ANRA

Angelina & Neches River Authority

August 2015

Clean Rivers Program Update

For the Stakeholders in the Neches River Basin

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THE TEXAS CLEAN RIVERS PROGRAM

Neches River at US 69

Angelina & Neches River Authority
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Fiscal Year 2015 Steering Committee Meeting

About the Steering Committee Meeting

Every year, the Angelina & Neches River Authority holds an Upper Neches Basin Steering Committee Meeting. Historically, this meeting has typically been held in April or May of each year.

During the April-May time frame, ANRA personnel were hard at work finalizing the 2015 Basin Summary Report, a comprehensive review of water quality in the Neches Basin that is prepared every five years. At the time, ANRA's intention was to postpone the meeting until July or early August. Unfortunately, unforeseen medical issues forced the meeting to be cancelled entirely.

Upon consultation with TCEQ's Clean Rivers Program Project Manager, ANRA personnel have prepared this newsletter to inform Steering Committee members and interested local stakeholders about ANRA's Clean Rivers Program activities.

Public Participation

Participation by stakeholders and Steering Committee members are crucial for the success of the Clean Rivers Program. The Steering Committee serves as the focus for public input into ANRA's surface water quality monitoring program. The committee assists ANRA with the:

- creation of specific and achievable water quality objectives and basin priorities,
- review, development, and approval or major reports (such as the Basin Highlights Report and the Basin Summary Report),
- establishment of monitoring priorities and the development of ANRA's monitoring plan,
- identification of priority problem areas and possible actions to address these problems and sources of pollution.

Fiscal Year 2015 Coordinated Monitoring Meeting

About the CMM

The FY 2015 Coordinated Monitoring Meeting (CMM) was held on March 19, 2015 at the Rayburn Country Resort in Brookeland, TX. The meeting was attended by representatives from the Angelina & Neches River Authority, the Lower Neches Valley Authority (LNVA), TCEQ Region 5 (Tyler). TCEQ Region 10 (Beaumont), and TCEQ Central Office (Austin). The purpose of the Coordinated Monitoring Meeting is to allow agencies conducting water quality monitoring in the basin to identify water quality issues in the basin and appropriately address those issues. By meeting to discuss these issues, it allows the agencies to better allocate resources and minimize duplication of efforts.

Based upon the results of this meeting, the agencies are able to establish their monitoring plan for the upcoming fiscal year.

Monitoring Changes for FY 2016

Based upon the discussions at the FY 2015 Coordinated Monitoring Meeting, ANRA is making the following modifications to the FY 2016 monitoring plan:

- ANRA is reducing the frequency of bacteriological monitoring for Station 10499 (Biloxi Creek at CR 216). Monitoring was occurring bimonthly, and will now be quarterly. Biloxi Creek was delisted for bacterial impairments in the Draft 2014 Integrated Report.
- ANRA is removing Total Dissolved Solids from the list of routine parameters collected at each monitoring station. This parameter can be derived from conductivity data that is also currently being collected, and so it can be omitted without data loss.

Fiscal Year 2016 - 2017 Clean Rivers Program Budget

ANRA's contract with TCEQ for Clean Rivers Program activities to be performed in the Fiscal Year 2016 - 2017 biennium was recently approved. The contract period begins September 1, 2015 and ends August 31, 2017.

The most significant change in FY 2016 - 2017 as compared to the FY 2014 - 2015 contract period is an increase in the Personnel/ Salary category. This increase is due to the program paying a portion of the salary of a part-time employee that will assist in Clean Rivers Program water quality monitoring activities. By adding additional field staff, ANRA will be better able to schedule and perform monitoring activities necessary to accomplish the goals of the program.

Also of note is a decrease in the amount allocated to the Other category. The largest component of this category is the costs for laboratory analyses. In FY 2016 - 2017, ANRA has removed Total Dissolved Solids (TDS) as a routine parameter for monitoring. This change was made to better allocate resources. Removing it frees up funds for an additional part-time CRP staff member.

FY 2016 - 2017 Clean Rivers Program Budget

BUDGET CATEGORY	APPROVED BUDGET
Personnel/Salary	$159,575.00
Fringe Benefits	$44,681.00
Travel	$7,276.00
Supplies	$8,476.50
Equipment	$0.00
Contractual	$0.00
Construction	$0.00
Other	$93,800.00
Indirect Costs	$15,957.50
TOTAL	**$329,766.00**

Angelina & Neches River Authority

2015 Basin Summary Report
For the Upper Portion of the Neches River Basin

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The 2015 Basin Summary Report is Now Available

The Angelina and Neches River Authority's 2015 Basin Summary Report provides a comprehensive review of water quality in the upper portion of the Neches River Basin. This report is prepared every five years. The report serves to develop a greater understanding of water quality within the basin, which can be used to aid regulatory agencies in decision making.

