



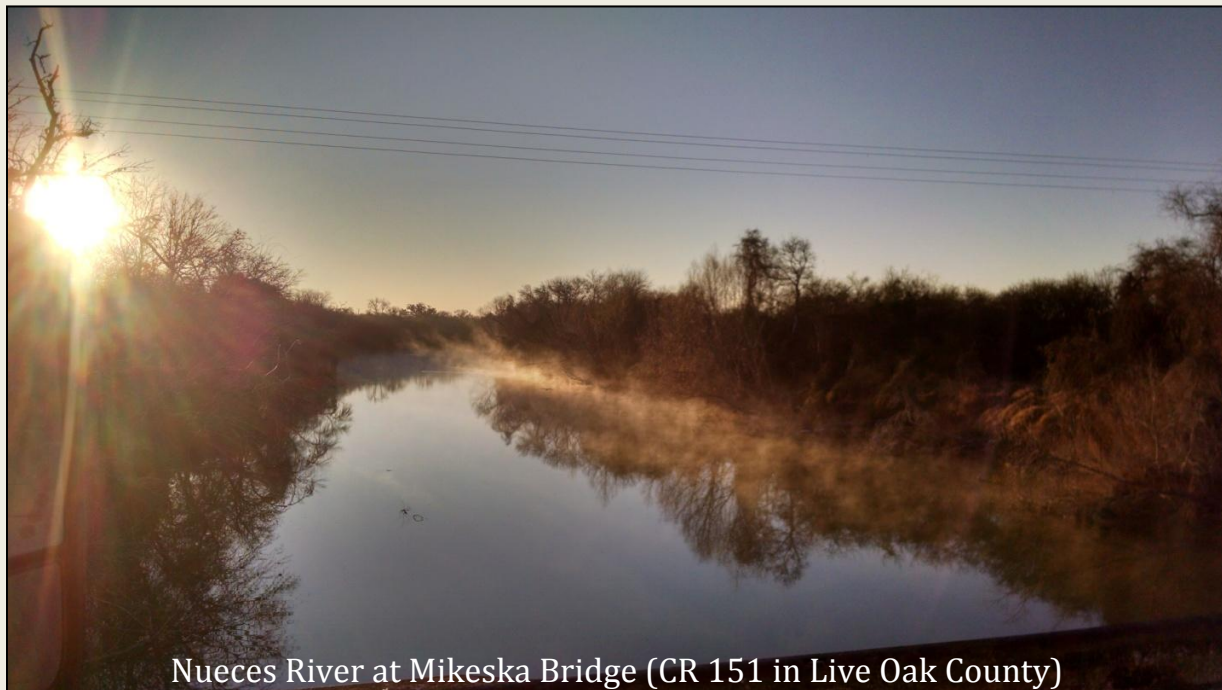
Nueces River Authority
Steering Committee and Stakeholder Update #2
(2nd Quarter of FY 2016-17)
December 2015 - February 2016



March 4th, 2016

Routine Clean Rivers Program (CRP) Monitoring

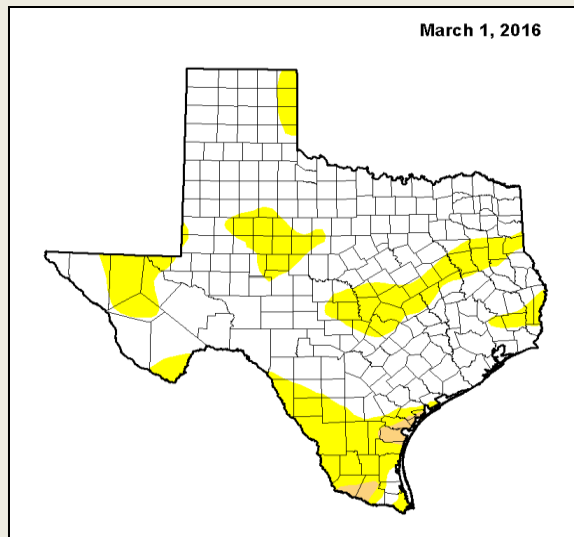
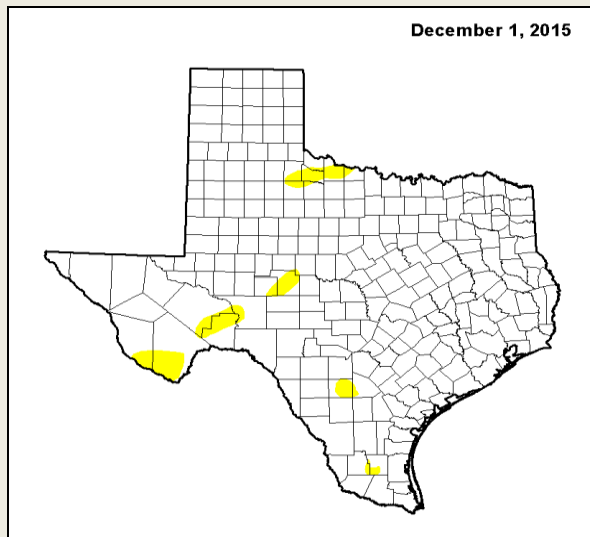
The Nueces River Authority (NRA) conducted routine water quality monitoring at 9 coastal stations and 31 river stations. All sites were monitored with the exception of Leona River near Uvalde due to a lack of water.



