

***Edwards Aquifer Authority v. Day and Bragg*—Predictions on Their Effects for Regulatory Takings Claims for Groundwater Used in Oil & Gas Operations¹**

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1. INTRODUCTION

In early 2012, a watershed Texas Supreme Court case appeared, *Edwards Aquifer Authority v. Burrell Day and Joel McDaniel*³ (“*Edwards*”), that turned Texas water law on its head. In a long-anticipated case, the Court first found that impoundment water could change its character and become “state water” if not put to a beneficial use. Then, in a judicial thunderclap, the Court declared that groundwater in place is a real property interest in Texas and cannot be taken for public use without adequate compensation guaranteed by the Texas Constitution. Overnight, claimants appeared, suing Texas regulatory agencies that had denied permits allowing water use at the level sought by landowners.

These claims, and the pause they may give to regulating and governing entities in withholding future permits or passing laws that limit groundwater use, will weigh heavily on the nature of groundwater rights and conservation efforts, particularly in light of increasing scarcity of water resources and the use of groundwater for hydraulic fracturing (“*fracing*”) operations. The effect of these claims will especially resonate in areas plagued by drought.

This article first examines relevant general Texas water law, rights, and jurisprudence to establish the legal foundation upon which *Edwards* rests upon. A description of the background and results of *Edwards* then follows. With the real property interest in groundwater thus established, the article then describes the methodology Texas will use to analyze when and whether a groundwater-sourced takings has occurred, and, if so, how to value the claim. To do this, federal and Texas general regulatory takings are reviewed before turning to the first water takings case in Texas, *Edwards Aquifer Authority v. Bragg*⁴ (“*Bragg*”). Next, because groundwater is often used in oil and gas drilling and (especially) development, Texas oil and gas regulatory takings case law and how it might influence—and be influenced by—Texas groundwater regulatory takings jurisprudence is discussed, with a focus on groundwater used for oil and gas operations. Finally, the possible effect of this change in regulatory takings law on groundwater conservancy districts, and what the state legislature can do about it, is considered.

2. GROUNDWATER RIGHTS IN TEXAS—A BRIEF BACKGROUND

Water ownership rights are subject to management and regulation by courts and by the state legislature through regulatory agencies.⁵ Regulatory control over water in Texas is bifurcated. Surface water is owned by the public. The Texas Commission on Environmental Quality (the “*TCEQ*”) regulates surface water appropriation and use. Without a permit from the TCEQ, a landowner cannot use surface water except for exempted livestock or domestic use.⁶ In addition, no permit is required for construction of a stock tank or impoundment that contains 200 acre-feet of water or less.⁷

In contrast to surface water, groundwater is the property of the landowner, who can use, move, and sell the groundwater it produces with a well. At first, groundwater use in Texas was essentially a free-for-all, with the person with the biggest well being able to produce all he

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⁵ See Water Use in Associations with Oil and Gas Activities Regulated by the Railroad Commission of Texas, available at <http://www.rrc.state.tx.us/barnettshale/wateruse.php>.

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⁷ [-] (An “acre-foot” is that amount of water that will cover an acre to a depth of one foot and equals 325,850 gallons.)

wanted. Later, courts limited this free use by disallowing negligent or wasteful use, use designed to maliciously harm a neighbor, or pumping that caused subsidence.

Still later, the state legislature passed a series of statutes that restrict limitless groundwater pumping, broadly constraining pumping from beneath rivers, from aquifers beneath areas managed by groundwater conservation districts, or from areas subject to the jurisdiction of the Edwards Aquifer Authority, as described below. Groundwater appropriation and use is now subject to either city control or groundwater management districts.⁸ These districts, known as Groundwater Conservation Districts (“GCD”) in Texas, are authorized to “make and enforce rules, including rules limiting groundwater production based on tract size or the spacing of wells, to provide for conserving, preserving, protecting, and recharging of the groundwater or of a groundwater reservoir or its subdivisions in order to control subsidence, prevent degradation of water quality, or prevent waste of groundwater...”⁹

All state-recognized Texas GCDs are required to promulgate, implement, and enforce a management plan for the effective management of groundwater resources within their jurisdiction. Over the GCDs sits the Texas Water Development Board (the “TWDB”), the statewide agency that must approve of all the GCDs’ groundwater management plans. As of 2013, all recognized GCDs either possess an approved groundwater management plan or are now in the approval process.¹⁰

If required by the applicable GCD’s management plan, water well drillers may be required to submit reports detailing drilling and completing of water wells and of the production and use of groundwater.¹¹ For a long time after their creation, however, GCDs were not a major concern for oil and gas companies because they were not allowed to require permits for the drilling of a water well used solely to supply water for a rig that is actively engaged in drilling or exploration operations for an oil or gas well permitted by the Railroad Commission (“RRC”), provided that the person holding the permit was responsible for drilling and operating the water well and the well was located on the same lease or field associated with the drilling rig.¹² Recently, as detailed below, GCDs have taken a more action role in requiring permits for water wells that may provide water for oil and gas activities not exempted from GCD control. This reach for control by GCDs, when combined with the finding of *Edwards* that groundwater in place is real property that may require compensation when its use is curtailed by regulation, may put the hydrocarbon industry and the water owners that sell to them on a crash course to litigation with the GCDs.

3. EDWARDS AQUIFER AUTHORITY v. DAY

Edwards involved the Edwards Aquifer Authority (the “EAA”), a state regulatory agency established by the 73rd Legislature in May 1993¹³ with the passage of the Edwards Aquifer Authority Act (the “EAAA”) to preserve and protect the groundwater in the Edwards Aquifer that covers all or portions of Atascosa, Bexar, Caldwell, Comal, Guadalupe, Hays, Medina, and

⁸ TEX. WATER CODE ANN. § 35.001 (Vernon 2011).

⁹ TEX. WATER CODE ANN. § 36.101 (Vernon 2011).

¹⁰ Texas Water Development Board public website, *available at* http://www.twdb.state.tx.us/groundwater/conservation_districts/ (last visited Oct. 13, 2013).

¹¹ TEX. WATER CODE ANN. § 36.111 (Vernon 2011).

¹² TEX. WATER CODE ANN. § 36.117(a)(2) (Vernon 2011). (The driller of such an exempted well is still required to file a drilling log with the district. (TEX. WATER CODE ANN. § 36.117(i))

¹³ “Legal challenges” prevented the EAA from operating until June 28, 1996. (See the Authority’s website, *available at* <http://www.edwardsaquifer.org/eaa/who-we-are> (last visited Sep. 25, 2013).

Uvalde counties.¹⁴ The 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.”¹⁵ Approximately two million residents rely on the aquifer as their primary source of fresh and livestock grade groundwater.¹⁶ The EAA’s mission remains to direct “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.”¹⁷

On February 24, 2012, after a wait of almost two years from oral argument, the Texas Supreme Court released its opinion in *Edwards*.¹⁸ *Edwards* was among the longest-pending cases on the Court’s docket and attracted over two dozen amicus briefs.¹⁹ In a 49-page opinion, the Court ran through a thorny hedgerow both of administrative and constitutional questions, and ultimately determined that Texas courts recognize a landowner’s property interest in “groundwater in place” beneath their property. The opinion contained two significant statements regarding ownership and use of groundwater pumped to the surface and stored in an impoundment.²⁰

Day, a party comprised of two individuals that were the successors to a water right holder that produced groundwater from an artesian well and then stored it in an open impoundment, applied for a water well permit to the EAA.²¹ Specifically, in their application, Day requested from the EAA permission to pump 700 acre-feet of water per year for irrigation from the well.²² The EAAA guarantees that landowners who have a history of using the Edwards Aquifer groundwater for irrigation purposes will receive a permit of at least two acre-feet of production of water per year per acre irrigated.²³

Specifically, EAAA regulations placed a limit on water usage based on each landowner’s historical use of water from the Edwards Aquifer.²⁴ With the exception of a small amount of water for domestic or livestock use, use of any other aquifer water requires a permit.²⁵ The amount of water allowed for on the permits is determined by looking at the level of historical use

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Id.
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Id.
Edwards Aquifer Authority Act § 1.01.
Edwards Aquifer Authority v. Day, 369 S.W.3d 814 (Tex. 2012).
Don Cruise, *Landmark Texas Water Rights Case May Lead to Future Takings Claims or Legislative Fixes: Edwards Aquifer v. Day*, The Supreme Court of Texas Blog, Feb. 24, 2012, available at <http://www.scotxblog.com/case-notes/landmark-texas-water-rights-case-may-lead-to-future-takings-claims-or-legislative-fixes-edwards-aquifer-v-day-feb-24-2012/> (last visited Aug. 21, 2013).
Edwards Aquifer Authority v. Day, 369 S.W.3d 814 (Tex. 2012).
See id. at 820.
See id.
See id.
Edwards Aquifer Auth. v. Chem. Lime, 291 S.W.3d at 392, 394 (citing EAAA § 1.15(b) (“Except as provided by Sections 1.17 [‘Interim Authorization’] and 1.33 [wells producing less than 25,000 gallons per day for domestic or livestock use] of this article, a person may not withdraw water from the aquifer or begin construction of a well or other works designed for the withdrawal of water from the aquifer without obtaining a permit from the authority.”) and EAAA § 1.35(a) (“A person may not withdraw water from the aquifer except as authorized by a permit issued by the authority or by this article.”)).
Id.

from aquifer sources before the EAAA went into effect.²⁶ An “existing user” who operated a well for three or more years during the historical period was entitled to a permit for at least the average amount of water drawn from the aquifer annually.²⁷ Therefore, if, during the “historic period” as defined in the EAAA, a certain amount of water was drawn from the aquifer annually, landowners of the same tract could get a permit allowing production of that same amount of groundwater. If only a little water was withdrawn from the aquifer during the “historic period,” then the present landowner was allowed only that small amount.

As an attachment to their application, Day included a statement from its predecessor-in-right.²⁸ These predecessors claimed to have irrigated 300 acres of grass from the well on the property during 1983 and 1984, and to have recreationally used the fifty-acre lake that was on the property in addition.²⁹ In reviewing Day’s application, however, the Authority determined that the original water right holder had used the water in the impoundment only for recreation purposes—a use not recognized as a “beneficial use.”³⁰ Because of this lack of use, no permit was issued. Day protested the EAA’s determination and brought the dispute before an administrative law judge.³¹ The administrative law judge agreed with the EAA and found that the water in the impoundment, due to being produced and stored but not used for purposes seen as “beneficial,” was now state water and beyond the control of both the EAA and the surface owner.³²

Since surface water in Texas is primarily regulated by the TCEQ while groundwater outside cities is primarily regulated across the state by GCDs districts, the first question that arose over the EAA’s finding was whether the water in the impoundment was now state-controlled surface water (that would be subject to the jurisdiction of the TCEQ) and therefore beyond the EAA’s sway with regards to Day’s water well drilling application.³³ After litigation and appeal, the Texas Supreme Court held that the necessary evidence was present so that the EAA *could* rightfully have found that such impoundment water had changed its character and become “state water” if not put to a beneficial use.³⁴

Located on Day’s property was an intermittent creek that flowed into the fifty-acre lake.³⁵ In order for the groundwater—that Day produced from his well—to move into the creek, Day constructed a conveyance mechanism.³⁶ The Court found that, when the groundwater entered the creek, the water became surface water over which Day no longer had an ownership interest.³⁷ Therefore, interestingly, the Court’s decision in *Day* implies that, if groundwater is on a watercourse and the landowner withdraws any water from that watercourse, the landowner has unlawfully diverted state water even if the landowner was the one who created the watercourse.³⁸

26 EAAA § 1.16(a).
27 EAAA § 1.16(e).
28 *See id.*
29 *See id.*
30 *See id.* at 820-21.
31 *See id.* at 821.
32 *See id.*
33 *See id.* at 822.
34 *See id.* at 823.
35 *See id.* at 818.
36 *See id.* at 822-23.
37 *See id.*
38 *See id.*

Day also did not present any accepted evidence of prior use of the water by either Day or its predecessors except for some water-based recreation.³⁹ As a result the Court held Day failed to prove that it was utilizing groundwater, not state water.⁴⁰ However, the Court recited that it was not holding that such produced water *always* became state water or that an impoundment or lake could never be used to store groundwater for use by its original owner, but that the water would then have to be used for some beneficial purpose such as irrigation, not mere recreation.⁴¹

The second major question addressed by the Court—and the one most observers waited for with intense interest—was the larger issue of whether land ownership in fee included a real property interest in the groundwater thereunder and whether that interest, if present, is subject to the Texas Constitutional requirement of adequate compensation in the event of a “taking” for a public purpose.⁴² The EAA tried to distinguish groundwater from oil and gas by citing numerous differences between the two.⁴³ However, the Court was not persuaded by any of the EAA’s arguments.⁴⁴ In likening water to oil and gas, the Court held that water may be owned in place by one owner while neighboring parties are allowed to drain it without liability through the rule of capture.⁴⁵

After distinguishing earlier cases involving the rule of capture, the Court then examined various relevant factors used to analyze whether the Authority’s denial of Day’s application had resulted in a “taking” that required compensation, namely whether the tests enumerated in the U.S. Supreme Court cases of *Lucas v. South Carolina Coastal Council*⁴⁶ and *Penn Central Transp. Co. v. NYC*⁴⁷—both described below—would be applied.

