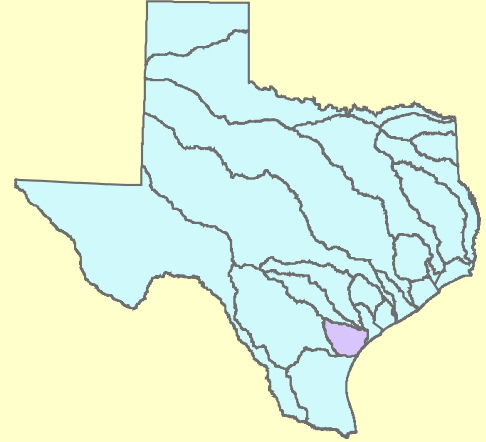


***Nueces River Authority***  
**Steering Committee and Stakeholder Update #1**  
**September - November 2019**

**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. 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.



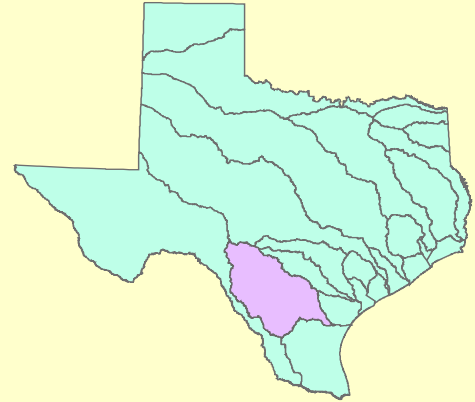
**Mission and Aransas River Sampling**

Nueces River Authority conducts routine water quality monitoring at 7 locations in the Mission/Aransas watershed. All seven sites were visited on September 17<sup>th</sup>. Bacteria levels were elevated in the tidal portions following a small rain event on the 14<sup>th</sup>. Bacteria levels were low in the above tidal portions though. All other parameters were in the normal range.



## **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 28 locations throughout the Nueces River Basin (see map on page 12). All sites were visited but a few locations were dry (Atascosa River near McCoy and at FM 99, Frio River at Fowlerton, San Miguel Creek at SH 16). No 24-hour dissolved oxygen monitoring occurred in the first quarter.

## **Upper Frio River Aquatic Life Monitoring (ALM)**



Aquatic Life Monitoring (ALM) is a type of monitoring that's used to derive baseline data on fish communities, benthic macroinvertebrate communities, and physical habitat to determine if designated or presumed aquatic life uses are being attained. An ALM sampling event occurred on the Upper Frio River (Segment 2104) in early September to address the impairments for fish and benthic macroinvertebrate communities as listed in the Texas Intergrated Report. Nueces Authority Field Staff assisted TCEQs Surface Water Quality Monitoring (SWQM) team and TPWD in conducting the ALM at station 13007 (Frio R. at Magers crossing), station 21131 (Frio R. near Happy Hollow) and Station 21984 (Frio R. near the USGS gage station). Activities included fish and aquatic invertebrate collection, habitat assessment, 24-hour dissolved oxygen data collection, and water chemistry analysis. This effort is the second of two ALM monitoring efforts that were scheduled to be conducted on the segment for assessment purposes.

