



***TWDB-UTA-NIDIS Workshop on
Forecast-Informed Reservoir Operation***

***Brazos River Authority's Perspective
September 13, 2019***

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Brazos River Authority**

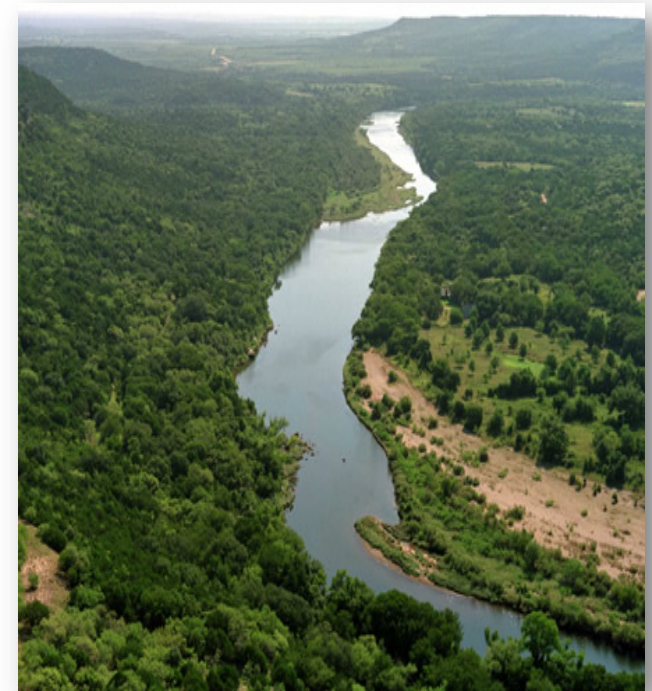


Brazos River Authority Overview

Our Mission

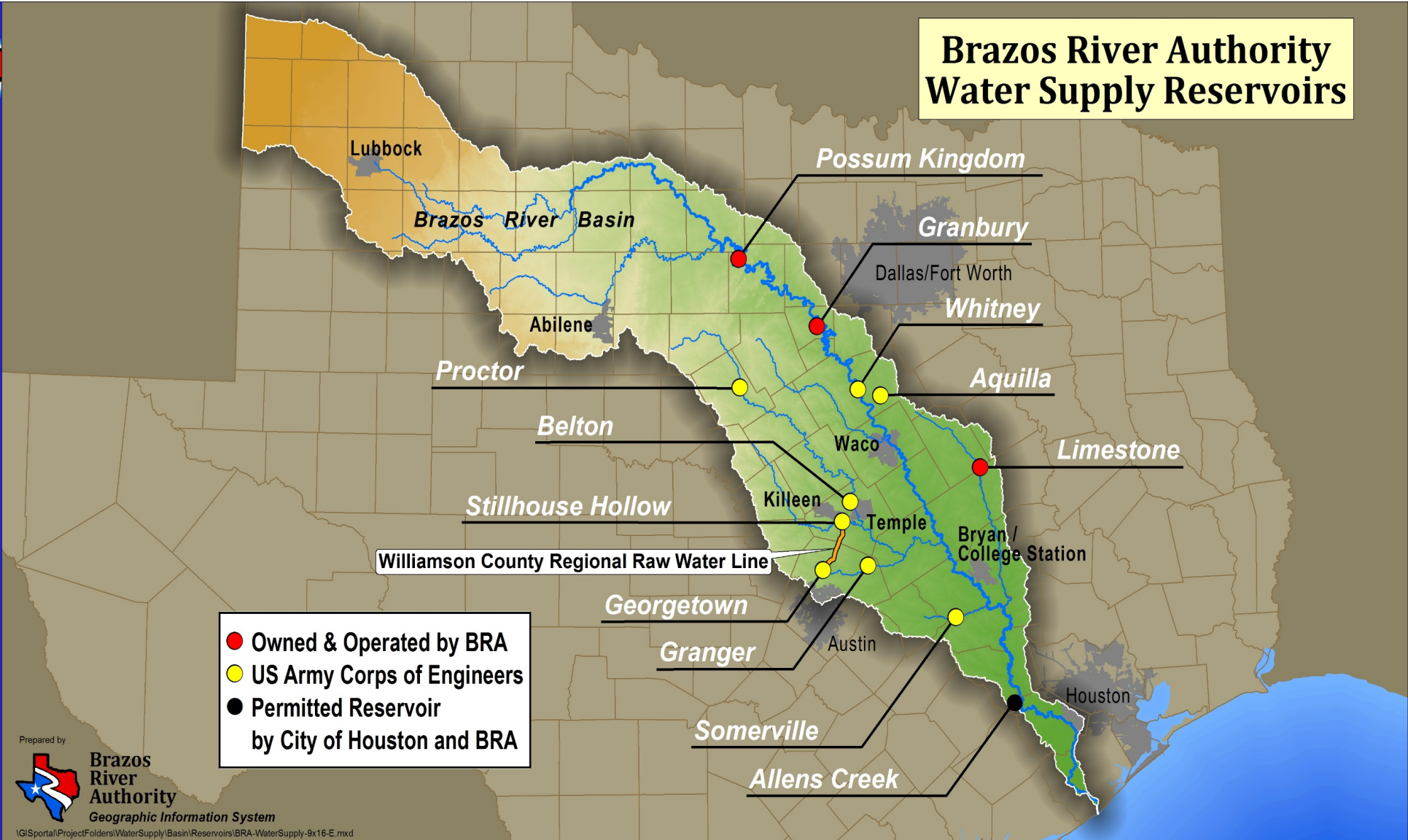
**To develop, manage, and protect
the water resources of the Brazos River basin**

