

Rural Water in Central Texas

Balancing Expansion and Public Trust

Jason Knobloch, Deputy Executive Director

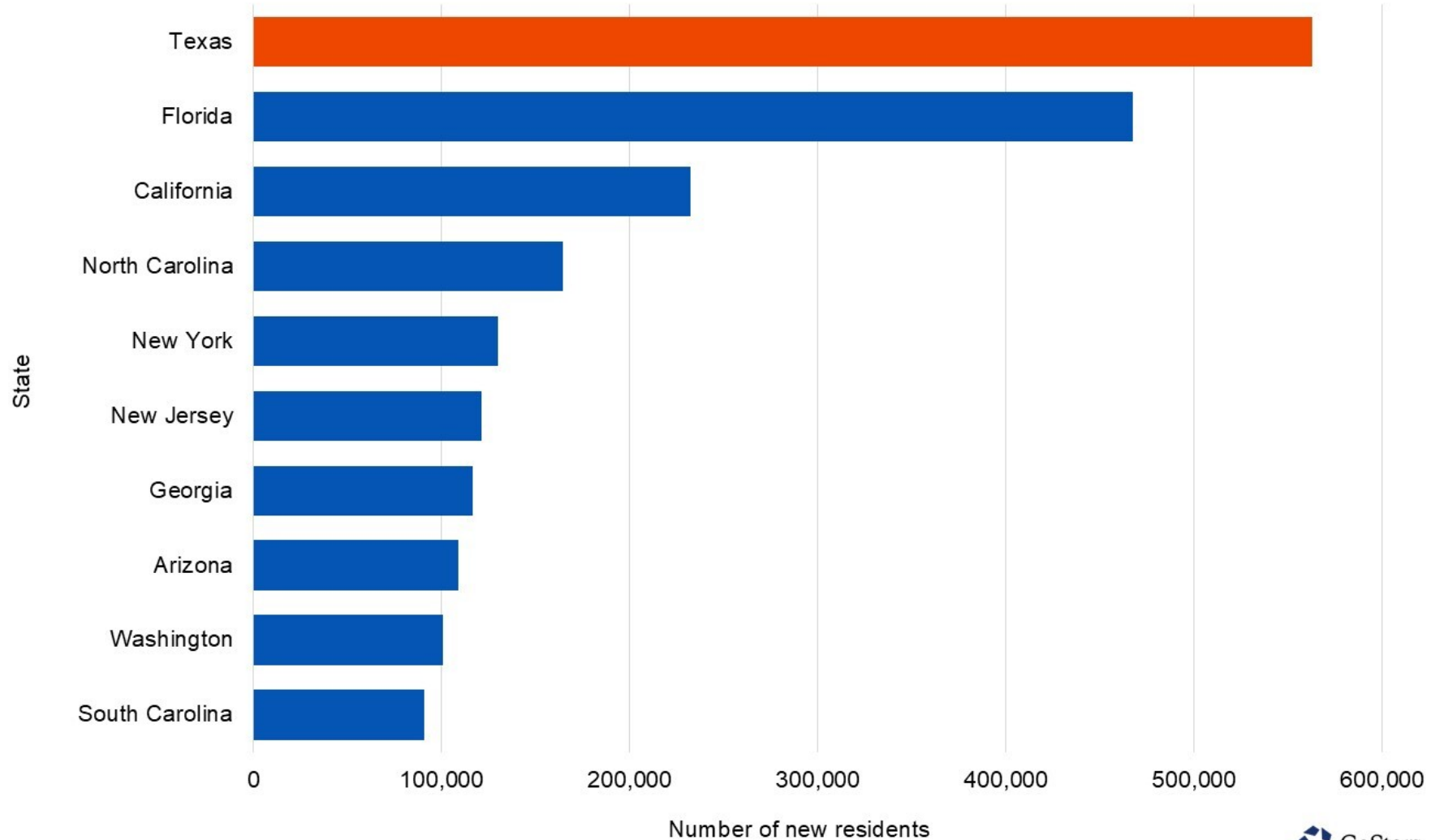




What's in the news?

