

**Texas State Soil and Water Conservation Board
Clean Water Act §319(h) Nonpoint Source Grant Program
FY 2021 Workplan 21-13**

SUMMARY PAGE			
Title of Project	Coordinated Implementation of Matagorda Basin Watershed Protection Plans		
Project Goals	<ul style="list-style-type: none"> To conduct the coordinated implementation of management measures from the Lavaca River, Tres Palacios Creek, and Carancahua Bay Watershed Protection Plans (WPP) Connect and inform stakeholders about WPP implementation progress through public meetings, newsletters, and other media outlets Organize and host water resources education and outreach programs across the watersheds Work with local, state, and federal agencies as appropriate to bring technical and financial assistance to the residents in the watersheds Participate in local and regional natural resource management meetings and activities to represent the WPPs and stakeholder interests 		
Project Tasks	(1) Project Administration; (2) Building Foundational Watershed Knowledge in the Matagorda Basin; (3) Homeowner OSSF Education; (4) Feral Hog Management Education; (5) Illicit and Illegal Dumping Awareness Campaign; (6) Basin-wide Engagement, Support, and Facilitation of WPP Implementation		
Measures of Success	<ul style="list-style-type: none"> Number of education programs hosted in the basin, program attendee evaluations and knowledge-gained from pre- and post-tests Number of technical and financial assistance grant proposals submitted throughout the project period Number of educational direct mailer flyers to basin residents Number of educational videos developed Number of newsletters and social media updates related to project activities Number of regional planning meetings attended and presentations given 		
Project Type	Implementation (X); Education (X); Planning (); Assessment (); Groundwater ()		
Status of Waterbody on 2020 Texas Integrated Report	<u>Segment ID</u> Lavaca River: <ul style="list-style-type: none"> 1601, 1602, 1602A, 1602B, 1602C Tres Palacios Creek: <ul style="list-style-type: none"> 1501, 1502 Carancahua Bay: <ul style="list-style-type: none"> 2456, 2456A 	<u>Parameter of Impairment or Concern</u> Impairments: Lavaca River: <ul style="list-style-type: none"> 1602_02 and _03: Bacteria (recreation) 1602B_01: Bacteria (recreation) 1602C_01 and 02: Depressed dissolved oxygen in water Tres Palacios Creek: <ul style="list-style-type: none"> 1501_01: Bacteria (recreation); Depressed dissolved oxygen in water Carancahua Bay: <ul style="list-style-type: none"> 2456_02: Bacteria (recreation) 2456A_01: Depressed dissolved oxygen in water Concerns:	<u>Category</u> Lavaca River: <ul style="list-style-type: none"> 1602_02 and _03: 5a 1602B_01: 5a 1602C_01 and 02: 5b Tres Palacios Creek: <ul style="list-style-type: none"> 1501_01: 4a (bacteria), 5b (dissolved oxygen) Carancahua Bay: <ul style="list-style-type: none"> 2456_02: 5a 2456A_01: 5c

		Lavaca River: <ul style="list-style-type: none"> • 1602B_01: Total Phosphorus Tres Palacios Creek: <ul style="list-style-type: none"> • 1501_01: Chlorophyll-a, Nitrate • 1502_01: Chlorophyll-a • 1502_03: Depressed dissolved oxygen in water Carancahua Bay: <ul style="list-style-type: none"> • 2456_02: Chlorophyll-a, Total Phosphorus • 2456A_01: Chlorophyll-a 				
Project Location (Statewide or Watershed and County)	Lavaca River Watershed, Tres Palacios Creek Watershed, and Carancahua Bay Watershed in the Matagorda Basin Lavaca County, Jackson County, Wharton County, Matagorda County, Gonzales County, Fayette County, Victoria County					
Key Project Activities	Hire Staff (); Surface Water Quality Monitoring (); Technical Assistance (); 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"> • Component 1: LTG Objectives 1, 2, 3, 6, STG 1 Obj. B, E; STG 2 Obj. B, D; STG 3 Obj. A, B, D, G • Component 2 • Component 3 • Component 6 • Milestones: Priority Watershed Milestones (Ch. 2): Stakeholder Participation, Water Quality Monitoring 					
Project Costs	Federal	\$ 402,500	Non-Federal	\$ 268,334	Total	\$ 670,834
Project Management	<ul style="list-style-type: none"> • Texas A&M AgriLife Research, Texas Water Resources Institute 					
Project Period	December 1, 2021 – November 30, 2024					

Part I – Applicant Information

Applicant							
Project Lead		T. Allen Berthold					
Title		Assistant Director					
Organization		Texas A&M AgriLife Research, Texas Water Resource Institute					
E-mail Address		taberthold@ag.tamu.edu					
Street Address		578 John Kimbrough Blvd, TAMU 2118					
City	College Station	County	Brazos	State	Texas	Zip Code	77840
Telephone Number		979-845-2028			Fax Number		

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 Water Resources Institute (TWRI)	TWRI work with the Matagorda Basin County Extension Agents, local river authorities, and other local partners to implement select management measures for the Lavaca River & Rocky Creek Watershed Protection Plan, the Carancahua Bay Watershed Protection Plan, and the Tres Palacios Watershed Protection Plan. Due to the proximity of the watersheds, TWRI will coordinate implementation efforts across the basin in a systematic and thematic approach, allowing Watershed Coordinators to concentrate efforts on each measure individually basin-wide each project year and develop strong foundational knowledge among local stakeholders.
Lavaca Navidad River Authority (LNRA)	Collaborate with TWRI to coordinate implementation of management measures through their role as the local river authority, including identifying technical and financial assistance needed in the area, making connections for the watershed coordinator
Texas A&M AgriLife County Extension Agents	Collaborate with the watershed coordinators to provide updates on county activities; provide input and support for seeking future funding sources.
Matagorda Bay Foundation	Collaborate with the watershed coordinators to provide updates about activities in the Matagorda Bay and technical and financial assistance acquisition.

