

Texas Water Resources Institute

ANRA and TWRI Collaborations Grand Update

Anna Eismont, Program Specialist

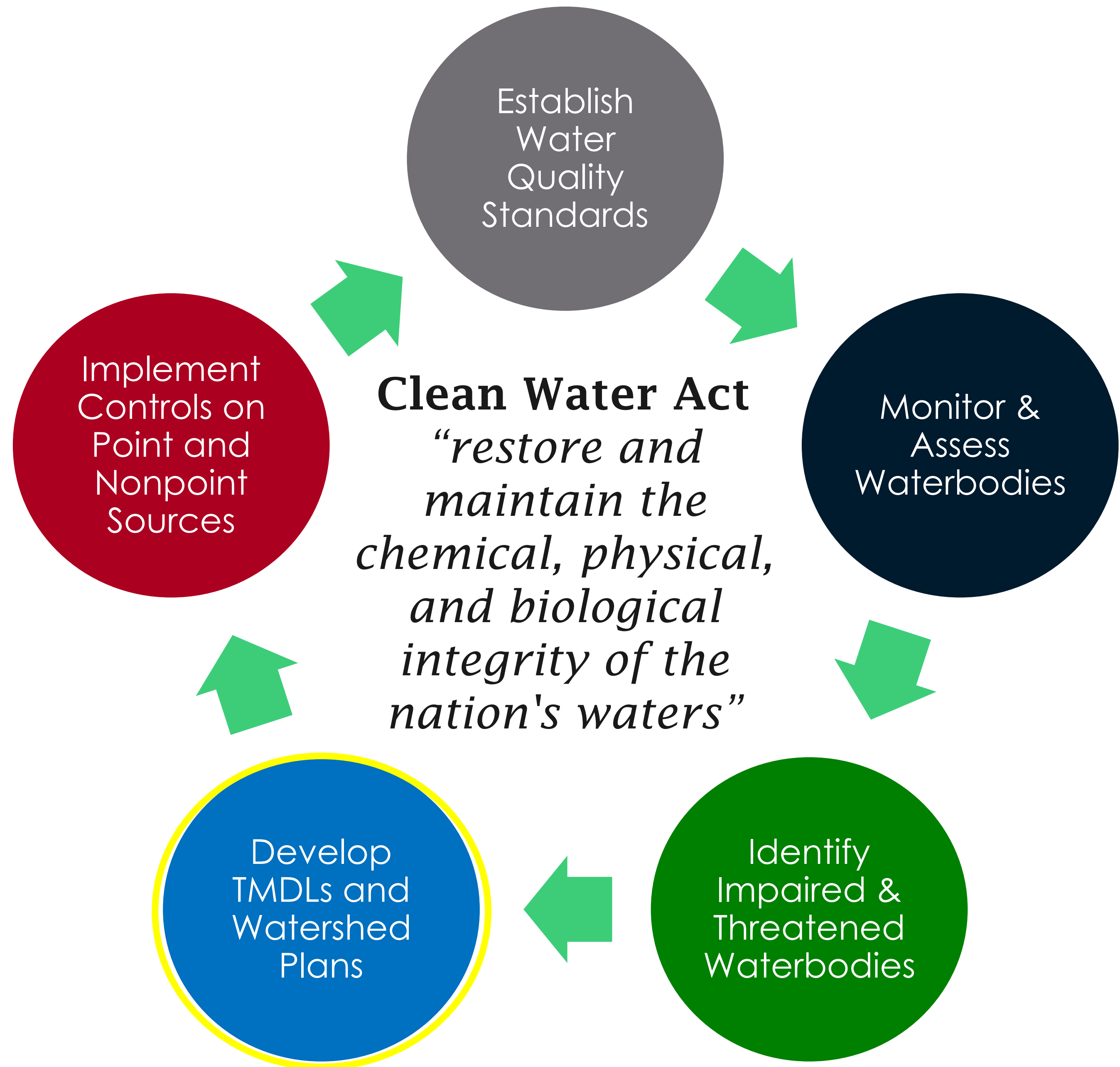


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Middle Neches Tributaries TMDL Updates

