Texas State Soil and Water Conservation Board
Clean Water Act §319(h) Nonpoint Source Grant Program
FY 2009 Project Workplan 09-06

NONPOINT SOURCE SUMMARY PAGE for the CWA §319(h) Agricultural/Silvicultural Nonpoint Source Grant Program						
Title of Project:	Development of a Synergistic, Comprehensive Statewide Lone Star Healthy Streams Program					
Project Goals:	The goal of this project is to reduce the amount of bacteria entering Texas waterbodies from the major classes of livestock. To accomplish this, the *Lone Star Healthy Streams* (LSHS) education program will be expanded through integration of grazing cattle, horse, poultry, dairy cattle, and feral hog components into a synergistic, industry endorsed LSHS Program ready for statewide delivery.					
Project Tasks:	(1) Project Administration; (2) LSHS Program Coordination (3) LSHS Program Development; and (4) Develop Interactive Website To Increase Access To LSHS Program					
Measures of Success:	(1) LSHS Program for grazing cattle, horses, poultry, dairy cattle, and feral hogs ready for statewide delivery including: • Standardized resource manuals for bacteria runoff management from each species • Standardized presentations for bacteria runoff management from each species • Interactive website for bacteria runoff management from each species (2) Endorsement of LSHS Program by Steering Committee, Development Committee, and AgriLife Leadership (3) Promotion of the availability of the LSHS education program.					
Project Type:	Implementation ( ); Education (X); Planning ( ); Assessment ( ); Groundwater ( )					
Status of Water Body: 2008 Texas Water Quality Inventory and 303(d) List	Segment ID: Statewide		Parameter: Bacteria		Category: 4 & 5	
Project Location (Statewide or Watershed and County)	Statewide					
Key Project Activities:	Hire Staff (X); Surface Water Quality Monitoring ( ); Technical Assistance ( ); Education (X); Implementation ( ); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )					
Texas NPS Management Program Elements:	• Short-Term Goal 3, Objectives A, B, and D • Milestone F					
Project Costs:	Federal:	$379,601	Non-Federal:	$253,219	Total:	$632,820
Project Management:	• Texas Water Resources Institute • Texas AgriLife Extension Service					
Project Period:	September 1, 2009 – August 31, 2012					

Part I – Applicant Information

Applicant							
Project Lead	Dr. B.L. Harris						
Title	Acting Director						
Organization	Texas Water Resources Institute						
E-mail Address	bharris@ag.tamu.edu						
Street Address	1500 Research Parkway, Suite A240 2118 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843-2118
Telephone Number	979.845.1851			Fax Number	979.845.8554		

Project Co-Lead	Larry A. Redmon						
Title	Professor and State Forage Specialist						
Organization	Texas AgriLife Extension Service – Department of Soil and Crop Sciences						
E-mail Address	l-redmon@ag.tamu.edu						
Street Address	2474 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843-2472
Telephone Number	979.845.2425			Fax Number	979.845.0456		

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.
Texas A&M AgriLife, Texas Water Resources Institute (TWRI)	Project administration (Task 1) and assist with LSHS program coordination (Task 2) and development (Task 3); and interactive website development (Task 4)
Texas AgriLife Extension Service – Department of Soil and Crop Sciences (AgriLife Extension)	LSHS program coordination (Task 2) and development (Task 3), interactive website development (Task 4)
Associate Professor and Extension Dairy Specialist – Stephenville, Animal Science Dept.; Assistant Professor and Extension Wildlife Specialist, Wildlife Fisheries & Sciences Dept.; Assistant Professor and Extension Waste Management Specialist, Poultry Science Dept.; Professor and State Soil Environmental Specialist, Soil and Crop Sciences Dept.; Agricultural Engineer, USDA-ARS, Temple; Professor and Extension Wildlife and Fisheries Specialist – Overton, Dept. of Wildlife and Fisheries Sciences; Professor and Extension Dairy Specialist – Dallas, Dept. of Animal Science; Associate Professor and Extension Specialist, Dept. of Biological & Agricultural Engineering; Professor and Extension Livestock Specialist – Corpus Christi, Animal Science Dept.; Professor and State Extension Forage Specialist, Soil and Crop Science; Professor and Extension Horse Specialist, Animal Science Dept.; Associate Director, TWRI	LSHS Program Development Committee. Serve to ensure that the LSHS Program accurately captures and represents the species-specific information from the amassed body of work
TSSWCB, SWCDs, NRCS, Texas Department of Agriculture (TDA), Grazing Lands Conservation Initiative (GLCI), Texas Farm Bureau (TFB), Texas and Southwestern Cattle Raisers Association (TSCRA), Independent Cattleman's Association of Texas (ICA), Texas Cattle Feeders (TCFA), Texas Poultry Federation (TPF), Texas Association of Dairymen (TAD), Texas Wildlife Association (TWA), Texas Animal Health Commission (TAHC), Texas Parks and Wildlife Department (TPWD), and Texas Horse Council.	Compose the Project Steering Committee. Serve as the review panel for the educational materials. Provide endorsement for LSHS program.

