Texas AgriLife Research Texas Water Resources Institute

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

FY 08 CWA 319(h) TSSWCB Project No. 08-08

Quarter no.	5	From	10.1.2010	Through	12.31.2010	
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I. Abstract

Work this quarter has focused on initiating several project tasks and continuing others. Legal representation was consulted by TSSWCB to prepare agreement language for riparian landowners to spray, burn and revegetate areas along the river infested with saltcedar. This agreement was finalized late last quarter and will enable SWCD technicians to begin securingn written permission from watershed landowners to conduct activities under Tasks 3 and 5. The major effort this quarter has been the initiation of the Water Quality Management Plans with the first plan being fully approved this quarter and several more nearing completion. Saltcedar leaf beetles have entered diapause and are no longer defoliating saltcedar. In total, this past year produced the best results yet with an estimated 14,000 acres of saltcedar defoliated by the leaf beetles in the Trans-Pecos region alone. Education and outreach continues to be a cornerstone of the project and presentations were made at numerous venues and meetings.

II. Overall Progress and Results by Task

TASK 1: Project Coordination and Administration

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.

The following actions have been completed during this reporting period:

- A. The Upper Pecos SWCD Technician submitted 5th QPR to the Watershed Coordinator on Jan 7, 2011.
- B. The Crockett SWCD Technician submitted 5th QPR to the Watershed Coordinator on Jan 7, 2011.
- C. AgriLife Extension submitted 5th OPR to the Watershed Coordinator on Jan 13, 2011.
- D. TWRI submitted the Year 2, Quarter 1 report to TSSWCB on Jan 14, 2011.

42% Complete

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.

The following actions have been completed during this reporting period:

A. A coordination meeting via conference call was conducted on November 12, 2010. All partners were represented at the meeting.

42% Complete

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.

The following actions have been completed during this reporting period:

- A. As of November 30, 2010, project expenditures have totaled \$54,930 or approximately 10% of the total project budget.
- B. The Upper Pecos SWCD Technician submitted reimbursement forms to the bookkeeper (supplies, mileage, motel, per diem, and registration expenses).

20% Complete

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.

The following actions have been completed during this reporting period:

- A. Website updates were made throughout the quarter as needed.
- B. Website usage this quarter consisted of 249 individual site visits with approximately 75% of these being new visitors to the site.

80% Complete

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.

The following actions have been completed during this reporting period:

A. No Activity to report at this time.

0% Complete

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.

A. Subtask complete.

100% Complete

TASK 2: Promotion, Development and Implementation of WQMPs

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.

The following actions have been completed during this reporting period:

A. Subtask complete.

100% Complete

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.

The following actions have been completed during this reporting period:

- A. The Upper Pecos SWCD Technician submitted 5th QPR to the Watershed Coordinator on January 7, 2011.
- B. The Crockett SWCD Technician submitted 5th QPR to the Watershed Coordinator on January 7, 2011.

42% Complete

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.

The following actions have been completed during this reporting period:

A. The Upper Pecos SWCD Technician identified landowners in priority areas in the Pecos River Watershed.

50% Complete

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.

The following actions have been completed during this reporting period:

A. The Upper Pecos SWCD Technician sent a letter to the landowners along the river on

describing the Watershed Protection Plan's a) list of practices eligible for cost share and b) saltcedar control methods.

20% Complete

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.

The following actions have been completed during this reporting period:

- A. The Crockett County SWCD Technician promoted the Pecos River Watershed Protection Plan at the Texas Agrilife Extension Predator workshop in Ozona, TX October 26, 2010
- B. The Crockett County SWCD Technician promoted the WPP at the Society of Range Management Annual Meeting in Odessa on October 14th and 15th, 2010.
- C. The Upper Pecos SWCD Technician supported the Pecos River Watershed Protection Plan's exhibitor booth at the Texas Section Society for Range Management Annual Meeting in Odessa, Texas, on October 13-15, 2010.

30% Complete

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.

The following actions have been completed during this reporting period:

A. The Upper Pecos SWCD Technician maintained communication with Red Bluff WPCD and various irrigation districts.

20% Complete

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.

The following actions have been completed during this reporting period:

- A. The Upper Pecos SWCD Technician met with SWCDs 213, 231 and 241 during their monthly board meetings.
- B. The Crockett SWCD Technician met with SWCDs 235, 224, 231 and 237 during their monthly board meetings.

30% Complete

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.

The following actions have been completed during this reporting period:

- A. The Upper Pecos SWCD Technician:
 - a. Maintained communication with the Pecos River Watershed Coordinator and TFS personnel via meetings, phone, and e-mail.
 - b. Maintained communication with the landowners in the Pecos River Watershed.
- B. The Crockett County SWCD Technician maintained regular communication with the Pecos River Watershed Coordinator.

40% Complete

Subtask 2.9: 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.

The following actions have been completed during this reporting period:

- A. The Upper Pecos SWCD Technician assisted a landowner in the development of a WQMP in Pecos County.
- B. The Upper Pecos SWCD Technician received the following NRCS training:
 - a. Agronomy, soils, and range training in San Angelo on October 25-28, 2010.
 - b. Cropland erosion prediction training in San Angelo on November 17, 2010.
 - c. Zone 2 Prescribed Burning training in Junction on December 7-9, 2010.
 - d. Zone 2 nutrient management training in San Angelo on December 14, 2010.
- C. The Crockett County SWCD Technician receiver the following NRCS training:
 - a. Agronomy, soils, and range training in San Angelo on October 25-28, 2010.
 - b. Cropland erosion prediction training in San Angelo on November 17, 2010.
 - c. Zone 2 nutrient management training in San Angelo on December 14, 2010.
- D. The Crockett County SWCD Technician received certification of one WQMP in Crockett Count and is currently working on an additional 3WQMP's in Crockett County.

