

COMMENT

THE INCONVENIENCE IN TEXAS GROUNDWATER LAW*

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I. INTRODUCTION

Texas groundwater law is a composite of two opposing management regimes.¹ The first is a statutory system built on

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1. Throughout this Comment, the term “groundwater” will refer to water

pecially powered groundwater districts.² As provided by the legislature, these districts have various rulemaking abilities that allow them to issue well permits, regulate groundwater production, and otherwise implement policies that further the objectives of aquifer conservation.³ Despite their seemingly plenary nature, these powers have not completely protected the state's aquifers, and that is primarily because the Texas legislature has yet to devise a fully comprehensive framework of groundwater regulation. To illustrate briefly, the Water Code functionally confines districts to limited jurisdictions, often according to the boundaries of individual county lines, even though the aquifers themselves are far more expansive.⁴ Moreover, the Water Code requires considerable political cooperation when establishing a district, a precondition that can easily delay any effort towards regulation.⁵ As such, the legislative regime is best described as a largely decentralized approach to groundwater management, and its framework remains incomplete because some regions of the state and their underlying aquifers are still completely without a system of regulation.⁶

Where the legislature has not yet established a groundwater district, aquifer management has been a function of an alternative common law regime.⁷ This system has no

"percolating below the surface of the earth." TEX. WATER CODE ANN. § 36.001(5) (Vernon 2008). This classification is to be distinguished from water flowing in defined subterranean channels, which is governed instead by the laws of surface water. *See Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 236–37 (Tex. App.—Austin 1989, writ denied); *see also Tex. Co. v. Burkett*, 296 S.W. 273, 278 (Tex. 1927) (creating a presumption that all underground water is percolating).

2. *See* TEX. WATER CODE ANN. § 36.0015 (Vernon 2008) (authorizing groundwater districts for the "conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions").

3. *See* TEX. WATER CODE ANN. § 36.101(a) (Vernon 2008).

4. *See* Tex. Water Dev. Bd., Groundwater Conservation Districts, http://www.twdb.state.tx.us/mapping/maps/pdf/gcd_only_8x11.pdf (last visited Dec. 1, 2009) [hereinafter Groundwater Conservation Districts] (showing the distribution of districts and their respective jurisdictions).

5. However, the process of creating groundwater districts has been gaining speed in recent years. *See* LAURA MARBURY & MARY KELLY, ENVTL. DEF., 2005 UPDATE: SPOTLIGHT ON GROUNDWATER CONSERVATION DISTRICTS IN TEXAS 1 fig.1 (2005) (tracking regulation activity since 1951).

6. *See* Tex. Water Dev. Bd., Four Map Composite, <http://www.twdb.state.tx.us/mapping/maps/pdf/4%20-%20Map%20Composite.pdf> (last visited Dec. 1, 2009) [hereinafter Four Map Composite] (depicting groundwater management areas, major aquifers, groundwater conservation districts, and regional water planning areas).

7. *See* *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904) ("In the absence of . . . positive authorized legislation, as between proprietors of adjoining land, the law recognizes no correlative rights in respect to underground waters percolating, oozing, or filtrating through the earth" (quoting *Frazier v. Brown*, 12 Ohio St. 294,

administrative body charged with actually managing the state's aquifers.⁸ Instead, the Texas judiciary recognizes landowners as having ownership of the groundwater beneath their property, and by virtue of this ownership, they may exploit the resource according to their own needs without any risk of liability.⁹ In effect, the courts have adopted a laissez-faire approach to aquifer governance,¹⁰ which in turn has permitted groundwater practices entirely antithetical to the goals of conservation. Landowners may remove unlimited amounts of groundwater even if such extractions result in aquifer overdraft,¹¹ well interference,¹² non-negligent land subsidence,¹³ or even salt water intrusion of underground basins.¹⁴ Such occurrences are not actionable wrongs in the view of the courts; they are instead treated as "inconveniences" for which neighboring landowners have no legal remedy.¹⁵

In developing what exactly constitutes an "inconvenience," Texas courts have remarkably undervalued the significance of responsible aquifer conservation. Aside from the physical consequences already described, groundwater practices within those areas governed by the common law can seriously complicate the planning and enforcement efforts of neighboring districts sharing the same aquifer.¹⁶ Indeed, because common law jurisdictions lack regulatory bodies capable of implementing

311 (1861), *overruled by* Cline v. Am. Aggregates Corp., 474 N.E.2d 324 (Ohio 1984)).

8. A number of public and private agencies are still responsible for supplying water to some localities, but they remain mostly uninvolved in groundwater management. JEFFREY S. ASHLEY & ZACHARY A. SMITH, *GROUNDWATER MANAGEMENT IN THE WEST* 239 (1999). These supply agencies, however, have occasionally campaigned against state regulation. See LAURA BROCK & MARY SANGER, *ENVTL. DEF., SPOTLIGHT ON GROUNDWATER CONSERVATION DISTRICTS IN TEXAS* 7 (2003) (discussing the role of the Canyon Lake Water Supply Corporation in defeating a proposed district).

9. *East*, 81 S.W. at 280–81.

10. See JOSEPH L. SAX ET AL., *LEGAL CONTROL OF WATER RESOURCES* 393–94 (4th ed. 2006) (addressing the separate development of groundwater law from surface water law).

11. Overdrafting results when groundwater is removed at a rate in excess of the aquifer's natural recharge. ASHLEY & SMITH, *supra* note 8, at 293; see also SAX ET AL., *supra* note 10, at 8–10 (discussing the incidental problems of groundwater overdraft).

12. *E.g.*, Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 80 (Tex. 1999).

13. *E.g.*, Friendswood Dev. Co. v. Smith-Sw. Indus., Inc., 576 S.W.2d 21, 30 (Tex. 1978) (announcing a new limitation on the rule of capture).

14. Joe M. Kilgore, *Developing a Comprehensive Water Plan*, 1965 WATER FOR TEX. 5, 6.

15. *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904).

16. See Ty H. Embrey, *Won't You Be My Neighbor: The New Joint Groundwater Planning Process for Texas*, State Bar of Texas Continuing Legal Education Program, 7th Annual The Changing Face of Water Rights in Texas 4 (2006) (stressing the need for unregulated localities to participate in the joint planning process of neighboring districts).

sustainable groundwater practices, regional planning representatives can only estimate what sorts of limitations should be placed upon their own districts to best manage the shared resource.¹⁷ Thus, as long as the common law permits groundwater practices directly harmful to the state's aquifers and indirectly obstructive to the management operations intending to protect those aquifers, the common law regime offers little confidence that it can independently ensure the future availability of the state's groundwater reserves.¹⁸

In a time when access to natural resources has become increasingly unstable, Texas cannot afford to continue this bifurcated approach to groundwater management.¹⁹ Aquifers already provide nearly three-fifths of the state's water supply needs,²⁰ and this dependence will only intensify with population growth.²¹ The common law regime provides no mechanism through which the state can secure the water required to satiate these demands, whereas the legislature's scheme, though imperfect in its own right, has notably succeeded in implementing some sustainable groundwater policies.²² Especially considering that the legislature already treats groundwater districts as the "preferred method of groundwater management,"²³ the state should engage in all efforts to abandon the common law approach.

17. See *id.* (describing how some planning representatives must determine the desired future conditions for an entire management area even though their districts collectively comprise only 14% of that area).

18. See Michael J. Kelly, *Management of Groundwater Through Mandatory Conservation*, 61 DENV. L.J. 1, 3 (1983) (proposing that the common law was "developed primarily to resolve conflicts among individual users, not to prevent depletion of groundwater supplies"); A.W. McHendrie, *The Law of Underground Water*, 13 ROCKY MTN. L. REV. 1, 5 (1940) (observing that the common law "is not and cannot be consistent with any substantial beneficial use of ground waters").

19. See Jon Gertner, *The Future Is Drying Up*, N.Y. TIMES, Oct. 21, 2007, § 6 (Magazine), at 68 (predicting that global climate change will foster conflicts over dwindling water supplies).

20. TEX. WATER DEV. BD., 2 WATER FOR TEXAS 176 (2007) [hereinafter 2007 STATE WATER PLAN]. For cities like San Antonio, groundwater basins are in fact the sole suppliers of potable drinking water. Ronald Kaiser & Frank F. Skillern, *Deep Trouble: Options for Managing the Hidden Threat of Aquifer Depletion in Texas*, 32 TEX. TECH L. REV. 249, 250 n.3 (2001).

21. See 2007 STATE WATER PLAN, *supra* note 20, at 120–23 (projecting that by year 2060, total water demand will exceed usage in 2000 by 27%); see also Dave Pasley, *Not Enough Water for Growing Population*, BOERNE STAR, Sept. 29, 2008, available at <http://www.boernestar.com/articles/2008/09/30/news/news07.txt> (cautioning that population growth will compromise spring flows in the Cow Creek District).

22. See generally 2007 STATE WATER PLAN, *supra* note 20, at 186–217 (summarizing the availability of groundwater in the state's various aquifers with simultaneous implementation of groundwater management policies).

23. TEX. WATER CODE ANN. § 36.0015 (Vernon 2008).

Two means are available for removing this common law burden, but each has its own set of obstacles. The first method is through expanding the legislature's system of individual groundwater districts. The difficulty with this process is political in nature.²⁴ Because of the common law regime, property owners enjoy powerful water rights and regulation is seen as a challenge to those rights.²⁵ Local interests have often formed in opposition to proposed groundwater districts, and in some circumstances, these interests have even defeated state efforts to regulate groundwater withdrawals.²⁶

The other method available is to have the courts themselves abandon the common law. The difficulty with this approach, however, is that the courts adhere to the common law out of principles of judicial restraint.²⁷ In particular, the courts have held that they should not disturb the common law because (1) the legislature has the exclusive responsibility of regulating groundwater; and (2) ever since assuming this responsibility, the legislature has acquiesced in the common law by passively allowing it to remain the default rule in areas where the state has not already established its own regulatory regime.²⁸

The purpose of this Comment is to show that the courts need not continue this line of argument. The history of groundwater regulation in Texas offers no suggestion that the courts should be bound to uphold common law doctrines. Moreover, the common law itself relies on outdated justifications that are no longer valid under contemporary analyses, and so abrogation of the common law is especially warranted notwithstanding the argument for judicial restraint. Part II examines the development of groundwater regulation in Texas. After detailing the structure of the existing regulatory system, Part III explains the weaknesses in the current system and their relationship to the common law regime. Part IV explicates the common law itself, from its origins

24. See BROCK & SANGER, *supra* note 8, at 6 (suggesting that the establishment of groundwater districts is often dependent upon an area's political climate and special management needs).

25. See Kaiser & Skillern, *supra* note 20, at 251; see also Cynthia DeLaughter, Comment, *Priming the Water Industry Pump*, 37 HOUS. L. REV. 1465, 1480 (2000) (addressing landowners' concerns of state control over groundwater).

26. See, e.g., Shaddix v. Kendrick, 430 S.W.2d 461 (Tex. 1968) (discussing the consequences of rejecting the South Plains Underground Water Conservation District No. 4 at its confirmation election).

27. See Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 79–80 (Tex. 1999) (resisting a plea to reform the state's groundwater jurisprudence in light of the legislature's recent work on Senate Bill 1).

28. See City of Corpus Christi v. City of Pleasanton, 276 S.W.2d 798, 803 (Tex. 1955).

to its current role in Texas groundwater law. Part IV then criticizes the legal bases of common law precedent by showing its incompatibility with established Texas policy.

II. HISTORY OF LEGISLATIVE REGULATION

The authority for all groundwater regulation in Texas today rests in a constitutional provision that originally had no impetus in aquifer management.²⁹ Article XVI, Section 59, or the historically preferred "Conservation Amendment,"³⁰ was instead proposed to remedy failed efforts at securing the availability of surface water resources.³¹ Nevertheless, the Conservation Amendment still merits a role in the state's groundwater conservation scheme because the events and discussions contemporaneous with its ratification demonstrate a common interest in preserving all natural resources in kind.³² The following discussion describes that interest, how the Conservation Amendment came into effect, and the primary legislation enacted since then.

A. *The 1904 Amendment*

By the turn of the twentieth century, cyclical periods of drought and flooding had seriously impeded the state's economic and industrial development.³³ Water had become essential to irrigators and manufacturers alike, but the state had yet to erect any significant improvement projects that could secure the resource in times of shortage.³⁴ During years of drought, farmers would often lose their crops to parched earth.³⁵ Commercial

29. Edward P. Woodruff, Jr. & James Peter Williams, Jr., Comment, *The Texas Groundwater District Act of 1949: Analysis and Criticism*, 30 TEX. L. REV. 862, 865 (1952); see TEX. CONST. art. XVI, § 59 interp. commentary (Vernon 1993) (describing the fiscal obstacles to achieving reclamation projects under the prior constitutional structure).

30. See, e.g., *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*, 642 S.W.2d 438, 440 (Tex. 1982); *Conservation Amendment's Purpose and Effect*, DALLAS MORNING NEWS, Aug. 21, 1917, at 8.

31. See TEX. CONST. art. XVI, § 59 interp. commentary (Vernon 1993).

32. See, e.g., *Governor Asks Aid for Drouth-Stricken*, SAN ANTONIO EXPRESS, Aug. 17, 1917, at 3 (discussing the effects of a devastating drought on farmers in West Texas); *Tuesday's Election*, STATESMAN, Aug. 19, 1917, at 4 (suggesting that the Conservation Amendment will secure the future water supply of Texas).

33. TEX. CONST. art. XVI, § 59 interp. commentary (Vernon 1993); TEX. CONST. art. III, § 52 interp. commentary (Vernon 2007).

34. See TEX. CONST. art. III, § 52 interp. commentary (Vernon 2007) (discussing the difficulties in erecting large-scale improvement projects).

35. See, e.g., *Rain Needed*, DALLAS MORNING NEWS, Apr. 3, 1899, at 3 (describing the impact of water shortages in Corsicana).

industries relying on water for navigation, manufacturing, and hydropower would experience similar strains.³⁶ When the rains finally did come, they would pour down proverbially upon the countryside, causing streams to crest over their banks, and that merely traded the problem with drought for one with flooding.³⁷ The floodwaters would wash away fertile farmland and bring destruction to roads, bridges, and property.³⁸ In short, nature's offering of surface water was volatile, and regardless of whether the season was wet or dry, many Texans were disadvantaged by the absence of water control infrastructure.

