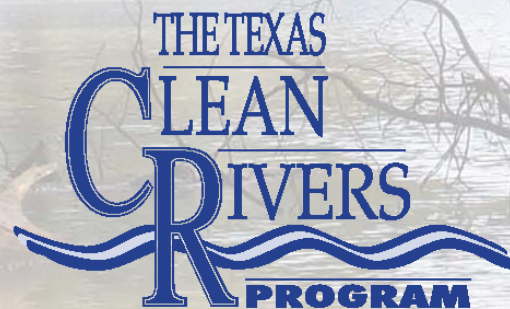




Upper Neches Basin Steering Committee Meeting

June 26, 2014





Agenda

- **Welcome and Introductions** – Brian Sims, ANRA
- **Overview of the Clean Rivers Program** – Brian Sims, ANRA
- **ANRA's Water Quality Monitoring Program** – Brian Sims, ANRA
- **Texas Stream Team Volunteer Monitoring Program** – Travis Tidwell, Texas Stream Team
- **Recreational Use Attainability Analysis for Kickapoo Creek, Neches River Above Lake Palestine, Prairie Creek, Mud Creek, and West Mud Creek** – Leah Taylor, TIAER
- **Attoyac Bayou Watershed Protection Plan** – Lucas Gregory, TWRI
- **ANRA's FY 2014 Basin Highlights Report** – Brian Sims, ANRA
- **Steering Committee Member Recommendations and Concerns**