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.	Lavaca River & Rocky Creek Watershed Protection Plan, Tres Palacios Creek Watershed Protection Plan, Carancahua Bay Watershed Protection Plan						
If yes, identify the agency/group that developed and/or approved the document.	TCEQ and TWRI	Year Developed	Lavaca River: 2018; Tres Palacios: 2018; Carancahua Bay: 2019				

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2020 IR	Size (Acres)
Lavaca River Watershed	121001010402; 121001010305; 121001010304; 121001010401; 121001010206; 121001010205; 121001010201; 121001010108; 121001010104; 121001010103; 121001010102; 121001010101; 121001010302; 121001010303; 121001010301; 121001010203; 121001010204; 121001010106; 121001010202; 121001010107; 121001010105; 121001010403; 121001010404	1601, 1602, 1602A, 1602B, 1602C	1602_02 and _03: 5a 1602B_01: 5a 1602C_01 and 02: 5b	581,760
Tres Palacios Creek Watershed	121004010300, 121004010301, 121004010302, 121004010303, 121004010306, 121004010310	1501, 1502	1501_01: 4a (bacteria), 5b (dissolved oxygen)	234,880

Carancahua Bay Watershed	121004010201, 121004010202, 121004010203, 121004010207, 121004010209	2456, 2456A	2456_02: 5a 2456A_01: 5c	205,440
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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: *2020 Texas Integrated Report*, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

IMPAIRMENTS (2020 Texas Water Quality Inventory and 303(d) List)

Segment 1501: Tres Palacios Creek Tidal: From the confluence with Tres Palacios Bay in Matagorda County to a point 1.6 km (1.0 mi) upstream of the confluence of Wilson Creek in Matagorda County

Segment 1602: Lavaca River Above Tidal: From a point 8.6 km (5.3 mi) downstream of US 59 in Jackson County to the confluence of Campbell Branch west of Hallettsville in Lavaca County

Segment 1602B: Rocky Creek: Perennial stream from the confluence with the Lavaca River upstream to 2.9 km upstream of County Rd 364 north west of the City of Shiner

Segment 1602C: Lavaca River Above Campbell Branch: From the confluence of Campbell Branch in Hallettsville to approximately 3.4 mi upstream of SH 95 in Lavaca Co.

Segment 2456: Carancahua Bay: Carancahua Bay

Segment 2456A: West Carancahua Creek Tidal: From the Carancahua Bay confluence to Jackson CR 440, 10.1 km (6.3 mi) upstream of FM 616 in Jackson County

<u>Listed</u>	<u>Impairment</u>	<u>Category</u>	<u>Year</u>
1501_01: From the confluence with Willow Dam Creek at Tres Palacios Bay/Turtle Bay	bacteria	4a	2006
1501_01: From the confluence with Willow Dam Creek at Tres Palacios Bay/Turtle Bay	dissolved oxygen	5b	1999
1602_02: Confluence of Beard Branch upstream of Campbell Branch	bacteria	5a	2008
1602_03: Lower portion of segment from confluence with NHD RC 12100101002463	bacteria	5a	2008
1602B_01: Confluence of Lavaca River upstream to confluence of Ponton Creek	bacteria	5a	2014
1602C_01: Confluence of Campbell Branch upstream to confluence of West Pong Lavaca River	bacteria	5b	2004
1602C_02: Confluence of West Pong Lavaca River to head-Waters upstream of TX Hwy 95	bacteria	5b	2004
2456_02: Upper half of bay	bacteria	5a	2006
2456A_01: Carancahua Bay confluence to Jackson CR 440	bacteria	5c	2006

CONCERNS (2020 Texas Water Quality Inventory)

1501_01: Chlorophyll-a in water (CS) and Nitrate in water (CS)

1502_01: Chlorophyll-a in water (CS)

1502_03: Depressed Dissolved Oxygen in water (CS)

1602B_01: Total Phosphorus in water (CS)

2456_02: Total Phosphorus in water (CS), and Chlorophyll-a in water (CS)

2456A_01: Chlorophyll-a (CS)

SOURCES (2020 Texas Water Quality Inventory)

1501_01: Sources- NPS- Agriculture, NPS- Crop Production (irrigated)
1502_01: Sources- NPS- Non-Point Sources, PS- Unknown Point Source; UNK- Source Unknown
1502_03: Sources- UNK- Source Unknown
1602_02: Sources- UNK- Source Unknown
1602_03: Sources- NK- Source Unknown
1602B_01: Sources- UNK- Source Unknown
1602C_01: Sources- PS- Drought-Related Impacts
1602C_02: Sources- PS- Drought-Related Impact
2456_02: Sources- NPS- Non-Point Source, NPS- Rural (Residential Areas), NPS- Upstream Source, NPS- Wildlife Other than Waterfowl, UNK- Source Unknown
2456A_01: Sources- UNK- Source Unknown, NPS- Non-Point Source

Tres Palacios Creek Watershed Protection Plan, Texas Water Resources Institute

Pollution Sources: Cattle, household pets, deer, on-site sewage facilities (OSSFs), feral hogs, horses, wastewater treatment facilities (WWTFs), and urban runoff

Lavaca River Watershed Protection Plan, Texas Water Resources Institute

Pollution Sources: Domestic livestock, wildlife and feral hogs, domestic pets, on-site sewage facilities, wastewater treatment facilities (WWTFs) discharge, stormwater, and urban runoff.

Carancahua Bay Watershed Protection Plan, Texas Water Resources Institute

Point Source Pollution: Permitted wastewater and stormwater discharges.

Nonpoint Source Pollution: Domestic livestock, wildlife, domestic pets and on-site sewage facilities (OSSFs)

Project Narrative

Problem/Need Statement

The Matagorda Basin is an important resource to the Texas economy. The basin provides ecotourism opportunities and a vast amount of row crop production (Jackson, Wharton, and Matagorda counties), contains one of the highest populated cow-calf producing counties in the United States (Lavaca County), and is home to 95 threatened and endangered species according to the Texas Parks and Wildlife Department (<https://tpwd.texas.gov/gis/rtest/>). Additionally, this basin faces competing demands for its water supplies between agricultural and urban needs, falling between both Houston and Corpus Christi, which are rapidly growing urban areas. With all these challenges, it is extremely important to keep both residents and visitors engaged in protecting water resources.

