

Texas State Soil and Water Conservation Board
EPA Multipurpose Grant
FY 2020 Workplan MPG-02

SUMMARY PAGE					
Title of Project	Little River Supplemental Watershed Monitoring				
Project Goals	<ul style="list-style-type: none"> Supplement existing water data through targeted sample collection 				
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Supplemental Monitoring for Watershed Characterization				
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 2020 Texas Integrated Report	<u>Segment ID</u>	<u>Parameter of Impairment or Concern</u>			<u>Category</u>
	1213	Bacteria			5c
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 ()				
2017 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	Federal	\$66,945	Non-Federal	\$0	Total \$66,945
Project Management	<ul style="list-style-type: none"> Texas A&M AgriLife Research, Texas Water Resources Institute 				
Project Period	February 3, 2021 – December 31, 2022				

Part I – Applicant Information

Applicant

Project Lead	T. Allen Berthold, Ph.D.				
Title	Senior Research Scientist				
Organization	Texas A&M AgriLife Research, Texas Water Resources Institute				
E-mail Address	taberthold@ag.tamu.edu				
Street Address	578 John Kimbrough Blvd., 2260 TAMU				
City	College Station	County	Brazos	State	TX
Zip Code	77843				
Telephone Number	979-845-2028		Fax Number	979-845-0662	

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 (TWRI)	Provide project oversight and reporting, QA/QC, conduct water sample collection, and data submittals.

Part II – Project Information

Project Type						
Surface Water	X	Groundwater				
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	No	X
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 2020 IR	Size (Acres)
Upper and Lower Little River	120702040101-0111; 120702040301-0308	1213	5c	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: <i>2020 Texas Integrated Report</i> , Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.			
Impairments (2020 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>bacteria</i>	<i>5c</i>	<i>2006</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 together 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 is impaired for excessive levels of bacteria and another has a concern for elevated bacteria. Additionally, concerns for excessive amounts of nitrate and chlorophyll-a along the length of the river also exist.

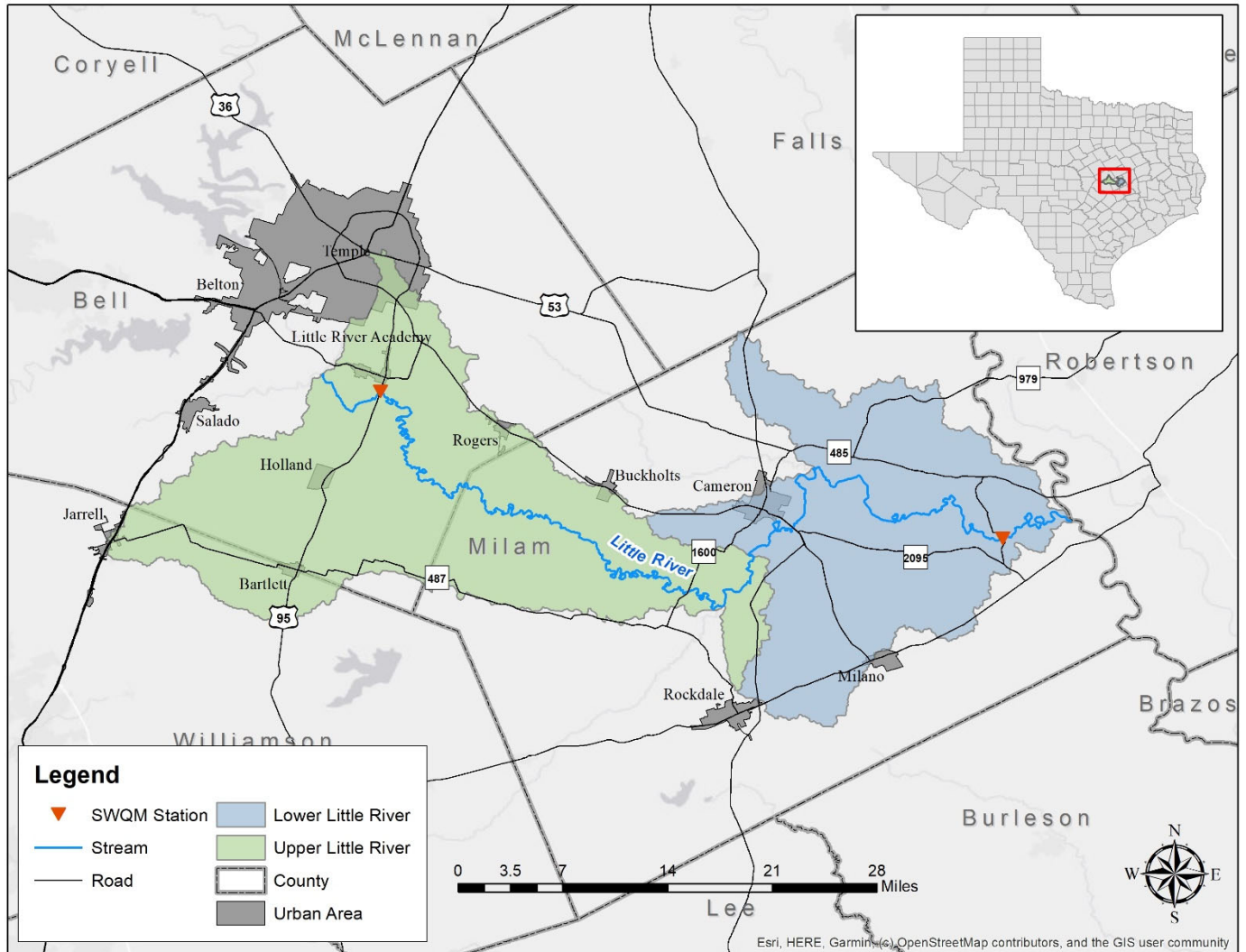
Water quality monitoring in the watershed currently occurs quarterly at three locations and monthly at a fourth location. However; the distribution of these sampling sites and the frequency of data collected may not adequately represent water quality conditions in the bulk of the watershed. For example, assessment unit 1213_01 which 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. Upstream, assessment unit 1213_04 is considered impaired due to an insufficient data set; however, recent data indicates improved water from earlier monitored conditions but a sufficient amount of sampling has not been completed to fully assess this portion of the water body.