The Court ultimately agreed with the court of appeals and remanded the case back to the district court for a determination of whether a “taking” requiring compensation had occurred and, if so, what compensation might be required.⁴⁸ Most importantly, land ownership now includes an interest in the actual groundwater in place—like oil and gas in Texas—and not merely an exclusive license to develop, as in Oklahoma.⁴⁹ Thus, a landowner in Texas may now assert a suit against the government for uncompensated takings of his groundwater under both the state and federal constitutions.⁵⁰

While analogizing groundwater to oil and gas, the Court stated that a landowner’s ownership interest is based on “volumes that, while they could be diminished through drainage, with ‘proper diligence’, could be replenished through drainage.”⁵¹ However, this statement does not take into account a characteristic that differentiates an oil and gas formation from an aquifer.⁵² Specifically, any drainage of an aquifer is easily and naturally replenished from the

³⁹ See *id.*

⁴⁰ See *id.*

⁴¹ See *id.*

⁴² See *id.* [cite Constitution]

⁴³ See *id.* at 830-32.

⁴⁴ See *id.* at 832.

⁴⁵ See *id.* at 831-32.

⁴⁶ *Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992).

⁴⁷ *Penn Central Transportation Co. v. New York City*, 438 U.S. 104 (1978).

⁴⁸ See *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814, 843 (Tex. 2012).

⁴⁹ See *id.* at 838.

⁵⁰ See *id.*

⁵¹ See *id.* at 828.

⁵² See *id.*

surface by rain water.⁵³ The same is not true for an oil and gas formation.⁵⁴ Therefore, while the volume of an oil and gas formation may be determined by measuring the formation itself, the volume of a rechargeable groundwater aquifer cannot be as easily established.⁵⁵

After the Court found that a landowner had a constitutionally protected and vested property right in his groundwater, it looked to whether Day had properly asserted a takings claim.⁵⁶ The Court first determined that Day could not sustain a claim that the government had physically taken its property.⁵⁷ The Court based its decision on the fact that the EAA had granted Day a permit for the use of fourteen acre-feet of water annually for irrigation purposes.⁵⁸ Furthermore, pursuant to the EAAA, Day could use up to 25,000 gallons of groundwater per day for domestic and livestock use.⁵⁹

As to whether the Authority had deprived Day of all economically beneficial use of its property, the Court found that the summary judgment record was inconclusive.⁶⁰ Specifically, in applying the three-part test of *Penn Central* to *Day*, the Court found that the record was incomplete on both of the first two factors: (1) whether the claimant was economically impacted by the regulation the government had imposed; and (2) to what extent the regulation interfered with the claimant's distinct investment-back expectations.⁶¹ The Court, however, focused most of its discussion on whether the third factor of the *Penn Central* test—the character of the regulation—was applicable in *Day*.

In analyzing whether the third part of the *Penn Central* test was applicable in *Day*, the Court differentiated between the goals and methods of regulating groundwater from those of oil and gas.⁶² The Court concluded that, while the government must emphasize surface area to fairly regulate oil and gas, the government must consider factors other than surface area in order to fairly regulate groundwater.⁶³ The Court then looked to § 36.002 of the Water Code to interpret the legislature's recent amendments.⁶⁴ In doing so, the Court found that the words “deprive” and “divest” as used in § 36.002(c) did not include the government taking a landowner's property rights for which the government must adequately compensate the landowner.⁶⁵ Accordingly, the Court recognized that “a landowner cannot be deprived of all beneficial use of the groundwater below his property merely because he did not use it during an historical period and supply [was] limited.”⁶⁶ The Court therefore affirmed the finding of the court of appeals and remanded the case for Day's takings claims to be fully explored.⁶⁷

53 *See id.*
54 *See id.*
55 *See id.*
56 *See id.* at 838.
57 *See id.* at 839.
58 *See id.*
59 *See id.*
60 *See id.* at 839-40.
61 *See id.*
62 *See id.* at 840-41.
63 *See id.* at 841.
64 *See id.* at 842.
65 *See id.* at 843.
66 *Id.* (alteration in original).
67 *See id.*

The end result is that Texas is now one of only five states—and the only Western state—that follow the ownership-in-place rule with regards to water⁶⁸ and which like hydrocarbons is subject to the rule of capture.⁶⁹ Therefore, unless state regulation curtails production or negligent harm is done to the reservoir, surface owners may produce as much water as they like, without exposure to surrounding landowners who might complain their aquifers are being depleted.⁷⁰

4. REGULATORY TAKINGS ANALYSIS GENERALLY

So how will water rights be considered in the regulatory takings context? The U.S. Supreme Court provides the basic takings jurisprudential framework that will be applied to water, and its case law on the subject has varied over the decades. The 1930s and the resultant New Deal programs, with their sometimes heavy regulatory load, led to federal jurisprudence that disfavored property regulatory takings challenges.⁷¹ Since approximately the advent of the Presidency of Ronald Reagan, however, the U.S. Supreme Court has more closely scrutinized federal regulation and sought to more actively defend private property rights by allowing for more compensation for regulatory takings in a broader range of circumstances.⁷²

The U.S. Supreme Court recognizes two situations where *per se* takings exist and therefore require automatic compensation to the individual with lost property rights.⁷³ The first situation involves a physical intrusion onto real property, no matter how small, while the second situation involves a government regulation that prevents “all economically beneficial or productive use of land.”⁷⁴

A third category of takings exists that is not as black and white.⁷⁵ Takings cases that involve government regulations that limit, but not completely deprive, use of real property are determined on a case-by-case basis.⁷⁶ The following summary of two cases illustrates how the U.S. Supreme Court looks at regulatory takings, and lays the groundwork for Texas jurisprudence on such takings that will, in turn be applied to water, perhaps as it has been to oil and gas.

A. **Per Se Takings—Loretto v. Teleprompter Manhattan CATV Corp.**

When a governmental entity actually occupies a private tract, takings compensation is much more likely. The U.S. Supreme Court noted in *Loretto v. Teleprompter Manhattan CATV Corp.*⁷⁷ that the nature of the regulation giving rise to a takings claim is crucial.⁷⁸ Laws and rules that lead to a permanent occupation of the caption tract are, in essence, a condemnation action

⁶⁸ A. Dan Tarlock, LAW OF WATER RIGHTS AND RESOURCES § 4.6 (2012). (The other four are Louisiana, Connecticut, Maine, and Rhode Island.)

⁶⁹ *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d 75, 76 (Tex. 1999); *Houston & Texas Cent. R.R. Company v. East*, 81 S.W. 279, 280 (Tex. 1904).

⁷⁰ *Id.*

⁷¹ Barton H. Thompson, *Application of the Law of “Takings” to Restrictions on Mineral Development*, ROCKY MTN. MIN. L. FOUND., Mineral Law Series No. 3, p. 8-1, 1995.

⁷² *Id.*

⁷³ See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1015 (1992).

⁷⁴ *Id.*

⁷⁵ See *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 104.

⁷⁶ See *id.* at 123.

⁷⁷ 458 U.S. 419 (1982).

⁷⁸ *Id.* at 426-35.

and thus a *per se* takings requiring compensation.⁷⁹ A temporary physical occupation is still considered serious and may require compensation, but is not a *per se* taking and instead requires some balancing of the facts of the particular case.⁸⁰ Regulations that entirely or partially prevent mineral development, however, rarely involve either permanent or even temporary occupation of the land.⁸¹ Moreover, perhaps since whenever a *per se* takings category is created, property owners quickly try to fit every new regulatory takings action into the new category, the Supreme Court has opined that courts should narrowly construe what even physical occupation may entail.⁸²

B. Lucas v. South Carolina

If there is no physical invasion, takings cases get thornier. What happens when government regulations entirely eliminate the possibility that any portion of a tract may be developed? It is established that the government generally “takes” property when the landowner is left without any economically beneficial use of his land.⁸³ A regulatory taking by the government is equivalent to the government physically occupying the landowner’s property.⁸⁴ The Court acknowledged that there were only two exceptions to the *per se* takings rule. The first exception is if the regulation imposed by the government prevented a nuisance to the extent common law would have prevented the same nuisance.⁸⁵ The second exception is if the regulation imposed by the government reflected the state’s background principles of real property.⁸⁶

In *Lucas*, the South Carolina Coast Council (the “*South Carolina CC*”) passed the Coastal Zone Management Act in 1977 that designated land next to beaches and sand dunes as critical areas that required permits to use the land for any purpose other than what the area was already devoted to.⁸⁷ David Lucas purchased two lots near the beach in 1986 and intended to build single dwelling homes on the land.⁸⁸ The lots Lucas purchased were not designated as a “critical area” under the 1977 legislation and the state had not yet designated the area as a “construction-free zone,” but two years later, when Lucas began to develop on his lots, the South Carolina CC had expanded the construction-free zone to include Lucas’s lots, and Lucas was prohibited to build on his property.⁸⁹ The South Carolina CC passed the Beachfront Management Act in an effort to control erosion issues that had affected the area for the previous forty years.⁹⁰ The legislation set a baseline that connected the furthest landward

⁷⁹ *Id.* at 427-35.

⁸⁰ *Id.* at 432-44.

⁸¹ Barton H. Thompson, *Application of the Law of “Takings” to Restrictions on Mineral Development*, ROCKY MTN. MIN. L. FOUND., Mineral Law Series No. 3, p. 8-1, 1995.

⁸² *Id.* at 8.4, citing *Yee v. City of Escondido*, 503 U.S. 519 (1992).

⁸³ See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1015-16 (1992).

⁸⁴ See *id.* at 1017.

⁸⁵ See *id.* at 1022-23. (Regulations leading to total deprivation of use require compensation unless the rule does “no more than duplicate the result that could have been achieved...under the state law of private nuisance...or otherwise.”)

⁸⁶ See *id.* at 1031-32.

⁸⁷ *Id.* at 1007-08.

⁸⁸ *Id.* at 1008.

⁸⁹ See *id.*

⁹⁰ *Id.*

points of erosion, and prohibited certain activities, including construction of homes, from the baseline to the water.⁹¹

Lucas brought suit in South Carolina Court of Common Pleas, stating that the new regulations constituted a taking without just compensation, and therefore violated the Fifth Amendment.⁹² The trial court held that the regulation was a taking regardless of the state's authority to exercise its police power because Lucas purchased the land with the intent to build before the restrictions were established.⁹³ The Supreme Court of South Carolina reversed the decision based on the theory that regulations that serve a valid purpose do not constitute a taking under the Fifth Amendment.⁹⁴

The U.S. Supreme Court began its analysis by citing to Justice Holmes's *Pennsylvania Coal Co. v. Mahon* opinion where the Court recognized that "while property may be regulated to a certain extent, if regulations go too far it will be recognized as a taking."⁹⁵ The Court recognized that while no set formula exists to determine when regulations that limit property use go too far, two *per se* takings cases exist (physical intrusion and denial of all economical use of property).⁹⁶ When the government denies a property owner all economically viable use of the land, it essentially transforms the use of the land from private use to strictly serving governmental needs.⁹⁷ The Court concluded that while the regulations served legitimate governmental purposes, the regulations constituted a taking because they deprived Lucas of all economically viable uses of the property.⁹⁸

The Court stated that the South Carolina Supreme Court incorrectly based its decision on the premise that the regulation did not constitute a taking because the regulation served a legitimate public purpose of preventing harm.⁹⁹ Instead, regulatory deprivation (and possible taking) cases are based on whether the "restrictions were reasonably related to the implementation of a policy . . . expected to produce a widespread public benefit and applicable to all similarly situated property."¹⁰⁰ Harm prevention, it was ruled, cannot be used to excuse the government from justly compensating a property owner when the governmental regulation has completely denied the owner of all economically beneficial use of the property.¹⁰¹

Just as physical occupation of property requires just compensation, regulations that prevent any economically beneficial use of land should require just compensation as well.¹⁰² The Court found that legislation, such as the Beachfront Management Act, could not add additional exceptions allowing the government to forego compensation.¹⁰³ Unless regulations are justified through private nuisance laws or a state's power to stop nuisances that affect the general public, the government must compensate property owners.¹⁰⁴ Additional factors to

⁹¹ *Id.* at 1008-09.

⁹² *Id.* at 1009.

⁹³ *Id.*

⁹⁴ *Id.* at 1009-10.

⁹⁵ *Id.* at 1014 (quoting *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922)).

⁹⁶ *See id.* at 1015-16.

⁹⁷ *Id.* at 1018.

⁹⁸ *Id.* at 1032.

⁹⁹ *Id.* at 1022.

¹⁰⁰ *Id.* at 1023 (quoting *Penn Central Transp. Co. v. New York City*, 438 U.S. 104, 133-34 (1978)).

¹⁰¹ *Id.* at 1026.

¹⁰² *Id.* at 1028-29.

¹⁰³ *Id.* at 1029.

¹⁰⁴ *Id.*

consider in a total taking inquiry include the following: (1) the activity's degree of harm to the surrounding neighbors and area; (2) the activity's social value; (3) whether the activity is suitable for the location; and (4) the ability to avoid harm through private and government measures.¹⁰⁵ Because nuisance laws would not prevent a property owner from building a house, the government regulation constituted a taking and required compensation.¹⁰⁶

In summation, *Loretto* and *Lucas* help establish some initial considerations any claimant should expect a court to make. First, does the regulation at issue advance a legitimate state interest? Second, does the regulation at issue result in a *per se* takings? This second step, when applied to mineral or water development, likely invokes the *Lucas* test, which asks whether the regulation denies all economic or productive use of the captioned land. If no takings is yet found because not all economic or productive use has been denied, a likely result, the takings question becomes more difficult, as discussed next.

