February 19th, 2025

Davidson Creek

Watershed Protection Plan Development

Texas A&M AgriLife

Texas State Soil & Water Conservation Board

Texas Water Resources Institute
make every drop count

Funding provided by the Texas State Soil and Water Conservation Board through the State Nonpoint Source Grant Program

Texas Water Resources Institute

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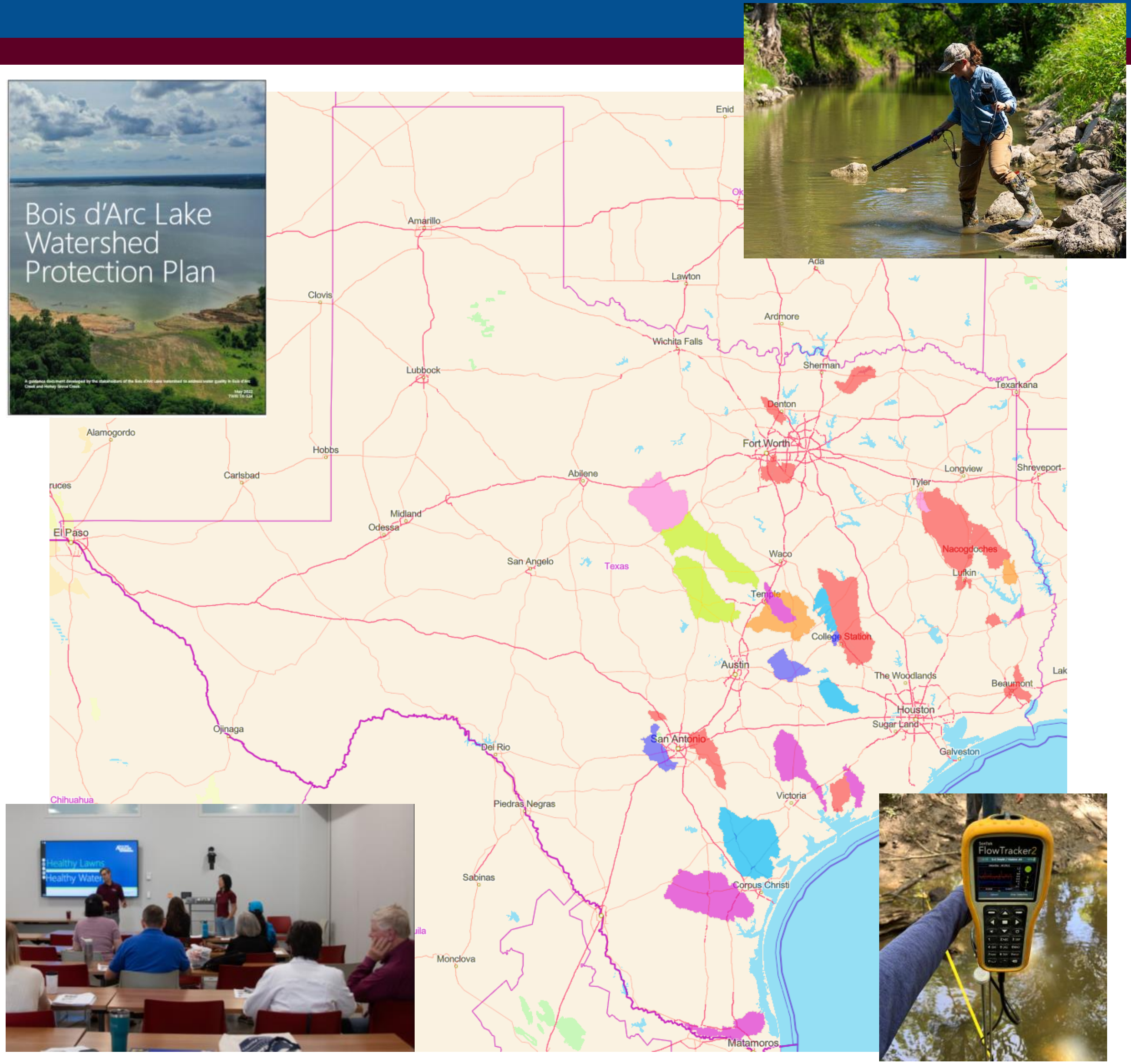
Who we are:

- Established in 1952 by Texas A&M Board of Directors
- Became the official state water resources institute in 1964
- Unit of Texas A&M AgriLife

What we do:

- Restoring & Protecting
- Sustaining & Enhancing
- Engaging & Educating



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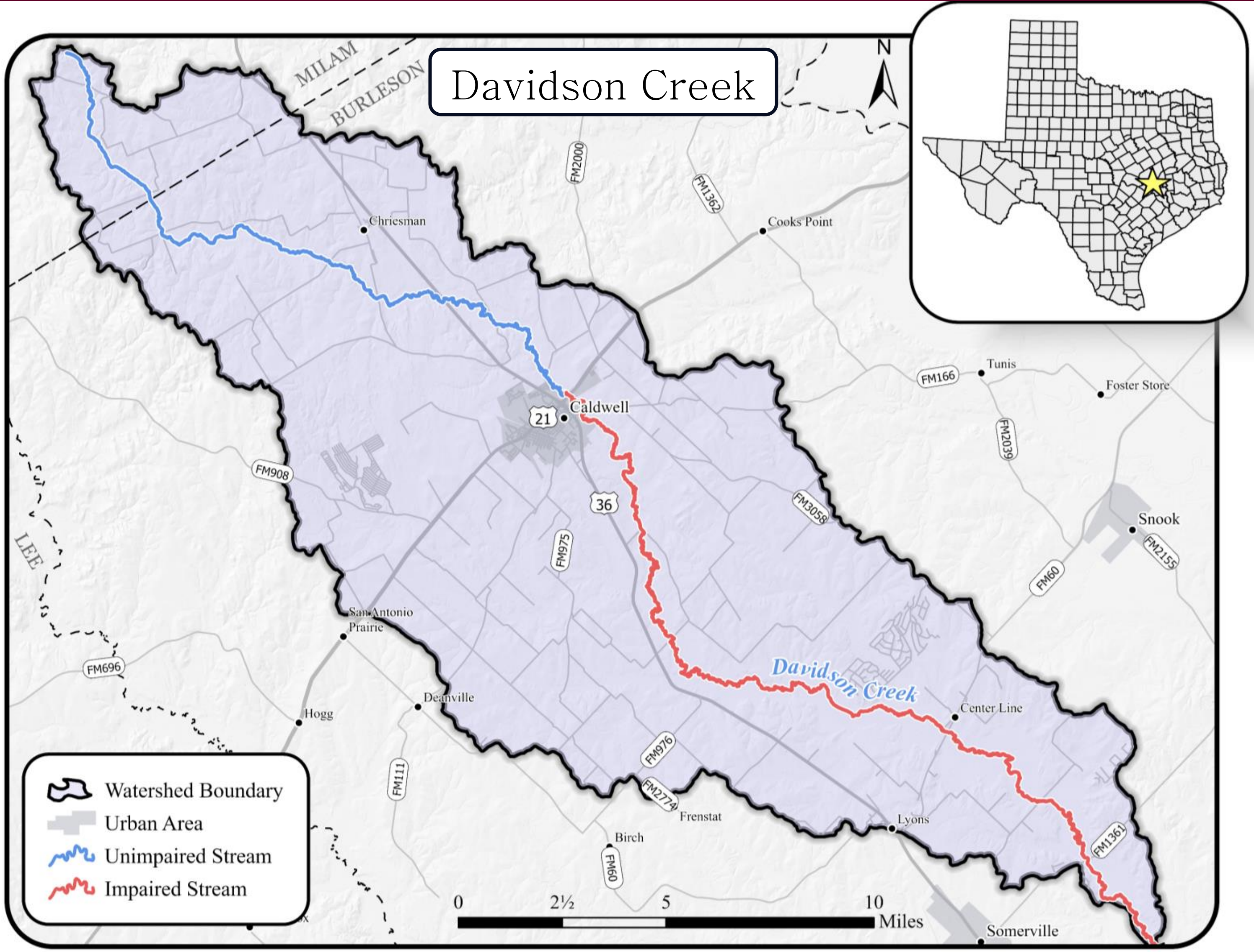
Why are we here?

- To help address water quality issues within the Davidson Creek watershed

How will we help?

- Facilitate local watershed knowledge and actions to address water quality



Meeting Agenda

- Surface water management
- Project overview
- Watershed protection plans
- Stakeholder organization
- Questions and next steps

Clean Water Act (CWA)

- **1948** – Federal Water Pollution Control Act
- **1972** – Federal Water Pollution Control Act Amendments (commonly known as the Clean Water Act)
- U.S. Environmental Protection Agency (EPA) works with the States to apply and enforce the CWA
- In Texas,
  - Texas Commission on Environmental Quality (TCEQ) administers rules and regulations supporting the CWA
  - EPA reviews and approves rules and regulations and checks to ensure that TCEQ is adequately enforcing them

Texas Water Quality Management

United States Environmental Protection Agency

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Develops Surface Texas Water Quality Standards and Texas Water Code

