TEXAS STATE Soil & Water conservation board

Texas State Soil and Water Conservation Board Clean Water Act §319(h) Nonpoint Source Grant Program FY 2022 Workplan 22-12

SUMMARY PAGE			
Title of Project	Continuance of the Texas Watershed Steward Program		
Project Goals	 Facilitate statewide implementation of the Texas Watershed Steward (TWS) program through watershed-based group trainings and computer-based distance training components. Increase stakeholder involvement in Watershed Protection Plan (WPP) and/or 		
	 Total Maximum Daily Load (TMDL) development processes by educating and organizing local citizens. Promote healthy watersheds by increasing citizen awareness, understanding, and knowledge about the nature and function of watersheds, potential impairments, and watershed protection strategies to minimize NPS pollution. Enhance interactive learning opportunities for watershed education across the 		
	 state and establish a larger, more well-informed citizen base. Empower individuals to take leadership roles in community and watershed-level water resource issues. 		
Project Tasks	(1) Project Administration; (2) Coordinate and Deliver Watershed-based TWS Trainings in Selected Watersheds Throughout Texas; (3) Distribute and Manage Computer-based Training Tools for the TWS Program; (4) Evaluate the Effectiveness of Watershed- and Computer-based TWS Training Tools		
Measures of Success	 Deliver a minimum of 30 watershed-based TWS trainings in selected watersheds during project period. Workshops may be delivered virtually on a singular basis if determined necessary by TSSWCB and Texas A&M AgriLife Extension in response to local, state, or agency guidelines concerning Coronavirus Disease 2019 (COVID-19). Number of citizens participating in watershed-based TWS trainings. Number of citizens utilizing the computer-based training components of the TWS program. Increased knowledge and understanding of watershed management by individuals participating in the program, as measured by pre-/post-tests and 6-month follow-up evaluations. 		
Project Type	Implementation (); Education (X); Planning (); Assessment (); Groundwater ()		

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Status of Waterbody on 2020 Texas Integrated Report	<u>Segment ID</u> 0508, 0508A, 0508B, 0508C, 0511, 0511A, 0511B, 0511C, 0511E	Parameter of Impairment or Concern Bacteria (recreation use), depressed dissolved oxygen, pH	<u>Category</u> 4a
	2201, 2202	Bacteria (recreation use), depressed dissolved oxygen, mercury in edible tissue, PCBs in edible tissue	4a, 5a, 5b, 5c
	0612	Bacteria (recreation use)	5b, 5c
	1105	Bacteria (recreation use)	5c
	1213	Bacteria (recreation use)	5b, 5c
	1416	Bacteria (recreation use), depressed dissolved oxygen	5c
	0207	Bacteria (recreation use)	5b
	2456, 2453, 1602	Bacteria (recreation use), bacteria (oyster waters), depressed dissolved oxygen	5a, 5c
	0901	Bacteria (recreation use), dioxin in edible tissue, PCBs in edible tissue, depressed dissolved oxygen	5a, 5c
	1421	Depressed dissolved oxygen	5c
	1815	Depressed dissolved oxygen, impaired fish community, impaired macrobenthic community	5c
	1103	Bacteria (recreation use), dioxin in edible tissue, PCBs in edible tissue, depressed dissolved oxygen	4a, 5a, 5b, 5c
	2422B, 2422D	Bacteria (recreation use), dioxin in edible tissue, PCBs in edible tissue, depressed dissolved oxygen	5a, 5b, 5c
	1811	Bacteria (recreation use)	5c
	1804A	Bacteria (recreation use)	5c
	1428C	Bacteria (recreation use)	4a
	0823	Bacteria (recreation use)	5c
	2424A, 2424C	Bacteria (recreation use), dioxin in edible tissue, PCBs in edible tissue, depressed dissolved oxygen	5a, 5b, 5c

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0403	Depressed dissolved oxygen, pH N/A	4a, 5c
1205	Bacteria (recreation use)	N/A
0821C, 0821D	Depressed dissolved oxygen	5c
1217D	Bacteria (recreation use), depressed	5c
1602	dissolved oxygen Bacteria (recreation use), depressed	5a, 5b
1221	dissolved oxygen Total dissolved solids	5b, 5c
2102	Bacteria (recreation use), impaired fish	5c
1901	community, depressed dissolved oxygen	4a, 5c
	Bacteria (recreation use), depressed	
1902	dissolved oxygen Bacteria (recreation use)	5c, 5b
1202K	Bacteria (recreation use)	5c
2002. 2004	Bacteria (recreation use), toxicity in	4a, 5c
1209	sediment, depressed dissolved oxygen Bacteria (recreation use)	4a, 5a, 5b, 5c
1218	Bacteria (recreation use)	5b, 5c
1810	Bacteria (recreation use), depressed	4b
1301, 1302	dissolved oxygen	5b, 5c
	Bacteria (recreation use)	
1008	Bacteria (recreation use), depressed dissolved oxygen	4a, 5a
1501	Bacteria (recreation use)	4a, 5b
1908	N/A	5c
1415_05, 1415_06	Bacteria (recreation use), depressed dissolved oxygen	N/A
1245		4a, 5b, 5c
1911	Bacteria (recreation use), depressed dissolved oxygen, impaired fish community, impaired macrobenthic community	4a, 5a, 5c

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		N/A	
	1814	Bacteria (recreation use)	N/A
	0828	Bacteria (recreation use)	5c
	1004, 1015		4a, 5a
Project Location		for the following watersheds and their a	
Project Location (Statewide or Watershed and County)	Adams and Cows Bayou Cameron and Willacy Cou and Shelby Counties; Bas Bell, Falls, and Milam Co Saba Counties; Buck Cree Carancahua Bay in Jacks in Chambers, Liberty and Coke, Reagan, Tom Greer County; Dickinson Bayou Chambers County; Dry C Geronimo Creek in Guad Hickory Creek in Dentor Galveston County; Lake Counties; Lake Houston Jacinto, Walker, and Wall Bell, Burnet, Coryell, Han River in Lavaca, De Witt, Proctor Lake in Comanche River below Lake Corpus San Antonio River in De Counties; Mid and Lower Karnes Counties; Mill Cr Rivers in Karnes, Goliad, River Below Lake Limes Limestone Counties; Nola Coryell Counties; Peach C Plum Creek in Caldwell, Colorado, Wharton, Fort H Wharton Counties; Upper Edwards, Kerr, Kimble, M	for the following watersheds and their a s in Adams, Jasper and Newton Counties; A trop Bayou in Brazoria County; Big Elm (unties; Brady Creek in Concho, McCulloc ek in Donley, Collingsworth, and Childress son, Matagorda, Calhoun, and Wharton Cou Harris Counties; Concho River in Irion, R h , Schleicher, and Concho Counties; Cypre i in Brazoria and Galveston Counties; Dou omal and Comal River in Comal and Gua dalupe and Comal Counties; Gilleland Cre h County; Highland Bayou and Marchlan Granbury in Hood, Parker, Palo Pinto, Ran Area Watersheds in Grimes, Harris, Liber er Counties; Lake Lavon in Collin County nilton, Lampasas, Mills, and Williamson C Jackson, Gonzales, and Fayette Counties; e , Hamilton, Erath, Mills, and Bell Countie Christi in Nueces, Jim Wells and San Patri Witt, Goliad, Guadalupe, Karnes, Refugio, r Cibolo Creek in Comal, Guadalupe, Bex eek in Washington and Austin Counties; M Bee, Live Oak, San Patricio, and Refugio (stone in Grimes, Leon, Robertson, Brazos, 1 m Creek/South Nolan Creek (Segment 12 Creek in Bastrop, Caldwell, Fayette, and G Hays, and Travis Counties; Tres Palacios cibolo Creek in Kendall County; Upper fenard, Real, and Sutton Counties; Upper S	Arroyo Colorado in hes, San Augustine, Creek in McLennan, ch, Menard, and San s Counties; unties; Cedar Bayou unnels, Sterling, ss Creek in Hays ble Bayou in dalupe Counties; ek in Travis County; d Bayou in nger, Erath, and Jack ty, Montgomery, San ; Lampasas River in ounties; Lavaca Leon River below s; Lower Nueces icio Counties; Lower Victoria, and Wilson ar, Wilson, and lission and Aransas Counties; Navasota Madison and 218) in Bell and onzales Counties; River in Austin, s in Matagorda and Llano River in Oyster Creek in Fort
		age Creek-Lake Arlington in Tarrant and	
	West Fork San Jacinto F	River and Lake Creek in Grimes and Mon	tgomery Counties;
	-	watersheds identified for TMDL or WPF	development
Kow Droiget Astivities	and/or implementation.	ton Quality Monitoring (). Technical Activ	tongo ():
Key Project Activities		ter Quality Monitoring (); Technical Assistation (X); BMP Effectiveness Monitoring	
		ng (); Modeling (); Bacterial Source Track	
2017 Texas NPS	• Component 1 – LTG		
Management Program	• Component $1 - STGs$	s 3A, 3B, 3F, 3G	
Reference Project Costs	• Components 2 & 3 Federal \$409,591	Non-Federal \$273,061 Tot	tal \$682.652
Project Costs Project Management	Texas A&M AgriLife Ext		tal \$682,652
Project Management Project Period	December 6, 2022 – Nove		
110,000101100	2000100,2022 10000		

