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Maybe Oil and Water Should Mix - At Least In Texas Law: An Analysis of Current Problems With Texas Ground Water Law and How Established Oil and Gas Law Could Provide Appropriate Solutions

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**MAYBE OIL AND WATER SHOULD MIX — AT
LEAST IN TEXAS LAW: AN ANALYSIS OF
CURRENT PROBLEMS WITH TEXAS GROUND
WATER LAW AND HOW ESTABLISHED OIL
AND GAS LAW COULD PROVIDE
APPROPRIATE SOLUTIONS**

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I. INTRODUCTION

A. Historical Development

1. Texas Surface Water Law Has Developed in an Effort to Meet Changing Conditions

The history of Texas surface water law begins with land grants from the King of Spain to settlers on land which would later become a part of the Republic of Texas.¹ After Mexico won independence from Spain, the Mexican government also granted land, including grants of surface water rights, to induce people to settle in Texas. The Republic of Texas continued the Spanish-Mexican system for regulating surface water rights from 1836 until 1840.²

In 1840 Texas adopted the English Common Law system of “riparian rights” to determine surface water use.³ The riparian system recognizes a distinction between owning water and owning the right to use water. Although a property owner has no property right in the surface water itself, landowners with property containing flowing water have a right to use the water.⁴ The right to use flowing water is

1. *Miller v. Letzerich*, 121 Tex. 248, 253, 49 S.W.2d 404, 407 (1932). In *Miller*, the court noted that:

In determining the Legislature’s power to pass laws affecting surface water rights [the court] must consider the effect of the grants made by each sovereign. Lands in Texas have been granted by four different governments, namely, the Kingdom of Spain, the Republic of Mexico, the Republic of Texas, and the State of Texas. Many millions of acres of land were granted by Spain, Mexico, and the Republic of Texas prior to the adoption by the latter of the common law of England as the rule of decision in 1840. From 1836 until 1840 Texas continued to recognize Spanish - Mexican civil law. A change of sovereignty does not affect the property rights of the inhabitants of the territory involved.

Id.

2. *Id.* at 407.

3. Laws of the Republic of Texas, Act of January 20, 1840, reprinted in 2 H. GAMMEL, LAWS OF TEXAS 177-78 (1898); (currently codified at TEX. CIV. PRAC. & REM. CODE ANN. § 5.001 (Vernon 1986), providing that the rule of decision in this state consists of those portions of the common law of England that are not inconsistent with the Constitution or the laws of this state).

4. *In re Contests of City of Laredo to Adjudication of Water Rights in Middle Rio Grande Basin and Contributing Texas Tributaries*, 675 S.W.2d 257, 260 (Tex.

known as a "usufruct."⁵ Usufructuary rights apply only to those landowners with property contiguous to flowing water.⁶ Flowing water is "ferae naturae". The capturer is the only true owner.⁷

Although the Republic of Texas changed to the common law riparian system, Texas continued to recognize water rights granted to property owners under Spanish or Mexican land grants.⁸ In 1852 Texas passed the Relinquishment Act, which provided that where surface water rights granted by Spanish law were greater than those in the common law, Spanish law would prevail.⁹ The Texas Supreme Court has recognized the validity of Spanish and Mexican land grants, with surface water rights controlled by the laws in effect at time of the grants.¹⁰ Recognition of Spanish and Mexican water rights has profoundly impacted Texas surface water law; 26 million acres of Texas' 170 million acres have titles derived from land grants by the Spanish Crown or the Republic of Mexico.¹¹ The water rights granted by Spanish sovereigns and by the Republics of Mexico and Texas have combined with the influence of English common law to give Texas a

App.—Austin 1984, writ ref'd n.r.e.); *Texas Co. v. Burkett*, 117 Tex. 16, 25, 296 S.W. 273, 276 (1927) (stating that a riparian owner has a right of use only, since the riparian does not own the water which flows past his land).

5. *In re Adjudication of Water Rights in Medina River Watershed of San Antonio River Basin*, 670 S.W.2d 250, 254 (Tex. 1984) (defining "usufruct" as a right to use water without ownership of the water). See also *Laredo*, 675 S.W.2d at 260.

6. *Friedsam v. Ulbricht*, 315 S.W.2d 442, 447 (Tex. Civ. App.—Austin 1958), *aff'd in part, rev'd in part*, 325 S.W.2d 669 (Tex. 1959); *Woody v. Durham*, 267 S.W.2d 219, 221 (Tex. Civ. App.—Fort Worth, 1954, writ ref'd); *Magnolia Petroleum Co. v. Dodd*, 125 Tex. 125, 128, 81 S.W.2d 653, 655 (Tex. Comm'n App. 1935, judgment adopted) (noting that however a riparian right may be defined, it is a universal rule that it is something inherent in and a part of the abutting land itself); *Richter v. Granite Mfg. Co.*, 107 Tex. 58, 62, 174 S.W. 284, 285 (1915) (holding that riparian rights subsist only for riparian owners, and those who do not own riparian land cannot claim them; the right depends, not upon ownership of the soil under which the water flows, but upon lateral contact with the water).

7. See 3 ROBERT E. BECK, *WATERS AND WATER RIGHTS* 118 (1991) (comparing law of water to law of fish and wild beasts).

8. *State v. Valmont Plantations*, 346 S.W.2d 853, 863 (Tex. Civ. App.—San Antonio 1961), *aff'd* 163 Tex. 381, 355 S.W.2d 502 (1962) (stating water rights granted by the Mexican state of Tamaulipas are governed by Mexican and state laws at time of grant; Spanish and Mexican land grants do not carry with them any implied rights of irrigation). See also *In re Adjudication of Water Rights in Medina River Watershed of San Antonio River Basin*, 670 S.W.2d 250, 253 (Tex. 1984) (discussing history of Spanish and Mexican water law).

9. *In re Contests of City of Laredo to Adjudication of Water Rights in Middle Rio Grande Basin and Contributing Texas Tributaries*, 675 S.W.2d 257, 259 (Tex. App.—Austin 1984, writ ref'd n.r.e.) (stating water rights are determined by the law of the granting sovereign, Spain, at the time of grant).

