



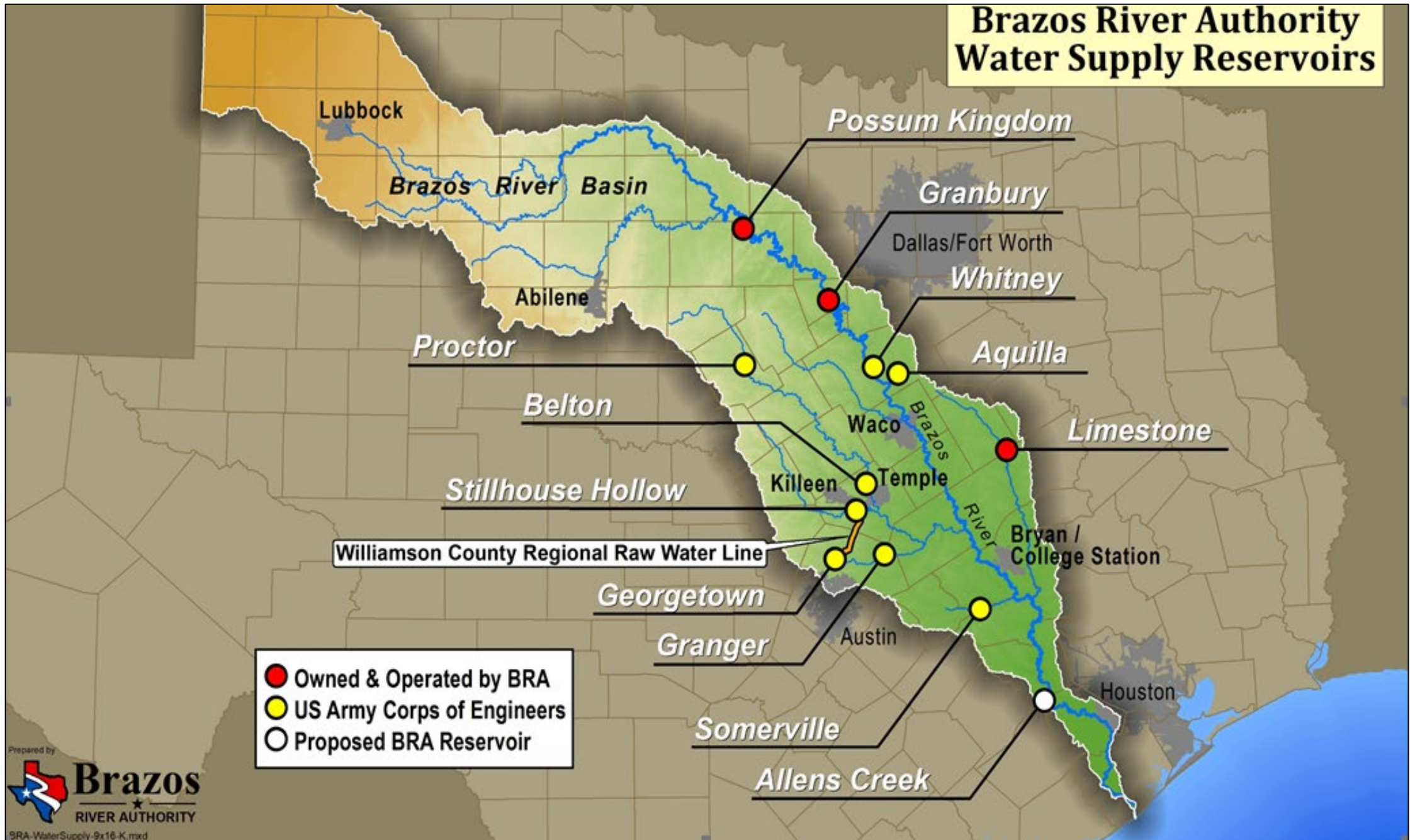
# ***Water Supply***

***Bell County WCID#1 Conservation Workshop,  
February 7, 2024***

***Presented by  
Aaron Abel, Water Services Manager***



# Brazos River Authority Water Supply Reservoirs



- Owned & Operated by BRA
- US Army Corps of Engineers
- Proposed BRA Reservoir

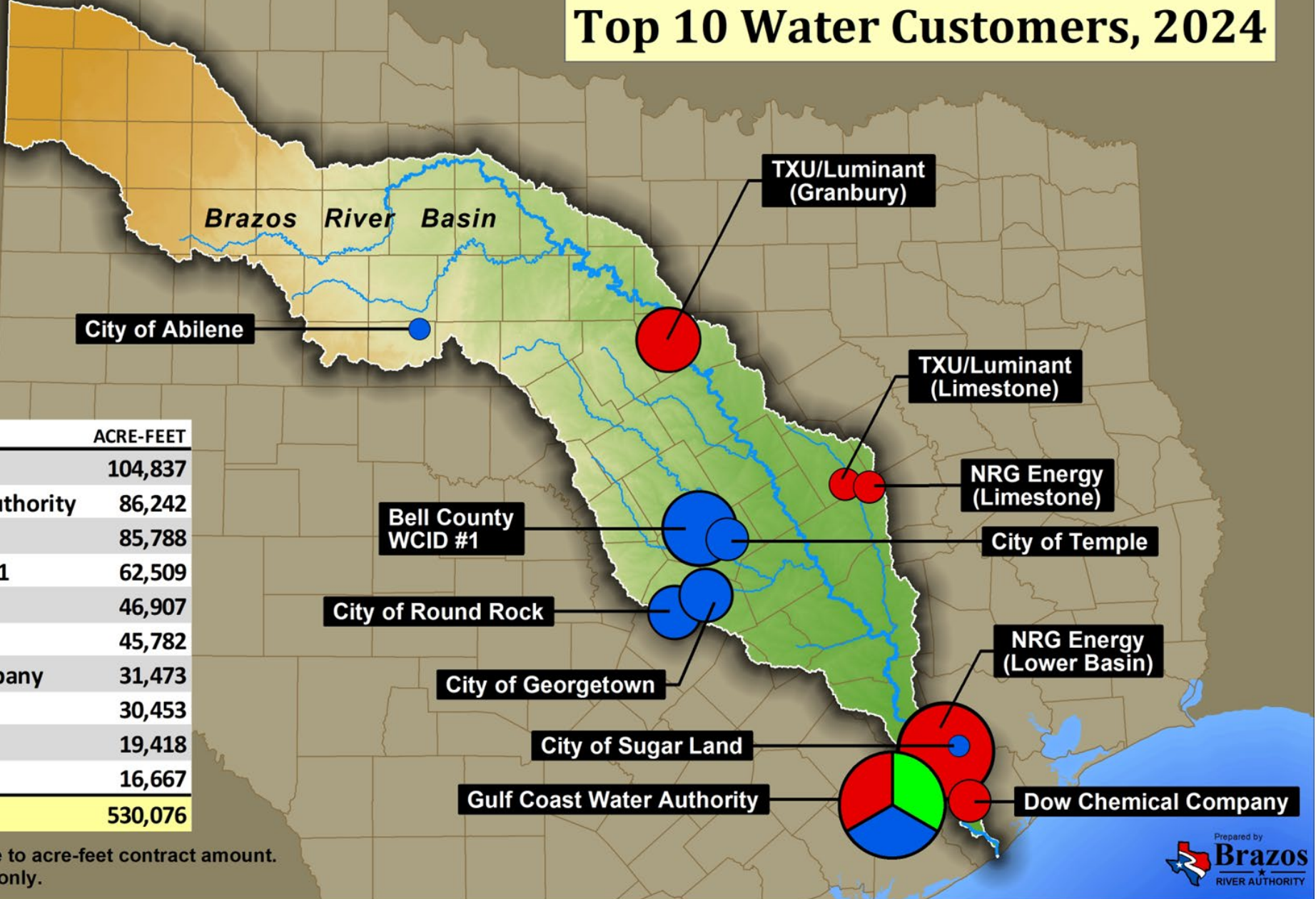


# Top 10 Water Customers, 2024

**Use Type**

- Municipal
- Industrial
- Irrigation

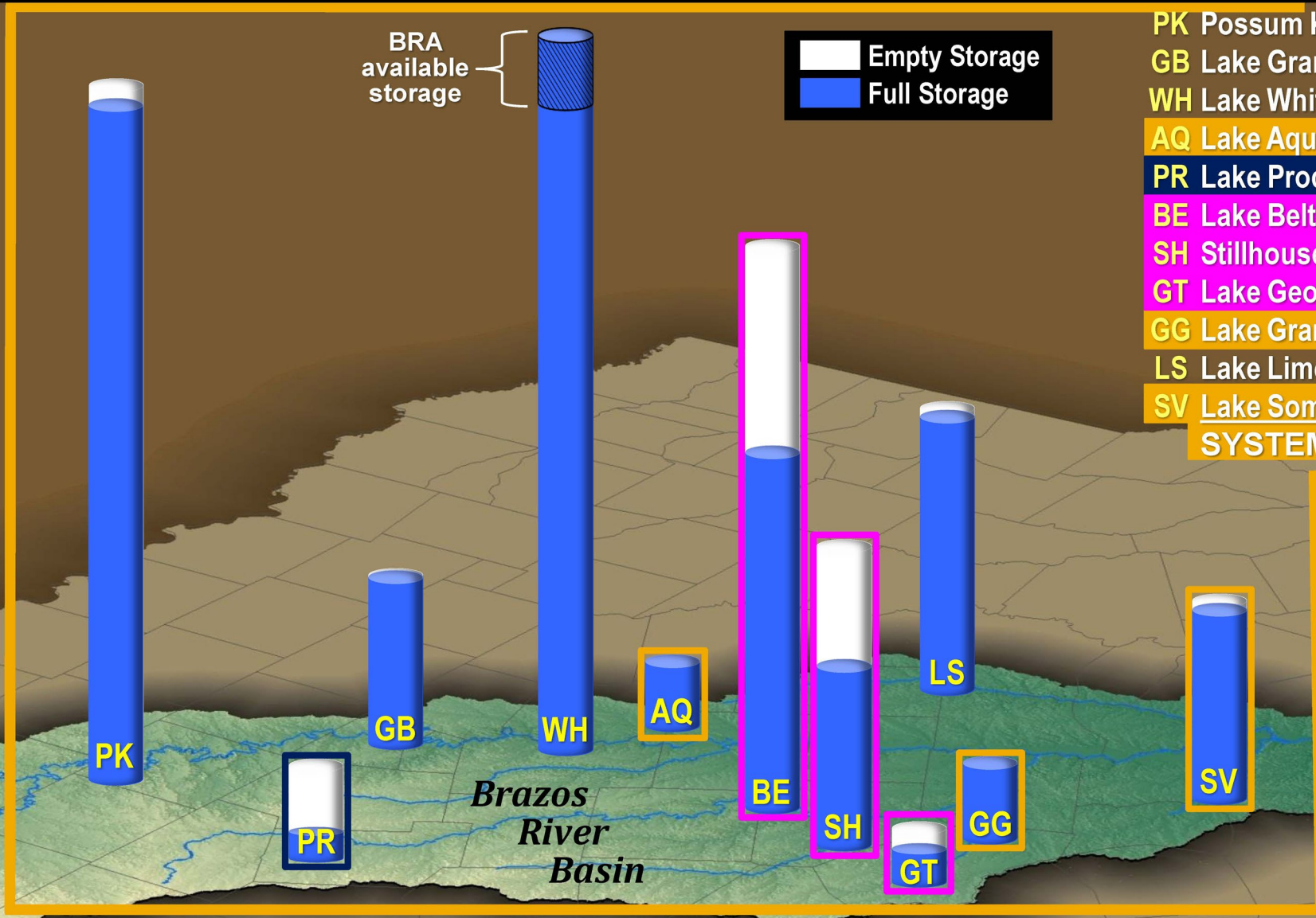
CUSTOMER	ACRE-FEET
NRG Energy	104,837
Gulf Coast Water Authority	86,242
TXU/Luminant	85,788
Bell County WCID # 1	62,509
City of Georgetown	46,907
City of Round Rock	45,782
Dow Chemical Company	31,473
City of Temple	30,453
City of Abilene	19,418
City of Sugar Land	16,667
<b>TOTAL</b>	<b>530,076</b>



Circle size is proportionate to acre-feet contract amount.  
