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Edwards Aquifer Authority v. Day and the Search for Consistency in the Theory of Groundwater Rights

Adam T. Walton

NOTE

EDWARDS AQUIFER AUTHORITY V. DAY AND THE SEARCH FOR CONSISTENCY IN THE THEORY OF GROUNDWATER RIGHTS

Adam T. Walton†

I. INTRODUCTION

For millennia, men have fought over groundwater rights. Even the Hebrew Patriarchs, Abraham and Isaac, were embroiled in disputes with their Philistine neighbors over whether they held exclusive possessory rights over the wells that they dug.[1] In contemporary society, groundwater rights remain an extraordinarily slippery issue. And the ever-increasing demands of modern urban development only serve to accentuate the problems in this area.

Edwards Aquifer Authority v. Day[2] represents the most recent effort of the Texas Supreme Court to address the tensions regarding groundwater rights.[3] As this Note will demonstrate, the *Day* case provides a framework within which to explore the underlying theory of groundwater rights as it relates to the problems of modern society. Texas's approach to water law is important because Texas has appropriated legal principles from many other jurisdictions, integrated them with concepts from other areas of law, and applied them to groundwater in a unique manner. Additionally, due to the topographical, geological, meteorological, and climatological diversity of the Lone Star State, disputes over groundwater rights recur frequently and

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† *Notes and Comments Editor*, LIBERTY UNIVERSITY LAW REVIEW, Volume 8. J.D. Candidate, Liberty University School of Law (2014); B.A., Christian Philosophy, Whitefield College (2011). I want to thank my best friends for the unique contributions that each of them has made to my life and, indirectly, to the production of this Note: Ben Walton, Schuyler and Elizabeth Knippa, Nathan Walton, Christopher Walton, Matthew Walton, and Sarah Grace Walton. I pray that God blesses each of you as thoroughly as I know that this Note will bore you.

1. *See Genesis* 21:23–32; 26:12–33.

2. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814 (Tex. 2012).

3. Prior to *Day*, discussions of groundwater rights in Texas jurisprudence were largely controlled by *Houston & T. C. Railway Co. v. East*, 81 S.W. 279 (Tex. 1904). *See, e.g.*, Sipriano v. Great Spring Waters of America, Inc., 1 S.W.3d 75 (Tex. 1999). Of course, it remains to be seen how the *Day* decision will affect the development of Texas jurisprudence in the future. This will largely depend on how the courts approach the task of harmonizing *Day* with *East*. This Note seeks to address that task.

command a significant amount of attention from the state legislature, administrative agencies, and courts. Thus, Texas is making key contributions to the development of groundwater rights.

The *Day* case raises critical issues regarding the underlying theory of groundwater rights. This Note will explore two principles affirmed and developed in the *Day* decision. First, the *Day* court applies the concept of *ownership in place*[4] to groundwater rights.[5] For decades, numerous states have recognized ownership in place as a guiding principle of mineral, coal, and oil and gas law; however, until now, this principle has never been applied to groundwater—an application unique to Texas jurisprudence. Second, the *Day* court reaffirms the *rule of capture*[6] in its strict English form.[7] This too sets Texas water law apart from other jurisdictions. Over the past hundred years, most American jurisdictions have moved away from the rule of capture in favor of an alternative scheme such as the "reasonable use" rule or correlative rights doctrine.[8] Texas's consistent affirmation of the rule of capture helps to balance proprietary rights against the vicissitudes and demands of usage.

As this Note will demonstrate, these principles are not mere pedantic theories.[9] Rather, they have a vital impact on the practical rights of private

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4. The "ownership-in-place theory" refers to

> [a] characterization of oil-and-gas rights used in a majority of jurisdictions, holding that the owner has the right to present possession of the oil and gas in place as well as the right to use the land surface to search, develop, and produce from the property, but that the interest in the minerals terminates if the oil and gas flows out from under the owner's land. This theory is used in Texas, New Mexico, Kansas, Mississippi, and other major producing states.

BLACK'S LAW DICTIONARY 1215–16 (9th ed. 2009).

5. *See* discussion *infra* Part II.B.1.

6. In the context of water law, the "rule of capture" refers to "[t]he principle that a surface landowner can extract and appropriate all the groundwater beneath the land by drilling or pumping, even if doing so drains away groundwaters to the point of drying up springs and wells from which other landowners benefit." BLACK'S LAW DICTIONARY 1448 (9th ed. 2009). In the context of oil and gas law, the courts have generally articulated the same principle, "holding that there is no liability for drainage of oil and gas from under the lands of another so long as there has been no trespass and all relevant statutes and regulations have been observed." *Id.*

7. *See* discussion *infra* Part II.B.2.

8. *See* 6 JAMES B. WADLEY, THOMPSON ON REAL PROPERTY § 50.11(a), (e)–(g) (David A. Thomas ed., 2d Thomas ed. 2003).

9. *See* discussion *infra* Part II.A.

landowners and the management responsibilities of administrative agencies. The challenges presented by the physical characteristics and location of the Edwards Aquifer are unique and complex and so are the regulatory schemes enacted to address them. This Note will illustrate the interplay between the concept of ownership in place and the rule of capture by exploring how these principles affect this unique situation.[10] Also, this Note will suggest ways in which the *Day* decision may affect future interpretations, applications, and modifications of the Edwards Aquifer Authority Act.[11]

Finally, this Note will make a two-part proposal for integrating and clarifying Texas's approach to the theory of groundwater rights. First, the Note will clarify the proper definitions of the concept of ownership in place and the rule of capture. Second, the Note will discuss how the harmonization of these principles should affect the ways in which groundwater resources are regulated in the future. If the Texas Supreme Court builds on *Day* by integrating the rule of capture with the concept of ownership in place, then *Day* will represent a valuable contribution to the modern understanding of groundwater rights.

II. BACKGROUND

A. *The Factual Context of* Edwards Aquifer Authority v. Day

Before considering the legal framework that undergirds the *Day* decision, it is important to establish the factual context of the case. The regulatory battles that occurred between the Edwards Aquifer Authority and the private landowners bringing suit illustrate both the theoretical and practical importance of the concept of ownership in place and the rule of capture.

1. The Claims of the Private Landowners

The theory of groundwater rights cannot be developed and perfected in a vacuum. As with every other legal concept, the significance of the concept of ownership in place and the rule of capture is most keenly apparent when these principles are applied to the lives of common individuals in the community. The *Day* court would never have reassessed the theory of groundwater rights if they had not been presented with a conflict between

10. *See* discussion *infra* Parts III, IV.

11. *See* discussion *infra* Part IV.B.

the Edwards Aquifer Authority and two private landowners in Atascosa County.[12]

a. General factual setting of the case

(1) *Dependence on the Edwards Aquifer*

The Edwards Aquifer is the primary source of water for much of south central Texas.[13] Notably, this aquifer is "one of the largest and most important karst aquifer systems in the United States."[14] As described by the Edwards Aquifer Authority Hydrologic Data Report for 2010:

> The aquifer extends through parts of Kinney, Uvalde, Zavala, Medina, Frio, Atascosa, Bexar, Comal, Guadalupe, and Hays counties and covers an area approximately 180 miles long and five to 40 miles wide. The aquifer is the primary water source for much of this area, including the City of San Antonio and surrounding communities. Historically[,] the cities of Uvalde, San Antonio, New Braunfels, and San Marcos were founded around large springs that discharge from the aquifer. As the region grew, wells were drilled into the aquifer to supplement water supplied by the springs. In addition, the Edwards Aquifer is the principal source of water for agriculture and industry in the region and provides springflow required for endangered species habitat, as well as recreational purposes and downstream uses in Nueces, San Antonio, and Guadalupe river basins.[15]

The combined land area of the drainage zone, recharge zone, and artesian zone of the aquifer is approximately 8,000 square miles.[16] This area encompasses nineteen counties and is home to at least 1.7 million inhabitants.[17] Moreover, over the past seventy years, the records and trends

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12. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814 (Tex. 2012).

13. EDWARDS AQUIFER AUTH., EDWARDS AQUIFER AUTHORITY HYDROLOGIC DATA REPORT FOR 2010, at 5 (Report No. 11–01 December 2010), http://www.edwardsaquifer.org/documents/2011_Hamilton-etal_2010HydrologicData.pdf.

14. *Id.*

15. *Id.*

16. Ronald Kaiser, *Groundwater Management in Texas: Evolution or Intelligent Design?*, 15-SPG KAN. J.L. & PUB. POL'Y 467, 482 (2006).

17. *Id.*; EDWARDS AQUIFER AUTH., *supra* note 13, at 15 (showing the aquifer's various zones as they extend through the counties of Edwards, Real, Kerr, Bandera, Gillespie, Blanco, Hays, Caldwell, Kendall, Comal, Guadalupe, Bexar, Wilson, Kinney, Uvalde, Medina, Zavala, Frio, and Atascosa). Obviously, the largest city in this geographical area is San Antonio. For

indicate that the water usage in this area has increased over 500%.[18] Now more than ever, the Edwards Aquifer is vital to the life of south central Texas.

(2) *Physical characteristics of the Edwards Aquifer*

In light of the area's dependence on the Edwards Aquifer and the increasing usage levels, the physical characteristics of the Edwards Aquifer and its recharge zone are particularly significant—and problematic. As summarized by the Edwards Aquifer Authority,

> [t]he Edwards Aquifer is a karst aquifer, characterized by the presence of sinkholes, sinking streams, caves, large springs, and a well-integrated subsurface drainage system.... The aquifer exhibits extremely high (cavernous) porosity and permeability, characteristic of many karst aquifers. In contrast, aquifers that occur in sand and gravel or in many other rock types, such as sandstone, have a much lower permeability. Because the Edwards Aquifer is known for having areas of high permeability, it allows the transmission of large volumes of water, enabling groundwater levels to respond quickly to rainfall (recharge) events.[19]

The extreme porosity and permeability of the aquifer result in equally extreme volatility in the water levels of the aquifer.[20] Thus, although the aquifer responds quickly to adequate rainfall, it is especially vulnerable in times of drought and is peculiarly susceptible to the effects of over-pumping.[21] These vulnerabilities and susceptibilities highlight the need for careful regulation and management of groundwater resources.

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more information regarding the population and demographics of San Antonio and the surrounding areas that depend on the Edwards Aquifer, see www.census.gov.

18. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 4:36 (Law of Water Rights and Resources Database, updated July 2012) (stating that "[w]ater use... increased over 500% from 1940 to 1990").

19. EDWARDS AQUIFER AUTH., *supra* note 13, at 5–6.

20. PETER G. GEORGE, ROBERT E. MACE & RIMA PETROSSIAN, AQUIFERS OF TEXAS REPORT 380, at 27 (Susann Doenges ed., Texas Water Development Board July 2011), https://www.twdb.state.tx.us/publications/reports/numbered_reports/doc/R380_AquifersofTexas.pdf.

21. *Id.*

b. Specific parties and issues in the case

(1) *State of the land under prior ownership*

The specific parcel of land involved in the dispute in *Day* consists of 381.40 acres in Atascosa County, which lies directly south of Bexar County and the City of San Antonio.[22] The only land in Atascosa County that is fed by the Edwards Aquifer lies at the northernmost tip of the county.[23] On the parcel involved in the *Day* case, the earliest notable water development occurred in 1956 when the then-owners drilled a well.[24] Through the 1970s, the water from the well was used for irrigation and agricultural purposes.[25] In 1983, the casing of the well shaft collapsed, and the owners discontinued its active use.[26] Nevertheless, the well continued to produce water through artesian pressure.[27] This water flowed through a natural ditch into a fifty-acre lake, which was used for both recreational and agricultural purposes.[28] During the 1980s, Billy and Bret Mitchell owned the land.[29] The Mitchells used the land to raise Costal Bermuda Grass (a common hay-crop).[30] In 1983–1984, during a drought, they irrigated their crop with water from the well-fed lake.[31] In the early 1990s, however, the Mitchells abandoned their

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22. *Id.* Notably, the vast majority of Atascosa County is covered by the Carrizo-Wilcox Aquifer. *Compare id.* at 23 (showing the coverage of the Carrizo-Wilcox Aquifer), *with id.* at 27 (showing the coverage of the Edwards Aquifer). Differing significantly from the Edwards Aquifer, the Carrizo-Wilcox is an enormous sandy aquifer stretching from the Texas-Louisiana border to the Texas-Mexico border and covering sixty-six counties over the span of 25,409 square miles. *Id.* at 23–25. It is ironic that the most recent landmark case defining the extent of groundwater rights (the *Day* case) grew out of a dispute over one of the most unique aquifers in Texas (the Edwards Aquifer) in an area that is barely covered by that aquifer (Atascosa County). Undoubtedly, those who disagree with the conclusions of the *Day* court will cite the old adage that bad facts make bad law. More importantly, however, difficult facts force lawyers, judges, and politicians to think more critically and consistently as to the principles they are seeking to develop and apply. Thus, in actuality, the facts of the *Day* case presented the perfect opportunity for reconsidering the theory of groundwater rights.