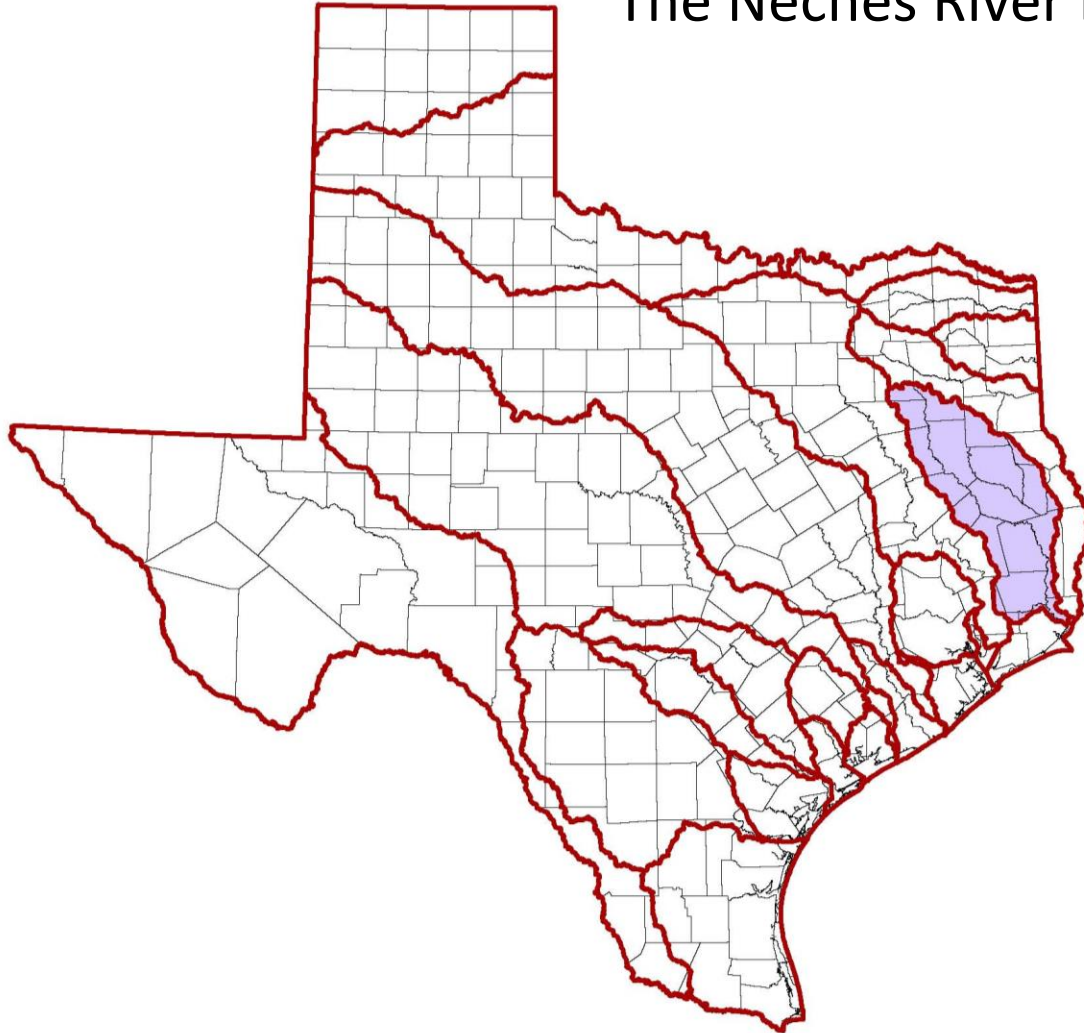




ANRA's Functions in the Neches Basin



The Neches River Basin



ANRA's Jurisdictional Service Area includes all or a portion of the following counties:

Van Zandt
Smith
Henderson
Newton
Cherokee
Anderson
Rusk
Houston
Nacogdoches

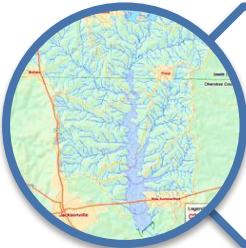
San Augustine
Shelby
Angelina
Trinity
Sabine
Polk
Jasper
Orange



ANRA's General Administration



**Coordinate with
Governments/Entities**



Water Resource Planning and Development
Lake Columbia



Economic Development
Bond Issuance



ANRA's Field Operations Division



**Regional Wastewater Treatment Facilities
and Contract Operations**



Drinking Water Utilities



**Biosolids Composting
Neches Compost Facility**



ANRA's Environmental Division



Clean Rivers Program
Water Quality Monitoring



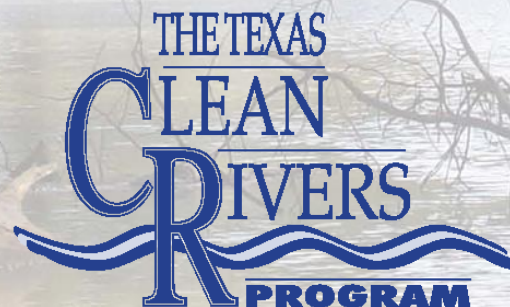
Environmental Laboratory
Drinking Water, Surface Water, and
Wastewater Testing



Control Zone Rayburn
On-Site Sewage Facility Permitting



An Overview of the Texas Clean Rivers Program





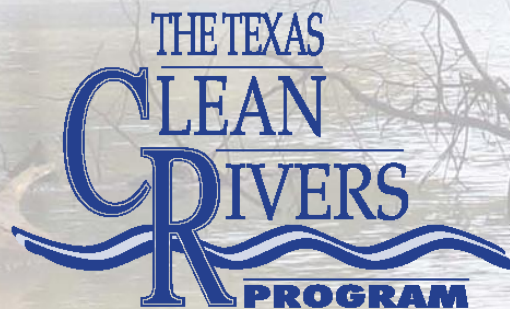
The Texas Clean Rivers Program (CRP)

- Established in 1991 by the 72nd Texas Legislative Session (SB 818)
- Purpose is to monitor the waters of the state and maintain and/or improve water quality
- Partially funded by fees on wastewater discharge and water rights permits
- Collaboration of the Texas Commission on Environmental Quality (TCEQ) and 15 partner agencies
- Emphasis on the collection of water quality data for assessment and regulatory purposes

