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Over-Ruling the Rule of Capture: What Can Texas Learn From 10 Other States' Groundwater Law Updates?



Gabriel Collins, J.D.
Baker Botts Fellow for Energy & Environmental Regulatory Affairs
Baker Institute for Public Policy, Rice University

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Note: These are working research findings and are subject to change. In the event of material developments, the author will post an updated version.

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Mr. Collins holds a membership interest in Cactus Water Services, LLC. This relationship is covered by a Rice University conflict of interest management and monitoring plan.

Methodology + Purposes of Study

- **Central Question:** Is there a way to update groundwater management common law in Texas that can balance world-scale agricultural activity, industrial development, and urban growth while also protecting private property rights?
- **Key Assumptions:** conflicts over groundwater are inevitable, but Texas needs a fairer and more rational common law system to underpin adjudication
- **Core Policy Objective:** Lay the foundation for legislative and judicial discussion and action that can help adapt to rapid growth and climate change, overcome challenges, and help ensure a dynamic, resilient, and water secure Texas in 2100
- **Data Source:** Leverage dozens of judicial decisions and approximately 150 years of collective experience across the 50 states in managing the extraction, use, and in multiple cases, ownership, of groundwater.
- **Download Full Report:** Gabriel Collins, J.D., "Overruling The Rule of Capture: What Can Texas Learn From 10 Other States' Groundwater Law Updates?," Baker Institute for Public Policy, Rice University, June 2021, https://www.bakerinstitute.org/media/files/files/ccdd8528/ces-pub-groundwater-laws-060321.pdf

The Rule of Capture

--"*...essentially allows, with some limited exceptions, a landowner to pump as much groundwater as the landowner chooses, without liability to neighbors who claim that the pumping has depleted their wells*."—Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 75 (Tex. 1999)

Technological Evolution Forced Groundwater Law to Modernize…In Most States

How Homo Sapiens accessed groundwater for 99% of our history—hundreds of gallons per day per wellbore

Fort Stockton, 1948



Source: Pecos County Historical Commission

How we accessed it beginning in 1920s-30s—millions of gallons per day per wellbore

Early 21st Century Texas



Source: Edwardsaquifer.net

Representative of Wells Numbered 302707, 304215, 304300, 306784 by TWDB

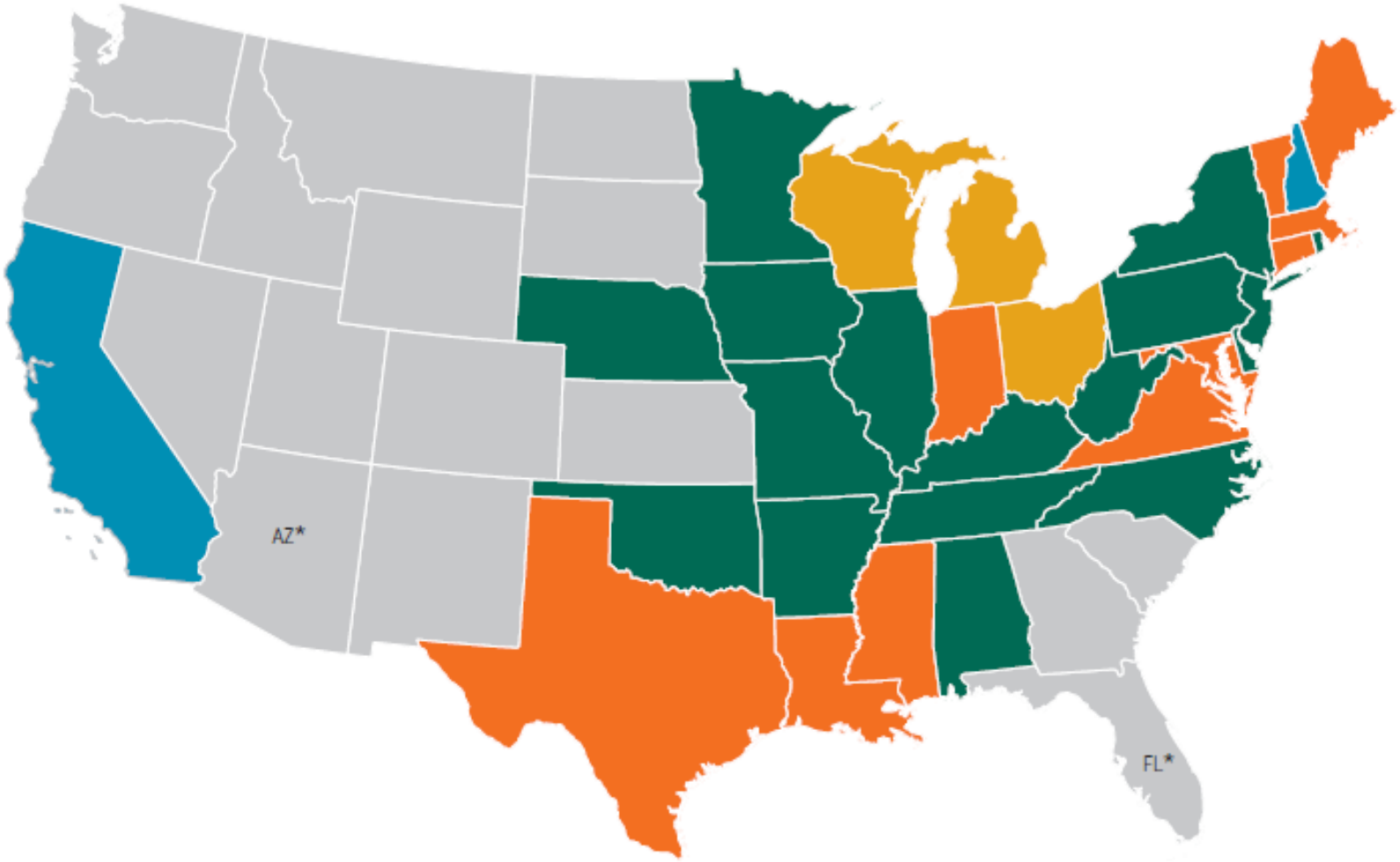
Groundwater Governance Systems in the United States

10 Key States

- New Hampshire
- Ohio
- Michigan
- Nebraska
- Kansas*
- Oklahoma
- Arkansas
- Arizona*
- California
- Florida*

