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# Introduction

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## Texas River Basins



- 1 - Canadian River Basin
- 2 - Red River Basin
- 3 - Sulphur River Basin
- 4 - Cypress Creek Basin
- 5 - Sabine River Basin
- 6 - Neches River Basin
- 7 - Neches–Trinity Coastal Basin
- 8 - Trinity River Basin
- 9 - Trinity–San Jacinto Coastal Basin
- 10 - San Jacinto River Basin
- 11 - San Jacinto–Brazos Coastal Basin
- 12 - Brazos River Basin

- 13 - Brazos–Colorado Coastal Basin
- 14 - Colorado River Basin
- 15 - Colorado–Lavaca Coastal Basin
- 16 - Lavaca River Basin
- 17 - Lavaca–Guadalupe Coastal Basin
- 18 - Guadalupe River Basin
- 19 - San Antonio River Basin
- 20 - San Antonio–Nueces Coastal Basin
- 21 - Nueces River Basin
- 22 - Nueces–Rio Grande Coastal Basin
- 23 - Rio Grande River Basin

# Introduction

The State of Texas Water Quality Inventory is the primary mechanism for informing the public about general water quality conditions within the state. This document:

- identifies whether water bodies are attaining designated beneficial uses and meeting water quality criteria and screening levels;
- identifies widespread water quality problems of statewide significance; and
- describes various programs the TNRCC has implemented to restore and protect waters.

The 2000 State of Texas Water Quality Inventory, the fifteenth in a series since 1974, satisfies reporting requirements in Section 305(b) of the CWA, formally known as the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500). Section 305(b) requires that states and other jurisdictions to survey the health of their surface waters every two years and submit their water quality conditions to the EPA. Section 305(b) requires the EPA to summarize the reports submitted by the states and other jurisdictions into a National Water Quality Inventory Report to the U.S. Congress on a biennial schedule. Most of the survey information in the 2000 Texas 305(b) report is based on water quality information collected and evaluated during a five-year period from 1994 to 1999.

General water quality described in 2000 Texas 305(b) report represents status, or a “snapshot” of conditions at the time of the assessment. This is because of the short assessment duration (five years) and the fact that survey methods, criteria and screening levels, the number water bodies included, and portions of water bodies assessed are often modified or change from one reporting period to the next. Changes in survey methods and criteria are made to reflect EPA guidance for preparation of the report and are necessary to improve overall confidence in the assessment (EPA, 1997). Shifts in monitoring strategies, due to revised water quality standards or other management programs, may increase or decrease the number and portions of water bodies evaluated statewide for each reporting period. For these reasons, the 305(b) report should only be used to indicate water quality status in the year the assessment is made and is not recommended by the TNRCC for comparison of change or “trends” between reporting periods.

The last statewide assessment was conducted by the TNRCC in 1996. The 1998 305(b) report included only an abbreviated assessment, covering waters from the Trinity River basin westward to and including the San Jacinto River basin. Substantial changes were made to the assessment

guidance for the 2000 report that were not used in 1996. These changes were made to improve the accuracy of the assessment. The major changes that were made to the assessment guidance in 2000 include the following.

- A general use category was established in the assessment. Support of the general uses is determined by evaluation of surface water temperature, pH, and dissolved mineral (chloride, sulfate, and total dissolved solids) data against criteria specifically assigned to classified segments in the TSWQS. Unclassified water bodies are not assessed for general use support. Stream and river miles, reservoir acres, and estuary and ocean square miles that are assessed as supporting, partially supporting, or not supporting the general use category are aggregated into the computation of overall use support in 2000. In 1996, water temperature, pH, and dissolved mineral data were assessed as criteria exceedances but were not included in use support mileage or area aggregations.
- The oyster waters use was assessed by using TDH *Classification of Shellfish Harvesting Area Maps* in 2000. The maps reflect general trends in frequent fecal coliform monitoring data collected by the TDH. In 1996, actual fecal coliform data in the TNRCC database were assessed against oyster water criteria in the TSWQS.
- Targeted monitoring of unclassified streams and rivers, reservoirs and lakes, and estuaries began in 1996 by the TNRCC and CRP in order to improve knowledge of smaller water bodies and improve comprehensive monitoring coverages. For the 2000 report, unclassified water bodies are assessed using general criteria in the TSWQS for aquatic life use (dissolved oxygen, toxic substances in water, ambient water and sediment toxicity test results) and contact recreation use (fecal coliform). Use support information for miles, acres, and square miles assessed are included in statewide aggregations of overall use, aquatic life use, and contact recreation use. Unclassified water bodies are a significant new class of water bodies added to the assessment since 1996.
- The minimum number of samples required for assessment of dissolved oxygen (aquatic life use), water temperature, pH, and dissolved minerals (general uses), and fecal coliform (contact recreation) was increased from two to nine between 1996 and 2000. Required toxic substances in water samples (aquatic life and human health) increased from two to five.
- In 2000, assessment of ambient water and sediment toxicity test results, 24-hour dissolved oxygen concentrations, and biological data (benthic macroinvertebrate and fish community assessments)

were added as indicators to provide assessment of the aquatic life use. Similarly in 2000, evaluation of toxic substances in water data were compared to human health criteria in the TSWQS to provide an additional assessment indicator of fish consumption use support. In 1996, none of the mentioned indicators were used in the assessment.

Major changes to the assessment guidance result in significant differences between use support information (reported in miles, acres, square miles, or as a percentage of assessed miles or area) that is aggregated statewide in the Inventory for the 1996 and 2000 reporting periods. Apparent improvement or declines in the use support information may be due to changes made in the assessment methodology and not to actual changes in water quality.

The TNRCC recognizes that statewide initiatives alone cannot clean up our waters. Water quality protection and restoration must often happen at the local watershed level, in conjunction with state and federal activities. Similarly, this document can not provide the detailed information needed to manage water quality at all levels. This document will be used together with previous Texas 305(b) reports, the Texas 303(d) list of impaired waters, the TSWQS, CRP basin reports, watershed management plans, and other local documents to develop integrated water quality management options.