Part II – Project Information

Project Type							
Surface Water	X	Groundwater					
Does the project implement recommendations made in a completed Watershed Protection Plan or an adopted TMDL or Implementation Plan?				Yes		No	X
If yes, identify the document.	N/A						
If yes, identify the agency/group that developed and/or approved the document.	N/A			Year Developed	N/A		

Watershed Information				
Watershed Name(s)	HUC (8 Digit)	Segment ID	305 (b) Cat.	Size (Acres)
Statewide	N/A	N/A	4 & 5	N/A

Water Quality Impairment
Describe all known causes (pollutants of concern) of water quality impairments from any of the following sources: 2008 Texas Water Quality Inventory and 303(d) List, Clean Rivers Program Basin Summary, Basin Highlights Reports or Other Documented Sources.
295 bacteria impaired waterbodies statewide, specifically those identified as having a NPS contribution with livestock attributed.

Project Narrative

Problem/Need Statement

According to the *2008 Texas Water Quality Inventory and 303(d) List*, 295 waterbodies in Texas are impaired for bacteria. To address the bacteria impaired waterbodies, Texas is developing and implementing total maximum daily loads (TMDLs), TMDL Implementation Plans, and Watershed Protection Plans. One of the primary strategies for reducing bacteria in many of these waterbodies is to provide technical and financial assistance to implement best management practices (BMPs) to reduce bacteria runoff from livestock. However, in order inspire behavior change, educational programs are needed for the major livestock classes (grazing and dairy cattle, poultry, horses), as well as feral hogs, to increase awareness of the bacteria issues and encourage voluntary implementation of BMPs and participation in technical and financial assistance programs to reduce the runoff of bacteria which will ultimately lead to improved water quality.

The TSSWCB, in collaboration with TWRI, AgriLife Extension, and other cooperating entities, have already done much to develop educational materials on bacteria issues for the major classes of livestock through multiple CWA §319(h) NPS grants from EPA. The grazing cattle component is being developed through TSSWCB project 06-05, *Lone Star Healthy Streams*. The horse component is being developed through TSSWCB project 06-08, *Education Program for Improved Water Quality in Copano Bay*. The dairy cattle component is being developed through TSSWCB project 06-07, *Monitoring and Educational Programs Focused on Bacteria and Nutrient Runoff on Dairy Operations in the Leon Watershed*. Portions of the poultry component are being developed through TSSWCB project 05-06, *PLAN for Tomorrow: Poultry Litter Application on New Sites*. Portions of the feral hog component are being refined through TSSWCB project 08-07, *Implementing Agricultural Nonpoint Source Components of the Plum Creek Watershed Protection Plan*. In addition, the USDA-NRCS has sponsored work contributing to the grazing cattle component, specifically a Grassland Reserve Program (GRP) funded project, *Environmental Management of Grazing Lands*, and a Conservation Innovation Grants (CIG) funded project, *Bacteria Runoff BMPs for Intensive Beef Cattle Operations*. Also, AgriLife Extension has done significant work with their own funding to develop the majority of the feral hog component by hosting Feral Hog Management Workshops across the state.

Notwithstanding this significant amassed body of work, there lacks a unifying and overarching theme to the educational materials developed through these disparate projects. There is a critical need to create synergy between these projects to establish the *Lone Star Healthy Streams Program* as the State's mechanism to provide a coordinated and comprehensive education program designed to increase awareness of the bacteria issues associated with grazing and dairy cattle, poultry, horses, and feral hogs; and encourage voluntary implementation of BMPs to reduce the runoff of bacteria which will ultimately lead to improved water quality. This project shall bring the amassed body of work together under the umbrella of the *Lone Star Healthy Streams Program*.