10. BECK, *supra* Note 7, at 407 (discussing Texas' recognition of Spanish water rights). See also *Manry v. Robison*, 56 S.W.2d 438, 443 (Tex. 1932) (recognizing water rights provided under Mexican land grants).

11. Karen H. Norris, Comment, *The Stagnation of Texas Ground Water Law: A Political v. Environmental Stalemate*, 22 ST. MARY'S L.J. 493 (1990) (total Texas acreage is 170,000,000: of this, 26,280,000 acres have titles of Spanish or Mexican derivation) (quoting B. DOBKINS, *THE SPANISH ELEMENT IN TEXAS WATER LAW* ix (1959)).

colorful history of water regulation resulting in a unique body of law.¹²

Surface water law in Texas evolved through three stages of increasing State control. The first stage of surface water law combined the Spanish and Mexican grants of surface water with the common law system of riparian rights.

The Irrigation Acts of 1889 and 1895 launched Texas upon a dual system of surface water law which continued until 1967. Unappropriated surface water became public property, but existing riparian and Spanish-Mexican grant rights remained in place.¹³ To gain rights to unappropriated surface water, a potential user filed an application with the Board of Water Engineers (ultimately, through a series of name changes, to become the Texas Water Commission). The theory was that as demand for surface water increased, the State would issue rights to meet the demand until all available water supplies were allocated.¹⁴ Over time, the market, through supply and demand, would allocate water to the most economically and ecologically efficient use. Those with new surface water needs would buy water rights, transferring water to the use that generated the most revenue.¹⁵

The dual system caused Texas water law to be in a “chaotic state.”¹⁶ In 1967, attempting to remedy the perceived problems with Texas surface water law, Texas passed the Water Rights Adjudication Act.¹⁷ The Act set up a single system for administering surface water law,¹⁸

12. See FRANK. F. SKILLERN, 1 TEXAS WATER LAW 25 (1988) (discussing effects of Spanish, Mexican, and English laws on Texas water law); see also BECK, *supra* note 7, 407-11.

13. *In re* Adjudication of the Water Rights of Upper Guadalupe Segment of Guadalupe River Basin, 642 S.W.2d 438, 440 (Tex. 1982) (discussing dual system of surface water control prior to 1967).

14. See WELLS A. HUTCHINS, THE TEXAS LAW OF WATER RIGHTS 259 (1961) (summarizing the evolution of the Board of Water Engineers into the Texas Water Commission). See also TEX. WATER CODE ANN. § 11.134(b)(2) (Vernon 1988) (“The commission shall grant the application only if . . . unappropriated water is available in the source of supply.”); Lower Colorado River Auth. v. Texas Dept. of Water Resources, 638 S.W.2d 557 (Tex. App.—Austin 1982), *rev’d on other grounds*, 689 S.W.2d 873 (1984) (stating that the Water Commission has broad discretion to determine if unappropriated water is available, considering the needs of downstream holders of vested surface water rights).

15. For the modern implementation of this concept, see TEX. WATER CODE ANN. § 12.014 (Vernon 1988) (The Texas Water Commission shall administer privileges granted for the use of State water to achieve maximum public value); See also TEX. WATER CODE ANN. § 15.701 (Vernon 1988 & Supp. 1994) (implementing the Texas Water Bank to assist in Water Rights marketing and transfer).

16. *Upper Guadalupe*, 642 S.W.2d at 442.

17. TEX. WATER CODE ANN. § 11.301 (Vernon 1988).

18. *In re* Adjudication of Water Rights of Brazos III Segment of Brazos River Basin, 746 S.W.2d 207, 209 (Tex. 1988) (stating the Water Rights Adjudication Act of 1967 was passed to remedy the chaotic condition of Texas water law). See also *Upper Guadalupe* 642 S.W.2d at 442 (noting the Water Rights Adjudication Act was passed in 1967 to consolidate surface water administration into a single system); R. Lambeth Townsend, *Cancellation of Water Rights in Texas: Use It or Lose It*, 17 ST. MARY’S L.J.

required recording water rights claims,¹⁹ provided a licensing system and required permits for surface water use.²⁰ To retain surface water rights, users must use the water²¹ in ways deemed beneficial to the public.²² The Act granted the State ownership of all surface water in trust for the people.²³ Water use permits generally define the quantity of water to be used and often limit diversions to specific times of the day or week.²⁴

Texas Courts have interpreted Spanish and Mexican grants of surface water rights in light of the 1967 Act. The Texas Supreme Court held in 1988 that owners of Spanish and Mexican lands granted prior to 1840 continue to have surface water rights under the 1967 Act,²⁵ but they must affirmatively show the grant of irrigation rights from the Spanish or Mexican sovereign.²⁶ The Court also held the 1967 Act gave exclusive authority to the Texas Water Commission to issue water permits based upon valid existing law.²⁷ The Commission's findings and determinations are subject to state district court review,²⁸ but, the trial court cannot grant equitable water rights not provided in the statute.²⁹

1217, 1227 (1986) (discussing how the Water Rights Adjudication Act ended the "dual system" of surface water regulation and vested in Texas Water Commission the right to adjudicate all surface water rights).

19. TEX. WATER CODE ANN. § 11.307(a) (Vernon 1988).

20. TEX. WATER CODE ANN. § 11.302 (Vernon 1988).

21. TEX. WATER CODE ANN. § 11.173(a) (Vernon 1988). *See also* Texas Water Rights Commission v. Wright 464 S.W.2d 642, 647-48 (Tex. 1971) (stating water permit owners were not vested with the right of nonuse of the water).

22. TEX. WATER CODE ANN. § 11.305(a) (Vernon 1988) (providing that promptly after a petition is filed the commission shall consider whether the adjudication would be in the public interest).

23. TEX. WATER CODE ANN. § 11.302 (Vernon 1988) (declaring the conservation and best utilization of the water resources of this state are a public necessity, and in the interest of the people of the state); Lower Colorado River Authority v. Texas Dept. of Water Resources, 638 S.W.2d 557, 562 (Tex. App.—Austin 1982), *ref'd on other grounds*, 689 S.W.2d 873 (1984) (holding the State's ownership of State water is a public trust.)

