



Upper Neches Basin Steering Committee Meeting

July 13, 2022



Agenda

Welcome and Introductions

Jeremiah Poling, Angelina & Neches River Authority

Overview of the Clean Rivers Program

Rene Barelas, Angelina & Neches River Authority

Updates to ANRA's Water Quality Monitoring Program and The 2022 Basin Highlights Report

Rene Barelas, Angelina & Neches River Authority

TMDL and Clean Water Act Project Updates

Kickapoo Watershed Protection Plan – Leah Taylor, Texas Institute for Applied Environmental Research

La Nana Watershed Protection Plan – Michael Schramm, Texas Water Resources Institute

Attoyac Watershed Protection Plan – Michael Schramm, Texas Water Resources Institute

Ayish Bayou Water Quality – Duncan Kikoyo, Texas Water Resources Institute

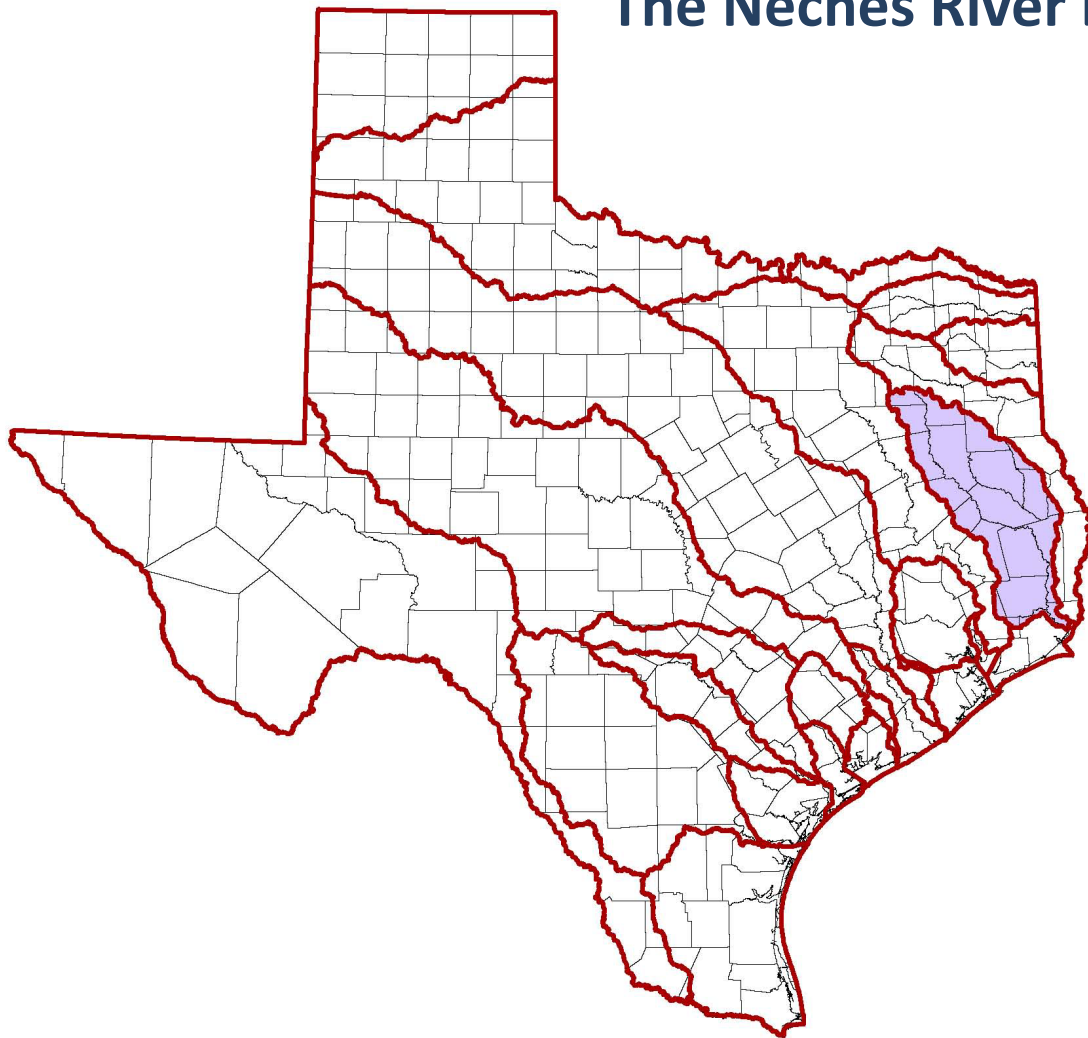
Guest Speakers

Repetriation of illegally harvested alligator snapping turtles back into native Texas waters – Andy Mullaney, Stephen F. Austin State University

Open Discussion for Steering Committee Member Recommendations and Concerns



The Neches River Basin



ANRA's Jurisdictional Service Area includes all or a portion of the following 17 counties:

Van Zandt
Smith
Henderson
Newton
Cherokee
Anderson
Rusk
Houston
Nacogdoches

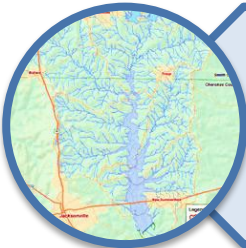
San Augustine
Shelby
Angelina
Trinity
Sabine
Polk
Jasper
Orange