Project Narrative

General Project Description (Include Project Location Map)

The unified LSHS Program will bring the amassed body of work together under the umbrella of the *Lone Star Healthy Streams* Program and provide a coordinated and comprehensive education program designed to increase awareness of the bacteria issues associated with grazing and dairy cattle, poultry, horses, and feral hogs; and encourage voluntary implementation of BMPs to reduce the runoff of bacteria which will ultimately lead to improved water quality.

This project will continue and expand the work begun by the projects described in the previous section by:

1. Compiling the amassed body of work already developed through various TSSWCB and AgriLife Extension projects;
2. Developing standardized educational Resource Manuals on bacteria issues and BMPs for addressing bacteria runoff from grazing and dairy cattle, poultry, horses, and feral hogs;
3. Developing standardized educational presentations, for in-person LSHS Program delivery, on bacteria issues and BMPs for addressing bacteria runoff from grazing and dairy cattle, poultry, horses, and feral hogs; and
4. Developing an interactive website to disseminate the educational manuals and presentations assembled for grazing and dairy cattle, poultry, horses, and feral hogs.

TWRI and SCSC will assemble the Principal Investigators for the TSSWCB projects contributing to the amassed body of work. This *Lone Star Healthy Streams* Program Development Committee will serve to ensure that the Extension Program Specialist accurately captures and represents the species-specific information from the amassed body of work.

TWRI and AgriLife Extension will utilize the framework of TSSWCB project 06-05 *Lone Star Healthy Streams* Project Steering Committee to establish a LSHS Program Steering Committee to direct this synergistic project. This LSHS Program Steering Committee will include representatives of the grazing cattle, dairy cattle, horse, and poultry industries, as well as wildlife organizations (feral hogs). This Program Steering Committee will provide a "sounding board" and serve as the primary review panel for the educational materials developed. This Steering Committee is a partnership of the primary federal and state agencies that interface with livestock producers and livestock organizations. The LSHS Program Steering Committee will be facilitated by TWRI and AgriLife Extension and include representatives from the TSSWCB, SWCDs, NRCS, TDA, GLCI, TFB, TSCRA, ICA, TCFA, TPF, TAD, TWA, TAHC, TPWD, and Texas Horse Council. Endorsement of the final LSHS Program by Steering Committee member entities will be sought.

The Professor/State Forage Specialist, with assistance as needed from TWRI, will also work closely with AgriLife Extension Regional Program Directors, County Extension Agents, Extension Specialists, and other Extension Leadership, as appropriate, to ensure that the LSHS Program is supported statewide to ensure delivery of this program upon completion.

An important component of this project will be to make the educational materials and program easily accessible by the public, landowners, county agents, soil and water conservation districts, decision makers, and others through development of an interactive website. This interactive website will be developed using the latest appropriate technology. The LSHS Program website could be similar to the Texas Watershed Steward Program modules at http://tws.tamu.edu/workshop_presentations.html or the approach taken at http://mosquitosafari.tamu.edu/.

The *Lone Star Healthy Streams* Extension Program Specialist, under the supervision of the Extension State Forage Specialist and with guidance of the TWRI Project Manager, will be responsible for development of all aspects of the education program. Additionally, the Program Specialist will work with TDA (pesticide applicator program) and Texas Certified Crop Advisors Program to establish CEU credits for the components of the LSHS Program to encourage participation by landowners and crop advisors in program delivery.

Tasks, Objectives and Schedules						
Task 1:	Project Administration					
Costs:	Federal:	$14,844	Non-Federal:	$9,896	Total:	$24,740
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 15th of January, April, July and October. QPRs shall be posted to the project website and distributed to all project partners.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.2:	TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.3	TWRI will host coordination meetings, conference calls, or TTVN meetings with the TSSWCB Project Manager and SCSC at least quarterly to discuss project activities, project schedule, communication needs, deliverables, and other requirements. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project personnel.					
	Start Date:	Month 1		Completion Date:		Month 36
Subtask 1.4:	TWRI will work with AgriLife Extension to develop a Final Report summarizing all project activities.					
	Start Date:	Month 30		Completion Date:		Month 36
Deliverables	• QPRs in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Lists of action items needed from project coordination meetings • Final report					

