

**Agricultural NPS Remediation in the Cedar Creek Reservoir Watershed**  
**Section 319(h) Nonpoint Source Program**  
**FY 2007 Project 07-14**

Quarter no. 2 From 4/1/08 Through 6/30/08

**I. Abstract**

Implementation began this quarter with the completion of the first WQMP of the project by the Kaufman-Van Zandt SWCD. Through this WQMP, 174 acres of the Cedar Creek watershed were addressed including the conversion of 23 acres from cropland to pasture thus reducing potential sediment and nutrient loading to Cedar Creek Reservoir. Texas AgriLife Research began preparation for evaluating BMP effectiveness. Development of the QAPP was initiated and equipment needed for the monitoring was ordered. The BMPs to be evaluated were selected and the runoff plots have been constructed. Texas AgriLife Extension Service has begun collecting information on educational resources available and is coordinating with County Extension Agents to deliver these resources to the watershed. The Texas Water Resources Institute contract was initiated this quarter. TWRI began working to coordinate project activities and reporting, and set up an August 6 meeting between Texas AgriLife Research, Kaufman-Van Zandt SWCD, and TSSWCB to facilitate coordination between all the project partners.

**II. Overall Progress and Results by Task**

**TASK 1: DEVELOP AND IMPLEMENT WATER QUALITY MANAGEMENT PLANS**

*Subtask 1.1 The Kaufman-Van Zandt SWCD will hire a technician to provide technical assistance to landowners on the development of WQMPs. The TSSWCB Mount Pleasant Regional Office will train the technician.*

The following actions have been completed during this reporting period:

- The Kaufman-Van Zandt Soil and Water Conservation District hired Zach Kinsey to serve as the technician for this project on February 20, 2008.

**100% Complete**

*Subtask 1.2 The SWCD technician will attend monthly SWCD board meetings to discuss technical assistance activities, project schedule, lines of responsibility, communication needs, and other required tasks with project participants.*

The following actions have been completed during this reporting period:

- Zach Kinsey attended SWCD board meetings on April 2, May 7, and June 4 to update them of field visits, conservation planning, and program status.

**16% Complete**

*Subtask 1.3 The SWCD technician will coordinate with other agencies and programs providing landowners incentives for adopting Best Management Practices.*

The following actions have been completed during this reporting period:

- Zach Kinsey has assisted with the completion of WQMP#505-08-014 and has cooperated with NRCS employees to improve water quality within the Cedar Creek Watershed.

**16% Complete**

*Subtask 1.4 The SWCD technician will attend meetings with the TSSWCB project manager and other meetings, as needed, to review project status, deliverables, etc.*

The following actions have been completed during this reporting period:

- No activity to report this quarter.

**16% Complete**

*Subtask 1.5 The SWCD technician will prepare materials for inclusion in quarterly reports and the final report for submittal by TWRI to the TSSWCB.*

The following actions have been completed during this reporting period:

- Zach Kinsey provided information for the quarterly report.

**16% Complete**

*Subtask 1.6 The Kaufman-Van Zandt SWCD will be allocated \$300,000 in 319(h) funding to provide cost-share to landowners in the Cedar Creek Watershed to implement BMPs that reduce nutrient and sediment runoff to local waterbodies. In addition, TRWD will provide \$50,000 in cost-share funds. The maximum cost-share rate shall not exceed 70% of the cost of implementation of the BMP with 60% coming from 319(h), 10% from TRWD funds, and 30% from the landowner. Landowners shall be eligible to receive a maximum cost-share amount of \$15,000 from the TSSWCB 319(h) funds. 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:

- All practices on WQMP# 505-08-014 have been completed (23 ac. Pasture and Hayland Planting and 23 ac. Nutrient Management for Establishment). Zack Kinsey certified performance of the practices on April 17, 2008. Approximately 1% of the \$300,000 allocated funds were used (\$3,185.76).