Part I – Applicant Information

Applicant

Project Lead		Dr. Jake Mowrer	•						
Title		Assistant Profess	sor & Spec	vialist – So	il N	utrient and V	Vater Reso	ource Manag	gement
Organization		Texas A&M Agr	iLife Exte	nsion Serv	vice				
E-mail Address		jake.mowrer@ag	jake.mowrer@ag.tamu.edu						
Street Address		Extension Soil and	nd Crop So	ciences					
		2474 TAMU							
City Colle	ge Sta	ion County Brazos State Texas Zip Code 77843							
Telephone Number 979-845-5366 Fax Number 979-845-0604									

Project Co-Lead	Michael J. Kuitu				
Title	Extension Program Specialist II				
Organization	Texas A&M AgriLife Extension Service				
E-mail Address	michael.kuitu@ag.tamu.edu				
Street Address	Extension Soil and Crop Sciences				
	2474 TAMU				
City College St	ion County Brazos State Texas Zip Code 77843				
Telephone Number 979-862-4457 Fax Number 979-845-0604					

Project Partners	
Names	Roles & Responsibilities
Texas State Soil and Water Conservation	Provide state oversight and management of all project activities and
Board (TSSWCB)	ensure coordination of activities with related projects and TCEQ.
Texas A&M AgriLife Extension Service –	Provide management of all project activities and ensure coordination of
Department of Soil and Crop Sciences	activities with related projects and TCEQ.
(Extension)	

Part II – Project Information

Project Type								
Surface Water	Х	Groundwater						
TMDL; (c) an app	proved I- CWA §3	Plan; (d) a Compr 20; (e) the <i>Texas</i> C	ehensive	in: (a) a completed WPP; (b) an adopted Conservation and Management Plan <i>NPS Pollution Control Program</i> ; or (f) the	Yes	X	No	

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	Arroyo Colorado Watershed Protection Plan; Attoyac Bayou Watershed
	Protection Plan; Bastrop Bayou Watershed Protection Plan; Big Elm Creek
	Watershed Protection Plan; Brady Creek Watershed Protection Plan; Buck
	Creek Watershed Protection Plan; Carancahua Bay Watershed Protection Plan;
	Cedar Bayou Watershed Protection Plan; Texas Commission on
	Environmental Quality CWA §319 Grant Program Total Maximum Daily
	Load (TMDL) Implementation Plan (I-Plan) to Nine Element Watershed-
	Based Plan Bridge Document: Colorado River Below E.V. Spence Reservoir,
	Segment 1426; Concho River Watershed Protection Plan; Cypress Creek
	Watershed Protection Plan; Eight Total Maximum Daily Loads for Indicator
	Bacteria in Dickinson Bayou and Three Tidal Tributaries; Dickinson Bayou
	Watershed Protection Plan; Double Bayou Watershed Protection Plan; Dry
	Comal Creek and Comal River Watershed Protection Plan; Geronimo Creek
	and Alligator Creeks Watershed Protection Plan; Implementation Plan for One
	Total Maximum Daily Load for Bacteria in Gilleland Creek; Hickory Creek
	Watershed Protection Plan; Highland Bayou Coastal Basin Watershed
	Protection Plan For Highland Bayou, Highland Bayou Diversion Canal,
	Marchand Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake;
If yes, identify the document.	Lake Conroe Watershed Protection Plan; Lake Granbury Watershed Protection
If yes, identify the document.	Plan; Fifteen TMDLs for Indicator Bacteria in Watersheds of the Lake
	Houston Area; Lake Lavon Watershed Protection Plan; Lampasas River
	Watershed Protection Plan; Lavaca River Watershed Protection Plan;
	Watershed Protection Plan for the Leon River Below Proctor Lake and Above
	Belton Lake; Lower Nueces River Watershed Protection Plan; One Total
	Maximum Daily Load for Bacteria in the Lower San Antonio River; Mid and
	Lower Cibolo Creek Watershed Protection Plan; Mill Creek Watershed
	Protection Plan; Two Total Maximum Daily Loads for Indicator Bacteria in
	the Mission and Aransas Rivers; Navasota River Below Lake Limestone
	Watershed Protection Plan; Watershed Protection Plan for Nolan Creek/South
	Nolan Creek (Segment 1218); One Total Maximum Daily Load for Bacteria in
	Peach Creek; Plum Creek Watershed Protection Plan; San Bernard River
	Watershed Protection Plan; Tres Palacios Creek Watershed Protection Plan;
	Upper Cibolo Creek Watershed Protection Plan; Upper Llano River Watershed
	Protection Plan; One TMDL for Bacteria in Upper Oyster Creek; Upper San
	Antonio River Watershed Protection Plan; The Upper San Marcos River
	Watershed Protection Plan; Village Creek-Lake Arlington Watershed
	Protection Plan; A Watershed Protection Plan for the West Fork San Jacinto
	River and Lake Creek Watersheds