ANRA's General Administration



**Coordinate with
Governments/Entities**



Water Resource Planning and Development



**Economic Development
Bond Issuance**



ANRA's Field Operations Division



**Regional Wastewater Treatment Facilities
and Contract Operations**



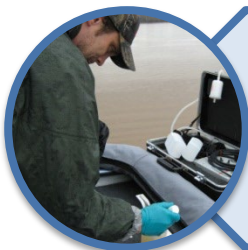
Drinking Water Utilities



**Biosolids Composting
Neches Compost Facility**



ANRA's Environmental Division



Clean Rivers Program
Water Quality Monitoring



Environmental Laboratory
Drinking Water, Surface Water, and
Wastewater Testing



On-Site Sewage Facilities Program
OSSF Permitting & Investigations



Ayish at W. Columbia Street In City of San Augustine

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>

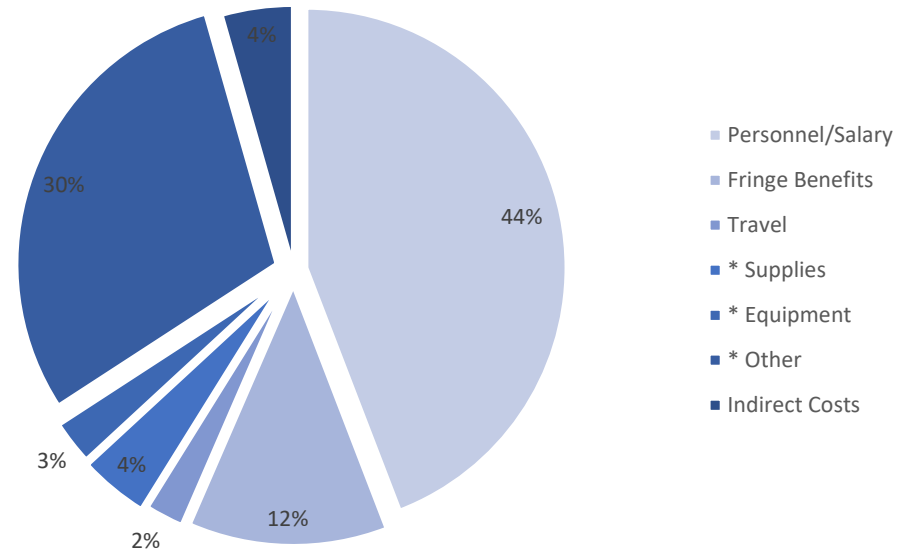


FY 2022 - 2023 Budget Allocations			
Planning Agency	FY 2022	FY 2023	Total Allocation
BRA (12)	\$398,159.00	\$398,159.00	\$796,318.00
GBRA (17 & 18)	\$1,353,781.00	\$135,378.00	\$270,756.00
HGAC (9, 10, 11, 13)	\$965,615.00	\$965,615.00	\$1,931,230.00
IBWC (23)	\$267,252.00	\$267,252.00	\$534,504.00
LNRA (16)	\$99,298.00	\$99,298.00	\$198,596.00
LCRA (14 & 15)	\$381,797.00	\$381,797.00	\$763,594.00
ANRA & LNVA (6 & 7)	\$329,766.00	\$329,766.00	\$659,532.00
NETMWD (4)	\$99,298.00	\$99,298.00	\$198,596.00
NRA (20, 21, & 22)	\$258,906.00	\$258,906.00	\$517,812.00
RRA (1 & 2)	\$311,118.00	\$311,118.00	\$622,236.00
SARA (19)	\$197,770.00	\$197,770.00	\$395,540.00
SRA (5)	\$313,074.00	\$313,074.00	\$626,148.00
SRBA (3)	\$99,297.00	\$99,297.00	\$198,594.00
TRA (8)	\$393,272.00	\$393,272.00	\$786,544.00
TOTALS	\$4,250,000.00	\$4,250,000.00	\$8,500,000.00



ANRA Clean Rivers Program Budget by Category

FY 2022 - FY 2023 Clean River Program Budget	
Budget Category	Approved Budget
Personnel/Salary	\$153,911.68
Fringe Benefits	\$43,095.28
Travel	\$8,185.00
* Supplies	\$14,852.87
* Equipment	\$9,400.00
Contractual	\$0.00
Construction	\$0.00
* Other	\$103,730.00
Total Direct Costs	\$333,174.83
Indirect Costs	\$15,391.17
Total Project Costs	\$348,566.00