- **Oldest river authority in Texas**
- **Created by the Texas Legislature in 1929**
- **First entity of its kind in the nation**
- **Self-funded (not appropriated), do not levy taxes**
- **21 member Board appointed by Governor**
- **Territory:**
 - **Extends from the Texas-New Mexico state line west of Lubbock to the Gulf of Mexico near Freeport**
 - **More than 42,000 square miles**
 - **All or part of 76 counties**





Brazos River Authority Water Supply Reservoirs



Prepared by



Brazos River Authority

Geographic Information System

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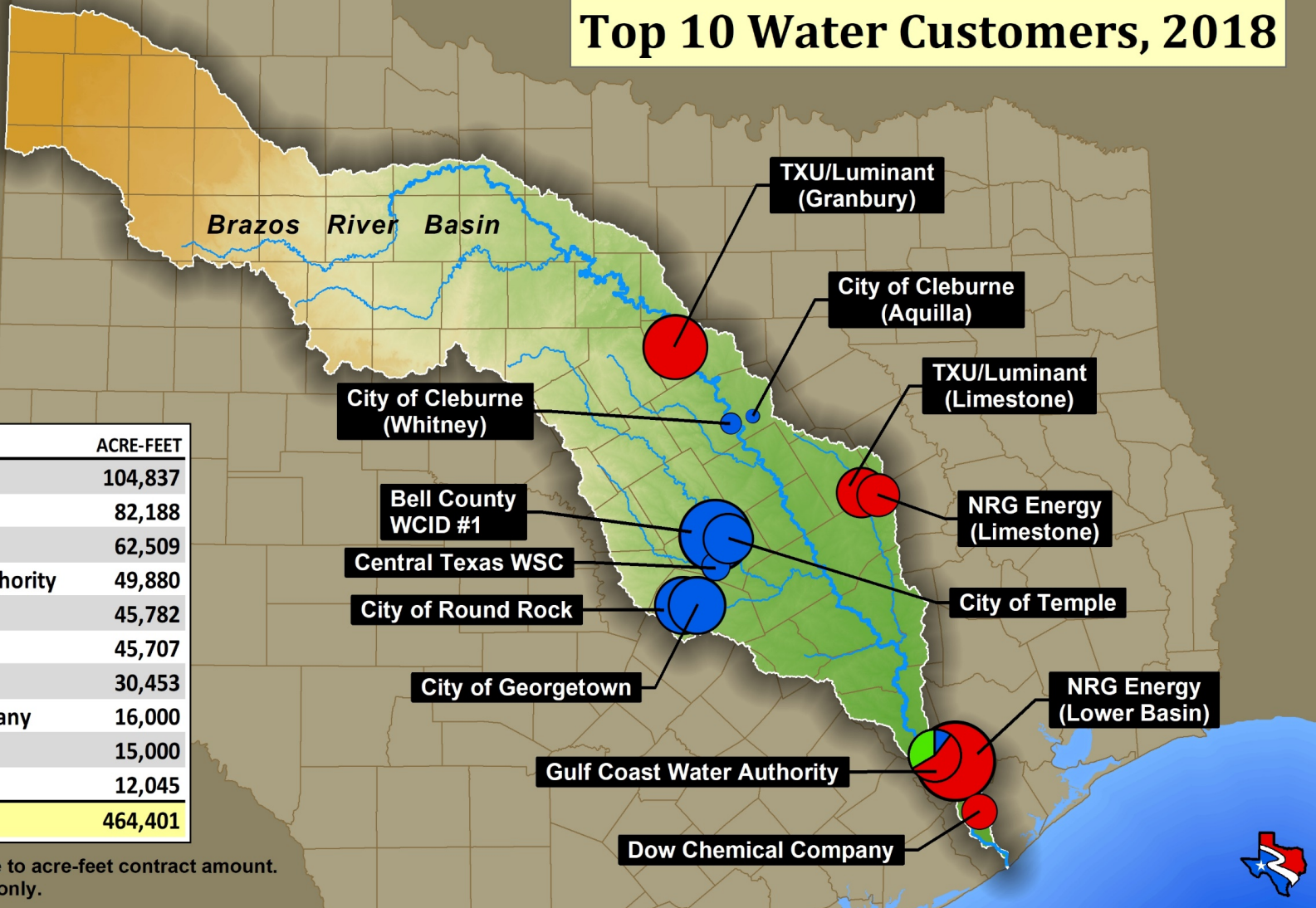