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If yes, identify the agency/group that developed and/or approved the document.	Arroyo Colorado Watershed Partnership facilitated by Texas Sea Grant, TCEQ and the U.S. EPA;	Year Developed	2007
	Attoyac Bayou Watershed Partnership facilitated by Texas Water Resources Institute (TWRI) and TSSWCB;		2014
	Bastrop Bayou Stakeholder Group facilitated by Houston-Galveston Area Council, Galveston Bay Estuary Program TCEQ, University of Houston, and CDM;		2011
	Big Elm Creek Watershed Protection Plan facilitated by TWRI and TCEQ;		2021
	Brady Creek Watershed Protection Plan facilitated by Upper Colorado River Authority and Texas Institute of Applied Environmental Research;		2016
	Buck Creek Watershed Protection Plan facilitated by TWRI and TSSWCB;		2014
	Carancahua Bay Watershed Protection Plan facilitated by TWRI and TCEQ;		2019
	Cedar Bayou Watershed Partnership facilitated by the H-GAC, Galveston Bay Estuary Program, TSSWCB, and U.S. EPA;		2016
	Texas Commission on Environmental Quality CWA §319 Grant Program Total Maximum Daily Load (TMDL) Implementation Plan (I-Plan) to Nine Element Watershed-Based Plan Bridge Document: Colorado River Below E.V. Spence Reservoir, Segment 1426 facilitated by Upper Colorado River Authority, Railroad Commission of Texas, and TCEQ;		2013
	Concho River Watershed Advisory Committee facilitated by the Upper Colorado River Authority, TSSWCB, U.S. EPA, and Texas Institute for Applied Environmental Research;		2011
	Cypress Creek WPP facilitated by The Meadows Center, TCEQ, Texas A&M AgriLife Extension, City of Wimberley, Blue Hole, Hays Trinity Groundwater Conservation District, U.S. EPA, Hays County, Texas Clean Rivers Program, City		2015

of Woodcreck, Texas Water Development Board, TSWCE, Guadalope-Blanco River Authority (GBRA), and the Wimberley Valley Watershed Association; 2012 Eight Total Maximum Daily Loads for 2012 Indicator Bacteria in Dickinson Bayou and Three Tidal Tributaries facilitated by 2009 Diancor Bacteria in Dickinson Bayou Watershed 2010 2009 plan—Dickinson Bayou Watershed Protection 2009 2016 partnership, facilitated by TCEQ and EPA; 2016 2016 Double Bayou Watershed Partnership 2016 2018 Atvanced Research Center, U.S. Geologic 2017 2018 Watershed Protection Plan facilitated by City of New Braunfels, TCEQ, U.S. EPA, and Guadalupe-Blanco River Authority; 2012 Geronimo Creek Watershed Partnership 2012 2017 Maximum Daily Load for Bacteria in Gilleland Creek facilitated by TCEQ; 2016 2017 Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ; 2016 2016 Hicking Alanda Bayou Diversion Canl, Maximum Daily Load for Bayou, Aud Umamed Tributary of Moses Lake facilitated by City of Denton and TCEQ; 2016 Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ; 2016 Highland Bayo		 Page 8 of 25
Indicator Bacteria in Dickinson Bayou and Three Tidal Tributaries facilitated by TCEQ:2009Dickinson Bayou Watershed Protection plan—Dickinson Bayou Watershed 	Board, TSSWCB, Guadalupe-Blanco River Authority (GBRA), and the Wimberley	
plan—DickinsonBayouWatershed Partnership, facilitated by TCEQ and EPA;DoubleBayouWatershedPartnership facilitated by Galveston Bay Estuary Program, TCEQ, TSSWCB, Houston 	Indicator Bacteria in Dickinson Bayou and Three Tidal Tributaries facilitated by	2012
facilitated by Galveston Bay Estuary Program, TCEQ, TSSWCB, Houston Advanced Research Center, U.S. Geologic Survey, and Shead Conservation Solutions;2018Dry Comal Creek and Comal River 	plan—Dickinson Bayou Watershed	2009
Watershed Protection Plan facilitated by City of New Braunfels, TCEQ, U.S. EPA, and Guadalupe-Blanco River Authority;2012Geronimo Creek Watershed Partnership facilitated by Texas A&M AgriLife Extension Service and TSSWCB;2017Implementation Plan for One Total Maximum Daily Load for Bacteria in Gilleland Creek facilitated by TCEQ;2016Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ;2016Highland Bayou Coastal Basin Watershed Protection Plan For Highland Bayou, Highland Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake facilitated by TCEQ, Galveston Bay Estuary Program, and Texas Community Watershed Partners;2015Lake Conroe Watershed Protection Plan facilitated by San Jacinto River Authority; Lake Granbury Watershed Protection Plan Stakeholders Committee facilitated by the Brazos River Authority and TCEO.2015	facilitated by Galveston Bay Estuary Program, TCEQ, TSSWCB, Houston Advanced Research Center, U.S. Geologic	2016
Geröfinite Greek Matchine Greek Matchinefacilitated by Texas A&M AgriLifeExtension Service and TSSWCB;Implementation Plan for One Total Maximum Daily Load for Bacteria in Gilleland Creek facilitated by TCEQ;Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ;Highland Bayou Coastal Basin Watershed Protection Plan For Highland Bayou, Highland Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake 	Watershed Protection Plan facilitated by City of New Braunfels, TCEQ, U.S. EPA,	2018
Implementation Film for One Four Maximum Daily Load for Bacteria in Gilleland Creek facilitated by TCEQ;2016Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ;2021Highland Bayou Coastal Basin Watershed 	facilitated by Texas A&M AgriLife	2012
Hickory Creek Watershed Protection Plan facilitated by City of Denton and TCEQ;2021Highland Bayou Coastal Basin Watershed Protection Plan For Highland Bayou, Highland Bayou Diversion Canal, Marchand Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake facilitated by Texas A&M AgriLife Extension Service, TCEQ, Galveston Bay Estuary Program, and Texas Community Watershed Partners;2015Lake Conroe Watershed Protection Plan facilitated by San Jacinto River Authority; Lake Granbury Watershed Protection Plan Stakeholders Committee facilitated by the Brazos River Authority and TCEQ:2015	Maximum Daily Load for Bacteria in	2017
Protection Plan For Highland Bayou, Highland Bayou Diversion Canal, Marchand Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake facilitated by Texas A&M AgriLife Extension Service, TCEQ, Galveston Bay Estuary Program, and Texas Community Watershed Partners;2021Lake Conroe Watershed Protection Plan facilitated by San Jacinto River Authority; Lake Granbury Watershed Protection Plan Stakeholders Committee facilitated by the Brazos River Authority and TCEQ:2015		2016
Lake Conroe Watershed Protection Plan facilitated by San Jacinto River Authority; Lake Granbury Watershed Protection Plan Stakeholders Committee facilitated by the Brazos River Authority and TCEO;	Protection Plan For Highland Bayou, Highland Bayou Diversion Canal, Marchand Bayou, Moses Bayou, And Unnamed Tributary of Moses Lake facilitated by Texas A&M AgriLife Extension Service, TCEQ, Galveston Bay Estuary Program, and Texas Community	2021
Brazos River Authority and TCFO:	facilitated by San Jacinto River Authority; Lake Granbury Watershed Protection Plan	2015
2011	-	2011

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Fifteen TMDLs for Indicator Bacteria in Watersheds of the Lake Houston Area facilitated by TCEQ and Houston- Galveston Area Council;	2011
Lake Lavon Watershed Partnership facilitated by North Texas Municipal Water District, Texas A&M AgriLife, and TSSWCB;	2017
Lampasas River Watershed Partnership facilitated by Texas A&M AgriLife Research and TSSWCB;	2012
Lavaca River Watershed Protection Plan facilitated by TWRI, TCEQ, and Texas A&M AgriLife;	2018
Watershed Protection Plan for the Leon River Below Proctor Lake and Above Belton Lake facilitated by TSSWCB, Brazos River, and U.S. EPA;	2015
Nueces River Watershed Partnership facilitated by the Nueces River Authority and TSSWCB;	2016
One Total Maximum Daily Load for Bacteria in the Lower San Antonio River; facilitated by TCEQ;	2008
Mid and Lower Cibolo Creek Watershed Protection Plan facilitated by TWRI, San Antonio River Authority, TSSWCB, and Texas A&M AgriLife;	2020
Mill Creek Watershed Partnership facilitated by Texas A&M AgriLife Extension Service and the TSSWCB;	2015
Two Total Maximum Daily Loads for Indicator Bacteria in the Tidal Segments of the Mission and Aransas Rivers facilitated by the TCEQ;	2016
Navasota River Watershed Partnership facilitated by TWRI, TSSWCB, and Texas A&M AgriLife;	
The Nolan Creek Partnership facilitated by Texas Institute for Applied Environmental Research and TCEQ;	2017