23. *See id.* at 27.

24. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 818 (Tex. 2012).

25. *Id.*

26. *Id.*

27. *Id.*

28. *Id.*

29. *Id.* at 820–21.

30. *Id.* at 820.

31. *Id.*

agricultural water usage and used the groundwater and lake water exclusively for domestic and recreational purposes.[32]

(2) *State of the land under current ownership*

In 1994, the plaintiffs in the present case, R. Burrell Day and Joel McDaniel, purchased the property from the Mitchells.[33] This transfer took place one year after the Edwards Aquifer Authority assumed responsibility for regulating use of the Edwards Aquifer.[34] Day and McDaniel intended to use the land for the purpose of growing oats and peanuts and grazing cattle.[35] In accordance with the newly introduced regulatory scheme,[36] Day applied for a permit to reopen the 1956 well for active pumping.[37] The application requested the use of 600 acre-feet of water per annum for irrigation of 300 acres of crops and 100 acre-feet of water per annum for sustaining the level of the fifty-acre lake.[38] While waiting on a response from the Edwards Aquifer Authority, Day replaced the 1965 well "at a cost of $95,000" and amended his application accordingly.[39] It was during this application process that a conflict arose as to Day's ownership and usage rights in the groundwater beneath his property.[40]

2. The Claims of the Edwards Aquifer Authority

In order to understand the legal battle that erupted between Day and the Edwards Aquifer Authority, it is necessary to gain a basic familiarity with the general structure of the Edwards Aquifer Authority and the specific regulatory provisions that occasioned the conflict. Although an investigation of the complexity and sophistication of the Edwards Aquifer Authority Act is beyond the scope of this work, a general knowledge of the Act provides the necessary context within which to consider the underlying theory of groundwater rights.

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32. *Id.* at 820–21.

33. *Id.* at 818.

34. *Id.*

35. *Id.* Rather than referring to both Day and McDaniel throughout the opinion, the *Day* court referred to the parties collectively as "Day." *Id.* In the interest of clarity and efficiency, the author will do the same here.

36. *See* discussion *infra* Part II.A.2.

37. *Day*, 369 S.W.3d at 820.

38. *Id.*

39. *Id.*

40. *Id.* at 820–21.

a. The purpose and policy of the Edwards Aquifer Authority

The Edwards Aquifer Authority[41] was formed in 1993, in recognition of the fact that "[t]he Edwards Aquifer is 'the primary source of water for south central Texas and therefore vital to the residents, industry, and ecology of the region, the State's economy, and the public welfare.'"[42] The Texas Legislature has specifically articulated the rationale behind the Authority:

> The legislature finds that the Edwards Aquifer is a unique and complex hydrological system, with diverse economic and social interest dependent on the aquifer for water supply. . . . To sustain these diverse interests and that natural resource, a special regional management district is required for the effective control of the resource to protect terrestrial and aquatic life, domestic and municipal water supplies, the operation of existing industries, and the economic development of the state. Use of water in the district for beneficial purposes requires that all reasonable measures be taken to be conservative in water use.[43]

To make the purpose of the Authority perfectly clear, the legislature stated:

> it is necessary, appropriate, and a benefit to the welfare of this state to provide for the management of the aquifer through the application of management mechanisms consistent with our

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41. The Edwards Aquifer Authority is specially created and defined by the Edwards Aquifer Authority Act (EAAA). Act of May 30, 1993, 73d Leg., F.S., ch. 626, 1993 Tex. Gen. Laws 2350, amended by Act of May 16, 1995, 74th Leg., R.S., ch. 524, 1995 Tex. Gen. Laws 3280; Act of May 29, 1995, 74th Leg., R.S., ch. 261, 1995 Tex. Gen. Laws 2505; Act of May 6, 1999, 76th Leg., R.S., ch. 163, 1999 Tex. Gen. Laws 634; Act of May 25, 2001, 77th Leg., R.S., ch. 1192, 2001 Tex. Gen. Laws 2696; Act of May 28, 2001, 77th Leg., R.S., ch. 966, §§ 2.60–.62 and 6.01–.05, 2001 Tex. Gen. Laws 1991, 2021–2022, 2075–2076; Act of May 25, 2001, 77th Leg., R.S., ch. 1192, 2001 Tex. Gen. Laws 2696; Act of June 1, 2003, 78th Leg., R.S., ch. 1112, § 6.01(4), 2003 Tex. Gen. Laws 3188, 3193; Act of May 23, 2007, 80th Leg., R.S., ch. 510, 2007 Tex. Gen. Laws 900; Act of May 28, 2007, 80th Leg., R.S., ch. 1351, §§ 2.01–2.12, 2007 Tex. Gen. Laws 4612, 4627–4634; Act of May 28, 2007, 80th Leg., R.S., ch. 1430, §§ 12.01–12.12, 2007 Tex. Gen. Laws 5848, 5901–5909; Act of May 21, 2009, 81st Leg., R.S., ch. 1080, 2009 Tex. Gen. Laws 2818 [hereinafter "EAAA"]. Citations are to the EAAA's current sections, without separate references to amending enactments. The EAAA remains uncodified, but an unofficial compilation can be found on the Authority's website, *available at* http://www.edwardsaquifer.org/filed/EAAact.pdf.

42. *Day*, 369 S.W.3d at 818.

43. EAAA § 1.01.

> legal system and appropriate to the aquifer system.... The authority is created to serve a public use and benefit.[44]

In other words, the regulatory functions and powers of the Authority are designed and intended to further the public interests of the state.[45] At the same time, these interests cannot be interpreted or construed in a manner that is inconsistent with the groundwater rights of individual property owners. Once again, the legislature was very clear:

> [A]ction taken pursuant to this Act may not be construed as depriving or divesting the owner... of these ownership rights or as impairing the contract rights of any person who purchases water for the provision of potable water to the public or for the resale of potable water to the public for any use.... The legislature intends that just compensation be paid if implementation of this article causes a taking of private property or the impairment of a contract in contravention of the Texas or federal constitution.[46]

Essentially then, the legislature created the Edwards Aquifer Authority in an attempt to balance the established property interests and groundwater rights of individual citizens against the unique physical characteristics of the Edwards Aquifer and the complex socio-geopolitical demands of the dependent area. Thus, the form and function of the Authority embody an explicit policy restraint. Properly administered, the Authority can accommodate the needs of the public while simultaneously protecting the rights of the landowners.

b. The basic functions of the Edwards Aquifer Authority

In order to accomplish its stated purpose, the Edwards Aquifer Authority is endowed with "all of the powers, rights, and privileges necessary to manage, conserve, preserve, and protect the aquifer and to increase the recharge of, and prevent the waste or pollution of water in, the aquifer."[47] These powers, rights, and privileges are primarily exercised by means of the issuance and enforcement of permits for water usage and withdrawal. Before granting any permit for the withdrawal of water from the aquifer, the Authority must be satisfied that the water quality of the aquifer and surface

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44. *Id.* § 1.06.

45. *Id.*

46. *Id.* § 1.07.

47. *Id.* § 1.08(a).

streams fed by the aquifer is protected, that the maximum water conservation is achieved, that the most beneficial use of water is facilitated, that "the hydro-geologic connection and interaction between surface water and groundwater" is properly accommodated, that aquatic and wildlife habitat is maintained, that threatened and endangered species are protected, and that instream uses, bays, and estuaries are guarded.[48] Unless all of these interests are recognized and respected, the Authority cannot grant a withdrawal permit.[49] Moreover, since the beginning of 2008, the Authority has limited the amount of permitted withdrawals to "572,000 acre-feet of water for each calendar year."[50]

c. The types of permits issued by the Edwards Aquifer Authority

Generally speaking, the Authority may issue four types of permits. First, the Authority may issue an *interim authorization* to property owners who control a producing well so long as the well meets statutory and regulatory standards, the water is not wasted, and a declaration of historical use was filed before March 1, 1994.[51] An interim authorization allows only withdrawal of the amount of water proven in the declaration of historical use.[52] It terminates when the Authority issues a final response to the property owner's application for a regular permit.[53]

Second, the Authority may issue a *regular permit* to existing users that are able to satisfy the withdrawal requirements mentioned above.[54] The most important aspect of these permits is that they are issued in order of submission, with absolute preference being given to those who submitted their application "on or before the initial application date of March 1, 1994."[55] The other substantial limits on obtaining this type of permit are the historical and beneficial use requirements that are discussed below.[56]

Third, the Authority may issue *term permits*, which are valid up to ten years, to applicants whose usage request satisfies the feasibility analysis of

48. *Id.* § 1.14(a)(1)–(8).
49. *Id.* § 1.14(a).
50. *Id.* § 1.14(c).
51. *Id.* § 1.17(a).
52. *Id.* § 1.17(b).
53. *Id.* § 1.17(d)(1).
54. *Id.* § 1.18(a)–(b).
55. *Id.* § 1.18(b).
56. *See infra* Part II.A.2.d–e.

the Authority.[57] These permits allow the Authority an essential degree of managerial flexibility within the terms established by "the authority's critical period management plan."[58] Generally, term permits are limited in accordance with the water levels of the various sections of the aquifer and the flow rates of springs in the area.[59] Also, these permits are interruptible and terminable at the discretion of the Authority.[60]

Last, the Authority may issue *emergency permits* in drastic situations where immediate access to water is necessary "to prevent the loss of life or to prevent severe, imminent threats to the public health or safety."[61] Such permits are absolutely limited to 30-day periods, but they are renewable.[62] Given the nature of such a permit, its holder "may withdraw water from the aquifer without regard to its effect on other permit holders."[63]

d. Historical use requirements for withdrawal permits

Perhaps the Authority's most significant consideration in analyzing withdrawals from the Edwards Aquifer relates to the historical use requirements. As the *Day* court explains, "[t]he Act gives preference to 'existing users'—defined as persons who 'withdrew and beneficially used underground water from the aquifer on or before June 1, 1993'—and their successors and principals. With few exceptions, water may not be withdrawn from the aquifer through wells drilled after June 1, 1993."[64] The historical period established by the Act is "from June 1, 1972, through May 31, 1993."[65] When an existing user applies for a regular permit, he must establish "by convincing evidence" that he utilized groundwater in a beneficial manner *during the historical period.*[66] The Authority does not consider any use made of the groundwater before or after the designated historical period.[67] If a property owner is able to demonstrate the amount of land "actually irrigated in any one calendar year during the historical

57. EAAA § 1.19(a).
58. *Id.* § 1.19(b).
59. *Id.* § 1.19(b)(1)–(3), (c).
60. *Id.* § 1.19(a).
61. *Id.* § 1.20(a).
62. *Id.* § 1.20(b)–(c).
63. *Id.* § 1.20(d).
64. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 819 (Tex. 2012).
65. EAAA § 1.16(a).
66. *Id.* § 1.16(a), (d)–(e).
67. *Id.* § 1.16(a), (e).

period," he will be permitted to pump "not less than two acre-feet" per annum per acre.[68] Given the difficulty of proving historical use, the Authority may allow applicants to substitute average or normal usage amounts when actual usage amounts are unavailable.[69]

e. Beneficial use requirements and waste restrictions

As noted previously, the Edwards Aquifer Authority will not grant withdrawal permits without first balancing the diverse interests that depend on the preservation and conservation of the aquifer.[70] Thus, the terms of a permit will be determined by "the beneficial use of water without waste."[71] The term *beneficial use* is defined by the legislature as "the use of the amount of water that is economically necessary for a purpose authorized by law, when reasonable intelligence and reasonable diligence are used in applying the water to that purpose."[72] In order to substantiate the idea of beneficial use, the legislature went on to define several types of uses that could fall into the category of beneficial use.[73] These types of uses include conservation, domestic or livestock use, industrial use, irrigation use, municipal use, or agricultural use.[74]

Moreover, the Edwards Aquifer Authority Act provides a detailed definition of *waste* that includes references to the rate and amount of water withdrawals, the flow and production of wells, the escape of groundwater to unsuitable reservoirs, the pollution or alteration of groundwater, and the escape of irrigation tailwater.[75]

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68. *Id.* § 1.16(e).

69. *Id.*

70. *Id.* § 1.14(a)(1)–(8). *See supra* Part II.A.2.b.

71. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 819 (Tex. 2012).

72. EAAA § 1.03(4).

73. *See, e.g., id.* § 1.03(7), (9), (11), (12), (14), (26).

74. *See id.* § 1.03(7), (9), (11), (12), (14), (26).

