National Water Quality Inventory

2000 Report

Section 305(b) of the Clean Water Act

This report was prepared pursuant to Section 305(b) of the Clean Water Act, which states:

(b)(1) Each State shall prepare and submit to the Administrator by April 1, 1975, and shall bring up to date by April 1, 1976, and biennially thereafter, a report which shall include—

(A) a description of the water quality of all navigable waters in such State during the preceding year, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, correlated with the quality of water required by the objective of this Act (as identified by the Administrator pursuant to criteria published under section 304(a) of this Act) and the water quality described in subparagraph (B) of this paragraph;

(B) an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water;

(C) an analysis of the extent to which the elimination of the discharge of pollutants and a level of water quality which provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities in and on the water, have been or will be achieved by the requirements of this Act, together with recommendations as to additional action necessary to achieve such objectives and for what waters such additional action is necessary;

(D) an estimate of (i) the environmental impact, (ii) the economic and social costs necessary to achieve the objective of this Act in such State, (iii) the economic and social benefits of such achievement; and (iv) an estimate of the date of such achievement; and

(E) a description of the nature and extent of nonpoint sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs.

(2) The Administrator shall transmit such State reports, together with an analysis thereof, to Congress on or before October 1, 1975, and October 1, 1976, and biennially thereafter.

Note that, pursuant to Public Law 104-66, the Federal Reports Elimination and Sunset Act of 1995, this *2000 National Water Quality Inventory* is not considered a Report to Congress.

EPA

United States Environmental Protection Agency
Office of Water
Washington DC 20460
August 2002
EPA-841-R-02-001

Cover photo taken at Cape Hatteras National Seashore, NC, by Jim Crawford

A Message from the Administrator

Christine Todd Whitman

I believe water is the biggest environmental issue we face in the 21st Century in terms of both quality and quantity. In the 30 years since its passage, the Clean Water Act has dramatically increased the number of waterways that once again are safe for fishing and swimming. Nevertheless, as this National Water Quality Inventory report points out, many of the nation's waters still do not meet water quality goals. In particular, polluted runoff from farms and urban areas continues to impair large numbers of our nation's rivers, lakes, estuaries, and coastal waters. Fish and shellfish consumption advisories and swimming restrictions continue to be reported. The U.S. Environmental Protection Agency and its many partners at the federal, state and local level are working together to finish the business of restoring and protecting our nation's waters for present and future generations. Please join with us in meeting the challenges ahead.

Acknowledgments

This report is based primarily on water quality assessments submitted to the U.S. Environmental Protection Agency by the states, territories, American Indian tribes, the District of Columbia, and interstate commissions of the United States. The EPA wishes to thank the authors of these assessments for the time and effort spent in preparing these reports and reviewing the draft of this national assessment. Additional thanks go to the water quality assessment coordinators from all 10 EPA Regions who work with the states, tribes, and other jurisdictions.

Contractor support was provided by Research Triangle Institute (RTI) under Contract 68-C-01-001. RTI provided data analysis, technical assistance, editorial support, design, typesetting, and graphics.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
WATER

Dear Reader,

This 2000 National Water Quality Inventory report is the 13th in a series published since 1975 under Section 305(b) of the Clean Water Act. Section 305(b) requires states to describe the quality of their waters; the U.S. Environmental Protection Agency (EPA) must then summarize these assessments and transmit that summary report to Congress. Please note that, pursuant to Public Law 104-66 (the Federal Reports Elimination and Sunset Act of 1995), this edition of the Inventory is not considered a Report to Congress.

In their 2000 reports, states, tribes and other jurisdictions assessed 19% of the nation's stream miles; 43% of its lake, pond, and reservoir acres; and 36% of its estuarine square miles. The states also assessed the quality of their ocean coastline, Great Lakes shoreline, wetlands, and ground water. The information contained in this report applies only to the waters assessed.

The states found that approximately 60% of assessed stream miles, 55% of assessed lake acres, and 50% of assessed estuarine square miles fully supported the water quality standards set for them, although significant proportions of these waters were threatened and might degrade in the future. The remaining assessed waters were impaired to some degree. Leading causes of impairment reported by the states in 2000 include bacteria, siltation, nutrients, and metals (primarily mercury). Sources of impairment include agricultural activities, hydrologic modifications (such as channelization, dredging, or flow regulation), municipal sources, and urban runoff/storm sewers. The percent of assessed stream and estuarine waters found to be impaired overall has increased somewhat from the last report in 1998, although that difference is more likely due to changes in monitoring approaches than actual water quality degradation.

In 2000, metals (primarily mercury) were the leading cause of impairment in the nation's estuaries (up from third leading cause in 1998); in lakes, metals were again the second leading cause of impairment. Increasingly, states are moving toward more comprehensive examination of fish tissue and are issuing statewide advisories that restrict the consumption of selected fish species, especially for vulnerable segments of the population. Mercury, which originates from air transport from power generating facilities and incinerators, mining, natural rock weathering, and other sources, was cited in approximately 2,240 of the 2,800 fish consumption advisories reported in 2000.

In the past, data collection and interpretation efforts under the Clean Water Act were not always coordinated. The EPA has been working with its partners to streamline and combine Section 305(b) water quality reporting requirements with those of Section 303(d) (which requires states to identify impaired waters and develop allocations of the maximum amount of a pollutant each impaired water can receive and still meet water quality standards). EPA has also developed guidance providing details on water monitoring designs, data quality and data quantity needs, and data interpretation methods under this combined approach. You can learn more about these monitoring initiatives by visiting our website at www.epa.gov/owow/monitoring.

Sincerely,

Robert H. Wayland III
Director, Office of Wetlands, Oceans and Watersheds

Contents

Page

Chapter 8

Chapter 9

Part II: Individual Section 305(b) Report Summaries and Recommendations

Chapter 10

Chapter 11

Chapter 12

Appendices

Available only on the Internet at http://www.epa.gov/305b

Figures

Tables

For more information about the National Water Quality Inventory Report, contact:

U.S. Environmental Protection Agency
Assessment and Watershed Protection Division (4503T)
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
(202) 260-1155

This document is available on the Internet at: http://www.epa.gov/305b or from the National Service Center for Environmental Publications at 1-800-490-9198.

Executive Summary

The Quality of Our Nation's Water

This National Water Quality Inventory, prepared under Section 305(b) of the Clean Water Act, summarizes water quality reports submitted by all 50 states, the District of Columbia, and 5 territories; 4 interstate commissions; and 5 Indian tribes in 2000.

How Do States and Other Jurisdictions Assess Water Quality?

Water quality assessment begins with water quality standards. States and other jurisdictions adopt water quality standards for their waters. EPA must then approve these standards before they become effective under the Clean Water Act.

Water quality standards have three elements: the designated uses assigned to waters (e.g., swimming, the protection and propagation of aquatic life, drinking); the criteria or thresholds that protect fish and humans from exposure to levels of pollution that may cause adverse effects; and the antidegradation policy, intended to prevent waters currently in degraded condition from further deteriorating, and minimizing deterioration of high quality waters.

After setting standards, states assess their waters to determine the degree to which these standards are being met. To do so, states may take biological, chemical, and physical measures of their waters; sample fish tissue and sediments; and evaluate land use data, predictive models, and surveys.

John Theilgard, Jonathon's Pond, Fleetville, PA

How Many of Our Waters Were Assessed for 2000?

This report does not describe the health of all waters of the United States because states have not yet achieved comprehensive assessment of all their waters. For this biennial report, states assessed 19% of the nation's total river and stream miles; 43% of its lake, pond, and reservoir acres; 36% of its estuarine square miles; and 92% of Great Lakes shoreline miles.

What Is the Status of Our Assessed Waters?

States focused the majority of their assessment activities on rivers and streams; lakes, ponds, and reservoirs; estuaries; and Great Lakes shoreline. States reported that 61% of assessed river and stream miles, 54% of assessed lake acres, 49% of assessed estuarine square miles, and 22% of assessed Great Lakes shoreline miles fully support the water quality standards evaluated. In the remaining assessed waters, one or more designated uses are impaired.

States assessed very small amounts of ocean and marine resources, wetlands, and ground water. This is due in part to a lack of assessment tools for these resources and, in the case of wetlands, lack of water quality standards. EPA and states are working to improve characterization of these resources.

What Do States Identify as the Leading Causes and Sources Affecting Impaired Waters?

For the subset of assessed waters identified as impaired, this report presents the leading pollutants and sources of pollution reported by states, territories, commissions, and tribes. Across all waterbody types, states and other jurisdictions reported that:

- Siltation, nutrients, bacteria, metals (primarily mercury), and oxygen-depleting substances are among the top causes of impairment.
- Pollution from urban and agricultural land that is transported by precipitation and runoff (called nonpoint source or NPS pollution) is the leading source of impairment.

It is important to understand the difficulties in identifying causes and, in particular, sources of pollution in impaired waters. For many waters, states and other jurisdictions classify the causes and sources as unknown. EPA and states are working to develop methodologies for both determining the causes and sources of impairment and describing the level of confidence in the classification.

How Does Impaired Water Quality Impact Public Health and Aquatic Life?

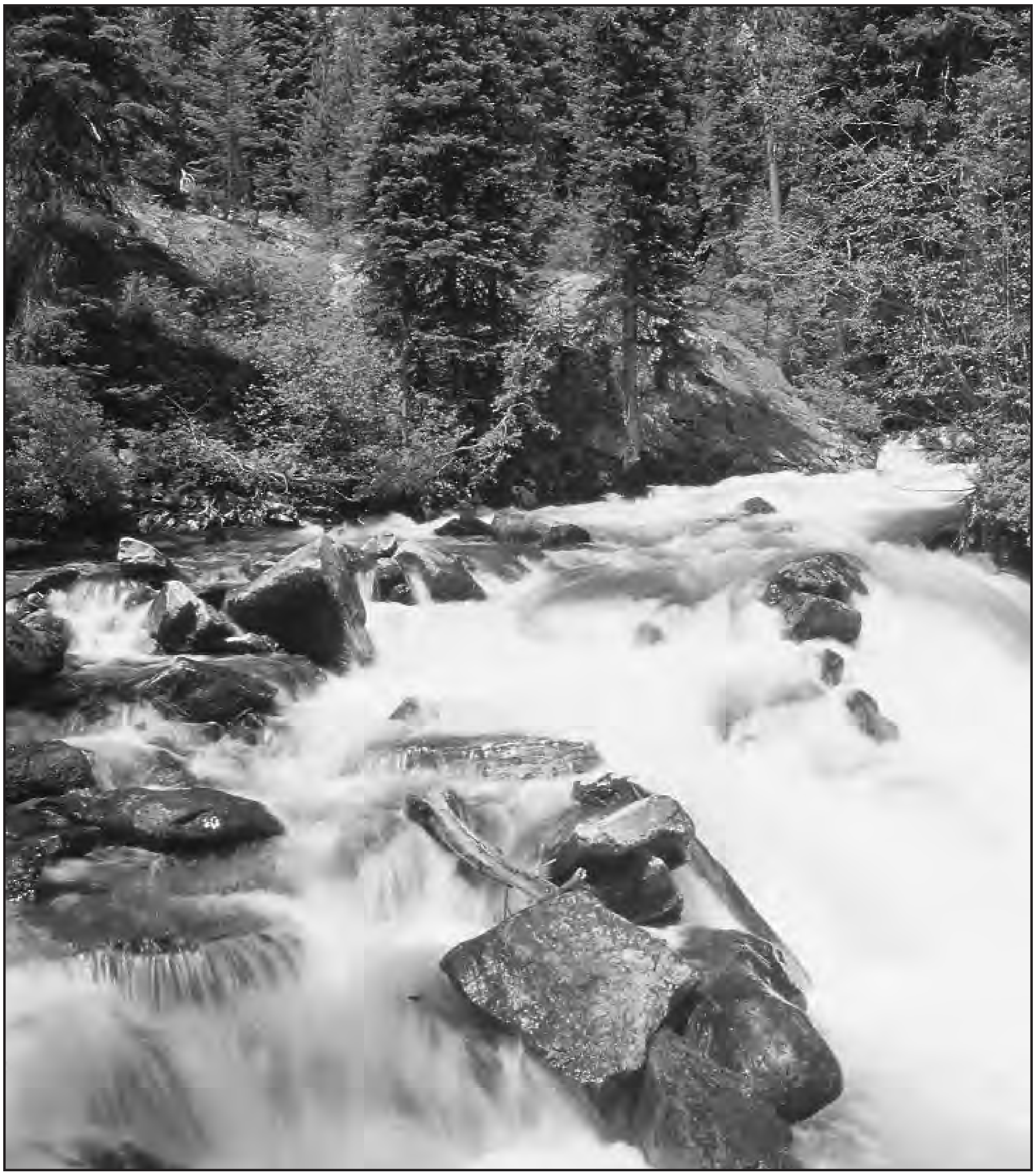
Water pollution threatens public health both directly through the consumption of contaminated food or drinking water, and indirectly through skin exposure to contaminants present in recreational or bathing waters. Contaminants that threaten human health include toxic chemicals and waterborne disease-causing pathogens such as viruses, bacteria, and protozoans.

Some of the problems caused by toxic and pathogen contamination include fish, wildlife and shellfish consumption advisories, drinking water closures, and recreational (e.g., swimming) restrictions. Reporting on these impacts in the state Section 305(b) reports is often incomplete because of jurisdictional and technical monitoring concerns. EPA's National Listing of Fish and Wildlife Advisories (NLFWA) database listed 2,838 advisories in effect in 2000; mercury, polychlorinated biphenyls (PCBs), chlordane, dioxins, and dichlorodiphenyltrichloroethane (DDT) (with its byproducts) were responsible for 99% of all the fish consumption advisories in effect. Ten of 28 coastal states reported prohibited, restricted, or conditionally approved shellfish harvesting in 1,630 square miles of estuarine waters. Thirty-nine states, tribes, or territories submitted drinking water use data in their reports, and reported that the majority of waterbodies assessed—86% of river and stream miles and 84% of lake and reservoir acres—are considered to be supporting their drinking water use. Thirteen states and tribes identified 233 sites where contact recreation was restricted at least once during the reporting cycle.

What Do the States and Tribes Recommend to Improve Water Quality?

A considerable variety of challenges and recommendations were discussed in the 2000 reports. Many pressing problems seem to have root causes in resource constraints, lack of adequate monitoring data, or lack of coordination among multiple agencies responsible for the same issue areas. The states and other governing entities recommended that Congress address financial/resource problems so that, at the minimum, basic and priority activities can be implemented. The reports also indicated the need for proper coordination and data integration among different programs to improve efficiency and fully use scarce resources. The states recommended flexibility in developing programs tailored to individual conditions and needs, especially for issues that can vary widely between regions, such as ground water and NPS pollution management. And finally, the importance of wider public involvement was a common theme, especially for dealing with complex problems like NPS pollution, where control options are difficult or expensive.

