NONPOINT SOURCE SUCCESS STORY

Texas

Partnerships and Conservation Planning Help Restore Water Quality in Catfish Creek

Waterbody Improved

High levels of bacteria prompted the Texas Commission on Environmental Quality (TCEQ) to add Catfish Creek to the 2010 Clean Water Act (CWA) section 303(d) list of impaired waters for not supporting its primary contact recreation use. The Texas State Soil and Water Conservation Board (TSSWCB) and an extensive group of partners came together to engage with the community in 2010 to help address these issues. Project partners used CWA section 319(h) grant funds from the U.S. Environmental Protection Agency (EPA) to develop a network of private landowners engaged in cooperative conservation to advance the restoration and protection of water quality in the Trinity River Basin. Through these efforts water quality was improved and Catfish Creek (assessment unit [AU] 0804G_1) was removed from the state's list of impaired waters in 2014 for bacteria (*Escherichia coli*).

Problem

Catfish Creek (Figure 1) in east-central Texas begins in Henderson County and flows 36 miles to its confluence with the Trinity River in Anderson County. The 165-square-mile watershed is largely undeveloped and livestock production and wildlife management are the main land use activities.

Water quality data collected in Catfish Creek from 2002 to 2009 showed that *E. coli* levels exceeded the bacteria water quality standard for contact recreation. As a result, TCEQ added the creek to the 2010 CWA section 303(d) list of impaired waters for not supporting its primary contact recreation use.

Concurrent to the stream being listed, natural resource managers and landowners across the Middle Trinity River Basin identified a need for stakeholder education focusing on water quality and quantity, along with overall natural resource management.

Story Highlights

The success of this effort can be attributed to numerous education and outreach programs and the implementation of best management practices (BMP) through conservation plans. The Texas State Soil and Water Conservation Board (TSSWCB) partnered

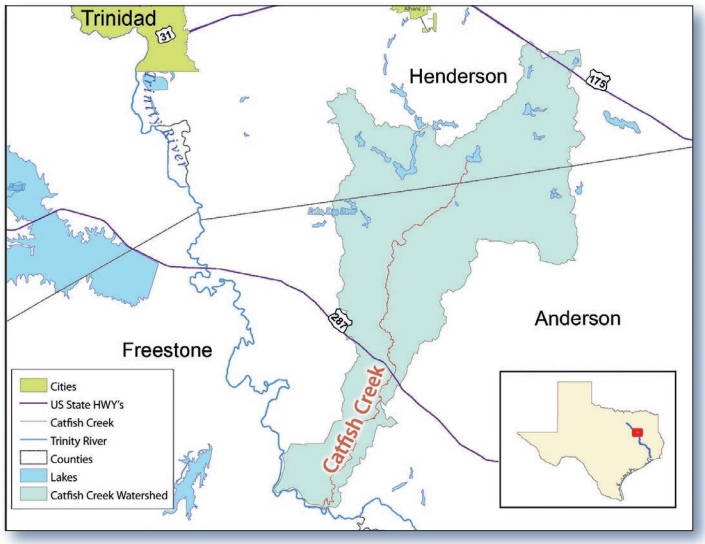

Figure 1. Catfish Creek is in east-central Texas.

with Texas A&M AgriLife Extension Service, Texas Water Resources Institute (TWRI), Texas A&M Natural Resources Institute (NRI), Trinity Waters, Texas Wildlife Association (TWA) and Texas Parks and Wildlife Department (TPWD) to initiate an effort in 2010 to help address these issues. Project partners used CWA section 319(h) grant funds from EPA to develop a peer network of private landowners engaged in cooperative conservation to advance the restoration and protection of water quality in the Trinity River Basin.