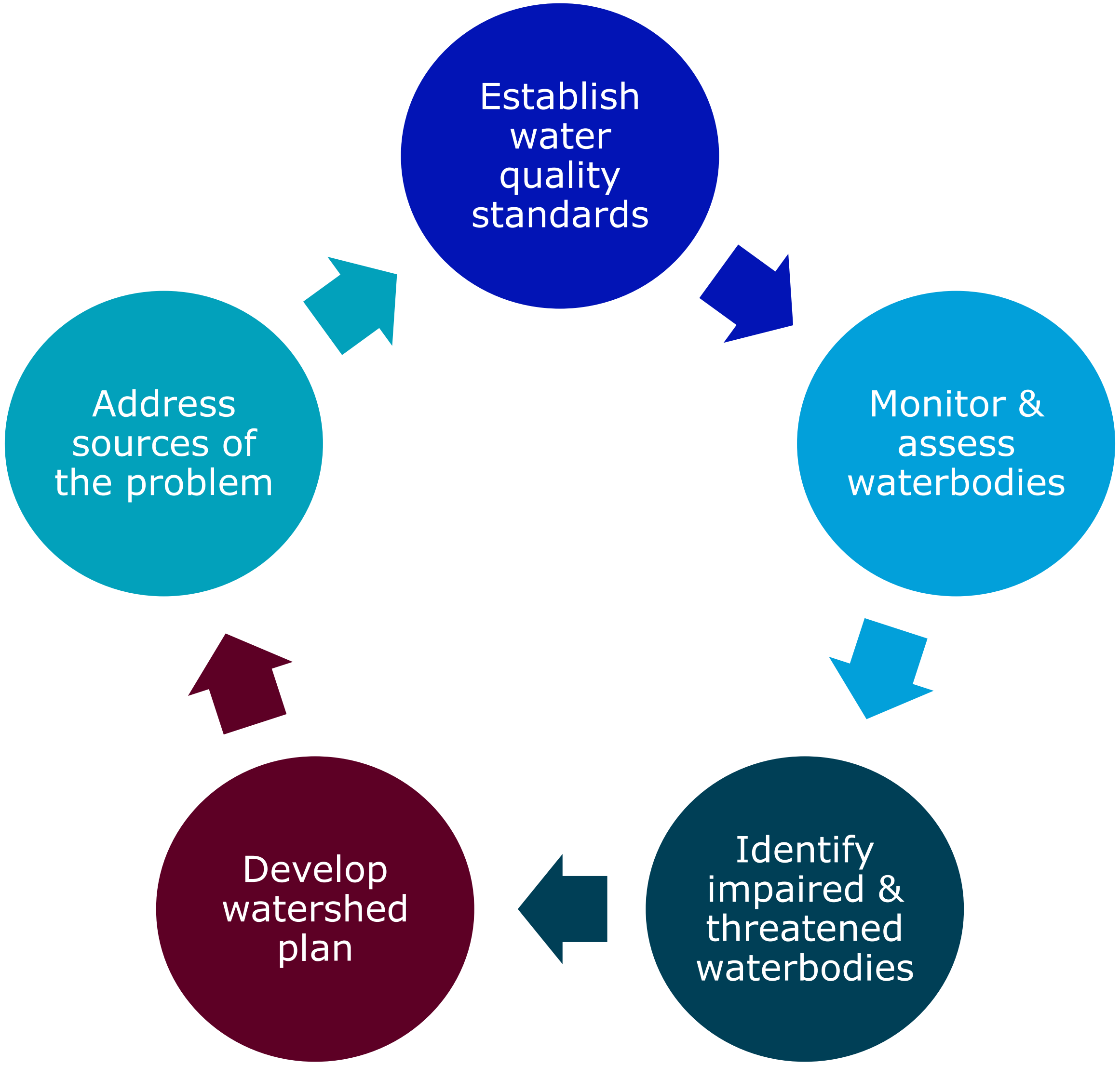
Responsible for activities related to

- point source pollution
- urban and non-agricultural nonpoint source pollution

TEXAS STATE Soil & Water CONSERVATION BOARD

Responsible for activities related to agricultural and silvicultural (forestry) nonpoint source pollution

Surface Water Quality Management in Texas



Strategies for Improving Water Quality

- Total Maximum Daily Loads (TMDL)
  - Driven by CWA requirements
  - Defines allowable pollutant load
  - Can be regulatory
- Implementation Plan (I-Plan)
  - Stakeholder driven plan that outlines how the TMDL will be achieved
- Watershed Protection Plan (WPP)
  - Stakeholder driven plan that holistically addresses all impairments and concerns in a watershed through voluntary measures

Texas Water Quality Standards

Clean Water Act

- Require states to adopt water quality standards

Texas Commission on Environmental Quality

- Sets Texas Water Quality Standards under Texas Water Code

Texas Surface Water Quality Standards

- Reviewed every 3 years
- Adopted by state
- EPA reviews

Surface Water Quality Monitoring

- Assess water bodies every 2 years
- Use most recent 7 years of data in assessment

Surface Water Quality Standards

- **Recreation**
  - **primary contact** – swimming, water skiing, etc., likely to result in ingestion of water
  - **secondary contact** – boating, wading, rowing, immersion is unlikely
- **Domestic Water Supply**
- **Aquatic Life**
- **Fish Consumption**
- **General Use**

Davidson Creek Progress

Establish water quality Standards

- Primary Contact Recreation Standard for bacteria set at 126 MPN/100 mL
- Texas AgriLife Research
  - 2010 – Recreation Use Attainability Analysis confirms Primary Contact Recreation Standard

Monitor & assess waterbodies

- Brazos River Authority: 1998 – 2007 routine monitoring
- United States Geological Survey:
  - 2003 – 2004 diel sampling
  - 2016 – 2017 routine monthly monitoring
- TCEQ: 2018 – 2019 routine quarterly monitoring
- Texas Water Resources Institute:
  - 2018 – 2024 routine monthly monitoring
  - 2018 – 2022 watershed characterization report

Identify impaired & threatened waterbodies

- Texas Integrated Report
  - 2002 first listed as impaired for bacteria
  - 2010 first listed as impaired for low dissolved oxygen

Davidson Creek Next Steps

Develop watershed plan

- Create a stakeholder –driven plan to improve water quality

Address sources of the problem

- On-the-ground practices to address sources of non-point source pollution and improve water quality

