

Amendment #1 Update to the Angelina & Neches River Authority Clean Rivers Program FY 2026–2027 QAPP

***Prepared by the Angelina & Neches River
Authority in Cooperation with the Texas
Commission on Environmental Quality
(TCEQ)***

Effective: Immediately upon approval by all parties

Questions concerning this QAPP Amendment should be directed to:

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Angelina & Neches River Authority
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Justification

This document details the changes made to the basin-wide QAPP to update Appendix B for fiscal year 2027. Additional changes include TCEQ personnel updates, changes to the total phosphorus and total non-filterable residue performance criteria, and clarified language regarding adherence of sub-participants to the QAPP.

Green highlighting = change by Angelina & Neches River Authority

Red font = change by TCEQ

Strikethrough font = deletion of text from previous QAPP document

Summary of Changes

Section	Sub-section/ Figure/Table	Page(s) in Basin- wide QAPP	Change	Justification	Affected Entity	Page(s) in this Amendment
A2	TCEQ sub-section	02	Replaced Sunshyne Hendrix with Jenna Wadman as the TCEQ CRP Project Quality Assurance Specialist. Replaced Cathy Anderson, Team Leader, with Samantha Trexler, TCEQ CRP Data Manager, as the signatory for the TCEQ Data Management and Analysis (DM&A) team. Replaced D. Jody Koehler with Jason Natho as TCEQ Quality Assurance Manager. Replaced Loren Walker with Sagar Shrestha as the TCEQ Lead CRP Quality Assurance Specialist.	TCEQ personnel update. TCEQ personnel update and internal change to the QAPP approval process. TCEQ personnel update. TCEQ personnel update.	TCEQ	07

A2 (cont)	TCEQ sub-section (cont)	04	Added paragraph regarding adherence of sub-tier participants to the QAPP. Moved paragraph from Section B4 to Section A2.	Clarified requirements for sub-tier participants who do not sign the QAPP.	ANRA Lab, Pace	10
A2	ANRA sub-section	03	Replaced Emylea Cole with Meredith Coffey as ANRA Project Manager.	ANRA personnel update.	ANRA	08
A5	Amendments to the QAPP, Special Project Appendices	08	Replaced the TCEQ DM&A Team Leader with the TCEQ CRP Data Manager as the signatory for DM&A on amendments and appendices.	Internal change to the approval process.	TCEQ	11
A7	TCEQ sub-section	10-11	Replaced Cathy Anderson, Team Leader, with Samantha Trexler, TCEQ CRP Data Manager, as the contact for the TCEQ DM&A team. Replaced Loren Walker with Sagar Shrestha as the TCEQ Lead CRP Quality Assurance Specialist.	TCEQ personnel update and change to the QAPP distribution process. TCEQ personnel update.	TCEQ	12
A7	ANRA sub-section	10-11	Replaced Emylea Cole with Meredith Coffey as ANRA Project Manager.	ANRA personnel update.	ANRA	12
A8	TCEQ sub-section	12-13	Replaced Sunshyne Hendrix with Jenna Wadman as the TCEQ CRP Project Quality Assurance Specialist. Replaced Cathy Anderson with Scott Delgado as the TCEQ DM&A Team Leader.	TCEQ personnel update. TCEQ personnel update.	TCEQ	13-14

			Replaced Scott Delgado with Samantha Trexler as the TCEQ CRP Data Manager. Replaced D. Jody Koehler with Jason Natho as TCEQ Quality Assurance Manager. Replaced Loren Walker with Sagar Shrestha as the TCEQ Lead CRP Quality Assurance Specialist.	TCEQ personnel update. TCEQ personnel update. TCEQ personnel update.		
A8	ANRA sub-section	13-14	Replaced Emylea Cole with Meredith Coffey as ANRA Project Manage. Replaced Kimberly Wagner, Executive Manager, Communications with Kendra Fleming Executive Manager, Public Relations Director.	ANRA personnel update.	ANRA	15
A10	Figure A10.1	15	Replaced Emylea Cole with Meredith Coffey as ANRA Project Manager. Replaced Kimberly Wagner, Executive Manager, Communications with Kendra Fleming Executive Manager, Public Relations Director.	ANRA personnel update.	ANRA	17
A10	Figure A10.1	15	Replaced D. Jody Koehler with Jason Natho as TCEQ Quality Assurance Manager. Replaced Loren Walker with Sagar Shrestha as the TCEQ	TCEQ personnel update. TCEQ personnel update.	TCEQ	17

			Lead CRP Quality Assurance Specialist. Replaced Sunshyne Hendrix with Jenna Wadman as the TCEQ CRP Project Quality Assurance Specialist. Replaced Cathy Anderson with Scott Delgado as the TCEQ DM&A Team Leader. Replaced Scott Delgado with Samantha Trexler as the TCEQ CRP Data Manager.	TCEQ personnel update. TCEQ personnel update. TCEQ personnel update.		
B4	Quality Control or Acceptability Requirements, Deficiencies, and Corrective Actions	26	Deleted paragraph regarding the use of subcontracted labs.	Moved paragraph to Section A2.	ANRA	18
Appendix A	Table A6.2	39	Updated the AWRL for total phosphorus in Table A6.2 from 0.06 to 0.02. Added precision and bias % recovery of LCS criteria for total non-filterable residue in Table A6.2 from NA to 80-120.	Programmatic update to support the development of nutrient criteria. TSS precision (RPD) updated from “NA” to “10%” Added footnote indicating that for TSS, sample duplicates will be analyzed in lieu of LCS/LCSD.	ANRA	19

