

**Texas State Soil and Water Conservation Board**  
**Clean Water Act §319(h) Nonpoint Source Grant Program**  
**FY 2021 Workplan 21-11**

SUMMARY PAGE					
Title of Project	Extending Implementation of the Mill Creek Watershed Protection Plan				
Project Goals	<ul style="list-style-type: none"> <li>Facilitate continued implementation of management measures identified in the Mill Creek Watershed Protection Plan.</li> <li>Conduct regularly scheduled stakeholder meetings to provide the Partnership with updates on progress and seek stakeholder input and recommendations on needed activities.</li> <li>Assist the Partnership in identifying and developing proposals to acquire funding for implementation projects, and in managing and tracking implementation efforts.</li> <li>Coordinate and/or conduct water resources and related environmental outreach/education efforts across the watershed.</li> <li>Communicate water quality conditions to the public and the Partnership in order to support adaptive management and expand public knowledge and participation in the Mill Creek project.</li> </ul>				
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Conduct water quality monitoring and data analysis to support adaptive implementation of the Mill Creek Watershed Protection Plan; (4) Facilitate and Promote Watershed Protection Plan Implementation				
Measures of Success	<ul style="list-style-type: none"> <li>Facilitate and Promote Watershed Protection Plan Implementation</li> <li>Provide technical assistance to the Mill Creek Partnership</li> <li>Evaluate progress toward WPP Implementation milestones</li> <li>Increase watershed stewardship among citizens, landowners, agricultural producers, and other stakeholders.</li> </ul>				
Project Type	Implementation (X); Education ( ); Planning ( ); Assessment ( ); Groundwater ( )				
Status of Waterbody on 2020 Texas Integrated Report	<u>Segment ID</u> 1202K	<u>Parameter of Impairment or Concern</u> Bacteria in water	<u>Category</u> 5c		
Project Location (Statewide or Watershed and County)	Mill Creek Watershed, including Austin and Washington Counties in Texas.				
Key Project Activities	Hire Staff ( ); Surface Water Quality Monitoring (X); Technical Assistance (X); Education (X); Implementation (X); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )				
2017 Texas NPS Management Program Reference	<ul style="list-style-type: none"> <li>Component 1 LTG 1, Objectives 1, 3, 6, 7</li> <li>STG 2, Objective D</li> <li>STG 3, Objective A, B, D, G</li> </ul>				
Project Costs	Federal	\$243,940	Non-Federal	\$162,649	Total \$406,589
Project Management	<ul style="list-style-type: none"> <li>Texas A&amp;M AgriLife Extension Service, Department of Soil and Crop Sciences</li> </ul>				
Project Period	October 1, 2021- September 30, 2024				

**Part I – Applicant Information**

Applicant							
Project Lead	Jake Mowrer						
Title	Assistant Professor and Extension Specialist						
Organization	Texas A&M AgriLife Extension Service						
E-mail Address	<a href="mailto:jake.mowrer@tamu.edu">jake.mowrer@tamu.edu</a>						
Street Address	370 Olsen BLVD 2474 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843
Telephone Number	979.845.5366			Fax Number	979.845.0604		

Project Co-Lead	Evgenia Spears						
Title	Program Specialist I						
Organization	Texas A&M AgriLife Extension Service						
E-mail Address	evgenia.spears@tamu.edu						
Street Address	370 Olsen BLVD 2474 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843
Telephone Number	979.845.2862			Fax Number	979.845.0604		

Project Co-Lead	Lucas Gregory						
Title	Senior Research Scientist						
Organization	Texas Water Resources Institute						
E-mail Address	lfgregory@ag.tamu.edu						
Street Address	578 John Kimbrough Blvd 2260 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843
Telephone Number	979.845.7869			Fax Number			