The report includes descriptions of water quality conditions and issues, trend analysis of water quality by station and parameter, discussion of watershed characteristics, and potential influences on water quality. Furthermore, recommendations of management strategies for correcting identified water quality impairments are also included in the report. The report details activities performed by the Angelina & Neches River Authority (ANRA) under the Texas Clean Rivers Program (CRP).

To determine whether designated uses are supported, water quality parameters were examined and compared to criteria and screening levels as listed in the Texas Surface Water Quality Standards. Assessment data from the Draft 2014 Texas Integrated Report for Clean Water Act Section 305(b) and 303(d) was used in this report.

Significant Findings

In general, historical and current water quality data of the Neches River basin included elevated bacteria levels, depressed dissolved oxygen, and dioxin and mercury in edible fish tissue. Data analysis displayed several concerns in regards to nutrients. However, there are several segments, tributaries, and reservoirs within the basin that are fully supporting their designated uses.

Obtaining a Copy of the 2015 Basin Summary Report

The 2015 Basin Summary Report for the Upper Portion of the Neches River Basin is available for download on ANRA's website at www.anra.org.

A print version of the report can be requested by contacting the Angelina & Neches River Authority at 936-632-7795 or by emailing a request to info@anra.org.

2015 Upper Neches Basin Summary Report
The 2015 Basin Summary Report was prepared by the Angelina & Neches River Authority in cooperation with the Texas Commission on Environmental Quality (TCEQ) under the authorization of the Texas Clean Rivers Act.

Updates on Special Projects in the Basin

Attoyac Bayou Watershed Protection Plan

The Development of a Watershed Protection Plan for Attoyac Bayou project collected additional water quality and stream flow data to help develop a better understanding of *E. coli* loadings in the Attoyac Bayou, which is listed as impaired for bacteria. Local stakeholder input, through the Attoyac Bayou Watershed Partnership, helped facilitate the accurate identification of *E. coli* sources and was critical in the development of a Watershed Protection Plan (WPP) to protect and restore water quality in the watershed.

In July 2010, Stephen F. Austin State University (SFASU) field personnel began collecting surface water samples and submitted them to the ANRA Environmental Laboratory for analysis of nutrients, solids, and bacteria.

A subset of samples was sent to Texas A&M University for bacterial source tracking analysis. Sampling was performed biweekly at 10 routine stations and quarterly at 4 wastewater treatment facilities, with stormwater sampling being conducted at 2 additional stations in response to rain events. Sampling was occasionally sporadic due to prolonged drought conditions. Laboratory and field data from the study was submitted for inclusion in the TCEQ's Surface Water Quality Monitoring Information System (SWQMIS).

As part of this project, a Recreational Use Attainability Analysis (RUAA) was conducted in 2012 and submitted to TCEQ.

The Attoyac Bayou Watershed Protection Plan was approved by the Environmental Protection Agency in 2015.

The project website (attoyac.tamu.edu) includes links to download project documents, including the RUAA document and Watershed Protection Plan.

The Development of a Watershed Protection Plan for Attoyac Bayou project is a collaborative effort by several partner agencies. Funding for the project was provided by the Texas State Soil and Water Conservation Board (TSSWCB) through a Clean Water Act, Section 319(h) grant from the U.S. Environmental Protection Agency (EPA).

Partner agencies for the project include the Texas Water Resources Institute (TWRI), AgriLife Research & Extension, Stephen F. Austin State University (SFASU), the Angelina & Neches River Authority, and Castilaw Environmental Services, LLC.

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

Through this project, ANRA will develop a database of On-Site Sewage Facilities (OSSFs) in the Control Zone Rayburn (CZR), the 2000-ft buffer zone around Sam Rayburn Reservoir, as well as the unincorporated portion of San Augustine County. The database will be used to track and map all permitted systems in the area immediately surrounding Sam Rayburn Reservoir, as well as the unincorporated portion of San Augustine County. This portion of the county includes a portion of the Attoyac Bayou watershed, a 303(d) listed waterbody impaired for bacteria.

