

REGULATORY FRAMEWORK FOR THE PROTECTION OF SURFACE WATER QUALITY

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ENVIRONMENTAL QUALITY**



PRESENTATION OUTLINE

- Regulatory Scheme 101
- Framework of the US Clean Water Act
- Federal and State Approach to Manage Water Quality
 - Standards
 - Monitoring & Assessment
 - Implementing Restoration Projects



IMPORTANCE OF STAKEHOLDERS

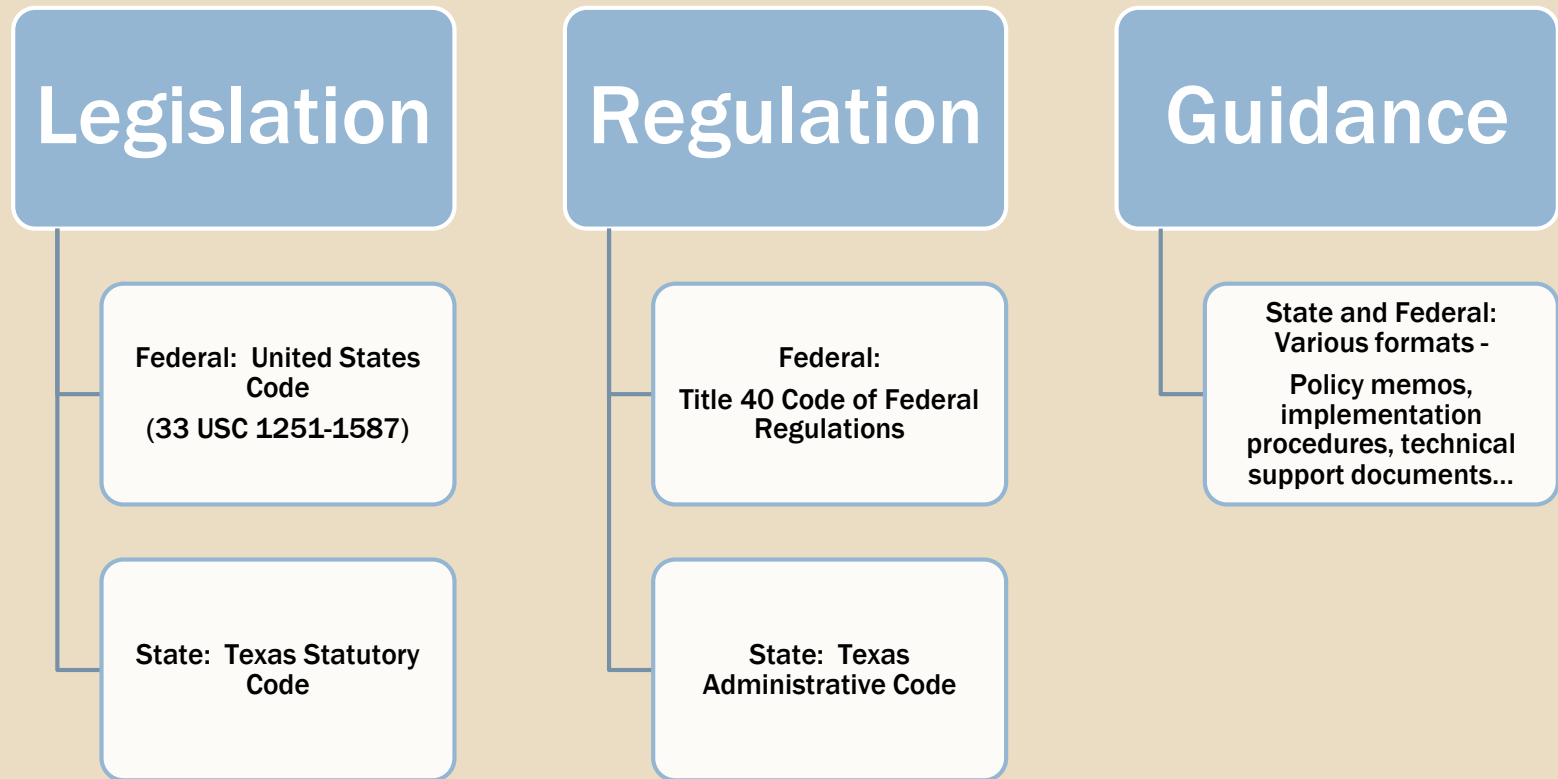
- You are part of the process
- Public participation is required in Clean Water Act and Texas Water Code
- All aspects of water quality management include public input and feedback



REGULATORY SCHEME: 101



REGULATORY SCHEME 101



WHAT IS LEGISLATION?