 Map is for general display only.

## Combined Storage of Authority System is Below Stage 1 Drought Watch Storage Trigger

	% Full	2 Week % Change	Drawdown**	2 Week Change (ft)
PK Possum Kingdom Lake	97%	+ 1%	- 0.8	+0.3
GB Lake Granbury	98%	0%	- 0.3	0.0
WH Lake Whitney	*104%	+1%	0.0	+0.3
AQ Lake Aquilla	107%	+11%	0.0	+1.6
PR Lake Proctor	28%	0%	- 12.8	0.0
BE Lake Belton	64%	+3%	- 14.2	+1.2
SH Stillhouse Hollow Lake	60%	+1%	- 17.3	+0.7
GT Lake Georgetown	62%	+6%	- 12.5	+2.6
GG Lake Granger	123%	+26%	0.0	+2.9
LS Lake Limestone	97%	+18%	- 0.4	+3.2
SV Lake Somerville	95%	+35%	- 0.7	+5.3
<b>SYSTEM TOTAL</b>	<b>83%</b>	<b>+6%</b>		



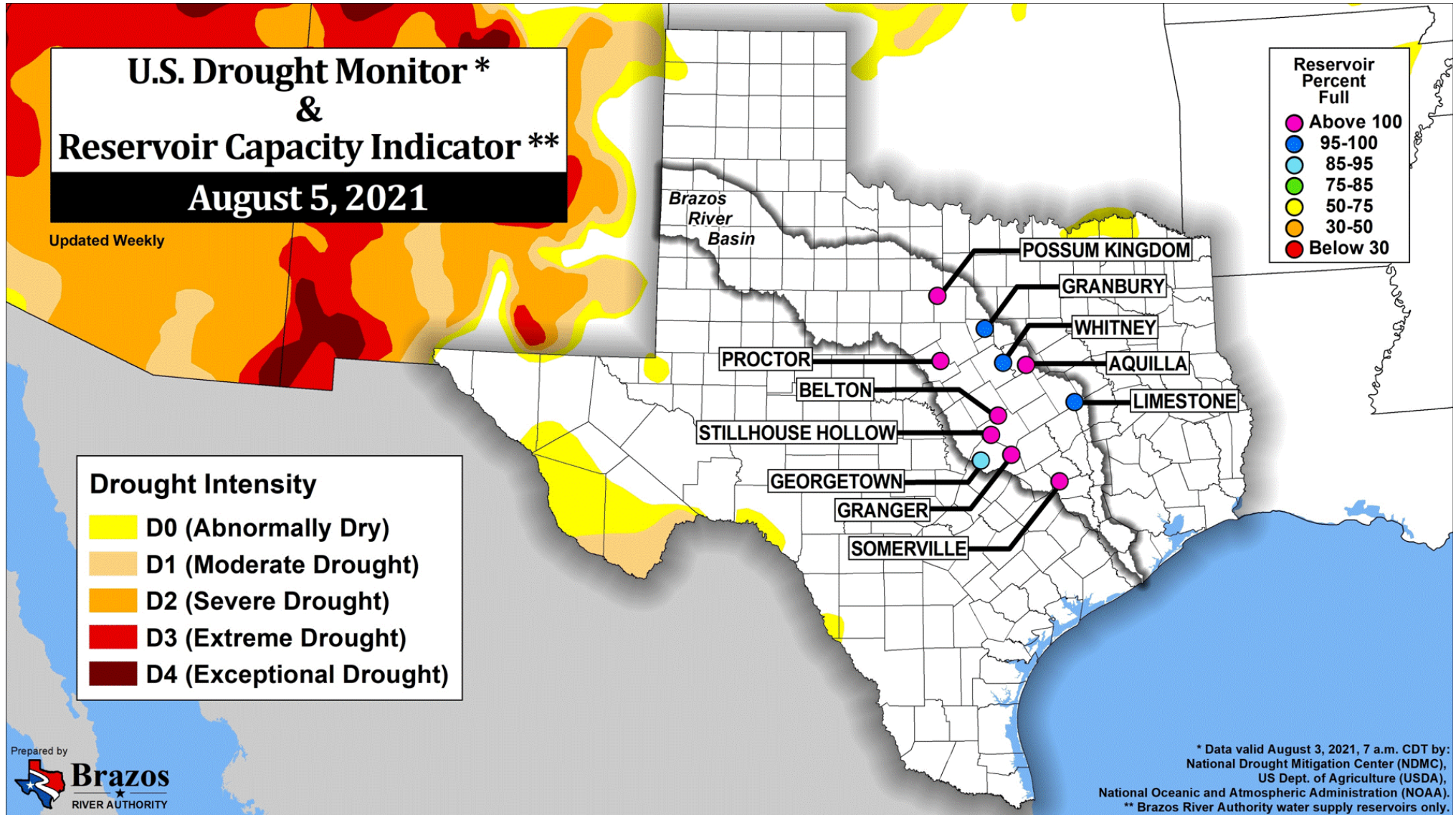
\* Total Lake Whitney storage.  
BRA available storage is 100% full  
\*\* Feet below full

- Stage 1 Drought Watch
- Stage 2 Drought Warning
- Stage 3 Drought Emergency
- Stage 4 Pro-rata Curtailment