Failing or non-existent OSSFs in the area will be identified through a combination of database tracking of complaints and violations, field reconnaissance and inspections, and consultations with local officials. Funds from the project will be used to replace (in the case of failing systems) or install (in the case of non-existent systems) OSSFs in the Attoyac Bayou watershed located in Nacogdoches, San Augustine, Shelby, and Rusk Counties. Replacement or installation of OSSFs will reduce potential sources of nonpoint source (NPS) pollution that may be contributing to the bacteria impairments in the watershed.

The database tracking and GIS mapping of permitted OSSFs in the watershed will provide a framework that ANRA can use in identifying candidates for future OSSF replacement or installation in additional or subsequent projects.

Surface water quality monitoring in the Attoyac Bayou watershed will be used to identify improvements in water quality following the replacement of failed or non-existent OSSFs, as well as monitoring effectiveness of Best Management Practices (BMPs) established by the Attoyac Bayou WPP. Water quality monitoring conducted under this project will test not only for bacteria but for nutrients as well, including parameters for which Attoyac Bayou and Sam Rayburn Reservoir have nutrient concerns.

Water quality data collected under this project will be routinely shared with the Attoyac Bayou Watershed Partnership, the group of stakeholders guiding the development of the Attoyac Bayou WPP. The data will also be collected under a TCEQ-approved Quality Assurance Project Plan (QAPP), allowing the data to be uploaded to the TCEQ's Surface Water Quality Monitoring Information System (SWQMIS), and thus making the data available to TCEQ for consideration in future water quality assessments.

The mapping and database components of this project began in FY 2014. OSSF replacement and surface water quality monitoring will be performed during FY 2015 and FY 2016.

Funding for the project is provided by the Texas Commission on Environmental Quality (TCEQ) through a Clean Water Act, Section 319(h) grant from the U.S. Environmental Protection Agency. (EPA).

Updates on Special Projects in the Basin

Recreational Use Attainability Analysis of Prairie Creek, Mud Creek, West Mud Creek, and Neches River Above Lake Palestine

Prairie Creek, Mud Creek, West Mud Creek, and the Neches River Above Lake Palestine are currently listed on the *Texas 303(d) List* due to elevated levels of *E. coli* bacteria. These water bodies have a presumed designated use of primary contact recreation. Based upon revisions to the Texas Surface Water Quality Standards (TSWQS) adopted by TCEQ in 2010, water bodies listed as impaired for bacteria are eligible for a standards review to determine if primary contact recreation is appropriate, or if a revision to the recreation use category is warranted.

Primary contact recreation is presumed for unclassified segments, and it is not known with certainty that recreational use is occurring in these waterbodies. The findings from an RUAA will provide information regarding the level of recreational use actually occurring in the waterbodies.

Through this project, the Texas State Soil and Water Conservation Board (TSSWCB) and the Texas Institute for Applied Environmental Research (TIAER) will work with local stakeholders for the data collection components of an RUAA, such as site selection and historical use surveys. At the end of this project, they will have adequate data that either supports the existing designated or presumed use (primary contact recreation) or supports a change in designated or presumed use for these water bodies.

The RUAAs were conducted during the summer of 2014, with preliminary findings presented to stakeholders in September 2014, with final results presented in August 2015.

The website for this project is tiaer.tarleton.edu/ruaa/index.html.

Recreational Use Attainability Analysis of Ayish Bayou, Biloxi Creek, East Fork Angelina River, Jack Creek, and Paper Mill Creek

The Texas Commission on Environmental Quality is the lead agency for a project to conduct Recreational Use Attainability Analyses on Ayish Bayou, Biloxi Creek, East Fork Angelina River, Jack Creek, and Paper Mill Creek. These segments have been listed as impaired for *E. coli* bacteria levels which exceed their presumed designated use of primary contact recreation.

The RUAAs will be used to determine if primary contact recreation is the most appropriate recreation use category for these water bodies, or if a more appropriate use, such as secondary contact recreation, is more appropriate.

A series of three public meetings were held to inform stakeholders and engage them in the RUAA process:

- June 24, 2014, in Lufkin to discuss the proposed RUAAs on Jack, Biloxi, and Paper Mill Creeks
- June 25, 2014, in San Augustine to discuss the Ayish Bayou RUAA
- June 26, 2014, in Mount Enterprise to discuss the East Fork Angelina RUAA

RUAAs for this project were conducted by Texas AgriLife Research & Extension.

