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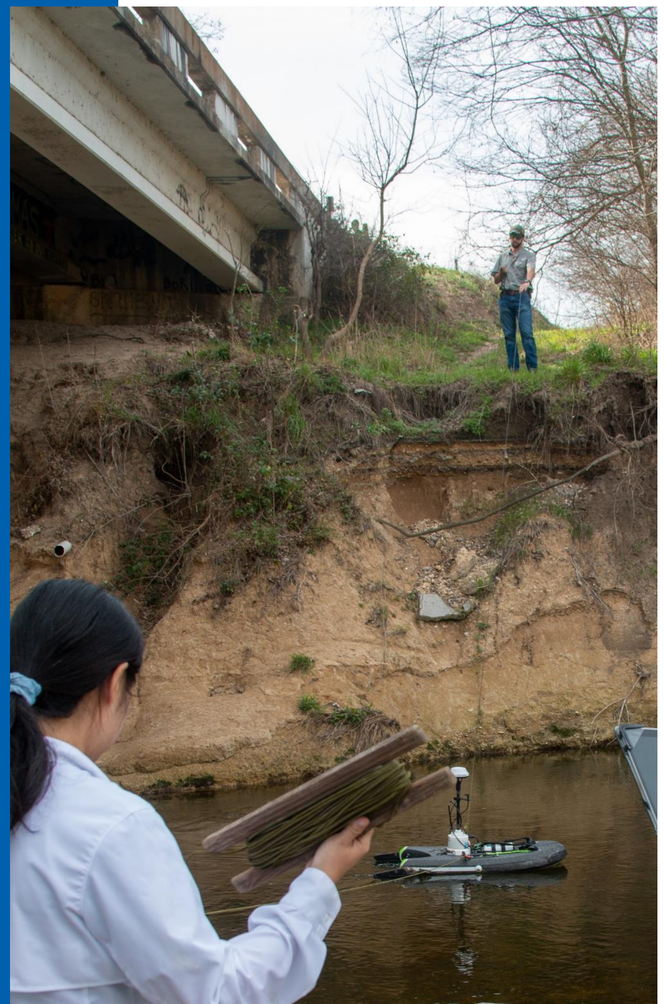
Middle Neches Tributaries TMDL Updates