75. *Id.* § 1.03(21)(A)–(F). Notably, the legislature has provided a distinct definition of waste as it relates to water produced by an artesian well. *Id.* § 1.03(21)(G). Hence, since Day's well produced water, at least in part, by artesian pressure, the Authority's definition of waste has limited applicability. Moreover, it is interesting to note that EAAA § 1.08(b) states that "[t]he authority's powers regarding underground water apply only to underground water within or withdrawn from the aquifer. This subsection is not intended to allow the authority to regulate surface water." This provision is pregnant with important implications for the *Day* case. Consider the following hypothesis:

(1) since the Authority is not allowed to regulate surface water,

(2) since the groundwater collected in Day's lake was held to be surface water, and

3. Summary of the Procedural History of the Case

The legal battle between Day and the Edwards Aquifer Authority was protracted. When Day filed his initial application for a permit in 1996, he could hardly have imagined that sixteen years later his case would be remanded from the Texas Supreme Court in conjunction with the publication of a landmark opinion.[76] Hence, before returning to the theoretical implications of the *Day* case, it is important to summarize the procedural history of the case.

a. History of the case through the administrative process

In December 1997, a full year after receiving Day's application for a permit, the Edwards Aquifer Authority responded with a preliminary allowance for 600 acre-feet of water per annum to be used to irrigate the 300 acres that Day intended to utilize for growing crops and grazing cattle.[77] The Authority granted this preliminary allowance on the basis of the Mitchells' alleged use of water for irrigation purposes during the historical period.[78] Two years passed without any change.[79] In December 1999, Day amended his application to reflect the fact that he had drilled a replacement well to take the place of the original 1956 well.[80] Although the Authority was still not prepared to act on Day's application, Day proceeded to use the new well in the interim.[81] Finally, in November 2000, the Authority issued a formal response to Day and rejected his application for a permit.[82] In support of this decision, the Authority cited the fact that Day had not

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(3) since the artesian pressure of Day's well would presumably continue to pump water into the lake,

(4) then Day can irrigate with water from the lake even if he was precluded from pumping water from the well.

In reality, the only thing that might limit such usage is the provision against wasting water from artesian wells; but this seems to be inapplicable to Day's proposed use. *See* TEXAS WATER CODE § 11.205 ("Unless the water from an artesian well is used for a purpose and in a manner in which it may be lawfully used on the owner's land, it is waste and unlawful to willfully cause or knowingly permit the water to run off the owner's land or to percolate through the stratum above which the water is found.").

76. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 820 (Tex. 2012).

77. *Id.* at 820.

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.* at 820–21.

provided sufficient evidence of beneficial water usage during the historical period.[83] When Day protested, the case was transferred to the State Office of Administrative Hearings.[84]

In determining the merits of Day's application, the administrative law judge considered the historical use of the well without any reference to the water in the lake, since the water in the lake was deemed to be surface water, not groundwater.[85] In the discovery process that followed, the former owners of the property revealed that the water used for irrigation during the historical period was limited to 150 acres and was drawn from the lake, not from the well.[86] Only seven acres of the property were directly watered from the well during the historical period.[87] In an attempt to combat this evidence, Day provided a report from the U.S. Geological Survey Department demonstrating that 52.1 million gallons of water had been pumped from the well during 1972–1973.[88] The court held that such evidence was inconclusive for two reasons.[89] First, the mere removal of such an amount of water from the well during a two-year period did not provide any indication that the water was put toward a beneficial use during the same period.[90] Much of the water could have simply gone toward filling the lake for recreational uses. Second, even if it were assumed that the water had been put toward a beneficial use, Day had not based his original or amended application on such use.[91] He had only cited the Mitchells' water use during 1983–1984.[92] On these grounds, the administrative judge held that the Authority's regulations would properly limit Day's use of the well water to fourteen acre-feet per annum, corresponding to the historical irrigation of seven acres.[93] Unsatisfied, Day appealed to the district court.[94]

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83. *Id.*
84. *Id.* at 821.
85. *Id.*
86. *Id.*
87. *Id.*
88. *Id.* at 821 n.23.
89. *Id.*
90. *Id.*
91. *Id.*
92. *Id.* at 821.
93. *Id.*
94. *Id.*

b. History of the case through the trial and appellate courts

Day filed suit against the Edwards Aquifer Authority in the 218th District Court of Texas, Atascosa County.[95] In his complaint, Day asserted that the Edwards Aquifer Authority's refusal to permit him to use his groundwater constituted a taking of property under the Texas Constitution.[96] Immediately upon seeing this, the Authority responded by impleading the State of Texas "as a third-party defendant, asserting indemnification and contribution for Day's taking claim."[97] Both sides filed for summary judgment.[98] On one issue, the trial court granted summary judgment for Day, holding that all the water used for irrigation during the historical period should be considered part of a beneficial use, even if the water had flowed into the lake first.[99] Nevertheless, on the issue of a constitutional taking, the trial court granted summary judgment for the Edwards Aquifer Authority.[100] Both parties appealed.[101]

The San Antonio Court of Appeals viewed the case from the opposite perspective.[102] The court reversed the trial court's summary judgment for Day, holding that any water removed from the lake must be classified as surface water, not groundwater.[103] And the court also reversed the trial court's summary judgment for the Edwards Aquifer Authority, holding that "'landowners have some ownership rights in the groundwater beneath their property [that are] entitled to constitutional protection,' and therefore

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95. *In re* Edwards Aquifer Auth., 217 S.W3d 581, 585, 585 n.1 (Tex. App. 2006).

96. *Day*, 369 S.W.3d at 821; *see also* TX CONST. art. I, § 17(a). As it will be seen, Day's takings claim hinges on the theories involved in the concept of ownership in place and the rule of capture. *See infra* Part II.B. From a simple logical standpoint, if ownership of groundwater does not vest until it is extracted, then a limitation on extraction is not a deprivation of existing ownership rights; it is only a limit on future or potential ownership rights. Although a full investigation of the theories and criteria involved in Day's takings claim is beyond the scope of this work, it is essential to realize that such a claim cannot be addressed without a clear understanding of the ownership principles explained in this work. Part of the contemporary confusion over property rights—among both laymen and legal professionals—springs from attempting to identify a violation of property rights before establishing a careful, critical, and logical understanding of the nature of such rights.

97. *Day*, 369 S.W.3d at 821.

98. *Id.*

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.* at 814, 821.

103. *Id.* at 821.

Day's takings claim should not have been dismissed."[104] Once again, both parties appealed.[105] The Supreme Court of Texas granted the parties' petitions for certiorari and handed down its decision in February of 2012—sixteen years after Day filed his original application for a permit.[106]

Essentially, the *Day* decision declares that the Authority was correct in limiting Day's permit to fourteen acre-feet of water per annum to reflect the beneficial uses of the historical period.[107] Nevertheless, the decision also declares that Day had "a constitutionally protected interest in the groundwater beneath his property."[108] The court remanded the issue to the trial court for further investigation of whether the Authority's actions constituted a constitutional taking in this case.[109]

B. *The Legal Context of* Edwards Aquifer Authority v. Day

A critical portion of the court's analysis in *Day* is focused on two fundamental property law principles: (1) *ownership in place* and (2) the *rule of capture*. Thus, in order to understand the court's conclusions as to a landowner's interests in the water beneath the surface of his land,[110] it is imperative to understand the context and development of these two principles.[111]

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104. *Id.* (quoting Edwards Aquifer Auth. v. Day, 274 S.W.3d 742, 753–55 (Tex. App. San Antonio 2008)).

105. *Id.* at 822.

106. *Id.* at 814, 820, 822.

107. *Id.* at 822.

108. *Id.*

109. *Id.*

110. Confusingly, water beneath the surface of the ground may be designated "groundwater," "subterranean water," or "underground water," depending on the source and context. In this Note, the author endeavors to use "groundwater" or "subterranean water" as the default terms to refer to water beneath the surface of the ground; however, in special contexts or in quotations, the author may employ "underground water" to refer to the same object.

111. *See Day*, 369 S.W.3d at 823–32. The third section of the court's opinion (to which this citation refers) contains the court's analysis of how the concept of ownership in place applies to groundwater. *See id.* This analysis assumes the rule of capture as a well-established and fundamental standard of Texas property law. *Id.* As this Note develops, it will become evident that the juxtaposition of these two principles—ownership in place and the rule of capture—has complex theoretical ramifications for the nature of groundwater rights. *See infra* Part III.

1. Ownership in Place

The Texas Supreme Court's affirmation of ownership of groundwater in place is one of the most striking aspects of *Edwards Aquifer Authority v. Day*.[112] This issue was a matter of first impression for the Texas Supreme Court.[113] The court's holding stands in contradiction to the modern trend, which denies any form of ownership in place with respect to groundwater.[114] To appreciate the ramifications of the court's holding it is helpful to consider the historical development and application of ownership in place. The court makes it clear that its application of this concept to groundwater does not occur in a jurisprudential vacuum.[115] In fact, the court presents ownership of groundwater in place as the logical extension of a venerable and extensive body of precedent in English common law, early American common law, and Texas case law.[116]

a. Introduction and basic definition of ownership in place

It is important to define the concept of ownership in place so that there is no confusion as to what the *Day* court means when it declares that "we held long ago that oil and gas are *owned in place*, and we find no reason to treat groundwater differently."[117] The *Day* court summarizes this concept by quoting *Elliff v. Texon Drilling Co.*,[118] a case involving the ownership of oil and gas:

In our state the landowner is regarded as having absolute title in severalty to the oil and gas in place beneath his land. The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. The oil and gas beneath the soil are considered a part of the realty. Each owner of land owns separately, distinctly and exclusively all the oil and gas under his land and is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value.[119]

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112. *See id.* at 831–32, 838.

113. *Id.* at 823.

114. *See* WADLEY, *supra* note 8, § 50.11(a).

115. *Day*, 369 S.W.3d at 823, 829.

116. *Id.* at 824, 829–32.

117. *Id.* at 823 (emphasis added).

118. Elliff v. Texon Drilling Co., 210 S.W.2d 558 (Tex. 1948).

119. *Day*, 369 S.W.3d at 831–32 (quoting *Elliff*, 201 S.W.2d at 561). Incidentally, the "only qualification" attached to the rule of ownership (i.e., "the law of capture" and "police

The *Day* court concludes that "this correctly states the common law regarding the ownership of groundwater in place."[120]

b. Development of ownership in place in other jurisdictions

(1) *Development of ownership in place in English common law*

The idea that groundwater can be owned in place is traceable to basic property law concepts expressed in English case law.[121] In *Acton v. Blundell*,[122] for example, the court declared that groundwater could not be governed by the same riparian and usufructuary rights[123] that govern surface water.[124] The court asserted three distinct reasons why groundwater should be treated differently: (1) the law governing surface water springs from different circumstances and is affected by different considerations than those related to groundwater;[125] (2) the application of the same law would result in disparate and unjust consequences;[126] and (3) the weight of precedent and historical authority recognizes substantial differences between surface water and groundwater.[127] For these reasons, the court concluded that the case should be decided upon

> that principle, which gives to the owner of the soil all that lies beneath his surface; that the land immediately below is his property, whether it is solid rock, or porous ground, or venous earth, or part soil, part water; that the person who owns the

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regulations") presents substantial difficulties and tensions that will be addressed later on in this work. *See infra* Part III.

120. *Day*, 369 S.W.3d at 832.

121. WADLEY, *supra* note 8, § 50.11(e).

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

123. A "riparian right" is "[t]he right of a landowner whose property borders on a body of water or watercourse. Such a landowner traditionally has the right to make reasonable use of the water." BLACK'S LAW DICTIONARY 1442 (9th ed. 2009). A "usufructuary right" or "usufruct" is "[a] right for a certain period to use and enjoy the fruits of another's property without damaging or diminishing it, but allowing for any natural deterioration in the property over time." *Id.* at 1684–85.

124. *Acton*, 152 Eng. Rep. at 1233.

125. *Id.* at 1233–34.

126. *Id.*

127. *Id.* at 1233–35. Interestingly, the English Court cites a case from the Roman Digest to support its argument. *Id.* at 1235. To most modern attorneys, the Latin quotations are meaningless; however, they reinforce the antiquity of the venerable rule of law espoused by the Court. *See id.*

> surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure . . . .[128]

Although the court did not specifically designate this principle as "ownership in place," the principle encapsulates the essence of ownership in place by affirming an owner's distinct property interest in groundwater.