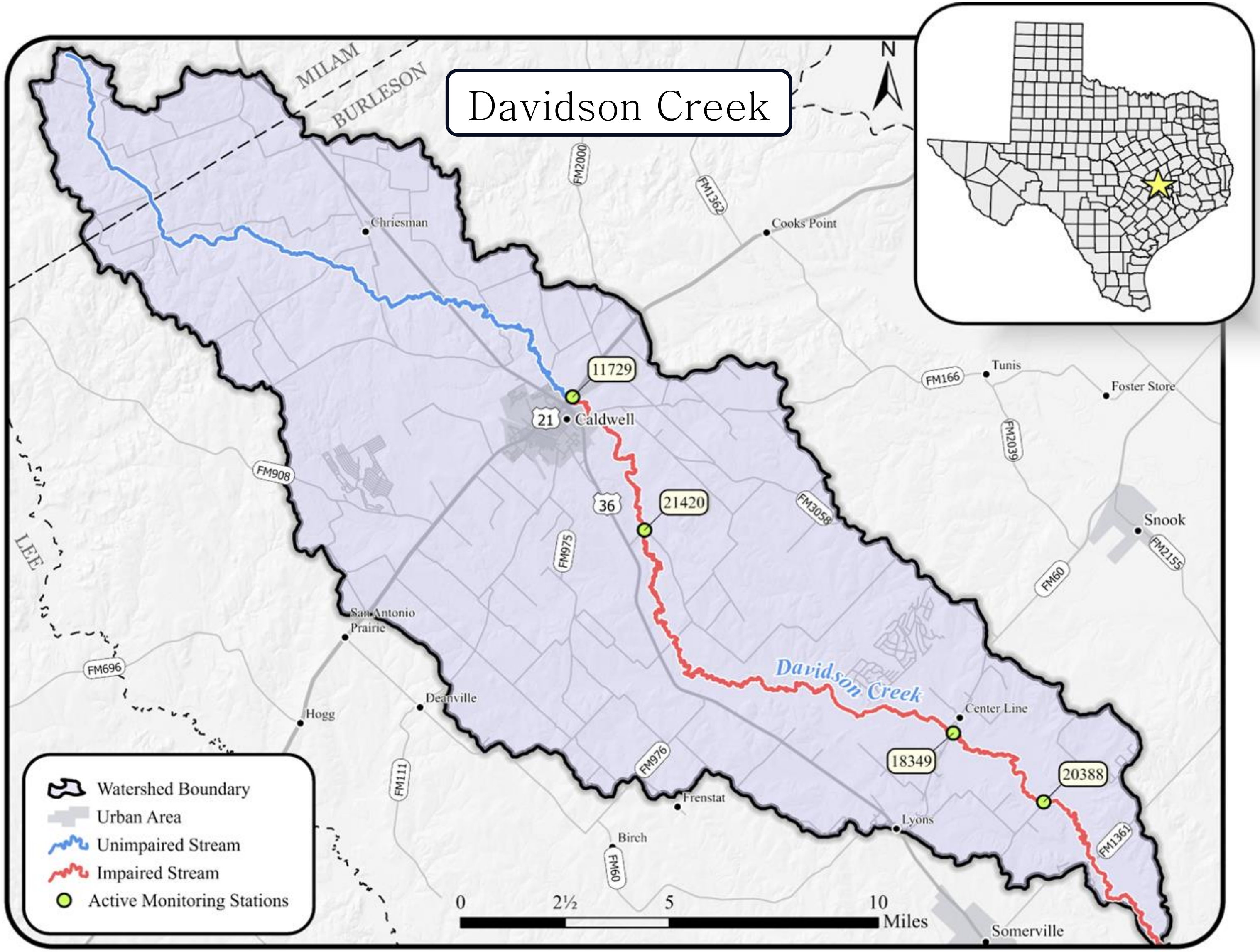
Davidson Creek

Watershed

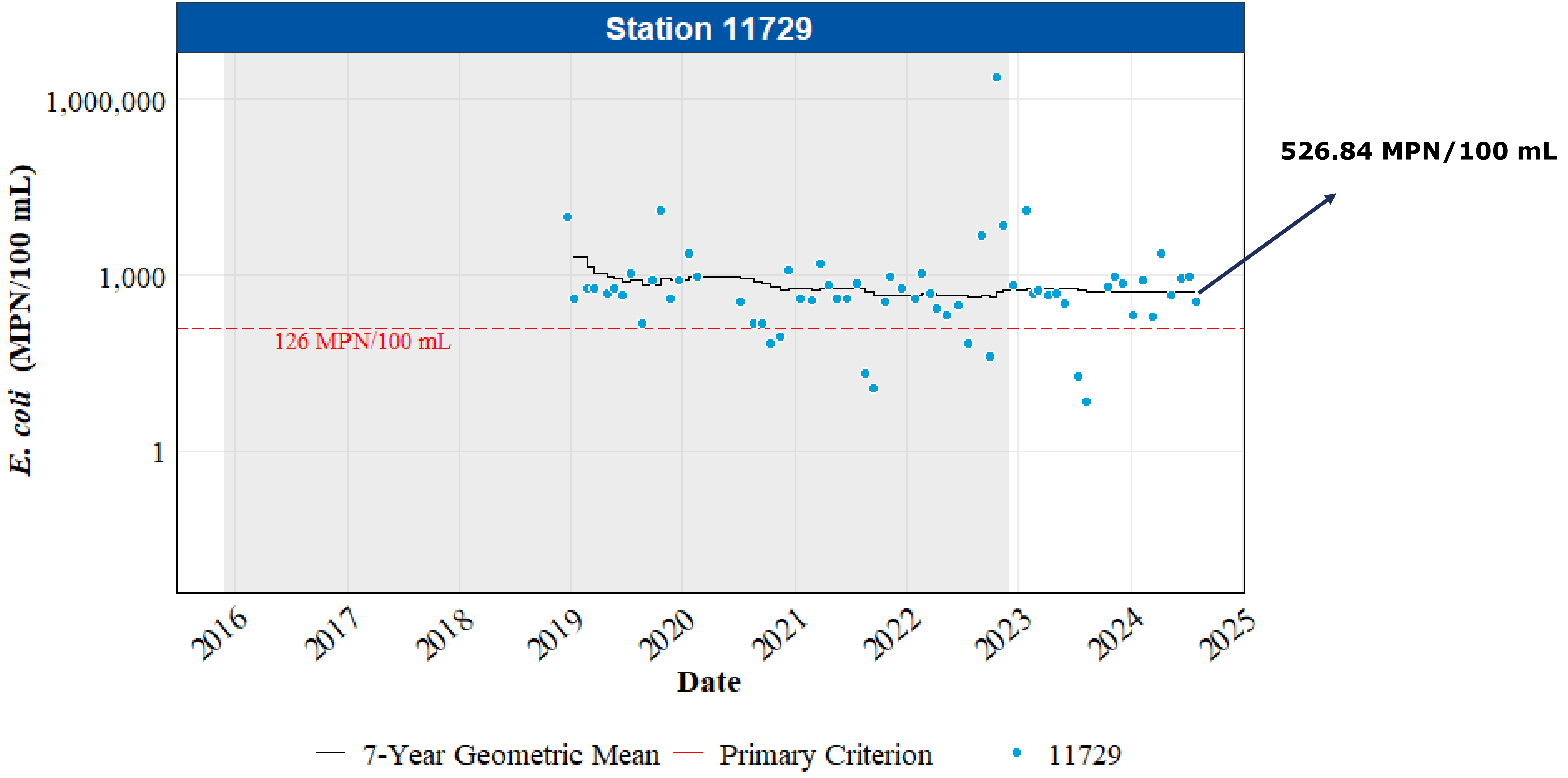
- Approximately 218 mi^2
- Includes portions of Burleson and Milam Counties

Water Quality

- Elevated bacteria – risk to human health
- Low dissolved oxygen – risk to fish & aquatic life



How elevated are bacteria levels?