Shaylynn Postma, Research Specialist



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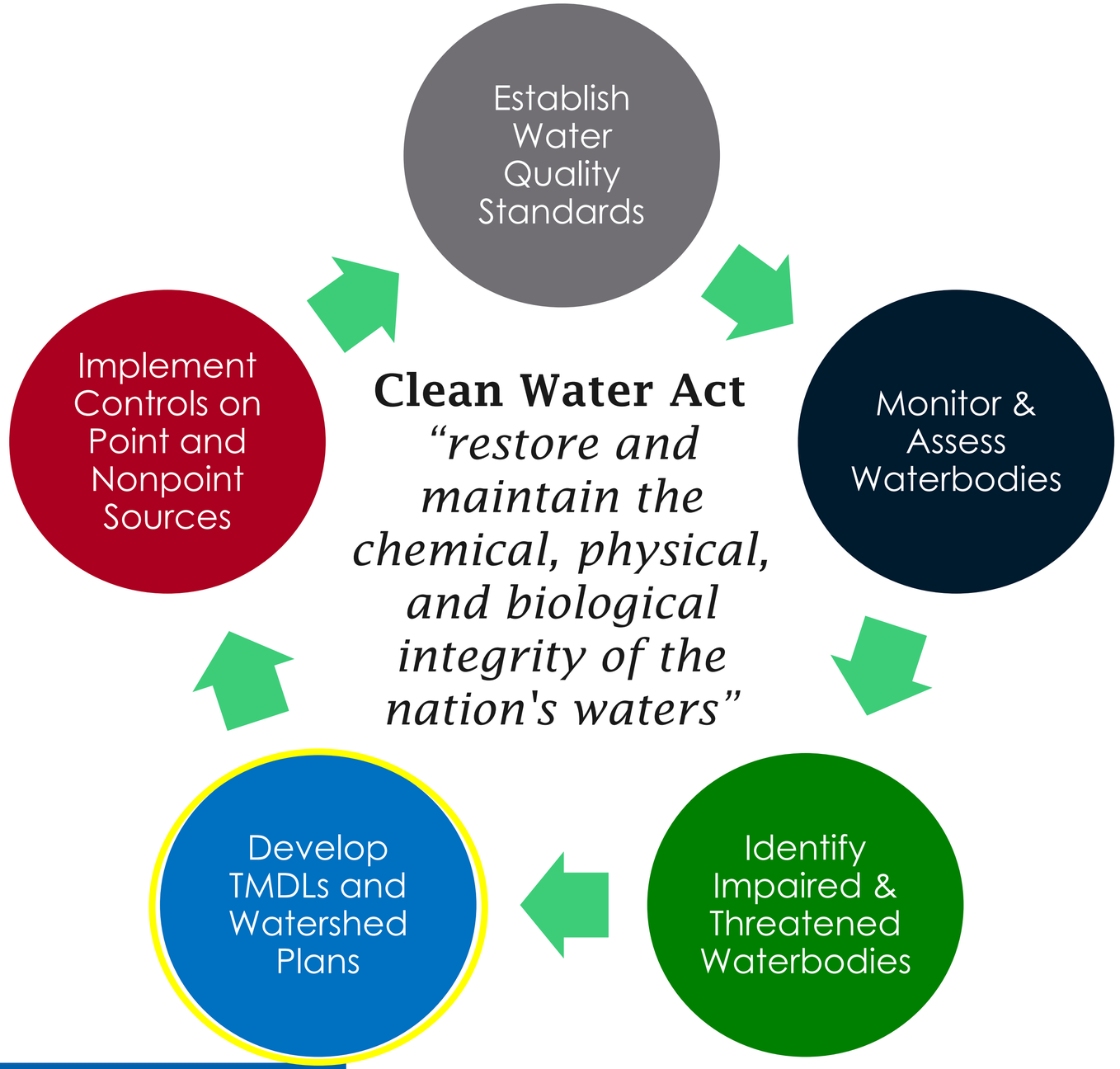
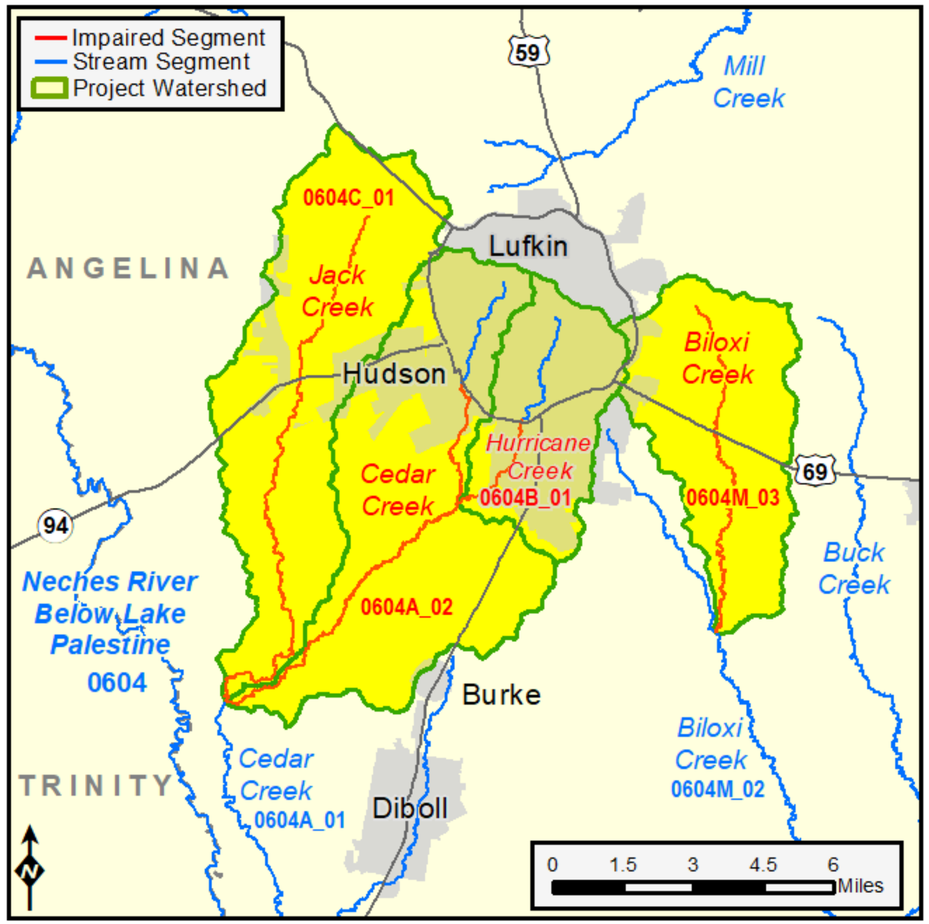