**Categorical amendments totaling \$18,800
approved in April 2022.*

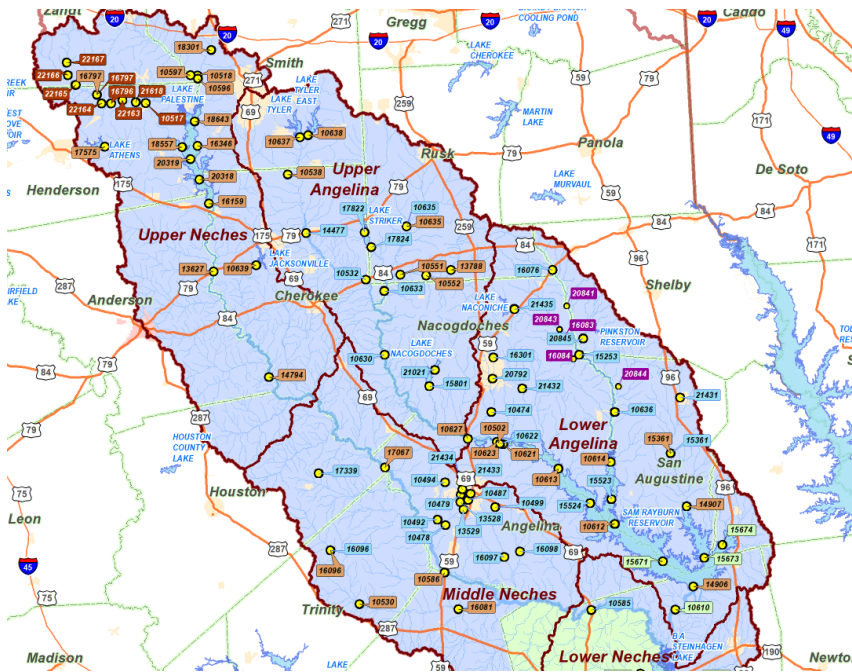


FY 2022 Water Quality Monitoring in the Neches Basin

- ANRA continues to monitor 37 sites quarterly for field parameters, conventional parameters, and bacteria. Additionally, one 24-Hr Dissolved Oxygen site on Cedar Creek in Lufkin, Texas.
- **Changes** – Additional 24-Hr site to be added at Segment 0615 (Station ID 10622) by the end of FY 22 due to additional monitoring requested by the TCEQ.
- Additional monitoring in the Upper Neches Basin is performed by TCEQ (Region 5 in Tyler and Region 10 in Beaumont), Stephen F. Austin State University (SFASU), Texas Institute for Applied Environmental Research (TIAER), the Lower Neches Valley Authority (LNVA), and the Trinity River Authority (TRA).

FY 2022 Monitoring Stations in the Neches Basin	
<i>Sampling Entity</i>	<i>Number of Monitoring Sites</i>
ANRA	39
TCEQ-Region 5	45
TCEQ-Region 10	23
LNVA	26
SFASU	5
TIAER	9
TRA	1

FY2021 vs FY2022





FY 2022 Water Quality Monitoring in the Neches Basin

Parameters Collected:

Field:

Dissolved Oxygen
Days Since Last Significant Rainfall
Water Temperature
Flow Severity
Instantaneous Stream Flow
pH
Present Weather
Secchi Transparency
Specific Conductivity
Total Water Depth

Conventional:

Ammonia-N
Chloride
Chlorophyll-*a*
Total Kjeldahl Nitrogen (TKN)
Nitrate-N
Nitrite-N
Pheophytin-*a*
Sulfate
Total Phosphorus
Total Suspended Solids (TSS)

Bacteriological:

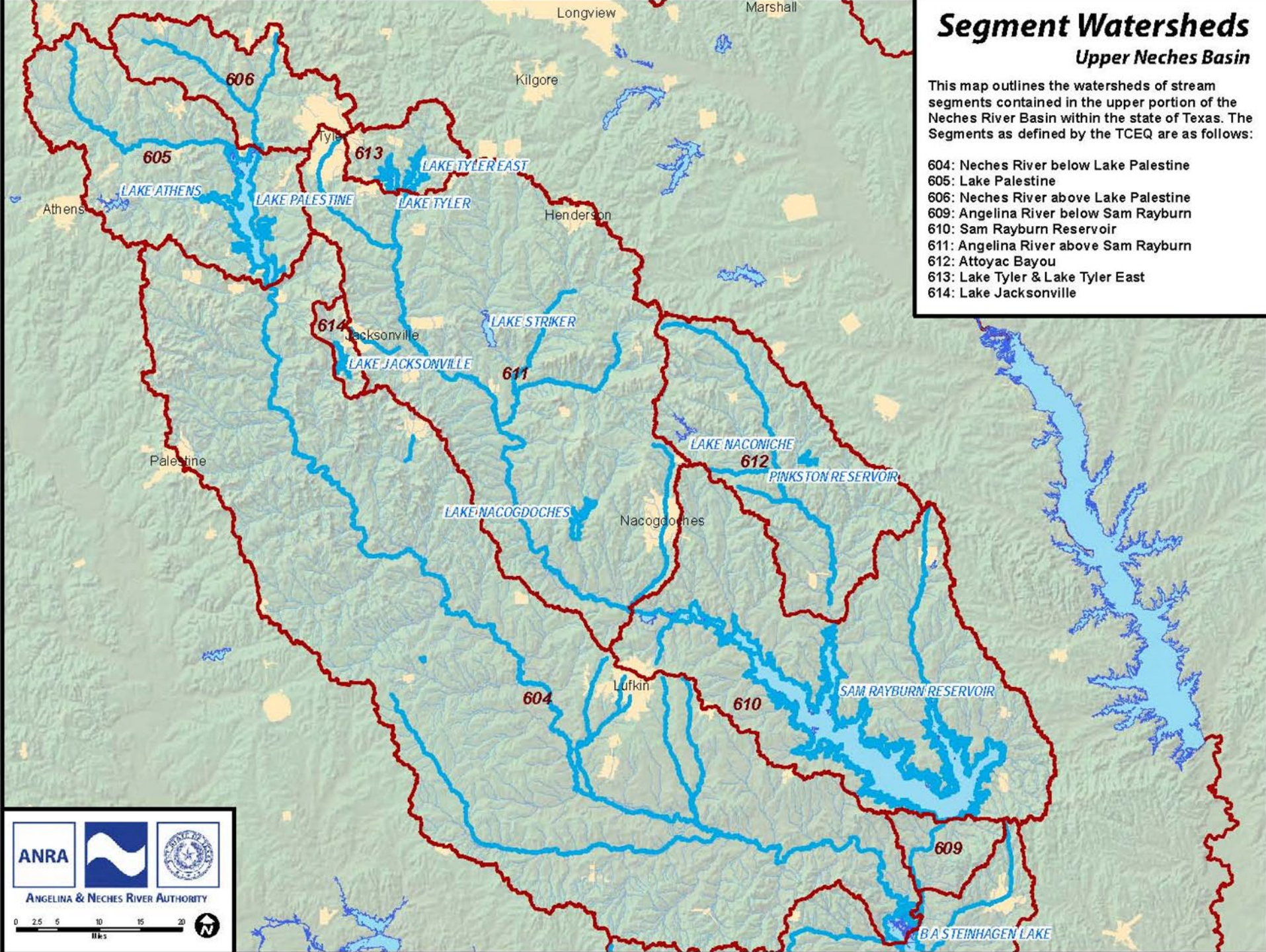
Escherichia Coli (E.coli)