C. ***Penn Central Transportation Co. v. City of New York***

Regulations that *partially* prevent beneficial uses of a tract of land are more challenging to analyze. In the landmark federal case of *Penn Central*, the owners of Grand Central Station (collectively, "*Penn Central*") in New York City ("*NYC*") wanted to further develop the property by constructing office space above the railroad terminal in the form of a high rise extension of the main building.¹⁰⁷ NYC's ordinances prohibited substantial alteration of historical structures like Grand Central Station without prior approval.¹⁰⁸ When Penn Central applied for permission to develop the space above the terminal, the NYC's Landmarks Preservation Commission denied the application and required the terminal to remain as it was.¹⁰⁹ The owners brought suit against NYC, alleging that, by restricting their developmental rights to the space above the terminal, NYC had taken their property.¹¹⁰

Specifically, Penn Central sued NYC for violation of the Fifth Amendment Takings Clause applied to the states through the Fourteenth Amendment,¹¹¹ seeking injunctive relief to prevent the city from prohibiting construction and damages for a temporary taking.¹¹² The trial court granted the sought-after injunctive relief and severed the temporary taking claim.¹¹³ The New York Supreme Court Appellate Division reversed the trial court's finding and stated there was no taking because the regulations served a legitimate public purpose in protecting historical landmarks.¹¹⁴ The New York Court of Appeals affirmed, holding that there could not be a taking claim without a transfer of control of the property to the city or state.¹¹⁵

The Supreme Court granted certiorari and reviewed the Fifth Amendment taking claim.¹¹⁶ Previous cases had not established a set formula to determine when government

¹⁰⁵ *Id.* at 1030-31.

¹⁰⁶ *See id.* at 1031.

¹⁰⁷ *See Penn Central Transportation Co. v. New York City*, 438 U.S. 104, 116 (1978).

¹⁰⁸ *See id.* at 111-12.

¹⁰⁹ *See id.* at 116-17.

¹¹⁰ *See id.* at 119.

¹¹¹ *Id.* at 119.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.* at 119-20.

¹¹⁵ *Id.* at 120-21.

¹¹⁶ *Id.* at 104.

regulations go so far as to constitute a taking.¹¹⁷ Instead, the Court had historically analyzed the circumstances on a case-by-case basis to establish whether compensation was required.¹¹⁸ The Court first recognized that “[g]overnment hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law.”¹¹⁹ The Court outlined several historical cases where government regulation did not constitute a taking because either the regulation protected the health, safety, morals, or general welfare of the public or the landowner had a reasonable expectation of regulation.¹²⁰ Penn Central argued that the government regulation was so invasive that it constituted an eminent domain action and therefore required just compensation.¹²¹

The Court noted that there was not, and never could be, any “set formula” for deciding when “justice and fairness” require monetary compensation for regulatory takings for public use.¹²² The Court narrowed the question into an analysis of the regulation’s impact on the Terminal by applying three factors: (1) the economic impact of the regulation; (2) the interference with investment-backed expectations of the property owner seeking compensation; and (3) the nature of the governmental action (e.g., does the government action result target a legitimate concern?).¹²³

The Court first pointed out that while the regulation prevents new development, it did not interfere with both the current and historical use of Grand Central Station.¹²⁴ Because Penn Central was able to continue to use Grand Central Station in the same manner it was previously used, the regulation did not interfere with Penn Central’s primary use expectation.¹²⁵ Penn Central was “not only [able] to profit from the Terminal but also to obtain a ‘reasonable return’ on its investment.”¹²⁶ The Court determined that no economic impact on Penn Central existed because Grand Central Station continued to operate in the same manner as it always had.¹²⁷

Next, the Court highlighted that while Penn Central could not construct the proposed plans, the regulation did not prohibit construction of all portions above Grand Central Station.¹²⁸ The Commission’s response to the proposed plans stated that construction approval would depend on ability to “harmonize in scale, material and character with [the train terminal].”¹²⁹ In addition to alternative construction plans subject to approval, Penn Central maintained the right to transfer the development rights of the train terminal to eight other buildings in the surrounding area.¹³⁰

The Court also held that while the captioned regulation did indeed interfere with the ownership rights of Penn Central, the regulation did not constitute a taking.¹³¹ The Court did not

¹¹⁷ *Id.* at 123-24.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at 124 (quoting *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 413 (1922)).

¹²⁰ *See id.* at 125-28.

¹²¹ *See id.*

¹²² *Id.* at 124.

¹²³ *See id.* at 124, 136-38.

¹²⁴ *Id.* at 136.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *See id.*

¹²⁸ *Id.* at 136-37.

¹²⁹ *Id.* at 137.

¹³⁰ *Id.*

¹³¹ *Id.* at 138.

find any significant economic impact or interference with investment-backed expectations because the Grand Central Station continued to turn a profit and Penn Central maintained the option of moving the development rights to several other buildings.¹³²

The Court based the third part of the test on whether the regulation was reasonable in light of the goals and impacts of the regulation.¹³³ Finally, although not in dispute, the Court found that the regulation was legitimately related to the public welfare.¹³⁴

5. GENERAL REGULATORY TAKINGS ANALYSIS IN TEXAS

Over time, how federal courts have analyzed the character of a regulation has fluctuated.¹³⁵ For example, in *Lucas*, the Supreme Court viewed the result of the regulation to be equivalent to the government physically occupying the property.¹³⁶ Accordingly, the Court deemed that the government had categorically taken the property, as opposed to have carried out a regulatory taking.¹³⁷ Therefore, if the government imposes a regulation that is so burdensome that the property is not economically viable to the landowner, the second and third parts of the *Penn Central* test become irrelevant.¹³⁸ Texas has looked closely at the federal case law footprints and, as described below, has followed that general jurisprudential framework with a fairly unquestioning vigor, if in slightly a different order.

A. Compensable Regulatory Takings Generally—*Mayhew v. Town of Sunnyvale*

The common law jurisprudence for regulatory takings in Texas is detailed in the case of *Mayhew v. Town of Sunnyvale*.¹³⁹ The City of Sunnyvale (“*Sunnyvale*”) had one acre minimum lot requirements for single family homes, a provision that was originally intended to address septic tank spacing requirements. Mayhew, a local real estate mogul, owned just over a quarter of the land in Sunnyvale then available for residential development. In 1985, Mayhew began meeting with Sunnyvale authorities to discuss a proposed planned development of his land at a higher density than the one unit per acre requirement. In 1986, anticipating a dramatic rise in population, Sunnyvale amended its zoning ordinance to allow, with city’s council authorization, plats with densities greater than one unit per acre. Then, in 1996, Mayhew proposed to Sunnyvale’s city council a large development of between 3,650 - 5,025 single family dwellings that required zoning allowing at least three units per acre. Mayhew’s plan was examined by a planning and engineering firm hired by Sunnyvale. The firm determined Mayhew’s plan satisfied each of the requirements of Sunnyvale’s zoning ordinance and so recommended approval. After the firm’s recommendation, however, the planning and zoning commission enacted a building moratorium and recommended denial. In 1986, after negotiations between city officials—including some city members and the mayor—and Mayhew, an agreement was achieved

¹³² *Id.* at 137.

¹³³ *See id.*

¹³⁴ *Id.* at 138.

¹³⁵ *See Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1028-29 (1992).

¹³⁶ *See id.*

¹³⁷ *See id.*

¹³⁸ *See id.*

¹³⁹ 964 S.W. 2d 922 (Tex. 1998). (An excellent description of the events of *Mayhew*, a dispute that actually comprised a series of cases leading up to the final Texas Supreme Court case, described above, was presented by attorney Reid C. Wilson in a paper entitled *Practical Tips for Dealing with Local Governments* given to the 27th Annual Advanced Real Estate Law Course, Jul. 7-9, 2005, San Antonio, Texas, available at <http://www.wcglaw.net/docs/Practical%20Tips%20for%20Dealing%20With%20Local%20Goverments.pdf> (last visited Oct. 31, 2013)).

allowing for a 3,600 unit development. Citizen invective, however, caused the city council to reject Mayhew's amended proposal in January 1987. In March 1987, Mayhew brought suit against Sunnyvale and the four city council members who voted against the proposal.

In determining whether a compensable taking had occurred, the Texas Supreme Court adopted the analysis that a compensable regulatory taking may occur (i) if a statute or regulation does not substantially advance a legitimate governmental purpose, **or** (ii) if the statute or regulation prevents the landowner from any economic use of the property, **or** (iii) if the statute or regulation *unreasonably interferes* with the landowner's use and enjoyment of the property.¹⁴⁰

As for the first possibility, the Court in *Mayhew* opined that "[t]he standard requires that the ordinance substantially advance the legitimate state interest sought to be achieved rather than merely analyzing whether the government could rationally have decided that the measure achieved a legitimate objective," before reciting several legitimate government purposes that may be advanced by laws and rules, such as "enhancing the quality of life," "protecting a beach system for recreation, tourism, and public health," and "protecting residents from the ill effects of urbanization."¹⁴¹ This standard has been an easy hurdle for regulators to meet, particularly in oil and gas regulatory jurisprudence.¹⁴²

Moving to the second criterion, the *Mayhew* Court noted that "a restriction denies the landowner all economically viable use of the property or totally destroys the value of the property if the restriction renders the property worthless."¹⁴³ "Determining whether all economically viable use of a property has been denied entails a relatively simple analysis of whether value remains in the property after the governmental action."¹⁴⁴

Finally, a taking can occur when governmental restrictions unreasonably interfere with the landowner's use and enjoyment of his property.¹⁴⁵ The *Mayhew* Court cited two factors to be considered: (1) the economic impact of the regulation; and (2) the extent to which the regulation interferes with distinct investment-backed expectations.¹⁴⁶ Regarding economic impact, the Court broadly opined that this prong "merely compares the value that has been taken from the property with the value that remains in the property," and "[t]he loss of anticipated gains or potential future profits is not usually considered in analyzing this factor."¹⁴⁷ Regarding investment-backed expectations, the Court noted that these were generally based only on the existing and permitted uses of the property.¹⁴⁸

¹⁴⁰

Id.

¹⁴¹

Id. at 934.

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Dwight Shupe, *Compensable Regulatory Takings in Texas*, Special Institute on Development Issues & Conflicts in Modern Gas and Oil Plays, Houston, Nov. 4-5, 2004, available at <http://www.klgates.com/files/tempFiles/dc7c600d-e892-47e8-9632185804d08c41/takingslitigation.pdf> (last visited Sep. 21, 2013).

¹⁴³

Id. at 935.

¹⁴⁴

Id.

¹⁴⁵

Id.

¹⁴⁶

Id.

¹⁴⁷

Id. at 936.

¹⁴⁸

Id.

B. Interference with Use and Enjoyment—Sheffield v. Glenn Heights

Interference with “use and enjoyment” resonated loudly in the next watershed Texas case that helped define the general analysis to be applied to an alleged partial regulatory taking. In 1986, Glenn Heights zoned a tract of land as Planned Development District 10 (“PD 10”) that included a provision that restricted the house density level to 5.5 dwellings per acre.¹⁴⁹ In 1995, the city recognized a surplus of high-density dwelling zones and developed the “Future Land Use Plan” that restricted house density levels to four or five houses per acre.¹⁵⁰ This plan rezoned all property within city limits except for a few planned development districts, including PD 10.¹⁵¹ In 1996, Sheffield Development Company contracted to buy 194 acres within PD 10 for \$600 an acre (well below market price).¹⁵² Sheffield intended to develop the land into a housing subdivision and met with city officials several times to ensure no zoning limitations existed before the final purchase.¹⁵³

At the same time they were meeting with Sheffield, but without Sheffield’s knowledge, the City officials were also conducting private meetings to discuss “downzoning” PD 10.¹⁵⁴ During this time, a “Vested Rights Statute” existed that allowed landowners to file a plat with the City and vest their zoning rights.¹⁵⁵ In other words, a landowner could file a plat to avoid subsequent zoning changes.¹⁵⁶ On January 6, 1997, the City passed a resolution that prevented landowners from filing plats until February 6, 1997, and later extended the moratorium to March 6.¹⁵⁷ The City claimed the need to conduct a study of the current zoning structure in order to see if it aligned with the comprehensive use plan.¹⁵⁸ On March 11, Sheffield attempted to file a plat with the city to vest the PD 10 zoning regulations.¹⁵⁹ The City Secretary informed Sheffield that the City Manager continued the moratorium without City Council approval.¹⁶⁰ The City continued to extend the moratorium through May 15, 1998.¹⁶¹ During this time, but after Sheffield’s final purchase, the City rezoned PD 10 restricting the number of houses per acre.¹⁶² Sheffield filed suit claiming that both the City’s moratorium and rezoning constituted a taking that required just compensation.¹⁶³

The trial court found that the moratorium did not constitute a taking because it “substantially advanced a legitimate governmental interest, [and] did not unreasonably interfere with Sheffield’s rights to use and enjoy its property.”¹⁶⁴ The court also found that while the rezoning did substantially advance government interests, it severely impacted Sheffield’s

¹⁴⁹ Sheffield Dev. Co., Inc. v. City of Glenn Heights, 140 S.W. 3d 660, 664 (Tex. 2004).

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 665. (“Downzoning” is the process by which the number of buildable lots in a zoned tract is lowered by raising the minimum number of contiguous square feet required for an individual lot. In Sheffield, the downzoning meant that the minimum lot size went from 6,500 to 12,000 ft².)