Increased spatial and temporal distribution of water quality monitoring activity is needed in this watershed to better define current instream water quality conditions. This will increase the quantity of water quality data available for future water body assessments and it will build a more robust data set for future planning purposes should remedial action be needed.

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 three sites on a monthly basis for 14 months at two TCEQ monitoring stations on the Little River in assessment units with impairments or concerns for bacteria. Monthly sampling will include field parameters and grab samples and allow data gaps to be filled which will improve future watershed analysis.



Tasks, Objectives and Schedules						
Task 1	Project Administration					
Costs	Federal	\$8,033	Non-Federal	\$0	Total	\$8,033
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 January, April, July and October. QPRs shall be distributed to all Project Partners.					
	Start Date	Month 1		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 1		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 1		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 1		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	Federal	\$4,017	Non-Federal	\$0	Total	\$4,017
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 Tasks 3 and 4 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 1		Completion Date	Month 4	
Subtask 2.2	TWRI will implement the approved QAPP. TWRI will submit revisions and necessary amendments to the QAPP as needed.					
	Start Date	Month 1		Completion Date	Month 4	
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 Tasks 3 and 4 					

Tasks, Objectives and Schedules						
Task 3	Supplemental Monitoring for Watershed Characterization					
Costs	Federal	\$54,895	Non-Federal	\$0	Total	\$54,895
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 12 months (28 total samples). Sampling will include basic field parameters (temperature, pH, DO, 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 3	Completion Date	Month 20		
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 1	Completion Date	Month 24		
Deliverables	<ul style="list-style-type: none"> Documentation of sampling events in QPRs SWQMIS data submissions (Data sets, Data Review Checklists) 					

Project Goals (Expand from Summary Page)
TWRI will collect surface water quality data from the watershed. Data will be submitted to SWQMIS for use in future waterbody assessments.

Measures of Success (Expand from Summary Page)
This project will be considered successful upon collection of a years’ worth of monthly ambient water quality data collection. and assessment of this newly generated data combined with existing data.

2017 Texas NPS Management Program Reference (Expand from Summary Page)
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.

Estimated Load Reductions Expected (Only applicable to Implementation Project Type)

Loading reductions are not anticipated to result from this project.

EPA State Categorical Program Grants – Workplan Essential Elements
FY 2018-2022 EPA Strategic Plan Reference

Strategic Plan Goal – Goal 1 Core Mission

Strategic Plan Objective – Objective 1.2 Provide for Clean and Safe Water

Part III – Financial Information

Budget Summary

Federal	\$	66,945	% of total project	100%
Non-Federal	\$	0	% of total project	0%
Total	\$	66,945	Total	100%
Category		Federal	Non-Federal	Total
Personnel	\$	38,026	\$ 0	\$ 38,026
Fringe Benefits	\$	13,012	\$ 0	\$ 13,012
Travel	\$	2,625	\$ 0	\$ 2,625
Equipment	\$	0	\$ 0	\$ 0
Supplies	\$	0	\$ 0	\$ 0
Contractual	\$	0	\$ 0	\$ 0
Construction	\$	0	\$ 0	\$ 0
Other	\$	4,550	\$ 0	\$ 4,550
Total Direct Costs	\$	58,213	\$ 0	\$ 58,213
Indirect Costs (≤ 15%)	\$	8,732	\$ 0	\$ 8,732
Total Project Costs	\$	66,945	\$ 0	\$ 66,945

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	\$ 38,026	<p>Sr. Research Scientist (Project PI): \$75,563 annually @ 0.48 months (\$3,160) Sr. Research Scientist & QA Officer: \$86,771 annually @ 0.48 months (\$3,628) Research Associate: \$50,692 annually @ 4.2 months (\$18,588) Research Assistant: \$45,000 annually @ 2.04 months (\$7,662) Program Manager: \$59,064 annually @ 1 month (\$4,988) *named positions are budgeted with a 3% annual pay increase in all years; TBD positions 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.</p>
Fringe Benefits	\$ 13,012	<p>Fringe for faculty and staff is calculated at 18.2% salary plus \$746 per month. *Fringe benefits estimates are based on salary estimates listed. Actual fringe benefits will vary between months coinciding with percent effort variations; but in aggregate, will not exceed the overall estimated total.</p>
Travel	\$ 2,625	<p>Mileage for water quality monitoring estimated at 15 trips, 175 miles round trip ea., 2 vehicles per trip @ \$0.50 per mile for state vehicles</p>
Equipment	\$ 0	N/A
Supplies	\$ 0	N/A
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 4,550	<p>Lab analysis for samples for 2 sites at 14 sampling events (28 total samples) at \$50 per sample (\$1,400) TWRI Equipment Usage Fee: 14 days @ \$225/day (\$3,150)</p>
Indirect	\$ 8,732	<p>Texas A&M AgriLife Research's federally-negotiated indirect cost rate (IDC) is 51.5% of modified total direct costs (MTDC). Per the limitations of this RFP, indirect costs are limited at 15% total direct costs. \$58,213 * 0.15</p>