Most directly relevant for Texas

groundwater now public property



US Groundwater Governance Systems

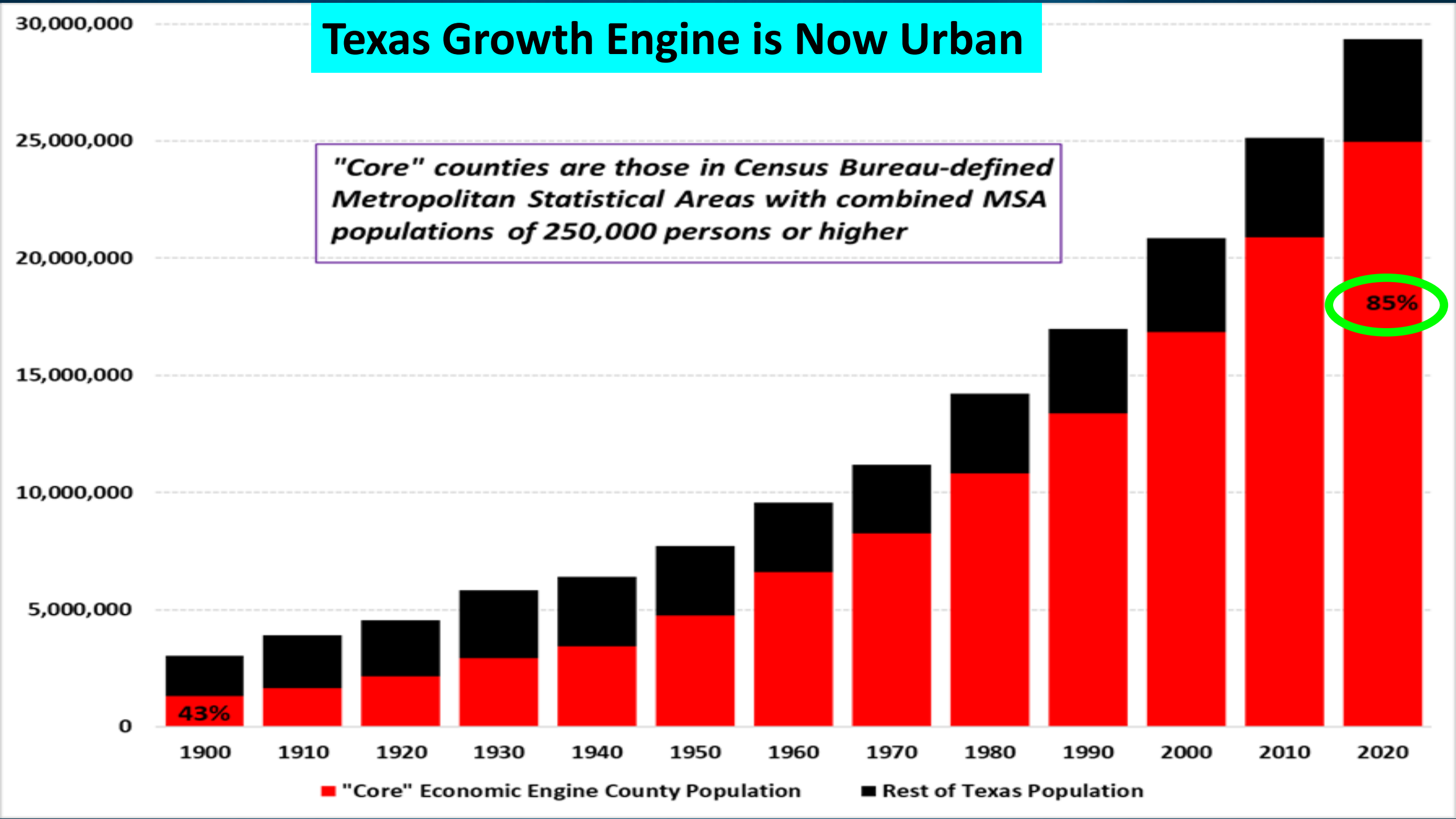
- Correlative Rights
- Prior Appropriation/Admin permit
- English Rule
- Restatement (Second)
- American Rule

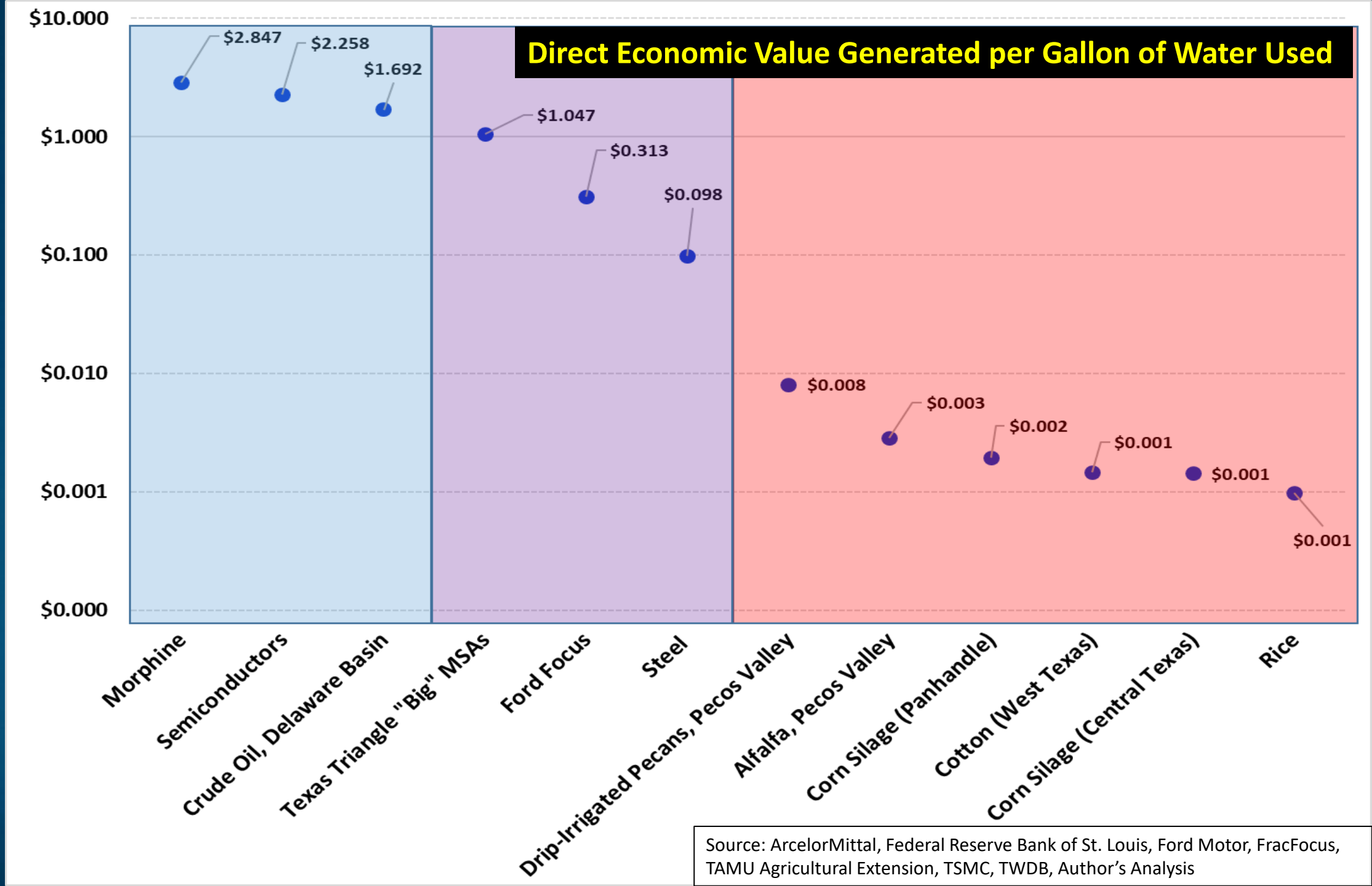
* *Both AZ and FL made groundwater public property by statute and have state agencies arbitrate present and future externalities via administrative action under specific statutory guidelines. Texas presents different case because groundwater in place is owned as real private property.*

Sources: Court Decisions, State Groundwater Acts (Arizona, Florida, Georgia, South Carolina, South Dakota, Wyoming), author's analysis

New Circumstances: Texas Groundwater Now a Vital Water Security Provider For a Canada-Sized Economy

Texas Growth Engine is Now Urban





Source: ArcelorMittal, Federal Reserve Bank of St. Louis, Ford Motor, FracFocus, TAMU Agricultural Extension, TSMC, TWDB, Author's Analysis

Water Underpins Growth: Warning Signs From Other States

Rockport Reservoir, ~40 mi E of Salt Lake City, Sept. 2018



July 2021

A Drought So Dire That a Utah Town Pulled the Plug on Growth

Groundwater and streams vital to both farmers and cities are drying up in the West, challenging the future of development.