Top 10 Water Customers, 2018

Use Type

- Municipal
- Industrial
- Irrigation

CUSTOMER	ACRE-FEET
NRG Energy	104,837
TXU/Luminant	82,188
Bell County WCID # 1	62,509
Gulf Coast Water Authority	49,880
City of Round Rock	45,782
City of Georgetown	45,707
City of Temple	30,453
Dow Chemical Company	16,000
City of Cleburne	15,000
Central Texas WSC	12,045
TOTAL	464,401



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

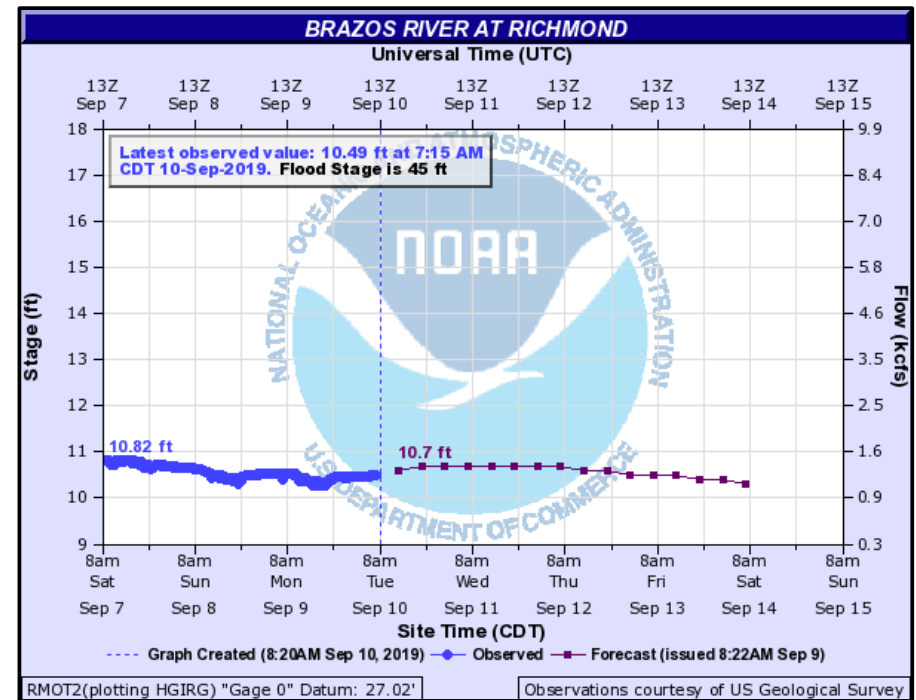




National Weather Service - West Gulf River Forecast Center Stream Flow Forecasts

Forecasts allow BRA to manage the water supply in the Brazos River Basin more efficiently by:

Incorporating rainfall runoff and hydropower releases to help BRA determine the timing for initiating/discontinuing water supply releases