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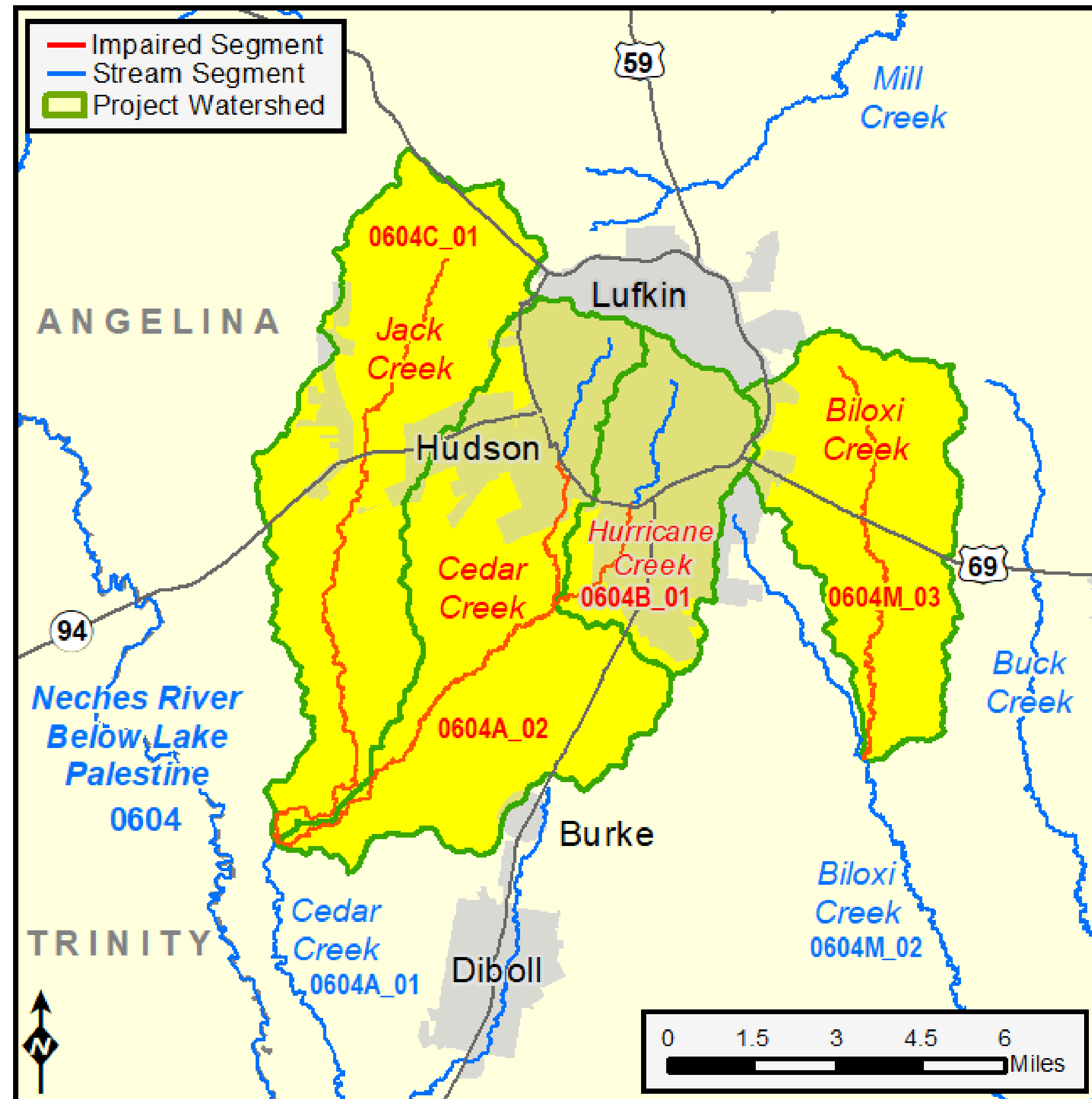