<http://www.tceq.texas.gov/waterquality/clean-rivers>



ANRA Clean Rivers Program FY 2014 – 2015 Budget Allocations & Expenses





FY 2014 - 2015 Budget Allocations

<u>Planning Agency</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Total Allocation</u>
BRA (12)	398,1590	398,159	796,318
GBRA (17 & 18)	135,3781	135,378	270,756
HGAC (9, 10, 11, 13)	965,615	965,615	1,931,230
IBWC (23)	267,252	267,252	534,504
LNRA (16)	99,298	99,298	198,596
LCRA (14 & 15)	381,797	381,797	763,594
ANRA & LNVA (6 & 7)	329,766	329,766	659,532
NETMWD (4)	99,298	99,298	198,596
NRA (20, 21, & 22)	258,906	258,906	517,812
RRA (1 & 2)	311,118	311,118	622,236
SARA (19)	197,770	197,770	395,540
SRA (5)	313,074	313,074	626,148
SRBA (3)	99,297	99,297	198,594
TRA (8)	393,272	393,272	786,544
TOTALS	\$4,250,000	\$4,250,000	\$8,500,000



Clean Rivers Program Budget Reduction

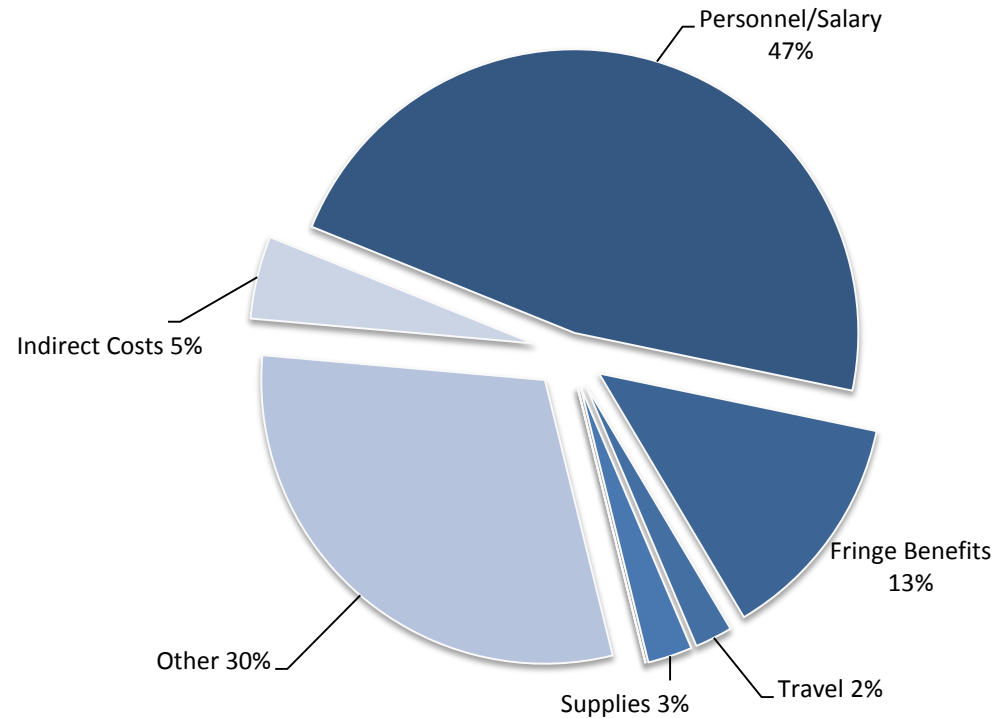
- The CRP funding currently allocated to ANRA from TCEQ for FY 2014 – 2015 is \$329,766.00 (a reduction of \$19,398.00 compared to historical funding levels)
- ANRA has reallocated salaries and resources within its Environmental Division to address this reduction in funding
 - Shifting of salaries from CRP to the Environmental Laboratory
 - Use of ANRA personnel for additional field monitoring activities (not reimbursed by CRP)
 - Use of automated laboratory equipment to improve testing efficiency
 - Reallocation process actually allowed for in an **increase** in the amount of surface water quality monitoring we are able to conduct
 - Increased from 26 sites to 40 sites per quarter beginning September 2013



