Texas State Soil and Water Conservation Board
Clean Water Act §319(h) Nonpoint Source Grant Program
FY 2013 Workplan 13-10

SUMMARY PAGE						
Title of Project	Implementing Best Management Practices to Reduce Agricultural Nonpoint Source Pollution in Support of the Arroyo Colorado Watershed Protection Plan					
Project Goals	• Provide technical assistance to agricultural producers for the development of Water Quality Management Plans (WQMPs) and implementation of Best Management Practices (BMPs) and track progress • Provide educational programs to increase stakeholders and citizens knowledge about water quality issues in the watershed • To conduct status reviews on WQMPs to track implementation success • To foster coordinated technical assistance between TSSWCB, SWCDs and NRCS • Inform and coordinate project efforts with the Arroyo Colorado Watershed Steering Committee and Partnership					
Project Tasks	1) Project Administration; 2) Promotion and implementation of the TSSWCB WQMP Program					
Measures of Success	• Provide needed technical assistance to agricultural producers; • Development and implementation of WQMPs; • Implementation of management measures outlined in Arroyo Colorado WPP; • Reduction in potential pollutant loads of streams from NPS pollution from agricultural operations.					
Project Type	Implementation (X); Education ( ); Planning ( ); Assessment ( ); Groundwater ( )					
Status of Waterbody on *2010 Texas Integrated Report*	Segment ID 2201 (Arroyo Colorado Tidal) 2202 (Arroyo Colorado Above Tidal)	Parameter of Impairment or Concern bacteria dissolved oxygen bacteria	Category 5c 5a 5b			
Project Location (Statewide or Watershed and County)	Arroyo Colorado Watershed located within Hidalgo, Cameron and Willacy Counties					
Key Project Activities	Hire Staff ( ); Surface Water Quality Monitoring ( ); Technical Assistance (X); Education (X); Implementation (X); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )					
2012 Texas NPS Management Program Reference	• Component 1 – Long Term Goal – Objectives 1, 2, and 3 • Component 1 – Short Term Goal 2 – Objectives A, B, D • Component 1 – Short Term Goal 3 – Objectives A, D, G • Components 2, 3, 4					
Project Costs	Federal	$183,741	Non-Federal	$0	Total	$183,741
Project Management	• Texas State Soil and Water Conservation Board					
Project Period	October 1, 2013 – September 30, 2016					

Part I – Applicant Information

Applicant							
Project Lead	Lee Munz						
Title	Regional Office Coordinator						
Organization	Texas State Soil and Water Conservation Board						
E-mail Address	lmunz@tsswcb.texas.gov						
Street Address	P.O. Box 658						
City	Temple	County	Bell	State	TX	Zip Code	76503
Telephone Number	(254) 773-2250			Fax Number	(254) 773-3311		

Project Partners	
Names	Roles & Responsibilities
Texas State Soil and Water Conservation Board (TSSWCB)	Provide state oversight and management of all project activities.
Texas State Soil and Water Conservation Board, Harlingen Regional Office (HRO)	Work with and assist SWCDs in the development, implementation, and maintenance of WQMPs. Responsible for technical review and certification of WQMPs. Conduct WQMP status reviews. Responsible for all project deliverables.
Southmost Soil and Water Conservation District (SWCD 319), Hidalgo Soil and Water Conservation District (SWCD 350), and Willacy Soil and Water Conservation District (SWCD 349)	Collaborate with HRO to develop, implement, and maintain WQMPs.
United States Department of Agriculture-Natural Resources Conservation Service (NRCS)	Support the HRO in the development, implementation, and maintenance of WQMPs. Provide training as necessary.
Arroyo Colorado Watershed Partnership	Collaborate with HRO and local SWCDs to promote stakeholder participation in WQMPs via watershed-based outreach and education programs.

