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carters and burton creeks water quality

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Carters Creek (Segment 1209C) and Burton Creek (Segment 1209L) are located in central Brazos County and are tributaries of the Navasota River. Land uses in these watersheds differ in that the Burton Creek watershed is totally urbanized while Carters Creek is roughly 50 percent urban and 50 percent rural. Water quality monitoring indicates that these water bodies are not meeting their designated contact recreation use standards due to elevated levels of *E. coli* bacteria.

Excessive amounts of the monitored, non-pathogenic strains of *E. coli* in a water body signify an increased risk for pathogens to be present and effectively limit the safe use of a water body for contact recreation. Both *E. coli* and other pathogenic organisms that may be present in Carters and Burton creeks come from the fecal material of birds and warm-blooded mammals.

In the ***Improving Water Quality in Carters and Burton Creeks*** project, the Texas Institute for Applied Environmental Research is assessing water quality data, identifying potential sources of *E. coli* in the watershed and developing a total maximum daily load (TMDL) for each of these creeks. A TMDL defines the maximum amount of pollutant, in this case *E. coli*, which a water body can receive yet still meet its designated water quality standards. Through this TMDL process, allowable pollutant loads will be allocated to major categories of pollutant sources in the watershed.

In concert with the TMDL development, the Texas Water Resources Institute is developing a TMDL Implementation Plan (I-Plan), which will describe pollution control measures needed to restore water quality in Carters and Burton creeks. The TMDL I-Plan is being developed through a stakeholder involvement process where stakeholders use local water quality data and assessments to make informed management decisions that when implemented will work toward restoring instream water quality.

Objectives

- Facilitate the involvement of watershed stakeholders in the TMDL I-Plan development process
- Guide stakeholder workgroups in the development of pollution control measures that will reduce *E. coli* loading into Carters and Burton creeks
- Shepherd the TMDL I-Plan through the agency review and approval process

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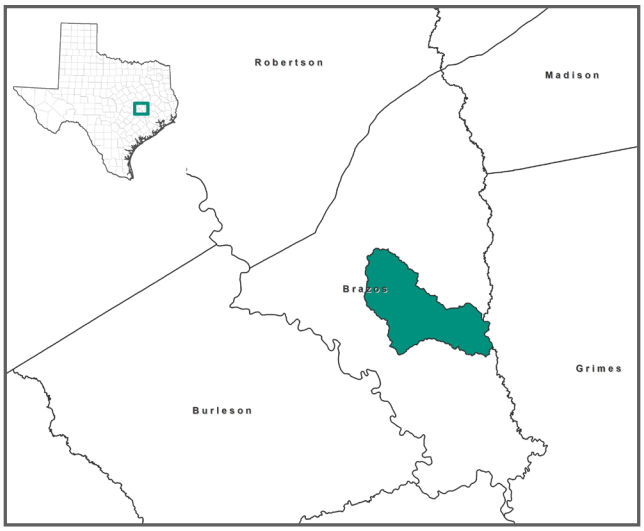
Collaborators

- Texas Water Resources Institute
- Texas Institute for Applied Environmental Research

Funding Agency

- Texas Commission on Environmental Quality



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