# TEXAS'S NEW LIQUID GOLD: WATER RIGHTS TRANSACTIONS IN TEXAS ENERGY*

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## I. WATER TRANSACTIONS IN THE OIL AND GAS BASINS

Many families and ranchers who have held or bought lands in oilfield country have discovered that the most valuable part of their property is not the oil, but the underground water. Hydraulic fracturing has increased the need for groundwater in oilfield areas, and while efforts are underway to reduce this need, the industry is still years away from eliminating it. Consequently, millions, if not billions, of dollars have been exchanged among oil and gas companies, midstream water companies, landowners, and ranchers, all centered around water. A cottage industry has even emerged solely for producing groundwater in Texas for transportation to New Mexico, where groundwater laws differ from those in Texas.

Further, Texas is facing a looming water shortage that is creating demand not just in oil-rich counties, but in large metropolitan areas and other cities that are on the brink of a water crisis. This race to secure water resources has pitted some Texans against each other, creating the need for Texas's institutions such as the legislature and groundwater conservation districts to find the balance between these water-hungry metroplexes and private developers, on the one hand, and rural Texans whose livelihood depends on rich water resources beneath their feet, on the other hand.

This imbalance, while sparking controversy, has ushered in a boom in water transactions. While a burgeoning area, attorneys in the water space have the benefit of decades of practice in the oil and gas industry to use as a starting point for determining how these transactions should be conducted. Part II of this Article highlights the water problems Texas could face in the future, and shows different ways Texas plans to approach these problems. Part III gives an overview of the current state of Texas water law along with a recent case law update regarding ownership of produced water. Finally, Part IV provides guidelines for transacting with water use rights in Texas.

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This article focuses on groundwater, not surface water, in Texas.

## II. TEXAS'S WATER PROBLEM AND HOW IT PLANS TO FIGHT IT[1]

Texas's escalating water scarcity is reshaping legal and commercial decisions for municipalities, landowners, and oil and gas stakeholders alike. Demographic and hydrologic projections, read alongside recent, high-profile allocation disputes, reveal the practical pressures driving policy change and investment—from groundwater transfers and urban supply diversification to infrastructure finance. The State's emerging response frames the legal analysis and transactional guidance that follow.

### *A. Increase in Water Usage in Texas*

By 2070, Texas's population is expected to increase by 73%, from 29.7 million in 2020 to 51.5 million.[2] Water demands are projected to rise less significantly, from 17.7 million acre-feet per year to 19.2 million acre-feet per year.[3] That said, Texas's reliable water supplies during droughts are anticipated to decline by 18%, from 16.8 million acre-feet per year to 13.8 million acre-feet per year.[4] Consequently, by 2070, Texas is projected to face a water deficit of 6.9 million acre-feet[5] unless water management strategies, including conservation, are implemented.[6] Failure to address this looming water crisis could cost the state $153 billion annually by 2070, with job losses reaching 1.4 million.[7]

Charles Perry—a Republican state senator from Lubbock who focuses heavily on State water policy—argues that the 2022 forecasts are actually understated, warning that Texas could see an annual water shortfall of up to twelve million acre-feet by 2050.[8] Researchers have concluded that while Texas has sufficient water supply for today and tomorrow, the long-term problem is more about economics.[9] Existing groundwater supply is projected to decline by 32% from 8,912,000 acre-feet in 2020 to 6,023,000 acre-feet in 2070.[10] As Charles Gilliland, research economist at the Texas Real Estate Research Center, has said, "Texas is not running out of water, but it is running out of *cheap* water."[11]

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[1] People in the water business talk water volumes in different terms, so it is important to understand the equivalent term:

42 U.S. Gallons = 1 Barrel

7,758.36 Barrels = 1 acre-foot

325,851 U.S. Gallons = 1 acre-foot

[2] TEX. WATER DEV. BD., 2022 STATE WATER PLAN 3 (2022), https://www.twdb.texas.gov/waterplanning/swp/2022/. "The 2022 State Water Plan is the fifth plan completed under the regional water planning process and the state's 11th water plan overall." *Id.* at 17.

[3] *Id.* at 3.

[4] *Id.*

[5] *Id.* at 3, 84. This number will not match the difference between 19.2 minus 13.8; the 6.9 is based on local factors (*e.g.*, surplus water in East Texas cannot satisfy demand in West Texas). *Id.* at 84–86.

[6] *See* Jayme Lozano Carver, *"We Have a Problem Here": Sen. Charles Perry Outlines His Plans to Save Texas' Water Supply*, TEX. TRIBUNE (last updated Feb. 13, 2025 10:20 A.M. Central), https://www.texastribune.org/2025/01/10/charles-perry-water-texas-priorities/.

[7] TEX. WATER DEV. BD., *supra* note 2, at 3, 12.

[8] Rachel Monroe, *Texas's Water Wars*, THE NEW YORKER (Nov. 13, 2025), https://www.newyorker.com/news/letter-from-the-southwest/texas-water-wars.

[9] Daniel Oney, *The Supply and Demand of Texas Water*, TIERRA GRANDE: J. TEX. REAL EST. RSCH. (Oct. 21, 2025), https://trerc.tamu.edu/article/the-supply-and-demand-of-texas-water/.

[10] TEX. WATER DEV. BD., *supra* note 2, at 77. Projections of the "willingness to pay" for groundwater range from $0.0020–0.0045 per barrel by 2050 for irrigation users to $0.69–0.85 per barrel for municipal users by 2050. TEX. PRODUCED WATER CONSORTIUM, BENEFICIAL USE OF PRODUCED WATER IN TEXAS 7 (2024), https://www.depts.ttu.edu/research/tx-water-consortium/TXPWCFINALDRAFT.pdf.

[11] Oney, *supra* note 9.

The largest consumer of water in Texas is currently irrigation, with usage projected to decrease from 9.4 million acre-feet in 2020 to 7.6 million acre-feet in 2070.[12] At the same time, the most significant increase in consumption will be driven by municipal use, rising from 5.2 million acre-feet in 2020 to 8.5 million acre-feet in 2070, with municipal use surpassing irrigation by 2060.[13] Despite the looming water crisis in Texas, it surprises many that mining, which primarily relies on groundwater, is only the fifth-largest consumer of water in the state.[14] Although the oil and gas industry often faces criticism for the volumes of water used in fracking, the State Plan predicts mining water use to increase through 2030 and then decline in subsequent decades; currently, mining accounts for roughly 2% of total water demand statewide.[15]

Texas's data center sector is expanding rapidly—and it is highly water intensive. Projects like the $500 billion "Stargate" network in Abilene and new facilities across the Panhandle require not just energy but massive volumes of water for liquid cooling.[16] On a percentage basis, this consumption currently appears small, consuming approximately 0.8% of Texas water consumption (49 billion gallons of water) in 2025.[17] However, with many companies being drawn to Texas due to the business-friendly environment, some speculate that water consumption by these data centers could increase to up to 2.7% (roughly 161 billion gallons of water) of the annual Texas water consumption.[18]

To adequately handle this looming water shortage, efforts are necessary across a broad spectrum of Texans, from the Texas legislature to the many city councils who are trying to quench the thirst of their constituents, and to private developers who are looking for innovative ways to prevent the water tap from running dry. However, many contend that efforts to transfer water from wetter to drier parts of Texas are doing more harm than good, as discussed in the next Section.

### *B. Recent Water Controversies*

The increased usage of water discussed is more than just numbers, and many Texans are becoming unsettled by new parties trying to utilize the water beneath these Texans' feet. Specifically, many are worried that water is being traded like a commodity by private developers and wealthy cities, who may abuse the rule of capture and draw too much water out of the ground before the water replenishes.[19]

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[12] TEX. WATER DEV. BD., *supra* note 2, at 6.

[13] *Id.* at 6, 47.