- Statutory law
- Addresses needs or problems by adding or modifying laws
- Passed by the legislative branch
 - Federal: US Congress
 - State: TX Legislature
- Signed by executive branch
 - Federal: President
 - State: Governor
- **Enforceable**
- Examples:
 - Federal: Clean Water Act
 - Texas: Water Code



WHAT ARE REGULATIONS?

- Rules
- Implements and interprets laws
- Authority comes from law
- State and federal regulatory agencies
- Public notice and comment during rulemaking
 - Federal Register
 - Texas Register
- **Enforceable**
- Examples:
 - Federal: Code of Federal Regulations (CFR)
 - Title 40 Protection of the Environment, Chapter I Environmental Protection Agency
 - State: Texas Administrative Code (TAC)
 - Title 30 Environmental Quality, Chapter 307 Texas Surface Water Quality Standards

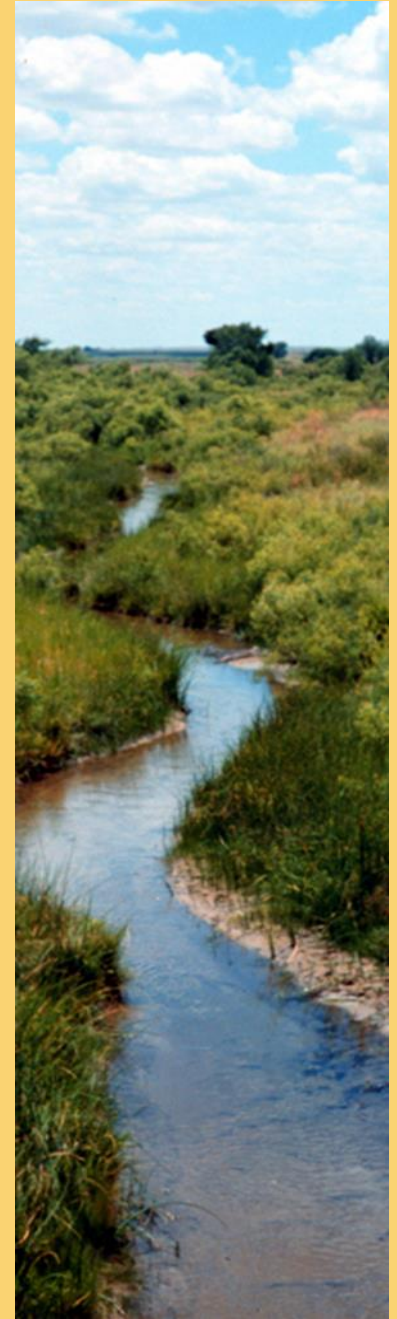


WHAT IS GUIDANCE?

- Clarifies intent of regulations
- Facilitates and describes implementation of regulations
- Public notice and comment not specifically required
 - Procedures to implement regulations usually include public input
- **Not enforceable or binding**
- Examples:
 - Federal: Water Quality Standards Handbook
 - Federal: Technical Support Document for Water Quality-based Toxics Control
 - State: Procedures to Implement the Texas Surface Water Quality Standards
 - State: Guidance for Assessment and Reporting of Surface Water Quality in Texas



FRAMEWORK OF THE US CLEAN WATER ACT



CLEAN WATER ACT

- Purpose “Restore and maintain the chemical, physical, and biological integrity of the Nation’s waters”
- Goal: “Water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water, wherever attainable”

Fishable



Swimmable



FEDERAL LEGISLATION: CLEAN WATER ACT TIMELINE

- 1899: Rivers and Harbors Act
- 1948: Federal Water Pollution Control Act
- 1965: Water Quality Act
- 1972: Clean Water Act
 - Major amendments in 1977, 1981, 1987 and 2000
 - Amendments addressed specific issues such as grants for water infrastructure, toxics, nonpoint sources and protection of coastal waters



1972 CLEAN WATER ACT: WHAT WAS NEW?

- Built on foundation of previous legislation
- Major long-term funding
- New resources available to implement (EPA)
- Fully enforceable and required for all states
- Applied to intrastate and interstate waters



CLEAN WATER ACT: TITLES

- I. Research and program funding
- II. Grants to construct treatment facilities
- **III. Water quality management**
- IV. Permits (wastewater discharges)
- V. General provisions
- VI. Loans to construct treatment facilities