**1% Complete**

*Subtask 1.7 The SWCD technician will send out notifications announcing the availability of assistance for implementing WQMPs/BMPs and will assist the SWCD in accepting and prioritizing the WQMP applications. The TSSWCB project manager must approve all announcements, letters and publications developed before distribution.*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

*Subtask 1.8 The SWCD technician, with assistance from NRCS and the TSSWCB Mount Pleasant Regional Office, will provide landowners information on appropriate BMPs and will work with landowners in developing and implementing a minimum of 20 WQMPs.*

The following actions have been completed during this reporting period:

- Zach Kinsey assisted in completion of WQMP# 505-08-014 (174 acres) near Kemp, TX on April 14, 2008.
- A request for planning on a 1600 acre ranch was approved by the SWCD Board on June 4<sup>th</sup>. Work on the WQMP will be initiated next quarter. Jeff Goodwin (NRCS Range Management Specialist) and Michael Brooks (District Conservation for Forney FO, and Arlington FO) will be assisting Zach with the plan.

**5% Complete**

*Subtask 1.9 The TSSWCB Mount Pleasant Regional Office will provide technical review and certification of WQMPs. During this process, TSSWCB will certify all WQMPs and ensure that they are consistent with state water quality standards.*

The following actions have been completed during this reporting period:

- TSSWCB reviewed and certified WQMP# 505-08-014.

**5% Complete**

*Subtask 1.10 The SWCD technician will conduct status reviews on all WQMPs to ensure BMP implementation schedules are being followed.*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

*Subtask 1.11 The SWCD technician will assist landowners in the SWCD with the acquisition of current soil tests though utilization of project funding. Funding for 100 soil tests annually will be provided.*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

*Subtask 1.12 The SWCD will have an audit completed at least once during the project period.*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

*Subtask 1.13 The SWCD technician, with assistance from the NRCS and TSSWCB Mount Pleasant Regional Office, will compile information on the location and types of BMPs for each WQMP implemented within the Cedar Creek Reservoir, Kings Creek, and Cedar Creek Watersheds.*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

## **TASK 2: VERIFY BMP EFFECTIVENESS**

*Subtask 2.1 Texas AgriLife Research will develop a Quality Assurance Project Plan (QAPP) that will detail project goals and objectives, the data needs to fulfill those objectives, lists field and laboratory methods, procedures and schedules to be followed, and specify a data management structure and quality assurance protocols. The QAPP will be developed using guidelines in EPA QA/R-5, "EPA Requirements for Quality Assurance Project Plans".*

The following actions have been completed during this reporting period:

- The development of the QAPP has been initiated and should be provided to TSSWCB next quarter.

**75% Complete**

*Subtask 2.2 Texas AgriLife Research will provide annual revisions to the QAPP and amendments, as needed, to the TSSWCB and EPA. (Start Date: Month 6; Completion Date: Month 36)*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

*Subtask 2.3 Texas AgriLife Research will construct 10 replication plots 2,500 square feet in size and measuring 50X50 ft to evaluate agricultural BMPs for cropland and pasture lands. Texas AgriLife Research will install run off collection instruments and soil moisture monitoring equipment in the runoff plots and gather benchmark runoff data from each plot before initiating BMPs.*

The following actions have been completed during this reporting period:

- The research team has selected the BMPs which will be evaluated, designed the replications, and constructed runoff plots for the cropland and pastureland studies. BMPs selected include crop residue management, buffer strips, fertilizer/nutrient management and cropland converted to pasture
- Equipment has been ordered and will be installed to collect benchmark data starting in August.

### **70% Complete**

*Subtask 2.4 Texas AgriLife Research will collect runoff data including flow intensities and volumes, sediment loads, total and soluble N and P concentrations, pH, electrolytic conductivity, total and dissolved organic carbon, and dissolved oxygen content. Treatments will consist of the following: 1) Control, 2) Residue management, 3) Buffer Strips, 4) Fertilizer and Nutrient Management, and 5) Cropland converted to forage production.*

The following actions have been completed during this reporting period:

- No activity this quarter.

### **0% Complete**

*Subtask 2.5 Texas AgriLife Research will use runoff data and data from other sources to calculate the nutrient and sediment load reductions resulting from the project for inclusion in the final report.*

The following actions have been completed during this reporting period:

- No activity this quarter.