In light of this fluctuating water availability, the legislature proposed an amendment to Article III, Section 52 that would permit the creation of new taxing districts capable of providing more dependable water protections.³⁹ Adopted in 1904, this amendment provided in pertinent part that these new districts may collect funds for the "construction and maintenance of pools, lakes, reservoirs, dams, canals and waterways for the purposes of irrigation, drainage or navigation, or in aid thereof."⁴⁰ The projects were ambitious, and hindering their completion was an accompanying provision in the amendment that precluded districts from issuing bonds in excess of one-fourth of the value of all real property within their jurisdiction.⁴¹ The effect of having such a restrictive revenue collection policy was that most districts found the achievement of any improvement project "exceedingly difficult."⁴² Indeed, some even found the challenge outright "impossible."⁴³

36. See *Value of Navigation*, DALLAS MORNING NEWS, Aug. 12, 1907, at 14 (predicting that a reclamation project will protect navigational interests even in times of drought); *The Waterworks Problem*, DALLAS MORNING NEWS, May 6, 1900, at 24 (urging the construction of reservoirs to prevent the "great loss to industries that depend upon city water supply to operate").

37. See *Tuesday's Election*, *supra* note 32, at 4.

38. *Id.* (arguing that improvement projects would prevent millions of dollars in property damage caused by flooding).

39. Tex. H.R.J. Res. 11, 28th Leg., R.S., 1903 Tex. Gen. Laws 246.

40. TEX. CONST. art. III, § 52(b)(2).

41. TEX. CONST. art. III, § 52(b); see also TEX. CONST. art. III, § 52 interp. commentary (Vernon 2007) (explaining how past dealings with the railroad industry had inspired the drafters of the Texas Constitution to limit the spending projects of political subdivisions). At the time, district boundaries were also contained to county lines, and this only further restricted revenue collection efforts. *State Voting on Constitutional Amendment*, HOUS. CHRON., Aug. 21, 1917, at 3.

42. See J.C. Nagle, *Voters Have Chance To Help Texas Much*, HOUS. POST, Aug. 20, 1917, at 4 (revealing that districts either inflated property values for the purpose of selling bonds or purchased privately developed levees in order to effect irrigation projects).

43. *Urge Amendment to State Constitution*, DALLAS MORNING NEWS, Mar. 16, 1917, at 18.

With many districts unable to deliver major improvements under the existing constitutional framework, much of Texas was left with little option but to succumb to the wild fluctuations in surface water supplies.⁴⁴ By early 1917, during the height of another major dry spell,⁴⁵ conservation groups began assembling “for the purpose of securing adoption by the people of an amendment providing for a more practicable and comprehensive system of conservation of storm waters and other natural resources of the State.”⁴⁶ The talks anticipated the eventual ratification of the Conservation Amendment months later.⁴⁷

B. *The 1917 Conservation Amendment*

The critical language of the Conservation Amendment permits the legislature to authorize as much indebtedness as necessary to preserve the state’s natural resources.⁴⁸ By allowing districts to incur greater debts and thereby issue larger bonds, the Conservation Amendment removes the primary impediment to financing the erection of improvement projects under Article III, Section 52.⁴⁹ But like its 1904 predecessor, the Conservation Amendment still focuses mainly on the preservation of surface water resources.⁵⁰ Indeed, the language of the Amendment is wholly lacking in any mention of groundwater or aquifer management:

The conservation and development of all of the natural resources of this State, including the control, storing, preservation and distribution of its storm and flood waters,

44. See, e.g., H.W.P., Letter to the Editor, *The Drought in the Southwest*, N.Y. TIMES, Nov. 20, 1910, at 12 (“The Red River, twice the width of the Hudson, is nothing but a streak of dust, and the ranches are dried out, compelling the feeding of stock, for which little fodder is available.”); see also TEX. CONST. art. XVI, § 59 interp. commentary (Vernon 1993) (recalling the floods of 1913 and 1914).

45. See *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996) (indicating that the droughts of 1910 and 1917 prompted the adoption of the Conservation Amendment).

46. *Conservation Meeting Called*, DALLAS MORNING NEWS, Mar. 1, 1917, at 8.

47. See *Amendment to Constitution Carries*, DALLAS MORNING NEWS, Aug. 22, 1917, at 1 (reporting that nearly three-fourths of voters supported the Conservation Amendment).

48. TEX. CONST. art. XVI, § 59(c).

49. TEX. CONST. art. XVI, § 59 interp. commentary (Vernon 1993); see *Conservation Amendment’s Purpose and Effect*, supra note 30 (“It will enable men having a community of interest to organize themselves into a corporate body to undertake works of improvement which they lack the means to finance individually, and the legal facilities to finance in association.”).

50. Compare TEX. CONST. art. III, § 52(b)(2) (encouraging the construction of lakes and waterways), with TEX. CONST. art. XVI, § 59(a) (providing for the conservation and development of the waters in rivers and streams).

the waters of its rivers and streams, for irrigation, power and all other useful purposes, the reclamation and irrigation of its arid, semi-arid and other lands needing irrigation, the reclamation and drainage of its overflowed lands, and other lands needing drainage, the conservation and development of its forests, water and hydro-electric power, the navigation of its inland and coastal waters, 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.⁵¹

The Amendment does contain a catchall provision allowing for the conservation of “all of the natural resources of this State,” and by necessity, that provision must function as the constitutional basis for all groundwater management today.⁵² But even with this general authority, the Conservation Amendment manifests no obvious intent that the courts should be preempted from the field of groundwater law, or at least from further modifying their own groundwater jurisprudence already in force at the time of ratification. To determine the true scope of the Amendment, any reading of the text must be weighed against the understanding of those who drafted it,⁵³ and significantly, the committee report recommending adoption of the Conservation Amendment does not suggest any prospective use of the provision for groundwater management purposes:

The plan of improvement contemplated by the amendment is for the creation by the Legislature of conservation and reclamation districts of such size and following such lines as have coordinate interests in the storing of surface waters, of irrigation, of flood control, of drainage, and other like development measures. Existing methods of dealing with reclamation and conservation work are wholly inadequate to meet the necessities of the State in dealing with problems of such gravity. The proposed amendment constitutes a broad enabling act to the Legislature to deal with what is recognized as the greatest problem affecting

51. TEX. CONST. art. XVI, § 59(a). In 2003, a clause was added to the Conservation Amendment to provide for the “development of parks and recreational facilities.” Tex. S.J. Res. 30, 78th Leg., R.S., 2003 Tex. Gen. Laws 6218.

52. Hunter Wyatt Burkhalter, Deborah Clarke Trejo & Connie Basel, *Groundwater Districts—Where Are We Now?*, State Bar of Texas Continuing Legal Education Program, *The Changing Face of Water Rights in Texas 2* (2004) (quoting TEX. CONST. art. XVI, § 59(a)); see *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996) (upholding the facial validity of the Edwards Aquifer Act under the Conservation Amendment).

53. See *Doody v. Ameritrust Mortgage Co.*, 49 S.W.3d 342, 344 (Tex. 2001) (“We strive to give constitutional provisions the effect their makers and adopters intended.”).

the material development of the State now demanding the consideration of our people.⁵⁴

Newspapers from all of the major cities in Texas promoted the Amendment along similar lines, which suggests that the voters could only reasonably envision use of the Amendment for projects on the surface as well. The *San Antonio Express*, for instance, notably emphasized that the Conservation Amendment would only serve five purposes: “(a) the storage and distribution of water for irrigation, (b) the reclamation and drainage of overflowed and swamp lands, (c) the development of water and hydro-electric power, (d) the conservation and development of forests, and (e) the development of inland and coastal navigation.”⁵⁵ The *Dallas Morning News* likewise stressed that the Amendment would “remove an insuperable obstacle in the path of enterprise” by opening millions of acres of land that would otherwise remain idle and waterlogged.⁵⁶ This sentiment was repeated in Houston and Austin, with newspapers there asserting that funds raised under the new constitutional structure would be used for “flood control projects, drainage or irrigation systems or for similar purposes.”⁵⁷

Historical evidence reveals then that groundwater was not the focus of the Conservation Amendment, its drafters, or its supporters. This analysis does not suggest that the Conservation Amendment is incapable of authorizing the valid regulation of groundwater. To the contrary, Texas courts have confirmed that the Conservation Amendment’s reach is not so narrow as to encompass only surface water resources.⁵⁸ However, because discussion of groundwater regulation was so conspicuously wanting during the ratification period, any suggestion that the Conservation Amendment purports to suspend the judiciary’s role in shaping the state’s groundwater laws is necessarily weak. The historical development of the Conservation Amendment should instead permit only the following conclusions with regard

54. LEONARD TILLOTSON, TEX. HOUSE COMM. ON CONSTITUTIONAL AMENDMENTS, REPORT, 35th Leg., R.S., at 1–2 (1917) (on file with Houston Law Review).

55. *Cureton Declares Conservation Bill Most Important*, SAN ANTONIO EXPRESS, Aug. 20, 1917, at 3.

56. *Conservation Amendment’s Purpose and Effect*, supra note 30; *accord Urge Amendment to State Constitution*, supra note 43.

57. *State Voting on Constitutional Amendment*, supra note 41; *accord Conservation Amendment Is Worthy One; Vote for It*, HOUS. PRESS, Aug. 20, 1917, at 1; Nagle, supra note 42; *Scattering Vote on Amendment*, STATESMAN, Aug. 21, 1917, at 8; *Tuesday’s Election*, supra note 32; *Vote for the Amendment*, HOUS. POST, Aug. 19, 1917, at 28.

58. See, e.g., *Brown v. Humble Oil & Ref. Co.*, 83 S.W.2d 935, 937–38 (Tex. 1935) (finding oil and gas to be natural resources within the bounds of Article XVI, Section 59).

to groundwater: First, because the Conservation Amendment was actually written in response to issues of water shortage, its ratification should guide state policy in the direction of protecting both surface water and groundwater resources alike, even though its language may only explicitly reference the former.⁵⁹ Second, because the Conservation Amendment was specifically drafted to remedy the problems of surface water administration, it offers no express or implied opinion on whatever groundwater management regimes may have existed prior to its ratification in 1917.⁶⁰ Any review of the legislative framework to groundwater management should accordingly be mindful of these central themes.

C. *The Current Regulatory Framework*

The Texas legislature did not avail itself of the Conservation Amendment's authorizations until 1949 when it enacted the first bill providing for the creation of underground water conservation districts (UWCDs).⁶¹ Since then, the legislature has made significant revisions to its regulatory framework such that groundwater management is now a cooperative effort among several state entities.⁶² On the local level are still the districts, which are now simply termed groundwater conservation districts (GCDs) by convention.⁶³ Typically arranged on a county-by-county basis,⁶⁴ GCDs are primarily responsible for implementing groundwater withdrawal policies.⁶⁵ Though regarded as "the

59. See TEX. CONST. art. XVI, § 59(a) (imposing on the legislature a duty to protect the state's natural resources); see also SAX ET AL., *supra* note 10, at 399–402 (illustrating how surface and groundwater resources are hydrologically interconnected); Trigg Twichell, *Interrelation of Surface and Ground Water in Texas*, 1952 PROCEEDINGS: WATER LAW CONFERENCES 30, 36–37 (addressing the surface water consequences of particular groundwater practices and planning).

60. See, e.g., *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904) (adopting the common law rule of capture for groundwater). *But see* *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 77 (Tex. 1999) ("This constitutional amendment, proposed and passed after our common-law decision in *East*, made clear that in Texas, responsibility for the regulation of natural resources, including groundwater, rests in the hands of the Legislature.").

61. Act of July 6, 1949, 51st Leg., R.S., ch. 306, 1949 Tex. Gen. Laws 559.

62. See Robert E. Mace et al., *A Streetcar Named Desired Future Conditions: The New Groundwater Availability for Texas*, State Bar of Texas Continuing Legal Education Program, 9th Annual The Changing Face of Water Rights in Texas, ch. 2.1 app. A (2008) (detailing some of the more substantial changes to the Water Code since 1949).

63. See *Groundwater Conservation Districts*, *supra* note 4 (listing all confirmed and pending GCDs).

64. *Id.*

65. See TEX. WATER CODE ANN. § 36.0015 (Vernon 2008) (providing that GCDs may be created for the "conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs").

state's preferred method of groundwater management,"⁶⁶ GCDs in fact provide the sole means of regulating groundwater under the existing statutory scheme.⁶⁷ Of the various agencies overseeing management of the state's natural resources, only GCDs have powers to regulate issues such as well permits,⁶⁸ well spacing,⁶⁹ and groundwater production.⁷⁰

Because their regulatory powers directly impact the sustainability of aquifers,⁷¹ GCDs assume a role with meticulous planning responsibilities. At least once every five years, for instance, GCDs are required to adopt their own long-term management plans.⁷² These plans reveal the various objectives of each district, from providing for the most efficient use of groundwater to detailing the district's preparedness in times of drought.⁷³ Ever since 2005, GCDs have also been directed to establish in their management plans the "desired future conditions" for the aquifers underlying their jurisdictions.⁷⁴ This term of art reflects the "desired, quantified condition of groundwater resources (such as water levels, water quality, spring flows, or volumes) for a specified aquifer within a management area at a specified time or times in the future."⁷⁵

66. *Id.*

67. *See* Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 81 (Tex. 1999) (Hecht, J., concurring) ("Actually, such districts are not just the preferred method of groundwater management, they are the only method presently available.").

68. TEX. WATER CODE ANN. § 36.113 (Vernon 2008).

69. TEX. WATER CODE ANN. § 36.116(a)(1) (Vernon 2008).

70. TEX. WATER CODE ANN. § 36.116(a)(2) (Vernon 2008).

71. *See, e.g.,* Arthur P. Duggan, *Texas Ground Water Law*, in PROCEEDINGS: WATER LAW CONFERENCES, *supra* note 59, at 11, 17–20 (indicating that policies that promote aquifer recharge, prevent groundwater waste, and distribute the spacing of wells assist in the effort to minimize aquifer overdraft).