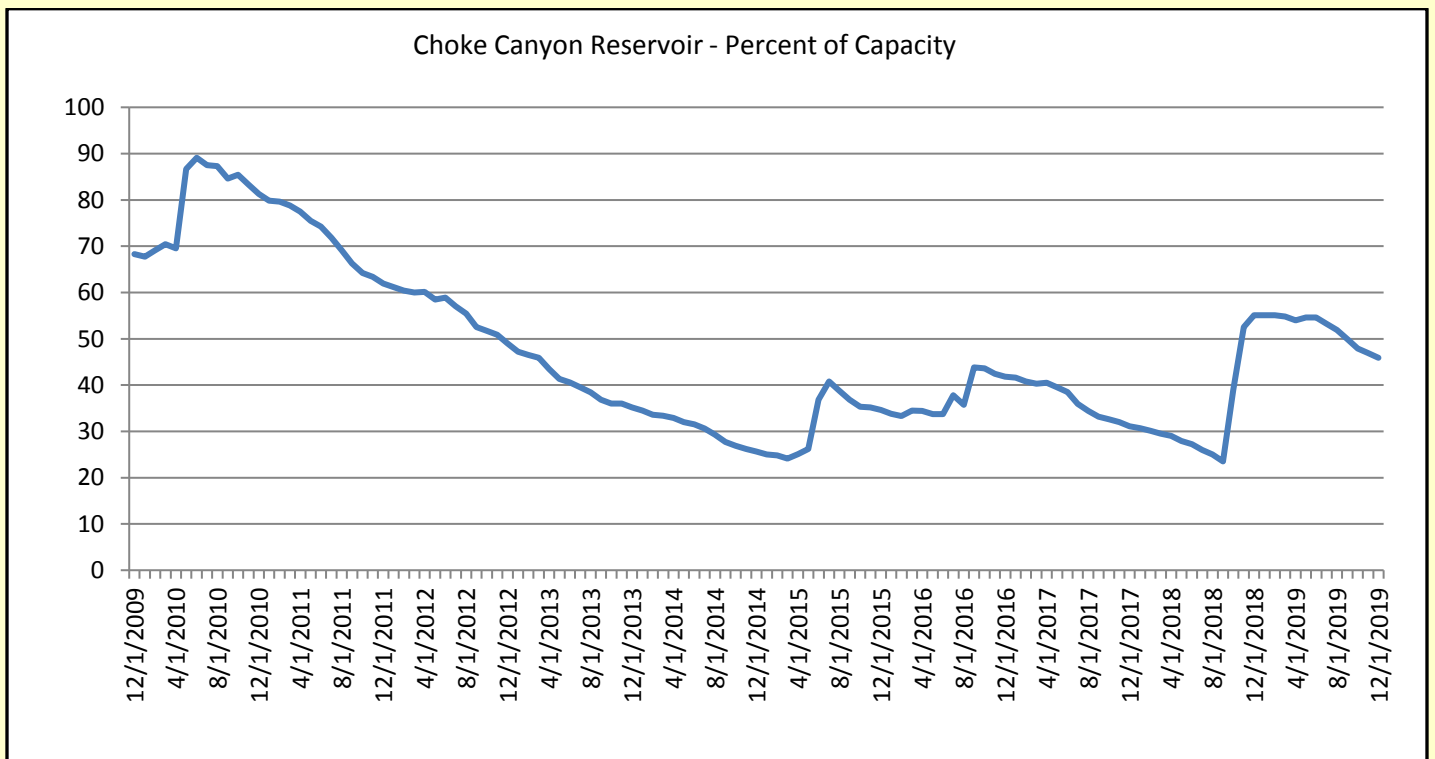
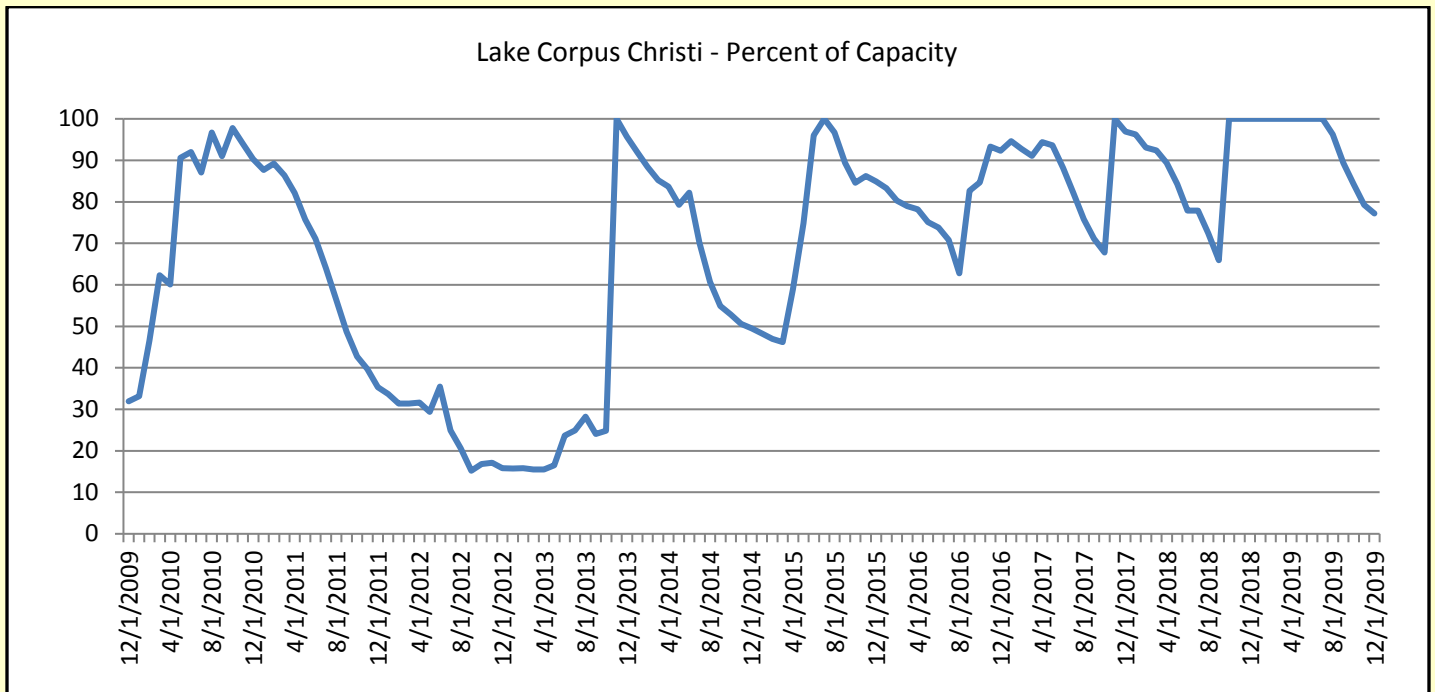