One effort that began in 2014 was a partnership between TCEQ and TWRI, taking a basin approach to addressing water quality in the Matagorda Basin. Beginning with characterizing the watershed, TWRI worked to identify data gaps in the watersheds, identify potential causes and sources to bacteria impairments, and host public education events to raise water quality awareness. As a result of this effort, TWRI successfully developed WPPs across the basin, which includes the Tres Palacios Creek WPP completed in 2018, the Lavaca River WPP completed in 2018, and the Carancahua Bay WPP completed in 2019. Additionally, the Arenosa Creek and Garcitas Creek WPP has been developed and submitted but has not yet been accepted by the EPA.

Currently, there is one WPP Implementation project underway in the Lavaca River Watershed, and three in the Tres Palacios Watershed, all managed by TWRI. The Carancahua Bay WPP was accepted by the EPA in June 2019 so there is no WPP implementation project currently in that watershed. The Lavaca River Watershed is composed of rural areas so the current WPP project (TCEQ Contract No. 582-19-90200) focuses on bringing agricultural education programs to the area. These programs educate watershed residents and producers on topics that improve water quality, including homeowner OSSF and private well education, riparian area management, feral hog management, and general agricultural BMPs as they relate to water quality issues. The Tres Palacios WPP Implementation project (TCEQ Contract No. 582-18-80187) addresses impairments in the neighboring rural watershed through similar programs, and its implementation lead to the development of two implementation projects based on WPP management measures, driven by requests from watershed residents and city officials. The Tres Palacios OSSF Remediation project (TCEQ Contract No. 582-18-80184) replaces failing OSSFs in the riparian areas of the Tres Palacios Creek. The El Campo Education and Outreach project (TCEQ Contract No. 582-20-10158) educates public park visitors about urban stormwater runoff and the importance of pet waste management. All current WPP Implementation programs in the basin are slated to end during the 2022 fiscal year.

The current implementation projects within the Matagorda Basin are carried out separately by different watershed coordinators. However, the projects have many of the same management measures being addressed, tasks, land use types, and local stakeholders, which provides an opportunity for streamlining implementation. Stakeholders involved in the watershed protection planning process devoted much of their time attending meetings and providing input, which was crucial to the development of these plans. Due to the proximity of these watersheds, it was not uncommon to see the same stakeholders attending a meeting for the Carancahua Bay Watershed also attending a planning meeting or other program for the Lavaca River project, for example. Additionally, these stakeholders typically became aware of the public meetings through the same media outlets from one watershed to the next, indicating there is an opportunity to expand the number of sources for broadcasting public information. The counties that make up the Matagorda Basin overlap with multiple watersheds, so the watersheds also share many of the same extension agents, soil and water conservation districts (SWCDs), and other county-based resources. This leads to a duplication in programing, an over-saturation of stakeholder meetings, and an over-extension of time and resources.

To minimize redundancy across the watersheds, TWRI is proposing to have one implementation project for accepted WPPs within the entire Matagorda Basin. As of now, the Lavaca River and Tres Palacios Creek Implementation projects will still be ongoing during the beginning of this project, so deliverables for Lavaca River and Tres Palacios begin towards the end of Year 1 while initiating implementation for the Carancahua Bay WPP will be the focus at the

beginning. An end result of this project will be to have all watersheds in the basin on the same implementation schedule.

Through this project, TWRI will develop an education and outreach campaign that follows a curriculum-building approach that has been proven successful in classrooms and focuses on select management measures each year of the project. In the first year, management measures related to general watershed education will be the main focus. Each subsequent year, TWRI will build on the momentum developed during the previous year but begin a new campaign for an additional management measure, while reinforcing topics addressed in the previous years. This trend will continue with the anticipation of gaining more public support than what has been generated thus far. By creating a focused, structured implementation plan beginning with broad, introductory watershed education then targeting specific topics systematically, watershed coordinators and partners can concentrate their efforts on each measure while enhancing foundational knowledge in local residents and building confidence to take ownership of implementation. This approach also allows for strategic and easier program coordination with local government and agency employees who have their own agendas and deliverables to manage and will ultimately increase the overall impact of the project.

Project Narrative

General Project Description (Include Project Location Map)