72. TEX. WATER CODE ANN. § 36.1072(e) (Vernon 2008).

73. *See* TEX. WATER CODE ANN. § 36.1071(a) (Vernon 2008) (addressing additional objectives).

74. Act of May 30, 2005, 79th Leg., R.S., ch. 970, § 5, 2005 Tex. Gen. Laws 3247, 3251 (codified at TEX. WATER CODE ANN. § 36.1071(a)(8) (Vernon 2008)).

75. 31 TEX. ADMIN. CODE § 356.2(8) (2006). How a GCD defines its desired future conditions for an aquifer indicates essentially whether that district has chosen to deplete the aquifer or sustain it for projected water supply needs. Depletion, though, does not necessarily signify irresponsible management. *See* Corwin W. Johnson, *The Continuing Voids in Texas Groundwater Law: Are Concepts and Terminology To Blame?*, 17 ST. MARY'S L.J. 1281, 1284 (1986) (maintaining that some conditions require aquifers to be mined "at an optimum rate, with due regard for future generations" if they are to be utilized at all). Some aquifer systems naturally recharge at an exceptionally slow rate, making sustainable yields impractical when the human need for water is so high on the surface. Accordingly, some GCDs have decided to exhaust their aquifers, but at a rate that will still provide access to groundwater over a predetermined period. For example, some districts in the Texas Panhandle region have planned to only deplete the Ogallala Aquifer by 50% over fifty years. *See* Burkhalter, Trejo & Basel, *supra* note 52, at 6.

How a GCD drafts its management plans ultimately affects the extent to which that district may operate under the larger statutory scheme. Once a GCD has established its desired future conditions, its management plans are submitted to the Texas Water Development Board (TWDB),⁷⁶ which then returns a value known as managed available groundwater (MAG).⁷⁷ This figure does not represent the total volume of groundwater located within each district's aquifers, but instead indicates the approximate amount of groundwater available annually to a district for beneficial use.⁷⁸ The MAG figure thereby provides how much groundwater the district may allocate for permitting purposes.⁷⁹ TWDB also forwards the estimate of each district's MAG to its respective regional water planning area (RWPA).⁸⁰ These groups influence much of the spending for water conservation projects within their established regions through the implementation of regional water plans.⁸¹ The accuracy of a GCD's desired future conditions is important because the amount of funding available to each RWPA can vary according to TWDB's estimate of that region's aggregate MAG.⁸²

Given this amount of interplay between various state entities, careful planning on the GCD level plays a critical part in ensuring that the state's conservation framework functions effectively. To facilitate the comprehensive development of each GCD's management plans, the legislature has organized a system of groundwater management areas (GMAs).⁸³ As

76. TEX. WATER CODE ANN. § 36.1072 (Vernon 2008).

77. TEX. WATER CODE ANN. § 36.108(o) (Vernon 2008).

78. TEX. WATER CODE ANN. § 36.001(25) (Vernon 2008).

79. See TEX. WATER CODE ANN. § 36.1132 (Vernon 2008) ("A district, to the extent possible, shall issue permits up to the point that the total volume of groundwater permitted equals the managed available groundwater.").

80. TEX. WATER CODE ANN. § 36.108(o) (Vernon 2008). For a map highlighting the distribution of RWPAs with their corresponding GCDs, see Tex. Water Dev. Bd., Groundwater Conservation Districts and the 16 Regional Water Planning Areas, <http://www.twdb.state.tx.us/mapping/maps/pdf/GCDswithRWPAs24x24.pdf> (last visited Dec. 1, 2009).

81. These regional water plans are later incorporated into the state water plan, which functions as a guide to state water policy. TEX. WATER CODE ANN. § 16.051(a)–(b) (Vernon 2008).

82. Embrey, *supra* note 16, at 4 ("[Regional water planning groups] must now use the MAG information generated by the TWDB based on the desired future conditions decisions which were made by the joint planning groups."); see also TEX. WATER CODE ANN. §§ 15.973–.974 (Vernon 2008) (providing low interest loans to GCDs and other political subdivisions for the implementation of water projects recommended by the state and regional water plans); TEX. WATER CODE ANN. § 16.053(e)(3)(A) (Vernon 2008) (instructing that regional water plans be based on an aquifer's managed available groundwater).

83. See TEX. WATER CODE ANN. § 35.004 (Vernon 2008) (requiring TWDB to designate GMAs with the "objective of providing the most suitable area for the

designated by TWDB, sixteen regional GMAs cover the entire state,⁸⁴ with their borders honoring those of the state's major aquifers.⁸⁵ This network of GMAs operates by coordinating the joint planning of every GCD within the same GMA so that each district's management plans and groundwater policies may remain relatively compatible with the regulations of other districts sharing the same aquifer.⁸⁶ This system prevents a situation whereby the policies of one district aspiring to preserve groundwater reserves are undermined by those of an adjoining district simultaneously fixed on exhausting the same resource.⁸⁷ To this end, GMAs require representatives from each GCD within their respective jurisdictions to meet annually and jointly develop complementary management plans.⁸⁸ At these meetings, representatives are directed to consider the goals of each GCD's management plan, their impact on planning throughout the GMA, and the degree to which each plan achieves the aquifer's desired future conditions.⁸⁹ By the end of 2010, representatives will also have to review such specific factors as groundwater availability models provided by the state, as well as other data and groundwater management practices that differ substantially from their own GCD's rules.⁹⁰ By the conclusion of each meeting, the representatives vote on the establishment of their aquifer's desired future conditions and then return to their districts to carry out their new models of groundwater administration.⁹¹

III. THE REGULATORY REGIME AND THE LEGACY OF THE COMMON LAW

Though elaborate, the state's current regulatory framework does not provide for a perfectly comprehensive system of

management of groundwater resources").

84. Tex. Water Dev. Bd., Groundwater Management Areas in Texas, <http://www.twdb.state.tx.us/mapping/maps/pdf/GMA%20map%208x11.pdf> (last visited Dec. 1, 2009).

85. Mace et al., *supra* note 62, at 2 (describing the method by which TWDB delineated the GMAs).

86. See TEX. WATER CODE ANN. § 36.108(d-2) (Vernon 2008).

87. See Mace et al., *supra* note 62, at 4. *But see* David Bowser, *Boards Disagree on Aquifer's "Desired Future Condition,"* PAMPA NEWS ONLINE, Jan. 24, 2009, available at <http://www.thepampanews.com/articles/2009/01/24/news/4news.prt> (providing a recent example of districts within the same GMA unable to compromise over conflicting groundwater management schemes).

88. TEX. WATER CODE ANN. § 36.108(c) (Vernon 2008).

89. *Id.*

90. TEX. WATER CODE ANN. § 36.108(d) (Vernon 2008).

91. See TEX. WATER CODE ANN. § 36.108(d-1) (Vernon 2008) (requiring adoption of desired future conditions by a two-thirds vote).

groundwater conservation because it still leaves some aquifers vulnerable to mismanagement. This regrettable situation is a product of both judicial stubbornness and legislative inaction. Where GCDs have not yet been established, Texas courts have unyieldingly adjudicated groundwater disputes pursuant to English common law principles that are entirely antithetical to the legislature's overall conservation scheme.⁹² These principles allow landowners to remove limitless amounts of groundwater from beneath their surface estates with very little threat of liability.⁹³ Conversely, where GCDs have been established, landowners have no similar freedom to tap their underlying aquifers because districts have regulations restricting groundwater productions.⁹⁴ The problem in achieving a coherent system of groundwater conservation arises then because several regions within the state do not have GCDs to regulate their underlying aquifers.⁹⁵

This problem cannot be neatly contained because aquifers provide a common pool resource, and so the operations of a single unregulated groundwater pump can have rippling effects in neighboring jurisdictions that are actively regulating.⁹⁶ From a

92. See, e.g., *Sipiano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 80 (Tex. 1999) (denying liability for a bottling company whose operations caused neighbor's well to run dry); *Friendswood Dev. Co. v. Smith-Sw. Indus., Inc.*, 576 S.W.2d 21, 29 (Tex. 1978) (denying liability for company whose groundwater extractions caused subsidence to adjacent properties); *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 281 (Tex. 1904) (denying liability for railroad company that caused neighbor's well to run dry); *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.) (refusing to enjoin groundwater pumping even though it caused Comanche Springs to cease flowing).

93. The only exceptions to the common law rule are for malicious pumping, waste, and negligence. *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 626 (Tex. 1996). The waste exception has been construed so narrowly, however, as to have no real teeth in Texas. See, e.g., *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798, 800, 804 (Tex. 1955) (holding that supply district may lawfully pump groundwater despite losing between 6.3 and 7.4 million gallons of water per day to evaporation, transpiration, and seepage).

94. See *East*, 81 S.W. at 280–81 (adopting the rule of capture only “[i]n the absence of . . . positive authorized legislation” (quoting *Frazier v. Brown*, 12 Ohio St. 294, 311 (1861), *overruled by Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324 (Ohio 1984))). The law does allow general permitting exemptions for some wells, including those used for domestic and livestock purposes. TEX. WATER CODE ANN. § 36.117(b) (Vernon 2008).

95. See Four Map Composite, *supra* note 6; see also Mace et al., *supra* note 62, at 7 (discussing the “white areas” on TWDB's groundwater conservation district map).

96. See WILLIAM M. ALLEY, THOMAS E. REILLY & O. LEHN FRANKE, U.S. DEPT OF INTERIOR, SUSTAINABILITY OF GROUND-WATER RESOURCES 48–49 (U.S. Geological Survey Circular No. 1186, 1999) (describing how water withdrawn from individual wells affects regional water levels over time); see also *Cappaert v. United States*, 426 U.S. 128, 143 n.7 (1976) (citing expert testimony recognizing that landowners who substantially exploit an aquifer as far as forty miles away from a subterranean lake could have “a small effect” on water levels within that lake over a period of decades); Scott Parks, *Groundswell of*

physical perspective, the unregulated pump can independently cause well interference, depletion of the resource, and any other host of evils.⁹⁷ From a planning perspective, areas without GCDs complicate the process of determining an aquifer's desired future conditions because only representatives from established districts have voting powers to decide such issues.⁹⁸ Districts in some GMAs have recognized this conflict and have invited county judges and other stakeholders from unregulated areas to contribute to the joint planning process.⁹⁹ These gestures, however, cannot secure complete confidence in the resulting management plans because as long as a single locality remains unregulated by a GCD, Texas courts will continue to follow English common law doctrines in groundwater controversies arising within those jurisdictions.¹⁰⁰ By consequence, landowners in such areas may abuse their underlying aquifers without any external considerations. Such passivity ignores whatever management plans may be in operation in the vicinity and thus potentially counteracts the state's objective in conserving the resource.

Creating more GCDs is the first step towards solving this problem of comprehensive groundwater management, but even that process has obstacles. When the state first contemplated a system of groundwater regulation, the legislature particularly disfavored the establishment of a single, centralized authority responsible for all groundwater management.¹⁰¹ The reason for this decision was in part because not all aquifers behave uniformly;¹⁰² their structures vary with the land.¹⁰³ Some aquifers,

Debate, DALLAS MORNING NEWS, Sept. 17, 2000, at 39A (noting that the extent of a single well's impact is dependent upon factors like elevation and underground formations).

97. Kaiser & Skillern, *supra* note 20, at 291–92; *see also* R.W. Harden, *Problems in Ground Water Supply and Management*, 1963 WATER FOR TEX. 34, 35–36 (discussing potential for groundwater contamination); Kilgore, *supra* note 14, at 6 (addressing salt water encroachment and land subsidence).

98. TEX. WATER CODE ANN. § 36.108(d-1) (Vernon 2008); *see also* Embrey, *supra* note 16, at 1–3 (discussing the impact of unregulated areas on the joint planning process); Karen H. Norris, Comment, *The Stagnation of Texas Ground Water Law: A Political v. Environmental Stalemate*, 22 ST. MARY'S L.J. 493, 503 (1990) (noting that GCDs cannot require pumpage reports from well owners in unregulated areas).

99. Mace et al., *supra* note 62, at 7; *see also* TEX. WATER CODE ANN. § 35.020 (Vernon 2008) (“It is the policy of the state to encourage public participation in the groundwater management process in areas within a groundwater management area not represented by a groundwater conservation district.”).

100. *See infra* note 139 (discussing a well interference case arising out of Henderson County).

101. *See* Burkhalter, Trejo & Basel, *supra* note 52, at 4 (noting the legislature's recognition that those “closest to the resource are the people best able to manage it”).

102. *Id.*

103. *See* 2007 STATE WATER PLAN, *supra* note 20, at 186–217 (describing the

for example, underlie geologic formations that lend themselves to exceptional groundwater recharge rates.¹⁰⁴ Located primarily in central Texas, these basins can support high rates of groundwater production, rates otherwise unsustainable if applied to the coastal aquifers, which face salt water intrusion under comparable degrees of withdrawal.¹⁰⁵ Having a single body of rules to govern all aquifers without accounting for their inherent diversities would therefore ignore the very objective of responsible aquifer management.¹⁰⁶ Thus, the legislature preferred instead to follow a system of local control in which GCDs could individually tailor their groundwater policies to specific aquifers.¹⁰⁷ The drawback of this decentralized approach, though, is that local opposition to regulation can also prevent the formation of a GCD,¹⁰⁸ and this is due in part to certain provisions in the Water Code.

The law currently allows three methods for creating a GCD. The first method permits landowners to independently request the creation of a GCD.¹⁰⁹ Under this option, landowners must recommend boundaries for the new district and collect petitions of support from residents within the territory of the newly proposed GCD.¹¹⁰ Upon gathering the statutory minimum number of petitions,¹¹¹ the petitioners must file an application with the Texas Commission on Environmental Quality (TCEQ), which will in turn conduct a public meeting within the proposed district.¹¹² If TCEQ decides to approve the application for the district following these open forums, it will certify the petitions,

characteristics of individual aquifers in Texas); *see also* SAX ET AL., *supra* note 10, at 398–99 (highlighting the differences between confined and unconfined aquifers).