¹⁵⁵ *Id.*

¹⁵⁶ *See id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.* at 666.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

economic interests, deprived investment-backed expectations, and unreasonably disturbed his use and enjoyment of the property.¹⁶⁵ The Court of Appeals found that both the moratorium and the rezoning constituted a taking.¹⁶⁶ The Supreme Court of Texas granted certiorari to review the case, and applied federal jurisprudence to determine the issue.¹⁶⁷

The Court outlined three *per se* takings scenarios, including a physical invasion of property, regulations that deny all economically beneficial use of land, and regulations that fail to substantially advance legitimate state interests¹⁶⁸ and noted that when a situation does not fall within one of these three categories, a question of law then exists whereby a court must balance the public interest against the private owner's interests.¹⁶⁹ The Court was therefore compelled to apply the *Penn Central* factors: economic impact; interference with investment-backed expectations; and the character of the governmental action, when balancing the competing interests.¹⁷⁰

When considering these, the Court first determined that the rezoning met the qualifications to constitute a substantial advancement of legitimate governmental interests.¹⁷¹ In doing this, it noted that a legitimate public use is determined by applying a rational basis test¹⁷² and that a legitimate public use will be found if the regulating entity can conceive any rational reason for protecting the public's interest—a fairly low threshold to meet.¹⁷³ The Court also found that such a substantial advancement does not have to be proved to the degree of certainty, particularly in situations, like the present, when the regulation is based on estimates and projections.¹⁷⁴ "The City could reasonably conclude that this would substantially advance its legitimate interest in preserving a smaller community environment."¹⁷⁵

Next, the Court considered the *Penn Central* factors of investment-backed expectations and economic impact.¹⁷⁶ The Court first stated that lost profits is merely one of several factors considered when determining the economic impact.¹⁷⁷ In this case, although the regulation had a significant economic impact due to Sheffield's lost profits, the land was still worth substantially more (four times more) than the purchase price.¹⁷⁸ This investment profit seemed to be the determinant factor in the Court's economic impact analysis, mitigating the loss caused by the regulation.¹⁷⁹ The Court concluded that, while Sheffield's expectations were reasonable in light of his research of previous zoning laws and his efforts to communicate with the City,¹⁸⁰ that did not mean that the restrictions severely interfered with his investment expectations.¹⁸¹ The purchase investment was speculative in itself because Sheffield was not guaranteed to

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Id.

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Id. 667.

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Id. at 669.

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See id. at 671.

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Id. at 672.

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Id.

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See id. at 673-78.

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See id. at 675.

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See id.

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Id. at 676.

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Id.

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See id. at 677.

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See id.

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See id.

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Id.

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See id. at 678.

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See id.

successfully develop and sell the housing subdivision.¹⁸² Additionally, the purchase price of the land was small in comparison to the cost to develop it.¹⁸³

The Court also identified an additional issue not specifically mentioned in *Penn Central* by considering the City's conduct in dealing with Sheffield.¹⁸⁴ The City's decision to rezone and place a moratorium on plat filings did not take effect until *after* Sheffield closed on the property.¹⁸⁵ Although the City's conduct was a cause for concern for the Court, it did not take away from the legitimate goals achieved from rezoning.¹⁸⁶ The Court therefore determined that while the rezoning and moratorium may very well have been unreasonable, the City's action did not go so far in the Court's view to constitute a taking, and therefore Sheffield was ordered to take nothing on its takings claim.¹⁸⁷

This is a harsh outcome as it appears the city employees were clearly false in their dealings with the developer. As one commentator put it, "[i]f the facts in Sheffield do not constitute an unreasonable interference with the use and enjoyment of the PD-10 property by [Sheffield] (meeting both the test of economic impact and interference with investment-backed expectations), then it is difficult for me to imagine a set of facts that would."¹⁸⁸

6. TEXAS WATER REGULATORY TAKINGS LITIGATION BEGINS—EDWARDS AQUIFER AUTHORITY v. BRAGG

So how will regulatory takings analysis in the water context look in Texas? Once *Edwards* was released, landowners unhappy with GCD orders curtailing their water production and use quickly filed suit. *Bragg* was the first such case to be considered at the state appellate level. On Aug. 28, 2013, the San Antonio Court of Appeals released its opinion considering whether a GCD's withholding of a water permit from one pecan orchard and the curtailing of another in South Texas were a regulatory taking requiring compensation.

The Braggs owned two tracts over the Edwards Aquifer known as the Home Place Orchard (60 acres) and the D'Hanis Orchard (42 acres) that they purchased in 1979 and 1983, respectively. After the EAA was established and the EAAA became effective in 1996, the Braggs applied for "Initial Regular Permits" as existing users of groundwater. The applications contained a declaration of maximum beneficial use for the Home Place Orchard of 228.85 acre-feet of groundwater and 193.12 acre-feet of groundwater for the D'Hanis Orchard. In response, the EAA examined the historical use of water for the two orchards over the period of 1972 to 1993. As a result, the EAA permitted only 120.2 acre-feet of the water for the Home Place Orchard and issued no permit for the D'Hanis Orchard, finding no historical use.

In response, the Braggs sued, moving for partial summary judgment on the takings claims. The EAA moved also for summary judgment itself. The trial court found for the Braggs, granting their motion and concluding the EAA's actions amounted to a regulatory taking. In a subsequent bench trial conducted to determine the compensation due, the judge considered the amount of groundwater to which the Braggs were entitled and the value of that groundwater. Ultimately, the trial court held that the Braggs did not suffer an actual or *per se* taking of their

¹⁸² See *id.*

¹⁸³ See *id.*

¹⁸⁴ *Id.* at 679.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ See *id.*

¹⁸⁸ Shupe, *supra* note [-] at 9.

groundwater real property and that the tracts still had some value without the water use. The court also measured the value of the regulatory taking at \$134,918.20 for the D'Hanis tract and \$597,575.00 for the Home Place tract, holding in effect that the statute of limitations did not bar the Braggs' claim. On appeal from both parties, the Fourth Court of Appeals considered four significant questions.

A. Was There a Taking?

After the trial court found a regulatory takings had occurred, the EAA argued to the court of appeals that the EAAA did not unreasonably interfere with the "use and enjoyment" of the orchards to the extent the tracts were unusable for that purpose. Then, crafting a rather brazen argument, the EAA claimed its reduction/denial of the water permits *enhanced* the value of the Braggs' tracts because the EAAA conserved/preserved the water in the aquifer so that the Braggs could continue to rely on it in the Home Place tract and/or buy water for the D'Hanis tract, could lease the permit rights received for the Home Place tract, and could now lease the permit rights of other parties to irrigate both tracts to their hearts' content. The EAA claimed all of these ethereal "benefits" were leavened only by the all-too-real increased irrigation costs.

The court of appeals pierced this ham-fisted salesmanship of government regulation first with admirable understatement: "We believe [the EAA] misconstrues the nature of the takings claims asserted here and the analysis of whether a taking has occurred." Then, the court of appeals invoked *Edwards* for the proposition that since the landowner has absolute title in severalty to the groundwater in place beneath his land, subject only to the state's police power and the common law rule of capture, the issue was not whether the Braggs had been denied their ability to sell or lease their groundwater but rather whether their own use had been hindered by the EAAA to the extent that some or all of the losses inflicted on the Braggs by the restrictions ought to be shouldered by the government. Since the trial court found that the highest and best use of the tracts was as pecan orchards, the court of appeals defined its task as determining whether the EAA, though the EAAA, impacted the Braggs' pecan irrigation plans to the extent that a compensable taking occurred.

The court of appeals then noted the two circumstances when the U.S. Supreme Court recognizes *per se* takings—first, when a direct, physical invasion has taken place and second, when a regulation "denies all economically beneficial or productive use of the land"¹⁸⁹—did not apply to the facts before them. Instead, after admonishing opinion readers that "...the three *Penn Central* factors [are not] the only ones relevant in determining whether the burden of regulation ought 'in all fairness and justice' to be borne by the public..."¹⁹⁰ the court of appeals then hurried to apply the three *Penn Central* factors with little variation in theme from the original piece. Again, these were (1) the economic impact on the regulation or law upon the property owner; (2) the investment-backed expectations of the property owners the nature of the government's action; and (3) whether it was rationally related to a legitimate government end.

As to the economic impact on the Braggs, the court of appeals first noted that a reduction in property value stemming from a prohibitive regulation cannot by itself create a taking because all real property is owned subject to a state's police power.¹⁹¹ Likewise, the court

¹⁸⁹ [-], citing *Lucas*, 505 U.S. at 1015-16.

¹⁹⁰ [-], citing *Hallco Tex. Inc. v. McMullen Cnty.*, 221 S.W.3d 50, 75 (Tex. 2006).

¹⁹¹ [-], citing *Sheffield Dev.*, 140 S.W.3d at 669-70.

of appeals also opined that even if the single most profitable use of a tract is lost—but others remain—a compensable taking may not automatically be incurred.¹⁹²

Then the court of appeals examined the record describing the actual impact on the Braggs' operations caused by the EAA's action on the permits, finding that the Braggs would now have to purchase or lease water under the EAA's permit scheme. The EAA claimed that the impact on the pecan operations would only amount only to a ten percent (10%) increase in irrigation costs, but the appeals court did not consider even this increase, if true, as just an "incidental diminution in value," but rather a significant impact that would force the Braggs to purchase or lease what they had before the EAA's action on their permit requests, being an unrestricted right to use the groundwater on their tracts. Thus, the first *Penn Central* factor went in the Braggs' favor.

Second, the court of appeals considered whether or not there existed among the Braggs an investment-backed expectation of profit from the activities that were later curtailed by the permitting activities of the EAA. Acknowledging that applying this prong to groundwater use is difficult because of all the potential uses of groundwater, the court of appeals noted that historical, existing, and permitted uses of the captioned tracts comprise the "primary expectation" of the affected groundwater owner.¹⁹³ In addition, whether the regulations existed at the time of the purchase by claimants, and whether the claimants knew of the existing regulation—or should have known—is also to be considered.¹⁹⁴

In *Bragg*, the claimants easily jumped this evidentiary hurdle, with the court of appeals commenting on the claimants' long-held and demonstrable intent to use the tracts as pecan orchards, their purchase of pumps and other irrigation equipment, and their expectation that they could use as much groundwater as they liked to irrigate the trees. Further, the court of appeals quoted Mr. Bragg as saying the Braggs would never have bought the land if they knew they would not be able to utilize the Edwards Aquifer to their liking

On the other side of the ledger, the court of appeals also noted that when the Braggs were planning to sink a water well on the D'Hanis tract in 1993, they *did* know of the recently-passed EAAA (that was then delayed by litigation that lasted until 1996). More broadly, the court of appeals noted that investment-backed expectations must be reasonable and allowed that the claimants certainly had no reasonable investment-backed expectation that regulatory curtailment of groundwater use could *never* happen in the future.

After a description of Mr. Bragg's extensive experience in agriculture generally, and pecan production specifically, the court of appeals highlighted a test for the reasonableness of expectations, taken from *Appolo Fuels, Inc. v. United States*:¹⁹⁵ (1) whether the claimant operated in a "highly regulated field" and should have expected close regulatory control; (2) whether the claimant was aware of the issue(s) that triggered the need for the regulation at the time it purchased the captioned land; and (3) whether the claimant could have "reasonably anticipated at the time of purchase." The Braggs were found to have met all three criteria, and therefore prevailed on the second prong.

¹⁹² [-], citing *Taub v. City of Deer Park*, 882 S.W.2d 824, 826 (Tex. 1994).

¹⁹³ [-], citing *Mayhew*, 964 S.W.2d at 936-7.

¹⁹⁴ *Id.*

¹⁹⁵ 381 F.3d 1338, 1349 (5th Cir. 2004).

Third, the court of appeals considered the nature of the regulation and, basically, whether the regulators had a good reason to be concerned about the activity and whether the regulation was reasonably directed toward mitigating/preventing the possible harm. Not surprisingly, the court of appeals found that this prong augured against a finding of a compensable taking.

In the end, the court of appeals found that a compensable taking existed because two prongs went in favor of the Braggs while only one was found in favor of the EAA.

B. Who Pays—the State of Texas or the Edwards Aquifer Authority?

One unexpected question arose on appeal: who pays the compensation taking settlement—the GCD or the state? Since the trial court found that the EAA acted without discretion and as mandated by the state, on appeal the EAA argued that this conclusion could only mean that the state, as opposed to the EAA, should pay the takings liability. Therefore, the EAA argued, the Braggs should have sued the state on their taking claim. The Braggs countered that the EAA is the regulatory agency that promulgated the actions that led to the takings and should therefore bear responsibility for making the compensation, whether or not the state could also be a proper defendant.

The EAA cited *Barshop v. Medina Cnty. Underground Water Conservation Dist.*,¹⁹⁶ a case that arose from the genesis of the EAAA that claimed the language in § 1.07 of the EAAA¹⁹⁷ meant that “[b]ased on this provision in the [EAAA], we must assume that the Legislature intends to compensate Plaintiffs for any taking that occurs.”¹⁹⁸

The court of appeals responded that, while the EAA was correct, *Barshop* also noted that “the [Edwards Aquifer] Authority may constitutionally take property as long as *it* provides adequate compensation”¹⁹⁹ so that *Barshop* is not dispositive about who—the EAA or the state—should pay takings compensation. After addressing some other federal and Texas cases produced by the EAA that the court of appeals acknowledged as being supportive of the argument that, when an agency lacks discretion whether to or not to “enforce a state law that may be characterized as the effectuation of the policy of the State of Texas embodied in that statute, it is the State that is liable,”²⁰⁰ the court of appeals distinguished the current case in that it involved a state actor enforcing a state law and not a county or county employee enforcing a state law.

In *Edwards*, the EAA claimed that, like the Braggs, a strong majority of landowners in its jurisdiction could not show the historical use necessary for a permit and that since the EAA was required to shrink the permitted amounts, or deny them altogether, a “disastrous” wave of litigation and liability was to come.²⁰¹ And like in *Edwards*, the court of appeals in *Bragg* largely shrugged at this concern, opining instead that the state legislature certainly must have known the potential impact of EAA liability for takings claims when it passed the enabling legislation calling for the EAAA. In any event, the court of appeals finally then held that, “[a]lthough the

¹⁹⁶ 925 S.W.2d 618 (Tex. 1996).

