Texas State Soil and Water Conservation Board
Clean Water Act §319(h) Nonpoint Source Grant Program
FY 2008 Project Workplan 08-08

NONPOINT SOURCE SUMMARY PAGE for the CWA §319(h) Agricultural/Silvicultural Nonpoint Source Grant Program						
Title of Project:	Implementing the Pecos River Watershed Protection Plan through Invasive Species Control (Saltcedar) and by Providing Technical and Financial Assistance to Reduce Agricultural Nonpoint Source Pollution					
Project Goals/Objectives:	To begin implementing some of the highest priority practices recommended in the WPP that has been developed for the Pecos River in Texas as a means to improve the quality of water in the Pecos River and to improve the health of the watershed. To continue chemical saltcedar treatments along the riparian corridor in areas that have not already been treated. To encourage landowners to voluntarily implement recommended management practices on their land, especially those that address nutrient and sediment loss and consequently affect dissolved oxygen levels, by offering technical and financial assistance. To deliver pertinent educational programs.					
Project Tasks:	(1) Project Coordination, Administration and reporting (2) Promotion, Development and Implementation of WQMPs (3) Chemical treatment of Saltcedar (4) Biological control of Saltcedar (5) Prescribed burning/debris removal (6) Support and Facilitation of Watershed Protection Plan Implementation (7) Compilation of Surface Water Quality Monitoring Data					
Measures of Success:	• Chemical treatment of an estimated 1,775 acres of saltcedar along the main stem of the Pecos • Removal of debris resulting from past saltcedar treatment within the riparian corridor • Continued delivery of landowner education and involvement programs • Establishment and implementation of 20 WQMPs within the watershed targeted toward managing pollutants affecting DO levels in the river • Biological control of saltcedar implemented at 10 sites across the watershed					
Project Type:	Implementation (x); Education (x); Planning ( ); Assessment ( ); Groundwater ( )					
Status of Water Body: 2008 Water Quality Inventory and 303(d) List	Segment ID: 2310, 2311, 2312	Parameter: dissolved oxygen ammonia, chl-a, nitrate, ortho-P, golden alga		Category: 5c screening level concerns		
Project Location: (Statewide or County and Watershed Name)	Pecos River Watershed in Texas in Crane, Crockett, Loving, Pecos, Reeves, Terrell, Upton, Ward, and Winkler Counties					
Key Project Activities:	Hire Staff (x); Surface Water Quality Monitoring ( ); Technical Assistance (x); Education (x); Implementation (x); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )					
NPS Management Program Elements:	• LTG Objectives 1, 2, 3, 5, 6, and 7 • STG 1, Objective D; STG 2, Objective B and D: STG 3, Objective A, B, D and F • Milestones A, C, E and F					
Project Costs:	Federal:	$1,499,859	Non-Federal Match:	$526,956	Total:	$2,026,815
Project Management:	• Texas Water Resources Institute • Crockett Soil and Water Conservation District • Upper Pecos Soil and Water Conservation District					
Project Period:	November 1, 2009 – October 31, 2012					

Part I – Applicant Information

Applicant							
Project Lead	B.L. Harris						
Title	Acting Director						
Organization	Texas Water Resources Institute						
E-mail Address	bharris@ag.tamu.edu						
Street Address	1500 Research Parkway, Suite A 240 2118 TAMU						
City	College Station	County	Brazos	State	TX	Zip Code	77843-2118
Telephone Number	979-845-1851			Fax Number	979-845-8554		

Applicant							
Project Lead	Calvin G. Gerke						
Title	Chairman						
Organization	Upper Pecos Soil and Water Conservation District #213						
E-mail Address	upperpecosswcd@tx.nacdnet.org						
Street Address	1415 W 3rd St						
City	Pecos	County	Reeves	State	TX	Zip Code	79772
Telephone Number	432-445-3196			Fax Number	432-445-9718		

Applicant							
Project Lead	Paul C. Perner III						
Title	Chairman						
Organization	Crockett Soil and Water Conservation District #235						
E-mail Address	crockettswcd@tx.nacdnet.org						
Street Address	PO Box 1048						
City	Ozona	County	Crockett	State	TX	Zip Code	76943
Telephone Number	325-392-2301			Fax Number	325-392-4146		

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. Responsible for technical review and certification of WQMPs. Responsible for contracting of saltcedar spraying and oversight.
Texas Water Resources Institute (TWRI)	Project coordination and reporting
Texas AgriLife Extension Service (Extension)	Implementation oversight, educational programming coordination, saltcedar leaf beetle implementation
Texas Forest Service (TFS)	Saltcedar (riparian brush) burning/debris removal
Upper Pecos Soil and Water Conservation District #213 (SWCD 213), Crockett Soil and Water Conservation District #235 (SWCD 235)	Responsible for the supervision of the technicians and acquiring landowner permission for saltcedar spraying. Responsible for developing and implementing WQMPs within the Pecos River Watershed. Responsible for tracking the implementation of WQMPs. Responsible for providing necessary project information for quarterly progress reports and final report.
USDA Natural Resources Conservation Service (NRCS)	Provide technical assistance as requested

Part II – Project Information

Project Type							
Surface Water	x	Groundwater					
Does the project implement recommendations made in a Watershed Protection Plan or TMDL Report or Implementation Plan?				Yes	x	No	
If yes, identify the document.	A Watershed Protection Plan for the Pecos River in Texas						
If yes, identify the agency/group that developed and/or approved the document.	Landowners and entities in the Pecos River watershed, facilitated by Texas AgriLife Extension Service, Texas Water Resources Institute, and TSSWCB		Year Developed	2008			

Watershed Information				
Watershed Name(s)	Hydrologic Unit Code (8 Digit)	Segment ID	305 (b) Category	Size (Acres)
Pecos River Watershed in Texas	13070001, 13070002, 13070003, 13070004, 13070005, 13070006, 13070007, 13070008, 13070009, 13070010, 13070011	2310, 2311, 2312	5c	9,984,000

Project Narrative

Problem/Need Statement

The geographic focus of the WPP is the Texas portion of the Pecos River watershed. The Pecos River begins in the Sangre de Cristo Mountains of North-Central New Mexico, travels through Eastern New Mexico, crosses into Texas at Red Bluff Reservoir, winds through west Texas, and then empties into the Rio Grande in Val Verde County above the International Amistad Dam. Segment 2312 - Red Bluff Reservoir, Segment 2311- Upper Pecos River, and Segment 2310 - Lower Pecos River are designated for contact recreation and high aquatic use, with segment 2310 also being designated as a public water supply.

The Pecos River is a greatly depleted western river flowing 418 winding miles through hot, dry, semi-arid landscapes in Texas. It is the largest river sub-basin flowing into the Rio Grande from the United States. The Pecos River itself is also the lifeblood of many communities within its reaches, mainly as an irrigation source, recreational uses, and as recharge for underlying aquifers. As such, its importance historically, biologically and hydrologically to the future of the Rio Grande Basin is critical. The flows of the once great Pecos River have dwindled to a mere trickle due to many causes – some natural and some man-induced. Its upper reaches in Texas now resemble a creek rather than a river. If the integrity of the entire Rio Grande Basin below the Pecos is to be improved and maintained, then it is crucial that both the water quality and quantity of Pecos flows be improved and stabilized within a natural flow regime.