24. TEX. WATER CODE ANN. § 11.122(a) (Vernon 1988).

25. *Wright*, 464 S.W.2d at 647 (citing San Antonio River Authority v. Lewis, 363 S.W.2d 444 (Tex. 1962)) (holding water rights acquired under the authority of the laws of Mexico are vested rights).

26. *In re Adjudication of Water Rights of Brazos III Segment of Brazos River Basin*, 746 S.W.2d 207, 209 (Tex. 1988). *See also* State v. Valmont Plantations, 346 S.W.2d 853, 869 (Tex. Civ. App.—San Antonio 1961), *aff'd*, 163 Tex. 381, 355 S.W.2d 502 (1962).

27. *Brazos III*, 746 S.W.2d at 209.

28. TEX. WATER CODE ANN. § 11.320(a) (Vernon Supp. 1994).

29. *Brazos III*, 746 S.W.2d at 210 (The legislature, in passing the Water Rights Adjudication Act, provided the exclusive means by which water rights may be recognized, and district courts do not have authority under the Texas Constitution to grant in equity water rights not otherwise recognized by law in cases filed after August 28, 1967).

2. Underground Water Belongs to the Owner of the Surface Estate

Underground water is defined as water percolating below the surface of the earth which is not a defined subterranean stream.³⁰ Texas law states that ground water belongs to the owner of the overlying surface estate.³¹ Texas is the only state in the western United States which applies the English rule of absolute ownership to govern capture and use of groundwater.³²

The English rule provides a landowner with an absolute right to capture and withdraw percolating groundwater and places no restrictions on the amount or manner of production.³³ The English rule applies common law rules of property rights based on the “ad coelum”, or “heaven to hell” ownership theory.³⁴ Texas has adhered to the English rule of ground water regulation since the Texas Supreme Court, in 1904, established the English rule as Texas law in *Houston & T.C. Ry. Co. v. East*.³⁵ The Court stated:

[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 that if, in the exercise of such right, he intercepts or drains off the water collected from the underground springs in his neighbor’s well, this inconvenience to his neighbor falls within the description of *damnum absque injuria*, which cannot become the ground of an action.³⁶

30. TEX. WATER CODE ANN. § 52.001(6) (Vernon Supp. 1994).

31. TEX. WATER CODE ANN. § 52.002 (Vernon Supp. 1994). See *Friendswood Dev. Co. v. Smith-Southwest Indus.*, 576 S.W.2d 21, 25-26 (Tex. 1978) (discussing Texas’ adoption of the English common law rule giving a landowner absolute ownership of ground water).

32. Norris, *supra* Note 11, at 506. See also Richard S. Harnsberger, *Nebraska Ground Water Problems*, 42 NEB. L. REV. 721, 727 (1963) (“Almost all of the contiguous seventeen Western states originally accepted the English rule by dictum or decision, but today only Texas appears to follow it.”).

33. *City of Sherman v. Public Util. Comm’n of Tex.*, 643 S.W.2d 681, 686 (Tex. 1983) (holding city has absolute right to withdraw groundwater even though it interferes with the operation of a privately-owned public utility); *Friendswood Dev. Co.*, 576 S.W.2d at 24-26 (stating the right to capture underground water is absolute and “not subject to the conflicting ‘reasonable use’ rule”); *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 294, 276 S.W.2d 798, 802 (1955) (holding that landowner can capture all groundwater under his land with no limits on transportation or sale); *Farb v. Theis*, 250 S.W. 290, 292 (Tex. Civ. App.—San Antonio 1923, no writ) (stating there is an absolute right to withdraw percolating ground water “even though this withdrawal . . . results in the destruction of [another’s] water supply”).

34. HOWARD R. WILLIAMS & CHARLES J. MEYERS, *OIL AND GAS LAW* 13-14 (1981) (defines “ad coelum” as vesting the property owner in rights in all of the sky above his property up to the heavens and everything beneath the surface of his property to the center of the earth; the Latin phrase reads: *Cujus est solum, ejus est usque ad coelum et ad inferos*). See also JOHN S. LOWE, *OIL AND GAS IN A NUTSHELL* 8 (2d ed. 1988).

35. 98 Tex. 146, 81 S.W. 279 (1904).

36. *East*, 98 Tex. at 149, 81 S.W. at 280 (quoting *Acton v. Blundell*, 152 Eng. Rep. 1223, 1225 (Ex. 1843)).

East deals only with percolating water, although courts presume all ground water is percolating water unless the plaintiff can prove it is not.³⁷ The Texas Supreme Court has set out three limitations on the absolute ownership rule. The *East* rules do not protect wanton or malicious conduct or waste, and the Court in 1978 added negligence as a cause of action for damage to ground water resulting from another's acts.³⁸ The Texas legislature has codified the *East* decision in section 52.002 of the Texas Water Code.³⁹ Texas case law shows the Texas Supreme Court considers the task of formulating rules for ground-water use to be the responsibility of the legislature.⁴⁰

3. Texas Oil and Gas Law Came From the Same Roots as Ground Water Law

The first oil field in Texas was in Corsicana — accidentally discovered in 1894 while drilling for water.⁴¹ Texas oil and gas law originated from the same roots as Texas ground water law. *East* influenced early oil and gas law as well as water law.⁴²

Applying the rule of capture in early court decisions probably resulted from practical necessity; courts said they applied the rule of capture because they were not able to determine the source of a well's production. The rule as adopted was a doctrine of nonliability for damage; it did not confer a "right" to drain a neighbor's tract of oil, but refused to impose liability for so doing.⁴³

37. See *Texas Co. v. Burkett*, 117 Tex. 16, 29, 296 S.W. 273, 278 (1927); *Bartley v. Sone*, 527 S.W.2d 754 (Tex. Civ. App.—San Antonio 1975, writ ref'd n.r.e.) (holding that absent evidence that flow of springs had its source in subterranean stream, owner of the land had right to use the waters for any purpose and springs were the exclusive property of the landowner).