Background

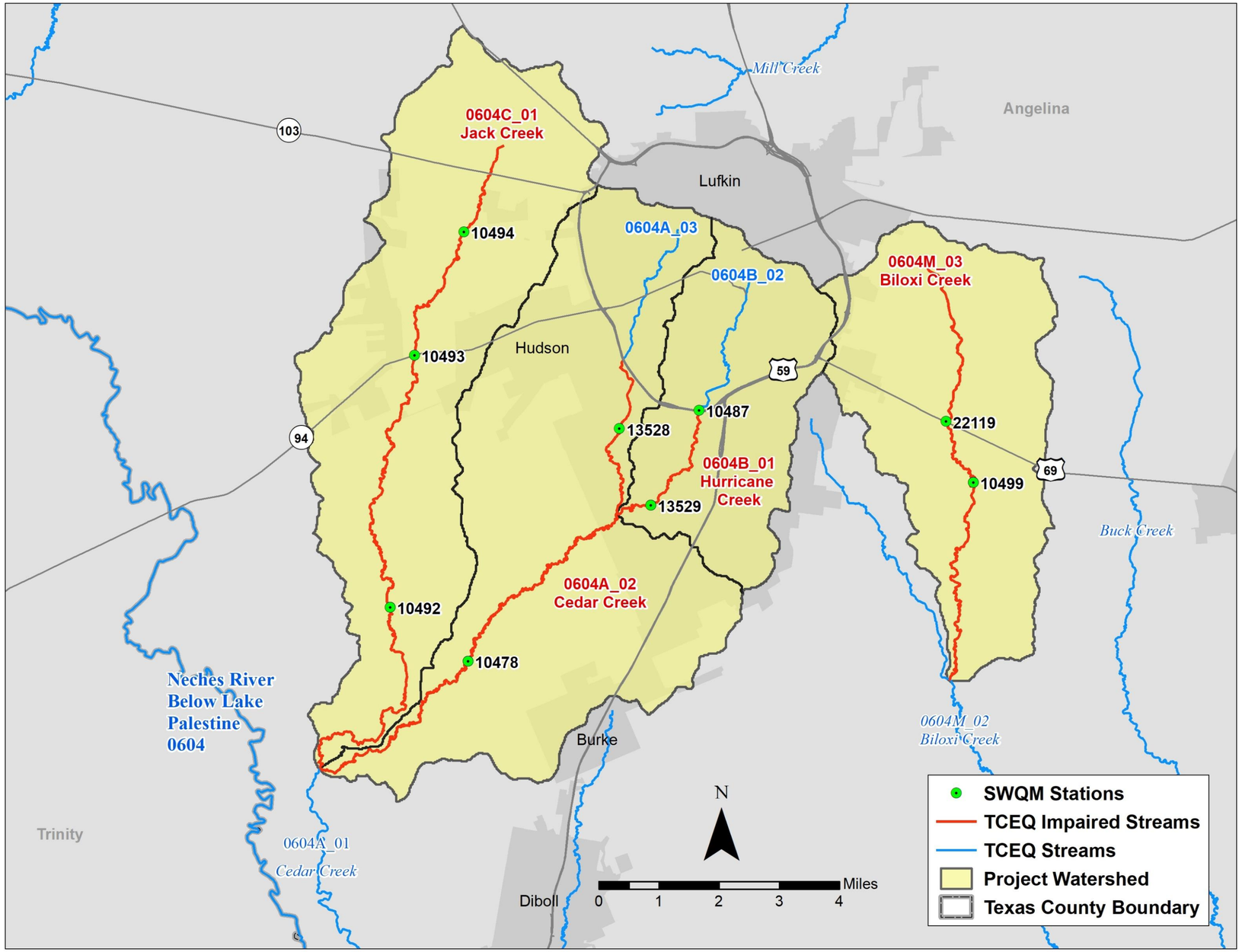
TCEQ manages water quality by

- Setting standards for quality
- Monitoring and Assessing
- Identifying impaired waterbodies
- Engaging stakeholders to develop and implement plans for improvement
- Using regulatory and non-regulatory tools
    - Regulates discharges from Point Sources
    - Manages runoff from Nonpoint Sources



Middle Neches Tributaries

- Lufkin-area tributaries to the Neches River below Lake Palestine.
- High concentrations of *E. coli* bacteria.
- Levels may indicate a health risk for swimming or wading in the creeks.
- TMDL (Total Maximum Daily Load) reports and Implementation Plans developed to improve water quality.



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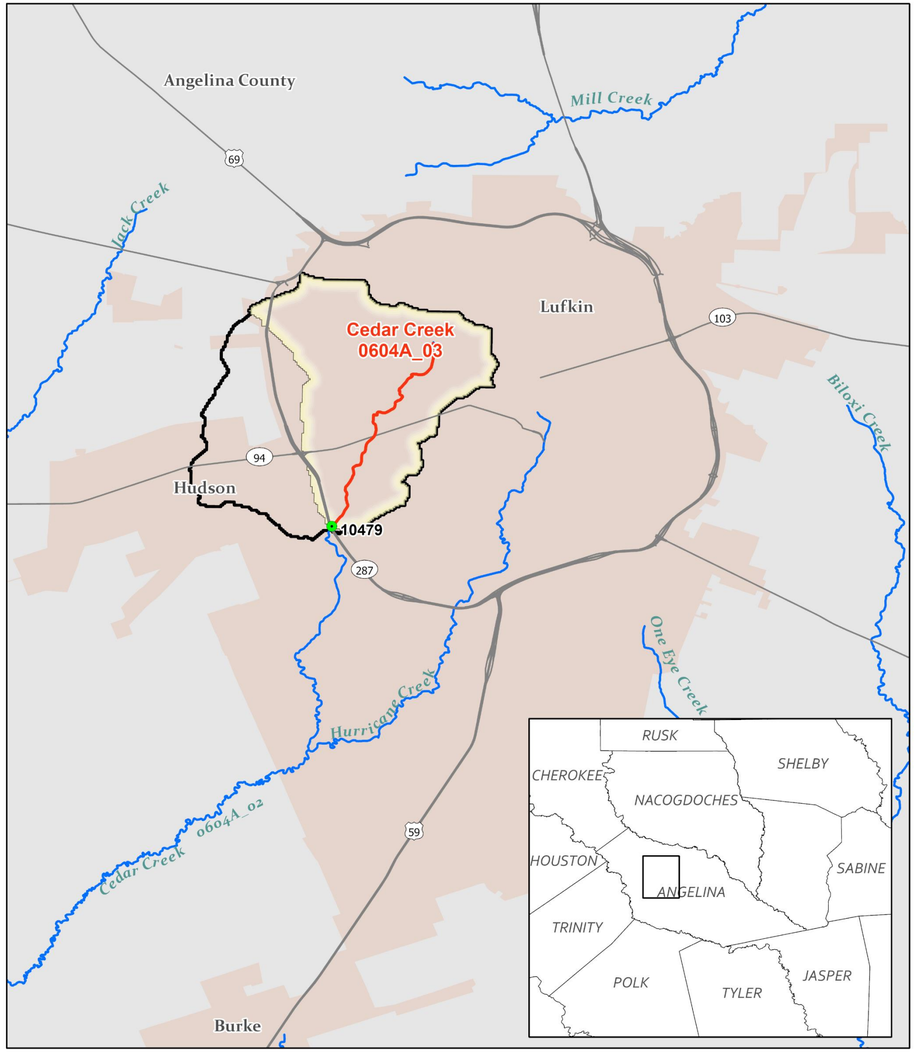