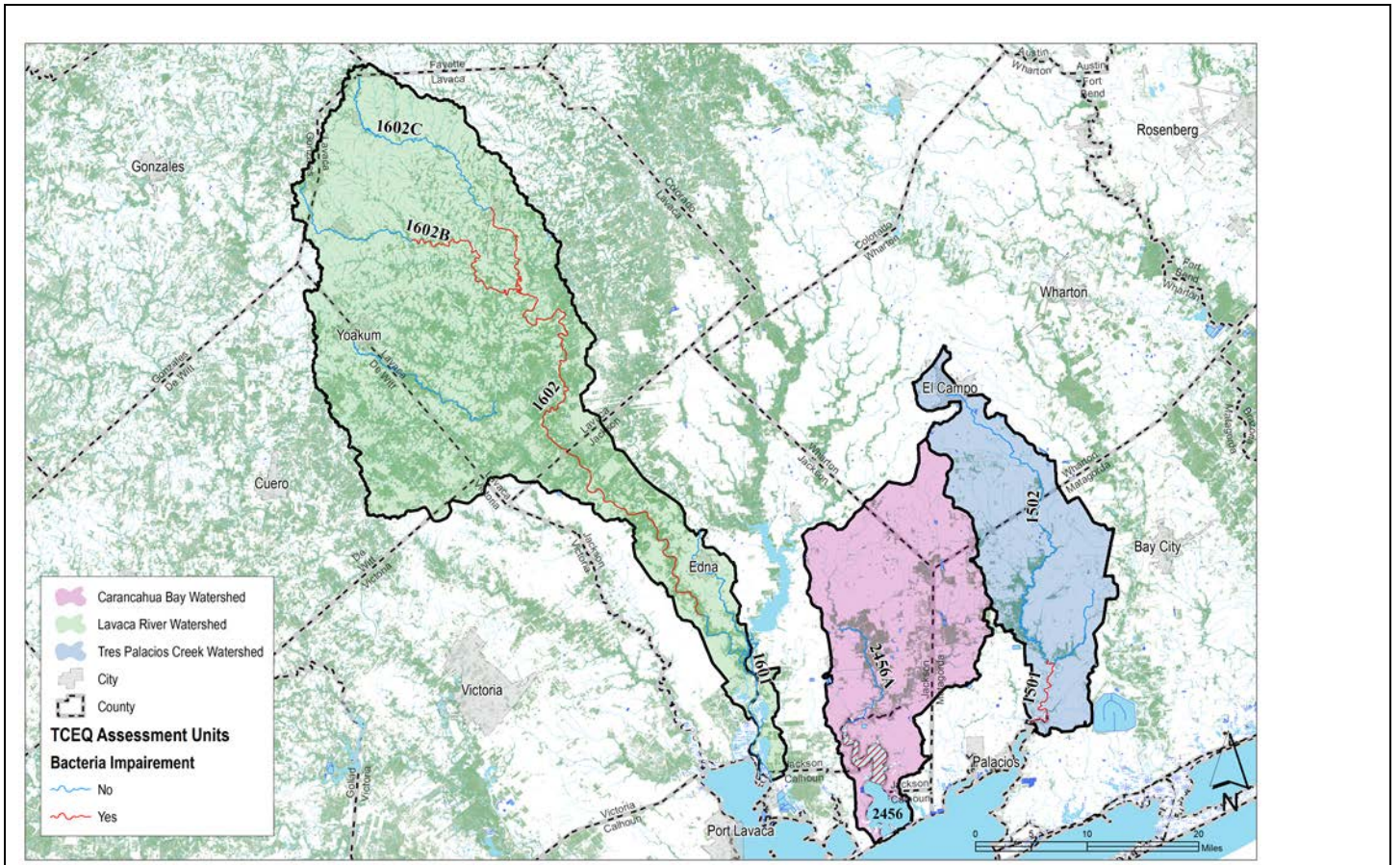
This project will continue to implement management measures outlined in the Lavaca River and Tres Palacios Creek WPPs after the current projects end in early- to mid-2022 and begin the implementation of management measures from the Carancahua Bay WPP upon this project's start date. TWRI and project partners will continue to work alongside local stakeholders and continue building relationships in those watersheds. Through developing water resources knowledge in the community, residents will continue to implement the BMPs and management measures that they selected during the WPP development process. This will be achieved through partnering with local governmental agencies and non-governmental organizations. Primarily, TWRI will serve as watershed coordinator to facilitate resource acquisition that will enable implementation and work with the landowners, residents, and other watershed entities to gather input on priority BMPs while providing guidance and expertise.

Outreach and education efforts by TWRI will follow a curriculum development model that develops basic knowledge and builds upon that foundation by introducing more specific topics. This project will follow the model by beginning with focusing on general watershed education programming and developing various agricultural conservation plans. These topics will continue to be revisited through the life of the project to reiterate basic water resource protection topics and BMPs. In the next phase of the project, due to the rural nature of the watersheds, the focus will be on homeowner on-site sewage facility (OSSF) and private well owner education program delivery covering proper operation and maintenance procedures. Finally, the project will focus on topics that local stakeholders have indicated are a top priority: illegal dumping and feral hog management. Illegal dumping will be addressed through an awareness campaign via various media outlets and engaging county officials, and feral hog management will be addressed through the various education programs available as well as awareness campaigns. Additional management measures from the WPPs will be discussed as requested, at public meetings, and during education programs that are hosted by our local agency collaborators, such as LNRA and county extension offices. TWRI will continue to facilitate the development of workgroups interested in addressing specific topics.

Another approach to reach target audiences is to directly contact watershed residents through targeted mailing. Through this project, a direct mailer program will be administered, reaching rural and urban residents that would typically not be able to attend in-person programs. This approach will be conducted throughout the Matagorda Basin. In Year 1, the direct mailer will cover good grazing management practices and will be sent to rural landowners that likely have cattle production. The direct mailer in Year 2 will also target rural residents that are not part of the municipal waste management infrastructure and will cover on-site sewage facility (OSSF) operation and maintenance. The final direct mailer campaign in Year 3 will focus on illegal and illicit dumping.

Due to the COVID-19 global health pandemic of 2020 and the reduction in the number of in-person programs allowed by local, state, and federal regulations, this project will also focus on creating content that can be easily shared via online media outlets, radio, newspapers, or other methods as they become available. Statewide education programs are already redirecting their efforts to providing webinars in place of face-to-face meetings, and TWRI will work with local partners to ensure residents are informed about those opportunities. In the event that education programs are not available to be held online or in person, TWRI will work with the TSSWCB PM to find alternative solutions for educating residents on relevant water quality topics that will maintain the safety of all stakeholders while still educating stakeholders on the importance of water quality conservation.

There has been a consistent stakeholder presence throughout the current WPP implementation project and the recent watershed planning process. Key stakeholders and city/county officials have been active in the planning process and will help with the WPP implementation and educational programs. Stakeholders are eager to assist in the WPP implementation process and are willing to work with TWRI to continue implementing it. TWRI has the expertise to begin implementing the outlined management measures and has experience in planning public meetings, writing grants for implementation, developing QAPPs for monitoring, etc. As a result of this expertise and stakeholder involvement, the project is ready to begin in Carancahua Bay, and to continue in the Lavaca River and Tres Palacios watersheds.