Due to the lowered water quality and stream flows in the upper portion of the river, the aquatic community of the Pecos River has been drastically altered according to reports from biologists and to local users of the river. No longer does the river support as many diverse communities of aquatic plants, invertebrates, microorganisms, fish and amphibians as is described in the *WPP for the Pecos River in Texas*. Insufficient dissolved oxygen (DO) levels and concerns of elevated nutrient levels have contributed to this shift in the aquatic community and must be addressed to return water quality to meet state standards. The greatly reduced aquatic diversity has also been negatively affected by changes in river hydrology, riparian community destruction, oil and gas activities, irrigation demands, long and short-term droughts, damming of the river and the desertification of the upland watershed. Factors causing these changes, both natural and man-made, have allowed invasive plant species, such as saltcedar, to dominate the riparian corridor and other nuisance brush species to become firmly established on upland areas and have likely contributed to water quality declines, such as the DO impairment in the upper reaches of the river.

According to data from the U.S. Section of the International Boundary and Water Commission (IBWC), the Pecos River contributes 274 million m^3 of streamflow to the Rio Grande, which accounts for approximately 11% of the total annual inflow into Amistad International Reservoir. However, it also contributes to the total dissolved solids (TDS) (salt) loading into the reservoir at an annual rate of 0.54 million tons or 29.5% of the total annual salt load. The concentration of TDS of the Amistad International Reservoir exceeded 1,000 ppm for a month in 1988, and has fluctuated since. It is important to control salt loading from the Pecos to Rio Grande if TDS of the reservoir are to be kept in compliance with the Texas Surface Water Quality Standards. Several key areas where salts enter the river have been identified and quantified in the WPP; however, the sources of these salts remain unknown.

Watershed health has also suffered greatly over time. Overgrazing dating back to the 19^{th} Century initiated the transition of a grass dominated landscape to one dominated by brush. This transition has led to a shift in the function of the watershed and may be responsible for increased evapotranspiration and decreased forage production. Numerous studies conducted on rangeland ecosystems have indicated that transitioning rangelands from shrub-dominated to grass-dominated systems will result in more and cleaner water available in the environment. To work toward this transition, technical and financial assistance is needed for brush control and subsequent re-vegetation.

This project will implement selected strategies set forth in the Pecos River WPP. Areas focused on in this workplan are chemical treatment of saltcedar stands and controlling re-growth in previously treated areas with biological control methods, removal and management of debris resulting from saltcedar management, education of stakeholders about project activities and best management practices (BMPs), gathering monitoring data to assess the overall effect of implemented BMPs, developing and implementing 20 WQMPs that target riparian restoration, grazing management and other practices that can mitigate pollutants that affect in-stream DO and establishing 10 saltcedar leaf beetle colonies

across the watershed where chemical saltcedar control is not desired, feasible or economical.

Agricultural producers, along with SWCDs, TSSWCB, NRCS and EPA, have been collaborating to protect natural resources in Texas for decades. Through the TSSWCB's Water Quality Management Plan (WQMP) Program, farmers and ranchers routinely implement BMPs on their lands utilizing the cost-share and technical assistance programs of SWCDs, who receive state and federal funds from TSSWCB, EPA, and NRCS. 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 NPS pollution. The BMPs prescribed in a WQMP are defined in the NRCS Field Office Technical Guide. SWCDs provide for technical assistance to producers seeking to develop a WQMP. TSSWCB and NRCS have various cost-share programs which provide financial assistance to producers in implementing a WQMP.

Project Narrative

General Project Description (Include Project Location Map)

This project will begin implementing portions of the WPP developed for the Pecos River watershed in Texas. It will focus primarily on implementing three of the highest priority management measures identified in the WPP. These three practices, chosen by landowners, are the control of saltcedar and other brush species in the riparian corridor, removing the debris left by saltcedar control, revegetating these areas through the development and implementation of WQMPs.

Continuing to treat saltcedar infestations along the riparian corridor of the river using aerially applied herbicide is the initial management strategy identified in the WPP that will be implemented as a part of this project. Approximately 1,775 acres of saltcedar along the main river channel of the river remain to be treated. This project will focus on spraying as much of this remaining live saltcedar in the reach of the river between Interstate-20 and Val Verde County as possible. This process will involve the acquisition of permission from landowners to spray saltcedar on their private property and to conduct follow-up activities such as debris removal, re-vegetation, long-term maintenance and additional treatment as necessary. Undoubtedly, there will be some areas of the river that do not get sprayed due to landowners desire not to participate or the inability of the helicopter to safely and effectively spray these areas.

Removing dead plant material left behind from the saltcedar spraying effort is also a major component of this project. Carrying out this task will help combat low DO levels in the river by removing a large portion of decaying material very near the river and will ultimately reduce biological oxygen demand (BOD) levels. In addition, removing treated saltcedar will also reduce sediment loading and allow flood waters to move down the river channel with fewer restrictions while carrying less debris. Burning this debris is currently the most cost-effective option available and is the preferred method of removal along the river. Natural re-vegetation will benefit greatly from burning this debris; nutrients left behind after the burns will benefit plants that come back and promote their prompt re-establishment and reduce sediment oxygen demand (SOD) by preventing future sediment loading. The Texas Forest Service (TFS) will conduct controlled burns along the river to remove remaining debris. This work will leverage funding from other efforts in the watershed to remove the remaining debris in the upper portion of the river.

The Crockett and Upper Pecos SWCDs will provide technical assistance to agricultural producers in developing and implementing WQMPs in the Pecos River Watershed focused on restoring riparian areas and mitigating pollutant loads that adversely affect in-stream DO levels. The SWCD Technicians will develop WQMPs and assist landowners in acquiring cost-share assistance for the implementation of BMPs. This project will improve and enhance the abilities of local SWCDs to assist area landowners in preventing and abating agricultural NPS pollution.

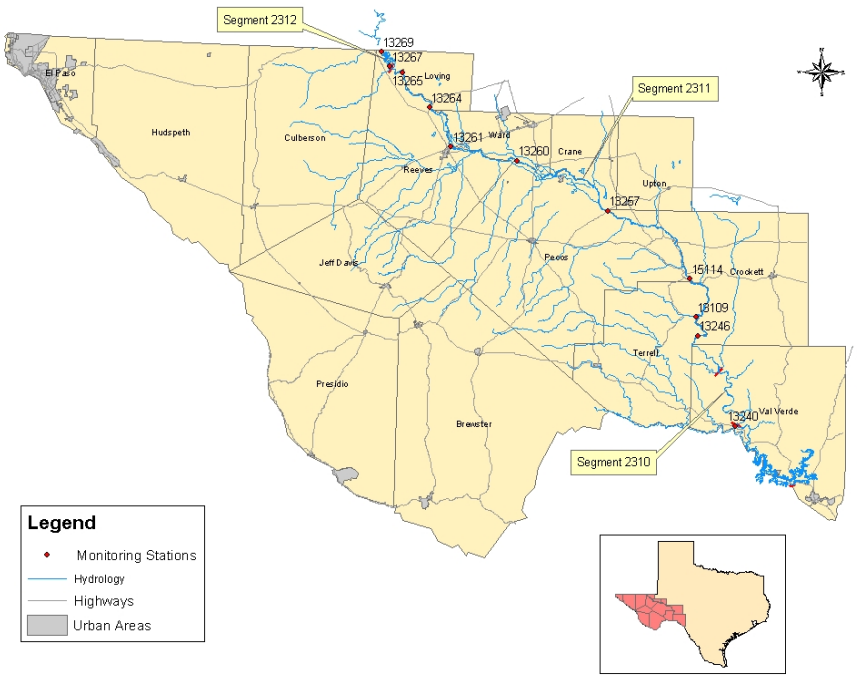
The technicians will be placed in the Upper Pecos SWCD (#213) and the Crockett SWCD (#235) and will work through cooperative agreements in adjacent SWCDs [Devil's River (#224), Trans-Pecos (#231), Rio Grande-Pecos (#237) and Sandhills (#241)]. The technicians will work under direction of the SWCDs, with assistance from the TSSWCB and NRCS, as needed.