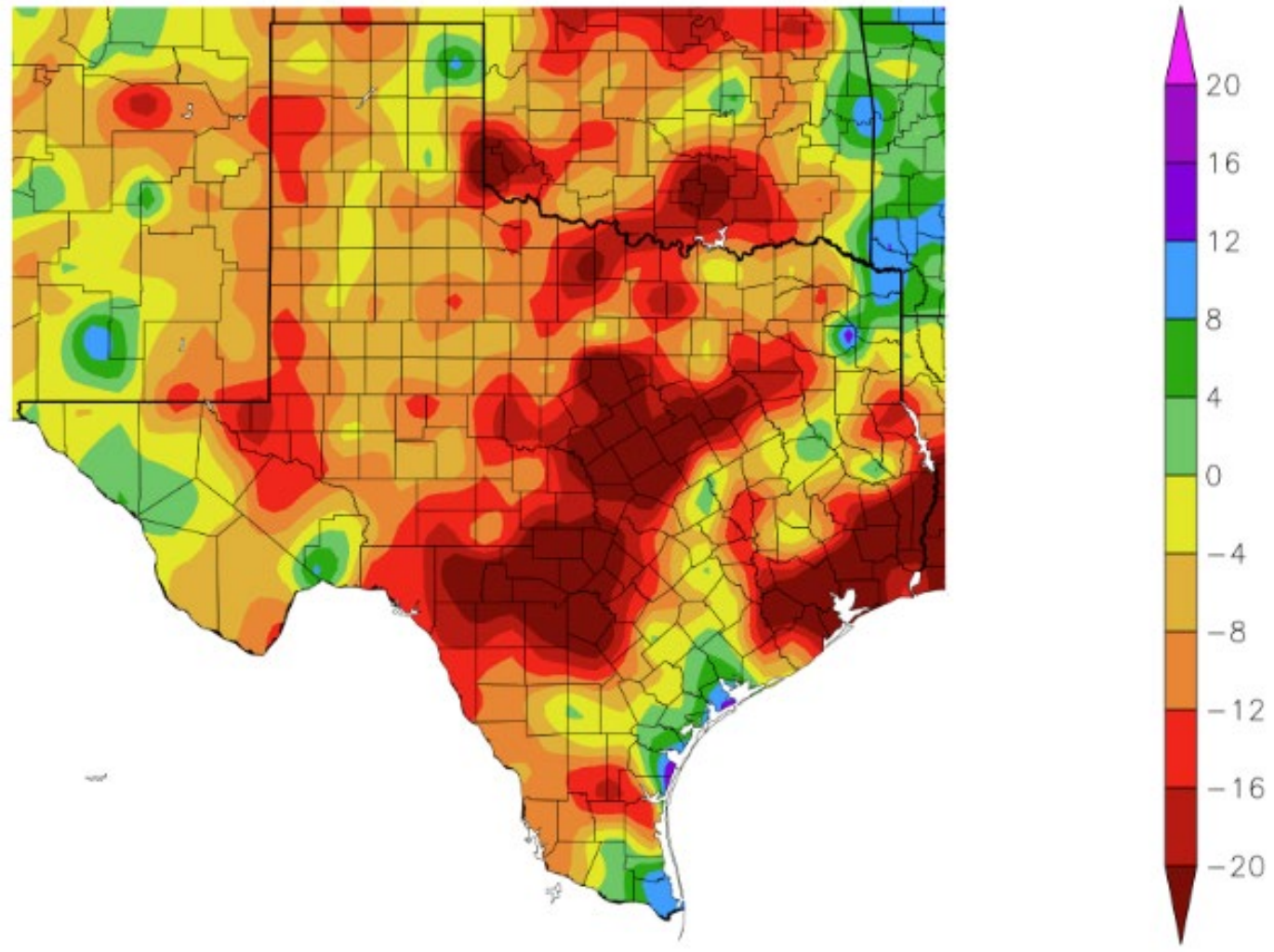


# 2021-2024 Drought Evolution





# Departure from Normal Precipitation (in) 2/2/2021 - 2/1/2024

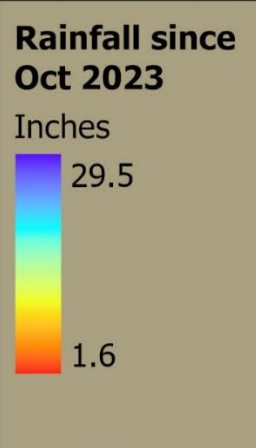
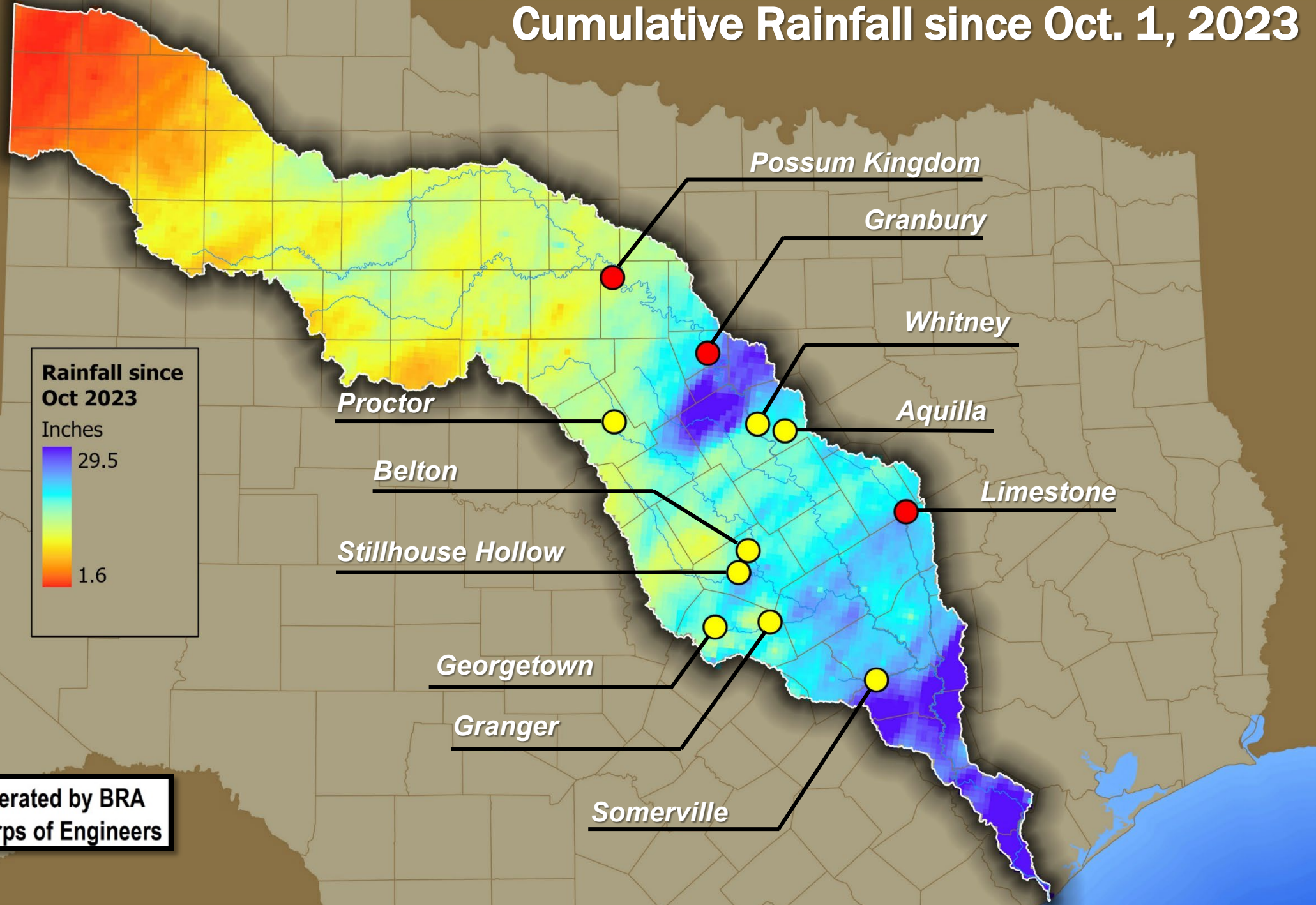