Tasks, Objectives and Schedules						
Task 1	Project Administration					
Costs	Federal	\$ 20,125	Non-Federal	\$ 13,417	Total	\$ 33,542
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 36	
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 36	
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 36	
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 36	
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	Building Foundational Watershed Knowledge in the Matagorda Basin					
Costs	Federal	\$ 120,750	Non-Federal	\$ 80,500	Total	\$ 201,250
Objective	To deliver general watershed education and outreach materials to rural and urban audiences to provide a baseline of knowledge and action items that can be taken to improve water quality. TWRI will coordinate and conduct outreach and education efforts across the watershed as identified in the WPPs and prioritized by stakeholders. Additionally, TWRI will work with local NRCS and SWCD to promote the development of conservation plans					
Subtask 2.1	<p>In year 1 of the project, TWRI will coordinate direct mailings of educational materials to landowners in the basin focused on proper stocking rates of cattle. Through this, up to 17,000 landowners will be reached with messages about the pitfalls of overstocking, the benefits of proper stocking rates, practices to help with pasture management, and local contacts that can provide technical and financial assistance. These direct mailings will be conducted once per quarter for one year.</p> <p>In Years 2 and 3 of the project, one direct mailing will be conducted, reminding landowners to properly stock their pastures and to reach out to local contacts for technical and financial assistance.</p>					
	Start Date	Month 1		Completion Date	Month 36	
Subtask 2.2	In year 1 of the project, TWRI will develop at least two educational articles, flyers, or infographics to be distributed through stakeholder e-mail subscriber lists, social media outlets (using targeted audience advertisements), local newspapers and other publications, and radio broadcast when available to reach rural and urban residents. At least one additional general watershed educational article will be released in Year 2 or 3, in addition to other topical articles from Tasks 4 and 5.					
	Start Date	Month 1		Completion Date	Month 36	

Subtask 2.3	In year 1 of the project, TWRI will develop at least one general educational video covering agricultural and urban BMPs that help protect and impact water resources and relevant industries in the Matagorda Basin. These videos will be distributed through social media and local outlets to reach both rural and urban residents. The video will be no longer than 5-7 minutes and will provide resources for further learning and additional information.			
	Start Date	Month 1	Completion Date	Month 15
Subtask 2.4	TWRI will work with collaborating entities to organize at least two educational/training programs in Year 1 and one program in subsequent years throughout the Matagorda Basin. Options for educational programs to be brought to the basin include but are not limited to:			
	<ul style="list-style-type: none"> • Lone Star Healthy Streams (Grazing Cattle component) workshop • Texas Riparian & Stream Ecosystem Training (Landowner and Urban) • Agricultural and Urban BMP workshops • Texas Watershed Stewards • Healthy Lawns and Healthy Waters 			
	Start Date	Month 1	Completion Date	Month 15
Deliverables	<ul style="list-style-type: none"> • Agriculture/Cattle BMP direct mailings. Four mailings in Year 1, one in Year 2, and one in Year 3 for six total mailings. • At least two general watershed education articles released in Year 1 and one additional article in Year 2 or 3, in addition to any educational material covered in the annual newsletter (Task 6) for a total of two articles. • One general watershed educational video produced and distributed. • Two educational programs in the basin in Year 1, one program in Year 2, and one program in Year 3 for a total of four general watershed education programs. 			

Tasks, Objectives and Schedules						
Task 3	Homeowner OSSF Education					
Costs	Federal	\$ 92,575	Non-Federal	\$ 61,717	Total	\$ 154,292
Objective	To promote the need for, and environmental benefits of, proper OSSF function to OSSF owners across the Matagorda Basin. TWRI will coordinate and conduct OSSF outreach/education efforts across the basin, as identified in the WPPs and prioritized by stakeholders.					
Subtask 3.1	TWRI will coordinate the distribution of educational OSSF flyers directly to residents in the basin who are not part of a municipal waste management system; the WPPs estimate that there are 9,632 OSSFs across the three watersheds. Direct mailers will be sent quarterly in Year 2, and another follow-up mailer will be sent in Year 3 for a total of up to 48,160 educational contacts made.					
	Start Date	Month 9		Completion Date	Month 36	
Subtask 3.2	In Years 2 and 3 of the project, TWRI will distribute least two OSSF fact sheets (one per year) or other relevant materials into educational articles, flyers, or infographics to be distributed through stakeholder e-mail subscriber lists, social media outlets (using targeted audience advertisements), local newspapers and other publications, and radio broadcast when available to reach rural residents.					
	Start Date	Month 9		Completion Date	Month 36	
Subtask 3.3	In Year 2 of the project, TWRI will develop one OSSF educational video covering the importance of maintaining proper waste management and how it impacts the water quality of the Matagorda Basin. The video will be under 5 minutes long and will highlight the impact of OSSFs on water quality, the work being done to remediate OSSF issues in the basin, the WPPs, and point viewers towards additional resources provided by the Texas A&M AgriLife OSSF extension specialists. This video will be distributed through social media and local outlets.					
	Start Date	Month 9		Completion Date	Month 24	

Subtask 3.4	TWRI will work with collaborating entities to organize at least two educational/training programs in Year 2 and one program in Year 3 throughout the Matagorda Basin, including, but not limited to: <ul style="list-style-type: none"> • Intro to Septic Systems for Homeowners • Aerobic system operation and maintenance workshops for homeowners • Texas Well Owner Network training and well screening 			
	Start Date	Month 12	Completion Date	Month 36
Deliverables	<ul style="list-style-type: none"> • One OSSF direct mailer per quarter in Year 2 and one in Year 3 for a total of five direct mailers. • One OSSF education article released in Year 2 and one additional article in Year 3 for a total of two articles. • One OSSF educational video produced and distributed. • Two educational programs in the basin in Year 2 and one program in Year 3 for a total of three OSSF education programs. 			

