

Angelina & Neches River Authority

Providing water resource solutions and protecting the waterways of the Neches River Basin since 1935.



2026 Upper & Middle Neches Basin Steering Committee Meeting



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June 30th 2026

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Agenda

Welcome and Introductions

Jeremiah Poling, Angelina & Neches River Authority

Overview of the Clean Rivers Program

Meredith Coffey, Angelina & Neches River Authority

Updates to ANRA's Water Quality Monitoring Program and The 2026 Basin Summary Report

Jeremiah Poling, Angelina & Neches River Authority

TMDL and Clean Water Act Project Updates

East Texas Metals Project –

Jeremiah Poling, Angelina & Neches River Authority

Middle Neches Tributaries TMDL Update –

Sam Bickley, Texas Commission on Environmental Quality

Bayou Carrizo Supplementary Water Quality Monitoring and Data Analysis – Shaylynn Postma, Texas Water Resources Institute

Sandy Creek Watershed Characterization project –

Anna Eismont, Texas Water Resources Institute

TMDL and Clean Water Act Project Updates cont.

Attoyac Bayou Watershed Protection Plan –

Alexander Neal, Texas Water Resources Institute

La Nana Bayou Watershed Protection Plan –

Alexander Neal, Texas Water Resources Institute

Ayish Bayou Water Quality – Texas Water Resources Institute

Recreation, Education, and Outreach Updates

Kendra Fleming, Angelina & Neches River Authority

Guest Speakers

TBD

Open Discussion for Steering Committee Member Recommendations and Concerns



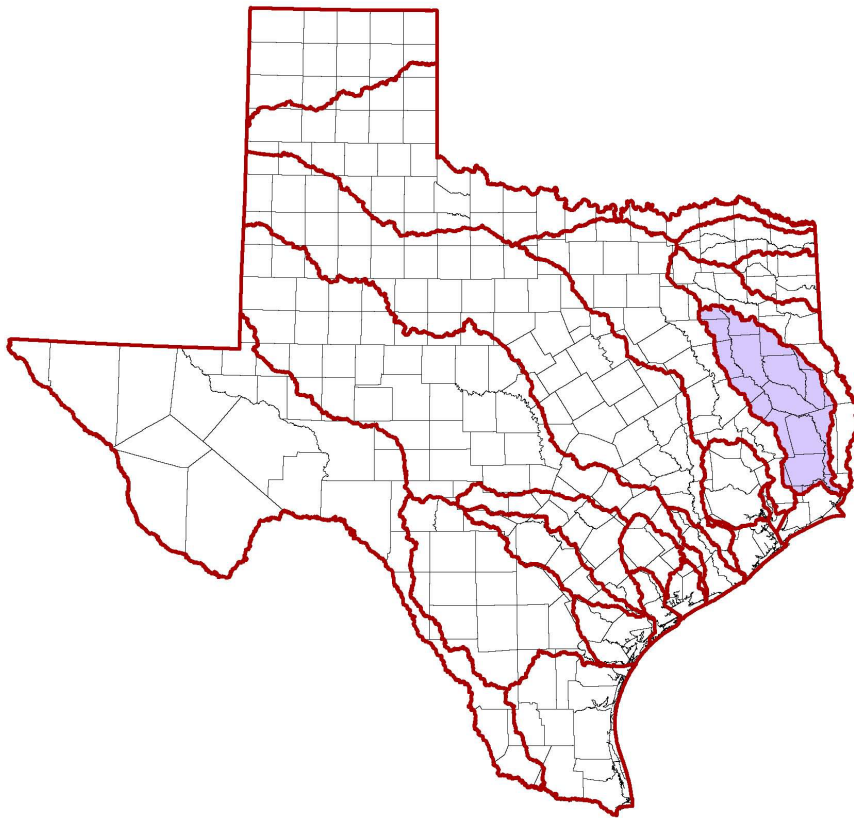
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The Neches River Basin



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



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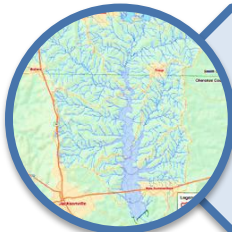
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ANRA's General Administration