The technicians will be critically important in promoting the components of this project, including WQMP development,

cost-share availability, and encouraging participation from agricultural producers. The technicians will work with TSSWCB, NRCS and Extension to educate producers and other groups about water quality issues and how WQMPs and BMPs provide an opportunity to enhance the value of their operation and achieve water quality goals for the watershed at the same time. The technicians will cooperate and communicate with the Pecos River Watershed Coordinator in order to efficiently and effectively achieve project goals and to summarize activities and achievements made throughout the course of this project.

The technicians, with assistance from NRCS and TSSWCB, will assist landowners in the development of WQMPs and associated Prescribed Grazing Plans. WQMPs are developed according to the NRCS Field Office Technical Guide. Once the WQMP is developed, it is sent to TSSWCB for technical review and certification. Upon certification of the WQMP, the District Technician will work with the landowner to implement the BMPs prescribed in the WQMP.

The continued delivery of educational programs and information is crucial to maintaining support for the WPP and its implementation. Project personnel will work closely with County Extension Agents, Extension Program Specialists and others to bring pertinent informational programs and information to the residents and landowners of the watershed. Seminars that provide information on watershed stewardship, proper grazing management, prescribed burning, and land management are programs that will be held in the watershed, as described in the WPP.



Observing changes in water quality and quantity will serve as means to evaluate the management practices implemented in the watershed and their ability to improve water quality. Many sources of data currently exist, however they are not compiled in a central location that is easily accessible or user friendly. An Extension Assistant will be tasked with compiling water quality and quantity data on a monthly basis and adding it to a central database that can be accessed through the project website.

Continuing to treat saltcedar infestations along the riparian corridor of the river and in upland areas of the watershed is critical to achieving sustainable long-term management of saltcedar in the Pecos River watershed. In areas where it is not desired, physically or economically feasible to treat saltcedar using aerially applied herbicide, other methods must be employed. Establishing populations of the saltcedar leaf beetle is one biological management option that will have long-term management benefits at a reduced cost as compared to aerial herbicide application. Previously established saltcedar leaf beetle colonies have shown the ability to repeatedly defoliate saltcedar stands and lead to the tree's eventual demise. This project will establish 10 separate saltcedar leaf beetle colonies throughout the Pecos River watershed where aerially applied chemical treatment is not feasible, chemical treatment has not been previously applied or where landowners desire. Extension will track and document the location and release date of biological control sites and the acres of defoliated saltcedar on each site.

Water Quality Impairment

Describe all known causes (pollutants of concern) of water quality impairments from any of the following sources: 2008 Water Quality Inventory and 303(d) List, 2008 Summary of Waterbodies with Water Quality Concerns (Secondary Concerns List) or Other Documented Sources (ex. Clean Rivers Program Basin Summary or Basin Highlights Reports).

Lower Pecos River Segment 2310
2008 Concerns & Impairment

Assessment Area		Use or Concern	Status	Concern Description
2310_01	Upper segment boundary to Big Hackberry Canyon	Near Non-attainment	Concern	Golden alga
2310_02	FM 2083 nr Pandale Rd to Lower segment boundary	Near Non-attainment	Concern	Golden alga

Upper Pecos River Segment 2311
2008 Concerns & Impairment

Assessment Area		Use or Concern	Status	Concern Description
2311	Entire segment	Near Non-attainment	Concern	Golden alga
2311_01	Red Bluff dam to FM 652	Screening level	Concern	Chlorophyll-a
2311_04	Barstow dam to Bus. 20	Near Non-attainment	Concern	E. coli geomean & single sample
2311_05	Bus. 20 to FM 1776	Non-supporting	5c	Continuous 24 hr min DO
		Non-supporting	5c	DO 24 hr min
		Screening level	Concern	Chlorophyll-a
2311_06	FM 1776 to US 67	Non-supporting	5c	Continuous 24 hr min DO
		Non-supporting	5c	DO 24 hr min
2311_07	US 67 to US 290	Screening level	Concern	Chlorophyll-a

Red Bluff Reservoir Segment 2312
2008 Concerns & Impairment

Assessment Area		Use or Concern	Status	Concern Description
2312	Entire segment	Near Non-attainment	Concern	Golden alga
2312_01	State line to Mid-lake	Screening level	Concern	Chlorophyll-a
		Screening level	Concern	Nitrate
2312_02	Mid-lake to dam	Screening level	Concern	DO grab
		Screening level	Concern	Ammonia
		Screening level	Concern	Chlorophyll-a
		Screening level	Concern	Ortho-P

Project Goals (Expand from Summary Page)

The main goal of this project is to begin implementing some of the highest priority management practices recommended in the WPP developed for the Pecos River in Texas as a means to improve the quality of water in the Pecos River and the overall health of the watershed. To achieve this overarching goal, a suite of management and educational measures will be implemented throughout the watershed. These measures include the implementation of additional chemical saltcedar treatments along the riparian corridor in areas not previously treated, the establishment and evaluation of biological saltcedar control measures, implementation of WQMPs in and near the riparian corridor, debris burning will be conducted to promote remediation of riparian habitat along with promoting improved water quality (especially DO), water quality data will continue to be compiled and education and outreach efforts will be implemented to promote WPP implementation. Collectively, these efforts will promote the implementation of the WPP and encourage landowners to voluntarily implement recommended management practices on their land, especially those that address nutrient and sediment loss and consequently affect dissolved oxygen levels, by offering technical and financial assistance.

Tasks, Objectives and Schedules						
Task 1:	Project Coordination and Administration					
Costs:	Federal:	$199,135	Non-Federal:	$109,132	Total:	$308,267
Objective:	To effectively administer, coordinate and monitor all work performed under this project including technical and financial supervision, preparation of status reports, and maintenance of project files and data.					
Subtask 1.1:	TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. Extension, SWCD Technicians and TFS will collaborate with TWRI to develop QPRs. 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 on the project website and distributed to all project partners.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 1.2:	TWRI will host coordination meetings, conference calls, or TTVN meetings with the TSSWCB Project Manager and all Project Partners at least quarterly to discuss project activities, project schedule, lines of responsibility, communication needs, 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 1.3:	TWRI will perform accounting functions for Tasks 1, 4, 5, 6 and 7 and submit appropriate reimbursement forms to TSSWCB at least quarterly. The SWCD Technicians and Bookkeepers will perform accounting functions for Task 2 and will submit appropriate Reimbursement Forms to TSSWCB at least monthly. TSSWCB will manage project funds for Task 3.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 1.4:	TWRI will continue to host and maintain an internet website (http://pecosbasin.tamu.edu/) for the public dissemination of information pertaining to the implementation of the Pecos River WPP. Project partners will provide appropriate content matter for the website as needed.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 1.5:	TWRI, in collaboration with Extension, TFS, and the SWCDs, will develop, complete and submit an aggregate final report to TSSWCB at the culmination of the project. This report will be provided in electronic and hard copy format. The TSSWCB project manager will set the appropriate due dates for this task.					
	Start Date:	Month 33	Completion Date:	Month 36		
Subtask 1.6:	TWRI will hire (Months 1-3) and oversee (Months 4-36) the Pecos River Watershed Coordinator. This position will be responsible for the general oversight and coordination of all project activities, be responsible for reporting requirements and directing educational activities, and serve as the primary conduit for interaction with landowners and entities to facilitate the implementation of the WPP. The Pecos River Watershed Coordinator shall be stationed in the watershed at Fort Stockton.					
	Start Date:	Month 1	Completion Date:	Month 36		
Deliverables	• QPRs in electronic format • Lists of action items needed from project coordination meetings • Project Website • Reimbursement Forms and necessary documentation in hard copy format • Final Report in both electronic and hard copy formats					