In general, historical and current water quality data of the Neches River Basin include impairments and concerns for the following parameters:

Elevated bacteria levels
Depressed dissolved oxygen
Mercury and Dioxin in edible fish tissue
Concerns for Nutrient levels

This map outlines the watersheds of stream segments contained in the upper portion of the Neches River Basin within the state of Texas. The Segments as defined by the TCEQ are as follows:

604: Neches River below Lake Palestine
605: Lake Palestine
606: Neches River above Lake Palestine
609: Angelina River below Sam Rayburn
610: Sam Rayburn Reservoir
611: Angelina River above Sam Rayburn
612: Attoyac Bayou
613: Lake Tyler & Lake Tyler East
614: Lake Jacksonville



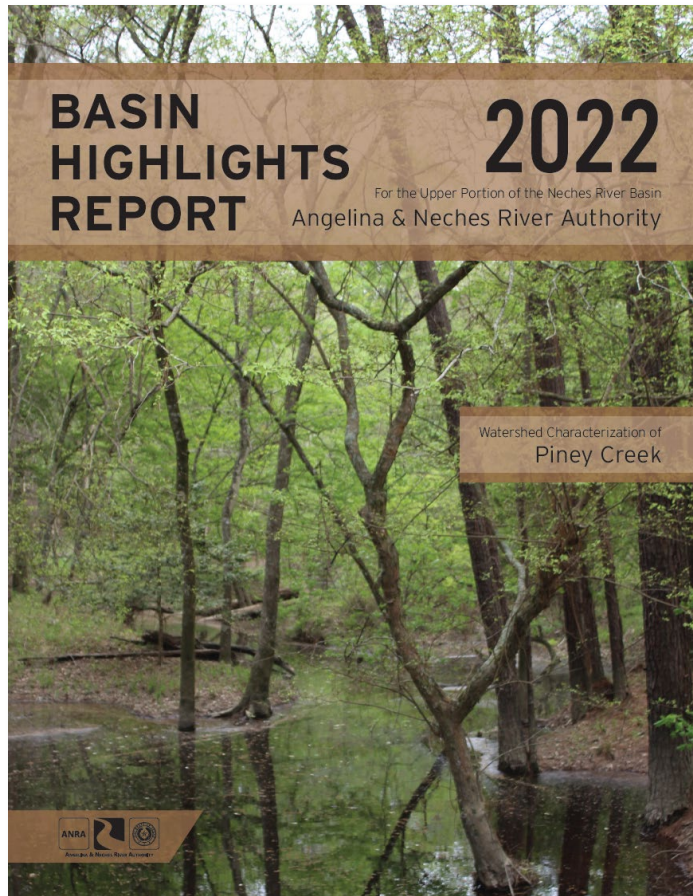
2022 Texas Integrated Report – Approved Texas 303(d) list

Segment ID	Segment Name	Impairments	Category	Level of Concern
604	Neches River below Lake Palestine	Dioxin in edible tissue,	5c	CS
		Mercury in edible tissue	5c	
0604A	Cedar Creek	Bacteria (Recreation Use)	5b	CS
				CS
0604B	Hurricane Creek	Bacteria (Recreation Use)	5b	
0604C	Jack Creek	No Impairments	5a	CN
				CS
				CS
0604D	Piney Creek	Depressed dissolved oxygen	5c	CS
0604M	Biloxi Creek	Bacteria (Recreation Use),	5b	CS
		Depressed dissolved oxygen	5c	
0604T	Lake Ratcliff	Mercury in edible tissue	5c	
605	Lake Palestine	pH	5b	CS
0605A	Kickapoo Creek	Bacteria (Recreation Use)	5b	
		Depressed dissolved oxygen	5c	
606	Neches River Above Lake Palestine	Bacteria (Recreation Use) (AU 01),	5b	CN
		Bacteria (Recreation Use) (AU 02),	5c	CS
		Depressed dissolved oxygen	5b	CS
				CN
0606A	Prairie Creek	Bacteria (Recreation Use)	5b	
0606D	Black Fork Creek	Bacteria (Recreation Use)	5c	
609	Angelina River Below Sam Rayburn Reservoir	Dioxin in edible tissue,	5c	
		Mercury in edible tissue	5c	