- Supply shortages
- Contamination
- Excessive growth
- Boil Water Notices
- Politics and Scandals

Texas added over 562,000 new residents last year

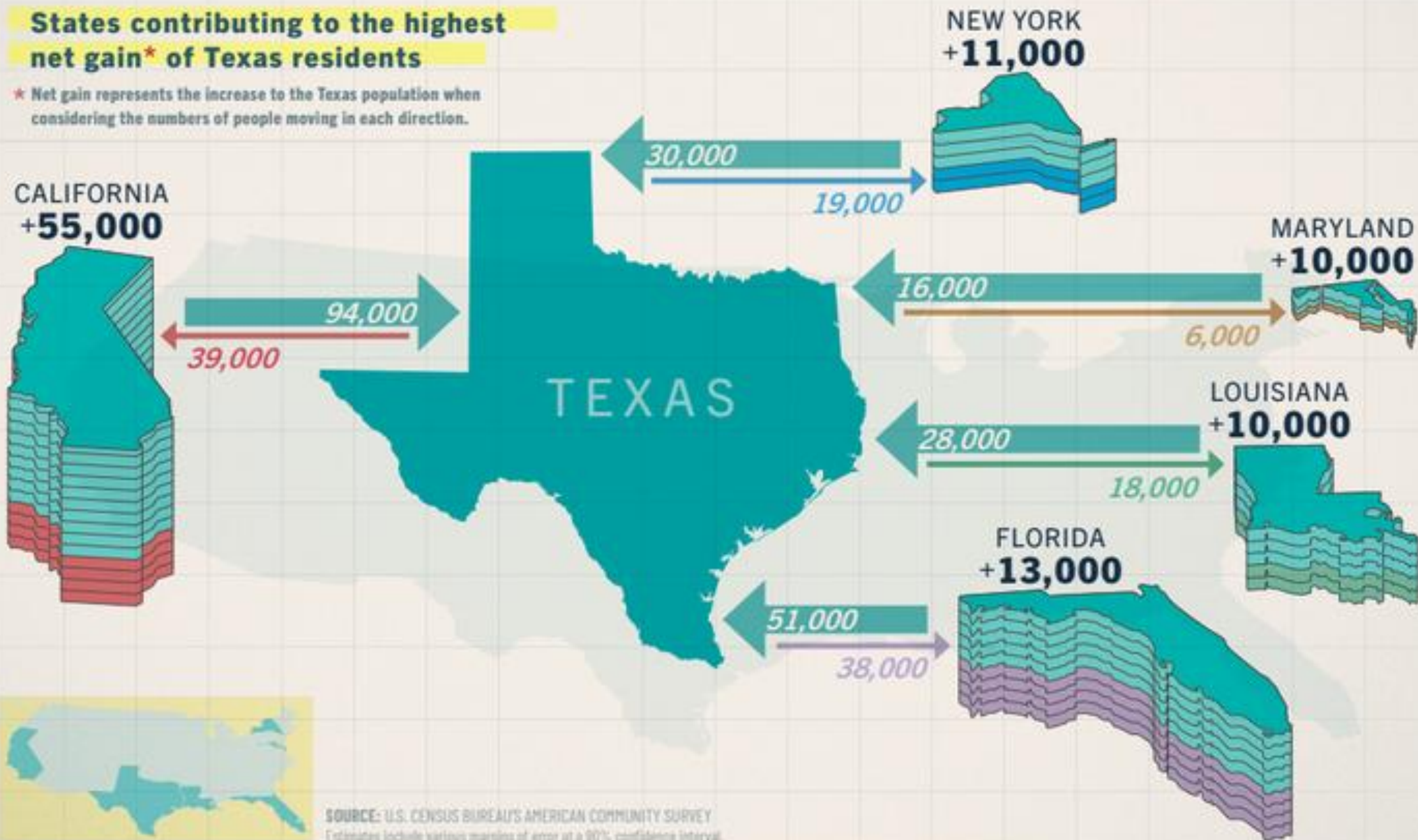


Source: CoStar, U.S. Census Bureau, December 2024