**Coordinate with
Governments/Entities**



**Water Resource Planning and
Development**



**Economic Development
Bond Issuance**



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ANRA's Utilities Division



**Regional Wastewater Treatment Facilities
and Collection Systems**



Drinking Water Utilities



**Biosolids Composting
Neches Compost Facility**



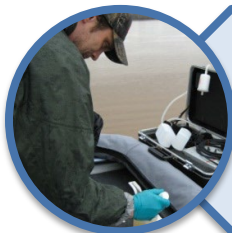
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ANRA's Field Environmental Division



Water Quality Monitoring Program
Clean Rivers Program and Associated Projects



Environmental Laboratory
Drinking Water, Surface Water, and
Wastewater Testing



On-Site Sewage Facilities Program
OSSF Permitting & Investigations



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The Texas Clean Rivers Program (CRP)



Angelina and Neches River Confluence at Lake B.A. Steinhagen

- 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
- Emphasis on the collection of water quality data for assessment and regulatory purposes
- Funded by state fees
- Collaboration of the Texas Commission on Environmental Quality (TCEQ) and 15 partner agencies

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



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Budget Allocations for the CRP Program

FY 2026 - 2027 Budget Allocations			
Planning Agency	FY 2026	FY 2027	Total Allocation
Brazos River Authority (12)	\$474,088.00	\$474,088.00	\$948,176.00
Guadalupe-Blanco River Authority (17 & 18)	\$161,195.00	\$161,195.00	\$322,390.00
Houston-Galveston Area Council (9, 10, 11, 13)	\$1,149,758.00	\$1,149,758.00	\$2,299,516.00
International Boundary & Water Commission (23)	\$318,217.00	\$318,217.00	\$636,434.00
Lavaca-Navidad River Authority (16)	\$118,234.00	\$118,234.00	\$236,468.00
Lower Colorado River Authority (14 & 15)	\$454,606.00	\$454,606.00	\$909,212.00
Angelina & Neches River Authority and Lower Neches Valley Authority (6 & 7)	\$392,652.00	\$392,652.00	\$785,304.00
Northeast Texas Municipal Water District (4)	\$118,234.00	\$118,234.00	\$236,468.00
Nueces River Authority (20, 21, & 22)	\$308,279.00	\$308,279.00	\$616,558.00
Red River Authority of Texas (1 & 2)	\$370,448.00	\$370,448.00	\$740,896.00
San Antonio River Authority (19)	\$235,485.00	\$235,485.00	\$470,970.00
Sabine River Authority (5)	\$372,777.00	\$372,777.00	\$745,554.00
Sulphur River Basin Authority (3)	\$118,233.00	\$118,233.00	\$236,466.00
Trinity River Authority (8)	\$468,269.00	\$468,269.00	\$936,538.00
TOTALS	\$5,060,475.00	\$5,060,475.00	\$10,120,950.00



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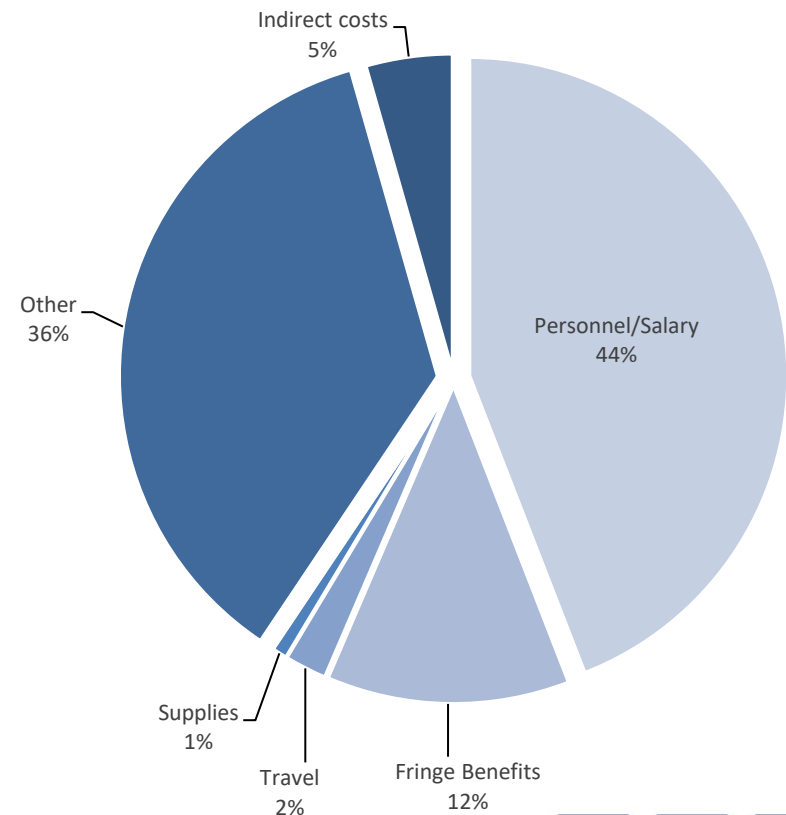
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ANRA's CRP Budget Breakdown