Segment ID	Segment Name	Impairments	Category	Level of Concern
610	Sam Rayburn Reservoir	Mercury in edible tissue	5a	CN
		Dioxin in edible tissue	5c	CS
		Excessive Algal growth in water	5c	CS
				CS
				CS
				CN
0610A	Ayish Bayou	Bacteria (Recreation Use)	5b	CS
0610P	Bayou Carrizo	Bacteria (Recreation Use)	5c	CN
611	Angelina River above Sam Rayburn	Bacteria (Recreation Use)	5c	
0611A	East Fork Angelina River	Bacteria (Recreation Use)	5b	CN
0611B	La Nana Bayou	Bacteria (Recreation Use)	5b	CN
				CS
				CS
0611C	Mud Creek	Bacteria (Recreation Use)	5b	
0611D	West Mud Creek	Bacteria (Recreation Use)	5b	CS
				CS
612	Attoyac Bayou	Bacteria (Recreation Use)	5b	
0612F	West Creek	Bacteria (Recreation Use)	5c	
613	Lake Tyler/Lake Tyler East	Excessive Algal growth in water	5c	
615	Angelina/Sam Rayburn Reservoir	Depressed dissolved oxygen,	5c	
		Dioxin in edible tissue,	5a	
		Mercury in edible tissue	5c	
0615A	Paper Mill Creek	Bacteria (Recreation Use)	5b	



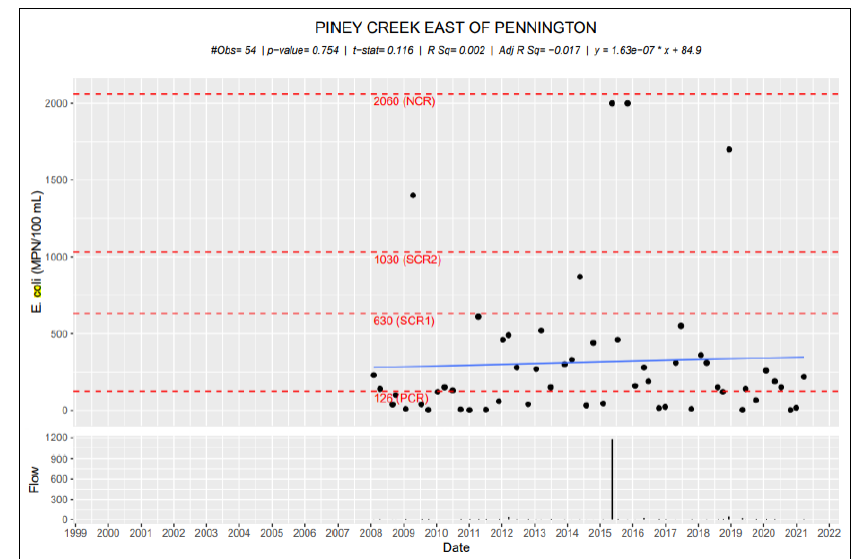
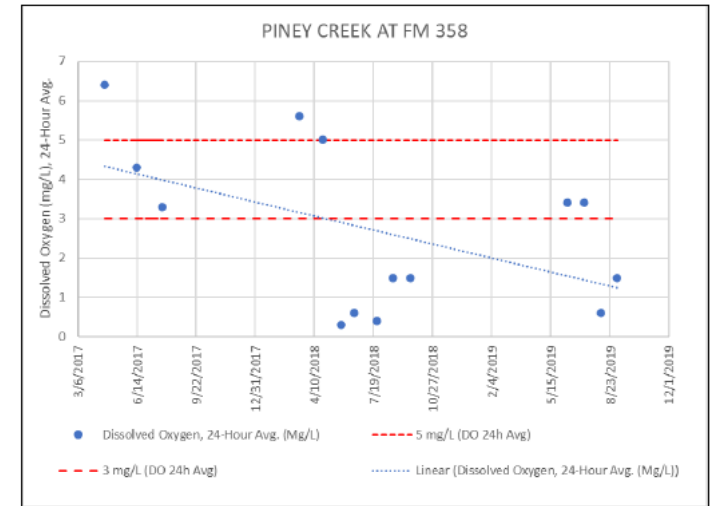
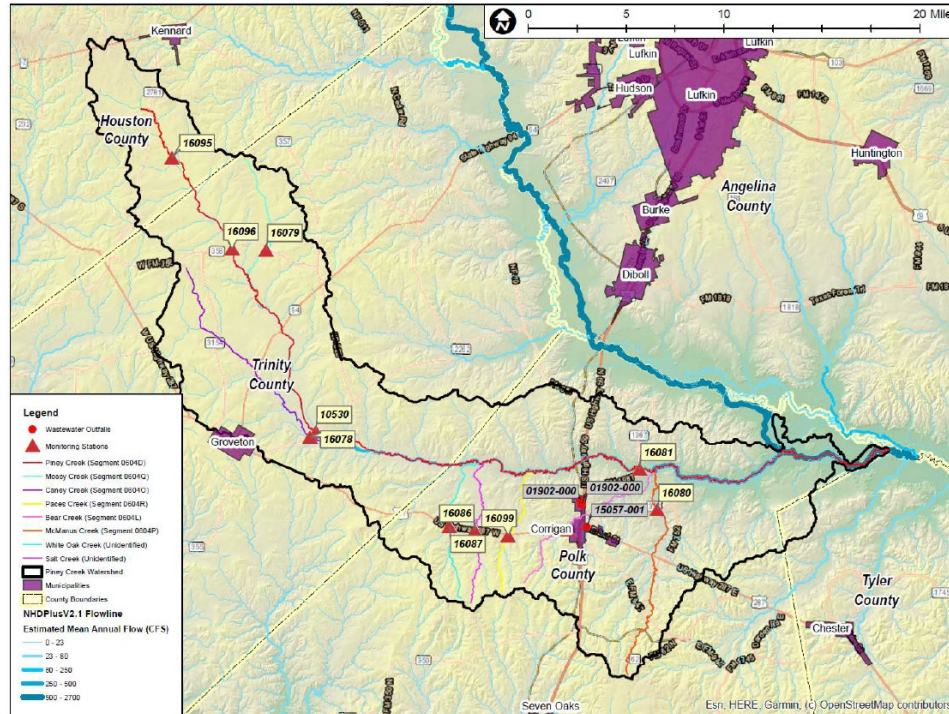
2022 Upper Neches Basin Highlights Report

