



**Texas State Soil and Water Conservation Board
 Clean Water Act §319(h) Nonpoint Source Grant Program
 FY 2010 Project Workplan 10-11**

SUMMARY PAGE

SUMMARY PAGE						
Title of Project	Implementing Educational Components of the Arroyo Colorado Watershed Protection Plan Focused on Agricultural Nonpoint Source Pollution					
Project Goals	<ul style="list-style-type: none"> • Develop a focused education effort on cost-share programs and BMPs that protect water quality • Educate agricultural producers on how to better manage their acreage to reduce the potential for NPS pollution • Support and promote cost-share programs that foster implementation of BMPs to protect water quality • Increase the number of producers that participate in cost-share programs, adopt WQMPs and install BMPs 					
Project Tasks	1) Project Administration; 2) Increase Landowner Participation in Technical and Financial Assistance Programs; 3) Develop Educational Program Materials; 4) Conduct Education and Outreach					
Measures of Success	<ul style="list-style-type: none"> • Educational materials specifically addressing BMPs and cost-share programs • Education of agricultural producers • Potential reduction of nutrients (N and P) applied to lands as a result of the soil testing campaign 					
Project Type	Implementation (); Education (X); Planning (); Assessment (); Groundwater ()					
Status of Waterbody on 2008 Texas Water Quality Inventory and 303(d) List	<u>Segment ID</u> 2202 (Arroyo Colorado Above Tidal) 2201 (Arroyo Colorado Tidal)	<u>Parameter</u> bacteria bacteria dissolved oxygen	<u>Category</u> 5a 5c 5a			
Project Location (Statewide or Watershed and County)	Arroyo Colorado Watershed in Hidalgo, Cameron and Willacy Counties					
Key Project Activities	Hire Staff (X); Surface Water Quality Monitoring (); Technical Assistance (); Education (X); Implementation (); BMP Effectiveness Monitoring (); Demonstration (X); Planning (); Modeling (); Bacterial Source Tracking (); Other ()					
Texas NPS Management Program Elements	<ul style="list-style-type: none"> • E1, LTGs 1, 2, 3, 5, 6, • E1, STG 2D, STG 3A, 3B, 3C, 3D, 3F • E2, E3 					
Project Costs	Federal	\$218,989	Non-Federal	\$135,191	Total	\$354,180
Project Management	<ul style="list-style-type: none"> • Texas Water Resources Institute • Texas A&M AgriLife Extension Service 					
Project Period	October 1, 2010 – September 31, 2014					

Part I – Applicant Information

Applicant							
Project Lead		Kevin Wagner.					
Title		Associate Director					
Organization		Texas Water Resources Institute					
E-mail Address		klwagner@ag.tamu.edu					
Street Address		1500 Research Parkway, Suite A240 TAMU 2118					
City	College Station	County	Brazos	State	TX	Zip Code	77843-2118
Telephone Number	979.845.2649			Fax Number	979.845.8554		

Co-Applicant							
Project Lead		Ruben Saldana					
Title		District Extension Administrator					
Organization		Texas A&M AgriLife Extension Service, South - Extension District 12 - Weslaco					
E-mail Address		rj-saldana@tamu.edu					
Street Address		2401 East Highway 83					
City	Weslaco	County	Hidalgo	State	TX	Zip Code	78596-8398
Telephone Number	956.968.5581			Fax Number	956.969.5639		

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)	Provide overall project coordination and administration, reporting
Texas A&M AgriLife Extension Service (AgriLife Extension)	Project education and outreach; development of educational materials; coordinate BMP demonstrations; and promote participation in cost-share programs
United States Department of Agriculture – Natural Resources Conservation Service (NRCS)	Lead cost-share and technical assistance program and provide information to AgriLife Extension to coordinate related education programs and demonstrations
Texas State Soil and Water Conservation Board, Harlingen Regional Office (HRO)	Work with and assist SWCDs in the development, implementation, and maintenance of WQMPs through TSSWCB project 09-09. Responsible for technical review and certification of WQMPs. Provide information to AgriLife Extension to coordinate related education programs and assist with demonstration field tour
Southmost Soil and Water Conservation District #319 and Hidalgo Soil and Water Conservation District #350 (SWCD)	Lead cost-share program and provide information to AgriLife Extension to coordinate related education programs and assist with demonstration field tour through TSSWCB project 09-09