<b>Project Partners</b>	
<b>Names</b>	<b>Roles &amp; Responsibilities</b>
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 Extension Service, Department of Soil and Crop Sciences (Extension)	Provide project administration and coordination. Serve as watershed coordinator, project reporting, provide assistance for stakeholder relations, and support the implementation of the WPP. Provide coordination of ongoing implementation efforts.
Texas Water Resources Institute	Conduct targeted water quality monitoring and related quality assurance.
Mill Creek Watershed Partnership	Collaborate as critical local stakeholders and play a lead role in communicating with other local stakeholders.
Austin County Soil and Water Conservation District (SWCD 347)	Collaborate with SWCD 347 to track implementation of BMPs.
Washington County Soil and Water Conservation District (SWCD 348)	Collaborate with SWCD 348 to track implementation of BMPs.
Gideon-Lincecum Chapter – Texas Master Naturalist	Coordinate citizen science water quality monitoring with stakeholders, to raise awareness of the Mill Creek Partnership, and to provide education
Washington County Wildlife Society	Coordinate public school education program, to raise awareness of the Mill Creek Partnership, and to provide education
Bluebonnet Master Gardener Association	Coordination with volunteers for stream cleanup, to raise awareness of the Mill Creek Partnership, and to provide education

## 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	X	No	
If yes, identify the document.		The Mill Creek Watershed Protection Plan					
If yes, identify the agency/group that developed and/or approved the document.		Mill Creek Watershed Partnership, facilitated by Texas A&M AgriLife Extension and accepted by EPA		Year Developed	2015		

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2020 IR	Size (Acres)
Mill Creek	1207010402	1202K	5C	263,450

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.
<p>Mill Creek (Segment 1202K) is a 263,450-acre watershed in the Brazos River Basin that is identified as impaired on the 2014 303(d) list due to bacterial contamination. Segment 1202K is listed in the 2014 Integrated Report as impaired and utilized 26 samples for assessment taken during the 7-year period between December 2005 and November 2012. The geometric mean of these data for E. coli bacteria was 191.85 colony forming units per 100 milliliters (cfu/100 mL), which exceeds the state standard of 126 cfu/100 mL.</p> <p>The 2014 Texas Integrated Report lists the source of the bacteria impairment for Mill Creek as unknown. Watershed reconnaissance performed on Mill Creek in 2007 as part of an RUAA noted that land use in the watershed is used predominantly for agricultural purposes. The RUAA also noted the presence of three wastewater treatment plants in the watershed.</p> <p>A thorough evaluation of watershed characteristics was performed during the development of the Mill Creek WPP as part of TSSWCB project 14-57. Results indicated that potential causes for impairment included urban, agricultural, and wastewater nonpoint source pollution. The WPP identified a combination of management measures aimed at addressing these nonpoint sources, with focus on the top three contributors: livestock, septic systems, and feral hogs.</p> <p>In addition, the 2011 Brazos River Basin Highlights Report indicated concerns for bacteria and an impaired fish community; suggesting that Mill Creek had poor habitat to support a large and diverse fish population. The 2012 and 2013 Brazos River Basin Highlights Reports identify Mill Creek as not supporting a designated use due to bacteria impairment. Mill Creek (SegID: 1202K) was included again on the 303(d) list in 2016, 2018 and 2020 Texas Integrated Report of Surface Water Quality.</p>

## Project Narrative

### Problem/Need Statement

A Recreational Use Attainability Analysis (RUAA) was conducted on Mill Creek, segment 1202K in 2007. Results of the analysis showed that Mill Creek currently supports, and has historically supported, contact recreation. Routine water quality data have been collected quarterly by the TCEQ as part of the CRP program at one site (11576) in the watershed. In 2008, Mill Creek was listed on the Texas Water Quality Inventory List of Sources of Impairment and Concern related to the fish community. Following further analysis, Mill Creek was included on the 303(d) list in the 2010, 2012, 2014, 2016, 2018 and 2020 Texas Integrated Report(s) of Surface Water Quality.

