



Texas State Soil and Water Conservation Board
State Nonpoint Source Grant Program
FY 2023 Workplan 23-50

SUMMARY PAGE			
Title of Project	Little River Continued Surface Water Quality Monitoring		
Project Goals	<ul style="list-style-type: none"> Supplement existing water quality data through targeted sample collection for future watershed planning 		
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Continued Surface Water Quality of Little River		
Measures of Success	<ul style="list-style-type: none"> Collection of quality-assured water quality and streamflow data 		
Project Type	Implementation (); Education (); Planning (); Assessment (X); Groundwater ()		
Status of Waterbody on 2022 Texas Integrated Report	<u>Segment ID</u> 1213	<u>Parameter of Impairment or Concern</u> Bacteria Nitrate Chlorophyll-a	<u>Category</u> CN CS CS
Project Location (Statewide or Watershed and County)	From the confluence with the Brazos River in Milam County to the confluence of the Leon River and the Lampasas River in Bell County		
Key Project Activities	Hire Staff (); Surface Water Quality Monitoring (X); Technical Assistance (); Education (); Implementation (); BMP Effectiveness Monitoring (); Demonstration (); Planning (); Modeling (); Bacterial Source Tracking (); Other ()		
2022 Texas NPS Management Program Reference	<ul style="list-style-type: none"> Component 1: LTG 1, 2 Component 1: STG 1A, 1B Component 3, 7 		
Project Costs	Total Cost	\$110,037	
Project Management	<ul style="list-style-type: none"> Texas A&M AgriLife Research, Texas Water Resources Institute 		
Project Period	November 10, 2022 – October 31, 2024		

Part I – Applicant Information

Applicant							
Project Lead	T. Allen Berthold, PhD.						
Title	Interim Director						
Organization	Texas A&M AgriLife Research, Texas Water Resources Institute						
E-mail Address	taberthold@ag.tamu.edu						
Street Address	1001 Holleman Dr. E, 2118 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77840-2118
Telephone Number	979-314-2467			Fax Number	N/A		

Project Partners	
Names	Roles & Responsibilities
Texas State Soil and Water Conservation Board (TSSWCB)	Provide state oversight and management of all project activities and ensure coordination of activities with related projects and TCEQ.
Texas A&M AgriLife Research, Texas Water Resources Institute	Provide project oversight and reporting, QA/QC, conduct water sample collection, and data submittals.

Part II – Project Information

Project Type									
Surface Water	<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>						
Does the project implement recommendations made in: (a) a completed WPP; (b) an adopted TMDL; (c) an approved I-Plan; (d) a Comprehensive Conservation and Management Plan developed under CWA §320; (e) the <i>Texas Coastal NPS Pollution Control Program</i> ; or (f) the <i>Texas Groundwater Protection Strategy</i> ?						Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
If yes, identify the document.		N/A							
If yes, identify the agency/group that developed and/or approved the document.			N/A			Year Developed	N/A		

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2022 IR	Size (Acres)
Upper and Lower Little River	120702040101-0111; 120702040301-0308	1213	CN, CS	435,006

Water Quality Impairment

Describe all known causes (i.e., pollutants of concern) and sources (e.g., agricultural, silvicultural) of water quality impairments or concerns from any of the following sources: *2022 Texas Integrated Report*, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

Impairments (2022 Integrated Report)

Segment 1213: From the confluence with the Brazos River in Milam County to the confluence of the Leon River and the Lampasas River in Bell County

<u>Assessment Unit</u>	<u>Impairment</u>	<u>Category</u>	<u>Year Listed</u>
<i>1213_01: From the confluence with the Brazos River upstream to confluence with the City of Cameron WWTP receiving water</i>	<i>bacteria</i>	<i>CN</i>	
	<i>Chlorophyll-a</i>	<i>CS</i>	
	<i>Nitrate</i>	<i>CS</i>	
<i>1213_02: From the City of Cameron WWTP receiving water upstream to the confluence with the San Gabriel River</i>	<i>Nitrate</i>	<i>CS</i>	
<i>1213_03: From the confluence with the San Gabriel River upstream to the confluence with Boggy Creek</i>	<i>Nitrate</i>	<i>CS</i>	
<i>1213_04: From the confluence with Boggy Creek upstream to its confluence with Leon and Lampasas Rivers</i>	<i>Nitrate</i>	<i>CS</i>	

Potential Sources: NPS-non-point sources; NPS-agriculture; PS-municipal point source discharges

Project Narrative

Problem/Need Statement

The Leon and Lampasas Rivers below Belton Lake and Stillhouse Hollow Lake, respectively, transect the urban areas of Temple, TX and Belton, TX flowing downstream where they merge to form the Little River. The Little River flows southeast where it ultimately reaches the Brazos River. Major tributaries of the Little River are the San Gabriel River and Big Elm Creek. Currently, one assessment unit of the Little River has a concern for elevated levels of bacteria. There are also concerns for nitrate and chlorophyll-a along the length of the river.

