



## Improving Water Quality in the Carters Creek Watershed A TMDL Project for Bacteria

Concentrations of bacteria in the Carters Creek Watershed (Segments 1209C, 1209D, and 1209L) are sometimes elevated, indicating a possible health risk for people who swim or wade in local streams—activities called “contact recreation” in the state’s standards for water quality.

Bacteria are commonly found in the intestines of warm-blooded organisms such as humans, livestock, poultry, cats, and dogs. High concentrations of bacteria may indicate the presence of disease-causing microorganisms that can pose a health threat to people.

The TCEQ developed a total maximum daily load (TMDL) report to determine the pollutant reductions necessary to restore water quality in these streams. The goal of a TMDL is to determine the amount (or load) of a pollutant that a body of water can receive and still support its designated uses. The allowable load is then allocated among categories of sources within the watershed.

Stakeholders worked with the state to develop an implementation plan (I-Plan) with measures that reduce pollutant loads to the TMDL targets. These plans are carried out by stakeholders over a period of several years, with regular follow-up to gauge progress.

Learn more about water quality standards and monitoring, and TMDLs by reading *Preserving and Improving Water Quality*, available on our website at [www.tceq.texas.gov/goto/tmdl/](http://www.tceq.texas.gov/goto/tmdl/).

### Project Watershed

The Carters Creek watershed is located in Brazos County. It covers about 58 square miles in the Southern Post Oak Savanna ecoregion. Land is heavily urbanized in the upper reach of Carters Creek, where the creek begins in Bryan/College Station. The landscape becomes more rural in the lower reach. Country Club Branch (1209D) flows into Burton Creek (1209L), which in turn flows into Carters Creek (1209C). These subwatersheds are almost entirely urbanized.

The influence of urban areas is most evident during low flow or drought periods, when the streamflow of portions of the Carters Creek watershed is dominated by the effluent from municipal wastewater treatment facilities in the watershed.



### Project Development

The TCEQ began this project in 2007 through an agreement with the Texas Institute for Applied Environmental Research (TIAER) at Tarleton State University in Stephenville. TIAER reviewed existing water quality data, developed a load duration curve analysis, and modeled water quality changes based on different load-reduction scenarios. Stakeholders began developing the implementation plan in the spring of 2010.

The Texas Water Resources Institute (TWRI) coordinated drafting of the plan under contract with the TCEQ. Initial stakeholder meetings provided background on water quality, bacteria loads, and the process for developing and implementing TMDLs. Following these initial meetings, the stakeholders established work groups that started meeting in October 2010. Recommendations from the various work groups formed the basis of the I-Plan.

### Public Participation

In all its projects, the TMDL Program seeks opinions and information from people who represent government, permitted facilities, agriculture, business, environmental, and community and private interests in the watershed. The TCEQ solicits advice and comment

from the public at meetings and through print and electronic media notices.

The TWRI also coordinated stakeholder involvement in the project. Several public meetings were held in the summer of 2010 to begin developing a coordination committee for Implementation Plan development. The TCEQ and TWRI held public meetings in April, July, August, and October of 2010 and February and July of 2011.

The TCEQ coordinates follow-up meetings for this project. Check-in meetings provide opportunities for stakeholders to report on progress and changes in the watershed. At each meeting so far, stakeholders had positive reports of steps being taken toward water quality improvement.

## For More Information

Visit the project webpages at:

<[www.tceq.texas.gov/waterquality/tmdl/85-carterscreek.html](http://www.tceq.texas.gov/waterquality/tmdl/85-carterscreek.html)>

or

<[cartersandburton.tamu.edu](http://cartersandburton.tamu.edu)>

E-mail us at [tmdl@tceq.texas.gov](mailto:tmdl@tceq.texas.gov) or call us at 512-239-6682.

## TMDL Development Status

**Start Date:** August 2007

**Projected End Date:** 2012

**TCEQ Adoption:** August 22, 2012

**EPA Region 6 Approval:** September 27, 2012

## I-Plan Development Status

**Projected End Date:** 2012

**TCEQ Approval:** August 22, 2012

## Project Highlights

- The TCEQ began the Carters Creek TMDL Watershed project in 2007.
- The TCEQ met with representatives from the cities of Bryan and College Station in 2007 to discuss the TMDL and get their initial feedback.
- The TCEQ worked with representatives of the Texas AgriLife Extension Service, Texas AgriLife Research, and the TWRI to coordinate TMDL development.
- Stakeholders developed the I-Plan for the Carters Creek Watershed while the TMDL was being developed, in partnership with the TCEQ, TWRI, and other state and local organizations.
- The commission adopted the TMDL and approved the I-Plan in August 2012.
- Stakeholders are taking positive steps each year to improve water quality.

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