Part II – Project Information

Project Type							
Surface Water	X	Groundwater					
Does the project implement recommendations made in a completed WPP or an adopted TMDL or approved I-Plan?				Yes	X	No	
If yes, identify the document.		<i>A Watershed Protection Plan for the Arroyo Colorado Phase I</i>					
If yes, identify the agency/group that developed and/or approved the document.		Arroyo Colorado Watershed Partnership facilitated by Texas Commission on Environmental Quality and Texas Sea Grant	Year Developed	2007			

Watershed Information				
Watershed Name(s)	Hydrologic Unit Code (8 Digit)	Segment ID	305(b) Category	Size (Acres)
Arroyo Colorado Watershed	12110208	2201/2202	5(c)	418,144.6

Water Quality Impairment			
Describe all known causes (pollutants of concern) of water quality impairments or concerns from any of the following sources: 2008 Texas Water Quality Inventory and 303(d) List, Clean Rivers Program Basin Summary/Highlights Reports or other documented sources.			
Arroyo Colorado Tidal (2201)			
<u>AU</u>	<u>Standards not met</u>	<u>Category</u>	<u>Year First Listed</u>
2201_01	nitrate & chlorophyll-a	concern	2008
2201_02	nitrate & chlorophyll-a	concern	2008
2201_03	Bacteria	5c	2006
2201_04	ammonia, chlorophyll-a, nitrate orthophosphorus	concern	2008
	Depressed dissolved oxygen	5a	1996
2201_05	Bacteria	5c	2006
	ammonia, chlorophyll-a, nitrate orthophosphorus	concern	2008
2201_05	Depressed dissolved oxygen	5a	1996
	Bacteria	5c	2006
2201_05	PCBs in smallmouth buffalo and Longnose gar	5c	2008
	Mercury in longnose gar	5a	2008
2201_05	DDE in smallmouth buffalo and Longnose gar	4a	2008
	ammonia, chlorophyll-a, nitrate orthophosphorus, total phosphorus	concern	2008
Arroyo Colorado Above Tidal (2202)			
<u>AU</u>	<u>Standards not met</u>	<u>Category</u>	<u>Year First Listed</u>
2202_01	Bacteria	5a	1996
	PCBs in smallmouth buffalo and Longnose gar	5c	2008
2202_01	Mercury in longnose gar	5c	2008
	DDE in smallmouth buffalo and		

2202_02	Longnose gar	4a	2002
	ammonia, chlorophyll-a, nitrate orthophosphorus, total phosphorus	concern	2008
	Bacteria	5a	1996
	PCBs in smallmouth buffalo and Longnose gar	5c	2008
	Mercury in longnose gar	5c	2008
2202_03	DDE in smallmouth buffalo and Longnose gar	4a	2002
	ammonia, chlorophyll-a, nitrate orthophosphorus, total phosphorus	concern	2008
	Bacteria	5a	1996
	PCBs in smallmouth buffalo and Longnose gar	5c	2008
	Mercury in longnose gar	5a	2008
2202_04	DDE in smallmouth buffalo and Longnose gar	4a	2002
	ammonia, chlorophyll-a, nitrate orthophosphorus, total phosphorus	concern	2008
	Bacteria	5a	1996
	PCBs in smallmouth buffalo and Longnose gar	5c	2008
	Mercury in longnose gar	5a	2008
	DDE in smallmouth buffalo and Longnose gar	4a	2002
	ammonia, chlorophyll-a, nitrate orthophosphorus, total phosphorus	concern	2008

Project Narrative

Problem/Need Statement

The Arroyo Colorado is an ancient channel of the Rio Grande that extends eastward for about 90 miles from near the City of Mission through southern Hidalgo County to the City of Harlingen in Cameron County, eventually discharging into the Laguna Madre near the Cameron-Willacy county line. The Arroyo Colorado watershed drains approximately 700 square miles and generally consists of coastal plain that slopes gently eastward toward the Gulf of Mexico.

Approximately two dozen cities in the area use the Arroyo Colorado as a major drainage-way and it serves as a major source of freshwater to the lower Laguna Madre, an economically and ecologically important resource to the region. The Laguna Atascosa National Wildlife Refuge and several county and city parks are located within the Arroyo Colorado watershed, making it an area for bird-watchers, nature-lovers and outdoors enthusiasts. The mild climate, semi-tropical plants and animals, and many recreational opportunities draw large numbers of people to the Arroyo Colorado watershed. One third of the stream is also used for shipping from the Gulf Intracoastal Waterway to the Port of Harlingen. Finally, agriculture is a predominant industry in the Arroyo Colorado and includes cotton, citrus, vegetables, grain sorghum, corn and sugar cane production. With so many land uses in the watershed, the Arroyo Colorado not only serves as a natural habitat, fishery and recreational waterway, it also serves a very important purpose of draining runoff and return flows from urban wastewater discharges, irrigation and other agricultural activities, stormwater runoff and base flows from groundwater.