Tasks, Objectives and Schedules						
Task 2:	LSHS Program Coordination					
Costs:	Federal:	$17,249	Non-Federal:	$15,870	Total:	$33,119
Objective:	To coordinate the development of the LSHS Program with 1) a livestock industry Steering Committee, 2) a TSSWCB Principal Investigator Development Committee, and 3) AgriLife Leadership.					
Subtask 2.1:	AgriLife Extension SCSC will hire an Extension Program Specialist. The Extension Program Specialist will report to the State Extension Forage Specialist. The Program Specialist will be responsible for carrying out all Subtasks for Tasks 2 and 3.					
	Start Date:	Month 1	Start Date:	Month 6		
Subtask 2.2:	TWRI and AgriLife Extension will utilize the framework of the TSSWCB project 06-05 LSHS Project Steering Committee to establish a LSHS Program Steering Committee to direct this synergistic project. This LSHS Program Steering Committee will include entities representing grazing and dairy cattle, poultry, horses, and feral hogs. At a minimum, membership shall be composed of TSSWCB, SWCDs, NRCS, TDA, GLCI, TFB, TSCRA, ICA, TCFA, TPF, TAD, TWA, TAHC, TPWD, and Texas Horse Council. This LSHS Program Steering Committee will primarily serve as the review panel for the educational materials developed through the project; endorsement of the final LSHS Program by Steering Committee member entities will be sought. This LSHS Program Steering Committee will meet as frequently as needed, likely semi-annually. Note that project steering committees for independent projects will not be directly affected by this project; those committees will continue to provide direction and guidance to those projects.					
	Start Date:	Month 1	Start Date:	Month 36		
Subtask 2.3:	The Extension Program Specialist will work with the Principal Investigators of the amassed body of work to compile the information and educational materials developed. At a minimum this LSHS Program Development Committee shall consist of the Associate Professor and Extension Dairy Specialist – Stephenville, Animal Science Dept.; Assistant Professor and Extension Wildlife Specialist, Wildlife Fisheries & Sciences Dept.; Assistant Professor and Extension Waste Management Specialist, Poultry Science Dept.; Professor and State Soil Environmental Specialist, Soil and Crop Sciences Dept.; Agricultural Engineer, USDA-ARS, Temple; Professor and Extension Wildlife and Fisheries Specialist – Overton, Dept. of Wildlife and Fisheries Sciences; Professor and Extension Dairy Specialist – Dallas, Dept. of Animal Science; Associate Professor and Extension Specialist, Dept. of Biological & Agricultural Engineering; Professor and Extension Livestock Specialist – Corpus Christi, Animal Science Dept.; Professor and State Extension Forage Specialist, Soil and Crop Science; Professor and Extension Horse Specialist, Animal Science Dept.; and Associate Director, TWRI. This LSHS Program Development Committee shall meet as often as needed, including by TTVN. This LSHS Program Development Committee will primarily serve to ensure that the Extension Program Specialist accurately captures and represents the species-specific information from the amassed body of work.					
	Start Date:	Month 1	Start Date:	Month 18		
Subtask 2.4:	The Professor/State Forage Specialist, with assistance as needed from TWRI, will work closely with Texas AgriLife Extension Service Regional Program Directors, County Extension Agents, Extension Specialists, and other Extension Leadership, as appropriate, to ensure that the LSHS Program is supported around the state to ensure delivery of this program upon completion.					
	Start Date:	Month 18	Start Date:	Month 36		
Deliverables	• Meeting materials for LSHS Program Steering Committee • Summaries of Development Committee meetings and action items needed • Summaries of Extension Leadership meetings and action items needed					