Tasks, Objectives and Schedules						
Task 2:	Promotion, Development and Implementation of WQMPs					
Costs:	Federal:	$523,800	Non-Federal:	$133,334	Total:	$657,134
Objective:	To promote the WQMP Program and the availability of technical and financial assistance. To encourage participation in the WQMP Program by agricultural producers in the Pecos River watershed. To provide technical assistance to agricultural producers in the Pecos River watershed for the development and implementation of WQMPs. To provide financial assistance to support the installation of BMPs designed to achieve agricultural NPS pollutant load reductions in the Pecos River. To track implementation of WQMPs to achieve water quality improvement.					
Subtask 2.1:	SWCD 213 and SWCD 235 will each hire one full-time District Technician to promote, develop, and implement WQMPs. SWCD 213 and SWCD 235 will each hire one part-time Bookkeeper to assist with project accounting functions.					
	Start Date:	Month 1	Completion Date:	Month 3		
Subtask 2.2:	To ease the development of the Final Report (Subtask 1.6), the District Technicians will submit quarterly updates to a template Final Report along with QPRs. The TSSWCB Project Manager will provide a template Final Report.					
	Start Date:	Month 1	Completion Date:	Month 3		
Subtask 2.3:	The District Technicians will identify landowners in priority areas in the Pecos River watershed to periodically distribute notifications announcing the availability of financial and technical assistance for developing and implementing WQMPs.					
	Start Date:	Month 3	Completion Date:	Month 9		
Subtask 2.4:	The District Technicians will develop and distribute flyers, brochures, letters, news releases and other appropriate promotional publications to encourage participation from landowners. The TSSWCB Project Manager must approve all announcements, letters, and publications prior to distribution.					
	Start Date:	Month 3	Completion Date:	Month 36		
Subtask 2.5:	The District Technicians will work with NRCS and AgriLife Extension to educate landowners and agricultural producers about water quality issues and how WQMPs and BMPs address pollutant loadings from agriculture. The District Technicians will support, promote, and participate in, as appropriate, any field days, demonstrations, site tours, or education events sponsored by NRCS and/or AgriLife Extension for the Pecos River watershed.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 2.6:	The District Technicians will work with organizations, such as Texas and Southwestern Cattle Raisers Association (TSCRA), Texas Wildlife Association (TWA), Texas Sheep and Goat Raisers Association (TSGRA) and Texas Farm Bureau (TFB), 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 District Technicians will work with Irrigation Districts to educate their customers on this project.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 2.7:	The District Technicians will meet monthly with SWCDs 213 and 235, and as needed with SWCDs 224, 231, 237, and 241, 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 2.8:	The District Technicians will cooperate and communicate with landowners and entities in the Pecos River watershed in order to efficiently and effectively achieve project goals and to summarize activities and achievements made throughout the course of this project. Specifically, the District Technicians will, at least, participate in meetings scheduled under the auspices of the WPP. The District Technicians will maintain regular communication with the TWRI Pecos River Watershed Coordinator, TFS personnel, and the selected chemical saltcedar control contractor.					
	Start Date:	Month 1	Completion Date:	Month 36		

<table>
<tr><td>Subtask 2.9:</td><td colspan="4">The District Technicians, with assistance from NRCS and TSSWCB as appropriate, will assist landowners in the development of WQMPs and associated Prescribed Grazing Plans. The District Technicians will develop at least 10 WQMPs above Girvin and 10 WQMPs below Girvin. Noting that the 10-year goal of the Pecos River WPP is to develop at least 120 WQMPs along the riparian corridor and 50 WQMPs in other portions of the watershed, the District Technicians shall strive to develop additional WQMPs beyond the minimum of 20; cost-share availability for additional WQMPs is dependent upon outcomes of Subtask 2.10.</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 2.10:</td><td colspan="4">The District Technicians, with assistance from NRCS and TSSWCB, will assist landowners in the Pecos River watershed in applying for and obtaining cost-share to aid in implementation of BMPs prescribed in WQMPs. This project provides $200,000 in CWA §319(h) funding (TSSWCB project 09-02 provides an additional $100,000 in CWA §319(h) funding) as cost-share through the TSSWCB WQMP Program with allocations of $100,000 to each SWCD 213 and SWCD 235. Landowners shall be eligible to receive a maximum cost-share amount of $15,000 from the TSSWCB §319(h) funds. The maximum cost-share rate shall not exceed 60% of the cost of implementation of the BMPs. The remaining 40% will be provided by the landowner. Cost-share will be based on actual cost not to exceed average cost of the practice.

Practices that achieve pollutant load reductions that are eligible for cost-share include:
• Fencing (382)
• Watering Facilities (614)
• Pipelines (516)
• Wells (642)
• Rangeland Planting (550)
• Riparian Herbaceous Buffer (390) (for practice establishment only)
• Riparian Forest Buffer (391) (for practice establishment only)
• Nutrient Management (590) (for establishment of 550, 390, or 391 only)</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 2.11:</td><td colspan="4">The District Technicians will prioritize WQMP development and cost-share applications consistent with the priority areas identified in the Pecos River WPP. Specifically, priority shall be given for operations nearest to the Pecos River or major tributaries and those lands where chemical saltcedar control and follow-up debris removal has been conducted.</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 2.12:</td><td colspan="4">The District Technicians will assist landowners with WQMPs in acquiring financial assistance through USDA administered federal Farm Bill Programs, including but not limited to, the Environmental Quality Incentives Program (EQIP) [1) county-level funding based on resource concern priorities established by Local Work Groups and 2) any applicable State Resource Concerns], the Grasslands Reserve Program (GRP), and the Agricultural Water Enhancement Program (AWEP).</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 2.13:</td><td colspan="4">The District Technicians will conduct annual status reviews on all WQMPs developed and certified through the course of this project and any existing WQMPs (certified prior to this project) in the Pecos River watershed to ensure that the landowners implement BMPs as specified and agreed to in the WQMP implementation schedule. The District Technicians 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 2.14:</td><td colspan="4">The District Technicians will track utilization of obligated cost-share funds and, with assistance from TSSWCB and NRCS, will assist landowners in utilizing obligated cost-share funds 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 2.15:</td><td colspan="4">The District Technicians will create spreadsheets and maps describing and showing the location of all WQMPs developed and BMPs implemented through the project. These maps will not reveal the identity or exact location of any producer.</td></tr>
<tr><td></td><td>Start Date:</td><td>Month 1</td><td>Completion Date:</td><td>Month 36</td></tr>
</table>