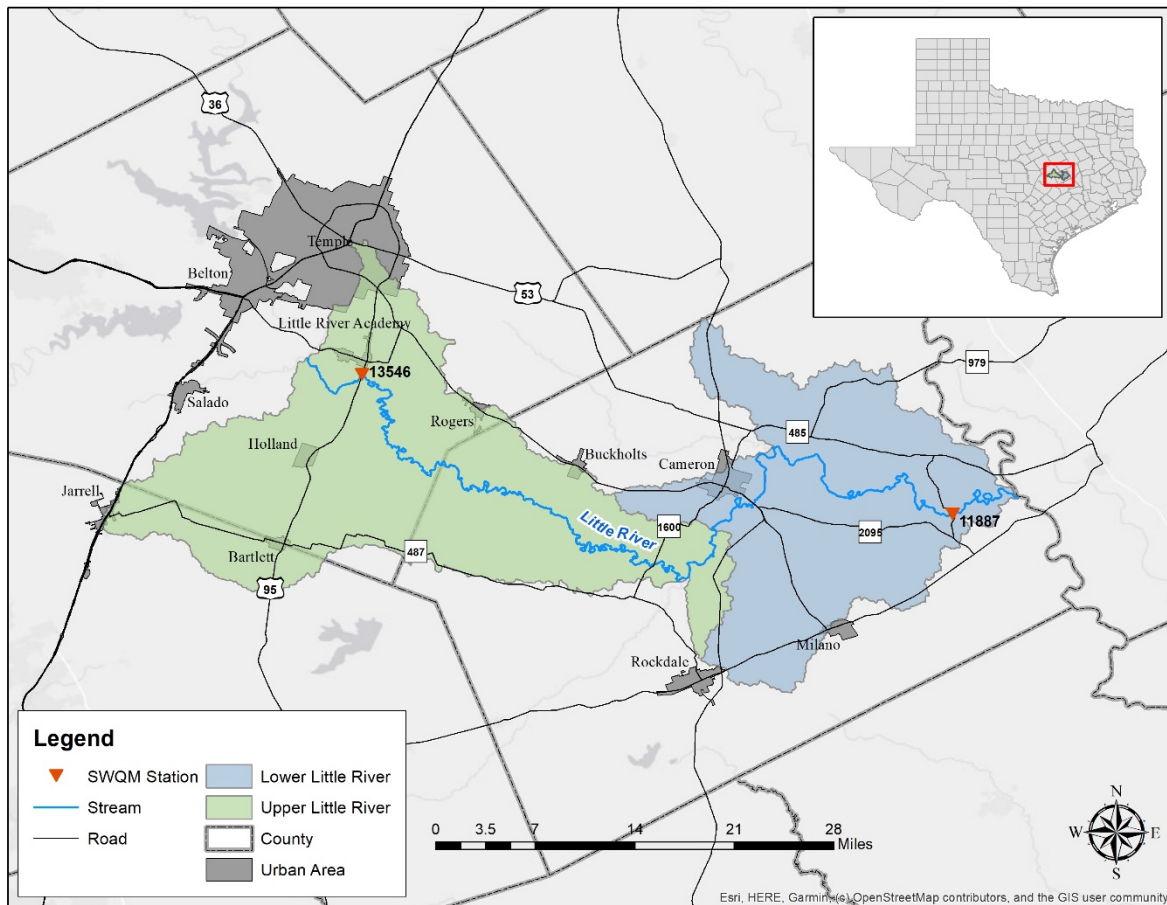
Historically, water quality monitoring in the watershed has occurred quarterly at three locations and monthly at a fourth location. However, the distribution of these sampling sites and the frequency of data collected may not adequately represent water quality conditions in the bulk of the watershed. For example, assessment unit 1213_01 that extends from the Brazos River upstream to Cameron, TX is evaluated on samples collected at two sites very near the City of Cameron. These sites are influenced by wastewater inflows to the river and may not adequately represent instream water quality condition farther downstream where more primary contact recreation is known to occur.