Mud Creek at US 84

Preparation of standards for Total Phosphorus analysis

ANRA Environmental Laboratory

For water samples collected by ANRA, analysis of conventional and bacteriological parameters is performed by the ANRA Environmental Laboratory. The ANRA Environmental Laboratory is certified by the National Environmental Laboratory Accreditation Program (NELAP) for the chemical and microbiological analysis of potable and non-potable water. The laboratory performs analysis of drinking water, wastewater, and surface water samples for numerous entities and private individuals in the basin, including the Clean Rivers Program.

Beginning in FY 2014, The ANRA Environmental Laboratory began performing analyses for Total Phosphorus using a SEAL AutoAnalyzer 3 system. This equipment was partially funded by a grant from the TCEQ Clean Rivers Program. The autoanalyzer allows the laboratory to report data to a much lower limit of quantitation (currently 0.02 mg/L as P). Efficiencies gained by moving away from manual methods to automated equipment has allowed for a much higher throughput of samples. The addition of this equipment is one of the primary reasons that ANRA was able to increase the number of monitoring stations from 26 to 40 stations beginning in FY 2014.

The ANRA Environmental Laboratory is currently NELAP-accredited for Total Phosphorus, Orthophoshorus and Nitrate+Nitrite-N using this equipment. Additional methods will be added in the future as needed.

As part of a Federal Clean Water Act Section 319 grant funded by TCEQ, the ANRA Environmental Laboratory was able to purchase a Metrohm ion chromatograph for anion analysis. This equipment is utilized for analysis of water samples from an extensive monitoring program in the Attoyac Bayou watershed, as well as to analyze samples collected under the Clean Rivers Program.

Beginning in FY 2015, the ANRA Environmental Laboratory added Nitrate-N, Nitrite-N, Chloride, Sulfate, and Orthophosphorus-P by EPA Method 300.0 to our NELAP scope of accreditation.

In FY 2015, the TCEQ funded a Clean Rivers Program contract amendment to provide ANRA with an additional $10,957 to purchase laboratory equipment. These funds were used to purchase a block digester to be used for digestion of samples for total phosphorus analysis. This equipment can also be used for the digestion of Total Kjeldahl Nitrogen (TKN) samples, and this parameter may be added in the future if the need arises.

For more information regarding analytical testing services and ANRA, please visit http://www.anra.org/divisions/water_quality/lab/

Basin Goals and Priorities

The following priorities are based upon the evaluation of water quality presented in the 2015 Basin Summary Report, as well as recommendations from stakeholders and Steering Committee members.

Implementing the Attoyac Bayou WPP

With the approval of the Attoyac Bayou Watershed Protection Plan by the EPA, a concerted effort can now be made to address water quality impairments in the Attoyac Bayou watershed. ANRA has already implemented some of the suggestions in the WPP to address failing and non-existent OSSFs. Through a TCEQ-funded Clean Water Act Section 319 grant, ANRA is replacing failing septic systems within the four counties of the watershed to address one of the potential sources of *E. coli*.

ANRA is working closely with the Texas Water Resources Institute, Stephen F. Austin State University, Castilaw Environmental, and the Pineywoods Resource Conservation & Development program to develop additional project proposals to address public education, water quality monitoring, and OSSF replacement in the watershed.

On-Site Septic Facility Database and Mapping

As part of ANRA's Clean Water Act Section 319 grant to replace failing septic facilities in the Attoyac Bayou watershed, ANRA is also creating a database of all permitted OSSFs in the Sam Rayburn Reservoir Control Zone (the 2000 ft buffer zone around the reservoir), as well as the unincorporated portions of San Augustine County. ANRA is the Authorized Agent for OSSF permitting in both areas. ANRA is very interested in working with other Authorized Agents in the basin to share data and create a clearinghouse of OSSF permit data that can be used to map septic systems throughout the basin.

Recreational Use Attainability Analyses

Numerous segments in the basin are listed as impaired based upon their failure to meet the standard set for Primary Contact Recreation. Many of these segments are not likely used for Primary Contact Recreation due to numerous factors, such as limited access, bank characteristics, etc. By conducting RUAAs on these segments, the actual use of the streams can be determined to see if the most appropriate contact recreation standard is being applied.

RUAAs have either been completed or are underway on the Attoyac Bayou, Neches River above Lake Palestine, Prairie Creek, Mud Creek, West Mud Creek, Ayish Bayou, East Fork Angelina River, Biloxi Creek, Jack Creek, and Paper Mill Creek.

