

Neches River Tidal and Hillebrandt Bayou TMDL Public Meeting

Water Quality Planning and Implementation in Texas

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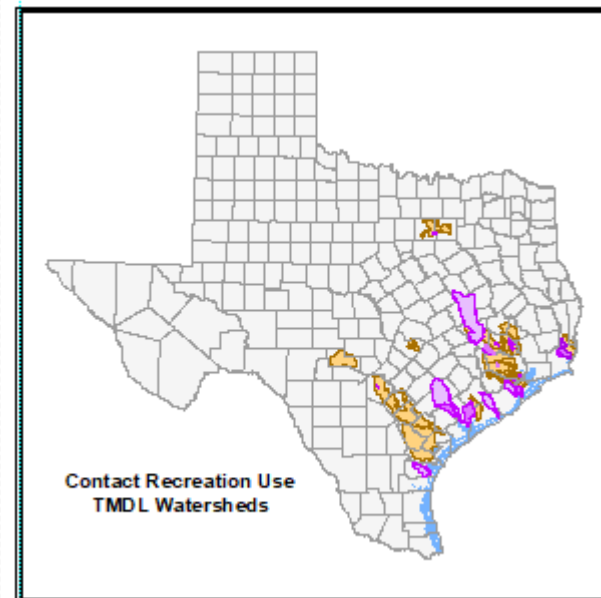
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TMDL – Total Maximum Daily Load

- Determines the maximum amount (load) of a pollutant that a water body can receive and still maintain uses
- Allocates this load to broad categories of sources in the watershed.
- Adopted by the TCEQ
- Approved by the EPA