High Plains Regional Climate Center: <https://hprcc.unl.edu/>



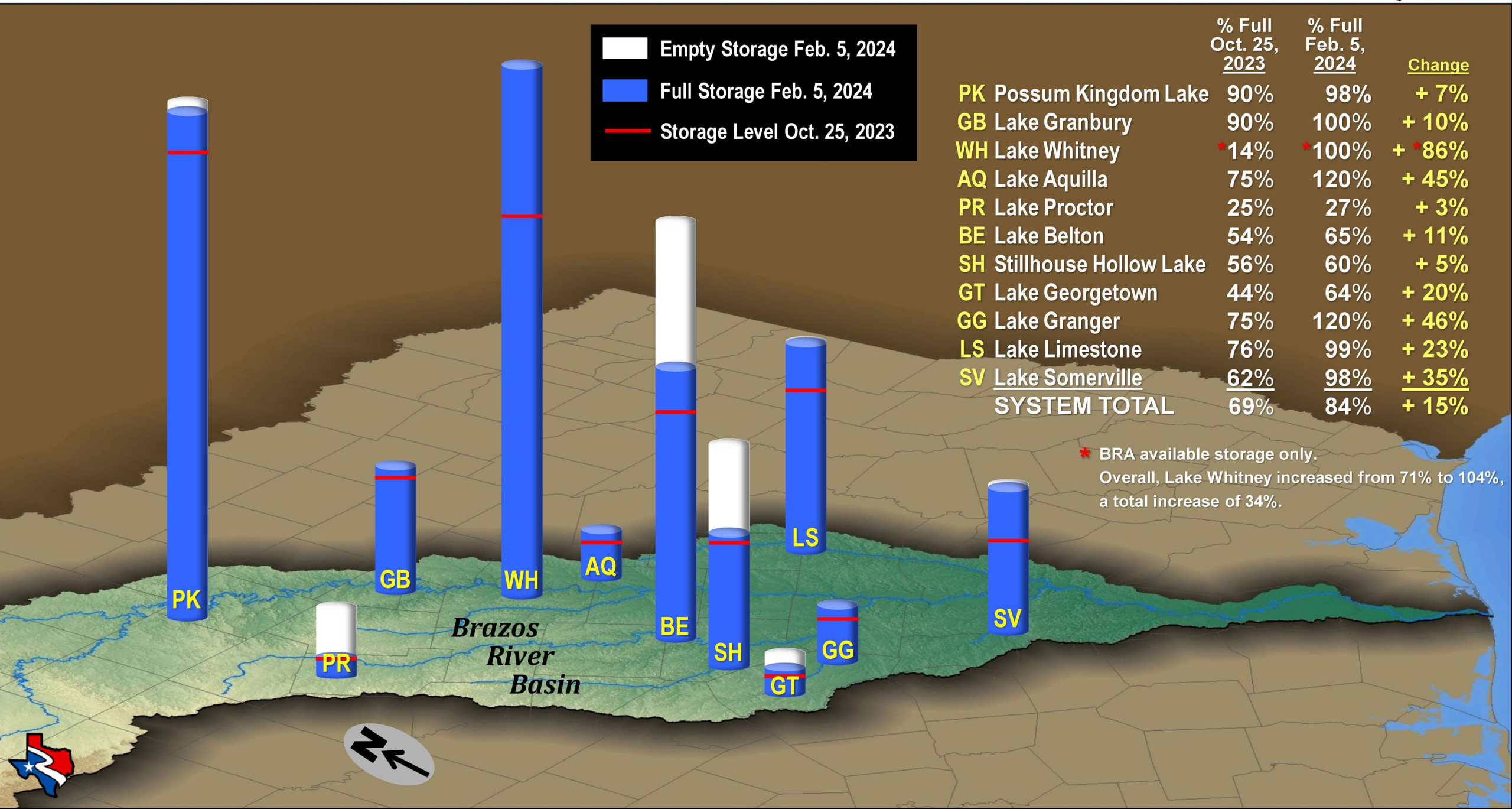
Brazos River Authority

# Cumulative Rainfall since Oct. 1, 2023



- Owned & Operated by BRA
- US Army Corps of Engineers

# Reservoir Capacity "PERCENT FULL" : Comparing October 25, 2023 to February 5, 2024



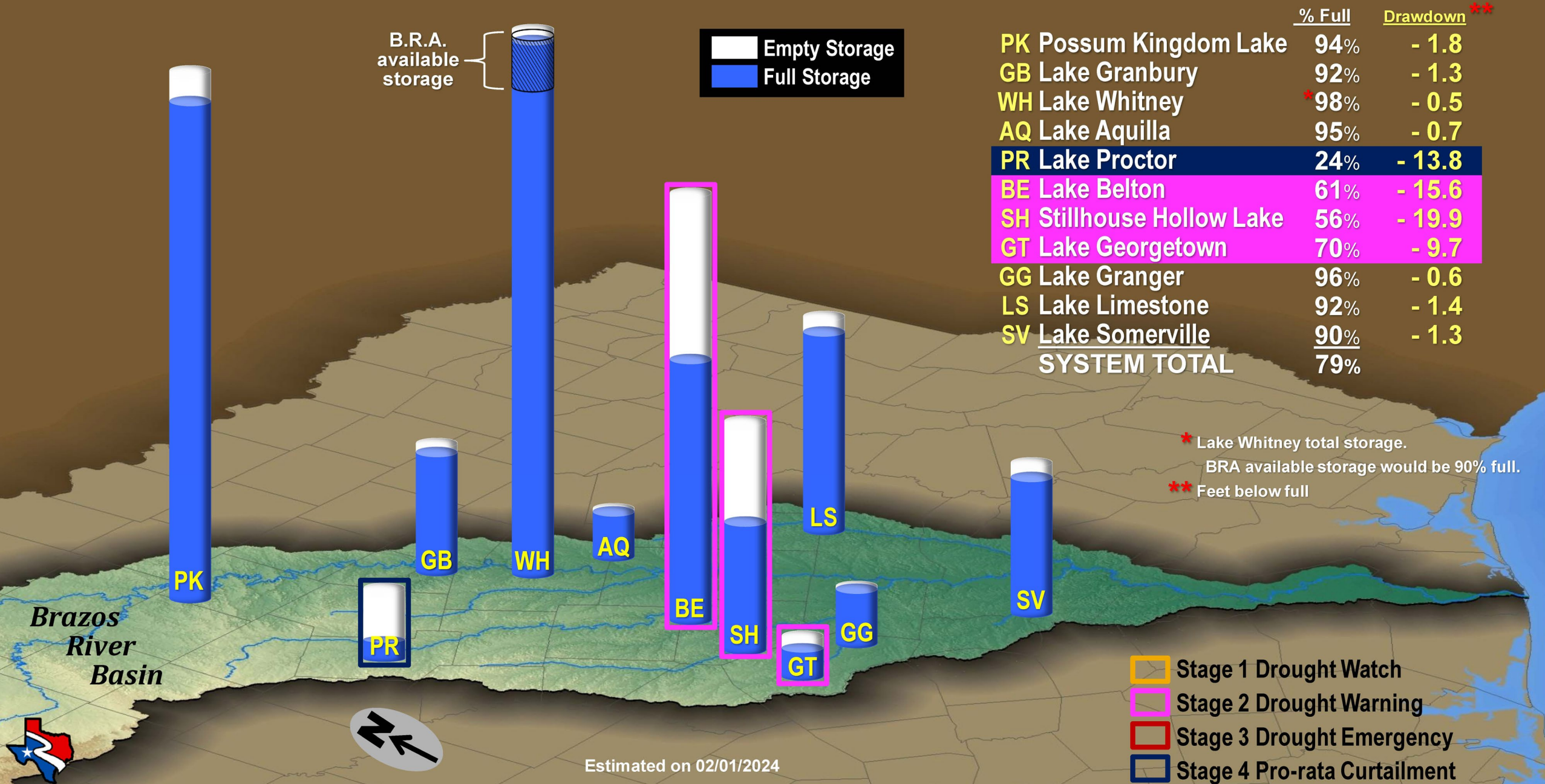
Empty Storage Feb. 5, 2024  
 Full Storage Feb. 5, 2024  
 Storage Level Oct. 25, 2023

	% Full Oct. 25, 2023	% Full Feb. 5, 2024	Change
<b>PK</b> Possum Kingdom Lake	90%	98%	+ 7%
<b>GB</b> Lake Granbury	90%	100%	+ 10%
<b>WH</b> Lake Whitney	*14%	*100%	+ *86%
<b>AQ</b> Lake Aquilla	75%	120%	+ 45%
<b>PR</b> Lake Proctor	25%	27%	+ 3%
<b>BE</b> Lake Belton	54%	65%	+ 11%
<b>SH</b> Stillhouse Hollow Lake	56%	60%	+ 5%
<b>GT</b> Lake Georgetown	44%	64%	+ 20%
<b>GG</b> Lake Granger	75%	120%	+ 46%
<b>LS</b> Lake Limestone	76%	99%	+ 23%
<b>SV</b> Lake Somerville	62%	98%	+ 35%
<b>SYSTEM TOTAL</b>	69%	84%	+ 15%

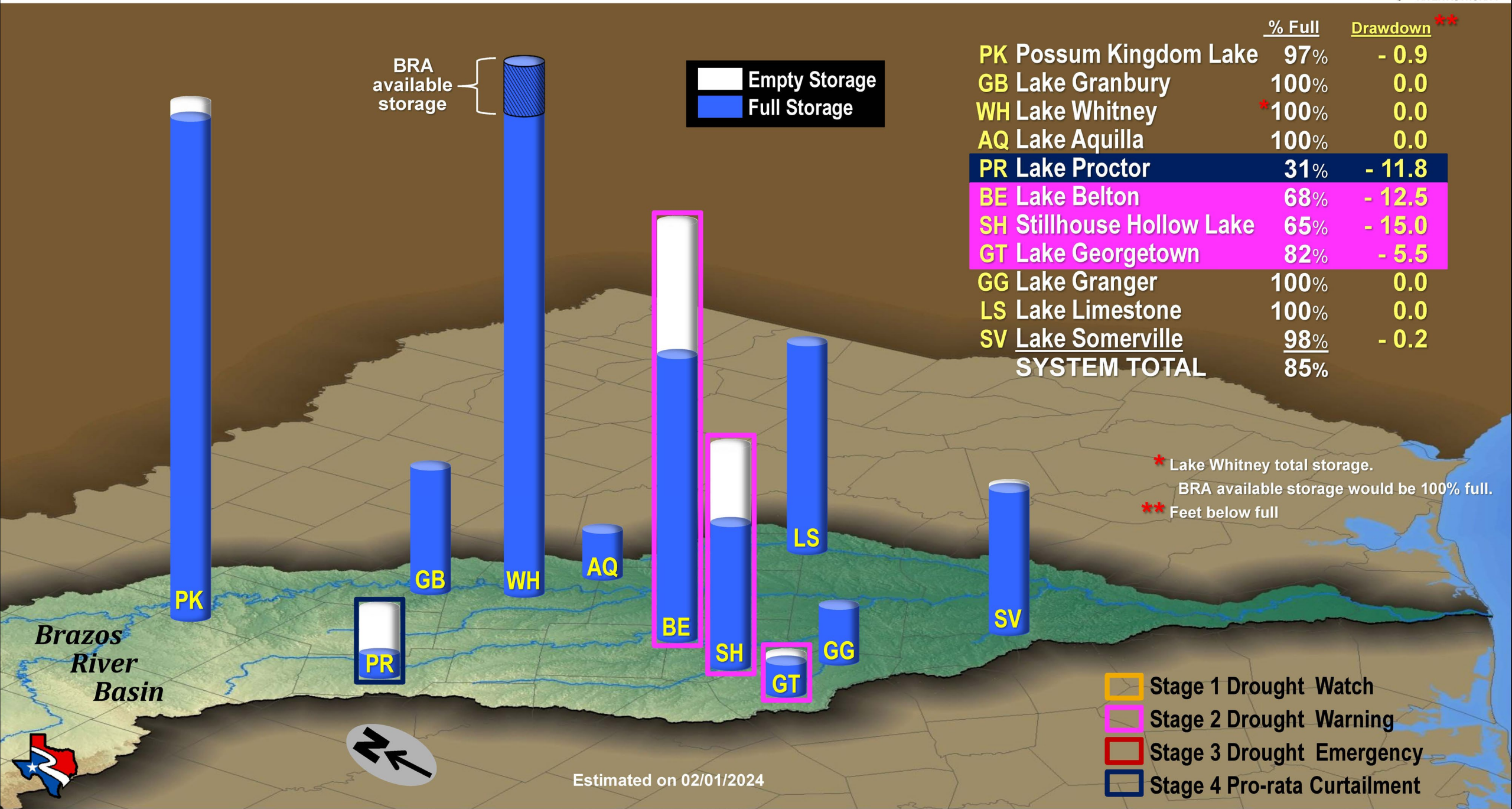
\* BRA available storage only.  
 Overall, Lake Whitney increased from 71% to 104%, a total increase of 34%.