104. *See* Kaiser & Skillern, *supra* note 20, at 260–61 (contrasting the annual recharge of several major aquifers in Texas).

105. *See id.* at 260–61, 301–04.

106. *See* Burkhalter, Trejo & Basel, *supra* note 52, at 4 (“[T]he Legislature clearly intended to . . . avoid a ‘one-size-fits-all’ approach to groundwater management.”).

107. *See* WELLS A. HUTCHINS, *THE TEXAS LAW OF WATER RIGHTS* 588 (1961) (crediting the control of groundwater by local districts to the legislature’s recognition of the “wide variety of conditions that may occur in the water-bearing formations of the State”); *see also* Bruce E. Toppin III, Comment, *The Path of Least Resistance: The Effects of Groundwater Law’s Failure To Evolve with Changing Times*, 38 ST. MARY’S L.J. 503, 508 (2007) (proposing that groundwater management should emulate the central authority of the Texas Railroad Commission).

108. BROCK & SANGER, *supra* note 8, at 6–7.

109. TEX. WATER CODE ANN. § 36.013 (Vernon 2008).

110. *Id.*

111. The petition must contain the signatures of at least fifty landowners within the proposed district’s boundary, or, if the community is much smaller, just a simple majority of landowners, whichever is less. TEX. WATER CODE ANN. § 36.013(b) (Vernon 2008).

112. TEX. WATER CODE ANN. §§ 36.013(a), 36.014 (Vernon 2008).

administratively create the district, and appoint a temporary board of directors.¹¹³

This process does not, however, secure the fixed establishment of the new GCD. The Water Code still requires the temporary board of directors to conduct an election in which residents decide whether to confirm or dissolve the new GCD.¹¹⁴ Perhaps not surprisingly, opposition movements occasionally arise in anticipation of these elections.¹¹⁵ Opponents believe that these initiatives invite unwanted taxation and threaten their vested common law rights to the groundwater beneath their property.¹¹⁶ Given such attitudes, the confirmation elections for some proposed districts have been known to fail by staggering margins. In 1995, for example, landowners requesting the creation of the Comal County UWCD were defeated by a 92% majority.¹¹⁷ In 2003, the Lake Country GCD (proposed for Wood County) similarly failed with 87% of voters in opposition.¹¹⁸ Critically, these counties have yet to establish new districts,¹¹⁹ demonstrating that even though the Water Code strives to achieve a conservation framework towards groundwater management, it imperfectly provides too large an opportunity for selfish interests to impede diligent planning efforts.¹²⁰

The remaining two methods available do not expose new districts to the same threat of electoral defeat, but even with this

113. TEX. WATER CODE ANN. §§ 36.015–.016 (Vernon 2008).

114. TEX. WATER CODE ANN. § 36.017(a) (Vernon 2008). If the district is confirmed, voters will also elect its permanent board of directors and determine whether the district may retain the authority to levy maintenance taxes. TEX. WATER CODE ANN. § 36.017(d) (Vernon 2008). If voters defeat the maintenance tax measure, then the confirmed district will instead have the power to set its own permitting fees to cover the costs of regulation. TEX. WATER CODE ANN. § 36.017(i) (Vernon 2008).

115. See, e.g., John Tackett, *Proposed Water District Meeting Some Opposition*, SAN ANTONIO EXPRESS-NEWS, Mar. 8, 1995, at S5 (describing local rancher's opposition to ad valorem tax and speculation that temporary director was abusing his position to capitalize with real estate developers).

116. See BROCK & SANGER, *supra* note 8, at 6–7; see also Kaiser & Skillern, *supra* note 20, at 251 (discussing why landowners oppose regulation).

117. See TEX. COMM'N ON ENVTL. QUALITY & TEX. WATER DEV. BD., PRIORITY GROUNDWATER MANAGEMENT AREAS AND GROUNDWATER CONSERVATION DISTRICTS, REPORT TO THE 80TH TEXAS LEGISLATURE 33 tbl.6 (2007) [hereinafter GMA & GCD REPORT] (listing the failed GCDs since 1989).

118. See *id.*

119. Groundwater Conservation Districts, *supra* note 4.

120. But see GMA & GCD REPORT, *supra* note 117, at 25–28 (listing several GCDs recently confirmed by election). With its flaws, the petition process has not been the most popular means of creating GCDs. Of the more than ninety currently active, only seven GCDs have been established by request and then subsequently confirmed. Mace et al., *supra* note 62, at 1 n.5; see also Mary K. Sahs, Groundwater Regulation in Texas, State Bar of Texas Continuing Legal Education Program, Nuts & Bolts of Texas Water Rights 2 (2005) (describing the petition process as “lengthy and potentially expensive”).

procedural safeguard, these methods have not led to a comprehensive system of groundwater management precisely because the state has yet to exploit them to their full potential. On an annual basis, TCEQ, in conjunction with TWDB, is required to identify all “areas of the state that are experiencing or that are expected to experience, within the immediately following 25-year period, critical groundwater problems, including shortages of surface water or groundwater, land subsidence resulting from groundwater withdrawal, and contamination of groundwater supplies.”¹²¹ After public meetings and extensive studies of the pertinent aquifers, TCEQ may then designate priority groundwater management areas (PGMAs) if it determines that such areas are facing or likely to face the described groundwater crises.¹²² Upon this designation, TCEQ can then expedite the process in creating new GCDs without being subject to the political whims of opposition movements.¹²³ It may recommend the establishment of one or more new GCDs, the annexation of these areas by existing GCDs in adjoining territories, or some combination thereof.¹²⁴ The recommendation has no binding effect, but landowners within the PGMA must take some action to regulate their underlying aquifers with the participation of a GCD.¹²⁵ If local leadership fails to timely create a GCD, then TCEQ must create one by its own order.¹²⁶ Landowners may not dissolve this district in a confirmation election, but they may still elect to strip the district of its taxing authority.¹²⁷

The final method for creating a GCD is through special enabling legislation. This process derives its authority directly from the Conservation Amendment and simply involves the legislature enacting a bill specifically tailored for an individual GCD.¹²⁸ Upon passage of the bill, the GCD has all the powers

121. TEX. WATER CODE ANN. § 35.007(a) (Vernon 2008).

122. TEX. WATER CODE ANN. §§ 35.007–.008 (Vernon 2008).

123. See TEX. WATER CODE ANN. § 36.0151(a) (Vernon 2008) (requiring an election only to determine the district’s board of directors and taxing authority).

124. TEX. WATER CODE ANN. § 35.008(g) (Vernon 2008).

125. TEX. WATER CODE ANN. § 35.012(a) (Vernon 2008).

126. TEX. WATER CODE ANN. § 35.012(b) (Vernon 2008). TCEQ must allow landowners within the PGMA at least 120 days from the issuance of the recommendation report to adopt a GCD, but the agency may provide for up to two years. *Id.*

127. See TEX. WATER CODE ANN. § 36.0151(a) (Vernon 2008). In this single regard, the election follows the same process as those GCDs requested by petition. See *supra* note 114 (showing that voters must choose essentially between taxes and permitting fees).

128. TEX. WATER CODE ANN. § 36.011(a) (Vernon 2008) (“A groundwater conservation district may be created under and subject to the authority, conditions, and restrictions of Section 59, Article XVI, Texas Constitution.”).

granted in it and may or may not be subject to confirmation elections, as per the judgment of the legislature.¹²⁹

Together, the PGMA program and the special enabling legislation have met with noteworthy success. In a twenty-year period, TCEQ studied at least eighteen areas throughout the state suspected of facing critical water crises.¹³⁰ Thorough examinations have concluded that most of those localities would not experience critical groundwater problems within a twenty-five year period.¹³¹ By 2007, of the five study areas that had been designated PGMAs, four had already seen GCD creation activity.¹³² Additionally, the legislature has by its own initiative specially enabled well over seventy individual GCDs.¹³³

This movement towards more extensive groundwater management promises hope for the overall conservation of the state's natural resources, but the legislature's regulatory framework still leaves room for considerable improvement. For instance, reports indicate that the successful creation of a GCD does not always guarantee the equally successful management of that district's aquifers.¹³⁴ Whether because of their enabling legislation or because of the results in their confirmation elections, some newly created districts specifically lack the taxing authority to conduct effective management operations.¹³⁵ More importantly, TCEQ and the Texas legislature have declined to exercise their power to establish GCDs in unregulated areas of the state, and this has only fostered unnecessary conflicts over an increasingly precious resource.¹³⁶

To a certain extent then, the common law can be credited with prolonging the problems of groundwater administration in Texas. Landowners have been resistant to regulation because it disturbs their common law rights, and the legislature has been reluctant to adopt stricter groundwater policies because of the

129. See, e.g., GMA & GCD REPORT, *supra* note 117, at 10–11 (listing GCDs specially created by the 79th Legislature and whether they were subject to confirmation elections).

130. *Id.* at 15–16; see also *id.* at 20–24 (discussing the plans of TCEQ to complete updated studies of areas previously considered for PGMA designation).

131. See *id.* at 15 (noting that ten study areas were determined to not be PGMAs).

132. *Id.* at 18.

133. See Mace et al., *supra* note 62, at 1 n.5 (indicating that seventy-seven GCDs had been established by legislation by 2001); see also MARBURY & KELLY, *supra* note 5, at 1 (charting the trend of increasing GCD creation since 1951).

134. See, e.g., MARBURY & KELLY, *supra* note 5, at 11–12 (discussing budget issues experienced by several recently formed GCDs).

135. See *id.*

136. See, e.g., *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613, 614–16 (Tex. App.—San Antonio 2008, pet. filed) (disputing common law rights in Val Verde County).

political opposition those policies provoke.¹³⁷ The product of this conflict has been an incomplete regulatory regime. It provides no assurances to groundwater users in regions without GCDs and complicates the management of aquifers in nearby areas that have GCDs.¹³⁸ Rather than delaying action until controversies escalate to the point of demanding government intervention,¹³⁹ the state and its various actors should work now to compel the creation of GCDs over every square mile having an underlying aquifer.¹⁴⁰ Regulation does not have to entail excessively rigid or restrictive groundwater policies,¹⁴¹ but at the very least, a modicum of state control should be able to induce more sustainable groundwater practices.

IV. THE JUDICIAL INFLUENCE ON TEXAS GROUNDWATER LAW

With the legislature only incrementally expanding the system of GCDs, the state's current patchwork approach to

137. See Kaiser & Skillern, *supra* note 20, at 251 ("The notion of private property rights in groundwater is so entrenched in both landowner and legislative psyche that any attempt to regulate the pumping of groundwater provokes significant political and legal opposition.").

138. See *id.* at 251–53 (addressing lack of aquifer regulation and the deleterious effects of the common law rule of capture).

139. In one recent case, the Ozarka Water Company profited from the absence of regulation in Henderson County by conducting a water mining operation for its lucrative bottling business. *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 75–76 (Tex. 1999); see also TEX. SEN. INTERIM COMM. ON NATURAL RES., INTERIM REPORT: TEXAS GROUNDWATER RESOURCES, 77th Leg., R.S., at 19 (2000) (showing lack of a GCD in Henderson County). When the operation drained the wells of neighboring landowners, the Texas Supreme Court, following the English common law rule, denied them any sort of recovery. *Sipriano*, 1 S.W.3d at 80–81. The disposition of the case led some city managers to question whether the state would tolerate such results. See Parks, *supra* note 96 (contemplating that the damage caused by the bottling industry "very well could drive a change in the law"). By 2001, the legislature had specially enacted the Neches & Trinity Valleys GCD, thereby abrogating the supreme court's common law rule in Henderson County. Act of June 16, 2001, 77th Leg., R.S., ch. 1387, 2001 Tex. Gen. Laws 3571.

140. As with many regulatory programs, this proposal is likely to invite takings challenges. See, e.g., *Edwards Aquifer Auth. v. Day*, 274 S.W.3d 742, 756 (Tex. App.—San Antonio 2008, pet. filed) (remanding to the trial court for a determination of whether the denial of a groundwater permit application constitutes an unconstitutional taking). For an argument that groundwater restrictions do not give rise to takings issues, see Kelly, *supra* note 18, at 14–24. See also *Bragg v. Edwards Aquifer Auth.*, 71 S.W.3d 729, 737 (Tex. 2002) (holding that the Property Rights Act does not require groundwater regulators to prepare takings impact analyses before acting on individual permit applications); John D. Leshy, *A Conversation About Takings and Water Rights*, 83 TEX. L. REV. 1985, 1992–93 (2005) (emphasizing that the communal character of water makes it unlike other types of property subject to takings analysis).

141. Cf. Robert H. Abrams, *Water Allocation by Comprehensive Permit Systems in the East: Considering a Move Away from Orthodoxy*, 9 VA. ENVTL. L.J. 255, 264 n.27 (1990) ("In a basin with no foreseeable potential for shortage, to have any managerial system whatsoever is to overmanage and to incur costs that produce no benefit. Sophisticated rules of permit system inclusion and exclusion can be drawn to limit the cost of overmanagement.").

groundwater management has left a number of unregulated voids on the Texas landscape.¹⁴² In some of the state's most arid localities, many counties are entirely without a framework of GCDs.¹⁴³ Texas courts have filled these voids with English common law doctrines,¹⁴⁴ but these doctrines offer no real contribution to the objectives of conservation management. Indeed, their policy is actually to encourage the opposite: consume the resource and disregard the externalities.¹⁴⁵ The common law doctrines specifically provide that the owner of the surface estate owns all of the groundwater beneath his land, and as a consequence, he has an unfettered right to withdraw the resource, even if that withdrawal results in the drainage of neighboring wells or springs.¹⁴⁶ Thus, whenever a groundwater dispute arises from an area without a GCD there to govern the withdrawal, the courts have brushed aside the petition, leaving landowners with the only remedy of self-help.¹⁴⁷ If injured parties wish to be made whole again, they can install a deeper well or perhaps a more powerful pump.¹⁴⁸

This common law approach to groundwater management is irresponsible in the context of increasingly frequent natural resource crises.¹⁴⁹ It provides no incentive for the landowner to preserve the resource for times of shortage.¹⁵⁰ Moreover, it

142. See Groundwater Conservation Districts, *supra* note 4.

143. Oldham County, located in the Panhandle, is one such example. See GMA & GCD REPORT, *supra* note 117, at 33 tbl.6 (indicating that no action has been taken to recreate the Oldham County UWCD, which was repealed in 1999 for failing to conduct a confirmation election). Various counties along the Rio Grande River also remain unregulated, but efforts have been made to change that. Groundwater Conservation Districts, *supra* note 4; see GMA & GCD REPORT, *supra* note 117, at 15–16, 20 (discussing updated studies for possible PGMA in several counties along the Rio Grande River).