States contributing to the highest net gain* of Texas residents

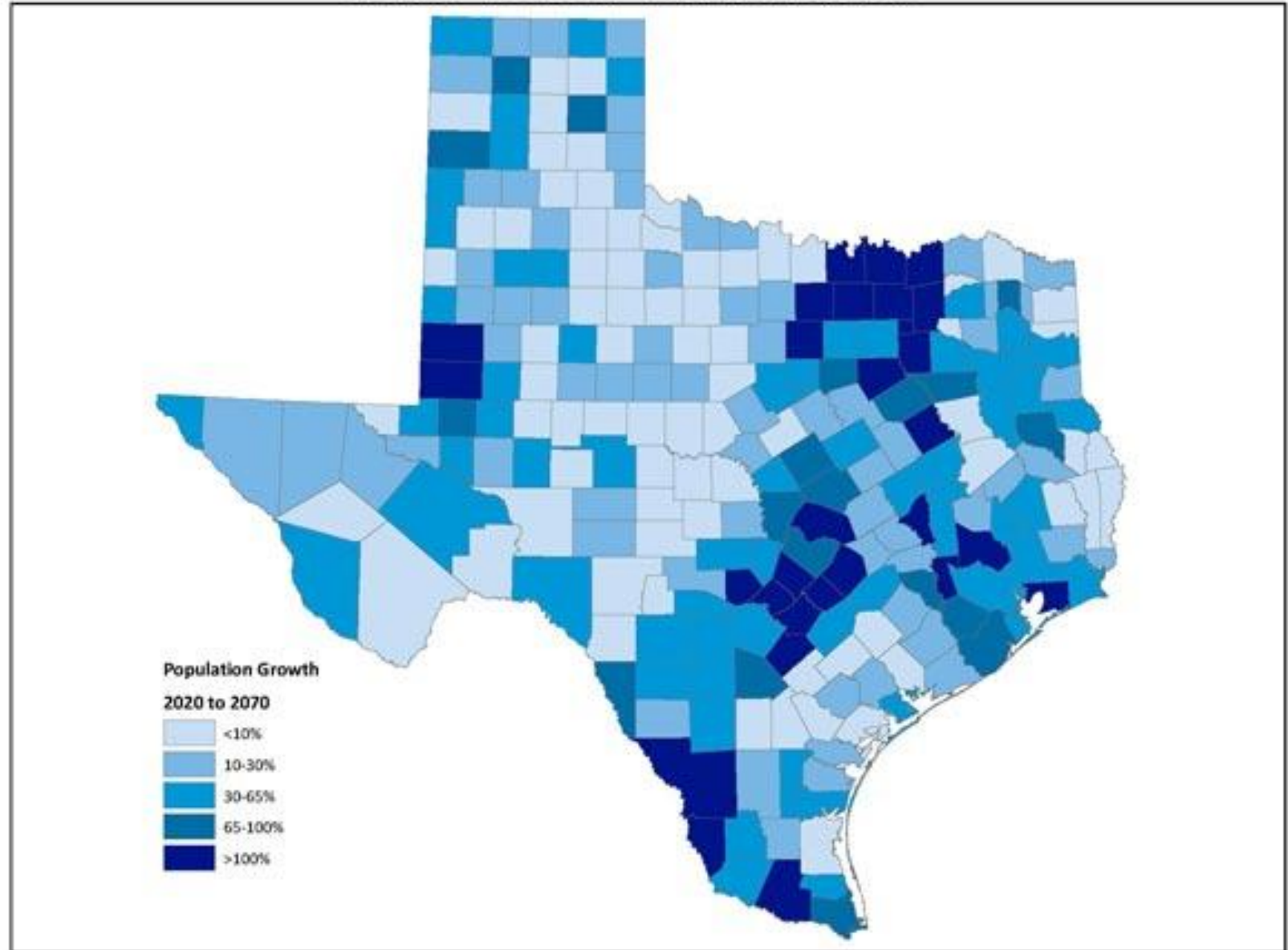
* Net gain represents the increase to the Texas population when considering the numbers of people moving in each direction.