Jim Crawford, Eno River State Park, Durham, NC



Jeff Cole, Cascade Creek, Grand Teton National Park, WY

Introduction

Section 305(b) of the Clean Water Act requires states and other jurisdictions to assess the health of their waters and the extent to which water quality standards are being met. States are to submit reports describing water quality conditions to the U.S. Environmental Protection Agency (EPA) every 2 years. This report, the thirteenth in a series published since 1975, summarizes state water quality reports submitted in 2000. It is important to note that this report is no longer a Report to Congress, pursuant to Public Law 104-66, the Federal Reports Elimination and Sunset Act of 1995.

This chapter introduces the concept of water quality standards and describes the monitoring data and approaches used by the states to assess their rivers, lakes, estuaries, wetlands, and coastal waters.

Water Quality Standards

In 1972, Congress adopted the Clean Water Act (CWA), which establishes a framework for achieving its national objective "…to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Congress decreed that, where attainable, water quality "…provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." These goals are referred to as the "fishable and swimmable" goals of the Act.

The CWA called for states to develop water quality standards to guide the restoration and protection of all waters of the United States. Water quality standards became the centerpiece around which most surface water quality programs revolve. For instance, water quality standards are the benchmark against which monitoring data are compared to assess the health of waters and to list impaired waters under CWA Section 303(d). They are the endpoint used to calculate water quality-based discharge limits in permits issued under the National Pollutant Discharge Elimination System (NPDES).

The CWA allows states, tribes, and other jurisdictions to set their own water quality standards but requires that, at a minimum, they include the fishable and swimmable goals of the Act, wherever attainable. States must submit their standards to EPA for approval.

Water quality standards have three elements: designated uses, criteria developed to protect each use, and antidegradation policy.

The Clean Water Act of 1972

. . . it is the national goal that, wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water . . .

- **State designated uses** are the beneficial uses that water quality should support. Where attainable, all waters should support recreation (such as swimming and surfing), aquatic life, and fish consumption. Additional important uses include drinking water supply, agriculture, industry, and navigation. Waste transport or disposal is not an acceptable designated use. States, tribes, and other jurisdictions may designate an individual waterbody for multiple uses. Each designated use has a unique set of water quality criteria that must be met for the use to be realized.

- **State water quality criteria** come in two forms, numeric and narrative. Numeric criteria establish thresholds for the physical conditions, chemical concentrations, and biological attributes required to support a beneficial use. Narrative criteria describe, rather than quantify, conditions that must be maintained to support a designated use. For example, a narrative criterion might be "Waters must be free of substances that are toxic to humans, aquatic life, and wildlife."

- **Antidegradation policies** are narrative statements intended to protect existing uses and prevent waterbodies from deteriorating even if their water quality is better than the fishable and swimmable goals of the Act.

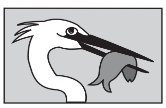
Designated Uses

The states, participating tribes, and other jurisdictions measure attainment of CWA goals by comparing

Water quality standards consist of

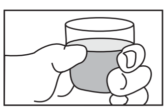
- *State designated uses*
- *Numeric and narrative criteria for biological, chemical, and physical parameters*
- *Antidegradation policies*

monitoring data to the narrative and numeric criteria they have adopted to ensure support of each use designated for a specific waterbody. These uses include:



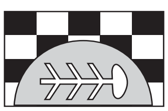
Aquatic Life Support

The waterbody provides suitable habitat for protection and propagation of desirable fish, shellfish, and other aquatic organisms.



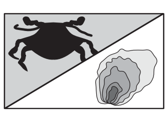
Drinking Water Supply

The waterbody can supply safe drinking water with conventional treatment.



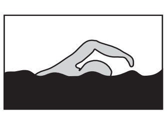
Fish Consumption

The waterbody supports fish free from contamination that could pose a significant human health risk to consumers.



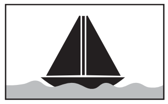
Shellfish Harvesting

The waterbody supports a population of shellfish free from toxicants and pathogens that could pose a significant human health risk to consumers.



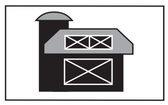
Primary Contact Recreation – Swimming

People can swim in the waterbody without risk of adverse human health effects (such as catching waterborne diseases from raw sewage contamination).



Secondary Contact Recreation

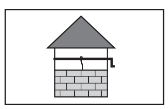
People can perform activities on the water (such as boating) without risk of adverse human health effects from incidental ingestion or contact with the water.



Agriculture

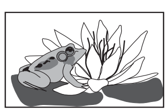
The water quality is suitable for irrigating fields or watering livestock.

States, tribes, and other jurisdictions may also define their own individual uses to address special concerns. For example, many tribes and states designate their waters for the following additional uses:



Ground Water Recharge

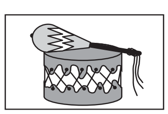
The surface waterbody plays a significant role in replenishing ground water, and surface water supply and quality are adequate to protect existing or potential uses of ground water.



Wildlife Habitat

Water quality supports the waterbody's role in providing habitat and resources for land-based wildlife as well as aquatic life.

Tribes may designate their waters for special cultural and ceremonial uses.



Culture

Water quality supports the waterbody's role in tribal culture and preserves the waterbody's religious, ceremonial, or subsistence significance.

In their 305(b) reports, states are asked to identify the type of assessment—monitored or evaluated—they used to make each use support determination. **Monitored** assessments are based on recent monitoring data collected during the past 5 years. These data include ambient water chemistry, biological assessments, fish tissue contaminant levels, and sediment chemistry. If monitoring data are not available, states may use qualitative information such as land use data, fish and game surveys, and predictive model results. **Evaluated** assessments are based on qualitative information or monitored information more than 5 years old.

Types of Monitoring Data

Section 305(b) assessments are normally based upon five broad types of monitoring data: biological integrity, chemical, physical, habitat, and toxicity data. Each type of data yields an assessment that must then be integrated with other data types for an overall assessment. Depending on the associated designated use, one data type maybe more informative than others for making the assessment.

- **Biological integrity data** are objective measurements of aquatic biological communities, usually aquatic insects, fish, or algae, used to evaluate the condition of an aquatic ecosystem with respect to the presence of human impacts. Biological assessment data are best used for making aquatic life use support decisions.

- **Chemical data** include measurements of key chemical constituents in water, sediments, and fish tissue. Examples of these measurements include nutrients such as nitrogen and phosphorus, metals, oils, and pesticides. Monitoring for specific chemicals helps states identify the specific pollutants causing impairment and helps trace the source of the impairment.

■ **Physical data** include characteristics of water that such as temperature, flow, dissolved oxygen, suspended solids, turbidity, conductivity, and pH. Physical attributes are useful screening indicators of potential problems, often because they can moderate or exaggerate the adverse effect of chemicals.

■ **Habitat assessments** include descriptions of sites and surrounding land uses, status of riparian and aquatic vegetation, and measurement of features such as stream width, depth, flow, and substrate. They are used to supplement and interpret other types of data.

■ **Toxicity testing** is used to determine whether aquatic life use is being attained. Toxicity data are generated by exposing selected organisms such as fathead minnows, daphnia ("water fleas"), or algae to known dilutions of wastewater or ambient water. These tests can help determine whether poor biological integrity is related to toxins or degraded habitat.

Who Collects the Data?

Hundreds of organizations around the country conduct some type of water quality monitoring. These include federal agencies such as the EPA and the U.S. Geological Survey, state water quality agencies, interstate and local agencies, tribes, research organizations such as universities, industry, and citizen volunteer programs. They may collect water quality data for their own purposes or to share with government decision makers. States evaluate and use much of these data when preparing their water quality reports.

The states, territories, and tribes maintain monitoring programs to support several objectives, including assessing whether water is safe for drinking, swimming, and fishing. States also use monitoring data to review and revise water quality standards, identify impaired and threatened waters under CWA Section 303(d), develop pollutant-specific total maximum daily loads or TMDLs (calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources), determine the effectiveness of control programs, measure progress toward clean water, and respond to citizen complaints or events such as spills and fish kills.

New Developments

In the past, data collection and interpretation efforts under the Clean Water Act (CWA) were not always coordinated. However, EPA is now providing states, territories, and tribes with guidance which recommends they submit a 2002 *Integrated Water Quality Monitoring and Assessment Report* to satisfy CWA requirements for both Section 305(b) water quality reports and Section 303(d) lists. The guidance (published November 19, 2001) is available at *http://www.epa.gov/owow/tmdl/2002wqma.html*. In addition, EPA and its partners are developing new guidance, called the Consolidated Assessment and Listing Methodology (CALM), to provide details on water quality monitoring strategies and designs, data quality and data quantity needs, and data interpretation methods under this streamlined, integrated approach. For more information on CALM, visit *http://www.epa.gov/owow/monitoring/calm.html*.

Various data and information management systems handle the enormous amount of water quality data generated in the United States. These systems have been updated and are generally Web-accessible, allowing the user to retrieve actual raw data or assessment findings for specific waterbodies. Three of these systems particularly relevant to the 305(b) reporting process are EPA's STOrage and RETrieval system (STORET), the Assessment Database (ADB), and WATERS.

STORET is the EPA's central repository of raw monitoring data. STORET includes both a Legacy Data Center for historical data, and recent biological, chemical, and physical data. It requires a specific set of qualifiers—including such information as when and where a given sample was taken, who took it, why it was taken, what methods were used to do so, etc.—to accompany each sampling result. Data in STORET are available on the Web. For more information, visit *http://www.epa.gov/storet/*.

The Assessment Database (ADB) is a relational system for tracking water quality assessment results—whether or not individual water segments meet uses, and what pollutants and sources impair them. The ADB is widely used by the states for 305(b) reporting. Version 2.0 of the ADB, due to be released in 2002, has a new integrated approach that consolidates surface water assessments under Sections 305(b) and 303(d) of the Clean Water Act.

Further information on water quality results, including mapping capabilities, can be obtained from WATERS, a tool that unites information for specific waterbodies (such as their designated uses and impairment status) previously available only on individual state agency homepages and at several EPA Web sites. State and federal water quality managers, as well as interested citizens, can use WATERS to quickly identify the status of individual waterbodies of interest to them. Visit WATERS at *http://www.epa.gov/waters/*.

Part I

Water Quality Assessments

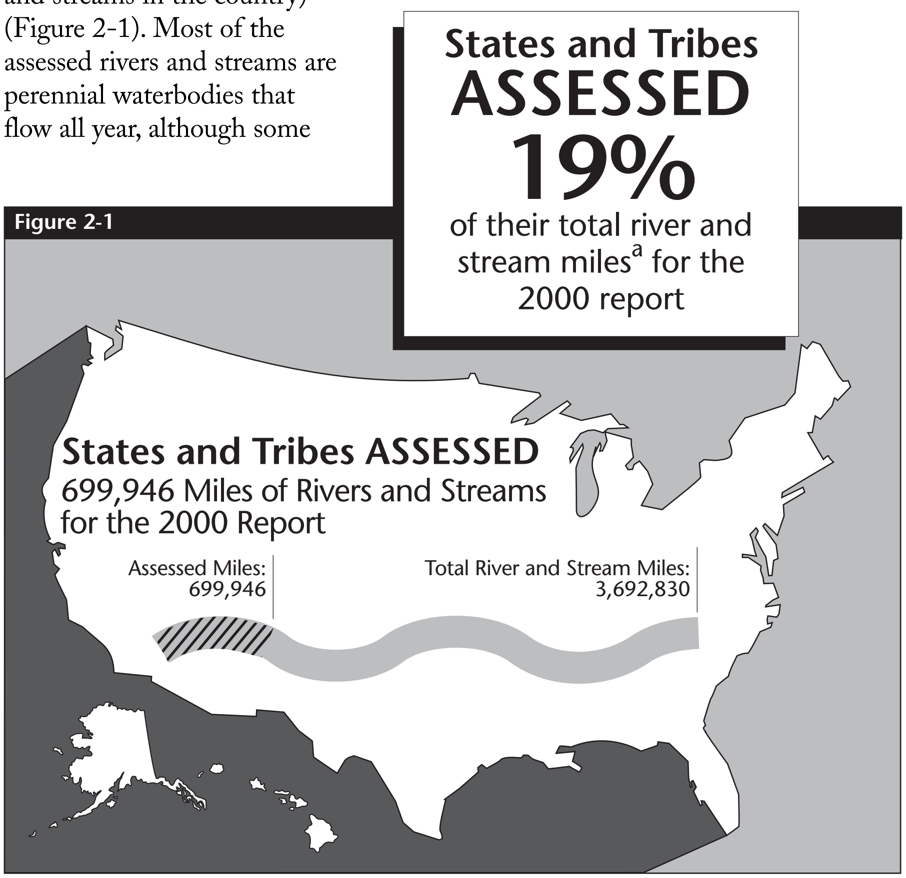
Linda Cooper, Eno River State Park, Durham, NC

Rivers and Streams

All 50 states, 2 interstate river commissions, American Samoa, Guam, Puerto Rico, the District of Columbia (collectively referred to as states in the rest of this chapter), and 3 American Indian tribes rated river water quality in their 2000 Section 305(b) reports (see Appendix A, Table A-1, for individual state and tribal information). These states and tribes assessed water quality in 699,946 miles of rivers and streams (19% of the total miles of all rivers and streams in the country) (Figure 2-1). Most of the assessed rivers and streams are perennial waterbodies that flow all year, although some assessments included nonperennial streams that flow only during wet periods.

Altogether, the states and tribes assessed 142,480 fewer river and stream miles in 2000 than in 1998. This 17% decrease is primarily a result of changes in assessment and reporting methods in a few states. The changes for the most part reflect a move toward the use of more reliable monitoring data and a greater reluctance to include qualitative

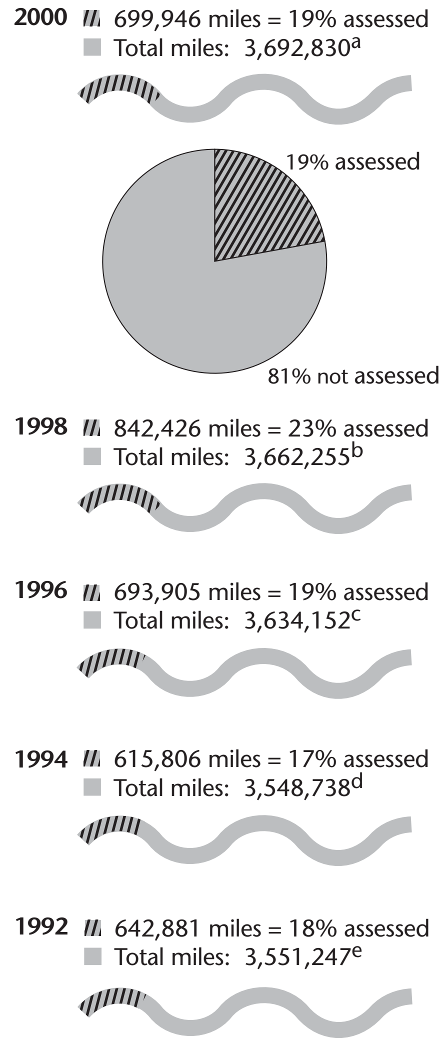
Figure 2-1



This figure compares the total miles of rivers and streams (combination of perennial and intermittent) with the subset that were assessed by states for the 2000 water quality report.

Based on data contained in Appendix A, Table A-1.