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

39. TEX. WATER CODE ANN. § 52.002 (Vernon, Supp. 1994).

40. See *Friendswood Dev. Co.*, 576 S.W.2d at 30; *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, —, 276 S.W.2d 798, 803 (1955) (stating power to say what types of conduits and reservoirs can be used belongs to the legislature, not the courts).

41. WALTER P. RUNDLELL, JR., *EARLY TEXAS OIL: A PHOTOGRAPHIC HISTORY*, 1866-1936, at 23 (1977).

42. See *Friendswood Dev. Co.*, 576 S.W.2d at 26 (stating rule of capture traced to absolute ownership rule); *Brown v. Humble Oil & Ref.*, 126 Tex. 296, —, 83 S.W.2d 935, 940 (1935); Joe R. Greenhill & Thomas Gibbs Gee, *Ownership of Ground Water in Texas: The East Case Reconsidered*, 33 TEX. L. REV. 620, 621 (1955) (*East* "influenced the formative stages of the Texas law of oil and gas."). See also *Bender v. Brooks*, 103 Tex. 329, 127 S.W.169 (1910) (holding a person owns all oil and gas produced by a well bottomed on his own land, even if it drains the substances from beneath another's).

43. See 2 ERNEST E. SMITH AND JACQUELINE LANG WEAVER, *TEXAS LAW OF OIL AND GAS* 48 (1993); see also *LOWE*, *supra* note 34, at 9.

4. Texas Oil and Gas Law Evolved in a Different Direction from Early Applications of the Common Law Rule of Capture

Application of the rule of capture to oil and gas production in the early part of the 20th century produced wasteful and inefficient results. The Texas legislature, concerned about the abuses, passed laws in 1899⁴⁴ and added amendments in 1905 and 1913 in an effort to control waste in oil and gas production. These laws gave any resident power to sue and imposed fines on violators. The Texas Railroad Commission acquired jurisdiction over oil and gas in a 1917 Act designed to prevent monopolistic practices, unfair pricing and discrimination in oil and gas pipelines.⁴⁵ The 1917 Act declared oil and gas pipelines to be common carriers and gave the Railroad Commission power to enforce common carrier provisions for oil and gas pipelines. In 1919, the Texas legislature passed a law which established the “core” regulations governing oil and gas and gave the Railroad Commission authority to regulate oil and gas production to prevent waste.⁴⁶

In many early oil fields, the drilling of too many wells, too closely spaced, combined with the flaring natural gas and other wasteful practices, caused excessive losses of the pressure which drove the reservoir. The loss of reservoir pressure resulted in a large quantity of the oil in the reservoir being unrecoverable. Texas began, at least as early as 1923, to develop and apply the doctrine of correlative rights to give at least some protection to a mineral interest owner against having a neighbor drain the oil from beneath his land.⁴⁷

Texas oil and gas law changed because of economic and political pressures existing in the 1920's and 1930's. The Daisy Bradford Number 3 “blew in” September 5, 1930, seven miles outside of Henderson, Texas. The Daisy Bradford Number 3 was the discovery well for the East Texas field, which covered parts of Rusk, Gregg, Upshur, Smith, and Cherokee counties. Within seven months of the Daisy Bradford, 3,732 wells were completed; by the end of 1932 the East Texas field had 5,652 wells in production. Texas Railroad Commission Rule 37, which controlled spacing of wells, had little practical effect because of the number of small tracts — all entitled to exceptions from the spacing rules. Resulting overproduction drove the price of oil down from \$1.10 a barrel, on September 5, 1930, to \$0.05 per barrel

44. Act of March 29, 1899, 26th Leg. R.S., 1899 Tex. Gen. Laws ch. 49 (partially codified in TEX. NAT. RES. CODE ANN. §§ 86.012, 86.042, 86.181, 91.017, 91.018 (Vernon 1988)).

45. Act of Feb. 20, 1917, 35th Leg., R.S., ch. 30 § 7, 1917 Tex. Gen. Laws 48, 51.

46. Act of Mar. 31, 1919, 36th Leg., R.S., ch. 155 § 3, 1919 Tex. Gen. Laws 285. See also SMITH & WEAVER, *supra* Note 43, at 10.

47. Stevens County v. Mid-Kansas Oil & Gas Co., 113 Tex. 160, 254 S.W. 290 (1923), *quoted in* Elliff v. Texon Drilling Co., 146 Tex. 575, 581, 210 S.W.2d 558, 562 (1948).

in the summer of 1931. Part of the problem resulted from the fact that most major oil companies had not pursued oil leases in east Texas because they believed east Texas had no oil. Small, independent oil producers owned a large number of the leases. These independents resisted any efforts to control production. They wanted to get as much oil as they could as quickly as possible, before someone else got it.⁴⁸

The Texas Railroad Commission attempted, in April, 1931, to restrict oil output in the East Texas field, but a federal court enjoined enforcement of the regulations.⁴⁹ However, in August, 1931, the Texas legislature gave the Railroad Commission explicit power to regulate oil production to avoid physical and economic waste.⁵⁰ In September, 1931, the Railroad Commission issued orders to limit production and increased well spacing in the East Texas field to one well per 10 acres, stating that the previous rule threatened to cause actual physical waste due to the excessive dissipation of gas and the encroachment of water into the wells.⁵¹ Independent oil producers in East Texas fiercely resisted Railroad Commission efforts to regulate their production and Texas Governor Ross Sterling imposed martial law to enforce compliance with Railroad Commission regulations.⁵² Texas courts have upheld the State's use of the police power to regulate oil and gas.⁵³ The common-law rule of capture, as applied to Texas oil and gas, has been extensively changed by statute and regulation.⁵⁴

48. RUNDELL, *supra* note 41, at 225.

49. *MacMillan v. Railroad Comm'n of Tex.*, 51 F.2d 400, (W.D. Tex. 1931). The court held that the Railroad Commission regulation did not primarily regulate waste but related to market demand and set prices to prevent economic waste. State law specified "waste" did not include economic waste. The Railroad Commission had no statutory authority to prevent economic waste and the prorationing order was illegal. *Id.* See generally RUNDELL, *supra* note 41, at 226.