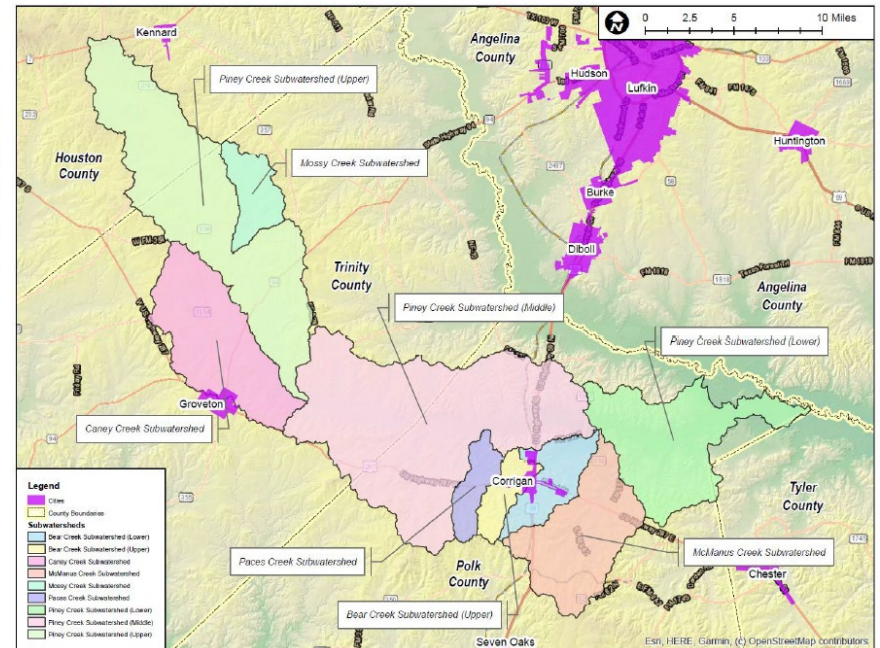


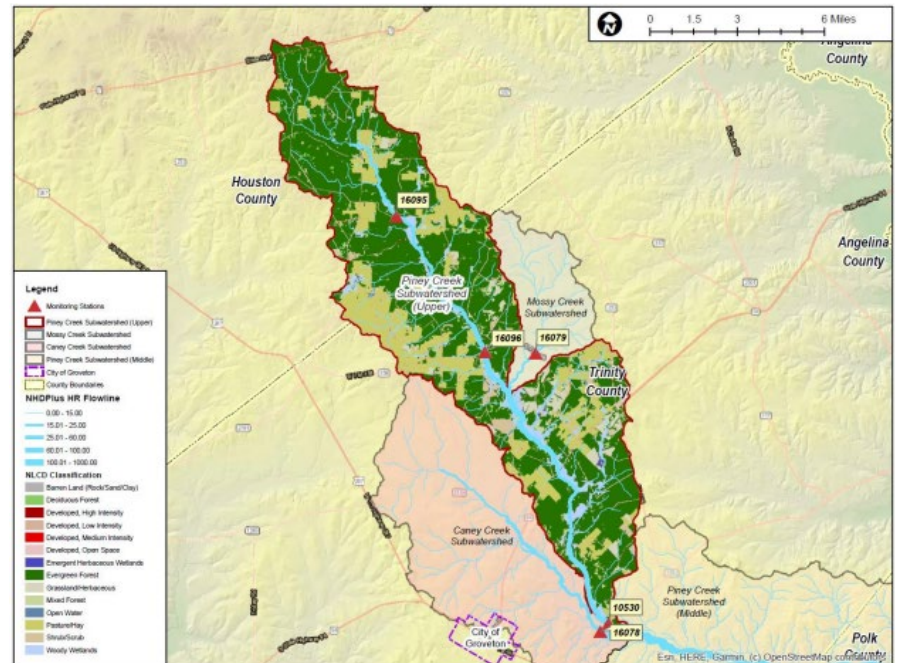
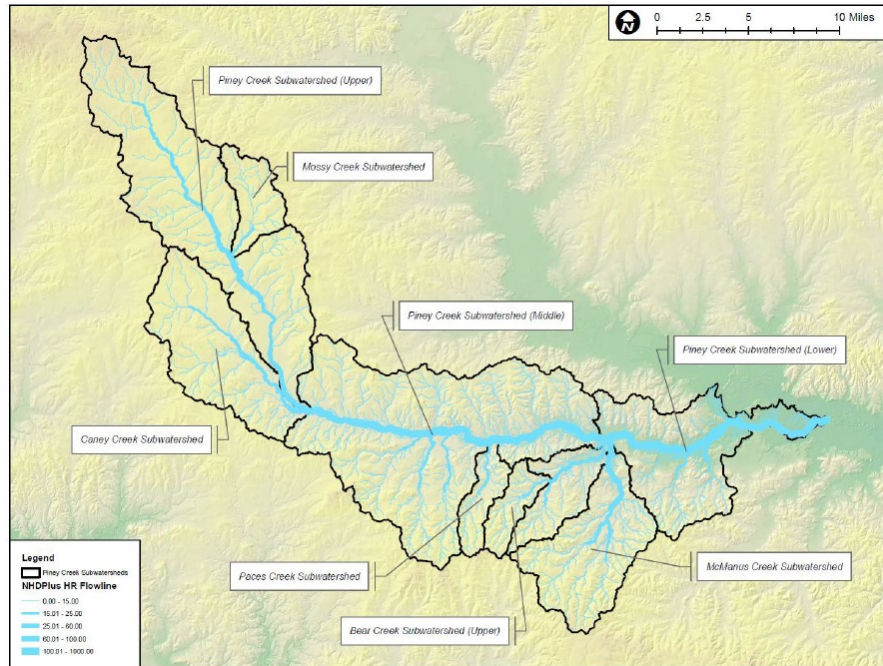
- The Basin Highlights Report is produced annually by ANRA and typically provides an overview of previous years events and ongoing programs in the upper and middle portions of the Neches River Basin that are relevant to the Clean River Program.
- Used to address impaired water bodies in the basin that currently do not meet the Texas Surface Water Quality standards listed in the 2020 Integrated Report.