144. See *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904) (“In the absence of . . . positive authorized legislation, as between proprietors . . . the law recognizes no correlative rights in respect to underground waters percolating, oozing, or filtrating through the earth . . .” (quoting *Frazier v. Brown*, 12 Ohio St. 294, 311 (1861), *overruled by Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324 (Ohio 1984))).

145. See *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 818 (Tex. 1972) (Daniel, J., dissenting) (criticizing the policy implications of the rule of capture).

146. *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613, 617–18 (Tex. App.—San Antonio 2008, pet. filed).

147. Corwin W. Johnson, *Texas Groundwater Law: A Survey and Some Proposals*, 22 NAT. RESOURCES J. 1017, 1024 (1982).

148. *Id.*

149. See generally DANTE A. CAPONERA & MARCELLA NANNI, *PRINCIPLES OF WATER LAW AND ADMINISTRATION* 1–2 (2d ed. 2007) (addressing the need for water planning amid increasing demands).

150. Indeed, the common law produces a tragedy of the commons in which an outlier will exploit the resource if the landowner does not actively do so himself. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1244 (1968) (asserting that in a system without control, rational beings will seek to maximize their own interests even if

undermines the very ideals of the Conservation Amendment,¹⁵¹ which charges as “public rights and duties” the conservation and preservation of the state’s water resources.¹⁵²

Courts recognize this inconsistency.¹⁵³ They comprehend that adherence to the common law in no way supports the effort to secure the future availability of groundwater supplies.¹⁵⁴ Nevertheless, they assert that principles of judicial restraint preclude them from abrogating the common law in favor of some other doctrine of groundwater management.¹⁵⁵ According to this argument, because the Texas Supreme Court embraced the common law thirteen years before the Conservation Amendment ever charged the legislature with the duty of water regulation,¹⁵⁶ to disturb the common law now, subsequent to that Amendment’s ratification, would be to trespass on the sacred province of the legislature.¹⁵⁷

The problem with this specific instance of judicial restraint is that the bases for following it have never been valid. First, the history of the Conservation Amendment offers no opinion on the groundwater regimes of the early twentieth century.¹⁵⁸ Indeed, nothing in its development, from the intent of its drafters to its promotion in area newspapers, can impart even the slightest suggestion that groundwater management would be an object of

doing so brings ruin to all).

151. See *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798, 804 (Tex. 1955) (Griffin, J., dissenting) (criticizing the majority’s approach to waste for ignoring the express purpose of the Conservation Amendment).

152. TEX. CONST. art. XVI, § 59(a).

153. See, e.g., *Friendswood Dev. Co. v. Smith-Sw. Indus., Inc.*, 576 S.W.2d 21, 28–29 (Tex. 1978) (“We agree that some aspects of the English or common law rule as to underground waters are harsh and outmoded . . .”).

154. See *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 81 (Tex. 1999) (Hecht, J., concurring) (“What really hampers groundwater management is the established alternative, the common law rule of capture . . .”).

155. See *Corpus Christi*, 276 S.W.2d at 803 (insisting that the duty to regulate groundwater resources “belongs exclusively to the legislative branch of government”).

156. See *Houston & Tex. Cent. Ry. Co. v. East*, 81 S.W. 279, 280–82 (Tex. 1904).

157. See, e.g., *Sipriano*, 1 S.W.3d at 78–79 (asserting that the Conservation Amendment allocated responsibility to the legislature); *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618, 633 (Tex. 1996) (“Water regulation is essentially a legislative function.”); *Friendswood*, 576 S.W.2d at 30 (“Providing policy and regulatory procedures in this field is a legislative function. It is well that the Legislature has assumed its proper role, because our courts are not equipped to regulate ground water uses and subsidence on a suit-by-suit basis.”); *Corpus Christi*, 276 S.W.2d at 803 (inviting the legislature to amend the state’s water laws); *S. Plains Lamesa R.R. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770, 776 (Tex. App.—Amarillo 2001, no pet.) (asserting that “water regulation is essentially a duty of the Legislature”).

158. See *supra* Part II.A–B (describing how surface water crises inspired the ratification of the Conservation Amendment).

its ratification.¹⁵⁹ Thus, the Conservation Amendment cannot be treated as though it somehow certified the wisdom of the common law as it applies to groundwater, and accordingly, courts should not feel so compelled to abide by the common law's instruction when reasons exist to reject it.¹⁶⁰

Furthermore, invoking judicial restraint out of deference to the legislature in this groundwater context actually works to defeat legislative policy. By allowing for the contemporaneous administration of two conflicting groundwater regimes, the courts have nourished the risk of unnecessary challenges to the sustainability of aquifers.¹⁶¹ Especially in those unregulated areas lying adjacent to GCDs, upholding the common law out of principles of judicial restraint works to effectively undermine the legislature's "preferred method of groundwater management."¹⁶² Thus, even if the courts could maintain that they were respecting the legislature's decision (or indecision) to *not* dispose of the common law,¹⁶³ they could not justify their position with any argument complementing the legislature's constitutional role as steward of the state's natural resources.¹⁶⁴

Finally, the courts' policy of judicial restraint is improper because the common law doctrines which it furthers must be rejected themselves. They rest on flawed logic and since-discredited assumptions. The following discussion addresses the history of the common law and the reasons why Texas has no business prolonging its use.

159. *Supra* Part II.A–B.

160. *See Sipriano*, 1 S.W.3d at 82 (Hecht, J., concurring) (citing Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897)) (suggesting that the common law rule for groundwater has outlived its usefulness).

161. Admittedly, this risk has been shrinking. As of 2004, GCDs covered half of the state and regulated 89% of the overall groundwater production. Burkhalter, Trejo & Basel, *supra* note 52, at 3; *see also* MARBURY & KELLY, *supra* note 5, at 1 fig.1 (illustrating the increasing frequency of GCD creation in recent years). Nevertheless, partial coverage still allows for isolated instances of aquifer mismanagement. *See* Duggan, *supra* note 71, at 25 (conceding that unregulated withdrawals outside of a district would take many years to be felt but insisting that "it would be desirable for conservation measures to be taken over an entire reservoir or subdivision thereof").

162. TEX. WATER CODE ANN. § 36.0015 (Vernon 2008); *see also Sipriano*, 1 S.W.3d at 83 (Hecht, J., concurring) ("It is hard to see how maintaining the rule of capture can be justified as deference to the Legislature's constitutional province when the rule is contrary to the local regulation that is the Legislature's preferred method of groundwater management." (internal quotation marks omitted)).

163. *See* TEX. SEN. SELECT COMM. ON WATER POLICY, INTERIM REPORT, 79th Leg., R.S., at 2 (2004) (recognizing officially the legislative alternatives to the rule of capture); *see also The Rule of Capture in Texas, Ground Water Law in Other States, and Options for Changes to the Rule: Hearing Before the Tex. Sen. Select Comm. on Water Policy*, 78th Leg., R.S., at 1–7 (Tex. 2004) (statement of Gabriel E. Eckstein) (presenting the alternatives in detail).

164. *See* TEX. CONST. art. XVI, § 59(a).

A. Development of the Common Law Doctrines

*Acton v. Blundell*¹⁶⁵ is the seminal case from which Texas first derived its groundwater law.¹⁶⁶ The controversy there arose when the defendant sunk two wells for the operation of his coal pits, the first in 1837 and the second in 1840. Both wells were drilled within a mile of the plaintiff's cotton mill, for which a separate well had previously been sunk in 1821. The effect of the defendant's first well was to seriously diminish the supply of water for the plaintiff's mill; the effect of the second was to render the mill altogether inoperable.¹⁶⁷

In a suit for damages, the plaintiff asserted that he held a right to have the underground springs supply his mills with water, a right that the defendant had negligently disturbed. No such right to groundwater had ever been established by an English court before, so the plaintiff analogized his entitlement to the riparian rights doctrine concerning surface waters.¹⁶⁸ Under this doctrine, riparians are owners of land appurtenant to flowing streams, and they have all the rights and duties of other similarly situated landowners: for all non-domestic uses, they have the right to the natural flow of the water and they may diminish neither its quantity nor its quality for those riparian users downstream.¹⁶⁹ Accordingly, if this doctrine had also applied to groundwater, the plaintiff would have had a qualified right to recovery because the defendant's operations absolutely deprived his neighbor of water.¹⁷⁰

The *Acton* court declined to adopt this theory, ruling instead that the legal assumptions behind the riparian system rendered the doctrine inapplicable to the groundwater context. In so doing, the court stressed that the riparian system rested on a foundation of implied assent among riparians that all

165. *Acton v. Blundell*, (1843) 152 Eng. Rep. 1223 (Exch. Ch.).

166. *Houston & Cent. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904) (recognizing the reasoning of *Acton* as controlling under similar circumstances).

167. *Acton*, 152 Eng. Rep. at 1232–33.

168. *Id.* at 1233.

169. This limitation essentially restricts non-domestic uses of water to activities actually conducted in the stream itself, such as navigation and fishing. *SAX ET AL.*, *supra* note 10, at 31; *see Acton*, 152 Eng. Rep. at 1233; *see also* *Bealey v. Shaw*, (1805) 102 Eng. Rep. 1266, 1269 (K.B.) (announcing the natural flow theory as the general rule that “every man has a right to have the advantage of a flow of water in his own land without diminution or alteration”).

170. *See Acton*, 152 Eng. Rep. at 1233 (“And if the right to the enjoyment of underground springs, or to a well supplied thereby, is to be governed by the same law, then undoubtedly the defendants could not justify the sinking of the coal-pits, and the direction given by the learned Judge would be wrong.”).

downstream landowners should have a rightful appropriation of water. This system is easy to monitor in the case of surface streams because the flow of water can be measured visually. Proprietors of riparian lands can recognize the water they receive first from upstream users and thereafter transmit to downstream users. And from this awareness, riparians can always know of their potential liabilities in using the resource, i.e., whether they are diminishing the quantity or quality of water to the detriment of other riparians along the stream.¹⁷¹

Groundwater aquifers, however, do not provide for this sort of visibility.¹⁷² Absent monitoring devices, those who exploit the resource through pumping operations cannot easily know or measure how much groundwater is taken and how much remains. By consequence, the hidden nature of groundwater discourages landowners from mutually assenting to the appropriation of any amount of water whatsoever, and thus the court decided that the defendant was not like a riparian and that he owed no similar duty to preserve the resource.¹⁷³

The court offered additional policy justifications for rejecting application of the riparian rights doctrine. The court first noted that the act of drilling a well created an absolute and indefeasible right of the landowner to acquire water that collected in it. This result fundamentally disagrees with the principles of the riparian system, which rely on the assumption that surface waters are constantly flowing at a consistent and reliable level for the benefit of all riparians.¹⁷⁴ The court also considered the economic interests at stake. To impose liability on a person who chose to exploit the groundwater resource would not only punish self-initiative but also seriously retard the growth of valuable industries for which aquifers provide the most readily available supply of water.¹⁷⁵ Finally, the court stressed that application of the riparian rights doctrine would not answer critical questions as to the extent of a person's liability. In the case of *Acton*, the closer of the defendant's wells was only one-half mile away from the plaintiff's mill. The court reasoned that if the riparian rule were to be implemented fairly, even innocent users many miles away would be subject to similar liability if their operations had similarly drained the

171. *See id.*

172. *Id.* (“[N]o man can tell what changes these underground sources have undergone in the progress of time . . .”).

173. *Id.* at 1232–34.

174. *See id.* at 1233–34.

175. *See id.* at 1234.

wells of their distant neighbors.¹⁷⁶ The court found this result unacceptable.

With the plaintiff's analogy to the riparian system roundly rejected, the court analogized to two earlier English cases to demonstrate that landowners cannot have a reasonable expectation interest in water lying beneath the surface.¹⁷⁷ The first reference was to *Cooper v. Barber*, which involved a cause in trespass.¹⁷⁸ The plaintiff there had an irrigation system that diverted surface water away from a stream into a network of penstocks. During the rainy season when the stream was heavy, water from the penstocks would occasionally escape, spilling over onto land with especially porous soil. Because of the earth's porosity, this water would then percolate through the ground and down to the defendant's nearby property. For many years this cycle would repeat itself without incident because the defendant had no knowledge of the water's movement underground. However, once the defendant excavated his land to construct a house and found that his kitchen and cellar were subject to flooding, he traced the water back to the diverted stream and determined that the only way of stopping the groundwater intrusion was to break down the plaintiff's penstocks, thereby allowing the surface water to move more freely into other channels.¹⁷⁹

The plaintiff in *Cooper* initially sought compensation for the damage to his irrigation system, but when the court's focus shifted to nuisance theory, the case actually proceeded on the question of whether the plaintiff ever held a prescriptive right to erect the penstocks. The court noted that because the plaintiff's use of property was limited to the extent that it prejudiced his neighbor, the plaintiff could not justifiably pen back the water if doing so would flood the defendant's house, unless the plaintiff had obtained some earlier grant to that effect. While the plaintiff's diversions had caused water to course through the defendant's subsurface estate for a time sufficient to satisfy the prescription period, the court held that the movement of water occurred without notice to the defendant, and thus the plaintiff had no prescriptive right.¹⁸⁰ According to the *Acton* court, the

176. *Id.* at 1233–34; *cf.* *Smith v. Town of Morganton*, 123 S.E. 88, 88–89 (N.C. 1924) (affirming judgment that defendant could not lawfully divert a stream one mile above plaintiff's land without violating the American rule of reasonable use, a variation on the natural flow theory).