In response to the dissolved oxygen impairment, a local steering committee, working with the Texas Commission on Environmental Quality (TCEQ), TSSWCB, and other agencies, developed a WPP to improve conditions in the Arroyo Colorado. To address the Arroyo Colorado's bacteria and dissolved oxygen impairment as well as nutrient concerns, the Arroyo Colorado Watershed Partnership developed *A Watershed Protection Plan for the Arroyo Colorado – Phase I*. The WPP, which was released in 2007, included recommendations from five major workgroups: wastewater infrastructure; agricultural issues; habitat restoration; water quality monitoring; and education and outreach. These workgroups continue to meet at least bi-annually and the Arroyo Colorado Watershed Partnership Steering Committee continues to meet quarterly to address issues, direct efforts and assess progress in implementing the WPP.

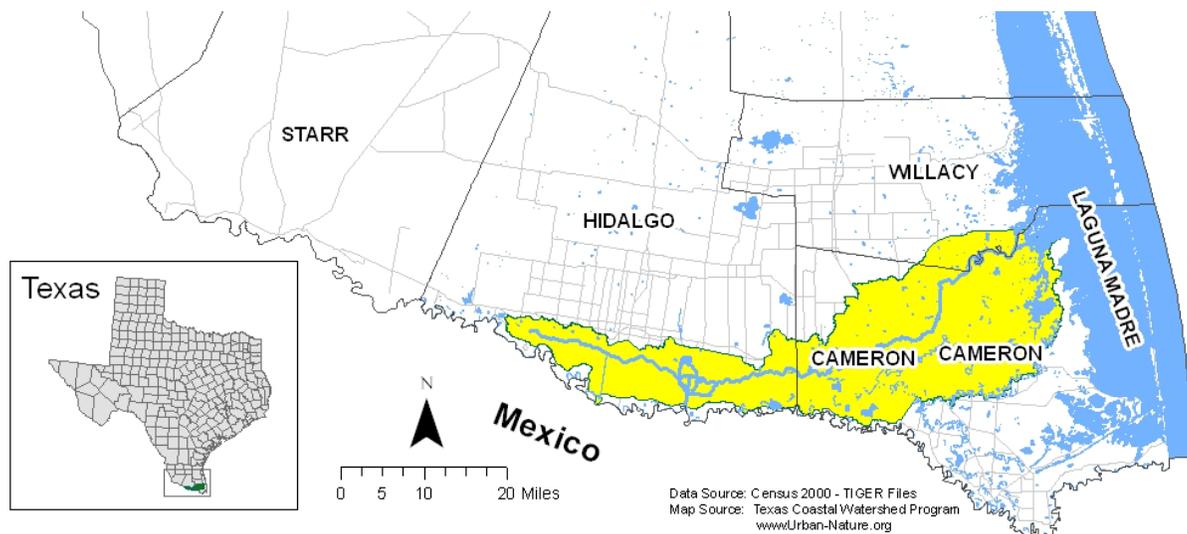
In the Arroyo Colorado, where agriculture is a predominant land use, successful implementation of the WPP relies heavily on reaching the milestones set forth by the Agricultural Issues Workgroup, specifically, voluntary adoption of BMPs to reduce suspended sediment levels resulting from cropland erosion, BOD (oxygen demanding organic material) from runoff of crop residue, and nitrogen and phosphorus fertilizer runoff from irrigated cropland fields. To accomplish this goal, TSSWCB has funded numerous projects providing technical and financial assistance through the SWCDs, most recently TSSWCB project 09-09 entitled *Implementing the Arroyo Colorado WPP by Providing Technical and Financial Assistance to Reduce Agricultural NPS Pollution*. Outreach and education for agricultural producers is a critical component to achieve voluntary implementation of BMPs. To this end, TSSWCB has also funded projects providing for outreach and education to farmers, most recently TSSWCB project 05-10 entitled *Education of BMPs in the Arroyo Colorado Watershed*.