Deliverables	• Quarterly updates to template Final Report submitted with QPRs • List of landowners, classified by priority area, eligible for participation in the WQMP Program, updated as needed • Promotional and Educational publications, as developed and distributed • List of meetings attended and dates with brief summary of topics discussed and action needed. • Summary sheets on certified WQMPs submitted with QPRs • Cost-share applications for obligated project funds • Summary of cost-share funds utilized per BMP • Status reviews for WQMPs submitted with QPRs • Map of project area showing locations of WQMPs developed and BMPs implemented with a quantifiable breakdown for each BMP submitted with QPRs; map will not reveal the identity of any landowner

Tasks, Objectives and Schedules						
Task 3:	Chemical Control of Saltcedar					
Costs:	Federal:	$390,500	Non-Federal:	$0	Total:	$390,500
Objective:	To implement chemical treatment of selected remaining live stands of saltcedar located on the main channel of the Pecos River.					
Subtask 3.1	The District Technicians will obtain permission to spray saltcedar, conduct debris removal (Task 5) and re-vegetation efforts. The SWCD 213 District Technician will work in the Pecos River, between Interstate-20 and Girvin, TX; and the SWCD 235 District Technician will work below Girvin down to the confluence with the Rio Grande. The District Technicians will also collect GPS coordinates of areas where chemical treatment will not be applied (e.g., sensitive areas, where permission is not obtained, or in areas where biological control is implemented).					
	Start Date:	Month 1	Completion Date:	Month 12		
Subtask 3.2	The District Technicians will send out notifications to landowners describing goals and asking for landowner cooperation. The letter will be accompanied by approved technical documents that illustrate the benefits of treating saltcedar. Contact information for the District Technician will be included. Verbal contact with the landowners that are not receptive to written communication will be made. The District Technicians will continue to promote participation in chemical treatment of saltcedar throughout the duration of the project.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 3.3	TSSWCB will take bids from qualified aerial herbicide applicators experienced in strategically applying pesticides to sensitive areas using helicopters and GPS coordinates to treat selected saltcedar. The budget allows for chemical treatment at $220 per acre.					
	Start Date:	Month 1	Completion Date:	Month 12		
Subtask 3.4	TSSWCB will contract with the selected applicator (Subtask 3.3) (chemical saltcedar control contractor) to treat an estimated 1,422 acres of saltcedar in segment 2311 of the Pecos River, between Interstate-20 and Girvin, TX and an estimated 353 acres of saltcedar in segments 2311 and 2310 of the Pecos River, between Girvin, TX and the Val Verde County line with Arsenal™ (Imazapyr) herbicide or a comparable generic version. The herbicide will be applied by helicopter in a selective manner using GPS guidance technology, to control saltcedar and having little or no effect on desirable plants and wildlife. General areas to be sprayed were developed from low-level, high-resolution aerial photography that was digitized and converted to GIS shapefiles. Areas will be ground-truthed by the District Technicians prior to initiating spraying. These files will be loaded into the helicopter's GPS system and will dictate where herbicide is applied.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 3.5	The District Technicians will be onsite with the TSSWCB contractor during aerial pesticide application to observe and document (Observation Checklist) the following: 1) chemical mixture, 2) chemical application, 3) treatment acreage, and 4) weather conditions.					
	Start Date:	Month 1	Completion Date:	Month 36		
Deliverables	• Letters to landowners and brochures on chemical control of saltcedar • Annual spraying reports including Observation Checklists • Acres treated • GPS coordinates of chemical control areas (ArcGIS shapefile) • GIS maps of application areas including background aerial imagery of project area					

Tasks, Objectives and Schedules						
Task 4:	Biological control of Saltcedar					
Costs:	Federal:	$67,422	Non-Federal:	$73,975	Total:	$141,397
Objective:	To establish at least 10 separate colonies of *Diorhabda elongata*, the saltcedar leaf beetle, across the watershed on privately owned land where permission has been granted					
Subtask 4.1:	Extension will coordinate site selection with the saltcedar spraying and debris removal efforts (Tasks 3 & 5) so that these areas do not overlap with biological control areas.					
	Start Date:	Month 1		Completion Date:	Month 36	
Subtask 4.2:	Extension will establish at least 10 release sites across the watershed. Beetles will be placed in protective enclosures and the beetle populations will be allowed to go through one regeneration cycle before being released.					
	Start Date:	Month 1		Completion Date:	Month 36	
Subtask 4.3:	Extension will track and document the location of biological control sites and leaf beetle release dates and the subsequent acres of defoliated saltcedar on each site. Extension will create GIS maps showing the location of release sites and defoliated acres at each site.					
	Start Date:	Month 1		Completion Date:	Month 36	
Deliverables	• Selection and establishment of 10 release sites across the watershed • Establishment of 10 separate sustained leaf beetle populations • Documented location of sites and release date of beetles • GIS maps showing locations of release sites and acres defoliated (ArcGIS shapefile)					

Tasks, Objectives and Schedules						
Task 5:	Prescribed burning for saltcedar debris removal					
Costs:	Federal:	$267,500	Non-Federal:	$179,000	Total:	$446,500
Objective:	To burn previously treated saltcedar along the Pecos River to prevent the standing dead debris from washing downriver during high-flow events, causing structural damage, flooding, increased sedimentation, exacerbating DO impairments and generally decreasing water quality.					
Subtask 5.1:	TFS will coordinate with the District Technicians to obtain permission for debris burning activities from private landowners (Subtask 3.1).					
	Start Date:	Month 1		Completion Date:	Month 12	
Subtask 5.2:	TFS will draft the appropriate prescribed burn plans.					
	Start Date:	Month 1		Completion Date:	Month 36	
Subtask 5.3:	TFS will work with the District Technicians to inform landowners of scheduled prescribed burns. Where practical, landowners and local prescribed burning organizations shall be involved in burning activities.					
	Start Date:	Month 1		Completion Date:	Month 36	
Subtask 5.4:	TFS will conduct prescribed burning on standing dead saltcedar that has been chemically treated prior to this project along the main channel of the river, between Girvin, TX and the confluence of the Pecos River and Independence Creek, or about 138 river miles. As stated in the WPP, at least 3 years should have transpired between chemical treatment and prescribed burning in order to achieve the most effective kill rate of saltcedar and the most effective degree of debris removal. Controlled burns will only be conducted in areas where landowners have given permission for these activities to be carried out.					
	Start Date:	Month 3		Completion Date:	Month 36	
Deliverables	• Prescribed burn plans • Annual burn reports • GIS mapping of burned areas (ArcGIS shapefile)					