[14] *Historical Water Use Summary and Data Dashboard*, TEX. WATER DEV. BD., https://www.twdb.texas.gov/waterplanning/wateruses urvey/dashboard/index.asp (last visited Jan. 12, 2026).

[15] TEX. WATER DEV. BD., *supra* note 2, at 59. "Within the Permian Basin region, irrigated agriculture accounts for approximately 75% of total water use." TEX. PRODUCED WATER CONSORTIUM, *supra* note 10, at 29.

[16] Jack Herrera, *AI Data Centers Are Taking Texas Resources. Residents Without Reliable Water Are Sounding the Alarm*, TEX. MONTHLY (Dec. 19, 2025), https://www.texasmonthly.com/news-politics/data-centers-sapping-texas-water-electricity/.

[17] Margaret Cook, PhD, *Thirsty Data*, HOUSTON ADVANCED RSCH. CTR., https://savetarrantwater.com/wp-content/uploads/2025/11/Thirsty-Data-Margaret-Cook.pdf (last visited Dec. 19, 2025).

[18] Cook, *supra* note 17 (estimating that by 2030, "[d]ata centers could account for 29–161 Bgal . . . or 0.5–2.7% of [the] 2030 estimated annual water demand."). *See also* THE FUTURE OF THE ELECTRIC GRID IN TEXAS: OPPORTUNITIES AND CHALLENGES IN THE NEXT DECADE, UH ENERGY 22 (2025), https://www.uh.edu/energy/_docs/_papers-reports/the-future-of-the-electric-grid-in-texas_uh.pdf. *Texas Is Still in Drought, and AI Data Centers Are Quietly Guzzling Up Water*, THE AUSTIN CHRONICLE (Jul. 25, 2025), https://www.austinchronicle.com/news/texas-is-still-in-drought-and-ai-data-centers-are-quietly-guzzling-up-water-13343827/.

[19] Kurt Cobb, *A Water War Is Brewing in Texas*, MSN

One way these controversies manifest is when developers attempt to quench the thirst of large metropolitan areas by drawing water from rural areas and carrying it away to the big city via pipeline.[20] San Antonio opened its 142-mile Vista Ridge pipeline, which began transporting water southward from Burleson County to the San Antonio metropolitan area.[21] This is part of a broader effort by the San Antonio Water System to diversify its water source portfolio, as it can no longer continue to rely primarily on the Edwards Aquifer for drinking water.[22] Private developers are applying for permits that would allow transfer of approximately 15 billion gallons of water annually from the Carrizo-Wilcox aquifer in East Texas to areas around the Dallas-Fort Worth metroplex.[23] This project in particular has faced extreme pushback from farmers and ranchers around Jacksonville, who sued the groundwater conservation district and reached a favorable settlement that was eventually upheld by a district court.[24]

The City of Georgetown's plan to build a pipeline from the Bryan-College Station area also faced pushback, and Bryan, College Station, and Texas A&M University jointly sued private developers to halt the project.[25] The parties to this suit eventually settled, so Georgetown and surrounding areas can only bring about half the amount of acre-feet they originally planned to transport from Bryan and College Station.[26] The city of Corpus Christi recently approved a $169.5 million groundwater rights purchase with a private developer, which includes the purchase of 24 million gallons per day (approximately 28,486 acre-feet annually) of groundwater rights.[27] These moves by big cities have caused one commentator to describe them as "ravenous wolves . . . on the prowl for water" and these rural areas with plenty of water as "a big, juicy pig, with no one standing guard."[28]

Yet, even when cities propose to drill within their own counties and areas, controversy arises. In light of the looming water crisis in Corpus Christi along with the failure of its plans to build a desalination plan, the city has turned to drilling for groundwater in its own Nueces County.[29]

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(Dec. 1, 2025), https://www.msn.com/en-us/politics/government/a-water-war-is-brewing-in-texas/ar-AA1RvanN?ocid=BingNewsSerp.

[20] Bekah Stolhandske McNeel, *How a Billionaire's Plan to Export East Texas Groundwater Sparked a Rural Uprising*, GRIST (Nov. 19, 2025), https://grist.org/regulation/how-a-billionaires-plan-to-export-east-texas-groundwater-sparked-a-rural-uprising/.

[21] *Vista Ridge Pipeline*, SAN ANTONIO WATER SYSTEM, https://www.saws.org/wp-content/uploads/2019/07/SAWS_VistaRidge_PipelineFactSheet.pdf (last visited Dec. 18, 2025).

[22] Lindsey Carnett, *Edwards Aquifer Authority Could Enforce Extraction Limits. Here's What It Means For SAWS Customers*, SAN ANTONIO REPORT (Oct. 25, 2024), https://sanantonioreport.org/edwards-aquifer-authority-could-enforce-extraction-limits-heres-what-it-means-for-saws-customers/.

[23] McNeel, *supra* note 20.

[24] *Id.*; Mark Curriden, *Judge Rejects Kyle Bass Efforts to Reverse Judgment in Water Rights Case*, DALL. MORNING NEWS (Nov. 19, 2025), https://www.dallasnews.com/business/entrepreneurs/2025/11/19/judge-rejects-kyle-bass-efforts-to-reverse-judgment-in-water-rights-case/.

[25] Dylan Baddour, *"Water Is The New Oil" As Texas Cities Square Off Over Aquifer Pipeline Plans*, THE TEX. TRIBUNE (Mar. 31, 2025, 5:00 AM), https://www.texastribune.org/2025/03/31/texas-water-pipeline-dispute-georgetown-bryan-college-station-aquifer/.

[26] Anna Maynard, *Bryan City Council Accepts Settlement In Ongoing Brazos Valley Groundwater Lawsuit*, KBTX3 (Jun. 24, 2025 6:25 PM), https://www.kbtx.com/2025/06/24/bryan-city-council-accepts-settlement-ongoing-brazos-valley-groundwater-lawsuit/.

[27] *City Council Approves Two Major Water Supply Agreements*, CITY OF CORPUS CHRISTI (Oct. 22, 2025), https://www.corpuschristitx.gov/news/posts/city-council-approves-two-major-water-supply-agreements/.

[28] McNeel, *supra* note 20.

[29] Alejandra Martinez, *After Killing Planned Desalination Plant, Corpus Christi Tries To Drill Its Way Out Of A Water Crisis*, TEX. TRIBUNE (Jan. 12,

This, of course, has sparked controversy with local farmers, who claim their wells are losing pressure due to Corpus Christi pumping around 8 million gallons of groundwater per day and dumping it into the Nueces river (which supplies Corpus Christi's water treatment plant).[30]

Texas cities are also facing other problems incidental to the water shortage. Homeowners in parts of the Houston area report foundation damage and related flooding issues, which some analysts attribute in part to subsidence exacerbated by groundwater depletion.[31] In fact, Houston is sinking faster than any other city in America, and Dallas is not far behind. [32] Local swimming holes are drying up.[33] And certain businesses are having to shut down due to water shortages. [34] Recently, Moody's Ratings downgraded the credit rating for the city of Corpus Christi, citing the city's looming water shortage. [35] The Moody's report highlighted the effect the water shortage could have on industrial operations, which is a "key component of the regional economy."[36]

Taken together, it appears that cities, private developers, and the state of Texas are in a predicament: take action and spark controversy, or do nothing and continue on the path of water insecurity. Nevertheless, Texas must pivot from contention to implementation, mobilizing capital, refining rules, and conservation to stabilize water supplies, as discussed in the following Section.