CLEAN WATER ACT: MAJOR PROVISIONS AND SECTIONS

- **These are the sections we'll touch upon today....**
 - §101 – Goals and Policy
 - §303 – Water Quality Standards and Implementation
 - §305 – Water Quality Inventory
 - §319 – Nonpoint Source Permitting

- **Other relevant sections...**
 - §301 – Technology Based Effluent Limits
 - §302 – Water Quality Based Effluent Limits
 - §304 – Information and Guidelines
 - §402 – Point Source Permitting (NPDES)



JURISDICTION OF THE CLEAN WATER ACT

- Clean Water Act addresses “navigable waters”
- Clarity needed, as a result of Supreme Court rulings
- 2015 Clean Water Rule
 - April 21, 2014: EPA / Army Corps of Engineers proposed a rule to re-define the phrase “waters of the United States” (WOTUS)
 - June 29, 15: Publication of final rule
 - August 28, 2015: Effective date of final rule
- Litigation: June 29, 2015 - Current
- September 12, 2018: Statewide injunction in Texas
- February 14, 2019: Replacement rule proposed by EPA
 - April 15, 2019: End of public comment period



ENDANGERED SPECIES AND THE CWA

- Endangered Species Act requires conferring with United States Fish and Wildlife Service (USFWS) for federal actions that could affect listed species
- EPA/USFWS consultation includes
 - Standards revisions
 - Wastewater permits
 - Include commitment for more stringent permits as needed
 - Notice to USFWS for areas with listed species
- Species of concern
 - 13 Freshwater Mussel species (Statewide)
 - Brazos River Mussels, pending action by USFWS
 - False spike
 - Texas fawnsfoot