Tasks, Objectives and Schedules						
Task 6:	Support and Facilitation of WPP Implementation, Education and Tracking					
Costs:	Federal:	$35,957	Non-Federal:	$30,028	Total:	$65,985
Objective:	To facilitate continued landowner involvement to ensure successful implementation of the WPP for the Pecos River in Texas.					
Subtask 6.1:	Extension will engage and facilitate Pecos River watershed landowners and other entities identified in the Pecos River WPP and work in cooperation with partner agencies to implement the Pecos River WPP. Extension will facilitate and host meetings of the landowners and partner agencies as needed, likely semi-annually at multiple locations across the watershed.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 6.2:	Extension will assist governmental and non-governmental organizations in the Pecos River WPP, in identification and acquisition of resources (financial and technical) to enable WPP implementation. Extension will actively seek and pursue funding opportunities and work with partners to develop grant proposals.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 6.3:	Extension will evaluate progress toward achieving milestones established in the WPP. Extension will publish an addendum to the Pecos River WPP that describes modifications/updates to goals and milestones, explains new understandings of sources and cause of water quality issues, documents success in achieving goals and milestones and success in achieving water quality improvement and load reductions at least biennially. As the WPP was published in October 2008, this biennial addendum would most appropriately be published around October 2010, or soon thereafter.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 6.4:	Extension will facilitate and coordinate education and outreach activities as identified in the Pecos River WPP. Extension will develop and distribute press releases when warranted. Specifically, Extension will collaborate with NRCS and SWCDs to host workshops, field days, demonstrations, site tours, or other education events focused on each of the following topics: • Texas Watershed Steward Program (2 events) • Lone Star Healthy Streams Program (2 events) • Nutrient Management (2 events) • Wildlife Management (3 events) • Crop Management (2 events) • Irrigation Management (3 events) • Feral Hog Management (2 events) The TSSWCB Project Manager must approve all announcements, letters, and publications prior to distribution.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 6.5:	Extension will provide information to IBWC for inclusion in the Clean Rivers Program Basin Summary Report and Basin Highlights Report. Extension shall participate in IBWC-sponsored meetings of the Clean Rivers Program Basin Advisory Committee.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 6.6:	Extension will develop and publish a semi-annual newsletter that is designed to keep landowners and entities informed of ongoing WPP implementation activities and other relevant information. The newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed.					
	Start Date:	Month 7	Completion Date:	Month 36		
Subtask 6.7:	The Watershed Coordinator will make deliberate efforts to increase awareness of the WPP and secure implementation support thereof from county and municipal governments, and irrigation districts throughout the watershed, as well as, the Red Bluff Water and Power Control District. The Watershed Coordinator will also work with the Pecos River Compact Commission and the New Mexico Environment Department (NMED) to explore mechanisms to influence the implementation of management measures in New Mexico that have positive effect to the Pecos River in Texas.					
	Start Date:	Month 3	Completion Date:	Month 36		

Deliverables	• Schedules, agendas, meeting materials, attendance lists and minutes from WPP implementation meetings with landowners • Promotional materials, agendas, and attendance lists from outreach and education events • Documentation of resource opportunities identified, applied for and resources obtained to support plan implementation. • Biennial addendum to WPP • Content matter for Clean Rivers Program publications • Press releases, as developed and distributed • Semi-annual Newsletter

Tasks, Objectives and Schedules						
Task 7:	Compilation of Surface Water Quality Monitoring Data					
Costs:	Federal:	$15,545	Non-Federal:	$1,487	Total:	$17,032
Objective:	To compile data from water quality monitoring activities in the watershed and incorporate it into a database that will combine data relevant to the Pecos River watershed in one location.					
Subtask 7.1:	Extension will maintain and update Red Bluff release and delivery databases. USGS gaging station discharge data and TCEQ Clean Rivers Program water quality and streamflow data from established monitoring sites will be updated and maintained in existing databases by Extension. This task will build upon the existing water quality database developed under TSSWCB project 04-11.					
	Start Date:	Month 1	Completion Date:	Month 36		
Subtask 7.2:	Extension will collaborate with IBWC to assess water quality data collected through the Clean Rivers Program and other projects in relation to achieving load reductions described in the WPP.					
	Start Date:	Month 1	Completion Date:	Month 36		
Deliverables	• Database of water quality and quantity information updated quarterly • Publish data on project website					

Estimated Load Reductions Expected

Estimated load reductions expected from implementing BMPs through this project are based on information in the Pecos River WPP. BMPs to be implemented through this project support the Pecos River WPP goals, specifically:

- Decrease salinity concentrations in the Pecos River by increasing streamflow through chemical treatment of saltcedar and reducing TDS loading through a variety of strategies.
- Prevent increases in sediment loading in the Pecos River as a result of "new" chemical treatment of saltcedar and reduce sediment loading from "old" chemical treatment of saltcedar by removal of dead saltcedar debris through prescribed burning and subsequent re-vegetation with native species.
- Decrease nutrient (nitrogen and phosphorus) loadings to the Pecos River through management of the riparian corridor after chemical treatment of saltcedar and subsequent re-vegetation; and nutrient management on irrigated cropland in upland areas.

The Pecos River WPP identifies 2,158 ac of saltcedar needing chemical treatment. This project budgets for chemical treatment on 1,775 ac. The WPP estimates water salvaged from treated saltcedar at 0.5-1.0 ac-ft/yr per ac of saltcedar treated. Therefore, this project will result in an estimated increase in available water of 887.5-1,775 ac-ft/yr in the river or shallow aquifers. This will result in a change in salinity concentrations (not TDS loading).

The Pecos River WPP demonstrates that brush (such as saltcedar) which is only chemically treated results in greater sediment loading than chemically treated brush that is followed by prescribed burning. The WPP estimates saltcedar acreage which has been previously chemically treated but not followed up with prescribed burning. This project budgets for prescribed burning of dead standing saltcedar along 138 river miles (approximately 2,000 ac). Therefore, this project will result in an estimated decrease in sediment loading of approximately 2,590 tons.

The Pecos River WPP calls for WQMPs to be developed, certified, and implemented on agricultural lands to accomplish 1) re-vegetation of areas where saltcedar has been treated, 2) livestock management in the riparian corridor to prevent streambank deterioration and erosion, and 3) nutrient management and irrigation water management on irrigated cropland in upland areas. Specific BMPs prescribed in WQMPs will achieve sediment, nitrogen, and phosphorus load reductions. Full WPP implementation calls for 120 WQMPs on rangeland in the riparian corridor and 50 WQMPs on irrigated cropland in upland areas. This project provides cost-share for implementing 20 WQMPs on rangeland in the riparian corridor. Participation in the TSSWCB WQMP Program by individual ranchers and farmers is voluntary. This decision to participate is based on a number of factors, including the producer's ability to provide the cost-share 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.

It is assumed that all load reductions achieved at the individual farm level (i.e., through individual WQMPs), or along the riparian corridor in general, translate to equivalent load reductions at index monitoring sites in the Pecos River. 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; GRTS is not designed to track salinity load reductions. Nitrogen, phosphorus, and sediment load reductions achieved through this project will be reported through GRTS. Other load reductions achieved through this project may be reported in the *NPS Annual Report*, this project's Final Report, or through the adaptive management process for the Pecos River WPP.

Measures of Success (Expand from Summary Page)

- Continued control of saltcedar along the Pecos and its tributaries down to the Val Verde County line; an estimated 1,775 acres of saltcedar along the river above this point will be treated
- Removal of debris left by saltcedar control efforts; an estimated 138 river miles (both sides of the river) estimated to be approximately 2,000 acres
- Development, certification and implementation of at least 20 WQMPs that are targeted toward improving water quality, specifically DO, and restoring desired landscape systems
- Establishment of 10 self-sustaining saltcedar leaf beetle populations across the watershed
- Continued landowner education and involvement in BMP implementation
- Updated water quality database for the watershed
- Continually updated project website to enhance education and awareness of the project and watershed management
- Delivered educational programs on watershed management, BMP implementation to promote improved water quality, wildlife management, grazing management, nutrient management, etc.
- Development, publication, and distribution of materials regarding project activities, meetings, and accomplishments
- Reports summarizing progress made in WQMP development and implementation, debris burning, saltcedar control (biological and chemical)

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

LTG Objectives

- 1 – Focus NPS abatement efforts, implementation strategies, and available resources in watershed s identified as impacted by NPS pollution
- 2 - Support the implementation of state, regional and local programs to prevent NPS pollution through assessment, implementation and education
- 3 - Support the implementation of state, regional and local programs to reduce NPS pollution as defined in Watershed Protection Plans
- 5 – Develop partnerships, relationships, memoranda of agreement…to facilitate collective, cooperative approaches to manage NPS pollution
- 6 - Increase overall public awareness of NPS issues and prevention activities
- 7 – Enhance public participation and outreach by providing forums for citizens and industry to contribute their ideas and concerns about the water quality management process

Short-Term Goals

Goal 1: Data Collection and Assessment: Coordinate with appropriate federal, state, regional, and local entities, private sector and citizen groups to target CWA §319(h) Grant funds toward water quality assessment activities in high priority, NPS impacted watersheds…

- Objective D – Develop and adopt at the state level….WPPs to maintain and restore water quality in waterbodies identified as impacted by NPS pollution

Goal 2: Implementation: Coordinate and administer the NPS program to support the implementation of…WPPs….to reduce NPS pollution.