# Projected Reservoir Status for March 31, 2024 (based on minimum inflows and high evaporation)



# Projected Reservoir Status for March 31, 2024 (based on normal inflows and normal evaporation)



BRA available storage

Empty Storage  
Full Storage

	% Full	Drawdown**
PK Possum Kingdom Lake	97%	- 0.9
GB Lake Granbury	100%	0.0
WH Lake Whitney	*100%	0.0
AQ Lake Aquilla	100%	0.0
PR Lake Proctor	31%	- 11.8
BE Lake Belton	68%	- 12.5
SH Stillhouse Hollow Lake	65%	- 15.0
GT Lake Georgetown	82%	- 5.5
GG Lake Granger	100%	0.0
LS Lake Limestone	100%	0.0
SV Lake Somerville	98%	- 0.2
<b>SYSTEM TOTAL</b>	<b>85%</b>	

\* Lake Whitney total storage.  
BRA available storage would be 100% full.  
\*\* Feet below full

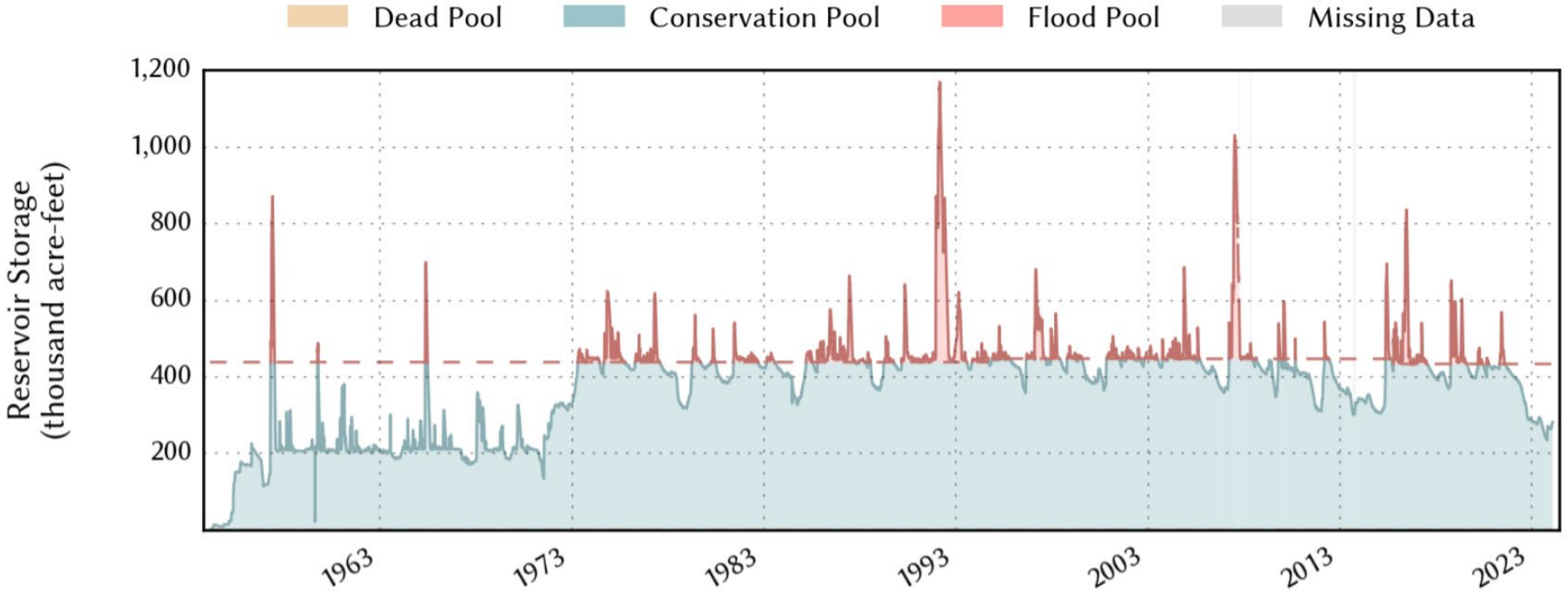
- Stage 1 Drought Watch
- Stage 2 Drought Warning
- Stage 3 Drought Emergency
- Stage 4 Pro-rata Curtailment

Estimated on 02/01/2024





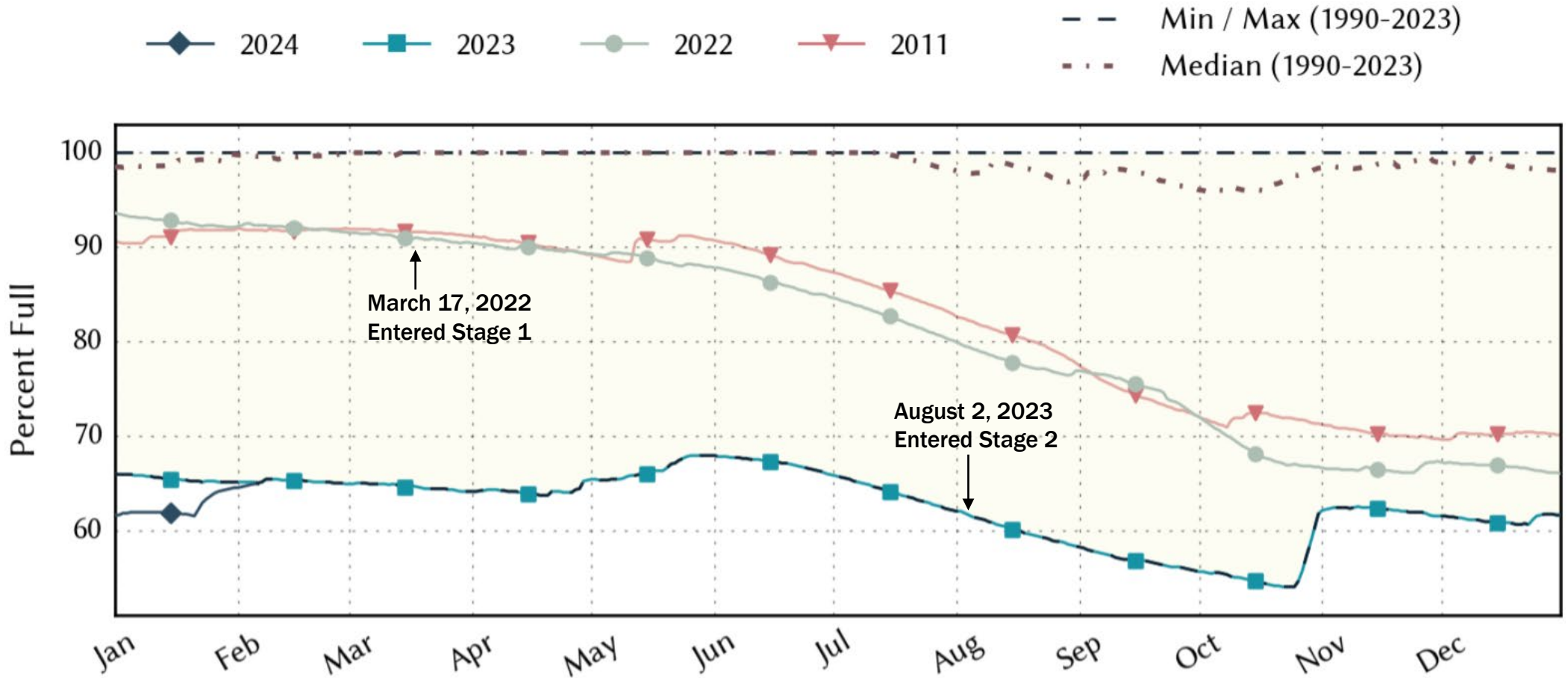
Belton Lake: 64.9% full as of 2024-02-06



Texas Water Development Board, Water Data For Texas, <https://waterdatafortexas.org/>



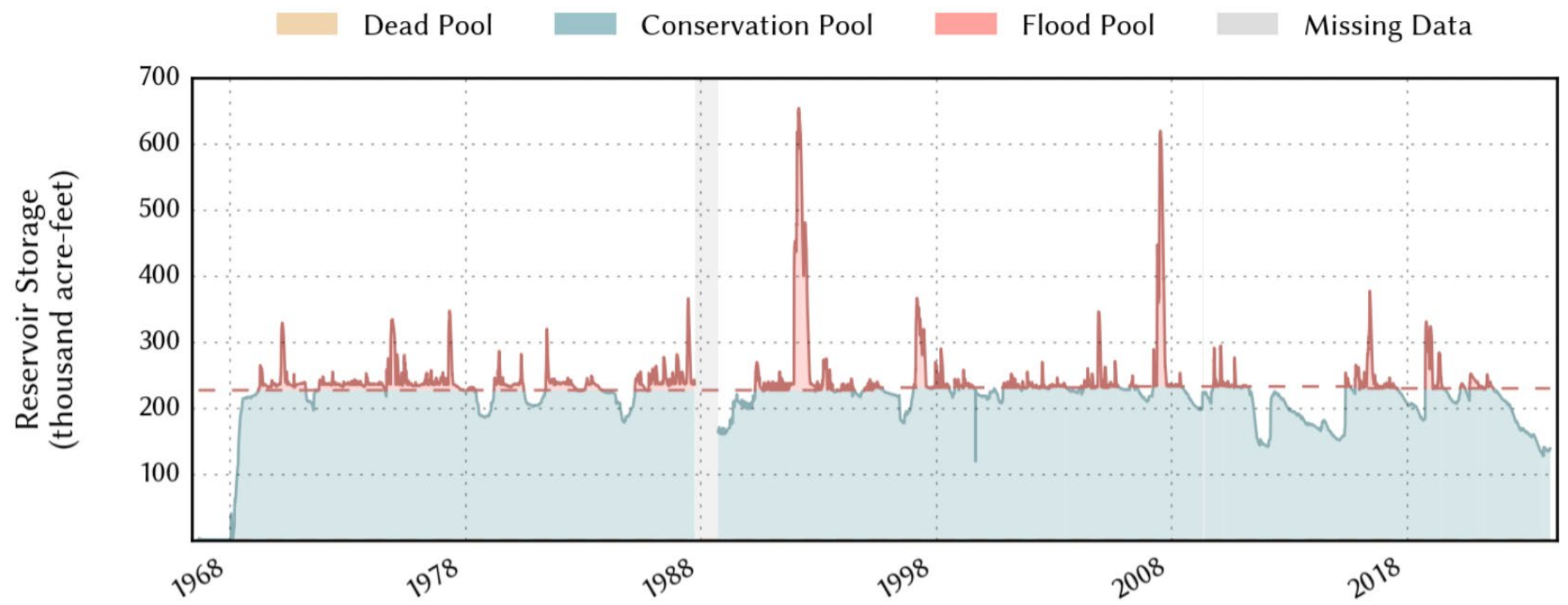
Belton Lake: 64.9% full as of 2024-02-06