FY 2026 - FY 2027 Clean River Program Budget

Budget Category	Approved Budget
Personnel/Salary	\$173,185.22
Fringe Benefits	\$49,491.86
Travel	\$8,448.00
Supplies	\$3,076.40
Equipment	\$0.00
Contractual	\$0.00
Other	\$142,132.00
Total Direct Costs	\$375,333.48
Indirect Costs	\$17,318.52
Total Project Costs	\$392,652.00



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FY 2026 Neches Basin Water Quality Monitoring Schedule

FY 2026 Monitoring Stations in the Neches Basin

<i>Monitoring Entity</i>	<i>Number of Monitoring Sites</i>
Angelina & Neches River Authority	46
TCEQ Region 5 (Tyler)	20
TCEQ Region 10 (Beaumont)	22
Lower Neches Valley Authority	23
Tarrant Regional Water District	1
Texas Water Resources Institute	3

For FY 2026 ANRA continues to monitor 37 sites quarterly for field parameters, conventional parameters, and bacteria. Additionally, there are two 24-hour Dissolved Oxygen monitoring sites: One on Cedar creek in Lufkin, and one on the Riverine Portion of Sam Rayburn Reservoir.

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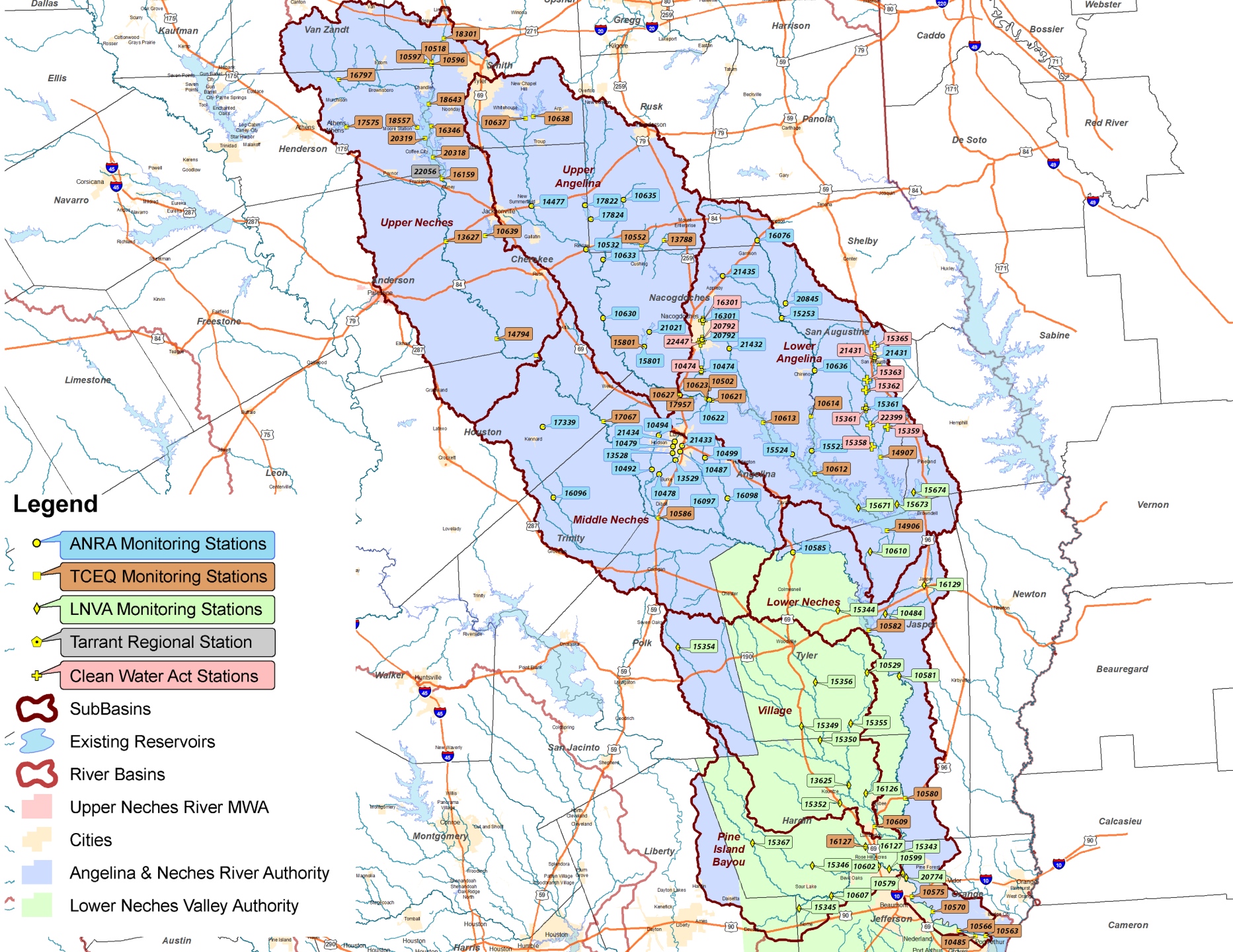
FY 2026 Neches Basin Water Quality Monitoring Schedule