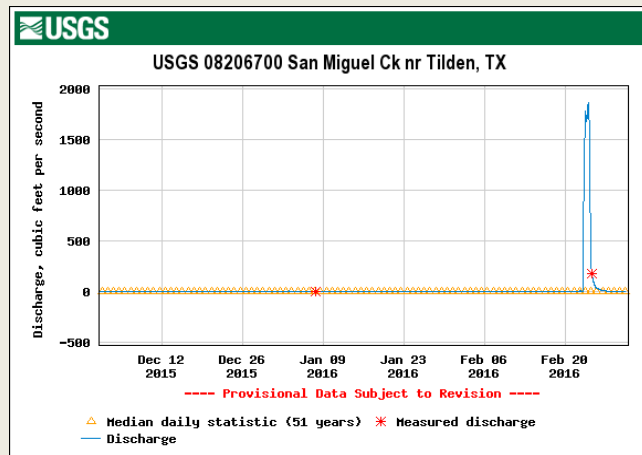
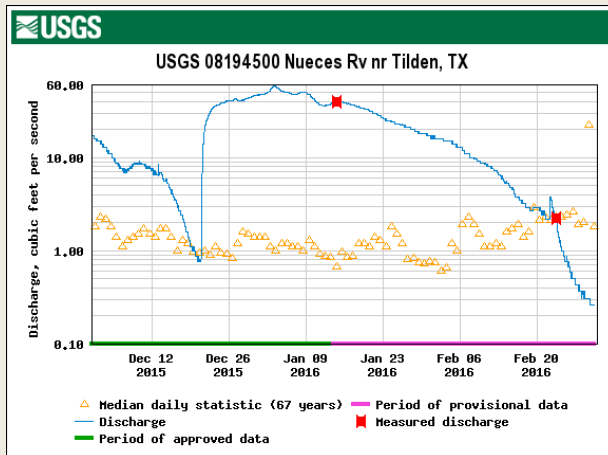
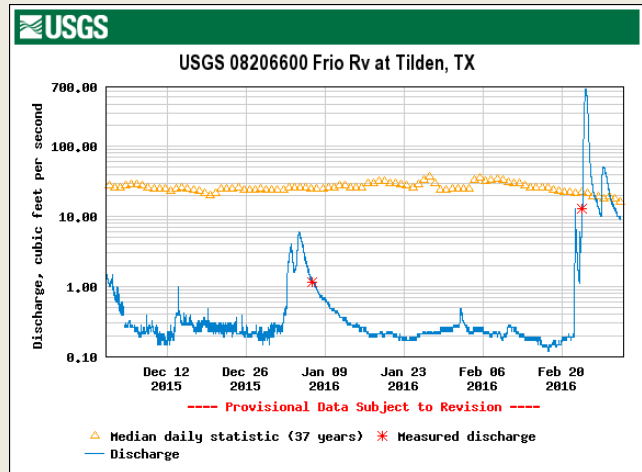
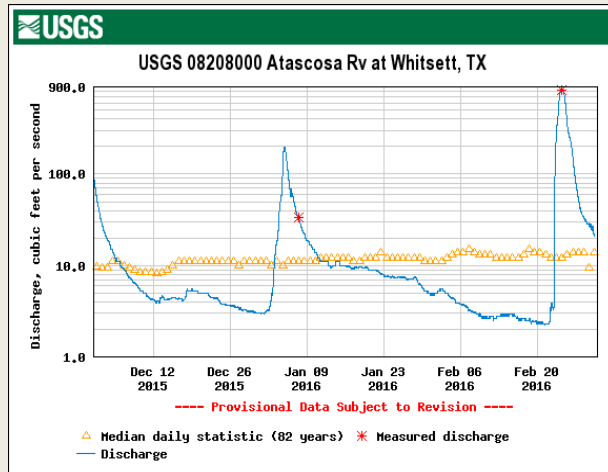
Nueces River at Mikeska Bridge (CR 151 in Live Oak County)