## Lake Levels

Combined lake levels for the reservoir system dropped from 60.3% to 54.6% by the end of the quarter. For the Daily Reservoir System and Pass-Thru Status Report, please visit the website <https://www.nueces-ra.org/CP/CITY/passthru/index.php>.



## **Nueces River Watershed Partnership – Implementation of the Lower Nueces River Watershed Protection Plan (WPP)**

Funding for the NRA, as watershed coordinator to seek funding for and initiate implementation of the WPP, is provided by the TSSWCB through a §319(h) grant from EPA.

### *Trash Collection Event*

A trash collection event for residents of the Lower Nueces River watershed is scheduled December 7 – 8, 2019 from 8am – 3pm. Non-hazardous materials can be dropped off, free of charge, at 5485 CR 83. The event is sponsored by Nueces County Commissioner Carolyn Vaughn, Precinct 1, and the Nueces County Inland Parks Department in participation with the TSSWCB and NRA. A second event is planned for April 18 – 19, 2020.

### *OSSF Repair and Replacement*

As of October 2019, 53 OSSFs within the watershed have been pumped out and inspected. Fifteen were found to be in good working order. Of the remaining 38 systems, 26 were in need of replacement and 12 were in need of some repair work. Eighteen replacements and 11 repairs have been completed. As of November, there are six pending replacements, one pending repair, and 11 pending inspections. An application for assistance is available at [http://www.nuecesriverpartnership.org/pdfs/OSSF\\_Assistance\\_Application.pdf](http://www.nuecesriverpartnership.org/pdfs/OSSF_Assistance_Application.pdf).

The program, funded by the TCEQ through §319(h) grants from EPA, will continue through February 2022 or until the budgeted funds are spent.

### *OSSF Conversion*

The City of Corpus Christi has completed its evaluation of the feasibility of converting homes in the River Forest subdivision in Calallen from OSSFs to the City's wastewater collection system. A stakeholder meeting to present the results was held on September 26, 2019.

When the Lower Nueces WPP was written, there was an initial concern that the study area could be contributing excessive bacteria levels because of the general age of the existing OSSFs. Based on an independent study and more recent sampling by NRA, it does not appear that this area is a major bacteria contributor.

Now, instead of the City considering trying to get the entire neighborhood connected to the existing wastewater infrastructure, at a cost of over \$3M, the goal now is to have all OSSFs inspected, repair those that can be repaired, replace those that need to be replaced, and possibly connect some of the homes closest to the existing infrastructure. A \$1.3M initial cost estimate for this scenario includes 90 inspections, 35 repairs, 45 replacements, and 10 connections.

