

Illinois River Watershed Implementation Project

The Illinois River is designated as a State Scenic River and is recognized as one of Oklahoma's most valuable water resources for aesthetic and recreational value, as well as a drinking water source. The 2008-2010 Illinois 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, nutrients (particularly phosphorus), and sediment, the major nonpoint source pollutants. This project is a supplement to several previous implementation efforts in the watershed.

Background:

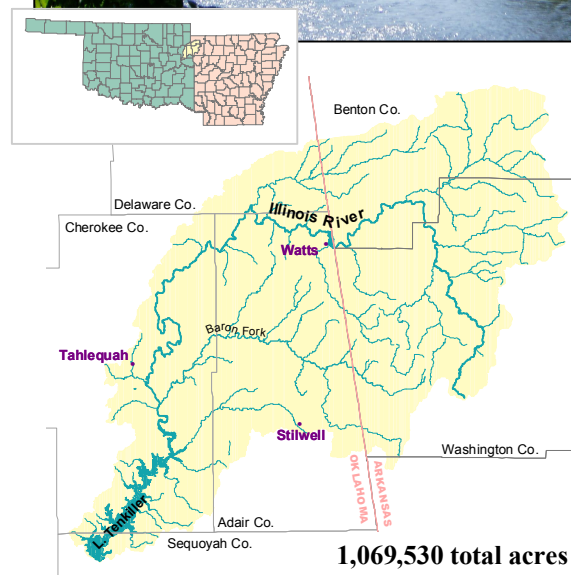
1993: Clean Lakes Study of **Lake Tenkiller**, fed by the Illinois River, shows substantial increase in chlorophyll-*a* over historical data due to **excessive nutrient loading**.

1992-2005: OCC conducts a **monitoring and demonstration project in the Peacheater Creek Watershed**, a subwatershed of the Illinois River, as part of a National NPS Monitoring Program. Significant nutrient reductions are seen in the watershed as a result of agricultural BMP implementation.

1999-2004: OCC leads a **demonstration project in the Illinois River/Baron Fork Watershed**. A total of 177 landowners participated, resulting in protection of over 1,300 acres of riparian area. BMPs installed included 120 freeze proof tanks, 61 ponds, 56 miles of fencing, 28 feeding facilities, 21 septic systems, and 6 poultry cake-out storage houses.

2006: Lake Tenkiller receives a **nutrient limited watershed designation** due to low dissolved oxygen and an established relationship between nutrients and algae. Oklahoma State Attorney General files a **lawsuit against 7 poultry integrator companies** for their role in polluting the Illinois River watershed.

2008: Lake Tenkiller is on **Oklahoma's 2008 303(d) list of impaired waterbodies** for total phosphorus, dissolved oxygen, and chlorophyll-*a*. In addition, four segments of the Illinois River, as well as Chicken Creek, Town Branch of Tahlequah Creek, Ballard Creek, Caney Creek, the Baron Fork, Tyner Creek, Peacheater Creek, Battle Branch, Sager Creek, and two segments of Flint Creek are not supporting designated uses due to nutrients and/or pathogen (bacteria) impairments. This corresponds to **171 miles of impaired Oklahoma streams and 13,470 acres of impaired lake water**.



Project Planning:

Objectives: 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, nutrients, and sediment in the Illinois River Watershed and to work in conjunction with the Conservation Reserve Enhancement Program to establish long-term riparian area protection.

Funded through an EPA Clean Water Act, Section 319 grant that requires a 40% non-federal (state and landowner) match. As of May 2009, approximately **\$1,227,318** has been obligated for project implementation.

Partnered primarily with the Delaware County, Adair County, and Cherokee County Conservation Districts, as well as the local USDA-Natural Resources Conservation Service (NRCS) to implement the project.

Locally-led: The OCC hired local project staff based in Stillwell to coordinate implementation and education efforts.

Project Implementation:

Best Management Practices (BMPs) offered focus on:

- ♦ **Riparian Area / Buffer Zone Establishment:** exclusion fencing, alternative water supplies, vegetative plantings, and cross-fencing
- ♦ **Animal Waste Management Components:** waste storage structures (cattle and poultry)
- ♦ **Rural Waste Septic Systems:** replacement / repair of existing septic systems



Project Progress through May 2009 — 77 approved participants

Practices Installed:

- 104 acres of riparian area exclusion (10,442 linear feet of exclusion fencing)
- 10 watering facilities, 2 water wells, and 3,281 feet of pipeline
- 3 winter feeding facilities
- 3 heavy use areas
- 28 septic systems
- 10,286 feet of cross-fencing for pasture improvement



Practices Planned:

- 20 waste storage facilities
- 53 septic system replacements
- 32,342 feet of riparian fencing and 40,650 feet of cross-fencing
- 67 watering facilities (tanks), 3 ponds, and 10 water wells



Public Outreach and Education:

The OCC's Blue Thumb water pollution education program has been active in the Illinois River watershed since the 1990s. Blue Thumb trainings for new stream monitoring volunteers are held annually in the watershed. Currently, Blue Thumb has eight active stream monitoring sites in the Illinois River Watershed. Blue Thumb also provides educational information to local producers at quarterly Cattlemen's Association meetings and Poultry Education classes.

Additional Work in the Watershed: CREP and 30 year Riparian Easements

- ♦ In 2007, Oklahoma began a **\$20 million Conservation Reserve Enhancement Program (CREP)** to protect riparian areas (land adjacent to streams) in the Illinois River and Eucha-Spavinaw Watersheds. CREP is entirely voluntary, providing incentive payments to producers in priority watersheds who enter a 10-15 year contract to fence off and protect riparian buffer areas along streams in program zones. A total of 15 contracts, covering 135 acres, are currently enrolled, while 21 contracts covering 1,363 acres are pending approval.
- ♦ In a similar effort, **30 year riparian easements** have been established on approximately 416 acres in the Illinois River Watershed with funding from the Oklahoma Scenic Rivers Commission.

Monitoring:

OCC staff collect water samples weekly from six automated samplers in the Illinois River watershed. These continuous, flow-weighted samples are analyzed for various forms of phosphorus and nitrogen. Bacteria testing occurs weekly during the recreation season. Biological sampling occurs every 2 years for fish and twice a year for bugs. The analysis of these parameters will allow changes in the watershed to be assessed throughout the project.



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

For additional information, contact:

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