Drought Status in the Nueces River Basin

Much of the Nueces River Basin and adjoining basins had very little rainfall in the second quarter. The drought index (The US Drought Monitor for Texas) shows a slight increase in drought conditions compared with the beginning of the quarter.



Streamflow in the Nueces River Basin in Q2

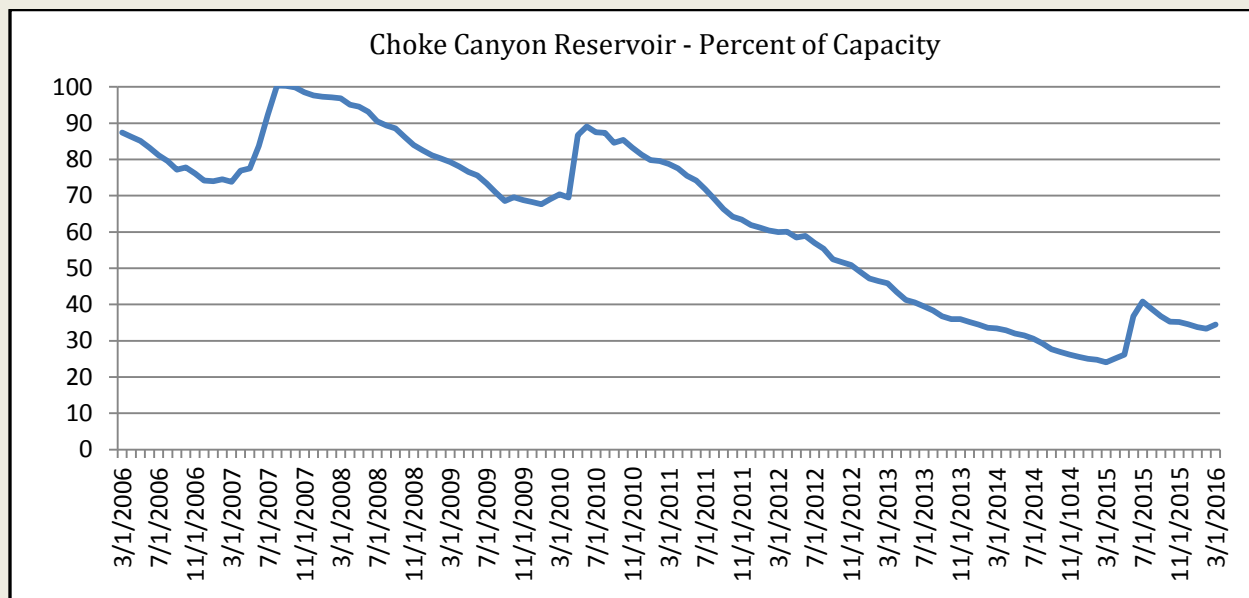
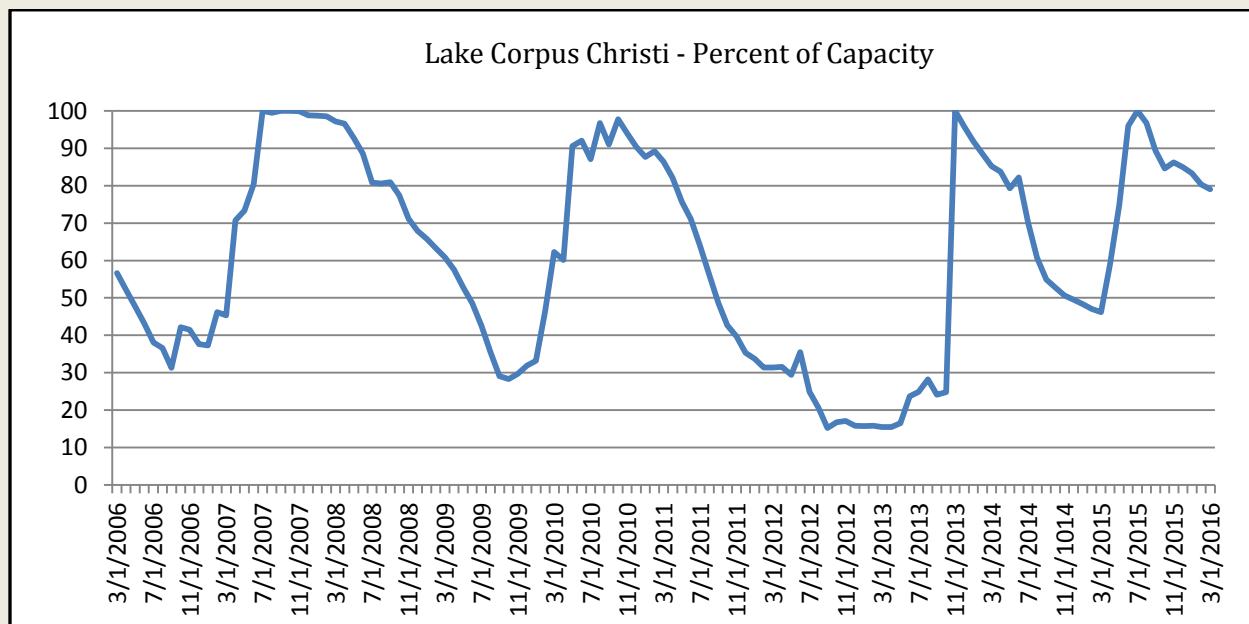