Texas Water Development Board, Water Data For Texas, <https://waterdatafortexas.org/>



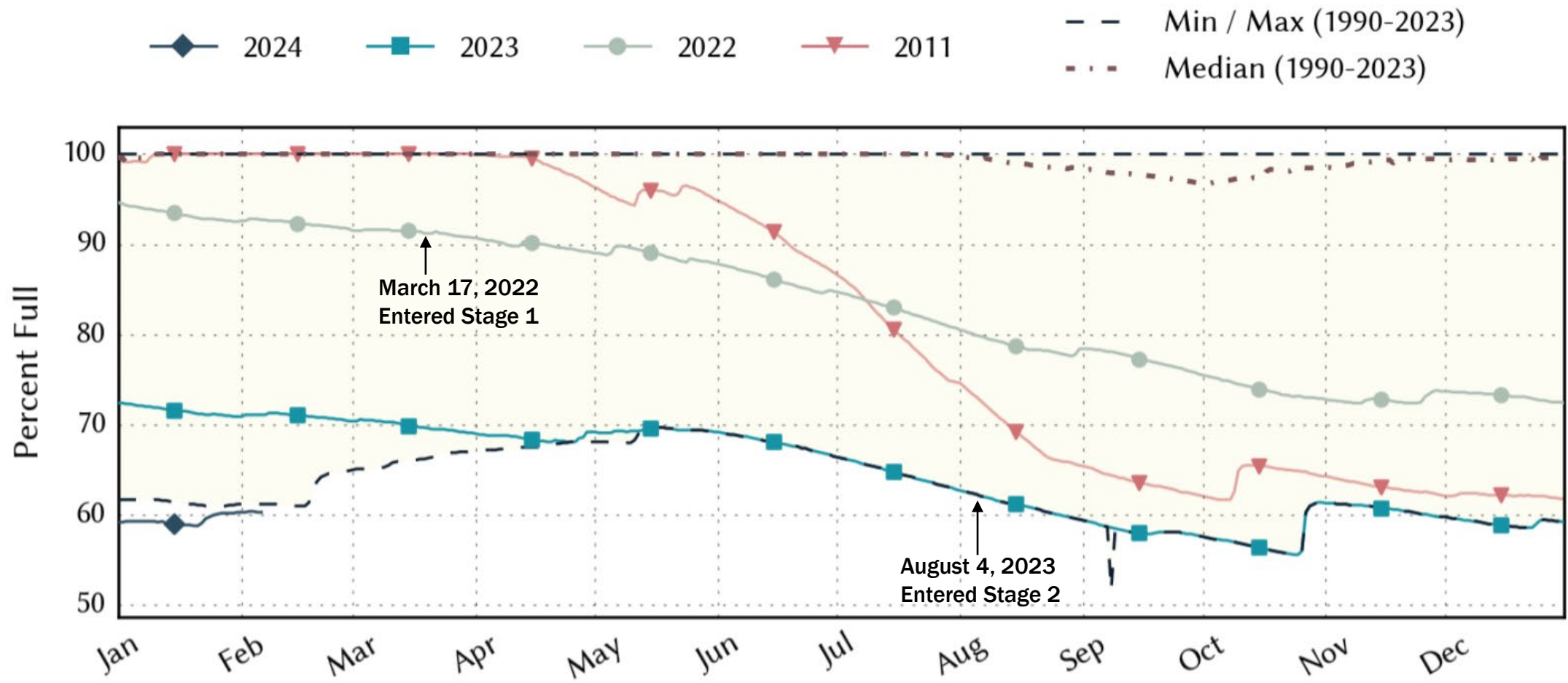
Stillhouse Hollow Lake: 60.3% full as of 2024-02-06



Texas Water Development Board, Water Data For Texas, <https://waterdatafortexas.org/>



Stillhouse Hollow Lake: 60.3% full as of 2024-02-06

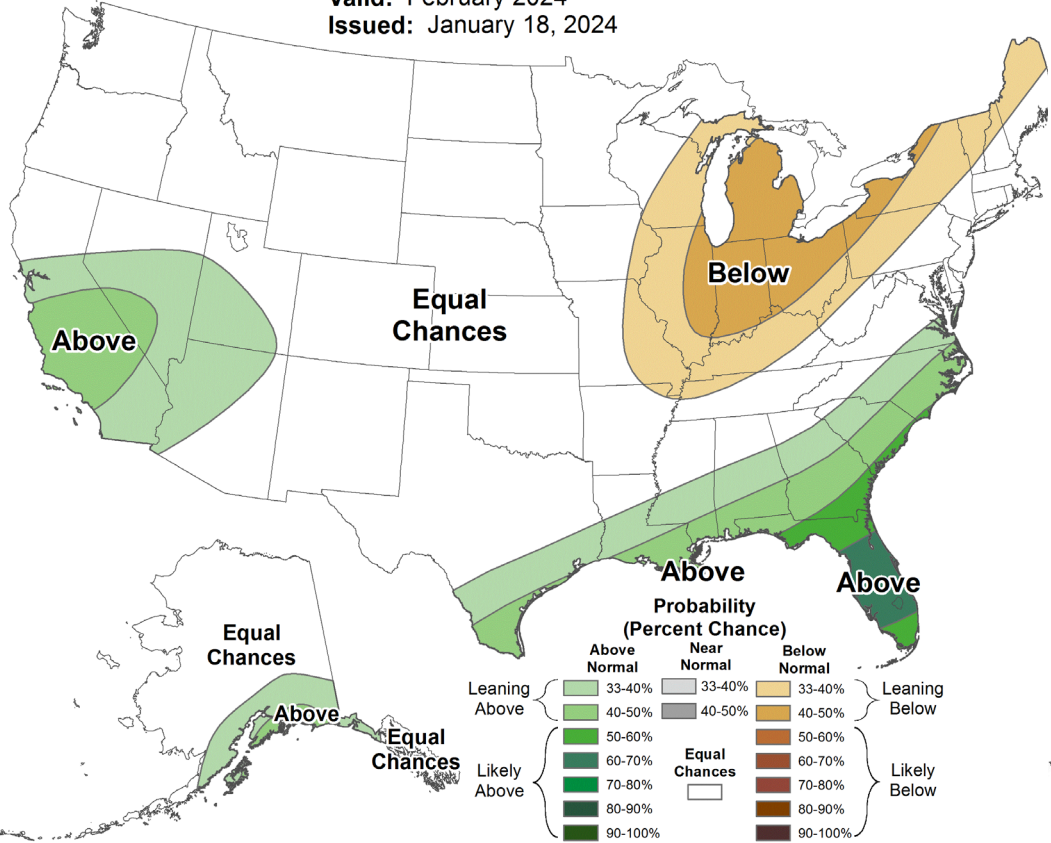


Texas Water Development Board, Water Data For Texas, <https://waterdatafortexas.org/>