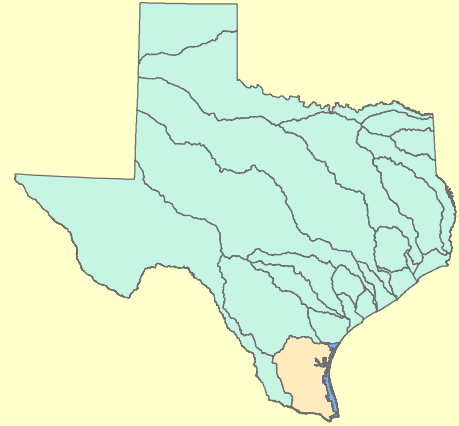
### *Website*

The Partnership's website, <http://www.nuecesriverpartnership.org>, is updated as warranted. Contact us if there is any additional information you would like to see added to the site.

For more information about the Partnership and the WPP, visit [the website](http://www.nuecesriverpartnership.org), or contact Rocky Freund at (361) 653-2110 or [rfreund@nueces-ra.org](mailto:rfreund@nueces-ra.org).

## **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 19<sup>th</sup>.



### **Petronila Creek Above Tidal (Segment 2204)**

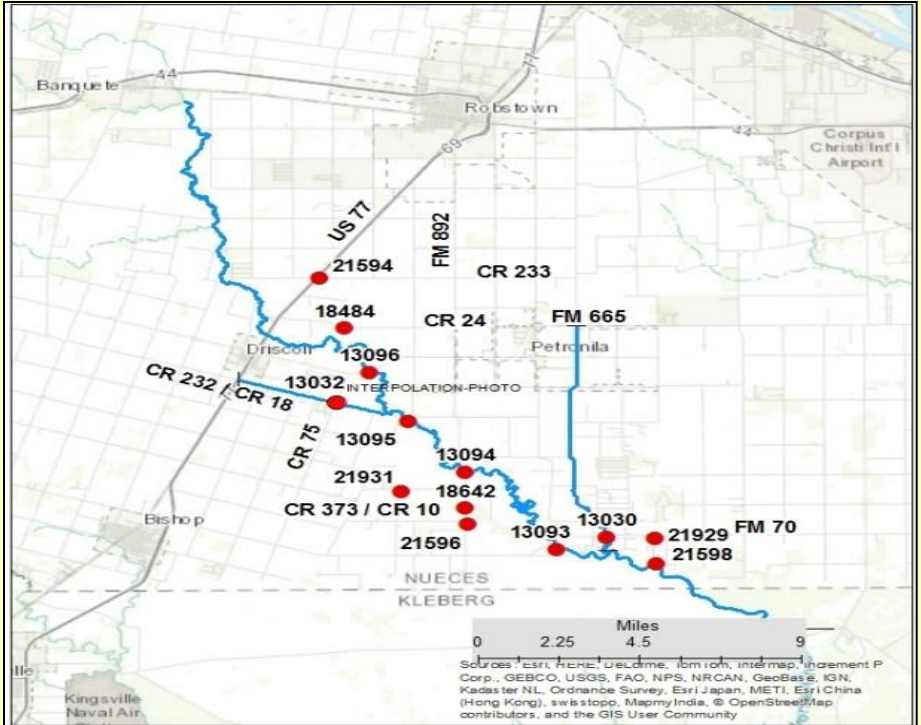
Three routine quarterly monitoring stations exist on Petronila Creek Above Tidal. One station, (Station ID 20806) is located west of US-77 and the other two (Station IDs 13094 and 13096) are located east of US-77. Monitoring on Petronila occurred on October 15<sup>th</sup>. Bacteria levels east of US 77 were highly elevated (>2,400 MPN). As reported in previous stakeholder updates, the Driscoll WWTP is in need of repairs and maintenance. The outfall of the plant is located just upstream of Station 13096 (Bridge crossing at FM 665). Streamflow was measured at Station 13094 (Bridge Crossing of FM 892) and yielded a value of 1.1 cubic feet per second (CFS) with approximately 0.5 CFS of that being wastewater.