Part II – Project Information

Project Type							
Surface Water	X	Groundwater					
Does the project implement recommendations made in (a) a completed WPP, (b) an adopted TMDL, (c) an approved I-Plan, (d) a Comprehensive Conservation and Management Plan developed under CWA §320, (e) the *Texas Coastal NPS Pollution Control Program*, or (f) the *Texas Groundwater Protection Strategy*?			Yes	X	No		
If yes, identify the document.	*A Watershed Protection Plan for the Arroyo Colorado Phase I*						
If yes, identify the agency/group that developed and/or approved the document.	Arroyo Colorado Watershed Partnership in conjunction with the Texas Sea Grant and TCEQ		Year Developed	2007			

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2010 IR	Size (Acres)
Arroyo Colorado Watershed	121102080100 121102080300 121102080600 121102080700 121102080800 121102080900	2201/2202	5c	418,144

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: *2010 Texas Integrated Report*, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

IMPAIRMENTS (*2010 Texas Integrated Report)*

Segment 2201: Arroyo Colorado Tidal

	Impairment	Category	Year Listed
2203_03	bacteria	5c	2006
2201_04	bacteria	5c	2006
	depressed dissolved oxygen	5a	1996
2201_05	bacteria	5c	2006
	depressed dissolved oxygen	5a	1996

Segment 2201B:

	Impairment	Category	Year Listed
2201B_01	bacteria	5c	2010

Segment 2202: Arroyo Colorado Above Tidal

2202_01	bacteria	5b	1996
2202_02	bacteria	5b	1996
2202_03	bacteria	5b	1996
2202_04	bacteria	5b	1996

Segment 2202B:

	Impairment	Category	Year Listed
2202B_01	bacteria	5c	2010

CONCERNS (*2010 Texas Integrated Report)*

Segment 2201: Arroyo Colorado Tidal

	Impairment	Category
2201_01	Chlorophyll-*a*	CS
	nitrate	CS
2201_02	Chlorophyll-*a*	CS
	nitrate	CS
2201_03	Chlorophyll-*a*	CS
	nitrate	CS
	orthophosphorus	CS
2201_04	Chlorophyll-*a*	CS
	nitrate	CS
	orthophosphorus	CS
2201_05	ammonia	CS

	Chlorophyll-*a*	CS
	depressed dissolved oxygen	CN
	nitrate	CS
	orthophosphorus	CS

Segment 2201A

	Impairment	Category
2201A_01	ammonia	CS
2201B_01	chlorophyll-a	CS
	nitrate	CS

Segment 2202

	Impairment	Category
2202_01	ammonia	CS
	chlorophyll-a	CS
	nitrate	CS
	orthophosphorus	CS
	total phosphorus	CS
2202_02	chlorophyll-a	CS
	nitrate	CS
	orthophosphorus	CS
	total phosphorus	CS
2202_03	ammonia	CS
	chlorophyll-a	CS
	nitrate	CS
	orthophosphorus	CS
	total phosphorus	CS
2202_04	ammonia	CS
	chlorophyll-a	CS
	nitrate	CS
	orthophosphorus	CS
	total phosphorus	CS

Segment 2202B

	Impairment	Category
2202B_01	chlorophyll-a	CS
	ammonia	CS
	bacteria	CN

Segment 2202C

	Impairment	Category
2202C_01	ammonia	CS
	bacteria	CN

Project Narrative

Problem/Need Statement

The Arroyo Colorado Watershed is located in the Lower Rio Grande Valley of South Texas and flows through the middle of Hidalgo and Cameron counties. The lower 16 miles of the Arroyo Colorado is the boundary between Cameron and Willacy counties. The Arroyo Colorado drainage area is a subwatershed of the Nueces-Rio Grande Coastal Basin, also known as the Lower Laguna Madre Watershed. The streams of the Nueces-Rio Grande Coastal Basin, including the Arroyo Colorado, drain to the Laguna Madre, which is considered to be one of the most productive hypersaline lagoon systems in the world. The Lower Rio Grande Valley comprises the northern part of the Rio Grande Delta, a broad fluviodeltaic plain laid down over tens of thousands of years by the ancestral Rio Grande. Just as the Rio Grande is the major source of freshwater for the Lower Rio Grande Valley, the Arroyo Colorado serves as the main drainage stream for this area of Texas.

The Arroyo Colorado currently has low dissolved oxygen levels within the tidal segment, not meeting the aquatic life use designated by the State of Texas and described in the Water Quality Standards. This has been the case for every 303(d) list prepared by the state since 1996. In addition, the Arroyo became impaired due to high bacteria levels in 2006.