A 14-month water quality monitoring project ended in August 2022 for Little River (MPG-02 Little River Supplemental Watershed Monitoring). Samples were collected at two sites monthly near the furthest upstream and downstream stations in the watershed. This project will allow monthly monitoring to continue for an additional 18 months, providing a more robust picture of surface water quality in the watershed, thus properly informing future watershed planning efforts.

Project Narrative

General Project Description (Include Project Location Map)

Through this project, supplemental water quality monitoring will be conducted with a focus on collecting paired flow rate and *E. coli* concentration data. Data will be collected at two sites monthly for 18 months at SWQM stations 13546 and 11887 on the Little River. Monthly sampling will include field parameters and grab samples and allow data gaps to be filled that will improve future watershed analysis.



Tasks, Objectives and Schedules				
Task 1	Project Administration			
Costs	\$20,907			
Objective	To effectively administer, coordinate, and monitor all work performed under this project including technical and financial supervision, and preparation of status reports.			
Subtask 1.1	TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 1 st of March, June, September and December. QPRs shall be distributed to all Project Partners.			
	Start Date	Month 01	Completion Date	Month 24
Subtask 1.2	TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.			
	Start Date	Month 01	Completion Date	Month 24
Subtask 1.3	TWRI will host coordination meetings or conference calls, at least quarterly, with Project Partners to discuss project activities, project schedule, communication needs, deliverables, and other requirements. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project personnel.			
	Start Date	Month 01	Completion Date	Month 24
Subtask 1.4	TWRI will develop a Final Report that summarizes activities completed and conclusions reached during the project and discusses the extent to which project goals and measures of success have been achieved.			
	Start Date	Month 01	Completion Date	Month 24
Deliverables	<ul style="list-style-type: none"> • QPRs in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Final Report in electronic and hard copy formats 			

Tasks, Objectives and Schedules				
Task 2	Quality Assurance			
Costs	\$4,401			
Objective	To develop data quality objectives (DQOs) and quality assurance/control (QA/QC) activities to ensure data of known and acceptable quality are generated through this project.			
Subtask 2.1	TWRI will develop a QAPP for activities in Task 3 consistent with the most recent versions of <i>EPA Requirements for Quality Assurance Project Plans (QA/R-5)</i> and the <i>TSSWCB Environmental Data Quality Management Plan</i> . All monitoring procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the <i>TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue (RG-415)</i> and <i>Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data (RG-416)</i> . [Consistency with Title 30, Chapter 25 of the Texas Administrative Code, <i>Environmental Testing Laboratory Accreditation and Certification</i> , which describes Texas' approach to implementing the National Environmental Laboratory Accreditation Conference (NELAC) standards, shall be required where applicable.]			
	Start Date	Month 01	Completion Date	Month 04
Subtask 2.2	TWRI will implement the approved QAPP. TWRI will submit revisions and necessary amendments to the QAPP as needed.			
	Start Date	Month 05	Completion Date	Month 24
Deliverables	<ul style="list-style-type: none"> • QAPP approved by TSSWCB and EPA in both electronic and hard copy formats • Approved revisions and amendments to QAPP, as needed • Data of known and acceptable quality as reported through Task 3 			

Tasks, Objectives and Schedules			
Task 3	Continued Surface Water Quality Monitoring for Little River		
Costs	\$84,728		
Objective	To collect surface water quality and flow data		
Subtask 3.1	Water Quality Monitoring – Upon QAPP approval, TWRI will conduct monthly ambient water quality monitoring at two sites for 18 months (36 total samples). Sampling will include basic field parameters (temperature, pH, DO, specific conductivity, and flow where conditions allow) and grab sample collection (analyzed for <i>E. coli</i>). Water samples will be delivered to a NELAP accredited laboratory within the appropriate holding time for bacterial analysis.		
	Start Date	Month 05	Completion Date
Subtask 3.2	Water Quality Data Submission – TWRI will maintain a master database of collected water quality data. Data will be submitted to TSSWCB for submission to SWQMIS on a quarterly basis.		
	Start Date	Month 05	Completion Date
Deliverables	<ul style="list-style-type: none"> Documentation of sampling events in QPRs SWQMIS data submissions (Data sets, Data Review Checklists) 		

Project Goals
TWRI will collect surface water quality data from the watershed. Data will be submitted to SWQMIS for use in future waterbody assessments. This project will greatly increase the temporal frequency of water quality data collected, allowing for a more robust assessment of the waterbody, and greatly assist with future watershed planning activities.