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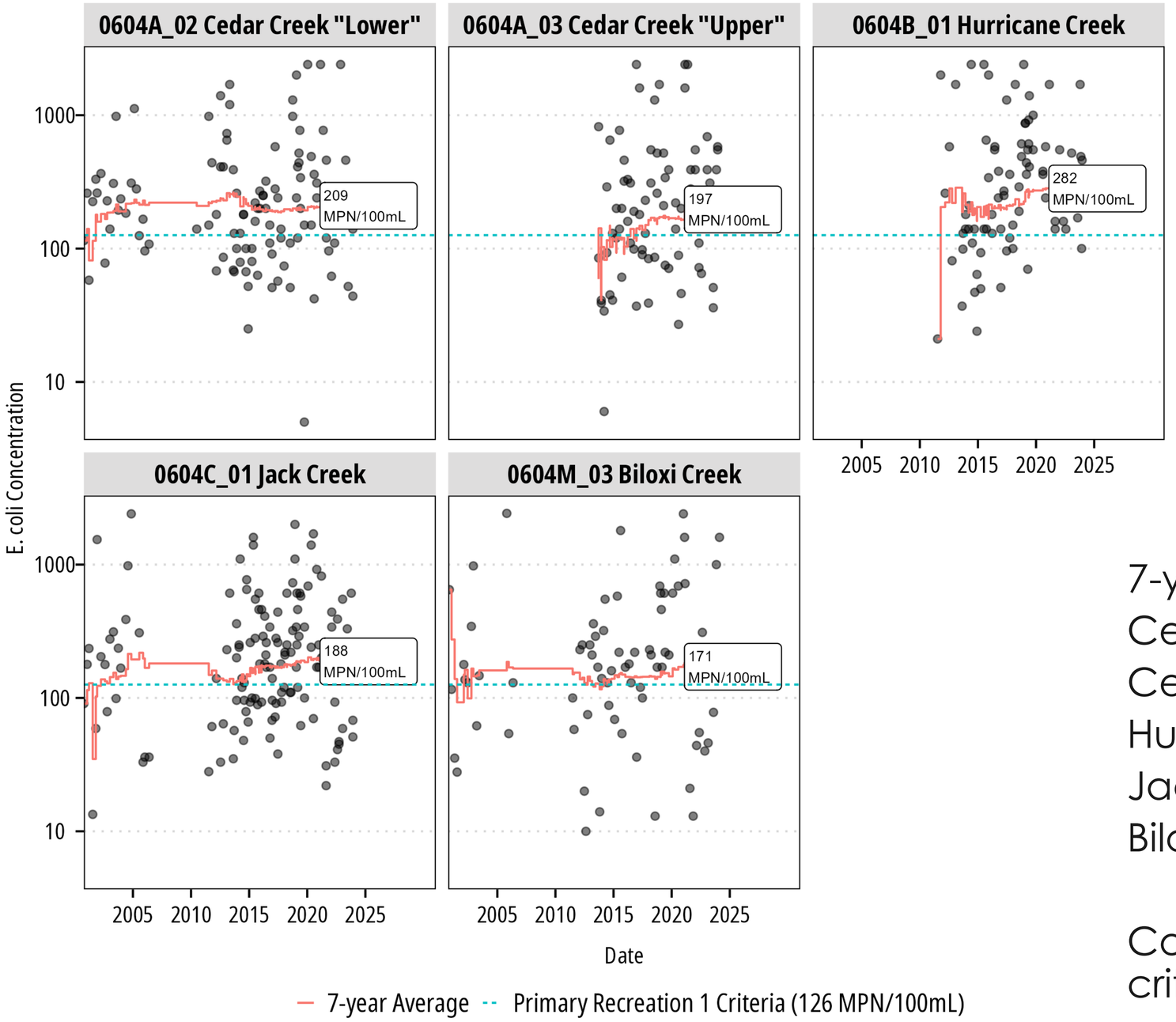
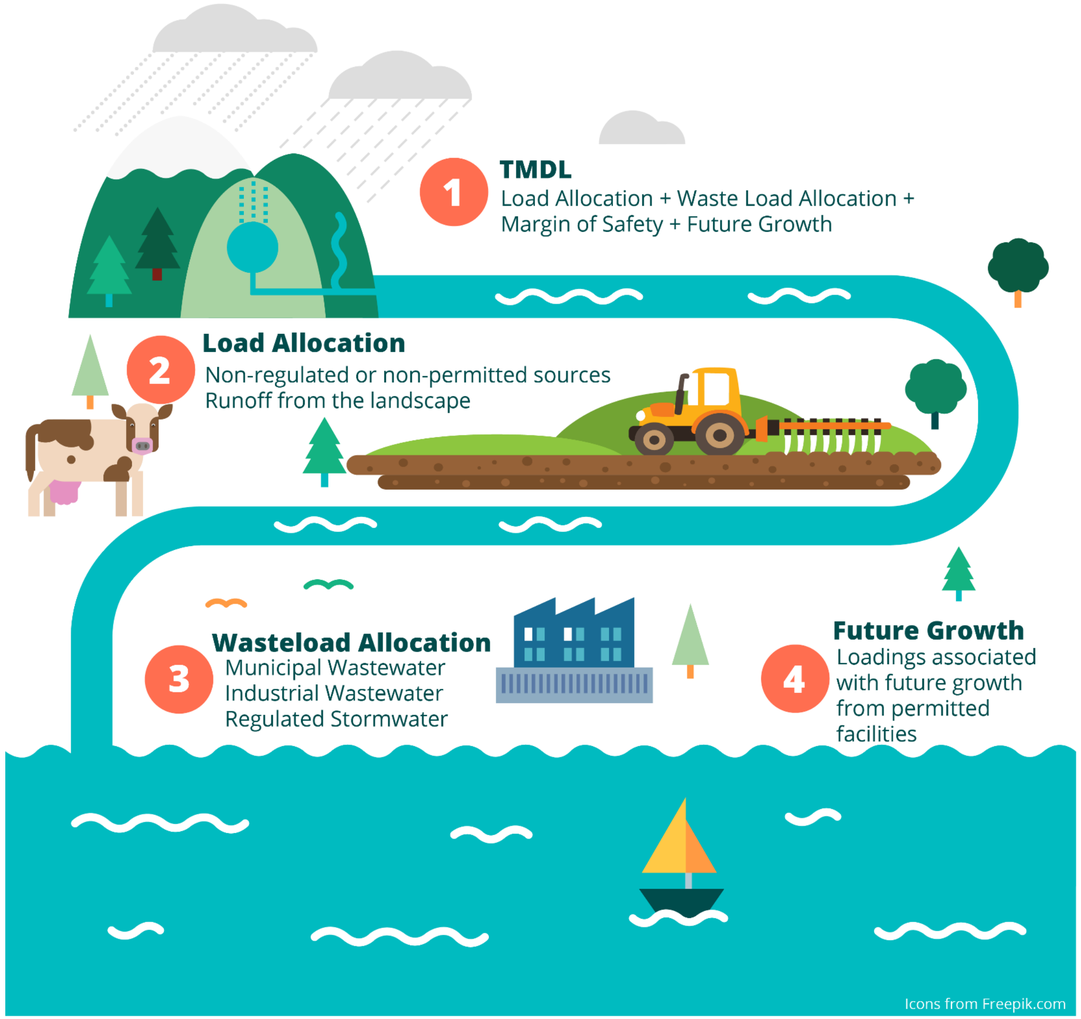