In 2013, the TSSWCB and Extension identified Mill Creek for WPP development due to two primary factors: 1) it had been listed as impaired due to bacteria levels in exceedance of the recreational contact use standard, and 2) the aforementioned RUAA had concluded the recreational contact use designation and concurrent water-quality standards were appropriate. The TSSWCB projects 14-57 and 15-54 entitled *Phase 1: Data Collection and Development of Essential Components for the Mill Creek Watershed Protection Plan* and *Phase 2: Development of a Watershed Protection Plan for Mill Creek*, respectively, began in 2014. These projects included water quality monitoring, water quality modeling, and WPP development.

The WPP development was a stakeholder-driven process led by Extension with vital support from TSSWCB. The Mill Creek Watershed Partnership Steering Committee included local officials, land and business owners and citizens and is supported by state and federal agency partners. With technical assistance from project staff, the Steering Committee identified issues that are of particular importance to the surrounding communities, contributed information on land use and activities that helped to identify potential sources of bacteria, and guided development of the WPP. Through the WPP development process, stakeholders identified three categories of potential nonpoint sources of bacteria in the watershed: urban, on-site wastewater, and agricultural. SELECT was utilized to estimate distributions and the degree of contribution of these potential pollutant sources within the watershed. Management measures were identified to address each of the potential sources. The timeline for full implementation of management measures identified in the Mill Creek WPP is 10 years. The WPP was approved and signed by the Steering Committee in January of 2016 and accepted by EPA in February of 2016.

TSSWCB project 16-11, entitled *Implementation of the Mill Creek Watershed Protection Plan*, saw Extension manage the beginning of the implementation of the Mill Creek WPP through project administration and facilitation. Houston-Galveston Area Council coordinated a 10-month water quality monitoring task that included nine monthly routine monitoring sites for 16-11, in accordance with stakeholder defined goals. During the implementation of the TSSWCB project 16-11, Extension conducted seven Partnership meetings, organized eleven educational workshops and two community-wide events, and facilitated outreach to the stakeholders through the project website, numerous press releases and newsletters, and local radio and newspaper advertisements. TSSWCB project 19-12, entitled *Continued Implementation of the Mill Creek Watershed Protection Plan*, began in 2019 and is currently underway. This project is managed and facilitated by Extension, with the water quality monitoring and quality assurance components managed in partnership with TWRI. In this project, the number of monitored sites was reduced to five in response to stakeholder input. During the 16-11 project, the duties of the Extension Watershed Coordinator were shared between Mill Creek and Geronimo Alligator Creeks Watersheds. Utilization of a single Watershed Coordinator for the two projects was successful, provided substantial salary savings, and is being continued through the 19-12 project. Other management measures addressed include septic system education, well-owner programs with water quality testing, and working with the Austin and Washington Soil and Water Conservation District Technician to encourage stakeholders to consider adopting a WQMP.

Extension, utilizing an Extension Program Specialist, will continue to facilitate the Mill Creek Watershed Partnership through coordination with all key stakeholder groups (cities, counties, agricultural groups, local businesses, HOAs, etc.) and partner agencies (NRCS, SWCDs, TCEQ, etc.). This will include organizing and conducting public meetings with the Partnership Steering Committee, as well as other planning and implementation meetings, as necessary and appropriate.

Extension will promote public participation in meetings, events, and implementation activities through extensive use of various communication mechanisms, including newsletters, news releases, radio and other mass media, the project website, social media, phone, mail and email contact.

Extension will facilitate collaborative efforts among project partners to implement management measures for all three key categories of nonpoint source pollution: urban, wastewater, and agricultural, including specific emphasis on management measures identified by stakeholders as urban storm water, septic system, and agricultural, and non-domestic animal and wildlife management. Guidance on these activities is provided in Tables 8.1 and 8.2 of the Mill Creek WPP. This will involve working closely with city and county personnel, as well as local and regional state staff, SWCDs, federal agency staff, and other members of the partnership.