River and Stream Miles Assessed by States and Tribes



[a]Source: 2000 state and tribal Section 305(b) reports.
[b]Source: 1998 state and tribal Section 305(b) reports.
[c]Source: 1996 state and tribal Section 305(b) reports.
[d]Source: 1994 state and tribal Section 305(b) reports.
[e]Source: 1992 state and tribal Section 305(b) reports.

information or older data in water quality assessments. For instance, in Wyoming, a new “Credible Data” law prevented the state from submitting over 90,000 miles of river and stream assessments that were based on older, evaluated data. For this reporting cycle, New York reclassified almost 50,000 river and stream miles as “unassessed” because limited reliable monitoring data were available to support assessments made in previous years. In the past, New York had listed all these waters as assessed with good quality unless specific problems were reported. The state is currently revising its monitoring program and plans to revisit these unassessed waters in coming years. Virginia has revised its assessment strategy in a similar way based on EPA guidance, which has led to a decrease of 10,000 assessed miles since 1998. Virginia is placing greater emphasis on highly reliable monitoring data, and is also better able to track the size of monitored waters with the use of an EPA-developed database. All of these cases indicate a shift toward the use of higher quality data to make more accurate water quality assessments.

Some states did see an increase in the number of river and stream miles assessed from 1998 to 2000. For instance, Pennsylvania’s efforts to survey previously unassessed waters resulted in the addition of over 20,000 assessed miles. Other states reported significant increases in assessed river and stream miles because of changes in their monitoring program or assessment process.

In 2000, the states and tribes used recent monitoring data to determine water quality conditions in 46% of their assessed river and stream miles, compared to 43% in 1998 (see Appendix A, Table A-2, for individual state and tribal information). Evaluated assessments, based on qualitative information or monitoring information more than 5 years old, were used for 36% of the assessed river and stream miles for the 2000 reporting cycle. States did not specify whether the remaining 18% of assessed river and stream miles were monitored or evaluated.

The summary information presented in this chapter applies strictly to the portion of the nation’s rivers and streams assessed by the states and tribes. EPA cannot make generalizations about the health of all of our nation’s rivers based on data extracted from the 305(b) reports.

Summary of Use Support

Most states and tribes rate how well a river supports individual uses (such as swimming and aquatic life) and then consolidate individual use ratings into a summary table. This table divides assessed rivers into those miles that are

- **Good** – Fully supporting all of their uses or fully supporting all uses but threatened for one or more uses
- **Impaired** – Partially or not supporting one or more uses
- **Not attainable** – Not able to support one or more uses.

Forty-four states, two tribes, one interstate commission, American Samoa, Guam, Puerto Rico, and the District of Columbia reported summary use support status for rivers and streams in their 2000 Section 305(b) reports (see Appendix A, Table A-2, for individual state and tribal information). Another six states reported individual use support status but did not report summary use support status. In such cases, EPA used aquatic life use support status to represent summary water quality conditions in the state’s rivers and streams.

Altogether, states and tribes reported that 61% of 699,946 assessed river and stream miles fully support all of their uses. Of the assessed waters, 53% fully support designated uses and approximately 8% fully support all uses but are threatened for one or more uses. These threatened waters may need special attention and additional monitoring to prevent further deterioration (Figure 2-2). Some form of pollution or habitat degradation impairs the remaining 39% of the assessed river and stream miles.

It is important to note that 10 states did not include the effects of statewide fish consumption advisories for mercury when calculating their summary use support status in rivers and streams. Connecticut, Indiana, Kentucky, Maine, Massachusetts, New Hampshire, New Jersey, North Carolina, Ohio, and Vermont excluded the impairment associated with statewide mercury advisories in order to convey information that would have been otherwise masked by the fish consumption advisories. New York excluded the effect of a statewide PCB/chlordane/mirex/DDT fish consumption advisory for rivers and streams in its summary data. If these advisories had been included, all of these states’ rivers and streams would have received an impaired rating.

Individual Use Support

Individual use support assessment provides important detail about the nature of water quality problems in our nation’s surface waters. There are six general use categories that EPA uses to summarize the often more detailed uses reported by the states and tribes.

■ **Aquatic life support** – Is water quality good enough to support a healthy, balanced community of aquatic organisms including fish, plants, insects, and algae?

■ **Fish consumption** – Can people safely eat fish caught in the river or stream?

■ **Primary contact recreation** (swimming) – Can people make full body contact with the water without risk to their health?

■ **Secondary contact recreation** – Is there a risk to public health from recreational activities on the water, such as boating, that expose the public to minimal contact with the water?

■ **Drinking water supply** – Can the river or stream provide a safe water supply with standard treatment?

■ **Agricultural uses** – Can the water be used for irrigating fields and watering livestock?

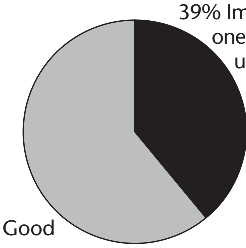
Only four states and one tribe did not report individual use support status of their rivers and streams (see Appendix A, Table A-3, for individual state and tribal information). The reporting states and tribes assessed the status of aquatic life and swimming uses most frequently (see Figure 2-3) and identified more impacts on aquatic life and swimming uses than on the four other individual uses. These states and tribes reported that fair or poor water quality affects aquatic life in 210,790 stream miles (34% of the 616,860 miles assessed for aquatic life support). Fair or poor water quality conditions also impair swimming activities in 88,679 miles (28% of the 313,832 miles assessed for swimming use support).

Assessed Waters

Total rivers and streams = 3,692,830 miles[a]
Total assessed = 699,946 miles

Of the assessed miles:
- 46% were monitored
- 36% were evaluated
- 18% were not specified

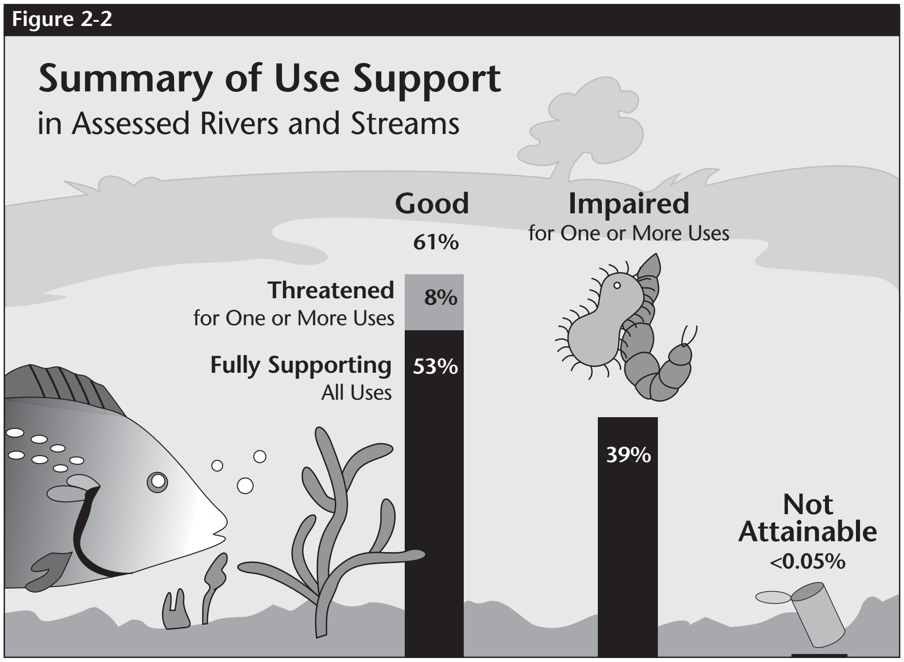
Summary of Assessed Water Quality



[a]Source: 2000 state and tribal Section 305(b) reports.

61% OF ASSESSED river and stream miles have good water quality.

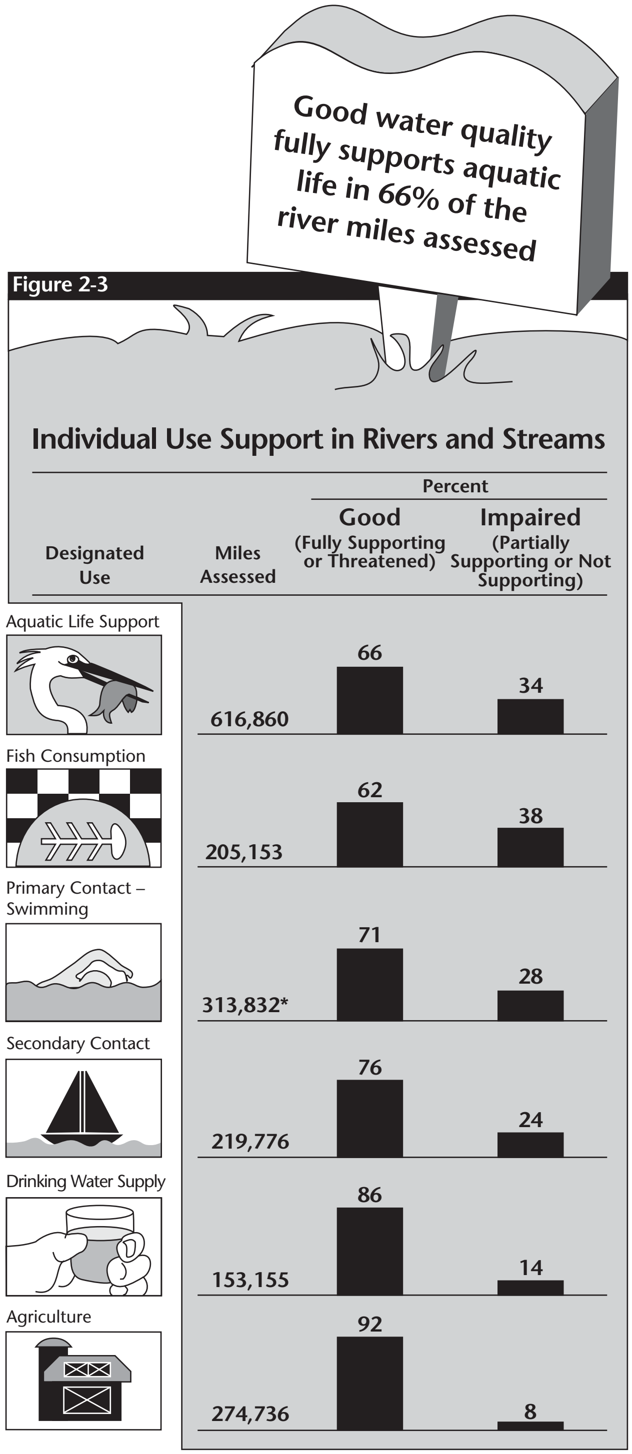
Figure 2-2



This figure presents the status of the assessed miles of rivers and streams. Of the close to 700,000 miles of rivers and streams assessed, 61% fully support their designated uses and 39% are impaired for one or more uses. Eight percent of the assessed waters are fully supporting uses but threatened.

Based on data contained in Appendix A, Table A-2.

Note: Figures may not add up to 100% due to rounding.



This figure presents a tally of the miles of rivers and streams assessed by states for each category of designated use. For each category, the figure summarizes of the proportion of the assessed waters rated according to quality.

*0.5% rated "Not Attainable."

Based on data contained in Appendix A, Table A-3.

Water Quality Problems Identified in Rivers and Streams

When states and tribes rate waters as impaired, they also attempt to identify the causes and sources of impairment. Figures 2-4 and 2-5 identify the pollutants and sources of pollutants that impair the most river and stream miles. It is important to note that information about pollutants and sources is incomplete because the states cannot always identify the pollutant(s) or source of pollutant(s) responsible for every impaired river segment.

Pollutants and Stressors Impacting Rivers and Streams

A total of 55 states and tribes reported the number of river and stream miles impaired by individual pollutants and stressors (see Appendix A, Table A-4, for individual state and tribal information).

The states and tribes report that bacteria (pathogens) pollute 93,431 river and stream miles (13% of the assessed river and stream miles and 35% of the impaired river and stream miles). Bacteria provide evidence of possible fecal contamination that may cause illness in people. States use bacterial indicators to determine if waters are safe for swimming and drinking. Bacteria commonly enter surface waters in inadequately treated sewage, fecal material from wildlife, and in runoff from pastures, feedlots, and urban areas.

The states and tribes report that siltation, comprising tiny soil particles, remains one of the most widespread pollutants affecting assessed rivers and streams. Siltation, which is also referred to as sedimentation, impairs 84,503 river and stream miles (12% of the assessed river and stream miles and 31% of the impaired river and stream miles). Siltation alters aquatic habitat, suffocates fish eggs and bottom-dwelling organisms, and can interfere with drinking water treatment processes and recreational use of a river (see Figure 2-6). Sources of siltation include agriculture, urban runoff, construction, and forestry.

Alteration to river and stream habitats was reported by the states and tribes to cause impairment to 58,807 miles (8% of the assessed river and stream miles and 22% of the impaired river and stream miles). In this case, only habitat alterations that do not affect water flow are considered because states and tribes report stream flow alterations (such as dams and irrigation) under a different category. Habitat alterations that do not directly affect stream flow, such as the removal of woody debris or stream bottom cobblestones, can adversely affect aquatic organisms whose health and abundance depend on specific physical and environmental conditions. (For example, small organisms such as young fish use submerged logs to gain protection from predators.) Habitat modifications result from human activities such as flow regulation, logging, and land-clearing practices.

In addition to siltation, bacteria, and nonflow habitat alterations, the states and tribes also reported oxygen-depleting substances, nutrients, thermal modifications, metals, and flow alterations as leading stressors. Often, several pollutants and stressors adversely affect a single river segment. For this reason, the river and stream miles impaired by each pollutant or stressor do not add up to 100% in Figure 2-4.

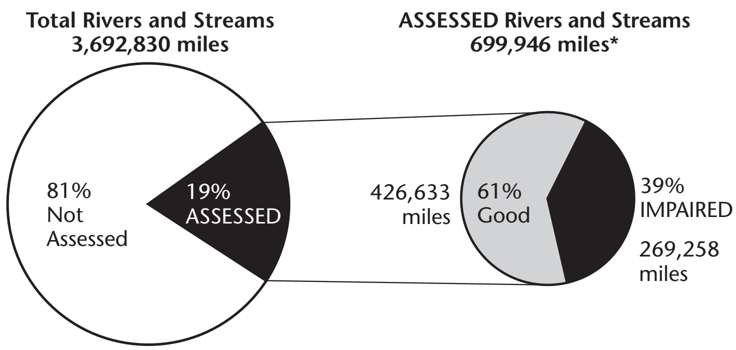
Sources of Pollutants Impacting Rivers and Streams

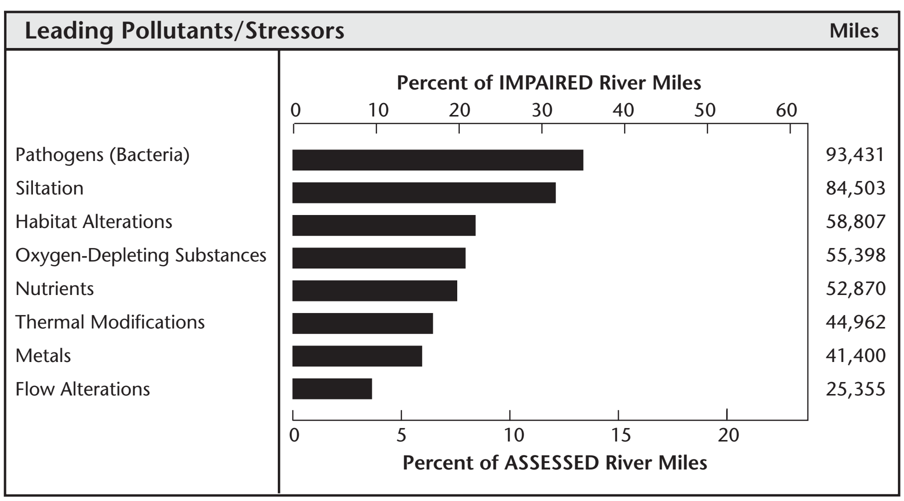
A total of 55 tribes and states reported sources of pollution related to human activities that impact some of their rivers and streams (see Appendix A, Table A-5, for individual state and tribal information). The most commonly reported sources include agriculture, hydrologic modifications, and habitat modifications.