(2) *Development of ownership in place in American jurisdictions*

The rudimentary principles of ownership in place began to develop in the United States during the nineteenth-century—long before underground minerals, oil and gas, and groundwater rose to their current value.[129] Massachusetts case law provides two illustrative cases: *Greenleaf v. Francis*[130] and *Wilson v. City of New Bedford.*[131] As early as 1836, in *Greenleaf*, the Massachusetts court rooted its decision in the basic common law doctrine that a property owner's rights extend to the sky above and the earth beneath the surface of his land.[132] Applying this doctrine to a dispute regarding the drainage of groundwater, the Massachusetts court stated:

> For by the common law the owner of the soil may lawfully occupy the space above, as well as below the surface, to any extent which he pleases, unless he has made some grant or agreement or there has been some statute or police regulation to the contrary. . . . But the proprietor, in the absence of any agreement subjecting his estate to another, may consult his own convenience in his operations above or below the surface of his

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128. *Id.* at 1235.

129. Tracing the genesis and progress of legal doctrines is often quite interesting. In *Day*, the Court is applying the concept of ownership in place to groundwater as it has been applied previously in the context of oil and gas law. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 823–32 (Tex. 2012). But if the concept is traced further back, it appears that some of the essential building blocks of ownership in place were originally developed in the context of groundwater disputes (as evidenced by the ensuing cases). Thus, in a certain sense, the *Day* case brings the concept of ownership in place full circle and reapplies it to one of the areas of its early development. *See id.*

130. Greenleaf v. Francis, 35 Mass. 117 (1836).

131. Wilson v. City of New Bedford, 108 Mass. 261 (1871).

132. *Greenleaf*, 35 Mass. at 121. This idea is often summarized by the Latin phrase: *ad coelum et ad inferos*, which means "[u]p to the sky and down to the center of the earth." BLACK'S LAW DICTIONARY 42 (9th ed. 2009).

> ground. He may obstruct the light and air above, and cut off the springs of water below the surface . . . .[133]

This is the essence of ownership in place. Unless a landowner parts with his subterranean rights by a specific conveyance, he retains the full right to extract and possess the water beneath his land.[134]

Later, in 1871, the same court expanded on this doctrine in *Wilson v. City of New Bedford*.[135] Like the *Acton* court, the *Wilson* court recognized that the standards applied to groundwater must differ from those applied to surface water.[136] Rather than equating groundwater with surface water, the court likened the *water* percolating beneath the surface to the *rocks and minerals* found beneath the surface.[137] Thus, the court again concluded that a landowner has the right to extract and possess the water beneath his land.[138] Even though ownership in place is not specifically mentioned, this affirmation of a landowner's rights presupposes the ideological foundation of ownership in place.

c. Development of ownership in place in the oil and gas law of Texas

(1) Texas Co. v. Daugherty

The first case in Texas to announce the concept of ownership of oil and gas in place was *Texas Co. v. Daugherty*,[139] decided in 1915.[140] The rationale in this case sets the framework for how the concept of ownership in place is applied in *Day*.[141] In *Daugherty*, the court grappled with the issue of whether an oil lease constituted an independent property interest.[142] The

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133. *Greenleaf*, 35 Mass. at 121, 123.

134. *Id.* at 121–23.

135. Wilson v. City of New Bedford, 108 Mass. 261 (1871).

136. *Id.* at 265 ("It is true that the rights of neighboring proprietors of lands in underground waters which remain still, or naturally percolate through the soil without forming channels, are very different from their rights in watercourses.").

137. *Id.* ("The percolating *water* belongs to the owner of the land, as much as the land itself, or the *rocks and stones* in it."(emphasis added)).

138. *Id.*

139. Texas Co. v. Daugherty, 176 S.W. 717 (Tex. 1915).

140. *Id.* at 720.

141. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 829–30 (Tex. 2012).

142. *Daugherty*, 176 S.W. at 717. It is interesting to note that this case was driven by the state's desire to subject the owners of oil leases to an independent property tax. *Id.* at 717, 722. Ironically, in order to justify an independent tax, the state had to admit and even

court provided a dual perspective on the issue by building a strictly logical argument and then supplementing this with case precedent from other jurisdictions.[143] To build its logical argument, the court turned a critical eye to what was actually being conveyed in the oil lease at issue.[144] The nature of the lease was sharply different from an ordinary leasehold estate.[145] The property owner did not merely convey a right for the lessee to possess the premises for a specified amount of time.[146] Instead, the conveyance declared that "[t]his lease is not intended as a mere franchise, but is intended as a conveyance of the property and privileges [pertaining to the minerals beneath the surface of the property]."[147] The court asserted that if oil and gas were not subject to ownership in place, such a conveyance would be meaningless.[148] To explain the meaning of this type of conveyance, the court proposed a simple syllogism: (A) oil and gas are legally classified as minerals;[149] (B) minerals constitute a material interest in the realty where they are found;[150] and therefore, (C) a conveyance of oil and gas constitutes a conveyance of a material interest in the realty where they are found.[151]

The court fortified its conclusion by pointing out the impossibility of the contrary.[152] After all, if minerals are treated as part of the property owner's property rights, then any conveyance of mineral rights must be treated as a

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endorse the existence of an independent property interest. *Id.* at 722. As a result, the burden placed upon the lessees' financial interests was accompanied by an unexpected benefit to their property interests. *Id.* at 719–22.

143. *Id.* at 718–21.

144. *Id.* at 718–19.

145. *Id.* at 718.

146. *Id.*

147. *Id.* at 719. The Court also emphasized the fact that the vesting of the oil lease was not subject to any condition precedent. *Id.* It vested immediately upon execution of the instrument of conveyance, just as any other independent property interest would. *Id.* This distinction is particularly relevant to the task of harmonizing ownership in place with the rule of capture. *See* discussion *infra* Part IV.

148. *Daugherty*, 176 S.W. at 720.

149. *Id.* at 719 ("It is no longer doubted that oil and gas within the ground are minerals.").

150. *Id.* ("In place, they lie within the strata of the earth, and necessarily are a part of the realty.").

151. *Id.* ("Being a part of the realty while in place, it would seem to logically follow that, whenever they are conveyed while in that condition or possessing that status, a conveyance of an interest in the realty results.").

152. *Id.* at 719–20.

conveyance of a property right.[153] It is inconsistent to classify such a conveyance as a usufructuary right when the language, intent, and application of the conveyance are cast in terms of an ownership right.[154] For these reasons, the court asserted that oil and gas must be treated as subject to ownership in place.[155]

As an important qualification of this argument, the court pointed out that the concept of ownership in place is not defeated by the fact that oil and gas levels beneath the surface may change due to percolation or subsidence.[156] The vesting of this property right is not predicated upon the absolute possession of the object of the interest; rather, the absolute possession of the object of the interest is predicated by the vesting of the right to ownership in place.[157]

To bolster this argument, the *Daugherty* court anchored its reasoning in case precedent from other jurisdictions[158]—citing, for example, *Appeal of Stoughton*.[159] In that case, the Supreme Court of Pennsylvania acknowledged that any conveyance of oil and gas rights—regardless of what it may be called—is effectively "the grant of part of the *corpus* of the estate and not of a mere incorporeal right."[160] In fact, given the value of oil and gas, there are many times when the true value of a parcel of land would be drastically skewed if ownership of the oil and gas beneath the surface was not considered part of the property interests of the owner.[161] Thus, eighteen years later, in *Blakley v. Marshall*,[162] the same court unhesitatingly declared that a conveyance of "the right to remove all the oil in place" from a parcel of land was legally equivalent to "a sale of a portion of the land . . . ."[163] This sale of oil in place theory implies the concept of ownership in place.

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153. *Id.* at 720 ("If these minerals are a part of the realty while in place, as undoubtedly they are, upon what principle can the ownership of the property interest, which they constitute while they are beneath or within the land, be other than the ownership of an interest in the realty?").

154. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 829 (Tex. 2012).

155. *Daugherty*, 176 S.W. at 720.

156. *Id.* at 719–20.

157. *Id.* The significance of this qualification will become apparent below when ownership in place is compared with the rule of capture. *See infra* Part IV.A.

158. *Daugherty*, 176 S.W. at 719–22.

159. Appeal of Stoughton, 88 Pa. 198 (1878).

160. *Stoughton*, 88 Pa. at 201.

161. *Id.* at 201–02.

162. Blakley v. Marshall, 34 A. 564 (Pa. 1896). *See Daugherty*, 176 S.W. at 721.

163. *Blakley*, 34 A. at 565 (citing *Stoughton*, 88 Pa. at 201–02).

The logical strength of this position is undeniable. Even in states such as Indiana and Illinois, which stop short of embracing the concept of ownership in place, courts were nonetheless forced to admit that there is a distinct substantive property interest involved in the conveyance of an oil and gas lease.[164] In light of these cases, it is clear that the court's decision in *Texas Co. v. Daugherty* was founded upon the well-established tradition that control of oil and gas was an independently conveyable interest. The court simply applied the logic of these cases to conclude that oil and gas were subject to ownership in place.[165]

(2) Stephens County v. Mid-Kansas Oil & Gas Co.

Not surprisingly, in the decades since *Texas Co. v. Daugherty*, the concept of ownership in place has seen numerous extensions and developments within Texas jurisprudence. Eight years after *Daugherty*, the Texas Supreme Court clarified the concept in *Stephens County v. Mid-Kansas Oil & Gas Co.*[166] In *Stephens County*, the court endeavored to forge a more consistent connection between property interests in solid minerals and property interests in oil and gas.[167] Applying reasoning similar to that in *Daugherty*, the court asserted that in the classification of oil and gas prior to their extraction from the land, the two substances ought to be treated as identical to solid minerals such as iron, coal, and lead.[168] Building on this idea, the court stated,

> We do not regard it as an open question in this state that gas and oil in place are minerals and realty, subject to ownership, severance, and sale, while mebedded [sic] in the sands or rocks

164. *See Daugherty*, 176 S.W. at 720–22 (citing Watford Oil & Gas Co. v. Shipman, 84 N.E. 53 (Ill. 1908)).

165. *Id.* at 719–20, 722. It is imperative to remember that ownership in place is not equivalent to absolute ownership. The court recognizes that absolute ownership does not vest until actual extraction and possession have taken place. *Id.* Nevertheless, the court is emphatic that this does not negate the real ownership interests that vest at the time of conveyance. *Id.* at 719–20. As mentioned above, this distinction will become clear below when the concept of ownership in place is balanced with the rule of capture. *See infra* Part IV.

166. Stephens Cnty. v. Mid-Kansas Oil & Gas Co., 254 S.W. 290 (Tex. 1923).

167. *Id.* at 291–93.

168. *Compare Daugherty*, 176 S.W. at 719, *with Stephens Cnty.*, 254 S.W. at 291–92.

> beneath the earth's surface, in like manner and to the same extent as is coal or any other solid mineral.[169]

Nevertheless, noting that confusion still existed after *Daugherty* regarding the significance of the rights implied by ownership in place,[170] the court proceeded to explain its affirmation of ownership in place.[171] Any conveyance of oil and gas property interests vests exclusive ownership in the grantee as soon as the instrument is executed.[172] As the new exclusive owner of these interests, the grantee gains the full rights of possession, use, and disposition of these resources.[173] Moreover, the grantee gains the full rights of divestiture and alienation.[174] Every aspect of dominion over these resources is treated as transferred unless it is specifically reserved by the grantor.[175] Thus, in *Stephens County*, the court added substantial solidity and clarity to the concept of ownership of oil and gas in place.

As in *Daugherty*, the court in *Stephens County* carefully compared its holding to cases from other jurisdictions.[176] Once again, Pennsylvania featured prominently in this comparison.[177] As early as 1858, in *Caldwell v. Fulton*,[178] the Pennsylvania Supreme Court laid the theoretical foundation for ownership in place by analyzing the nature of the rights implicated by property interests in coal: "[T]he grant of a thing can be no more than the grant of the full and unlimited use of it. So too the general power of disposal without liability to account is equivalent to ownership itself, it being the highest attribute of ownership . . . ."[179] In terms of the oft-repeated property law metaphor of a "bundle of sticks," once a party holds the sticks of unlimited use and free alienability for a portion of land, that party may claim full ownership over that portion. When these rights are present,

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169. *Stephens Cnty.*, 254 S.W. at 292.

170. *Id.* (stating that although the question of ownership of oil and gas in place was decided beyond reasonable doubt in *Daugherty*, the parties to the present case insisted that oil and gas leases conveyed only "incorporeal hereditaments" rather than vested real property interests).

171. *Id.* at 292–96.

172. *Id.* at 292.

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.* at 292–93, 296.

177. *Id.* at 292–93.

