Texas Commission on Environmental Quality
Total Maximum Daily Load Program
GI-544

Improving Water Quality in the Caney Creek Watershed

A Project to Protect Contact Recreation Uses

In portions of two stream segments in the Caney Creek watershed (1304, 1304A), 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.

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.

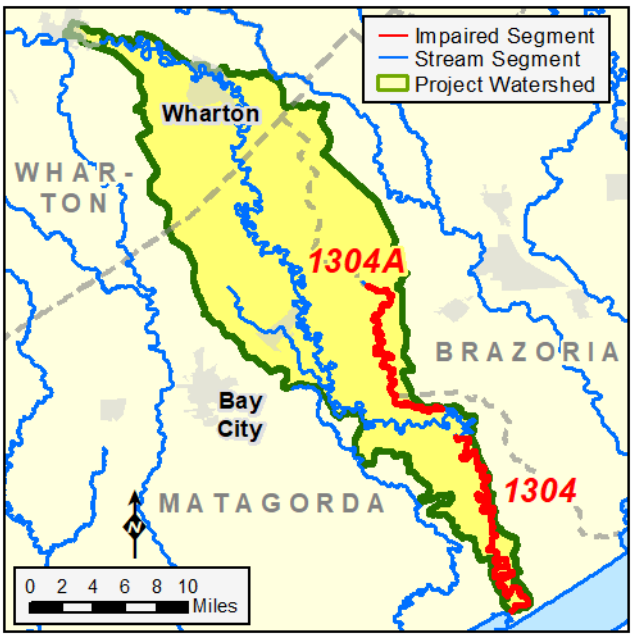
Learn more about water quality standards, monitoring, and TMDLs by reading Preserving and Improving Water Quality[1], available on our website and in print.

The Caney Creek Watershed

The Caney Creek watershed lies in southeast Texas near the Houston-Galveston area and includes the cities of Wharton, Boling-Iago, and Van Vleck. The watershed includes portions of Matagorda, Brazoria, and Wharton counties. Caney Creek flows southeastward before emptying into the Intracoastal Waterway (ICWW) near the northeast end of East Matagorda Bay.

The project includes the following stream segments:

- **Caney Creek Tidal** (Segment 1304)
  From the confluence with the ICWW in Matagorda County to a point 1.9 km upstream of the confluence of Linville Bayou in Matagorda County. Caney Creek Tidal has two assessment units (AUs). When this project was initiated in 2017, only the most downstream AU, 1304_01, was impaired for bacteria. In March 2020, AU 1304_02 was also identified as impaired due to bacteria concentrations. Because a draft TMDL was already in review by TCEQ at that time, AU 1304_02 will not be included in the TMDL report for the watershed, but will instead be addressed via an update to the state's Water Quality Management Plan, after the TMDLs for AU 1304_01 and 1304A_01 are approved by the U.S. Environmental Protection Agency (EPA).



- **Linnville Bayou** (Segment 1304A)
  From the confluence with Caney Creek in Matagorda County upstream to a point 0.7 km above SH 35 in Brazoria/Matagorda counties. Linville Bayou has three AUs; the middle one, AU 1304A_01, is impaired due to bacteria.

Topography ranges from just under 100 feet near the City of Wharton to sea level at the ICWW. The source water for Caney Creek is mostly from rainfall runoff. The creek and its tributaries are generally sluggish due to the gentle sloping relief found on the coastal plain. Riparian vegetation is still common along portions of the creek and remnant oxbows, particularly in Linnville Bayou. The tidal portion of the creek broadens slightly as it moves out over the coastal plain before reaching the ICWW.

In 2016, the Caney Creek Tidal subwatershed had a population of 438 and the Linnville Bayou watershed had a population of 912. The population of the entire

[1] https://www.tceq.texas.gov/publications/gi/gi-351

Caney Creek watershed is projected to increase in the future.

The project area is primarily coastal prairies and marshes, broken up by ribbons of riparian hardwoods and pine forests continually influenced by the sea, wind, rain, and hurricanes. Native vegetation consists of tallgrass prairies, live oak woodlands, and a variety of salt-tolerant plants with extensive wetland habitats providing food and shelter for numerous bird species and aquatic organisms. Developed land makes up only about 6% of the watershed.

Project Development

TCEQ began this project in 2015. The Houston-Galveston Area Council (H-GAC) has provided support for the technical work as well as stakeholder engagement.

The tasks of H-GAC personnel include compiling and analyzing all available bacteria data and considering sources of the bacteria and their relative contributions, along with stakeholder education and outreach. H-GAC staff completed a technical report of their investigations in 2018 and revised it in 2019.

In addition to the TMDL and I-Plan, stakeholders are considering developing a Watershed Protection Plan to address other issues in the watershed.

Public Participation

In all its projects, TCEQ seeks to gather opinions 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 has coordinated public participation in this project. Stakeholders formed a Coordination Committee to guide development of theTMDL.

For More Information

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

www.tceq.texas.gov/waterquality/tmdl/nav/115-caneycreek-bacteria

TCEQ Project Manager
Jason Leifester, TMDL Program
512-239-6457
Jason.Leifester@tceq.texas.gov

Public Participation
Steven Johnston, Houston-Galveston Area Council
832-681-2579, Steven.Johnston@h-gac.com

TMDL Development Status

Start Date: 2017
TCEQ Adoption:
EPA Region 6 Approval:

I-Plan Development Status

Start Date: 2019
TCEQ Approval:

Project Highlights

- Stakeholder meetings began in 2016. A Coordination Committee was formed in early 2019 to guide development of the I-Plan and participation in development of the TMDL.
- H-GAC completed a technical report of their investigations in September 2018 and revised it in August 2019.
- H-GAC submitted a draft TMDL report for TCEQ review and adoption in December 2019.
- The draft TMDL was approved for release by the Commission at their January 27, 2021 meeting. TCEQ will solicit public comments on the TMDL from February 12 through March 16 and will hold a public meeting to hear comments on the documents on February 23. See details about the meeting and how to submit written or oral comments on the project webpage.