50. RUNDELL, *supra* note 41, at 227.

51. The text of the Commission's order appears in *Tide Water Assoc. Oil Co. v. Railroad Comm'n*, 120 S.W.2d 544, 546 (Tex. Civ. App.—Austin 1938, no writ). See also SMITH & WEAVER, *supra* note 43, at 136; RUNDELL, *supra* note 41, at 227.

52. See generally RUNDELL, *supra* note 41, at 227. Ross Sterling, the Texas governor who promoted the new conservation law, was a former President of Humble Oil. Gen. Jacob Wolters, commander of the 36th division of the Texas National Guard, was sent by Sterling into the East Texas oil field to enforce the martial law order, and Railroad Commission production limits. In civilian life, Wolters was chief counsel for the Texas Company which later became TEXACO. *Id.*

53. *Corzelius v. Harrell*, 143 Tex. 509, 186 S.W.2d 961 (1945) (authorizes Railroad Commission to regulate rights of common owners in gas reservoir); *Brown v. Humble Oil & Ref. Co.*, 126 Tex. 296, 306, 83 S.W.2d 935, 941-42 (1935) (allowing Railroad Commission to regulate oil and gas is a valid exercise of police power); *Railroad Comm'n v. Bass*, 10 S.W.2d 586 (Tex. Civ. App.—Austin 1928), *writ dismissed*, 51 S.W.2d 1113 (Tex. 1932) (upheld Rule 37 well spacing regulation to decrease fire hazards and water percolation).

54. See 1 SMITH & WEAVER, *supra* Note 43, at 13.

*B. Why Oil and Water Don't Mix — The Edwards
Aquifer Example*

Texas surface water law and Texas oil and gas law have evolved in response to social, political and economic pressures. Ground water law in Texas has not evolved, probably because, until recently, no group having significant power has pressed for change. In 1973, the Texas Senate's Interim Committee on Environmental Affairs warned that several major Texas cities would encounter severe problems with municipal water use in two decades, and urged the adoption of a comprehensive law to protect and regulate Texas ground water.⁵⁵

Texas relies heavily on underground aquifers as a primary source of water. Texas has twenty nine aquifers that underlie more than eighty one percent of Texas land. Approximately forty five percent of all water used for municipal purposes is ground water.⁵⁶ Many areas of the state withdraw ground water from aquifers at a rate faster than natural recharge.⁵⁷ The resulting low aquifer levels lessen the volume and quality of ground water and can lead to land subsidence and drastic reductions in spring flow.⁵⁸ The City of San Antonio, as an example, relies entirely on the Edwards-Balcones aquifer to supply its water needs.⁵⁹ San Antonio is the largest city in the United States to rely solely on ground water.⁶⁰ San Antonio is also a good example because the City's recent history of political and other activity related to ground water in the Edwards Aquifer is well-documented.⁶¹

55. RECOMMENDATIONS OF THE SENATE INTERIM COMMITTEE ON ENVIRONMENTAL AFFAIRS, WATER RESOURCES 15, 18 62d Leg. (1983). See also Norris, *supra* Note 11.

56. TEX. WATER DEV. BD., WATER FOR TEXAS: TODAY AND TOMORROW 1-3 (Dec. 1990).

57. *Walsh v. United States Army Corps of Eng'rs.*, 757 F. Supp. 781, 783-784, (W.D. Tex. 1990). According to the Texas Water Commission, the dependable yield of the Edwards aquifer is 425,000 acre-feet per year. In 1982, the latest year for which data is available, withdrawals from the Edwards Aquifer amounted to 453,000 acre-feet. In addition, population projections for San Antonio and Bexar County show a more than fifty percent increase of the metropolitan area by the year 2020. *Id.*

58. For an extensive treatment of developments affecting Texas water and an analysis of Texas Water Development Board reports see FRANK F. SKILLERN, 1 TEXAS WATER LAW (1992).

59. TEX. WATER DEV. BD., WATER FOR TEXAS: TODAY AND TOMORROW 1-3, 1-4, 3-41, 3-83, 3-85 (Dec. 1990).

60. *Walsh*, 757 F. Supp. at 783. "San Antonio, Texas is the largest city in the United States that depends entirely on ground water for its water supply. Its current source of water is the Edwards Aquifer." *Id.*

61. Laura Shannon Shadwick, Note, *Obsolescence, Environmental Endangerment and Possible Federal Intervention Compel Reformation of Texas Groundwater Law*, 32 S. TEX. L. REV. 641 (1991) (contains an extensive discussion of this topic).

1. San Antonio Has Engaged in Political Posturing Instead of Taking Positive Actions to Eliminate Dependence Upon the Edwards Aquifer

San Antonio has known for at least 20 years that it needed another source of water by 1990.⁶² In 1984, when the aquifer dropped to its lowest level in three decades, local officials became alarmed. They feared the springs in the San Antonio area might dry up, destroy a major tourist attraction and reduce the flow of the Guadalupe River by as much as ninety percent.⁶³ In 1986 the San Antonio City Council endorsed a policy statement urging the Texas Water Commission to strengthen standards for protecting the Edwards Aquifer.⁶⁴ In 1989, partly at the City's insistence, the State created a Special Joint Committee on the Edwards Aquifer. The Texas Water Development Board reported in 1990 that during a drought water supplies would be barely adequate to support demand.⁶⁵ In addition, the population of Texas is projected to double over the next fifty years, drastically increasing water use.⁶⁶ "Proposals, proclamations, special committees — nothing done to date seems to have impacted the problems of the Edwards Aquifer."⁶⁷ At the same time the City of San Antonio was applying intense political pressure for State or Federal government action; San Antonio slipped project deadlines for the Applewhite dam and reservoir intended to provide another source of water for the city.⁶⁸

2. The Texas Legislature Has Created Local Water Conservation Districts But Has Not Changed Existing Ground Water Laws

In 1989, the Texas legislature enacted a complete revision of Chapter 52 of the Water Code, relating to the creation, administration, and operation of underground water conservation districts and management and critical areas.⁶⁹ The legislature specifically defined "under-

62. See *Royal Crest, Inc. v. City of San Antonio*, 520 S.W.2d 858, 866-67 (Tex. Civ. App.—San Antonio 1975, writ ref'd n.r.e.). City Ordinance 42018 § A, adopted in 1973 in accord with the city's general plan, provided that "[t]he city and the inhabitants of the ETJ [extraterritorial jurisdiction] will need a surface water supply by the year 1990." *Id.*

63. Shadwick, *supra* note 61, at 678.

64. *Id.*

65. See TEX. WATER DEV. BD., *WATER FOR TEXAS: TODAY AND TOMORROW* 1-3 (Dec. 1990) (stating that existing state water resources would be inadequate in case of drought).

