



# **PRESERVING AND IMPROVING WATER QUALITY**



## **Surface Water Quality Standards, Management, and Restoration**

GI-351a (Rev. 12/24) [www.tceq.texas.gov/publications/](http://www.tceq.texas.gov/publications/)

# Sources of Pollution

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Point source pollution can be traced to a specific location, such as a wastewater treatment facility or regulated industrial operation.

Nonpoint source pollution comes from many locations, including lawns, construction sites, roadways, or farms, and is carried primarily by rainfall runoff.

Most waterways can be affected by both point and nonpoint sources of pollution. For example, bacteria in a river can originate from point sources such as inadequately treated sewage, or from nonpoint sources such as pet waste or aquatic birds.



## Permits

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TCEQ issues permits that control discharges of wastewater into the surface waters of the state. Many types of discharges are regulated, such as the effluent from industrial facilities, domestic wastewater from city treatment plants, discharges from certain agricultural operations, and the stormwater that runs off from urban areas.

# Water Quality Management Cycle



The **water quality management**<sup>1</sup> cycle describes the process of continuously identifying water quality issues, establishing statewide and local priorities, developing community-based solutions, and collaborating with stakeholders to implement those solutions. Because environmental planning and implementation are not one-time activities, the water quality management cycle has five phases that are repeated regularly. This repeating cycle reflects the dynamic nature of watershed management.

<sup>1</sup> [www.tceq.texas.gov/waterquality](http://www.tceq.texas.gov/waterquality)



# Water Quality Standards

Water quality standards define the goals for a body of water and are the foundation for managing surface water quality. They are determined by combining a use and the criteria necessary to attain and maintain that use. To learn more about how use and criteria are paired to set standards, check out the complete **Texas Surface Water Quality Standards**<sup>2</sup> in Title 30 of the Texas Administrative Code, Chapter 307.

## Planning and Program Management

Every two years, an assessment of the state's surface waters is completed. TCEQ, partner agencies, and other stakeholders meet annually to develop or update monitoring plans based on the assessment.



<sup>2</sup> [www.tceq.texas.gov/waterquality/standards](http://www.tceq.texas.gov/waterquality/standards)

## Monitoring and Data Collection

Data on water quality are gathered regularly to monitor the condition of the state's surface waters. The data include chemical, physical, biological, hydrological, hydraulic, and land-use features. The data are collected by TCEQ, regional partner agencies of the Clean Rivers Program, and other collaborating organizations.

## Assessment and Targeting

Every two years, TCEQ publishes and submits to the Environmental Protection Agency the Texas Integrated Report of Surface Water Quality for Clean Water Act Sections 305(b) and 303(d). The 303(d) List identifies waters that do not meet water quality standards.

## Strategy Development

Based on assessment results, strategies are developed to protect or improve water quality. Making successful management decisions depends on understanding the relationships among water quality, water use, and conditions within a watershed.

## Implementing Strategies

Pollution control measures are introduced or updated for both point and nonpoint sources. Progress is evaluated, and plans are either updated or new ones are formulated.



Scan for  
**Title 30 of the Texas  
Administrative Code, Chapter 307.**<sup>3</sup>

<sup>3</sup> [texas-sos.appianportalsgov.com/rules-and-meetings?chapter=307&interface=VIEW\\_C&part=1&title=30](https://texas-sos.appianportalsgov.com/rules-and-meetings?chapter=307&interface=VIEW_C&part=1&title=30)

# Plans to Protect and Restore Water Quality

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Two types of plans are used in Texas for restoring impaired waters: Watershed Protection Plans (WPPs) and Total Maximum Daily Load (TMDL) implementation plans. The ultimate goal of both strategies is the attainment of the stated water quality standard.

TMDL implementation plans generally include both regulatory and nonregulatory measures, while WPPs use solely nonregulatory measures. Both plans outline a set of activities expected to restore water quality, along with a schedule for implementing them.

## Stakeholder Participation

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Stakeholders are involved in each phase of the water quality management cycle through activities such as citizen science data collection, cleanup events, and participation in steering committees. We believe that the best decisions are made by local communities, and encourage the public to join us in protecting water quality across the state.



# Texas Clean Rivers Program

The Texas Clean Rivers Program (CRP) plays a vital role in setting regional priorities for protecting and improving the state's surface waters. TCEQ meets with CRP partners yearly to integrate monitoring needs into a coordinated schedule for the entire state. CRP also engages stakeholders through annual meetings and public outreach activities.







Scan for the full publication,  
**Preserving and Improving  
Water Quality (GI-351).**<sup>4</sup>

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<sup>4</sup> [www.tceq.texas.gov/publications/gi/gi-351](http://www.tceq.texas.gov/publications/gi/gi-351)