FEDERAL AND STATE APPROACH TO MANAGING WATER QUALITY

**STANDARDS
MONITORING & ASSESSMENT
IMPLEMENTATION**

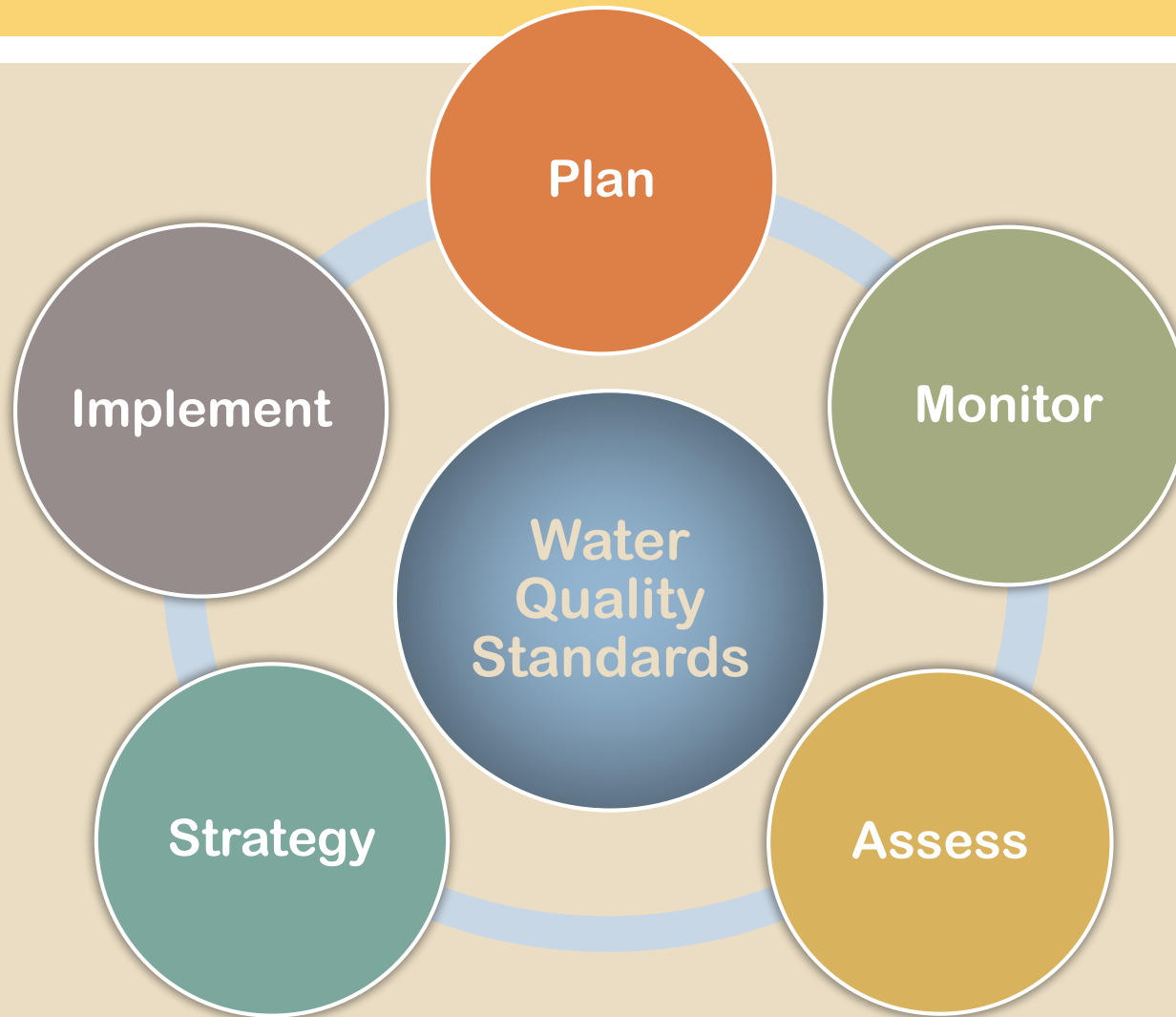


FEDERAL AND STATE COORDINATION

- The federal Clean Water Act gives states the primary responsibility for implementing programs to protect and restore water quality, including monitoring and assessing the nation's waters and reporting on their quality.
- Permits are issued by an authorized state (authorization given by EPA)
 - Texas Pollution Discharge Elimination System
- State program support
 - Federal grants
 - State fees
 - State appropriations from the legislature
- Federal approval of standards, assessments, and restoration activities.



WATER QUALITY MANAGEMENT



WATER QUALITY STANDARDS

- Targets for assessment, permitting, and implementation of restoration activities
- Texas has had standards since 1967...five years before the Clean Water Act
- Reviewed/revised ~ three years (triennial reviews)
- Adopted by state
- Approved by EPA
- Apply to state and federal water quality activities
- Must be approved by EPA for implementation in Clean Water Act activities (permitting, assessment, Total Maximum Daily Loads)



WATER QUALITY STANDARDS

■ Legislation

- Federal: Clean Water Act (§303, Water Quality Standards and Implementation Plans)
- State: Texas Water Code (Chapter 26, Water Quality Control)

■ Regulations

- Federal: 40 Code Federal Regulations Part 131 (Water Quality Standards)
- State: Title 30, Chapter 307 Texas Administrative Code, Texas Surface Water Quality Standards

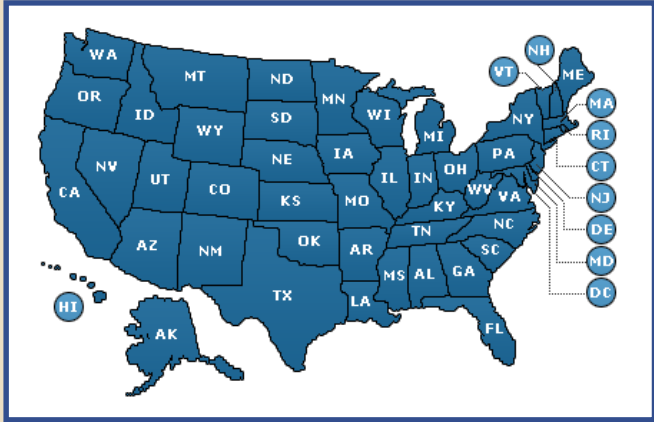
Designated
Uses
(Goals)

Criteria
(Protect Uses)

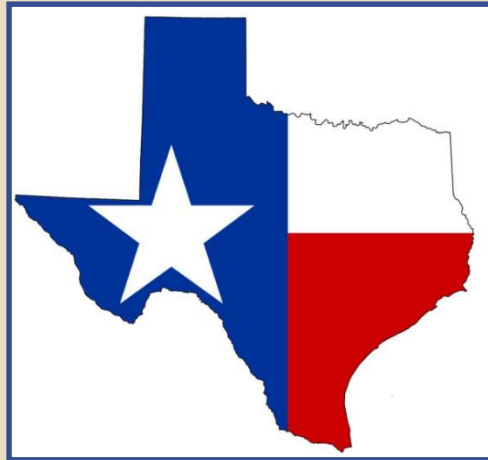
Antidegradation
Policy
(Protect existing uses
and high quality
waters)



