

Implementing Agricultural Nonpoint Source Components of the Leon River Watershed Protection Plan



Hamilton-Coryell Soil and Water Conservation District #506

Final Report TSSWCB Project #14-03

FUNDING PROVIDED THROUGH A CLEAN WATER ACT §319(h) NONPOINT SOURCE
GRANT FROM THE TEXAS STATE SOIL AND WATER CONSERVATION BOARD AND
THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Executive Summary

The Hamilton-Coryell and Upper Leon Soil and Water Conservation Districts (SWCDs), working cooperatively with the Texas State Soil and Water Conservation Board (TSSWCB) and the Natural Resources Conservation Service (NRCS), provided technical and financial assistance to agricultural producers in the Leon River watershed through a Clean Water Act §319(h) nonpoint source grant from the TSSWCB and the U.S. Environmental Protection Agency.

The development, installation, and maintenance of water quality management plans (WQMPs) in the Leon River watershed have continued to be a success. Through this project, a District Technician was hired and worked cooperatively with the TSSWCB and NRCS to provide agricultural producers with the opportunity to voluntarily implement best management practices (BMPs), which have a positive impact on water quality in the Leon River.

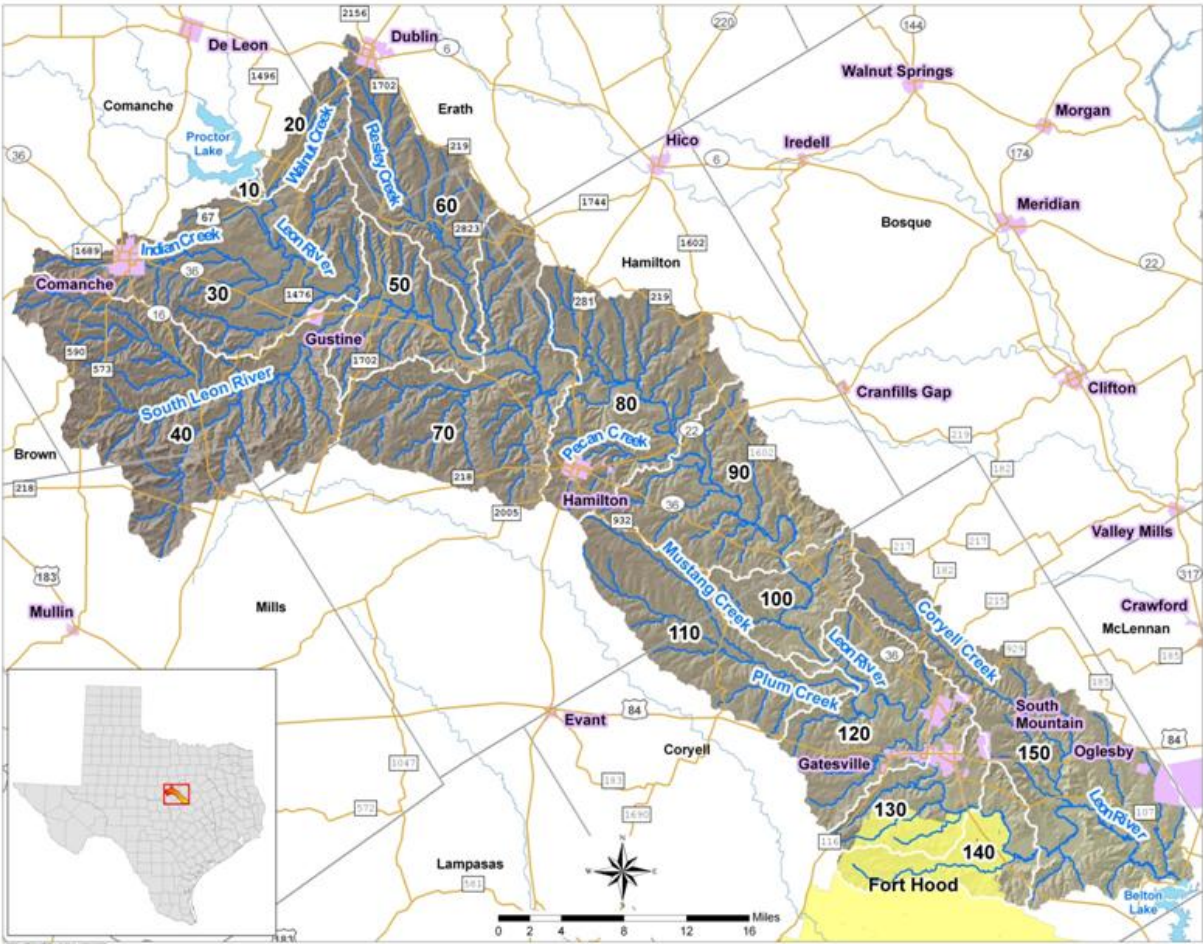
Through this project a total of 15 WQMPs were developed and implemented on approximately 5,569 acres. Examples of BMPs installed were Forage and Biomass Planting, Range Planting, Cross Fencing, and Prescribed Grazing, and Brush Management.

The District Technician and TSSWCB worked with the SWCDs and local producers to educate them on the WQMP program, proper soil sampling, and water quality. The District Technician and TSSWCB also presented at workshops, field days, and were active in continuing the development of the Leon River Watershed Protection Plan (WPP).

Implementation of WQMPs has and will continue to be a key component in the overall effort to improve water quality in the Leon River watershed.

Introduction

Between January 2005 and April 2008 stakeholders throughout the Leon River Watershed from Proctor Lake downstream to Belton Lake began to advocate a more locally driven process than that which was occurring through the TMDL process. Local stakeholders expressed interest in taking an active role in defining specific voluntary strategies to reduce bacteria loadings throughout the watershed and saw the WPP process as a more effective vehicle for pursuing this objective. Brazos River Authority (BRA) received a CWA §319(h) nonpoint source grant from the TSSWCB and the EPA to support development of this WPP. Parsons was hired to support BRA with the development of the WPP providing technical analysis, stakeholder coordination, and other expertise. The project team of BRA and Parsons received input from stakeholders of the Leon River watershed throughout this watershed planning process. TSSWCB Project 12-04 entitled Coordinating Implementation of the Leon River Watershed Protection Plan provided funding to hire a watershed coordinator and continue stakeholder meetings in order to implement and address EPA comments on the WPP.



Through the WPP development process, stakeholders identified several categories of potential nonpoint sources of bacteria in the watershed: forestland, cropland, rangeland, waste application fields, and residential/commercial/industrial. GIS shapefiles, livestock census, observations, stakeholder input, and TCEQ's draft TMDL report were all utilized to estimate distributions and the degree of contribution of these potential pollutant sources within the watershed. Based on these results, management measures were developed to address each of the potential sources. The timeline for full implementation of all the management measures in the Leon WPP is 10 years; this project supports that process for 3 of those years.

As identified during development of the WPP, nonpoint agricultural sources of pollutant loading may be addressed by implementing BMPs on agricultural operations. Agricultural producers, along with SWCDs, TSSWCB and NRCS, have been collaborating to protect the natural resources in Texas for decades. Through the TSSWCB's WQMP Program, farmers and ranchers routinely implement BMPs on their land utilizing financial and technical assistance programs of SWCDs who receive state and federal funds from TSSWCB, EPA, and NRCS. A WQMP is a site-specific plan developed through, and approved by, SWCDs which includes appropriate land treatment practices, production practices, management measures, and technologies that prevent and abate agricultural and silvicultural nonpoint source pollution. The BMPs prescribed in a WQMP are defined in the NRCS Field Office Technical Guide. Because of this, and similar programs, the State of Texas has been able to demonstrate successes in the improvement of water quality conditions through on-the-ground conservation results.

Expanding participation of agricultural producers in WPP implementation is essential to achieve water quality improvement. As an established and well-known local entity, the Hamilton-Coryell SWCD is uniquely situated to engage and support agricultural producers in watershed restoration and protection efforts, including implementation of appropriate BMPs to address nonpoint source pollution.

Technical support from the Hamilton-Coryell and Upper Leon SWCDs and NRCS personnel is critical for proper selection and placement of appropriate management measures on individual agricultural properties. However, due to the number of management plans that will be needed, a new position dedicated specifically to WQMP development in the watershed was necessary to provide direct assistance to agricultural producers, with emphasis on the sources and geographical areas within the watershed identified through the Leon WPP.

Program Development

A comprehensive watershed approach focused on the most significant potential sources of NPS pollution contributing to the current impairments was used for WPP development.

Recommended BMPs were identified for implementation by the Steering Committee, focus groups and partner agencies (Table 5.1 in the WPP). This project provides funding to support implementation of recommended agricultural management measures identified for action in the WPP during the 10-year implementation schedule.

To achieve this goal, the TSSWCB administered federal CWA §319(h) funds through the Hamilton-Coryell SWCD for support of one District Technician who will provide technical assistance to agricultural producers in developing and implementing WQMPs and Prescribed Grazing Plans in the Leon River Watershed. WQMPs are developed according to the NRCS Field Office Technical Guide. Once the WQMP was developed, it was sent to the appropriate TSSWCB regional office for technical review and certification. Upon certification of the WQMP, the District Technician worked with the landowners to implement the BMPs prescribed in the WQMP.

The District Technician was placed in the Gatesville NRCS field office and worked under the direction of the SWCD, with assistance from the TSSWCB, NRCS, and Watershed Coordinator, as needed. The District Technician also assisted landowners in applying for and obtaining financial incentives to aid in implementation of BMPs prescribed in WQMPs.

The District Technician worked with landowners to ensure proper installation and implementation of BMPs. The District Technician tracked utilization of obligated financial incentives and assisted landowners in utilizing these funds on schedule.

The District Technician also worked with TSSWCB, NRCS and the Watershed Coordinator to educate agricultural producers about water quality issues and how WQMPs and BMPs address NPS pollution from agriculture. The Technician presented to the Texas Farm Bureau (TFB), and educated members about how BMPs can protect and enhance the value of their operation and achieve water quality goals for the watershed at the same time. The Technician collaborated with the Leon River Watershed Steering Committee at meetings and individually in order to effectively and efficiently achieve project goals.

The District Technician and NRCS worked with landowners to implement BMPs as described in the WQMP. The examples of BMPs installed include:

Forage and Biomass Planting

This practice involves the planting of a grass(s) species on a cultivated field to prevent erosion, reduce runoff and nonpoint source pollution, and create forage for livestock.

Range Planting

This practice is the act of planting a mix of grass species on open rangeland needing to be covered by vegetation. This practice increases ground cover, improves soil health and water quality.

Prescribed Grazing

This practice implements a grazing plan to give pastures, rangeland, and cropland enough rest from livestock grazing to ensure that adequate amounts of forage covers the ground and is not overgrazed.

Cross- Fencing

This practice helps divide a producer's property into sections so that a grazing plan can be followed. The fence allows pastures and rangeland to be rested from grazing pressure to allow for vegetation growth.

Other BMPs installed or planned are Nutrient Management (590), Herbaceous Weed Control (315), Conservation Crop Rotation (328), Upland Wildlife Habitat Management (645), Water Well (642), Livestock Water Pipeline (516), Watering facility (614), Heavy Use Area Protection (561), and Brush Management (314)

In addition to the development, installation, and maintenance of WQMPs, the District Technician worked with the SWCDs and local producers to educate them on the effective management of their operation, the WQMP program, proper soil sampling, and water quality. The District Technician attended field days, workshops and educational events in the Leon River watershed disseminating information on this project and other pertinent agricultural-related issues.

Conclusions

The Hamilton-Coryell and Upper Leon SWCDs, working cooperatively with the TSSWCB and the NRCS, provided technical and financial assistance to agricultural producers in the Leon River watershed through a Clean Water Act §319(h) nonpoint source grant from the TSSWCB and the U.S. Environmental Protection Agency.

The District Technician and TSSWCB worked with the SWCDs and local producers to educate them on the WQMP program, proper soil sampling, and water quality. The District Technician also presented at workshops, field days, and was active in continuing the implementation of the Leon River WPP.

The development, installation, and maintenance of WQMPs in the Leon River watershed have been a success. Though this project a total of 15 WQMPs were developed and implemented on

approximately 5,569 acres. Examples of the BMPs installed were Forage and Biomass Planting, Range Planting, Cross Fencing, Prescribed Grazing, and Brush Management.

There is currently more need for technical and financial assistance to develop and implement BMPs in the watershed. The watershed technician will continue these implementation efforts through TSSWCB project 17-04.

WQMP's Developed and Implemented in Leon Watershed