Appendix A	Table A6.3	40	Updated Table A6.3 for Residue, Total Nonfilterable (mg/L) RPD from NA to 20% and LCS from NA to 80-120%	TSS precision (RPD) updated from “NA” to “20%” Added footnote indicating that for TSS, sample duplicates will be analyzed in lieu of LCS/LCSD	ANRA	20
Appendix B	Table B1.1	45-47	Updated Table B1.1 to reflect modifications to sampling design for FY 2027.	Removed 24 hr monitoring at 10479 (Cedar Creek at Loop 287), and discontinued monitoring at 21434 (Cedar Creek at Ellis)	ANRA	21-24
Appendix C	0604 Map	48	Updated maps of monitoring stations to reflect modifications to sampling design for FY 2027.	Sites 21434 removed from map.	ANRA	25

Distribution

The TCEQ CRP PM will provide the approved amendment to TCEQ staff listed in A7 and to the Angelina & Neches River Authority. The Angelina & Neches River Authority will provide copies of the amendment to each person on the distribution list and to each sub-tier project participant (e.g., subcontractors, subparticipants, or other units of government). The Angelina & Neches River Authority will document distribution according to section A7 of the QAPP to which this amendment pertains.

These changes will be incorporated into the QAPP document and TCEQ and the Angelina & Neches River Authority will acknowledge and accept these changes by approving the final amendment draft electronically.

A2 Approval Page

Texas Commission on Environmental Quality

Water Quality Planning Division

Electronically Approved	8/11/2026	Electronically Approved	8/11/2026
Sarah Whitley, Team Leader	Date	Sunshyne Hendrix Jenna Wadman	Date
Water Quality Standards and Clean Rivers Program		Project Quality Assurance Specialist	
		Clean Rivers Program	
Electronically Approved	8/10/2026	Electronically Approved	8/11/2026
Katrina Smith, Project Manager	Date	Cathy Anderson Samantha Trexler	Date
Clean Rivers Program		Team Leader CRP Data Manager	
		Data Management and Analysis	

Air Monitoring Division

Electronically Approved	8/11/2026	Electronically Approved	8/11/2026
D. Jody Koehler Jason Natho	Date	Loren Walker Sagar Shrestha	Date
TCEQ Quality Assurance Manager		Lead CRP Quality Assurance Specialist	
Laboratory and Quality Assurance Section		Quality Assurance Team	

Replaces specific sections on page 03-04 of the FY 2026-2027 CRP QAPP

Angelina & Neches River Authority (ANRA)

Electronically Approved	8/6/2026	Electronically Approved	7/23/2026
<u>Emylea Cole Meredith Coffey,</u>	Date	<u>Jeremiah Poling,</u>	Date
ANRA Project Manager		ANRA Quality Assurance Officer & Data Manager	

Angelina & Neches River Authority Environmental Laboratory

Electronically Approved	8/3/2026	Electronically Approved	7/27/2026
<u>Ashlé Wright,</u>	Date	<u>Kathryn Roeder,</u>	Date
ANRA Lab Quality Assurance Officer		ANRA Lab Technical Manager	

Replaces specific sections on page 03-04 of the FY 2026-2027 CRP QAPP
Pace Analytical (NOLA)

Electronically Approved	7/27/2026	Electronically Approved by	
Tracy Easley,	Date	April Zarychta on behalf of	
Pace General Manager		Gabrielle Jones	7/24/2026
		Gabrielle Jones,	Date
		Pace Quality Manager	

Electronically Approved	8/3/2026
Karen Brown,	Date
Pace Project Manager	

This page inserts after page 04 of the FY 2026-2027 CRP QAPP

Sub-tier participants (e.g., subcontractors, subparticipants, or other units of government) will sign the quality assurance project plan (QAPP), indicating the organization's awareness of, and commitment to requirements contained in the QAPP and any amendments or added appendices of this plan.

Signatures in section A2 will eliminate the need for adherence letters to be maintained. If adherence letters are preferred, ANRA will secure written documentation from each sub-tier project participant stating the organization's awareness of and commitment to requirements contained in this QAPP and any amendments or added appendices of this plan. ANRA will maintain this documentation as part of the project's quality assurance records and will ensure the documentation is available for review.

When a laboratory that is a signatory of this QAPP finds it necessary and/or advantageous to subcontract analyses, in accordance with CRP requirements and the TNI Standard (Volume 1, Module 2, Section 4.5, Subcontracting of Environmental Tests), the laboratory must ensure and document that the subcontracting laboratory is NELAP-accredited (when required) and understands and follows the QA/QC requirements included in this QAPP. This includes confirming that the sub-contracting laboratory has LOQs at or below TCEQ AWRLs and performs all required QC analysis outlined in this QAPP. The signatory laboratory is also responsible for QA of the data prior to delivering it to the ANRA, including review of all applicable QC samples related to CRP data. As stated in section 4.5.5 of the TNI Standard, the laboratory performing the subcontracted work shall be indicated in the final report and the signatory laboratory shall make a copy of the subcontractor's report available to the client (ANRA) when requested.

