

# ***Nueces River Authority***

## **Steering Committee and Stakeholder Update #5**

### **September - November 2020**

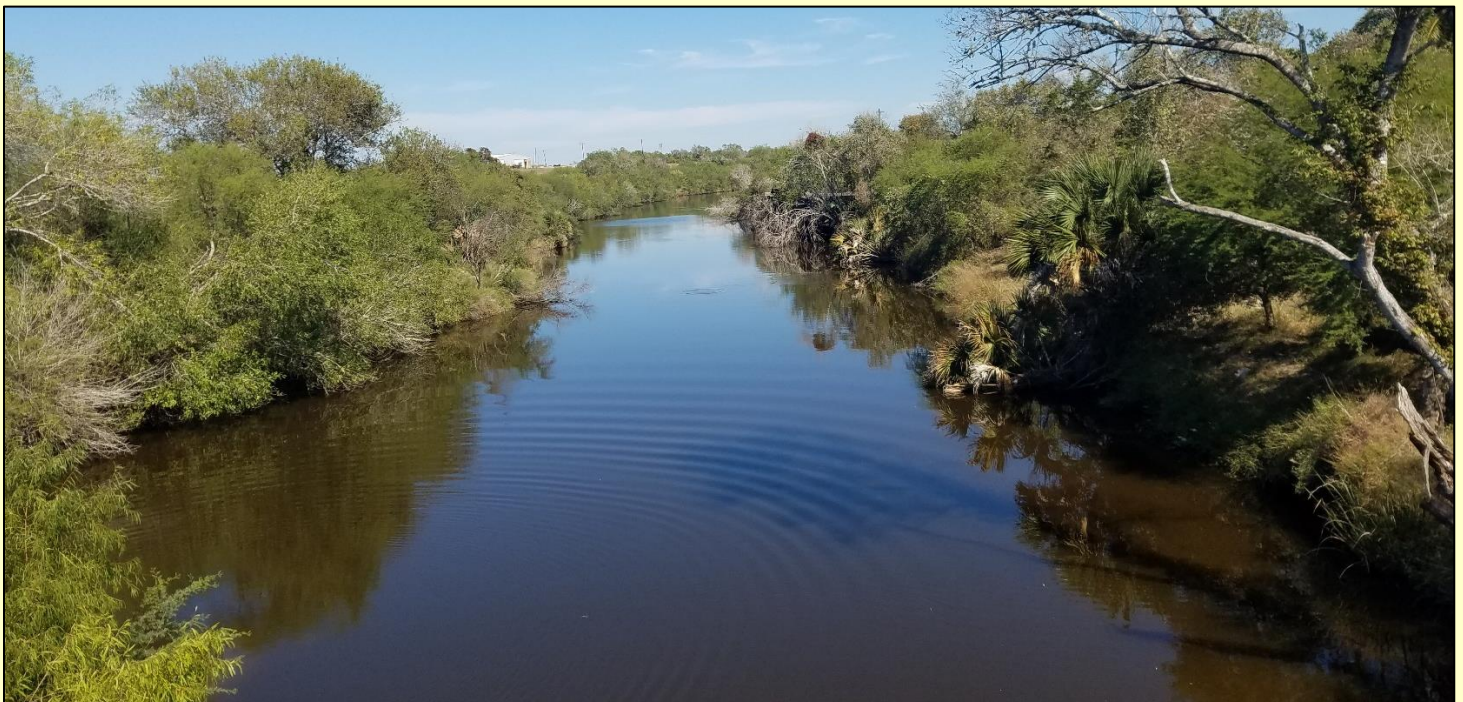
#### **Basin 20 - San Antonio-Nueces Coastal Basin**

The San Antonio-Nueces Coastal Basin covers approximately 3,100 square miles, draining to Copano and St. Charles bays. The basin is largely rural, with the dominant industries being crop farming and cattle rearing. Monitoring sites in Basin 20 are located on the tidal and above tidal portions of the Mission and Aransas rivers and Poesta Creek (see map on page 8). Tidal portions of the Mission and Aransas rivers have been impaired for the contact recreation standard, bacteria, since the 2004 Assessment. The above tidal portion of Aransas River and Poesta Creek is listed for the same parameter in the 2016 Assessment.