Measures of Success
This project will be considered successful upon collection of 18 months’ worth of monthly ambient water quality data collection.

2022 Texas NPS Management Program Reference
Components, Goals, and Objectives
<p>Component 1: Explicit short- and long-term goals, objectives ... that protect surface and groundwater.</p> <ul style="list-style-type: none"> LTG 1: Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by nonpoint source pollution LTG 2: Support the implementation of state, regional and local programs to prevent NPS pollution through assessment, implementation and education STG 1: Data Collection and Assessment: coordinate with appropriate federal, state, regional, and local entities.... Where additional information may be needed <ul style="list-style-type: none"> Objective A: Identify surface water bodies ... that need additional information to characterize non-attainment of designated uses and water quality standards Objective B: ensure that monitoring procedures meet quality assurance requirementsor TSSWCB Quality Management Plans
Component 3: Combination of statewide nonpoint source programs and on-the-ground projects achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.
Component 7: Manage and implement the NPS program efficiently and effectively, including necessary financial management.

Part III – Financial Information

Budget Summary	
Category	State
Personnel	\$ 61,164
Fringe Benefits	\$ 22,248
Travel	\$ 1,969
Equipment	\$ 0
Supplies	\$ 200
Contractual	\$ 0
Construction	\$ 0
Other	\$ 10,104
Total Direct Costs	\$ 95,685
Indirect Costs ($\leq 15\%$)	\$ 14,352
Unrecovered IDC	
Total Project Costs	\$ 110,037

Budget Justification		
Category	Total Amount	Justification
Personnel	\$ 61,164	<p>Allen Berthold, Interim Director: \$103,721 annually @ 0.48 months (2% per year) – \$4,338 Ed Rhodes, Research Specialist II: \$58,627 annually @ 4.56 months (19% per year) – \$23,290 TBD, QAO: \$75,000 annually @ 0.72 months (3% per year) – \$4,545 TBD, Program Manager: \$78,614 annually @ 1.2 months (5% per year) – \$7,980 TBD, Research Associate: \$60,000 annually @ 4.14 months (17.25% per year) – \$21,011</p> <p>*named positions are budgeted with a 3% annual pay increase in all years; TBD positions and graduate students are budgeted with a 3% pay increase in years after year 1 *(Salary estimates are based on average monthly percent effort for the entire contract. Actual percent effort may vary more or less than estimated between months; but in aggregate, will not exceed total effort estimates for the entire project.) *cell phone allowances for project calls/emails during & after business hours & travel are occasionally factored into salaries & fringe, but again, will not exceed overall dollar amount.</p>
Fringe Benefits	\$ 22,248	<p>Fringe benefits are calculated at 18.9% * salary. For part-time and graduate research assistants, the fringe rate is 10.9%. Health insurance rates are at \$963/month for faculty/staff and \$560/month for students.</p> <p>*(Fringe benefits estimates are based on salary the estimates listed. Actual fringe benefits will vary between months coinciding with percent effort variations; but in aggregate, will not exceed the overall estimated total.) *cell phone allowances for project calls/emails during & after business hours & travel are occasionally factored into salaries & fringe, but again, will not exceed overall dollar amount.</p>
Travel	\$ 1,969	Mileage for water quality monitoring estimated at 18 trips, 175 miles round trip per sampling event @ state rate per mile for state vehicles
Equipment	\$ 0	N/A
Supplies	\$ 200	Supplies including, but not limited to, sampling supplies and consumables; general project supplies
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 10,104	<p>Communication Services at \$75/hour – \$600 Lab analysis for 2 sites at 18 sampling events at \$54 per sample – \$1,944 Monitoring Equipment Rental fee at \$420 per event for 18 events – \$7,560</p>
Indirect	\$ 14,352	<p>Per the RFP requirements, indirect costs are limited at 15% of total direct costs. \$95,685 Total Direct Costs * 15% = \$14,352</p>