178. Caldwell v. Fulton, 31 Pa. 475 (1858).

179. *Id.* at 484.

ownership vests immediately—even if the conveyed portion of land happens to be below the surface.[180]

In keeping with *Daugherty*, the *Stephens County* court reiterated its approval of the Pennsylvania court's conclusion in *Appeal of Stoughton*[181]: subterranean property rights are not incorporeal and contingent; they are corporeal and definite.[182] The court also introduced a lengthy progression of Pennsylvania precedents building on this idea.[183] These precedents led the *Stephens County* court to adopt Pennsylvania's conclusion that ownership in place gives the owner the absolute right "to sell, to use, to give away, or to squander, as in the case of his other property."[184] By embracing the rationale of the Pennsylvania courts, the *Stephens County* court revealed that Texas's endorsement of the concept of ownership in place had grown into a robust and well-defined rule.

d. Summary of ownership in place

As mentioned previously, the *Day* court's application of ownership in place to groundwater stands in contradiction to the historical trend among the states.[185] At the turn of the twentieth-century, states generally affirmed a property owner's exclusive property interest in the groundwater beneath the surface of his land.[186] Nevertheless, this trend has changed radically over the past century: "[A]s a general rule today, groundwater is considered to be owned by the public at large, rather than by the individual landowner, and is therefore subject to significant public supervision and control."[187] Until the Court announced its decision in *Day*, it was unclear whether Texas

180. *Id.* at 488.

181. Appeal of Stoughton, 88 Pa. 198 (1878).

182. *Stephens Cnty.*, 254 S.W. at 292–93. *See Stoughton*, 88 Pa. at 201–02.

183. *Stephens Cnty.*, 254 S.W. at 292–94 (citing McIntosh v. Ropp, 82 A. 949 (Pa. 1912); Barnsdall v. Bradford Gas Co., 74 A. 207 (Pa. 1909); Jennings v. Bloomfield, 49 A. 135, 136 (Pa. 1901); Blakley v. Marshall, 34 A. 564, 565 (Pa. 1896); Hague v. Wheeler, 27 A. 714, 719–20 (Pa. 1893); Del. L. & W. Ry. Co. v. Sanderson, 1 A. 394 (Pa. 1885); Appeal of Stoughton, 88 Pa. 198, 201 (1878); Armstrong v. Caldwell, 53 Pa. 284, 288 (1866); Caldwell v. Copeland, 37 Pa. 427, 430 (1860); Caldwell v. Fulton, 31 Pa. 475, 483–88 (1858)).

184. *Id.* at 293 (quoting Hague v. Wheeler, 27 A. 714, 719–20 (Pa. 1893)).

185. WADLEY, *supra* note 8, § 50.11(a).

186. *Id.* (citing Stoner v. Patten, 63 S.E. 897 (Ga. 1909)).

187. *Id.* (citing Russell Adams, *Updating Groundwater Law: New Wine in Old Bottles*, 39 OHIO ST. L. REV. 520 (1978)).

would follow this trend or apply ownership in place to groundwater.[188] As it will be discussed below, *Day*'s assertion that groundwater is owned in place is an important step forward in the search for consistency in the theory of groundwater rights.[189]

2. Rule of Capture

The rule of capture is another essential doctrine that the Texas Supreme Court articulates in *Day* alongside the concept of ownership in place.[190] But unlike the court's interpretation and application of ownership in place, the court's interpretation and application of the rule of capture is not a matter of first impression for the Texas Supreme Court.[191] On the contrary, the *Day* court stands squarely in a line of Texas Supreme Court precedents that stretch back to *Houston & T. C. Railway Co. v. East*,[192] which was decided in 1904.[193] Nevertheless, the court's affirmation of the rule of capture is closely akin to its affirmation of ownership in place in that both positions are rooted in solid legal traditions,[194] and both positions stand in contradiction to the modern jurisprudential trend.[195]

a. Introduction and basic definition of the rule of capture

In order to understand the court's rationale in *Day*, it is helpful to begin by distinguishing two of the major approaches to the rule of capture and clarifying which approach the court adopts.[196] The earlier and stricter

188. Susana E. 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, 495–96 (2008).

189. *See infra* Part IV.A.

190. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 823–29 (Tex. 2012).

191. *Id.* at 823–25.

192. Houston & T. C. Ry. Co. v. East, 81 S.W. 279 (Tex. 1904).

193. *Day*, 369 S.W.3d at 823.

194. *See id.* at 823–32.

195. WADLEY, *supra* note 8, § 50.11(a), (f) n.631. *See also* 3 WATER AND WATER RIGHTS § 20.07 (Robert E. Beck et al. eds., 1991 ed. 2003 repl. vol.)[hereinafter WATER RIGHTS].

196. While there are other approaches to the rule of capture than the two summarized here, these two approaches are sufficient to set the context for the Court's discussion in *Day*. *See* WADLEY, *supra* note 8, § 50.11(g)–(j). In the interest of thoroughness, however, it is significant to note that some have suggested the doctrine of correlative rights as an alternative to the rule of capture. *Id.* at § 50.11(g). Essentially, this doctrine limits a landowner's groundwater rights to the reasonable share of the aquifer that is allocable to the landowner's specific acreage. BLACK'S LAW DICTIONARY 396 (9th ed. 2009). Interestingly, even before *Edwards Aquifer Authority v. Day* was decided, Susana Elena Canseco, writing

approach to the rule of capture is known as the "English rule," the "absolute dominion rule," or the "absolute ownership doctrine."[197] According to the English rule,

> The landowner could extract unlimited quantities of water from the land, regardless of injury caused to others, so long as no harm was caused by malice and no water was wasted.... [W]ater... was accessed under a "capture" theory: whoever actually withdrew the water was entitled to it. Thus, one landowner could actually withdraw water from beneath a neighbor's tract. And, since the right to extract the water was considered "absolute," the landowner who owned the land from which the water was being extracted had no rights against the adjoining landowner who was actually doing the extracting.[198]

Later on, the American courts endeavored to soften this approach to the rule of capture by placing greater restrictions on a landowner's ability to withdraw water from underneath his land when such a withdrawal was unreasonable.[199]

> Unlike the absolute ownership rule,... the water extracted under this rule must be used on overlying land and the use must be reasonably related to the natural use of the land. If these conditions are met, the landowner could use as much water as desired regardless of the adverse effects to other landowners. The sale or use of water on distant lands was considered unreasonable where it impaired the groundwater supply of

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for Baylor Law Review, suggested that it would be impossible to harmonize ownership of groundwater in place with the correlative rights doctrine. Canseco, *supra* note 188, at 521–22. From her perspective, any attempt to combine these two doctrines would require the Court to ignore critical differences between groundwater and oil and gas, and to neglect important regulatory needs in the area of water usage and management. *Id.* This apparent difficulty will be addressed later on. *See* discussion *infra* Part III.

197. WADLEY, *supra* note 8, § 50.11(e); WATER RIGHTS, *supra* note 195, § 20.03. Unfortunately, the plurality of terms used to refer to a single approach to the rule of capture can generate confusion. For the sake of clarity, the author will endeavor to use "the English rule" as the default term to refer to the earlier and stricter approach to the rule of capture. Nevertheless, in special contexts or in quotations, the author may employ "the absolute dominion rule" or "the absolute ownership doctrine" to refer to the same concept.

198. WADLEY, *supra* note 8, § 50.11(e).

199. *Id.* at § 50.11(f).

> another landowner. Likewise, courts have generally considered waste to be unreasonable *per se*.[200]

Eventually, this alternative became known as the "reasonable use rule" or the "American rule."[201] As it will be seen, Texas has strictly adhered to the English rule and consistently rejected the American rule.[202]

b. Development of the rule of capture in other jurisdictions

(1) *Development of the rule of capture in English common law*

As with the concept of ownership in place, the *Day* court explains the rule of capture in light of a venerable body of case precedent,[203] beginning with the eighteenth-century English case, *Acton v. Blundell*.[204] In *Acton*, the English Court of the Exchequer addressed whether a landowner could be held liable for damages when his use of underground water led to a subsidence of the water supply and the eventual exhaustion of his neighbor's well.[205] The court held that the injury sustained by the neighbor in the loss of his subterranean water did not give him a legally cognizable claim against the landowner since the landowner had rightfully taken possession of the water by capture.[206] Since he captured it by exercising his rights over his own property, the water was rightfully his.[207] Essentially, ownership of the land includes the right to possess any water that may be underneath the surface, regardless of whether this water is there by percolation from a neighboring property, or whether its removal will cause subsidence in the water underneath a neighboring property.[208]

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200. *Id.*

201. *Id.*

202. *Id.* at § 50.11(f) n.631.

203. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 823–29 (Tex. 2012).

204. *Id.* at 824–25 (citing Acton v. Blundell, (1843) 152 Eng. Rep. 1223).

205. *Acton*, 152 Eng. Rep. at 1223–24.

206. *Id.* at 1235.

207. *Id.* ("[T]he 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 . . . 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.").

208. WATER RIGHTS, *supra* note 195, § 20.03 ("As the law stands, the right of the landowner to abstract subterranean water flowing in undefined channels beneath his land . . . appears to us, in the light of [common law] authorities, to be exercisable regardless

Notwithstanding legislative and regulatory restraints, the English courts upheld this approach to the rule of capture throughout the twentieth-century.[209] For example, in *Langbrook Properties, Ltd. v. Surrey County Council*,[210] the court reviewed its precedents regarding absolute dominion and concluded,

> [S]ince it is not actionable to cause damage by the abstraction of underground water, even where this is done maliciously, it would seem illogical that it should be actionable if it were done carelessly. Where there is no duty not to injure for the sake of inflicting injury, there cannot . . . be a duty to take care not to inflict the same injury.[211]

From this standpoint, the rule of capture entitles a landowner to possess and use the water underneath his land without any thought for how his usage might affect his neighbor's water supply.[212] Thus, the English rule gives a landowner an absolute right to extract and capture any water that is underneath his land.[213]

(2) *Development of the rule of capture in American jurisdictions*

As the *Day* court builds upon the English common law understanding of the rule of capture, it incorporates important contributions from other American jurisdictions.[214] For example, the *Day* court cites the Supreme

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of the consequences, whether physical or pecuniary, to his neighbors." (quoting Stephens v. Anglian Water Auth., [1987] 3 All E.R. 379 (C.A.))).

209. *Id.*

210. Langbrook Properties, Ltd. v. Surrey Cnty. Council, [1969] 1 W.L.R. 161.

211. WATER RIGHTS, *supra* note 195, § 20.03 (quoting *Langbrook Props.*, 3 All E.R. at 1439–40).

212. *Id.* Given the breadth of power that this rule affords to individual landowners, it has been fittingly described as a "stark view." *Id.*; *see also* Chasemore v. Richards, [1857] 157 E.R. 71.

213. WATER RIGHTS, *supra* note 195, § 20.03.

214. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 825–26 (Tex. 2012). This subsection focuses on *Frazier v. Brown* and on the cases incorporated into that decision; however, the *Day* decision also references *Pixley v. Clark*, 35 N.Y. 520 (1866). *Day* includes the following quote from *Pixley*:

> An owner of soil may divert percolating water, consume or cut it off, with impunity. It is the same as land, and cannot be distinguished in law from land. So the owner of land is the absolute owner of the soil and of percolating water, which is a part of, and not different from, the soil. No action lies against the

Court of Ohio's affirmation of the rule of capture in *Frazier v. Brown*,[215] which was decided in 1861.[216] Standing on a foundation of multi-jurisdictional case precedent,[217] the *Frazier* court noted that there were two public policy considerations that supported its affirmation of the English rule.[218]

First, it is impossible to map, track, and calculate the rate and amount of groundwater percolating from one parcel to another with any degree of accuracy.[219] Such a task "would be involved in hopeless uncertainty, and would be, therefore, practically impossible."[220] In fact, this impossibility serves as the dividing line between surface water rights and groundwater rights.[221] After all, if subterranean water flowed in distinguishable channels, then the same laws could govern it as surface water, and groundwater disputes would be radically simplified. Unfortunately, however, this type of

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> owner for interfering with or destroying percolating or circulating water under the earth's surface.

Day, 369 S.W.3d at 826 (quoting Houston & T. C. Ry. Co. v. East, 81 S.W. 279, 280–81 (Tex. 1904) (quoting *Pixley*, 35 N.Y. at 527)). The placement of this quote in the *Day* decision is significant because it is used to support the rule of capture, not to present the principle of ownership in place. *Id.* In fact, the Court states that *Pixley* articulates rights under the rule of capture that can be maintained "irrespective" of whether ownership in place applies. *Id.* The inconsistencies inherent in such an interpretation will be highlighted later on. *See infra* Parts III, IV.A.

215. Frazier v. Brown, 12 Ohio St. 294 (1861).

216. *See Day*, 369 S.W.3d at 825. The manner in which the *Frazier* court framed the issue is particularly helpful:

> The question then is, whether—in the absence of all rights derived either from contract or legislation—a landowner can have any legal claims in respect to subsurface waters which, without any distinct and definite channel, ooze, filter, and percolate from adjoining lands into his own, when such waters are diverted, retained, or abstracted by the owner of such adjoining lands in the use of his property, for any object of either taste or profit, even though the use may be accompanied by a malicious intent to injure his neighbor by means of such use?