Flood on San Miguel Creek in February 2016 (picture courtesy of TPWD)



Lake Levels

At the beginning of the quarter, the combined capacity of the Reservoir System (Choke Canyon + Lake Corpus Christi) was 48.9%. By the end of February, the combined capacity of the reservoir system fell to 46.5%. For the Daily Reservoir System and Pass-Thru Status Report, please visit the website <https://www.nueces-ra.org/CP/CITY/passthru/index.php>.



CRP Coordinated Monitoring Meeting

The Coordinated Monitoring Meeting for Texas Clean Rivers Program partners will be held on March 30th, 2016 in the Choke Canyon Room located at the City of Corpus Christi Water Department offices located at 2726 Holly Road in Corpus Christi. The meeting starts at 1:00pm.

Petronila Creek CAMS 731



Nueces River Authority has been maintaining a Continuous Water Quality Monitoring (CWQM) Station on Petronila Creek since 2007, collecting specific conductance, TDS, temperature and depth data. The site, also known as CAMS 731, has seen its fair share of problems in the nine years it's been in operation. It was flooded out twice, requiring all new electronics, cables, and field probes. On one

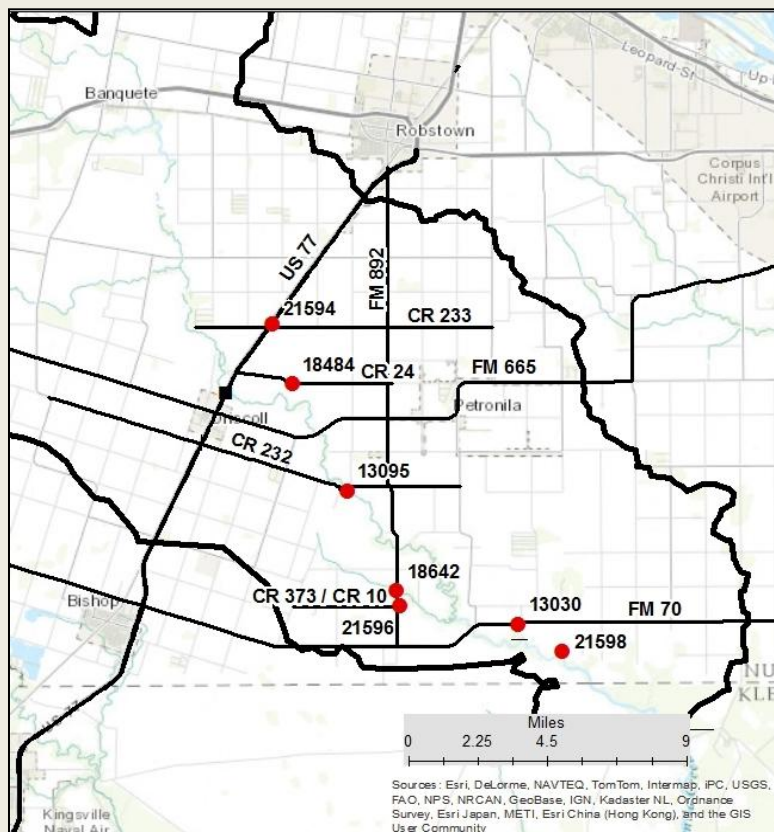


occasion, the site was dismantled due to an approaching tropical storm that changed course at the last minute. The instrument cables have been severed by rodents which required the use of red fox urine extract as a deterrent. A couple of modem and battery failures were experienced. Thousands of yellow jackets attempted to make permanent lodging out of the box. The site was broken into twice by curious visitors. We even caught a fish in the deployment tube on one trip out and learned what blood worms are. The one thing we never had a problem with was the solar panel, although the avian community does use it for regular target practice. However, the decision was made to terminate the site based on site specific issues (extreme stratification occurrences were one reason). February 16th marks the last day of data collection at the site before the signal light went out, intentionally this time. A big thank you goes out to the CWQM team at TCEQ for their expertise to keep the site up and running. I know we all learned a lot.

Petronila Creek Tributary Study