#### **Mission and Aransas River Sampling**

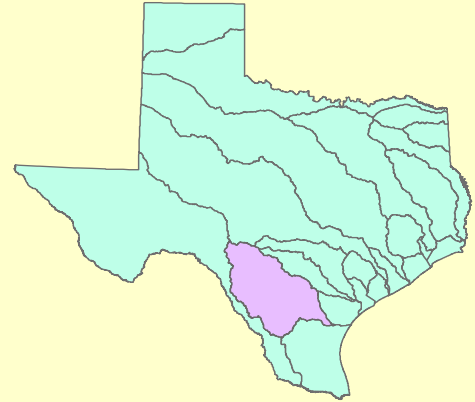
Nueces River Authority conducts routine water quality monitoring at 7 locations in the Mission/Aransas watershed (map of sampling sites on page 8). For FY 2021, one site located on Aransas River Tidal at US 77 (Station 12948) was discontinued due to the completion of the TMDL monitoring project by TWRI. An existing TCEQ site, located on Chiltipin Creek Tidal (pictured below) at the end of FM 631, was added in its place. The new site, located on private property, includes bi-annual metals monitoring which occurred on the site visit on November 3<sup>rd</sup>. Six sites were visited on November 12<sup>th</sup>. Station 12941, located on Aransas Creek at US 181 near Skidmore, didn't have enough water to sample (*E. coli* bacteria only).





## **Basin 21 - Nueces River Basin**

The Nueces River Basin covers approximately 17,000 square miles in South-Central Texas. The Nueces River winds 315 miles from its source in the Edwards Plateau near Rock Springs (elevation 2,402) through the brush country of the South Texas Plains to its end in Nueces Bay, located near Corpus Christi. The Nueces River is joined by the Frio and Atascosa rivers near the town of Three Rivers. Nueces River Authority conducts routine water quality monitoring at 25 locations throughout the Nueces River Basin (see map on page 9).



## **Nueces River Basin 24-hour Dissolved Oxygen Monitoring**

Nueces River Authority conducts twenty-four hour dissolved oxygen monitoring at 3 locations in the Nueces River Basin (see map of sampling locations on page 9). Dissolved oxygen monitoring was conducted on the Atascosa River at FM 541 in McCoy (Station 20764) on September 17-18<sup>th</sup> during the critical period for dissolved oxygen. Streamflow rose from 6 CFS to 26 CFS after an overnight shower but NRA staff was able to retrieve the datasonde instrument without issue. A subsequent 24-hour monitoring event on the Atascosa River occurred on October 22-23<sup>rd</sup>. The oxygen values were all in the normal range.





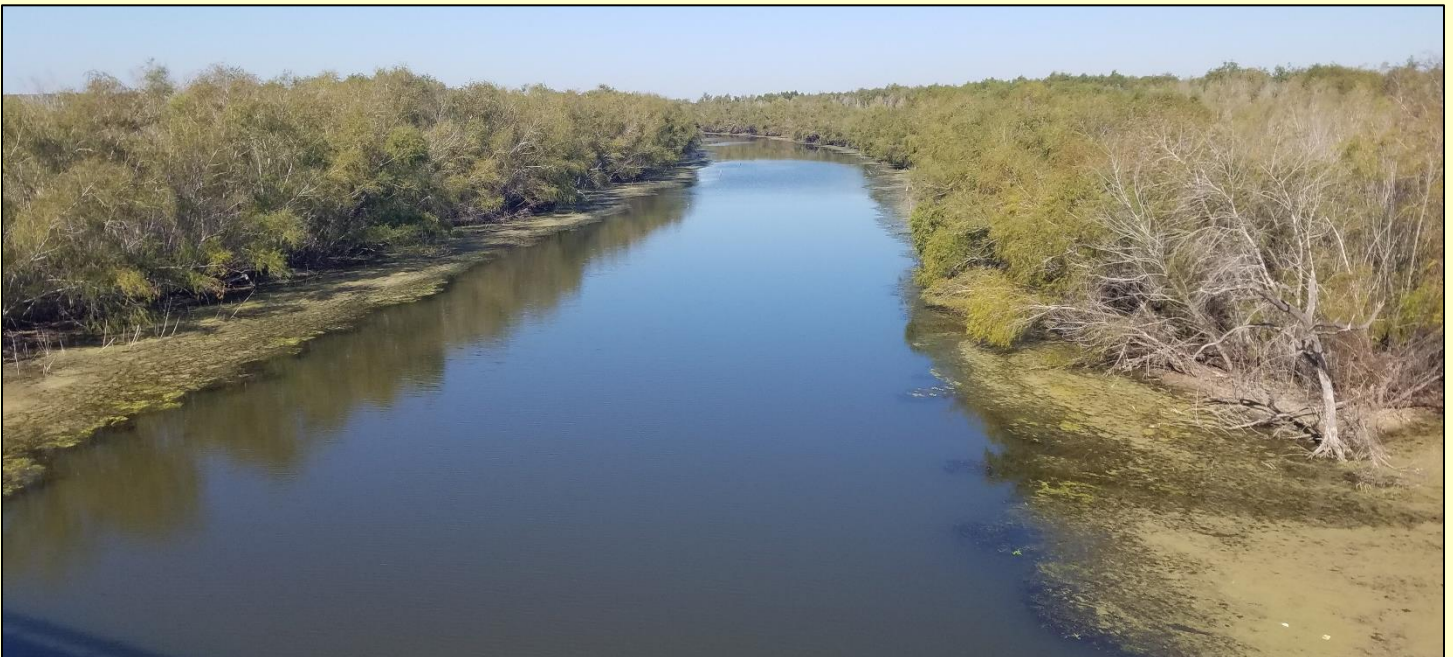
## **Nueces River Basin 24-hour Dissolved Oxygen Monitoring - continued**