Current Conditions

7-year geometric mean (average):
Cedar Creek "Lower": 209 MPN/100mL
Cedar Creek "Upper": 197 MPN/100mL
Hurricane Creek: 282 MPN/100mL
Jack Creek: 188 MPN/100mL
Biloxi Creek: 171 MPN/100mL

Concentrations are higher than the criteria but not increasing or decreasing.



TMDL and I-Plan developed with local stakeholders from 2019 through 2022.

Adopted October 5, 2022
AS-222
Approved by EPA June 7, 2023

Four Total Maximum Daily Loads for Indicator Bacteria in Tributaries of the Neches River below Lake Palestine

Assessment Units 0604A_02, 0604B_01, 0604C_01, and 0604M_03

Excerpted from the Texas Water Quality Management Plan, TCEQ SFR-121/2024-02
TMDLs Added in Appendix III in the January 2024 Update

Appendix III. Addendum One to Four Total Maximum Daily Loads for Indicator Bacteria in Tributaries of the Neches River below Lake Palestine

Adding one TMDL for AU 0604A_03

One TMDL for Indicator Bacteria in Cedar Creek

Introduction

TCEQ adopted *Four Total Maximum Daily Loads for Indicator Bacteria in Tributaries of the Neches River below Lake Palestine* (TCEQ, 2022a) on Oct. 5, 2022. The United ...y (EPA) approved the TMDLs on June 7, 2023. ...n specific to one additional assessment unit ...k (AU 0604A_03; also referred to in this ...AU is located within the watershed of the ...s of the Neches River below Lake Palestine. ...s additional AU exceeds the criterion used ...reation 1 use.