Extension will assist governmental and non- governmental organizations in the Mill Creek watershed with acquisition of resources to enable WPP implementation. This will include the identification of potential funding sources and assistance with the development of proposals and plans of work to secure supplemental funding from both internal (local) and external (state, federal, etc.) sources, as well as tracking and reporting for successful projects, as appropriate.

Extension will continue to facilitate and coordinate outreach and education activities in the watershed to promote implementation of recommended management measures. This will include active use of local media outlets (newspapers, newsletters, regional magazines, radio, social media, etc.) to communicate project planning efforts and activities, and development and dissemination of factsheets and other educational resources at public events through the project website. Extension will also facilitate and/or conduct a wide range of targeted educational programs consistent with the WPP including: Texas Watershed Stewards, Lone Star Healthy Streams , Smart Growth, Healthy Lawns/Healthy Waters, Riparian and Stream Ecosystem, Master Gardener/Master Naturalist, septic system, agricultural nutrient management, livestock grazing management, feral hog management, and New Landowners workshops.

Stakeholder input at Partnership meetings has consistently highlighted the issue of failing septic systems in the watershed. During projects 16-11 and 19-12, this issue has received attention from Extension in cooperation with authorized agents in both Austin and Washington Counties. This aspect is consistent with Chapter 6 of the WPP, to focus on high risk areas within targeted sub-watersheds. In 2017, 3rd party funding was secured to replace a septic system in Austin Co. In 2020, with facilitation from Extension, Washington Co. approved the use of the Extension Aerobic Septic System training workshop for OSSF owner maintenance certification. In Extending the Implementation of the Mill Creek WPP, OSSF maintenance will continue to be a priority, through increased educational outreach, inspections, seeking additional funding to assist homeowners repair/replace failing septic systems, and/or to assist cities with identifying funding sources to assist with extending sanitary sewer to areas largely served by septic systems with documented high failure rates.

Water quality monitoring is an important component to demonstrating reduced impairment in the Mill Creek Watershed. During development of the WPP, and the first stage of implementation (TSSWCB Project 16-11), the Partnership contracted with H-GAC to conduct water quality testing. To eventually remove the Mill Creek Watershed from the 303(d) list, direct measurement of reduced concentrations of E.coli will be required. Extension will work with TWRI to conduct water quality testing for E. coli and nutrients. To ensure the collection of data of a high quality, the sites listed below will be monitored, using the indicated parameters, throughout the project according to a quality assurance project plan (QAPP).

Proposed Monitoring Locations					
Site	Site ID	TCEQ ID	Lat_dd	Lon_dd	Description
5	EMC-6	21584	29.959612	-96.320151	East fork Mill Creek at FM 159/Old Nelsonville Rd, 1.5 km west of intersection of Koy Rd and FM 159.
4	WMC-4a	21582	29.9557127	-96.4276336	West Mill Creek at Tiemann Rd, east of Industry.
3	SSC-1	21580	29.921135	-96.301334	Sandy Creek at Mill Creek Rd southwest of Bellville
2	20131-A	21579	29.896756	-96.254975	Mill Creek at FM 2429 5.13 km upstream of SH 36 and 5.25 km downstream of Mill Creek Road at approximately 5.78 km south of the City of Bellville in Austin County
1	MC-2	21577	29.869637	-96.155232	Mill Creek at FM331, immediately downstream of bridge
Parameters monitored: Total Nitrogen, Total Phosphorous, Nitrate+Nitrite, Ammonia, <i>E. coli</i> , and Orthophosphate					