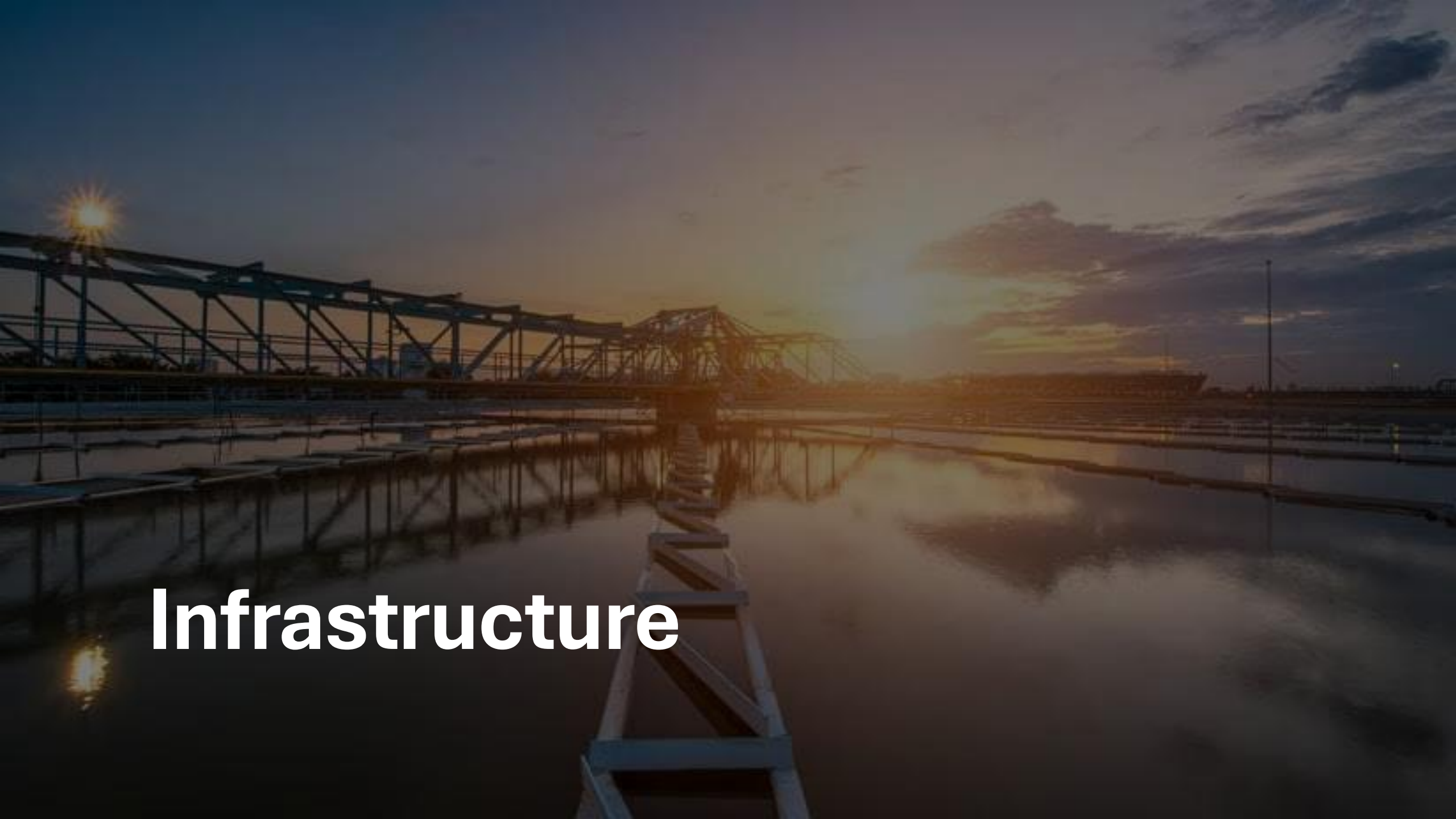


SOURCE: U.S. CENSUS BUREAU'S AMERICAN COMMUNITY SURVEY
Estimates include various margins of error at a 90% confidence interval.

Where are they going?

2021 RWP & 2022 SWP Population Projections





Infrastructure

How Long Will it Last?		
Typical Life Expectancies of Water System Equipment		
Component	Worksheet	Useful Life
Wells and Springs	Drinking Water Source	25 years
Intake Structures		35 years
Pumping Equipment		10 years
Disinfection Equipment	Treatment System	5 years
Hydropneumatic Tanks	Tanks	10 years
Concrete and Metal Storage Tanks		30 years
Transmission Structures (Pipes)	Distribution System	35 years
Valves	Valves	35 years
Mechanical Valves		15 years
Computer Equipment/Software	Electrical Systems	5 years
Transformers/Switchgears/Wiring		20 years
Motor Controls/Variable Frequency Drives		10 years
Sensors		7 years
Buildings	Buildings	30 years
Service Lines	Service Lines	30 years
Hydrants	Hydrants	40 years

Note: These expected useful lives are drawn from a variety of sources. The estimates assume that assets have been properly maintained. The adjusted useful life of an asset will be equal to or less than typical useful life.