One Total Maximum Daily Load for Bacteria in Peach Creek; facilitated by TCEQ;	2019
Plum Creek Watershed Partnership facilitated by Texas A&M AgriLife Extension Service and TSSWCB;	2008
Landowners and entities in the San Bernard River watershed, facilitated by the Houston- Galveston Area Council and TCEQ;2	2008; 2014
Tres Palacios Creek Watershed Protection Plan facilitated by TWRI, TCEQ, and Texas A&M AgriLife;	2013
Upper Cibolo Creek Watershed Partnership facilitated by the City of Boerne, Texas landowners and entities in the Upper Cibolo Creek watershed and the TCEQ;	2018
Llano River Watershed Alliance facilitated by Texas Tech Llano River Field Station and TSSWCB;	2013
One TMDL for Bacteria in Upper Oyster Creek prepared by the TCEQ;	2016
Upper San Antonio River Watershed Partnership facilitated by Texas A&M AgriLife Research, San Antonio River Authority, and the TCEQ;	2007
The San Marcos Watershed Initiative Stakeholder Committee facilitated by The Meadows Center for Water and the	2007; 2014
Environment at Texas State University;The Village Creek-Lake Arlington Watershed Protection Partnership facilitated by Trinity River Authority of Texas;	2018
West Fork Watersheds Partnership facilitated by Houston-Galveston Area Council, Galveston Bay Estuary Program, TCEQ, and U.S. EPA	2019
TCEQ, allu U.S. EFA	2019

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Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2020 IR	Size (Acres)
Adams and Cows Bayous	120100051100, 120100051001, 120100051002, 120100051003, 120100051004, 120100051005	0508, 0508A, 0508B, 0508C, 0511, 0511A, 0511B, 0511C, 0511E	4a	160,000
Arroyo Colorado	121102080700, 121102080600, 121102080100	2201 and 2202	4a, 5a, 5b, 5c	1,169,920
Attoyac Bayou	120200050301 - 120200050307, 120200050401 - 120200050406,	0612	5b, 5c	354,629
Bastrop Bayou Tidal	120402050400	1105	5c	138,880
Big Elm Creek	120702040201 - 120702040207	1213	5b, 5c	206,266
Brady Creek	120901100101, 120901100102, 120901100103, 120901100104, 120901100105, 120901100106, 120901100107, 120901100108, 120901100201, 120901100202, 120901100203, 120901100204, 120901100205, 120901100206, 120901100207, 120901100208, 120901100209, 120901100210	1416	5c	513,000
Buck Creek	111201050204, 111201050208, 111201050303, 111201050305 – 111201050307, 111201050401 – 111201050407, 111201050501 – 111201050502	0207	5b	184,960
Carancahua Bay	121004010201-121004010205, 121004010207-121004010211	2456, 2453, 1602	5a, 5c	218,462
Cedar Bayou Tidal	120402030101, 120402030102, 120402030103, 120402030104, 120402030105, 120402030106	0901	5a, 5c	92,800

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120901040408, 120901040502- 120901040505, 120901040508- 120901050107, 120901050101- 120901050207, 120901050301, 120901050207, 120901050304- 120901050207, 120901040103, 120901040105, 120901040108, 120901040205, 120901040207, 120901040205, 120901040207, 120901040205, 120901040207, 120901040507, 12090104056, 120901040507, 12090104056, 120901040507, 120901020102, 120901020502- 120901020504, 120901020502- 120901020504, 120901020502- 120901020504, 120901020502- 120901020504, 120901020502- 120901020504, 120901020502- 120901020504, 120901090104 1815 5c 24,328 Cypress Creek 12100203020 1815 5c 24,328 Dickinson Bayou 120402040200 1103 4a, 5a, 5b, 5c 63,287 Double Bayou 12040200100 2422B, 2422D 5a, 5b, 5c 89,325 Dry Comal and Comal River 121002020106, 121002020114, 121002020105 1811 5c 38,894					Page 12 of 25
Cypress Creek 121002030202 1815 5c 24,328 Dickinson Bayou 120402040200 1103 4a, 5a, 5b, 5c 63,287 Double Bayou 120402020100 2422B, 2422D 5a, 5b, 5c 89,325 Dry Comal and Comal River 121002020106, 121002020104, 121002020104, 121002020105 1811 5c 38,894 Geronimo Creek and Alligator Creek 121002020110, 121002020111 1804A 5c 44,152	Concho River	120901010206, 120901020101, 120901020103, 120901020306, 120901020501, 120901020505- 120901020509, 120901030402- 120901030404, 120901030602, 120901030601- 120901030602, 120901030801- 120901030706, 120901030801- 120901030909, 120901030901- 120901031006, 120901031001- 120901031006, 120901031001- 120901031006, 120901040101, 120901040102, 120901040104, 120901040102, 120901040107, 120901040106, 120901040107, 120901040301- 120901040204, 120901040305, 120901040204, 120901040305, 120901040404, 120901040403, 120901040404, 120901040406- 120901040505, 120901040502- 120901040505, 120901040508- 120901040505, 120901040508- 120901040507, 120901050301, 120901050302, 120901050304- 120901050302, 120901050304- 120901050308, 120901050304- 120901050308, 120901050304- 120901050308, 120901050304- 120901050308, 120901040103, 120901040205- 120901040103, 120901040304, 120901040306, 120901040507, 120901040103, 120901040304, 120901040306, 120901040507, 120901020305, 120901020502- 120901020504, 120901020502- 120901020504, 12	1421	5c	4,200,000
Dickinson Bayou 120402040200 1103 5c 63,287 Double Bayou 120402020100 2422B, 2422D 5a, 5b, 5c 89,325 Dry Comal and Comal River 121002020106, 121002020104, 121002020104, 121002020105 1811 5c 38,894 Geronimo Creek and Alligator Creek 121002020110, 121002020111 1804A 5c 44,152	Cypress Creek		1815	5c	24,328
Dry Comal and Comal River 121002020106, 121002020104, 121002020105 1811 5c 38,894 Geronimo Creek and Alligator Creek 121002020110, 121002020111 1804A 5c 44,152	Dickinson Bayou	120402040200	1103		63,287
Dry Comal and Comal River 121002020105 1811 5c 38,894 Geronimo Creek and Alligator Creek 121002020110, 121002020111 1804A 5c 44,152	Double Bayou		2422B, 2422D	5a, 5b, 5c	89,325
Creek 121002020110, 121002020111 1804A 5c 44,152	Dry Comal and Comal River		1811	5c	38,894
Gilleland Creek 120903010106 1428C 4a 52,866	Geronimo Creek and Alligator Creek			5c	44,152
	Gilleland Creek	120903010106	1428C	4a	52,866

