854 See sources supra note 7; Tex. S.B. 1041, 78th Leg., R.S. (2003).

n855 See discussion supra Part IV.A.2-3, IV.B.1.c-d.

n856 See discussion supra Part IV.A., IV.A.1, IV.B.1.

n857 See discussion supra Part IV.A.

n858 See discussion supra Part IV.A.4.

n859 Tyler, supra note 7, at 536; Smith, supra note 7, at 633 ("[T]he legislature cannot act on absolute ownership . . . without taking what is claimed as private property, an act that would require compensation for the lost property rights.").

n860 See discussion supra Part IV.C.1-2.

n861 See discussion supra Part IV.B.1.b-e, IV.C.1-3.

n862 See discussion supra Part IV.C.4.

n863 Cf. Caroom & Maxwell, supra note 7, at 55.

n864 See discussion supra Parts II-III.