Updates

- For FY 2027 ANRA is dropping one routine site (Cedar at Ellis Ave) and one 24 hour site (Cedar at Loop 287)
- Ayish Bayou sampling picked back up in March of 2026. Project is funded to sample for 22 months.
- La Nana Bayou sampling restarted in July of 2025. Sampling funded for 18 months.
- Sandy Creek sampling began in June of 2025 and will continue for 24 months.
- Bayou Carrizo sampling began in August 2025 and is funded for 18 months.
- Attoyac Bayou WPP Implementation is in QAPP development and should begin 33 months of sampling soon.
- East Texas Metals Sampling Project is in QAPP development, and should hopefully begin sampling this year.



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Water Quality Monitoring in the Neches Basin

Parameters Collected		
Field	Conventional	Bacteriological
Dissolved Oxygen	Ammonia-N	<i>Escherichia Coli</i> (E.coli)
pH	Nitrate-N	
Conductivity	Nitrite-N	
Instantaneous Stream Flow	Total Kjeldhal Nitrogen	
Water Temperature	Chlorophyll-a	
Secchi Depth (Transparency)	Pheophytin-a	
Total Water Depth	Chloride	
Present Weather	Sulfate	
Days Since Last Significant Rainfall	Total Phosphorus	
Flow Severity	Total Suspended Solids	