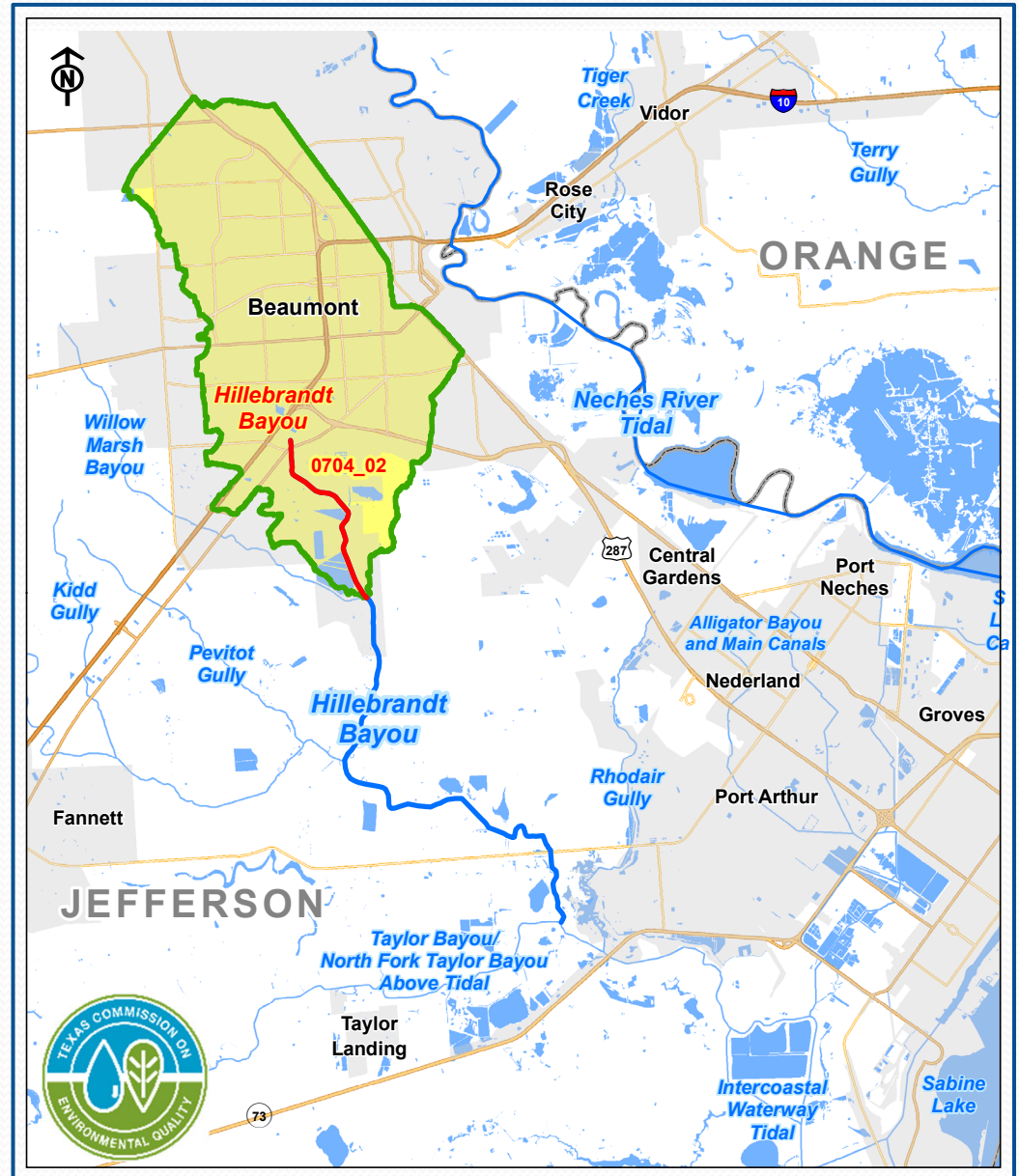


Primary Contact Recreation Use

- Primary contact recreation activities are those involving a significant risk of ingestion of water, such as wading by children or swimming.
- The primary contact recreation use is not met if the geometric mean of all indicator bacteria is greater than:
 - 126 cfu/100 mL for *E. coli* in freshwater streams
 - 35 cfu/100 mL for Enterococci in tidal streams

Hillebrandt Bayou

- From the confluence with Taylor Bayou to SH 124
 - Lower portion – depressed oxygen impairment
 - Upper portion – elevated bacteria levels since 2010 Integrated Report
 - 255 cfu/100mL *E. coli* (Dec. 2009 – Nov. 2016)



Timeline of TMDL for Hillebrandt Bayou

- January 2020 - Technical Support Document (TSD) dated November 2019 for the TMDL was completed and published to the web
- Spring 2020 – complete contractor draft TMDL
- Summer-Fall 2020 – TMDL report compilation and agency review
- Fall 2021 – Release TMDL for public review and comment
- Winter 2021 – Request Commission adoption of TMDL. If adopted submit to EPA for approval.

TECHNICAL SUPPORT DOCUMENT FOR ONE TOTAL MAXIMUM DAILY LOAD FOR INDICATOR
BACTERIA IN HILLEBRANDT BAYOU

Technical Support Document for One Total
Maximum Daily Load for Indicator
Bacteria in Hillebrandt Bayou

Segment: 0704

Assessment Unit: 0704_02

<https://www.tceq.texas.gov/waterquality/tmdl/nav/118-hillebrandtbayou-bacteria>

Hillebrandt Bayou (0704_02)

TMDL Equation

$$\text{TMDL} = \text{WLA}_{(\text{WWTF})} + \text{WLA}_{(\text{SW})} + \text{LA} + \text{FG} + \text{MOS}$$

- $\text{WLA}_{(\text{WWTF})}$ – wasteload allocation for WWTF discharges
- $\text{WLA}_{(\text{SW})}$ – wasteload allocation for aggregate regulated stormwater discharges
- **LA** – load allocation, amount of pollutant allowed by unregulated sources
- **FG** – future growth associated from regulated facilities (new or expansions)
- **MOS** – margin of safety load
 - Units per day

4.8. Summary of TMDL Calculations

Table 19 summarizes the TMDL calculations for the project watershed. The TMDL was calculated based on median flow in the 0-10 percentile range (five percent exceedance, high flow regime) for flow exceedance from the LDC developed for SWQM station 10687. Allocations are based on the current geometric mean criterion for *E. coli* of 126 cfu/100mL for each component of the TMDL.