- **Aging assets**

- 70% over 20 years
- 57% over 40 years

- **Amount of water line**

- Over 800,000 miles or 4.4 billion feet

- **Installation & Life Expectancy**

- How the old was put in
- How much to replace with new

Minimum Sizes

- The minimum waterline sizes are for domestic flows only and do not consider fire flows.
- Required sizes are based strictly on the number of customers, not on the distances between connections or differences in elevation or the type of pipe.
- No new waterline less than two inches in diameter

CONNECTIONS	MINIMUM DIAMETER
10	2 inches
25	2.5
50	3
100	4
150	5
250	6
>250	8 and larger

TCEQ §290.44(c)



What it takes to get water to you

- Easements (cooperation)
- Line locates
- Trenching & Excavations
- Pipe installation
- Disinfection
- Flushing
- Sampling
- Individual Taps & Meters
- Labor & Fuel
- Time in a day!

New Development

- You're not stopping it anyway, but growth is not bad!
- Assists with rehabilitation of major assets
- Generates additional revenues for the utility
- Helps divide future & fixed costs with economies of scale
- Bolsters local economy
- But does take a hit on resources....



The Human Infrastructure

- High retirement on the rise
- Lack of career exposure to the industry
- Water/Wastewater isn't sexy

....But it's truly meaningful and valued work for those called to public service





Water Supply

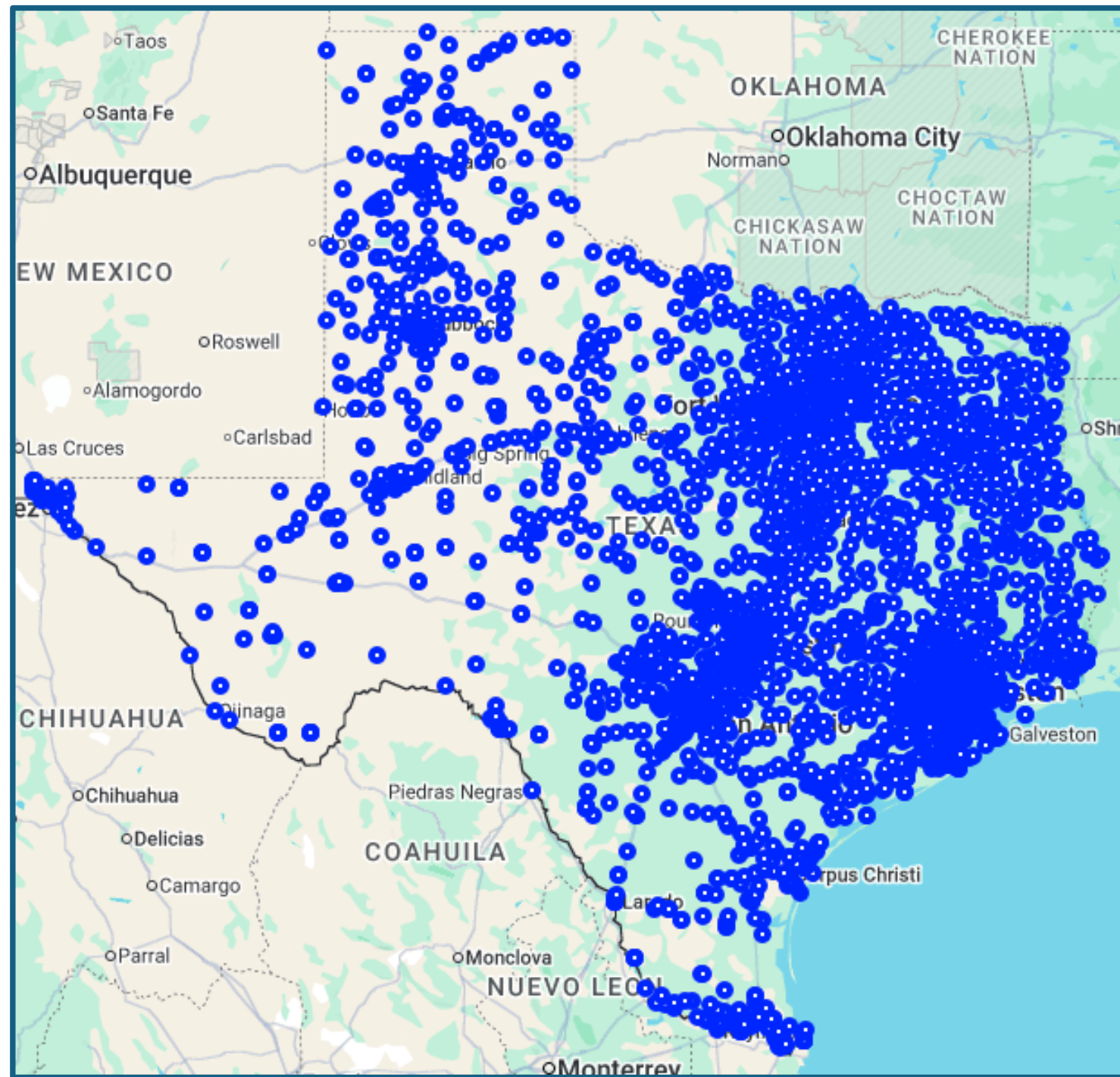
- Ogallala and Edwards-Trinity expected to decline 25% by 2070
- South reliant on the Rio Grande
- East Texas running out of permitted water rights
- Record droughts
- Increased demand from municipal, agriculture, and industrial/commercial use