SCALE OF STANDARDS



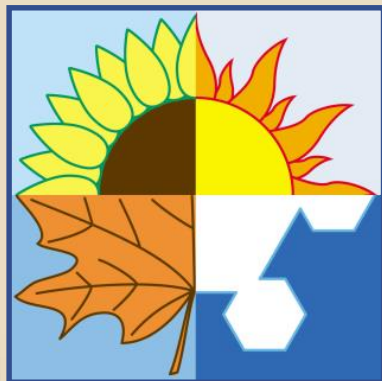
National



State-wide



Site-specific



Seasonal



Event-specific



MONITORING AND ASSESSMENT

■ Legislation

■ Federal: Clean Water Act

- §104 Research, Investigations, Training, and Information
- §106 Grants for Pollution Control Programs
- §205 Allotment
- §303 Water Quality Standards and Implementation Plans
- §305 Water Quality Inventory
- §314 Clean Lakes
- §319 Nonpoint Source Management Programs
- §604 Allotment of Funds

■ State: Texas Water Code (Chapter 26, Water Quality Control)

- §26.127 TCEQ as the principal authority re: water quality, including monitoring
- §26.0135 TCEQ, river authorities, and local/regional entities governments to establish agreements to conduct monitoring and assessment



MONITORING AND ASSESSMENT

- **Regulations:**
 - **Federal:** 40 Code Federal Regulations Part 130 (Water Quality Planning and Management)
 - **State:** Texas Administrative Code Title 30, Chapter 307, Texas Surface Water Quality Standards
 - §307.9, Determination of Standards Attainment of the Texas Surface Water Quality Standards.
- **Specific requirements and regulations for Clean Rivers Program**



CLEAN RIVERS PROGRAM

- Legislation

- State: Texas Water Code (Chapter 26)

- Regulations:

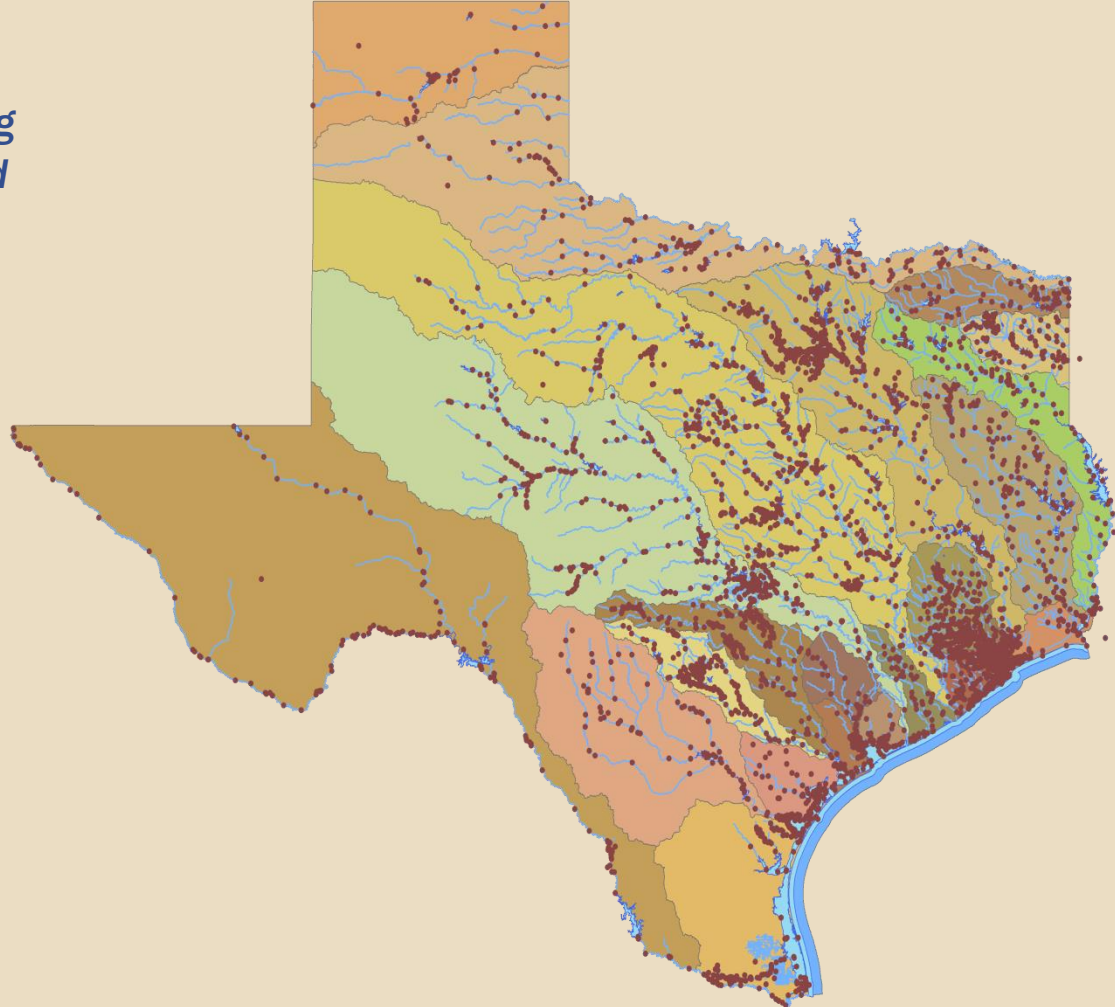
- State: Texas Administrative Code Title 30, Chapter 220, Regional Assessments of Water Quality, Subchapter A - Program for Monitoring and Assessment of Water Quality by Watershed and River Basin