...dded TMDL allocation for this ...sed in the original TMDL report. For ...ase refer to the *Technical Support ...r Indicator Bacteria in Cedar Creek*[2] ...pproved TMDL document for details ...ods and assumptions used in

...Creek in the 2022 Texas ...ater Act Sections 305(b) and ...t EPA-approved edition. The ...hree AUs. The downstream ...III-1 shows the watershed ...f the original TMDLs.

...ntify uses for surface ...nt of those uses. The

...48s-118h-cedar_creek_tmd.pdf

Approved: August 16, 2023
AS-470

Implementation Plan for Four Total Maximum Daily Loads for Indicator Bacteria in Tributaries of the Neches River below Lake Palestine

Assessment Units 0604A_02, 0604B_01, 0604C_01, 0604M_03

By Stakeholders of the Tributaries of the Neches River below Lake Palestine Watershed and the Texas Water Resources Institute

Published by the Texas Commission on Environmental Quality
Office of Water, Water Quality Planning Division

TMDL Results

- Impairments in both watersheds are primarily driven by non-point source runoff.
- 61-95% decrease in indicator bacteria loading during runoff conditions needed to meet water quality requirements.

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How?

- Promote feral hog management.
- Improve water quality monitoring.
- Promote volunteer water quality monitoring.
- Promote sustainable forest practices.
- Implement water quality conservation practices on grazed lands.
- Reduce sanitary sewer overflows and unauthorized discharges.
- Promote education and awareness for fats, oils, and grease, pet waste and illicit dumping,
- Promote proper OSSF management.

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Progress?

Tracking started last year:

- 1 feral hog program delivered
- ANRA continues monitoring and partnering with Texas Stream Team to provide kits and training.
- Texas Forest Service reports 92% of monitored sites are implementing forestry BMPs. Forest Pest Seminar held.
- No conservation plans reported, educational mailers for grazing management sent to producers.
- No updates on FOG, pet waste, or OSSF efforts.

Resources

TMDL and I-Plans: https://www.tceq.texas.gov/waterquality/tmdl/nav/118-lufkinwatersheds-bacteria

TWRI Projects: https://middle-neches.twri.tamu.edu/

ANRA Clean Rivers Program: https://www.anra.org/conservation-recreation/water-quality-activities/clean-rivers-program/

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Bayou Carrizo Supplemental Water Quality Monitoring and Data Analysis

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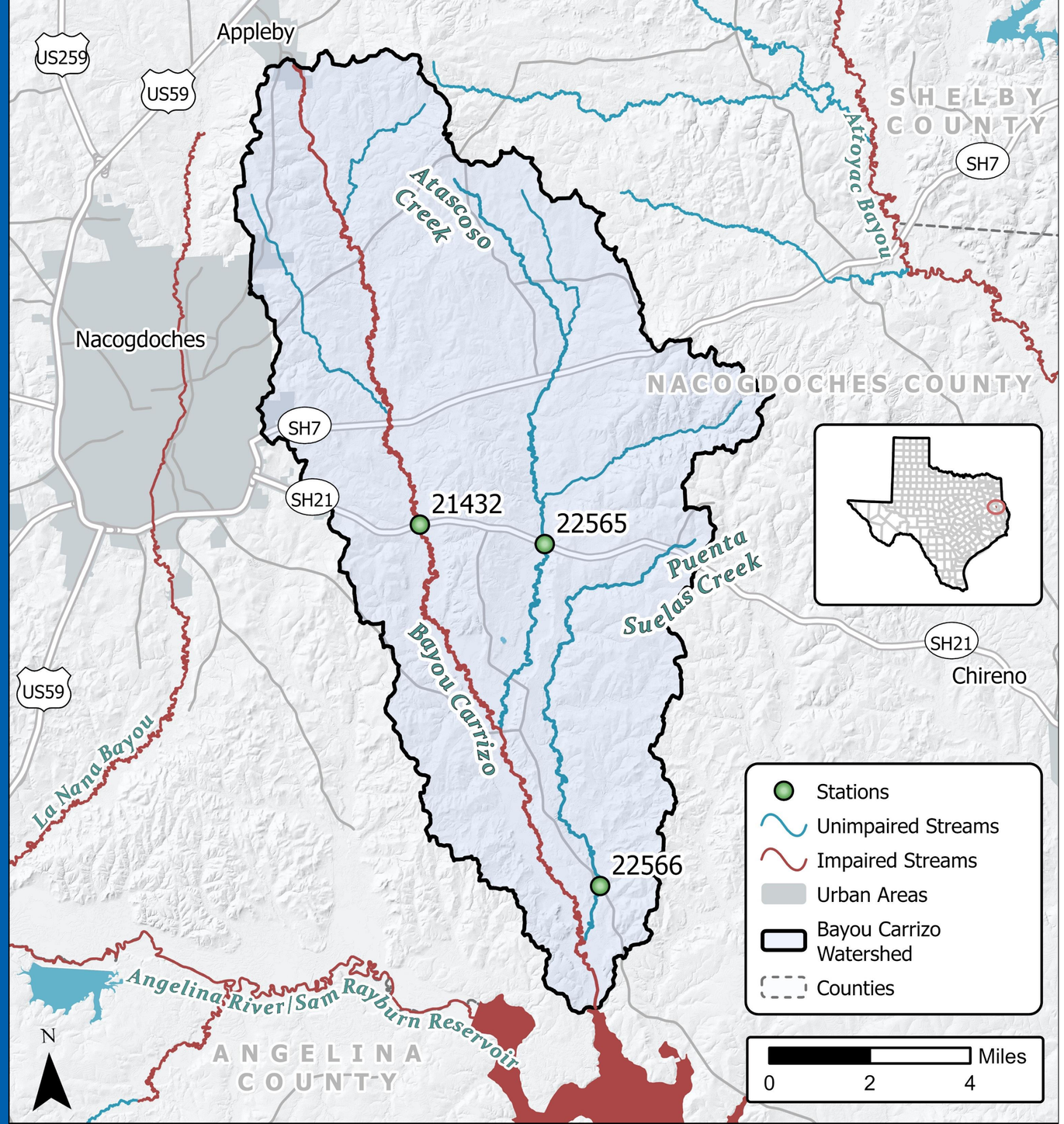

Bayou Carrizo Watershed

- High concentrations of *E. coli* bacteria at TCEQ station 21432.
- Levels may indicate a health risk for swimming or wading in the creeks.
- More data is needed to evaluate water quality throughout the watershed.

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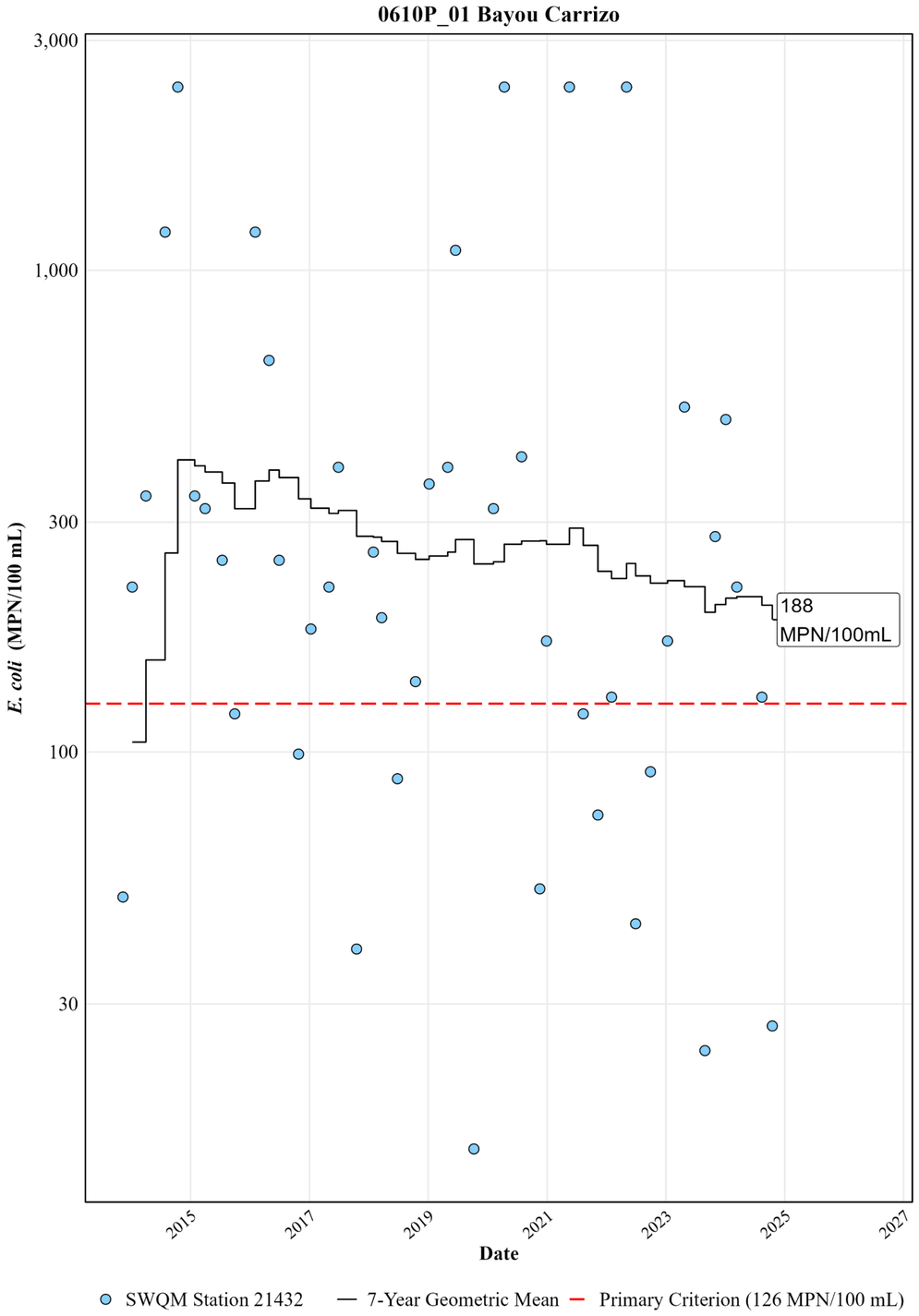

Current Conditions

7-year geometric mean (average):
Bayou Carrizo: 188 MPN/100 mL

Concentrations are higher than the criteria but may be slowly decreasing over time.