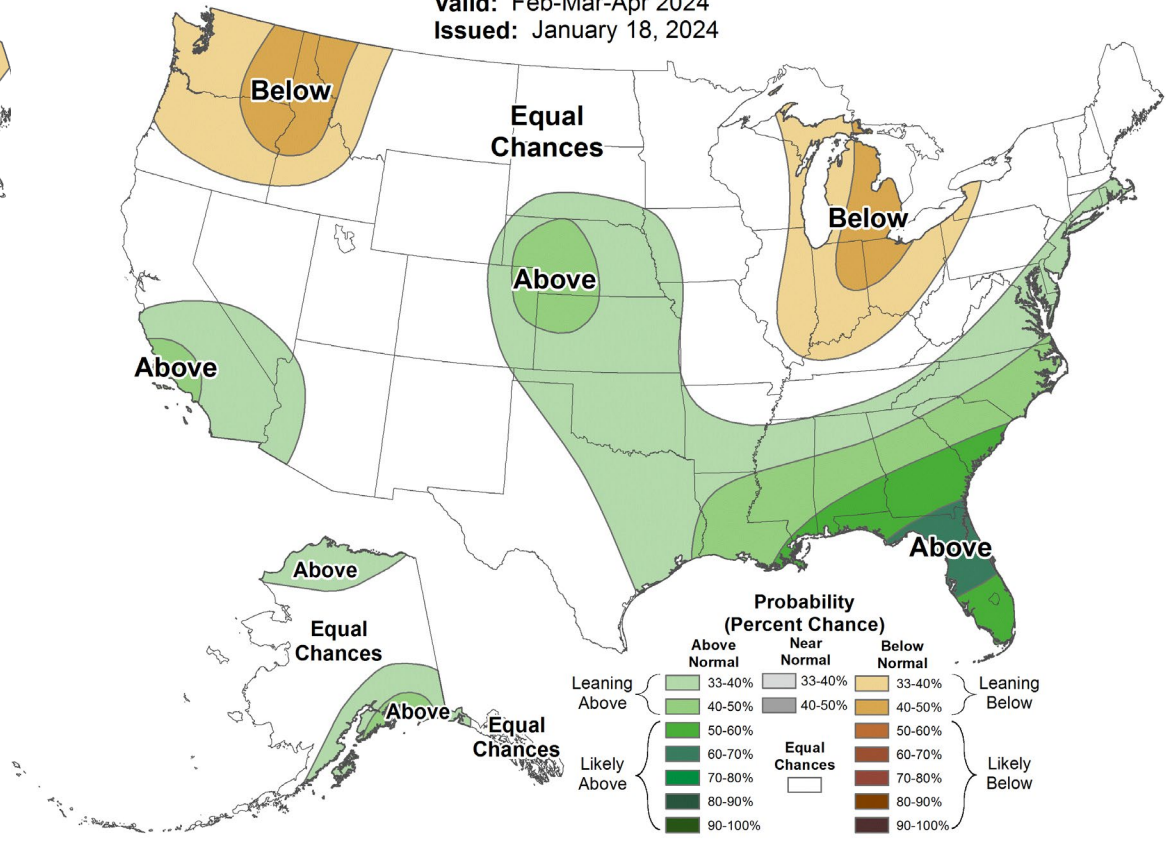
# Monthly Precipitation Outlook

Valid: February 2024  
Issued: January 18, 2024



# Seasonal Precipitation Outlook

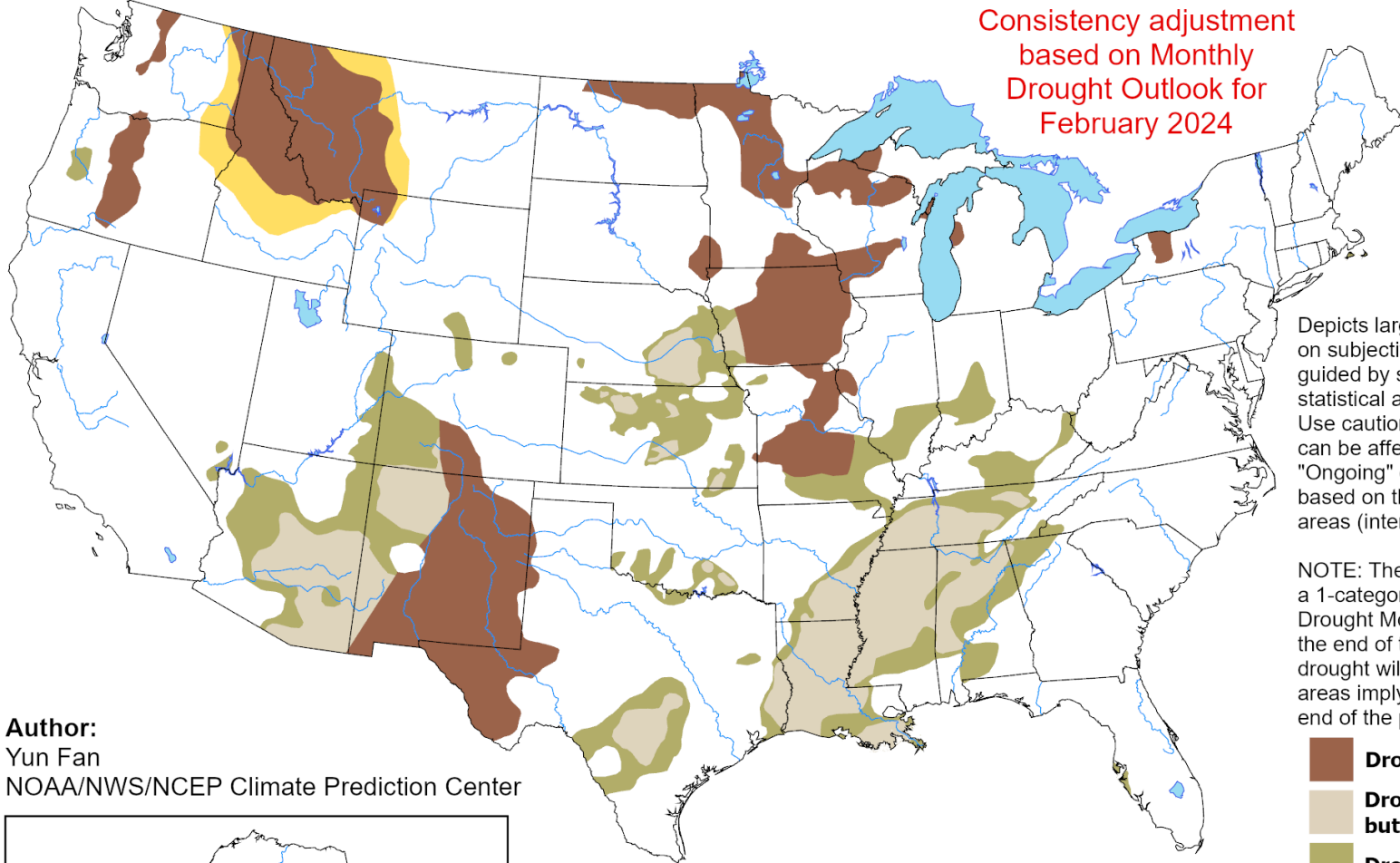
Valid: Feb-Mar-Apr 2024  
Issued: January 18, 2024



# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period

Valid for February 1 - April 30, 2024  
Released January 31, 2024



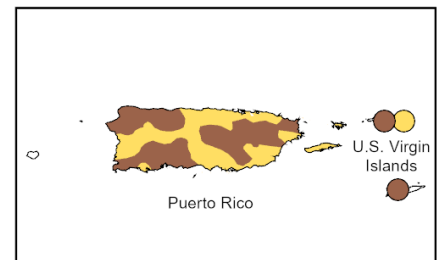
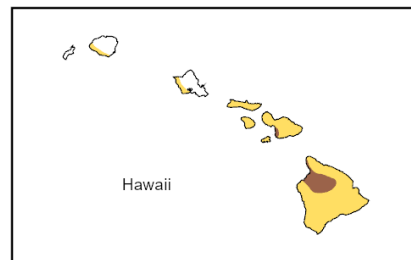
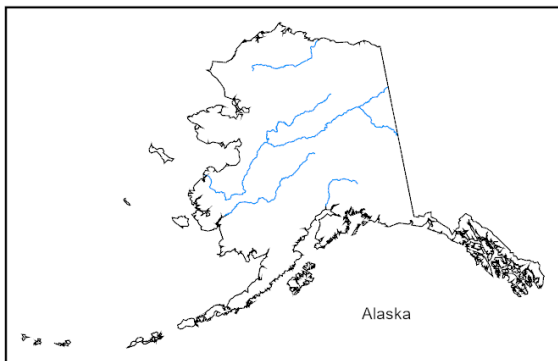
Consistency adjustment  
based on Monthly  
Drought Outlook for  
February 2024

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists**
- Drought remains, but improves**
- Drought removal likely**
- Drought development likely**
- No drought**

**Author:**  
Yun Fan  
NOAA/NWS/NCEP Climate Prediction Center







# ***Updates to Drought Contingency Plan and Water Conservation Plan***

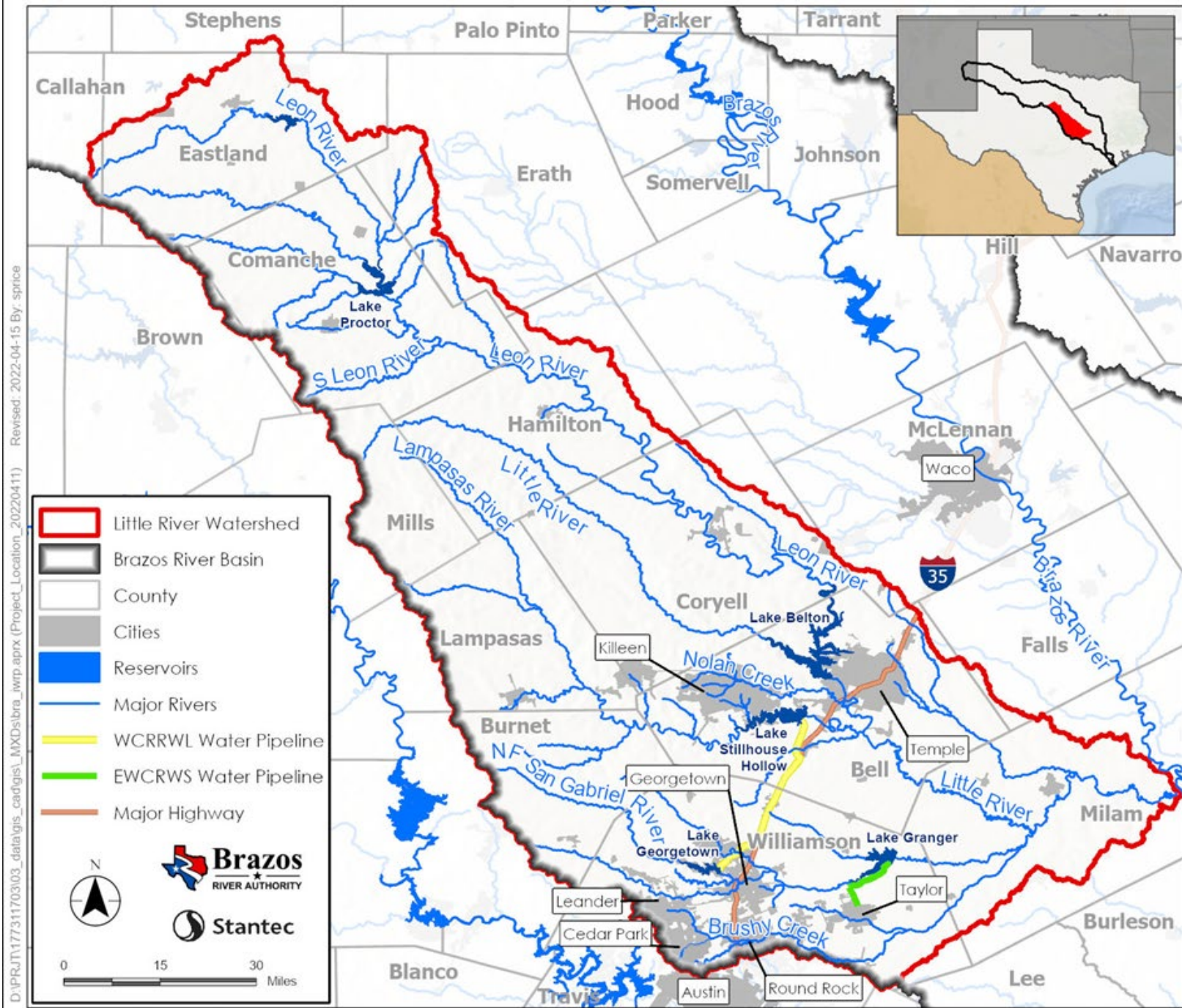
- **5-yr updates required by Texas Admin. Code, Title 30, Chapter 288**
- **Due May 1, 2024**
- **Both plans to be submitted to TCEQ and TWDB**
- **Coordinated through the Regional Water Planning Process**