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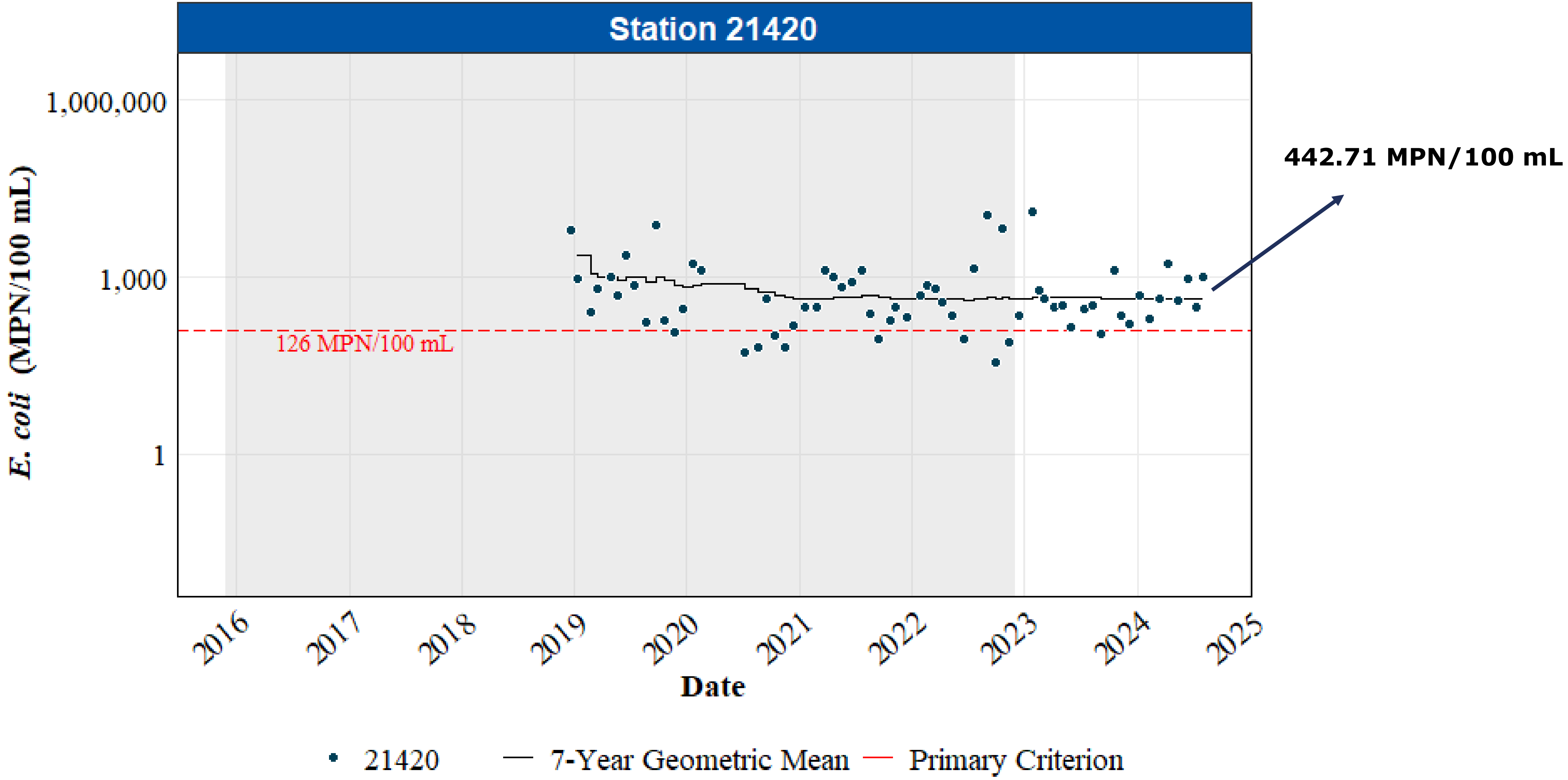

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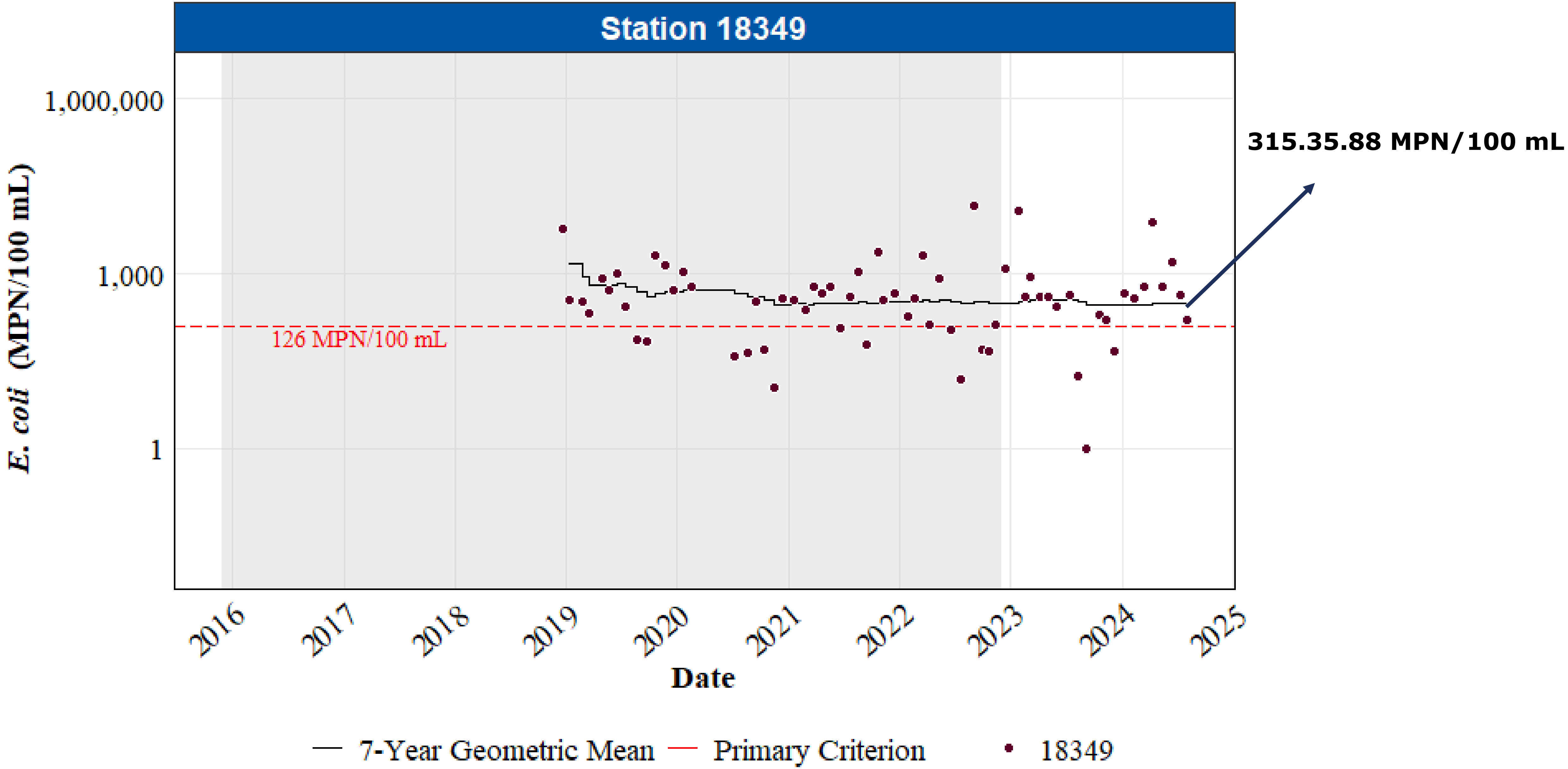

