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Yours, Mine, Our Water: Where Correlative Rights End and Taking Begins Following Texas House Bill 3246

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ONE J

Oil and Gas, Natural Resources, and Energy Journal

VOLUME 6

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YOURS, MINE, OUR WATER: WHERE CORRELATIVE RIGHTS END AND TAKING BEGINS FOLLOWING TEXAS HOUSE BILL 3246

CHARLES P. HOSEY*

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I. Introduction

The evolution of hydrologic fracturing has revolutionized America's economy on a global scale.¹ Over the past 15 years, technology has made it possible to extract billions of barrels and oil and gas from geologic formations “once thought to be out of reach.”² However, with new methods come new demands; technology provides the ways, water provides the means.³ Water provides not only the vehicle for bringing up the fractured minerals extracted from the formation, it allows for the efficient processing of hydrocarbons after exiting the well.⁴ To achieve energy independence through hydrologic fracturing—massive quantities of fresh water are needed.⁵

1. See Kondash, Andrew, and Avner Vengosh. *Water footprint of hydrologic fracturing*, *Environmental Science & Technology Letters* 2, no. 10 (2015): 276-280 (describing the demand of relative volume of hydrologic fracturing in the context of comparable industries).

2. Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 *Oil, Gas & Energy Res. Law Sec. Report* 21 (State Bar of Texas, Fall 2017).

3. See Clark, Corrie E., Robert M. Horner, and Christopher B. Harto. *Life cycle water consumption for shale gas and conventional natural gas*. *Environmental science & technology* 47, no. 20 (2013): 11829-11836 (detailing the use of water throughout the hydrologic fracturing process).

4. See López-Díaz, D.C., Lira-Barragán, L.F., Rubio-Castro, E., You, F. and Ponce-Ortega, J.M., 2018. *Optimal design of water networks for shale gas hydrologic fracturing including economic and environmental criteria*. *Clean Technologies and Environmental Policy*, 20 (10), pp. 2311- 2332 (describing the reason why fracing requires fresh water).

5. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.5, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (focusing on the statistics of oil and gas production in the major formations in

Depending on the geologic formation, millions of gallons of water per well utilizing the hydrologic fracturing method are required to maintain steady operations.⁶ Fracing operations in the Eagle Ford Basin could use between an estimated 943 million barrels (a barrel equal 42 gallons of water) to as much as 5.3 billion barrels of water per year, depending on the rate of productivity.⁷ Similarly, fracing operators in the Permian Basin could reach 8.8 billion barrels of water per year by 2030.⁸ This amount of water demand is equivalent to the yearly demand of the state of New Jersey.⁹ It is estimated the United States demand for water in the use of hydrologic fracing will grow exponentially as technology finds new untapped formations.¹⁰ Technology will provide new ways to extract minerals from the earth while conserving this valuable commodity, water.

As with any earthly mineral, fresh water is not unlimited. While concerns have been increasing with regard to the use of virgin water during fracing operations, especially during drought conditions, operators have been able to efficiently extract precise amounts of groundwater according to each

Texas); Kondash, Andrew, and Avner Vengosh. Water footprint of hydrologic fracturing. *Environmental Science & Technology Letters* 2, no. 10 (2015): 276-280. (explaining the use of water during hydrologic fracturing requires massive quantities).

6. See Kondash, Andrew, and Avner Vengosh. Water footprint of hydrologic fracturing. *Environmental Science & Technology Letters* 2, no. 10 (2015): 276-280. (quantifying the number of gallons of water required to maintain a producing well).

7. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.5, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (focusing on the statistics of oil and gas production in the major formations in Texas).

8. *Id.*

9. See U.S. Dep't of the Interior, U.S. Geological Surv., Cheryl A. Dieter, Molly A. Maupin, Rodney R. Caldwell, Melissa A. Harris, Tamara I. Ivahnenko, John K. Lovelace, Nancy L. Barber & Kristin S. Linsey, *Estimated Use of Water in the United States in 2015*, Circular 1441, 9 (June 19, 2018), <https://pubs.er.usgs.gov/publication/cir1441> [<https://perma.cc/272A-PGX7>] (quantifying the use of the fresh water needs of the state of New Jersey in order to compare it to the demand for fresh water usage in fracing operations).

10. See Jean-Philippe Nicot, Anna K. Hebel, Stephanie M. Ritter, Steven Walden1, Russ Baier1, Peter Galusky, James Beach, Richard Kyle, Leigh Symank & Cari Breton, Tex. Water Dev. Bd., *Current and Projected Water Use in the Texas Mining and Oil and Gas Industry*, 205 (June 2011), http://www.twdb.texas.gov/publications/reports/contracted_reports/doc/0904830939_MiningWaterUse.pdf [<https://perma.cc/U2GP-2F6X>] (utilizing a holistic view of future water use projected in Texas fracing operations).

formation.¹¹ Anticipating the growing need for freshwater, operators of fracing wells have developed recycling techniques to purify flowback water able to be utilized again.¹² On average, operators have developed a way to recycle up to 40% of the original water used in fracing operations so that it could be used again—without the need to use additional virgin freshwater.¹³

Such virgin groundwater is distinguished from water produced from oil bearing formation, which formation water is not covered in this comment. However, much of the recycled water product was not used again for fracing, but sold by operators for other industry needs or used on other tracts of land; by selling this recycled water or by using on other tracts of land, operators have created an economy that not only reduces their operating costs, but can also be said to limit the environmental impact.¹⁴

11. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.5, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (describing how operators have become very efficient at using exact fresh water quantities).

12. See Water Conservation & Technology Center, Fact Sheet Planning Component 8: The Eagle Ford Hydrologic Fracturing Water Planning Services, Texas A&M Univ. (Jan. 2013) (on file with author) (describing the water purification systems utilized in fracing operations); see also Shale and Tight Resources, <https://www.chevron.com/operations/shale> [<https://perma.cc/H9Z7-CNFX>] (last visited Dec. 29, 2019) (describing how a large producer has taken advantage of water recycling technology in the fracing industry).

13. See generally Gabriel Collins, *Frac Ranching vs. Cattle Ranching: Exploring the Economic Motivations Behind Operator-Surface Owner Conflicts over Produced Water Recycling Projects*, Issue Brief, Baker Inst. for Public Pol’y, Rice University (Oct. 17, 2017) (quantifying the amount of recycled water operators can use again or sell); Jason Schumacher and Jennifer Morrissey, *The Legal Landscape of "Fracing": The Oil and Gas Industry's Game-Changing Technique Is Its Biggest Hurdle*, 17 *Tex. Rev. Law & Pol.* 239 (Spring 2013) (describing the amount of flowback water generally produced in one well when hydrologic fracing).

14. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 *Oil, Gas & Energy Res. Law Sec. Report* 21 (State Bar of Texas, Fall 2017) (describing how the Operators have created a market for waste water that would have otherwise been permanently lost through traditional disposal methods). See also, Gabriel Collins, *Frac Ranching vs. Cattle Ranching: Exploring the Economic Motivations Behind Operator- Surface Owner Conflicts over Produced Water Recycling Projects*, Issue Brief, Baker Inst. for Public Pol’y, Rice University (Oct. 17, 2017) (describing the value of water owned by surface owners in a number of different industrial uses); 2019 Sustainability Report, Sustainable Development Program, Pioneer Natural Resources, <http://www.pxd.com/sites/default/files/reports/2019-Sustainability-Report.pdf> [<https://perma.cc/2MQW-2WKV>] (outlining the way a major operator will “Increasing the use of recycled produced water in hydrologic fracturing”).

With the price of recycled water selling from ten to seventy-five cents per barrel, it is estimated operators can make over one million dollars per well per production cycle.¹⁵ From the perspective of the operator, recycling fracing water is a matter of economics.

The expansion of hydrologic fracing has made Texas not only the industry leader, but the legislative vanguard of oil and gas exploration and extraction.¹⁶ Over and over again, it is to Texas to which other states mirror their fracing regulations.¹⁷ The Texas Railroad Commission (“RRC”) has been steady in its regulation of the oil and gas industry in Texas—balancing the needs of both the surface and mineral estate—while maintaining mineral exploration and exploitation essential to Texas’s economy.¹⁸ With the “hydrologic fracturing revolution” the Texas Legislature in 2013 and 2019, has tried to be proactive in maintaining the integrity of the oil and gas industry in relation to surface and mineral estate owners.¹⁹ Changes to the

15. See Gabriel Collins, *Frac Ranching vs. Cattle Ranching: Exploring the Economic Motivations Behind Operator-Surface Owner Conflicts over Produced Water Recycling Projects*, Issue Brief, Baker Inst. for Public Pol’y, Rice University (Oct. 17, 2017) (comparing how the value of water sold to hydrologic fracturing producers can be more lucrative than traditional cattle farming).

16. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p. 19, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (“per barrel water acquisitions costs in seven Permian Basin counties with averages ranging from a low of \$.48 per barrel in Howard County to as high as \$1.02 per barrel in Eddy County”); see also Mark Kaufman, *We’re fracing the hell out of the U.S.A. Can a president slam on the brakes?*, Yahoo! News (June 26, 2019), <https://news.yahoo.com/were-fracing-hell-u-president-165440714.html> [<https://perma.cc/3E6T-2J3N>] (focusing on the expansion and future of fracing in Texas and the legislation surrounding its regulation).

17. See generally Marathon Oil led an initiative to remove barriers to using produced water in New Mexico, <https://www.marathonoil.com/Sustainability-Report/Highlights/Water-Management/> [<https://perma.cc/NKG8-KRAL>] (last visited Dec. 30, 2019) (describing the way a major producer and operator will look to the New Mexico Legislature to change the law in the same way they lobbied the Texas Legislature).