7,000+ Public Water Supplies

~4,700 Community Water Systems

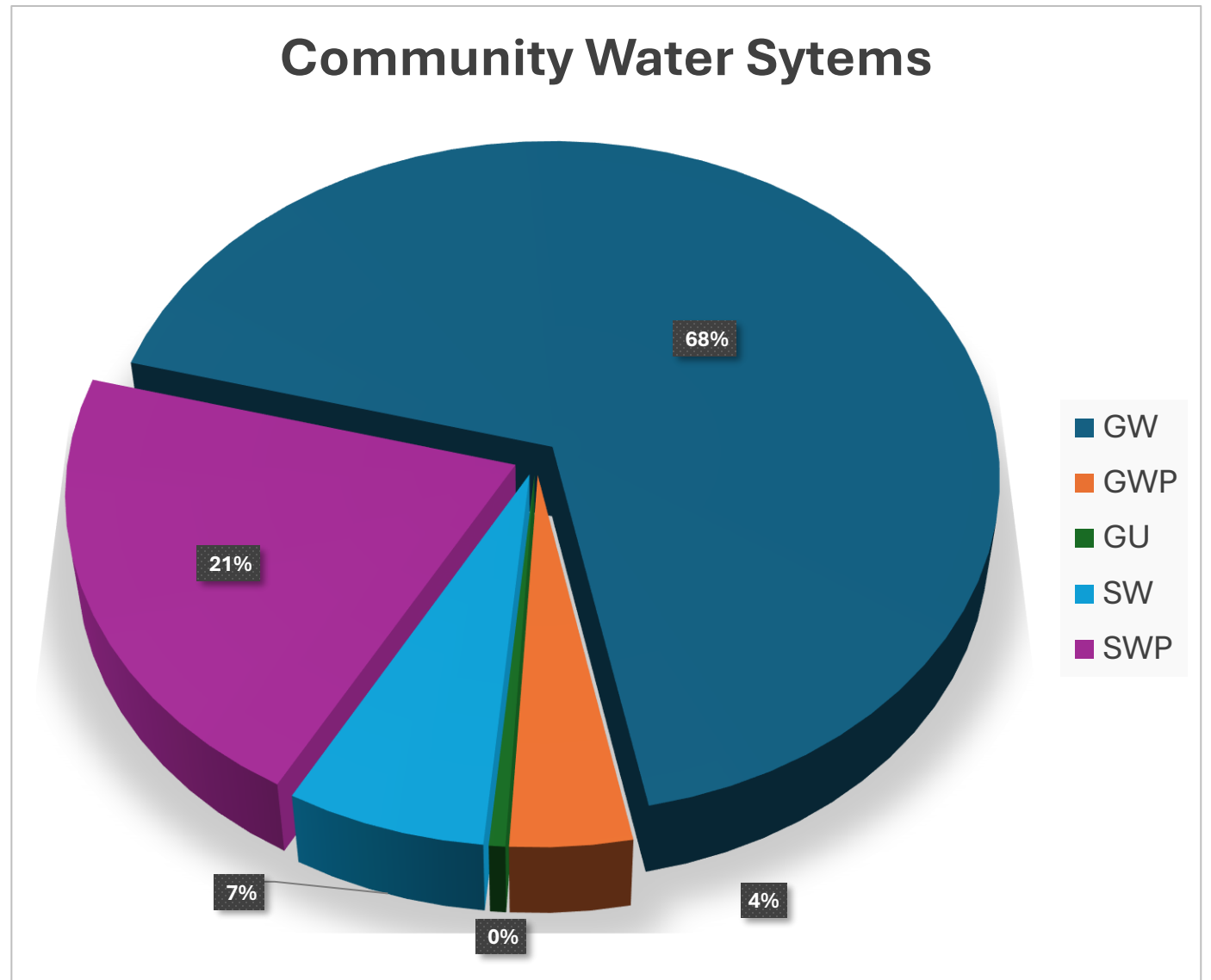
TWDB has records of over 140,000 water wells, with estimates of over 1.75 million wells drilled in Texas since the 1900