66. *Id.* at 3-3.

67. Shadwick, *supra* note 61, at 680.

68. *Walsh v. United States Army Corps of Eng'rs.*, 757 F. Supp. 781, 786 (W.D. Tex. 1990) (noting that the Public notice of the permit application for Applewhite reservoir construction was dated November 23, 1982).

69. Act approved June 14, 1989, 71st Leg., R.S., ch. 936, 1989 Tex. Sess. Law Serv. 3981 (Vernon) (codified as amended in TEX. WATER CODE ANN. § 52 (Vernon Supp. 1994)). See Douglas G. Caroom, et al., *Water Law*, 44 Sw. L.J. 441 (1990).

ground water conservation district” as “any district or authority created under Article III, Section 52 or Article XVI, Section 59 of the Texas Constitution,” that regulates the spacing of water wells or production from water wells, including those districts created under Chapter 52.⁷⁰ The revision includes procedures to identify and create critical areas.⁷¹ Each underground water district must develop a comprehensive management plan, adopt any rules necessary to implement the plan, and file the plan and the rules with the Texas Water Commission.⁷² The legislature also added sections for adding territory to districts, consolidating two or more districts, and dissolving a district.⁷³

Many Texans, especially those in West and North Texas, have opposed State regulation of groundwater because of the potential negative economic impact.⁷⁴ In enacting the 1989 Water Code, the legislature carefully attempted to satisfy the concerns of residents in the Austin-San Antonio area and those in west and north Texas.

3. By Bringing Suit Under the Endangered Species Act, Diverse Interests Sought Federal Intervention to Force Their Favored Solution in the Edwards Aquifer

In February 1990, the general manager of the Guadalupe-Blanco River Authority sent a notice of intent to sue in federal court to the Department of the Interior.⁷⁵ The stated intent of the lawsuit was to limit withdrawals from the Edwards Aquifer to protect the San Marcos Gambusia, the Fountain Darter, the San Marcos Salamander, the Texas Blind Salamander, and Texas wild rice — species asserted to be dependent on the Edwards Aquifer for their continued existence.⁷⁶ In April 1990, the Lone Star Chapter of the Sierra Club indicated an interest in actively participating in such a suit. The Sierra Club actually filed the suit as plaintiff, with the Guadalupe-Blanco River Authority and other water supply entities as plaintiff-intervenors.⁷⁷ These groups hoped to use the federal Endangered Species Act as a collateral attack on Texas groundwater law and get the federal courts to intervene and force the State to change the law.⁷⁸ The attack was at least partly successful. The court determined that Congress, in the

70. TEX. WATER CODE ANN. § 52.005(a) (Vernon Supp. 1994).

71. TEX. WATER CODE ANN. §§ 52.051-52.065 (Vernon Supp. 1994).

72. TEX. WATER CODE ANN. § 52.160 (Vernon Supp. 1994).

73. TEX. WATER CODE ANN. §§ 51.781-51.791 (Vernon 1972).

74. See Stephen E. Snyder, Comment, *Ground Water Management: A Proposal for Texas*, 51 TEX. L. REV. 289, 298 (1973) (West Texas residents oppose groundwater regulation “because they fear that production controls would reduce their economic return.”).

75. Shadwick, *supra* note 61, at 680.

76. *Sierra Club v. Lujan*, No. MO-91-CA-069, 1993 WL 151353 at *2 (W.D. Tex. Feb. 1, 1993); Shadwick, *supra* note 61 at 680 & n.242.

77. *Lujan*, No. MO-91-CA-069, 1993 WL 151353, at *1.

78. *Id.* at *19; Shadwick, *supra* note 61, at 644-45, 666.

Federal Endangered Species Act, "intended endangered species to be afforded the highest of priorities."⁷⁹ The court ordered the United States Fish and Wildlife Service to prepare its "best professional judgment" of the minimum sustained spring flow required to avoid jeopardy to endangered species and to communicate the findings to all federal and state agencies.⁸⁰ The Court also decided that the Edwards Aquifer was an underground stream and the Texas Water Commission could manage it in the same manner as surface water.⁸¹ The Federal district court opinion also included threats of federal intervention if Texas failed to change State law to control water use in the Edwards Aquifer.⁸²

4. In 1993, Partly as a Result of a Federal Endangered Species Act Lawsuit, the Texas Legislature Created the Edwards Aquifer Authority⁸³

As with the 1989 Act, the 1993 law is a compromise. The 1993 law modifies the unlimited right of capture in the Edwards Aquifer, but the law has many features sought by rural users. These features include the following:

- (a) The Edwards Aquifer is not an underground river and the Texas Water Commission has no jurisdiction to manage the Edwards Aquifer as if it were surface water;
- (b) Ground water rights are private property and any taking requires compensation. The Edwards Aquifer authority does not have power to take water rights by eminent domain;
- (c) Ground water cannot be transported out of Medina or Uvalde County;
- (d) The law prescribes minimums to be allotted to irrigation, if allocation becomes necessary. If pumping fees are used, the law limits agricultural fees to 20% of those imposed upon a municipality; and
- (e) The formula used to establish membership ensures a majority of the Board members will come from counties with largely rural populations.

79. *Lujan*, No. MO-91-CA-069, 1993 WL 151353 at *2 (quoting *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 174 (1978)).

80. *Id.* at *33-34.

81. *Id.* at *3.