Background

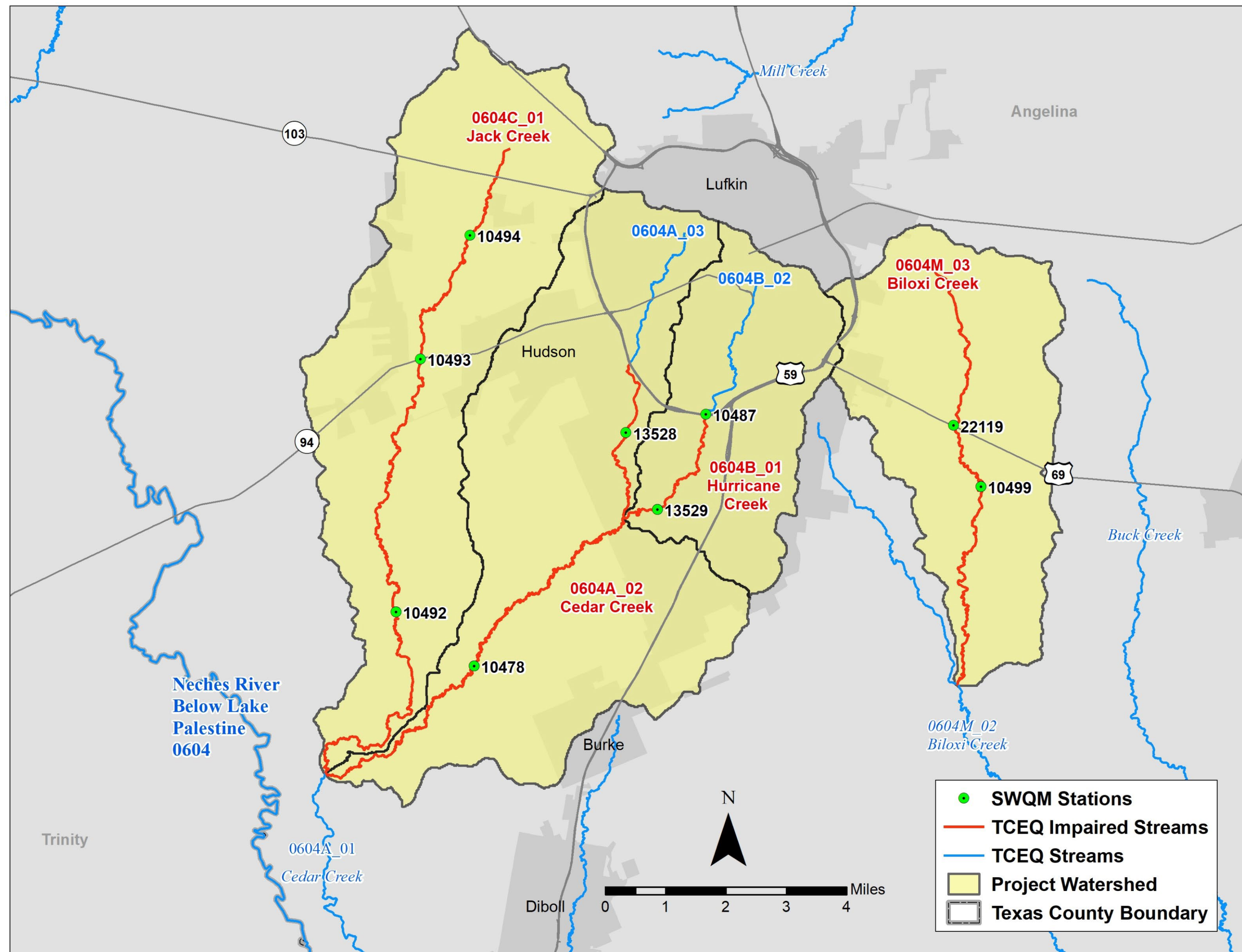
TCEQ manages water quality by

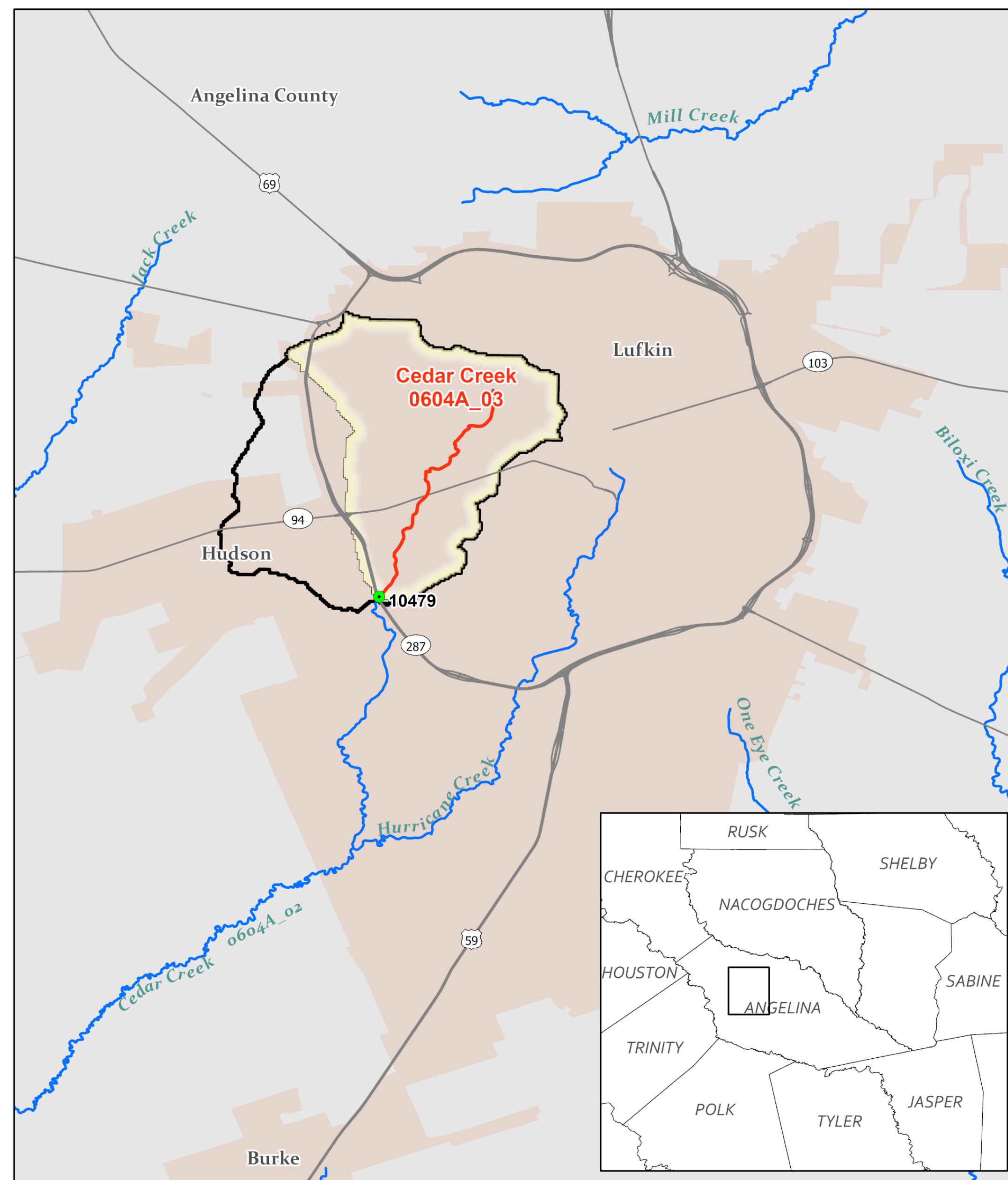
- Setting standards for quality
- Monitoring and Assessing
- Identifying impaired waterbodies
- Engaging stakeholders to develop and implement plans for improvement
- Using regulatory and non-regulatory tools
 - Regulates discharges from Point Sources
 - Manages runoff from Nonpoint Sources