Water System Supply

72% on groundwater

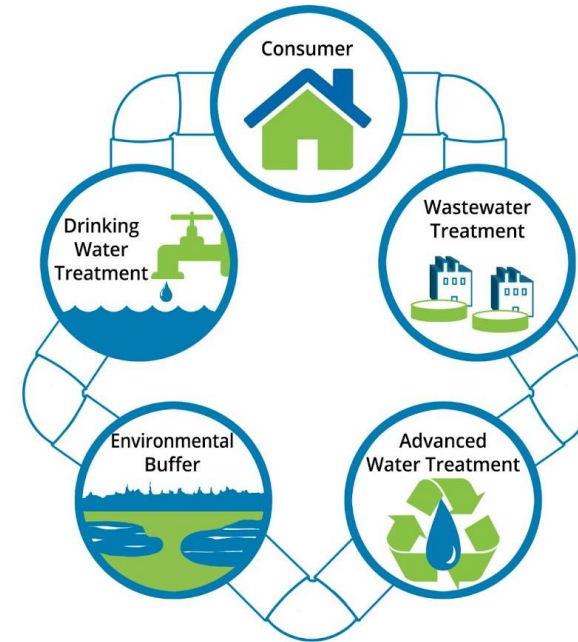
28% Surface Water
(pumped and purchased)



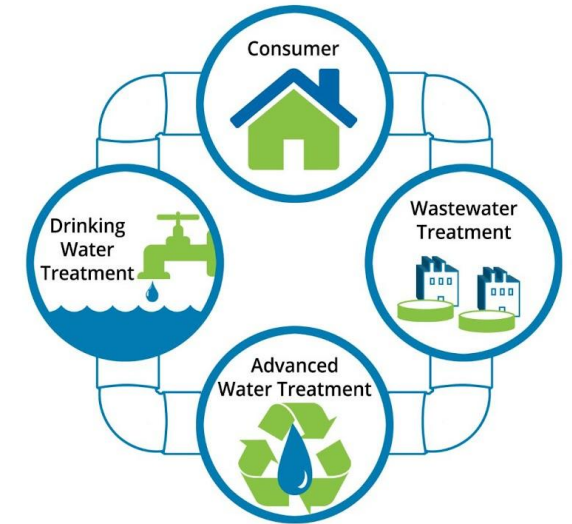
Exploring Solutions

- Regional Projects
- Brackish Desal
- Effluent reuse & Direct reuse
- Freshwater Reservoirs
- Interstate and Intrastate Pipelines
 - But not for capital gains!

Indirect Potable Reuse



Direct Potable Reuse





Public Trust



Utility Challenges & Efficiencies

- Permitted Water Rights
- Increased Regulations
- Advancing Technology
- Cost of Service
- Human Capital
- **Public Trust**

Accountability



Board Meetings

Attend, ask questions,
and share your concerns

Audits



Elections

You elect the
board/council

Responsibility to
represent the
customers, **AND** the
utility



Boil Water Notices

Required by federal and
state rule

Public Education

Conservation

Telling their story

Transparency &
Notifications

Advance customer
engagement



Middle Trinity GCD & TRWA – Private Well Event

Thank You

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