

Texas AgriLife Research

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

Quarter no. 13 From 1/1/11 Through 3/31/11

I. Abstract

Zach Kinsey has continued with planning, review, and implementation of all certified WQMP, and has continued to work on the BMP spreadsheet. Soil tests were conducted for both cropland and grassland BMPs plots to ensure proper nutrient management. Only one rainfall event produced runoff during this period. Runoff samples were collected and are being analyzed. TWRI continued coordinating project activities, collecting information from project members, and reporting. A project status update meeting is scheduled for April 26.

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 January 5, February 2 and March 2, 2011 to update them of field visits, conservation planning and program status.

80% 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 spoke with producers that have WQMP practices scheduled for spring 2011. Currently five producers have started work on seedbed preparation, and work has been initiated on three fences.

80% 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:

- Zach Kinsey attended a CEU Workshop held at the Able Springs Fire Department on February 11, 2011. Zach gave a power point presentation over WQMPs.

60% 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.
- Zach Kinsey has continued work on the Final Report and the BMP spreadsheet.

78% 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:

- One practice on WQMP #505-09-031 has been completed (820 ft of fencing) as of February 2011. Total cost-share for installation was \$1,107. Approximately .04% of the \$300,000 allocated funds were used.

65% 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.

60% 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:

- As of March 31, 2011, the Kaufman Van Zandt SWCD has 28 certified WQMPs. Work has begun or is completed on 24 plans.
- Zach Kinsey has completed planning on three WQMPs totaling 1,124.5 acres.

50% 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:

- No activity this quarter.

40% 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.

70% Complete

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

The following actions have been completed during this reporting period:

- Zach Kinsey and the Kaufman Van Zandt SWCD have assisted landowners with 12 soil tests.

12% 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.

100% 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:

- Work continued this quarter.

60% 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 QAPP was reviewed and approved by TSSWCB and EPA

100% 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 revisions were required during this reporting period.

70% 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:

- Flow measuring equipment, ISCO runoff samplers and best management practices were monitored in the cropland and pastureland runoff plots to guarantee operability.
- Soil tests were conducted for both cropland and grassland BMPs plots to ensure proper nutrient management.
- The three plots with residue management as a BMP were tilled in preparation for their conversion from cropland to forage.
- The conventional tillage (control) plots were also tilled.



Tillage to convert cropland to forage production

90% 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:

- Only one rainfall event produced runoff during this period.
- Runoff samples were collected and are being analyzed..



Collecting runoff samples

60% 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:

- Flow data for this reporting period are being processed. Nutrient and sediment load calculations using processed flow data continued during this period.

55% 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:

- No activity this quarter.

85% 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:

- Agricultural producers in the Cedar Creek Watershed participated in a one-day workshop organized by Texas AgriLife Research and Extension Center at Dallas on February 11, 2011. Speakers from AgriLife Extension and USDA-NRCS presented concepts in nutrient management, soil fertility, watershed planning, NRCS Funding Programs, riparian health and water quality Best Management Practices.
- The workshop news release, agenda and producer survey that was handed out are following this report in Appendix A.

85% 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:

- Surveys are being prepared to distribute at the February 11 meeting for knowledge of BMPs, watershed issues, and willingness to adopt such practices.

75% 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 4, Quarter 13 Progress Report on April 11, 2011.

90% 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:

- A project meeting was planned and scheduled during this quarter to review project activities and the status of deliverables. The meeting will be held April 26.

75% 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 has scheduled a meeting with project participants and TSSWCB to discuss project activities and the status of deliverables. The meeting will be April 26.

60% 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

- Nothing to report this quarter.

IV. Projected Work for Next Quarter

- Zach will continue working on WQMPs.
- Zach will continue working on the final report and the BMP spreadsheet.
- Working through the County Extension Agents in Kaufman, Henderson, Van Zandt and Rockwall counties, the project team will continue to 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.
- Rainfall for 2011 has been 3 to 5 inches below normal resulting in no runoff from the BMP verification plots. If rainfall is insufficient to generate natural runoff from the BMP plots, Texas AgriLife Research will use a rainfall simulator to generate artificial runoff.
- Project participants will attend the April 26 project meeting at TSSWCB in Temple to discuss project activities and status.

Appendix A

Cedar Creek Watershed Agricultural Workshop to Outline Water Quality Solutions

CONTACT: David Waidler, Texas AgriLife Research 972-952-9689

d-waidler@tamu.edu

Officials with Texas AgriLife Extension, Texas AgriLife Research, the USDA-NRCS, and the Kaufman- Van Zandt Soil and Water Conservation District will conduct a free full-day workshop in Able Springs on Friday February 11, 2011.

The workshop will take place at the Able Springs Fire Department located 8 miles north of Terrell at 30000 F.M. 429 North. Producers within Kaufman, Van Zandt, Rockwall, and Henderson County are invited to engage in presentations on soil fertility, pastureland erosion and nutrient conservation practices, brush control, riparian health, and feral hog abatement.

The workshop begins at 8:30AM and is scheduled to conclude at 5:00PM with a barbeque lunch compliments of the North Central Texas Water Quality Project. The Texas Department of Agriculture has approved 5 hours of CEU's for private pesticide applicators and 5.5 hours of CEU's for Certified Crop Advisors.

“The future of water quality for Cedar Creek Lake depends on the stewardship of the watershed agricultural producers,” said North Central Texas Water Quality Project Watershed Coordinator, David Waidler. “This workshop will assist with informing local farmers and ranchers of how we can work together.”