### *C. Texas Fights Back*

These projected shortages and disputes have caught the attention of policymakers in Austin.[37] On June 18, 2025, Governor Greg Abbott signed Senate Bill 7 and House Joint Resolution 7 into law, both of which created "the largest generational investment into Texas' water infrastructure."[38] Authored by Senator Charles Perry and Representative Cody Harris, SB 7 and HJR 7 provide $20 billion of investment aimed to secure new water supply and to repair existing infrastructure over the next twenty years.[39] HJR 7 amends the Texas Constitution to direct the first $1 billion of annual sales tax revenue exceeding $46.5 billion into the Texas water fund while updating Article III of the Texas Constitution to govern the fund's administration.[40] SB 7 is the enabling statute that operationalizes this revenue by amending the Texas Water Code, authorizing the Texas Water Development Board to finance critical projects such as desalination, produced water reuse, and infrastructure

2026), https://www.msn.com/en-us/news/us/after-killing-planned-desalination-plant-corpus-christi-tries-to-drill-its-way-out-of-a-water-crisis/ar-AA1U2USp?ocid=BingNewsSerp.

[30] *Id.*

[31] Monroe, *supra* note 8.

[32] Sophia Naughton, *28 Major U.S. Cities (Home To 34 Million People) Are Slowly Sinking — Can It Be Stopped?*, STUDYFINDS, https://studyfinds.org/major-cities-sinking/ (last updated May 16, 2025).

[33] Monroe, *supra* note 8.

[34] *Id.*

[35] Rachel Denny Clow, *Moody's Downgrades Corpus Christi's Credit Rating Over Water Supply Concerns*, KRIS 6 NEWS (Dec. 12, 2025), https://www.kristv.com/news/local-news/in-your-neighborhood/corpus-christi/moodys-downgrades-corpus-christis-credit-rating-over-water-supply-concerns.

[36] *Id.*

[37] McNeel, *supra* note 20.

[38] *Governor Abbott Signs Largest Generational Water Investment In Texas History In Lubbock*, OFF. OF THE TEX. GOV. (Jun. 18, 2025), https://gov.texas.gov/news/post/governor-abbott-signs-largest-generational-water-investment-in-texas-history-in-lubbock; S.B. 7, 89th Leg., Reg. Sess. (Tex. 2025) (codified at TEX. WATER CODE ch. 6, subch. H); H.J.R. 7, 89th Leg., Reg. Sess. (2025) (amending at TEX. CONST. art. VIII, § 7-e).

[39] *Governor Abbott*, *supra* note 38.

[40] H.J.R. 7, 89th Leg., Reg. Sess. (2025) (amending at TEX. CONST. art. VIII, § 7-e).

repair.[41] This will prove critical in securing Texas's future water supply.

The intensifying allocation pressures have also prompted renewed scrutiny of well-established Texas groundwater doctrines. While Texans are known for their reverence for private property rights, many are beginning to question the rule of capture as applied to groundwater. [42] This rings especially true for landowners who neighbor well-endowed neighboring landowners, as their right to offset the drainage is limited.[43] The primary criticism is that the rule of capture incentivizes over-pumping, and instead, critics advocate for another standard such as "reasonable use." [44] On the other hand, proponents of the rule of capture take an "If it ain't broke, don't fix it" approach, arguing that the "harsh" consequences of the rule of capture are often overstated.[45] They further highlight that the rule of capture does not operate unrestrained, pointing out that the "vast majority of Texas' groundwater resources are subject to regulation by groundwater conservation districts (GCDs)."[46] To get rid of the rule of capture, in their view, would cause more problems than it solves, as many businesses, water supply plans, and investments have been made with the rule of capture in mind.[47]

Texas is doing more than just policymaking when it comes to preventing the water shortage. Texas cities are attacking the water problem by experimenting with water conservation, water recycling and reuse, desalination, and a variety of other strategies. [48] For conservation, Lubbock revamped its water pricing to encourage conservation and curb waste, charging higher per-gallon prices as household use rises. [49] San Antonio built a water monitoring system that can track water usage and identify potential leaks.[50] Strategies like these have been shown to make an impact, as the city of El Paso has reduced its per-capita water consumption by about 40% since the 1980s due to conservation and education programs.[51]

Cities are also employing water recycling strategies. Two methods are direct potable reuse (DPR), which involves treating wastewater and returning it directly into the local water supply system, and indirect potable reuse (IPR), where wastewater is treated and returned to a natural water source like an aquifer or river before it is consumed again.[52] In May 2013, the city of Big Spring opened the nation's first DPR facility, biologically treating wastewater before microfiltration, reverse osmosis, and UV advanced oxidation, then blending the highly purified water roughly 50/50 with surface supplies and sending it to conventional plants for filtration, disinfection, and chemical stabilization to meet EPA and TCEQ

[41] S.B. 7, 89th Leg., Reg. Sess. (Tex. 2025) (codified at TEX. WATER CODE ch. 6, subch. H).
[42] McNeel, *supra* note 20; Monroe, *supra* note 8.
[43] Monroe, *supra* note 8.
[44] *See generally*, Gabriel Collins, *Overruling the Rule of Capture: What Can Texas Learn From 10 Other States' Groundwater Law Updates?*, CTR. ENERGY STUDIES (June 9, 2021), https://www.bakerinstitute.org/sites/default/files/2021-06/import/ces-pub-groundwater-laws-060321.pdf (suggesting that Texas should adopt an approach similar to Ohio or Michigan, which follow a Restatement or balancing approach).
[45] *See generally*, 100 YEARS OF RULE OF CAPTURE: FROM EAST TO GROUNDWATER MANAGEMENT, TEX. WATER DEV. BD. Ch. 4 (June 14, 2004), https://www.twdb.texas.gov/publications/reports/numbered_reports/doc/R361/R361.pdf (defending the rule of capture).
[46] *Id.* at 41–42.
[47] *Id.* at 53.
[48] Harold Hunt, *In the Pipeline: Engineering a Sustainable Water Future for Texas*, TIERRA GRANDE: J. TEX. REAL EST. RSCH. (Oct. 21, 2025), https://trerc.tamu.edu/article/in-the-pipeline-engineering-a-sustainable-water-future-for-texas/.
[49] *Id.*
[50] *Id.*
[51] *Id.*
[52] *Id.*

drinking water standards.[53] El Paso has used IPR since the 1980s, and in 2018, Wichita Falls installed a pipeline to transport recycled water from a treatment plant to Lake Arrowhead.[54] While both DPR and IPR have received public opposition due to the stigma around drinking water that was once considered waste, IPR tends to have higher public acceptance due to the natural barrier that distances water from its history as wastewater.[55] Ultimately, whether DPR and IPR become more widely used appears to be an issue of public education about the safety of water recycling and reuse.[56]

The role of desalination is expanding as well, as recent estimates show that Texas has roughly 2.7 billion acre-feet (880 trillion gallons) of brackish water.[57] El Paso again is leading in this area with its Kay Bailey Hutchison Desalination Plant, which is the world's largest inland desalination facility.[58] San Antonio also has a brackish water desalination facility, which uses reverse osmosis to convert brackish water into drinking water.[59] However, desalination faces challenges with managing the waste byproducts, and research is ongoing to dispose of this waste in a more economic and environmentally safe way.[60]

Many in Texas are also considering the beneficial reuse of produced water from oil and gas operations.[61] Generally, hydrocarbon-rich formations contain vast quantities of produced water within the formations, with many formations producing as much as two to five barrels of produced water for each barrel of oil produced.[62] Produced water historically has been seen as a liability due to disposal costs and compliance with applicable laws and regulations.[63] However, recent technological developments suggest that these large volumes of water could be used to offset other uses such as agricultural or municipal use cases in the future.[64] The technology needed to economically reuse produced water is still in development.[65]

Texas regulators are also considering proposals to treat produced water and discharge it into rivers and streams under Texas Commission on Environmental Quality permits.[66] Several applications, particularly in South Texas and the Permian Basin, would allow millions of gallons per day of treated produced water to enter waterways such as the Pecos, Nueces, and Atascosa River systems.[67] However, as one might expect, these operations are prone to stir up significant controversy due to long-term environmental and public-health concerns that remain uncertain despite treatment.[68]