82. *Id.* at *29 (suggesting that the next session of the Texas Legislature offers the last chance for adoption of an adequate state plan before the "blunt axe of Federal intervention" must be dropped).

83. Act effective Sept. 1 1993, 73d Leg., R.S., ch. 626, 1993 Tex. Sess. Laws Serv. 1477 (Vernon).

II. HOW DOES THE CURRENT GROUND WATER SITUATION COMPARE TO THE OIL INDUSTRY PRIOR TO RAILROAD COMMISSION CONSERVATION REGULATIONS?

A. *Who Wants the "Status Quo" and Who Wants Change?*

In the East Texas oil fields, in 1931, small independent producers sought to maximize their returns by producing as much oil as possible. If they did not, the well on the neighboring lease would probably drain the oil from beneath their land. The problems can be summarized as waste and overproduction which drove prices down to uneconomic levels. The major oil companies had long favored orderly production. The 1931 Railroad Commission regulations, and the subsequent strict enforcement under martial law, resulted from the major oil companies' influence. Railroad Commission regulations, however, did act to impose order on the market, prevent economic waste, and — incidentally — maintain prices.

In many ways, current Texas groundwater problems, as exemplified in the Edwards Aquifer, resemble those of the East Texas oil field, but the economics are different. The cities, especially San Antonio, are also the major users of ground water from the Edwards Aquifer. A cynic would comment that the City of San Antonio, or the general manager of the Guadalupe-Blanco River Authority, is likely to be more concerned with changing the existing law to get more water for the City than with protecting the Texas blind salamander. If the Federal government intervenes, water restrictions will affect everyone. Of course, the City could, without a change in the law, buy water from private producers, or the City could speed up plans for the Applewhite dam and reservoir. If Texas changes State law, and assumes ownership of all ground water, San Antonio and other cities could present a politically compelling case for a priority permit to take as much water as they need, without paying for it, leaving the remainder for the less politically astute individuals who formerly owned the water rights.

B. *No Politically Acceptable Solution Exists Because of the Conflict Over Property Rights in Ground Water*

In much of rural Texas, landowners' feelings toward land, and the associated property rights, approach the intensity of a religious belief. Texas politicians understand these attitudes.⁸⁴ A State legislator from Amarillo or Abilene who voted to "take away" a farmer's water used

84. Wells A. Hutchins, *Trends in the Statutory Law of Ground Water in the Western States*, 34 TEX. L. REV. 158, 183 (1955) ("[O]pposition within [Texas] has blocked enactment of several proposed ground water control statutes and has delayed others for varying periods of years. Objections come from persons who want no legal restrictions upon individual pumping; or who consider public control unnecessary, undesirable, or impracticable; or who question the constitutionality of proposed measures.").

to irrigate his crops, or a rancher's water used to grow feed for his livestock, would have a difficult time at the next election. If Texas changes State law to pre-empt ground water, enforcing State control may be a problem. Landowners are unlikely to voluntarily comply. Water users with existing wells cover most of the State. Many would probably be actively hostile or would ignore the law in much the same way as did the independent oil producers in the East Texas oil field. Unlike Governor Sterling in 1931, declaring martial law and sending in the National Guard to regulate production from water wells is not a viable option for the current governor.

In the 1989 Water Code revision, the Texas legislature tried to give something to the City of San Antonio without taking anything away from the people who currently own ground water rights. Put simply, the Edwards Aquifer conflict is over the property rights in ground water — the landowners have them and the City wants them. The city doesn't want to buy the rights. The City wants the State to take the rights to ground water away from the property owners through a politically-influenced permit process and give the water rights to the City.

The 1993 law creating the Edwards Aquifer Authority is another legislative attempt at compromise — a compromise which is unlikely to resolve the problems, since the parties are fighting for their economic lives. The issues in the Edwards Aquifer are complex and the plan will need "fine tuning" in later legislative sessions.⁸⁵

III. DISCUSSION OF ALTERNATIVE SOLUTIONS

A. *Ground Water Laws in Other States: Arizona, California, and New Mexico*

1. Arizona Follows a System for Regulating Ground Water Known as the Doctrine of Reasonable Use⁸⁶

In 1980, Arizona assumed state control of water regulation from a fear that local government would not be effective.⁸⁷ In enacting the law, Arizona protected the rights of existing water users. For instance, landowners who irrigated at any time during the five year period preceding the act continued to have rights to pump ground water for irrigation on a limited basis.⁸⁸ Under the Arizona system, cities and towns can meet the demand in their established service areas. How-

85. Joe Maley, *Edwards Aquifer Issues Confusing, Controversial*, TEX. AGRIC., July 2, 1993, at 2, 23.

86. See ARIZ. REV. STAT. ANN. § 45-401 (1987) (declaring policy of legislature in adopting reasonable use standard); *Chino Valley v. State Land Dept.*, 580 P.2d 704, 709 (Ariz. 1978) (discussing application of reasonable use rule in Arizona). See also Ellen K. Wheeler, *The Right to Use Groundwater in Arizona After Chino Valley II and Cherry v. Steiner*, 25 ARIZ. L. REV. 473, 484 (1983).

87. Philip R. Higdon & Terence W. Thompson, *The 1980 Arizona Groundwater Management Code*, 1980 ARIZ. ST. L.J. 621, 634-35 (1980).

88. *Id.* at 650 (discussing irrigation grandfathered rights).

ever, without agency approval, they cannot extend service to other areas.⁸⁹

2. California Adopted the Doctrine of Correlative Rights to Regulate Ground Water Use⁹⁰

Like Texas, California has no centralized state regulation of ground water.⁹¹ Some ground water is locally regulated; other ground water is essentially unregulated.⁹² Under the correlative rights doctrine, the state has no control over the amount of ground water extracted by landowners. Instead, when disputes arise, the courts determine who has a superior right of extraction.⁹³ Judicial adoption of the correlative rights doctrine has not controlled the rate of ground water removal, which continues to be excessive in California.⁹⁴

3. New Mexico Applies the Prior Appropriation Doctrine to Control Ground Water Use

New Mexico has a tightly controlled system of ground water regulation.⁹⁵ The State owns all ground water in New Mexico in trust for the people, and the State Engineer appropriates water.⁹⁶ Anyone who wishes to use water in New Mexico must first apply to the State Engineer.⁹⁷ If unappropriated water is available, and the applicant shows the water will be used beneficially, the State can issue a permit.⁹⁸ New Mexico has no statute to limit the rate of withdrawal in state aquifers and nothing to require aquifers to remain at reasonable levels.⁹⁹

89. ARIZ. REV. STAT. ANN. § 45-493 (1987).

90. *Miller v. Bay Cities Water Co.*, 157 Cal. 256, 277, 107 P. 115, 124 (1910) (discussing California's adoption of the doctrine of correlative rights to regulate ground water use).