Agriculture is listed as a source of pollution for 128,859 river and stream miles (18% of assessed river and stream miles, 48% of impaired river and stream miles) (Figure 2-5). For the 30 states and tribes that reported the number of river and stream miles affected by specific types of agricultural activities, the most common types are: nonirrigated crop production (degrades 26,830 miles), animal feeding operations (degrades

Figure 2-4

Leading POLLUTANTS in Impaired Rivers and Streams





States assessed 19% of the total miles of rivers and streams for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 61% are rated as good and 39% as impaired. When states identify waters that are impaired, they describe the pollutants or processes causing or contributing to the impairment. The bar chart presents the leading causes and the number of river and stream miles impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these pollutants. The lower axis compares the miles impacted by the pollutant to the total ASSESSED miles. The upper axis compares the miles impacted by the pollutant to the total IMPAIRED miles.

Based on data contained in Appendix A, Table A-4.

*Includes miles assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a river segment.

24,616 miles), and irrigated crop production (degrades 17,667 miles).

Hydrologic modifications include flow regulation and modification, channelization, dredging, and construction of dams. These activities may alter a river's habitat in such a way that it becomes less suitable for aquatic life. For example, dredging may destroy the river-bottom habitat where fish lay their eggs. The states and tribes report that hydrologic modifications degrade 53,850 river and stream miles (8% of the assessed miles and 20% of the impaired miles).

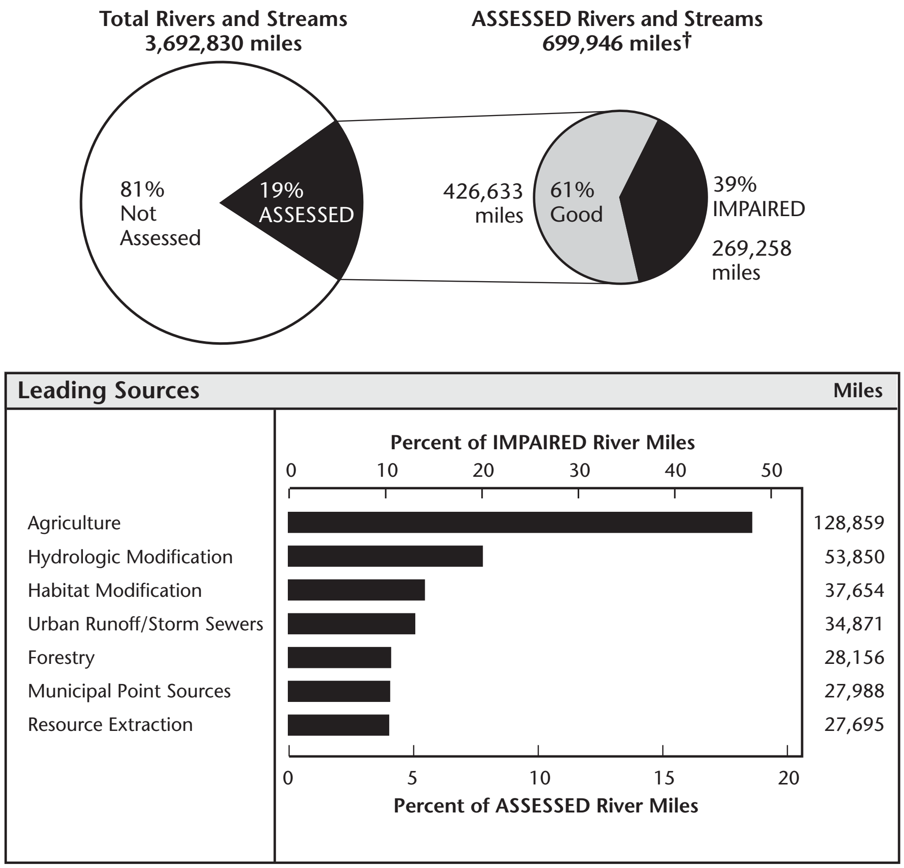
Identifying Sources Is a Challenge

It is relatively easy to collect a water sample and identify pollutants causing impairments, such as fecal coliform bacteria indicating pathogen contamination. However, detecting and ranking sources of pollutants can require monitoring pollutant movement from numerous potential sources, such as failing septic systems, agricultural fields, urban runoff, municipal sewage treatment plants, and local waterfowl populations. Often, states are not able to determine the particular source responsible for impairment. In these cases, many states report the source of impairment as "unknown." In the 2000 305(b) reports, states reported unknown sources impairing 39,056 river and stream miles (6% of the assessed river and stream miles).

The pollutants/processes and sources shown here may not correspond directly to one another (i.e., the leading pollutant may not originate from the leading source). This may occur because a major pollutant may be released from many minor sources. It also happens when states do not have the information to determine all the sources of a particular pollutant/stressor.

Figure 2-5

Leading SOURCES of River and Stream Impairment*



States assessed 19% of the total miles of rivers and streams for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 61% are rated as good and 39% as impaired. When states identify waters that are impaired, they also describe the sources of pollutants associated with the impairment. The bar chart presents the leading sources and the number of river and stream miles they impact. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these sources. The lower axis compares the miles impacted by the source to the total ASSESSED miles. The upper axis compares the miles impacted by the source to the total IMPAIRED miles.

Based on data contained in Appendix A, Table A-5.

*Excluding unknown and natural sources.

†Includes miles assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a river segment.

PATHOGENS are the most common pollutant affecting assessed rivers and streams. Pathogens

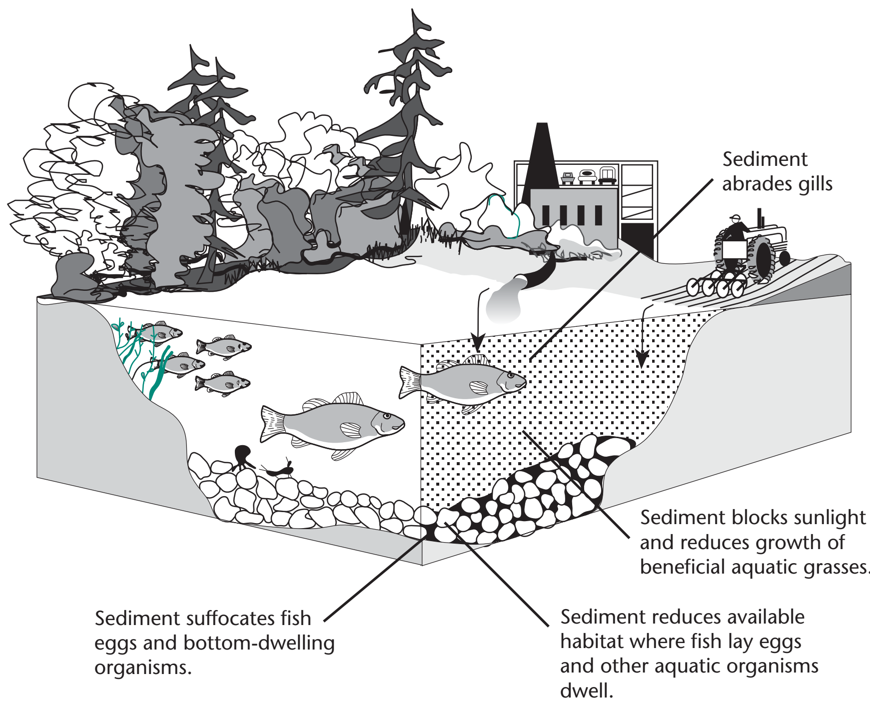
- Are found in 13% of the assessed rivers and streams (see Figure 2-4).
- Contribute to 35% of reported water quality problems in impaired rivers and streams.

AGRICULTURE is the leading source of pollution in assessed rivers and streams. According to the states, agricultural pollution problems

- Affect 18% of the assessed rivers and streams
- Contribute to 48% of reported water quality problems in impaired rivers and streams (see Figure 2-5).

Figure 2-6

The Effects of Siltation in Rivers and Streams



Siltation is one of the leading pollution problems in the nation's rivers and streams. Over the long term, unchecked siltation can alter habitat with profound adverse effects on aquatic life. In the short term, silt can kill fish directly, destroy spawning beds, and increase water turbidity resulting in depressed photosynthetic rates.

Habitat modifications—changes such as the removal of riparian (stream bank) vegetation—can make a river or stream less suitable for the organisms inhabiting it. The states and tribes report that habitat modifications degrade 37,654 river and stream miles (5% of the assessed miles and 14% of the impaired miles).

In urban areas, runoff from impervious surfaces may include sediment, bacteria (e.g., from pet waste), toxic chemicals, and other pollutants. Development in urban areas can increase erosion that results in higher sediment loads to rivers and streams. Storm sewer systems may also release pollutants to rivers and streams during wet weather events. The states and tribes report that urban runoff and storm sewers pollute 34,871 river and stream miles (5% of the assessed miles and 13% of the impaired miles).

The states and tribes also reported resource extraction, municipal point sources (sewage treatment plants), and commercial forestry activities as leading sources of pollution to rivers and streams. In addition, the states and tribes reported that unknown sources impair almost 40,000 miles of rivers and streams, and natural sources impair approximately 31,000 miles of rivers and streams. Natural sources include soils with natural deposits of arsenic or salts that leach into waterbodies, waterfowl (a source of nutrients and bacteria), and drought, which causes low-flow conditions and elevated water temperatures.

Pamela Birak, Jordan Lake State Park, Chatham County, NC

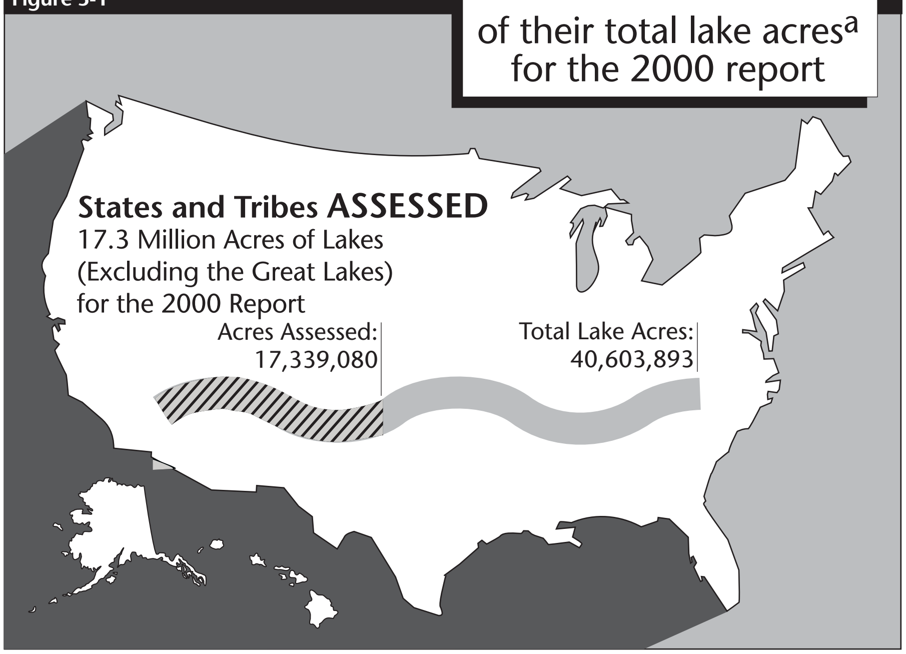
Lakes, Reservoirs, and Ponds

Forty-six states, Puerto Rico, and the District of Columbia (collectively referred to as states in the rest of this chapter) rated lake water quality in their 2000 Section 305(b) reports (see Appendix B, Table B-1, for individual state and jurisdiction data). These states assessed 17.3 million acres of lakes, reservoirs, and ponds, which equals 43% of the 40.6 million acres of lakes in the nation (Figure 3-1). The states based 68% of their assessments on monitored data and evaluated 28% of the assessed lake acres with qualitative information. The states did not specify whether the remaining 4% of assessed lake acres were monitored or evaluated. Compared to the 1998 reporting cycle, states are using monitoring data for a slightly larger percentage of their assessments. The number of assessed lake acres decreased slightly from 1998 to 2000, from 17.4 million acres to 17.3 million acres.

The summary information presented in this chapter applies strictly to the portion of the nation's lakes assessed by the states and tribes. EPA cannot make generalizations about the health of all of our nation's lakes based on data extracted from the 305(b) reports.

States and Tribes ASSESSED 43% of their total lake acres[a] for the 2000 report

Figure 3-1

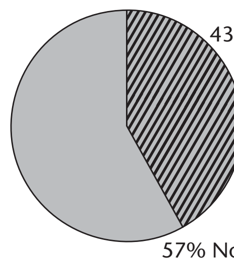


This figure compares the total acres of lakes, reservoirs, and ponds with the subset that were assessed by states for the 2000 water quality report.

Based on data contained in Appendix B, Table B-1.

Lake, Reservoir, and Pond Acres Assessed by the States and Tribes

2000 17,339,080 acres = 43% assessed
Total acres: 40,603,893[a]



1998 17,390,370 acres = 42% assessed
Total acres: 41,593,748[b]

1996 16,819,769 acres = 40% assessed
Total acres: 41,684,902[c]

1994 17,134,153 acres = 42% assessed
Total acres: 40,826,064[d]

1992 18,300,000 acres = 46% assessed
Total acres: 39,920,000[e]

[a]Source: 2000 state and tribal Section 305(b) reports.
[b]Source: 1998 state and tribal Section 305(b) reports.
[c]Source: 1996 state and tribal Section 305(b) reports.
[d]Source: 1994 state and tribal Section 305(b) reports.
[e]Source: 1992 state and tribal Section 305(b) reports.

Note: Figures may not add to 100% due to the rounding of individual numbers.

Summary of Use Support

Most states and tribes rate how well a lake supports individual uses (such as swimming and aquatic life) and then consolidate individual use ratings into a summary table. This table divides assessed lake acres into those that are

■ **Good –** Fully supporting all of their uses or fully supporting all uses but threatened for one or more uses

■ **Impaired –** Partially or not supporting one or more uses

■ **Not attainable –** Not able to support one or more uses.