177. *Acton*, 152 Eng. Rep. at 1234.

178. *Cooper v. Barber*, (1810) 128 Eng. Rep. 40, 41 (C.P.).

179. *Id.* at 42–44.

180. *Id.* at 43–45.

holding in *Cooper* recognized that the percolation of groundwater was “insensible,” and this accordingly limited any landowner’s claim over it.¹⁸¹

The second case analogized by the *Acton* court was *Partridge v. Scott*.¹⁸² In that case, the Court of Exchequer determined that a landowner who built a home on property that had previously been excavated for the production of coal had no right of lateral support by an adjoining landowner unless he had some grant to that effect.¹⁸³ Indeed, even if the landowner’s home had been built on solid ground, any subsequent damage from the lack of lateral support would be considered a loss without injury because the right of lateral support extends only to property existing in a state of nature, a quality removed when structural improvements are placed upon the land.¹⁸⁴ The *Acton* court reasoned that if the issue in *Partridge* had concerned a well on the edge of a landowner’s property instead of a house, then the right of lateral support would similarly provide the landowner with no entitlement to the surrounding soils giving that well a stable foundation.¹⁸⁵ Accordingly, the landowner’s neighbor could lawfully excavate his own property around that well, and if the well shaft happened to weaken, the landowner would have no legal recourse against the neighbor for any water that may have escaped. The court then concluded under the authority of *Partridge*, “it would seem to make no difference as to the legal rights of the parties, if the well stands some distance within the plaintiff’s boundary, and the digging by the defendant, which occasions the water to flow from the well, is some distance within the defendant’s boundary.”¹⁸⁶ This scenario described the situation in *Acton*, and as such, the court determined that the plaintiff should not recover any damages.¹⁸⁷

181. *Acton*, 152 Eng. Rep. at 1234.

182. *Id.*; *Partridge v. Scott*, (1838) 150 Eng. Rep. 1124 (Exch.).

183. *Partridge*, 150 Eng. Rep. at 1127. The right of lateral support provides that a proprietor may rely on the organic support of adjoining lands in keeping his own land “as it was in a state of nature.” *Simon v. Nance*, 45 Tex. Civ. App. 480, 483, 100 S.W. 1038, 1040 (1907, no writ); *Recent Decisions*, 33 MICH. L. REV. 802, 813 (1935). For instance, if a property owner were to construct a drainage ditch, he would be liable for any subsequent erosion that ditch may cause to his neighbor’s unadulterated landscape. *Carpentier v. Ellis*, 489 S.W.2d 388, 389–90 (Tex. Civ. App.—Beaumont 1972, writ ref’d n.r.e.).

184. *Partridge*, 150 Eng. Rep. at 1127 (“In this case, if the land on which the plaintiff’s house was built had not been previously excavated, the defendants might, *without injury to the plaintiff*, have worked their coal to the extremity of their own land, without even leaving a rib of ten yards, as they have done.” (emphasis added)).

185. *Acton*, 152 Eng. Rep. at 1234.

186. *Id.*

187. *Id.* at 1234–35.

In further defense of its holding, the court turned to Roman law, and finding the writings of Marcellus demonstrative, recited the notion that “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.”¹⁸⁸ From this, the *Acton* court derived the following principle concerning the incidents of land ownership:

[T]he owner of the soil [has] 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 injuriâ*, which cannot become the ground of an action.¹⁸⁹

Acton therefore announces two distinct rules. The first is the absolute ownership doctrine, which vests in the holder of the surface estate all interests in the groundwater beneath his land.¹⁹⁰ The second is said to be a corollary of the first.¹⁹¹ Owing itself to the tort aspect of the case, the rule of capture provides that because landowners own the water beneath their surface estates, they may withdraw it without liability to neighbors whose wells may subsequently be drained.¹⁹²

188. *Id.* at 1235 (citing DIG. 39.3.1.12 (Ulpian, Ad Edictum 53)); *see also id.* at 1228 (providing Justice Maule’s interpretation of the Latin text during oral argument).

189. *Id.* *Damnum absque injuria* literally means a loss without injury, and when applied as a legal maxim, it means that the law recognizes no entitlement to recovery even for a person who has been harmed by the actions of another. *See* BLACK’S LAW DICTIONARY 420–21 (8th ed. 2004).

190. *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798, 800 (Tex. 1955); 2 SAMUEL C. WIEL, *WATER RIGHTS IN THE WESTERN STATES* § 1039 (3d ed. 1911); Marion Rice Kirkwood, *Appropriation of Percolating Water*, 1 STAN. L. REV. 1, 2 (1948); *see also* Johnson, *supra* note 75, at 1288–89 (arguing that despite the connotations of the term “absolute,” groundwater ownership in Texas cannot be treated as a “super-right subject to no limitations whatever”). *But see* Kelly, *supra* note 18, at 4 (arguing that *Acton*’s absolute ownership doctrine stands for an unrestricted usufructuary right).

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

192. *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 75 (Tex. 1999). In the context of Texas groundwater law, the rule of capture is emphatically not the law of property that vests ownership over a fugitive resource in the person who first reduces it to possession. *See, e.g.,* *Pierson v. Post*, 3 Cai. 175, 177–79 (N.Y. 1805). *But see* *Friendswood Dev. Co. v. Smith-Sw. Indus., Inc.*, 576 S.W.2d 21, 22 (Tex. 1978) (“Our decision results from what we conceive to be our duty to apply a rule of property law . . .”); *City of San Marcos v. TCEQ*, 128 S.W.3d 264, 270–71 (Tex. App.—Austin 2004, no pet.) (citing *Pierson* in a discussion of the rule of capture); Eric Opiela, *The Rule of Capture in Texas: An Outdated Principle Beyond Its Time*, 6 U. DENV. WATER L. REV. 87, 115 (2002) (recognizing that courts over time have shaped the rule of capture from a doctrine of tort

These rules first found their way into Texas law through the case of *Houston & Texas Central Railway Co. v. East*.¹⁹³ On a fact pattern nearly identical to *Acton*, this case arose as another action for well interference. The plaintiff owned a well five feet in diameter and thirty-three feet deep, which he used solely for domestic purposes. The defendant railroad subsequently constructed a nearby well four times the size in diameter and twice in depth. Used for the operation of locomotives and machines, the railroad's well had the capacity to produce over 25,000 gallons of groundwater per day. When the plaintiff's well dried up, he blamed the railroad and sued for damages.¹⁹⁴

The issue was one of first impression for the Texas Supreme Court. Recognizing that the state of New Hampshire had already rejected the English common law,¹⁹⁵ the *East* court nonetheless preferred to adopt the rule in *Acton* because that case had been "recognized and followed in the courts of England, and probably by all the courts of last resort in this country before which the question has come."¹⁹⁶ Thus, the *East* court recited *Acton's* two common law doctrines and similarly found that the drainage of

law to one of property). If the Texas rule of capture were in fact a rule of property, its theoretical suppositions would then conflict with the absolute ownership doctrine, which Texas also recognizes. See *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613, 617–18 (Tex. App.—San Antonio 2008, pet. filed) (affirming absolute ownership and the rule of capture). To illustrate, recall that the property formulation of the rule of capture was announced to provide the simplest rule of decision for determining who may assert ownership over *ferae naturae* or common, migratory resources. See Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 76 (1985) (arguing that possession affords a clear rule that prevents confusion and quarreling). The absolute ownership doctrine by contrast assumes that these resources are already owned if they merely lie beneath one's property *in situ*, i.e., the holder of the surface estate owns the resource even if he has not exercised dominion over it through some possessory act such as drilling. See, e.g., *Del Rio*, 269 S.W.3d at 618–19 (permitting owner of surface estate to sever the underlying groundwater interest from a conveyance of the surface without having already reduced the groundwater to possession). Lacing the groundwater rule of capture in terms of property law would therefore be superfluous if the absolute ownership doctrine is to stand as well. See Dylan O. Drummond, Lynn Ray Sherman & Edmond R. McCarthy, Jr., *The Rule of Capture in Texas—Still So Misunderstood After All These Years*, 37 TEX. TECH L. REV. 1, 60–61 (2004) (recognizing that the rules of capture and absolute ownership are similar, yet distinct, groundwater doctrines).

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

194. *Id.* at 280. See generally Robert E. Mace, Cynthia Ridgeway & John M. Sharp, Jr., *Groundwater Is No Longer Secret and Occult—A Historical and Hydrogeologic Analysis of the East Case*, in 100 YEARS OF RULE OF CAPTURE, TEX. WATER DEV. BD. REPORT 361, at 63, 77–83 (William F. Mullican, III & Suzanne Schwartz eds., 2004) (hypothesizing, under certain assumptions, that the railroad's pumping was likely not the dispositive factor in the draining of East's well).

195. See *Bassett v. Salisbury Mfg. Co.*, 43 N.H. 569, 573 (1862) ("No land-owner has an absolute and unqualified right to the unaltered natural drainage or percolation to or from his neighbor's land.").

196. *East*, 81 S.W. at 280.

plaintiff's well was an inconvenience falling within the description of *damnum absque injuria*.¹⁹⁷ Speaking approvingly of the absolute ownership doctrine, the court wrote rather assertively that "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."¹⁹⁸ And finally, the court offered two policy justifications in holding for the defendant:

In the absence of express contract and a positive authorized legislation, as between proprietors of adjoining land, the 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: (1) Because the existence, origin, movement, and course of such waters, and the causes which govern and direct their movements, are so secret, occult, and concealed that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would, therefore, be practically impossible. (2) Because any such recognition of correlative rights would interfere, to the material detriment of the commonwealth, with drainage and agriculture, mining, the construction of highways and railroads, with sanitary regulations, building, and the general progress of improvement in works of embellishment and utility.¹⁹⁹

Since the *East* decision, the common law rules have remained relatively unchanged. In 1978, the Texas Supreme Court decided to modify the rule of capture to allow for causes of action in which the negligent removal of groundwater caused subsidence in the land, but this has been the only adjustment.²⁰⁰ Texas courts continue to recognize the absolute ownership doctrine and the rule of capture, with the most recent affirmation from the state supreme court coming in 1999.²⁰¹

197. *Id.* at 280–82 (citing *Acton v. Blundell*, (1843) 152 Eng. Rep. 1223, 1235 (Exch. Ch.)).

198. *Id.* at 281 (quoting *Pixley v. Clark*, 35 N.Y. 520, 526 (1866)).

199. *Id.* at 280–81 (quoting *Frazier v. Brown*, 12 Ohio St. 294, 311 (1861), *overruled* by *Cline v. Am. Aggregates Corp.*, 474 N.E.2d 324 (Ohio 1984)).

200. *See Friendswood Dev. Co. v. Smith-Sw. Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978) (making negligent subsidence actionable for all future incidences of groundwater extraction); *see also supra* note 93 (identifying the other common law exceptions).

201. *See Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 80 (Tex. 1999); *Friendswood*, 576 S.W.2d at 22; *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613, 617–18 (Tex. App.—San Antonio 2008, pet. filed); *City of San Marcos v. TCEQ*, 128 S.W.3d 264, 270–71 (Tex. App.—Austin 2004, no pet.); *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.); *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.).

B. Criticism of the Common Law Doctrines

One of the more significant issues with the common law rules is that scholarship on the subject has yet to reach a universal consensus on their actual meanings. For example, some commentators propose that the rule of capture is a rule of property, while some jurists insist it is a rule of tort.²⁰² Others still question the extent to which the absolute ownership doctrine has ever truly protected a private property interest,²⁰³ while the courts themselves have published conflicting expressions on the rule.²⁰⁴ This Section does not attempt to settle the debate, but it does lay out reasons for showing that at their core, the common law doctrines still lack sufficient justifications for any presence in Texas groundwater law.

1. *The Absolute Ownership Doctrine.* The problem with the doctrine of absolute ownership is that it fails to comport with any acceptable theory of property. When the *Acton* court first announced the doctrine, it prefaced the rule by claiming that it derives from that principle that “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.”²⁰⁵ Though the *Acton* court did not reference it in these terms, this passage is actually a recitation of the *ad coelum* doctrine, which provides that by virtue of surface ownership alone, an interest holder in land has a property right extending upwards into the heavens and downwards to the center of the earth.²⁰⁶

202. Compare Drummond, Sherman & McCarthy, Jr., *supra* note 192, at 53 (“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 . . .”), with *Del Rio*, 269 S.W.3d at 618 (asserting that the rule of capture was developed as “a doctrine of nonliability for drainage, not a rule of property” (citing ERNEST E. SMITH & JACQUELINE LANG WEAVER, 1 TEXAS LAW OF OIL AND GAS § 1.1(A) (2d ed. 2008))).

203. See Susana Elena Canseco, *Landowners’ Rights in Texas Groundwater: How and Why Texas Courts Should Determine Landowners Do Not Own Groundwater in Place*, 60 BAYLOR L. REV. 491, 524–25 (2008) (demonstrating that the right to groundwater *in situ* was never dispositive of any of the Texas groundwater cases).

204. Compare *Farb v. Theis*, 250 S.W. 290, 292 (Tex. Civ. App.—San Antonio 1923, no writ) (“It is now settled in this state, as well as in other jurisdictions, that owners of the soil have no rights in subsurface waters not running in well-defined channels . . .”), with *Del Rio*, 269 S.W.3d at 617 (asserting that groundwater is the “exclusive property” of the owner of the surface estate (quoting *Tex. Co. v. Burkett*, 296 S.W. 273, 278 (Tex. 1927))).

205. *Acton v. Blundell*, (1843) 152 Eng. Rep. 1223, 1235 (Exch. Ch.).