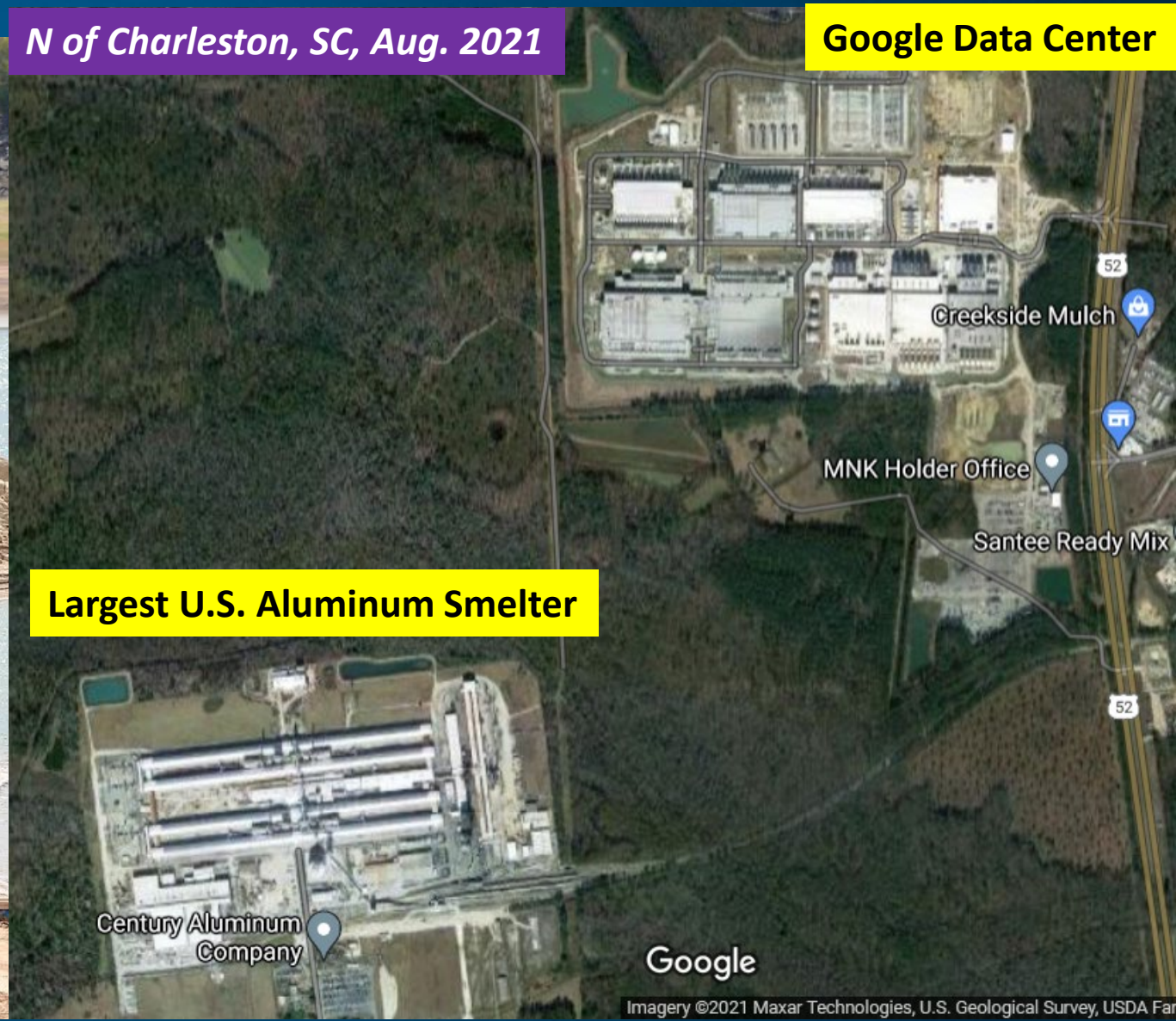


Source: Deseret News, New York Times

N of Charleston, SC, Aug. 2021

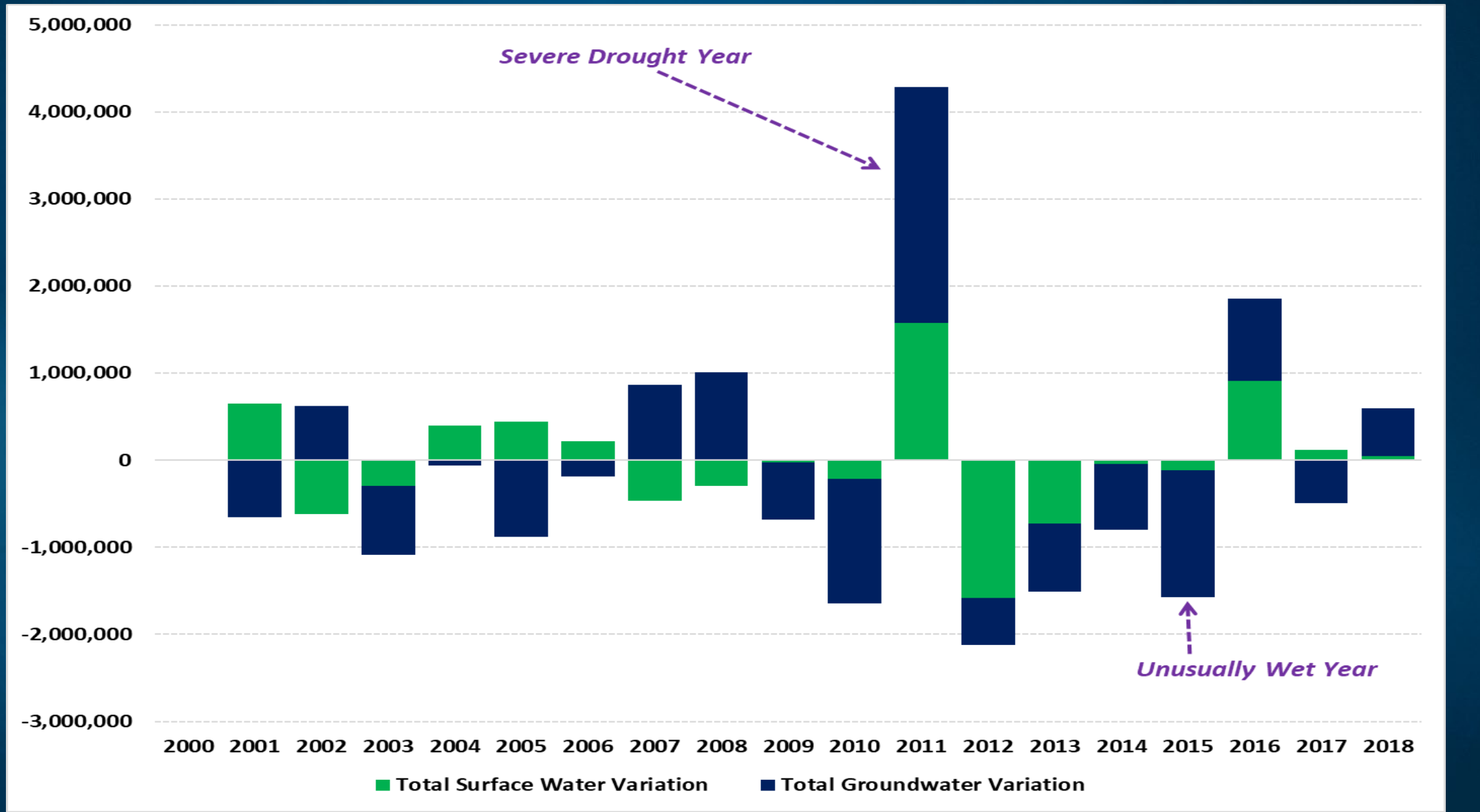
Google Data Center

Largest U.S. Aluminum Smelter



Groundwater Is the Texas "Water Supply Flywheel"

Usage Change, Ac-ft/yr

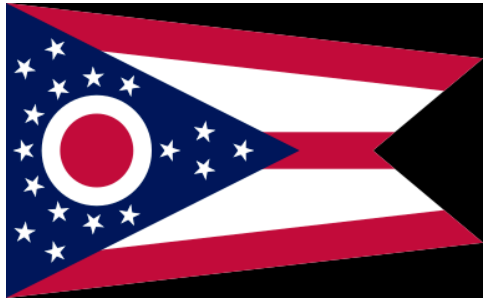


Time For an Operating System Update That Conforms Texas Groundwater Law to Demographic, Economic, and Hydrological Realities

The Common Law is Built to Evolve

--“when it is said that we have in this country adopted the common law of England, it is not meant that we have adopted any mere formal rules, or any written code, or the mere verbiage in which the common law is expressed...**we have adopted it as a constantly improving science, rather than as an art; as a system of legal logic, rather than as a code of rules**.”--Morgan v. King, 1858 WL 7174 (N.Y. Gen. Term. 1858), rev'd, 35 N.Y. 454 (1866)

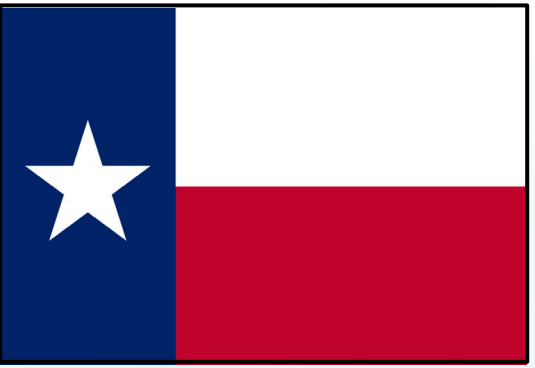
Ohio: Restatement Adopted Over Rule of Capture



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



Houst. & T.C. Ry. v. East, 98 Tex. 146, 81 S.W. 279, 280 (1904).