Through these TSSWCB-funded projects and other funding sources, educational events have reached more than 3,500 producers, and a total of 409 WQMPs have been developed on 39,016.5 acres. Including work done by NRCS through federal Farm Bill funding, a total of more than 680 farm plans have been developed in the Arroyo Colorado watershed covering more than 66,000 acres. More work still needs to be done to accomplish the goals in the WPP. The short-term goal set in the WPP is to develop WQMPs on 33 percent of the irrigated acreage (~100,000 acres) by 2010 and 50 percent of the irrigated acreage (~150,000 acres) by 2015. Given that goals are still not met, it is imperative that efforts to reach producers and encourage adoption of WQMPs and BMPs be increased.

Project Narrative

General Project Description (Include Project Location Map)

The focus of this project is to continue education programs from TSSWCB project 05-10 and enhance the coordination of outreach and education with current technical and financial assistance programs (TSSWCB project 09-09). The goal is to increase the adoption rate of BMPs and WQMPs by producers. Ultimately; this project will reach producers that have not yet participated in technical and financial assistance programs in the Arroyo Colorado watershed.



TWRI and AgriLife Extension will work to further expand and implement an educational program within the Arroyo Colorado watershed that focuses on the promotion of technical and financial assistance programs and encouraging agricultural producers to adopt BMPs that protect water quality. To accomplish this, NRCS, HRO and local SWCDs (through TSSWCB project 09-09) will provide up-to-date information about cost-share program availability, requirements and eligibility to AgriLife Extension. AgriLife Extension will work with NRCS, HRO, and SWCDs to promote BMPs and demonstrate their efficacy to producers through field days. AgriLife Extension in collaboration with NRCS, SWCDs and HRO will develop additional materials to educate producers on technical and financial assistance programs, WQMPs and BMPs that impact water quality. Surveys of program participants (pre- and post-participation) will be conducted to evaluate and document changes in; knowledge of technical and financial assistance available, knowledge about BMPs and their efficacy, as well as adoption of BMPs. Additionally, AgriLife Extension will encourage participation in a soil testing campaign for agricultural producers to determine nutrient application needs, and subsequently, will provide follow-up educational assistance to interpret soil test results and plan proper nutrient use. The AgriLife Extension, in coordination with CEAs, NRCS, HRO, and SWCDs, will work with Irrigation Districts to educate their customers on the water quantity conservation benefits of implementing WQMPs and participation in financial assistance programs. Similarly, AgriLife Extension will work with commodity organizations, such as Texas Citrus Mutual, Rio Grande Valley Sugar Growers, Texas Vegetable Association, and Texas Farm Bureau, to educate their members on the opportunity to enhance the value of their operation and achieve water quality goals for the watershed at the same time by participating in technical and financial assistance programs. Through an education effort led by AgriLife Extension targeting cost-share programs and BMP adoption, it is the goal of this project to increase the number of producers reached, increase the number of WQMPs adopted and increase the implementation of BMPs.

AgriLife Extension already has developed some resources and has an effective delivery system to educate producers on proper management and production techniques. Efforts within this project will enhance AgriLife Extension's education efforts and promote and increase focus of the programs associated with Arroyo Colorado water quality protection. By incorporating a focused effort into AgriLife Extension's education program, AgriLife Extension envisions that cost-share programs can significantly expand their efficiency, more producers will participate by adopting WQMPs and installing BMPs that protect water quality and the goals within the Arroyo Colorado WPP will be more nearly met.

Tasks, Objectives and Schedules						
Task 1:	Project Administration and Coordination					
Costs:	Federal:	\$25,749	Non-Federal:	\$2,463	Total:	\$28,212
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 15 th of January, April, July and October. QPRs shall be posted on the project website and distributed to all project partners.					
	Start Date:	Month 1		Completion Date:	Month 48	
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 48	
Subtask 1.3:	TWRI will host coordination meetings, conference calls, or TTVN meetings, 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 48	
Subtask 1.4:	AgriLife Extension will oversee an Extension Assistant who will be responsible for coordinating with County Extension Agents to implement this project. The Extension Assistant will serve as the primary conduit for coordination with project partners and landowners on agricultural NPS outreach and education activities in the watershed. The Extension Assistant shall be stationed in the Arroyo Colorado watershed.					
	Start Date:	Month 1		Completion Date:	Month 48	
Subtask 1.5:	TWRI and AgriLife Extension will participate in the Arroyo Colorado Watershed Partnership, Steering Committee, and Agricultural Issues Workgroup in order to communicate project goals, activities and achievements to affected parties and to obtain direction and input on the development of outreach and education materials for this project.					
	Start Date:	Month 1		Completion Date:	Month 48	
Subtask 1.6:	TWRI will continue to host and maintain http://www.arroyocolorado.org/ and develop a project webpage that contains information on Tasks 2-4.					
	Start Date:	Month 1		Completion Date:	Month 48	
Subtask 1.7	TWRI, with assistance from AgriLife Extension, will develop a final report for the project, assessing effectiveness of the education program including programmatic outcomes such as number of producers reached, number of soil samples collected and potential nutrient (N and P) savings.					
	Start Date:	Month 32		Completion Date:	Month 48	
Deliverables	<ul style="list-style-type: none"> • Quarterly progress reports in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Lists of action items from project coordination meetings • Project webpage • Final Report in electronic and hard copy formats 					