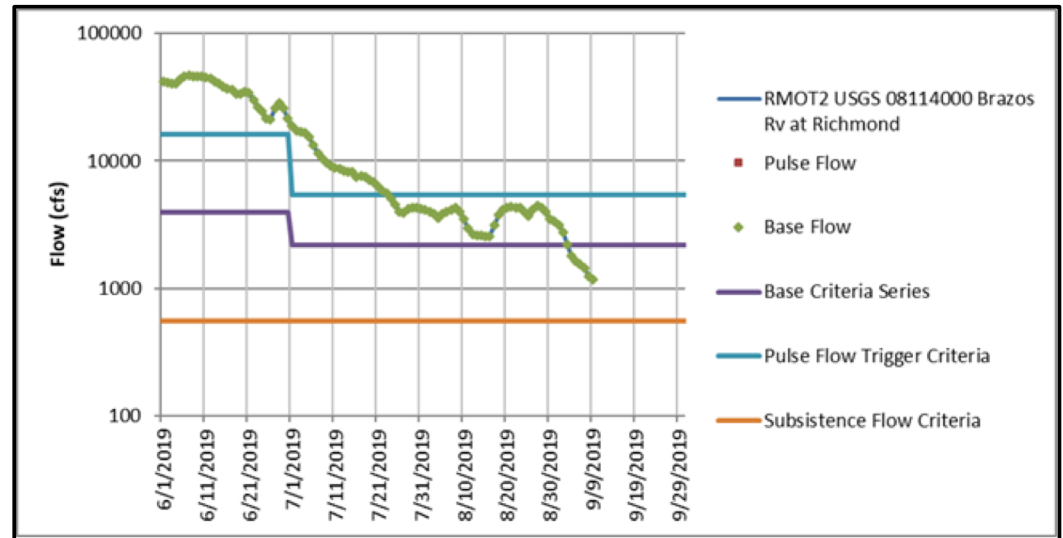




Provides necessary information to utilize run-of-river water (ROR) allocated under the System Operation Permit (SysOp).

SysOp – Use of ROR streamflow
Use of ROR water preserves water in reservoir storage; contingent on environmental flow special conditions

Environmental flow criteria are tied to USGS streamflow gages and vary depending on time of year and hydrologic conditions



TCEQ Brazos Watermaster – approval required in advance of using ROR under SysOp

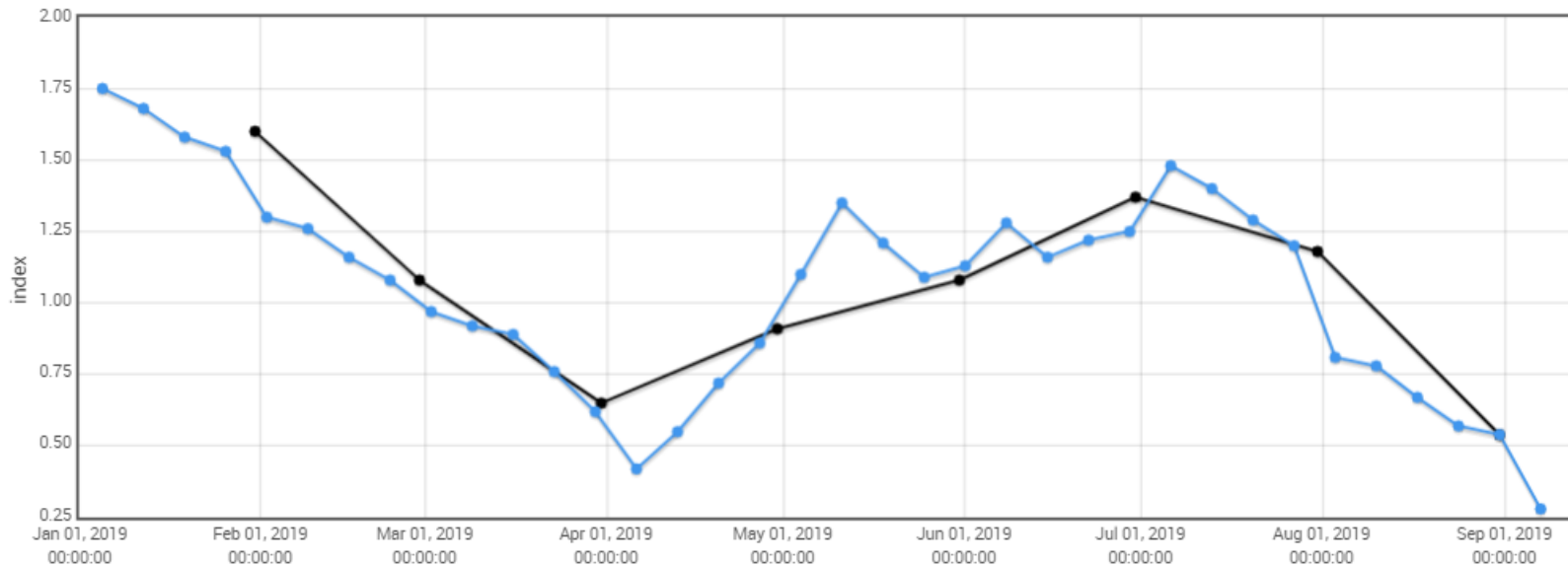
Streamflow forecasts indicate if environmental flow criteria will be met in the near future
Forecasts provide the Watermaster the necessary information to authorize ROR diversions