Petronila Creek (Segment 2204), is a stream approximately 44 miles long that flows into Alazan Bay, a small bay opening into Baffin Bay. The creek was listed on the 2000 Texas 303(d) list of impaired water bodies for exceeding the standards for chloride (1,500 mg/l), sulfate (500 mg/l), and total dissolved solids (TDS) (4,000 mg/l). Field investigations identified that excessive chloride, sulfate, and TDS concentrations occur in the downstream section of the creek, southeast of US 77, in an area where man-made nonpoint sources such as produced water, brine pits, and brine injection wells, related to oil and gas production, are most numerous. (Discharging produced water into brine pits was outlawed in 1969 and in ditches in 1987.) In support of the Implementation Plan (I-Plan) for Petronila Creek, NRA began a monthly monitoring project that examines the amount of chloride, sulfate, and TDS present in surface waters of the creek and many of its tributaries.

The monthly effort to monitor the tributaries of Petronila Creek resumed in the second quarter. Seven sites were identified for the second phase of the study, down from nine sites in the first year. Elevated concentrations of chloride, sulfate and TDS were observed in all sites so far. Freshwater streams typically have conductivity values between 150 and 500 μmhos , whereas the open ocean typically has conductance values around 52,000 μmhos .



Site #	Dec. 2015	Jan. 2016	Feb. 2016
21594	26,100 μmhos	25,000 μmhos	33,800 μmhos
18484	43,500	46,000	50,100
13095	17,700	13,600	20,500
18642	32,700	30,600	42,400
21596	15,400	16,000	18,300
13030	19,300	19,300	19,500
21598	32,300	35,100	38,900



Nueces River Watershed Partnership - Development of the Lower Nueces River Watershed Protection Plan

Although the Draft WPP, available at <http://www.nuecesriverpartnership.org/pubs.php>, is still under review by the EPA, NRA is moving forward with coordinating its implementation through a grant from the Texas State Soil and Water Conservation Board. There are currently four proposals out for consideration:

- An Urban Small Water Grant application to evaluate connecting some homes within the Corpus Christi city limits that are on on-site sewage facilities (OSSF) to the City's sewer system. Notification of selection is scheduled to be March 31, 2016.
- A Texas Commission on Environmental Quality (TCEQ) Clean Water Act §319(h) grant application to provide free OSSF inspections and possible funding for replacement systems. TCEQ selected it to be included with their FY 2017 workplan to EPA.
- A Coastal Bend Bays and Estuaries Program proposal to install up to five pet waste stations.
- A Coastal Bend Bays and Estuaries Program proposal to provide a feral hog management workshop and a wildlife management workshop.