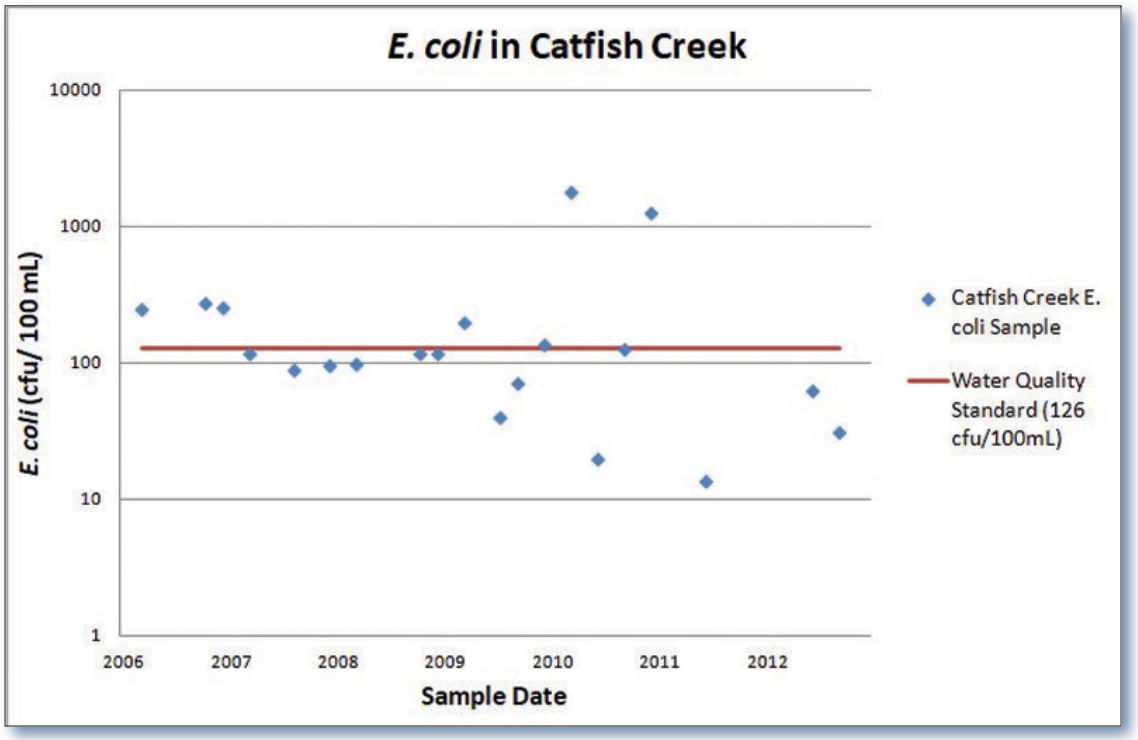

Figure 2. Bacteria levels in Catfish Creek declined and now meet standards.

During this effort, 196,297 contacts were made through presentations at workshops and webinars and by operating vendor booths. In addition, 3,754,554 contacts were made through the website and social media channels, totaling 3,950,851 contacts during the project.

Prescribed grazing, upland wildlife management, forest stand improvement and nutrient management were the main conservation practices implemented by landowners in the watershed. Implementation continues in the entire watershed; therefore, water quality is expected to be maintained in Catfish Creek.

Results

Recent water quality monitoring data show that the *E. coli* geometric means meet the state water quality standard (126 colony-forming units/100 milliliters) for contact recreation in Catfish Creek (Figure 2). Consequently, AU 0804G_1 was removed from the impaired waters list in 2014.

Catfish Creek currently supports the contact recreation use. Water quality monitoring continues in Catfish Creek to track progress of these and additional efforts in the watershed.

Partners and Funding

Over $437,900 in CWA section 319(h) funds (provided by the TSSWCB and EPA), matched with over $293,500 from Texas A&M AgriLife Extension Service, TWRI, NRI, TWA and Trinity Waters were used to educate stakeholders in the Middle Trinity River Basin, which includes Catfish Creek. The U.S. Department of Agriculture Natural Resources Conservation Service provided more than $17,800 in Farm Bill funding, combined with more than $8,000 in local match to implement conservation practices on over 26,000 acres in the watershed.

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