## Petronila Creek Tributary Study – Segment 2204

Since FY 2013-2014, the TCEQ has contracted with NRA to conduct monthly water quality monitoring to identify chloride, sulfate, and TDS contributions from tributaries of Petronila Creek, including drainage ditches. For FY 2020, NRA is conducting monthly monitoring at 13 sites. Four sites are located on the main stem of Petronila Creek (13096, 13095, 13094, and 13093 – data is in bold on the graph). Monitoring for October through November is summarized below. Samples were not taken in September 2019. (Disclaimer – Data has not been validated or input into the SWQMIS Database.)

Site #	October (µmhos)	November (µmhos)
21594	2,310	1,250
18484	27,500	24,300
13032	Dry	Dry
13096	<b>15,500</b>	<b>12,500</b>
13095	<b>18,500</b>	<b>16,600</b>
21931	Dry	Dry
13094	<b>20,000</b>	<b>18,900</b>
18642	52,600	50,700
21596	Dry	Dry
13093	<b>23,000</b>	<b>27,900</b>
13030	42,400	43,330
21929	Dry	Dry
21598	60,400	39,600





## **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.

### **New Station – Oso Bay at Ocean Drive (Segment 2485)**

Nueces River Authority field staff visited a new station (Station ID 13442) on the Oso Bay Bridge on Ocean Drive between NAS-CC and TAMUCC. Bacteria levels were highly elevated on our site visit (1,730 MPN for Enterococcus) on October 8th. Station 13440, located on SPID, also had very high bacteria concentrations (>2400 MPN Enterococcus). Streamflow on Oso Creek was <3.0 cubic feet per second in the days leading up to the sampling event.



### **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 November 20th following cold and rainy conditions the week before. Streamflow, measured at the Raymondville





Drain using an acoustic doppler flowmeter, was 47 CFS. The water is too deep (>1.2 m) and swift for streamflow measurements using the wading rod at the Hidalgo Main Floodway.

### **Los Olmos Creek (Segment 2492B)**

Los Olmos Creek runs 71 miles from southern Duval County to its confluence with Laguna Salada, and inlet of Baffin Bay. The creek was a new site (Station ID 13034) for FY2019, located at the bridge crossing at US 77 near Riviera. NRA field staff visited the site on October 15<sup>th</sup>. The creek lives up to its name (Salty Lagoon) with salinity values again around the 60 PSU range. Bacteria concentrations were very high on the site visit (>2,400 MPN).



### **New Station – San Martin Lake (Segment 2494C)**

Nueces River Authority field staff visited a new station (Station ID 22170) on the San Martin Lake system that's located off the Brownsville Ship Channel in the Lower Rio Grande Valley. NRA field staff rented a small boat from UTRGV to travel up the shallow waterway on November 19<sup>th</sup>. The station was added in support of the Lower Laguna Madre/Brownsville Ship Channel Watershed Protection Plan in Cameron County that is underway. If you would learn more about the project, visit the website: <http://www.co.cameron.tx.us/lmbbsc/>





## Outreach and Education

NRA's Education and Outreach Program saw 78 people in September, 1,537 people in October and 523 people in November for a total of 2,138 for the quarter. Thank you, Mary, Dee, and Jodi for your hard work showing off our river basin, water cycle, and rainwater catchment models. For more information about outreach and education, contact [slewey@nueces-ra.org](mailto:slewey@nueces-ra.org).