Tasks, Objectives and Schedules						
Task 2:	Increase Landowner Participation in Technical and Financial Assistance Programs					
Costs:	Federal:	\$17,140	Non-Federal:	\$12,966	Total:	\$30,106
Objective:	To collect and assess existing information regarding producer participation in technical and financial assistance programs within the watershed.					
Subtask 2.1:	Using data developed in TSSWCB projects 06-10 and 09-09, the Extension Assistant will compile (Months 1-6) a list of producers, categorized by priority areas identified in the Arroyo Colorado WPP, in the watershed that are not currently participating in technical and/or financial assistance programs through the local SWCDs, HRO, or NRCS. AgriLife Extension will update the list semi-annually (Months 7-36).					
	Start Date:	Month 1		Completion Date:	Month 48	
Subtask 2.2:	The Extension Assistant will develop and periodically distribute direct mailings (at least once per year) to producers identified through Subtask 2.1. Further, AgriLife Extension will engage producers through personal contact. Direct mailings and personal contact shall be geared towards highlighting the availability of and encouraging participation in technical and financial assistance programs. Direct mailings must be coordinated with project partners. The TSSWCB must approve all direct mailings prior to distribution.					
	Start Date:	Month 6		Completion Date:	Month 42	
Deliverables	<ul style="list-style-type: none"> List of landowners, categorized by priority area, who are eligible for participation in the WQMP Program but not currently participating, updated semi-annually Direct mailings, as developed and distributed 					

Tasks, Objectives and Schedules						
Task 3:	Develop Educational Program Materials					
Costs:	Federal:	\$40,621	Non-Federal:	\$25,668	Total:	\$66,289
Objective:	To develop an education program to increase producer participation in technical and financial assistance programs by compiling available knowledge and developing materials promoting technical and financial assistance programs and educating producers on their ability to abate agricultural NPS pollution within the Arroyo Colorado.					
Subtask 3.1:	The Extension Assistant will inventory and assess educational and related materials developed through similar efforts in Texas and other states addressing water quality BMPs and cost-share programs.					
	Start Date:	Month 1	Completion Date:	Month 9		
Subtask 3.2:	<p>The Extension Assistant will develop (Month 28-38) an evaluation instrument to assess barriers to BMP adoption as well as an evaluation to assess the perceived educational priorities of agricultural producers. The evaluation instrument should build upon the survey conducted by SUMA/Orchard Social Marketing, Inc. which was used in the development of the WPP. The evaluation instrument will be distributed to a random sample (determined using Krejcie and Morgan (1970)) of producers registered with USDA-FSA from 2007 – 2011 (approximately 2,400 individuals) using Dillman’s (2000) Tailored Design Method to ensure maximum response. The evaluation will continue to be applied to newly identified producers and to participants in field days and workshops in Task 4. The TSSWCB must approve the evaluation instrument prior to distribution.</p> <p>Dillman D. A. (2000). <i>Mail and telephone surveys: the tailored design method, second edition</i>. Hoboken, NJ: John Wiley & Sons.</p> <p>Krejcie, R. V., Morgan, D. W. (1970) Determining sample size for research activities. <i>Educational and Psychological Measurement, 30</i>, 607—610.</p>					
	Start Date:	Month 1	Completion Date:	Month 48		
Subtask 3.3:	<p>The Extension Assistant will develop additional materials to educate producers on technical and financial assistance programs, WQMPs and BMPs that impact water quality. In order to foster cooperative conservation across the Arroyo Colorado watershed, these materials will be designed to provide a common message for use by AgriLife Extension, NRCS, SWCDs, and HRO. Materials will include:</p> <ul style="list-style-type: none"> • a one-pager and a standard presentation on the agricultural NPS components of the Arroyo Colorado WPP and goals established by the stakeholders • fact sheets and a standard presentation that describe the applicability and eligibility of different technical and financial assistance programs available to producers within the Arroyo Colorado Watershed • Fact sheets on individual BMPs that extol the water quality benefits of each • Fact sheet on the BMP effectiveness study from TSSWCB project 06-10 (Task 7) <p>AgriLife Extension will collaborate with NRCS, SWCDs, and HRO to develop these materials. The TSSWCB must approve all educational materials prior to distribution.</p>					
	Start Date:	Month 1	Completion Date:	Month 18		
Subtask 3.4:	<p>The Extension Assistant will work with AgriLife Research to develop materials that incorporate and highlight outcomes from TSSWCB project 06-10 regarding the quality of delivered irrigation water. The Extension Assistant will provide these materials to Irrigation Districts in order to facilitate discussion regarding encouraging producers to take into account “free” nutrients in delivered irrigation water, thereby decreasing fertilizer application rates and abating agricultural NPS nutrient runoff.</p>					
	Start Date:	Month 1	Completion Date:	Month 18		