ANRA Clean Rivers Program Budget by Category

FY 2014 – FY 2015 Clean Rivers Program Budget

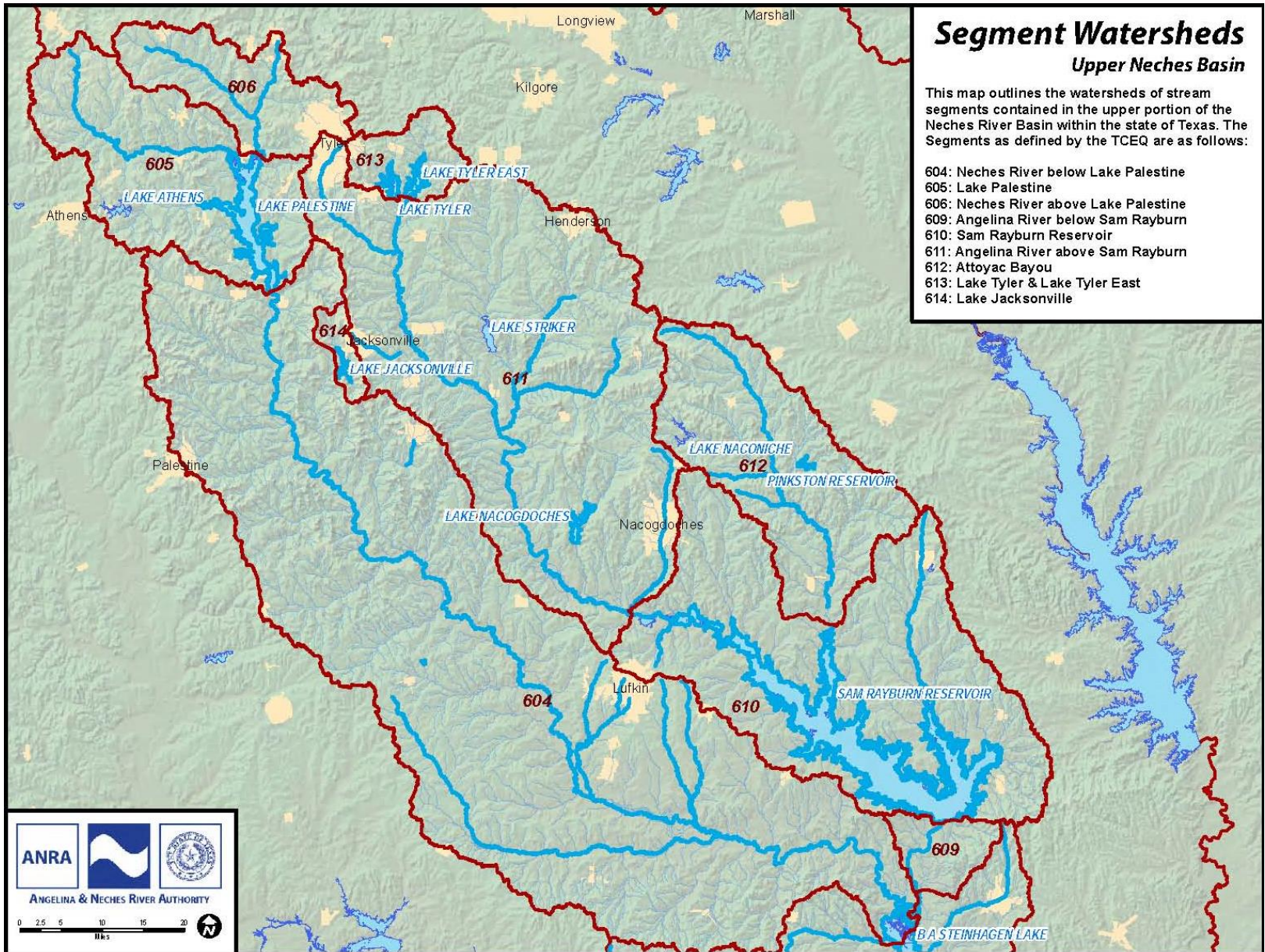
Budget Category	Approved Budget
Personnel/Salary	\$155,438.38
Fringe Benefits	\$43,535.35
Travel	\$7,083.54
Supplies	\$8,395.39
Equipment	\$0.00
Contractual	\$0.00
Construction	\$0.00
Other	\$99,720.00
Total Direct Costs	\$314,217.66
Authorized Indirect Costs	\$15,548.34
Total Reimbursable Costs	\$329,766.00