Frazier, 12 Ohio St. at 304. Of course, the Court answered this question in the negative, stating that any damage to neighboring land that resulted from a landowner's extraction of underground water was merely a *damnum absque injuria*. *Id.*

217. *See Frazier*, 12 Ohio St. at 303–10 (1861).

218. *Id.* at 311.

219. *Id.*

220. *Id.*

221. *See id.* at 300–02.

subterranean water flow is so rare that the *Frazier* court addressed it as a "curious speculation" instead of a reality.[222]

Second, if courts abandoned the rule of capture in favor of a correlative rights approach to groundwater, it would stymie the progress of commercial and private land development.[223] This is illustrated by two of the cases summarized by the *Frazier* court: *Greenleaf v. Francis*[224] and *Roath v. Driscoll*[225]—cases from Massachusetts and Connecticut, respectively.[226] In *Greenleaf*, a landowner drilled a well in close proximity to his neighbor's property, causing her well to run dry.[227] Notwithstanding the seemingly obvious connection between the defendant's gain and the plaintiff's loss, the court held that, in accordance with the rule of capture, the defendant had a right to the water that he captured from beneath his land.[228] The court reasoned that "'the defendant had no means of *knowing* that the plaintiff's well was supplied by springs in the defendant's soil, until the defendant dug for water there for his own use.'"[229] According to the court, to hold a defendant liable in such circumstances would handicap landowners by forcing them to anticipate how their drilling might affect the groundwater supply and would encourage courts to engage in speculation regarding a landowner's knowledge, intent, and motivation regarding his use of groundwater.[230] To avoid such a result, the *Greenleaf* court indicated that each landowner "may consult his own convenience in his operations above or below the surface of his ground."[231] Similarly, in *Roath*, the court warned that if landowners could not exercise their groundwater rights through capture, then,

> one man, by sinking a well . . . might prevent the sinking of other wells, and the improvement of the neighborhood, . . . and even

222. *Id.* at 302.

223. *Id.* at 311.

224. Greenleaf v. Francis, 35 Mass. 117 (1836).

225. Roath v. Driscoll, 20 Conn. 533 (1850).

226. *See Frazier*, 12 Ohio St. at 305–08.

227. *Greenleaf*, 35 Mass. at 117–18; *see also Frazier*, 12 Ohio St. at 305.

228. *Greenleaf*, 35 Mass. at 122–23; *see also Frazier*, 12 Ohio St. at 305–06.

229. *Frazier*, 12 Ohio St. at 306 (quoting *Greenleaf*, 35 Mass. at 122).

230. *See id.* at 311; *see also Greenleaf*, 35 Mass. at 122–23.

231. *Greenleaf*, 35 Mass. at 123.

> the opening of mines of metal or coal; as the water might not percolate, with the same freeness or abundance as before.[232]

Thus, once again, the court held that a landowner's right to capture the water beneath the surface of his land is not restricted by the unforeseeable effects that his activities might have on the percolation and subsidence of water beneath neighboring parcels.[233]

c. Development of the rule of capture in Texas

(1) Houston & T. C. Railway. Co. v. East

As noted previously, *Houston & T. C. Railway Co. v. East*[234] is the landmark case in which the Texas Supreme Court adopted the English rule of capture and applied it to groundwater rights.[235] Since the *Day* decision anchors its analysis of the rule of capture in the *East* decision, it is important to have a thorough understanding of *East*'s articulation of this rule.[236] In *East*, the court adopted the rationales stated in *Acton v. Blundell*[237] and *Frazier v. Brown*.[238][239] According to these precedents, a landowner is perfectly free to dig on his property and use any of the water he secures in whatever manner he pleases.[240] This means that a landowner's right to capture the water found beneath his land is not dependent upon the place of the water's origin or the effect of its removal.[241] Thus, the rule of capture justifies a landowner in capturing water beneath his land even if it results in the exhaustion of the water supply beneath a neighboring parcel.[242] In the words of the court: "The mere quantity of water taken by the owner from his land has nowhere been held to affect the question."[243]

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

233. *Id.* at 541–44.

234. Houston & T. C. Ry. Co. v. East, 81 S.W. 279 (Tex. 1904).

235. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 823 (Tex. 2012).

236. *See id.* at 823–29. Throughout *Day*'s discussion of the rule of capture, the court makes repeated references to *East* and seeks to interpret subsequent precedents in light of the fundamental principles pronounced in *East*. *Id.*

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

238. Frazier v. Brown, 12 Ohio St. 294 (1861).

239. *East*, 81 S.W. at 280–81.

240. *Id.*

241. *Id.*

242. *Id.* at 281.

243. *Id.*

Moreover, the *East* court asserted that this right is not contingent upon a landowner's underlying motivation in capturing the water[244] or his intentions for using the water after it is captured.[245] The court supported these assertions with references to case precedent from England, Iowa, and New York.[246] In fact, the court asserted that the English rule of capture it was articulating 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, except the Supreme Court of New Hampshire."[247] On the basis of these authorities, the *East* court held that Texas groundwater should thereafter be governed by the rule of capture.[248]

(2) *The progeny of* Houston & T. C. Railway. Co. v. East

Fifty years after *East* was decided, the Texas Supreme Court again addressed the question of the rule of capture in light of the increasing shift toward the "American rule" mentioned previously.[249] In *City of Corpus Christi v. City of Pleasanton*,[250] the court noted that the "American rule" originated in the New Hampshire case *Bassett v. Salisbury Manufacturing Co.*[251] and that "[t]he modern tendency is toward this . . . rule."[252] Nevertheless, the court in *Corpus Christi* declined to deviate from the English rule and refused to join the modern trend, declaring that the holding in *East* was "considered and deliberate."[253] Moreover, the court in

244. *Id.* at 280 ("[T]he 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* . . . ." (emphasis added) (quoting Acton v. Blundell, (1843) 152 Eng. Rep. 1223, 1235)).

245. *Id.* at 281 ("So the authorities generally state that the use of the water for manufacturing, brewing, and like purposes is within the right of the owner of the soil, whatever may be its effect upon his neighbor's wells and springs.").

246. *Id.* (citing Hougan v. Milwaukee & St. Paul Railway Co., 35 Iowa 558 (1872); Pixley v. Clark, 35 N.Y. 520 (1866); Chasemore v. Richards, [1857] 157 E.R. 71).

247. *Id.* at 280.

248. Edward Aquifer Auth. v. Day, 369 S.W.3d 814, 823–26 (Tex. 2012).

249. *See supra* Part II.B.2.a.

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

251. Bassett v. Salisbury Mfg. Co., 43 N.H. 569 (1862).

252. *Corpus Christi*, 276 S.W.2d at 800–01.

253. *Id.* ("With both rules before it, this Court, in 1904, adopted, *unequivocally*, the 'English' or 'Common Law' rule. . . . The opinion in the case shows quite clearly that the court weighed the merits of the two rules . . . ." (emphasis added)).

Corpus Christi expanded the rule of capture to include a landowner's right to transport and store the water he captured:

> It thus appears that under the common-law rule adopted in this state an owner of land could use all of the percolating water he could capture from wells on his land for whatever beneficial purposes he needed it, on or off of the land, and could likewise sell it to others for use off of the land and outside of the basin where produced, just as he could sell any other species of property. We know of no common-law limitation of the means of transporting the water to the place of use.[254]

Thus, a landowner holds vested rights in the water that he captures, and he is free to use it, move it, and keep it as he pleases.[255]

Following these affirmations of the rule of capture, the Texas Supreme Court tempered its position in *Friendswood Development Co. v. Smith-Southwest Industries, Inc.*[256] Looking back to the *East* decision, the *Friendswood* court noted that "the [*East*] Court mentioned only waste and malice as possible limitations to the rule [of capture]."[257] The *Friendswood* court acknowledged that waste and malice were the only historically recognized limits on the rule of capture and ruled accordingly.[258] Nevertheless, the *Friendswood* court declared that these limitations would be expanded in future cases to allow a cause of action against a landowner for the negligent withdrawal of groundwater:[259]

> As far as we can determine, there is no other use of private real property which enjoys such an immunity from liability under the law of negligence. . . . Our consideration of this case convinces us that there is no valid reason to continue this special immunity insofar as it relates to future subsidence proximately caused by negligence in the manner which wells are drilled or produced in the future. It appears that the ownership and rights of all landowners will be better protected against subsidence if each

254. *Id.* at 802.

255. *Id.* at 801–02.

256. Friendswood Dev. Co. v. Smith-Sw. Indus., Inc., 576 S.W.2d 21 (Tex. 1978).

257. *Id.* at 25.

258. *Id.* at 25–29. The Court supported its analysis with citations to the Restatement (First) of Torts §§ 818, 820 (1939) and cases from England, D.C., Ohio, Maryland, and various Texas State and Federal courts. *Id.*

259. *Friendswood*, 576 S.W.2d at 29–31.

> has the duty to produce water from his land in a manner that will not negligently damage or destroy the lands of others.[260]

Thus, in an effort to achieve uniformity in a landowner's legal responsibilities and to better balance the rights of landowners as a class, the *Friendswood* court moderated the rule of capture.[261]

As the years have passed, the Texas Supreme Court has continued to admit that the rule of capture is steadily becoming obsolete in many jurisdictions; however, the Court has consistently upheld the theory.[262] In *Sipriano v. Great Spring Waters of America, Inc.*,[263] for example, the Court repeated the classic statement of the rule of capture[264] and clarified its contemporary significance.[265] The *Sipriano* court pointed out that, when the constitutional, legislative, and regulatory developments that were made during the twentieth-century are considered alongside the judicial refinement of the rule of capture that occurred during the same period, it is evident that the rule of capture was foundational to the other developments of Texas water law.[266] Thus, the court concluded:

> It would be improper for courts to intercede at this time by changing the common-law framework within which the Legislature has attempted to craft regulations to meet this state's groundwater-conservation needs. . . . [W]e are reluctant to make so drastic a change as abandoning our rule of capture and moving into the arena of water-use regulation by judicial fiat.[267]

This conclusion sealed Texas's view of the rule of capture with respect to groundwater until the issue was resurrected and reexamined in *Day*.[268]

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260. *Id.* at 30.

261. *Id.* at 29–31.

262. *See, e.g.*, City of Sherman v. Pub. Util. Comm'n of Texas, 643 S.W.2d 681, 686 (Tex. 1983) ("[T]he Court [has] had an opportunity to reconsider the propriety of th[e] rule [of capture] and [has] refused to depart from it. Despite criticism of this theory, it remains the law today." (referring to *Friendswood*, 576 S.W.2d at 21)).

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

264. *See id.* at 76.

265. *Id.* at 76–80.

266. *Id.*

267. *Id.* at 80. It is ironic and puzzling to compare the *Sipriano* court's reluctance to change the rule of capture by "judicial fiat" with the *Friendswood* court's eagerness to place an additional limitation on the rule of capture by "judicial fiat." *Compare id.*, *with Friendswood*, 576 S.W.2d at 29–31.

268. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 826–28 (Tex. 2012).

d. Summary of the rule of capture

In light of the venerable tradition surrounding the rule of capture, it is not surprising that the *Day* court reaffirmed this important doctrine. At the same time, as noted previously, the traditions surrounding both the rule of capture and the concept of ownership in place have been jettisoned by modern legal trends. Thus, the rule of capture has been abandoned by a majority of modern American jurisdictions.[269] In fact, Texas now stands alone as "the only major state that follows the judicially crafted rule of capture regarding groundwater."[270] Nevertheless, for the Texas Supreme Court, the rationale behind the rule of capture remains compelling, and the court consistently continues to apply this rule to groundwater oil and gas.[271] At this point, it is doubtful that the court will ever—or *should* ever—follow the modern trend by overturning the rule of capture and moving toward an alternative theory such as the correlative rights doctrine. Hence, the key issue presented by *Day*'s reaffirmation of the rule of capture is not determining how it relates to the existing *precedential* framework of groundwater rights but how it should be harmonized with the expanding *theoretical* framework of groundwater rights. This issue will be addressed later on.

III. PROBLEM

As with all legal theories, the concept of ownership in place and the rule of capture are susceptible to critical variations of interpretation and application. Unfortunately, the *Day* court did not articulate these two principles with enough detail and nuance to establish which variant interpretation and application it was adopting and why. On the surface, there is tremendous tension between these two principles.[272] Moreover, as it has been seen, each theory has its own variegated history in Texas case law. If the holdings of the *Day* court are going to be developed effectively in future cases, these problems must be addressed.

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269. WATER RIGHTS, *supra* note 195, §§ 20.04, 20.06, 20.07(b).

270. Kaiser, *supra* note 16, at 473.

271. *Day*, 369 S.W.3d at 823–29.