Deliverables	<ul style="list-style-type: none"> • Educational materials on BMPs and proper irrigation water management (electronic and hard copy versions) • Survey tool and compiled results • Presentation and fact sheets that describe the different cost-share programs available to producers (electronic and hard copy versions) • One-pager and a standard presentation on the agricultural NPS components of the Arroyo Colorado WPP (electronic and hard copy versions) • Fact sheet on the BMP effectiveness study from TSSWCB project 06-10 (electronic and hard copy versions) • Materials that highlight outcomes from TSSWCB project 06-10 regarding the quality of delivered irrigation water (electronic and hard copy versions)
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Tasks, Objectives and Schedules						
Task 4:	Conduct Education and Outreach					
Costs:	Federal:	\$135,479	Non-Federal:	\$94,094	Total:	\$229,573
Objective:	To conduct education and outreach programs in the Arroyo Colorado watershed about the different water quality and BMP cost-share programs that are available for producers on agricultural lands					
Subtask 4.1:	AgriLife Extension will coordinate with SWCDs, NRCS, and HRO, to host one educational meeting annually specifically dedicated to promoting technical and financial assistance programs.					
	Start Date:	Month 1	Completion Date:	Month 48		
Subtask 4.2:	AgriLife Extension will coordinate with SWCDs, NRCS, HRO, and cooperating producers to host field tours that demonstrate benefits of BMPs and WQMPs. At least 2 field tours will be held annually. Demonstrations will include the use of equipment to illustrate the efficacy of BMPs. For example, a soil compaction probe will be used to demonstrate the efficacy of the no-till BMP.					
	Start Date:	Month 1	Completion Date:	Month 48		
Subtask 4.3:	AgriLife Extension will coordinate with SWCDs, NRCS, and HRO to include at least one presentation on technical and financial assistance programs in the following regular meetings held once per year: <ul style="list-style-type: none"> • 1 cotton production meeting • 1 sorghum production meeting • 1 sugarcane production meeting • 1 citrus production meeting • 1 nutrient management meeting including the soil testing campaign kickoff • Irrigation district trainings 					
	Start Date:	Month 1	Completion Date:	Month 48		
Subtask 4.4:	<p>To encourage the use of soil testing in support of nutrient management, AgriLife Extension will host a soil testing campaign for agricultural producers in Cameron, Hidalgo and Willacy counties. The soil testing campaign will be offered in the fall/winter of 2010, 2011, 2012, and 2013. Producers will be encouraged to soil test to determine nutrient application needs and AgriLife Extension will provide follow-up educational assistance to interpret soil test results.</p> <p>This project will pay up to \$10 per soil test sample taken within the Arroyo Colorado watershed; this project will pay for all soil tests necessary to comply with soil testing frequencies consistent with the NRCS practice standard for Nutrient Management (590). Soil tests and shipping paid for with project funding must be completed by a public soil testing laboratory, such as the AgriLife Extension Soil, Water and Forage Testing Laboratory. AgriLife Extension will work with producers to geo-reference each soil test sample location (i.e., to the field-scale as identified from aerial imagery or preferably coordinates from a GPS receiver).</p>					
	Start Date:	Month 1	Completion Date:	Month 48		