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Hickory Creek	120301030406, 120301030506, 12030103070305, 12030103080405, 12030103090102, 12030103090506, 120301031001	0823	5c	31,947
Highland Bayou and Marchland Bayou	120402040200	2424A, 2424C	5a, 5b, 5c	14,499
Lake O' The Pines	111403050401, 111403050402, 111403050403, 111403050404, 111403050405, 111403050406, 111403050407, 111403060101	0403	4a, 5c	544,000
Lake Granbury	$\begin{array}{l} 120602010601-0608,\\ 120602010701-0706,\\ 120602010801-120602010809,\\ 120602010901-120602010907,\\ 120602011001-120602011004,\\ 120602011101-120602011110,\\ 120602011201-120602011208\end{array}$	1205	N/A	1,335,138
Lake Lavon	120301060205,0708; 12030106030307	0821C, 0821D	5c	492,095
Lampasas River (Lampasas River above Stillhouse Hollow Lake, Rocky Creek, Sulphur Creek, Simms Creek)	120702030101 - 120702030509	1217D	5c	839,800
Lavaca River	$\begin{array}{c} 121001010305, 121001010204, 1\\ 21001010105, 121001010304, 12\\ 1001010201, 121001010202, 121\\ 001010401, 121001010102, 1210\\ 01010302, 121001010403, 12100\\ 1010106, 121001010104, 121001\\ 010108, 121001010107, 1210010\\ 10303, 121001010206, 12100101\\ 0203, 121001010404, 121001010\\ 301, 121001010205, 121001010\\ 03, 121001010205, 1210010101\\ 03, 12100101010101\\ \end{array}$	1602	5a, 5b	1,125,642
Leon River below Proctor Lake	$\begin{array}{r} 120702010501-120702010509,\\ 120702010601-120702010605,\\ 120702010701-120702010705,\\ 120702010801-120702010806,\\ 120702010901-120702010908,\\ 120702011002 \end{array}$	1221	5b, 5c	871,488
Lower Nueces River (below Lake Corpus Christi)	121101110701, 121101110705	2102	5c	116,862
Lower San Antonio River	121003030202, 121003030205, 121003030206, 121003030403, 121003030404, 121003030501, 121003030503, 121003030505, 121003030604 – 121003030608, 121003040405	1901	4a, 5c	776,863

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Mid and Lower Cibolo Creek	121003040405, 121003040205, 121003040202, 121003040402, 121003040305, 121003040302, 121003040403, 121003040404, 121003040303, 121003040401, 121003040206, 121003040203, 121003040304, 121003040204, 121003040301	1902	5c, 5b	370,535
Mill Creek	1207010402	1202K	5c	256,000
Mission and Aransas Rivers	$\begin{array}{c} 121004060306, 121004070105\\ 121004060303, 121004060107\\ 121004060101, 121004060104\\ 121004070102, 121004070304\\ 121004070402, 121004070301\\ 121004070205, 121004070403\\ 121004070205, 121004070202\\ 121004060209, 121004070305\\ 121004060301, 121004060204\\ 121004060307, 121004060102\\ 121004060202, 121004070103\\ 121004060207, 121004060102\\ 121004060304, 121004060208\\ 121004060205, 121004060302\\ 121004060103, 121004060302\\ 121004060103, 121004060302\\ 121004060103, 121004070206\\ 121004060103, 121004070206\\ 121004060103, 121004070206\\ 121004060109, 121004070201\\ 121004060109, 121004060106\\ 121004060206, 121004070204\\ 121004060206, 121004070204\\ 121004060206, 121004070204\\ 121004060206, 121004060106\\ 121004060206, 121004060203\\ \end{array}$	2002. 2004	4a, 5c	1,198,756
Navasota River Below Lake Limestone	120701030201-04, 120701030307, 120701030309, 120701030401-07, 120701030501-10, 120701030601-04, 120701030701-07, 120701030801-04	1209	4a, 5a, 5b, 5c	1,002,056
Nolan Creek and South Nolan	120702011101, 120702011104,	1218	5b, 5c	72,582
Creek Plum Creek	120702011102, 120702011103 110901050702, 110901050703, 111002030102, 111301050208, 111302090204, 120100040204, 120301010104, 120500030306, 120601020401, 120702010804, 120702010805, 120800020403, 121002030401 - 121002030403	1810	4b	288,240

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San Bernard River	120904010101, 120904010102, 120904010104, 120904010109, 120904010205, 120904010207, 120904010302, 120904010304 – 120904010306, 120904010308	1301, 1302	5c 5b, 5c	672,000
Spring Creek	120401020201, 120401020205, 120401020209, 120401020212, 120401020213	1008	4a, 5a	100,148
Tres Palacios Creek	121004010301, 121004010302, 121004010303, 121004010304, 121004010305, 121004010306, 121004010307, 121004010310	1501	4a, 5b	171,151
Upper Cibolo Creek	1210030402	1908	5c	49,210
Upper Llano River	$\begin{array}{l} 120902020107-09,\\ 120902020101-05,\\ 120902020201-08,\\ 120902020301-06,\\ 120902040201-02,\\ 120902030101-07,\\ 120902030201-06,\\ 120902030401-05 \end{array}$	1415_05, 1415_06	N/A	1,184,870
Upper Oyster Creek	120402050100, 120402050200, 120701040403	1245	4a, 5b, 5c	64,649
Upper San Antonio River	121003010201 - 03	1911	4a, 5a, 5c	80,375
Upper San Marcos River	121002030301, 121002030302	1814	N/A	60,389
Village Creek-Lake Arlington	120301020401 - 04	0828	5c	91,108
West Fork San Jacinto River and Lake Creek	120401010207, 120401010401 120401010306, 120401010303 120401010304, 120401010404 120401010301, 120401010307 120401010206, 120401010402 120401010302, 120401010403 120401010305, 120401010308	1004, 1015	4a, 5a	344,164

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.

Across the state of Texas, 1,009 impairments of assessment units were listed within the 2020 Texas Integrated Report-Texas 303(d) List for surface water bodies. The number of impairments has increased by 30 when compared to the 2018 report. Impairments due to elevated bacteria contributed to the greatest percentage of impaired water bodies (33%). Impairments documented as a result of elevated organic compounds in fish tissue were the second leading percentage at 28%, followed by dissolved oxygen (DO) related impairments (13%). Both bacteria and DO impairments are caused largely by non-point source (NPS) pollution. Other impairments documented in the 2018 Texas Integrated Report include toxicity, heavy metals, dissolved solids, temperature, pH, excessive algal growth, and biological (fish community; macrobenthos community).

Most of the listed project location watersheds are on the 303(d) list for bacteria and/or dissolved oxygen. Non-point sources of these impairments may originate from agricultural activities or from activities in urban

environments. The sources are diffuse and widespread. The activities that contribute to all forms of NPS pollution are diverse, occur daily, and, in many cases, are anthropogenic, being carried out by all Texans.

Project Narrative

Problem/Need Statement

All watersheds in Texas are threatened by nonpoint source (NPS) pollution which is detrimental to the valuable water resources of the state. To help combat this threat, federal and state water resource management agencies have adopted the "watershed approach" for managing water quality. One vital component of this approach involves engaging local stakeholders to become actively involved in planning and implementing water resource management and protection programs in their watershed. To support this need for stakeholder involvement, the Texas Watershed Steward (TWS) program was initiated to increase citizen understanding of watershed processes and to foster increased local participation in watershed protection/management activities.

Initial pilot testing of the TWS program took place in conjunction with TSSWCB project 05-05 entitled, *A Community-Based Water Quality Curriculum Which Enhances Stakeholder Involvement in Watershed Protection Initiatives: A Pilot Project* in the Plum Creek watershed. This piloting period provided an opportunity to refine the curriculum tools and components in preparation for statewide implementation of the program. Through TSSWCB projects 07-09, *Statewide Implementation of the Texas Watershed Steward Program*; 11-05, *Continued Statewide Delivery of the Texas Watershed Steward Program*; 15-55, *Additional Delivery of the Texas Watershed Steward Program*; 15-05, *Extended Delivery of the Texas Watershed Steward Program, and 18-05, Sustained Delivery of the Texas Watershed Steward Program*, additional workshops were held across the state. Moreover, the TWS curriculum was continually updated and refined. In total, 126 workshops were conducted through the end of FY2021, reaching over 5,225 people. Feedback from TWS workshops has been extremely positive and additional organizations and community groups from across the state have requested training events to enhance public understanding of local watershed issues and to support community water management and protection activities such as WPPs and TMDLs.

