

## Lone Star Healthy Streams

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### TEACHING BEST MANAGEMENT PRACTICES STATEWIDE

The Lone Star Healthy Streams (LSHS) Program uses education to reduce the amount of bacteria entering Texas water bodies from livestock operations and feral hogs. This program, originally developed in 2007, has been expanded through a new project, *Development of a Synergistic, Comprehensive Statewide Lone Star Healthy Streams Program*.

The LSHS Program initially developed and tested educational opportunities for cattlemen focusing on bacterial contamination of watersheds by grazing animals and how that bacterial contamination can be reduced. The program also encouraged adoption of best management practices designed to reduce bacterial loading to Texas streams and waterways.

The expanded LSHS Program, to be delivered by the Texas AgriLife Extension Service, will integrate programs for grazing cattle, horses, poultry, dairy cattle operations, and feral hogs into an industry-endorsed, statewide program for reducing bacterial loading from livestock operations and feral hogs.

Building upon the initial program, LSHS is incorporating efforts from other projects such as the *Guide to Good Horsekeeping*. This guide, targeting practices that horse owners can implement to reduce bacterial loading, was developed through the project *Copano Bay Water Quality Education*. That program was developed and implemented in response to bacterial water quality issues in Copano Bay that impaired oyster harvest in the

bay and contact recreation in the Aransas and Mission rivers. Bacterial source tracking in the Copano Bay Watershed by Texas A&M University-Corpus Christi identified cattle, horses, and other animals as sources of the bacteria.

The expanded LSHS Program is integrating this horse owners' education program and others to produce standardized resource manuals, presentations, and an interactive website for bacterial runoff management for each of the major classes of livestock and for feral hogs.

"This program will be a tremendous tool for use throughout the state to reduce bacterial loading from livestock operations and feral hogs," said Kevin Wagner, associate director of the Texas Water Resources



THE LONE STAR HEALTHY STREAMS PROGRAM TEACHES OWNERS OF CATTLE OPERATIONS AND OTHER LIVESTOCK OPERATIONS HOW TO REDUCE BACTERIAL LOADING IN TEXAS WATERWAYS.

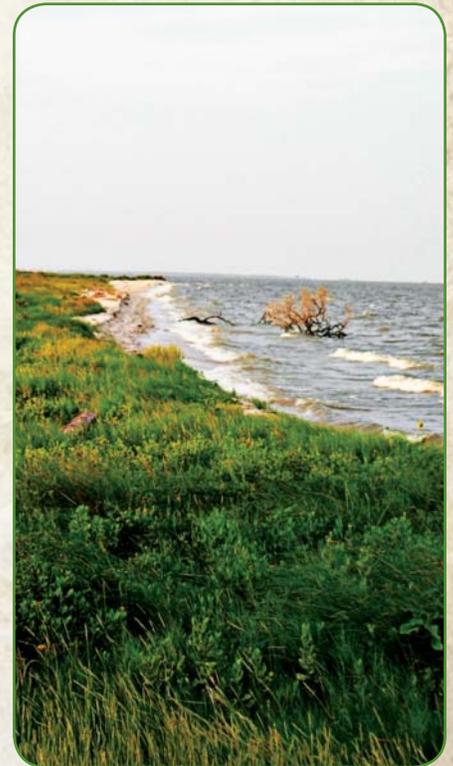
Institute (TWRI). “It will provide a one-stop shop for the livestock industry and natural resource agencies to access information regarding bacterial water quality issues related to livestock, as well as measures that can be implemented in response to development of Total Maximum Daily Loads, TMDL implementation plans, and watershed protection plans throughout Texas.”

All of these programs have been funded by the Texas State Soil and Water Conservation Board (TSSWCB) using Clean Water Act Nonpoint Source Grant funding from the U.S. Environmental Protection Agency.

Since its inception, LSHS has involved numerous collaborators, including TSSWCB, U.S.

Department of Agriculture (USDA) Natural Resources Conservation Service, USDA Agricultural Research Service, TWRI, Texas AgriLife Research, the Texas AgriLife Extension Service, Texas Department of Agriculture, Grazing Lands Conservation Initiative, and organizations such as the Texas Farm Bureau, Texas and Southwestern Cattle Raisers Association, Independent Cattlemen’s Association of Texas, Texas Cattle Feeders Association, Victoria Soil and Water Conservation District (SWCD), Hall-Childress SWCD, Little Wichita SWCD, Welder Wildlife Foundation, and private ranchers.

To learn more, visit [twri.tamu.edu/txH2O](http://twri.tamu.edu/txH2O). 🌱



TEXAS A&M UNIVERSITY-CORPUS CHRISTI CONDUCTED BACTERIAL SOURCE TRACKING RESEARCH IN THE COPANO BAY WATERSHED.