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*. Since the publication of the watershed protection plan (WPP) in January 2007, the Partnership has been working on implementation of management measures to improve water quality and natural habitat in the Arroyo Colorado. The objective of components of the Arroyo Colorado WPP addressing agricultural nonpoint source (NPS) pollution is to encourage the voluntary adoption of best management practices (BMPs) to reduce suspended sediment levels resulting from cropland erosion, BOD from runoff of crop residue, and nitrogen and phosphorus fertilizer runoff from irrigated cropland fields. The WPP concludes that approximately 300,000 acres of irrigated cropland lies within the Arroyo Colorado watershed. The WPP sets a goal to achieve the voluntary adoption of agricultural BMPs on 50% of the irrigated cropland (150,000 acres) by 2015.

Efforts that have been implemented or are in the process of being implemented that focus on the control of agricultural nonpoint source pollution include providing technical assistance to agricultural producers for the development and implementation of Water Quality Management Plans (WQMPs) that focus on reducing nutrient loadings from operations in targeted areas across the watershed. A WQMP is a site-specific plan developed through and approved by SWCDs which includes appropriate land treatment practices, production practices, management measures, and technologies that prevent and abate agricultural and silvicultural nonpoint source pollution. The BMPs prescribed in a WQMP are defined in the NRCS Field Office Technical Guide. TSSWCB and NRCS have various financial incentive programs to assist producers in implementing a WQMP.

The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program that promotes production agriculture and environmental quality as compatible goals. EQIP is administered by the NRCS. Through EQIP, farmers and ranchers receive financial assistance to implement structural and management conservation practices on their land. EQIP is available to producers through 1) resource concern priorities established by Local Work Groups at the county level, and/or 2) State Resource Concerns established by the State Technical Advisory Committee. The State Resource Concern for Water Quantity-Irrigation in the Lower Rio Grande Valley is focused on improving the efficiency of irrigation systems in order to reserve more water for additional uses and to reduce inherent soil salinity problems. Note that more efficient irrigation systems also result in less irrigation return flows to the Arroyo Colorado thereby reducing nutrient, sediment and BOD loadings.

Specifically, in the Arroyo Colorado watershed, since 1999, the TSSWCB and local SWCDs have been developing WQMPs utilizing CWA §319(h) NPS grants (TSSWCB projects 99-03, *Arroyo Technical Assistance*, 02-12, *SWCD*

WQMP Development, Implementation, and/or Maintenance Assistance, 02-16, *Implementation Support in the Arroyo Colorado Watershed*, 05-12, *WQMP Implementation Assistance in the Arroyo Colorado Watershed,* and 09-09 *Implementing the Arroyo Colorado Watershed Protection Plan by Providing Technical and Financial Assistance to Reduce Agricultural Nonpoint Source Pollution*) and state appropriations (colloquially known as SB 503 funds). To date, a total of 422 WQMPs have been developed on approximately 36,000 acres. Including work done by NRCS through federal Farm Bill funding, a total of 906 farm plans have been developed in the Arroyo Colorado watershed covering over 73,308 acres. There continues to exist a need for technical assistance and financial incentives to implement BMPs through WQMPs in order to achieve the goal in the Arroyo Colorado WPP to restore water quality.

Project Narrative

General Project Description (Include Project Location Map)

TSSWCB will administer federal CWA §319(h) funds through the HRO to provide technical assistance to agricultural producers in developing and implementing WQMPs in the Arroyo Colorado watershed. HRO will develop plans and assist producers in acquiring financial incentives for the implementation of BMPs. This project will improve and enhance the abilities of HRO, in coordination with the local SWCDs, to assist area landowners in preventing and abating agricultural nonpoint source pollution.

HRO will promote the components of this project, including WQMP development and availability of financial incentives, and encouraging participation from agricultural producers. HRO will work with NRCS and the Texas Water Resources Institute to educate producers about water quality issues and how WQMPs and BMPs address pollutant loadings from agriculture. HRO 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 this opportunity to enhance the value of their operation and achieve water quality goals for the watershed at the same time. Additionally, HRO will work with the Irrigation Districts to educate their customers on this effort. HRO will cooperate and communicate with the Arroyo Colorado Watershed Partnership in order to efficiently and effectively achieve project goals and to summarize activities and achievements made throughout the course of this project.