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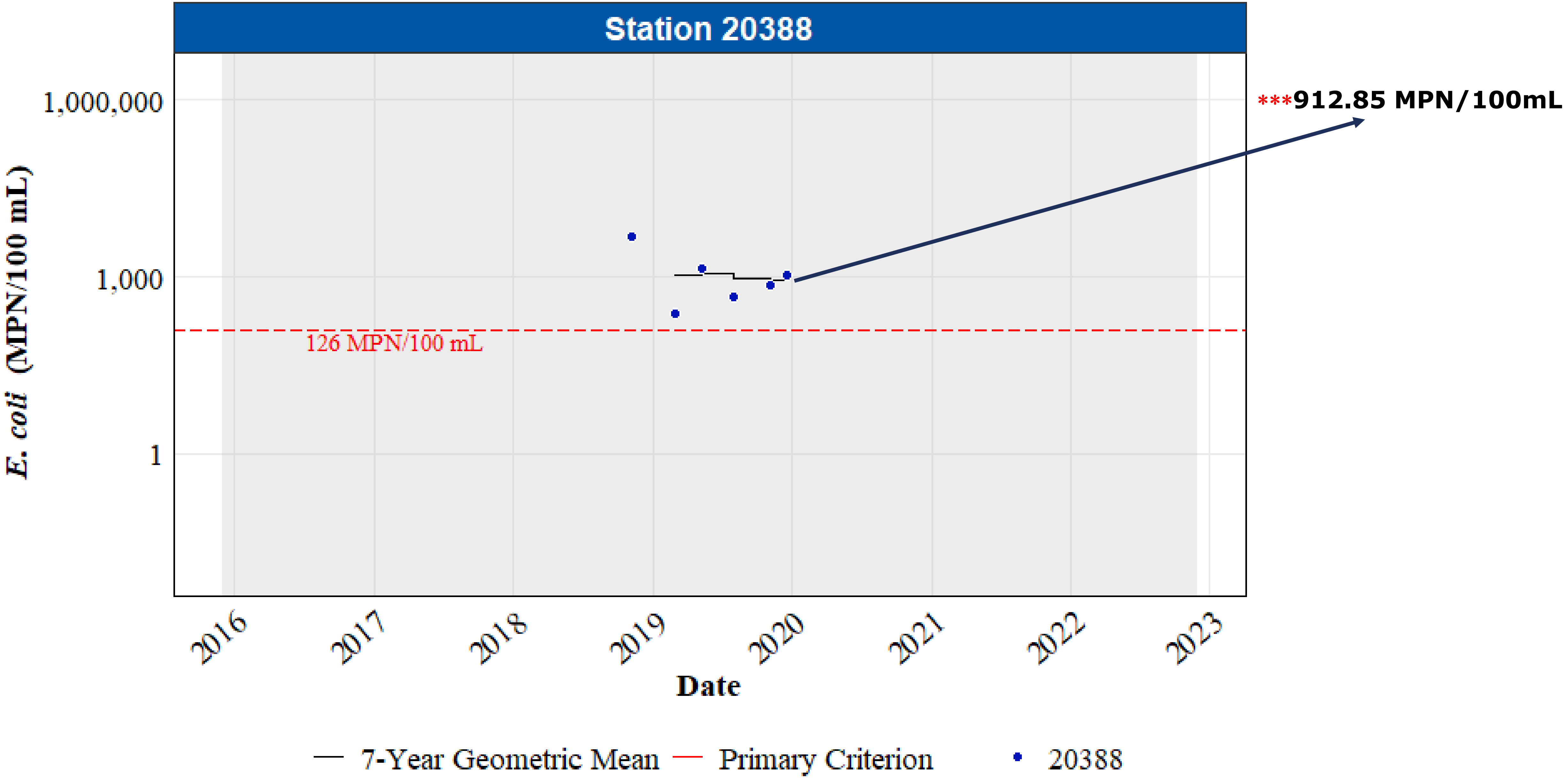
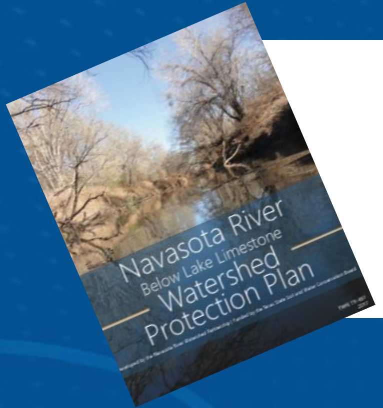
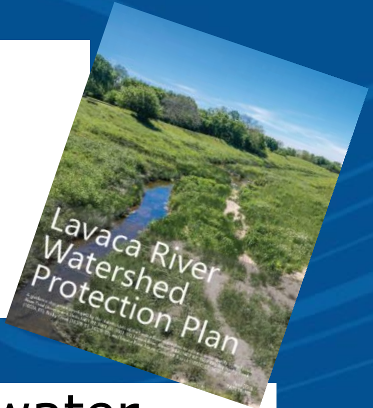
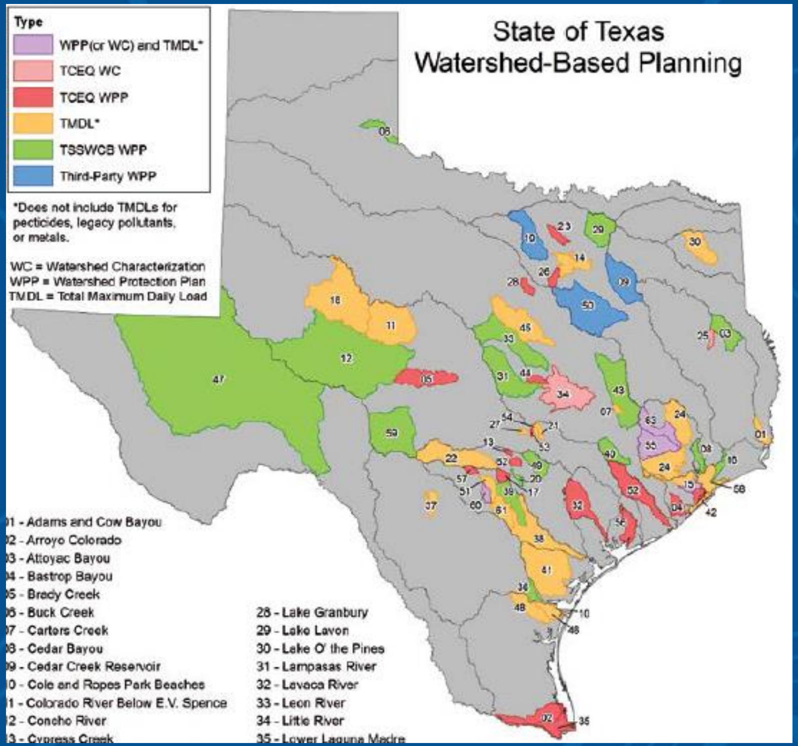