272. *See* Canseco, *supra* note 188, at 525 (concluding that "Texas's rule of capture was always inconsistent with the idea that landowners own groundwater in place because the law did not protect that ownership.").

A. *The Equivocal Nature of Texas's View of Ownership in Place*

The concept of ownership in place is a standard doctrine in Texas property law and jurisprudence; however, its application to groundwater is new. By applying a historic concept in such an innovative manner, the Texas Supreme Court invites scrutiny of the consistency of its logic and legal reasoning. If ownership in place is not properly defined and interpreted, it can present serious theoretical conundrums.

1. Difficulties with the Basic Characteristics of Groundwater

Perhaps the largest difficulty with ownership of groundwater in place springs from the intrinsic characteristics of groundwater. Groundwater is constantly moving, oozing, percolating, filtering, rising, and falling, "without any distinct, definite, and known channel."[273] In fact, the *Day* court explicitly adopts the rationale of the Ohio Supreme Court in *Frazier v. Brown*, acknowledging that,

> 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.[274]

This problem is accentuated by the unique nature of the Edwards Aquifer. As noted previously, the fluctuation of water levels within the Edwards Aquifer is even more volatile than that of other aquifers.[275] In some areas, the aquifer has a hydraulic conductivity of over 7000 feet per day.[276] Nevertheless, the *Day* court confidently asserts that property owners have constitutionally recognizable rights in the groundwater beneath the surface of their land: "Groundwater rights are property rights subject to constitutional protection, whatever difficulties may lie in determining adequate compensation for a taking."[277] Essentially, the court affirms a constitutional property right while simultaneously acknowledging that such a right may be practically unquantifiable.

This elicits a litany of questions: If groundwater is constantly in flux, how can any fixed property values be established? And if there are no fixed

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273. Frazier v. Brown, 12 Ohio St. 294, 302–03 (1861).

274. *Day*, 369 S.W.3d at 825 (quoting *Frazier*, 12 Ohio St. at 311).

275. EDWARDS AQUIFER AUTH., *supra* note 13, at 5–6.

276. GEORGE, MACE, & PETROSSIAN, *supra* note 20, at 30.

277. *Day*, 369 S.W.3d at 833.

property values and distinct water levels, what does ownership in place actually entail?[278] If there is no solid knowledge of the nature and movement of groundwater, is ownership of groundwater in place even a meaningful concept? Has the court embraced a hopeless uncertainty and a practical impossibility? If the nature of groundwater is taken seriously, then it appears that ownership of groundwater in place is a vacuous affirmation of an unquantifiable property interest.

2. Difficulties with the Established View of Groundwater

Additional problems arise when the concept of ownership in place is considered in conjunction with the established forms and structure of groundwater management. Two specific difficulties should be noted. First, it is firmly established that, in light of the rule of capture, property owners sustain no legally cognizable injury when the water beneath their land subsides, drains, or percolates away on account of a neighbor's drilling and extraction.[279] The *Day* court did not hesitate to affirm this fact when it cited *Pixley v. Clark*: "'An owner of soil may divert percolating water, consume or cut it off, with impunity. . . . No action lies against the owner for interfering with or destroying percolating or circulating water under the earth's surface.'"[280] The court attempted to clarify its use of *Pixley* by explaining that "[w]hatever the New York court may have intended by this statement, we could have meant only that a landowner is the absolute owner of *groundwater flowing at the surface* from its well, even if the water originated beneath the land of another."[281] Unfortunately, this clarification only worsens the court's dilemma: if ownership of water vests in the person that brings it to *the surface* without any regard for the prior position of the water while it was *in place*, then what becomes of *ownership in place*? If one property owner can deprive another of his groundwater with impunity, then of what value is the concept of ownership in place? The rights of

278. Canseco, *supra* note 188, at 510 ("While this statement of the rules of absolute ownership and capture might sound appealing to the drainer, it is less appealing to the drainee; under the above-described rule, he owns his groundwater too, and yet the rule of capture denies him a remedy when it is drained, so in what sense does he own it?").

279. *Day*, 369 S.W.3d at 824–28. This principle was affirmed in *Acton v. Blundell*, *Langbrook Properties, Ltd. v. Surrey County Council*, *Greenleaf v. Francis*, *Roath v. Driscoll*, and *Houston & T. C. Railway Co. v. East*, all of which were discussed and summarized above. *See supra* Part II.B.2.

280. *Day*, 369 S.W.3d at 826 (quoting Houston & T. C. Railway Co. v. East, 81 S.W. 279, 280–81 (Tex. 1904) (quoting Pixley v. Clark, 35 N.Y. 520, 527 (1866))).

281. *Id.* (emphasis added).

ownership appear to be worthless if their loss is a mere *damnum absque injuria*.[282]

Second, the concept of ownership in place has the potential to undermine regulatory schemes such as the one embodied in the Edwards Aquifer Authority Act. If every property owner has absolute rights to the groundwater beneath the surface of his land, and if a regulatory agency is committed to compensating property owners for any deprivation of their rights,[283] then entities like the Edwards Aquifer Authority will be unable to enforce any regulations on the extraction and use of groundwater without first compensating every property owner for the resultant deprivation. Given the unquantifiability of groundwater values and the expense of constitutional takings litigation, such an application of ownership in place would cripple any efforts for the effective management of groundwater.

B. *The Latent Problems with Texas's View of the Rule of Capture*

Notwithstanding the fact that the rule of capture is a venerable fixture in Texas property law and jurisprudence, there are numerous problems that can arise from imbalanced interpretations and applications of this principle. Like the concept of ownership in place, the rule of capture has conflicting implications that must be clarified, limited, and avoided in order for the principle to be developed effectively.

1. Difficulties with the Vesting of Ownership

Ironically, the key weakness of the rule of capture lies within its greatest strength—its ability to provide a definite time at which groundwater rights vest and become legally cognizable. The problem is not complex, but it is logically inescapable: If ownership rights do not vest until after groundwater has been reduced to actual possession by capture, then there are no property interests that support extracting the water in the first place. Thus, in a very real sense, it is a theoretical free-for-all before capture takes place. Of course, if groundwater were an unlimited resource, then this would not present a problem. But given the scarcity of groundwater, this aspect of the rule of capture can lead to serious conflict.

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

283. The Edwards Aquifer Authority Act clearly states that "[t]he legislature intends that just compensation be paid if implementation of this article causes a taking of private property...." EAAA § 1.07.

An excellent illustration of this difficulty is found in *City of Corpus Christi v. City of Pleasanton*.[284] In the mid-1900s, the City of Corpus Christi began purchasing water from the Lower Nueces River Supply District, which was 118 miles away.[285] The Supply District used four wells to pump water out of the Carrizo-Wilcox Aquifer and into the Nueces River so that it could be collected downstream by the City and stored in a settling basin.[286] If the wells were pumped at full capacity, they would "discharge water into the river at the rate of ten million gallons of water per day."[287] Unfortunately, however, there was evidence that 63–74% of this water "escaped through evaporation, transpiration and seepage and never reached its destination to be put to a beneficial use."[288] Notwithstanding the fact that such intensive pumping deprived surrounding property owners of water that they could have used beneficially, the court held that the plaintiffs had no actionable claim since the rule of capture gave the City and the Supply District the right to extract water as they pleased.[289] As the dissent pointed out, under the rule of capture, there is no recourse for the surrounding property owners:

> In the field of water law, there is no consolidation [sic] to be found in the law of capture. Of what value would it be to the plaintiffs to offset defendants' wells and produce an enormous amount of water for which they have no use? This would further deplete the reservoir, reduce the pressure, and lower the standing level with consequent increase of pumping expense. Why further injure their own wells? To refer them to the law of capture in this situation is simply to say that one who has been injured may go and inflict a like injury upon his neighbor. If the law of capture has any true application to underground water, it is an extremely limited one.[290]

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284. City of Corpus Christi v. City of Pleasanton, 276 S.W.2d 798 (Tex. 1955). Interestingly, this case was also filed in Atascosa County—almost fifty years before Day filed his complaint against the Edwards Aquifer Authority. *Id.*

285. *Id.* at 799–800.

286. *Id.*

287. *Id.* at 800.

288. *Id.*

289. *Id.* at 801–02.

290. *Id.* at 808 (Wilson, J., dissenting).

In such a situation, the rule of capture only encourages the petty multiplication of well-pumping wars or the complacent relinquishment of valuable groundwater. Neither alternative respects the property rights involved or optimizes the resources at stake.

2. Difficulties with the Regulation of Ownership

Furthermore, such a strict interpretation of the rule of capture opens the door for dangerous regulatory abuses. After all, if ownership rights do not vest in the property owner until he has extracted and captured the groundwater beneath his property, then regulations on extraction and capture would constitute pre-ownership restrictions and would not deprive a property owner of any vested rights. Consequently, the government would be free to impose any regulations that it desired without having to address the issue of constitutional takings. Although statute and custom may guard against such an intrusion, legal logic does not.

For example, according to the Edwards Aquifer Authority Act, "waste" includes "withdrawal of underground water from the aquifer at a rate and in an amount that causes or threatens to cause intrusion into the reservoir of water unsuitable for agricultural, gardening, domestic, or stock raising purposes."[291] If property owners do not have an underlying, preexisting property right in the groundwater beneath their land, then the Edwards Aquifer Authority may infuse this definition with its own understanding of what "causes or threatens to cause intrusion into the reservoir," without needing to fear any legal repercussions.[292] Functionally, groundwater would then be rationed according to the valuations of the Authority. Of course, the *Day* court makes it clear that the doctrine of constitutional takings renders this interpretation and application of the rule of capture impossible.[293] Nevertheless, although the court interprets and applies the rule of capture properly, it fails to articulate the rule clearly and consistently. This is problematic.

IV. PROPOSAL

In spite of the aforementioned difficulties, the concept of ownership in place and the rule of capture are not inherently antithetical. This position is stressed by the *Day* court: "But while the rule of capture does not entail

291. EAAA § 1.03(21)(A).

292. *See id.*

293. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 843–44 (Tex. 2012).

ownership of groundwater in place, neither does it preclude such ownership."[294] Thus, after the *Day* decision, the task moving forward is to clarify the meaning of *ownership in place* and *rule of capture* so that courts, legislatures, and agencies may work together with a consistent understanding of the theory of groundwater rights.

A. *The Process of Clarifying Theoretical Inconsistencies*

This Proposal will clarify the theoretical inconsistencies of the *Day* decision by addressing three issues. First, it will outline the proper meaning of ownership in place. This is the foundational doctrine on which the rule of capture and all groundwater regulatory schemes must rest. Second, the Proposal will outline the proper meaning of the rule of capture. This rule is only effective when its intended purpose is recognized and respected. Third, the Proposal will outline the practical ramifications that should result from a proper understanding of ownership in place and the rule of capture.

1. The Proper Meaning of Ownership in Place

In order to frame the proper understanding of the concept of ownership in place, it is essential to remember that ownership is inescapable. Property rights must vest at all times.[295] Therefore, the question is not *whether* groundwater is susceptible to ownership in place, but *who* will claim ownership of groundwater in place. Either the collective public represented by the state will claim ownership, or individual property owners will claim ownership.[296] Those who oppose the *Day* court's adoption of individual ownership in place will necessarily default to some form of collective ownership.[297] This does not answer any questions; it simply recasts them in a different context.

Properly understood, the assertion of private ownership of groundwater in place is not a vacuous affirmation of an unquantifiable right. Notwithstanding the continuous fluctuation in groundwater levels, there is quantifiable value in groundwater. In fact, the factual and legal context in which groundwater disputes are framed demonstrates that modern

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294. *Id.* at 828. The court opens and closes its discussion of the rule of capture with the assertion that this rule is consistent with the concept of ownership in place. *Id.* at 823, 828.

295. Marvin W. Jones & Timothy C. Williams, *A New Day in Texas: The Implications of Day v. Edwards Aquifer Authority*, B.N.A. TOXICS LAW REPORTER, 2012 WL 2831853 (B.N.A.), July 11, 2012.

296. *Id.*

297. *Id.*

landowners and regulative agencies possess a significant body of knowledge regarding the value, nature, and movement of groundwater.[298] As Justice Wilson noted in his dissent to *City of Corpus Christi v. City of Pleasanton*, it is a mistake to ignore the advances of modern technology:

> These cases [*Frazier v. Brown* and *Acton v. Blundell*] were decided . . . before the development of most of our present knowledge of geology and hydrology and there has been a great advance in knowledge since these decisions. . . . Th[e] dire prediction[s] [contained in these cases]—like much prophecy—overlooked the possibility of advance in knowledge and technique. It is understandable that this rationale should appeal to this court in 1904 but I regret to see us reaffirm it . . . especially in view of the development since 1904 of our comprehensive knowledge and experience in oil and gas regulation.[299]

If there was any truth in Justice Wilson's words in 1955, there is certainly truth in them in the twenty-first-century. A lack of *exact* knowledge does not imply a lack of *any* knowledge, and a lack of a *precise* remedy does not preclude the existence of *any* remedy. With the information available through modern technology, courts and regulative agencies are better equipped than ever before to defend property rights by expanding a property owner's ability to take legal action against wasteful, malicious, and wanton conduct. By the vigorous use of this information, courts can make the concept of ownership in place a practical reality, not merely a theoretical construct.