Subtask 4.5:	The Extension Assistant will develop and distribute flyers, news releases and other appropriate promotional publications to 1) educate agricultural producers about availability of financial assistance programs, 2) promote the soil testing campaign, and 3) advertise workshops and field tours. The Extension Assistant will coordinate with HRO, SWCDs, and NRCS on materials being developed through TSSWCB project 09-09. The TSSWCB must approve all promotion materials prior to distribution.			
	Start Date:	Month 1	Completion Date:	Month 48
Subtask 4.6	The Extension Assistant, in coordination with CEAs, NRCS, HRO, and SWCDs, will work with Irrigation Districts to educate their customers on the water quantity conservation benefits of implementing WQMPs and participation in financial assistance programs.			
	Start Date:	Month 1	Completion Date:	Month 48
Subtask 4.7	The Extension Assistant will work with commodity organizations, such as Texas Citrus Mutual, Rio Grande Valley Sugar Growers, Texas Vegetable Association, and Texas Farm Bureau, to educate their members on the opportunity to enhance the value of their operation and achieve water quality goals for the watershed at the same time by participating in technical and financial assistance programs.			
	Start Date:	Month 1	Completion Date:	Month 48
Subtask 4.8	The Extension Assistant will work with TAMU-K to develop materials that incorporate and highlight outcomes from TSSWCB project 06-10 regarding the degree to which pollutant assimilation is occurring in drainage ditches. The Extension Assistant will provide these materials to Drainage Districts in order to facilitate discussion regarding the management of vegetation in drainage ditches to contribute to agricultural NPS pollution abatement.			
	Start Date:	Month 1	Completion Date:	Month 48
Subtask 4.9	The Extension Assistant will support, promote, and participate in, as appropriate, any field days, demonstrations, site tours, or education events sponsored by NRCS, HRO, and/or SWCDs for the Arroyo Colorado watershed.			
	Start Date:	Month 1	Completion Date:	Month 48
Deliverables	<ul style="list-style-type: none"> • Agendas and materials for cost-share program, crop production meetings and nutrient management training • Estimated number of attendees at meetings • Results from pre and post evaluation surveys conducted at selected meetings • List of tours and demonstrations focusing on BMPs to interested groups • Materials highlighting pollutant assimilation in drainage ditches • News releases or other promotional materials, as developed and disseminated • Geo-referenced soil test sample location • Estimates of nutrient (N and P) reduction will be provided as a result of the soil testing campaign 			

Project Goals (Expand from Summary Page)

- Develop a focused education effort on cost-share programs, BMPs that protect water quality including materials, programs and field days (demonstrations).
- Educate agricultural producers on how to better manage their acreage to reduce the potential for NPS pollution through education programs, workshops, field days (demonstrations), fact sheets and news releases.
- Support and promote cost-share programs that implement BMPs to protect water quality including highlighting the programs at education events, developing materials that promote the programs such as news releases and flyers, and provided information to producers about the adoption and maintenance of BMPs that protect water quality.
- Assist NRCS and TSSWCB by providing outreach that will increase the number of producers that participate in cost-share programs, increase the number of WQMPs adopted and increase the number of BMPs installed.

Measures of Success (Expand from Summary Page)

- Development of educational materials specifically addressing BMPs and cost-share programs.
- Number of producers reached through education programs.
- Increase in the number of WQMPs developed and BMPs installed as a result of increased outreach and education through this project.
- At least 930 producers (approximately 130 samples in year 1 and 400 samples in years 2 & 3) will participate in the soil testing campaign
- Estimates of nutrient (N and P) reduction will be provided as a result of the soil testing campaign.
- Identification of the barriers to BMP adoption by agricultural producers as a result of the compilation of survey data.
- Development and delivery of survey to assess barriers to BMP implementation; knowledge gleaned will be used to better promote the implementation of BMPs in future implementation efforts.

2005 Texas Nonpoint Source Management Program Reference (Expand from Summary Page)

Goals and/or Milestone(s)

Element 1: Explicit short- and long-term goals, objectives ... that protect surface and groundwater.