Texas Water Code: “To ensure clean water, the commission shall establish the strategic and comprehensive monitoring of water quality and the periodic assessment of water quality in each watershed and river basin of the state. In order to conserve public funds and avoid duplication of effort, subject to adequate funding...river authorities shall, to the greatest extent possible and under the supervision of their commission, conduct water quality monitoring and assessments in their own watersheds.”



SURFACE WATER QUALITY MONITORING NETWORK

Texas Water Code: “The executive director has the responsibility for establishing a water quality sampling and monitoring program for the state. All other state agencies engaged in water quality or water pollution control activities shall coordinate those activities with the Commission.”



SURFACE WATER QUALITY MONITORING (SWQM)

- Established in 1967
 - Clean Rivers Program established in 1991
- Monitoring at ~ 1800 stations on a quarterly basis
 - Clean Rivers Program
 - TCEQ Regional SWQM Program
 - Other state and federal entities
- Monitoring purposes
 - Routine
 - Systematic
 - Targeted
 - Permit Support
 - Effectiveness



DATA COLLECTION

Metals-in-Water



Routine Water Chemistry

Sediment Contaminants



Flow Measurement



Aquatic Biota



Field Parameters

ASSESSMENT

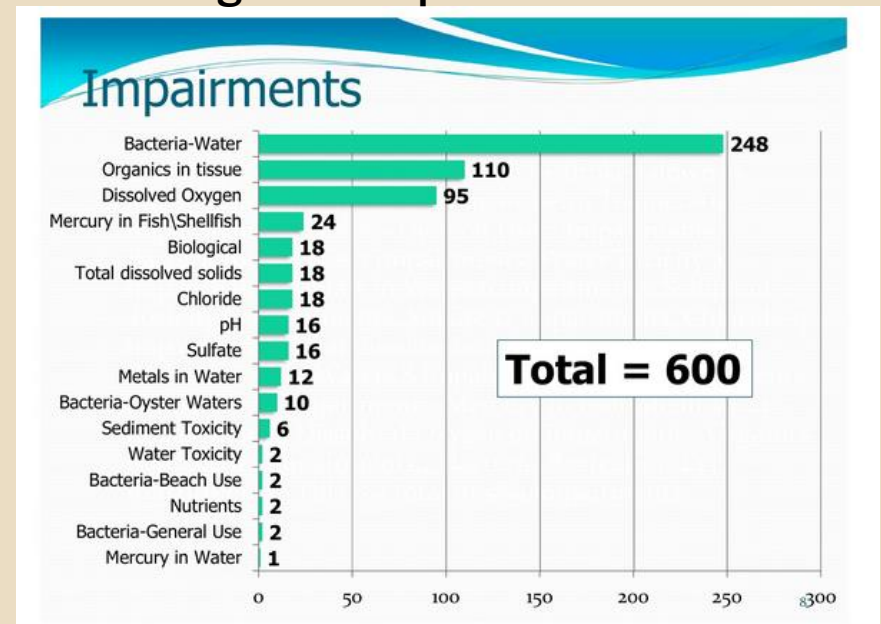
- How do we know if waters are meeting the goals of the Clean Water Act?
- Biennial Texas Integrated Report
 - Conducted every two years
 - A snapshot of water quality conditions
 - Categorizes waters according to results
 - Identifies waters that do not attain standards
 - 303 (d) List of Impaired Waters (Category 5)