E. The Crockett County SWCD Technician is working with 1 producer in Terrell County and 1 producer in Val Verde County to complete WQMP's.

40% Complete

Subtask 2.10: 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.

The following actions have been completed during this reporting period:

A. One WQMP has been certified for \$6,630.66 for cost share assistance in Crockett County.

20% Complete

Subtask 2.11: 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.

The following actions have been completed during this reporting period:

- A. The Crockett County SWCD Technician has prioritized WQMP's at this time on a first come, first served basis with priority given to applicants requesting funds for land adjacent to the Pecos River.
- B. The Upper Pecos SWCD Technician gave priority to applicants requesting funds for land adjacent to the Pecos River on a first come, first served basis.

100% Complete

Subtask 2.12: 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).

The following actions have been completed during this reporting period:

A. The Crockett County Technician has assisted landowners with applying for EQIP.

10% Complete

Subtask 2.13: 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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

Subtask 2.14: 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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

Subtask 2.15: 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.

The following actions have been completed during this reporting period:

A. The Crockett County SWCD Technician continues creating maps describing and showing the location of current WQMP applicants.

15% Complete

TASK 3: Chemical Control of Saltcedar

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).

The following actions have been completed during this reporting period:

- A. Crockett County SWCD Technician has begun contacting landowners who previously expressed interest in spraying.
- B. The Upper Pecos SWCD Technician mailed letters to landowners in priority areas describing saltcedar control methods.

15% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

5% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

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 ArsenalTM (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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

TASK 4: Biological Control of Saltcedar

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.

The following actions have been completed during this reporting period:

A. Beetles are in diapause so no activity at this time.

10% Complete

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.

The following actions have been completed during this reporting period:

A. Beetles are in diapause so no activity at this time.

35% Complete

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.

The following actions have been completed during this reporting period:

A. All new release sites have been documented with GPS location points. The sites will be located on a map for dispersal to all involved parties.

10% Complete

TASK 5: Prescribed burning for saltcedar debris removal

Subtask 5.1: TFS will coordinate with the District Technicians to obtain permission for debris burning activities from private landowners (Subtask 3.1).

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

Subtask 5.2: TFS will draft the appropriate prescribed burn plans.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

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 treatments 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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

TASK 6: Support and Facilitation of WPP Implementation, Education and Tracking

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.

The following actions have been completed during this reporting period:

A. The Watershed Coordinator has attended numerous public meeting throughout the watershed and updated meeting participants on project activities.

35% Complete

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.

The following actions have been completed during this reporting period:

A. Extension assisted in the preparation of a proposal for the use of a Helioelectromagnetic survey for a portion of the Pecos River.

10% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time. This task has been delayed as a result of delays in getting implementation projects up and running.

0% Complete

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 following actions have been completed during this reporting period:

- A. Crockett County SWCD Technician promoted the Pecos River Watershed Protection Plan at the Texas Agrilife Extension Predator workshop in Ozona, TX, October 26, 2010.
- B. Extension participated in the pesticide management courses held in Pecos County and Midland County

20% Complete

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.

The following actions have been completed during this reporting period:

A. No Activity to report at this time.

30% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

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.

The following actions have been completed during this reporting period:

- A. Work has continued in an effort to coordinate the resurrection of a salt mining effort near Malaga Bend, NM. This involves the establishment of an agreement between a private salt harvesting company and Red Bluff WPCD. The salt company has been permit by New Mexico Environmental Department to pump the brine from the well near Malaga Bend.
- B. The Watershed Coordinator has attended numerous public meeting throughout the watershed and updated meeting participants on project activities.
- C. The Watershed Coordinator continues to support monthly meeting in Austin with the Pecos River Restoration Coalition.
- D. Assist in activities with Sciblue to bring rainwater to the Pecos River watershed.

20% Complete

TASK 7: Compilation of Surface Water Quality Monitoring Data

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.

The following actions have been completed during this reporting period:

A. A student technician at TWRI has been compiling water quality data from SWQMIS for analysis purposes and will be feeding this information into the database.

20% Complete

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.

The following actions have been completed during this reporting period:

A. No activity to report at this time.

0% Complete

III. Related Issues/Current Problems and Favorable or Unusual Developments

Project personnel continue to await final language for a landowner agreement from TSSWCB that landowners will sign granting project personnel permission to carry out spraying and debris burning activities. Without this agreement, major project progress has been delayed.

IV. Projected Work for Next Quarter

- A. Work to produce maps identifying spraying and burning sensitive areas along the river channel.
- B. Work to renew and secure additional agreements to spray, burn and revegetate areas infested with saltcedar along the river once the agreements are developed.
- C. Attend monthly board meeting with SWCDs 213, 231, and 241.
- D. Meet with County Extension Agents in Crane, Pecos, Reeves, Ward, and Winkler-Loving County offices to discuss opportunities to educate landowners via Extension programs and local organizations.
- E. Obtain permission to spray saltcedar in priority areas.
- F. Develop maps of areas depicting area which spray burn agreements have been executed.
- G. Send out semi-annual reports to the landowners in the watershed.
- H. Collaborate with IBWC on activities needed in the watershed.
- I. Begin planning for Texas Watershed Steward Program delivery in the watershed this summer.
- J. Initiate a project to assess the natural revegetation of areas sprayed and burned for salt cedar control and areas which have experienced salt cedar control by salt cedar leaf beetles.