Forty-five states, Puerto Rico, and the District of Columbia reported summary use support status for lakes in their 2000 Section 305(b) reports (see Appendix B, Table B-2, for individual state and tribal information). Mississippi, New Jersey, and Ohio did not report on summary of use support for lake acres, so EPA used aquatic life use support status to summarize lake water quality conditions in these states.

The states and tribes reported that 55% of their assessed 17.3 million lake acres have good water quality (Figure 3-2); 47% of the assessed lake acres fully support all uses and 8% of the assessed lake acres fully support all uses but are threatened for one or more uses. Some form of pollution or habitat degradation impairs the remaining 45% of the assessed lake acres included in summary of use support.

It is important to note that 11 states did not include the effects of statewide fish consumption advisories for mercury when calculating their summary use support status in lakes. Connecticut, Kentucky, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, North Carolina, Ohio, Vermont, and Wisconsin excluded the impairment associated with statewide mercury advisories in order to convey information that would have been otherwise masked by the fish consumption advisories. If these advisories had been included, all of the states' lakes would have received an impaired rating. Michigan also has a statewide advisory for mercury, and included that impairment in the summary of use support. New York excluded the effects of a statewide PCB/chlordane/mirex/DDT fish consumption advisory for lakes in its summary data.

55% OF ASSESSED lake acres have good water quality.

Assessed Waters[a]

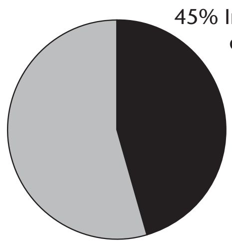
Total lakes = 40,603,893 acres
Total assessed = 17,339,080 acres

■ 43% assessed
■ 57% not assessed

Of the assessed acres:

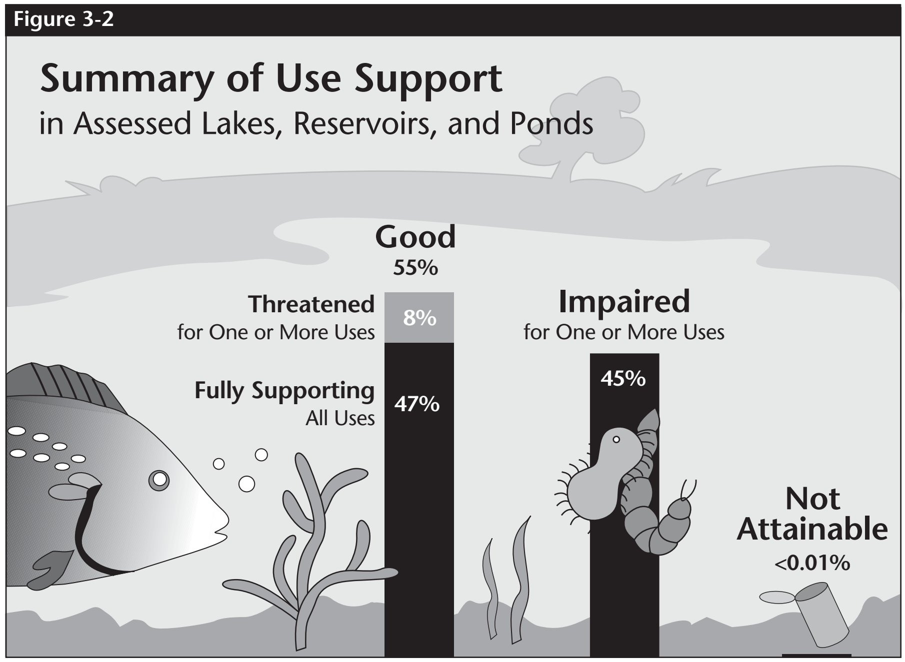
- 68% were monitored
- 28% were evaluated
- 4% were not specified

Assessed Water Quality



[a]Source: 2000 state and tribal Section 305(b) reports.

Figure 3-2



This figure presents the status of the assessed acres of lakes, reservoirs, and ponds. Of the more than 17 million acres of lakes, reservoirs, and ponds assessed, 54% fully support their designated uses and 44% are impaired for one or more uses. Eight percent of the assessed waters are fully supporting uses but threatened.

Based on data contained in Appendix B, Table B-2.

Note: Figures may not add up to 100% due to rounding.

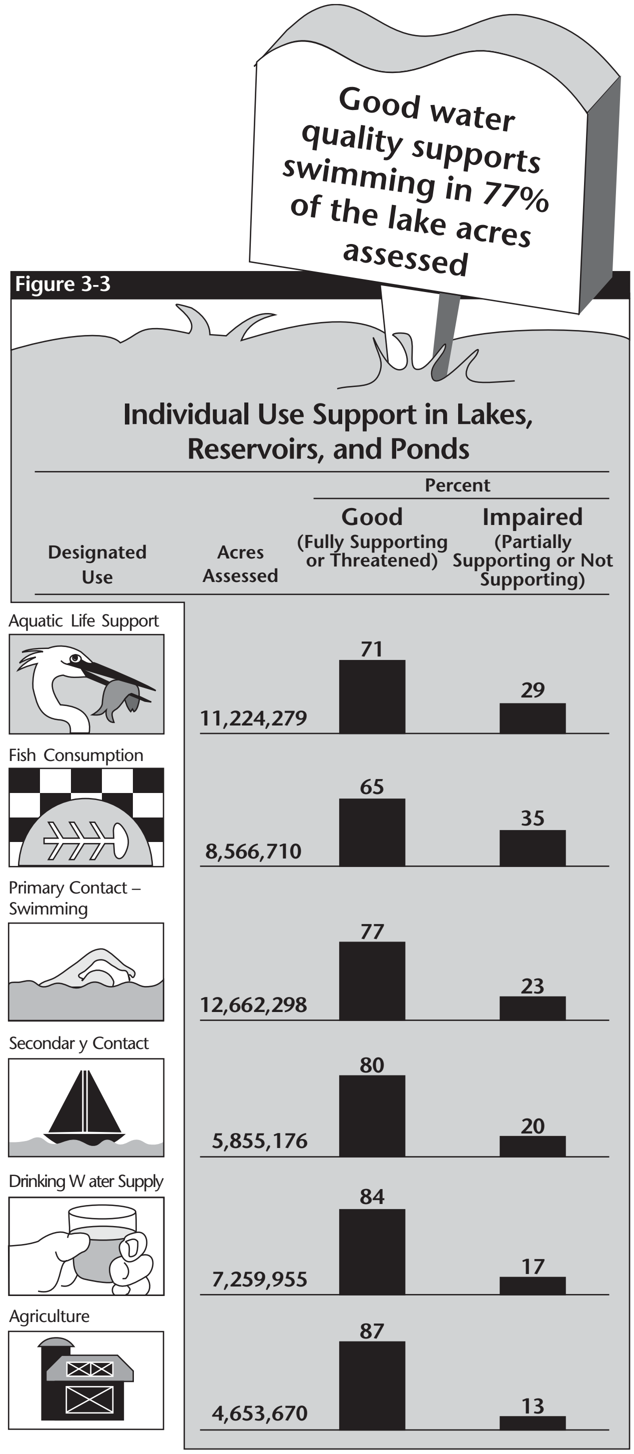
Individual Use Support

Individual use support assessment provides important details about the nature of water quality problems in our nation's surface waters. The states establish specific designated uses for waterbodies through their water quality standards and, for reporting purposes, consolidate their more detailed uses into six general use categories. The standard uses consist of aquatic life support, fish consumption, primary contact recreation (such as swimming and diving), secondary contact recreation (such as boating), drinking water supply, and agricultural use.

Forty-two states, Puerto Rico, and the District of Columbia reported individual use support status of their lakes, reservoirs, and ponds (see Appendix B, Table B-3, for individual state and tribal information). The reporting states assessed aquatic life use and swimming use most frequently. These states reported that support of aquatic life use is impaired in over 3.2 million lake acres (29% of the 11.2 million acres assessed for aquatic life support), and swimming criteria violations impact almost 3 million lake acres (23% of the 12.7 million acres assessed for swimming use support) (Figure 3-3).

Many states did not rate fish consumption use support because they have not included fish consumption as a use in their standards. However, through separate tracking of state fish consumption advisories (EPA's National Listing of Fish and Wildlife Advisories), EPA estimates that about 23% of the nation's total lake acres were under advisories in 2000. EPA encourages the states to designate fish consumption as a separate use in their waterbodies to promote consistency in future reporting.

Figure 3-3



This figure presents a tally of the acres of lakes, reservoirs, and ponds assessed by states for each category of designated use. For each category, the figure summarizes the proportion of the assessed waters rated according to quality.

Based on data contained in Appendix B, Table B-3.

Note: Figures may not add up to 100% due to rounding.

Water Quality Problems Identified in Lakes, Reservoirs, and Ponds

When states and tribes rate waters as impaired, they also attempt to identify the causes and sources of impairment. Figures 3-4 and 3-5 identify the pollutants and sources of pollutants that impair the most acres of assessed lakes.

The following sections describe the leading pollutants/stressors and sources of impairment identified in lakes. It is important to note that the information about pollutants/stressors and sources is incomplete. The states and tribes do not always report the pollutants/stressors or source of pollutants impacting every impaired lake acre. In some cases, they may recognize that water quality does not fully support a designated use, but may not have adequate data to document the specific pollutant, stressor or source responsible for the impairment.

Pollutants and Stressors Impacting Lakes, Reservoirs, and Ponds

Forty-five states, the District of Columbia, and Puerto Rico identified the pollutants and stressors causing impairments to lake water quality. More lake acres are affected by nutrients than any other pollutant or stressor (Figure 3-4). States reported that excess nutrients pollute 3.8 million lake acres (which equals 22% of the assessed lake acres and 50% of the impaired lake acres). See Appendix B, Table B-4, for individual state information.

Healthy lake ecosystems contain nutrients in small quantities from natural sources. Extra inputs of nutrients (primarily nitrogen and phosphorus) disrupt the balance of lake ecosystems by stimulating population explosions of undesirable algae and aquatic weeds (Figure 3-6). The algae sink to the lake bottom after they die, where bacteria decompose them. The bacteria consume dissolved oxygen in the water while decomposing the dead algae. Fish kills and foul odors may result if dissolved oxygen is depleted.

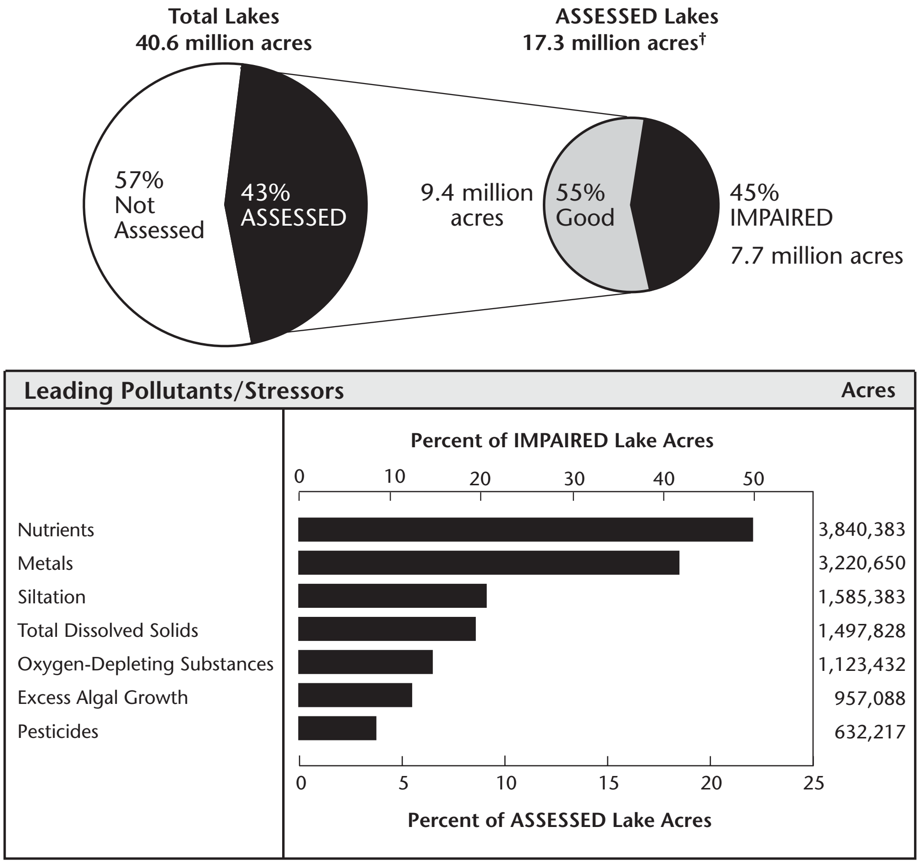
The states reported metals as the second most common pollutant in assessed lake acres, impairing 3.2 million lake acres (19% of the assessed lake acres and 42% of impaired lake acres). This is mainly due to the widespread detection of mercury in fish tissue samples. Most states rely on fish tissue samples to indicate mercury contamination, since mercury is difficult to measure in water but bioaccumulates in tissue. States are actively studying the extent of the mercury problem, which originates from atmospheric transport from power-generating facilities, waste incinerators, mining, and other sources.

In addition to nutrients and metals, the states report that siltation (sedimentation) pollutes nearly 1.6 million lake acres (9% of the assessed lake acres and 21% of the impaired lake acres), total dissolved solids affect nearly 1.5 million acres (9% of the assessed lake acres and 19% of the impaired lake acres), and enrichment by organic wastes that deplete dissolved oxygen in lake waters affects over 1.1 million lake acres (7% of the assessed lake acres and 15% of the impaired lake acres).

Often, several pollutants and processes impair a single lake. For example, an activity such as removal of shoreline vegetation may accelerate erosion of sediment and nutrients into a lake. In such cases, the states and tribes count a single lake acre under each category that impacts the lake acre. Therefore, the lake acres impaired by each pollutant and process do not add up to 100% in Figures 3-4 and 3-5.

Figure 3-4

Leading POLLUTANTS in Impaired Lakes*



States assessed 43% of the total acres of lakes, reservoirs, and ponds for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 55% are rated as good and 45% as impaired. When states identify waters that are impaired, they describe the pollutants or processes causing or contributing to the impairment. The bar chart presents the leading causes and the number of lake, reservoir, and pond acres impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these pollutants. The lower axis compares the acres impacted by the pollutant to the total ASSESSED acres. The upper axis compares the acres impacted by the pollutant to the total IMPAIRED acres.

Based on data contained in Appendix B, Table B-4.

* Eleven states did not include the effects of statewide fish consumption advisories when reporting the pollutants and sources responsible for impairment. Therefore, certain pollutants and sources, such as metals and atmospheric deposition, may be underrepresented.

† Includes acres assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a lake.

The pollutants/processes and sources shown here may not correspond directly to one another (i.e., the leading pollutant may not originate from the leading source). This may occur because a major pollutant may be released from many minor sources. It also happens when states do not have the information to determine all the sources of a particular pollutant/stressor.

According to the states, **NUTRIENTS** are the most common pollutants affecting assessed lakes. Nutrients

- Are found in 22% of the assessed lakes (see Figure 3-4)
- Contribute to 50% of reported water quality problems in impaired lakes.