Detail of Changes

A5 Project/Task Description

Amendments to the QAPP

Amendments to the QAPP may be necessary to address incorrectly documented information or to reflect changes in project organization, tasks, schedules, objectives, and methods. Requests for amendments will be directed from the ANRA Project Manager (PM) to the TCEQ CRP PM electronically. The ANRA will submit a completed QAPP amendment document, including a justification of the amendment, a table of changes, and all pages, sections, and attachments affected by the amendment. Amendments are effective immediately upon approval by the ANRA PM, the ANRA Quality Assurance Officer (QAO), the TCEQ CRP PM, the TCEQ CRP Lead Quality Assurance Specialist (QAS), the TCEQ CRP Project QAS, the TCEQ CRP Team Leader, the TCEQ ~~Data Management and Analysis (DM&A) Team Leader~~ CRP Data Manager (DM), and any additional parties affected by the amendment. Amendments are not retroactive. No work shall be implemented without an approved QAPP or amendment prior to the start of work. Any activities under this contract that commence prior to the approval of the governing QA document constitute a deficiency and are subject to corrective action as described in section C1 of this QAPP. Any deviation or deficiency from this QAPP which occurs after the execution of this QAPP will be addressed through a corrective action plan (CAP). An amendment may be a component of a CAP to prevent future recurrence of a deviation.

Amendments will be incorporated into the QAPP by way of attachment and distributed to personnel on the distribution list by the ANRA PM. If adherence letters are required, ANRA will secure an adherence letter from each sub-tier project participant (e.g., subcontractors, sub-participant, or other units of government) affected by the amendment stating the organization's awareness of and commitment to requirements contained in each amendment to the QAPP. The ANRA will maintain this documentation as part of the project's QA records and ensure that the documentation is available for review.

Special Project Appendices

Projects requiring QAPP appendices will be planned in consultation with the ANRA, the TCEQ CRP PM, and TCEQ technical staff. Appendices will be written in an abbreviated format and will reference the ANRA QAPP where appropriate. Appendices will be approved by the ANRA PM, the ANRA QAO, the Laboratory (as applicable), the TCEQ CRP PM, the TCEQ CRP Project QAS, the TCEQ Lead QAS, TCEQ CRP Team Leader, the TCEQ ~~DM&A Team Leader~~ CRP DM, and additional parties affected by the appendix, as appropriate. Copies of approved QAPP appendices will be distributed by the ANRA to project participants before data collection activities commence. The ANRA will secure written documentation from each sub-tier project participant (e.g., subcontractors, subparticipants, other units of government) stating the organization's awareness of and commitment to requirements contained in each special project appendix to the QAPP. The ANRA will maintain this documentation as part of the project's QA records and ensure that the documentation is available for review.

A7 Distribution List

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Gabrielle Jones, Quality Manager
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A8 Project/Task Organization

Description of Responsibilities

TCEQ

Jason Godeaux

Manager, Monitoring and Assessment Section

Responsible for oversight of the implementation of CRP QAPPs, directs the day-to-day management of the section.

Sarah Whitley

Team Leader, Water Quality Standards and Clean Rivers Program

Responsible for TCEQ activities supporting the development and implementation of the Texas CRP. Responsible for verifying that the TCEQ QMP is followed by TCEQ CRP staff. Supervises TCEQ CRP staff. Reviews and responds to any deficiencies, corrective actions, or findings related to the area of responsibility. Oversees the development of QA guidance for the CRP. Reviews and approves all QA audits, corrective actions, reports, work plans, contracts, QAPPs, and TCEQ QMP. Enforces corrective action, as required, where QA protocols are not met. Ensures CRP personnel are fully trained.

Sunshyne Hendrix Jenna Wadman

CRP Project Quality Assurance Specialist

Serves as liaison between CRP management and TCEQ QA management. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Serves on planning team for CRP special projects. Reviews and approves CRP QAPPs in coordination with other CRP staff. Coordinates documentation and monitors implementation of corrective actions for the CRP.

Katrina Smith

CRP Project Manager

Responsible for the development, implementation, and maintenance of CRP contracts. Tracks, reviews, and approves deliverables. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Coordinates the review and approval of CRP QAPPs in coordination with the TCEQ CRP Project QAS. Ensures maintenance of QAPPs. Assists TCEQ CRP Lead QAS in conducting Basin Planning Agency audits. Verifies QAPPs are being followed by contractors and that projects are producing data of known quality. Coordinates project planning with the Basin Planning Agency PM. Reviews and approves data and reports produced by contractors. Notifies TCEQ CRP QA Specialists of circumstances that may adversely affect the quality of data derived from the collection and analysis of samples. Develops, enforces, and monitors corrective action measures to ensure contractors meet deadlines and scheduled commitments.

Cathy Anderson Scott Delgado

Team Leader, Data Management and Analysis Team

Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Ensures DM&A staff perform data management-related tasks.

