



## Improving Water Quality in the Big Creek Watershed

# A Project to Protect Recreational Uses

Big Creek, Segment 1202J in the Brazos River Basin, was first identified as impaired for bacteria in 2002. High concentrations of bacteria, which are found in both human and animal waste, may indicate a health risk to people who swim or wade in the water body—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. Bacteria from human and animal waste often indicate the presence of disease-causing microorganisms, which can pose a health threat to people who engage in contact recreation.

To address these concerns, people who have a stake in the watershed are working with TCEQ to develop a total maximum daily load (TMDL) and its implementation plan (I-Plan) for the watershed. A TMDL is like a budget—it determines the amount (or load) of bacteria the creek can receive and still support the contact recreation use. The allowable load is then allocated among categories of sources within the watershed. The I-Plan outlines the measures that will be used to reduce pollution.

Learn more about water quality standards, monitoring, and TMDLs by reading [Preserving and Improving Water Quality](#)<sup>1</sup>, available on our website and in print.

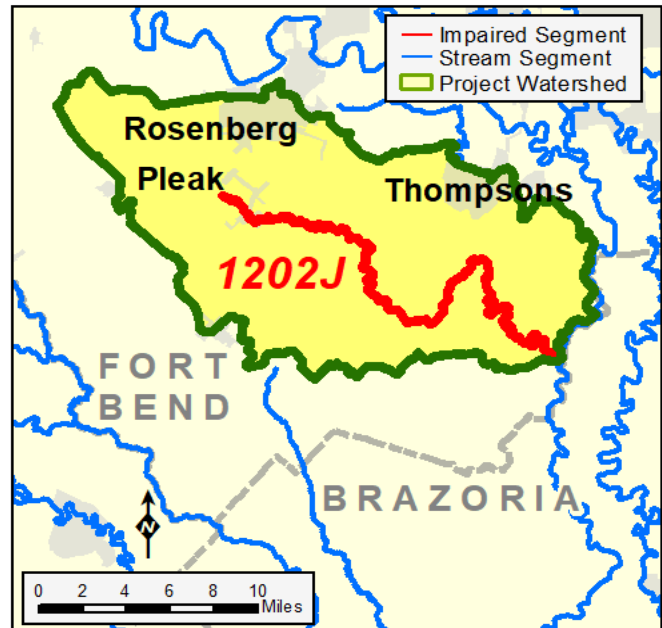
### The Big Creek Watershed

Big Creek, Segment 1202J, is a tributary to the Brazos River in Fort Bend County. The terminus of Big Creek, at its confluence with the Brazos River, lies within Brazos Bend State Park. The project watershed drains approximately 222 square miles of mixed urban, agricultural, and undeveloped rural land uses. The watershed includes portions of the cities of Richmond and Rosenberg, as well as several smaller communities.

Segment 1202J has two assessment units (AUs)—1202J\_01 and 1202J\_02. Only AU 1202J\_01 has an impaired contact recreation use, but there is concern about bacteria concentrations in AU 1202J\_02.

### Project Development

TCEQ began this project in 2018. The Houston-Galveston Area Council (H-GAC) is providing support for stakeholder engagement, as well as the technical aspects of the project. H-GAC has compiled and analyzed



all available bacteria data and considered sources of the bacteria and their relative contributions. H-GAC has summarized this information in a watershed characterization report to provide an overall assessment of the watershed and its impairments and potential pollutant sources. More in-depth findings of H-GAC’s investigation will be provided in a technical support document, which is currently in development.

In addition to the TMDL and I-Plan, stakeholders are considering developing a watershed protection plan (WPP) to address other issues in the watershed.

### Public Participation

In all its projects, TCEQ seeks to gather opinion and information from people who represent government, permitted facilities, agriculture, business, environmental, and community and private interests in the watershed. TCEQ solicits advice from the public at meetings and through print and electronic media notices.

H-GAC is coordinating stakeholder participation in this watershed. Stakeholders are a key part of developing solutions for Big Creek. They are advising TCEQ on the TMDL allocations and will develop the I-Plan. The first public meeting about the project was held in 2019.

<sup>1</sup> <https://www.tceq.texas.gov/publications/gi/gi-351>

### For More Information

Contact one of the people listed below, or visit the project webpage at:

[www.tceq.texas.gov/waterquality/tmdl/nav/122-bigcreek-bacteria](http://www.tceq.texas.gov/waterquality/tmdl/nav/122-bigcreek-bacteria)

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### TMDL Development Status

**Start Date:** 2018

**TCEQ Adoption:**

**EPA Region 6 Approval:**

### I-Plan Development Status

**Start Date:**

**TCEQ Approval:**

### Project Highlights

- Public meetings began in 2019.
- The H-GAC completed a watershed characterization report and is drafting a technical support document.

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