Figure 1.0. Overview Map of Piney Creek (Segment 0604D) and its watershed.









We identified several potential causes of point source and non-point source pollution

- Point source:
 - City of Corrigan and Georgia-Pacific
- Non-point:
 - Agricultural
 - Wildlife
 - Urban Runoff
 - Failing OSSF
 - Pet Waste



Clean Rivers Program Education & Outreach Efforts

Summer 2021 – Summer 2022



ANRA Rebranding & Marketing

2022-2023 ANRA Marketing Plan Goal: Focus more on conservation and recreation efforts.



ANGELINA & NECHES RIVER AUTHORITY





Training (ANRA staff & public)

- Texas Stream Team Citizen Scientist Training
 - ANRA staff
 - Sabine-Neches Texas Master Naturalists
- Texas Stream Team Train the Trainer
 - San Marcos
 - Port Arthur
- TPWD Spills & Kills Training
- Texas Riparian & Stream Ecosystem Evaluation Training

ANRA ANGELINA & NECHES RIVER AUTHORITY

THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT TEXAS STATE UNIVERSITY

TEXAS STREAM TEAM

SAVE THE DATE

Texas Stream Team
Standard Core Water Quality
Citizen Scientist Training

Friday, August 5 | 9:00 a.m. - 1:00 p.m.
Hackberry Bunkhouse & Kayak Rentals
(Neches River at Highway 7)

To register or learn more, email kwagner@anra.org

Photo by Jim Clay

This free training is a great opportunity for teachers, Texas Master Naturalists, or anyone interested in environmental stewardship and making positive change!

www.anra.org Find us on [@anratx](https://www.facebook.com/anratx) www.TexasStreamTeam.org

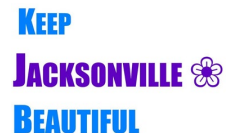
Hackberry Bunkhouse

Texas Master Naturalist



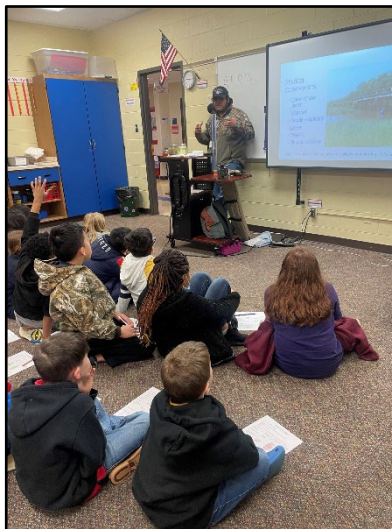
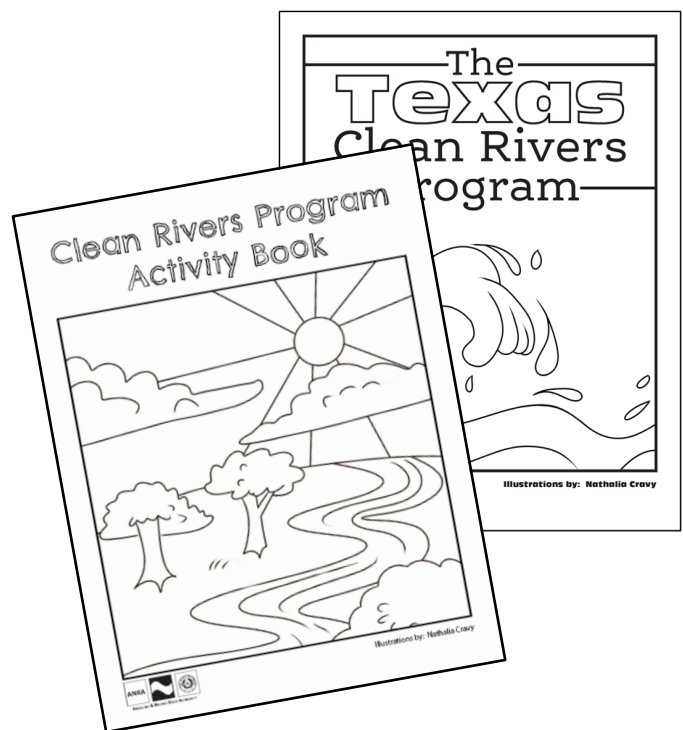
Community Partnerships & Support

- Neches River Life Tournament
- Evadale Neches River Tournament
- Stream Cleanup & Earth Day events





Public Education



- Zavalla ISD
- Jacksonville ISD
- Fredonia Rotary Club
- Texas Master Naturalists
- Multiple Keep Texas Beautiful affiliates



Miscellaneous CRP & CWA Outreach



- Promotional items
- Social media
- Litter bag campaign





Alligator Snapping Turtle Awareness Campaign

- The purpose of this project is to raise awareness of the listing status of the Alligator Snapping Turtle
- Strategically placed 20 awareness signs at boat ramps throughout the Neches River Basin- completed sign placement in December of 2020
- Data is reported to the East Texas Species of Concern database
- Partnership between ANRA and the Texas Parks and Wildlife Department

HAVE YOU SEEN THIS TURTLE?