HRO, with assistance from NRCS, will assist landowners in the development of WQMPs. WQMPs are developed according to the NRCS Field Office Technical Guide. By statute, WQMPs are developed so that their implementation achieves a level of pollution prevention or abatement that is consistent with State water quality standards. Once the WQMP is developed, it will undergo technical review and certification. Upon certification of the WQMP, HRO will work with the landowner to implement the BMPs prescribed in the WQMP.

The HRO, with assistance from NRCS, will assist landowners in applying for and obtaining financial incentives to aid in implementation of BMPs prescribed in WQMPs. HRO will annually conduct status reviews on all WQMPs developed and certified through the course of this project and on existing WQMPs in the watershed (10% each year) to ensure that the landowners implement BMPs as specified and agreed to in the WQMP implementation schedule. The HRO will track utilization of obligated financial incentives (CWA §319(h) and EQIP) and assist landowners in utilizing obligated funds on schedule. HRO will develop a final report which describes the success of the project including WQMPs developed, BMPs implemented, and financial incentives obligated and utilized.

Tasks, Objectives and Schedules						
Task 1:	Project Administration					
Costs:	Federal:	$45,935	Non-Federal:	$0	Total:	$45,935
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:	HRO 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 15th of January, April, July and October. QPRs shall be distributed to all project partners.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.2:	HRO will perform accounting functions and submit appropriate Reimbursement Forms to TSSWCB at least quarterly.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.3:	HRO will host coordination meetings or conference calls with the TSSWCB Project Manager, TSSWCB Field Representative, and Arroyo Colorado Watershed Coordinator, at least quarterly to discuss project activities, project schedule, communication needs, deliverables and other requirements. HRO will develop lists of action items needed, following each project coordination meeting and distribute to project personnel.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.4:	HRO will develop a final report at the culmination of the project. At a minimum the Final Report shall describe the success of the project including WQMPs developed, BMPs implemented, and funds obligated and utilized.					
	Start Date:	Month 34		Completion Date:		Month 36
Deliverables	• Quarterly Progress Reports in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Final Report (Electronic and hard copy format)					

Tasks, Objectives and Schedules						
Task 2:	Promotion and implementation of the TSSWCB WQMP Program					
Costs:	Federal:	$137,806	Non-Federal:	$0	Total:	$137,806
Objective:	To promote WQMP development and implementation, encourage participation, and provide technical assistance to agricultural producers for the development and implementation of WQMPs. Promote the availability of financial incentives to support BMP implementation. Track implementation of WQMPs to achieve nutrient load reductions as identified in the Arroyo Colorado WPP.					
Subtask 2.1:	HRO will identify landowners in priority areas to distribute notifications announcing the availability of technical assistance and financial incentives for developing and implementing WQMPs. HRO will develop and distribute flyers, brochures, letters, news releases and other appropriate promotional publications to encourage participation from agricultural producers. TSSWCB must approve all announcements, letters and publications prior to distribution.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 2.2:	HRO will work with TSSWCB, NRCS and the Arroyo Colorado Watershed Coordinator to educate producers about water quality issues and how WQMPs and BMPs address pollutant contamination from agriculture.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 2.3:	HRO will work with commodity organizations, such as such as Texas Citrus Mutual, Rio Grande Valley Sugar Growers, Texas Vegetable Association, and Texas Farm Bureau, to educate their members on this opportunity to enhance the value of their operation and achieve water quality goals for the watershed at the same time. Additionally, the HRO will work with the Irrigation Districts to educate their customers on this project.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 2.4:	HRO, with assistance from NRCS, will assist landowners in the development of WQMPs. HRO will develop at least 21 WQMPs. Noting that the 2015 goal of the Arroyo Colorado WPP is to achieve the voluntary adoption of agricultural BMPs on 50% of the irrigated cropland, HRO shall strive to develop additional WQMPs beyond the minimum of 21.					
	Start Date:	Month 1	Completion Date:	Month 36		