ANRA's Water Quality Monitoring Activities in the Upper Neches Basin

Fiscal Years 2014 - 2015





Water Quality Monitoring in the Upper Neches Basin

- Currently, ANRA monitors 40 sites quarterly for field parameters, conventional parameters, and bacteria. An additional site is monitored bimonthly for bacteria. This is an increase from 26 sites monitored in FY 2013.
- Additional monitoring in the Upper Neches Basin is performed by TCEQ (Region 5 in Tyler and Region 10 in Beaumont), as well as the Lower Neches Valley Authority (LNVA)

Number of Monitoring Stations in the Upper Neches Basin						
Sampling Entity	Field	Conventional	Bacteria	Flow	Metals in Water	Metals in Sediment
ANRA	40	40	41	31	0	0
TCEQ	36	36	36	13	1	6
LNVA	6	6	6	1	0	0



Water Quality Monitoring in the Upper Neches Basin

ANRA monitoring personnel collect field, conventional, and bacterial parameters at monitoring stations.

Parameters for Quarterly Monitoring		
Field Parameters	Conventional Parameters	Bacterial Parameters
Dissolved Oxygen Days Since Last Significant Rainfall Flow Severity Instantaneous Stream Flow pH Present Weather Secchi Transparency Specific Conductance Total Water Depth Water Temperature	Ammonia-N Chloride Chlorophyll- <i>a</i> Pheophytin- <i>a</i> Sulfate Total Dissolved Solids (TDS) Total Nitrate+Nitrite* Total Phosphorus Total Suspended Solids (TSS)	<i>E. coli</i>

* Beginning in FY 2015, ANRA will begin testing for Nitrate-N and Nitrite-N individually instead of combined.



Additional Monitoring Stations for FY 2014 -2015

- 2 sites on Lake Striker that were previously being monitored by TCEQ Region 5 (Tyler)
 - Lake Striker Near Dam
 - Lake Striker Upper Lake





Additional Monitoring Stations for FY 2014 -2015

- Added 2 monitoring stations on tributaries to Lake Striker
 - Bowles Creek
 - Johnson Creek
- These sites have historically exhibited low pH values that may have been contributing factors to fish kills on Lake Striker.



Bowles Creek at 4194



Johnson Creek at 476



Additional Monitoring Stations for FY 2014 -2015

- Added an additional monitoring station on Ayish Bayou
 - upstream of the City of San Augustine's WWTP
 - In an assessment unit (AU_02) without historical monitoring



Ayish Bayou at West Columbia Street



Additional Monitoring Stations for FY 2014 -2015

- Added additional monitoring on tributaries of Attoyac Bayou now that monitoring activities under the Attoyac Bayou Watershed Protection Plan project have ended.
 - Naconiche Lake
 - West Creek
- Lake Naconiche has not been previously monitored.
- West Creek was monitored as part of the Attoyac Bayou WPP project.