***Little River Watershed  
Integrated Water  
Resources Plan***

# BRA Little River System

The BRA has a high priority need for **decision making and action** in order to **ensure a reliable water supply to customers in the Little River Watershed**



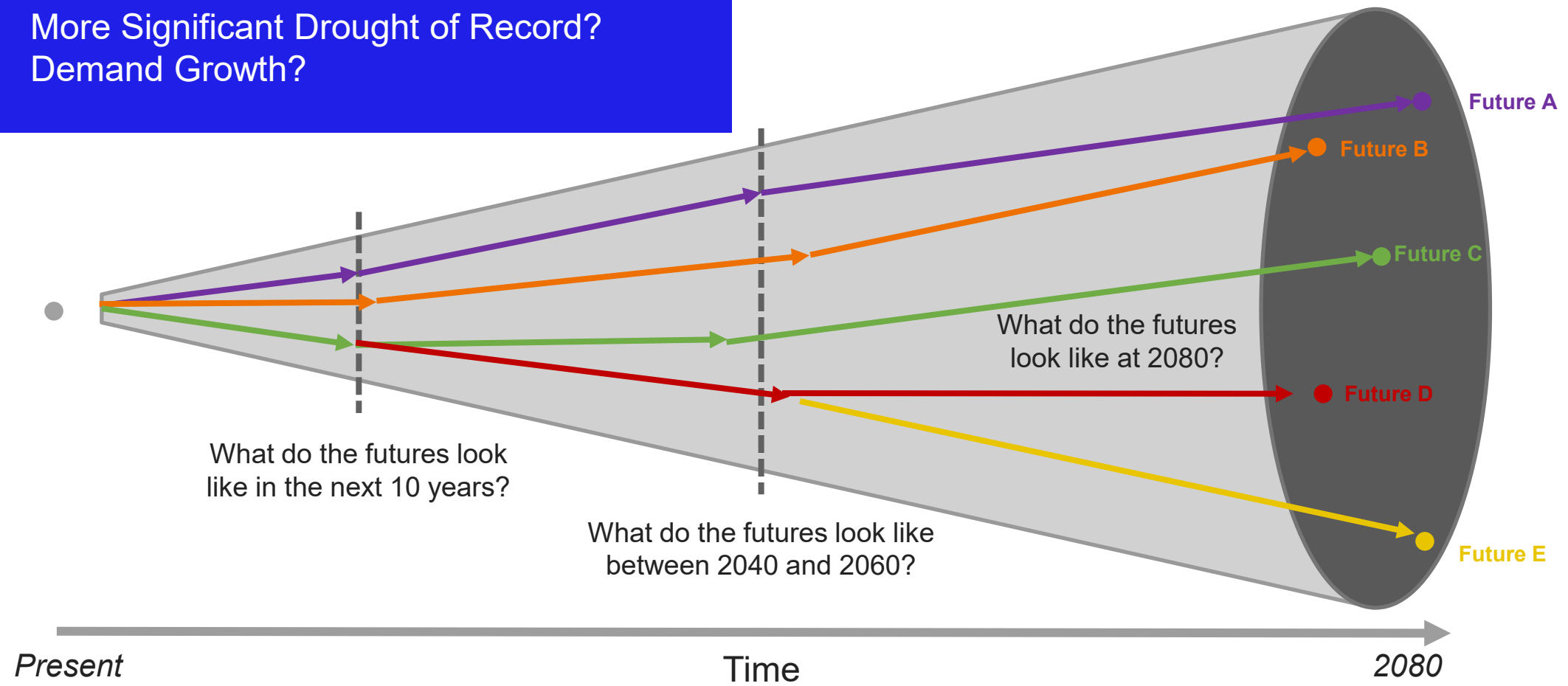


# Planning Scenarios

**What is a Planning Scenario?**  
Describes a particular set of future conditions the BRA's LRS IWRP will evaluate and plan for

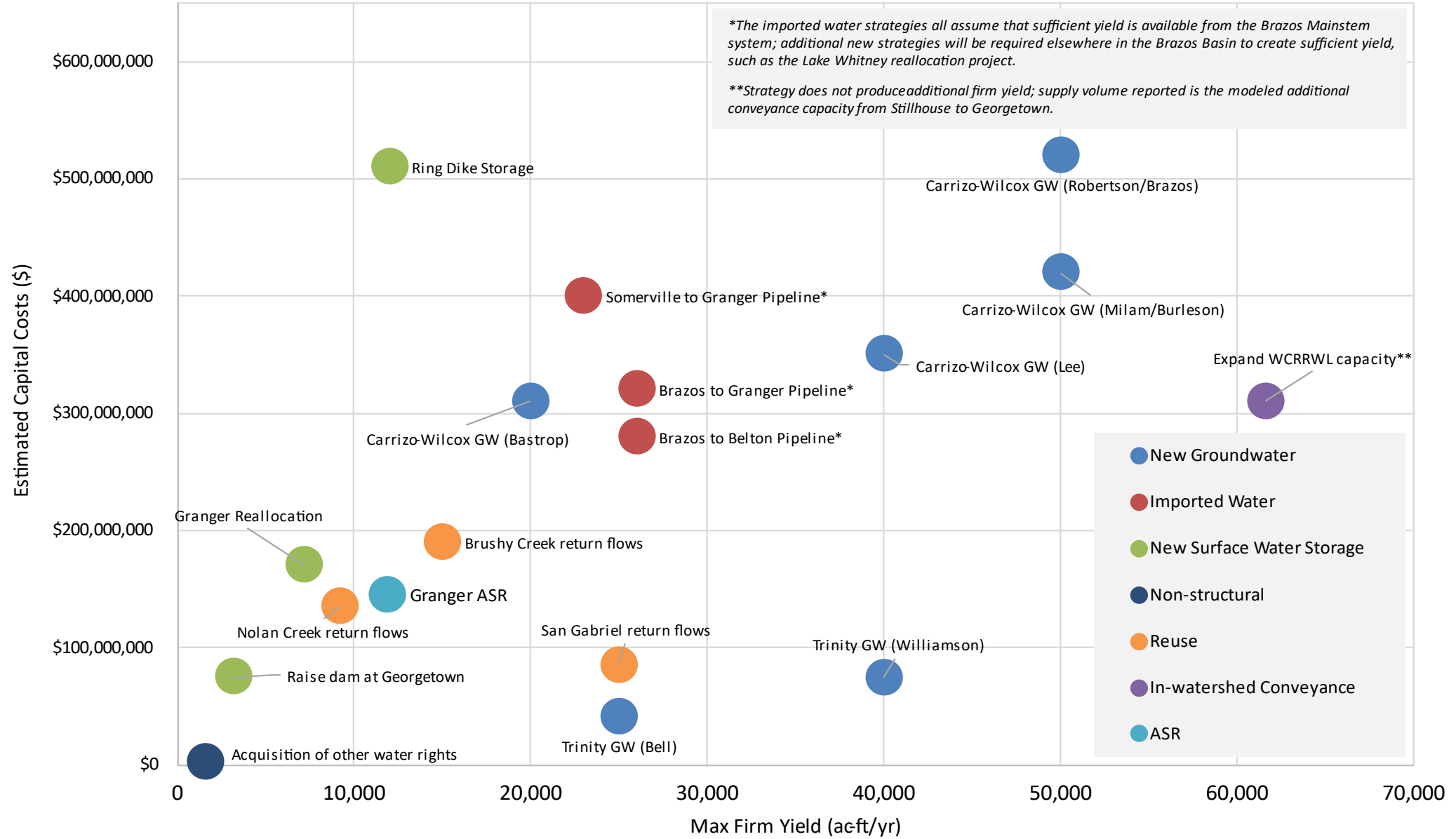
- Future Climate?
- More Significant Drought of Record?
- Demand Growth?

Potential Futures of the BRA LRS





# Summary of Capital Cost Estimates vs Max Estimated Yield





**Brazos**  
RIVER AUTHORITY  
[www.brazos.org](http://www.brazos.org)



[information@brazos.org](mailto:information@brazos.org)

[www.BrazosBasinNow.org](http://www.BrazosBasinNow.org)



@BrazosWater



The screenshot shows the website's home page with a navigation menu (Home, Map, Sites, Dashboards, Bookmarks) and a main heading: "Welcome to BrazosBasinNOW" and "Current Brazos River Basin Information". Below this are three main data sections:

- Streamflow:** A map of the river basin with red dots indicating monitoring points. Below the map are links for "Upper Basin Streamflow", "Central Basin Streamflow", and "Lower Basin Streamflow".
- Reservoirs:** A photograph of a reservoir at sunset. Below the image are links for "Reservoir Elevation", "Reservoir Drawdown", and "Percent Capacity".
- Rainfall:** A color-coded map showing precipitation levels. Below the map are links for "Limestone Mean Areal Precip", "Granbury Mean Areal Precip", and "Possum Kingdom Mean Areal Precip".