Twenty-four hour dissolved oxygen also occurred the Leona River (Segment 2109) at Station 18418 located at FM 140 south of Uvalde on October 21-22<sup>nd</sup>. Streamflow was around 10 cubic feet per second and the dissolved oxygen values were all in the normal range.



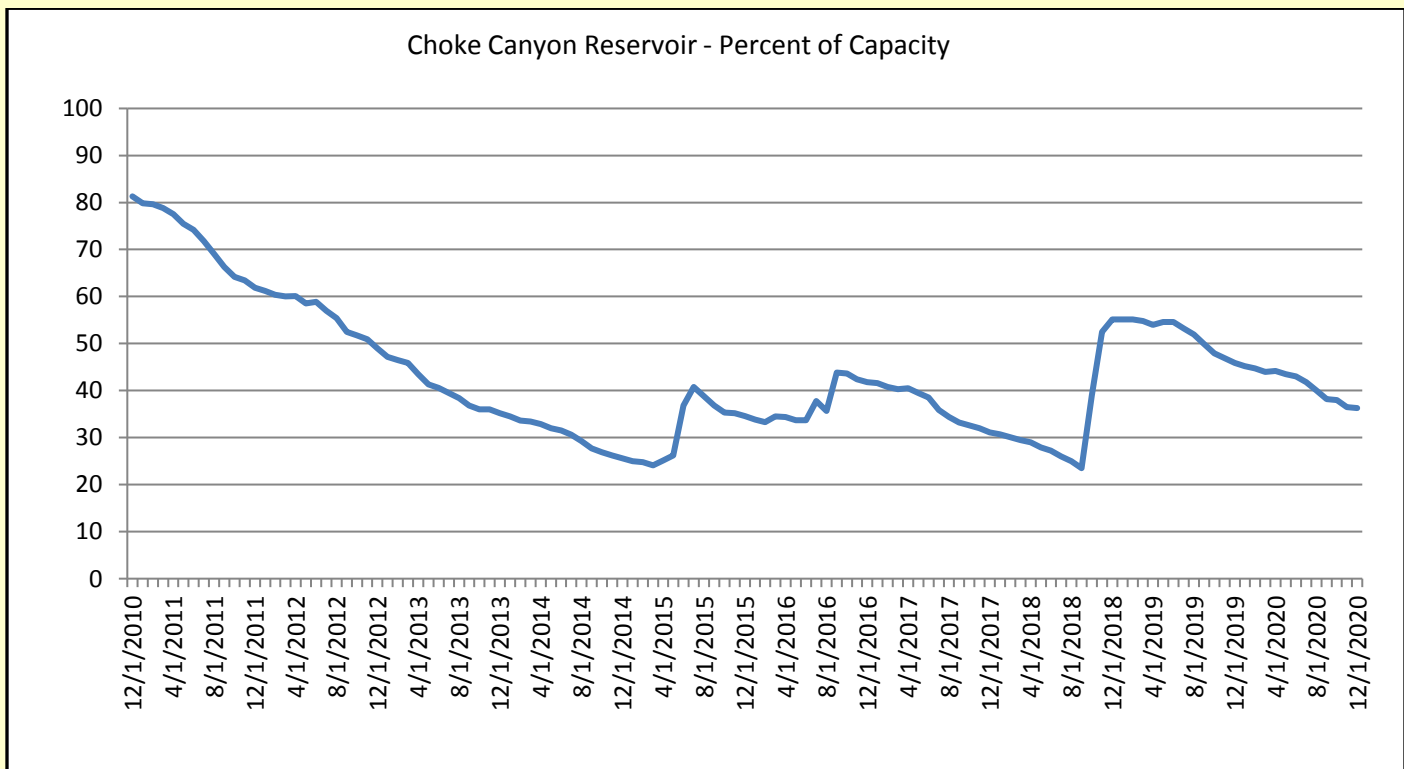
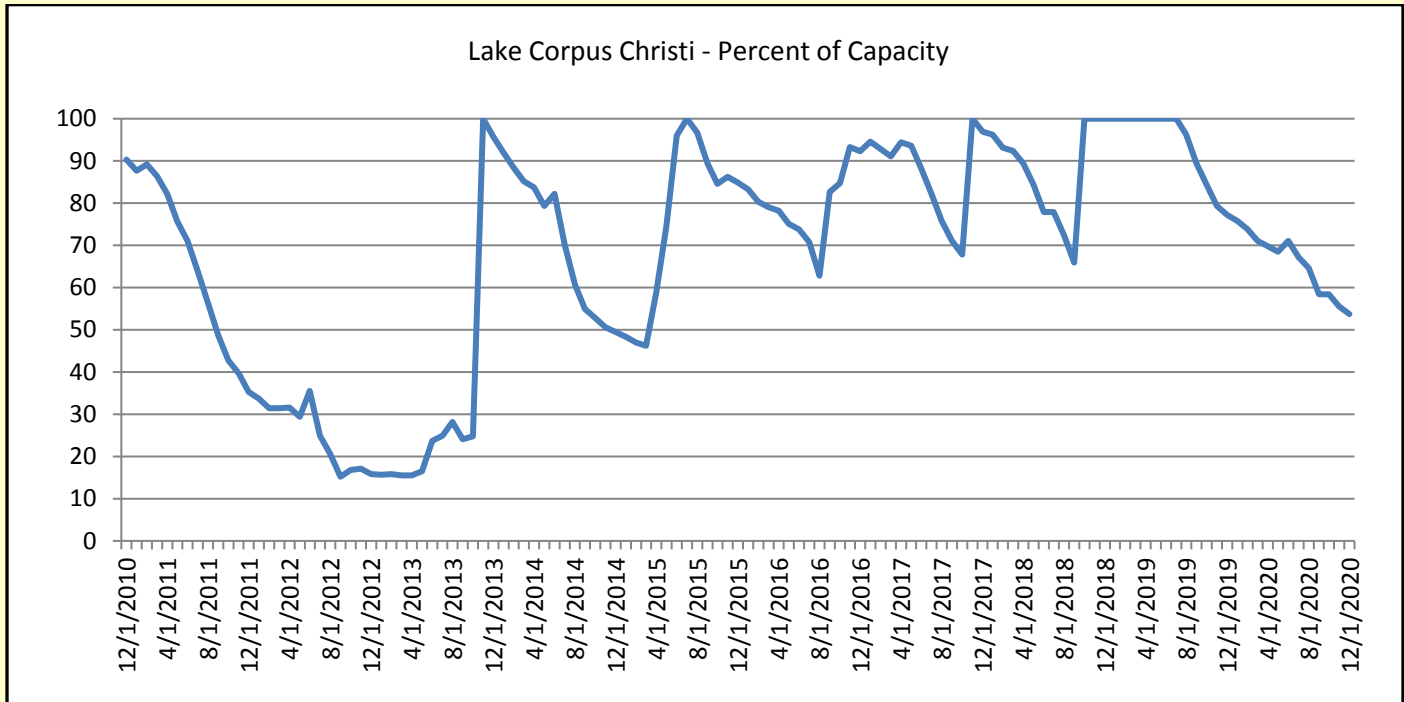
## **Nueces River Basin – Metals Sampling**

Nueces River Authority recently added metals sampling at 5 locations upstream of the reservoir system (Choke Canyon Reservoir and Lake Corpus Christi). Monitoring sites include Atascosa River at FM 99 (Station 12980), Choke Canyon Reservoir at FM 99 (Station 17389), San Miguel Creek at SH-16 (Station 12983), Frio River at SH-16 (Station 13023) and the Nueces River at FM 1042 (Station 12972). These stations will be monitored for dissolved and total metals on a quarterly basis alongside routine water quality parameters (See map of stations on page #9).