Scott Delgado Samantha Trexler

CRP Data Manager, Data Management and Analysis Team

Responsible for coordination and tracking of CRP data sets from initial submittal through TCEQ CRP

Replaces specific sections on page 12-14 of the FY 2026-2027 CRP QAPP

PM review and approval. Ensures that data are reported following instructions in the Data Management Reference Guide (DMRG), July 2019 or most current version. Runs automated data validation checks in SWQMIS and coordinates data verification and error correction with TCEQ CRP PMs. Generates SWQMIS summary reports to assist CRP PMs' data review. Identifies data anomalies and inconsistencies. Provides training and guidance to CRP and planning agencies on technical data issues to ensure that data are submitted according to documented procedures. Reviews QAPPs for valid stream monitoring stations. Checks validity of parameter codes, submitting entity (SE) code(s), collecting entity (CE) code(s), and monitoring type (MT) code(s). Develops and maintains data management-related SOPs for CRP data management. Coordinates and processes data correction requests. Participates in the development, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP).

~~D. Jody Koehler~~ Jason Natho

TCEQ Quality Assurance Manager

Responsible for coordinating development and implementation of TCEQ's QA program. Provides oversight and guidance for TCEQ's QA program. Responsible for the development and maintenance of the TCEQ QMP. TCEQ's QA Manager, or designated QA staff in the Laboratory and Quality Assurance Section of the Air Monitoring Division, is responsible for review and approval of program/project QAPPs to ensure QAPPs conform to applicable requirements as detailed in TCEQ's QMP.

~~Loren Walker~~ Sagar Shrestha

CRP Lead Quality Assurance Specialist

Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Assists program manager and TCEQ CRP Project QAS in developing and implementing the quality system. Reviews and approves CRP QAPPs, QAPP amendments, and QAPP special appendices. Prepares and distributes annual audit plans. Conducts monitoring systems audits of planning agencies. Concurs with corrective actions. Conveys QA problems to appropriate management. Recommends that work be stopped in order to safeguard programmatic objectives, worker safety, public health, or environmental protection. Ensures maintenance of audit records for the CRP.

Replaces specific sections on page 12-14 of the FY 2026-2027 CRP QAPP
ANGELINA & NECHES RIVER AUTHORITY

~~Emylea Cole, Meredith Coffey~~

Project Manager

Responsible for implementing and monitoring CRP requirements in contracts, QAPPs, and QAPP amendments and appendices. Coordinates basin planning activities and work of basin partners. Ensures monitoring systems audits are conducted to ensure QAPPs are followed by ANRA participants and that projects are producing data of known quality. Ensures that subparticipants are qualified to perform contracted work. Ensures TCEQ CRP PM and/or QA Specialists are notified of deficiencies and corrective actions, and that issues are resolved. Responsible for validating that data collected are acceptable for reporting to the TCEQ.

Jeremiah Poling

Quality Assurance Officer & Data Manager

Responsible for coordinating the implementation of the QA program. Responsible for writing and maintaining the QAPP and monitoring its implementation. Responsible for maintaining records of QAPP distribution, including appendices and amendments. Responsible for maintaining written records of sub-tier commitment to requirements specified in this QAPP. Responsible for identifying, receiving, and maintaining project QA records. Responsible for coordinating with the TCEQ CRP PM to resolve QA-related issues. Notifies the ANRA PM of particular circumstances that may adversely affect the quality of data. Coordinates and monitors deficiencies and corrective action. Coordinates and maintains records of data verification and validation. Coordinates the research and review of technical QA material and data related to water quality monitoring system design and analytical techniques. Conducts monitoring systems audits on project participants to determine compliance with project and program specifications, issues written reports, and follows through on findings. Ensures that field staff is properly trained and that training records are maintained.

Responsible for ensuring that field data are properly reviewed and verified. Responsible for the transfer of basin quality-assured water quality data to the TCEQ in a format compatible with SWQMIS. Maintains quality-assured data on ANRA internet sites.

Ashlé Wright

Laboratory Quality Assurance Officer

Responsible for the overall quality control and quality assurance of analyses performed by ANRA Environmental Laboratory. Monitors the implementation of the QM/QAPP within the laboratory to ensure complete compliance with QA data objectives, as defined by the contract and in this QAPP. Conducts in-house audits to ensure compliance with written SOPs and to identify potential problems. Responsible for supervising and verifying all aspects of the QA/QC in the laboratory.

Kathryn Roeder

Laboratory Technical Manager

Responsible for overall performance, administration, and reporting of analyses performed by ANRA's Environmental Laboratory. Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

~~Kimberly Wagner, Kendra Fleming~~

~~Executive Manager, Communications~~ **Public Relations Director**

Responsible for education and outreach regarding ANRA's Clean Rivers Program. Also responsible for coordinating and conducting CRP sample collection in accordance with the basin coordinated monitoring schedule and the QAPP.

Pace Analytical (NOLA)

Karen Brown

Pace Project Manager

Responsible for analyses performed by Pace (NOLA) for this project. Responsible for project setup in LIMS. Responsible for Pace (NOLA) laboratory and field staff corrective action communication with the Pace (NOLA) Quality Manager. Makes Pace (NOLA) data available to the ANRA Data Manager. Notifies the Pace (NOLA) Quality Manager and ANRA QAO of laboratory analysis issues that may invalidate data.

Tracy Easley

Pace General Manager

Responsible for overall performance, administration, and reporting of analyses performed by Pace (NOLA). Responsible for supervision of laboratory personnel involved in generating analytical data for the project. Ensures that laboratory personnel have adequate training and a thorough knowledge of this QAPP and related SOPs. Responsible for oversight of all laboratory operations ensuring that all QA/QC requirements are met, documentation is complete and adequately maintained, and results are reported accurately.