Sources of Pollutants Impacting Lakes, Reservoirs, and Ponds

Forty-five states, the District of Columbia, and Puerto Rico reported sources of pollution related to human activities that impair some of their lake, reservoir, and pond acres (see Appendix B, Table B-5, for individual state information). The most commonly reported known sources of impairment in lakes include agriculture, hydrologic modifications, and urban runoff/storm sewers.

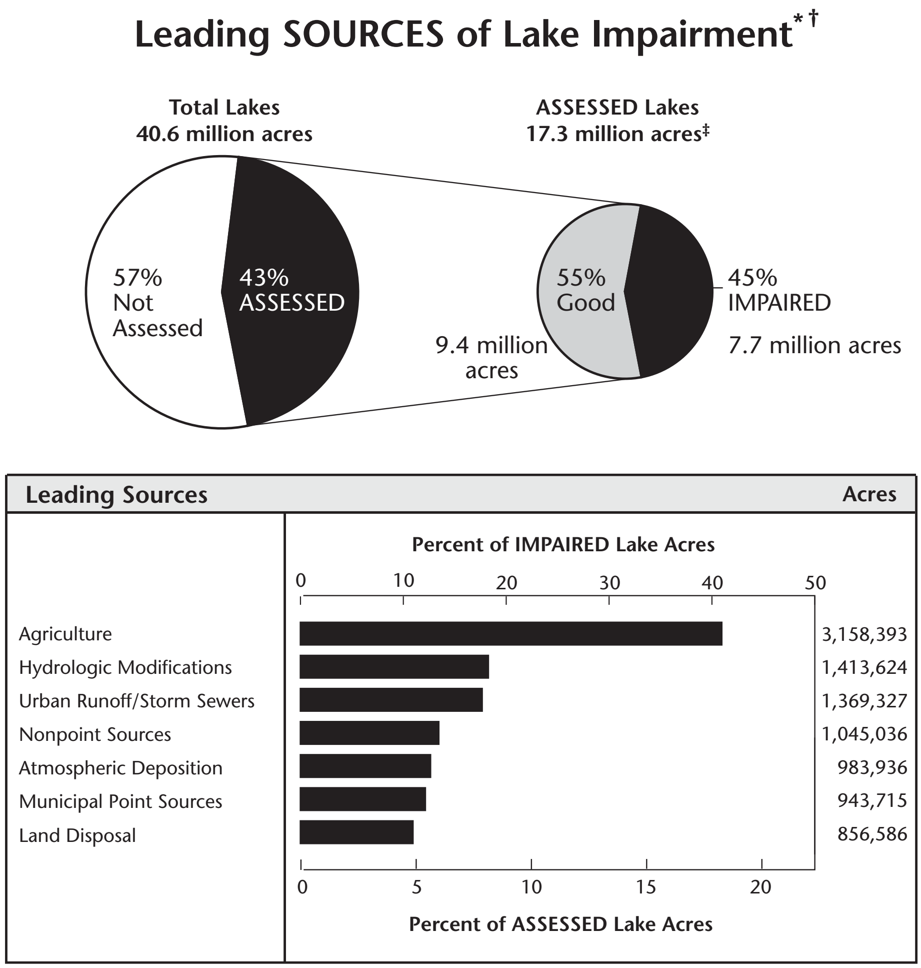
Agriculture is the most widespread source of impairment in the nation's assessed lake acres (Figure 3-5). Agriculture generates pollutants that degrade aquatic life or interfere with public use of over 3 million lake acres (18% of the assessed lake acres and 41% of the impaired lake acres). Riparian pasture grazing and irrigated and nonirrigated crop production were the most frequently cited types of agriculture causing impairments to lake water quality.

Hydrologic modifications, the second most commonly reported source of impairment, degrade 1.4 million lake acres (8% of the assessed lake acres and 18% of the impaired lake acres). Hydrologic modifications include flow regulation and modification, dredging, and construction of dams. These activities

According to the states, **AGRICULTURE** is the leading source of pollution in assessed lakes. Agricultural pollution problems

- Affect 18% of the assessed lakes
- Contribute to 41% of reported water quality in impaired lakes (see Figure 3-5).

Figure 3-5



States assessed 43% of the total acres of lakes, reservoirs, and ponds for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 55% are rated as good and 45% as impaired. When states identify waters that are impaired, they also describe the sources of pollutants associated with the impairment. The bar chart presents the leading sources and the number of lake, reservoir, and pond acres impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these sources. The lower axis compares the acres impacted by the source to the total ASSESSED acres. The upper axis compares the acres impacted by the source to the total IMPAIRED acres.

Based on data contained in Appendix B, Table B-5.

* Eleven states did not include the effects of statewide fish consumption advisories when reporting the pollutants and sources responsible for impairment. Therefore, certain pollutants and sources, such as metals and atmospheric deposition, may be underrepresented.

† Excluding unknown, natural, and "other" sources.

‡ Includes acres assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a lake.

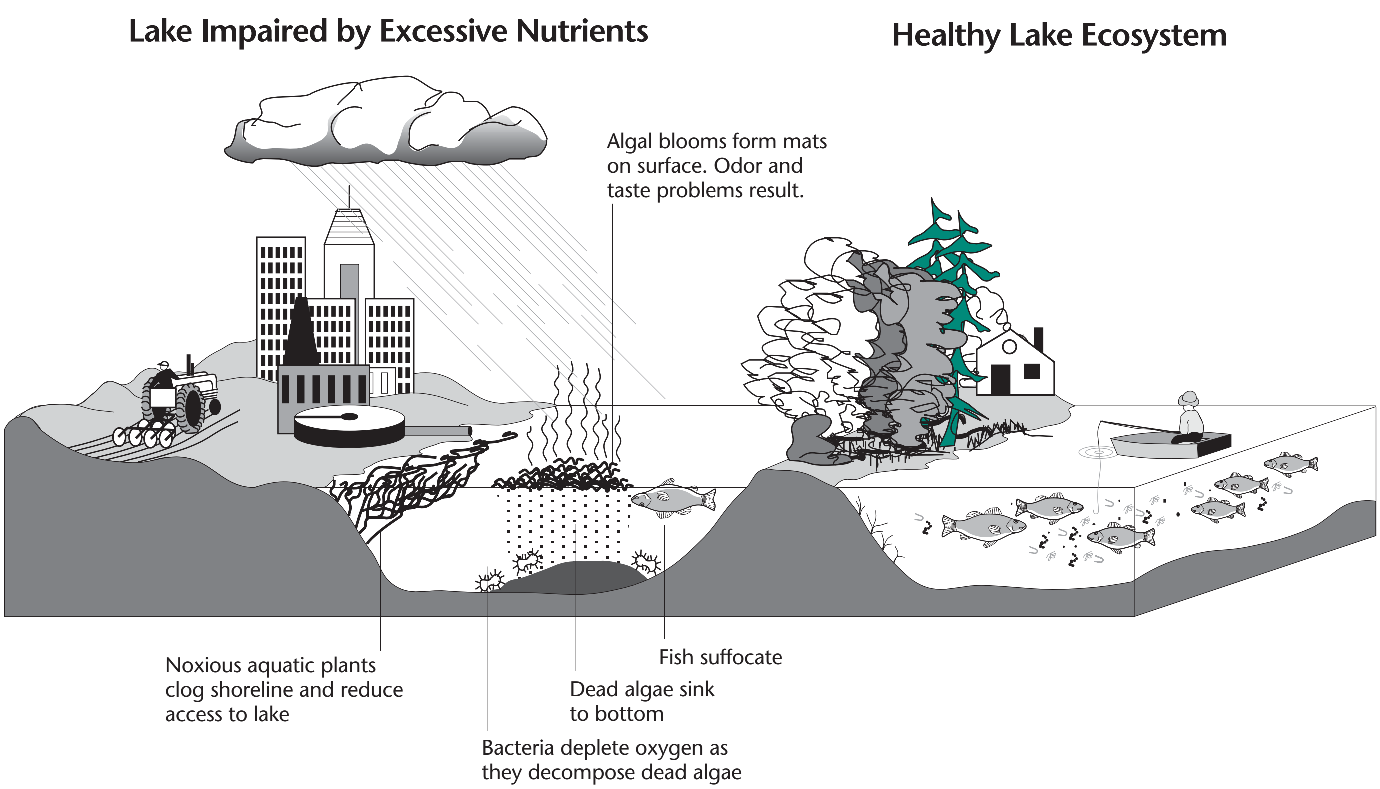
may alter a lake's habitat in such a way that it becomes less suitable for aquatic life.

The states report that pollution from urban runoff and storm sewers degrades nearly 1.4 million lake acres (8% of the assessed lake acres and 18% of the impaired lake acres), generalized nonpoint sources of pollution impair about 1 million lake acres (6% of the assessed lake acres and 14% of the impaired lake acres), atmospheric deposition of pollutants impairs 1 million lake acres (6% of the assessed lake acres and 13% of the impaired lake acres), and municipal sewage treatment plants pollute 943,715 lake acres (5% of the assessed lake acres and 12% of the impaired lake acres).

As in 1998, more states reported lake degradation from atmospheric deposition than in past reporting cycles. This is due, in part, to a growing awareness of the magnitude of the atmospheric deposition problem. Researchers have found significant impacts to ecosystems and human health from atmospherically delivered pollutants.

The states listed additional sources affecting several hundred thousand lake acres, including habitat modifications, land disposal of wastes, flow regulation, resource extraction, contaminated sediments, highway maintenance and runoff, drainage and filling of wetlands, and forestry activities.

Figure 3-6



Nutrients cause nuisance overgrowth of algae as well as noxious aquatic plants, which leads to oxygen depletion via plant respiration and microbial decomposition of plant matter. If not properly managed and controlled, sources such as agriculture, industrial activities, municipal sewage, and atmospheric deposition can contribute to excessive nutrients in lakes.


Liz Sullivan, Ocracoke Island, NC

Coastal Resources—Tidal Estuaries, Shoreline Waters, and Coral Reefs

The United States' coastal resources include nearly 90,000 square miles of estuarine waters, more than 5,500 miles of Great Lakes shoreline, nearly 60,000 miles of ocean shoreline, and extensive coral reef areas. This chapter discusses the states' water quality findings for these diverse resources.

The findings in this chapter largely agree with the water quality and ecological assessment of the nation's estuaries provided in the *National Coastal Condition Report*, EPA-620/R-01/005, published in March 2002. The *National Coastal Condition Report* was based on data from a variety of federal, state, and local sources, including EPA's National Coastal Assessment Program, with samples taken from over 1,000 randomly selected sites in the estuaries of the United States. For a copy of this report, visit *http://www.epa.gov/owow/oceans/nccr/index.html*.

ESTUARIES

Estuaries are the waters where rivers meet the oceans and include bays and tidal rivers. These waters serve as nursery areas for many commercial and recreational fish species and most shellfish populations, including shrimp, oysters, clams, crabs, and scallops.

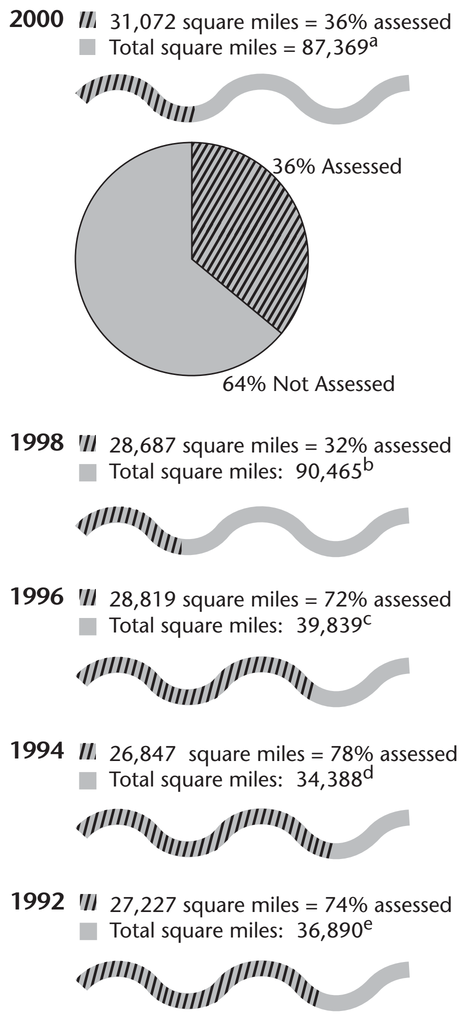
Twenty-three of the 27 coastal states, the District of Columbia, the Commonwealth of the Northern Mariana Islands, and the Delaware River Basin Commission (collectively referred to as states in the rest of this chapter) rated general water quality conditions in some of their estuarine waters (Appendix C, Table C-2, contains individual state data). Puerto Rico's information on its estuarine waters was based on linear miles rather than square miles, and consequently could not be aggregated with information reported by the other states.

Altogether, these states assessed 31,072 square miles of estuarine waters, which equals 36% of the 87,369 square miles of estuarine waters in the nation. The states based 51% of their assessments on monitored data and evaluated 32% of the assessed estuarine waters with qualitative information (see Appendix C, Table C-2, for individual state information). The states did not specify whether 17% of the assessed estuarine waters were monitored or evaluated.

The number of assessed estuarine square miles increased slightly between 1998 and 2000, as did the percentage of total estuarine area assessed. This is primarily due to increases in the area assessed in a few states. California, Florida, Mississippi, and Washington all assessed significantly more estuarine area in 2000 than in 1998.

The states constantly revise their assessment methods in an effort to improve their accuracy and precision.

Estuaries Assessed by States



[a]Source: 2000 state Section 305(b) reports.
[b]Source: 1998 state Section 305(b) reports.
[c]Source: 1996 state Section 305(b) reports.
[d]Source: 1994 state Section 305(b) reports.
[e]Source: 1992 state Section 305(b) reports.

Assessed Waters

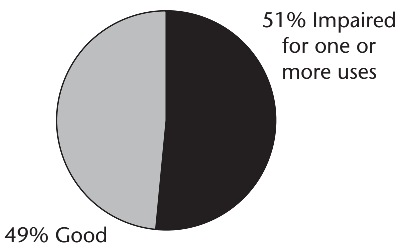
Total estuaries = 87,369 square miles[a]
Total assessed = 31,072 square miles

- 36% assessed
- 64% not assessed

Of the assessed estuarine waters:

- 51% were monitored
- 32% were evaluated
- 17% were not specified

Assessed Water Quality



[a]Source: 2000 state Section 305(b) reports.

49% of ASSESSED estuaries have good water quality.

These changes, however, limit the comparability of data from year to year. Similarly, differences in state assessment methods limit meaningful comparisons of estuarine information submitted by individual states. States devote varying resources to monitoring biological integrity, water chemistry, and toxic pollutants in fish tissues. The wide range in water quality ratings reported by the states reflects both differences in water quality and differences in monitoring and assessment methods.