206. The original Latin maxim is *cujus est solum, ejus est usque ad coelum*. 2 WILLIAM BLACKSTONE, COMMENTARIES *18; see also Kaiser & Skillern, *supra* note 20, at 263 (crediting the *ad coelum* doctrine as the origin for the *Acton* rule). To encompass

When carried to its literal conclusion, the *ad coelum* doctrine leads to truly absurd results. At its theoretical worst, it permits landowners to stake ridiculous claims to the “periphery of the universe.”²⁰⁷ Even when applied to less egregious assertions of property ownership, the doctrine is still fraught with such faulty origins that any modern application should be considered analytically questionable.²⁰⁸ As Professor Sprankling describes, the *ad coelum* doctrine is in fact just a deviant creation of William Blackstone.²⁰⁹ It has no basis in the Roman legal heritage, but because of its placement in Blackstone’s authoritative *Commentaries on the Laws of England*, many courts have mistakenly taken the *ad coelum* rule as a fair representation of the ancient common law.²¹⁰ Sprankling criticizes this adherence because the doctrine ignores many significant realities.²¹¹ Disregarding for now the doctrine’s physical impracticalities,²¹² the *ad coelum* rule substantially departs from the jurisprudence of the early English cases that were actually available to Blackstone.²¹³ Of those cases, none had actually proposed that landowners may assert claims of ownership fully towards the center of the earth. Instead, the English courts had ruled much more narrowly in recognizing only limited rights to the proprietor’s subsurface estate.²¹⁴

claims beneath the surface, the maxim has since been appended with the phrase *et ad inferos*, or “to the depths.” *E.g.*, *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 11 n.30 (Tex. 2008).

207. *United States v. Causby*, 328 U.S. 256, 260–61 (1946).

208. *See* John G. Sprankling, *Owning the Center of the Earth*, 55 UCLA L. REV. 979, 982–84 (2008) (describing the doctrine as mere poetic hyperbole).

209. *See id.* at 982–83. The maxim may have been set forth by earlier scholars, but the Blackstone pronouncement has carried more widespread influence. *See, e.g.*, Stuart S. Ball, *The Vertical Extent of Ownership in Land*, 76 U. PA. L. REV. 631, 631 (1928) (attributing the *ad coelum* doctrine to Cino da Pistoia).

210. *See, e.g.*, *Crandall v. Woods*, 8 Cal. 136, 138 (1857) (“The [*ad coelum* maxim] is too well accredited to be denied.”); *Wolfley v. Lebanon Mining Co.*, 4 Colo. 112, 114 (1878) (“At common law a grant of land carries with it all that lies beneath the surface down to the center of the earth.”); *Hannabalson v. Sessions*, 90 N.W. 93, 95 (Iowa 1902) (“It is one of the oldest rules of property known to the law that the title of the owner of the soil extends, not only downward to the center of the earth, but upward usque ad coelum”); *Gas Prods. Co. v. Rankin*, 207 P. 993, 997 (Mont. 1922) (“The common-law rule is stated thus by Blackstone”); *see also* Sprankling, *supra* note 208, at 990 (“Similarly, leading American authors such as James Kent adopted the center of the earth standard without providing any analysis or justification other than a citation to Blackstone’s text.”).

211. Sprankling, *supra* note 208, at 983–85.

212. *See id.* at 992–99 (discussing mankind’s incompatibility with the geologic properties of Earth’s subterranean layers).

213. *See id.* at 983–85 (addressing the narrow reach of English decisions).

214. *See id.* at 983 (“[T]he law recognized that a landowner had title only to the region immediately underneath the surface, which he could physically use for a

For example, in *Bishop of London v. Nevell*, the Court of Common Pleas acknowledged that a lessor's property interest in a tree must necessarily extend to the deepest point in the soil where the tree grows.²¹⁵ Beyond this line however, the court was silent. The actual dispute in *Nevell* was whether a lessee could justifiably take herons that were nesting in a tree. The lease specifically excepted the "wood and underwood," which the court construed to include the trees of the estate, but the lease did not otherwise speak to the lessee's interest in what birds may be nesting in those trees. Judge Fitzherbert observed that the tree and everything contained within it could not feasibly be separated from the soil, and so for him the ultimate question was whether the lessee could profit from the soil where the tree grew. Because the lease did not expressly extend to the soil, Judge Fitzherbert concluded that the lessor must have reserved all the soil necessary to support the tree. Thus, the lessee had no right to "intermeddle" with the tree or any of its contents, and accordingly he could not take the herons.²¹⁶ For purposes of this Comment, this case is significant because it demonstrates that more practical approaches to adjudicating subsurface rights were available to English courts than just the *ad coelum* doctrine alone. Rather than resorting to a sweeping assumption that the lessor had reserved all of the soil lying beneath the surface estate, Judge Fitzherbert instead issued a focused opinion going no farther than what was required to dispose of the case. As Sprankling summarizes, the decision implies merely that "the surface owner owned only as far downward as necessary to accommodate the roots of his tree."²¹⁷

In another case more directly addressing rights to the subsurface estate, the Exchequer Chamber ruled that a landowner has the freedom to claim certain metals he excavates from beneath his property.²¹⁸ Because this right restricts the scope of the Crown's general ownership over all mines containing gold or silver,²¹⁹ Sprankling suggests that the court's decision

productive purpose . . .").

215. See *Bishop of London v. Nevell*, Y.B. 14 Hen. 8, Mich. 1 (1522), reprinted in 119 SELDEN SOCIETY 88 (2002).

216. *Id.*

217. Sprankling, *supra* note 208, at 983.

218. See *R v. Earl of Northumberland (The Case of Mines)*, (1568) 75 Eng. Rep. 472, 511 (Exch. Ch.) ("[I]f the ore or mine in the soil of a subject be of copper, tin, lead, or iron, in which there is no gold or silver, in this case the proprietor of the soil shall have the ore or mine, and not the Crown by prerogative . . .").

219. See *id.* at 472 ("[T]he Queen . . . by reason of her prerogative royal, is intituled to have and enjoy, to her own proper use, all and singular mines and ores of gold and silver . . .").

reflects a pragmatic approach to a landowner's subterranean property interests. Rather than crediting the proprietor with deeper subsurface rights, the court simply accepted that he may claim the "near-surface resources that were actually subject to human exploitation."²²⁰

Because English courts did not recognize general claims to the center of the earth, these cases together reflect the idea that Blackstone's *ad coelum* maxim exaggerated the incidences of property ownership at common law.²²¹ As such, Texas courts arguably erred when they established their own system of groundwater rights on reliance of this doctrine.²²² Nevertheless, these earlier English cases still express the authority that landowners could feasibly have *some* property interest in the groundwater beneath their land.²²³ Critically, however, the common law does not quantify the full extent of this interest. One suggestion may permit that the interest should include the entire corpus of groundwater—everything lying between the surface estate and the base of the aquifer—but even an interest of this scale would still seem just as implausible as every other claim recognized by the *ad coelum* doctrine.²²⁴ Some aquifers extend several hundred feet beneath the surface,²²⁵ and modern groundwater practices would counsel against the notion that ownership of groundwater should be recognized at such depths. For instance, even though hydraulic technologies have advanced since the time of Blackstone such that aquifers can now be tapped at greater depths than ever before,²²⁶ the convention

220. Sprankling, *supra* note 208, at 984.

221. English treatises likewise were not so far-reaching in defining the rights associated with land ownership. *See id.* at 983–85 (analyzing the works of Edward Coke and other seventeenth- and eighteenth-century legal scholars).

222. *See, e.g.,* Houston & Tex. Cent. Ry. Co. v. East, 81 S.W. 279, 280 (Tex. 1904) (relying on English common law for the proposition that the landowner may take all of the groundwater beneath his property without liability).

223. *See supra* text accompanying note 220 (addressing similar resources available for acquisition).

224. *Cf.* United States v. Causby, 328 U.S. 256, 260–61 (1946) (describing the *ad coelum* doctrine as having "no place in the modern world" when addressing private rights to airspace); Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 11 (Tex. 2008) (citing *Causby* to reject a landowner's claim to absolute ownership of rock two miles below the surface).

225. *E.g.,* V.L. MCGUIRE ET AL., U.S. DEPT OF INTERIOR, WATER IN STORAGE AND APPROACHES TO GROUNDWATER MANAGEMENT, HIGH PLAINS AQUIFER, 2000, at 31 fig.20 (U.S. Geological Survey Circular No. 1243, 2003) (showing that the base of the Ogallala Aquifer is more than 400 feet beneath the surface in parts of Hansford County, Texas).

226. Historical accounts show that wells sunk to depths between twenty-five and eighty feet were not uncommon around the time of *Acton*. *See, e.g.,* Chasemore v. Richards, (1857) 157 Eng. Rep. 71, 78 (Exch. Ch.) (concerning a well seventy-four feet deep); JOHN PETER OLESON, GREEK AND ROMAN MECHANICAL WATER-LIFTING DEVICES

among groundwater users today is to not extend well shafts to the bottoms of deep aquifers because the costs of lifting groundwater from those depths are economically unreasonable.²²⁷ Moreover, water quality degrades at lower depths, which accordingly limits consumption to groundwater nearer to the surface.²²⁸

Even if the *ad coelum* doctrine did have some practical limits (e.g., allowing landowners to assert ownership over groundwater at a depth of twenty feet beneath the surface), the administration of the rule would still raise property-related complications. Given the fugitive nature of groundwater, landowners could not neatly contain their own allocations of the resource.²²⁹ Any act of pumping would drain the common pool over the long term, not just the landowner's supposed allocation.²³⁰ Moreover, the *ad coelum* rule does not allow for any method of enjoining the groundwater practices of neighboring pumps, and thus the rule creates no system by which landowners could demand that groundwater be conserved.²³¹ The operative effect of these limitations is that a landowner's "ownership interest" in the groundwater beneath his property is really nothing more than a fiction because the landowner still functionally lacks the power to exclude others from it.²³² Accordingly, if the exclusion power is to

214–15, 361–62 (1984) (discussing wells at Herculaneum and Pompeii between eight and twenty-five meters deep).

227. See Harden, *supra* note 97, at 34; see also Douglas Jehl, *Saving Water, U.S. Farmers Are Worried They'll Parch*, N.Y. TIMES, Aug. 28, 2002, at A1 (discussing one irrigator's increased costs of pumping).

228. ROBERT GLENNON, WATER FOLLIES 32 (2002).

229. See ALLEY, REILLY & FRANKE, *supra* note 96, at 48–49 (stating that aquifers cannot be treated as "egg cartons" from which landowners may carve out their own segregated interests); cf. *In re Hood River*, 227 P. 1065, 1089 (Or. 1924) (McBride, C.J., concurring) ("Practically, there is no such a thing as property in the water of a flowing stream. The riparian proprietor may own the banks and even the bed of a nonnavigable stream, but he no more owns the water than he owns the air."). *But cf.* *Tex. Co. v. Daugherty*, 176 S.W. 717, 719–20 (Tex. 1915) (arguing that oil and gas interests should not be considered separate from the surface estate merely because of their possibility of escape).

230. See David G. Thompson & Albert G. Fielder, *Some Problems Relating to Legal Control of Use of Ground Waters*, 30 J. AM. WATER WORKS ASS'N 1049, 1054 (1938) ("[G]enerally it is impossible for one land owner to pump water from beneath his land at an appreciable rate without affecting the water level or artesian pressure beneath the land of his neighbors and perhaps also beneath land at a distance of several miles from his own property.").

231. See, e.g., *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999) (denying injunctive relief).

232. See Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 731 (1998) ("[T]he right to exclude others is a necessary and sufficient condition of identifying the existence of property."). Even Blackstone himself recognized the exclusionary quality of property:

remain the most fundamental stick in the “bundle of rights,” then the *ad coelum* doctrine offers no basis for defending groundwater as an object of individual ownership.²³³

Thus, the *ad coelum* doctrine has many components that make it unsuitable as an authority for a law of property. However, the shortcomings of Blackstone’s rule do not altogether defeat the possibility of asserting some ownership interest in groundwater. Other explanations could support such a private right, such as a direct grant from a sovereign.²³⁴ Absent any indication that the State of Texas has made such a grant, some property rights proponents have nonetheless asserted that the following provision in the Water Code actually creates a private right in groundwater:

The ownership and rights of the owners of the land and their lessees and assigns in groundwater are hereby recognized, and nothing in this code shall be construed as depriving or divesting the owners or their lessees and assigns of the ownership or rights, except as those rights may be limited or altered by rules promulgated by a district.²³⁵

A careful reading of this provision reveals, however, that the statute does nothing more than to acquiesce in the body of case law already “recognizing” some extent of groundwater ownership.²³⁶ Indeed, this provision can hardly be treated as *granting* title to groundwater when the state’s corresponding legislation on surface water rights unequivocally *declares* that such waters are “the property of the state.”²³⁷

There is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property; or that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.

2 BLACKSTONE, *supra* note 206, at *2.

233. See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 435 (1982).

234. See *Allen v. Keeling*, 598 S.W.2d 951, 955 (Tex. Civ. App.—Corpus Christi 1980) (discussing the different methods of establishing title), *rev’d on other grounds*, 613 S.W.2d 253 (Tex. 1981).

235. TEX. WATER CODE ANN. § 36.002 (Vernon 2008).

236. See *Johnson*, *supra* note 75, at 1293 (“Landowners cannot claim a super-right in groundwater by virtue of constitutional or legislative grant. There is no relevant constitutional provision, and the pertinent statutes do no more than acquiesce in the court decisions.”); *United States v. Shurbet*, 347 F.2d 103, 106 (5th Cir. 1965) (“[A] Texas statute has *recognized* that the ownership of underground water in the Ogallala formation is vested in the owners of the land.” (emphasis added)). The courts have been ambiguous at best in construing the same provision. See *City of Sherman v. Pub. Util. Comm’n of Tex.*, 643 S.W.2d 681, 686 (Tex. 1983) (“The Texas Water Code *confirms* private rights in underground water . . .” (emphasis added)); *Friendswood Dev. Co. v. Smith-Sw. Indus., Inc.*, 576 S.W.2d 21, 27 (Tex. 1978) (“[T]he Legislature specifically confirmed private ownership of underground water.”).

237. See TEX. WATER CODE ANN. § 11.021(a) (Vernon 2008). *But see* TEX. PROP. CODE

2. *The Rule of Capture.* The problem with the rule of capture lies not within any legal complication as with the doctrine of absolute ownership. To the contrary, the rule of capture appears to have been promoted over the years almost exclusively as a matter of policy.²³⁸ While the most articulate expression of the rule of capture is presented in *Acton* as a reflection of ancient Roman law,²³⁹ the precise justifications for that law remain unclear, even to its contemporary adherents. For example, jurists have criticized proponents for supporting the rule not with any principled argument, but merely from the standpoint that “the rule should not be abandoned because it has been the rule for a long time.”²⁴⁰ Regardless of what may have been the case in Marcellus’s Rome, or even in Texas in 1904, as a matter of policy the rule of capture has no place in the current management regime.²⁴¹ Indeed, the justifications offered by *East* in defense of the rule of capture have largely outlived their usefulness.