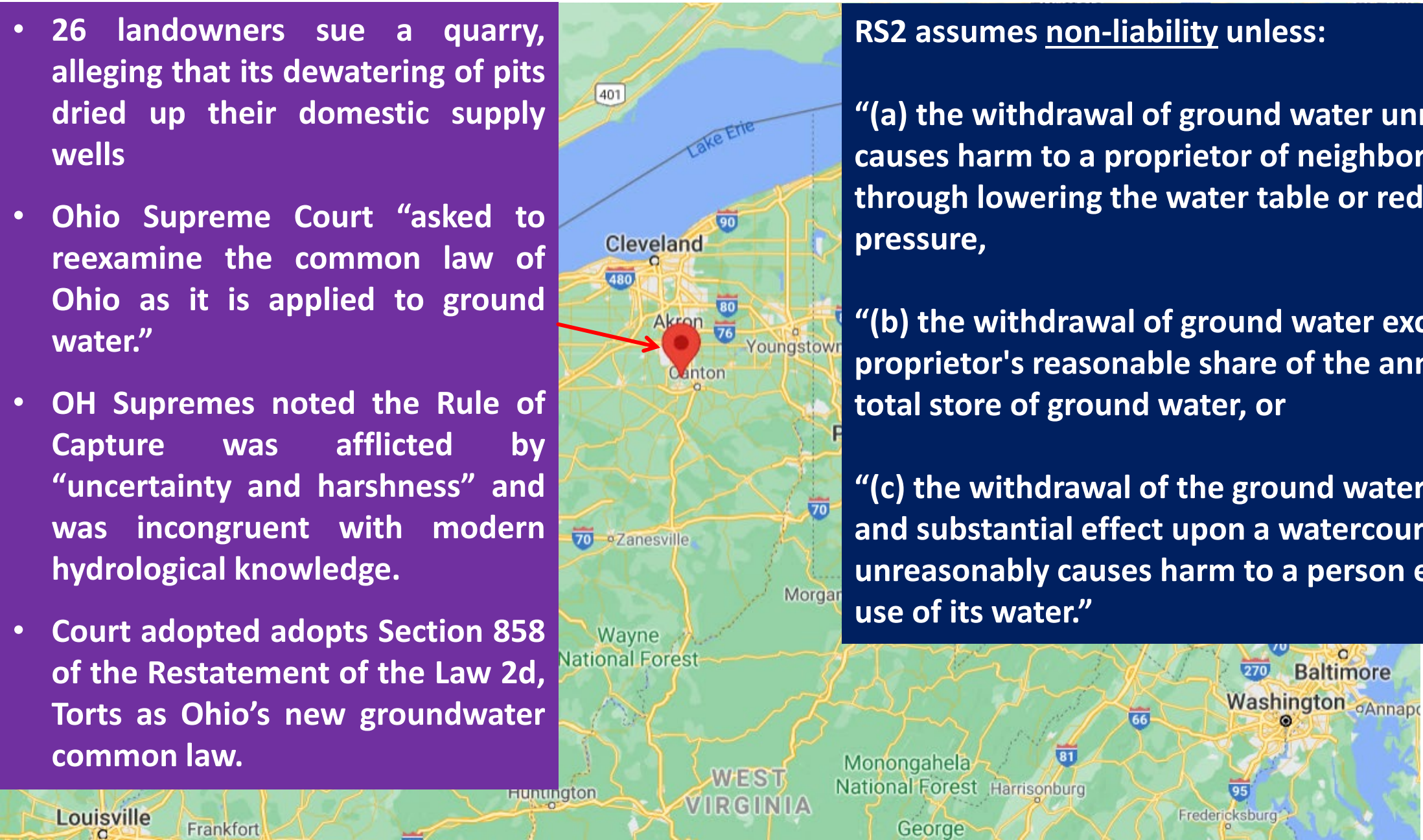


Cline v. Am. Aggregates Corp., 15 Ohio St. 3d 384, 474 N.E.2d 324 (1984)

Texas continued adherence to rule of capture circ. 2021

Ohio: Cline Decision Conforms Legal Doctrine to Hydrological Fact

- 26 landowners sue a quarry, alleging that its dewatering of pits dried up their domestic supply wells
- Ohio Supreme Court "asked to reexamine the common law of Ohio as it is applied to ground water."
- OH Supremes noted the Rule of Capture was afflicted by "uncertainty and harshness" and was incongruent with modern hydrological knowledge.
- Court adopted adopts Section 858 of the Restatement of the Law 2d, Torts as Ohio's new groundwater common law.



RS2 assumes <u>non-liability</u> unless:

"(a) the withdrawal of ground water unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,

"(b) the withdrawal of ground water exceeds the proprietor's reasonable share of the annual supply or total store of ground water, or

"(c) the withdrawal of the ground water has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water."

Ohio Post-*Cline*

How Did The Shift Practically Affect Groundwater Property Rights?

- *McNamara v. Rittman, 2005-Ohio-6433, ¶ 20, 107 Ohio St. 3d 243, 246, 838 N.E.2d 640, 644*
- Groundwater property rights under rule of capture could only be protected through massive land tracts, having larger pumps than neighbors (i.e. "might"). Under RS2, landowner water rights are now "**protected by law**."
- Under the rule of capture in Texas, a water owner can only look to the "limiting" factors of malicious harm, waste, or subsidence to protect his/her groundwater. **No groundwater owner in Texas has ever been able to successfully use any of these three factors to prevent over-extraction by neighbors, suggesting that in practice they are illusory**.
- In contrast, McNamara takes position that "*A property owner has a potential cause of action against anyone who unreasonably interferes with his property right in groundwater. That cause of action arises only from the effect on the landowner's water rights—no other effect on the overlying property is necessary for the cause of action to proceed*." [emphasis added]
- In other words, McNamara's application of RS2 is based on the effects a water user's actions have on the H2O resource itself without requiring demonstration of derivative harms that typically only arise in the most extreme cases. Thus, actionable legal protection for groundwater rights becomes much more feasible for the "99%" of conflicts that pre-dominate in the real world.

Ohio: Legislative Codification of "Reasonableness" R.C. § 1521.17

(A) The general assembly hereby finds and declares that the determination of the reasonableness of a use of water depends upon a consideration of the interests of the person making the use, of any person harmed by the use, and of society as a whole.

(B) In accordance with section 858 of the Restatement (Second) of Torts of the American law institute, all of the following factors shall be considered, without limitation, in determining whether a particular use of water is reasonable:

(1) The purpose of the use;

(2) The suitability of the use to the watercourse, lake, or aquifer;

(3) The economic value of the use;

(4) The social value of the use;

(5) The extent and amount of the harm it causes;

(6) The practicality of avoiding the harm by adjusting the use or method of use of one person or the other;

(7) The practicality of adjusting the quantity of water used by each person;

(8) The protection of existing values of water uses, land, investments, and enterprises;

(9) The justice of requiring the user causing harm to bear the loss.

(C) In any determination of reasonable use of water under common law in which prior use is a factor, it shall be conclusive that one use is prior to another in the quantity claimed if the date of registration of one facility providing such use under section 1521.16 of the Revised Code is prior to that of another facility. If a use of water in which prior use is a factor is by means of a facility having the capacity to withdraw one hundred thousand gallons or less of water per day and the facility is not registered under division (B) of that section, prior use shall be based on historic information and documentation provided by any person. Effective Date: 07-18-1990.