Tasks, Objectives and Schedules						
Task 4	Feral Hog Management Education					
Costs	Federal	\$ 84,525	Non-Federal	\$ 56,350	Total	\$ 140,875
Objective	To educate landowners on the water quality issues caused by the lack of management of feral hog populations and to promote technical and direct operational assistance to landowners for feral hog control. TWRI will coordinate and conduct feral hog management education efforts across the watershed with AgriLife Extension feral hog specialists, as identified in the WPPs and prioritized by stakeholders.					
Subtask 4.1	In Year 3 of the project, TWRI will develop one educational article to be distributed through stakeholder e-mail subscriber lists, social media outlets (using targeted audience advertisements), local newspapers and other publications, and radio broadcast when available to reach rural and urban residents.					
	Start Date	Month 21	Completion Date	Month 36		
Subtask 4.2	In Year 3 of the project, TWRI will distribute educational videos developed by the Texas A&M Natural Resource Institute's Wild Pigs team. These videos will be sent to stakeholders via e-mail and social media posts with a short description of the videos and how they relate to the water quality efforts in the Matagorda Basin.					
	Start Date	Month 21	Completion Date	Month 36		
Subtask 4.3	TWRI will work with collaborating entities to organize at least two feral hog educational/training programs in Year 3 in the Matagorda Basin, including, but not limited to: <ul style="list-style-type: none"> • Lone Star Healthy Streams (feral hog component) • Feral Hog Management Workshop 					
	Start Date	Month 25	Completion Date	Month 36		
Deliverables	<ul style="list-style-type: none"> • One feral hog management article in Year 3. • Two e-mail and social media campaigns highlighting NRI's Wild Pig educational videos • Two feral hog management education workshops. 					

Tasks, Objectives and Schedules						
Task 5	Illicit and Illegal Dumping Awareness Campaign					
Costs	Federal	\$ 44,275	Non-Federal	\$ 29,517	Total	\$ 73,792
Objective	To raise awareness about water quality issues caused by illicit and illegal dumping of trash and animal carcasses in and along waterways, and to educate residents on the proper disposal of waste materials in the Matagorda Basin as well as what to do when witnessing illegal dumping. This topic will also be addressed during general watershed education programming covered in Task 2. TWRI will work with county officials to develop further awareness campaigns for future projects.					
Subtask 5.1	In Year 3 of the project, TWRI will develop at least two educational articles, flyers, or infographics to be distributed through stakeholder e-mail subscriber lists, social media outlets (using targeted audience advertisements), local newspapers and other publications, and radio broadcast when available to reach rural and urban residents. The materials will be developed by the end of Year 2 and distributed in Year 3.					
	Start Date	Month 21	Completion Date	Month 36		
Subtask 5.2	In Year 3 of the project, TWRI will develop one illegal dumping educational video covering the importance of preventing illegal dumping, correct waste disposal, and the impact illegal dumping has on the water quality of the Matagorda Basin. This video will be distributed through social media and local outlets to reach both rural and urban residents. The video will be under 5 minutes long and will provide resources for further learning and additional information.					
	Start Date	Month 21	Completion Date	Month 36		
Deliverables	<ul style="list-style-type: none"> Two illegal dumping awareness education materials released in Year 3. One illegal dumping awareness educational video produced and distributed. 					

Tasks, Objectives and Schedules						
Task 6	Basin-wide Engagement, Support, and Facilitation of WPP Implementation					
Costs	Federal	\$ 40,250	Non-Federal	\$ 26,833	Total	\$ 67,083
Objective	Facilitate continued stakeholder engagement in the watershed planning process to ensure successful implementation of the WPPs and track implementation.					
Subtask 6.1	TWRI will assist governmental and non-governmental organizations (i.e., responsible parties in the WPPs) in identification and acquisition of resources (financial and technical) to enable WPP implementation. TWRI will actively seek and pursue funding opportunities and work with collaborators to develop grant proposals. TWRI will work with state and federal agencies, as appropriate, to bring technical and financial resources to the watershed.					
	Start Date	Month 1	Completion Date	Month 36		
Subtask 6.2	TWRI will attend and participate in other public meetings, as appropriate, to communicate project goals, activities, and accomplishments to affected parties. Such meetings may include, but are not limited to, city councils, county commissioners' courts, Clean River Program Basin Steering Committee and Coordinated Monitoring, local SWCDs, and other appropriate meetings of critical watershed stakeholder groups. TWRI will attend at least one public meeting per year.					
	Start Date	Month 1	Completion Date	Month 36		
Subtask 6.3	TWRI will evaluate and track progress toward achieving milestones established in the WPPs.					
	Start Date	Month 1	Completion Date	Month 36		