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.





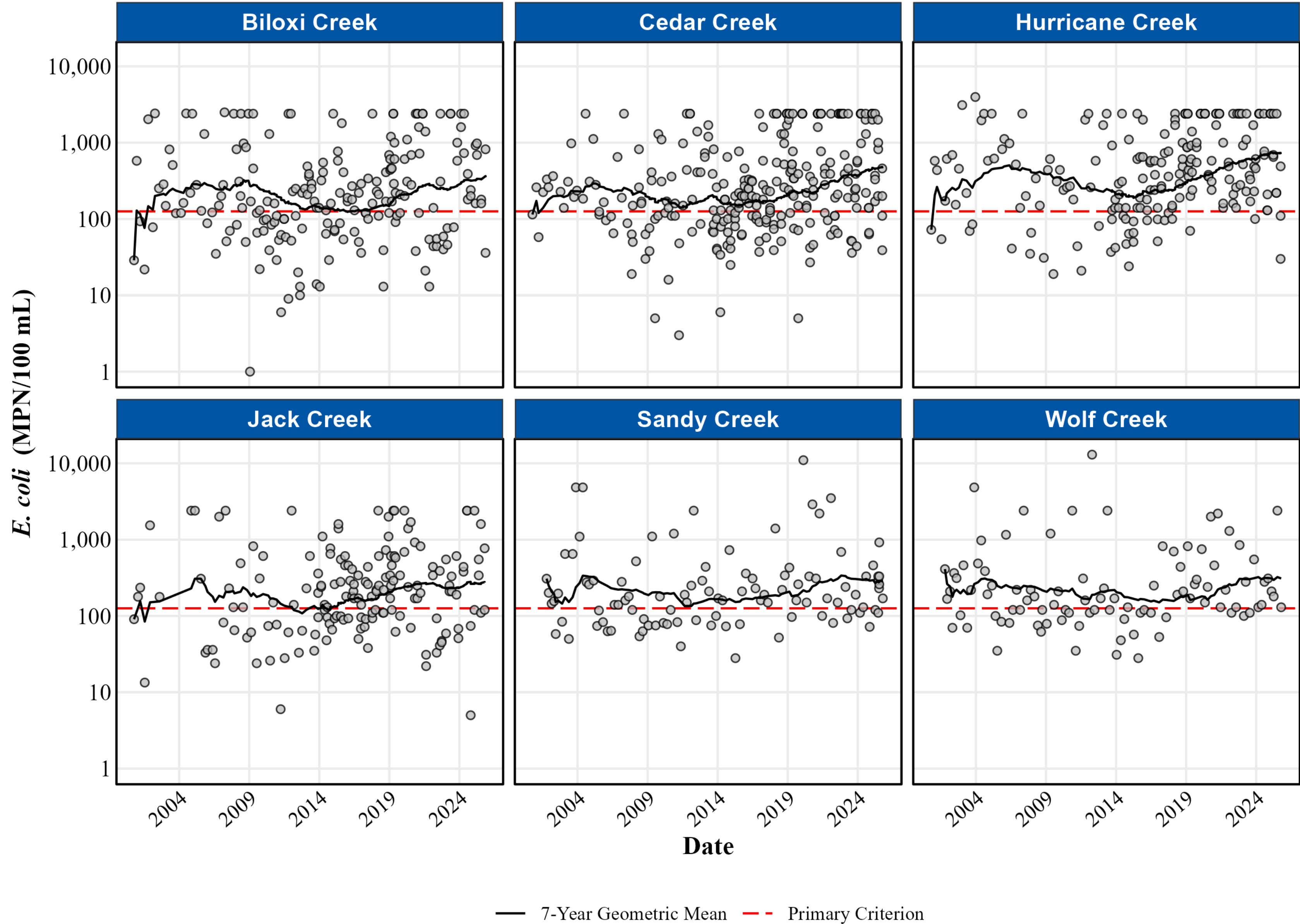
● SWQM Station
TCEQ Assessment Unit

○ AU Watershed
Watershed Above SWQM Station

Streams
Roads
City Boundaries



Middle Neches Tributaries Bacteria



Current
Conditions

7-year geometric mean
(average)

Concentrations are higher
than the criteria



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





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.