18. See generally Railroad Commission of Texas, Oil & Gas Exploration and Surface Ownership, <https://www.rrc.state.tx.us/about-us/resource-center/faqs/oil-gas-exploration-and-surface-ownership/> [<https://perma.cc/689E-8A7Y>] (last updated July 18, 2016) (providing context to how the agency for regulatory oversight interacts with operators and surface owners within the context of oil and gas exploration).

19. See Act of May 28, 2013, 83rd Leg., R.S., ch. 201, § 1, 2013 Tex. Gen. Laws 209 (amended 2015 and 2019) (current version at Tex. Nat. Res. Code Chapter 122.002) (understanding the evolution of fracing technology, the Texas Legislature has amended this code three times in the past 6 years); see also Yes, No, Maybe So: Uncertainty in Texas Groundwater Withdrawal for Hydrologic Fracting, 52 Hous. L. Rev. 1227, 1236 (2015)

Natural Resource Code Chapter 122 have tried to keep up with the general practices of the evolution of fracing technology.²⁰ In 2013, the Texas Legislature would first address the treatment of post fracing waste.²¹ However, changing the law to favor the operators at the expense of the surface owners during fracing operations—in an industry where the production of value is hundreds of millions of dollars per day—had the potential to produce unanticipated consequences.²²

Water treatment technology is not a stranger in the energy sector; nor is the practice of recycling industrial waste. Therefore, it is essential to limit the scope and properly define the terms within this comment. The principles of law and conclusions throughout this comment are specific to “groundwater entirely produced by the surface estate (and the lands pooled therewith) subject to mineral production on a tract therein.”²³ This comment will exclusively focus on what is commonly referred to as a severed estate subject to no prior contracts or surface use agreements. As used throughout this comment “surface owner” or “surface estate” means all interests in the fee simple estate (whether severed or not), except the mineral estate granted to or reserved by the mineral interest owner (*i.e.*, the fee simple title save

(“The Texas legislature made numerous unsuccessful attempts to address this ambiguity”); Blythe Lyons, John Tintera, Kylie Wright, Executive Summary: *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, (Sept. 16, 2019), <https://texasalliance.org/white-paper/> [<https://perma.cc/944V-MA4D>] (last visited Dec. 30, 2019) (“Texas took an early lead in recognizing the potential value of recycling and began updating its regulatory framework in 2013”).

20. See Act of May 28, 2013, 83rd Leg., R.S., ch. 201, § 1, 2013 Tex. Gen. Laws 209 (amended 2015 and 2019) (current version at Tex. Nat. Res. Code Chapter 122.002) (understanding the evolution of fracing technology, the Texas Legislature has amended this code three times in the past 6 years).

21. See generally Act of May 28, 2013, 83rd Leg., R.S., ch. 201, § 1, 2013 Tex. Gen. Laws 209 (amended 2015 and 2019) (current version at Tex. Nat. Res. Code Chapter 122.002) (understanding the evolution of fracing technology, the Texas Legislature has amended this code three times in the past 6 years).

22. See generally Andrew R. Thomas, Fracing Keeps the Gas Pedal on U.S. Economy, Industry Week (March 26, 2019) (explaining the impact of the United States fracing industry on the global economy); Permian Basin Petroleum Association, Economic Impact of Oil and Gas Industry in Texas, <https://pbpa.info/industry-statistics> [<https://perma.cc/GE3S-G4HA>] (last visited Dec. 30, 2019) (“[t]he oil and gas industry paid over \$15.7 billion in Texas state and local taxes and royalties in fiscal 2014 and a total \$98.9 billion in Texas state and local taxes and royalties from 2007 through 2015”).

23. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (matching terminology with language used in the practice of oil and gas law).

the title to the minerals in place); “mineral estate” means those interests held by the mineral interest owner.²⁴ “Operator” means the companies exploring and exploiting the minerals through hydrologic fracturing. This comment does not cover ground water which has been sold by the surface owner to the operator.

There are many stakeholders in the economy of hydrologic fracturing.²⁵ For example, Regulatory agencies, environmental agencies, state and local governments, and independent business operators all have a part to play at any one stage of the fracing process.²⁶ However, even though this comment does not intend to delve into the interests of the above-mentioned stakeholders—by focusing on the surface and mineral estates—the consequences will reverberate amongst these stakeholders. The regulation of finite minerals will increasingly become more important.

This comment will focus on House Bill 3246 and its impact in the context of surface and operator conflicts; specifically, the common practice of operators recycling post-fracing wastewater. Further, this comment will assert the enforcement of the provisions in House Bill 3246 as outlined in the Texas Natural Resources Code Chapter 122.002 constitutes a constitutional regulatory taking of the water, being an attribute of the surface estate, when operators use recycled water to service acreage other than the producing tract of land, or acreage pooled within. Part II of the comment will explain the division of rights existing between the surface estate owner and the mineral estate owner. Part III will describe the legislative history of House Bill 3246 and the interest of the Legislature in revising the Texas Natural Resources Code. Part IV will analyze the effect of House Bill 3246 on surface owners and conclude that as applied, Texas Natural Resources Code Chapter 122.002 is a regulatory taking. Part V will conclude and provide context into this unique area of the law. The real

24. *Id.*

25. See Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the number of parties involved in dealing with post fracing waste in the context of operators and third parties).

26. See generally Railroad Commission of Texas, Water Use in Association with Oil and Gas Activities, <https://www.rrc.state.tx.us/about-us/resource-center/faqs/oil-gas-faqs/faq-water-use-in-association-with-oil-and-gas-activities/> [https://perma.cc/Z5UK-NDEB] (last visited Dec. 18, 2019) (providing context to how the agency for regulatory oversight interacts with other agencies within the context of oil and gas exploration); Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (describing the enforcement and regulatory power in the context of water treatment and usage).

property doctrine of correlative rights creates a usufruct interest in the groundwater allowing the operator to use the water to exploit the minerals for benefit of the land or acreage pooled therewith. The statute then attempts to expand the usufruct right of use into an ownership interest in the backflow water.

II. Division of Rights

Texas gives a fee simple owner proprietary rights and constitutional protections to every molecule or atom located underground within the property boundary.²⁷ The mineral interest owner will have the dominant interest over the surface estate.²⁸ It is important to establish what rights and substances are reserved when the minerals are severed. Traditionally, the hydrocarbons in place are owned by the mineral estate while groundwater is part of the surface estate.²⁹ Moreover, this severability is always subject to the terms of the conveying instrument or contract.³⁰

27. *See* *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 831–32 (Tex. 2012) (quoting “[I]n our state the landowner is regarded as having absolute title in severalty to the oil and gas in place beneath his land. The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. The oil and gas beneath the soil are considered a part of the realty. Each owner of land owns separately, distinctly and exclusively all the oil and gas under his land and is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value.”); *see also* *Elliff v. Texon Drilling Co.*, 210 S.W.2d 558, 562 (Tex. 1948) (quoting “[E]ach owner whose land overlies the basin has a like interest, and each must of necessity exercise his right with some regard to the rights of others”).

28. *See* *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 810 (Tex. 1972) (“[T]he oil and gas lessee’s estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.”); *Getty Oil Co. v. Jones*, 470 S.W.2d 618, 621 (Tex. 1971) (quoting “[I]t is well settled that the oil and gas estate is the dominant estate in the sense that use of as much of the premises as is reasonably necessary to produce and remove the minerals is held to be impliedly authorized by the lease; but that the rights implied in favor of the mineral estate are to be exercised with due regard for the rights of the owner of the servient estate.”); *Brown v. Lundell*, 344 S.W.2d 863, 865 (Tex. 1961) (citing “[W]e agree that the owner-operator of the lease has the right to use so much of the land, both surface and subsurface, as is reasonably necessary to comply with the terms of the lease contract and to carry out the purposes and intentions of the parties.”); *TDC Engineering, Inc. v. Dunlap*, 686 S.W.2d 346, 349 (Tex. Ct. App. 1985) (holding the mineral estate is the “dominant estate”).

29. *See* *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) (quoting “[W]ater, unsevered expressly by conveyance or reservation, has been held to be a part of the surface estate.”); *See also* *Fleming Found. v. Texaco, Inc.*, 337 S.W.2d 846, 852 (Tex. Ct. App. 1960) (holding “[t]he reservation of oil, gas and other minerals does not include the sub-surface water.”); *City of Del Rio v. Clayton Sam Colt Hamilton Tr.*, 269 S.W.3d 613 (Tex.

Texas jurisprudence and regulatory governance dictates a balance between correlative rights and the rule of capture.³¹ The delicate dance created by correlative rights in the use of groundwater have limited the outright exploitation of hydrocarbons at the expense of the surface estate in four major ways: the accommodation doctrine³², the reasonable and non-negligent use of the surface³³, usufructuary water rights³⁴, and beneficial surface use for the mineral estate.³⁵ These well-established doctrines work together to ensure balance between the rights of the surface owner and mineral owner, when interests may not always align.³⁶ Because the mineral estate is dominant, the accommodation doctrine tempers these implied rights by stating the mineral interest owner must, if reasonably able to do so, give due regard to the surface owner's existing current use of the surface.³⁷ Along these same lines, the mineral owner must use its implied

Ct. App. 2008) (quoting “[U]nder the rule of capture a person owns all of the [water or] oil and gas produced by a well bottomed on his own land, even though the well may be draining the substances from beneath other property”).

30. *See Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) (“[W]ater, unsevered expressly by conveyance or reservation, has been held to be a part of the surface estate.”).

31. *See* 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* 8.3 (LexisNexis Matthew Bender 2015) (“the Railroad Commission’s duty to protect correlative rights exists side by side with the common-law rule of capture.”).

32. *See Sun Oil Co. v. Whitaker*, 483 S.W.2d 808,810 (Tex. 1972) (“The oil and gas lessee’s estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment, of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.”) (emphasis added).

33. *See Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 810 (Tex. 1972) (Quoting “[T]he oil and gas lessee’s estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment, of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.”) (emphasis added).