RESULTS OF ASSESSMENTS

- Inform water quality management activities
 - Considered in wastewater permitting
 - Used to schedule additional monitoring
 - Identify waterbodies where standards should be re-evaluated
 - Used to plan restoration activities

2016 Integrated Report:



IMPLEMENTING RESTORATION PROJECTS

■ Legislation

■ Federal: Clean Water Act

- §303, Water Quality Standards and Implementation Plans
- §319, Non-point Source Management Programs
- §604, Allotment of Funds

■ State: Texas Water Code

- Chapter 5, Texas Commission on Environmental Quality (authority to award grants)
- Chapter 26, Water Quality Control

■ Regulations

■ Federal: 40 Code of Federal Regulations

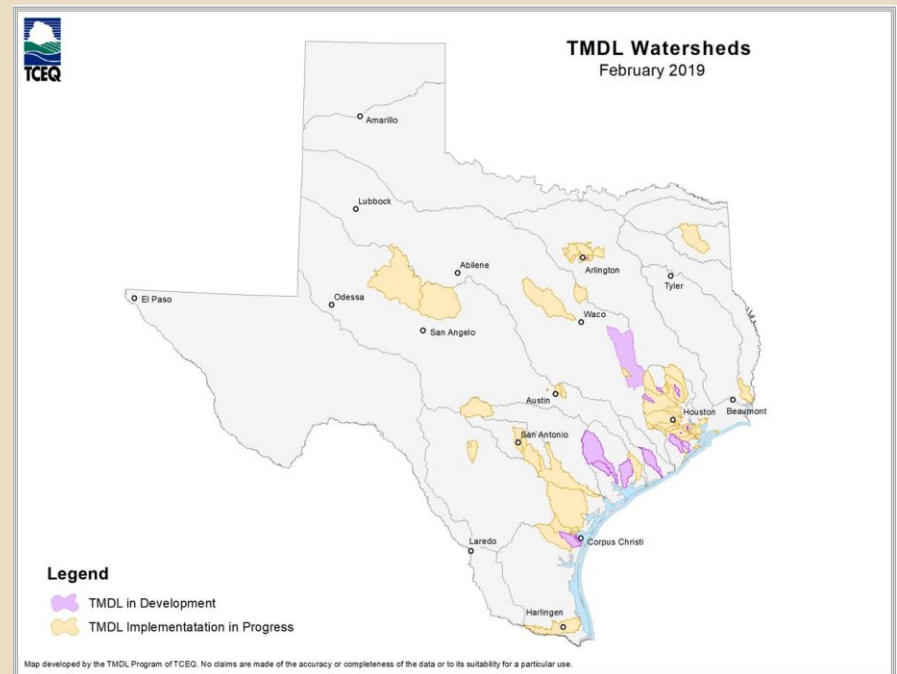
- Part 130, Water Quality Planning and Management
- Part 35, State and Local Assistance Grants

■ State: Title 30, Chapter 307 Texas Administrative Code, Texas Surface Water Quality Standards