Lake Naconiche Main Pool



West Creek at FM 2913



Additional Monitoring Stations for FY 2014 -2015

- Following consultation with City of Lufkin personnel, additional sampling locations on Cedar Creek and Hurricane Creek were added within the city limits.
 - Cedar Creek at Ellis Avenue
 - Cedar Creek at South Loop 287
 - Hurricane Creek downstream of Kiwanis Park Drive
 - Hurricane Creek at South Loop 287



Cedar Creek at Ellis Avenue



Hurricane Creek at S Loop 287



Additional Monitoring Stations for FY 2014 -2015

- An additional monitoring station was added on Bayou Carrizo, tributary of Sam Rayburn Reservoir that had not been historically monitored.



Bayou Carrizo at SH 21



Additional Monitoring Stations for FY 2014 -2015

- Additional monitoring stations were added to Jack Creek.
 - Jack Creek at FM 3150
 - Jack Creek at SH 94
- Jack Creek at SH 94 has been monitored previously, but not since 2000.
- The site at FM 3150 provides a monitoring station between Jack Creek at SH 103 and the new station at SH 94

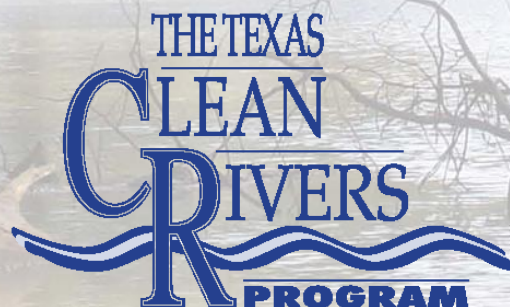


Jack Creek at SH 94





Additional Projects and Activities





Clean Water Act Section 319(h) Nonpoint Source Grant

Lake Sam Rayburn On-Site Sewage Facility (OSSF) Program Support and Attoyac Bayou OSSF Remediation

Project Goals and Objectives:

- Development of a database for storage and retrieval of information for permitted OSSFs around Sam Rayburn Reservoir and within the unincorporated portion of San Augustine County
- Electronic capture of all OSSF permit documents, dating back to the 1970's
- Field collection of GPS data and mapping of OSSFs
- Identification and replacement of failing or non-existent OSSFs in the portion of the Attoyac Bayou watershed located in San Augustine and Nacogdoches counties
- Water Quality Monitoring in the Attoyac Bayou watershed