An aerial survey above the lake is being planned to try and locate the source of the water hyacinth infestations in the Lake Corpus Christi and downstream in the project area.

The next meeting of the Nueces River Watershed Partnership will be scheduled after comments are received from EPA. The date will be posted in the 'Announcements, Meetings, and Workshops' section on our homepage, <http://www.nueces-ra.org>.

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



The "headwaters" of Segment 2102 at Wesley E. Seal Dam at Lake Corpus Christi

Oso Creek Total Maximum Daily Load

Since 2002, Oso Creek (Segment 2485A), which flows 28 miles to the confluence of Oso Bay in Nueces County has been identified as being impaired for having bacteria concentrations that exceed state water quality standards. Since 2003, the TCEQ and the TSSWCB have conducted studies of bacteria sources and quantities in the Oso Creek watershed. Based on the results of those studies, a TMDL for Oso Creek is being developed to address the contact recreation impairment. Staff from the Center for Coastal Studies at Texas A&M University – Corpus Christi and the Coastal Bend Bays Foundation is disseminating information to the public. The next public meeting will be held on March 9th at 5:30 pm at the Corpus Christi Botanical Gardens.



Learn more about the Oso Bay TMDL and/or the Oso Creek Watershed Public Outreach at the TCEQ project page:

<http://www.tceq.texas.gov/waterquality/tmdl/67-osobaybacteria.html>; You may also go to the CBBF web site at www.baysfoundation.org, email Teresa Carrillo at tcarrillo@baysfoundation.org or call 361-882-3439.

Mary Rhodes Phase 2 Project

NRA staff attended an update meeting on Phase 2 of the Mary Rhodes Pipeline Extension Project. The meeting was discussed at the Coastal Issues Forum hosted by the Coastal Bend Bays Foundation on February 8th. Annie Hoskins, an Associate and Project Manager at Freese and Nichols, Inc provided details about the project. The pipeline extension will allow up to 35,000 acre feet/year from the Lower Colorado River (known as the Garwood Water rights) to tie into the Mary Rhodes Pipeline. Water will travel through a 44" closed conduit pipeline from the intakes located near the City of Bayside. The project is scheduled to be completed around March 2016.



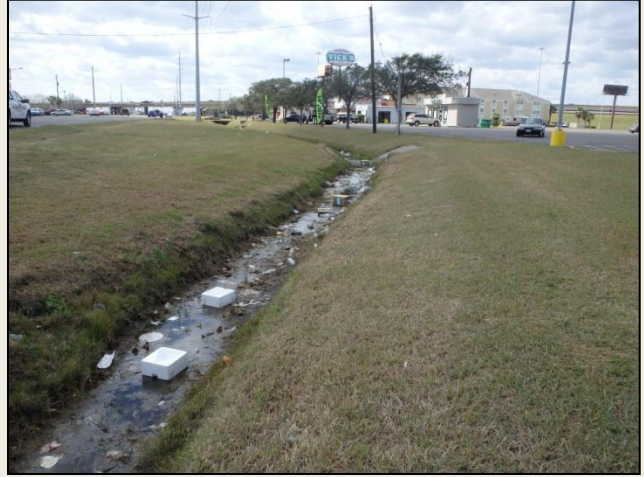
Lower Laguna Madre (LLM) Steering Committee

The Lower Laguna Madre (LLM) Steering Committee hosted the first stakeholder meeting on January 21st at 3301 Carmen Ave., in Rancho Viejo. Jaime Flores discussed the establishment and purpose of the LLM and the status of the Non Point Source (NPS) 319 Grant Application and the completion of the Watershed Characterization project. Dr. Jude Benavides discussed the status of the LMM Monitoring QAPP which will need to be completed before monitoring can begin. For more information please email Jaime Flores at jiflores@ag.tamu.edu.



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NRA field staff did not like to see all this trash in a tributary of Oso Creek in Corpus Christi. Strong winds and an open dumpster nearby likely caused most of this mess.