¹⁹⁷ § 1.07 (the Legislature “intends that just compensation be paid if implementation of [the EAAA] causes a taking of private property or the impairment of a contract in contravention of the Texas or federal constitution.”)

¹⁹⁸ *Id.* at 631. (emphasis added by citing court)

¹⁹⁹ *Id.* at 628.

²⁰⁰ [-]

²⁰¹ 369 S.W.3d 814, 843 (Tex. 2012).

[EAA]'s actions in this case may not have been discretionary and even if the State might be a proper party, we conclude the [EAA] also is a proper party to a takings lawsuit instituted under the [EAAA].”

C. Application of the Statute of Limitations

The parties disputed whether or not the ten-year statute of limitations applied. The EAA argued that the statute of limitations began to run with the final activation of the EAAA in 1996, and thus the Braggs had until 2006 to bring an action. The Braggs countered that the statute was triggered at the time of the application of the regulatory scheme to their tracts—in 2004 and 2005—and that since the EAA had previously argued in federal court the very same thing (in an effort to counter due-process claims), they were judicially estopped from claiming otherwise. The trial court held for the Braggs.

After dismissing the Braggs’ judicial estoppel argument and establishing that the ten-year statute of limitations period applied, the court of appeals found that the statute of limitations began to run on the dates that the permits were granted or denied, in 2004 and 2005, respectively. First, the court of appeals noted the difference between physical invasions and regulatory takings and that it is often inappropriate to apply the analysis of one type of case to the facts belonging to the other variety,²⁰² but that generally a cause of action accrues the moment an activity invokes liability.²⁰³ The court of appeals then noted that in Texas, “[w]hen...there has been no ‘entry’ on land, but rather an interference with the right to use the property, limitations must begin when that interference first occurs.”²⁰⁴ Drawing on that entry syllogism, the court of appeals held that the Braggs’ cause of action “did not accrue, until the [EAA] made its final decisions regarding the application of the [EAAA] to the Braggs’ permit applications....as to the Braggs, the provisions of the [EAAA] were not implemented or applied until 2004 and 2005.”

D. How Much Compensation Is Due & When Is It Measured?

Finally, the court of appeals turned to the measure of compensation. As for the Home Place Orchard, the trial court calculated the takings damages as the difference between the market value of the tract if the requested permit had been issued and the market value of the tract with the lessened permitted amount. In essence, the trial court measured the value of the land by valuing the lost water at the time of trial. Since the water rights in the orchard were found to have a market value of \$5,500 per acre-feet of water, and the permit was for 108.65 acre-feet less than the amount requested, the trial court held that the product of the two was the correct measure of compensation, being \$597,575. As for the D’Hanis Orchard, where the water permit had been denied, the trial court looked at the value of irrigated farmland vs. unirrigated farmland in the county and multiplied the difference by the acreage of the D’Hanis Orchard to arrive at \$134,918 as the correct measure of compensation.

The court of appeals considered two questions—what is the correct methodology to calculate the takings compensation and what is the correct time to measure the values associated with calculating the correct measure of compensation. The EAA argued that the correct measure of compensation associated with a restriction that merely interferes with “use

²⁰² [-], citing *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg’l Planning Agency*, 535 U.S. 302, 323-24.

²⁰³ *Id.* citing *Lowenberg v. City of Dallas*, 168 S.W.3d 800,802 (Tex. 2005).

²⁰⁴ *Id.* citing *Trail Enters., Inc. v. City of Houston*, 957 S.W.2d 625, 631 (Tex.App.—Houston [14th Dist.] 1997, writ denied).

and enjoyment” should have been the difference between the value of the orchards immediately before and after the date of the regulation that incurred the takings compensation. Thus, the EAA argued that the market value takings measurements should have arisen in either May 1993, when the EAAA was enacted, or in June 1996, when the EAAA became effective after various legal challenges. The Braggs countered that the date of the takings was when the EAA issued/denied the permits but, citing § 21.0421 of the Texas Property Code (the portion of the code covering condemnation proceedings initiated by state or local regulatory entities), that the value of the property should have been calculated at trial and not the date of the takings.

The court of appeals agreed with the Braggs that the takings liability was incurred when the EAAA’s stipulations impacted the two tracts but disagreed that the values of the tracts should be determined at trial, holding instead the value should have been determined at the time the EAA’s final permitting incurred takings compensation. The court of appeals noted that § 21 of the Texas Property Code does not apply to inverse condemnation suits²⁰⁵—the takings at issue in *Bragg*—and that cases of inverse condemnation that require takings compensation assess damages either when the regulation is enacted or, as in *Bragg*, when the regulation is implemented.

Turning to the question of how to value the takings compensation, the court of appeals noted the difficulty in defining what “property” was actually taken—was it the groundwater that was taken, or a portion of the surface estate? The appeals court also noted that Texas takings jurisprudence recognizes that cases requiring the valuation of subsurface estates fall into two general categories: (1) cases involving property taken in a condemnation/eminent domain context that require valuation of the sub-surface estate as a component of the whole land estate²⁰⁶ and (2) cases involving taking all or a component of the sub-surface where the sub-surface estate must be valued as property separate from the land.²⁰⁷ The bifurcation of the two types of cases hinges upon whether the mineral estate is being taken along with the rest of the fee estate and is a separate component of the value of the entire fee estate (the first variety) or is being taken as a separate component alone (the second variety). The proper measure of compensation due in the first strain of cases is the market value of the total fee estate as it was enhanced by the minerals actually taken. The proper measure of compensation due in the second is the loss of value of the mineral estate itself.

While *Bragg* does not neatly fit into either category, the appeals court noted that a “common thread” in such cases is that the sub-surface estate consisted of “property” or a “commodity” that comprised the business of the plaintiffs.²⁰⁸ In *Bragg*, the water itself was not the commodity being sold, but rather was a component necessary for operation of another concern—growing pecans. Therefore, the court of appeals determined that the “property” taken was the amount of irrigation water necessary to maintain the Braggs’ enterprise and therefore the value of that “property” was the value of the pecan orchards right before and right after the application provisions of the EAAA were implemented and affected the orchards in 2004 and 2005—in other words, the difference between the value of the land as a commercial orchard

²⁰⁵ “An inverse condemnation may occur when the government physically appropriates or invades the property, such as by restricting access or denying a permit for development.” *Westgate, Ltd. v. State*, 843 S.W.2d 448, 452 (Tex. 1992).

²⁰⁶ [-], citing *United States v. 339.77 Acres of Land, More or Less, in Johnson and Logan Counties, Ark.*, 420 F.2d 324, 326 (8th Circ. 1970) and three other cases.

²⁰⁷ [-], citing *United States v. 4.105 Acres of Land in Pleasanton*, 68 F.Supp. 279, 291-92 (N.D. Cal. 1946) and one other case.

²⁰⁸ [-], citing *4.105 Acres of Land*, 68 F. Supp. at 286.

with unlimited access to the Edwards Aquifer and the value of the land as an orchard with the permitted amount of water.

7. TEXAS OIL & GAS REGULATORY TAKING JURISPRUDENCE

With only one Texas water takings case released (as of the time of this writing) and the court of appeals' admittance therein that such cases will largely be determined not by application of a rote jurisprudential formula but instead will entail fact-specific analysis, and with the obvious analogous qualities between hydrocarbons and water, one way to help predict how Texas water takings jurisprudence may develop for groundwater generally and, more specifically, for water produced and then used for oil and gas operations is to consider recent Texas regulatory takings jurisprudence in the realm of oil and gas.

A. Denial of All Economical Use

The mineral estate is considered dominant over the surface estate, and absent development restrictions in the severance, fee mineral ownership comes freighted with the ability to exclusively enter the mineral estate—and the surface estate above it within the same fee tract or leasehold as reasonably necessary—and to explore, produce, develop, and take away the minerals, and any other necessary incidents that will allow same.²⁰⁹ Courts long ago noted that without this right of development over the resistance of the surface owner, the mineral estate would be worthless.²¹⁰

But can a city or state agency by regulation prevent groundwater development for use in operations for oil and gas development? If they do, is compensation forthcoming? The answers after *Edwards* and *Bragg* are now “yes” and “maybe,” respectively. For example, the City of Grand Prairie, located on the eastern boundary of the Barnett Shale in (primarily) Dallas County, Texas, became in August 2011 the first municipality in Texas to ban the use of city water for fracking.²¹¹

With only one Texas opinion released considering a taking related to groundwater use—and that not for oil and gas development—little guiding jurisprudence yet exists in Texas for a groundwater owner who seeks taking compensation for regulations like that found in Grand Prairie. For those hoping to find analogous case law in oil and gas jurisprudence, there is also a legal lacuna of cases in Texas that rule that a statute or regulation that prevents—or *effectively* prevents—hydrocarbon development establishes a claim for a compensable regulatory taking.

Like a federal claimant, a property owner facing regulations that deny him the beneficial use of *all* his property faces a less difficult path in Texas. But in order to go down the relatively easy path of *Lucas* requires that a landowner establish that the statute and/or rule in question completely nullifies the value of the property.²¹² With the advent of *Edwards*, the owner of land now has title to the groundwater in that land, just as the owner of oil and gas in Texas has title in

²⁰⁹ See *Harris v. Currie*, 176 S.W.2d 302 (1943). (These rights have been recognized for at least 150 years in Texas. See *Cowan v. Hardeman*, 26 Tex. 217, 222 (1862)).

²¹⁰ *Id.*

²¹¹ Mike Lee, *Parched Texans Impose Water-Use Limits for Fracking Gas Wells*, BLOOMBERG BUSINESSWEEK (Oct. 6, 2011) available at <http://www.businessweek.com/news/2011-10-06/parched-texans-impose-water-use-limits-for-fracking-gas-wells.html> (last visited Nov. 6, 2011).

²¹² *Mayhew*, *supra* note [-] at 936.

severalty to the unproduced hydrocarbons in place.²¹³ In Texas, development of that oil and gas is subject the police power of the state²¹⁴ as manifested by the regulations of the RRC.

Lucas, and situations where it or the state case law equivalent are invoked, are generally more favorable to mineral owning taking claimants than situations where some economic use may remain.²¹⁵ Mineral owners generally fail in their claims when they fail to conclusively show either economic impact,²¹⁶ that the activity regulated may be curtailed through public or private nuisance law,²¹⁷ or that the mineral right still had some value.²¹⁸

Another question, touched upon in *Lucas* and that could greatly affect water-for-hydrocarbon-development taking claims is: what is the relevant piece of land when determining whether the landowner has been deprived of all beneficial use of his property right? For example, if a landowner owns groundwater rights on two contiguous tracts and a permit for water use is denied for one, has that denial eliminated all beneficial use of the groundwater right for that tract, leading to a *Lucas* analysis, or is such a limitation considered only a partial taking, as groundwater use of the other tract was not obviated, and leading to a *Penn Central* analysis?

The *Lucas* Court provides little guidance in answering this question, but does helpfully (ahem) acknowledge in a footnote that the right definition of a property right is a “difficult question.”²¹⁹ The Court did provide that courts should not take into consideration all the tracts that a claimant owns when the tracts are noncontiguous and/or unrelated,²²⁰ before theorizing somewhat vaguely that, “[t]he answer may lie in how the owner’s reasonable expectations have been shaped by the State’s law of property, i.e., whether and to what degree that State’s law has accorded legal recognition and protection to the particular interest in land with respect to which the takings claimant alleges a diminution of (or elimination of) value.”²²¹

Since *Lucas*, state and lower federal courts have carried the ball on the question of determining the relevant piece of land to consider when determining whether the landowner has been deprived of all beneficial use of his or her property right. Contiguity remains a primary tension, as was shown in *Loveladies Harbor, Inc. v. U.S.*²²² wherein the federal authorities argued that a claim by a landowner that a law preventing development on wetlands did not constitute a takings because the landowner had several noncontiguous tracts that were still available for development and because all the captioned tracts had originally been purchased as one large tract before subdivision. The Court of Claims appears to have split the difference in its opinion. First, focusing only on the location of the wetlands and not tract contiguity, the court found a taking had occurred.²²³ But then, since all the tracts had been acquired together as one original tract, the court considered the entire original tract when

²¹³ *Eliff v. Texon Drilling*, 210 S.W. 2d 558, 561 (Tex. 1948).

²¹⁴ *Id.*

²¹⁵ See Barton H. Thompson, *Application of the Law of “Takings” to Restrictions on Mineral Development*, ROCKY MTN. MIN. L. FOUND., Mineral Law Series No. 3, p. 8-3, 1995.

²¹⁶ See, e.g., *Goldblatt v. Town of Hempstead*, 369 U.S. 590, 594-95 (1962).

²¹⁷ See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1022-23 (1992).

²¹⁸ See, e.g., *Keystone Bituminous Coal Ass’n v. DeBenedictus*, 480 U.S. 470 (1987) (Wherein the Court upheld a Pennsylvania law requiring that an underground coal mine owner leave 50% of the coal in place even if surface owners have waived their rights to support.)

²¹⁹ *Lucas*, at 505 U.S. 1003, n. 7 (1992).

²²⁰ *Lucas*, at 505 U.S. 1003.

²²¹ *Lucas*, at 505 U.S. 1003.

²²² 15 Cl. Ct. 381 (1988).

²²³ *Id.* at 391-93.

considering the value lost.²²⁴ The court highlighted several considerations that should go into deciding the correct size of a tract to value, such as purchase history, proximity of the tracts and their contiguousness, whether or not the tracts have been considered a single unit in the past, and whether the restrictions actually raise the value of the unrestricted tracts.²²⁵

Ultimately, however, in the groundwater realm, and particularly for groundwater used for new oil and gas operations, denial of *all* possible economic use of a tract's groundwater will likely be very difficult to prove, particularly if the contemplated use is for a relatively new process such as hydraulic fracturing. Water may be used in many profitable enterprises outside of oil and gas operations. Only when the best possible uses are interfered with to an unreasonable degree are compensable takings to be found.