Clean Water Act Section 319(h) Nonpoint Source Grant

Water Quality Monitoring in the Attoyac Bayou Watershed

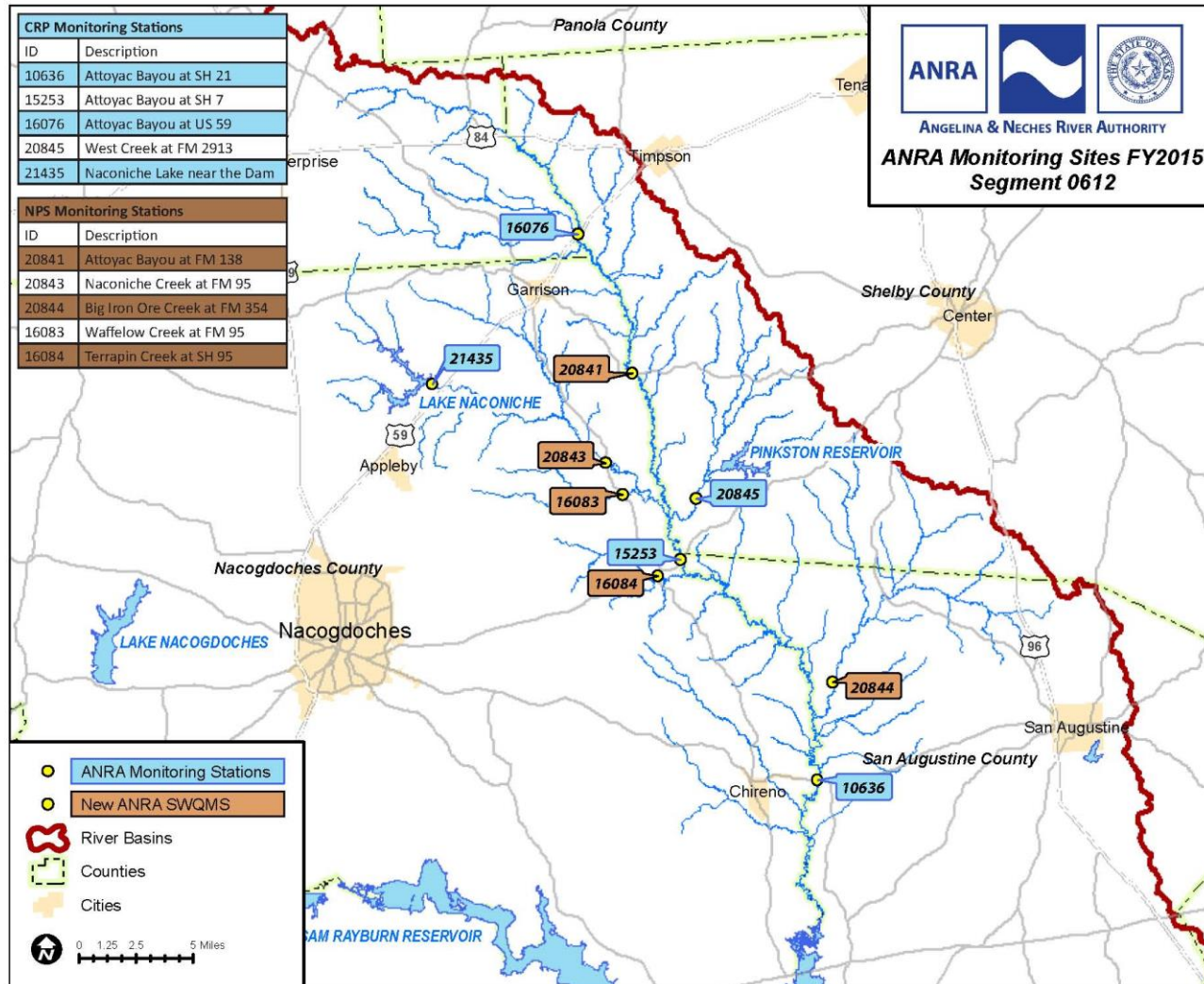
Beginning in FY 2015, ANRA will be adding 5 additional monitoring stations in the Attoyac Bayou Watershed:

- Naconiche Creek at FM 95
- Big Iron Ore Creek at FM 354
- Waffelow Creek at FM 95
- Terrapin Creek at SH 95
- Attoyac Bayou at FM 138

These stations were monitored previously as part of the Attoyac Bayou WPP project.