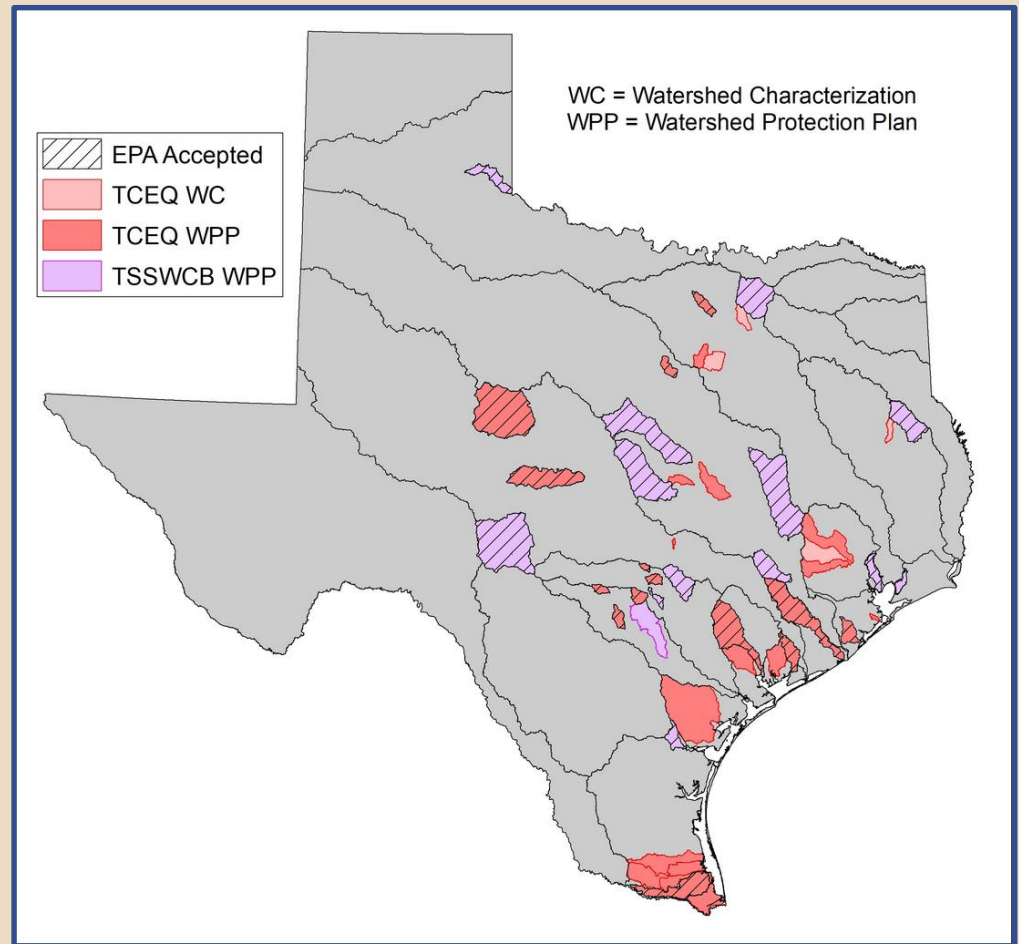
TMDLS AND IMPLEMENTATION PLANS

- Budget for pollution (measure of assimilative capacity)
- One plan usually implements several Total Maximum Daily Loads
- Specific pollutants in impaired waters
- Regulated and unregulated sources
- Regulatory for permitted entities



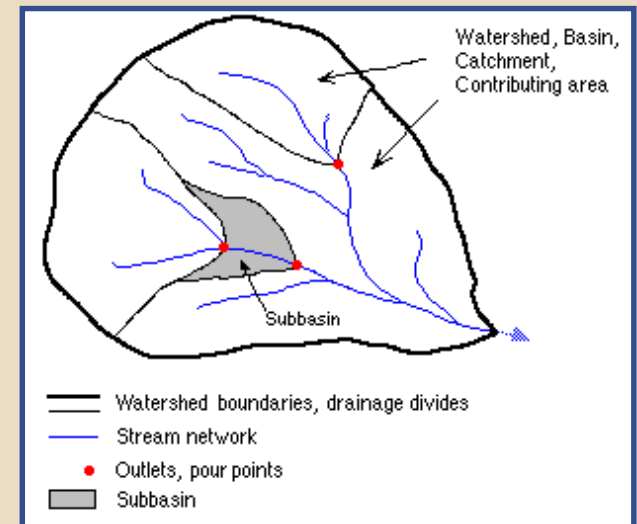
WATERSHED PROTECTION PLANS

- Approximately 46 plans
- Sponsored by:
 - TCEQ
 - Texas State Soil Water Conservation Board (TSSWCB)
 - Third-parties



STAKEHOLDER INVOLVEMENT IN WATERSHED PROTECTION PLANS

- Collaborative effort
 - Citizens
 - Local governments and authorities
 - Community groups
- Watershed protection plans are **voluntary**
- Local development of plan to fix water quality problems or concerns
- Funded using federal and state grants



PARTICIPATION TO ADDRESS ISSUES

- Direct participation in restoration and other management projects
- Restoration Activities
 - Total Maximum Daily Load
 - Watershed Protection Plan



PUBLIC PARTICIPATION TO PROVIDE INPUT

- Participation by staying informed, and providing information and input
 - Steering Committees
 - Clean Rivers Program
 - Advisory Groups
 - Surface Water Quality Standards
 - Nutrient Criteria Development
 - Assessment
 - Public Hearings
 - Texas Surface Water Quality Standards
 - Public Comment
 - Texas Surface Water Quality Standards
 - Texas Integrated Report



QUESTIONS?

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