- Objective B – Develop and implement BMPS to address constituents of concern or water bodies not meeting water quality standards in watersheds identified as impacted by NPS pollution
- Objective D - Implement …WPPs developed to restore and maintain water quality in waterbodies identified as impacted by NPS

Goal 3 – Education: Conduct education and technology transfer activities to help increase awareness of NPS pollution and prevent activities contributing to the degradation of waterbodies … by NPS pollution

- Objective A: Enhance existing outreach programs… to maximize the effectiveness of NPS education
- Objective B: Administer programs to educate citizens about water quality and their potential role in causing NPS pollution
- Objective D: Conduct outreach through CRP, Extension, SWCDs, and others to facilitate participation in partnerships enabling public participation in the decision-making process and provide a more complete understanding of water quality issues an dhow they relate to each citizen
- Objective F: Implement public outreach and education to maintain and restore water quality in waterbodies impacted by NPS pollution

Milestones

- A: employ or develop a local watershed committee to solicit input and encourage the participation of affected citizens in the decision-making process
- C: complete water quality monitoring. Analyze data, assess loadings, and determine the origin and distribution of pollutants
- E: develop a detailed action plan which establishes overall goals and objective, load allocations, strategies for load allocations, timetables for implementation, and a list of expected results
- F: implement voluntary actions in the watershed and adjust BMP implementation based on follow-up verification monitoring of effectiveness

Part III – Financial Information

Budget Summary: Complete Project			
Federal 319(h)	$ 1,499,859	% of total project	74%
Non-Federal Match	$ 526,956	% of total project (at least 40%)	26%
Total $ Cost	$ 2,026,815	Total project %	100%

Category	Federal	Non-Federal Match	Total
Personnel	$ 347,476	$ 116,540	$ 464,016
Fringe Benefits	$ 94,247	$ 29,650	$ 123,897
Subtotal Personnel & Fringe	$ 441,723	$ 146,190	$ 587,913
Travel	$ 74,500,	$ 0	$ 74,500
Equipment	$ 0	$ 0	$ 0
Supplies	$ 25,850	$ 0	$ 25,850
Contractual	$ 664,000	$ 179,000	$ 843,000
Construction	$ 200,000	$ 133,334	$ 333,334
Other	$ 52,300	$ 0	$ 52,300
Subtotal	$ 1,016,650	$ 312,334	$ 1,328,984
Total Direct Costs	$ 1,458,373	$ 458,524	$ 1,916,897
Indirect Costs (15%)	$ 41,486	$ 68,432	$ 109,918
Total Project Costs	$ 1,499,859	$ 526,956	$ 2,026,815

IDC was calculated using direct costs that go through TWRI, not the total direct costs for the project.

The TSSWCB CWA §319(h) Nonpoint Source Grant Program has a 60/40% match requirement. A cooperating entity will be reimbursed 60% from federal funds and must contribute a minimum of 40% of the costs to conduct the project. The 40% match must be from non-federal sources and should be described in the budget justification. Indirect costs are limited to 15%. The project budget generally covers a three year period.

Budget Justification: Complete Project (Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 441,723	TWRI Project Manager @ 25% annually: $47,204 Watershed Coordinator/Water Specialist @ 25% annually: $63,306 TWRI IT Associate @ 5% annually: $8,852 2 SWCD Technicians @ 100% and 2 SWCD Bookkeepers @ 10 hrs/month; $10/hr: $269,200 Extension Assistant (Hatler) @ 16% annually: $22,533 2 part-time technicians (students) @ 20 hr/wk, 22.5 wk/yr @ $10/hr: $30,628
Travel	$ 74,500	TWRI Project Manager: 10 trips @ $550 Watershed Coordinator/Water Specialist: est. 18,182 mi annually @ 55¢/mi Extension Range Specialist: 10 trips total @ $500 1 SWCD Technician: 20 trips total @250 1 SWCD Technician: 20 trips total @ $250 Extension Entomologists and technicians: est. 11,818 mi annually @ 55¢/mi Extension Assistant: 9 trips total @ $500
Equipment	$ 0	
Supplies	$ 25,850	Misc. Education Supplies: $4,500 Misc. Monitoring Supplies: $750 TWRI PM computer: $2,500 Watershed Coordinator/Water Specialist Supplies: $3,000 Extension Entomologists Supplies: $8,500 2 SWCD Technicians: Computer & Office Supplies for each: $6,600 total
Contractual	$ 664,000	Contractor TBD – 100% of total saltcedar spraying costs on 1,775 ac @ $220/ac: $390,500 TFS – Debris burning services: approximately 138 river miles: $267,500 Financial audits for SWCDs @ $3,000; total $6,000
Construction	$ 200,000	Financial assistance for 20 WQMPs, 60% of total cost: $200,000 (TSSWCB project 09-02 provides an additional $100,000 in CWA §319(h) funding)
Other	$ 52,300	TWRI Report printing (WPP addendum and other reports as needed): $5,000 Extension educational materials: $6,000 Postage and printing for 3,000 newsletters per year: $9,300 SWCD vehicle maintenance and fuel: $30,000 SWCD printing and publication: $2,000
Indirect	$ 41,486	15% of Total Direct Costs (Federal) through TWRI

Budget Justification: Complete Project (Non-Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 146,190	Watershed Coordinator/Water Specialist @ 25% annually: $63,306 Extension Range Specialist (Hart) @ 10.42% annually: $29,011 Extension Entomologist (Knutson) @ 5% annually: $16,442 Extension Entomologist (Muegge) @ 15.568% annually: $37,431
Travel	$ 0	
Equipment	$ 0	
Supplies	$ 0	
Contractual	$ 179,000	Debris burning services from TFS: $179,000
Construction	$ 133,334	Landowner match for 20 WQMPs, 40% of total cost: $133,334 (TSSWCB project 09-02 provides an additional $66,666 in landowner match)
Other	$ 0	
Indirect	$ 68,432	26% of Total Direct Costs (Non-Federal) through TWRI and 11% of Total Direct Costs (Federal) through TWRI

Budget Summary: Extension Portion of the Project			
Federal 319(h)	$ 585,559	% of project portion	60%
Non-Federal Match	$ 393,622	% of project portion (at least 40%)	40%
Total $ Cost	$ 979,181	Portion of project %	100%