If Texas is to secure a durable water future, it must pursue a balanced strategy that expands supply, reins in demand, and navigates the social and economic tradeoffs

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[53] *Id.*
[54] *Id.*
[55] *Id.*
[56] *Id.*
[57] *Id.*
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] TEX. PRODUCED WATER CONSORTIUM, *supra* note 10, at 29.
[62] *Id.* at 88.
[63] *See*, *e.g.*, TEX. NAT. RES. CODE § 91.101; 16 TEX. ADMIN. CODE § 3.8.
[64] TEX. PRODUCED WATER CONSORTIUM, *supra* note 10, at 29–31.
[65] *Id.*
[66] *Oil and Gas Wastewater Permits*, TEX. COMM'N ENVT'L QUALITY, https://www.tceq.texas.gov/permitting/wastewater/oilandgas, (last visited Jan. 3, 2026); Martha Pskowski & Dylan Baddour, *Companies Aim To Release More Treated Oilfield Wastewater Into Rivers And Streams*, TEX. TRIBUNE (Apr. 29, 2024, 5:00 A.M. Central), https://www.texastribune.org/2024/04/29/texas-treated-produced-water-disposal-discharge-rivers/.
[67] Pskowski & Baddour, *supra* note 66.
[68] *Id.*

inherent in moving water to where it is needed most. The initiatives now underway—from major infrastructure funding and recycling to desalination and the potential beneficial use of produced water—will only succeed if paired with clear legal rules and predictable permitting that align capital with long-term outcomes. At the same time, the intensifying controversies over groundwater exports, subsidence, and interlocal competition underscore that policy choices cannot be divorced from the legal doctrines that allocate risk and define rights. In short, the path forward runs through law as much as engineering and finance. With that backdrop, the next section turns to the foundations and fault lines of Texas water law.

## III. TEXAS WATER LAW

### *A. Established Texas Water Law*

To understand groundwater in Texas, one must understand what it is. The Texas Water Code states that "'Groundwater' means water percolating below the surface of the earth."[69] Groundwater is a part of the surface estate until severed—"Water, unsevered expressly by conveyance or reservation, has been held to be a part of the surface estate."[70] The Texas Legislature further recognizes this ownership in Texas Water Code Section 36.002: "The legislature recognizes that a landowner owns the groundwater below the surface of the landowner's land as real property."[71]

Texas courts have also adopted the rule of capture to groundwater.[72] As discussed in Part II, this rule is coming under increasing scrutiny by the public, and the legislature may give the rule of capture a second look in future legislative sessions.

While groundwater has been around at least since the dawn of mankind, Texas law first recognized groundwater in place as a real property interest only in 2012, in the historic *Edwards Aquifer Auth. v. Day* opinion.[73] The Court in *Edwards* restated the law laid out in *Eliff v. Texon Drilling Co*., which says:

> 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.[74]

The *Edwards* Court held that this rule "correctly states the common law regarding the ownership of groundwater in place."[75]

A severed mineral estate may also use groundwater to extract minerals from the land. It has an implied right to "use of as much of the premises as is reasonably necessary to produce and remove the

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[69] TEX. WATER CODE § 36.001(5).

[70] *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) (citing *Fleming Found. v. Texaco*, Inc., 337 S.W.2d 846 (Tex. App.—Amarillo 1960, writ ref'd n.r.e.)).

[71] TEX. WATER CODE § 36.002(a).

[72] *Houston & T.C. Ry. Co. v. East*, 81 S.W. 279, 281 (Tex. 1904), reaffirmed in 1999 in *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 80 (Tex. 1999) ("Given the Legislature's recent efforts to regulate groundwater, we are not persuaded that it is appropriate today for this Court to insert itself into the regulatory mix by substituting the rule of reasonable use for the current rule of capture.").

[73] *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 831–32 (Tex. 2012).

[74] *Id.* (citing *Eliff v. Texon Drilling Co.*, 210 S.W.2d 558, 561 (Tex. 1948)).

[75] *Id.*

minerals," [76] and that right includes the reasonable right to use the groundwater of the premises. [77] What was not known was whether the accommodation doctrine applied to a severed groundwater right estate until 2016 in the Texas Supreme Court's holding in *Coyote Lake Ranch, LLC v. City of Lubbock*.[78] There, the Court held that, along with a severed mineral estate, the accommodation doctrine "also applies as between a landowner and the owner of an interest in the groundwater."[79]

### *B. Groundwater Conservation Districts*[80]

Another distinct feature of Texas water law is that regulation of groundwater usage is not statewide, but local. Understanding groundwater conservation districts (GCDs) in Texas is essential for transacting in water in the state.

GCDs were created by the Texas Legislature pursuant to its powers under Article XVI Section 59 of the Texas Constitution. [81] Chapter 36 of the Texas Water Code establishes GCDs as the "preferred method of groundwater management" to protect property rights, balance groundwater conservation and development, and to use the "best available science in the conservation and development of groundwater." [82]

Texas currently has ninety-eight GCDs established either by the Texas legislature or the Texas Commission on Environmental Quality. [83] The first GCD, the High Plains Underground Water Conservation District No. 1, was created in 1951. [84] Most GCDs follow county lines and consist of either a single county (sixty GCDs) or multiple counties (thirty-eight GCDs). [85] "Approximately 72 percent of major and

[76] *Getty Oil Co. v. Jones*, 470 S.W.2d 618, 621 (Tex. 1971) ("It 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.").

[77] *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972) "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." *Id.*; *see Guffey v. Stroud*, 16 S.W.2d 527, 528 (Tex. Comm'n App. 1929) ("The grant of the oil carried with it a grant of the way, surface, soil, water, gas, and the like essential to the enjoyment of the actual grant of the oil."); *see also Stradley v. Magnolia Petroleum Co.*, 155 S.W.2d 649, 652 (Tex. App.—Amarillo 1941, writ ref'd).

[78] 498 S.W.3d 53, 55 (Tex. 2016).

[79] *Id.* ("Absent an agreement to the contrary, an oil-and-gas lessee has an implied right to use the land as reasonably necessary to produce and remove the minerals but must exercise that right with due regard for the landowner's rights. This rule has come to be called the accommodation doctrine. The issue now before us is whether the doctrine also applies as between a landowner and the owner of an interest in the groundwater. Contrary to the court of appeals, we hold that it does . . . ."). While some operators may acquire their water needs through their implied right to use the surface, we have not gone into further depth here because based on the needed water volumes and infrastructure to support those volumes, few projects can justify a water operation limited to the leasehold footprint.

[80] The authors credit Monica Jacobs and Diana Nichols, both at Kelly Hart & Hallman LLP, with assistance on this section.

[81] TEX. CONST. art. XVI, § 59.

[82] TEX. WATER CODE § 36.0015(b) ("In order to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution, groundwater conservation districts may be created as provided by this chapter.").

[83] *Groundwater Conservation District Facts*, TEX. WATER DEV. BD., https://www.twdb.texas.gov/groundwater/conservation_districts/facts.asp (last visited Jan. 12, 2026).