<table>
<tr><td>Subtask 2.5:</td><td colspan="4">HRO with assistance from NRCS, will assist landowners in applying for and obtaining financial incentives to aid in implementation of BMPs prescribed in WQMPs. $315,000 in CWA §319(h) funding (TSSWCB project 13-02) is available as financial incentive through the TSSWCB WQMP Program. Landowners shall be eligible to receive a maximum financial incentive amount of $15,000 from the TSSWCB §319(h) funds. The maximum financial incentive rate shall not exceed 60% of the cost of implementation of the BMPs. The remaining 40% will be provided by the landowner. Financial incentives will be based on actual cost not to exceed average cost of the practice.

Practices that achieve nutrient, BOD, and sediment reductions on irrigated cropland that are eligible for financial incentives include:
• Irrigation System (441, 442, 443)
• Irrigation Tail Water Recovery (447)
• Nutrient Management (590) (for Establishment of 512, 393, 342 or 412 only)
• Irrigation Land Leveling (464)
• Subsurface Drain (606)
• Irrigation Pipeline (430)
• Grade Stabilization Structures (410)
• Pasture and Hayland Planting (512) (for the conversion of cropland to pastureland only)
• Filter Strip (393)
• Critical Area Planting (342)
• Grassed Waterway (412)
• Pipelines (516)
• Watering Facilities (614) (for livestock only)
• Pumping Plant (533) (associated with 614 only)
• Fencing (382)</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
<tr><td>Subtask 2.6:</td><td colspan="4">HRO will prioritize WQMP development and financial incentive applications consistent with the priority areas identified in the WPP.</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
<tr><td>Subtask 2.7:</td><td colspan="4">HRO will conduct annual status reviews on all WQMPs developed and certified through the course of this project and on 10% of existing WQMPs (certified prior to this project) in the Arroyo Colorado watershed to ensure that the landowners implement BMPs as specified and agreed to in the WQMP implementation schedule. To date, a total of 422 WQMPs have been certified in the Arroyo Colorado watershed. HRO will document any follow-up technical assistance needed or necessary modifications to the WQMP implementation schedule.</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
<tr><td>Subtask 2.8:</td><td colspan="4">HRO will track utilization of obligated financial incentives (primarily CWA §319(h) funds, but also EQIP funds). HRO, with assistance from NRCS, will assist landowners in utilizing obligated financial incentives on schedule.</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
<tr><td>Subtask 2.9:</td><td colspan="4">To encourage the use of soil testing in support of Nutrient Management (590), HRO will assist holders of WQMPs in the acquisition of current soil tests. This project will pay up to $10 per soil test sample; this project will pay for all soil tests necessary to comply with soil testing frequencies described in each WQMP and consistent with the NRCS practice standard for Nutrient Management (590). Soil tests paid for with project funding must be completed by a public soil testing laboratory, such as the Texas A&M AgriLife Extension Service Soil, Water and Forage Testing Laboratory.</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
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Subtask 2.10:	HRO will create a spreadsheet and map describing and showing the location of all WQMPs developed and BMPs implemented through the project. The map will not reveal the identity or exact location of any producer.			
	Start Date:	Month 1	Completion Date:	Month 36
Subtask 2.11:	HRO will meet monthly with SWCDs 319, 349, and 350 in order to efficiently and effectively achieve project goals; summarize activities and achievements made throughout the course of this project; and discuss project activities, project schedule, communication needs, deliverables, and other requirements.			
	Start Date:	Month 1	Completion Date:	Month 36
Subtask 2.12:	HRO will cooperate and communicate with the Arroyo Colorado Watershed Coordinator in order to efficiently and effectively achieve project goals and to summarize activities and achievements made throughout the course of this project. Specifically, the HRO will, at least, participate in any stakeholder meetings held under the auspices of the Arroyo Colorado Watershed Partnership.			
	Start Date:	Month 1	Completion Date:	Month 36
Deliverables	• Promotional and educational publications, as developed and distributed • Status reviews for WQMPs • Map of project area showing location of WQMPs developed and BMPs implemented with a quantifiable breakdown for each BMP; map will not reveal the identity of any landowner			