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.



Progress?

Tracked so far:

- 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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Attoyac Bayou basin WPPs updates

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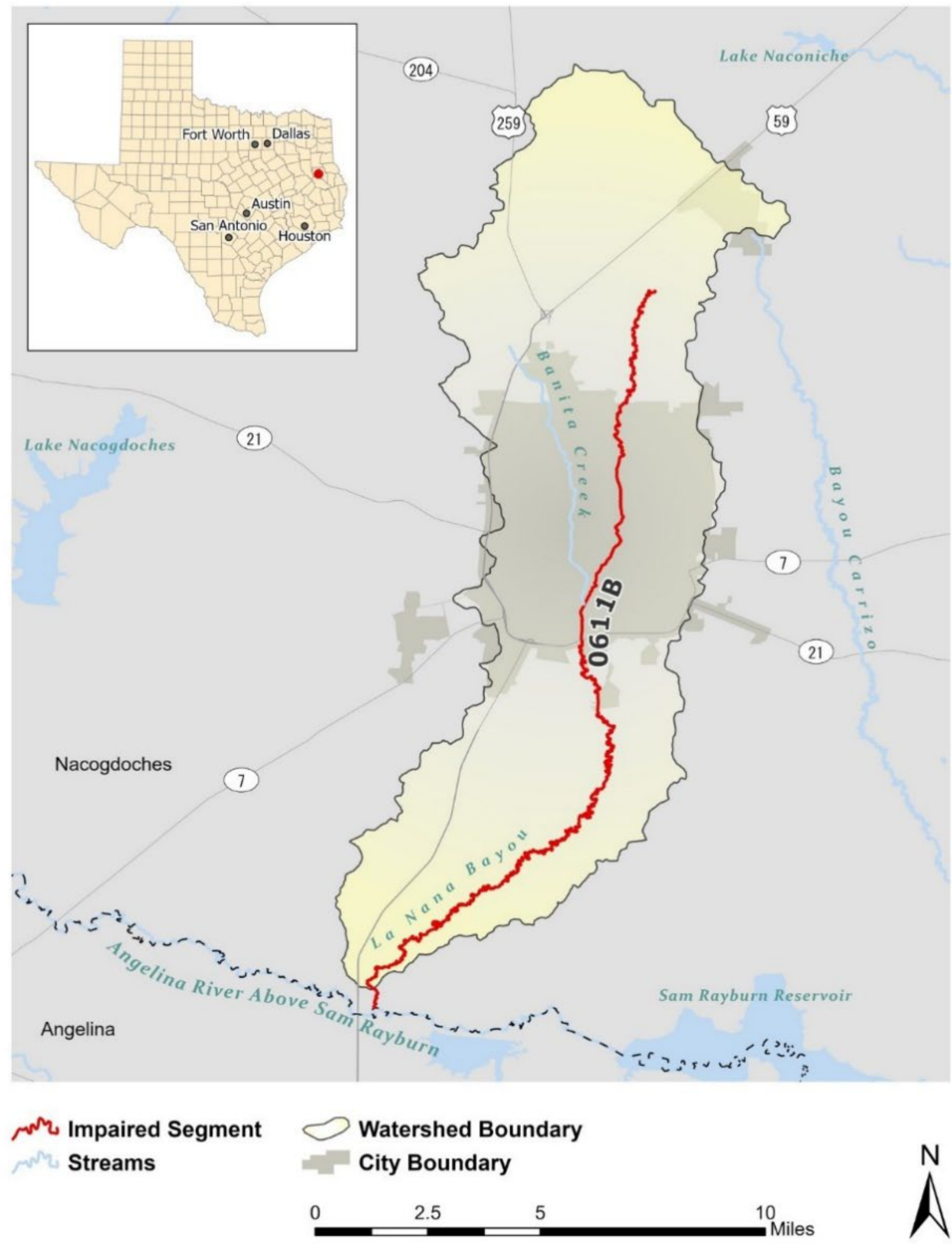


La Nana Bayou WPP

Funded by the Clean Water Act §319(h) Nonpoint Source Grant Program of the Texas State Soil and Water Conservation Board.