Support of the Texas Stream Team

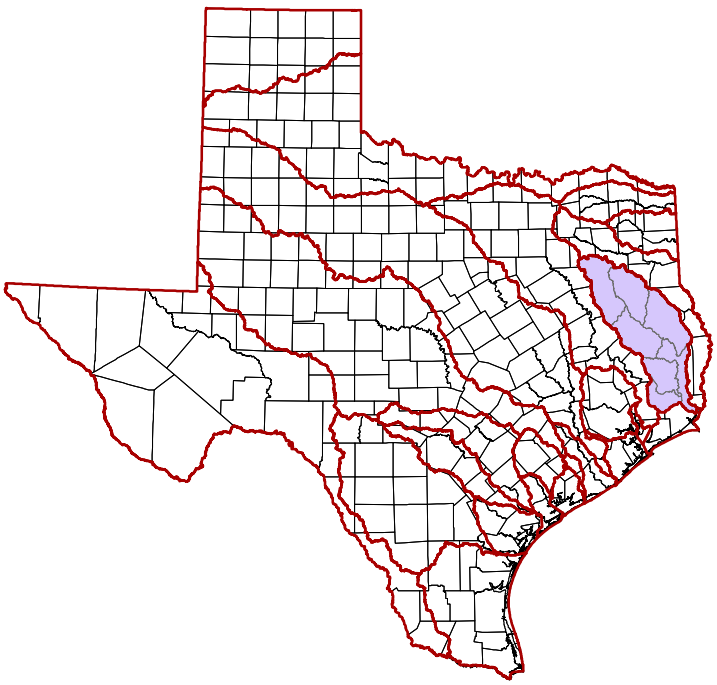
ANRA continues to support the Texas Stream Team and the volunteer monitoring program of the Greater Lake Palestine Council, including the facilitation of a training program for new monitors in 2014. In the future, ANRA would like to participate in additional training opportunities and expand volunteer monitoring programs to other areas of the basin.

Watershed-Specific Monitoring Activities

ANRA has implemented additional monitoring in certain watersheds to address stakeholder concerns.

For Cedar and Hurricane Creeks, ANRA has added additional monitoring stations within the Lufkin city limits to help identify potential sources of the elevated *E. coli* and nutrient levels observed in these segments. ANRA worked closely with the City of Lufkin to select these additional monitoring stations.

In the Lake Striker watershed, unusually low pH values have been recorded. Working with the TPWD Kills and Spills Team, ANRA instituted additional monitoring on streams which flow into Lake Striker in order help identify potential causes of the low pH issues in the lake.



Clean Rivers Program Stakeholder Questionnaire

Thank you for taking time to complete this survey. Your input is important!

In order to better serve our stakeholders, the Angelina & Neches River Authority is seeking your feedback regarding topics and water issues relevant to our stakeholders that should be addressed in future Clean Rivers Program (CRP) meetings. The following are discussion topics for our next stakeholder meeting. Please rate them on a scale of 1 to 5 as they relate to inclusion in future CRP meeting agendas. We appreciate your past participation and look forward to your continued participation.

Topic	1	2	3	4	5
Implementation of nutrient standards in TPDES permits	○	○	○	○	○
Construction/Development Impacts to Water Quality	○	○	○	○	○
Permitting Trends in Wastewater	○	○	○	○	○
Proposed changes to water quality standards in the Basin	○	○	○	○	○
Review what the CRP actually represents and how customers benefit	○	○	○	○	○
Water Bodies Not Meeting State Water Quality Criteria	○	○	○	○	○
Environmental Enforcement, Illegal Dumping and Illegal Discharge	○	○	○	○	○
Watershed Protection Plans	○	○	○	○	○

(1 = Most Important, 2 = Somewhat Important, 3 = Neutral, 4 = Somewhat Unimportant, 5 = Not at all Important)

Are there any other water quality related issues in the Basin that you would like highlighted and/or discussed in more detail? _____

_____

_____

Are you still interested in receiving correspondence from the River Authority regarding CRP meetings and other stakeholder events? Yes ☐ No ☐

Can you provide the names or organizations of potential stakeholders that may be interested in CRP activities? _____

_____

_____

To facilitate future communication please provide the following contact information:

Name: _____ Organization/Agency: _____

Address: _____ Phone #: _____

E-mail address: _____

For more information about ANRA's Clean Rivers Program, or to submit surveys, please contact:

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