Puenta Suelas Creek. Photo Credit: Angelina Neches River Authority

Project Goals

- Monthly sampling is set to begin soon (upon QAPP approval) at stations 21432, 22565, and 22566.
- Sampling will be conducted over 18 months for flow, bacteria, conventional, and field parameters.
- Data collected under the project will be aggregated with historical data and summarized in a final report.

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Sandy Creek Watershed Water Quality Monitoring and Characterization

Anna Eismont, Program Specialist

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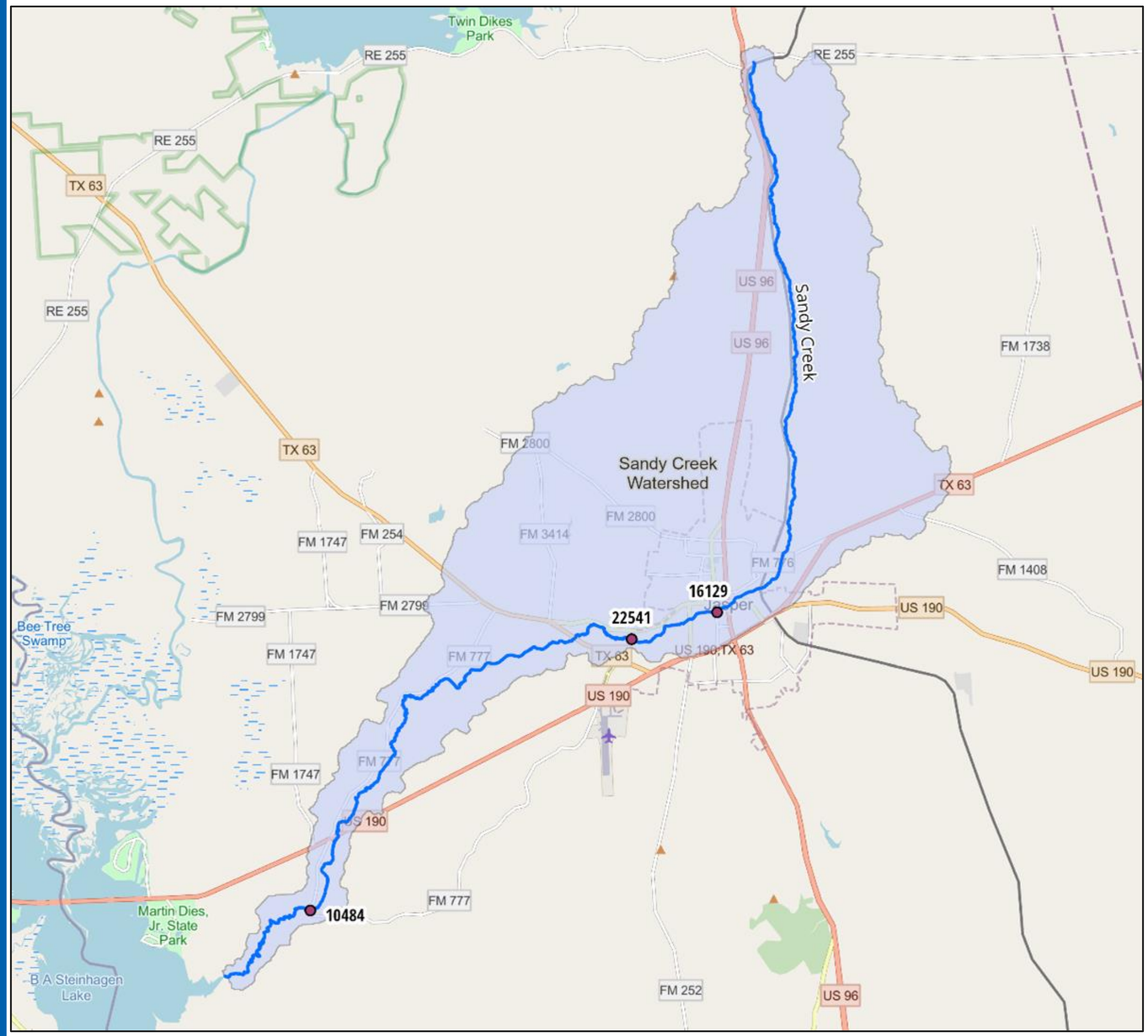

Sandy Creek Watershed

- Impaired for bacteria since 2000 (0603A)
- TMDL in place 2022 with stakeholder interest in a WPP
- More data is needed to evaluate water quality throughout the watershed.

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Sampling Ongoing

- Sampling began June 2025 and will continue for 24 months
- Collecting flow, routine parameters, and nutrients at 3 stations (10484, 16129, 22541)
- Characterization report will be developed through this project

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Contact us

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all things water.

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