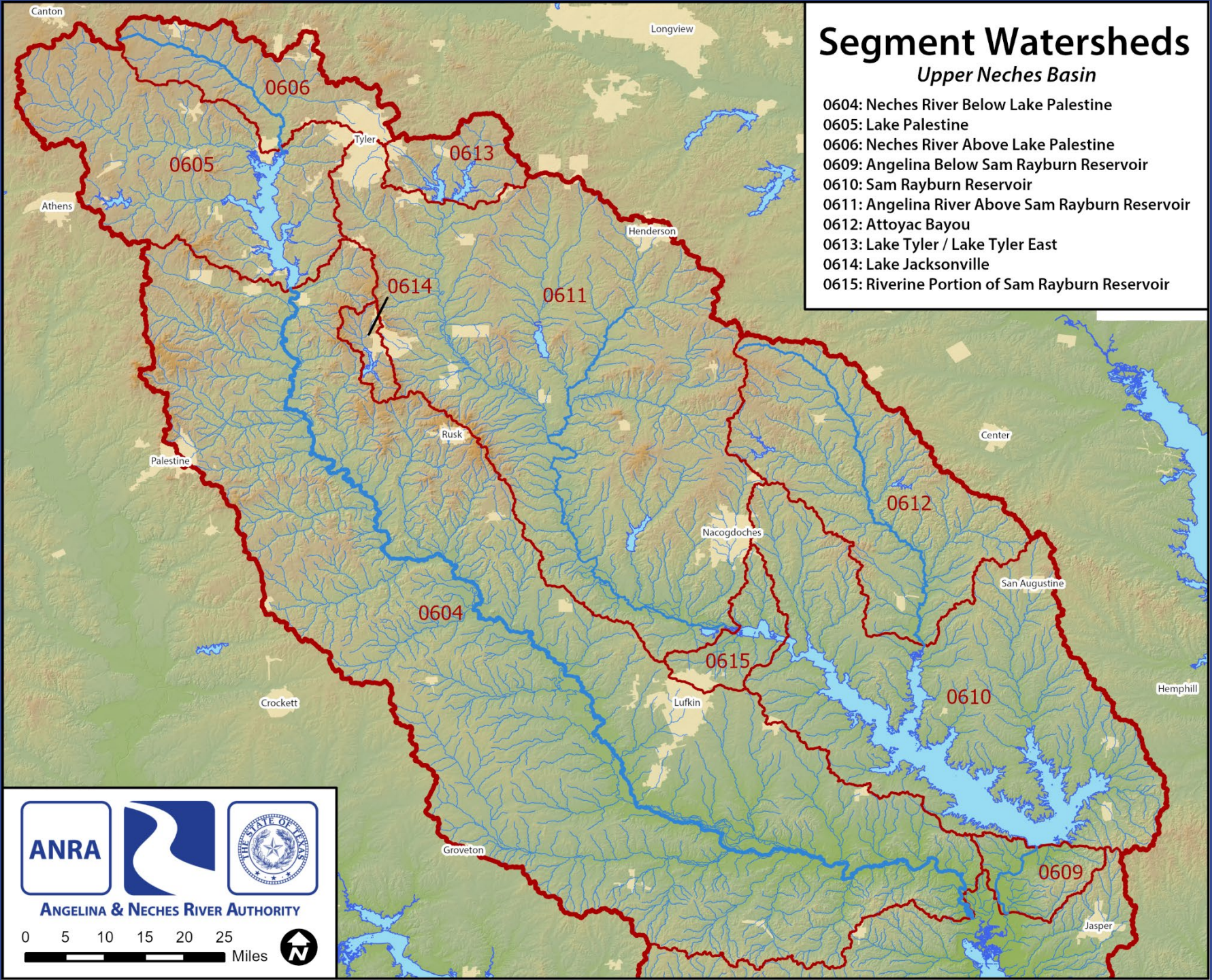


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Segment Watersheds

Upper Neches Basin

- 0604: Neches River Below Lake Palestine
- 0605: Lake Palestine
- 0606: Neches River Above Lake Palestine
- 0609: Angelina Below Sam Rayburn Reservoir
- 0610: Sam Rayburn Reservoir
- 0611: Angelina River Above Sam Rayburn Reservoir
- 0612: Attoyac Bayou
- 0613: Lake Tyler / Lake Tyler East
- 0614: Lake Jacksonville
- 0615: Riverine Portion of Sam Rayburn Reservoir



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0 5 10 15 20 25 Miles



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2026 Upper Neches Basin Summary Report

Upper Neches Basin Summary Report is prepared every six years and provides a comprehensive overview of water quality data and water quality related issues for the Upper Neches River Basin.