34. *See Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867 (Tex. 1973) (explaining the use of the implied right by the dominant estate does not extend to an ownership interest in the property used); *In re Adjudication of Water Rights of Upper Guadalupe Segment etc.*, 642 S.W.2d 438, 444 (Tex. 1982) (“[a] usufruct has been defined as the right to use, enjoy and receive the profits of property that belongs to another”).

35. *See* 501 S.W.2d 865, 868 (Tex. 1973) (explaining the use of the implied right by the dominant estate must not be for the benefit outside that of the surface estate boundaries).

36. *See* 2 Ernest E. Smith and Jacqueline Lang Weaver, *Texas Law of Oil and Gas* 8.3 (LexisNexis Matthew Bender 2015) (“Because Texas conservation statutes never define correlative rights, the courts have filled the void.”).

37. *See generally* *Getty Oil Co. v. Jones*, 470 S.W.2d 618, 619 (Tex. 1971) (establishing the mineral interest owner must take into account reasonable alternatives when operating

right of the surface in a reasonable and non-negligent manner.³⁸ The last two limiting doctrines are of the utmost importance for the purposes of this comment³⁹

A. Use Versus Ownership

Use is not ownership. Correlative rights of the severed mineral interest owner are expressly usufructuary.⁴⁰ The Texas Supreme Court utilizes the present right to use only when conceptualizing the implied surface use right by the dominant estate.⁴¹ In both the *Sun Oil* and *Robinson v. Robbins Petroleum Corp.* opinions, the court takes pains to describe these rights in terms of “use” and not of ownership.⁴² In *Sun Oil*, the court reiterates “the implied grant of reasonable *use* extends to and includes the right to *use* water from the leased premises in such amount as may be reasonably necessary to carry out the lessee’s operations under the lease.”⁴³

Robbins Petroleum Corp. would not only further usufructuary nature of the implied right to use, but would state “the water itself is an incident of surface ownership in the absence of specific conveyancing language to the contrary.”⁴⁴ It is in this concept that the dominant estate is dominant,

under the implied right of use; further, the mineral estate must do so in a non-negligent manner).

38. *Id.*

39. See *Coyote Lake Ranch, LLC v. City of Lubbock*, 498 S.W.3d 53, 64 (Tex. 2016) (“Common law rules governing mineral and groundwater estates are not merely similar; they are drawn from each other or from the same source”).

40. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (“Since a mineral interest owner’s right to water is usufructuary—giving it a present right of use only—it cannot sell that which it does not own.”) (emphasis in original).

41. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (“In each instance, the court’s recognition of a mineral interest owner’s implied right of surface use implicitly recognizes the surface estate owner’s ownership of the surface. Second, the court’s language confines surface use to effectuating the purposes of the mineral lease”).

42. See generally *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808 (Tex. 1972) (describing the rights of the mineral interest owner in terms of use); *Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867 (Tex. 1973) (explaining use of the surface estate and not ownership of the property used).

43. *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) (adding the qualification of reasonable use of the surface estate by the operator).

44. *Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867 (Tex. 1973) (qualifying the usufruct can be modified by any legal contractual agreement).

without this usufruct, mineral interest owners would have no way to extract minerals without an agreement with the surface owner.

The reiteration of use over ownership is not inconsequential, it is essential to how Texas law balances the interests of a severed estate. Also important, are the ancillary and regulatory interactions between the state and the oil and gas industry. This comment seeks to provide background into how the oil and gas industry has been regulated previously to provide context to the impact of House Bill 3246. To understand how operators must interact with statutory and regulatory obligations, every stage of the fracturing process must be understood in terms of the legislative purview.

B. The Legal Relation of Water to Its Practical Use

There is no question that groundwater is an attribute of the surface estate.⁴⁵ The mineral estate is the dominant estate.⁴⁶ Because of the dominant estate status, Texas allows capture of those minerals through reasonable use of the surface estate. Operators looking to exploit minerals may in a practical sense, use the surface to effectuate their exploitation.⁴⁷ The means by which operators effectuate the use of the surface estate during the process of hydrologic fracturing is a multi-tiered approach—every tier requires fresh groundwater.⁴⁸

45. *See* *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 831-32 (Tex. 2012) (holding “In our state the landowner is regarded as having absolute title in severalty to the oil and gas in place beneath his land. The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. The oil and gas beneath the soil are considered a part of the realty. Each owner of land owns separately, distinctly and exclusively all the oil and gas under his land and is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value.”).

46. *Sun Oil Co. v. Whitaker*, 483 S.W.2d 810 (Tex. 1972) (“The oil and gas lessee’s estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment, of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.”) (internal citation omitted) (emphasis added).

47. *See* *TDC Engineering, Inc. v. Dunlap*, 686 S.W.2d 346, 349 (Tex. App.—Eastland 1985) (“A grant of minerals would be worthless to a grantee if he could not enter upon the land for exploration and extraction of the minerals granted.” (quoting *Ball v. Dillard*, 602 S.W.2d 521, 523 (Tex. 1980))).

48. *Frac Focus Chemical Disclosure Registry*, *Hydrologic Fracturing: The Process*, <https://fracfocus.org/hydrologic-fracturing-how-it-works/hydrologic-fracturing-process> [<https://perma.cc/DW5V-QUDX>] (last visited Dec. 18, 2019) (describing the four-stage process requiring freshwater).

1. From Groundwater to Well-Head

Once operators begin the process of drilling and fracing, one of the first steps is to acquire significant amounts of fresh water, usually by way of freshwater wells drilled on the surface estate.⁴⁹ The water extracted by the operator is then pumped to storage tanks or large ponds closer to the well head.⁵⁰ These fresh water storage ponds are usually filled days prior to the beginning of injecting the water into the well.⁵¹ The operator is very cautious not to lose or contaminate any freshwater during this early stage by ensuring proper transportation of the freshwater through pipes or by trucks and properly casing the wellbore.⁵² Throughout this process, involving significant and expensive infrastructure, the legal ownership of the water has not changed.⁵³ Legal ownership has not changed under common law, Texas jurisprudence, or even acting within the changes outlined in Natural Resources Code Chapter 122.002. This means, where the surface owner has not sold the water to the operator, the surface estate still owns all the water in the storage tanks, the storage ponds, inside transportation pipes and trucks, and at the wellbore. Once again, operators have only a usufruct when it comes to land use of the surface estate, including groundwater.⁵⁴

At no point in the stages prior to pumping the freshwater down the fraced well, does Texas jurisprudence qualify or describe freshwater in any

49. *Id.* (describing the location and storage of fresh groundwater during the process of fracing).

50. See Frac Focus Chemical Disclosure Registry, *Hydrologic Fracturing: The Process*, <https://fracfocus.org/hydrologic-fracturing-how-it-works/hydrologic-fracturing-process> [<https://perma.cc/DW5V-QUDX>] (last visited Dec. 18, 2019) (describing the location and storage of fresh groundwater during the process of fracing).

51. *Id.*

52. *Id.*

53. See Tex. Nat. Res. Code Ann. Chapter 122.002 (providing no condition of the freshwater ownership status prior to exiting the well as “wastewater”; without any express change within the law, it is valid to consider groundwater to be owned by the surface); See also Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p. 19, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (describing the economic benefit of investing large amounts of infrastructure during oil and gas operations).

54. See *Sun Oil Co. v. Whitaker*, 483 S.W.2d 810 (Tex. 1972) (“The oil and gas lessee’s estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment, of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.”) (emphasis added).

other sense than being a fee simple proprietary ownership right of the surface. Texas common law doctrine of ensuring the mineral estate is dominant has evolved with technology, but fundamentally, still provides both estates benefit from this doctrine.⁵⁵ Surface owners who purchase after the land has been severed, have undoubtedly done so at a discount. Likewise, mineral interest owners who negotiated the purchase price of their interest have done so with the hope that their interest will be productive.⁵⁶ Therefore, Texas common law understands surface owners most likely have already benefited from their interest prior to the exploitation of the mineral estate.⁵⁷ Because of this concept, the scale of this usufructuary right is not a factor in changing the delicate balance of ownership between the estates.

Further, with the *Edwards Aquifer* opinion, Texas jurisprudence put an end to any question pertaining to the ownership of groundwater.⁵⁸ Coupled with Texas's common law, this decision solidified groundwater as a part of the realty, for this comment, that is to say, groundwater will be considered part of the surface; "We now hold that this correctly states the common law regarding the ownership of groundwater in place."⁵⁹ Therefore, during this stage, absent any contractual agreement, legal ownership of groundwater is still a vested property right of the surface estate.

55. *Tarrant County Water Control & Improvement Dist. Number One v. Haupt, Inc.*: "It is a well-established doctrine from the earliest days of the common law that the right to the minerals carries with it the right to enter and extract them, and all other such incidents thereto as are necessary to be used for getting and enjoying them. This common law right was created "because a grant or reservation of minerals would be wholly worthless if the grantee or reserver could not enter upon the land in order to explore for and extract the minerals." 854 S.W.2d 909, 911 (Tex. 1993) (internal citations omitted) (quoting *Harris v. Currie*, 176 S.W.2d 302, 305 (Tex. 1944)).

56. Standard Oil and Gas Surface Use Agreements often include costs of affecting hunting and fishing activities; these agreements take into account many factors of the surface owner's use of his own land.

57. *See TDC Engineering, Inc. v. Dunlap*, 686 S.W.2d 346, 349 (Tex. App.—Eastland 1985) ("A grant of minerals would be worthless to a grantee if he could not enter upon the land for exploration and extraction of the minerals granted." (quoting *Ball v. Dillard*, 602 S.W.2d 521, 523 (Tex. 1980)).

58. *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 832 (Tex. 2012) ("By ownership of groundwater as real property, the Legislature appears to mean ownership in place").