- LTG 1: Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by nonpoint source pollution
- LTG 2: Support the implementation of state, regional and local programs to prevent NPS pollution through assessment, implementation and education.
- LTG 3: Support the implementation of state, regional and local programs to reduce NPS pollution, such as implementation of strategies defined in... Watershed Protection Plans
- LTG 5: Develop partnerships, relationships, ... to facilitate collective, cooperative approaches to manage NPS pollution
- LTG 6: Increase overall public awareness of NPS issues and prevention activities
- STG 2: Implementation: Coordinate and administer the implementation of Watershed Protection Plans and other state, regional, and local plans/programs to reduce NPS pollution.
 - Objective D: Implement... Watershed Protection Plans developed to restore and maintain water quality in water bodies identified as impacted by nonpoint source pollution.
- STG 3: Education: Conduct education and technology transfer activities to help increase awareness of NPS pollution and prevent activities contributing to the degradation of water bodies, including aquifers, by NPS pollution
 - Objective A: Enhance existing outreach programs at the state, regional and 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 C: Where applicable, expedite development of technology transfer activities to be conducted upon completion of BMP implementation.
 - Objective D: Conduct outreach through the ...Texas Cooperative Extension, Soil and Water Conservation Districts, and others to facilitate broader participation and partnerships. 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 F: Implement public outreach and education to maintain and restore water quality in waterbodies impacted by NPS pollution.

Element 2: Working partnerships and linkages to appropriate state, ..., regional and local entities, private sector groups and Federal agencies.

Element 3: Balanced approach that emphasizes both state-wide nonpoint source programs and on-the-ground management of individual watersheds.

Part III – Financial Information

Budget Summary				
Federal	\$	218,989	% of total project	62%
Non-Federal	\$	135,191	% of total project (≥ 40%)	38%
Total	\$	354,180	Total	100%
Category	Federal	Non-Federal	Total	
Personnel	\$ 113,471	\$ 72,768	\$ 186,239	
Fringe Benefits	\$ 38,966	\$ 19,158	\$ 58,124	
Travel	\$ 6,000	\$ 0	\$ 6,000	
Equipment	\$ 0	\$ 0	\$ 0	
Supplies	\$ 500	\$ 0	\$ 500	
Contractual	\$ 0	\$ 0	\$ 0	
Construction	\$ 0	\$ 0	\$ 0	
Other	\$ 31,488	\$ 0	\$ 31,488	
Total Direct Costs	\$ 190,425	\$ 91,926	\$ 282,351	
Indirect Costs (≤ 15%)	\$ 28,564	\$ 23,901	\$ 52,465	
Unrecovered IDC	\$ 0	\$ 19,364	\$ 19,364	
Total Project Costs	\$ 218,989	\$ 135,191	\$ 354,180	

The TSSWCB CWA §319(h) NPS Grant Program has a 60/40% match requirement. The cooperating entity will be reimbursed 60% from federal funds and must contribute a minimum of 40% of the total costs to conduct the project. The 40% match must be from non-federal sources and should be described in the budget justification. Reimbursable indirect costs are limited to no more than 15% of total federal direct costs. The project budget generally covers a three year period.

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	\$ 113,471	TWRI PM – @ 10% annually: \$14,186 Extension Assistant – @ 100% annually: \$99,285
Fringe Benefits	\$ 38,966	Full Time: salary * 17.1% + 494/mo for insurance: TWRI PM & Extension Assistant
Travel	\$ 6,000	TWRI travel to project area for regular meetings: \$1,500 Extension Assistant travel within watershed to conduct education/outreach: \$4,500
Equipment	\$ 0	N/A
Supplies	\$ 500	TWRI supplies to cover development of education and outreach materials: \$500
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 31,488	Soil Testing Campaign (1,680 samples @ \$10/sample (130 samples in year 1, 575 samples in year 2, 475 samples in year 3, and 500 samples in year 4) and \$2,000 for sample shipping): \$18,800 Development and printing of Cost-Share Program Fact Sheet: \$1,000 Developing and printing of promotional publications: \$1,500 Printing additional educational materials for outreach: \$1,000 Direct mailings to reach producers: \$4,288 Soil compaction probe for no-till (BMP) demonstrations: \$400 PhD Student Tuition & Fees: \$4,500
Indirect	\$ 28,564	15% of Total Federal Direct Costs

Budget Justification (Non-Federal)		
Category	Total Amount	Justification
Personnel	\$ 72,768	AgriLife County Extension Agents: Hidalgo CEA @ 13% annually: \$9,803 Cameron CEA @ 13% annually: \$9,383 Willacy CEA @ 12% annually: \$5,070
Fringe Benefits	\$ 19,158	Full Time: salary * 17.1% + 494/mo for insurance: Hidalgo, Cameron and Willacy CEAs
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	\$ 23,901	26% of Non-Federal Total Direct Costs
Unrecovered IDC	\$ 19,364	11% of Federal Total Direct Costs