Project Goals (Expand from Summary Page)

- Provide technical assistance to agricultural producers for the development of Water Quality Management Plans (WQMPs) and implementation of Best Management Practices (BMPs) and track progress
- Provide educational programs to increase stakeholders and citizens knowledge about water quality issues in the watershed
- To conduct status reviews on WQMPs to track implementation success
- To foster coordinated technical assistance between TSSWCB, SWCDs, and NRCS
- Inform and coordinate project efforts with the Arroyo Colorado Watershed Steering Committee and Partnership

Measures of Success (Expand from Summary Page)

- Provide needed technical assistance to agricultural producers
- Development and implementation of WQMPs
- Involvement by watershed stakeholders
- Implementation of agricultural management measures outlined in Arroyo Colorado WPP
- Reduction in potential pollutant loads of streams from NPS pollution from agricultural operations

2012 Texas Nonpoint Source Management Program Reference (Expand from NPS Summary Page)
Goals &/or Milestone(s)
Component One – Explicit short- and long-term goals, objectives and strategies that protect surface and ground water.
Long Term Goal – To protect and restore water quality from NPS pollution through assessment, implementation, and education. • Objective 1 – Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by NPS pollution. • Objective 2 – Support the implementation of state, regional, and local programs to prevent NPS pollution through assessment, implementation, and education. • Objective 3 – Support the implementation of state, regional, and local programs to reduce NPS pollution, such as the implementation of strategies defined in WPPs
Short Term Goal Two – Implementation – Coordinate the NPS Program to support the implementation of TMDL I-Plans …and other state, regional, and local plans/programs to reduce NPS pollution …[by] target[ing] implementation activities to the areas identified as impacted… • Objective A – Work with regional and local entities to determine priority areas and develop and implement strategies to address NPS pollution in those areas. • Objective B – Develop and implement BMPs to address constituents of concern or waterbodies not meeting water quality standards in watersheds indentified as impacted by NPS pollution. • Objective D – Implement TMDL I-Plans, WPPs, and other state, regional, and local plans developed to restore and maintain water quality in waterbodies identified as impacted by NPS pollution.
Short-Term Goal Three – Education – Conduct education and technology transfer activities to increase awareness of NPS pollution and activities which contribute 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 D – Conduct outreach through the CRP, AgriLife Extension, SWCDs, and others to enable stakeholders and the public to participate in decision-making and provide a more complete understanding of water quality issues and how they relate to each citizen. • Objective G – Implement public outreach and education to maintain and restore water quality in water bodies by NPS pollution.
Component Two – Working partnerships and linkages to appropriate state, regional, and local entities, private sector groups, and federal agencies.
Component Three – Balanced approach that emphasizes both statewide NPS programs and on-the-ground management of individual watersheds.
Component Four – Abatement of water quality impairments from NPS pollution and prevention of significant threats to water quality from present and future NPS activities.

Estimated Load Reductions Expected

Estimated load reductions expected from implementing BMPs through this project are based on information in the Arroyo Colorado WPP. The Arroyo Colorado WPP goals are to reduce suspended sediment levels resulting from cropland erosion, BOD from runoff of crop residue, and nitrogen and phosphorus fertilizer runoff from irrigated cropland fields. WQMPs to be implemented through this project only address agricultural NPS loadings from irrigated cropland operations. Based on SWAT modeling, the Arroyo Colorado WPP estimates load reductions from agricultural BMPs only for sediment, total nitrogen, and total phosphorus (Table 17 of the WPP).

Constituent	Estimated load reduction per treated acre
Sediment	2,000 lbs
Total nitrogen	0.567 lbs
Total phosphorus	0.0947 lbs

There are currently 422 WQMPs certified on approximately 36,000 acres in the Arroyo Colorado equating to an average of 85 ac per WQMP. In order to estimate financial incentives needed to implement the Arroyo Colorado WPP, an average of 185 ac per WQMP was assumed. Based on the *2007 Census of Agriculture*, conducted by the USDA National Agricultural Statistics Service, the average harvested cropland farm size for Cameron County is 247 ac, for Hidalgo County is 279 ac, and for Willacy County is 761 ac. To estimate load reductions expected from implementing BMPs through this project, the *2007 Census of Agriculture* farm size acreages will be used. As the percent of the Arroyo Colorado watershed in Willacy County is minimal, the average farm size for the Arroyo Colorado will be assumed to be the average of Cameron and Hidalgo average harvested cropland farm sizes (i.e., 263 ac). Therefore, to estimate load reductions expected from implementing BMPs through this project, each WQMP certified through this project will be assumed to cover 263 ac of irrigated cropland.