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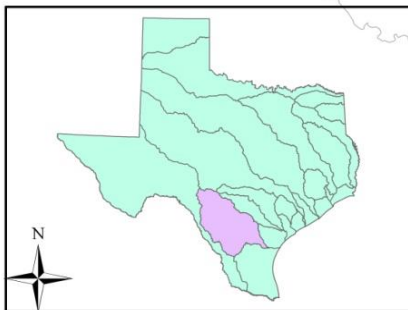
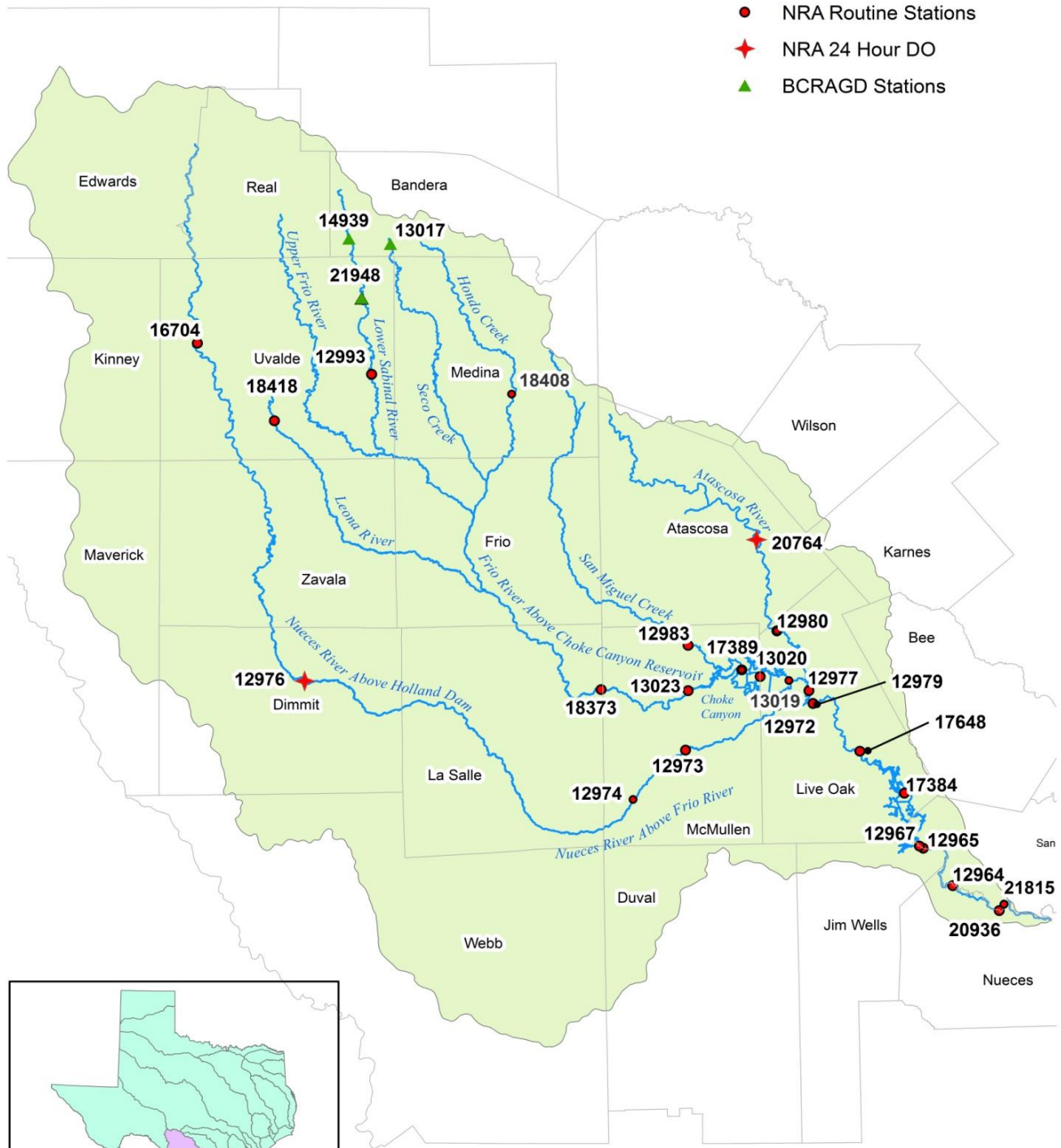




# Nueces River Basin

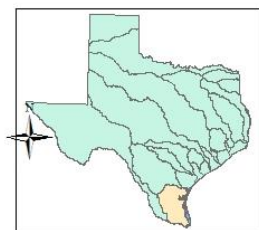
## NRA Monitoring Stations

- NRA Routine Stations
- ★ NRA 24 Hour DO
- ▲ BCRAGD Stations



0 12.5 25 50 Miles

### Monitoring Stations



 NRA Routine Stations