In the publication titled, *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*, the U.S. Environmental Protection Agency (EPA) identifies nine important elements of effective WPPs. One of the most critical elements focuses on information and education and recognizes the importance of enhancing public understanding and encouraging early and continued participation in the watershed planning process. The TWS program will continue to function to provide this vital information/education component and, in addition, will strive to facilitate greater, more effective, and sustained participation of stakeholders in watershed planning, implementation, and management efforts. The TWS program is a fundamental component of the state's implementation of the *Texas NPS Management Program*.

While face-to-face training events are highly effective, and preferred in impaired watersheds, participation can be reduced due to practical limitations related to time and/or travel to the event location for individuals with jobs, family commitments, or other constraints. Computer-based instruction, on the other hand, allows users to proceed through interactive program content at an individualized pace, adding flexibility and personalization to the learning experience. In February 2011, an online TWS program that incorporates all aspects of the TWS face-to-face training was officially launched as part of project 07-09. Under projects 11-05 and 18-05, the online TWS course was redesigned. These redesign efforts led to greater interactive features, an education platform with audio voiceover instruction, and a course option containing video footage from specially filmed, live TWS workshop.

The TWS program is a unique and valuable water education resource for the citizens of Texas. This project will continue statewide implementation of the TWS program to support and enhance current and future watershed management and protection efforts by all agencies and organizations in Texas.

Project Narrative

General Project Description (Include Project Location Map)

This project will continue statewide implementation of the TWS program by conducting watershed-based trainings in selected watersheds and enhancing access to the program through the computer-based distance training tools.

Watershed-Based Trainings. The watershed-based trainings will be delivered as single-day training events and will focus on enhancing understanding of watershed systems, watershed impairments, methods for improving watershed function, and community-driven watershed protection and management. Both 4-hour and 7-hour versions of the single-day course will be offered. Curriculum content will be tailored as much as possible to each specific watershed so participants may better understand and relate to their particular watershed processes, causes of impairment(s), and the tools that can be employed to prevent and/or resolve them. At the conclusion of the training, participants will receive a certificate of completion recognizing them as Texas Watershed Stewards.

As a part of the training, participants will be educated on the importance of watershed protection and the need for active participation of local stakeholders in WPP and/or TMDL development processes. A major goal of the program will be to foster the formation of local groups that take an active role in leading and expanding watershed education efforts and promoting watershed protection activities in their community. Groups will be encouraged to identify key issues and activities to undertake and will be made aware of various programs available through Extension (e.g., soil testing campaigns, water testing campaigns, Master Gardener, Master Naturalist, Texas Well Owner Network, Lone Star Healthy Streams) and other agencies and organizations (e.g., River Authorities, Texas Stream Team).

Extension will work in concert with state and local organizations to select and schedule locations for the watershed-based TWS training events. Priority will be given to watersheds currently engaged in WPP or TMDL processes and those planning future watershed efforts. Additional watersheds may be selected based on impairment status, environmental sensitivity, and/or other priority issues identified by a partner agency or organization. Preliminary planning has already been conducted with several river authorities and partner entities to identify target watersheds.

Due to the size of many watersheds in the state, the breadth of water quality issues in those watersheds, and efforts to enhance continued citizen involvement, TWS trainings may be offered multiple times (2-3) and at different locations within selected watersheds during the project period. A minimum of 10 workshops will be conducted annually in selected watersheds.

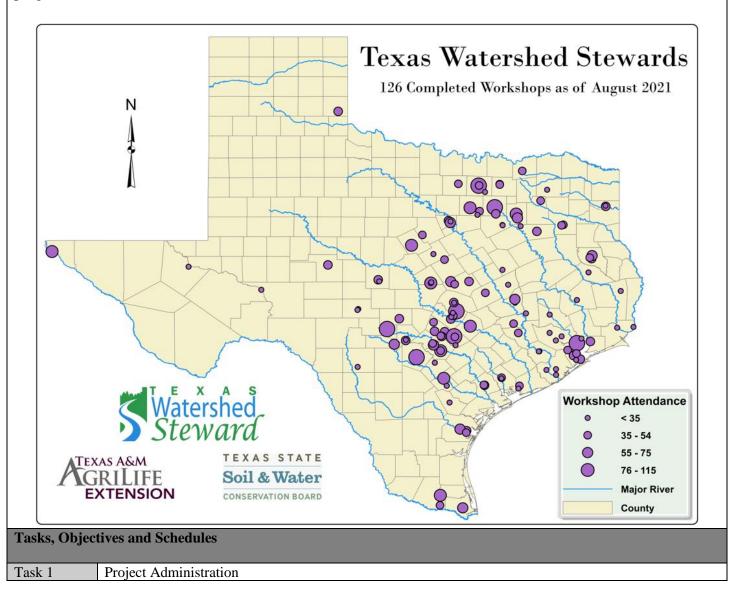
Computer-Based Tools. The computer-based training components of TWS will be advertised on a statewide basis. Citizens unable to attend face-to-face events will be encouraged to utilize the web-based version of the training or, when available, a live, virtual attendance option for face-to-face events. The web-based distance learning tool is available on the TWS website (<u>https://tws.tamu.edu</u>). Live, virtual attendance options for face-to-face events will also be offered when internet resources/broadcasting capabilities allow. Registered

individuals that complete the training via online or computer-based access will also receive a certificate once pre- and post-tests have been completed.

Evaluation and Assessment. Both the face-to-face and computer-based training programs will include an evaluation component to assess program effectiveness and allow on-going assessment and enhancement of curriculum content to achieve project goals. A two-phase evaluation approach will be used to measure both knowledge and behavior changes of individuals participating in the program.

Phase 1. A pre-/post-test evaluation strategy will be utilized for both the face-to-face and computer-based training programs. A combination of multiple choice, true/false, and short answer questions will be used to quantify knowledge gained by participants. In addition, the post-test will include 'satisfaction' and 'intention to adopt' questions. Tests will be designed and evaluated using scanning technology and software to expedite analysis and minimize data entry errors.

Phase 2. A six-month, follow-up evaluation will also be administered to participants online. Emails will be sent to program participants to ascertain what practices were adopted six months after participating in the program.



Costs	Federal \$24,116	Non-Federal	\$ 16,078	Tota	al \$40,194	
Objective	To effectively administer,	coordinate, and monitor a	ll work performed	under this	s project including	
	technical and financial su	pervision, and preparation	of status reports.			
Subtask 1.1	Extension will prepare ele	ectronic quarterly progress	reports (QPRs) for	[.] submissi	ion 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 C	January, April, July and October. QPRs shall be distributed to all Project Partners.				
	Start Date	Month 1	Completion D	Date	Month 36	
Subtask 1.2	•	counting functions for pro-		submit ap	ppropriate	
		TSSWCB at least quarterl				
	Start Date	Month 1	Completion D		Month 36	
Subtask 1.3		ination meetings or conference				
		project schedule, commun				
		sts of action items needed f	ollowing each proj	ect coord	lination meeting and	
	distribute to project perso					
	Start Date	Month 1	Completion D		Month 36	
Subtask 1.4		Final Report that summarize				
		cusses the extent to which	project goals and n	neasures of	of success have been	
	achieved.					
	Start Date	Month 1	Completion D	Date	Month 36	
Deliverables	• QPRs in electronic format					
	Reimbursement Forms and necessary documentation in hard copy format					
	Final Report in elect	ronic and hard copy format	ts			