What is a Watershed Protection Plan?





- Stakeholder-driven plan that addresses water quality in a watershed rather than political subdivisions
- Address all water body impairments
- A mechanism for voluntarily address complex water quality issues
- A framework for coordinated management strategies
- Prioritizes strategies based on technical merit and benefits to the community
- Typically focused on 10-year goals

Watershed Protection Planning

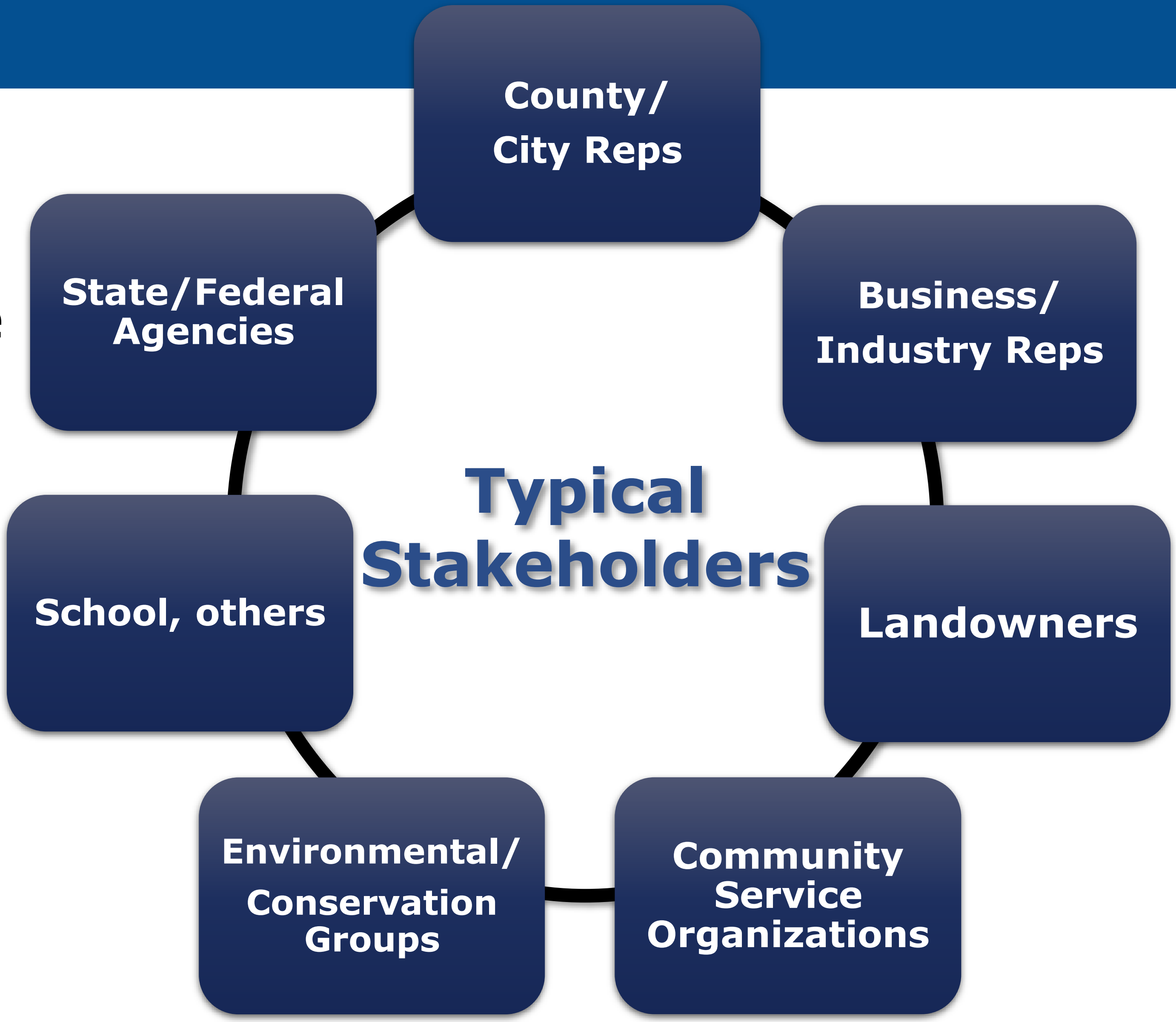
1. Build partnerships
2. Watershed Characterization
3. Identify solutions and finalize goals
4. Design Implementation Plan
5. Follow through on Implementation
6. Measure Progress and adjust as necessary

Stakeholders

A stakeholder is anyone who ***lives***, ***works***, or ***has interest*** within the watershed or may be ***affected*** by efforts to address water quality issues.