## Lake Levels

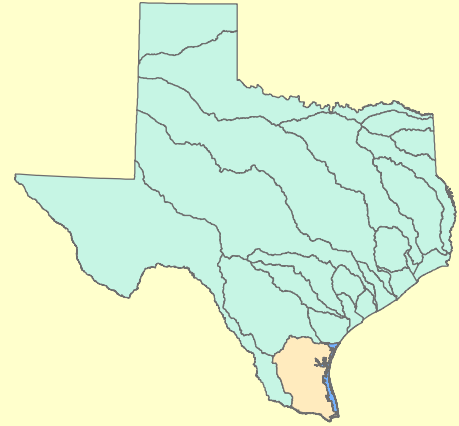
Combined lake levels for the reservoir system dropped from 43.9% to 40.6% by the end of the quarter. A rain event in late November added about 2 inches to Lake Corpus Christi and approximately 1 inch to Choke Canyon Reservoir in direct precipitation. Streamgages located upstream of the reservoir system remain unchanged following the rain event. For the Daily Reservoir System and Pass-Thru Status Report, please visit the website <https://www.nueces-ra.org/CP/CITY/passthru/index.php>.





## Basin 22 – Nueces-Rio Grande Coastal Basin

The Nueces-Rio Grande Coastal Basin covers approximately 10,400 square miles in South Texas and includes streams such as the Arroyo Colorado Tidal (Segment 2201) and above tidal (Segment 2202) in the Rio Grande Valley and Petronila Creek Tidal (Segment 2203) and above tidal (Segment 2204), which is a tributary to Alazan Bay located on the northern arm of Baffin Bay.



### Arroyo Colorado Above Tidal (Segment 2202)

Station 13079 is located on the above tidal portion of the Arroyo Colorado (Segment 2202) at the US-77 Bridge in Harlingen. Water quality at Station 13079 was monitored on November 17<sup>th</sup>. Bacteria levels (204 MPN) were above the standard (126 MPN) during the site visit.

### San Martin Lake (Segment 2494C)

San Martin Lake system is located off the Brownsville Ship Channel in the Lower Rio Grande Valley. NRA field staff rented a boat from UTRGV to travel up the shallow waterway on November 17<sup>th</sup>. The site was monitored on an outgoing tide about a week after an extreme high tide event associated with a tropical system in the Gulf of Mexico. Enterococcus bacteria levels were elevated during the site visit (>2400 MPN). If you would learn more about the project, visit the website: <http://www.co.cameron.tx.us/llmbasc/>





## Basin 24 –Bays and Estuaries

The Bays and Estuaries region of Texas covers approximately 2,002 square miles along the entire Texas Coast. There are 48 classified estuarine segments that are monitored by several River Authorities and TCEQ regional offices. NRA monitors water quality in 5 of the coastal segments including: Copano/Port/Mission Bay (Segment 2472), Redfish Bay (Segment 2483), Oso Bay (Segment 2485), Laguna Madre (Segment 2491), and Baffin Bay/Alazan Bay/Cayo del Grullo/Laguna Salada (Segment 2492) which includes Los Olmos and San Fernando creeks.

### Hidalgo Main and Raymondville Drain (Segment 2491C)

The Hidalgo Main (Station ID 22003) and Raymondville Drains (Station ID 22004) are tributaries of the Lower Laguna Madre (Segment 2491). These two sites are located east of US-77 and were added to the CRP Monitoring Schedule back in 2018. Both sites were visited on October 14<sup>th</sup>. The Hidalgo Drain had a floating mat of vegetated debris across the drain and the Raymondville Drain sampling site had an active bee colony under the bridge during the site visit. No flow measurements were recorded at the Raymondville Drain. Bacteria levels on the Hidalgo Main and Raymondville Drain were 200 MPN and 610 MPN (standard is 126 MPN) respectively. (Disclaimer – Data has not been validated or input into the SWQMIS Database.)





### Los Olmos Creek (Segment 2492B)

Los Olmos Creek runs 71 miles from southern Duval County to its confluence with Laguna Salada, an inlet of Baffin Bay. The creek was a new site (Station ID 13034) for FY2019, located at the bridge crossing at US 77 south of Riviera. NRA field staff visited the site on October 14<sup>th</sup>. Salinity values again around the 68 PSU range (seawater is around 35 PSU) and the shallow waterbody (about 1 foot deep) had an orange color at the site visit. Bacteria concentrations were very high on the site visit (>2,400 MPN), same as the last 4 quarters.