Tasks, Objectives and Schedules

Task 2	Coordinate and Deliver W	atershed-based TWS Train	nings in Selected Watershe	eds Throughout Texas			
Costs	Federal \$319,37	2 Non-Federal	\$212,914 To	otal \$532,286			
Objective	Facilitate statewide delive can adversely impact wate employed to prevent and/ development processes by importance of local stakel	Facilitate statewide delivery of the TWS program to increase local understanding of the forces which can adversely impact water resources and to provide access to the knowledge and tools which can be employed to prevent and/or resolve them. Enhance stakeholder involvement in WPP and TMDL development processes by educating citizens about their watersheds and the opportunities and critical importance of local stakeholder involvement. Promote the formation of local watershed action groups to take leadership for local watershed education and protection activities.					
Subtask 2.1	Extension will employ an Coordinator and will be re	Extension Program Special esponsible for the general of nating, and delivering the '	alist who will serve as the poversight and coordination	of all project activities			
	Start Date	Month 1	Completion Date	Month 36			
Subtask 2.2	Extension will work in concert with state and local organizations to select locations for the watershed- based TWS training events. Extension will coordinate efforts with state agencies and organizations involved in WPP/TMDL processes or who are planning future WPP/TMDL processes in specific watersheds. Additional watersheds may be selected based on impairment status, environmental sensitivity, and/or other priority issues identified by a partner agency or organization. Extension and TSSWCB will periodically make a collaborative decision to re-prioritize and add to/remove from the list of watersheds.						
	Start Date	Month 1	Completion Date	Month 36			
Subtask 2.3		arket watershed-based TW Internet postings, newslette vareness and utilization. Month 1					
Subtask 2.4		east 10, 4-hour or 7-hour 7					

	Start Date	Month 1	Completion Date	Month 36		
Subtask 2.5	Extension will foster the e	Extension will foster the establishment of local watershed action groups spawned by the TWS program.				
	Extension will work with state and local organizations to develop and/or provide more detailed, resource					
	specific education and tra	ining resources and action-	oriented activities that can	be delivered and/or		
	undertaken in watersheds	where those issues are idea	ntified as most significant.			
	Start Date	Month 1	Completion Date	Month 36		
Subtask 2.6	Extension will attend and	participate in meetings, as	appropriate, in order to con	mmunicate project goals,		
	activities and accomplishing	ments to affected parties. S	uch meetings may include,	but are not limited to,		
	Clean Rivers Program Ba	sin Steering Committees, t	he Texas Watershed Planni	ing Short Course, Texas		
	Watershed Coordinator R	oundtables, and the TSSW	CB Regional Watershed C	oordination Steering		
	Committee.					
	Start Date	Month 1	Completion Date	Month 36		
Deliverables	• List of specific wate	ersheds where TWS traini	ings have been and will l	be implemented, updated		
	routinely.					
	• Schedules, agendas, and attendance lists for TWS trainings.					
	• Copies of press releases, newspaper articles, newsletters, public information statements, etc., as					
	developed and disserr	ninated.	~			

Tasks, Objecti	ves and Schedules			
Task 3	Distribute and Manage	Computer-based Training '	Tools for the TWS Program	1
Costs	Federal \$44,28	Non-Federal	\$ 29,521 T	Total \$ 73,802
Objective	Manage, update, and promote web-based TWS curriculum and associated program materials to expand participation in the TWS program by 1) supporting different adult learning styles and preferences, 2) providing flexible learning opportunities for interested citizens who have time and/or mobility constraints, and 3) enabling ready access to program resources statewide (i.e., watersheds not targeted for WPP or TMDL development).			
Subtask 3.1	Extension, with assistan	ce from Texas A&M Agri ersions of the TWS progra	Life Marketing and Commu m. Program information wi	
	Start Date	Month 1	Completion Date	Month 36
Subtask 3.2	and local media outlets).		VS resources through news ter announcements, public/ based tools.	
	Start Date	Month 1	Completion Date	Month 36
Subtask 3.3	Extension will track well	osite usage and online cour	se completion.	
	Start Date	Month 1	Completion Date	Month 36
Deliverables	 Press releases, news and disseminated. Tracking report of w		public information stateme	ents, etc., as developed
	List of web-based T	WS curriculum completion	n certificate awardees.	

Tasks, Objectives and Schedules						
Task 4	Task 4 Evaluate the Effectiveness of Watershed- and Computer-based TWS Training Tools					
Costs	Federal	\$21,822	Non-Federal	\$ 14,548	Total	\$ 36,370
Objective						
	using a phased e	valuation approac	h.			

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Subtask 4.1	Extension will conduct pre-/post-test evaluations of watershed- and computer-based trainings to				
	measure knowledge gained by participants regarding watershed principles, impairments, and				
	appropriate BMPs to redu	ce NPS pollution; to deter	nine participant's intention	s to change their	
	behavior as a result of the	program; and to evaluate	participant satisfaction with	the program.	
	Start Date	Month 1	Completion Date	Month 36	
Subtask 4.2	Extension will administer	a 6-month follow-up evalu	ation to assess actions take	en and practice adoption	
	by participants.	_			
	Start Date	Month 1	Completion Date	Month 36	
Subtask 4.3	Extension will analyze res	sults obtained from Phase	(pre-/post-tests) and Phase	e 2 (6-month follow-up)	
	evaluations using descript	ive, correlational, and anal	ysis of variance statistical	procedures. Results will	
			ogram materials and incorp		
	report.				
	Start Date	Month 1	Completion Date	Month 36	
Deliverables	• Pre-/post-test evaluations for watershed- and computer-based TWS trainings.				
	• Six-month follow-up evaluation assessments for watershed- and computer-based TWS trainings.				
	• Results from evaluations				

Project Goals (Expand from Summary Page)

This project will continue statewide implementation of the TWS program through watershed-based trainings and computer-based distance education components. The broad project goals are to:

- Increase stakeholder involvement in WPP and/or TMDL development processes.
- Promote healthy watersheds by increasing citizen awareness, understanding, and knowledge about the nature and function of watersheds, potential impairments, and watershed protection strategies to minimize NPS pollution.
- Enhance interactive learning opportunities for watershed education across the state and establish a larger, more well-informed citizen base.
- Empower individuals to take leadership roles in community and watershed-level water resource issues.

Measures of Success (Expand from Summary Page)

- Delivery of a minimum of 30 watershed-based TWS trainings in selected watersheds during project period. Workshops may be delivered virtually on a singular basis if determined necessary by TSSWCB and Texas A&M AgriLife Extension in response to local, state, or agency guidelines concerning COVID-19.
- Number of citizens participating in watershed-based TWS trainings.
- Delivery of the computer-based training components of the TWS program.
- Number of citizens utilizing the computer-based training components of the TWS program.
- Increased knowledge and understanding of watershed management by individuals participating in the program, as measured by pre-/post-tests and 6-month follow-up evaluations.
- Increased adoption of BMPs as indicated by pre-/post-tests and 6-month follow-up evaluations.

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 to restore and protect surface and groundwater, as appropriate.

LTG: Protect and restore water quality affected by nonpoint source pollution through assessment, implementation, and education.

- 1. Focus nonpoint source abatement efforts, implementation strategies, and available resources in watersheds and aquifers identified as impacted by nonpoint source pollution.
- 2. Support the implementation of state, regional, and local programs to prevent nonpoint source pollution through assessment, implementation, and education.
- 6. Develop partnerships, relationships, memoranda of agreement, and other instruments to facilitate collective, cooperative approaches to manage nonpoint source pollution.
- 7. Increase overall public awareness of nonpoint source 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.