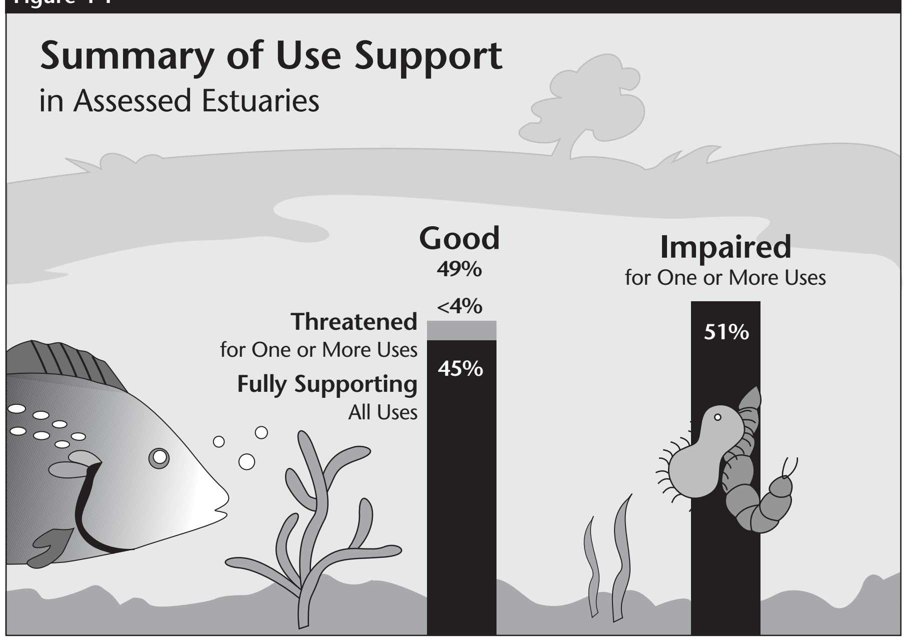
Summary of Use Support

The states reported that 49% of their assessed estuarine waters have good water quality that fully supports designated uses (Figure 4-1). Of the assessed waters, 45% fully support uses and nearly 4% are threatened for one or more uses. Some form of pollution or habitat degradation impairs the remaining 51% of assessed estuarine waters.

Individual Use Support

Individual use support assessment provides important details about the nature of water quality problems in our nation's surface waters. The states establish specific designated uses for waterbodies through their water quality standards. For reporting purposes, the states consolidate their more detailed uses into five general use categories. The standard uses for estuaries are aquatic life support, fish consumption, shellfish harvesting, primary contact recreation (such as swimming and diving), and secondary contact recreation (such as boating). Few states designate saline estuarine

Figure 4-1



This figure presents the status of the assessed square miles of estuaries. Of 31,072 square miles assessed, 49% fully support their designated uses and 51% are impaired for one or more uses. Less than 4% of assessed waters are fully supporting uses but threatened.

Based on data contained in Appendix C, Table C-2.

Note: Figures may not add up to 100% due to rounding.

waters for drinking water supply use and agricultural use because of high treatment costs.

Twenty-two states reported the individual use support status of their estuarine waters (see Appendix C, Table C-3, for individual state information). Most often, these states examined aquatic life conditions and swimming use in their estuarine waters (Figure 4-2). The states reported that pollutants:

- Impact aquatic life in 11,391 square miles of estuarine waters (about 52% of the 22,047 square miles assessed for aquatic life support).

- Restrict fish consumption in 6,255 square miles of estuarine waters (about 48% of the 12,940 square miles assessed for fish consumption).

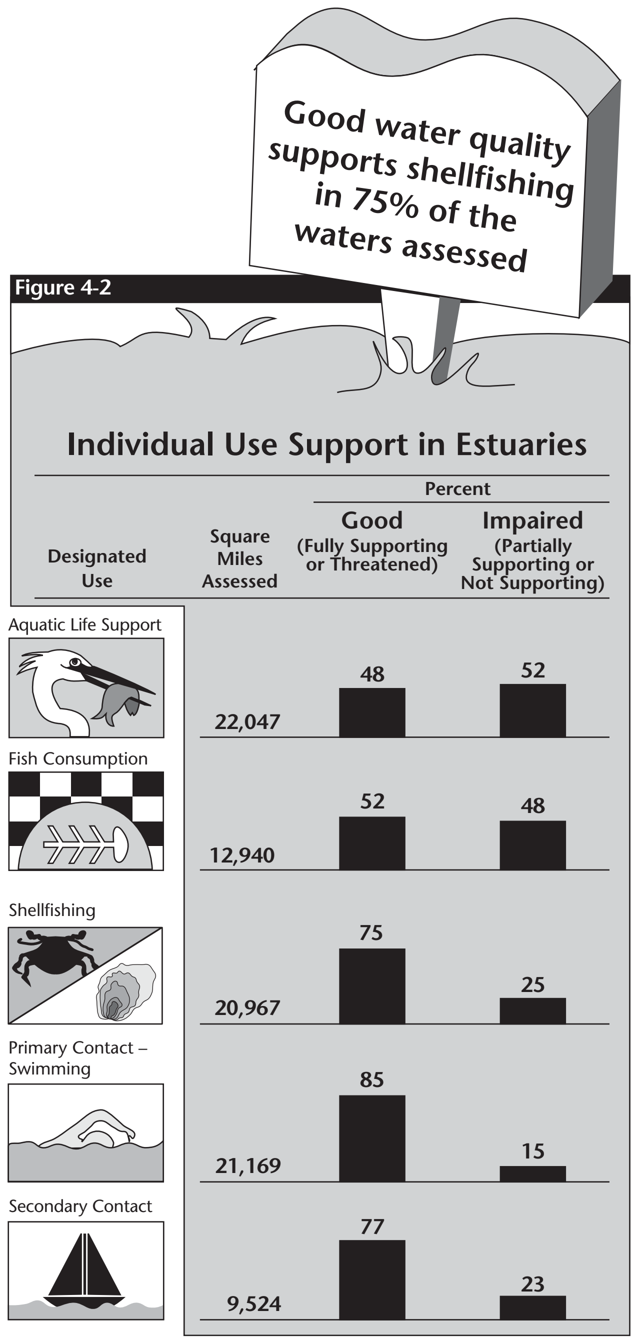
- Restrict shellfish harvesting in 5,288 square miles of estuarine waters (25% of the 20,967 square miles assessed for shellfishing use support).

- Violate swimming criteria in 3,245 square miles of estuarine waters (15% of the 21,169 square miles assessed for swimming use support).

Water Quality Problems Identified in Estuaries

When states and tribes rate waters as impaired, they also try to identify the causes and sources of impairment. Figures 4-3 and 4-4 identify the pollutants and sources of pollutants that impair the most square miles of assessed estuarine waters.

It is important to note that information about pollutants and sources is incomplete. The states do not



This figure presents a tally of the square miles of estuaries assessed by states for each category of designated use. For each category, the figure summarizes the proportion of the assessed waters rated according to quality.

Based on data contained in Appendix C, Table C-3.

always report the pollutant or source of pollutants affecting every impaired estuarine waterbody. In some cases, they may recognize that water quality does not fully support a designated use but may not have adequate data to document the specific pollutant or stressor responsible for the impairment. Sources of impairment are even more difficult to identify than pollutants and stressors.

Pollutants and Processes Impacting Estuaries

Twenty-five states reported pollutants and processes related to human activities that impact some of their estuarine waters (see Appendix C, Table C-4, for individual state information). Often, more than one pollutant or stressor impacts a single estuarine waterbody. In such cases, the states and other jurisdictions count a single square mile of estuary under each pollutant or stressor category that affects the estuary. Therefore, the percentages of estuarine waters impaired by all the pollutant and stressor categories do not add up to 100% in Figure 4-3.

The states identified more square miles of estuarine waters polluted by metals than any other pollutant or stressor (Figure 4-3). States reported that metals, primarily mercury, pollute 8,077 square miles of estuarine waters (26% of the assessed estuarine waters and 52% of the impaired estuarine waters). Similar to lakes, this is mainly due to the widespread detection of mercury in fish tissue samples. Mercury bioaccumulates in fish tissue, and the consumption of fish with high concentrations of mercury can be harmful to human health. The health risk is higher for sensitive populations such as pregnant women, nursing women, and children. Nine states have statewide fish consumption advisories for mercury in coastal and/or estuarine waters that recommend restricting the consumption of fish from those waters.

The states determined that pesticides pollute 5,985 square miles (19% of the assessed estuarine waters and 38% of the impaired estuarine waters). Pesticides such as DDT and chlordane pose risks to human health and aquatic life because they bioaccumulate in fish tissues.

Oxygen depletion from organic wastes impacts 5,324 square miles of estuarine waters (17% of the assessed estuarine waters and 34% of the impaired estuarine waters). Oxygen depletion may trigger fish kills and foul odors, and can adversely affect aquatic life.

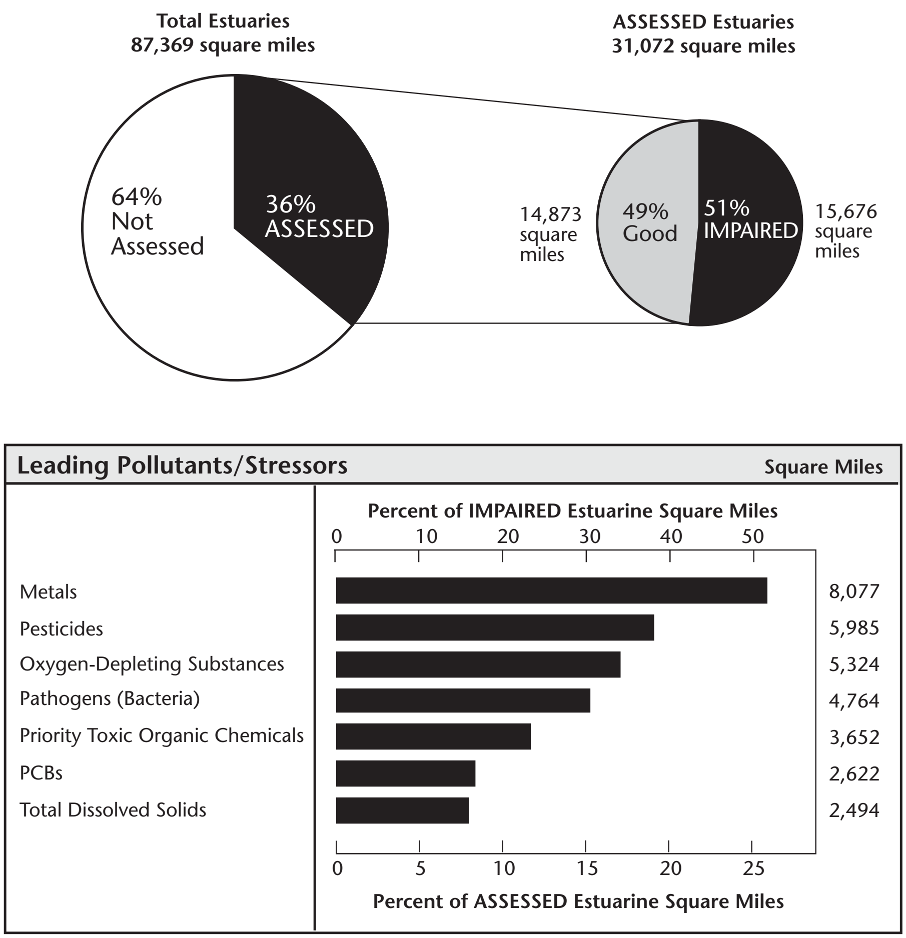
The states reported that pathogens impair 4,764 square miles of estuarine waters (15% of the assessed estuarine waters and 30% of the impaired estuarine waters). Most states monitor indicator bacteria, such as *E. coli*, that inhabit the digestive tracts of humans and other warm-blooded animals and populate sewage in high densities. The presence of such bacteria in water samples is an indicator that an estuary is contaminated with sewage that may contain numerous viruses and bacteria that cause illness in people.

Sources of Pollutants Impacting Estuaries

Twenty-five states reported sources of pollution related to human activities that affect some of their estuarine waters (see Appendix C, Table C-5, for individual state information). These states reported that unknown sources impaired the greatest number of estuarine square miles (7,592 square miles). Of the known sources, states report that municipal point sources (sewage treatment

Figure 4-3

Leading POLLUTANTS in Impaired Estuaries



States assessed 36% of the total square miles of estuaries for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 49% are rated as good and 51% as impaired. When states identify waters that are impaired, they describe the pollutants or processes causing or contributing to the impairment. This bar chart presents the leading causes and the number of estuarine square miles impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these pollutants. The lower axis compares the square miles impacted by the pollutant to the total ASSESSED square miles. The upper axis compares the square miles impacted by the pollutant to the total IMPAIRED square miles.

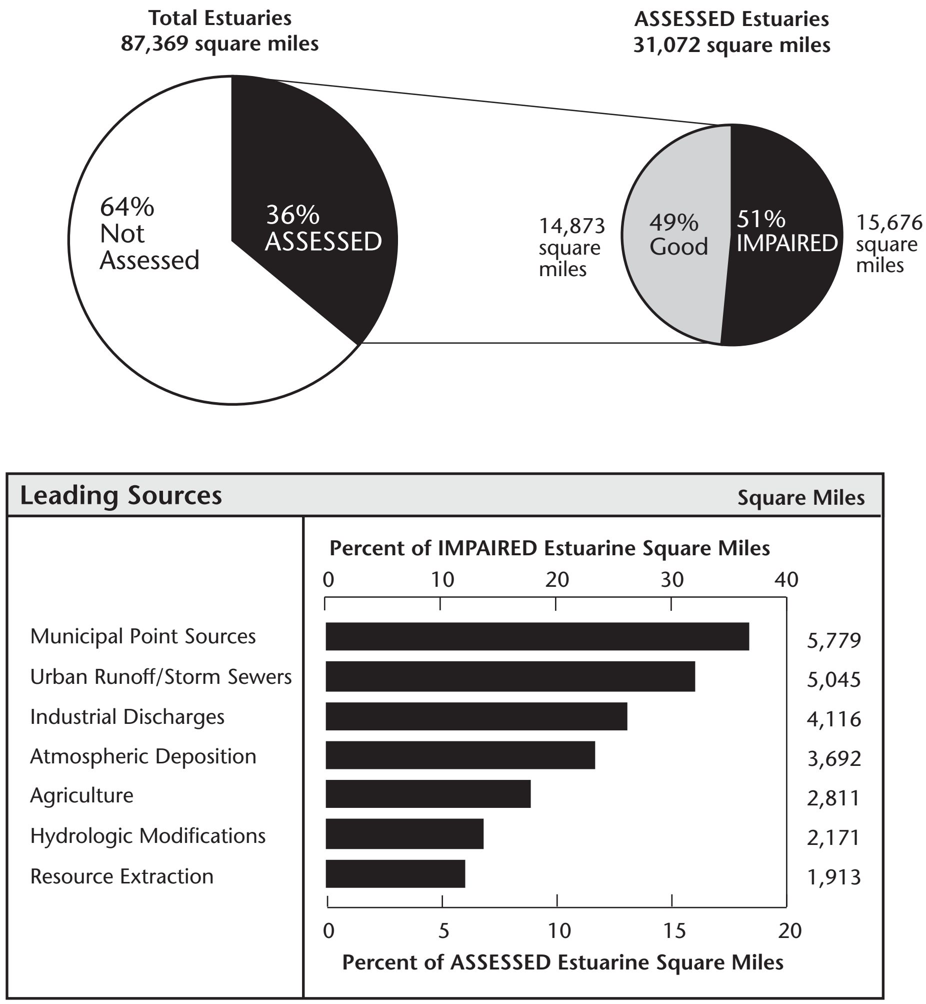
Based on data contained in Appendix C, Table C-4.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair an estuary.