Tasks, Objectives and Schedules						
Task 1	Project Administration					
Costs	Federal	\$21,940	Non-Federal	\$14,627	Total	\$36,567
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	Extension 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 <sup>st</sup> of January, April, July and October. QPRs shall be distributed to all Project Partners.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 1.2	Extension 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 36	
Subtask 1.3	Extension 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. Extension will develop lists of action items needed following each project coordination meeting and distribute to project personnel.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 1.4	Extension 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 36	
Deliverables	<ul style="list-style-type: none"> <li>QPRs in electronic format</li> <li>Reimbursement Forms and necessary documentation in hard copy format</li> <li>Final Report in electronic and hard copy formats</li> </ul>					

Tasks, Objectives and Schedules						
Task 2	Quality Assurance					
Costs	Federal	\$3,000	Non-Federal	\$2,000	Total	\$5,000
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 06	
Subtask 2.2	TWRI will implement the approved QAPP. TWRI will submit revisions and necessary amendments to the QAPP as needed.					
	Start Date	Month 01		Completion Date	Month 36	
Deliverables	<ul style="list-style-type: none"> <li>QAPP approved by TSSWCB and EPA in both electronic and hard copy formats</li> <li>Approved revisions and amendments to QAPP, as needed</li> <li>Data of known and acceptable quality as reported through Task #3</li> </ul>					

Tasks, Objectives and Schedules						
Task 3	Conduct Water Quality Monitoring and Data Analysis					
Costs	Federal	\$116,311	Non-Federal	\$77,541	Total	\$193,852
Objective	Conduct water quality monitoring and data analysis to support adaptive implementation of the Mill Creek Watershed Protection Plan.					
Subtask 3.1	TWRI will conduct routine monitoring at 5 sites for monthly, collecting field, conventional, flow and bacteria. Sampling period extends over 24 months. Total number of sample events scheduled for collection through this subtask is 24.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 3.2	Monitoring data from activities will be uploaded into the TCEQ SWQMIS at least quarterly. Data will be transferred in the correct format using the TCEQ file structure along with a completed Data Summary, as described in the most recent version of the TCEQ Surface Water Quality Monitoring Data Management Reference Guide. TWRI will submit Station Location Requests to TCEQ, as needed, to obtain TCEQ station numbers for new monitoring sites. Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported. All monitoring data files, data summary reports and data correction request forms will also be provided to Extension. TWRI will input monitoring regime, as detailed in the QAPP, into the TCEQ CMS.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 3.3	Extension will summarize water quality data collected and conduct statistical and trend analysis to evaluate the effectiveness of BMPs implemented which will be included in the Report developed in subtask 1.4.					
	Start Date	Month 01		Completion Date	Month 36	
Deliverables	<ul style="list-style-type: none"> <li>Water quality data submitted to watershed coordinator and TCEQ SWQMIS.</li> <li>Technical reports detailing water quality</li> <li>Participation in Partnership meetings, as needed.</li> </ul>					