[84] *Id.*

[85] *Id.*

minor aquifers are overlain by a GCD."[86] In Texas, there are nine major and twenty-two minor aquifers—"[m]ajor aquifers produce large amounts of water over large areas, whereas minor aquifers produce minor amounts of water over large areas or major amounts of water over small areas."[87]

Of the top twenty Texas crude oil-producing counties in October 2025, fourteen are subject to a GCD[88]:

| County Rank (Crude Oil) | County | GCD (Yes or No) |
|---|---|---|
| #1 | Martin | Yes (Permian Basin UWCD) |
| #2 | Midland | No |
| #3 | Loving | No |
| #4 | Upton | No |
| #5 | Reeves | Yes (Reeves County GCD) |
| #6 | Karnes | Yes (Evergreen UWCD) |
| #7 | Reagan | Yes (Glasscock GCD and Santa Rita UWCD) |
| #8 | Howard | Majority Yes (Permian Basin UWCD) |
| #9 | Andrews | No |
| #10 | Glasscock | Yes (Glasscock GCD) |
| #11 | Ward | No |
| #12 | La Salle | Yes (Wintergarden GCD) |
| #13 | De Witt | Yes (Pecan Valley GCD) |
| #14 | Gonzales | Majority Yes (Gonzales County UWCD) |
| #15 | Atascosa | Yes (Evergreen UWCD) |
| #16 | Yoakum | Yes (Sandy Land UWCD) |
| #17 | Dimmit | Yes (Wintergarden GCD) |
| #18 | Dawson | Yes (Mesa UWCD) |
| #19 | Pecos | Yes (Middle Pecos GCD) |
| #20 | Winkler | No |

While groundwater in place in Texas is owned by the surface estate owner, its production and use are highly regulated in areas covered by a GCD. These local regulations are tied to a GCD's statutory responsibility for long-term planning and management of the aquifers within its geographic territory.[89] Although all GCDs operate under the same statewide statutes, each district has significant discretion in

[86] *Id.*
[87] TEX. WATER DEV. BD., *supra* note 2, at 69 (internal citations omitted).
[88] *Texas Oil and Gas Production by County: October 2025*, TEX. R.R. COMM'N, https://www.rrc.texas.gov/media/1dsnemrz/2025-10-monthly-production-county-oil.pdf (last visited on Jan. 12, 2026); *Groundwater Conservation District Facts*, *supra* note 83.
[89] *See* TEX. WATER CODE § 36.0015(b).

creating its own rules and regulations.[90] Consequently, rules and processes can vary greatly from district to district, even among neighboring districts. Similarly, the management style and local concerns regarding groundwater also differ from district to district, influencing how groundwater is managed.

In areas within a GCD, the GCD has the authority to regulate virtually every aspect of groundwater production and use within its boundaries. GCD regulations include requirements for:

- Spacing of Wells. GCDs almost always require wells to be set back a certain distance from property boundaries, and some GCDs also require spacing between wells.
- Production Limits. GCDs regulate both the quantity of groundwater produced and the rate of production. Production limits may vary within different areas of the same district. Fee-based districts, unlike GCDs that are supported by a local tax, often charge production fees.
- Well Registration. GCDs generally require that all wells (except for wells governed by the Railroad Commission of Texas) be registered with the district.
- Well Permitting.[91] In addition to being registered, many types of wells must also have operating permits from the GCD.
  - In some GCDs, a separate drilling permit must be obtained.
  - Some types of permit applications may be subject to public notice and the opportunity for a public hearing on the application.
  - Permits are typically issued for a specific term, although some GCDs issue perpetual permits.
- Well Construction. All water wells in Texas are subject to regulations issued by the Texas Department of Licensing and Regulation regarding well construction. Many GCDs will have regulations specifying additional construction/completion requirements.
- Regulation After Initial Permitting. Regulation after the initial permitting is complete may include metering and reporting of production. In addition, GCDs typically have detailed requirements for which changes to wells (*e.g.*, increasing pump capacity) require formal amendment applications. And unless a GCD issues permits with a perpetual term, the GCD will have regulations regarding permit renewal.
- Transport of Groundwater Outside District Boundaries. Most GCDs require a separate permit for transporting groundwater that is sourced within their district for use outside the district. In addition, these GCDs often levy a fee for such transport.

Thus, it is crucial that transactional attorneys keep in mind the local rules of the GCD in which their clients operate to avoid unnecessary run-ins with GCD authorities and to ensure the deal timeline matches local permitting realities. In practice, that means mapping district boundaries and management goals, confirming applicable requirements and planning for notice-and-hearing risks where they apply. Where projects involve movement of water across GCD boundaries, counsel should also account for export/transport permits and related fees, which many districts require separately from production approvals. Above all, parties should align covenants, milestones, and remedies in their agreements with the specific GCD's rules and renewal risks, recognizing that neighboring districts may regulate differently and can drive distinct

[90] *See* TEX. WATER CODE § 36.0015.

[91] *See* Carl R. Galant, *In Drought, a Storm Brews: DFCS and the Oil and Gas Exemption*, 44 TEX. TECH L. REV. 817 (2012), for a discussion on exemptions for water wells serving oil and gas operations.

operational and credit outcomes for the same project.

### *C. Recent Developments in Texas Water Law*

At the center of current transactional practice in the energy space is the Texas Supreme Court's clarification of ownership of produced water. This ruling is reshaping how parties draft leases, reservations, and midstream arrangements, sharpening title expectations while preserving the ability to contract around the default rule.

In *Cactus Water Services, LLC v. COG Operating*, LLC, the Texas Supreme Court ruled that "a deed or lease using typical language to convey oil-and-gas rights, though not expressly addressing produced water, includes that substance as part of the conveyance."[92] COG Operating, LLC (COG) acquired leases spanning thousands of acres in Reeves County from 2005 to 2014, granting it "the exclusive right to explore for, produce, and keep 'oil and gas' or 'oil, gas, and other hydrocarbons.'"[93] The leases did not reference produced water or oil and gas waste. [94] Under these leases, COG had incurred $21 million in disposal fees and had generated fifty-two million barrels of produced water.[95]

The surface owners of the lands covered by COG's leases later executed "produced water lease agreements" with Cactus Water Services, LLC (Cactus). [96] Cactus notified COG of its claimed rights under the produced water lease agreements, asserting title to the produced water from COG's wells.[97] COG filed a declaratory suit seeking to establish their ownership of the produced water, and Cactus filed a counterclaim seeking the reverse. [98] Cactus claimed that "once the hydrocarbons have been separated after production at the well, the remaining watery mixture, being neither oil nor gas, is surface-estate water owned by the landowner absent an express conveyance of water rights."[99] After hearing cross motions for summary judgment, the trial court ruled in favor of COG, finding it owned the produced water, and the El Paso Court of Appeals affirmed.[100] The Supreme Court of Texas granted Cactus's petition for review to address the issue of whether the surface or mineral estate owns produced water.

The Texas Supreme Court affirmed, recognizing that "[p]roduced water is an inherent and inescapable byproduct of oil-and-gas production," and that "Texas law has long recognized that the hydrocarbon producer's possession and control over the disposition of liquid-waste byproduct is necessarily incidental to, and therefore encompassed in, a conveyance of oil-and-gas rights." [101] The Court reasoned that conveying the right to produce hydrocarbons necessarily includes the burdens and incidents of waste separation and disposal, which, for decades, was a burden imposed on the operator.[102]

While past cases such as *Edwards Aquifer Authority v. Day*, *Robinson v. Robbins Petroleum Corp.*, and *Sun Oil Co. v. Whitaker* held that groundwater belongs to the surface estate, granting only a usufructuary right to groundwater, the Court recognized that this "precedent is simply inapplicable" to the issue of produced water ownership because these cases "do not

[92] *Cactus Water Servs., LLC v. COG Operating, LLC*, 718 S.W.3d 214, 230 (Tex. 2025), *reh'g denied* (Sept. 5, 2025).
[93] *Id.* at 217–18.
[94] *Id.* at 218.
[95] *Id.* at 220.
[96] *Id.* at 221.
[97] *Id.* at 222.
[98] *Id.*
[99] *Id.* at 216.
[100] *Id.* at 222.
[101] *Id.* at 216–17 (citing *Brown v. Lundell*, 344 S.W.2d 863, 866–67 (Tex. 1961)).
[102] *Id.* at 225–26, 227–28.