Subtask 6.4	<p>TWRI will facilitate public participation and stakeholder involvement in each of the watersheds, specifically by facilitating stakeholder meetings twice per year and work groups (as needed) to provide regular updates on progress to implement the WPPs, status of monitoring efforts in Lavaca River and Tres Palacios watersheds, progress in identifying implementation funding, and movement towards sustaining and improving water quality. Input and recommendations on needed activities will be sought. TWRI will coordinate meetings, secure locations, and prepare and disseminate meeting notices and agendas. Meeting summaries will be prepared and posted to the project website. TWRI will provide all interested and responsible parties with updates on implementation progress.</p>				
	<table border="1"> <tr> <td data-bbox="297 499 602 531">Start Date</td> <td data-bbox="602 499 915 531">Month 1</td> <td data-bbox="915 499 1229 531">Completion Date</td> <td data-bbox="1229 499 1528 531">Month 36</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 36
Start Date	Month 1	Completion Date	Month 36		
Subtask 6.5	<p>TWRI will develop, publish, and distribute an annual newsletter for the Matagorda Basin designed to keep landowners and entities informed of ongoing implementation activities including progress toward achieving milestones in the WPPs. The newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed.</p>				
	<table border="1"> <tr> <td data-bbox="297 667 602 699">Start Date</td> <td data-bbox="602 667 915 699">Month 1</td> <td data-bbox="915 667 1229 699">Completion Date</td> <td data-bbox="1229 667 1528 699">Month 36</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 36
Start Date	Month 1	Completion Date	Month 36		
Subtask 6.6	<p>TWRI will maintain a database of watershed stakeholders and affected parties for use in engaging the public in the implementation process. The database was created and used during the WPP development process will be added to as needed in the Carancahua Bay watershed, and the database that is currently maintained in Lavaca River and Tres Palacios will continue to be maintained. The databases represent a cross section of watershed landowners, citizens, local and regional governmental entities and elected officials, state and federal agencies, and environmental and special interest groups.</p>				
	<table border="1"> <tr> <td data-bbox="297 909 602 940">Start Date</td> <td data-bbox="602 909 915 940">Month 1</td> <td data-bbox="915 909 1229 940">Completion Date</td> <td data-bbox="1229 909 1528 940">Month 36</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 36
Start Date	Month 1	Completion Date	Month 36		
Subtask 6.7	<p>TWRI will coordinate education and outreach activities as identified in the implementation plan. TWRI will make presentations on general NPS pollution information to community organizations as well as support, promote, and participate in, as appropriate, any field days, demonstrations, site tours, or education events sponsored by Texas A&M AgriLife Extension Service, USDA-NRCS, and/or SWCD's in the watershed. TWRI will deliver at least two presentations annually to local organizations in the basin.</p>				
	<table border="1"> <tr> <td data-bbox="297 1140 602 1171">Start Date</td> <td data-bbox="602 1140 915 1171">Month 1</td> <td data-bbox="915 1140 1229 1171">Completion Date</td> <td data-bbox="1229 1140 1528 1171">Month 36</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 36
Start Date	Month 1	Completion Date	Month 36		
Subtask 6.8	<p>TWRI will coordinate with local organizations to develop and post social media posts that will promote the Matagorda Basin project on the TWRI social media pages. TWRI will share at least six social media posts per year that highlight the work in the Matagorda Basin, including posts that may be shared as deliverables from Tasks 2 – 5.</p>				
	<table border="1"> <tr> <td data-bbox="297 1308 602 1339">Start Date</td> <td data-bbox="602 1308 915 1339">Month 1</td> <td data-bbox="915 1308 1229 1339">Completion Date</td> <td data-bbox="1229 1308 1528 1339">Month 36</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 36
Start Date	Month 1	Completion Date	Month 36		
Deliverables	<ul style="list-style-type: none"> • Documentation of resource opportunities identified, applied for, and resources obtained to support plan implementation • Notices, agendas, meeting materials, attendance lists, and summaries from public meetings • List of other meetings attended, including dates with summary of topics discussed and action needed • Annual milestone database updates in newsletters and stakeholder meetings • Development of coordination committees and workgroups • Draft and final annual summer newsletter developed and distributed to stakeholders • Continue to maintain and promote stakeholder e-mail subscriber list • Presentations as requested 				

Project Goals (Expand from Summary Page)

- Conduct public meetings to provide updates on progress, seek stakeholder input and recommendations on needed activities, and encourage citizen participation.
- Support and facilitate stakeholders in implementing management measures identified in the WPP to improve water quality.
- Work with state and federal agencies, as appropriate, to bring technical and financial assistance to the watershed. Technical assistance provided to the watershed stakeholders through identification and acquisition of resources, funding opportunities pursued, and grant proposals developed.
- Coordinate and conduct water resources education and outreach across the watershed by developing publications and website content to promote and communicate watershed efforts, and by organizing training programs.
- Facilitate watershed stakeholders and foster coordinated assistance activities between cities, counties, TSSWCB, local SWCDs, and NRCS by providing a presence in the watershed.

Measures of Success (Expand from Summary Page)

- During the education programs hosted by the project (goal of at least 9 programs throughout the project period), stakeholders will be provided with WPP implementation updates. TWRI will give updates in the basin at least twice per year.
- Assist local stakeholders with developing at least one grant per year with a goal of assisting with at least 3 grants throughout the project period.
- Host at least nine educational programs in the basin over the project period.
- Provide at least eight direct mailer flyers to basin residents educating them on management measures addressed by this project.
- Develop at least four short educational videos related to the management measures addressed by this project.
- Develop at least eight educational materials related to the management measures addressed by this project.
- Develop and post at least six social media updates per year providing updates about the project, including any posts related to programs, articles, or videos.
- Number of regional planning meetings attended and presentations given.
- Increased watershed stewardship among stakeholders and increased knowledge of citizens, landowners, and agricultural producers of management measures identified in the WPP through the development of work groups focused on the management measures.

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

Components, Goals, and Objectives

Component 1 - Explicit short- and long-term goals, objectives and strategies that protect surface ... water.

Long-Term Goal – Protect and restore water quality affected by NPS pollution through assessment and education.

Objectives

- 1 – Focus NPS abatement efforts, implementation strategies and available resources in watersheds identified as impacted by NPS pollution in the latest state approved Texas Water Quality Inventory and 303(d) List.
- 2 – Support the implementation of state, regional and local programs to prevent NPS pollution through... implementation and education.
- 3 - Support the implementation of state, regional, and local programs to reduce NPS pollution, such as the implementation of strategies defined in WPPs and other water planning efforts in the state
- 6 – Develop partnerships, relationships... to facilitate collective, cooperative approaches to manage NPS pollution.
- 7 – Increase overall public awareness of NPS issues and prevention activities.
- 8 – Enhance public participation and outreach by providing forums for citizens and industry to contribute their ideas and concerns about the water quality management process

Short-term Goals

Goal One – Data Collection and Assessment: Coordinate with appropriate federal, state, regional and local entities and stakeholder groups to target water quality assessment activities in high priority, NPS-impacted watersheds...

- Objective B – Ensure that monitoring procedures meet quality assurance requirements and are in compliance with EPA-approved ... TSSWCB Quality Management Plans
- Objective E – Conduct monitoring to determine effectiveness of ...WPPs and BMP implementation

Goal Two – Implementation: Implement ... WPPs... to reduce NPS pollution by targeting implementation activities to the areas identified as impacted ... by NPS pollution.