Alligator snapping turtles are a threatened species and protected in Texas. We are asking for help reporting sightings of these turtles. Alligator snapping turtles have a large triangular head and three distinct ridges on their shell.

IT IS ILLEGAL TO INTENTIONALLY KILL, INJURE, OR HARASS THESE TURTLES.

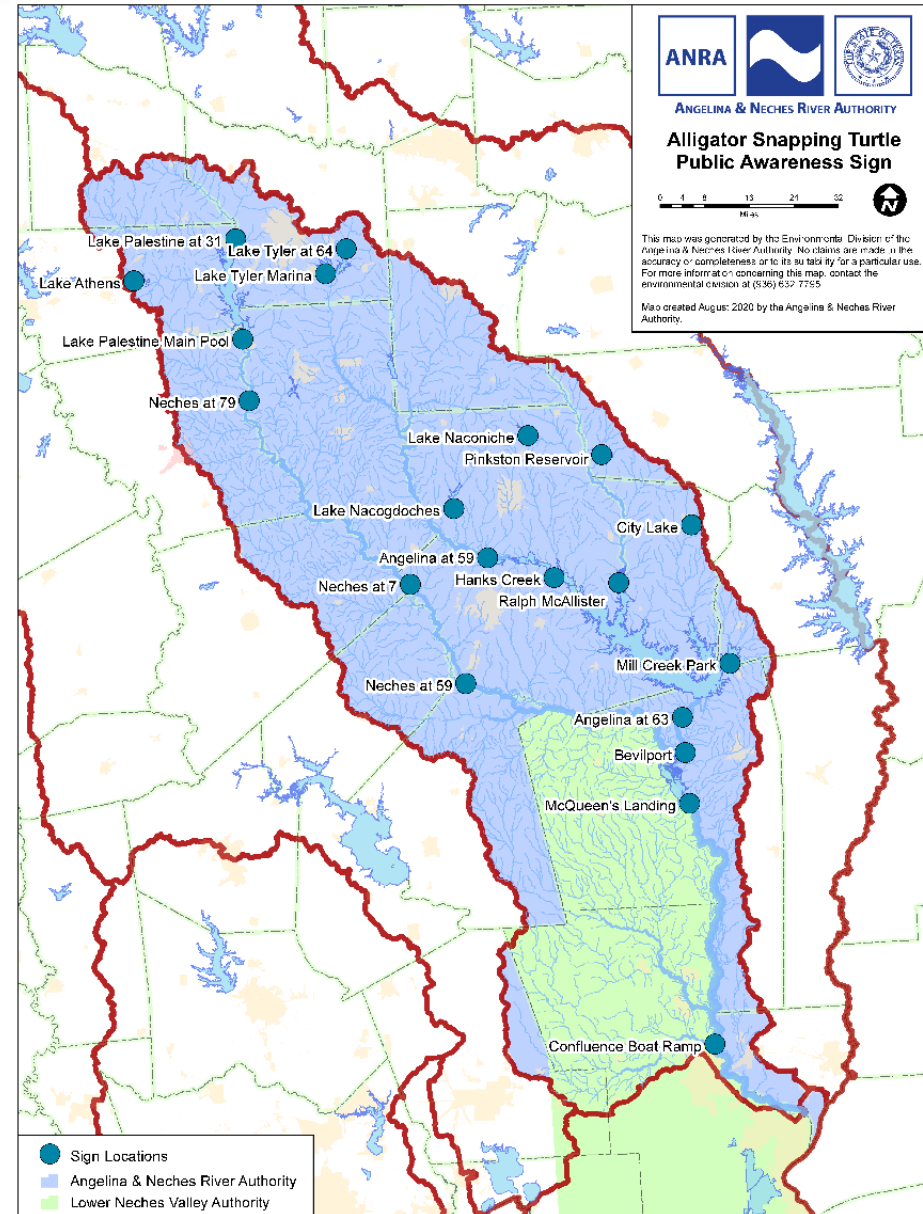
If you accidentally catch one, it should be returned to its habitat, as close as possible to the spot where it was caught.

Report alligator snapping turtle sightings (live or dead) along with a photo, GPS coordinates, and any measurements to the Angelina & Neches River Authority at:

www.anra.org

wildlife@anra.org

tpwd.texas.gov





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 Basin Quality Assurance Project Plan (QAPP)
 - https://www.anra.org/divisions/water_quality/crp/pdfs/QAPP/ANRA_FY_2021_CRP_QAPP_FINAL.pdf
- ANRA CRP Monitoring Activities
 - http://www.anra.org/divisions/water_quality/crp/monitoring.html
- Coordinated Monitoring Schedule
 - <http://cms.lcra.org>
- ANRA Education and Outreach Materials
 - https://www.anra.org/divisions/water_quality/crp/current_activities.html#activitybooks



Comments or Questions?

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

Rene Barelas

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