Project duration: December 2, 2024 – November 30, 2026. TWRI is asking TSSWCB for an extension into February of 2027.

- **Project location**: La Nana Bayou watershed within the City of Nacogdoches and Nacogdoches County
- **Bacteria impairments**: La Nana Bayou (Segments 0611B_01, 0611B_02, 0611B_03).
- **Nutrient concerns**: Nitrates, Total Phosphorous – La Nana Bayou (Segments 0611B_02, 0611B_03).
- Additional education and outreach events are being planned for fall of 2026.





La Nana Bayou WPP Implementation supporting monitoring by ANRA staff

Intended to support existing CRP monitoring, quarterly monitoring continues to be conducted by ANRA staff (to include ammonia, nitrate, and nitrite nitrogen, Total P, Total Suspended Solids, Chloride, Sulfate, and E. coli):

- 10474 – La Nana Bayou at Nacogdoches CR 526
- 16301 – La Nana Bayou at Loop 224
- 20792 – La Nana Bayou upstream of Main Street
- 22447 – Banita Creek upstream of MLK Jr Boulevard

Attoyac Bayou WPP Implementation supporting monitoring by SFASU staff & students

Intended to support existing CRP monitoring, quarterly monitoring continues to be conducted by ANRA staff (to include ammonia-N, nitrate-N, nitrite-N, Total P, Total Suspended Solids, Chloride, Sulfate, and *E. coli*):

- 10636 – Attoyac Bayou at SH 21
- 15253 – Attoyac Bayou at SH 7
- 16076 – Attoyac Bayou at US 59
- 20845 – West Creek at FM 2913

The project's QAPP has been signed and is awaiting execution by TSSWCB before monitoring can begin. Expecting to begin monitoring in July.



Resources

TWRI WPP Projects:

<https://lanana.twri.tamu.edu/>

<https://attoyac.tamu.edu/>

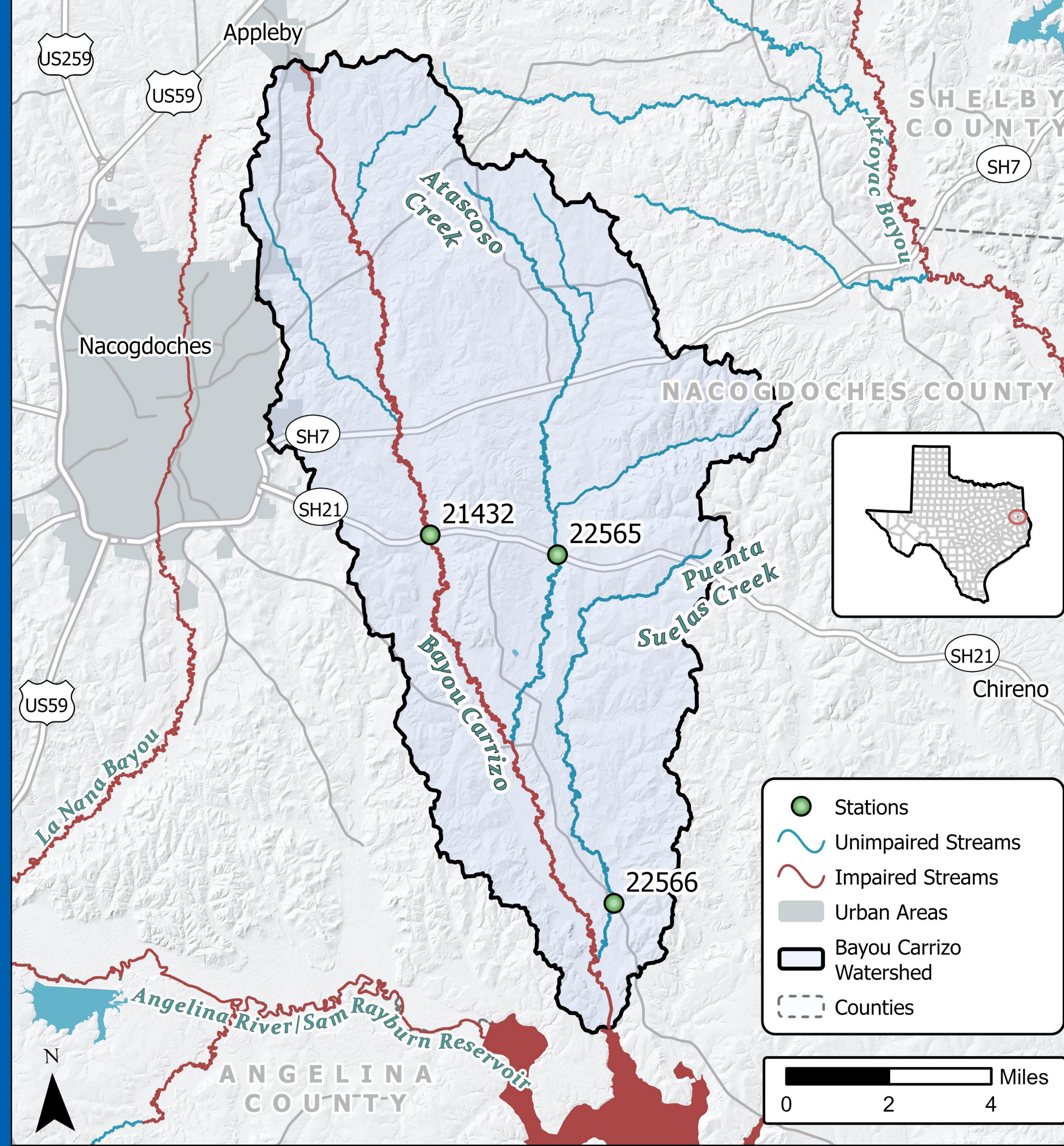
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Bayou Carrizo Supplemental Water Quality Monitoring and Data Analysis