59. *Id.*

2. From Well-Head to Mineral Formation and Back

With millions of gallons of freshwater prepped and in frac ponds prior to fracing, the legal ownership has not changed.⁶⁰ During this process, four distinct stages require large amounts of freshwater to effectuate the fracing operation.⁶¹ These stages utilize the extracted groundwater for the purpose of effectuating hydrocarbon extraction. As the freshwater and chemical mixture is pumped thousands of feet into the formation below, legal ownership between the surface owner and the operator regarding the groundwater has not changed.⁶²

During the acid stage, several thousand gallons of fresh water are used to dissolve material in the well bore.⁶³ This is not always required for every formation; the necessity of this stage depends on the calcium concentration within the rock formation. The pad stage demands approximately 100,000 gallons of freshwater be forced down the well bore to prime the pump and to allow the bore to reach pressure.⁶⁴ The prop stage allows the operator to add either fine or course material to make the capture of the minerals more efficient. This stage can use up to one hundred thousand gallons of freshwater.⁶⁵ After the capture of minerals, freshwater is again used in the flushing stage to flush out additional material from the well prior to closing it.⁶⁶ No matter how many chemicals are introduced during these stages, 98% to 99.5% of the material pumped into the well is water and sand.⁶⁷

It is important to distinguish common practices among operators at this stage of the operation. After the formation is fractured and the operator begins pumping out fluid from the well, the concurrent process of

60. See Frac Focus Chemical Disclosure Registry, Hydrologic Fracturing: The Process, <https://fracfocus.org/hydrologic-fracturing-how-it-works/hydrologic-fracturing-process> [<https://perma.cc/DW5V-QUDX>] (last visited Dec. 18, 2019) (describing the volume and storage of fresh groundwater during the process of fracing).

61. *Id.*

62. See Frac Focus Chemical Disclosure Registry, Hydrologic Fracturing: The Process, <https://fracfocus.org/hydrologic-fracturing-how-it-works/hydrologic-fracturing-process> [<https://perma.cc/DW5V-QUDX>] (last visited Dec. 18, 2019) (describing the location and storage of fresh groundwater during the process of fracing); See also See Tex. Nat. Res. Code § 122.002 (providing no condition of the freshwater status prior to exiting the well as “wastewater”).

63. *Id.* (describing the first stage of fresh groundwater use during the process of fracing).

64. See *Id.* (describing the second stage of fresh groundwater during the process of fracing).

65. See *Id.* (describing the third stage of fresh groundwater during the process of fracing).

66. See *Id.* (describing the last stage of fresh groundwater during the process of fracing).

67. *Id.*

separating minerals, water, and chemicals can begin.⁶⁸ Once separated, the minerals go to the producer, the chemicals are either reused or disposed of, and the water is transported away by truck or pipe to salt water disposal wells.⁶⁹ Traditionally, the operator paid for a waste disposal service to truck away the water, sand, and chemicals to an offsite deep injection well.⁷⁰

Alternatively, the operator could provide its own waste disposal service or entirely contract out waste disposal services.⁷¹ Even though the water was being trucked to a disposal site located off the land of the surface owner, surface owners were happy to permit operators to dispose of the unusable water because the operator was statutorily obligated to properly dispose of post-fracing waste.⁷² However, this “implied permission” did not transfer any property rights.

Texas has distinguished the chemical composition of groundwater owned by the surface estate from other similar liquid materials found underground. In *Robinson v. Robbins Petroleum Corp.*, the operator took saltwater from the surface estate to re-pressurize the mineral formation for the oil-bearing rock to remain stable.⁷³ Relying on the word “water” in the lease, the operator argued it was only liable to reimburse the surface owner for the freshwater used.⁷⁴ “Water,” to the operator, meant only freshwater. The Texas Supreme Court disagreed, “[W]ater is never absolutely pure unless it is treated in a laboratory. It is the water with which these parties are concerned and not the dissolved salt. . . . [T]he saline content has no consequence upon ownership.”⁷⁵

The next year the Texas Supreme Court lent further insight into identifying groundwater in *Humble Oil & Refining Co. v. West*.⁷⁶ In *Humble Oil*, a dispute arose between an operator and royalty interest owner pertaining to the comingling of native gas and produced gas.⁷⁷ The court held, “the confusion of goods theory attaches only when the commingled

68. *Id.*

69. *Id.*

70. *Id.*

71. See Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the number of parties involved in dealing with post fracing waste in the context of operators and third parties).

72. See tit. 16, pt. 1, ch. 3 Tex. Admin. Code, § 3.9 (2020) (providing regulations on the use and treatment of “wastewater.”).

73. *Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 866 (Tex. 1973).

74. *Id.* at 867.

75. *Id.*

76. *Humble Oil & Ref. Co. v. West*, 508 S.W.2d 812, 818 (Tex. 1974).

77. *Id.*

goods of different parties are so confused that the property of each cannot be distinguished.”⁷⁸

Therefore, if the surface-owned freshwater is going into the well as a usufruct by the operator, it is an asset of the surface estate. When it is mixed with chemicals, pumped down into the formation, and returned as produced liquid, it becomes part of the production stream. However, when operators recycle the produced liquid, the recycled water is separated from the hydrocarbons. As in *Humble Oil and Robinson*, ascertaining what is groundwater is a question of fact.

With the rise of water treatment technologies came the rise in operators looking to take advantage of this common practice.⁷⁹ Instead of disposing of the backflow water, operators set up treatment technologies to bring the backflow water to a state clean enough to be reused. Once recycled, the operators either sold the water for industrial use, reused it in the same well, or stored it for future use (on either the same tract or a nearby tract). Thus, operators created a market through ingenuity.⁸⁰ Depending on the formation, operators recover up to 40% of the frac water when it flows back through the wellbore.⁸¹

All questions concerning the use of groundwater are resolved when the surface owner sells groundwater to the operator; because the cost of groundwater sold by the surface owner to operators ranges from ten to seventy-five cents—depending on demand and location—the cost of frac water is a significant expense to the operator. Where the operator relies on the doctrine of correlative rights, the use of the flowback water is limited to use on the land covered by the lease, or acreage pooled therein.⁸²

Throughout the entire fracing process, the operator must dance the delicate usufruct dance. Once the purchased backflow water is recycled, it can be used for another tract of land or sold. Recognizing this proprietary

78. *Id.*

79. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 *Oil, Gas & Energy Res. Law Sec. Report* 21 (State Bar of Texas, Fall 2017) (describing the effect market operators have created by recycling fracing water).

80. See *Id.* (describing the market operators have created by recycling fracing water).

81. See Gabriel Collins, *Frac Ranching vs. Cattle Ranching: Exploring the Economic Motivations Behind Operator-Surface Owner Conflicts over Produced Water Recycling Projects*, Issue Brief, Baker Inst. for Public Pol’y, Rice University (Oct. 17, 2017) (comparing how the value of water sold to hydrologic fracturing producers can be more lucrative than traditional cattle farming).

82. See *Robinson*, 501 S.W.2d at 867 (explaining the use of the implied right by the dominant estate does not extend to an ownership interest in the property used).

issue, operators and producers sought help from the Texas Legislature to codify their new practice.⁸³

3. Voluntary Agreements or Legislative Intervention

Some operators and producers have invested billions of dollars into water treatment technologies since 2013.⁸⁴ To protect their investment, operators rely heavily on their relationships with landowners and future legislative certainty.⁸⁵

In Texas, some operators have preemptively entered into surface use agreements with landowners that contain groundwater sales provisions.⁸⁶ Unlike New Mexico, Texas does not have a surface use statute. These surface use agreements are not required by the Texas Legislature or the Railroad Commission, but merely codify the duties and obligations of each party prior to and during operations. Contained within these agreements are reimbursement rates not limited to wildlife killed by operations, land damage, and the cost of groundwater used during all stages of the fracing process.⁸⁷ Even where the operator has no legal obligation to the surface owner other than the common law doctrines described above, some operators and producers contract with surface owners to express their respective duties and obligations.

Given the massive investment in infrastructure required to exploit minerals for each tract—and given the desire to take full advantage of this

83. See William C. Mumby, *Trust in Local Government: How States' Legal Obligations to Protect Water Resources Can Support Local Efforts to Restrict Fracing*, 44 *Ecology L.Q.* 195, 202 (2017) (“[S]tates act as the primary regulators of the practice.”). See also House Comm. on Energy Resources, *List of Witnesses*, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing the private parties testifying for and against House Bill 3246).

84. See generally Austin C. Whitmore, *Oilfield Recycling in Texas: Why Command and Control Regulations are Stifling the End Goal*, 44 *Tex. Env'tl. L.J.* 287, 292 (Sept. 2014) (“A 2011 study by the Texas Water Development Board estimated that only 3% of injected frac water is recycled in Texas.”); N.M. Stat. Ann. § 70-12-5 (West) (outlining the requirements of surface use agreements prior to the commencement of oil and gas operations).

85. Marathon Oil led an initiative to remove barriers to using produced water in new Mexico, <https://www.marathonoil.com/Sustainability-Report/Highlights/Water-Management/> [<https://perma.cc/NKG8-KRAL>] (last visited Dec. 30, 2019) (describing the way a major producer and operator will look to the New Mexico Legislature to change the law in the same way they lobbied the Texas Legislature).

86. See generally Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

87. *Id.*

investment through backflow water recycling, it is sensible to stave off conflicts by negotiating with the surface owner through a “groundwater sales agreement” or “surface use agreement” prior to the commencement of operations. As the water used in fracing becomes more valuable than cattle ranching or agriculture, operators have anticipated conflicts with surface owners—surface owners understand the importance of groundwater. Every drop is important.⁸⁸ For example, land owners have negotiated to calculate of the volume payable by the quantity of the water measured at the well head rather than the backside of the frac pond.⁸⁹

This simple detail can save the landowner thousands of dollars in lost water sales. After being pumped from the ground, the water can sit in open frac ponds for days or weeks before arriving at the fracing well site. If the calculation occurs at the water well, evaporation is of no concern, but if the operator calculates water use at the fracing site, operators are not paying for any evaporated water.⁹⁰ Because fracing operations require substantial use of the surface estate, these practical details are of the utmost importance to landowners.