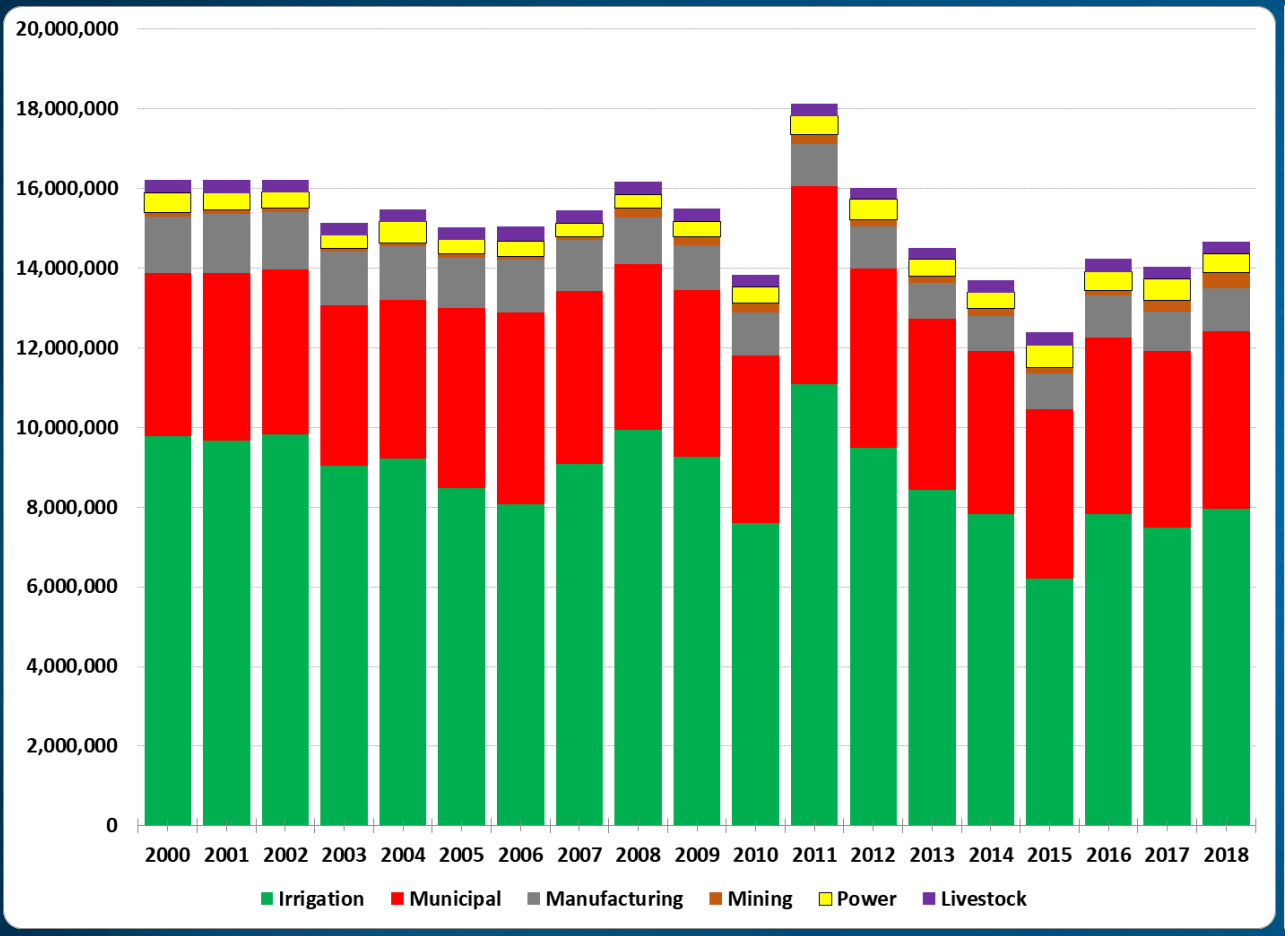
In short, the RS2 riparian water dispute resolution standards codified.

Michigan: "Reasonable Use Balancing a/k/a Quasi-Restatement (Second)"

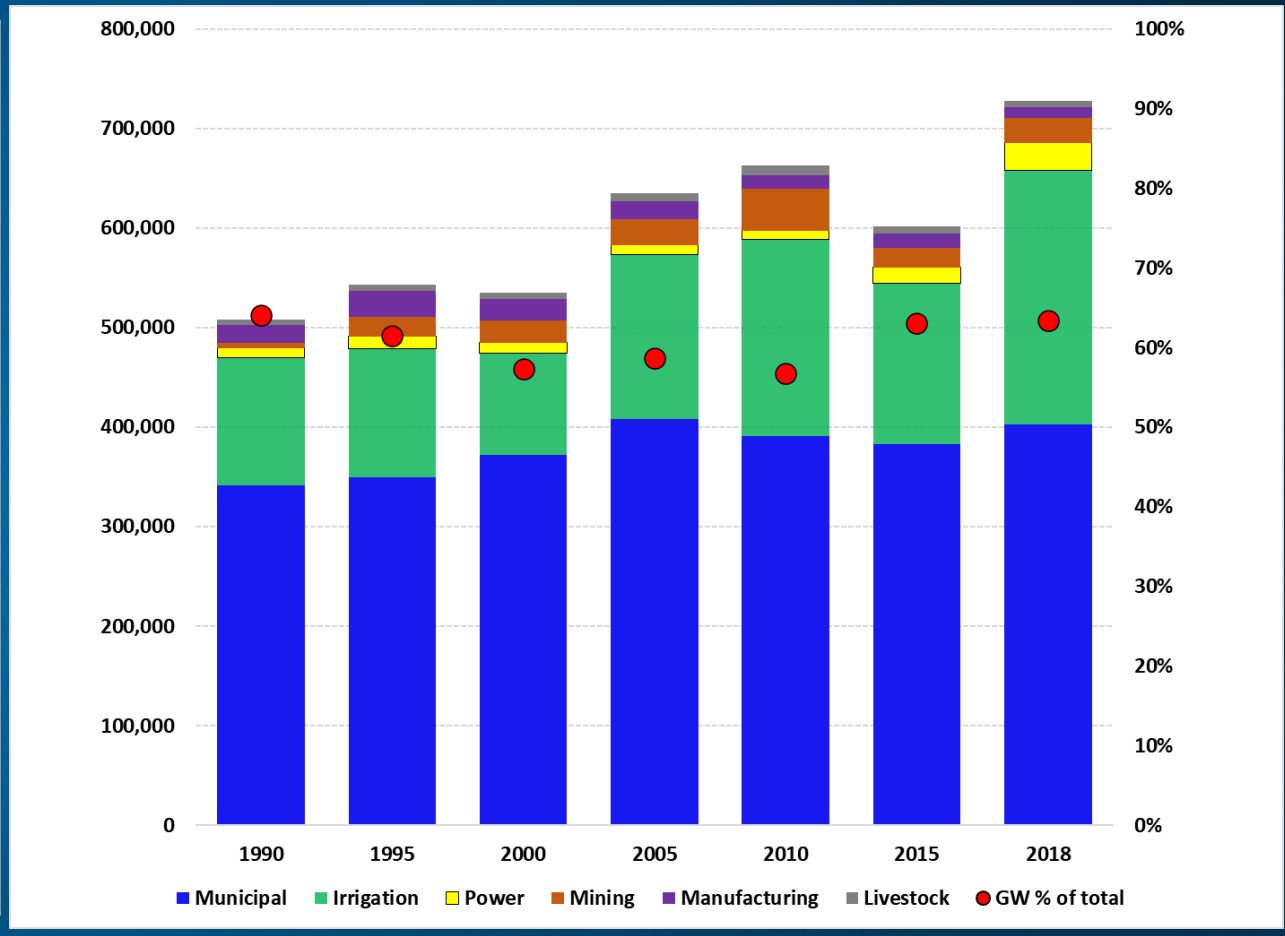
- **Schenk/Bernard/Hart/Maerz (1917-1982)**
  - "*It is imperative that the people of the city have water; it is not imperative that they secure it at the expense of those owning lands adjoining lands owned by the city*."--Schenk v. City of Ann Arbor, 196 Mich. 75, 91, 163 N.W. 109 (1917)
  - Defendant city should (1) pump at an intensity that would not "interfere with an adequate supply of water for the plaintiffs' reasonable use" and (2) **compensate the plaintiffs for the cost of further investments in equipment necessary for them to secure adequate water supplies**.--Bernard v. City of St. Louis, 220 Mich. 159, 165, 189 N.W. 891, 893 (1922)
- **Michigan Citizens (2005/2007)**
  - Long, complex opinion regarding a dispute between Nestle bottled water operation and local landowners and public interest groups (groundwater vs. riparian dispute)
  - Key takeaway: Court adopted "reasonable use balancing test" for adjudicating groundwater disputes
  - 6 Key Dimensions: **(1) the purpose of the use, (2) the suitability of the use to the location, (3) the extent and amount of the harm, (4) the benefits of the use, (5) the necessity of the amount and manner of the water use, and (6) any other factor that may bear on the reasonableness of the use**.—Michigan Citizens for Water Conservation v. Nestle Waters N. Am. Inc., 269 Mich. App. 25, 58, 709 N.W.2d 174, 196 (2005), aff'd in part, rev'd in part, 479 Mich. 280, 737 N.W.2d 447 (2007).