<b>Tasks, Objectives and Schedules</b>						
Task 4	Facilitate and Promote Watershed Protection Plan Implementation.					
Costs	Federal	\$102,689	Non-Federal	\$68,481	Total	\$171,170
Objective	Facilitate the Mill Creek Watershed Partnership and promote stakeholder implementation of the WPP.					
Subtask 4.1	Extension will facilitate the Mill Creek Watershed Partnership through the activities of the Watershed Coordinator, who will be responsible for general oversight and coordination with partner agencies, reporting requirements, communication, and direction of implementation activities.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 4.2	Extension will facilitate public participation and stakeholder involvement in the implementation of the Mill Creek Watershed Protection Plan, including public Partnership meetings.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 4.3	Extension will assist governmental and non-governmental organizations in the watershed in identification and acquisition of resources (financial and technical) to enable WPP implementation.					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 4.4	<p>Extension will lead public education efforts for the project, including mass media (newspaper, radio), social media marketing and promotion, maintenance of a project website, and educational programs. Extension will facilitate and coordinate education and outreach activities as identified in the Mill Creek WPP tables 8.1 and 8.2, as well as other management measures identified in the plan, and use these activities identified in the WPP as the goal for the watershed coordinator. Extension will provide information to county offices, soil and water conservation district partners, and directly to stakeholders at Partnership Meetings. Extension will provide publicly available updates, reports, meeting materials, and other project related information through the Mill Creek Watershed Partnership Website.</p> <p>Extension will coordinate and conduct a series of workshops targeting WPP-identified priorities, including one Texas Watershed Stewards workshop and one Lone Star Healthy Streams workshop during the project. As needed, Extension will coordinate with NRCS and other agencies to conduct educational programs that include rainwater harvesting, septic system management, agricultural management of chemicals and nutrients, and homeowner chemical and nutrient management.</p> <p>Extension will coordinate with project partners to provide educational programs to Master Naturalist and Master Gardener groups (1/year). Extension will coordinate with project partners to conduct 1 stream clean-up event each year. At all events, Extension will continue to distribute WPP and WPP related information to attendees.</p>					
	Start Date	Month 01		Completion Date	Month 36	
Subtask 4.5	Extension will evaluate progress toward achieving milestones established in the WPP, collaborate with the contractor to assess water quality data, and provide updates to stakeholders regarding the project.					
	Start Date	Month 01		Completion Date	Month 36	
Deliverables	<ul style="list-style-type: none"> <li>Agendas and attendance lists from Partnership meetings, educational workshops, and other events.</li> <li>Documentation of resource opportunities identified, applied for, and obtained to support WPP implementation.</li> <li>Newsletters, press releases, and other publications developed in support of the project.</li> </ul>					

### **Project Goals (Expand from Summary Page)**

- Coordinate implementation of the Mill Creek WPP.
- Encourage active involvement of the public in implementation of the WPP.
- Perform water quality monitoring and communicate water quality conditions to the public and Partnership in order to support adaptive management of WPP.
- Facilitate the Partnership and foster coordinated activities and actions between and among the contractor, cities, counties, local SWCDs, TSSWCB, TCEQ, and NRCS.
- Conduct Partnership meetings to provide progress updates and seek stakeholder input and recommendations on needed activities.
- Provide assistance to address impactful septic system problems affecting the watershed, following guidance given in Chapters 6 and 8 of the WPP.
- Foster and/or assist with the development of proposals to acquire funding for implementation of management measures, and with managing and tracking implementation projects.
- Conduct and/or facilitate education and training programs in order to encourage adoption of BMPs.
- Work with state and federal agencies, as appropriate, to secure and optimize the delivery of technical and financial resources within the watershed.
- Track and document implementation efforts to assess progress toward achieving milestones established in the WPP.
- Facilitate public awareness and participation in planning and implementation efforts by remaining active on social media, maintaining and updating website content, sending regular emails/newsletters to stakeholders.

### **Measures of Success (Expand from Summary Page)**

- Technical assistance provided to the Partnership through identification and acquisition of resources and funding for implementation efforts.
- Communication of water quality data to the public and Partnership, and use of those data to evaluate progress in achieving water quality restoration.
- Increased knowledge and adoption by citizens, landowners and agricultural producers of management measures identified in the WPP as a result of outreach and education efforts.
- Development and dissemination of factsheets, news releases, newspaper and magazine articles, and a semi- annual newsletter to maintain contact with Mill Creek stakeholders and promote implementation of the WPP.
- Active management of the project website to announce education and training events, provide project updates and disseminate educational resources to stakeholders.
- Provide regular updates to the Mill Creek Partnership that describe modifications/updates to goals and milestones, and documents success in achieving goals and milestones for water quality improvement and load reductions.