address waste byproducts of oil-and-gas production." [103] The right to dispose of property is inconsistent with a mere right of use.[104] Further, modern industry methods that have made produced water valuable cannot "change the original scope of the conveyance, which must be interpreted as of the transfer of rights . . . ." [105] Although parties remain free to contract around this default rule through express reservation or allocation language, absent such language, produced water is included in the hydrocarbon conveyance and considered a distinct substance from groundwater.[106]

Three justices joined and wrote separately to clarify limits of the holding.[107] First, the concurrence clarifies that the Court's opinion is a default rule, and parties "are free to strike a different deal."[108] No Texas law prevents landowners from retaining their produced water ownership, nor does any law prevent landowners from obtaining the applicable permits or contracting with a permitted third party to handle produced water.[109]

Second, while produced water generally goes along with the conveyance of hydrocarbon minerals, other non-hydrocarbon minerals are not conveyed, because such minerals are not leased (or at least, they were not leased in COG's leases).[110] More specifically, while the leases conveyed "oil, gas, and other hydrocarbons" to COG, the "production of unleased minerals" does not give COG ownership of the unleased minerals, even if they are produced together with oil, gas, or other hydrocarbons. [111] This clarification further solidifies that while oil and gas operators have ownership rights to produced water that is produced along with leased hydrocarbons, they do not have ownership rights to any unleased minerals (e.g., lithium) that are produced along with leased hydrocarbons.[112]

Third, the concurrence highlights that the Court's opinion does not address a mineral lessee's royalty obligations to the landowner regarding groundwater. [113] The question of any financial obligations owed to lessors regarding groundwater (such as any royalty obligations and traditional implied covenants for the oil and gas lease) would have to be taken up in future cases.[114]

This opinion establishes that a mineral lease's conveyance of oil and gas production rights also includes ownership of produced water. A surface owner or mineral lessor must therefore expressly state a desire to reserve produced water that is a byproduct of oil and gas exploration. For transactions, that default rule sharpens title expectations and should be reflected in how parties draft leases, reservations, and midstream handling or reuse agreements. In practice, clear reservation language, tailored royalty or fee mechanisms, and diligence on produced-water rights will be essential inputs to bankable water deals across the oilfield and beyond.

## IV. TRANSACTING WITH WATER USE RIGHTS

Attorneys transacting in Texas water will benefit from mastering a few core instruments that convert unused water rights into payments and predictable cash flows.

[103] *Id.* at 226 (citing *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814, 832 (Tex. 2012); *Robinson v. Robbins Petroleum Corp.*, 501 S.W.2d 865, 867-68 (Tex. 1973); *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 811 (Tex. 1972)).
[104] *Id.* at 227.
[105] *Id.* at 228.
[106] *Id.* at 230.
[107] *Id.* at 230–233 (Busby, J., concurring).
[108] *Id.* at 232 (Busby, J., concurring).
[109] *Id.*
[110] *Id.*
[111] *Id.*
[112] *Id.*
[113] *Id.* at 233.
[114] *Id.*

Careful drafting requires close attention to the client's objectives and a robust understanding of the specific assets. The Sections that follow begin with water rights severance before addressing leases and sale agreements, highlighting deal structures and clauses that set in motion a good foundation for water transactions. The examples below are derived from instruments that were originally designed for groundwater transactions with oil and gas operations in mind, but they can be utilized for different purposes.

### *A. Water Rights Severance*[115]

While the cleanest approach to obtain groundwater rights is by purchasing the surface in fee, where the groundwater rights have not been previously severed, there are several reasons why a water rights severance is necessary. A water rights severance is the separation of water rights from the surface estate by conveyance.[116] It is an effective method for a rancher or landowner to monetize water rights through sale while retaining the surface. The primary distinction between water rights severance and a water rights lease is that severance involves transferring the water rights in fee to the assignee, typically for a lump sum at closing. In contrast, a water rights lease involves leasing the water rights for either a flat fee per barrel or a percentage of revenues or profits. While one might rely on the implied right to use the surface to benefit the severed water rights, it is advisable to obtain express easements to ensure all aspects are addressed.

The grant of water rights is straightforward; for example, in a conveyance, the surface owner of an unsevered surface would convey to the grantee the following:

> all of Grantor's right, title and interest in and to all of the Groundwater and Groundwater Rights in and under the [County Name] County, Texas lands that are more particularly described on Exhibit [Exhibit Identifier] attached hereto (the "Property");

Whereby Groundwater could be defined as, *e.g.*, the following:

> All of the underground water, percolating water, artesian water, and any other water in, under and that may be produced from any and all depths, reservoirs, formations, depths and horizons lying immediately beneath the surface of the Property down to the center of the earth, expressly including, without limitation, the Aquifers.[117]

Whereby Groundwater Rights could be defined as, *e.g.*, the following:

> (i) the legal title to all Groundwater in and under the applicable real property, including, without limitation, any and all rights to Groundwater of Grantor that are attributable to or derive from any interests that are directly or indirectly owned by Grantor in the mineral estate in such property, subject to terms of existing oil and gas leases previously executed by or binding upon Grantor; (ii) the right to test, explore for, drill for, develop, produce, capture, transport, store, treat, sell and otherwise use all Groundwater in, under and that may be produced from the applicable real property; (iii) the right to use the surface of the applicable real property for access to and to explore for, drill for, develop, produce,

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[115] One resource for water-related transaction documents can be found in Rhonda G. Jolley & Taylor Spalla, *Water Acquisition Agreements for the Oil and Gas Producer*, 30TH ANNUAL ADVANCED OIL, GAS AND ENERGY RESOURCES LAW COURSE (Oct. 2012).

[116] *See id.* at 3 (citing *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613 (Tex. App.—San Antonio 2008, pet. denied) (other citations omitted)).

[117] "'Aquifers' means [list any relevant aquifers under applicable property] and any other aquifer or other water-bearing formation located beneath the surface of the Property."

capture, transport, store, treat, sell and otherwise beneficially use such Groundwater to the full extent permitted by Law; (iv) all permits relating to any of the foregoing, expressly including any Groundwater permits; and (v) all rights, privileges, and appurtenances relating to any of the foregoing.

Along with the interest in the Groundwater and Groundwater Rights, the seller will also convey rights in leases, agreements, and instruments associated with the Groundwater, water wells, and tangible personal property (*e.g.*, pumps, flow lines). The conveyance typically includes ancillary assets common in upstream transactions (*e.g.*, records, causes of action, warranties). The surface owner should at least retain domestic and livestock water wells, along with the water rights to produce from those wells.[118] This can be achieved by reserving specific water wells and water rights, which, the reservation of the water rights, can be accomplished as, *e.g*., the following:

Grantor's exclusive right following Closing to take Groundwater from the Excluded Wells without charge solely for Domestic Use[119] and Livestock Use[120] [together with the non-exclusive right to request and receive Groundwater from Grantee from its water wells on the Property of Grantee's reasonable selection without charge to the extent the Excluded Wells may have insufficient capacity to satisfy Grantor's Domestic and Livestock Use requirements].[121]

One challenging area is when the landowner has executed surface use agreements covering both the right to drill water wells and extract groundwater, as well as, for example, build surface pads. Typically, a groundwater estate severance does not include the surface owner's right to receive damages from activities like building surface pads, but it does include the right to receive damages from drilling water wells and extracting groundwater. Therefore, in the conveyance, the seller must assign an undivided interest in these surface use agreements as they pertain to surface and water rights, ensuring the appropriate parties receive their respective revenues.

### *B. Water Rights Lease*

A water rights lease operates similarly to an oil and gas lease in Texas. It begins with a lease of groundwater rights, akin to a groundwater conveyance, and includes certain easement rights. The lease typically has either a flat term or both a primary and secondary term. It also includes royalties, possible development obligations, restoration rights, and indemnification.