Outreach and Education

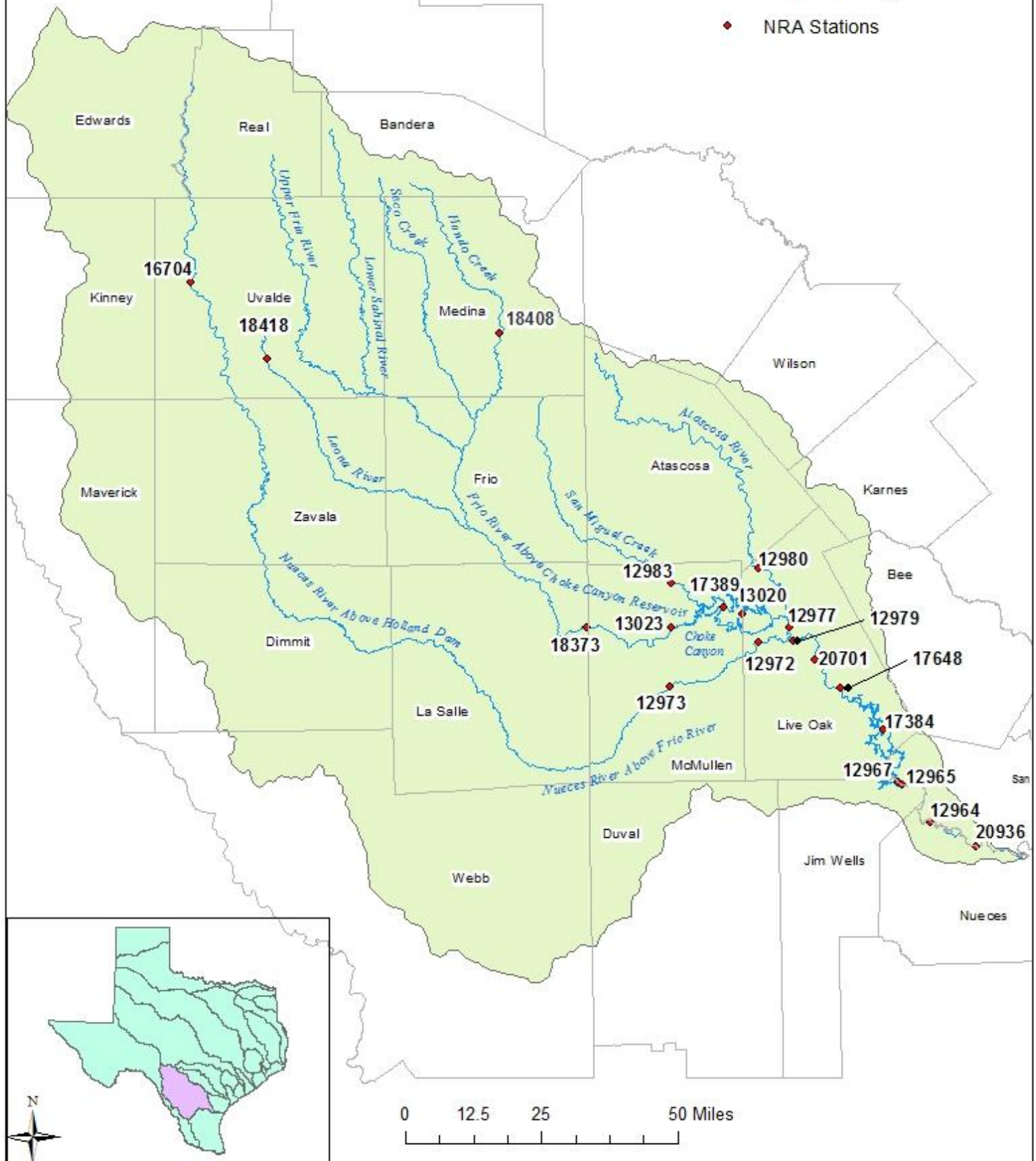
NRA staff will be at the Earth Day/Bay Day event hosted by the Coastal Bend Bays Foundation on Saturday, April 9th at Heritage Park in Corpus Christi to demonstrate our watershed model to the public. It's free to the public and runs from 10 AM to 5 PM. For more information about outreach and education, contact slewey@nueces-ra.org.



Nueces River Basin

NRA Monitoring Stations

◆ NRA Stations



San Antonio-Nueces Coastal Basin



Nueces-Rio Grande Coastal Basin

Monitoring Stations

◆ NRA