### **0% Complete**

## **TASK 3: PROVIDE WATER QUALITY EDUCATION**

*Subtask 3.1 Texas AgriLife Extension and Texas AgriLife Research will assimilate and evaluate the adequacy of existing educational resources and resource needs to provide educational support for the project.*

The following actions have been completed during this reporting period:

- Project team members have begun collecting information on educational resources available that can be utilized for educational programs within the Cedar Creek Watershed related to BMPs.
- Project team members have met and will continue meeting with County Extension Agents in the watershed to coordinate educational events and provide information for already scheduled events.
- Project team members are utilizing workgroup recommendations from the Cedar Creek Watershed Protection Plan Stakeholders Committee to evaluate what educational programs to implement and what the priority areas are.

### **35% Complete**

*Subtask 3.2 Texas AgriLife Extension and Texas AgriLife Research will provide biannual educational/training events on single- or multi-county level to: 1) improve landowner knowledge and understanding of BMPs for nutrient management and erosion control, 2) provide information on project activities and results and 3) provide additional training on implementing and sustaining BMPs. NRCS, TSSWCB, and Kaufman-Van Zandt SWCD personnel will be requested to be speakers to provide information on cost share and technical assistance programs available to assist producers.*

The following actions have been completed during this reporting period:

- No activity this quarter.

### **0% Complete**

*Subtask 3.3 Texas AgriLife Extension and Texas AgriLife Research will conduct a preliminary survey of a select group of initial event participants to evaluate knowledge about surface water conditions in the watershed and assess current knowledge and use of erosion control and nutrient management practices. Follow-up surveys will be conducted in subsequent years to evaluate changes, if any, in producer awareness and BMP implementation.*

The following actions have been completed during this reporting period:

- No activity this quarter.

### **0% Complete**

## **TASK 4: COORDINATE PROJECT ACTIVITIES AND REPORTING**

*Subtask 4.1 TWRI, with input from the Project Partners, will prepare electronic quarterly reports for submission to the TSSWCB. All progress reports will be provided to all Project Participants.*

The following actions have been completed during this reporting period:

- TWRI will submit the Year 1, Quarter 2 Progress Report on July 15, 2008

**16% Complete**

*Subtask 4.2 TWRI will coordinate quarterly TTVN meetings or teleconferences, as appropriate, with project participants to discuss project activities, project schedule, lines of responsibility, communication needs, and other requirements.*

The following actions have been completed during this reporting period:

- Research Team Members met on May 28, 2008 to discuss plot design, construction, monitoring equipment needs and BMPs to be evaluated.
- Project Team Members met on June 19, 2008 after the Cedar Creek Watershed Stakeholder meeting to discuss the project's progress.
- TWRI, Texas AgriLife Research, and TSSWCB will meet with the Kaufman-Van Zandt SWCD on August 6, 2008.

**16% Complete**

*Subtask 4.3 TWRI will attend meetings with the TSSWCB project manager, SWCD, and other meetings, as needed, to review project status, deliverables, etc.*

The following actions have been completed during this reporting period:

- TWRI met with the TSSWCB project manager on May 5 to review the project status.

**16% Complete**

*Subtask 4.4 TWRI will assist Project Partners with the completion and submittal of a final report to the TSSWCB at the culmination of the project. This report will be completed and provided to the TSSWCB in electronic format (i.e. compact disc, etc.).*

The following actions have been completed during this reporting period:

- No activity this quarter.

**0% Complete**

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

- N/A

#### **IV. Projected Work for Next Quarter**

- SWCD Technician Zach Kinsey will send out notifications announcing the availability of assistance for implementing WQMPs/BMPs in the Cedar Creek Watershed.
- Finalize the QAPP.
- Install monitoring equipment getting the site ready to collect baseline data.
- Working through the County Extension Agents in Kaufman, Henderson, Van Zandt and Rockwall counties the project team will coordinate educational events in the Cedar Creek Watershed.
- Continue working with the Kaufmann-Van Zandt SWCD, TSSWCB, USDA-NRCS, Texas AgriLife Research, Texas AgriLife Extension Service, TWRI, and TRWD in moving forward with project deliverables and reporting progress on a quarterly basis. Efforts will be made to publicize the project and raise awareness of water quality issues within the study area.
- TWRI, Texas AgriLife Research, and TSSWCB will meet with the Kaufman-Van Zandt SWCD on August 6.
- AgriLife Research has posted and will hire a research assistant assigned to work on this project.