Modern surface use agreements have anticipated conflict to the point that operators have begun to buy the groundwater from the surface owner prior to use—even when the operator has no obligation to do so.⁹¹ Operators understand the legal “grey area” of ownership when water is recycled and have solved this issue with purchase agreements within surface use contracts.⁹² However, given the expense of groundwater, operators have solved one problem to buy another.

88. *Id.*

89. *Id.*

90. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.6, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (“Hauling water away from well pads via truck can cost anywhere from \$1 to \$5 per barrel depending on travel distance and terrain, which can be prohibitively expensive when compared to the \$.30 it reportedly costs to pipe water from a production well to a disposal well.”).

91. See generally Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

92. See Gabriel Collins, *Frac Ranching vs. Cattle Ranching: Exploring the Economic Motivations Behind Operator-Surface Owner Conflicts over Produced Water Recycling Projects*, Issue Brief, Baker Inst. for Public Pol’y, Rice University (Oct. 17, 2017)

The reason for recycling post-fracing water or backflow water is to lower the operator's costs. If operators are going to buy the water *and* recycle, they have effectively lowered their margins only to the extent of the virgin water saved. However, if operators do not purchase groundwater and must therefore rely on the correlative rights doctrine limited in how and where the backflow water may be used, "Costs expended on such technologies would create no cost or economic benefits for the mineral interest owner, and the implementation of water treatment technologies would yield to less costly disposal well alternatives."⁹³ Thus, operators and producers began to look for legislative ways to protect their recycling investments without the need for legally preemptive surface use agreements.

III. Legislative History and Importance

A. Regulatory History of Oil and Gas in Texas

With the Texas Railroad Commission ("RRC") and Texas Commission on Environmental Quality ("TCEQ") gently stepping around the regulatory use of water for oil and gas operations, it is easy to become lost in the practical process of how operators use water. The scope of water use for operators must always be described, absent written agreement and for the reasons stated above, in terms of usage.⁹⁴ Therefore, groundwater always begins as an asset of the surface estate, or the estate where the severance has occurred, but is not granted to the lessee under the terms of a typical oil and gas lease.⁹⁵ Its use is dictated according to the common law doctrine of correlative rights. The historical evolution of mineral law in Texas has nourished the oil and gas industry in many ways.⁹⁶

(comparing how the value of water sold to hydrologic fracturing producers can be more lucrative than traditional cattle farming).

93. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (describing the market that operators have created by recycling fracing water).

94. *Brown v. Lundell*, 344 S.W.2d 863, 865 (Tex. 1961) ("We agree that the owner-operator of the lease has the right to use so much of the land, both surface and subsurface, as is reasonably necessary to comply with the terms of the lease contract and to carry out the purposes and intentions of the parties.") (internal citation omitted).

95. *Sun Oil Co. v. Whitaker*, 483 S.W.2d at 810 ("The oil and gas lessee's estate is the dominant estate and the lessee has an implied grant, absent an express provision for payment, of free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regard for the rights of the owner of the surface estate.") (internal citation omitted).

96. See generally John Burritt McArthur, *Stewarding Public Oil, Gas, and Hard Minerals: The Express and Implied Development Rights that Protect Public Resources*, 9

Recognizing the importance of being an energy leader throughout the world, Texas legislative acts have gone to great lengths to perfect property rights in relation to the theory of mineral ownership in place.⁹⁷ The goal of oil and gas legislative regulation has been the ability of lawmakers and regulators to balance the exploration and exploitation of natural resources with the absolute right of property ownership.⁹⁸ Even though the methods of exploration and production have been revolutionized through technology, the legislature has sought to reinforce the moniker of the independent producer, “rise early, work hard, strike oil.”⁹⁹

The primary way the Texas Legislature ensured the perpetuity of the hydrocarbon energy sector was how it structured the oversight of the energy industry.¹⁰⁰ Texas established the Railroad Commission in 1890, but it wasn’t until 1917 that the legislature declared pipelines to be “common carriers” that the RRC was able to regulate the energy industry.¹⁰¹ From 1917 to 1939, the legislature would enact new statutes or amend the Natural Resource Code a total of thirty-six times.¹⁰²

These acts would serve to clarify the scope and authority of the RRC in comparison with the ever-growing oil and gas producers; these acts would

Tex. J. Oil Gas & Energy L. 215, 250 (July 2014) (treats leases obligating lessees to produce by the end of the primary term as requiring actual production in paying quantities); *see also* 2 Texas Law of Oil and Gas 8.4 (2019) (“Texas governors, legislators, attorneys general, and Railroad Commissioners are concerned not just with preventing waste in the oil and gas fields but with the state’s economy as a whole—with employment levels, tax revenues, investment opportunities, and the maintenance of competition. When the size of the state’s oil and gas wealth became apparent, its distribution among citizens also became a political matter.”).

97. *See* Ernest E. Smith and Jacqueline Lang Weaver, 2 Texas Law of Oil and Gas 8.3 (LexisNexis Matthew Bender 2015) (Not surprisingly, the Texas Legislature enacted various tax incentives to offset the deteriorating market conditions faced by the oil industry.”); *see generally* 2 Texas Law of Oil and Gas 8.4 (2019) (outlining the evolution of Texas’ statutory scheme incentivizing exploration and production of oil and gas).

98. *See generally* 2 Texas Law of Oil and Gas 8.4 (2019) (outlining the evolution of Texas’ statutory scheme incentivizing exploration and production of oil and gas).

99. J. Paul Getty Quotes, BrainyQuote.com, 2019. https://www.brainyquote.com/quotes/j_paul_getty_100065 [<https://perma.cc/JS7P-FMFS>] (last visited Dec. 18, 2019).

100. Lone Star Gas Co. v. State, 153 S.W.2d 681, 687 (Tex. 1941) (describing the interaction between the regulatory institutions that affect the oil and gas industry).

101. *See* History of the Railroad Commission 1866-1939, <https://www.rrc.state.tx.us/about-us/history/history-1866-1939> [<https://perma.cc/JQ8N-XB5C>] (last visited Dec. 30, 2019) (“Legislature declares pipelines to be common carriers, and gives Railroad Commission jurisdiction over same. This is the first act to designate the Railroad Commission as the agency to administer the conservation laws relating to oil and gas.”).

102. *Id.* (describing the major events in history for the Texas Railroad Commission).

include the authority to issue statewide proration orders¹⁰³, physical waste standards¹⁰⁴, market manipulation limitations¹⁰⁵, and the well spacing rule.¹⁰⁶ In 1941, with the *Lone Star Gas Co. v. State* decision, the RRC rate consideration orders were to be considered “legislative” in nature¹⁰⁷. Therefore, the RRC would be able to expand its regulatory authority and scope without a specific enactment by the legislature. This is evidenced by the decreasing number of changes to the Natural Resource Code in the years following this decision. From 1940-1980, the legislature amended or expanded the Natural Resources Code only another twenty-two times.¹⁰⁸ From 1980-2009, only four legislative changes occurred regarding the Natural Resources Code.¹⁰⁹

To understand the relationship of the RRC and the legislature is to understand energy politics in Texas—incentives to explore and produce oil and gas in Texas go hand in hand with explicit and implicit rights of both the mineral and surface estates. The current three RRC commissioners have a combined total of 70 years’ experience in the energy, business, and engineering sectors.¹¹⁰ They have worked both in the public and private business sectors; and some have had experience in the financial sector.¹¹¹ Even though these commissioners are popularly elected or appointed by the Governor during a vacancy in a largely conservative state, they are clearly dedicated to their mission “to serve Texas by our stewardship of natural resources and the environment, our concern for personal and community

103. *Id.*

104. *Id.*

105. *Id.*

106. *Id.*

107. *Id.*

108. See History of the Railroad Commission 1980-1999, <https://www.rrc.state.tx.us/about-us/history/history-1980-1999/> [<https://perma.cc/GR4E-4FLV>] (last visited Dec. 30, 2019) (describing the major events in history for the Texas Railroad Commission).

109. See History of the Railroad Commission, <https://www.rrc.state.tx.us/about-us/history/history-2000-2009/> [<https://perma.cc/2ZN3-D6LP>] (last visited Dec. 30, 2019) (describing the major events in history for the Texas Railroad Commission).

110. See 2 Texas Law of Oil and Gas 8.4 (2019) (“However, the authority to regulate the oil and gas fields in Texas naturally carries with it the power to manage the Texas economy. Railroad Commissioners are elected officials who operate in the same environment as the lawmakers who create the policy framework. Not surprisingly, then, they have viewed their role as managers of the Texas economy and have acted accordingly.”).

111. See Commissioners, <https://www.rrc.state.tx.us/about-us/commissioners/> [<https://perma.cc/W87N-FFBE>] (last visited Dec. 30, 2019) (providing the background of the current commissioners for the Texas Railroad Commission).

safety, and our support of enhanced development and economic vitality for the benefit of Texans.”¹¹²

The scope of the RRC’s regulatory power over the oil and gas is broad and has expanded over time. First and foremost, correlative rights have mainly been protected by the courts and statutory guidance because the RRC has had a tough time walking the proprietary interest tightrope:

The Natural Resources Code evidences near-schizophrenia regarding the commission’s power and duty to protect correlative rights. Chapter 85 of the code, which involves oil conservation, never uses the phrase “correlative rights.” Chapter 86 on gas conservation is replete with references to the need to protect correlative rights. Chapter 111 on common carriers and common purchasers is based on the principle that all producers should have equal access, without discrimination, to pipelines, a principle imbued with the concept of protecting correlative rights. Chapter 102, the Mineral Interest Pooling Act, openly acknowledges the protection of correlative rights as one of its purposes. Yet nowhere in the code is “correlative rights” ever defined.¹¹³

“The directive of the RRC is not to define what interests parties currently have, but to simply regulate and “protect the correlative rights of different interest owners.”¹¹⁴ When there is a gap or need for interpretation, the courts have filled the gap.

