

Agricultural NPS Remediation in the Cedar Creek Reservoir Watershed
Texas AgriLife Research and Extension Urban Solutions Center
FY 07 Section 319(h) Nonpoint Source Program
Project # 07-14

Quarter no. 1 From 12/1/07 Through 3/15/08

Progress in Meeting Project Milestones and Output Commitments

Task, Deliverables and Schedules

Tarrant Regional Water District (TRWD) is one of the largest raw water suppliers in Texas, serving about 1.6 million people in ten counties in the Fort Worth area and its surroundings. With the growing urbanization, TRWD is expected to serve a projected population of 2.66 million in 2050. TRWD has been concerned about the recent water quality issues caused by nonpoint source pollution sources in the watershed. Nonpoint source pollution from agricultural runoff is reported to be a contributor to water quality impairment in the watershed. Excess nutrient loading to the reservoir has led to eutrophication, depletion of dissolved oxygen (DO), excess algal growth, and fish tissue contamination.

This project will consist of the Kaufmann-Van Zandt SWCD, TSSWCB, USDA-NRCS, Texas AgriLife Research, Texas AgriLife Extension Service, TWRI, and TRWD working together to implement agricultural BMPs and education programs in the Kaufmann-Van Zandt SWCD as recommended by the Cedar Creek Reservoir Watershed Protection Plan. The effectiveness of these programs will be evaluated by Texas AgriLife Research. This project will work cooperatively with ongoing efforts in the watershed such as the North Central Texas Water Quality Project and the NRCS EQIP program.

The project's goal is to reduce nutrient and sediment loading to Cedar Creek Reservoir by implementing BMPs on crop and pasture lands. The objectives are to encourage BMP implementation by providing landowners with technical and financial assistance through the Kaufmann-Van Zandt SWCD and educational programs through Texas AgriLife Extension Service. Effectiveness of BMPs will be assessed by AgriLife Research.

The status of tasks, milestones and deliverables will be defined using the following terms:

Pending	Work has not started on the deliverable
Initiated	Work has started
Completed	Objectives were achieved and deliverables are finished
Deferred	Work has started, but further action is delayed pending other information, the completion of another objective, staff restraints, etc.
Ongoing	Work will continue throughout the term of the contract

Task 1 Develop and Implement Water Quality Management Plans

Due Date	Status	Deliverables
3/15/08	Completed	1. Hire a SWCD technician to provide technical assistance
8/31/10		2. Prepare materials for inclusion in quarterly reports and the final report for submittal by Texas AgriLife Research and Extension Center - Dallas to the TSSWCB
4/30/10		3. Develop and send out notifications announcing the availability of assistance for implementing WQMPs/BMPs in the Cedar Creek Watershed and assist the SWCD in accepting and prioritizing the WQMP applications
4/30/10		4. Development and implementation a minimum of 20 WQMPs
8/31/10		5. Conduct status reviews on all WQMPs to ensure BMP implementation schedules are being followed.
8/31/08		6. Assist landowners in the Cedar Creek Watershed with the acquisition of current soil tests and will keep records of soils tests and provide a summary of the results
8/31/08		7. The SWCD audit
8/31/08		8. Develop a spreadsheet and map on the location and types of BMPs for each WQMP implemented

Comments:

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

Task 2 Verify BMP Effectiveness

Due Date	Status	Deliverables
3/31/08	Initiated	1. Develop a Quality Assurance Project Plan (QAPP)
8/31/09		2. Provide annual revisions to the QAPP
8/31/10		
4/30/08	Initiated	3. Construct 10 replication plots to evaluate BMPs
6/30/10		4. Collect runoff data
8/30/10		5. Calculate the nutrient and sediment load reductions for BMPs implemented in the runoff plots
8/30/10		6. Develop a technical report on BMP effectiveness for blackland soils in North Central Texas related to BMP runoff data

Comments:

- Texas AgriLife Research Faculty members at the Texas AgriLife Research and Extension Urban Solutions Center have surveyed the land in preparation for determining the most appropriate placement of the run-off plots.
- The research team has selected the BMPs which will be evaluated in the study and have designed the replications.

Task 3 Provide Water Quality Education

Due Date	Status	Deliverables
9/30/08	Initiated	1. Assimilate and evaluate the adequacy of existing educational resources and resource needs to provide educational support for the project
6/31/08		2. Conduct 6 educational training events
10/15/08		
5/1/09		
8/31/09		
5/1/09		
8/31/10		
8/31/10		3. Conduct survey of event participants to evaluate knowledge gained and likelihood to adopt practices

Comments:

- 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 BMP.
- Project team members have meet and will continue meeting with County Extension Agents in the Watershed to coordinate educational events and provide information for already scheduled events.

Task 4 Coordinate Project Activities and Reporting

Due Date	Status	Deliverables
3/15/08	Completed	1. Quarterly progress reports
6/15/08		
9/15/08		
12/15/08		
3/15/09		
6/15/09		
9/15/09		

12/15/09		
3/15/09		
6/15/09		
3/15/08	Completed	2. Quarterly project meetings
6/15/08		
9/15/08		
12/15/08		
3/15/09		
6/15/09		
9/15/09		
12/15/09		
3/15/09		
6/15/09		
3/15/08	Completed	3. Project Update Meetings with TSSWCB
9/15/08		
3/15/09		
9/15/09		
3/15/10		
8/31/10		
8/31/10		4. Final Report

Comments:

- On January 18, 2008 the research team at the Texas AgriLife Research and Extension Urban Solutions Center meet to discuss the research protocol for instillation of the runoff plots.
- On March 12, 2008 Clint Wolfe, Zach Kinsley and Lee Munz meet to discuss project activities. At the meeting Clint discussed the background of the North Central Texas Water Quality project and gave an update on the status of the project. At the meeting project participants discussed the plans of work and project deliverables.

Problems or Obstacles Encountered and Remedial Actions Taken

- None to report at this time

Work Planned for Next Quarter

Task 1: Develop and Implement Water Quality Management Plans

SWCD Technician Zach Kinsley will send out notifications announcing the availability of assistance for implementing WQMPs/BMPs in the Cedar Creek Watershed

Task 2: Verify BMP Effectiveness

Finalize the QAPP. Prepare the runoff plots and install monitoring equipment getting the site ready to collect baseline data

Task 3: Provide Water Quality Education

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

Task 4: Coordinate Project Activities and Reporting

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.