B. Unreasonable Interference with Use and Enjoyment

Instead of claims rooted in allegations that a regulation has removed all possible use of groundwater, it is much more likely in the groundwater taking realm to find claims that the regulation curtailing groundwater use is an unreasonable interference with the use and enjoyment of the captioned tract. Under traditional land use/zoning regulatory takings law, in the absence of a total taking or a physical invasion, a federal court would apply the tri-partite *Penn Central* test to determine if there is a taking. A court applying Texas law would apply basically the same analysis as that outlined in *Sheffield*. In the context of groundwater, *Bragg* is the only modern taking case in Texas. Such takings have, however, been considered in the oil and gas context.

(i) City of Houston v. Maguire Oil Co.

One such case was the two-decades spanning litigation marathon of *City of Houston v. Maguire Oil Co.* ("*Maguire*").²²⁶ On May 7, 1991, the City of Houston issued Maguire Oil a drilling permit for one well within the city limits proper. On May 22, 1991, the City of Houston ratified a modified version of the permit. On Aug. 5, 1991, the City of Houston extended the permit. On Halloween later that year, however, the City of Houston delivered a trick in the form of a stop work order, shortly followed by a written declaration that the drilling permit had been revoked due to a 1967 City of Houston ordinance that prohibited drilling in the City of Houston's extraterritorial jurisdiction²²⁷ and within 1,000 feet of Lake Houston.

²²⁴ *Id.* (This can lower the potential compensation because if the entire original tract is considered and only a portion of the tract cannot be developed, that can lead a fact finder to determine that the loss is relatively small as large tracts are often not entirely developed anyway even without regulatory curtailment. On the other hand, if just the smaller tract is considered whereon no development is possible at all, then the tendency is to find more compensation is due because the owner can do nothing.)

²²⁵ *Id.*

²²⁶ 342 S.W.3d 726 (2011).

²²⁷ A city's zone of extraterritorial jurisdiction was established by the State to allow cities to "designate certain areas as the extraterritorial jurisdiction of municipalities to promote and protect the general health, safety, and welfare of persons residing in and adjacent to the municipalities." (TEX. LOC. GOV.'T CODE ANN. § 42.001).

Relying on the May permit, Maguire Oil had spent around \$190,000 by Oct. 31, 1991 in preparing the drilling site for operations. After mediation attempts by Maguire failed,²²⁸ the company filed suit, both seeking to recover its sunk costs and arguing that the City's prevention of its drilling was a regulatory taking effectively depriving it of all economically viable use of its mineral property. The company sought recompense measured at the alleged value of the oil and gas in place. The City riposted, arguing that Maguire Oil's action was blocked by the 10-year statute of limitations and that the company had produced no evidence to substantiate its damages.

A procedural dogfight ensued. First, the City of Houston removed the case to the U.S. District Court. The trial court held in favor of the city, granting its motion for summary judgment on all claims. The federal court, however, then determined that it did not have jurisdiction after all and sent the case back to a Harris County district court. In 2002, the state district court in Harris County held for the City of Houston, and Maguire appealed. The Court of Appeals both affirmed and remanded, rejecting the city's argument that Maguire's claim was barred by the statute of limitations on the grounds that Maguire's lease was in the city limits of Houston and not in the its halo of extraterritorial jurisdiction.²²⁹ Maguire then reasserted its inverse condemnation claim in the Harris County district court. The district court then dismissed the claim on Nov. 29, 2005, but the Court of Appeals—Houston [14th District] reversed and remanded. The City of Houston appealed up to the Texas Supreme Court, but its appeal was denied.

When a jury finally considered the question of a regulatory takings and damages on Mar. 16, 2009, Maguire was found to have suffered a regulatory takings and was awarded two million dollars. The City of Houston appealed, but the Court of Appeals—Houston [14th District] upheld the trial court's finding of a takings and the award, citing both the Fifth Amendment of the U.S. Constitution and the Texas Constitution.

Maguire, however, may prove to be an outlier because of the nature of what constituted the taking. Maguire's finding of a compensable partial regulatory taking did not turn on the no-drilling ordinance *per se*—it was not the prohibition itself that caused the taking—but rather on the application of the ordinance to property interests not covered by the geographic coverage of the ordinance—on its face the ordinance did not geographically apply to the permitted Maguire wells.

Maguire does offer a very important precedent for the measure of damages in an oil and gas takings context. The court of appeals noted “the primacy of comparable sales evidence to determine market value of property taken. However, when comparable sales figures are lacking or the method is otherwise inadequate as a measure of fair market value, other methods of determining market value can be applied.”²³⁰ The developer in *Maguire* provided petroleum geology and engineering data estimating there was 47,304,000 mcf of recoverable natural gas under the captioned lease, with a potential value estimated to be at least \$33,586,000.²³¹ The claimant's geoscience expert admitted, however, that “he had no opinion concerning the price a

²²⁸ Alex Mills, *Drawn-out Houston Drilling Case Judged in Oil Company's Favor*, TIMES RECORD NEWS, Nov. 18, 2012, available at <http://www.timesrecordnews.com/news/2012/nov/18/drawn-out-houston-drilling-case-judged-in-oil/?print=1> (last visited on Oct. 16, 2013).

²²⁹ [-], (The Extraterritorial Jurisdiction halo—often referred to by practitioners as the “ETJ”—is the area outside of a municipality that restricts the area that the municipality may annex and may impose various police power regulations, including zoning and planning regulations, in that area.)

²³⁰ *Maguire Oil* at 363.

²³¹ *Id.* at 361.

willing buyer would pay a willing seller for the gas. In fact, he expressed doubt that a willing buyer would pay \$33,586,000 for the mineral prospect.”²³² The court of appeals agreed that “evidence of comparable sales of mineral interests would provide a superior measure of market value, given that the existence of recoverable gas under Maguire’s lease is as yet unproven.”²³³ In addition, in reversing the trial court’s summary judgment in favor of the City of Houston, the court of appeals noted that if adequate comparable sales data could be produced, the party or parties obtaining same should possess the opportunity to present it at trial and the court must “admit it to the exclusion of any other valuation evidence.”²³⁴

Would such analysis apply to groundwater? Obviously, permit denial such as the EAA imposed on the Braggs would not result in a physical invasion. Since groundwater is typically owned by the surface owners, there is neither denial of all economic use (a “total taking”) since the entire property interest—groundwater and all the other uses—would be considered under the majority view of the regulatory takings analysis.²³⁵

(ii) *City of Houston v. Trail Enterprises, Inc.*

Another such case was presented recently when the Texas 14th Court of Appeals handed down their opinion in *City of Houston v. Trail Enterprises, Inc.* on August 9, 2012, potentially deciding a long-standing dispute between mineral interest owners and the City of Houston regarding the city’s alleged inverse condemnation of the fee mineral interests in and around the Lake Houston watershed.²³⁶ Specifically, the owners’ 2003 suit against Houston claimed that restrictions on oil and gas drilling dating from 1995 amendments to an ordinance dating originally from 1967 constituted a compensable taking of their property rights under the Texas State Constitution.

In 2005, the trial court, in a bench trial, found in favor of the mineral owners, with a subsequently convened jury calculating damages at \$19,046,700, being the diminution of value of the mineral property before and after application of the drilling restrictions. The City of Houston appealed, challenging the verdict on ripeness grounds in that the mineral owners had not exhausted their administrative remedies because they had not filed a formal application for new drilling permits during a period in 1997 when the drilling ban was temporarily abated. After the Texas Supreme Court found that the claim was ripe, the trial court again found that a compensable taking had occurred. This time, the trial court entered a judgment for the mineral owners of \$17,000,000 and awarded the City of Houston the oil and gas not recoverable from the wells that already existed on the field. Both parties appealed, with the city challenging the takings and the mineral owners appealing the transfer of the mineral interests to Houston.

Considering only Houston’s argument that the claimants had not established that a taking had occurred as dispositive and therefore only considering that claim in its opinion, the court of appeals reversed. Relying on *Sheffield Development Company*,²³⁷ which, as seen above, largely incorporated the analysis of the U.S. Supreme Court in *Penn Central*,²³⁸ the court

²³²

Id.

²³³

Id. at 364.

²³⁴

Id.

²³⁵

See Pallazzolo v. Rhode Island.

²³⁶

City of Houston v. Trail Enterprises, Inc., 377 S.W.3d 873(Tex.App.—Houston, 2012).

²³⁷

140 S.W.3d 660 (Tex. 2004).

²³⁸

438 U.S. 104 (1978).

of appeals considered the same three factors described in those cases—and in *Bragg*—for balancing of the public’s interest vis-à-vis the real property owner’s private interest.

The court first found that, since the stated purpose of the drilling ban was to protect the drinking water of Houston—an important goal that could be compromised by drilling near the source of Lake Houston—the first factor leaned heavily in favor of the city. The court next found that, since the landowners had largely failed to prove any investment-back expectations of profit from their estate because they could point to no investments that they made or put at risk to develop the property, the second factor also leaned heavily in favor of the City of Houston. Finally, the court considered the economic impact of the regulation on the mineral owners, considering especially the diminution of value of the mineral estate. While the court found significant loss of value to the mineral estate, this loss was partially ameliorated by the facts that some wells were producing from the restricted estate already and that the restriction did not deny all economically beneficial use of the property as the regulations did not prevent drilling of new wells on 70-75% of the total mineral property of the mineral owners.

Considering the three *Penn Central/Sheffield* factors *in toto*, the court ultimately found that while the anti-drilling regulations did significantly affect the value of the mineral estate of the landowners, the combination of the other two factors outweighed the first, and ruled that the landowners should take nothing.

8. PREDICTIONS ON FUTURE “UNREASONABLE INTERFERENCE” GROUNDWATER JURISPRUDENCE

A. Balancing of the Factors

Penn Central begat *Sheffield* that in turn begat the Texas analysis that steered *Trail Enterprises* in the oil and gas context and *Bragg* in the groundwater context. The analysis under this jurisprudence looks at three factors, sometimes called prongs, with the party carrying the majority of factors being the winner. *Trail Enterprise* and *Bragg* suggest a pattern, however, with the “government interest” prong being more easily claimed by the regulatory agency and the “economic impact” prong being more easily won by the claimant. The tiebreaker, then, is the “reasonable investment-backed expectation” prong.

(i) Legitimate Government Interest

Regarding the judicial scrutiny of the “government interest” prong and the government’s regulatory means to a desired end, “rational basis” review is the most lenient form of judicial review for questions of equal protection and due process.²³⁹ Rational basis analysis is far less rigorous, for example, than that found in cases requiring strict scrutiny or intermediate scrutiny, and so this analysis generally is decided favorably for the regulating agency as courts have set the bar low for government actors to show the challenged law is rationally related to a legitimate government interest. With regards to takings cases, however, the U.S. Supreme Court has worded the government interest prong so that a taking has occurred if the regulation at hand does not “substantially advance legitimate state interests.”²⁴⁰ Thus, as the Court has opined,²⁴¹

²³⁹ [-] (Rational basis review is typically utilized in cases where no fundamental rights or suspect classifications are at issue.)

²⁴⁰ *Nollan v. California Coastal Comm’n*, 483 U.S. 825, 834 (1987).

analysis of a state's interest in making a regulation is different—and the scrutiny level is a little higher—in the takings realm than in due process or equal protection claims. Still, however, this author believes, despite the slightly higher level of scrutiny afforded state action in takings cases, that if the regulation at issue is a reasonably-worded rule purported to be made in the interest of public health, safety, and the environment—as most regulations affecting groundwater can easily be argued to be—the regulator will prevail as to the “government's interest” prong more often than not.

Indeed, with the exception of the U.S. Supreme Court, federal and state courts have been hesitant to increase the level of scrutiny they afford to the underlying legislative motivations for land use regulations.²⁴² While a couple of decisions have appeared in lower courts that invalidate a land use regulation that is ruled to have no close connection or substantial relationship between the purported goals of the statute and the curtailed use by the property owner,²⁴³ few cases have followed the Court's distinguishing comments in *Nollan* regarding heightened scrutiny for takings cases. In fact, courts strongly favor regulations on mineral (including oil and gas) development designed to protect health, safety, tax bases, land values, and even historical preservation.²⁴⁴

In both *Trail Enterprises* and *Bragg*, the opinions quickly found the regulation of oil and gas production near public sources of water and the permitting schemes that may quantitatively curtail or even block the use of groundwater, respectively, to both be easily within the scope of legitimate areas for government regulation.

(ii) *Economic Impact of the Regulation*

The third prong discussed in *Trail Enterprises* requires examination of the economic impact of the regulation on the claimant. Here, although the claimed loss may be attenuated by evidence of other profit possibilities, such as other minable minerals if development of one mineral is partially occluded by regulation, or pre-existing profit centers like productive wells grandfathered in before the regulation, the claimant can still often be found to have suffered a significant economic impact, as in *Trail Enterprises*. The finding of an significant economic impact in *Bragg*, where the cost of irrigation of the pecan orchards allegedly went up only approximately ten percent (10%), helps illustrate that total occlusion of the best economic use is not necessary for a groundwater owner to prevail on the “economic impact” prong.

Partial regulatory takings cases, however, also turn on whether the claimant can make a profit from other activities in the captioned land. Simple commercial differences exist between water and hydrocarbons. Water, known by chemists as the “universal solvent,”²⁴⁵ may be both

²⁴¹ *Id.* at 834-35, n.3. (“We have required that the regulation *substantially advance* the *legitimate state interest* sought to be achieved, not that the State ‘could rationally have decided’ that the measure adopted might achieve the State’s objective.”)

²⁴² Barton H. Thompson, *Application of the Law of “Takings” to Restrictions on Mineral Development*, ROCKY MTN. MIN. L. FOUND., Mineral Law Series No. 3, p. 8-14, 1995.

²⁴³ See, e.g., *Surfside Colony, Ltd. v. California Coastal Comm’n*, 226 Cal. App. 1260 (1991) (State authorities cannot mandate public access to a beach as a condition for granting permission to construct a seawall.)

²⁴⁴ Barton H. Thompson, *Application of the Law of “Takings” to Restrictions on Mineral Development*, ROCKY MTN. MIN. L. FOUND., Mineral Law Series No. 3, p. 8-18 to 8-19, 1995.

²⁴⁵ Anne Marie Helmenstine, *Why Is Water the Universal Solvent?* ABOUT.COM, available at <http://chemistry.about.com/od/waterchemistry/f/Why-Is-Water-The-Universal-Solvent.htm> (last visited Aug. 23, 2013).

more easily produced and stored. Potable or livestock grade groundwater is found in a much different environment than almost all commercial-grade hydrocarbons, existing in aquifers generally found within a couple of hundred feet of the surface.²⁴⁶ Commercial hydrocarbons, in contrast, are typically found thousands of feet below ground.²⁴⁷ Therefore, potable groundwater aquifers are much more easily tapped than most hydrocarbon deposits. Water is not flammable or poisonous and requires none of the often elaborate processing methods needed for hydrocarbons.

Although *Bragg* suggests that the “best possible use” is the benchmark for groundwater takings cases in Texas, and that any possible use other than that so decreed as the “best possible use” that may happen to use less water—say, for example, grazing instead of irrigation farming—would not count as another use that might eliminate the necessity of compensation, more general takings jurisprudence suggests that the ability to use the tract for another use would eliminate the necessity of compensation.²⁴⁸ Given that the category of parties that can develop and use groundwater is so much broader than those that can develop and use hydrocarbons, combined with the fact that groundwater has so many more uses than hydrocarbons, regulations that curtail or prevent groundwater use for oil and gas operations still allow the groundwater to be used for other purposes. It follows that courts not following *Bragg* and the “best possible use” may rule these other uses may alleviate the economic impact on the groundwater owner, hindering a takings recovery even if the most lucrative use of the groundwater is to sell it for use in oil and gas operations.

Texas regulation does not, in general, favor transfer of surface water,²⁴⁹ and regulation of groundwater that is removed from an aquifer or GCD jurisdiction has increased. Groundwater drawn from oil and gas exempted wells and then transported outside the district is subject to applicable production and export fees.²⁵⁰ In addition, exempted wells still require registration with the appropriate GCD, and like non-exempt wells must be maintained both to prevent the communication of groundwater from an aquifer to a nonaquifer as well as to generally prevent groundwater contamination.²⁵¹ GCDs often track new well permits issued by the RRC in their jurisdictions and are aware that water wells used initially for frac water are often turned over to other parties after fracing ceases.²⁵² These new well owners may then use the groundwater for purposes clearly not exempted from GCD permitting requirements, hence the GCDs’ interest in gathering information regarding such wells, through either permits or required forms.²⁵³

(iii) *Investment-Backed Expectations*

Since the nature of the first and third *Trail Enterprise* prongs discussed above are such that they will often be split among the litigants one-to-one, a tiebreaker will often be needed. This leaves the second prong discussed in *Trail Enterprises*, the “reasonable investment-backed expectations” of the mineral owning claimant prong. Namely, did the parties claiming compensation believe that, given the state of regulation at the time of purchase, investments could be made (or actually were made) in the property with the reasonable expectation that new

²⁴⁶ *Groundwater and Aquifers*, FRACFOCUS.ORG, available at <http://fracfocus.org/water-protection/groundwater-aquifers> (last visited Nov. 1, 2013).

²⁴⁷ [-]

²⁴⁸ [must fill this]

²⁴⁹ Mary Sahs, *Water Law*, TEXAS BAR JOURNAL, Vol. 76, No. 8, p. 736, Sep. 2013.

²⁵⁰ TEX. WATER CODE ANN. § 36.117(k).

²⁵¹ *Id.* § 36.117(h) (1)–(2).

²⁵² Conkwright, *supra* note [-].

²⁵³ *Id.*

development could go forward.²⁵⁴ This limitation was established to prevent a party entitling itself to a windfall compensation by procuring a mineral interest in a property where extraction of the minerals was prohibited before the purchase.²⁵⁵

Here, in the context of oil and gas development, the identity of the mineral claimant—depending on whether it is an energy company or a party unable to develop the minerals that acquired and owned the property independent of a specific profit motive in mineral development—can make a significant difference. Put more simply, energy companies can much more easily argue that they had an initial and continuing interest in profiting from mineral development (as well as the ability to self-develop those same minerals) than a farmer who does not know where or how to drill and who did not purchase the land with the initial intention to develop minerals. Energy companies would therefore seem to be at an advantage when considering the investment-backed expectation prong in cases like *Trail Enterprises* when considering hydrocarbon development.

Assuming that the above prediction holds, it follows that in regulatory takings cases involving water, Texas and other courts may attempt to apply the takings analysis found in oil and gas cases to groundwater development where the water would be used for oil and gas development. After all, the Texas Supreme Court looked to oil and gas jurisprudence in *Edwards*.²⁵⁶ Stark differences exist, however, in the uses of water when compared to oil and gas and the differing methodologies of their development. With that in mind, a closer examination of the application of the reasonable investment-backed expectation prong in *Trail Enterprise* and *Bragg* is warranted.

In *Trail Enterprises*, the City of Houston alleged no evidence existed that the landowners made any investment in the property with the expectation that new oil or gas wells would be drilled.²⁵⁷ To support this premise, the city investigated and presented evidence of how each landowner came to own its mineral interest, highlighting that only one landowner had received part of his interest during the period before the regulations preventing development were in place.²⁵⁸ The evidence presented by the City of Houston further showed that the vast majority of landowners had “never expended any money on drilling or potential drilling activities.”²⁵⁹

The City of Houston cited *Mayhew v. Town of Sunnyvale*,²⁶⁰ wherein the Texas Supreme Court held that a regulation existing at the time a property interest is acquired must be considered when deciding whether the property owner ever had a reasonable investment-backed expectation of profit from mineral development. The City of Houston argued that the landowners had never shown any investment-backed anticipation of drilling.²⁶¹

²⁵⁴ 377 S.W.3d at 880 (2012).

²⁵⁵ (“The purpose of consideration of plaintiffs’ investment-backed expectations... is to limit recoveries to property owners who can demonstrate that they bought their property in reliance on a state of affairs that did not include the challenged regulatory regime.”) (internal quotation marks omitted); *Sheffield*, 140 S.W.3d at 678 n. 88 (quoting *Mayhew v. Town of Sunnyvale*, 964 S.W.2d 922, 937 (Tex. 1998). Such a purchase would likely be made at a nominal sum as the seller may not believe that mineral development can take place and therefore the minerals are valueless.

²⁵⁶ *Edwards*, at 21 [-]

²⁵⁷ [-]

²⁵⁸ [-]

²⁵⁹ *Id.*

²⁶⁰ 964 S.W.3d 922, 937 (Tex. 1998).

²⁶¹ *Id.*

The landowners reposted *Mayhew* with the well-known federal case *Palazzolo v. Rhode Island*,²⁶² wherein the U.S. Supreme Court ruled that a takings regulation claim is not barred just because the captioned property was purchased or inherited after the regulation was in effect. Using *Palazzolo* as authority, the landowners argued that receiving the interest after the curtailing regulation had taken effect should not “preclude consideration of evidence of their reasonable investment-backed expectations.”²⁶³

In their analysis, the court of appeals first largely brushed off the use of *Palazzolo*, believing instead that while *Palazzolo* allowed that takings claims could be considered if the claimants got the captioned property after the curtailing regulation became effective, it did not provide that courts can never consider development-curtailing regulations in effect at the time of the conveyance.²⁶⁴ The court expressed a policy concern that disallowing consideration of when a regulation was enacted relative to the conveyance to the claimant could then mean that a party could purchase, perhaps for a nominal fee, a mineral interest with the express purpose of seeking compensation for not being able to develop that mineral interest which, in fact, it never really intended to develop at all. Then the court made its definitive statement of the purpose of the requirement and whom it covers: “...the purpose of the investment-backed expectation requirement is to assess whether the landowner had taken legitimate risks with the reasonable expectation of being able to use the property, which in fairness and justice, would entitle him or her to compensation. This is true *regardless of the nature of the property interest owned*.”²⁶⁵

Applying the above rule, the court found that since the property owners had “failed to demonstrate that investments were made (*i.e.*, put at risk) in the property with the reasonable expectation that new wells could be drilled, concepts of fairness and justice do not militate in favor of compensation.”²⁶⁶ Since almost all the “investment” (*i.e.*, purchases and inheritances) took place after imposition of the anti-drilling laws, the court relied on *Sheffield*, *Mayhew*, and similar cases to find the investment expectation prong lay with the City of Houston, cinching for it victory in the case.²⁶⁷

Notice should also be given to the words chosen by the court that lurk at the end of the quote from *Palazzolo*, “...regardless of the nature of the property interest owned.”²⁶⁸ The investment-backed expectation prong therefore applies to all types of underground wealth, be it hydrocarbons, groundwater, or kryptonite. *Bragg* demonstrates this, with the court of appeals there closely analyzing the investment in the orchards and the professional history of Mr. and Mrs. Bragg and, upon finding a long record of investment and pecan-producing prowess, awarding the prong to them.

While *Bragg* suggests that groundwater owners who can point to an existing and longstanding activity supported by their groundwater will be successful in seeking a measure of compensation, particularly if that activity has been deemed the best economic use of the groundwater/land, landowners who cannot do so face a more difficult battle. This scrutiny into the material investment and professional history of groundwater owners is especially worrisome for owners who want to use or sell groundwater for use with new oil and gas operations. Such new operations will not have the historical use record that long-lasting agricultural practices like

²⁶² 533 U.S. 606 (2001).

²⁶³ *Id.*

²⁶⁴ *Id.*

²⁶⁵ *Id.* (emphasis added)

²⁶⁶ *Id.*

²⁶⁷ *Id.*

²⁶⁸ *Id.*

the Braggs' pecan operations had. Moreover, with the exception of hydrocarbons that may be used to power leasehold operations or that may be provided to the surface owners' (usually residential or agricultural) use, oil and natural gas are developed strictly for profit by professional corporations. Both usually require extensive processing and subsequent transportation to markets and then to distributors. Both are often found thousands and thousands of feet beneath the surface and can be developed only with the use of very sophisticated and expensive exploration, drilling, and production equipment.

Simply put, almost any landowning party can develop its water assets to at least some extent, while only sophisticated companies with expensive equipment can find, develop, transport, and refine petroleum. The modern oil and gas business is not for typical homeowners or farmers but rather is the province of experienced professionals backed with highly technological logistics. Owners of the groundwater, unless they are energy companies themselves, will likely possess no experience in oil and gas operations or—given the long-held belief that Texas shale formations like the Cline, Eagle Ford, and the Barnett were not productive—nor any long-held belief that the strata comprising their mineral estate held marketable hydrocarbons. Deriving a provable expectation of profit of record in such circumstance would seem to be difficult.

Most importantly, water has all manner of uses—far more than oil and natural gas—and remains the key to basic human existence. Oil and gas are developed to be sold for profit. Groundwater itself is sometimes sold for profit, certainly, but if not used for residential purposes, it can more often be used to facilitate profit from other activities such as agriculture and livestock, or oil and gas development. The prospect for whether these possible uses—or even just future plans for such uses—count as an “investment-back expectation” appears dim.

This universality of water use, the relative ease wherein it may be produced, and the ready-to-use nature of potable water—all in contrast to oil and gas—show that *any* landowner now owning the recognized right to groundwater in place is much more capable of both producing it and using it for a variety of profitable enterprises. With all these uses and the relative ease with which water may be produced compared to oil and gas, the “tiebreaker” prong of the partial regulatory takings analysis used in *Trail Enterprise* and *Bragg*—the investment-backed expectation of the mineral owning claimant—looks in most instances to favor regulators interested in curtailing or preventing groundwater use for oil and gas operations. Since this prong is potentially the “tiebreaker,” a shift towards one party when considering this prong can tilt the entire takings analysis towards that party.

Ultimately, this author believes that the analysis applied in *Trail Enterprises*, if affirmed by the Texas Supreme Court, will become an important touchstone and clearly suggests that as long as a municipal ordinance is couched in terms of public health and/or safety concerns and not anti-mineral development rhetoric, it will not incur an actionable takings. How this case will play out with regards to permitting schemes that curtail water use and other regulations that may deny the use of water at the level desired by the landowner is less clear.

GROUNDWATER DISTRICTS GROUNDED?