Table 19. TMDL allocation summary for Hillebrandt Bayou 0704_02 watershed

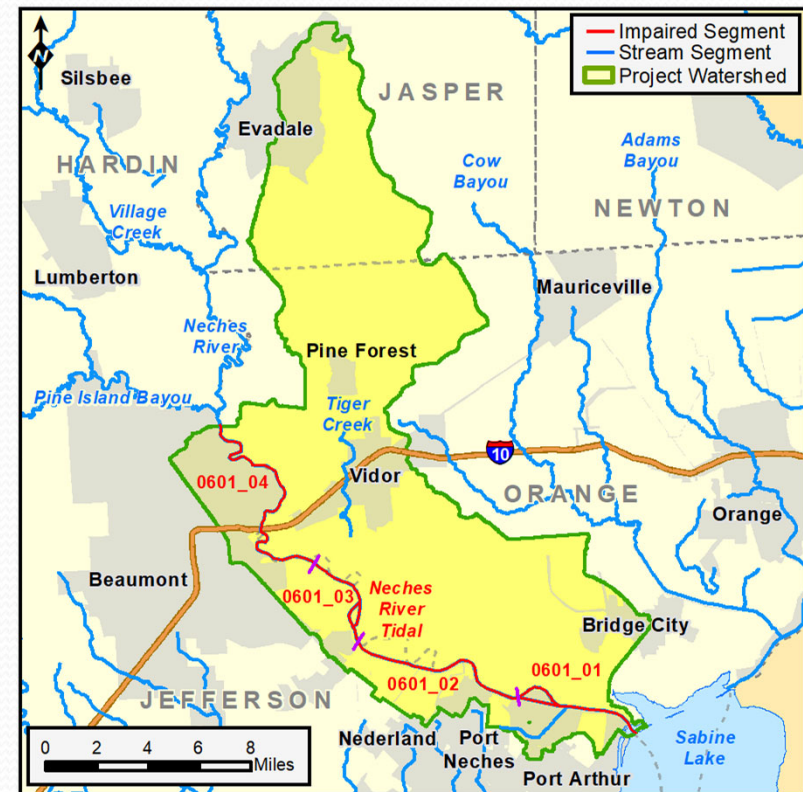
AU	TMDL [†]	MOS [†]	WLA _{WWTF} [†]	WLA _{SW} [†]	LA [†]	FG [†]
0704_02	2,102.049	105.102	0	1,856.795	53.448	86.664

[†] in units of a billion cfu/day *E. coli*

The final TMDL allocations (Table 20) needed to comply with the requirements of 40 CFR §103.7 include the FG component within the WLA_{WWTF}.

Neches River Tidal

- From the confluence with Sabine Lake to Neches River Saltwater Barrier (four assessment units)
 - **Elevated bacteria levels** since 2012 IR
 - 102, 300, 166, 170 cfu/100 mL Enterococci (Dec. 2009 – Nov. 2016)





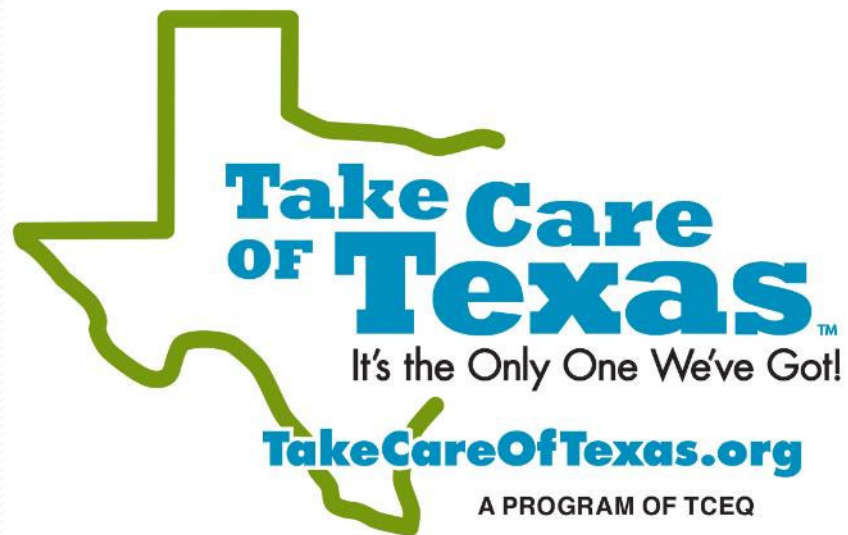
Timeline of TMDLs for Neches River Tidal

- April 2020 - Technical Support Document (TSD) continues to be drafted
- July 2020 – complete TSD and publish to web
- August 2020-Spring 2021 – TMDL report compilation and agency review
- Summer/Fall 2021 – Release TMDL for public review and comment
- Summer/Fall 2022– Request Commission adoption of TMDL. If adopted submit to EPA for approval.

<https://www.tceq.texas.gov/waterquality/tmdl/nav/118-nechestidal-bacteria>

TMDL Implementation Plan (I-Plan) for Neches River Tidal & Hillebrandt Bayou

- August 2019 – Stakeholders indicate preference for a regional I-Plan.
- April 2020 – Outline stakeholder structure for development of I-Plan
- Summer 2020 – Spring 2021 – Stakeholders develop I-Plan, facilitation provided by TWRI
- Summer/Fall 2021– Release I-Plan for public review and comment
- Summer/Fall 2022– Request Commission approval of I-Plan



Questions?

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