This workshop is made possible with funding from the USDA-NRCS as well as a Clean Water Act Section 319(h) nonpoint source grant awarded to the Texas AgriLife Research and Extension Center - Dallas by the Texas State Soil and Water Conservation Board and the U.S. Environmental Protection Agency. Other key partners supporting watershed protection efforts include Tarrant Regional Water District and the Kaufman County Soil and Water Conservation District. The workshop is also supported by the Kaufman County Livestock and Forage Committee.

For more information on the meeting and to register for the event please contact the Kaufman County AgriLife Extension Office at 972-932-9069 or e mail

sburden@ag.tamu.edu.

Cedar Creek Agricultural Producers Workshop

February 11, 2011

Able Springs Fire Department

30000 FM 429 North

Terrell, Texas 75161

8:00AM Registration and Sign In

8:30AM Welcome and Introductions

8:40AM The Watershed Management Approach for Cedar Creek Watershed
Justin Mechell, Texas AgriLife Extension

9:15AM Pasture and Rangeland BMPs Including Brush Control
Kevin Derzapf, USDA-NRCS

10:45AM Break

11:00AM Soil Testing to Manage Fertility
Mark McFarland, Texas AgriLife Extension

12:00PM Lunch- Catered by Eddie Deen Ranch. Sponsored by the North Central Texas Water Quality Project

12:30PM Funding the Implementation of Best Management Practices
Glenn Lubke, USDA-NRCS

1:00PM Water Quality Management Plans for the Cedar Creek Watershed
Zach Kinsey, Kaufman- Van Zandt Soil and Water Conservation District

1:15PM Evaluating Rangeland Stream and Riparian Health-
Ken Mayben, USDA-NRCS

2:15PM Cover Crops, Tillage, and Pest Management
Andy Spencer USDA-NRCS

3:00PM Break

3:15PM Texas' Biggest Pest: Feral Hogs
Ralph Davis, Texas AgriLife CEA Kaufman County

4:15PM Laws & Regulations: Last Chance Video Series

5:15PM Adjourn

**Water Quality Best Management Practices
Producers Survey
February 11, 2011**

- 1) **Please provide the location of your property your home county (example: southwest Kaufman County).**

- 2) **Please list the number of acres you have in production.**

- 3) **Please list your current landuse (example: rangeland, pasture, crops).**

- 4) **Do you face erosion, channel erosion, or nutrient management issues on your property?**

- 5) **Are you currently participating in a federal or state cost share program?**

- 6) **Current BMP Usage**
Please check off any practices that you currently utilize:

- | | |
|--------------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> Grassed Waterways | <input type="checkbox"/> Contour Farming |
| <input type="checkbox"/> Rotational Grazing | <input type="checkbox"/> Nutrient Management |
| <input type="checkbox"/> Terracing | <input type="checkbox"/> Cropland Conversion to Pasture |
| <input type="checkbox"/> Crop Residue Management | <input type="checkbox"/> Range Planting |
| <input type="checkbox"/> Pasture Planting | <input type="checkbox"/> Fencing |
| <input type="checkbox"/> Water Facility | <input type="checkbox"/> Channel Stabilization |
| <input type="checkbox"/> Riparian Buffer Strips | <input type="checkbox"/> Sedimentation Basins/Ponds |
| <input type="checkbox"/> Wetland Creation | <input type="checkbox"/> Streambank Protection |
| <input type="checkbox"/> Filter Strips | |

List additional BMPs that you currently practice:

7) Cost Sharing Program

Please check which cost sharing program you are most likely to apply for:

- | | |
|-------------------------------------------------|-------|
| Environmental Quality Incentive Program (EQIP) | _____ |
| Wildlife Habitat Incentive Program (WHIP) | _____ |
| Conservation Technical Assistance Program (CTA) | _____ |
| Conservation Reserve Program (CRP) | _____ |
| Agricultural Water Enhancement Program (AWEP) | _____ |
| Grassland Reserve Program (GRP) | _____ |
| Emergency Watershed Program (EWP) | _____ |
| Water Quality Management Plan (WQMP) | _____ |

8) Likelihood of Implementation

*Please consider the following BMPs for implantation on your property
1 being completely unlikely and 5 being completely likely.*

Grassed Waterways	1	2	3	4	5
Filter Strips	1	2	3	4	5
Rotational Grazing (fencing, water facility)	1	2	3	4	5
Contour Farming	1	2	3	4	5
Terracing	1	2	3	4	5
Nutrient Management/ Soil Testing	1	2	3	4	5
Crop Residue Management	1	2	3	4	5
Cropland Conversion to Pasture	1	2	3	4	5
Pasture Planting	1	2	3	4	5
Range Planting	1	2	3	4	5
Riparian Buffer Strips	1	2	3	4	5
Channel Stabilization	1	2	3	4	5
Sedimentation Basins/Ponds	1	2	3	4	5
Streambank Protection	1	2	3	4	5
Grade Stabilization	1	2	3	4	5

What potential barriers exist to implementation of BMPs on your property?

9) Cost Sharing Partnerships

Please estimate the percentage of cost sharing that would be necessary to adopt a BMP or coordinated suite of BMPs on your land (example 30% NRCS/ 70% Producer).

Grassed Waterways	_____	Water Facility	_____
Filter Strips	_____	Fencing	_____
Rotational Grazing	_____	Riparian Buffer Strips	_____
Contour Farming	_____	Channel Stabilization	_____
Terracing	_____	Wetland Creation	_____
Nutrient Management	_____	Streambank Protection	_____
Crop Residue Management	_____	Sedimentation Basins/Ponds	_____
Cropland Conversion to Pasture	_____	Grade Stabilization	_____
Pasture Planting	_____	Other (please list)	_____
Range Planting	_____		

Comments:
