The Lampasas and Leon River Bacterial Source Tracking Assessment project provides critical bacteria loading information as well as source identification information for use by agencies and local stakeholders to guide them in their development of watershed protection plans.

The Lampasas and Leon rivers, located in the Brazos River Basin, flow through predominantly agricultural landscapes characterized by row crops and grasslands. Segments of both rivers were listed on the Texas Water Quality Inventory and 2008 303(d) List for elevated bacteria levels, causing recreational uses to be impaired. Potential sources of bacterial pollution in the Leon River watershed include wastewater facility discharges, stormwater runoff, leaking public and private septic systems and feces from wildlife, feral animals, livestock and pets. However, potential sources in the Lampasas River remain unclear.

The Lampasas and Leon River Bacterial Source Tracking Assessment project is providing critical bacteria loading information as well as source identification information through the use of library-dependent bacterial source tracking (BST). Water samples and streamflow measurements are supplementing the BST work and are used to assess and identify the sources of bacteria responsible for the impairment. The results of the study will be used to support the development and implementation of watershed protection plans (WPPs) for the Lampasas and Leon rivers watersheds, which will be developed under two separate projects by stakeholders within their respective watersheds. This information will enable stakeholders to adequately address bacteria-related issues in the places where they live and work.

Objectives

- Collect water samples and streamflow data to aid in bacteria loading characterizations
- Collect known source fecal samples from watersheds for inclusion in the Texas E. coli BST Library
- Conduct BST to identify different sources of bacteria through the use of library-dependent methods
- Deliver BST results to stakeholders to inform them of the issues in the watersheds

Accomplishments

- Project sampling received assistance from the State BST project, extending the number of samples collected from 100 to 200, reinforcing the local and state BST known-source libraries, which will assist in identification of future water impairments.
lampasas and leon bst assessment

Collaborators
- Brazos River Authority
- Texas State Soil and Water Conservation Board
- Texas Water Resources Institute
- Texas AgriLife Blackland Research and Extension Center
- Texas AgriLife Research Center at El Paso

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- Texas State Soil and Water Conservation Board