STG Three – Education: Conduct education and technology transfer activities to increase awareness of nonpoint source pollution and activities which contribute to the degradation of water bodies, including aquifers, by nonpoint source pollution.

- Objective A Enhance existing outreach programs at the state, regional, and local levels to maximize the effectiveness of nonpoint source education.
- Objective B Administer programs to educate citizens about water quality and their potential role in causing nonpoint source pollution.
- Objective F Implement outreach and education activities identified in the *Texas Coastal Nonpoint Source Pollution Control Program* to prevent and abate nonpoint source pollution impacts to coastal resources.
- Objective G Implement public outreach and education to maintain and restore water quality in water bodies impacted by nonpoint source pollution.

Component 2 – Working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities, private sector groups, and federal agencies.

Component 3 – Combination of statewide nonpoint source programs and on-the-ground projects achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.

EPA State Categorical Program Grants – Workplan Essential Elements FY 2022-2026 EPA Strategic Plan Reference

Strategic Plan Goal – 5.0 Ensure Clean and Safe Water for All Communities

Strategic Plan Objective – 5.2 - Protect and Restore Waterbodies and Watersheds

This workplan supports Goal 5 (Ensure Clean and Safe Water for All Communities) and Objective 5.2 (Protect and Restore Waterbodies and Watersheds) by funding the *Texas State and Soil Water Conservation Board's* NPS Program for state and local planning, education, assessments, watershed restoration and protection, best management practices, and related water quality activities.

Part III – Financial Information

Budget Summary										
Federal	\$	409,591		% of total project			60%			
Non-Federal	\$	273,061		% of total project		project	40%			
Total	\$	682,652			Total		100%			
Category		Federal				Non-Federal	Total			
Personnel		\$	229,824		\$	120,085	\$	349,909		
Fringe Benefits		\$	73,431		\$	40,910	\$	114,341		
Travel		\$	16,848		\$	0	\$	16,848		
Equipment		\$	0		\$	0	\$	0		
Supplies		\$	12,990		\$	0	\$	12,990		
Contractual			\$ 0		\$	0	\$	0		
Construction		\$	\$ 0		\$	0	\$	0		
Other		\$	\$ 23,073		\$	0	\$	23,073		
Total Direct Costs		\$	356,166		\$	160,995	\$	517,161		
Indirect Costs ($\leq 15\%$)		\$	53,425		\$	51,517	\$	104,942		
Unrecovered IDC		\$	0		\$	60,549	\$	60,549		
Total Project Costs		\$	409,59	1	\$	273,061	\$	682,652		

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Budget Justifica	tion (Federal)	
Category	Total Amount	Justification
Personnel	\$ 229,824	Program Specialist (1.0 FTE yrs. 1-3; \$229,824)
		• 12/06/22-08/31/23 (\$50,625)
		 09/01/23-08/31/24 (\$80,722.92)
		• 09/01/24-08/31/25 (\$83,144.61)
		• 09/01/25-11/30/25 (\$15,331.47)
		*Salary estimates provided above may vary more or less than estimated; but in aggregate, will not exceed total personnel budget for project.
Fringe Benefits	\$ 73,431	Fringe benefits are calculated at a rate of 18.8% of salary to cover FICA, UCI, WCI, and retirement. An additional amount of \$825/month (prorated by % FTE) is calculated for group medical insurance. These estimates are in
		accordance with the TAMUS Office of Budget and Accounting estimating procedures established for FY 2022 (\$73,431).
Travel	\$ 16,848	Funds will be used to support travel to and from TWS training events: up to 12 locations/year, with 8 locations/year resulting in single-day overnight stay for up to 4 individuals (Program Specialist and other Extension personnel
		necessary for support of training events). General Services Administration (GSA) rates are applied to each travel event for per diem and lodging. GSA rates may vary by location and fiscal year—FY22 minimum per diem and lodging rates are \$44.25 and \$96, respectively. Mileage at the State rate for
		12 trips ranging from 100-400 miles roundtrip and fuel, parking, travel fees (at the State rate), and/or rental vehicles ($$10,338$); Travel to state and national meetings and conferences: up to 10 trips x 1 night x 1 individual x
		per diem and lodging (at the GSA rate) + mileage, fuel, airfare, taxi, parking,
		travel fees (at the State rate), and/or vehicle rental (\$6,510).
Equipment	\$ 0	N/A
Supplies	\$ 12,990	Certificates: 1 certificate per participant with up to 50 participants/workshop at up to 12 workshops/yr. x \$0.90 per certificate (\$1,620); printing costs for TWS training events: \$150 per event x up to 12 events/yr. (\$5,400); brochures and fact sheets: workshop supplies plus 1 brochure and factsheet per participant with up to 50 participants/workshop at up to 12 workshops/yr. x \$0.60 per brochure and factsheet (\$1,080); program supplies including general
		office supplies and sanitation/backup PPE supplies required to be made
		available at in-person events (\$4,890)
Contractual*	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 23,073	 ADP/Computer Services (\$750) Equipment or Facility Rental/User Fees for up to \$1000/event with up to 12 events/yr. (\$4,850) Wireless Hotspot and service plan through Texas A&M
		 Telecommunications \$45.00/month x 36 months (\$1,620) Printing costs for TWS curriculum manuals up to 12 locations/year x 3
		years x 35 manuals/training (\$2,208)
		• Software licensing fees (\$570)
		• Advertising and Postage (\$5,575)
		• Certified planners CEU trainer fees (\$4,050)
T 1'	ф. <u>го</u> 105	Conference Fees (\$3,450)
Indirect	\$ 53,425	15% of Total Federal Direct Costs per TSSWCB FY2022 RFP for CWA, §319(h) NPS Grant Program

Budget Justification (Non-Federal)							
Category	Total Amount		Justification				
Personnel	\$	120,085	Extension Specialist (0.0397 FTE yrs. 1-3) Five Extension District 4 County Extension Agents (0.0142 FTE yrs. 1-3) Two Extension District 5 County Extension Agents (0.0147 FTE yrs. 1-3) Four Extension District 7 County Extension Agents (0.0152 FTE yrs. 1-3) Six Extension District 8 County Extension Agents (0.0152 FTE yrs. 1-3) Two Extension District 9 County Extension Agents (0.0152 FTE yrs. 1-3) One Extension District 9 County Extension Agents (0.0152 FTE yrs. 1-3) Seven Extension District 10 County Extension Agents (0.0152 FTE yrs. 1-3) Three Extension District 11 County Extension Agents (0.0152 FTE yrs. 1-3) Two Extension District 11 County Extension Agents (0.0152 FTE yrs. 1-3) One Extension District 11 County Extension Agents (0.0152 FTE yrs. 1-3) One Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) One Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) One Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) Three Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) One Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) Three Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) One Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3) Three Extension District 11 County Extension Agent (0.0162 FTE yrs. 1-3)				
Fringe Benefits	\$	40,910	Fringe benefits are calculated at a rate of 18.8% of salary to cover FICA, UCI, WCI, and retirement. An additional amount of \$825/month (prorated by % FTE) is calculated for group medical insurance. These estimates are in accordance with the TAMUS Office of Budget and Accounting estimating procedures established for FY 2022.				
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	\$	51,517	32.0% of Total Non-Federal Direct Costs				
Unrecovered IDC	\$	60,549	Unrecovered Indirect Costs of 17% of Total Federal Direct Costs (difference between project-allowed indirect costs (15%) and the standard Texas A&M AgriLife Extension Service indirect cost rate of (32.0%))				