Just as confusing is how the RRC and the Texas Commission on Environmental Quality share the responsibility of regulating water for the purpose of oil and gas exploration and exploitation. However, no matter how confusing the relationship of regulation and legislative acts have become, the theme has been steady— legislative acts evolve with the regulatory nature of the oil and gas sector—and have generally not altered

112. Texas Railroad Commission Mission Statement, <https://www.rrc.state.tx.us/about-us/organization-activities/mission-statement/> [<https://perma.cc/N8JF-22Y7>] (last visited Dec. 30, 2019).

113. Ernest E. Smith and Jacqueline Lang Weaver, 2 *Texas Law of Oil and Gas* 8.3 (LexisNexis Matthew Bender 2015).

114. See Texas Railroad Commission, Oil and Gas Division, <https://www.rrc.state.tx.us/about-us/organization-activities/divisions-of-the-rrc/oil-gas-division/> [<https://perma.cc/KDF2-NLCA>] (last visited Dec. 30, 2019) (explaining how the Railroad Commission delegates its duties and responsibilities within the regulation of the oil and gas industry in Texas).

long established common law property rights.¹¹⁵ The relationship of the RRC and the Texas Legislature is not the aim of this comment; this background is meant to provide context into why legislative intervention in the oil and gas industry reverberates so profoundly.

B. Legislative History and Intent of House Bill 3246

Eight words contained in House Bill 3246 have changed the relationship between surface owners and operators by codifying a practice which alters property ownership in favor of one party, and transfers the same property to another party, without means of compensation.¹¹⁶ By breaking down the way the legislature went about codifying this practice, the creation of my first sentence in this paragraph is not an oversimplification.

The intent of the legislature was to codify the way operators dealt with the “waste of oil and gas fluid.”¹¹⁷ By reframing the issue of groundwater ownership in dealing with the post fracturing fluid waste, the legislature seeks to avoid expressly regrating proprietary rights.

Texas Representative Drew Darby introduced House Bill 3246 to clear up the perceived “ambiguity relating to ownership between water haulers and oil and gas operators.”¹¹⁸ Although this reasoning is factually true and seeks to clarify the current practices of the operators, the intended ambiguity to be resolved is not between haulers and operators—the legal ambiguity of ownership is between the operators and surface owners.

115. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p. 24, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [https://perma.cc/ZG7C-3PGQ] (“[Produced water] ownership is a private property issue, however its management as a waste is the operator’s responsibility under the existing regulatory framework.”).

116. See generally House Comm. on Energy Resources, Bill Analysis, H.B. 3246, 86th Leg., Reg. Sess. (Tex. 2019) (describing the background on the issue of post fracturing waste fluid and why the change was necessary); H.B. 2767, 83rd Leg., Reg. Sess., Ch. 209, § 1 (Tex. 2013) (amended 2015 and 2019) (2013 Tex. Sess. Law Serv. Ch. 209 (West), current version at Tex. Nat. Res. Code Ann. § 122.002 (West 2019)) (describing the changes to the Natural Resources Code).

117. See generally House Comm. on Energy Resources, Bill Analysis, H.B. 3246, 86th Leg., Reg. Sess. (Tex. 2019) (describing the background on the issue of post fracturing waste fluid and why the change was necessary).

118. *Id.*

1. Waste or Water?

Crucial to all rights held in the law is how we define terms. In construing a statute, “[o]ur primary objective is to give effect to the Legislature’s intent, which we ascertain from the plain meaning of the words used in the statute, if possible.” *Southwest Royalties, Inc.*, 500 S.W.3d at 404. Stated differently, “[i]f a statute is worded clearly, we must honor its plain language, unless that interpretation would lead to absurd results.” *Combs v. Health Care Servs. Corp.*, 401 S.W.3d 623, 629 (Tex. 2013). “Undefined terms in a statute are typically given their ordinary meaning, but if a different or more precise definition is apparent from the term’s use in the context of the statute, we apply that meaning.” *TGS-NOPEC Geophysical Co. v. Combs*, 340 S.W.3d 432, 439 (Tex. 2011). “We further consider statutes as a whole rather than their isolated provisions.”¹¹⁹

The Natural Resource Code Chapter 122.001 defines several terms used throughout the statute. In the bill analysis, the author of the bill takes steps to ensure that changes outlined in House Bill 3246 are uniform with other definitions running throughout the Natural Resource Code.

The author of the bill seeks to ensure “waste” is properly defined. “Waste” in terms of the Natural Resources Code is “fluid oil and gas waste as waste containing salt or other mineralized substances, brine, hydrologic fracturing fluid, flowback water, produced water or other fluid that arises out of or is incidental to the production of oil and gas.”¹²⁰ With the definition of “waste” including “flowback water, produced water, or other fluid,” the Natural Resource Code is using one definition to describe multiple substances subject to differing ownership.¹²¹

Practically, “waste” comes out of the fraced well altogether prior to the operator separating hydrocarbons from the rest of the production stream.¹²² Therefore, even when the freshwater is mixed with the fracing fluid during the preparation stage, ownership of each ingredient of the fluid can be ascertained.¹²³ For example, the freshwater, which was previously

119. *Corning v. Hegar*, 534 S.W.3d 28, 30 (Tex. App.—San Antonio 2017).

120. See House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (discussing how waste is defined in the context of oil and gas operations).

121. See generally House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing the background on the issue of post fracing waste fluid and the why the change was necessary).

122. See Adrian C Hedden, *Chevron Recycles, Reuses Fracing Water From Oil and Gas as Permian Production Booms*, (Nov. 2, 2019) <https://www.currentargus.com/story/news/local/2019/11/03/chevron-recycles-reuses-fracing-water-oil-gas/4121964002/> [<https://perma.cc/5XTF-LJEK>] (coming from a large producer and operator on how they classify material coming out of the fracing well).

123. *Id.*

groundwater and belonged to the surface owner where not purchased by the operator and prior to it becoming frac fluid, is not “waste” but is part of the usufruct of the operator; with the surface owner having the ownership interest. However, when “every liquid incidental to the production of oil and gas” is defined as “waste” after returning from the formation, any application of this definition to describe ownership rights could potentially conflict with multiple parties’ proprietary interests—the consequence of this House Bill.¹²⁴

As previously stated, surface owners are perfectly happy with the operators dealing with all “waste” associated with fracing according to statutory requirements; so that, “management of oil and gas waste has been a cost absorbed by operators.”¹²⁵ However, once the operators recycle the water it is no longer “waste”, and they should not have acquired title to the water.

2. Protecting the Investment

With fresh groundwater increasing in value and land owners becoming more informed about the implementation of water treatment technologies, operators and producers sought the assistance of the Texas Legislature to codify the ownership status of post-fracing recycled wastewater.¹²⁶ Operators knew they were legally protected in extracting the groundwater for use in their exploitation of the minerals, but in order to safeguard their practices after exploitation occurs, establishing the right to production stream and subsequent disposal was essential.¹²⁷

Supporters for the proposed change in the Natural Resource Code avoided the impact this change in ownership could produce. Acknowledging the cost of waste management operators absorb as a result

124. See House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing how the Texas Legislature defines waste).

125. See generally House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing the background on the issue of post fracing waste fluid and the why the change was necessary).

126. See Managing Water Use in Hydrologic Fracturing, <https://www.chevron.com/corporate-responsibility/environment/water> [<https://perma.cc/KP6A-39P6>] (last visited Dec. 30, 2019) (outlining how a major operator and producer manages water during fracing operations).

127. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p. 25, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (“[i]n some cases, midstream customers have voluntarily paid a recycle royalty just to “keep the peace” which makes recycling less competitive”).

of fracing, legislators in support offered to allow operators to own the waste they were already disposing of via deep salt water injection wells.¹²⁸ Supporters would further offer this change as an incentive to operators to recycle and reduce the need for additional exploitation of fresh groundwater.¹²⁹ The solution legislators offer to land owners is “to account for this in future agreements.”¹³⁰ This reasoning implicitly ignores the practicality recycling has created within the system of proprietary rights Texas has perpetuated.

Operators have no legal obligation or duty to contractually account for “waste” with land owners in a severed estate.¹³¹ As described above, “preemptive” surface use agreements were utilized by operators to stave off legal challenges when it came to the “grey area” of post recycled water/waste. However, with the codifying of ownership of this material, operators have no incentive to ensure the land owner interest in the of post-fracing fluid (including previously injected groundwater). Practically, the operator could only rely on correlative rights doctrine for its use of the land owner’s groundwater from the commencement of operations until the “water” returns to the surface of the fracing well—from now on, operators can rely on Natural Resource Code Chapter 122.001 to legally protect them after their implied usufruct has expired.¹³² Therefore, with this change in ownership, the benefit to operators is significant.¹³³

128. *See generally* House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing the background on the issue of post fracing waste fluid and the why the change was necessary).

129. *Id.*

130. *Id.*

131. *See* Tex. Nat. Res. Code Chapter 122.002 (providing no condition of the freshwater status prior to exiting the well as “wastewater.”).

132. *See* Tex. Nat. Res. Code Chapter 122.001 (providing no condition of the freshwater status prior to exiting the well as “wastewater.”).

133. *See* Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.6, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (“[h]auling water away from well pads via truck can cost anywhere from \$1 to 5 per barrel depending on travel distance and terrain, which can be prohibitively expensive when compared to the \$.30 it reportedly costs to pipe water from a production well to a disposal well”).

With value of water increasing, whether fresh or recycled, opponents for the bill understood the true consequence of the bill.¹³⁴ In other words, the parties whose interests were not addressed in House Bill 3246 were the parties whose legal rights were affected by House Bill 3246.