Palmer Hydrologic Drought Index

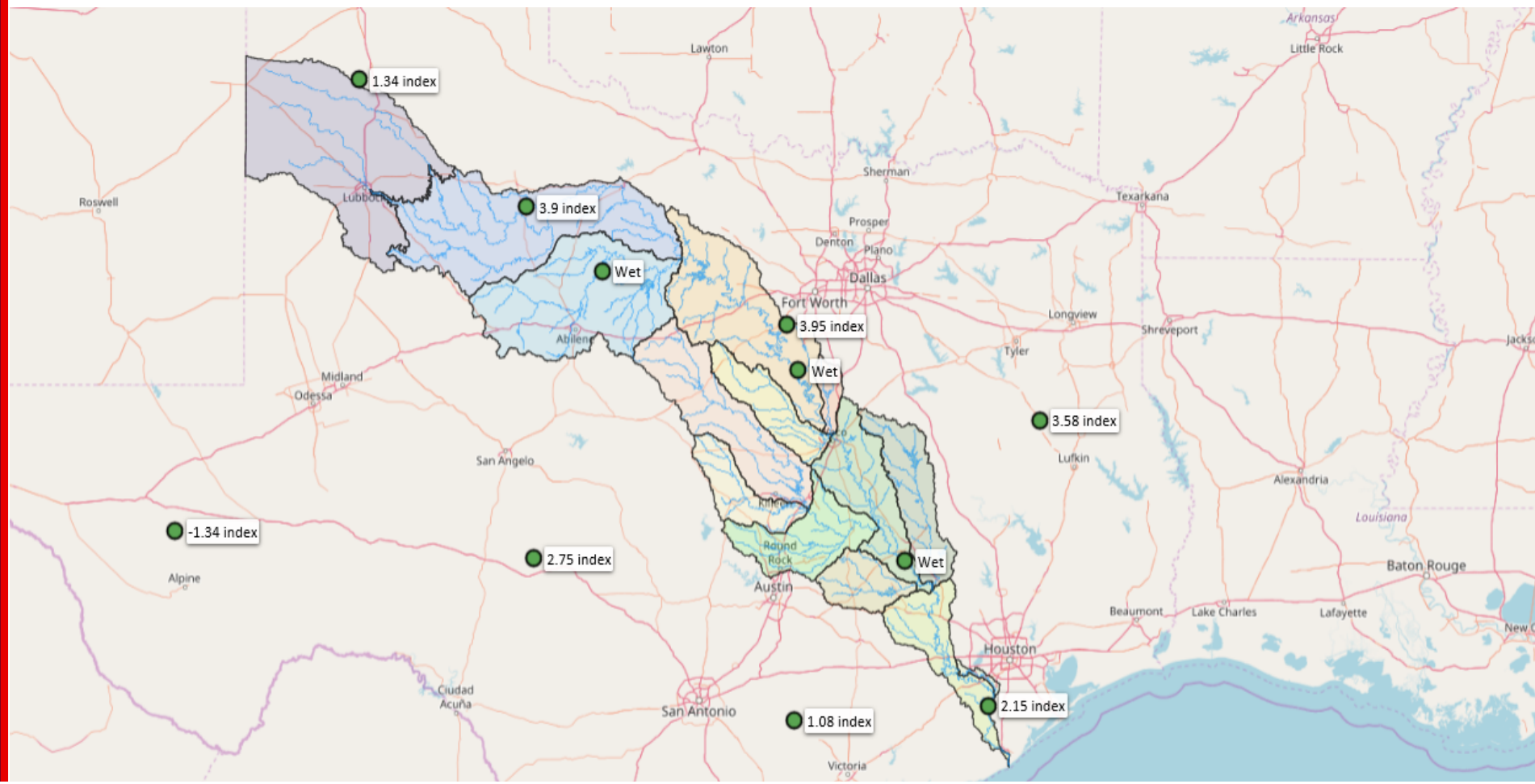
The PHDI has been incorporated into the following two areas of BRA water supply operations:

- Used in Drought Contingency Plan as an early drought warning trigger;
- and in the State approved Water Management Plan/Water Accounting Plan to determine hydrologic conditions.





Palmer Hydrologic Drought Index - Cont'd





Brazos River Authority

Questions!





Brazos
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RIVER AUTHORITY