Why Emphasize a Balancing Approach?

Texas Statewide Water Use, Ac-ft/yr



Key Central TX MSAs' Water Use, Ac-ft/yr

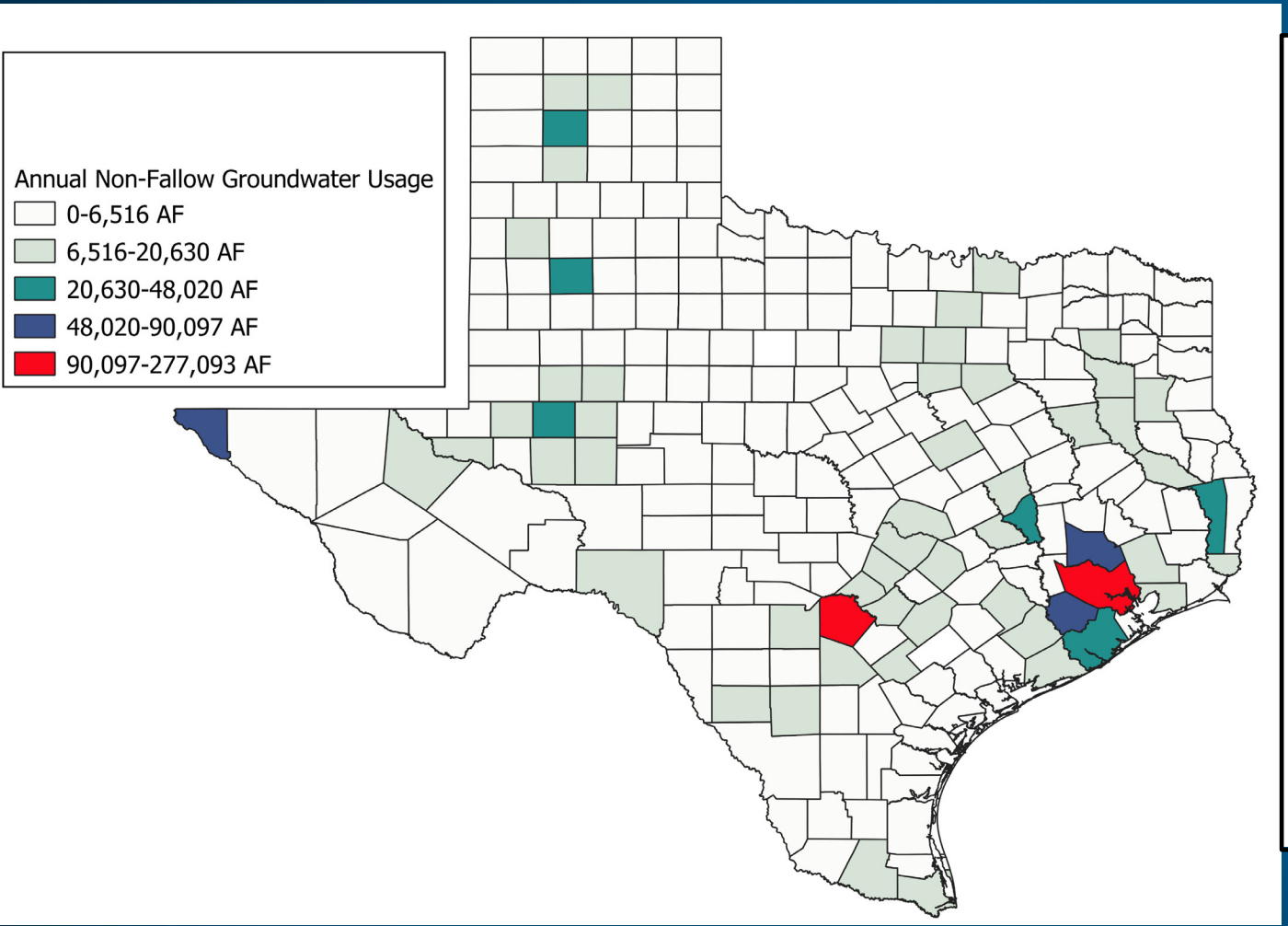


Source: TWDB, Author's Analysis

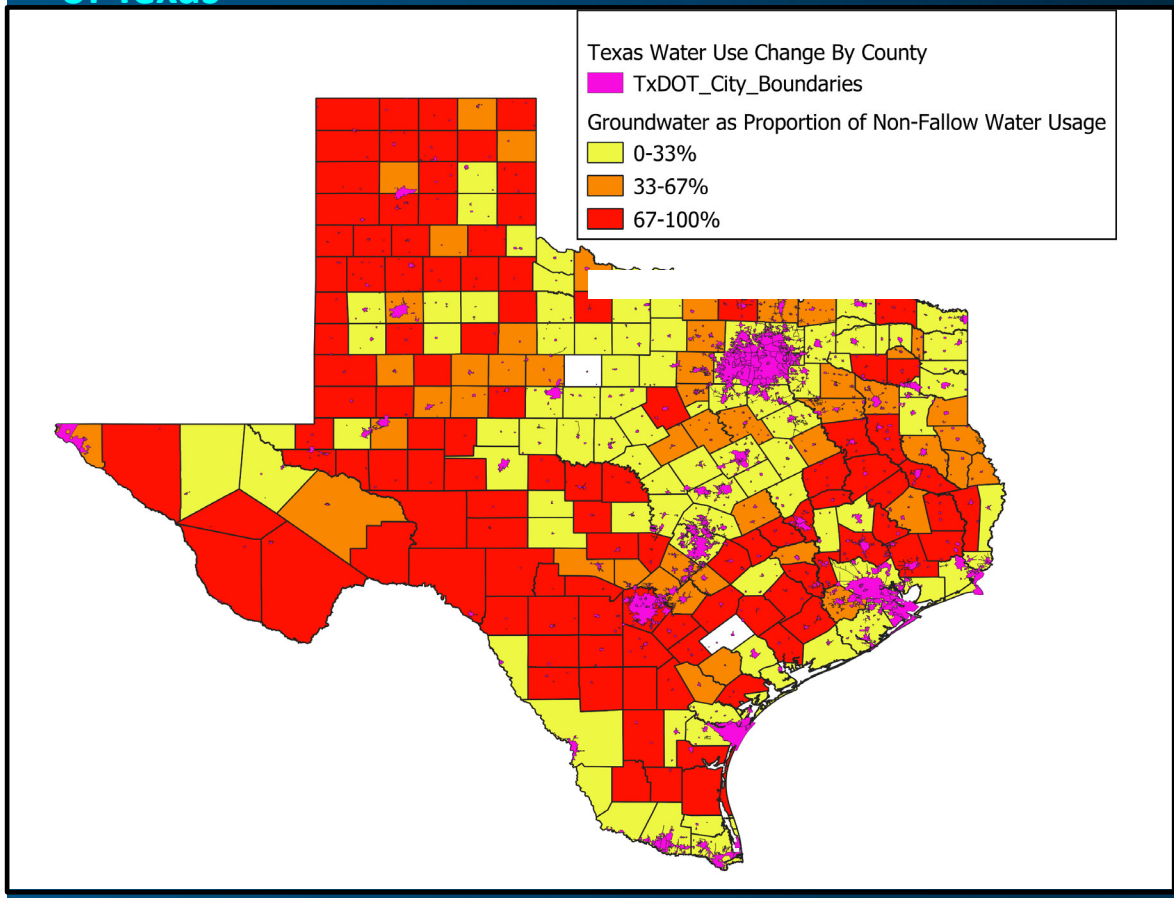
Must account for unequal geographical—and economic value--distribution