Gabrielle Jones

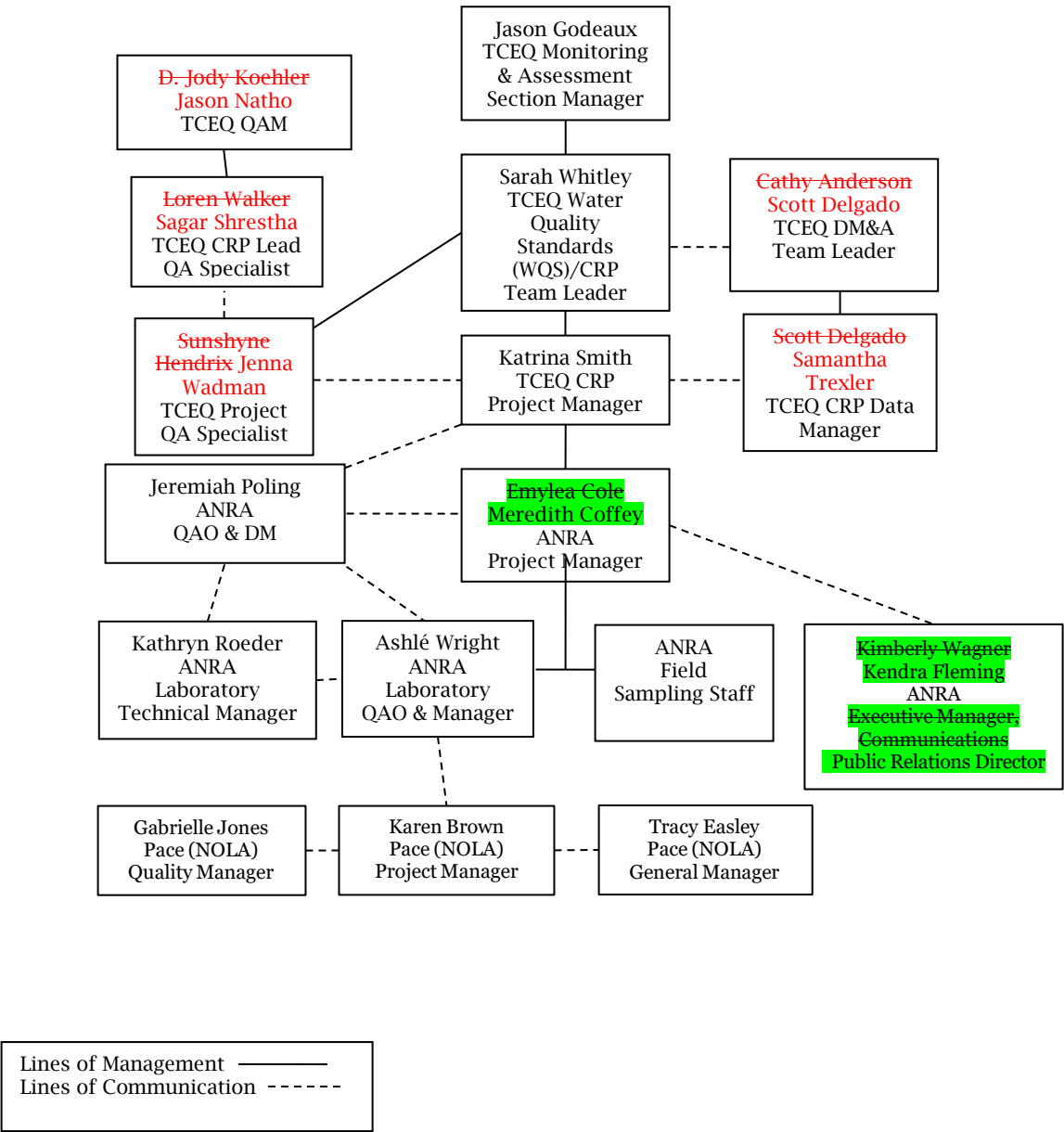
Pace Quality Manager

Responsible for the overall quality control and quality assurance of analyses performed by Pace (NOLA). Monitors the implementation of the QM/QAPP within the laboratory to ensure complete compliance with QA data quality objectives, as defined by the contract and in this QAPP. Conducts in-house audits to ensure compliance with written SOPs and to identify potential problems. Responsible for supervising and verifying all aspects of the QA/QC in the laboratory.

A10 Project Organizational Chart and Communication

Project Organization Chart

Figure A10.1. Organization Chart with Lines of Communication



B4 Quality Control

Quality Control or Acceptability Requirements, Deficiencies, and Corrective Actions

Sampling QC excursions are evaluated by ANRA PM, in consultation with the ANRA QAO. In that differences in sample results are used to assess the entire sampling process, including environmental variability, the arbitrary rejection of results based on pre-determined limits is not practical. Therefore, the professional judgment of the ANRA PM and QAO will be relied upon in evaluating results.

Laboratory measurement quality control failures are evaluated by the laboratory staff. The disposition of such failures and the nature and disposition of the failure is reported to the Laboratory QAO. The Laboratory QAO will discuss the failure with ANRA QAO and PM. If applicable, the ANRA PM or QAO will include this information in a CAP and submit the CAP to the TCEQ CRP PM.