In general, historical and current water quality data of the Neches River Basin include:

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

Summary of Impairments and Concerns in the Neches River Basin

Segment ID and Name	Bacteria	Nutrients	Dissolved Oxygen	pH	Metals	Toxins in Edible Fish Tissue
0604 - Neches River below Lake Palestine	CN	CS				NS
0604A - Cedar Creek	NS	CS	NS			
0604B - Hurricane Creek	NS		CS			
0604C - Jack Creek	NS	CS				
0604D - Piney Creek		CS	NS			
0604M - Biloxi Creek	NS		NS			
0604N - Buck Creek	CN					
0604T - Lake Ratcliff						NS
0605 - Lake Palestine			CS	NS	CS	
0605A - Kickapoo Creek	NS	CS	NS			
0606 - Neches River above Lake Palestine	NS	CN	NS			
0606A - Prairie Creek	NS	CS				
0606D - Black Fork Creek	NS					
0609 - Angelina River below Sam Rayburn Reservoir						NS
0610 - Sam Rayburn Reservoir		NS		NS	CS	NS
0610A - Ayish Bayou	NS					
0610P - Bayou Carrizo	NS					
0611 - Angelina River above Sam Rayburn	NS	CS				
0611A - East Fork Angelina River	NS					
0611B - La Nana Bayou	NS	CS				
0611C - Mud Creek	NS					
0611D - West Mud Creek	NS	CS				
0611V - Bowles Creek			CS			
0611W - Johnson Creek	CN					
0612 - Attoyac Bayou	NS					
0612F - West Creek	NS					
0613 - Lake Tyler / Lake Tyler East		NS		CN		CS
0615 - Angelina River/Sam Rayburn Reservoir	NS		NS	NS		NS
0615A - Paper Mill Creek	NS					

FS = Fully Supporting, NC = No Concern, CN = Concern for Near Non-Attainment, CS = Concern for Screening Level, NS = Not Supporting, NA = Not Assessed

BASIN-WIDE WATER QUALITY FINDINGS

Water Quality Trends

Within the 25 year dataset that we examined, 233 trends that meet our criteria for statistical significance were observed. More than 2/3 are decreasing, which is a positive direction for most of the parameters that we collect. The only parameter where an increase would be unambiguously preferable would be Dissolved Oxygen. The direction we would like to see temperature and pH trend is site dependant based on historical ranges and the current standards.

Nutrient Trends

73 of 83 Nutrient parameters trends are decreasing. The increasing trends we observed include: 1 ammonia, 5 TKN, 1 Total Phosphorus, 1 Nitrate, 1 Nitrite, and 1 Chlorophyll.

Bacterial Trends

There were three increasing trends identified for *E. coli* bacteria, and zero decreasing.

Other Trends

The remaining 83 trends observed were for D.O., pH, Chloride, Sulfate, Specific Conductivity, and TSS. The bulk of them for pH and Conductivity. There were an almost even mix of pH trends, with 17 AUs showing decreasing pH, and 20 showing increasing. The conductivity trends were overwhelmingly decreasing, with only 3 of 29 rising. Dissolved Oxygen trends were also positive, with only 1 of 11 trending downward.

Count of Statistically Significant Trends in the Upper Neches River Basin

	<i>E. coli</i>	Temp	DO	pH	S. Cond	NH3	Cl	SO4	TKN	Total P	TSS	NO3	NO2	NO3/NO2	Chl-a	Pheo	Total
Increasing	3		10	20	3	1	6		5	1	2	1	1		1		54
Decreasing			1	17	26	5	29	29	20	28	4	3		10	7		179

Summary of Statistically Significant Trends in the Upper Neches River Basin

Segment ID	Segment Name	AU	<i>E. coli</i>	Temp	DO	pH	Spec Cond	NH3	Cl	SO4	TKN	Total P	TSS	NO3	NO2	NO3/NO2	Chl-a	Pheo
0604	Neches River below Lake Palestine	0604_01				↑	↓		↓		↑							↓
0604	Neches River below Lake Palestine	0604_02				↓					↓		↓					
0604	Neches River below Lake Palestine	0604_03				↓					↓							
0604	Neches River below Lake Palestine	0604_04					↓				↓	↓						
0604	Neches River below Lake Palestine	0604_05				↓	↓		↓		↓	↓						
0604A	Cedar Creek	0604A_01	- No trends identified for this Assessment Unit -															
0604A	Cedar Creek	0604A_02	↑				↓		↓					↓↑	↑			
0604A	Cedar Creek	0604A_03	↑															
0604B	Hurricane Creek	0604B_01			↑	↑			↓			↓						↓
0604B	Hurricane Creek	0604B_02	↑															
0604C	Jack Creek	0604C_01			↑	↑		↓		↓		↓↑	↑				↓	
0604D	Piney Creek	0604D_01	- No trends identified for this Assessment Unit -															
0604D	Piney Creek	0604D_02			↓				↑									
0604M	Biloxi Creek	0604M_02				↑						↓						