Stakeholder Roles

- Provide guidance and input
- Set goals and objectives
- Identify reasonable strategies
- Identify community needs



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Organizational Frameworks and Decision-Making Processes

Possible Stakeholder Structure

Stakeholder Group

- The general body of individuals who participate in public meetings

Coordination (Steering) Committee

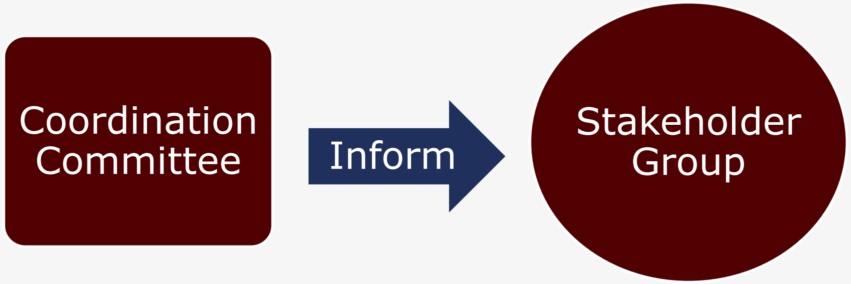
- A decision-making body made up of stakeholders from diverse interest/backgrounds

Workgroups

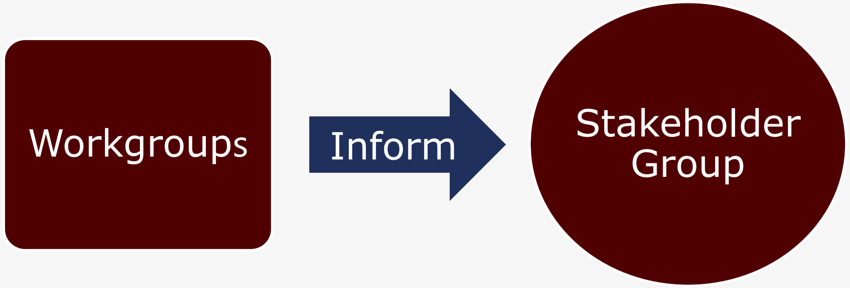
- Groups made up of stakeholders of a similar interest/background

Possible Frameworks for Organizing Stakeholders

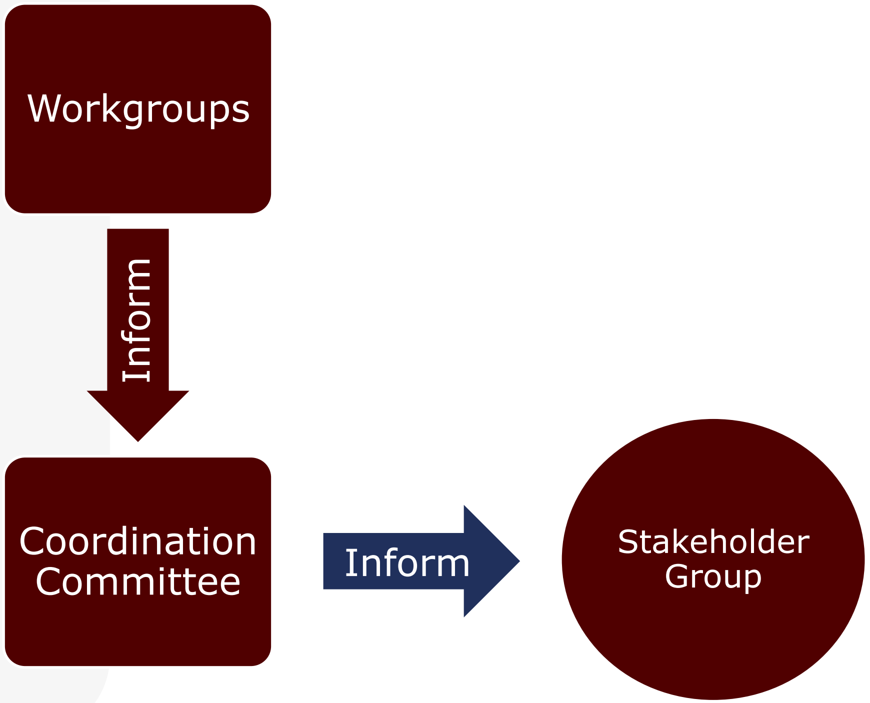
Formal Framework #1



Formal Framework #2



Formal Framework #3



Option #4
No Formal Framework

Possible Steering Committee Members – If Needed

- Landowners
- Agricultural Producers
- Business and Industry Reps
- Academia
- County and City Officials
- Educators
- Soil and Water Conservation Districts
- Nonprofit Organizations
- Others

Possible Workgroups – If Needed

- Agriculture & Wildlife
- Wastewater
- Urban runoff

Possible Decision-Making Processes

Formal

- Establish bylaws that govern the actions of the committee
- Adhere to Open Meeting Act Requirements
- Formal voting of Coordination Committee

Informal

- Use ground rules to govern coordination committee and work groups
- Strive to have most stakeholder groups represented in meetings
  - Will also see feedback via email
- Decision making via consensus building

Ground Rules Examples

More formal

- Goals
- Powers
- Timeframe
- Membership selection
- Steering committee
- Workgroup
- Technical advisory
- Replacement/additions
- Alternates
- Decision making
- Quorum
- Facilitators

Less formal

- No formal voting committee/representative
- Speak up
- Disagree respectfully
- Silence is presumed consent
- Listen during discussion
- Respect opinions and don't criticize people
- Be open to new ideas
- Silence cell phones
- Have fun

Additional Meetings and Overall Timeline

- Generally, have about 2 months between meetings
- Present 2 to 3 draft WPP chapters per meeting
- Send out and post online meeting reminders and recap of previous meeting
- Have a complete draft WPP by October 2025

Questions?

https://davidson.twri.tamu.edu/

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