ANN. § 21.0421(a) (Vernon Supp. 2008) (instructing that evidence relating to the market value of groundwater rights be admitted in certain eminent domain proceedings); TEX. GOV’T CODE ANN. § 2007.002(4) (Vernon 2008) (defining private real property as “an interest in real property recognized by common law, including a groundwater or surface water right of any kind, that is not owned by the federal government, this state, or a political subdivision of this state”).

238. Cf. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 14 (Tex. 2008) (defending the rule of capture as “a rule of expedience”).

239. *Acton v. Blundell*, (1843) 152 Eng. Rep. 1223, 1235 (Exch. Ch.) (citing DIG. 39.3.1.12 (Ulpian, Ad Edictum 53)). The *Acton* court also defended the nonliability aspect of the rule of capture through a legal analogy to the right of lateral support, but this analogy has its own problems. See *id.* at 1234 (citing *Partridge v. Scott*, (1838) 150 Eng. Rep. 1124, 1127 (Exch.)). The court reasoned that no liability should follow under a lateral support theory because if a neighbor could damage a well by lawfully removing its structural support in the earth, then the affected landowner could not recover for any groundwater lost from the well. *Id.*; see also *supra* note 183 (detailing the right of lateral support). The *Acton* court extended this analogy though without qualification, holding that the result should be the same even if a “well stands some distance within the plaintiff’s boundary, and the digging by the defendant, which occasions the water to flow from the well, is some distance within the defendant’s boundary.” *Acton*, 152 Eng. Rep. at 1234. The *Acton* court cannot reasonably sustain the justification for nonliability if its analogy is premised on the ability to cause structural damage to a well. Contrary to the court’s assumption, the impact of any excavation on the structural properties of the soil will necessarily reduce with distance. See, e.g., *Garden City Floral Co. v. Hunt*, 255 P.2d 352, 355 (Mont. 1953) (“[I]n making the excavation the digging *should not be so close to the wall as to deprive the foundation of its support . . .*” (emphasis added)). Thus, if the excavations of a neighbor were to somehow drain the well of a landowner a half-mile away, as in *Acton*, a take-nothing judgment could not be supported with an analogy to the right of lateral support when the excavations affected only the movement of groundwater and not the structure or foundation of the well itself.

240. *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 82 (Tex. 1999) (Hecht, J., concurring).

241. *Id.* at 81 (observing that Texas faces “recurring droughts, expansive population growth, and dwindling water supplies”).

East's first policy concern was that the nature of groundwater was too secret and occult to administer legal rules with any trace of certainty.²⁴² While the limited knowledge concerning aquifers may have justified this position in 1904, scientific advances have since “strip[ped] away the mysteries of groundwater.”²⁴³ Hydrologists are now fully capable of approximating “with a reasonable degree of accuracy, the limits of a particular underground water-bearing formation, its storage capacity, its rate of replenishment, and its potential yield.”²⁴⁴ In the past decade alone, TWDB has instituted a new program of mapping groundwater availability models (GAMs), a program that has produced numerous computer representations of aquifers and their various components with exceptional detail.²⁴⁵ GCDs must review these GAMs in the process of establishing an aquifer’s desired future conditions,²⁴⁶ which demonstrates at the very least that the policy of the state is to no longer function under a regime where groundwater is considered secret and occult.

East's second concern was that restrictions on the use of groundwater would impede industrial expansion and economic growth, but this assertion is not necessarily true.²⁴⁷ Especially as water supplies have become less dependable, irrigators in the High Plains region of Texas have realized that regulations on the right to pump groundwater can actually benefit their businesses by provoking the development of more efficient technologies.²⁴⁸ Because of tighter production limitations, these irrigators have adopted more sustainable groundwater practices, thereby decreasing the need for water supplies and reducing the overall pumping costs required to support the state’s agricultural industry.²⁴⁹ Also, groundwater regulation can even be seen as

242. Houston & Tex. Cent. Ry. Co. v. East, 81 S.W. 279, 280–81 (Tex. 1904).

243. TEX. HOUSE COMM. ON NATURAL RES., INTERIM REPORT, 76th Leg., R.S., at 10 (2000).

244. William F. Hughes, *Proposed Groundwater Conservation in Texas*, TEX. J. SCI., June 30, 1949, at 35, 36.

245. See generally INTERIM COMM. ON NATURAL RES., *supra* note 139, at 11–16 (describing the GAM initiative). For access to all GAMs since produced, see Tex. Water Dev. Bd., GAM Runs, <http://www.twdb.state.tx.us/gam/GAMruns.htm> (last visited Dec. 1, 2009).

246. TEX. WATER CODE ANN. § 36.108(d) (Vernon 2008).

247. *East*, 81 S.W. at 280–81.

248. See MARGARET HART, TEX. WATER COMM’N, GROUND WATER PROTECTION AND MANAGEMENT STRATEGIES IN THE TEXAS HIGH PLAINS 26–28 (1989) (discussing the use of “plant growth regulators, soil moisture blocks, and alternative crop production”).

249. See *id.* at 26–27 (describing the various benefits of groundwater restrictions such as “prolonging the life of the aquifer” and the realization of “cost savings to those who pump water”); see also W.L. Broadhurst, *Conservation Measures by Texas Ground*

more effective at protecting economic interests than the common law because the state's permitting system offers the only means of creating enforceable and quantifiable expectations in groundwater availability.²⁵⁰ Considering moreover that agriculture functions as the state's largest consumer of groundwater and second-largest industry overall,²⁵¹ perhaps the regulated system's most endearing quality is that it actually has a mechanism to protect against aquifer mismanagement, an inconvenience that could easily do harm to more than just the business sector.

V. CONCLUSION

Texas follows two approaches to groundwater management, and each has significant repercussions on how the state will meet its future water supply needs. Under the legislature's statutory regime, groundwater conservation districts regulate how users exploit the state's aquifer reserves. These districts are local political bodies with jurisdictions often reaching only to the county lines in which they are seated. GCDs assume the responsibility of promulgating groundwater regulations within their respective jurisdictions, and these regulations primarily operate in the form of permitting requirements, well spacing limitations, and caps on overall groundwater production.²⁵²

The counterpart to this regulatory regime is the common law system. Governing by default in those areas lacking established groundwater districts, this system has no comparable administrative agency to regulate in the place of GCDs. Instead, Texas courts treat landowners within common law jurisdictions as having an ownership interest in the groundwater beneath their property. Because of this recognized interest, management of the resource is left entirely to the will of the landowner.²⁵³ Free to do as they please, these landowners have been known to over-

Water Users, 1958 WATER FOR TEX. 95, 95–96 (addressing how irrigators would be driven out of business by increased pumping costs).

250. Todd H. Votteler, *Raiders of the Lost Aquifer? Or, the Beginning of the End to Fifty Years of Conflict over the Texas Edwards Aquifer*, 15 TUL. ENVTL. L.J. 257, 314–15 (2002); see also Editorial, *Texas Water: Aquifer Ecosystems Can Make or Break Texas*, DALLAS MORNING NEWS, May 20, 1997, at 12A (predicting that passage of Senate Bill 1 will promote economic opportunity).

251. See 2007 STATE WATER PLAN, *supra* note 20, at 176 (indicating that farmers consume 79% of all groundwater produced in the state to irrigate crops); Editorial, *Water Worries*, DALLAS MORNING NEWS, Aug. 11, 2008, at 14A (“Agriculture, after all, remains Texas’ second-largest industry, contributing \$64 billion annually.”).

252. See *supra* Part II.C.

253. See *supra* text accompanying notes 92–93.

consume the resource, occasionally creating shortages for which neighboring groundwater users have no legal recourse.²⁵⁴ As it offers no demonstrable contribution to the sustainability of aquifers, the common law system can best be described as a regime made for the benefit of self-availing groundwater users.

With pressures on groundwater availability only expected to intensify with time, the state should reexamine its management schemes to better accommodate the mounting needs of future generations. The two current regimes may have coexisted for some sixty years without any serious complication, but they are still fundamentally incompatible in at least two ways. First, the two regimes place opposite values on aquifer conservation. While the statutory regime actively engages in regulatory efforts to curb aquifer abuse, the common law system gives rise to a commons scenario in which the rules are actually structured to encourage exploitation of the resource: as long as the cost of taking groundwater is borne by all who share the aquifer, the rational groundwater user has no incentive to conserve the resource because other users will simply consume it for their own benefit.²⁵⁵ Second, the two regimes fail to work as one in the achievement of any comprehensive goal. This issue primarily arises in the context of regional planning meetings in which GCDs must jointly tailor their management policies so as to maintain their underlying aquifers within settled desired future conditions. Because common law jurisdictions have no organizational structure to control how and to what extent landowners may access these aquifers, GCDs will have no assurances that their joint planning efforts will effectively keep aquifers within any prescribed parameters.²⁵⁶ As such, the state gains no ostensible advantage from following a bifurcated approach to groundwater management; in many ways, the continued adherence to the common law system acts more precisely as an impediment to comprehensive water planning.

Fortunately, the legislature has shown a committed interest in expanding its regulatory system, and so to a great extent, the inconveniences associated with the state's bifurcated approach are becoming more contained.²⁵⁷ Nevertheless, the current situation is not optimal. Unregulated areas do remain, and their aquifers are too valuable to leave to chance. The most obvious step towards protecting them would involve further expansion of

254. See, e.g., *supra* note 139.

255. See *supra* note 150 and accompanying text.

256. See *supra* text accompanying notes 98–100.

257. See *supra* text accompanying notes 130–33.

the state's GCD system. At the very least, regulators would then have the tools to restrict the types of disproportionate groundwater practices that have already drained the wells of small, domestic users.

Of course, creating new GCDs is not always the easiest of tasks. Regardless of the method in which the GCD is established—whether it be by special enactment, by petition, or through the direction of a PGMA—the process still involves a considerable amount of political cooperation on some level. Legislators are mindful that some communities resist regulation of any kind, and the citizens themselves believe that they enjoy vested rights as property owners in the groundwater beneath their land. As a result, the legislature can be reluctant to form GCDs in the absence of exigent circumstances, and voters at GCD confirmation elections can impede the effectiveness of regulators by stripping them of their taxing authorities.²⁵⁸

In large respects, the common law rules can be credited with prolonging many of these problems. The rules first gave rise to a tragedy of the commons in Texas, which at the very least accelerated the initial need for regulation. The rules have also entrenched a belief in landowners that the groundwater beneath their surface estates is a matter of personal property that should be defended against any semblance of regulation. Reversing these conditions and attitudes is essential if the state is ever to achieve a sustainable groundwater regime.²⁵⁹ Effecting this reversal, however, entails abandoning the common law rules in favor of a more comprehensive regulatory system, and as already stressed, the process of establishing more GCDs and empowering them with adequate regulatory authority has its difficulties.

To facilitate the transition to a stronger network of GCDs, the Texas Supreme Court should discontinue its recognition of the common law rules as they apply to groundwater. For many years now, the court has held otherwise, insisting that the Conservation Amendment precludes any judicial modification to the laws affecting the state's natural resources.²⁶⁰ However, this

258. See *supra* Part III.

259. Indeed, the inconveniences of the common law system persist even where the state has already established a GCD. For example, in still-pending litigation, landowners from central Texas have threatened the very viability of the GCD system by claiming that permitting restrictions on the use of groundwater beneath their land amount to compensable takings of vested common law rights. See *Petition for Review at 8, Edwards Aquifer Auth. v. Day* (Tex. Feb. 2, 2009) (No. 08-0964) (asserting that regulatory takings liability on a statewide scale would have an impact on the public fisc of more than \$10 billion).

260. See *supra* text accompanying notes 153–57.

Comment has offered several reasons to challenge that position. First, the Conservation Amendment arose entirely out of concerns over surface water availability. Nothing in the legislative record or the periodical accounts leading up to its ratification anticipates the Conservation Amendment as a device for authorizing the sorts of regulatory groundwater districts in place today. Therefore, the Conservation Amendment should not be interpreted as though it somehow ensconced the common law rules announced in 1904 by the *East* decision.²⁶¹ Second, abrogation of the common law rules would be appropriate— notwithstanding the issue of judicial restraint—because the rules themselves cannot be justified as a matter of law or policy. If the doctrine of absolute ownership were to truly function as a law of property, as the courts have applied it, then the doctrine must necessarily meet certain benchmarks widely considered essential to any property interest. However, given the transient character of groundwater, landowners cannot feasibly contain their share of water in the underlying aquifer, and thus the doctrine of absolute ownership fails to observe the exclusionary principle implicit in every other form of property.²⁶² Finally, the policy considerations that once supported the corollary rule of capture have since been superseded. Groundwater is no longer secret and occult. In fact, the state's official policies mandate that GCDs consider detailed modeling reports as they develop their management plans. Moreover, because regulations have actually provided more stability to industries dependent upon groundwater, the concern that groundwater limitations would materially disadvantage economic prosperity is simply misplaced.²⁶³

The common law approach to groundwater management does not befit the demands of the modern age. Its rules were inconvenient in 1904 when the consequences only touched on well interference disputes between neighbors, and its rules are inconvenient today in the context of water planning in a state whose thirst will only grow with its ever-increasing population. Whether by legislative means or judicial decision, the state should engage in efforts to move away from the common law system in favor of a more sustainable approach to groundwater management. If the Texas Supreme Court were to overrule *East*, it would not be committing an injustice to the Conservation Amendment. If anything, a reversal of the common law rules

261. See *supra* text accompanying notes 158–60.

262. See *supra* Part IV.B.1.

263. See *supra* Part IV.B.2.

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would be welcomed as a transition to a more comprehensive regulatory regime, and this can only more closely align Texas policy with that Amendment's conservation ambitions.

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