The definition of and process for handling deficiencies and corrective action are defined in Section C1.

~~Additionally, in accordance with CRP requirements and the TNI Standard (Volume 1, Module 2; Section 4.5, Subcontracting of Environmental Tests) when a laboratory that is a signatory of this QAPP finds it necessary and/or advantageous to subcontract analyses, the laboratory that is the signatory on this QAPP must ensure that the subcontracting laboratory is NELAP-accredited (when required) and understands and follows the QA/QC requirements included in this QAPP. This includes confirming that the sub-contracting laboratory has LOQs at or below TCEQ AWRLs and performs all required QC analysis outlined in this QAPP. The signatory laboratory is also responsible for QA of the data prior to delivering it to ANRA, including review of all applicable QC samples related to CRP data. As stated in section 4.5.5 of the TNI Standard, the laboratory performing the subcontracted work shall be indicated in the final report and the signatory laboratory shall make a copy of the subcontractor's report available to the client (ANRA) when requested.~~

Appendix A: Measurement Performance Specifications (Table A6.1–6)

Table A6.2 - Measurement Performance Specifications for the Angelina & Neches River Authority

Conventional Parameters in Water										
Parameter	Units	Matrix	Method	Parameter Code	TCEQ AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L)	mg/L	water	SM 2540D (2015)	00530	5	2.5	NA	NA 10 ¹	NA 80-120	ANRA
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH3 D (2011)	00610	0.1	0.1	70-130	20	80-120	ANRA
NITRITE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00615	0.05	0.05	70-130	20	80-120	ANRA
NITRATE NITROGEN, TOTAL (MG/L AS N)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00620	0.05	0.05	70-130	20	80-120	ANRA
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	EPA 351.2 Rev. 2.0 (1993)	00625	0.2	0.2	70-130	20	80-120	ANRA
PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)	mg/L	water	EPA 365.1 (1993)	00665	0.06 0.02	0.02	70-130	20	80-120	ANRA
CHLORIDE (MG/L AS CL)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00940	5	5	70-130	20	80-120	ANRA
SULFATE (MG/L AS SO4)	mg/L	water	EPA 300.0 Rev. 2.1 (1993)	00945	5	5	70-130	20	80-120	ANRA
PHEOPHYTIN-A UG/L FLUOROMETRIC METHOD	µg/L	water	EPA 445.0 Rev. 1.2 (1997)	32213	3	2	NA	NA	NA	ANRA
CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L	µg/L	water	EPA 445.0 Rev. 1.2 (1997)	70953	3	2	NA	20	80-120	ANRA

In lieu of LCS/LCSD, sample duplicates will be analyzed.

ANRA Environmental Laboratory will perform the sample analyses for bacteriological and conventional parameters with the exception of Nitrate + Nitrite, as N, which will be performed by Pace Analytical, and only in instances where Nitrate and/or Nitrite cannot be analyzed individually.

References:

United States Environmental Protection Agency (EPA), Clean Water Act Analytical Methods

Standard Methods for the Examination of Water and Wastewater, 24th Edition, 2022 or applicable version

Table A6.3 - Measurement Performance Specifications for Pace Analytical (NOLA)

Conventional Parameters in Water										
Parameter	Units	Matrix	Method	Parameter Code	TCEQ AWRL	LOQ	LOQ Check Sample %Rec	Precision (RPD)	Bias %Rec. of LCS	Lab
RESIDUE, TOTAL NONFILTRABLE (MG/L)	mg/L	water	SM 2540D (2015)	00530	5	4	NA	NA 20	NA 80-120	Pace
NITROGEN, AMMONIA, TOTAL (MG/L AS N)	mg/L	water	SM 4500-NH3 G (2011)	00610	0.1	0.1	70-130	20	80-120	Pace
NITROGEN, KJELDAHL, TOTAL (MG/L AS N)	mg/L	water	EPA 351.2 Rev 2.0 (1993)	00625	0.2	0.1	70-130	20	80-120	Pace
NITRITE PLUS NITRATE, TOTAL ONE LAB DETERMINED VALUE (MG/L AS N)	mg/L	water	SM 4500-NO3 F (2016)	00630	0.05	0.05	70-130	20	80-120	Pace
CHLORIDE (MG/L AS CL)	mg/L	water	SM 4500-Cl E	00940	5	1	70-130	20	80-120	Pace
SULFATE (MG/L AS SO4)	mg/L	water	EPA 9038	00945	5	1	70-130	20	80-120	Pace

In lieu of LCS/LCSD, sample duplicates will be analyzed.

Pace (NOLA) will serve as the primary lab for Nitrate + Nitrite analysis. Pace (NOLA) will serve as an alternate laboratory for the analysis of conventional parameters as listed in their respective A6 table, in the event that sample analysis cannot be conducted at ANRA Environmental Laboratory (i.e., instrument failure, service or maintenance is required, etc.).

References:

United States Environmental Protection Agency (EPA), Clean Water Act Analytical Methods
Standard Methods for the Examination of Water and Wastewater, 24th Edition, 2022 or applicable version

Appendix B: Task 3 Work Plan & Sampling Process Design and Monitoring Schedule (Plan)

Sample Design Rationale FY 2027

The sample design is based on the legislative intent of CRP. Under the legislation, the Basin Planning Agencies have been tasked with providing data to characterize water quality conditions in support of the Texas Integrated Report of Surface Water Quality, and to identify significant long-term water quality trends. Based on Steering Committee input, achievable water quality objectives and priorities and the identification of water quality issues are used to develop work plans which are in accord with available resources. As part of the Steering Committee process, ANRA coordinates closely with the TCEQ and other participants to ensure a comprehensive water monitoring strategy within the watershed.

