



## Improving Water Quality in Lufkin Area Watersheds

# A Project to Protect Recreational Uses

In portions of four stream segments in the Lufkin area, bacteria concentrations are sometimes higher than the criteria set to protect the safety of recreation. 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.

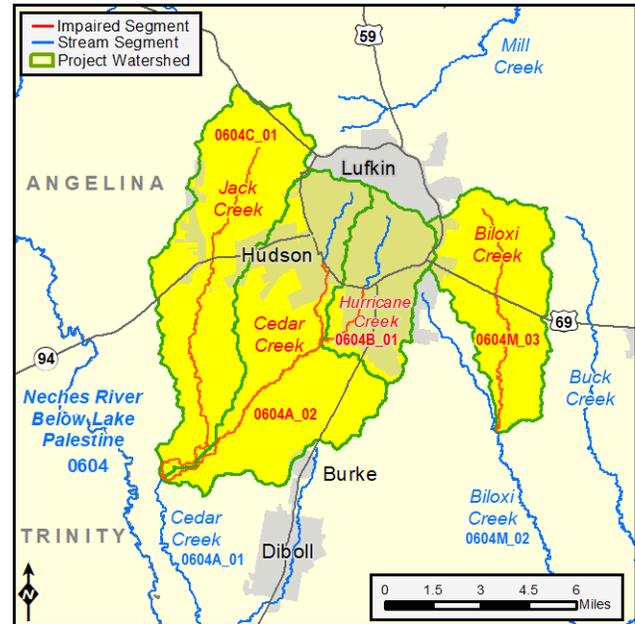
To address these concerns, people who have a stake in the watershed are working with TCEQ to develop a total maximum daily load (TMDL) and a plan to implement it (I-Plan). A TMDL is like a budget—it determines the amount (or load) of bacteria that the bayou can receive and still support recreational safety. 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 Project Watersheds

The watersheds lie in Angelina County in east Texas in the vicinity of Lufkin. Cedar and Biloxi creeks are tributaries to the Neches River below Lake Palestine. Jack and Hurricane Creeks are tributaries to Cedar Creek. The watersheds include the cities of Hudson and Lufkin. The project includes assessment units (AU) in four stream segments:

- **Jack Creek** (Segment 0604C)  
From the confluence with Cedar Creek (0604A) upstream to confluence with unnamed tributary southwest of US Hwy 69 northwest of Lufkin.
- **Cedar Creek** (Segment 0604A)  
From the confluence of the Neches River southwest of Lufkin in Angelina County to the upstream perennial portion of the stream in Lufkin.



- AU 0604A\_02 – From the confluence with Jack Creek (0604C) to the confluence with unnamed tributary adjacent to State Loop 287. This assessment area is the only impaired portion of the stream.
- **Hurricane Creek** (Segment 0604B)  
From the confluence with Cedar Creek (0604A) upstream to the headwaters near Groesbeck Ave in Lufkin.
- **Biloxi Creek** (Segment 0604M)  
From the confluence with the Neches River southeast of Diboil to FM 325 east of Lufkin.
  - AU 0604M\_03 – From the confluence with One Eye Creek in Angelina County southeast of Lufkin upstream to FM 325 east of Lufkin. This assessment area is the only impaired portion of the stream.

The Jack Creek watershed is about 29 square miles. The dominant land cover includes hay/pasture (33%), forest (33%) and developed (13%). This watershed includes portions of the city of Hudson.

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

The Cedar Creek watershed is about 32 square miles. The dominant land cover includes forest (37%), developed (25%), and hay/pasture (19%). This watershed includes portions of the cities of Hudson and Lufkin.

The Hurricane Creek watershed is about 13 square miles. The dominant land cover includes developed (66%) and forest (22%). This watershed includes portions of the city of Lufkin.

The Biloxi Creek watershed is about 19 square miles. The dominant land cover includes forest (37%), hay/pasture (31%), and developed (17%). This watershed includes small portions Lufkin.

### Project Development

TCEQ began this project in 2018. The Texas Water Resources Institute (TWRI) is providing support for the technical work as well as stakeholder engagement.

TWRI completed a technical report in 2021 that compiled and analyzed all available bacteria data and considered sources of the bacteria and their relative contributions.

TCEQ and TWRI are developing a draft TMDL based on that report, which TCEQ expects to release for public comments sometime in 2022. TWRI and stakeholders have begun developing the I-Plan.

### 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.

TWRI is coordinating stakeholder participation in this project.

### For More Information

Contact the project manager listed below, or visit the project webpage at:

[www.tceq.texas.gov/waterquality/tmdl/nav/118-lufkinwatersheds-bacteria](http://www.tceq.texas.gov/waterquality/tmdl/nav/118-lufkinwatersheds-bacteria)

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### TMDL Development

**Start Date:** 2018

**TCEQ Adoption:**

**EPA Region 6 Approval:**

### I-Plan Development

**Start Date:** 2018

**TCEQ Approval:**

### Project Highlights

- TWRI held a Watershed Stewards Workshop in May 2019 in Lufkin.
- TCEQ and TWRI held a public meeting on November 22, 2019 to inform stakeholders about water quality concerns for Jack, Cedar, Hurricane, and Biloxi creeks.
- Stakeholders met virtually on July 7, 2020 and November 30, 2020 to discuss TMDL development and the draft technical support document.
- The final technical support document was published on the TCEQ project webpage in March 2021.
- TCEQ and TWRI held online meetings with the I-Plan Coordination Committee on March 25, 2021 and June 7, 2021 to continue developing the I-Plan.

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