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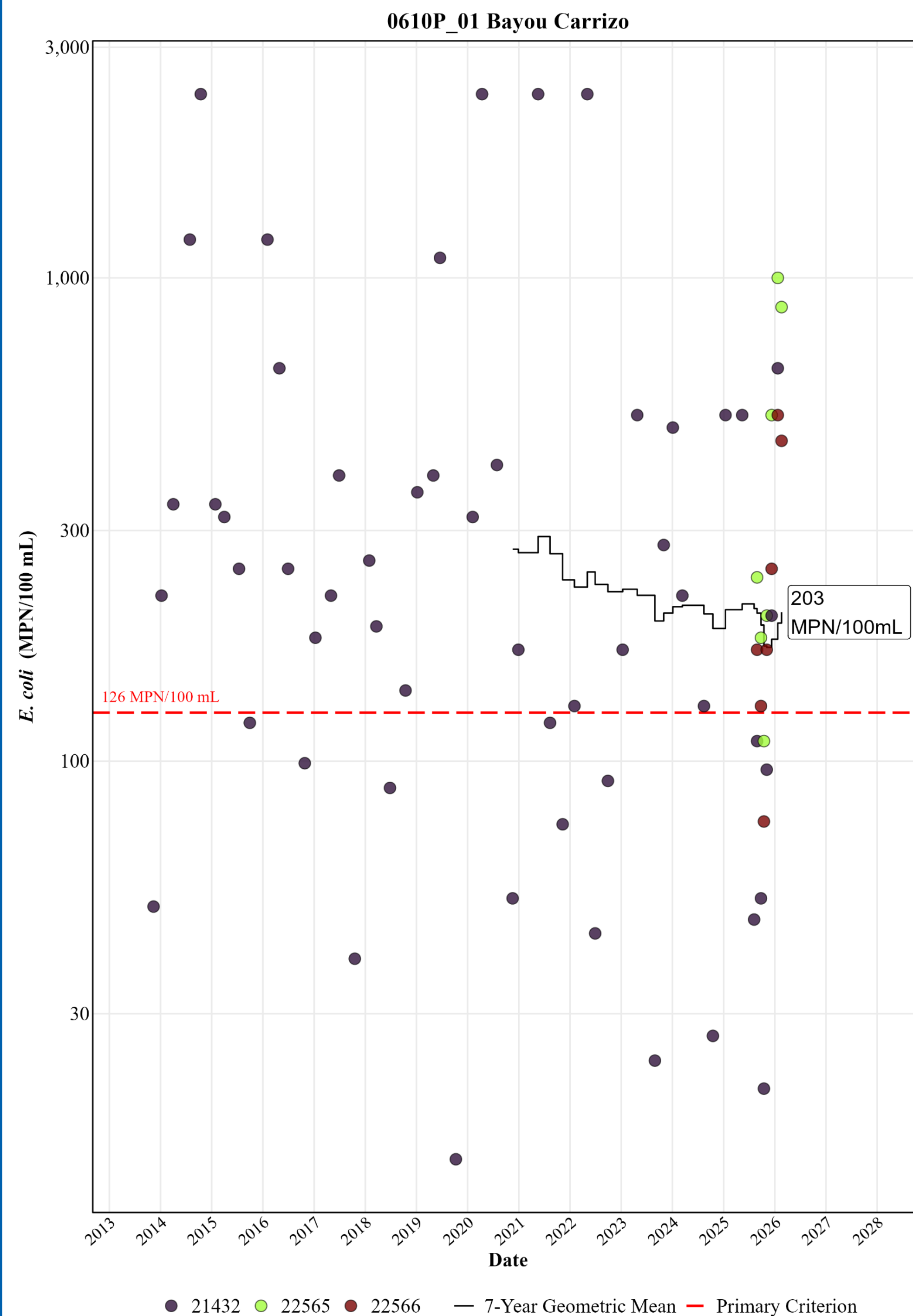


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Bayou Carrizo Watershed

- 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.