Tasks, Objectives and Schedules						
Task 3:	LSHS Program Development					
Costs:	Federal:	$276,672	Non-Federal:	$180,229	Total:	$456,901
Objective:	To compile the educational materials developed by ongoing TSSWCB and AgriLife Extension projects and develop standardized manuals and presentations on bacteria issues and associated BMPs for the major of the classes of livestock, as well as feral hogs.					
Subtask 3.1:	The Extension Program Specialist will compile the amassed body of work including, but not limited to, information and educational materials developed through TSSWCB projects 06-05 (*Lone Star Healthy Streams*), 06-08 (*Education Program for Improved Water Quality in Copano Bay*), 06-07 (*Monitoring and Educational Programs Focused on Bacteria and Nutrient Runoff on Dairy Operations in the Leon Watershed*), 05-06 (*PLAN for Tomorrow: Poultry Litter Application on New Sites*), and 08-07 (*Implementing Agricultural Nonpoint Source Components of the Plum Creek WPP*).					
	Start Date:	Month 7		Start Date:		Month 12
Subtask 3.2:	The Extension Program Specialist will work with the materials (subtask 3.1) and the Development Committee (subtask 2.3) to develop standardized educational manuals on bacteria issues and BMPs for addressing bacteria runoff from grazing cattle, dairy cattle, poultry, horses, and feral hogs. These five Resource Manuals will include species specific information on the bacteria water quality issues, BMPs (i.e,. BMP description, effectiveness, cost, photo and other pertinent information), and technical and financial assistance programs available for implementing BMPs. These Resource Manuals should be similar to the *Texas Watershed Steward Handbook* developed through TSSWCB project 05-05, *A Community-based Water Quality Curriculum which Enhances Stakeholder Involvement in Watershed Protection Plan Initiatives: A Pilot Project*.					
	Start Date:	Month 7		Start Date:		Month 30
Subtask 3.3:	The Extension Program Specialist will work with the materials (subtask 3.1) and the Development Committee (subtask 2.3) to develop standardized educational presentations on bacteria issues and BMPs for addressing bacteria runoff from grazing and dairy cattle, poultry, horses, and feral hogs to be used for in-person LSHS Program delivery. These presentations should be based on and flow from the Resource Manuals (subtask 3.2)					
	Start Date:	Month 7		Start Date:		Month 30
Subtask 3.4:	The Extension Program Specialist will develop promotional materials to be used for LSHS Program delivery and to inform the public of the availability of the LSHS Program. Promotional materials should at least include one-pagers or brochures on each species-specific component and the Program as a whole; and standard press releases for species-specific component delivery events and the Program as a whole.					
	Start Date:	Month 7		Start Date:		Month 30
Subtask 3.5:	The Extension Program Specialist will work with TDA and Texas Certified Crop Advisors Program to establish CEU credits for the educational program to encourage participation by landowners and crop advisors in the program.					
	Start Date:	Month 19		Start Date:		Month 30
Subtask 3.6:	The Extension Program Specialist will develop pre- and post- participant surveys to evaluate (1) changes in producer knowledge and awareness, (2) expected adoption of BMPs, and (3) any barriers to producer participation and successful implementation of the program to be used at in-person LSHS Program delivery events. Surveys may need to be species-specific.					
	Start Date:	Month 7		Start Date:		Month 30
Subtask 3.7:	The Extension Program Specialist, Professor & State Forage Specialist, Assistant Professor & District Agronomist at Overton, and the Assistant Professor & District Agronomist at Corpus Christi will pilot each of the five components of the LSHS Program at selected sites in East, Central, and South Texas. Watersheds selected for piloting of the LSHS Program shall be TSSWCB priority TMDL or WPP watersheds.					
	Start Date:	Month 31		Start Date:		Month 36

Deliverables	• 250 hard copies of each of the five standardized educational manuals for management of bacteria runoff from grazing cattle, horse, poultry, dairy cattle, and feral hogs • Five standardized presentations for management of bacteria runoff from grazing cattle, horse, poultry, dairy cattle, and feral hogs • CEU credits for LSHS Program • LSHS Program Participant Surveys • LSHS Program promotional materials • Pilot delivery of each of the five components of the LSHS Program

Tasks, Objectives and Schedules						
Task 4:	Develop Interactive Website To Increase Access To LSHS Program					
Costs:	Federal:	$70,836	Non-Federal:	$47,224	Total:	$118,060
Objective:	To make the educational materials developed under Task 2 easily accessible by the public, landowners, county agents, soil and water conservation districts, decision makers, and others through development of an interactive website.					
Subtask 4.1:	Using the latest appropriate technology, the Extension Program Specialist and TWRI IT Associate will work together to develop an interactive website to make the educational materials developed under Task 3 easily accessible by the public, landowners, county agents, soil and water conservation districts, decision makers, and others. The online modules will flow from the Resource Manuals and in-person presentations and utilize the surveys developed in Subtask 3.6 above. The Extension Program Specialist will also evaluate the feasibility of providing CEUs for participation in online modules and if found to be feasible, will work to make those available online as well.					
	Start Date:	Month 7	Start Date:	Month 30		
Subtask 4.2:	The Extension Program Specialist will develop and provide information for the website to the TWRI IT Specialist and update this information quarterly. The number of unique visitors to the website will be tracked to assess its impact and reported in each QPR.					
	Start Date:	Month 31	Start Date:	Month 36		
Deliverables	• Interactive website for management of bacteria runoff from grazing cattle, horse, poultry, dairy cattle, and feral hogs					

Project Goals (Expand from NPS Summary Page)

- The goal of this project is to reduce the amount of bacteria entering Texas waterbodies from the major classes of livestock. To accomplish this, the Lone Star Healthy Streams (LSHS) education program will be expanded through integration of grazing cattle, horse, poultry, dairy cattle, and feral hog components into a synergistic, industry endorsed LSHS Program ready for statewide delivery.