Most simple water rights leases have a fixed flat term because they are often made with farmers and ranchers, similar to original disposal well site leases. As these leases have evolved, they now often include both primary

[118] Or reserve domestic, livestock and agriculture.

[119] "'Domestic Use' means Grantor's right following Closing to take Groundwater from the Excluded Wells and any permitted replacements without charge for the purpose of drinking, washing, culinary purposes, irrigation of lawns, irrigation of a family garden and/or orchard, and watering of domestic animals, but does not include agricultural use, or using the Groundwater to support activities for which consideration is received or for which the product of the activity is sold, except for Livestock Use."

[120] "'Livestock Use' means Seller's right following Closing to take Groundwater from the Excluded Wells without charge for the watering of Grantor's livestock from troughs in a manner consistent with past usage for livestock watering purposes."

[121] In lieu of allowing the surface owner the right to drill new replacement water wells, one alternative is to allow them to take water free of charge. The parties can also build in caps on rates and volumes in this arrangement. Another alternative is to build is a traditional reservation of water rights for, e.g., Domestic Use and Livestock Use. At a minimum, a landowner should determine what rights going forward they need to support the surface .

and secondary terms. For example, a lease might have a primary term of three years and a secondary term that continues as long as water operations, as defined in the lease, occur. Due to the uncertainty around what that might mean (without producing-in paying-quantities case law with an oil and gas lease), it is sometimes helpful for the parties to define the conditions for the secondary term, such as a fixed production rate (*e.g.*, 100,000 barrels of water produced annually). This provides greater clarity for both parties.

One recent allegation is that some midstream companies acquire groundwater rights with little to no intent of drilling for and producing groundwater on the leased lands. Rather, some midstream companies have been accused of acquiring groundwater rights leases solely to use the easements for the benefit of groundwater from off the leased lands. To address this, the lease can expressly limit any easements granted to activities and infrastructure solely for the production, transportation, and sale of groundwater produced from under the lands covered by the lease. Further, capital development obligations can be included, requiring either a certain amount of capital investment in the leased premises, a set number of water wells or the establishment of sufficient water infrastructure to sell, for example, 100,000 barrels of water a day from the leased premises. The lessor should also consider including a termination provision for failure to develop. Lessors are more likely to secure a termination provision in groundwater rights leases, unlike in oil and gas leases.

The royalties can become a contentious issue if the de facto cents per barrel produced is not used.[122] Alternatively, a landowner may negotiate a percentage of the gross proceeds or net profits from water sales from the leased premises. A water midstream company should avoid this approach as it complicates royalty accounting when groundwater from multiple leased premises is combined and sold to multiple purchasers. For example, if equal amounts of water come from Ranches A, B, and C into a single pond, and Ranch A has a royalty of 25% of the gross proceeds (and Ranch B and Ranch C are on a cents per barrel royalty), but Operators X, Y, and Z purchase equal amounts of water from such single pond at different prices, determining Ranch A's royalty becomes complex.

Because of the nature of groundwater, there is less concern with spills compared to a produced water lease, but a landowner should still demand restoration obligations from the lessee in case of spills or alterations to the leased premises.

Almost all groundwater rights leases will include an indemnification clause for the lessor and its indemnified group covering operations by the lessee on the leased premises, which can be accomplished as, *e.g.*, the following:

> LESSEE AGREES TO INDEMNIFY AND HOLD HARMLESS LANDOWNER, ITS AFFILIATES, AND ITS AND THEIR RESPECTIVE FAMILY MEMBERS, HEIRS, ASSIGNS, TRANSFEREES, AGENTS, REPRESENTATIVES, TRUSTEES, ADMINISTRATORS, EMPLOYEES, LESSEES, TENANTS, AND INVITEES (COLLECTIVELY, THE "**INDEMNIFIED PARTIES**") FROM ANY AND ALL CLAIMS, CAUSES OF ACTION, LAWSUITS, ENFORCEMENT ACTIONS, PROSECUTIONS, DAMAGES, LIABILITIES, FINES, PENALTIES, FORFEITURES, OR LIENS (HEREINAFTER "**CLAIMS**") ARISING FROM OR CAUSED BY, IN

[122] If one uses cents per barrel, a lessor should include a consumer price index adjustment.

WHOLE OR IN PART, (I) THE PRESENCE OF LESSEE AND ITS AFFILIATES AND ITS AND THEIR EMPLOYEES, REPRESENTATIVES, CONTRACTORS, AND SUBCONTRACTORS ON THE SUBJECT LANDS, AND/OR (II) WATER OPERATIONS UNDER THIS LEASE, EVEN IF THE CLAIMS ARISE FROM OR WERE CAUSED BY, IN WHOLE OR IN PART, THE [NEGLIGENCE, GROSS NEGLIGENCE, OR WILLFUL MISCONDUCT][123] OF ONE OR MORE OF THE INDEMNIFIED PARTIES. THIS INDEMNIFICATION APPLIES TO ALL NATURE OF CLAIMS, INCLUDING, BUT NOT LIMITED TO CLAIMS FOR BODILY INJURY OR DEATH TO ANY PERSON, DAMAGE TO OR DESTRUCTION OF ANY REAL OR PERSONAL PROPERTY, AND POLLUTION OR CONTAMINATION OF THE AIR, LAND OR WATER. THIS INDEMNIFICATION APPLIES TO APPLICABLE CLAIMS ASSERTED BY ANY PERSON OR ENTITY. LESSEE AND LANDOWNER ACKNOWLEDGE THAT THIS STATEMENT COMPLIES WITH THE EXPRESS NEGLIGENCE RULE AND IS CONSPICUOUS.

Typically, there is no indemnification by the lessor against the lessee or its group. Some water lessees will even seek to include a more robust environmental indemnity. A majority of water leases will include minimum insurance provisions on the lessee (typically not mutual).

### *C. Water Sale Agreement*

A water sale agreement can resemble a disposal agreement, but there are key differences. Important provisions in a water sale agreement include: the purchaser's obligation to buy, the seller's obligation to sell, water quality, delivery point, indemnification, and insurance.

#### 1. Obligation on Purchaser

A water sale agreement should not include a "dedication" as seen in a disposal agreement. In a disposal agreement, dedications help survive bankruptcy and act as covenants running with the land, involving real property interests. In contrast, a water sale agreement treats water as personal property, not subject to real property laws. Therefore, a "dedication" in a water purchase agreement is more of a covenant to purchase all water for specific operations, similar to agreeing to buy all bolts from a particular supplier for use on a wellbore.

In a water sale agreement, the purchaser's obligation typically takes one of the following forms: an interruptible at-will arrangement, a minimum volume commitment, or a promise to purchase all water for certain operations or geographic areas.[124] Many midstream companies (starting in the disposal context) are shifting from dedications/commitments to minimum volume commitments for a more predictable income stream, avoiding the uncertainties of promises to purchase all needed water, which may not materialize if activities like drilling do not occur in that area.

While the purchase price is generally a business point, it is common to see a standard rate per barrel. Alternatively, a tiered pricing approach may be used, either during specific contract years or over the contract's duration.[125] For long-term water purchase

[123] A lessee will want to push back against indemnification of the lessor for lessor's own negligence and willful misconduct. A middle ground is most likely indemnifying a lessor for its own negligence but not for its gross negligence or willful misconduct.

[124] A water seller may also consider requiring the purchaser not to resell the water purchased from the seller to prohibit the purchaser from flipping the water to someone else.

[125] Some business arrangements may involve a purchaser fronting consideration to allow a seller to build out infrastructure, where the purchaser then

agreements, consider including a consumer price index adjustment for any fees due under the agreement.