Current Conditions

7-year geometric mean (average):

Bayou Carrizo: 203 MPN/100 mL

Concentrations are higher than the criteria but may be slowly decreasing





Puerta Suelas Creek. Photo Credit: Angelina Neches River Authority

Project Goals

- Monthly sampling has been occurring 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

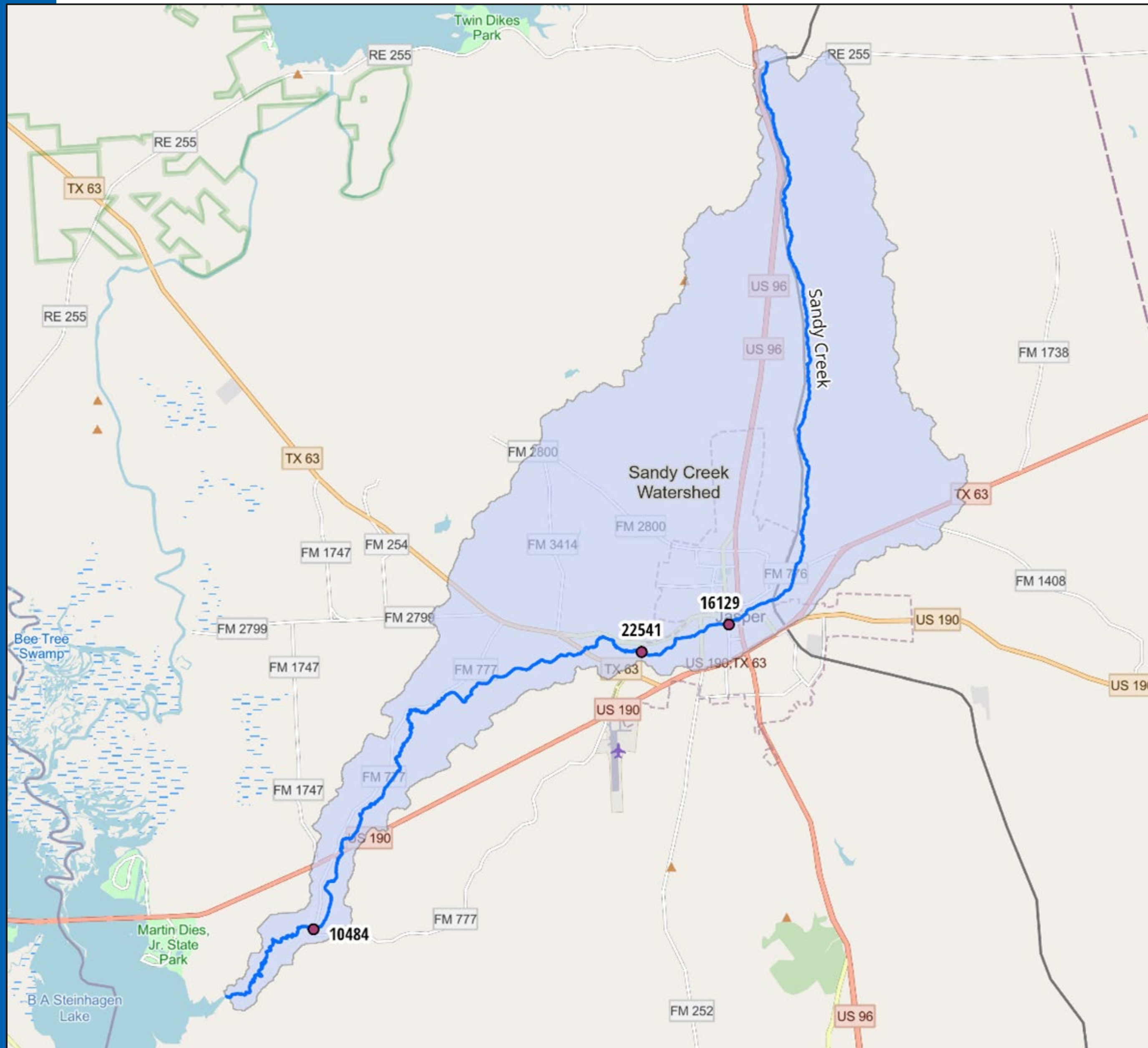
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Sandy Creek Watershed

- 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.



Sampling Ongoing

- Sampling began June 2025, 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
- Proposal submitted for WPP development





Contact us

We'd love to talk about
all things water.

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