Measures of Success (Expand from NPS Summary Page)

(1) LSHS Program for grazing cattle, horses, poultry, dairy cattle, and feral hogs ready for statewide delivery including:
- Standardized resource manuals bacteria runoff management from each species
- Standardized presentations for bacteria runoff management from each species
- Interactive website for bacteria runoff management from each species

(2) Endorsement of LSHS Program by Steering Committee, Development Committee, and AgriLife Leadership

(3) Promotion of the availability of the LSHS Program

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

Goals and/or Milestone(s)

This proposal will assist the State in meeting Short-Term Goal Three for NPS Management - Education by conducting education and technology transfer activities to help increase awareness of NPS pollution and prevent activities contributing to the degradation of water bodies, by NPS pollution.

This proposal will assist the State in meeting the Objective of reducing the amount of NPS pollution entering the water bodies of Texas through pollution prevention activities and education by: enhancing existing outreach programs at the state, regional, and local levels to maximize the effectiveness of NPS education; administering programs to educate citizens about water quality and their potential role in causing NPS pollution; and conducting outreach through Extension to facilitate broader participation and partnerships.

This project will assist the State in meeting Milestone F- Implement voluntary actions in the watershed (education and outreach) and evaluate BMP implementation effectiveness.

Part III – Financial Information

Budget Summary			
Federal	$ 379,601	% of total project	60%
Non-Federal	$ 253,219	% of total project	40%
Total	$ 632,820	Total	100%

Category	Federal	Non-Federal	Total
Personnel	$ 224,986	$ 138,916	$ 363,902
Fringe Benefits	$ 59,102	$ 33,234	$ 92,336
Travel	$ 21,000	$ 0	$ 21,000
Equipment	$ 0	$ 0	$ 0
Supplies	$ 25,000	$ 0	$ 25,000
Contractual	$ 0	$ 0	$ 0
Construction	$ 0	$ 0	$ 0
Other	$ 0	$ 0	$ 0
Total Direct Costs	$ 330,088	$ 172,150	$ 502,238
Indirect Costs (≤15%)	$ 49,513	$ 44,759	$ 94,272
Unrecovered IDC	$ 0	$ 36,310	$ 36,310
Total Project Costs	$ 379,601	$ 253,219	$ 632,820

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 15% of total federal direct costs. The project budget generally covers a three year period.

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	$ 224,986	• TWRI Project Manager @ 8% effort • TWRI IT Associate @ 6% effort • Extension Program Specialist @ 100% effort
Fringe Benefits	$ 59,102	• 17.1% plus group health of $494/month per fte
Travel	$ 21,000	• TWRI @ $500/yr • Extension Program Specialist @ $1,000/yr • Prof & State Forage Specialist @ $3500/yr • Asst Prof/District Agronomist – Overton @ $1,000/yr • Asst Prof/District Agronomist – Corpus @ $1,000/yr
Equipment	$ 0	N/A
Supplies	$ 25,000	• $5,000 in year 1 computer and printer, and $10,000/year in years 2-3 for printing of resource manuals
Contractual	$ 0	N/A
Construction	$ 0	N/A
Other	$ 0	N/A
Indirect	$ 49,513	• 15% of Total Direct Federal

Budget Justification (Non-Federal)		
Category	Total Amount	Justification
Personnel	$ 138,916	• TWRI Project Manager @ 2% effort • Prof & State Forage Specialist @ 17.1% effort • Asst Prof/District Agronomist – Overton @ 17.1% effort • Asst Prof/District Agronomist – Corpus @ 17.1% effort
Fringe Benefits	$ 33,234	• 17.1% plus group health of $494/month per fte
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	$ 44,759	• 26% of Total Direct Non-Federal Match
Unrecovered IDC	$ 36,310	• 11% of Total Direct Federal