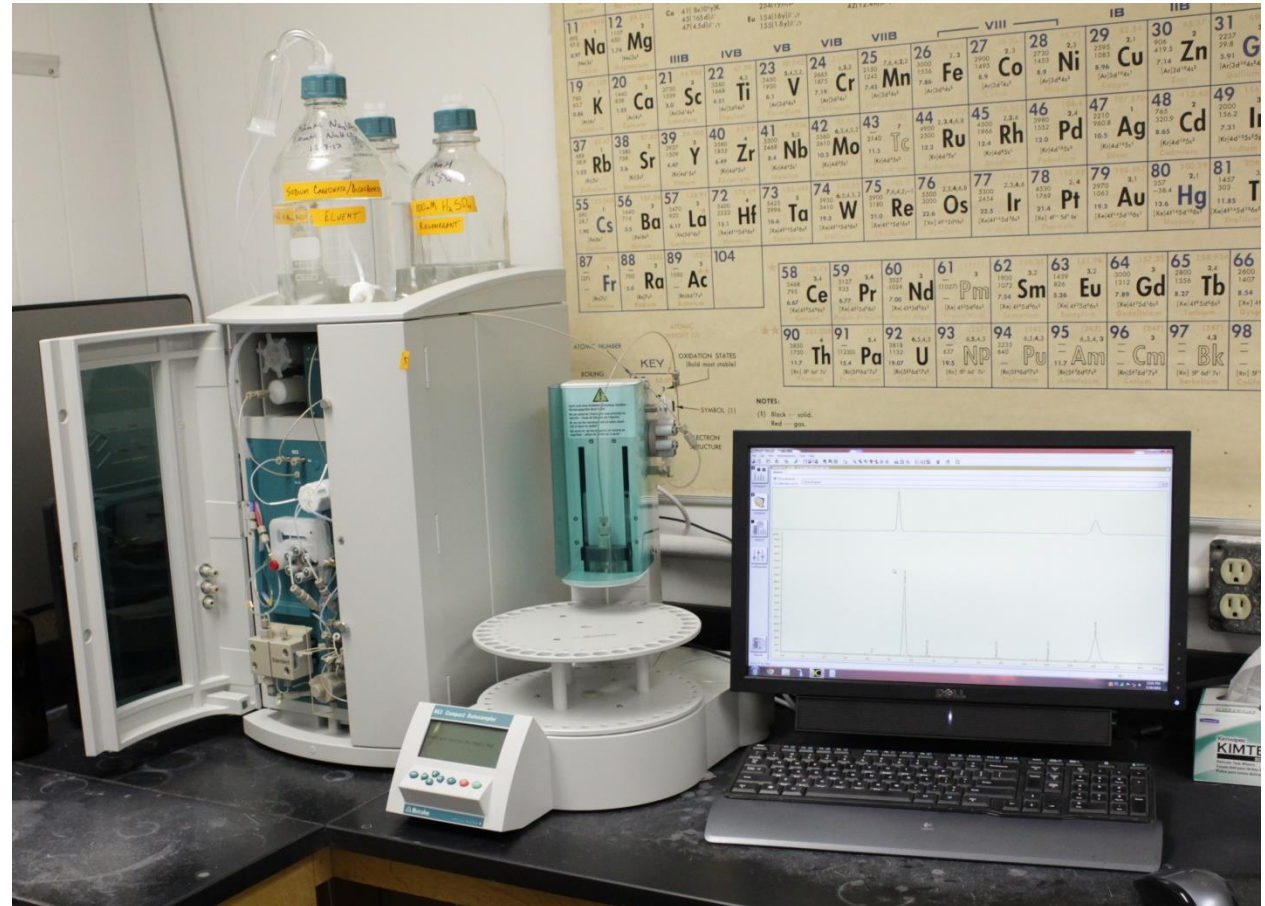
Clean Water Act Section 319(h) Nonpoint Source Grant





Clean Water Act Section 319(h) Nonpoint Source Grant

- As part of this grant, the ANRA Environmental Laboratory was able to purchase an ion chromatograph for anion analysis.
- Currently in the process of preparing an amended NELAP application to add Nitrate-N, Nitrite-N, Chloride, Sulfate, and Orthophosphorus-P by EPA Method 300.0 to our scope of accreditation.





Additional Resources

- Texas Commission on Environmental Quality Clean Rivers Program
 - <http://www.texascleanrivers.org>
- Surface Water Quality Monitoring Procedures Manual
 - http://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg415/rg-415.pdf
- Upper Neches Basins Quality Assurance Project Plan (QAPP)
 - http://www.anra.org/divisions/water_quality/crp/pdfs/QAPP/ANRA_CRP_QAPP_FY_14-15.pdf
- ANRA CRP Monitoring Activities
 - http://www.anra.org/divisions/water_quality/crp/monitoring.html
- Coordinated Monitoring Schedule
 - <http://cms.lcra.org>
- ANRA Basin Highlights Report
 - http://www.anra.org/divisions/water_quality/crp/pdfs/reports/Highlights_Reports/2014_Upper_Neches_Basin_Highlights_Report.pdf



Comments or Questions?

- Please direct inquiries regarding ANRA's Clean Rivers Program to:

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