- Objective D – Implement...WPPs...to restore and maintain water quality in water bodies identified as impacted by NPS pollution

Goal Three – Education: Conduct education... activities to increase awareness of NPS pollution and activities which contribute to the degradation of water bodies...by NPS pollution

- Objective A – Enhance existing outreach programs at...local levels to maximize the effectiveness of NPS education
- Objective B – Administer programs to educate citizens about water quality and their potential role in causing NPS pollution
- 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
- Objective G – Implement public outreach and education to maintain and restore water quality in water bodies impacted by NPS pollution

Component 2 – Working partnerships and linkages with appropriate state, ... regional, and local entities, private sector groups and Federal agencies.

Component 3 –Balanced approach that emphasizes both statewide NPS programs and on the ground management of individual watersheds.

Component 6 – Implement all NPS program components required by CWA §319(b) and establish strategic approaches and adaptive management to achieve and maintain water quality standards as expeditiously as practicable.

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

While this project is implementing an integral part of the area WPPs, expected load reductions cannot be easily quantified; however, loading reductions can be quantified through the adoption of BMPs that this project is promoting. Several educational workshops provided by AgriLife Extension program specialists include pre/post surveys and load reductions may be calculated based on the number of participants who adopt BMPs.

**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

Budget Summary				
Federal	\$	402,500	% of total project	60%
Non-Federal	\$	268,334	% of total project	40%
Total	\$	670,834	Total	100%
Category		Federal	Non-Federal	Total
Personnel	\$	200,508	\$ 76,236	\$ 276,744
Fringe Benefits	\$	63,390	\$ 17,281	\$ 80,671
Travel	\$	4,448	\$ 0	\$ 4,448
Equipment	\$	0	\$ 0	\$ 0
Supplies	\$	1,500	\$ 0	\$ 1,500
Contractual	\$	0	\$ 0	\$ 0
Construction	\$	0	\$ 0	\$ 0
Other	\$	80,154	\$ 0	\$ 80,154
Total Direct Costs	\$	350,000	\$ 93,517	\$ 443,517
Indirect Costs (≤ 15%)	\$	52,500	\$ 48,162	\$ 100,662
Unrecovered IDC			\$ 126,655	\$ 126,655
Total Project Costs	\$	402,500	\$ 268,334	\$ 670,834

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	\$ 200,508	<p>TWRI Assistant Director \$83,118 @ 1.44 months (4% per year): \$10,584 TBD TWRI Program Manager \$64,970 @ 3 months (8.33% per year): \$16,728 TWRI Program Specialist \$49,280 @ 18 months (50% per year): \$78,445 TWRI Extension Program Specialist \$41,820 @ 10.8 months (30% per year): \$39,941 TBD Graduate Student Research Assistant: \$54,000 @ 12 months (6 months/yr for years 1 and 2) (graduate students are considered “full-time” at 50% effort): \$54,810</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	\$ 63,390	<p>Fringe for faculty and staff is calculated at 18.5% salary plus \$771 per month. Fringe for students is calculated at 11% salary plus \$558 per month.</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>
Travel	\$ 4,448	<p>Estimated up to 16 trips to the basin around 300 miles round trip. Up to eight overnight trips. Per diem: \$55 per day up to 16 days: \$880 Lodging: \$96 per night up to eight nights: \$768 Mileage: \$175 per round trip, up to 16 trips: \$2,800</p>
Equipment	\$ 0	N/A
Supplies	\$ 1,500	Supplies include, but are not limited to paper (\$400), toner (\$500), envelopes (\$300) and other misc. supplies needed to carry out the project (\$300)
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A

Other	\$ 80,154	<p>Communications Services: \$26,100</p> <ul style="list-style-type: none"> • Direct Mailers – \$1,200 • Educational Materials – \$9,900 • Educational Videos – \$13,200 • Press Releases – \$1,500 • Social Media Promotions – \$300 <p>Postage for Task 2 Direct Mailer: \$18,360</p> <ul style="list-style-type: none"> • 17,000 contacts • 6 total mailings • \$0.18 per postcard <p>Printing for Task 2 Direct Mailer: \$16,320</p> <ul style="list-style-type: none"> • 17,000 contacts • 6 total mailings • \$0.16 per postcard <p>Postage for Task 3 Direct Mailer: \$8,669</p> <ul style="list-style-type: none"> • 9,632 contacts • 5 total mailings • \$0.18 per postcard <p>Printing for Task 3 Direct Mailer: \$7,705</p> <ul style="list-style-type: none"> • 9,632 contacts • 5 total mailings • \$0.16 per postcard <p>Facility Rental: \$3,000</p>
Indirect	\$ 52,500	15% Total Direct Costs (TDC)

Budget Justification (Non-Federal)		
Category	Total Amount	Justification
Personnel	\$ 76,236	<p>TWRI Director: \$209,180 @ 4.12 months (11.45% per year): \$76,236</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</p> <p>*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> <p>*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	\$ 17,281	<p>Fringe for faculty and staff is calculated at 18.5% salary plus \$771 per month. Fringe for students is calculated at 11% salary plus \$558 per month.</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</p> <p>*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> <p>*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	\$ 0	N/A
Equipment	\$ 0	N/A
Supplies	\$ 0	N/A
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 0	N/A
Indirect	\$ 48,162	<p>Texas A&M AgriLife Research's federally negotiated indirect cost rate (IDC) is 51.5% of modified total direct costs (MTDC). MTDC includes up to \$25,000 of each subcontract and excludes tuition, facility rental and equipment over \$5,000.</p>
Unrecovered IDC	\$ 126,655	<p>Unrecovered IDC: 51.5% MTDC – 15% TDC</p> <ul style="list-style-type: none"> - IDC on MTDC: \$347,000 MTDC * 51.5% = \$178,705 - IDC on TDC: \$350,000 TDC * 15% = \$52,050 <p>Total Unrecovered IDC: \$178,705 – \$52,050 = \$126,655</p>