3. *What is “Beneficial Use?”*

Water is now a strategic planning factor for fracing operations and major producers.¹³⁵ One of the main goals of the bill was to incentivize operators to recycle post fracing water by clarifying ownership after extracting the minerals.¹³⁶ By incentivizing recycling, the state would be said to have a stronger reason to alter certain property rights. The House Bill sought to incentivize recycling post-fracing water by stating the operator could own the post-fracing water (“waste”) only if it takes the water for “the purpose of treating the waste for a subsequent beneficial use.”¹³⁷ One of the issues in understanding the overall aim of this House Bill is the legislature did not define “treatment”—and more importantly, “beneficial use.”¹³⁸

Prior to water treatment technologies, many operators would contract out the waste disposal services after extracting the minerals.¹³⁹ These waste removal services would transport all waste material to a treatment site well

134. See generally House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (describing the background on the issue of post fracing waste fluid and the why the change was necessary).

135. See Adrian C Hedden, *Chevron Recycles, Reuses Fracing Water From Oil and Gas as Permian Production Booms*, (Nov. 2, 2019) <https://www.currentargus.com/story/news/local/2019/11/03/chevron-recycles-reuses-fracing-water-oil-gas/4121964002/> [https://perma.cc/5XTF-LJEK]; see also Diamondback Energy Corporate Report, 2019, p. 10, <https://www.diamondbackenergy.com/static-files/5ab827ab-4b26-47ee-9e16-4d1b273d37a3> [https://perma.cc/MDZ3-RNRK] (including recycling statistics in corporate report, one of the major operators in the Permian Basin stated “[o]ur use of recycled water for completions increased to 10.7% of total water used in completions in 2018, compared with less than 1% in 2017”).

136. See House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (understanding the intentions of the Texas Legislature by introducing House Bill 3246).

137. Tex. Nat. Res. Code § 122.002.

138. *Id.*

139. See Adrian C Hedden, *Chevron Recycles, Reuses Fracing Water From Oil and Gas as Permian Production Booms*, (Nov. 2, 2019) <https://www.currentargus.com/story/news/local/2019/11/03/chevron-recycles-reuses-fracing-water-oil-gas/4121964002/> [https://perma.cc/5XTF-LJEK]; see generally Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

away from the fracing well.¹⁴⁰ Prior to injecting the waste in a deep-water injection well, the waste treatment company would fill very large tanks with the liquid waste, skim as much leftover hydrocarbons off the top, and sell what they could (this is how they made a profit).¹⁴¹ The rest would be deposited in the saltwater disposal well. The operation of the waste disposal company treating the liquid waste—albeit one could say treating the waste to ensure all hydrocarbons are harvested for the beneficial use of not returning hydrocarbons into the ground—could meet the meaning of Natural Resource Code Chapter 122.002.

While the House Research Organization bill analysis states “recycling and treatment,” the final bill and Code are moot in describing the way treatment of waste for a “beneficial use” are supposed to occur.¹⁴² While the bill analysis helps us understand the problem to be solved, the enacted statute must be taken on its face. Without defining “beneficial use” in the enacted statute, the threshold operators must meet to effectuate the transfer of property ownership is ambiguous. Therefore, the specific intent of the legislature to incentivize post-fracing waste water treatment may not be realized.

IV. As Applied, Texas Natural Resource Code Chapter 122.002 is a Taking

The relationship of real property in Texas has been balanced through jurisprudence, proprietary doctrines, and, when necessary, legislative statutes. This balance has defined an oil and gas industry that has led the world in ground breaking technology and exploitation practices. However, it takes two to tango.¹⁴³ Operators could not exploit minerals without the rights given to them under the law (express or implied) or by agreement via the surface owner. Therefore, legislation taking property from one estate to give to another outright without compensation not only goes too far, but effectively diminishes that original property value to zero.

140. *See generally* Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

141. *Id.*

142. Tex. Nat. Res. Code § 122.002.

143. *See generally* Gabriel Collins, *How Produced Water's Economic Value is Evolving in the Permian Basin, Shale Play Water Management*, 22 October 2019, Houston, TX (describing the multi-tiered decision-making process when operators think about treating produced water).

A. Current Interpretation of the Regulatory Taking Doctrine

The current regulatory taking doctrine has been relatively unchanged since the Supreme Court decided *Penn Cent. Transp. Co. v. New York City*.¹⁴⁴ The *Penn Central* decision outlined factors by which courts apply to determine if government action, although not a direct invasion, has constituted a taking.¹⁴⁵ By focusing on the nature and extent of the regulation, the analysis will always be one of degree.¹⁴⁶ However, it is well settled when regulation goes to a degree as to effectuate a total conversion of value without compensation, it is a taking.¹⁴⁷ Total conversion is construed as a regulation denying “all economically beneficial or productive use of land.”¹⁴⁸

Even when the government regulation does not effectuate a total economic deprivation of the property, the Court will weigh factors to determine the validity of the taking claim, including: the economic impact of the regulation; interference with investor backed expectations; and the “character of the governmental action.”¹⁴⁹ The Supreme Court has made it clear, property rights well established according to state law will be respected.¹⁵⁰ However, to that extent, property rights cannot be confiscated by the government in favor of one party to the detriment of another.

Following the United States Supreme Court, the Texas Supreme Court outlined two distinct categories for analyzing whether a regulatory taking has occurred.

One is where regulation ‘compels the property owner to suffer a physical ‘invasion’ of his property.’ The direct, physical effect on property, though short of government possession, makes the regulation categorically a taking. Another is “where regulation denies all economically beneficial or productive use of land.” To

144. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 98 S. Ct. 2646 (1978).

145. *Id.* (articulating that: “this Court focuses rather both on the character of the action and on the nature and extent of the interference with rights”; see also *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 43 S. Ct. 158 (1922) (arguing that property regulated by the government can be taking if “it goes too far”).

146. See *Sheffield Dev. Co. v. City of Glenn Heights*, 140 S.W.3d 660, 673 (Tex. 2004).

147. See *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 43 S. Ct. 158 (1922) (arguing that property regulated by the government can be taking if “it goes too far”).

148. *Murr v. Wisconsin*, 137 S. Ct. 1933, 1942 (2017).

149. *Id.* (describing the factors courts should consider in takings cases); *Connolly v. Pension Benefit Guaranty Corporation*, 475 U.S. 211, 225 (1986) (describing the factors courts should consider in takings cases); *E. Enters. v. Apfel*, 524 U.S. 498, 519 (1998) (describing the factors courts should consider in takings cases).

150. *Id.*

deprive an owner of all economically beneficial use of land is tantamount to depriving him of the land itself. But this is ‘limited to ‘the extraordinary circumstance when no productive or economically beneficial use of land is permitted’” and ‘the landowner is left with a token interest.’ In addition to these two situations, the Supreme Court has stated that regulation ‘effects a taking if [it] does not substantially advance legitimate state interests.’¹⁵¹

With regulatory taking jurisprudence not as evolved as most constitutional law, the Court cautions lower courts to look the totality of circumstances surrounding the actions of the government, and must include “a fact-sensitive test of reasonableness.”¹⁵² Because the government is not physically invading the water rights of the surface owner, this analysis will focus on the category in which the government deprives the owner of all economically beneficial use of the property.¹⁵³

1. Standard of Review

To determine if a regulation completely deprives the owner of all economically beneficial use, the court will make a determination of law if any act by the government that “denies an owner economically viable use of his land,” that regulation will constitute a taking.¹⁵⁴ Following the *Lucas* decision, Texas considers the relevant factors to determine whether a regulatory taking has occurred.¹⁵⁵

The Texas Constitution mirrors the Fifth Amendment of the United States Constitution with respect to regulatory takings.¹⁵⁶ While the Texas Constitution does allow for the taking of private property for public use,

151. *Sheffield Dev. Co. v. City of Glenn Heights*, 140 S.W.3d 660, 671 (Tex. 2004).

152. *Id.*

153. *Connolly v. Pension Benefit Guar. Corp.*, 475 U.S. 211, 223 (1986) (“[G]iven the propriety of the governmental power to regulate, it cannot be said that the Taking Clause is violated whenever legislation requires one person to use his or her assets for the benefit of another”).

154. *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1016, 112 S. Ct. 2886, 2894 (1992).

155. *See Sheffield Dev. Co. v. City of Glenn Heights*, 140 S.W.3d 660, 671 (Tex. 2004) (explaining the Texas Supreme Court uses an analogous standard of review for determining a regulatory taking that the United States Supreme Court); see also *Sloan Creek II, L.L.C. v. N. Tex. Tollway Auth.*, 472 S.W.3d 906 (Tex. App.—Dallas 2015) (explaining what a party needs to prove to have a successful takings claim).

156. *Compare* U.S. Const. amend. I (“nor shall private property be taken for public use, without just compensation”), *with* Tex. Const. Art. I, § 17 (“No person’s property shall be taken, damaged, or destroyed for or applied to public use without adequate compensation being made”).

Texas clarifies our issue at hand, “‘public use’ does not include the taking of property... for transfer to a private entity for the primary purpose of economic development or enhancement of tax revenues.”¹⁵⁷

Currently, most Texas regulatory taking jurisprudence surrounds the use of zoning ordinances or land use regulations. Therefore, it would be difficult to determine what specific factors in the oil and gas sectors would be considered by the Texas Supreme Court if this law was to be challenged today.¹⁵⁸ However, with the regulatory taking analysis proscribed by the highest court in the land—House Bill 3246 as applied in Texas Natural Resource Code Chapter 122.002 runs afoul of Article I § 17 of the Texas Constitution.