### ↑2U

Nueces River Authority staff heard that the mesh bag bins on North Padre Island beaches were all empty in mid-October. We happened to have a few hundred bags in the office and decided to drop them off at 5 locations on the beaches. We're glad to see the community using these bags!



# San Antonio-Nueces Coastal Basin

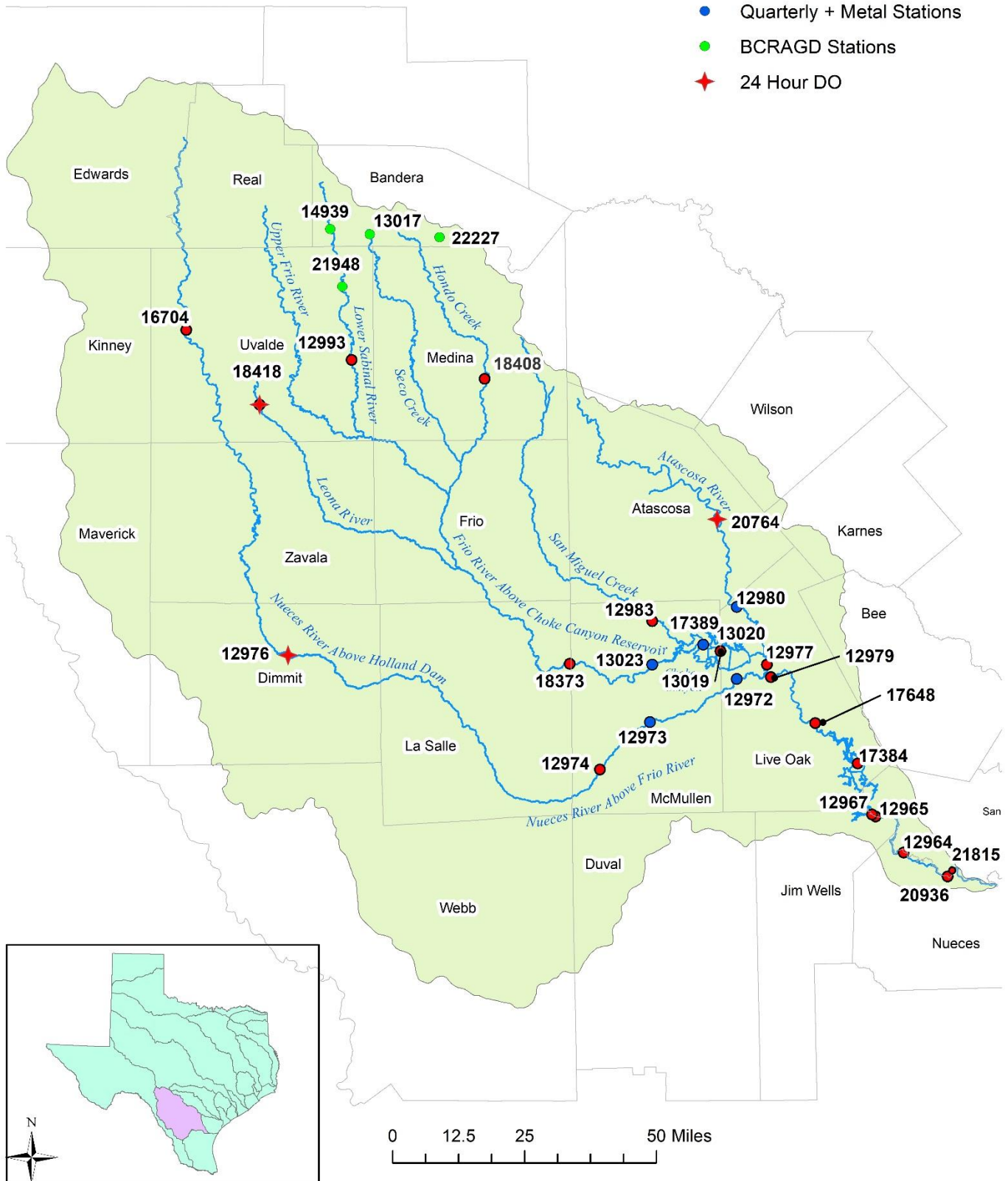




# Nueces River Basin

## NRA Monitoring Stations

- Quarterly Stations
- Quarterly + Metal Stations
- BCRAGD Stations
- ★ 24 Hour DO



# Nueces-Rio Grande Coastal Basin

## Monitoring Stations

- NRA Routine Stations