Texas Non-Fallow Groundwater Use: Absolute Volume vs. Proportional Reliance

Larger Cities Are The Prime Non-Interruptible Groundwater Use Areas…

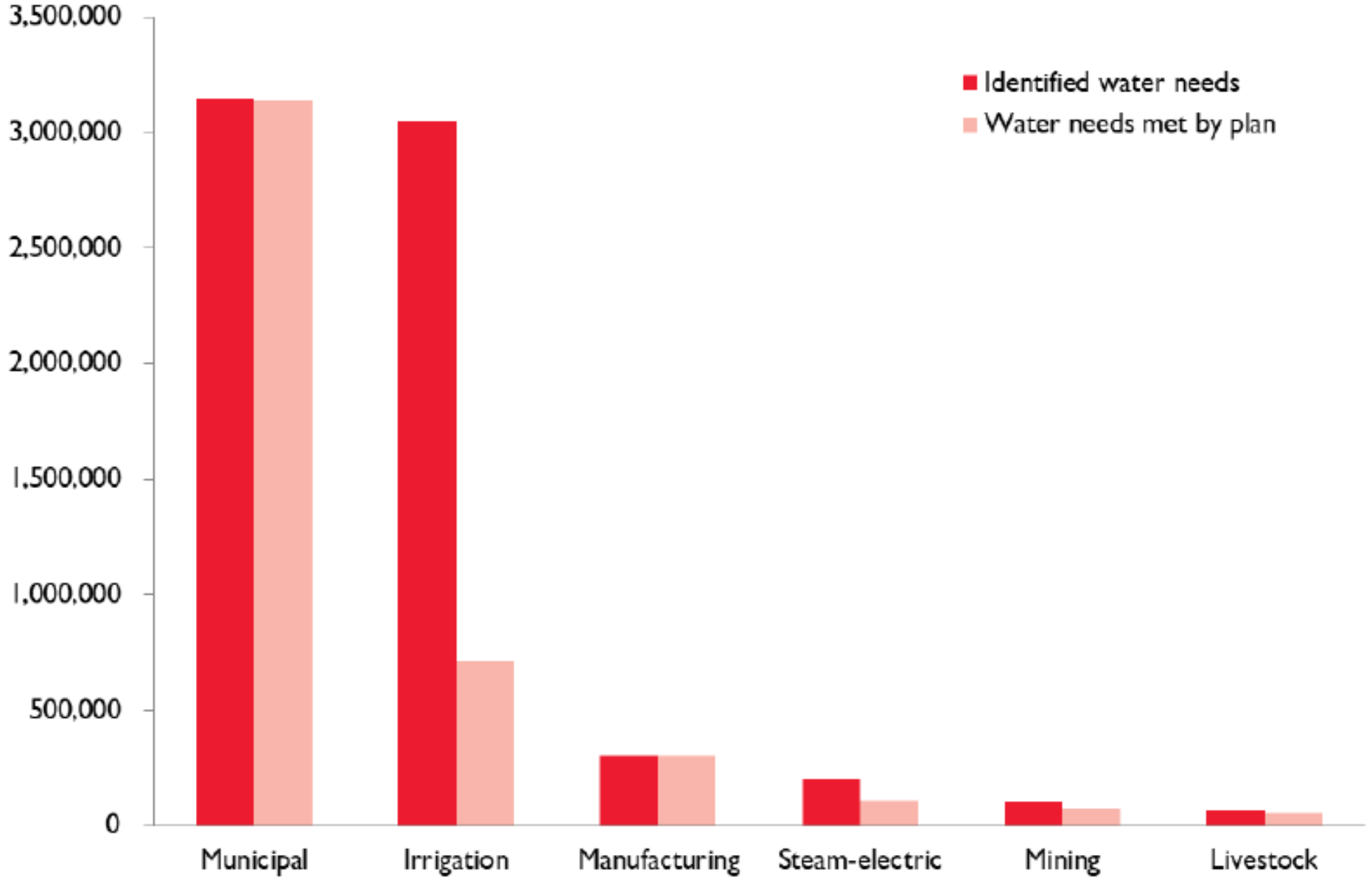


…But High Relative Dependence on Groundwater For Non-Interruptible Uses is a Reality For Much of Texas



Populous suburban counties' usage patterns foretell the core urban counties' likely water usage shift during next extended drought. **There is historical precedent: *Corpus Christi v. Pleasanton, 276 SW2d 798 (Tex. 1955).***

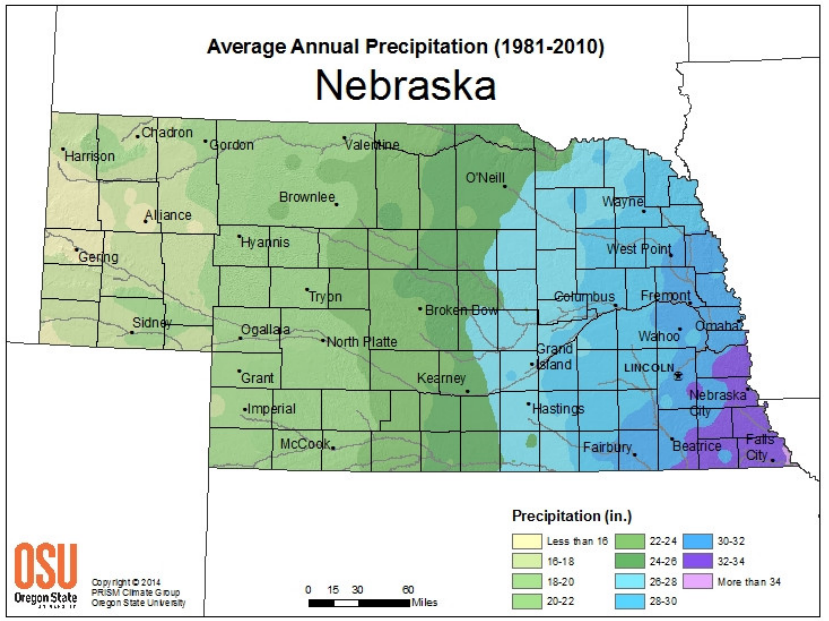
Figure ES-9. Annual water supply needs and needs met by the plan by water use category in 2070 (acre-feet)

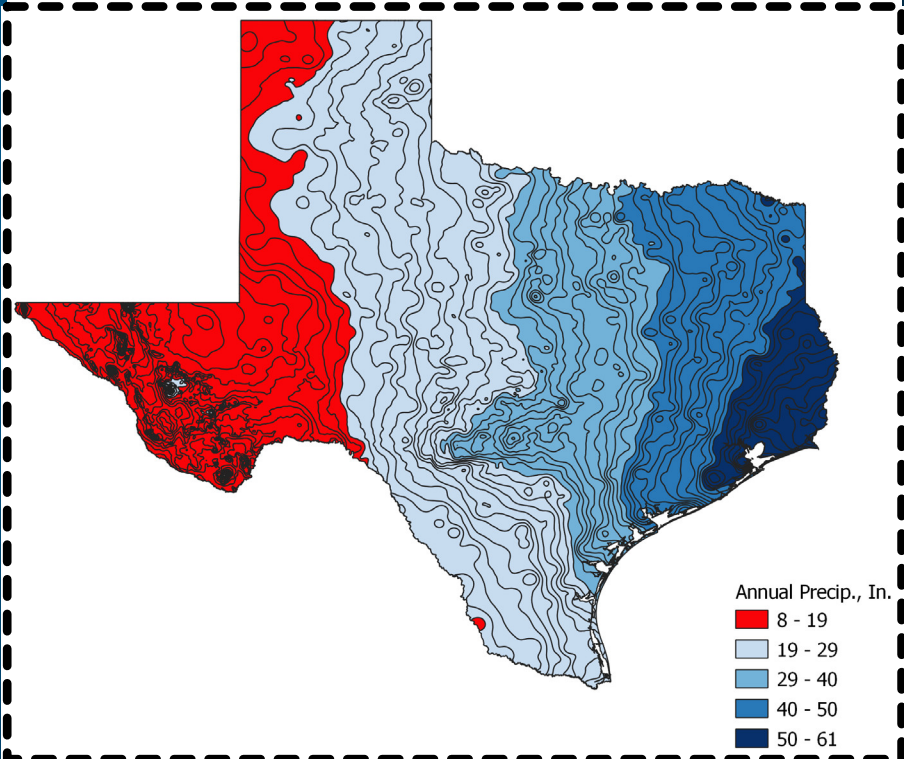


Nebraska

- Spear T: Nebraska Supremes adopt Restatement to govern conflicts between users of hydrologically connected surface water and ground water—*Spear T Ranch, Inc. v. Knaub*, 269 Neb. 177, 194, 691 N.W.2d 116, 132 (2005)
- Court notes 9 factors that can help determine "reasonableness" under the Restatement (albeit RS Sec. 850A for disputes between riparian users)
- *Purpose, suitability to the watercourse, economic value, social value, extent and amount of harm,* ***practicality of avoidance via adjustment/adaptation****/changing volumes used,* ***protection of existing investments and economic value****, justice of requiring the user causing harm to bear loss* (*Spear T Ranch, Inc. v. Knaub*, 269 Neb. 177, 192, 691 N.W.2d 116, 131 (2005))
- Additionally, *"…a trial court should consider any factors it deems relevant."*

In a slightly different, but still relevant context, Texas groundwater law already incorporates the highlighted principles via the accommodation doctrine.