Upper Neches Basin Sites in the 2024 Texas Integrated Report 303(d) List

SEGMENT ID	SEGMENT NAME	IMPAIRMENTS	CATEGORY (AU ID)
604	Neches River Below Lake Palestine	Dioxin in edible tissue Mercury in edible tissue	5c (01, 02, 03) 5c (01, 02, 03)
0604A	Cedar Creek	Bacteria in water (Recreation Use) Depressed dissolved oxygen in water	5c (03) 5c (03)
0604B	Hurricane Creek	Bacteria in water (Recreation Use)	5a (02)
0604C	Jack Creek	Bacteria in water (Recreation Use)	5a (01)
0604D	Piney Creek	Depressed dissolved oxygen in water	5b (01)
0604M	Biloxi Creek	Bacteria in water (Recreation Use) Depressed dissolved oxygen in water	5a (02) 5c (03)
0604T	Lake Ratcliff	Mercury in edible tissue	5c (01)
605	Lake Palestine	pH	5b (01, 02, 03, 09, 10, 11)
0605A	Kickapoo Creek in Henderson County	Bacteria in water (Recreation Use) Depressed dissolved oxygen in water	5r (01, 02) 5r (01)
606	Neches River Above Lake Palestine	Bacteria in water (Recreation Use) Depressed dissolved oxygen in water	5c (01, 02) 5b (02)
0606A	Prairie Creek	Bacteria in water (Recreation Use)	5b (01, 03)
0606D	Black Fork Creek	Bacteria in water (Recreation Use)	5b (02)
609	Angelina River Below Sam Rayburn Reservoir	Dioxin in edible tissue Mercury in edible tissue	5a (01) 5c (01)

SEGMENT ID	SEGMENT NAME	IMPAIRMENTS	CATEGORY (AU ID)
610	Sam Rayburn Reservoir	Dioxin in edible tissue Excessive algal growth in water Mercury in edible tissue pH (high)	5c (01 - 10) 5c (01 - 10) 5c (01 - 10) 5c (05)
0610A	Ayish Bayou	Bacteria in water (Recreation Use)	5a (01, 02)
0610P	Bayou Carrizo	Bacteria in water (Recreation Use)	5c (01)
611	Angelina River Above Sam Rayburn Reservoir	Bacteria in water (Recreation Use)	5c (01, 03, 04)
0611A	East Fork Angelina River	Bacteria in water (Recreation Use)	5c (01, 02)
0611B	La Nana Bayou	Bacteria in water (Recreation Use)	5r (01, 02, 03)
0611C	Mud Creek	Bacteria in water (Recreation Use)	5b (01, 02)
0611D	West Mud Creek	Bacteria in water (Recreation Use)	5c (01)
612	Attoyac Bayou	Bacteria in water (Recreation Use)	5r (01, 02, 03)
0612F	West Creek	Bacteria in water (Recreation Use)	5b (01)
613	Lake Tyler/Lake Tyler East	Excessive algal growth in water	5c (02, 03, 04)
615	Riverine Portion of Sam Rayburn Reservoir	Bacteria in water Depressed dissolved oxygen in water Dioxin in edible tissue Mercury in edible tissue pH (low)	5c (01) 5c (01) 5c (01) 5c (01) 5c (01)
615A	Paper Mill Creek	Bacteria in water	5b (01)

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Reclassifications and Delistings from the 2024 IR

Segment ID	Name	Impairment	AU ID	Previous Category	New Category
0604A	Cedar Creek	Bacteria in Water	02	5a	4a
0604B	Hurricane Creek	Bacteria in Water	01	5a	4a
0604C	Jack Creek	Bacteria in Water	01	5a	4a
0604D	Piney Creek	Bacteria in Water	02	5b	-
0604M	Biloxi Creek	Bacteria in Water	03	5a	4a
0605A	Kickapoo Creek	Bacteria in Water Depressed Dissolved Oxygen in Water	01, 02 01	5c	5r 5r
0611B	La Nana Bayou	Bacteria in Water	01, 02, 03	5b	5r
0612	Attoyac Bayou	Bacteria in Water	01, 02, 03	5c	5r