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

Components, Goals, and Objectives
<p>Long-Term Goal One– Protect and restore water quality affected by NPS pollution through assessment, implementation, and education.</p> <ul style="list-style-type: none"> <li>Objective 1 – Focus NPS abatement efforts, implementation strategies, and available resources in watersheds and aquifers identified as impacted by nonpoint source pollution.</li> <li>Objective 3 – Support the implementation of state, regional, and local programs to reduce NPS pollution, such as the implementation of strategies defined in TMDL I-Plans, WPPs, and other water planning efforts in the state.</li> <li>Objective 6 – Develop partnerships, relationships, memoranda of agreement, and other instruments to facilitate collective, cooperative approaches to manage NPS pollution.</li> <li>Objective 7 – Increase overall public awareness of NPS issues and prevention activities.</li> </ul>
<p>Short-Term Goal Two – Implementation</p> <ul style="list-style-type: none"> <li>Objective D – Implement TMDL I-Plans, WPPs, and other state, regional, and local plans developed to restore and maintain water quality in water bodies identified as impacted by NPS pollution.</li> </ul>
<p>Short-Term Goal Three – Education</p> <ul style="list-style-type: none"> <li>Objective A – Enhance existing outreach programs at the state, regional, and local levels to maximize the effectiveness of NPS education.</li> <li>Objective B – Administer programs to educate citizens about water quality and their potential role in causing NPS pollution.</li> <li>Objective D – Conduct outreach through the CRP, AgriLife Extension, SWCDs, and others to enable stakeholders and the public to participate in decision-making and provide a more complete understanding of water quality issues and how they relate to each citizen.</li> <li>Objective G – Implement public outreach and education to maintain and restore water quality in water bodies by NPS pollution.</li> </ul>

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

N/A

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

Strategic Plan Goal – Goal 1 Core Mission: Deliver a cleaner, safer, and healthier environment for all Americans and future generations by carrying out the Agency’s core mission.

Strategic Plan Objective – Objective 1.2 Provide for Clean and Safe Water to ensure waters are clean through improved water infrastructure and, in partnership with states and tribes, sustainably manage programs to support drinking water, aquatic ecosystems, and recreational, economic, and subsistence activities.

**Part III – Financial Information**

<b>Budget Summary</b>				
Federal	\$	243,940	% of total project	60%
Non-Federal	\$	162,649	% of total project	40%
Total	\$	406,589	Total	100%
Category		Federal	Non-Federal	Total
Personnel	\$	120,004	\$ 77,201	\$ 197,205
Fringe Benefits	\$	37,863	\$ 23,438	\$ 61,301
Travel	\$	13,200	\$ 0	\$ 13,200
Equipment	\$	0	\$ 0	\$ 0
Supplies	\$	1,700	\$ 0	\$ 1,700
Contractual	\$	0	\$ 0	\$ 0
Construction	\$	0	\$ 0	\$ 0
Other	\$	39,354	\$ 0	\$ 39,354
Total Direct Costs	\$	212,121	\$ 100,639	\$ 312,760
Indirect Costs (≤ 15%)	\$	31,819	\$ 62,010	\$ 93,829
Total Project Costs	\$	243,940	\$ 162,649	\$ 406,589