For FY 2027, sufficient 24 hour Dissolved Oxygen data has been collected on Cedar Creek. Therefore, ANRA is halting 24 hour monitoring at site 10479. Monitoring is also being halted at site 21434 due to limited flow and the existence of another site in the same AU (10479).

Monitoring Sites for FY 2027

Table B1.1 Sample Design and Schedule, FY 2027

Site Description	Station ID	Waterbody ID	Basin	Region	SE	CE	MT	Field	Conventional	Bacteria	Flow	24 hr DO	AqHab	Benthics	Nekton	Metal Water	Organic Water	Metal Sed	Organic Sed	Fish Tissue	Amb Tox Water	Amb Tox Sed	Comments
NECHES RIVER AT US 69 1.01 KM NORTH OF FM 1014/US 69 INTERSECTION 1.8 KM NORTHWEST OF ROCKLAND IN TYLER COUNTY	10585	0604	6	10	AN	AN	RT	4	4	4	4												
CEDAR CREEK AT ELLIS AVE IN LUFKIN	21434	0604A	6	10	AN	AN	RT	4	4	4	4												
CEDAR CREEK AT FM 1336 1.29 KM WEST-SOUTHWEST OF FM 324/FM 1336 INTERSECTION IN SOUTHWEST LUFKIN	13528	0604A	6	10	AN	AN	RT	4	4	4	4												
CEDAR CREEK AT FM 2497 5.55 KM NORTHWEST OF FM 2497/US 59 INTERSECTION 7.45 KM NORTH NORTHWEST OF CITY OF DIBOLL	10478	0604A	6	10	AN	AN	RT	4	4	4	4												
CEDAR CREEK AT ST LOOP 287 IN LUFKIN	10479	0604A	6	10	AN	AN	RT	4	4	4	4												
CEDAR CREEK AT ST LOOP 287 IN LUFKIN	10479	0604A	6	10	AN	AN	RT					4											
HURRICANE CREEK 38 METERS DOWNSTREAM OF KIWANIS PARK DRIVE AND DIRECTLY DOWNSTREAM OF CONFLUENCE WITH UNNAMED TRIBUTARY IN LUFKIN	21433	0604B	6	10	AN	AN	RT	4	4	4	4												
HURRICANE CREEK AT FM 324 6.74 KM SOUTH SOUTHWEST OF LUFKIN	13529	0604B	6	10	AN	AN	RT	4	4	4	4												

Replaces pages 45-47 of the FY 2026-2027 CRP QAPP

HURRICANE CREEK AT ST LOOP 287 IN SOUTH LUFKIN	10487	0604B	6	10	AN	AN	RT	4	4	4	4										
JACK CREEK AT FM 2497 5 KM SOUTHEAST OF SH 94/FM 2497 INTERSECTION 13.3 KM SOUTHWEST OF LUFKIN	10492	0604C	6	10	AN	AN	RT	4	4	4	4										
JACK CREEK AT FM 3150 7 KM WEST OF LUFKIN	10494	0604C	6	10	AN	AN	RT	4	4	4	4										
PINEY CREEK AT FM 358 2.4 KM EAST OF FM 3154/FM 358 INTERSECTION 10 KM EAST OF CITY OF PENNINGTON	16096	0604D	6	10	AN	AN	RT	4	4	4	4										
BILOXI CREEK AT ANGELINA CR216 8 KM SOUTHEAST OF LUFKIN 2.4 KM DOWNSTREAM OF US69	10499	0604M	6	10	AN	AN	RT	4	4	4	4										
BILOXI CREEK AT FM 1818 2.5 KM EAST OF FM 1818/ FM 58 INTERSECTION 13.8 KM EAST OF DIBOLL	16097	0604M	6	10	AN	AN	RT	4	4	4	4										
BUCK CREEK AT FM 1818 4.72 KM WEST OF FM 844/ FM 1818 17.94 KM EAST OF DIBOLL	16098	0604N	6	10	AN	AN	RT	4	4	4	4										
LAKE RATCLIFF WHERE NORTHWEST ARM OF LAKE JOINS MAIN BODY 350 M NORTHWEST OF THE SOUTHWEST CORNER OF DAM1.48 KM WEST OF RATCLIFF	17339	0604T	6	10	AN	AN	RT	4	4	4											
BAYOU CARRIZO AT SH 21 NEAR NACOGDOCHES	21432	0610P	6	10	AN	AN	RT	4	4	4	4										*
SAM RAYBURM RESERVOIR NEAR SHIRLEY CREEK IN THE ANGELINA RIVER CHANNEL 5.13 KM NE OF FM 2109/ FM 2801 INTERSECTION	15524	0610	6	10	AN	AN	RT	4	4	4											
SAM RAYBURN RESERVOIR ADJACENT TO ALLIGATOR COVE IN THE ATTOYAC RIVER CHANNEL 3.94 KM NORTHWEST OF FM 3185/ SH 147 INTERSECTION	15523	0610	6	10	AN	AN	RT	4	4	4											
AYISH BAYOU AT SH 103 0.8 KM EAST OF FM 705	15361	0610A	6	10	AN	AN	RT	4	4	4	4										*
AYISH BAYOU AT WEST COLUMBIA STREET IN CITY OF SAN AUGUSTINE	21431	0610A	6	10	AN	AN	RT	4	4	4	4										*
ANGELINA RIVER 340 METERS UPSTREAM OF SH 204 9.93 KM WEST OF CUSHING	10633	0611	6	5	AN	AN	RT	4	4	4	4										
ANGELINA RIVER AT SH 21 11.17 KM EAST NORTHEAST OF ALTO	10630	0611	6	10	AN	AN	RT	4	4	4	4										
ANGELINA RIVER UPSTREAM SAM RAYBURN RESERVOIR AT FM 1798 5.5 KM WEST OF LANEVILLE	10635	0611	6	5	AN	AN	RT	4	4	4	4										