RS2/Reasonable Balancing: Pros & Cons For Texas

Pros

- More latitude to adjudicate disputes between adjacent competing water users
- Only requires apportionment (a/k/a "restrictions") of groundwater use if there is a conflict whose existence is supported by evidence.
- **Flexibility that gives courts greater latitude to resolve conflicts equitably and with more nuance.**
- **Recognizes hydrological connectivity between ground and surface water and would create a legal cause of action to help protect environmental flows.**
- **Would likely ultimately become like the accommodation doctrine, whereby a powerful, but broadly flexible legal framework facilitates private negotiated resolutions rather than litigation.**
- **Helps perfect and protect the groundwater ownership rights conferred under the Texas Water Code and by the 2012 *Day* decision.**
- **Also likely to stimulate local water marketing activity and incentivize water flows toward the highest and best local uses.**

Potential Challenges

- Multiple users, pumping in ways that are individually "reasonable" and not actionable, may nonetheless extract sufficient water as to produce aquifer-level harm.
- How to handle requests for injunctive relief for anticipatory harms? Michigan caselaw may provide useful guidance…
- How would updating TX groundwater common law to RS2/reasonable balancing affect litigation risk and burden on the courts?
- How does a move to RS2 as common law potentially alter GCD regulatory power or practices?
- Relatedly, opposition from vested historical users whose advantaged position is often locked in by GCD rulesets
- Challenges from major pumpers who may not want to compensate neighboring water owners whose wells were dried up/impaired by large-scale withdrawals

TX Groundwater Governance Almost Changed in the 1930s and Early 1940s…

S. B. No. 38 By

A BILL
TO BE ENTITLED

AN ACT to control the orderly conservation and development of the underground waters of the State in compliance with the intent and command of Section 59a, b, and c, of Article XVI of the Constitution of the State of Texas; defining certain words and phrases as used in the Act; declaring all underground waters in this State to be public water subject to appropriation in the same manner as now are or hereafter may be provided by law for the control of surface waters; providing that the Board of Water Engineers may formulate and promulgate administrative orders, or modes of procedure or limitations for the appropriation of underground water; expecting from the provisions of the Act, water reasonably required for household use, watering livestock and yard vegetations and gardens when developed for individual use; providing for certain limitations on rights acquired under this Act; providing for granting permits by the State Board of Water engineers to appropriate underground water; amending Section 2 of Chapter 280 Acts of the Regular Session, 41st Legislature by adding a new subdivision to be designated subdivision (h) and providing for the creation of Districts for the purpose of developing projects for the diversion, control, preservation of purity and potability of underground water and the prudent use thereof; providing for the control and abatement of waste of underground water by District or by Board of Water Engineers; providing for control of the development and diversion of underground water; prescribing a penalty for the taking or diversion of underground water without a permit; providing a saving clause and declaring an emergency.

JAN 14 1937 Read first time and referred to Committee on Mining, Irrigation & Drainage

1937

Source: Legislative Reference Library

1937-1947, the Idea of Underground Water as "Public" Resource in Texas Goes From Surviving First Reading to Immediate "Dead Box"

H. B. No. 606 By:

A BILL

TO BE ENTITLED

AN ACT declaring the waters of underground streams, channels, artesian basins, reservoirs or lakes, having reasonably ascertainable boundaries, to belong to the public, to be subject to appropriation for beneficial use, to be a natural resource subject to and requiring conservation, development and regulation in the manner and for the uses named in the Act; vesting the State Board of Water Engineers with jurisdiction in the administration of the provisions of the Act; declaring beneficial use to be the basis, the measure and limit to the right to the use of the waters described in the Act; exempting water for the irrigation of certain lawns and gardens, for the watering of livestock and for domestic household use from the provisions of the Act; providing for application to the Board of Water Engineers for permits by persons, association of person, corporations, cities, towns, legal subdivisions and water improvement districts; providing for hearing of such application and prescribing manner of filing and publication, and cost of publishing and posting; providing for the place of such hearing, the transcription of proceedings, the manner of rendering decisions by the Board, the issuing and filing of permits and the manner of appeal from the decision of the Board; prohibiting the changing of the location and use of the water right issued under a permit; providing that every permit granted and every water right acquired under the provisions of the Act shall be contingent upon continued use of such water for a beneficial use; providing for a hearing upon whether or not permit or water right has been abandoned and for recording the Board's findings; providing that as between appropriators, the first in time shall be the first in right and that all appropriations or allotments of water hereafter made for any purpose other than municipal shall be granted subject to the right of any city or town or municipality to make further appropriations of said water thereafter for domestic and municipal purposes; recognizing and protecting existing rights, providing for the filing and recording of declaration of existing rights, prescribing how the location of wells or the use to which water is put may be changed; providing penalties for violation of the provisions of the Act; defining waste and prescribing a penalty therefor; and declaring an emergency.

1947

FILED MAR 11 1947

MAR 12 1947 READ 1ST TIME AND REFERRED TO COMMITTEE ON State Affairs

APR 1 1947 REPORTED UNFAVORABLY.

APR 2 1947 Dead Box



Then The 1949 Legislative Session Happened

AMENDMENT By Holt

AMENDMENT No. 1 to House Bill No. 162 by striking out all after the enacting clause and inserting in lieu thereof the following:

"D. The ownership and rights of the owner of the ~~soil~~ land, his lessees and assigns, in underground water are hereby recognized, and nothing in this Section 3c shall be construed as depriving or divesting such owner, his assigns or lessees, of such ownership or rights, subject, however to the rules and regulations promulgated pursuant to this Section 3c.

"It is specifically provided in this connection that:

'(1) the priorities, regulations and provisions of the law relating to the use of surface waters shall in no manner apply to underground water;

I.B. Holt





Mike, a character, is asked how he went bankrupt: *"Two ways. Gradually and then suddenly."*



Source: Wikipedia; By Jacket design by Cleonike Damianakes. - Heritage Auctions. Cropped by uploader., Public Domain, https://commons.wikimedia.org/w/index.php?curid=83678973; https://www.google.ca/books/edition/The_Sun_Also_Rises/hoOMCwAAQBAJ?hl=en&gbpv=1&dq=sun+also+rises&printsec=frontcover

Thank you for your time and attention!

gabe.collins@rice.edu

Supplemental Slides

Groundwater Governance in the United States

States presently govern groundwater extraction using one of five primary approaches:

Non-Liability Doctrines

1. The "English" rule of capture;

2. The "American" rule of reasonable use;

Common-Pool Doctrines: Conditional Liability, Compatible with Private Water Ownership

3. Correlative rights;

4. The Restatement approach (with a variant called "reasonable use balancing" employed in Michigan); and

Common-Pool Doctrine: Public Ownership of Water

5. Prior appropriation/administrative permit systems.

1917
Conservation Amendment to the Texas Constitution. "The conservation and development of all of the natural resources of this State ... are each and all hereby declared to be public rights and duties; and the Legislature shall pass all such laws as may be appropriate thereto."

1949
Groundwater Conservation District Act

1997
Senate Bill 1:
Affirms that groundwater conservation districts are preferred groundwater management mechanism in Texas

1904

"In the absence of express contract and **positive authorized legislation**, as between proprietors of adjoining land, the law recognizes no correlative rights in respect to underground waters percolating, oozing, or filtrating through the earth…"

Houston & T.C. Ry. Co. v. East, 98 Tex. 146, 149, 81 S.W. 279, 280 (1904)

1955
"**The Legislature is now in session. It will have this opinion before it before adjournment. It will recognize the problem. If it wishes to declare that the transportation of water in conduits which permit the escape of a large percentage is wasteful and unlawful it will have ample time in which to do it**."

City of Corpus Christi v. City of Pleasanton, 154 Tex. 289, 296, 276 S.W.2d 798, 803 (1955)

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**."

Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 80 (Tex. 1999)

2012
"Thus, the '**responsibility for the regulation of natural resources, including groundwater, rests in the hands of the Legislature**.'"

Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 833 (Tex. 2012)