

Executive Summary

2008 Texas Water Quality Inventory and 303(d) List (March 19, 2008)

Background

The Texas Commission on Environmental Quality (TCEQ) in keeping with its mission to protect the state's natural resources, regularly monitors the condition of the state's surface waters, and assesses water quality. The *Texas Water Quality Inventory and 303(d) List*, a statewide report on the status of state waters, is prepared and submitted to the U.S. Environmental Protection Agency (EPA) every two years. The report is also published on the TCEQ Web site.

The assessment describes the condition of all surface water bodies of the state that were evaluated for the given assessment period. The TCEQ uses data collected during the most recent seven-year period in making its assessment. The data are gathered by many different organizations that all operate according to approved quality control guidelines and sample collection procedures. The quality of waters described represents a snapshot of conditions during the limited time period considered in the assessment. Water quality is dynamic and constantly changing.

Requirements for the Inventory and List are codified in the federal Clean Water Act, Sections 305(b) and 303(d). Further requirements are set out in state law in Title 30 of the Texas Administrative Code (30 TAC), and in rules and guidance established by the TCEQ.

Guidance for developing the assessment, which includes a description of the 303(d) process, is based on a set of methods that apply the surface water quality standards, or goals for water quality. These methods are developed by the TCEQ with the advice of a diverse group of stakeholders, and are detailed in the *2008 Guidance for Assessing and Reporting Surface Water Quality in Texas*. The 303(d) List is an important management tool produced as part of the assessment. It identifies waters for which the existing preventive measures—such as permits that limit discharges of wastewater and the technology used by the dischargers—are not sufficient to achieve water quality standards.

TCEQ publishes and accepts public comment on a draft of the 303(d) List. The Commission directs staff to submit the list to EPA. EPA reviews and approves the list.

Focus for the 2008 Assessment

TCEQ has prepared a focused assessment in 2008 - assessing all 374 classified water bodies with adequate data and those unclassified water bodies where there was pending regulatory reason or need to initiate or revise planning activities, a TMDL, or watershed protection plan. TCEQ relied on cooperators, such as local, state, or federal agencies, and water program staff who identified 53 additional water bodies, other than the classified segments, for this assessment.

The period of record for the 2008 assessment is the most recent seven years of data for parameters with adequate datasets, and up to ten years if needed to attain a minimum sample number for assessment.

Categories Indicate Water Quality Status

The Inventory and List assigns each assessed water body to one of five categories to provide information to the public, EPA, and internal agency programs about water quality status and management activities (see table below for a description of categories). The categories indicate the status of the water body, and how the state will approach identified water quality problems.

Water bodies in Category 1 and 2 are meeting their uses, and simply require routine monitoring and preventive action. Higher category numbers correspond to higher levels of effort required to manage water quality. For example, water bodies in Category 5 constitute the 303(d) List, and require remedial action by the state to restore water quality. For water bodies in Category 5a, the state must develop a scientific model called a *total maximum daily load* (TMDL) and a plan to implement it. Further, these categories are applied to each combination of designated use and criteria (for a parameter or pollutant) for determining support. The combination of the use with the pollutant or condition of concern is called an *impairment*.

Impairments Assigned to Each Assessment Category in the 2008 Water Quality Inventory

Category	Definition
1	All standards are attained; no evidence that nonattainment of any standard will occur in the near future.
2	Some standards are attained; no evidence that nonattainment of any standard will occur in the near future; and insufficient or no data and information are available to determine if the remaining standards are attained.
3	Insufficient or no data and information to determine if any standard is attained.
4	Standard is not attained or nonattainment is predicted in the near future due to one or more parameters, but no TMDLs are required. <ol style="list-style-type: none"> All TMDLs have been completed and approved by EPA (53 impairments in 2008). Other control requirements are reasonably expected to result in the attainment of all standards (9). Nonattainment of the standard for one or more parameters is shown to be caused by pollution, not by pollutants and that the water quality conditions cannot be changed by the allocation and control of pollutants through the TMDL process (7).
5	Standard is not attained or nonattainment is threatened in the near future for one or more parameters. <ol style="list-style-type: none"> TMDLs are underway, scheduled, or will be scheduled for one or more parameters (183 impairments in 2008). A review of the standards for one or more parameters will be conducted before TMDLs are scheduled (54). Additional data or information will be collected for one or more parameters before TMDLs are scheduled (279).

303(d) Parameters and Uses Impaired

Impairment Parameters by Type	Media	2006 Number of Impairments	2008 Number of Impairments	Use
Bacteria	In water	291	274	Recreation
	In shellfish	21	21	Oyster Waters
Dissolved Oxygen		96	84	Aquatic Life
Toxicity	In ambient water	5	5	Aquatic Life
	In ambient sediment	6	6	
Organics	In water	0	0	Fish Consumption, Aquatic Life
	In fish/shellfish	31	34	
Metals (except Mercury)	In water	4	4	Fish Consumption, Oyster Waters, Aquatic Life
	In fish/shellfish	0	0	
Mercury	In water	1	1	Fish Consumption, Oyster Waters, Aquatic Life
	In fish/shellfish	15	17	
Dissolved Solids	Chloride	13	16	General
	Sulfate	6	6	
	Total dissolved solids	11	8	
Temperature		0	0	General
pH		13	16	General
Nutrients	Nitrogen	0	0	General, Public Water Supply
Biological	Habitat, macrobenthos community, or fish community	30	24	Aquatic Life
Totals		543	516	

Summary of the Assessment and 2008 303(d) List

For 2008, the TCEQ conducted a targeted water quality assessment, assessing 427 of the 925 water bodies which are typically surveyed and reported.

Because the water bodies assessed in 2008 were primarily the classified segments, large and important resources, water quality conditions are well understood from many years of monitoring. As a result, in 2008, there were fewer new listings, often the result of monitoring on new water bodies, and fewer delistings, often the result of more complete datasets and better understanding of instream conditions. The total number of water bodies and individual impairments on the list has been reduced slightly as illustrated in the table below. More than half of the impairments are for nonsupport of the contact recreation use, caused by elevated

bacteria. About a fourth of the impairments are due to low dissolved oxygen, resulting in unfavorable conditions for aquatic life.

Summary of the Changes to the 303(d) List between 2006 and 2008

Water Bodies or Impairments	2006	2008	Change from 2006
<u>Water Bodies</u> Surveyed	925	925	no change
<u>Water Bodies</u> Targeted	925	427	n/a
<u>Water Bodies</u> On the 303(d) List...TMDL may be required	399	386	3% decrease
<u>Impairments</u> On the List... some water bodies have more than one impairment	543	516	5% decrease
<u>Impairments</u> Added to the List	206	32	84% decrease
<u>Impairments</u> Removed from the List	77	59	23% decrease
<u>Impairments</u> Now in Category 4... TMDL approved or not required	60	69	15% increase

For More Information

The Texas Water Quality Inventory and 303(d) List is compiled and published on the TCEQ Web site page at:

<http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/08twqi/twqi08.html>

The water quality management program and role of the 303(d) List in agency planning is described in the publication “Preserving and Improving Water Quality”, available on the TCEQ Web site at:

http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/gi/gi-351.html