Replaces pages 45-47 of the FY 2026-2027 CRP QAPP

LA NANA BAYOU AT LOOP 224 NORTH IN THE CITY OF NACOGDOCHES 1.2 KM EAST OF THE INTERSECTION OF US BUS 59F/ST LOOP 224 NORTH	16301	0611B	6	10	AN	AN	RT	4	4	4	4											*
LA NANA BAYOU AT NACOGDOCHES CR 526 6.9 MI SOUTH OF NACOGDOCHESBETWEEN FM 2863 AND FM 3228	10474	0611B	6	10	AN	AN	RT	4	4	4	4											*
LA NANA BAYOU IMMEDIATELY UPSTREAM OF EAST MAIN STREET/STATE HIGHWAY 7/STATE HIGHWAY 21 IN NACOGDOCHES	20792	0611B	6	10	AN	AN	RT	4	4	4	4											*
MUD CREEK AT US 79 9.8 KM EAST OF JACKSONVILLE AND 5.9 KM WEST OF NEW SUMMERFIELD	14477	0611C	6	5	AN	AN	RT	4	4	4	4											
MUD CREEK AT US 84 0.87 KM SOUTHWEST OF REKLAW	10532	0611C	6	5	AN	AN	RT	4	4	4	4											
LAKE NACOGDOCHES IN MAIN POOL NEAR DAM 375 M EAST OF WESTERN EDGE OF DAM 126 M NORTH OF DAM 10 MI WEST OF NACOGDOCHES	15801	0611Q	6	10	AN	AN	RT	4	4	4												
LAKE NACOGDOCHES NEAR ISLAND IN UPPER LAKE EQUIDISTANT BETWEEN ISLAND AND BOAT RAMP AT THE END OF HARBOR DRIVE AND 3.37 KM SOUTH OF SH 21	21021	0611Q	6	10	AN	AN	RT	4	4	4												
LAKE STRIKER NEAR DAM APPROX 0.8 MILES SOUTHEAST OF POWERPLANT 138 M NORTHWEST OF SPILLWAY AND 7.5 MILES SOUTHEAST OF NEW SUMMERFIELD	17824	0611R	6	5	AN	AN	RT	4	4	4												
LAKE STRIKER UPPER LAKE EQUIDISTANT BETWEEN SHORELINES 2.28KM SOUTHEAST OF INTERSECTION OF FM2274/FM32889.4 KM E. OF NEW SUMMERFIELD	17822	0611R	6	5	AN	AN	RT	4	4	4												
ATTOYAC BAYOU AT SH 21 0.71 KM WEST OF INTERSECTION OF SH 21/ FM 1196 4.77 KM EAST OF CHIRENO	10636	0612	6	10	AN	AN	RT	4	4	4	4											
ATTOYAC BAYOU AT SH 7 1.75 KM NORTHEAST OF MARTINSVILLE	15253	0612	6	10	AN	AN	RT	4	4	4	4											
ATTOYAC BAYOU AT US 59 4.12 KM NORTHEAST OF GARRISON	16076	0612	6	10	AN	AN	RT	4	4	4	4											
NACONICHE LAKE NEAR THE DAM 226 METERS NORTH AND 715 METERS WEST OF INTERSECTION OF FM 2435 AND US 59 NORTHEAST OF CITY OF NACOGDOCHES	21435	0612G	6	10	AN	AN	RT	4	4	4												

Replaces pages 45-47 of the FY 2026-2027 CRP QAPP

WEST CREEK AT FM 2913 2.57 KM N OF INTERSECTION WITH SH 7	20845	0612F	6	10	AN	AN	RT	4	4	4	4												
ANGELINA RIVER/SAM RAYBURN RESERVOIR 0.2 KM DOWNSTREAM FROM PAPER MILL CREEK CONFLUENCE NW CORNER OF SAM RAYBURN RESERVOIR	10622	0615	6	10	AN	AN	BS					5											

* This site is part of a CWA section 319 or TMDL project which is providing additional monthly monitoring in non CRP months. For more details and project durations, please reference the Coordinated monitoring Schedule at <https://cms.lcra.org/schedule.aspx?basin=6&FY=2026>

Appendix C: Station Location Maps

Station Location Maps

Maps of stations monitored by ANRA are provided below. The maps were generated by ANRA. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Angelina River Authority Central Office at 936-632-7795.