91. Gary Weatherford, et al., *California Groundwater Management: The Sacred and the Profane*, 22 NAT. RESOURCES J. 1031, 1033 (1982).

92. *Id.* at 1031 (noting absence of ground water management in many areas of California).

93. *Id.* at 1034.

94. Porter A. Towner, *The Role of the State*, 45 CAL. L. REV. 725, 725 (1957) (noting that California is experiencing critical water problems). *See also* Weatherford, *supra* Note 91, at 1032 (recognizing excessive removal rates in 11 ground water basins and signs of overuse in 31 additional basins).

95. Charles T. DuMars, *New Mexico Water Law: An Overview and Discussion of Current Issues*, 22 NAT. RESOURCES J. 1045, 1046 (1982) (discussing prior appropriation doctrine followed in New Mexico).

96. *Id.* at 1046-47.

97. N.M. STAT. ANN. § 72-12-1 (Michie 1985).

98. *State v. King*, 321 P.2d 200, 201 (N.M. 1958) (noting that the state waters may be acquired for beneficial use); *State v. McLean*, 308 P.2d 983, 987 (N.M. 1957) (holding that the state determines what is "beneficial use").

99. DuMars, *supra* note 95, at 1047.

B. Possible Changes in Texas

Texas could adopt the doctrine of correlative rights in regulating ground water — a rule similar to that used in California. The idea of correlative rights is familiar to Texas courts because of the historical application of the doctrine in oil and gas law. Courts could easily extend the correlative rights doctrine to ground water regulation. The rule allows property owners to retain ownership of the water beneath their property, but use of the water is subject to the needs and rights of the adjoining landowners. However, application of the correlative rights doctrine may not result in any significant conservation. Without new legislation, the state could not limit the taking of ground water or otherwise create incentives to conserve water. The State could also suffer added strain on the judicial system as landowners sued each other to see who should get what water, how much, and when.

Texas could enact a reasonable use rule similar to Arizona's. Under the doctrine of reasonable use, landowners still own the ground water beneath their property, but the doctrine limits the amount of water landowners can use to what is reasonably necessary for the beneficial use of the surface estate. The reasonable use concept would not provoke as much controversy as prior appropriation, since the landowner would still own the water.¹⁰⁰ Also, the reasonable use doctrine could be more easily justified under the State's police power than could a prior appropriation doctrine.¹⁰¹ By adopting the reasonable use standard, Texas could gain as much control over ground water as in an appropriation state, but might avoid some of the political problems. However, rural Texans resent action by the central State government and seem to prefer the local control system established in the underground water conservation districts.

If Texas followed New Mexico, and established a system of prior appropriation, the State would have the same type of water rules for both surface water and ground water. In New Mexico, the State owns all of the water, and use is based upon "first come, first served." Since the State owns all ground water, landowners must obtain a water use permit from the State Engineer — the authorized state official. The Texas Water Commission could administer a permit system for ground water, since the basic system is already in place for regulating surface water use. However, Texas or U.S. courts may hold divesting all Texas landowners of their water rights to be a taking.¹⁰² Would the State's

100. See Zachary A. Smith, *Centralized Decisionmaking in the Administration of Groundwater Rights: The Experience of Arizona, California and New Mexico and Suggestions for the Future*, 24 NAT. RESOURCES J. 641, 685-56 (1984).

101. See Corwin A. Johnson, *The Continuing Voids in Texas Groundwater Law: Are Concepts and Terminology to Blame?*, 17 ST. MARY'S L.J. 1281, 1290-91 (1986).

102. See Stephen E. Snyder, Comment, *Ground Water Management: A Proposal for Texas*, 51 TEX. L. REV. 289, 314 (1973) (noting that state appropriation of ground water may be an unconstitutional taking).

assuming ownership of all ground water be considered an exercise of eminent domain? If so, the State would have to compensate landowners for the reasonable value of the water beneath their land.¹⁰³

Both Texas case law and statutes contain the concept of private ownership of ground water. Historically, Texans have opposed any ground water regulation, but especially those regulations which require landowners to surrender their ground water property rights to the State.¹⁰⁴ Drafting a prior appropriation act giving the State all ground water rights which would pass state constitutional muster would be difficult, if not impossible. Also, the Texas legislature is unlikely to approve a plan that would so outrage rural Texas voters.¹⁰⁵

IV. CONCLUSION

If oil were involved, rather than water, Texas law provides the landowner absolute ownership of all the oil and gas in place beneath his land. However, the Texas Railroad Commission requires a permit before drilling operations begin, enforces spacing rules, and sets production limits designed to maximize the overall production from the reservoir and enforce the correlative rights of neighbors. The Railroad Commission also makes and enforces rules to minimize waste and environmental damage. These rules sound like Arizona's "reasonable use" doctrine for ground water; the concepts are familiar to Texas legislators, Texas courts and to Texas property owners. Using the State's police powers in such a regulatory scheme has already been tested in Texas courts in oil and gas regulation, and a centralized state agency such as the Texas Water Commission offers advantages in cost and expertise. The application of the reasonable use doctrine to ground water appears to be the best alternative.

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103. See Roger Tyler, *Underground Water Regulation in Texas*, TEX. B.J. 532, 538 (1976) (stating if Texas adopts appropriation doctrine, state will be exercising eminent domain).

104. See Snyder, *supra* note 102, at 298 (relating that West Texas residents value ground water property right).

105. See Norris, *supra* Note 11, at 515.