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Additional Resources

- Texas Commission on Environmental Quality Clean Rivers Program
 - <http://www.texascleanrivers.org>
- Surface Water Quality Monitoring Procedures Manual
 - <https://www.tceq.texas.gov/publications/rg/rg-415>
- ANRA CRP Monitoring Activities
 - <https://www.anra.org/conservation-recreation/water-quality-activities/clean-rivers-program/monitoring-activities/>
- Coordinated Monitoring Schedule
 - <http://cms.lcra.org>
- ANRA Education and Outreach Materials
 - <https://www.anra.org/conservation-recreation/water-quality-activities/water-quality-education-outreach/>
- ANRA Annual Water Quality Reports (2004 to 2026)
 - <https://www.anra.org/conservation-recreation/water-quality-activities/clean-rivers-program/reports/>



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Comments or Questions?

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

Meredith Coffey

Water Quality Program Manager

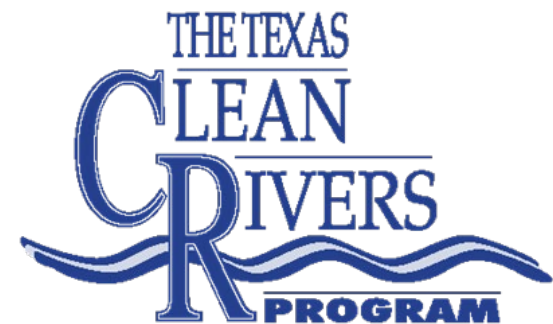
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SPECIAL PROJECTS IN THE BASIN

METALS SAMPLING IN SELECT EAST TEXAS WATERBODIES – 0602, 0604B, 0608A, 0608C, 0611, 0611C, 0615A, 1803C

During the development of the 2006 Integrated Report (IR), it was noted that the more recent metals in water data for several water bodies in East Texas were considerably higher than historical values for certain metals, primarily Aluminum, Copper, and Lead. Additionally, these high values were not consistent with probable sources of metals in the region. The disparity in the analytical results has been tentatively linked to a change in the type of filter (disc vs cartridge) supplied in metals sampling kits provided to field samplers during this time period. After consultation with the United States Environmental Protection Agency (EPA), The Texas Commission on Environmental Quality (TCEQ) made the decision to collect new metals data using cartridge type filters for comparability with historical data and consistency moving forward.

Methods

This project will collect new metals data using the current accepted cartridge filter in order to determine if the previously collected higher values are legitimate and if water quality issues compromising the aquatic life use support are present. Field staff will collect samples for dissolved and total metals and hardness following the Clean Hands/Dirty Hands sampling protocol described in Chapter 5 of the SWQM Procedures Manual, vol. 1. Field parameters will be collected using sampling protocols described in Chapter 3 of the SWQM Procedures Manual, vol. 1.

Metals constituents will include Dissolved & Total fractions of aluminum, arsenic, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, sodium, and zinc. Field Parameters will include dissolved oxygen, pH, temperature, specific conductance, depth and flow measurements or flow estimates as conditions dictate.

AUs of Interest (station within each AU subject to change)

AU ID	Station	Station Description
0602_01	15343	Neches River near Lakeview
0602_03	10581	Neches River at FM 1013
0604B_01	13529	Hurricane Ck at FM 324
0608A_01	15355	Beech Creek at FM 1943
0608C_01	15352	Cypress Creek at US 69
0611_03	10633	Angelina River 340 m upstream of SH 204
0611C_01	10532	Mud Creek at US 84
0615A_01	10502	Paper Mill Creek above Angelina River
1803C_01	14937	Peach Creek at CR 353

This project is a partnership of the Angelina & Neches River Authority, Sabine River Authority, Guadalupe-Blanco River Authority, and the TCEQ. The project is funded by TCEQ.

For more information contact:

Ms. Meredith Coffey at ANRA (mcoffey@anra.org)

Ms. Brianna Chang at TCEQ (brianna.chang@tceq.texas.gov)