B. Texas Natural Resources Code Chapter 122.002 is a Regulatory Taking

1. Deprivation of Economic Use

“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.”¹⁵⁹

Waste not, want not. Recycled backflow water is not waste. As detailed above, the process of the operator separating raw oil and gas products from water prior to refining adds credibility to the notion—the transfer of title of the surface water should not change just because it went down the pipe and came back out.¹⁶⁰

Historically, any liquid that was unrefined and sold by the operator was disposed of in deep, salt-water injection wells; this liquid included surface water that would be disposed of.¹⁶¹ This did not change the nature of the

157. Tex. Const. Art. I, § 17.

158. *See Dolan v. City of Tigard*, 512 U.S. 374, 384 (1994) (“Each aims to identify regulatory actions that are functionally equivalent to the classic taking in which government directly appropriates private property or ousts the owner from his domain. Accordingly, each of these tests focuses directly upon the severity of the burden that government imposes upon private property rights. The Court has held that physical takings require compensation because of the unique burden they impose: A permanent physical invasion, however minimal the economic cost it entails, eviscerates the owner's right to exclude others from entering and using her property -- perhaps the most fundamental of all property interests”); *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987); *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979).

159. *Mayhew v. Town of Sunnyvale*, 964 S.W.2d 922, 935 (Tex. 1998).

160. *See Tex. Parks & Wildlife Dep't v. Sawyer Trust*, 354 S.W.3d 384, 390 (Tex. 2011) (“[w]hether the government's actions are sufficient to constitute a taking is a question of law”).

161. *See generally* Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities*

ownership, but the surface owner did not want to pay for nor be responsible for the transportation and disposal of the flow back water and the operator was obligated to deal with all wastes of all oil and gas.¹⁶² This comported with current jurisprudence because the operator ceased using the “surface water” once they extracted the minerals.

However, because operators have created a market for recycled fracing wastewater, they have profited off property they have no ownership of.¹⁶³ House Bill 3246 by way of Texas Natural Resource Code Chapter 122.002, as applied in practice, allows for transfer of legal title of surface water to the operators at the point the water returns from the pipe. Currently, this backflow liquid is treated in totality by the Texas Legislature as “waste” and property of the operator.¹⁶⁴ Without compensation of the surface owner for the surface water taken by the operator, this will violate Article I § 17 of the Texas Constitution.¹⁶⁵

Regardless of House Bill 3246’s intent, which seeks to clarify the relationship between operators and third-party disposal or waste transportation companies, the resulting consequence following this “state action” is what surface owners will challenge, being the reduction of the pecuniary value of the backflow recycle water to the land owner to zero.

In Texas, groundwater is a vested property interest.¹⁶⁶ That property interest is specific, has value, and is transferable. This classification, as

and Potential Solutions, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

162. See generally Institute for Energy Law, 6th Midstream Oil and Gas Law Conference, *Transporting Water for Oil and Gas Development: Problems, Opportunities and Potential Solutions*, (Dec. 2019) (copy on file with author) (discussing the contractual relationships between parties at all stages of the fracing operational process).

163. See Peter E. Hosey & Jesse S. Lotay, *Quench My Thirst: Water Rights in the Context of Water Treatment Technologies*, 42 Oil, Gas & Energy Res. Law Sec. Report 21 (State Bar of Texas, Fall 2017) (explaining the market operators have created by recycling waste water).

164. See Blythe Lyons, John Tintera, Kylie Wright, *Sustainable Produced Water Policy, Regulatory Framework, and Management in the Texas Oil and Gas Industry: 2019 and Beyond*, Texas Alliance of Energy Producers, Independent Petroleum Association of America, (Sept. 16, 2019), p.18, <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A2c7b5154-f581-47dc-9c19-314d82c8de05> [<https://perma.cc/ZG7C-3PGQ>] (“[t]he premise of the legislation is that this is an oil field waste issue and not a water ownership issue”).

165. See Tex. Const. Art. I, § 17 (outlining what would constitute a regulatory taking which would violate the Texas Constitution).

166. See *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 831-32 (Tex. 2012) (holding “In our state the landowner is regarded as having absolute title in severalty to the oil and gas in place beneath his land. The only qualification of that rule of ownership is that it must be considered in connection with the law of capture and is subject to police regulations. The oil

previously mentioned in this comment, allows the operator to take the water after its usufruct has expired, make it more valuable, and profitable for the water owner. Once an operator invokes the terms of Natural Resource Code Chapter 122.002, without bargaining for the property, they render the surface owner's property—water used for operations and recycled—valueless. In effect, the surface owner is left with no economic value of the property, violating Article I § 17 of the Texas Constitution.

2. Substantially Legitimate State Interest

The government may affect a partial taking if there is a “substantially legitimate government interest,” such as encouraging recycling water.¹⁶⁷

Even though Texas Natural Resource Code Chapter 122.002 produces a total conversion, if the statute only produces a partial conversion of the surface owner's property, it would not violate Article I § 17 of the Texas Constitution. However, because House Bill 3246's intent does not match the statute in practice, any state interest would not be substantial enough to survive constitutional scrutiny.

The strongest state interest, subtly outlined in the bill's analysis, would incentivize operators to recycle water used during fracking operations.¹⁶⁸ By incentivizing recycling, less virgin groundwater would be needed for extraction by operators.¹⁶⁹ The legislature believed if operators were given statutory ownership of all post-fracking waste, including water, they would be more inclined, not only to recycle the waste water, but also to use it for further fracking operations. The state's reasoning is flawed in the assumptions it relies on. So far, operators already have access to the necessary amount of fresh groundwater they need. Operators recycle wastewater to use it in future fracking operations, and the amount of freshwater operators extract will not decrease as a result of statutorily defined ownership.

and gas beneath the soil are considered a part of the realty. Each owner of land owns separately, distinctly and exclusively all the oil and gas under his land and is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value).

167. See *Sheffield Dev. Co. v. City of Glenn Heights*, 140 S.W.3d 660, 670 (Tex. 2004) (explaining the scope by which courts will differentiate police powers and takings).

168. See *generally* House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (explaining that operators are less likely to recycle water if they cannot profit from it).

169. See *Shale and Tight Resources*, <https://www.chevron.com/operations/shale> (last visited Dec. 29, 2019) (describing how a large producer has taken advantage of water recycling technology in the fracking industry).

With the “grey area” solved by the legislature, operators have no reason to extract less fresh ground water. The legislature assumed operators were not recycling waste water because of the legal “grey area” of use/ownership.¹⁷⁰ To some degree they were, and in those cases, operators preemptively entered into surface-use agreements or water-use agreements with surface owners. However, operators have used recycled waste-water for years.¹⁷¹

Further, with this legal “grey area” resolved, operators have no reason to use less fresh groundwater or use recycled wastewater in their current fracing operations, only to treat for a “beneficial use.”¹⁷² With these assumptions animating the intent of the statute, the practical reason for the operators to recycle waste water is because they are incentivized by House Bill 3246, and are far more likely to profit from cost savings from reuse, or the potential income derived from selling the water.¹⁷³

The statute’s change in wording, compared with the legal practicality it has produced, was advertised as making a molehill out of a mountain; changing the language was to clarify an ambiguity in the last stage of a multi-tiered operation separate from any legal obligations. This would be the case, if the operator already owned the water mountain.

3. Proper Exercise of Police Power?

The same case the Texas Supreme Court used to outline the vested property interest of groundwater begins with the surface estate, it also predicted future constitutional takings claims regarding groundwater: “Suppose a landowner were prohibited from all access to groundwater.*.**[G]iven that there is a property interest in groundwater, some manner and degree of groundwater regulation could, under some facts, effect a compensable taking of property.’.*.* [G]roundwater rights are property rights subject to constitutional protection.”¹⁷⁴

There is no question the power of the legislature to regulate all aspects of exploring and exploitation of natural resources; Texas has made great leaps in its history to protect water as a natural and finite resource.¹⁷⁵ “All

170. *See generally* House Comm. on Energy Resources, Bill Analysis, Tex. H.B. 3246, 86th Leg., R.S. (2019) (explaining that operators are less likely to recycle water if they cannot profit from it).

171. *Id.*

172. *Id.*

173. *Id.*

174. *See Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 833 (Tex. 2012) (describing the exact situation in which this comment seeks to shed light on).

175. *See generally Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 835 (Tex. 2012) (outlining the way the legislature has historically regulated natural resources).

property is held subject to the valid exercise of the police power.”¹⁷⁶ However, the Texas Supreme Court foreshadowed the issues addressed in this comment—allowing the operator to gain ownership through a state action deprives the surface owner “all access to [their] groundwater.”¹⁷⁷

Because the Texas Supreme Court has held groundwater rights of the surface estate are to be constitutionally protected analogous to oil and gas vested property interests, surface owners looking to challenge Texas Natural Resource Code Chapter 122.002 could rely on *Edwards Aquifer Auth. v. Day*, *Robinson v. Robbins Petroleum Corp.*, *Humble Oil & Refining Co. v. West*, and current operator practices to prove the violation of Article I § 17 of the Texas Constitution.

V. Conclusion

Looking to evolve and innovate the common practice of post-fracing waste management, operators invested millions of dollars to recycle post-fracing waste water for further use on the same tract of land, on a different tract of land, or for sale to other industries. By selling recycled water or by using it on other tracts of land, operators created an economy that not only reduces their operating costs, but can also be said to limit their environmental impact. Understanding the balance of rights Texas provides to both mineral and surface owners, operators looked to the Texas Legislature to codify this practice and solidify proprietary rights—at the expense of the surface owners.

The real property doctrine of correlative rights creates a usufruct interest in the groundwater allowing the operator to use the water to exploit the minerals for benefit of the land or acreage pooled therewith. The statute then attempts to expand the usufruct right of use into an ownership interest in the backflow water. Other states will likely look to House Bill 3246 as a guide to codifying post-fracing recycled waste. With that being said, caution must be taken. Correlative rights permeate through American common law like the hydrocarbons located in fraced fissures, legislatures must take care to account for them in future legislation.

176. See *Sheffield Dev. Co. v. City of Glenn Heights*, 140 S.W.3d 660, 670 (Tex. 2004) (explaining the scope of police powers that have been allowable by the Texas Legislature).

177. See *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 835 (Tex. 2012) (understanding the ownership aspects of groundwater by surface owners).