<b>Budget Justification (Federal)</b>		
<b>Category</b>	<b>Total Amount</b>	<b>Justification</b>
Personnel	\$ 120,004	<ul style="list-style-type: none"> <li>PI Project Director (Dr. J. Mowrer; 0.08 FTE / yr for 3 yr. Annual Salary \$81,996. total = \$21,006)</li> <li>CoPI One Extension Program Specialist (Watershed Coordinator - Dr. E. Spears; 0.1-0.2 FTE / yr. for yr Annual Salary = \$ 50,000. total = \$23,877)</li> <li>Two Extension Program Specialist (Education / Technical Assistance, \$75,500 / yr up to 0.025 FTE / yr for three years. total = \$5,834)</li> <li>TWRI CoPI (Gregory) \$95,448 annually @ 1.5 months (\$13,052)</li> <li>TWRI Program Manager (Kalisek) \$64,970 annually @ 1.5 months (\$8,741)</li> <li>TWRI Research Assoc. (Rhodes) \$50,688 annually @ 5 months (\$22,809)</li> <li>TWRI Research Asst. (TBD) \$45,000 @ 4 months (\$15,685)</li> <li>TWRI Hourly Student Worker: 600 hours @ \$15/hr. (\$9,000)               <ul style="list-style-type: none"> <li>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</li> <li>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 the aggregate, will not exceed total effort estimates for the entire project.</li> </ul> </li> </ul>
Fringe Benefits	\$ 37,863	<p>Full time positions Fringe benefits are calculated at a rate of 18.5% salary to cover FICA, UCI, WCI, and retirement. An additional \$771 month (prorated by %FTE) is calculated for group medical insurance. Estimates are in accordance with TAMUS Office of Budget &amp; Accounting procedures.</p> <p>Student Fringe is calculated at 11% of wages.</p>
Travel	\$ 13,200	<ul style="list-style-type: none"> <li>Travel for Watershed Coordinator to Watershed to perform project tasks, attend state and regional watershed meetings as necessary, and up to one regional or national conference / year. Includes up to 3 nights lodging (GSA rate) per year. = \$2,500 / year</li> <li>Travel for other Extension education / technical assistance providers performing tasks directly related to project = \$500 / yr</li> <li>Travel for field sampling crew for 24 trips @ ,175 miles each and two vehicles per trip (assumes continued COVID travel requirements) \$0.50/mi. = \$4,200</li> </ul>
Equipment	\$ 0	N/A
Supplies	\$ 1,700	<ul style="list-style-type: none"> <li>Extension Facilitation: Stream cleanup supplies (\$100/yr), printing supplies (\$450/yr).</li> <li>TWRI WQ Monitoring: Consumable sampling supplies: gloves, ethanol, paper towels, etc. = \$50</li> </ul>
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 39,354	<ul style="list-style-type: none"> <li>Extension Facilitation: Phone service (\$600/year), advertising (\$1,350/yr), conference registration fees (\$600/year), facility rental for workshops (\$800/year), computer services (\$108/yr), and software licenses/computer services (\$120/year) = \$10,734</li> <li>TWRI WQ Monitoring and QA: Field sampling crew equipment rental: 24 days @ \$380/day = \$9,120, Computer software licenses: \$150</li> <li>Sample analysis: 120 samples @ \$161.25 each = \$19,350</li> </ul>

Indirect	\$ 31,819	Reimbursable indirect costs are limited to no more than 15% of total direct costs. State the rate and the base costs associated with the rate. Generally, indirect costs are based on personnel, fringe benefits, travel, supplies, other, and up to \$25,000 of each subcontract.
----------	-----------	--

<b>Budget Justification (Non-Federal)</b>		
Category	Total Amount	Justification
Personnel	\$ 77,201	<ul style="list-style-type: none"> <li>• PI Project Director (Dr. J. Mowrer 0.08 FTE / yr for 3 yr. Annual Salary \$81,996. total = \$20,883)</li> <li>• AgriLife Co. Agents in Washington (Matheney) and Austin Counties (TBD) (0.75 Person Mo.s/ yr = \$18,545)</li> <li>• AgriLife Regional Program Leader (P. Shackelford; 0.75 Person Mo.s / yr = \$19,467)</li> <li>• AgriLife District Administrator (D. Montemayor; 0.75 Person Mo.s / yr = \$18,306)</li> </ul>
Fringe Benefits	\$ 23,438	Fringe benefits are calculated at a rate of 18.5% salary to cover FICA, UCI, WCI, and retirement. An additional \$771 month (prorated by %FTE) is calculated for group medical insurance. Estimates are in accordance with TAMUS Office of Budget & Accounting procedures.
Travel	\$ 0	
Equipment	\$ 0	
Supplies	\$ 0	
Contractual*	\$ 0	
Construction	\$ 0	
Other	\$ 0	
Indirect	\$ 62,010	Indirect costs (\$30,193) Unrecovered Indirect (\$31,817)