Category	Federal	Non-Federal Match	Total
Personnel	$ 138,144	$ 116,540	$ 254,684
Fringe Benefits	$ 34,379	$ 29,650	$ 64,029
Subtotal Personnel & Fringe	$ 172,523	$ 146,190	$ 318,713
Travel	$ 64,500	$ 0	$ 64,500
Equipment	$ 0	$ 0	$ 0
Supplies	$ 19,250	$ 0	$ 19,250
Contractual	$ 267,500	$ 179,000	$ 446,500
Construction	$ 0	$ 0	$ 0
Other	$ 20,300	$ 0	$ 20,300
Subtotal	$ 371,550	$ 179,000	$ 550,550
Total Direct Costs	$ 544,073	$ 325,190	$ 869,263
Indirect Costs (15%)	$ 41,486	$ 68,432	$ 109,918
Total Project Costs	$ 585,559	$ 393,622	$ 979,181

Budget Justification: Extension Portion of the Project (Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 172,523	TWRI Project Manager @ 25% annually: $47,204 Watershed Coordinator/Water Specialist @ 25% annually: $63,306 TWRI IT Associate @ 5% annually: $8,852 Extension Assistant @ 16% annually: $22,533 2 part-time technicians (students) @ 20 hr/wk, 22.5 wk/yr @ $10/hr: $30,628
Travel	$ 64,500	TWRI Project Manager: 10 trips @ $550 ea. Watershed Coordinator/Water Specialist: est. 18,182 mi annually @ 55¢/mi Extension Range Specialist: 10 trips total @ $500 ea. Extension Entomologists and technicians: est. 11,818 mi annually @ 55¢/mi Extension Assistant: 9 trips total @ $500 ea.
Equipment	$ 0	
Supplies	$ 19,250	Misc. Education Supplies: $4,750 TWRI PM computer: $2,500 Watershed Coordinator/Water Specialist Supplies: $3,250 Extension Entomologists Supplies: $8,750
Contractual	$ 267,500	TFS – Debris burning services: approximately 138 river miles: $267,500
Construction	$ 0	
Other	$ 20,300	TWRI Report printing (WPP addendum and other reports as needed): $5,000 Extension educational materials: $6,000 Postage and printing for 3,000 newsletters per year: $9,300
Indirect	$ 41,486	15% of Total Direct Costs (Federal) through TWRI
Budget Justification: Extension Portion of the Project (Non-Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 146,190	Watershed Coordinator/Water Specialist @ 25% annually: $63,306 Extension Range Specialist @ 10.42% annually: $29,011 Extension Entomologist @ 5% annually: $16,442 Extension Entomologist @ 15.568% annually: $37,431
Travel	$ 0	
Equipment	$ 0	
Supplies	$ 0	
Contractual	$ 179,000	Debris burning services from TFS: $179,000
Construction	$ 0	
Other	$ 0	
Indirect	$ 68,432	26% of Total Direct Costs (Non-Federal) through TWRI and 11% of Total Direct Costs (Federal) through TWRI

Budget Summary: Crockett SWCD Portion of the Project			
Federal 319(h)	$ 261,900	% of project portion	80%
Non-Federal Match	$ 66,667	% of project portion (at least 40%)	20%
Total $ Cost	$ 328,567	Portion of project %	100%

Category	Federal	Non-Federal Match	Total
Personnel	$ 104,666	$ 0	$ 104,666
Fringe Benefits	$ 29,934	$ 0	$ 29,934
Subtotal Personnel & Fringe	$ 134,600	$ 0	$ 134,600
Travel	$ 5,000	$ 0	$ 5,000
Equipment	$ 0	$ 0	$ 0
Supplies	$ 3,300	$ 0	$ 3,300
Contractual	$ 3,000	$ 0	$ 3,000
Construction	$ 100,000	$ 66,667	$ 166,667
Other	$ 16,000	$ 0	$ 16,000
Subtotal	$ 127,300	$ 66,667	$ 193,967
Total Direct Costs	$ 261,900	$ 66,667	$ 328,567
Indirect Costs (0%)	$ 0	$ 0	$ 0
Total Project Costs	$ 261,900	$ 66,667	$ 328,567

Budget Justification: Crockett SWCD Portion of the Project (Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 134,600	1 SWCD Technicians @ $33,000/yr 1 SWCD Bookkeeper @ $10/hr for 10 hrs/month Fringe for both employees at 28.6% of salary
Travel	$ 5,000	SWCD Technician 20 trips @ $250
Equipment	$ 0	
Supplies	$ 3,300	Computer and printer @ $1,500 General office supplies @ $50/month for 36 months
Contractual	$ 3,000	SWCD financial audit
Construction	$ 100,000	Financial assistance for 10 WQMPs, 60% of total cost: $100,000 (TSSWCB project 09-02 provides an additional $50,000 in CWA §319(h) funding)
Other	$ 16,000	SWCD vehicle maintenance and fuel: $15,000 SWCD printing and publication: $1,000
Indirect	$ 0	

Budget Justification: Crockett SWCD Portion of the Project (Non-Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 0	
Travel	$ 0	
Equipment	$ 0	
Supplies	$ 0	
Contractual	$ 0	
Construction	$ 66,667	Landowner match for 10 WQMPs, 40% of total cost: $66,667 (TSSWCB project 09-02 provides an additional $33,333 in landowner match)
Other	$ 0	
Indirect	$ 0	

Budget Summary: Upper Pecos SWCD Portion of the Project			
Federal 319(h)	$ 261,900	% of project portion	80%
Non-Federal Match	$ 66,667	% of project portion (at least 40%)	20%
Total $ Cost	$ 328,567	Portion of project %	100%

Category	Federal	Non-Federal Match	Total
Personnel	$ 104,666	$ 0	$ 104,666
Fringe Benefits	$ 29,934	$ 0	$ 29,934
Subtotal Personnel & Fringe	$ 134,600	$ 0	$ 134,600
Travel	$ 5,000	$ 0	$ 5,000
Equipment	$ 0	$ 0	$ 0
Supplies	$ 3,300	$ 0	$ 3,300
Contractual	$ 3,000	$ 0	$ 3,000
Construction	$ 100,000	$ 66,667	$ 166,667
Other	$ 16,000	$ 0	$ 16,000
Subtotal	$ 127,300	$ 66,667	$ 193,967
Total Direct Costs	$ 261,900	$ 66,667	$ 328,567
Indirect Costs (0%)	$ 0	$ 0	$ 0
Total Project Costs	$ 261,900	$ 66,667	$ 328,567

Budget Justification: Upper Pecos SWCD Portion of the Project (Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 134,600	1 SWCD Technicians @ $33,000/yr 1 SWCD Bookkeeper @ $10/hr for 10 hrs/month Fringe for both employees at 28.6% of salary
Travel	$ 5,000	SWCD Technician 20 trips @ $250
Equipment	$ 0	
Supplies	$ 3,300	Computer and printer @ $1,500 General office supplies @ $50/month for 36 months
Contractual	$ 3,000	SWCD financial audit
Construction	$ 100,000	Financial assistance for 10 WQMPs, 60% of total cost: $100,000 (TSSWCB project 09-02 provides an additional $50,000 in CWA §319(h) funding)
Other	$ 16,000	SWCD vehicle maintenance and fuel: $15,000 SWCD printing and publication: $1,000
Indirect	$ 0	

Budget Justification: Upper Pecos SWCD Portion of the Project (Non-Federal)		
Category	Total Amount	Justification
Personnel & Fringe Benefits	$ 0	
Travel	$ 0	
Equipment	$ 0	
Supplies	$ 0	
Contractual	$ 0	
Construction	$ 66,667	Landowner match for 10 WQMPs, 40% of total cost: $66,667 (TSSWCB project 09-02 provides an additional $33,333 in landowner match)
Other	$ 0	
Indirect	$ 0	