

North Canadian River Watershed Implementation Project

The North Canadian River Watershed Implementation Project is a partnership between local landowners, conservation districts (CD), the Oklahoma Conservation Commission (OCC), the NRCS, and the USEPA to address water quality impairments in the project area. Best Management Practices (BMPs) are being installed on a voluntary, cost-share basis to reduce bacteria and turbidity, the principle nonpoint source pollutants. Educational opportunities are being offered to landowners and residents of the 760 square mile watershed through informational seminars, local district interaction, and the OCC's Blue Thumb program, which trains residents in water quality monitoring.

Background:

- ◆ The project area (see map inset) is located between Lakes Canton and Overholser in Blaine, Oklahoma, Dewey, and Canadian Counties. This segment of the North Canadian River is currently **impaired by *Enterococcus* bacteria and turbidity.**
- ◆ In 2004, the Blaine County CD, Central North Canadian River CD, and the East Canadian County CD signed a Memorandum of Agreement seeking assistance from the OCC in developing a **voluntary program in the area to address nonpoint source water quality issues.**
- ◆ A 2005 Department of Environmental Quality Total Maximum Daily Load (TMDL) study indicated that an **88% reduction in *Enterococcus* bacteria load is needed to restore water quality.**
- ◆ In 2007, the **OCC began an EPA 319 funded implementation project to reduce the NPS pollution associated with agricultural activity in the watershed.** Education activities and implementation of BMPs are focused on reduction of nutrient, sediment, and bacteria loading in the watershed.



North Canadian River



Project Planning:

- ◆ **Objective:** To demonstrate the efficiency and effectiveness of voluntary efforts to improve water quality by installing practices that reduce runoff of nonpoint source pollutants such as bacteria, sediment, and nutrients in the North Canadian River Watershed.
- ◆ **Funded** through an EPA Clean Water Act, Section 319 grant that requires a 40% non-federal match. The current project **totals \$1,244,435 in state and federal funds.**
- ◆ **Partnered** primarily with the Blaine County, the Central North Canadian River, the Dewey County, and the East Canadian County Conservation Districts, as well as the local USDA-Natural Resources Conservation Service (NRCS) to implement the project.
- ◆ **Locally-led** effort: Hired local project staff to coordinate implementation and education efforts.

Project Implementation:

- ◆ **Practices were targeted** towards the most significant sources or "hotspot" areas based on computer modeling by OSU. Cost-share rates were based on the advice of a "watershed advisory group" comprised of conservation district board members, local landowners, and local producers.
- ◆ **Practices offered** focused on **Erosion Control** (no-till, conversion of cropland to pasture, grade stabilization structures, field borders, waterways), **Riparian Area / Buffer Zone Establishment** (exclusion fencing, alternative water supplies, vegetative plantings), **Livestock Management** (cross-fencing, pasture planting, alternative watering supplies, heavy use areas, nutrient management), and **Septic Concerns** (repair and installation).
- ◆ A total of **\$779,637 of practices will be installed** during this three year project:

(94% of this amount has been obligated as of March 2009)

\$268,638 from Federal 319 funds

\$410,999 from State funds

\$100,000 from landowners

- ◆ **Project Progress through early 2009:**

67 approved participants

Practices Completed :

- 216 acres of riparian area exclusion
(22,666 linear feet of fencing)
- 9,079 acres converted to no-till farming
- 2,200 feet of pipeline (for alternative watering)
- 1 grade stabilization structure
- 272 acres of pasture planting (to prevent erosion)
- 2 septic systems installed

Practices Planned :

- 14 contracts pending for riparian area easements
- 459 acres of pasture planting
- 2 septic systems and 3 grade stabilization structures



No-till crop conversion



Riparian area exclusion fencing



No-till conference

Public Outreach and Education:

- ◆ The first of multiple no-till farming conferences was held in El Reno in August 2008 with 98 participants.
- ◆ The Blue Thumb Education Program has been very active in the North Canadian Watershed. The first of several planned trainings was held in 2008. As a result, there are currently four volunteer teams monitoring streams in the watershed.
- ◆ In 2009, the cities of El Reno, Geary, Watonga, and Calumet voted to participate in the Blue Thumb Curb marking program.

Additional Work in the Watershed: Carbon Sequestration Pilot Program

Oklahoma's first agricultural carbon offset pilot program began in the watershed in August 2008. Western Farmers Electric Coop agreed to purchase carbon offsets from local producers who install eligible practices, such as no-till farming and riparian buffers, which both sequester carbon dioxide and protect water quality. A total of \$90,000 will be dispersed in annual payments for three years to producers participating in the North Canadian River Watershed Implementation Project.



Visit our website at: www.conservation.ok.gov

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