### 2. Obligation on Seller

The seller's obligations in a water sale agreement typically take the form of several different levels of service (similar to levels of service in a disposal agreement). A seller may agree to deliver only the water it has available, a specified maximum volume per day as requested by the purchaser, all water requested by the purchaser, or only what it chooses to deliver. The terms of the agreement and the economic arrangement dictate the level of service the seller will provide.

In complex water operations and competing water sales, scheduling and planning are crucial to maximizing water sales and avoiding idle assets. Therefore, complex water transactions often include a planning and forecast mechanism that allows both parties to coordinate the supply and demand of water under the agreement. Additionally, purchasers may need to request water several days in advance to enable the seller to coordinate its supply. For these water jobs, companies are often dealing with large volumes of water on a given day, somewhere upward of 200,000 barrels per day, making planning essential to ensure supply and avoid competition with other jobs.

A controversial area is whether the seller will cover the buyer if the seller cannot deliver the requested water, assuming the seller had an obligation to deliver the water. This arrangement typically exists only in long-term water transactions where the seller has committed to firm service but fails to deliver. While this was more common in the early days of midstream water transactions, it has become less prevalent as these arrangements have become more sophisticated and commercial water operations more common in the Permian Basin, allowing parties to find alternative water with more ease than previously encountered.

### 3. Quality of the Water

The quality of the water in a sale agreement has become less contentious with advances in recycled water technology, but it remains important to ensure the purchaser receives usable groundwater. Typically, the agreement will specify that the water is not treated for public drinking purposes and is intended for industrial use only. Additionally, the agreement will set a maximum value for total dissolved solids, often starting in the thousands of parts per million, *e.g.*, 5,000 ppm, depending on the specific deal.

### 4. Delivery Point

The delivery point in a water sale agreement is crucial as it specifies where the water is transferred from the seller to the purchaser. Each transaction may vary, but common delivery points include the seller's water wells, tanks, ponds/pits, a pipeline connection, or the purchaser's ponds/pits.[126] The exact location at the delivery point is also significant. For instance, if the delivery point is the seller's ponds/pits, the responsibility for evaporative loss depends on whether delivery of the water is when it is delivered into or taken from the pond/pit. While evaporative loss might not be substantial, it still impacts the deal's economics. In long-term water purchase agreements, the delivery point is typically at a pipeline interconnect.

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receives a discounted purchase price on water to make up the upfront consideration.

[126] If delivery is on the purchaser's property, the lessor should build in a non-exclusive easement to allow seller ingress and egress and the right to lay layflat/poly lines to transport the water over the property.

Both parties need a means of accurately measuring the delivered water at the delivery point. Therefore, a meter or another measurement tool should be placed as close as possible to the delivery point. Sometimes, the meter itself serves as the delivery point, such as the outlet flange of the meter located at specified GPS coordinates. The metering section should include a provision that provides for regular calibrations of the meter, along with adjustments to the volumes if the meter becomes mis-calibrated.

### 5. Indemnification

Water purchase agreements typically have indemnity provisions similar to those in disposal agreements, rather than master service agreements. It is common for agreements between sophisticated parties to include mutual indemnity. However, in agreements where a sophisticated purchaser buys from a farmer, indemnification from the farmer (or even the purchaser) may be absent. Below is an example of a mutual indemnity provision in a water purchase agreement:

> SELLER SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS PURCHASER, ITS AFFILIATES AND ITS AND THEIR RESPECTIVE OFFICERS, DIRECTORS, MANAGERS, MEMBERS, LESSORS, TENANTS, INVITEES, EMPLOYEES, AGENTS, AND CONTRACTORS (OF ALL TIERS) (EXCLUDING SELLER) (COLLECTIVELY, INCLUSIVE OF PURCHASER, THE "**PURCHASER INDEMNIFIED GROUP**"), FROM AND AGAINST ANY AND ALL CLAIMS, DAMAGES, LOSSES, DEMANDS, SUITS, AND EXPENSES, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES, COSTS AND EXPENSES, FOR PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH (COLLECTIVELY "**CLAIMS**") THAT MAY BE ASSERTED AGAINST ANY MEMBER OF THE PURCHASER INDEMNIFIED GROUP ARISING FROM OR IN CONNECTION WITH (I) THE OWNERSHIP, STORAGE, AND TRANSPORTATION OF ANY WATER PRIOR TO THE PURCHASE THEREOF BY PURCHASER AT THE DELIVERY POINT, AND/OR (II) ANY MEMBER OF THE SELLER INDEMNIFIED GROUP'S OPERATIONS AND ACTIVITIES ON THE PROPERTY, IN ALL CASES, EXCEPT TO THE EXTENT SUCH CLAIMS RESULT FROM THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ONE OR MORE MEMBERS OF THE PURCHASER INDEMNIFIED GROUP.[127]
>
> PURCHASER SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS SELLER, ITS AFFILIATES AND ITS AND THEIR RESPECTIVE OFFICERS, DIRECTORS, MANAGERS, MEMBERS, LESSORS, TENANTS, INVITEES, EMPLOYEES, AGENTS, AND CONTRACTORS (OF ALL TIERS) (COLLECTIVELY, INCLUSIVE OF SELLER, THE "**SELLER INDEMNIFIED GROUP**"), FROM AND AGAINST ANY AND ALL CLAIMS THAT MAY BE ASSERTED AGAINST THE SELLER INDEMNIFIED GROUP ARISING FROM OR IN CONNECTION WITH (I) THE OWNERSHIP, STORAGE, TRANSPORTATION, AND USE OF ANY WATER FROM AND AFTER THE PURCHASE THEREOF BY PURCHASER AT THE DELIVERY POINT, AND/OR (II) ANY MEMBER OF THE PURCHASER INDEMNIFIED GROUP'S OPERATIONS AND ACTIVITIES ON THE PROPERTY, IN ALL CASES, EXCEPT TO THE EXTENT SUCH CLAIMS RESULT FROM THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ONE OR MORE

[127] Note this example does not include indemnification of the indemnified group's own negligence.

MEMBERS OF THE SELLER INDEMNIFIED GROUP.

There does not appear to be a right or wrong answer for whether the indemnity will cover the negligence, in whole or in part, of a member of the indemnified group, but the more likely scenario is that it will cover the negligence, in whole or in part, of a member of the indemnified group, excluding gross negligence or willful misconduct. The Texas Oilfield Anti-Indemnity Act may apply to water purchase agreements that include indemnification for the indemnitee's own negligence and involve water for oil and gas production. [128] Such agreements should include mutual insurance provisions and Texas Oilfield Anti-Indemnity Act savings clauses.

## V. CONCLUSION[129]

As Texas's demand for water continues to rise, water deals will remain crucial to the oil and gas industry. As cities and industry compete with rural suppliers, transfer deals and export arrangements will face higher community scrutiny, permitting friction, and credit sensitivity, all of which must be priced and allocated in the contracts.

Texas's legal framework lays the groundwork for the things transactional attorneys must contend with when assisting companies and municipalities with the purchase and sale of water. Yet, they must also keep in mind the changing landscape, with old rules such as the rule of capture coming under increasing scrutiny. Fortunately, recent case law developments have brought some degree of clarity as to who owns produced water. Critically, the Texas Legislature must contend with competing interests between advocates for private property rights and pragmatic reform to how water is handled in Texas.

Of course, the rules stated above for transacting with water use rights, are general rules of thumb derived from oil and gas transactions. Yet, as water demand increases for other uses, these rules will prove useful in informing how companies can conduct themselves when transacting for water. Absent significant developments in technology that allow Texans access to cheaper water, water transactions will be on the rise and will likely be subject to many legal battles in the courts.

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[128] TEX. CIV. PRAC. & REM. CODE § 127.001(4) (defining "well or mine service" as including "purchasing . . . or transporting . . . fresh water . . . ., or otherwise rendering services in connection with a well drilled to produce or dispose of oil, gas, or other minerals or water . . . .").

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