But even as a theoretical construct, the concept of ownership in place is crucial to maintaining groundwater rights. In light of the *Day* decision, it is helpful to reconsider the concept of ownership in place in terms of an analogy between groundwater and wild animals.[300] The idea behind this

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298. *Compare* City of Corpus Christi v. City of Pleasanton, 276 S.W.2d 798, 805 (Tex. 1955) (Wilson, J., dissenting), *with* Frazier v. Brown, 12 Ohio St. 294, 311 (1861). Only fools argue over something that they know nothing about. The fact that researchers, scientists, and others have been able to define, map, and attempt to manage the fluctuating levels of groundwater indicates that the movement of underground water is far from being the "secret, occult and concealed" mystery that it was in the past. *See Frazier*, 12 Ohio St. at 311.

299. *Corpus Christi*, 276 S.W.2d at 805 (Wilson, J., dissenting).

300. WADLEY, *supra* note 8, § 49.02(b). Unfortunately, this analogy was discarded by the Texas Court of Appeals in *Lone Star Gas Co. v. Murchison*, 353 S.W.2d 870, 879–80 (Tex. App. 1962). In that case, however, the court was addressing issues involving oil and gas, not

analogy has been developed and applied in various contexts, and it may be summarized quite simply:

> Rights to possess wild animals—*ferae naturae*—only become fixed upon "capture." Moreover, a wild animal, once it escaped from the possessor back to its natural habitat, would become unowned and subject to capture again. The one restraint on this system of ownership which recognized a landowner's rights was that it was trespass to enter another's property to capture a wild animal.[301]

Essentially, a property owner's rights in the groundwater beneath his land are identical to his rights over a wild animal on his land. While the water is beneath his land, he has the exclusive right to capture it, reduce it to possession, and use it as he pleases. If he does not exercise this right, then just as a wild animal may stray from one parcel to the next, so groundwater may percolate from one parcel to the next, taking his chances of possession with it. Nevertheless, the fact that the property owner may be divested of his ownership interest because of his failure to protect it does not mean that the interest did not exist to begin with. Also, the fact that the remedies available to a dispossessed property owner are limited does not negate the reality of his preexisting rights. In the same way that the law of trespass gives structure and order to the pursuit of wild animals, the concept of ownership in place sets the proper framework and context for the extraction and possession of groundwater.

2. The Proper Meaning of the Rule of Capture

The analogy between groundwater and wild animals also provides insight into the proper understanding of the rule of capture. In order for a property owner to claim the right to capture a wild animal, he must have access to that wild animal by a preexisting proprietary right. In other words, he can only capture the wild animal because it is on *his* land. For anyone else to capture the animal would constitute a trespass.[302] Thus, the right to capture the wild animal or groundwater logically presupposes a more basic and fundamental proprietary right. If there were no ownership interest, however limited, existing prior to the time of capture, then the property

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groundwater. *Id.* Thus, the reasons cited by the court for its refusal to apply this analogy to oil and gas law are not applicable to the present discussion.

301. WADLEY, *supra* note 8, § 49.02(b).

302. *Id.*

owner would have no more right to secure possession of the wild animal or groundwater than anyone else. In other words, the rule of capture is a derivative or secondary doctrine that is dependent on an underlying framework of property ownership.

This approach to the rule of capture is reinforced by the context in which it was originally developed. After all, the strict English form of the rule of capture was originally known as "the absolute ownership doctrine."[303] As explained by the court in *Acton v. Blundell*, a property owner owns "all that lies beneath his surface."[304] This fundamental ownership interest—ownership in place—provides the logical foundation for the derivative right to "dig therein, and apply all that is there found to his own purposes at his free will and pleasure"—rule of capture.[305] The rule of capture was never intended to be an independent theory of ownership; it has always been contingent on a more basic theory.

As the *Day* court acknowledges, there are significant limits and exceptions to the rule of capture.[306] Even though damages from subsidence, percolation, and drainage are difficult to prove, a property owner may still maintain a cause of action in cases of "malice or wanton conduct."[307] Moreover, the *Day* court suggests that these are "only examples" of the possible causes of action that might be maintained in a dispute over groundwater.[308] The original English rule of "non-liability" was only a "general doctrine."[309] It was intended to protect a property owner in the securement and enjoyment of his own groundwater rights against frivolous, speculative, and unverifiable claims. It was not intended to provide a rationale by which a property owner could surreptitiously claim rights over the groundwater of others.[310] Hence, the rule of capture must not be viewed as the absolute standard by which all property interests are defined, but rather as a limiting doctrine by which preexisting property interests are identified and secured.

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303. *Id.* at § 50.11(e).

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

305. *Id.* at 1235.

306. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 825–26 (Tex. 2012).

307. *Id.* at 825–26.

308. *Id.* at 826.

309. *Id.*

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

B. *The Ramifications of Clarifying Theoretical Inconsistencies*

To explore the ramifications that should follow the harmonization of the concept of ownership in place and the rule of capture, it is important to articulate clearly the standard being suggested. The foregoing sections may be summarized as follows: Groundwater is *owned in place.* This means that a property owner has a vested right to extract, possess, and use the water from beneath his land as he sees fit. At the same time, property owners must balance their competing interests by using the *rule of capture* as a limiting doctrine that helps to define the extent to which actions can be sustained for the wasteful, wanton, and malicious conduct of other groundwater users. Thus, the *rule of capture* is built on and must be subject to the more fundamental concept of *ownership in place.* This understanding of groundwater rights harmonizes the diverse principles proposed and affirmed in the *Day* decision. And it entails important practical ramifications.

1. The Ramifications of Theoretical Consistency for Private Landowners

The harmonization of the concept of ownership in place and the rule of capture will have significant effects on private landowners. There are two specific ramifications that should be noted. First, when ownership in place is asserted and the rule of capture is confined to its proper function, disputes over groundwater will take on an entirely different character. As long as the rule of capture is viewed as providing absolute immunity to the party extracting water, there is an inherent incentive for property owners to pump aggressively, without considering the future effects of their actions. But if the rule of capture is interpreted as complementary to ownership in place, and if the causes of action for waste, malice, and wanton conduct are vigorously applied, then property owners will be encouraged to pump responsibly, with a view toward the maximization of limited resources.

For example, such an approach would have dramatically changed the outcome of *City of Corpus Christi v. City of Pleasanton.*[311] Dissenting from the majority, Justice Griffin argued that it was quintessentially wasteful to pump 10 million gallons of groundwater into a river each day, lose 7.5 million gallons in transportation, and finally use only 2.5 million gallons for beneficial purposes.[312] Likewise, Justice Wilson argued that it was utterly

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

312. *Id.* at 804 (Griffin, J., dissenting).

useless for the court to instruct the neighboring property owners to "offset defendants' wells and produce an enormous amount of water for which they have no use."[313] Unfortunately, the majority adopted an absolute interpretation of the rule of capture that merely paid lip-service to actions for waste, malice, and wanton conduct.[314] If the majority had begun with the assumption of ownership in place and balanced the rule of capture with a more realistic understanding of waste, malice, and wanton conduct, then the City of Pleasanton would not have been forced to consider a well-pumping war with the City of Corpus Christi. Instead, Corpus Christi would have been forced to find a more responsible method of extraction and transportation—a method that did not result in the daily loss of 7.5 million gallons of groundwater.

Second, if property owners are going to enjoy the vitality and strength that the concept of ownership in place provides to their ownership interests, they must also prepare to bear the burdens that accompany such interests. The most notable burden that may fall on property owners is a property tax on their groundwater interests. As noted previously, when the Texas Supreme Court first recognized ownership of oil and gas in place in *Texas Co. v. Daugherty*, it was for the purpose of determining whether oil and gas rights constituted a taxable vested property interest.[315] After a lengthy analysis, the court concluded that "the value of [a party's underground property rights i]s assessable against it for taxation."[316] Since the *Day* court commenced its analysis of ownership in place with an examination of *Daugherty*, and since the court explicitly stated that it found "no reason to treat groundwater differently" from oil and gas as regards this principle, it is likely that the *Day* decision will be used to justify the assessment of taxes against groundwater interests.[317] Unfortunately, this possibility will likely grow stronger with the development of an independent market of private contractual groundwater transfers.

2. The Ramifications of Theoretical Consistency for Regulatory Agencies

The harmonization of the concept of ownership in place and the rule of capture should also have significant effects on the regulation of

313. *Id.* at 808 (Wilson, J., dissenting).

314. *Id.* at 801–03.

315. Texas Co. v. Daugherty, 176 S.W. 717, 722 (Tex. 1915). *See supra* Part II.B.1.c.(1).

316. Daugherty, 176 S.W. at 722.

317. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 823, 829, 831–32 (Tex. 2012).

groundwater. Most importantly, with respect to the specific circumstances addressed by *Day*, the historical use requirement of the Edwards Aquifer Authority Act must be revoked.[318] Such an arbitrary requirement is antithetical to both the concept of ownership in place and the rule of capture because it makes groundwater rights *contingent on the use* of one's property rather than *inherent in the ownership and possession* of one's property. In reality, rather than facilitating development and conservation, such a requirement attempts to artificially freeze water usage at an arbitrary level. This is contrary to the stated purpose of the Edwards Aquifer Authority.[319] The historical use requirement does not protect or equitably distribute groundwater rights; it undermines them.

If the historical use requirement was eliminated and only the beneficial use requirement was enforced, then property owners would be forced to develop their groundwater rights more efficiently. The increased competition for limited resources would cultivate the development of new methods of extraction, use, and recycling. It would also provide incentive for private contractual transfers. Rather than binding current property owners to the ways in which prior owners managed their groundwater in bygone days, regulations based solely on beneficial use would allow natural scarcities to fuel innovation and new development.

Instead of regulating on the basis of historical use, regulatory agencies ought to emphasize beneficial use requirements. Such requirements are more consistent with the concept of ownership in place and the rule of capture because they allow for flexibility and are tied to the well-established exceptions to the rule of capture. For example, if a localized water conservation district, such as the Edwards Aquifer Authority, is confronted with groundwater scarcity in a severe drought, then it may be justified in prohibiting the extraction of groundwater for extraneous, non-essential uses since such extraction could be considered waste, malice, or wanton conduct. Moreover, since this type of regulation is consistent with the common law causes of action, private individuals could enforce it through legal action. This would be a significant boon to the practical administration of such a regulatory scheme.

At the same time, regardless of what regulatory scheme prevails, the *Day* decision provides a new bulwark for private property rights. The *Day* court unequivocally acknowledges that its affirmation of the ownership of groundwater in place will cause certain regulatory actions to be regarded as

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318. *See supra* Part II.A.2.d.

319. EAAA §§ 1.01, 1.06, 1.07. *See supra* Part II.A.2.a.

constitutional takings.[320] Not surprisingly, the Edwards Aquifer Authority feared this result: "Moreover the Authority is concerned that takings litigation will disrupt the robust market that has developed in its permits and that buyers will be wary of paying for permits that may later be reduced."[321] Notwithstanding the Authority's fears, the *Day* court concludes:

> The Takings Clause ensures that the problems of a limited public resource—the water supply—are shared by the public, not foisted onto a few. We cannot know, of course, the extent to which the Authority's fears will yet materialize, but the burden of the Takings Clause on government is no reason to excuse its applicability.[322]

The court is correct to disregard the fears of the Authority. After all, it is inconsistent for the government to claim to regulate groundwater for the good of its citizens as a whole while simultaneously stripping them of their groundwater rights as individuals. Thus, in the end, *Day*'s affirmation of ownership in place provides a much-needed reaffirmation of constitutional property rights.

V. CONCLUSION

The theory of groundwater rights is important. In the area encompassed by the Edwards Aquifer alone, animals and crops, protected species and rare plants, special ecosystems and general waterways, small towns and large cities, all depend upon groundwater for survival. An erosion of groundwater rights today will lead to a drought of agricultural, industrial, and municipal development in the future. If, however, courts and lawmakers are willing to embrace the task commenced by the *Day* court and synthesize ownership in place and the rule of capture into a consistent theory of groundwater rights, then the future is bright. And perhaps the quarrels of the Patriarchs will finally become a thing of the past as men learn to understand and utilize their God-given resources in a more consistent and faithful manner.

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320. *Day*, 369 S.W.3d at 843–44.

321. *Id.* at 843.

322. *Id.* at 843–44.