In order to calculate estimated load reductions expected, it is assumed that all load reductions achieved at the individual farm level (i.e., through individual WQMPs) translate to equivalent load reductions at the index monitoring site in the impaired reach of the Arroyo Colorado mainstem.

Extent of BMP Implementation	# WQMPs	Total acreage	Estimated Load Reductions Expected		
			sediment (tons/yr)	Total N (lbs/yr)	Total P (lbs/yr)
Full WPP Implementation	-	150,000	150,000	85,050	14,205
Project 13-10 Funded	21	5,523	5,523	3,131	523

Participation in the TSSWCB WQMP Program by individual farmers is voluntary. This decision to participate is based on a number of factors, including the producer's ability to provide the financial incentive match (40% in this project). Adoption of BMPs and participation in the WQMP Program by producers is highly dependent on the success or failure of outreach and education initiatives and social marketing campaigns. Effectiveness of particular BMPs in reducing pollutants is dependent on a myriad of factors including natural weather phenomena and the ability of producers to correctly install, operate, maintain or manage the BMP. With these factors accounted for, the estimated load reductions to be expected, as presented above, should be regarded as the "best case scenario" with probability that actual load reductions will be less.

The mechanism for reporting pollutant load reductions achieved through implementation of BMPs funded with CWA §319(h) monies, is through the EPA Grants Reporting and Tracking System (GRTS). Actual load reductions achieved can only be reported after the BMPs are installed and operational. Currently, EPA Program Activity Measures (PAMs) only call for load reductions achieved for nitrogen, phosphorus, and sediment. Nitrogen, phosphorus, and sediment load reductions achieved through this project will be reported through GRTS.

EPA State Categorical Program Grants – Workplan Essential Elements ***FY 2011-2015 EPA Strategic Plan* Reference**
Strategic Plan Goal – Goal 2 Protecting America's Waters
Strategic Plan Objective – Objective 2.2 Protect and Restore Watersheds and Aquatic Ecosystems

Part III – Financial Information

Budget Summary

Federal	$ 183,741	% of total project	100%
Non-Federal	$ 0	% of total project (≥ 40%)	0%
Total	$ 183,741	Total	100%

Category	Federal	Non-Federal	Total
Personnel	$130,221	$0	$130,221
Fringe Benefits	$37,244	$0	$37,244
Travel	$1,476	$0	$1,476
Equipment	$0	$0	$0
Supplies	$1,800	$0	$1,800
Contractual	$0	$0	$0
Construction	$0	$0	$0
Other	$13,000	$0	$13,000
Total Direct Costs	$183,741	$0	$183,741
Indirect Costs (≤ 15%)	$0	$0	$0
Total Project Costs	$183,741	$0	$183,741

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	$130,221	Natural Resources Specialist IV – 100% time for 3 yrs
Fringe Benefits	$37,244	Benefits calculated @ 28.6%
Travel	$1,476	Per diem @ $46/day and hotel expenses @ $77/night for 12 overnight trips ($1,476)
Equipment	$0	N/A
Supplies	$1,800	Office supplies including pens, pencils, paper, printer cartridges, folders, envelopes, mailing labels, flash drives, etc. @ $50/month for 3 years ($1,800)
Contractual	$0	N/A
Construction	$0	N/A
Other	$13,000	Soil Sample Testing (500 samples @ $10); Vehicle maintenance and fuel ($8,000)
Indirect	$0	N/A

Budget Justification (Non-Federal)		
Category	Total Amount	Justification
Personnel	$0	N/A
Fringe Benefits	$0	N/A
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	$0	N/A