Water is necessary for mineral development. Water is used in drilling and completion operations, and a large amount of water is used in enhanced recovery operations like fracturing. For example, with today's technology, a typical fracturing operation in the Marcellus Shale requires between one to five million gallons of fracturing fluid, mostly water, per well, according to most

estimates, equivalent to about 15 acre-feet per well,²⁶⁹ and four to five million gallons of water for every well in the Eagle Ford in Texas.²⁷⁰ While this number is dropping with the development of new fracing technology that utilize CO₂ or guar-based gels instead of water,²⁷¹ water will remain a large constituent of any drilling or fracing operation for the foreseeable future. In dry parts of Texas, concern exists about the use of groundwater for oil and gas operations.²⁷² This concern has led some to question whether state agencies, local government, and GCDs should more thoroughly regulate, curtail, or even prevent the use of groundwater for oil and gas operations.²⁷³

GCDs have responded by more closely examining groundwater use for oil and gas operations in their districts. This closer examination is now possible because, while the Texas water code exempts hydrocarbon exploration and drilling activities from most GCD permitting requirements,²⁷⁴ “exploration” or “drilling” activities and “fracing” enhanced recovery operations are being contrasted from one another by GCDs so that fracing activities are being excluded from the general permit exception for groundwater used in drilling and exploration—an “exception to the exception.”²⁷⁵ Specifically, while GCDs must except from any permitting requirement a “water well used solely to supply water for a rig that is actively *engaged in drilling or exploration operations* for an oil or gas well permitted by the [RRC],” the GCDs are not including water wells used to provide water for *hydraulic fracturing* in this exception.²⁷⁶ This exception had, until mid-2011, prevented permitting requirements by GCDs from coverage of water wells intended to provide water for oil and gas operations, including fracing.²⁷⁷

The 2011-12 drought and the dramatic increase in fracing operations statewide sparked this change in the interpretation of the statute.²⁷⁸ GCDs and cities are now requiring permits (or completion of a questionnaire) for water wells used to supply water for fracing operations because fracing is seen as a separate and different activity than “drilling or exploration operations.”²⁷⁹ Section 36.117(d)(2) of the Water Code provides support for this interpretation

²⁶⁹ Michele Rodgers, et al., *Marcellus Shale: What Local Governments Need to Know*, Penn State College of Agricultural Sciences (2008) p. 11, available at www.naturalgas.psu.edu (last visited Oct. 30, 2013).

²⁷⁰ John Kemp, *Don't Mess with Texas Water, Frackers Warned*, REUTERS, May 1, 2013, available at <http://www.reuters.com/article/2013/05/01/us-column-kemp-texas-fracking-idUSBRE9400HB20130501> (last visited Oct. 30, 2013)

²⁷¹ Terrence Henry, *Water Use in Fracking Draws Legislature's Attention*, STATEIMPACT, Feb. 14, 2013, available at <http://stateimpact.npr.org/texas/2013/02/14/water-use-in-fracking-draws-legislatures-attention/> (last visited Oct. 30, 2013).

²⁷² See Kemp, *supra* note [-].

²⁷³ *Id.*

²⁷⁴ TEX. WATER CODE ANN. § 36.117(a)(2) (The oil and gas exception to local groundwater conservancy district control covers “the drilling of a water well used solely to supply water for a rig that is actively engaged in *drilling or exploration operations* for an oil or gas well permitted by the Railroad Commission of Texas provided that the person holding the permit is responsible for drilling and operating the water well and the well is located on the same lease or field associated with the drilling rig. (emphasis added)).

²⁷⁵ Telephone Interview with Jim Conkwright, Director, High Plains Underground Water Conservation District No. 1, Lubbock, Texas (Nov. 8, 2011).

²⁷⁶ TEX. WATER CODE ANN. § 36.117(b)(2) (Vernon 2011) (emphasis added).

²⁷⁷ Telephone Interview with Jim Conkwright, Director, High Plains Underground Water Conservation District No. 1, Lubbock, Texas (Dec. 5, 2012).

²⁷⁸ Telephone Interview with Brian Sledge, Attorney, Government Relations Practice Group Chairman, Lloyd Gosselink Rochelle & Townsend, P.C., Austin, Texas (Nov. 8, 2011).

²⁷⁹ *Id.*

by removing the permitting exemption if *any* water from an exempted water well is *not used* for oil and gas drilling or exploration.²⁸⁰

Examples abound statewide of municipalities and GCDs taking up permitting and curtailment of groundwater use for fracing. For example, the Evergreen Underground Water Conservation District, which directs aquifer use for Atascosa, Frio, Karnes, and Wilson Counties in South Texas, expressly applied its preexisting water use limits to fracing in 2008.²⁸¹ After drought struck in late 2010, conservancy authorities for the southern end of the Ogallala Aquifer, which partially overlaps the Permian Basin near Midland/Odessa, approved that district's first-ever restrictions on water use for fracing in July 2011.²⁸² In 2012, the High Plains Underground Water Conservation District No. 1, centered on Lubbock and covering an area bigger than New Hampshire, passed new water use restrictions that do not exempt fracing operations.²⁸³ Other GCDs are considering similar actions in the future.

Edwards will impact future oil and gas operations that require permitting to drill water wells for drilling and recovery projects. One commentator has noted that since the analysis required for the *Penn Central* test is a fact-intensive balancing of factors specific to each case, such litigation will often require extensive expert witness analysis and testimony, discovery, and extensive trial preparation.²⁸⁴ Therefore, when GCDs are determining whether or not to withhold a permit, they will have to be mindful of whether a "taking" has occurred and, if so, what compensation may be required. The threat of litigation may make them reluctant to deny permits in similar situations in the future to avoid litigation and possible subsequent "takings" liability.

Worry among mineral owners who do not possess the ability to self-develop or who have not leased and who may feel they cannot prevail in a partial regulatory takings action utilizing the takings jurisprudence started with *Bragg* may be misplaced. This author predicts that, given the cost of litigating a partial regulatory takings involving groundwater, GCDs—particularly smaller or cash-strapped—may think twice about fighting such battles. The Court in *Day* acknowledged that its holding—that land ownership includes an interest in groundwater in place and not merely a right to extract it—could open the floodgates of litigation, but stated that groundwater regulation need not result in takings liability. While the *Day* opinion contrasts the EAA's requirements governing the allocation of groundwater with those requirements under Texas Water Code that apply statewide, the Court plainly does not propose that any curtailment of groundwater use made under the EAA must result in a compensable taking.²⁸⁵ This may be so, but the *Sheffield/Penn Central* test referenced by the Court and utilized in *Bragg* is necessarily rather equivocal and its application potentially very expensive due to the case-by-case, fact-intensive data inputs required for a reasoned decision. When each permit on groundwater use promulgated by a water conservation district that curtails the requested amount now comes freighted with the potential to turn into a litigious money-disposal exercise, GCDs will now have to more carefully mull if their permit constitutes a regulatory taking, and if so, to what extent.

²⁸⁰ TEX. WATER CODE ANN. § 36.117(d) (2).

²⁸¹ *Id.*

²⁸² *Id.*

²⁸³ Conkwright, *supra* note [-].

²⁸⁴ See Jeff Civins, *Ground(water)-Breaking Decision*, LAW360°, available at <http://www.law360.com/articles/315752/print?section=appellate> (subscription required) (last visited Oct. 31, 2012).

²⁸⁵ William Burford, Permian Basin Oil & Gas Law 2013, Live Oak CLE, Midland, Texas, February 22, 2013.

One commentator agrees, noting, “Any [groundwater conservancy district] that seeks to regulate hydrofracturing...may find itself defending against a takings claim, a grim prospect for the small [groundwater conservancy districts].”²⁸⁶ Another predicts an even grimmer outcome for the districts: “The net effect on groundwater conservation districts, most of which are not well funded and are unable to bear the costs of litigation, will be to severely chill their ability to manage groundwater because of the liabilities they may incur in issuing permits.”²⁸⁷

It is believed that if groundwater districts like the Edwards Aquifer Authority are forced to litigate expensive takings claims, the money to fund this legal warfare will eventually have to come from the entities that provide financial support to the district. San Antonio gets most of its water from the Edwards Aquifer, so since the Court held that the EAA violated Day’s constitutional rights by only allowing it a permitted volume far below the amount requested, the City of San Antonio Water System and its customers are faced with the prospect that they will now underwrite via higher water rates the compensation for future takings claims cases.²⁸⁸ Robert Puente, a former state legislator familiar with San Antonio water development and use, said, “If the Supreme Court ruled there was a taking, I think the [EAA] would get inundated with lawsuits to protect the private interests that individuals think they have in the property underground, the water...We provide 55% of the funding for [EAA], so we, in essence, would be funding the defense of all these lawsuits.”²⁸⁹

If GCDs are charged with paying compensation for regulatory takings themselves, as *Bragg* suggests, greater reticence on their part in choosing to issue permits for less water than requested—or to even deny permits—is an easy thing to predict. On the other hand, if GCDs go ahead and, as a part of their state-mandated duty to manage groundwater assets, incur takings claims that they cannot cover, eventually the state will have to step in with money and/or legislation to satisfy claimants or to make claims more difficult to pursue, respectively. Otherwise, GCDs will simply be unable to maintain litigation and settlements stemming from permit denial or permit challenges by groundwater owners. How a GCD will not end up as a “rubber stamper” of permits without state support for settling compensation claims and litigation is unclear.

Trepidation exists about the status of ownership of groundwater in San Antonio after *Day*. Mr. Puente said, “We have water under the ground...If there’s a taking, the Supreme Court has basically ruled that we no longer own that water, but that it belongs to [landowners] who can pump that water out from the ground into their holdings.”²⁹⁰

It remains to be seen what practical effect the Court’s decision has beyond the Edwards Aquifer Authority itself. The Court’s discussion of the factors involved will perhaps trigger not

²⁸⁶ Mike Marek, *Edwards Aquifer Authority v. Day and the Future of Groundwater Regulation for Hydrofracturing in Texas*, Texas Journal of Oil, Gas, and Energy Law Blog, Oct. 7, 2012, available at <http://tjogel.org/blog/?p=206> (last visited Aug. 20, 2013).

²⁸⁷ Jeff Civins, *Ground(water)-Breaking Decision*, Law360, Mar. 9, 2012, available at <http://www.law360.com/articles/315752/ground-water-breaking-decision> (last visited Aug. 21, 2013).

²⁸⁸ Morgan Smith, *Lawsuit Could Determine Future of Groundwater*, THE TEXAS TRIBUNE, Apr. 22, 2010, available at <http://www.texastribune.org/texas-environmental-news/water-supply/lawsuit-could-determine-future-of-groundwater/> (last visited Aug. 20, 2013).

²⁸⁹ *Id.*

²⁹⁰ Morgan Smith, *Lawsuit Could Determine Future of Groundwater*, THE TEXAS TRIBUNE, Apr. 22, 2010, available at <http://www.texastribune.org/texas-environmental-news/water-supply/lawsuit-could-determine-future-of-groundwater/> (last visited Aug. 20, 2013).

only more legal wrangling over property rights, but also future legislative attempts to address water rights in Texas. The 2013 Texas Legislative session was surprisingly quiescent regarding possible statutory remedies designed to shield groundwater districts from liability. However, this author has doubts about the continuing viability of compensable takings based solely on unreasonable interference with use and enjoyment in Texas.

9. CONCLUSION

The regulatory takings claims made by oil and gas producing lessees may be very difficult to win. Leases terminate because of lack of production—production disallowed by regulation—and the fee simple determinable interest is over unless the lease does not contain an adequate force majeure clause that suspends, perhaps indefinitely, the running of the primary term during periods when regulations are enacted that prevent development. Therefore, effectively, lessees really do not possess a property interest capable of being taken. Owners of groundwater will not face this particular issue as their interest typically does not expire or get suspended.

Edwards Aquifer Authority v. Day will affect the future of enhanced recovery operations that require permits to drill water wells. Legal analysts have noted that since the required data for the *Penn Central* or *Lucas* tests are detail intensive balancing of dynamics specific to each conflict, such litigation will often require wide expert witness scrutiny and testimony, discovery, and courtroom preparation.²⁹¹ Therefore, when GCDs decide whether or not to issue a permit, they must be cognizant of the “taking” specter that might be invoked by the landowner, and if so, what compensation may be due. This may make GCDs reluctant to deny permits in scenarios such as that encountered in *Day* to avoid costly litigation and possible subsequent “takings” liability.

Concern exists within this author, however, as to whether the “takings” game is rigged against a water owner as *Trail Enterprises* suggests it may be rigged against a mineral owner that is not an oil and gas developer. With the third prong invoked in *Trail Enterprises*, taken from *Sheffield*, requiring an “investment backed expectation” possibly being the deciding factor, how can a water owner show such a thing? In addition, will case law now be developed that recognizes that hydrocarbons and water are very different things located in different places and which are developed for very different reasons?

The oil and gas industry and landowners are watching the development of water takings jurisprudence closely because of the necessity of water for exploration, development, and enhanced recovery operations, primarily fracing. Permitting schemes that significantly lower availability of groundwater for use in fracing operations would cause serious strife to the wave of operators developing Texas shale gas plays such as the Eagle Ford and Barnett Shale. However, fracing technology marches on. Already, techniques for saving and/or recycling water used for fracing are now prevalent.²⁹² There may come a day when advancing fracing techniques and technology lower the amount of water necessary for fracing to such an extent that compensatory actions arising from water use for unconventional plays fades.

²⁹¹ See Jeff Civins, *Ground(water)-Breaking Decision*, Law360, Mar. 9, 2012, available at <http://www.law360.com/articles/315752/ground-water-breaking-decision> (last visited Aug. 21, 2013).

²⁹² See Alison Sider, et al., *Drillers Begin Reusing 'Frack Water'*, WALL STREET JOURNAL, Nov. 20, 2012, available at <http://online.wsj.com/news/articles/SB10001424052970203937004578077183112409260> (last visited Nov. 1, 2013).

However, groundwater use and the regulation thereof will only wax in importance in the future. Even though enhanced oil and gas recovery operations can hinge on groundwater use and are currently perhaps the most contentious use of groundwater in the public's view, many other users of significant amounts of groundwater, such those involved in agricultural projects, should follow closely the development of groundwater takings jurisprudence and the corresponding reaction of cities, GCDs, and the state legislature. *Edwards* represents only the first drops of what could rise into a flood.