The pollutants/processes and sources shown here may not correspond directly to one another (i.e., the leading pollutant may not originate from the leading source). This may occur because a major pollutant may be released from many minor sources. It also happens when states do not have the information to determine all the sources of a particular pollutant/stressor.

Figure 4-4

Leading SOURCES of Estuary Impairment*



States assessed 36% of the total square miles of estuaries for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 49% are rated as good and 51% as impaired. When states identify waters that are impaired, they also describe the sources of pollutants associated with the impairment. The bar chart presents the leading sources and the number of estuarine square miles they impact. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these sources. The lower axis compares the square miles impacted by the source to the total ASSESSED square miles. The upper axis compares the square miles impacted by the source to the total IMPAIRED square miles.

*Excludes unknown, natural, and "other" sources.

Based on data contained in Appendix C, Table C-5.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair an estuary.

According to the states, **MUNICIPAL POINT SOURCES** are the leading source of pollution in assessed estuaries. This source

- Affects 19% of the assessed portions of estuaries
- Contributes to 37% of reported water quality problems in the impaired portions of estuaries (see Figure 4-4).

plants) are the most widespread source of pollution in their assessed estuarine waters. Pollutants in municipal discharges degrade aquatic life or interfere with public use of 5,779 square miles of estuarine waters (19% of the assessed estuarine waters and 37% of the impaired estuarine waters) (Figure 4-4). The states also reported that pollution from urban runoff and storm sewers impact 5,045 square miles of estuarine waters (16% of the assessed estuarine waters and 32% of the impaired estuarine waters); industrial discharges pollute 4,116 square miles of estuarine waters (13% of the assessed estuarine waters and 26% of the impaired estuarine waters); and atmospheric deposition of pollutants impacts 3,692 square miles of estuarine waters (12% of the assessed estuarine waters and 24% of the impaired estuarine waters).

GREAT LAKES SHORELINE

The Great Lakes—Superior, Michigan, Huron, Erie, and Ontario—are an important part of the physical and cultural heritage of North America. These vast inland freshwater seas provide water for consumption, transportation, power, recreation, fisheries, and a host of other uses. The Great Lakes basin is home to more than 10% of the U.S. population and some of the world's largest concentrations of industrial capacity. Many consider the Great Lakes the United States' fourth seacoast.

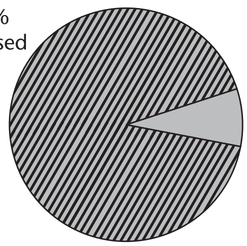
Six of the eight Great Lakes states rated general water quality conditions in 5,066 miles of Great Lakes shoreline in their 2000 Section 305(b) reports (see Appendix F, Tables F-1 and F-2, for individual state information). These states based less than 1% of their assessments on monitored data and evaluated 75% of the assessed shoreline miles with qualitative information. The states did not specify whether the remaining 25% of the assessed shoreline miles were monitored or evaluated.

Summary of Use Support

The states reported that 22% of their assessed Great Lakes shoreline miles have good water quality that fully supports designated uses, and all of these supporting waters are threatened for one or more uses (Figure 4-5). Some form of pollution or habitat degradation impairs the remaining 78% of assessed Great Lakes shoreline. This degradation leads to fish consumption advisories. It is important to note that two Great Lakes states, Ohio and Wisconsin, did not report summary use support status for their shoreline waters. EPA used their aquatic life use support information to represent summary water quality conditions. Nearly all of the assessed Great Lakes shoreline supports recreation and drinking water uses.

Great Lakes Shoreline Miles Assessed by States

2000 5,066 miles = 92% assessed
Total shoreline miles = 5,521[a]



1998 4,950 miles = 90% assessed
Total shoreline miles: 5,521[b]

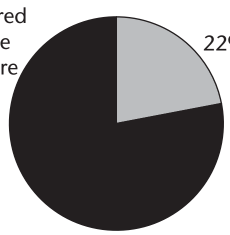
1996 5,186 miles = 94% assessed
Total shoreline miles: 5,521[c]

1994 5,224 miles = 94% assessed
Total shoreline miles: 5,559[d]

1992 5,319 miles = 99% assessed
Total shoreline miles: 20,121[e]

Of the assessed Great Lakes shoreline waters:
- <1% were monitored
- 75% were evaluated
- 25% were not specified

Assessed Water Quality



[a]Source: 2000 state Section 305(b) reports.
[b]Source: 1998 state Section 305(b) reports.
[c]Source: 1996 state Section 305(b) reports.
[d]Source: 1994 state Section 305(b) reports.
[e]Source: 1992 state Section 305(b) reports.

Note: Numbers may not add up to 100% due to rounding.

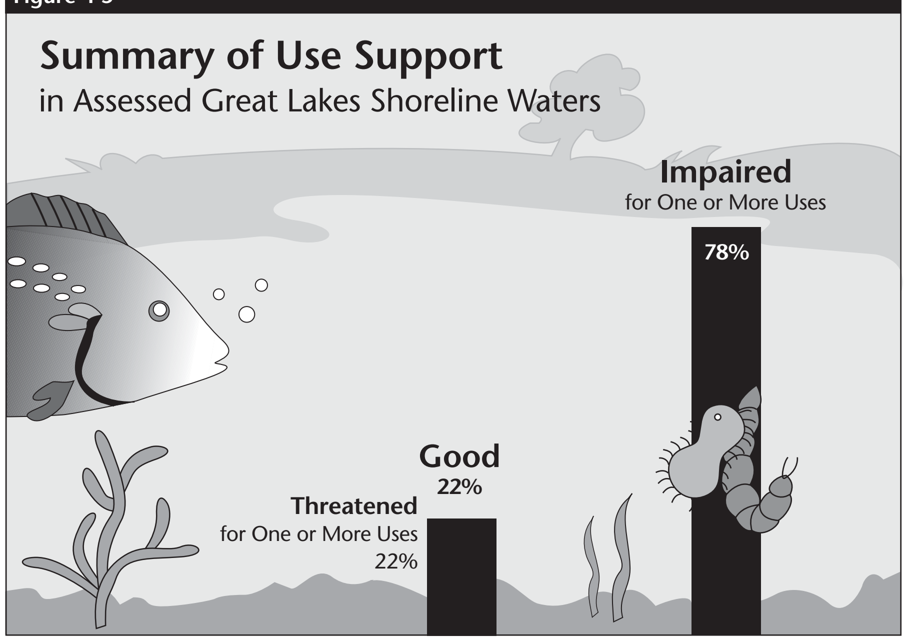
Individual Use Support

The states establish specific designated uses for waterbodies through their water quality standards. For reporting purposes, the states consolidate their more detailed uses into six general use categories. The standard uses of Great Lakes waters are aquatic life support, fish consumption, primary contact recreation (such as swimming and diving), secondary contact recreation (such as boating), drinking water supply, and agricultural use.

Six of the eight Great Lakes states reported the individual use support status of their Great Lakes shoreline (see Appendix F, Table F-3, for individual state information). These states report that swimming, secondary contact, drinking water supply, and agricultural uses are met in nearly all assessed shoreline miles (Figure 4-6). The greatest impacts to Great Lakes shoreline are on fishing activities.

The states bordering the Great Lakes have issued advisories to restrict consumption of fish caught along their entire shorelines. Depending upon location, mercury, PCBs, pesticides, or dioxins are found in fish tissues at levels that exceed standards set to protect human health. The water concentrations of most organochlorine compounds have declined dramatically since control measures began in the mid-1970s. As a result, concentrations of these contaminants in fish tissue have also declined, although 4,976 shoreline miles (100% of the assessed Great Lakes waters) still fail to fully support fish consumption uses.

Figure 4-5



This figure presents the status of the assessed Great Lakes shoreline waters. Of the 5,066 miles of Great Lakes shoreline assessed, 22% fully support their designated uses but are threatened, and 78% are impaired for one or more uses.

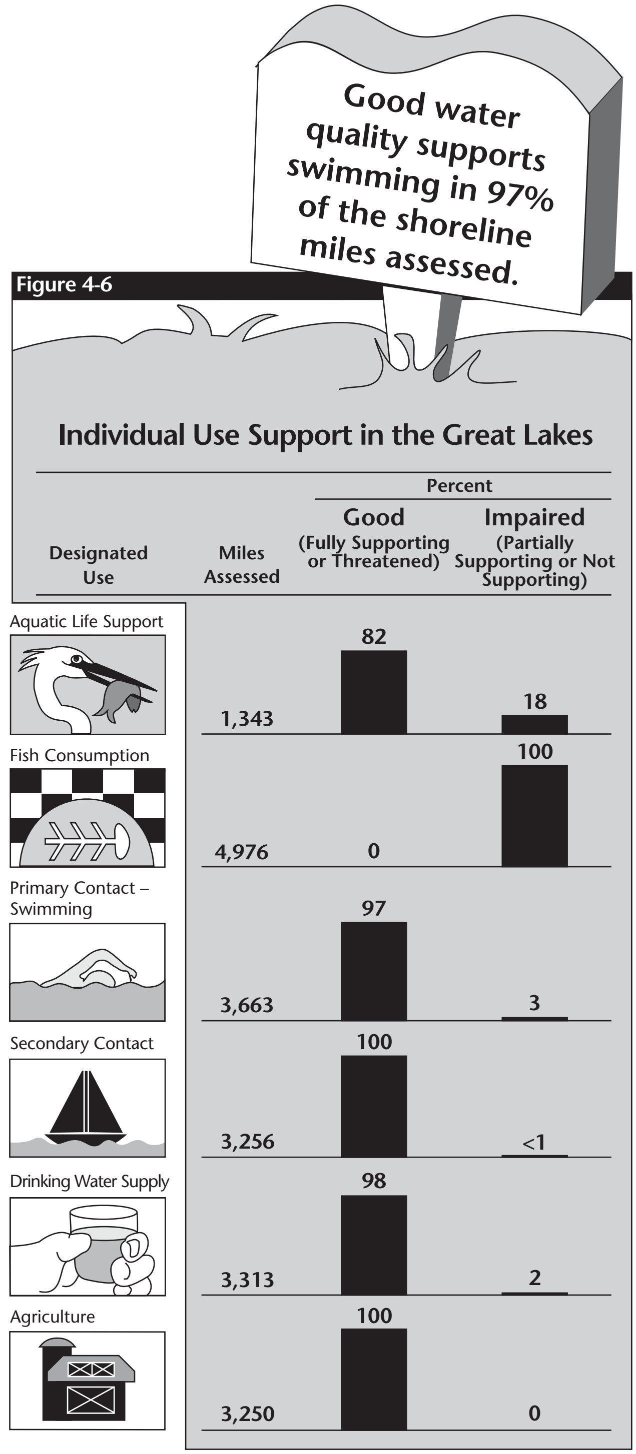
Based on data contained in Appendix F, Table F-2.

Water Quality Problems Identified in Great Lakes Shoreline Waters

Only four Great Lakes states identified pollutants and sources of pollutants degrading Great Lakes shoreline (Appendix F, Tables F-4 and F-5, contain individual state information). Limited conclusions can be drawn from this fraction of the nation's Great Lakes shoreline miles. The major causes of impairment cited by the four states were priority toxic organic chemicals, nutrients, pathogens, and sedimentation. In addition, oxygen-depleting substances, foul odor and taste, and PCBs caused water quality impairments (Figure 4-7).

The states reported that contaminated sediments, urban runoff and storm sewers, and agriculture are the primary sources of pollutants that impair their Great Lakes shoreline waters (Figure 4-8). Atmospheric deposition, habitat modification, land disposal, and septic tanks were also cited as sources of pollution.

Figure 4-6

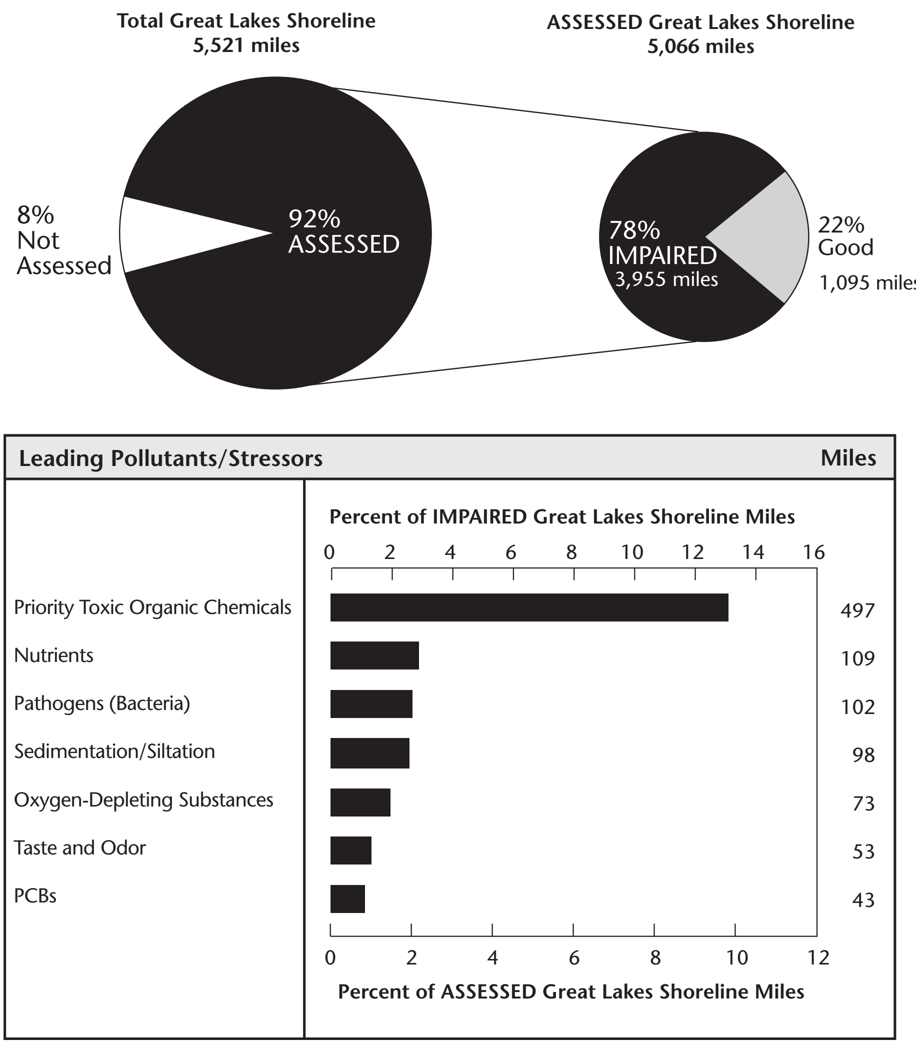


This figure presents a tally of the miles of Great Lakes shoreline assessed by states for each category of designated use. For each category, the figure summarizes the proportion of the assessed waters rated according to quality.

Based on data contained in Appendix F, Table F-3.

Figure 4-7

Leading POLLUTANTS in Impaired Great Lakes Shoreline Waters



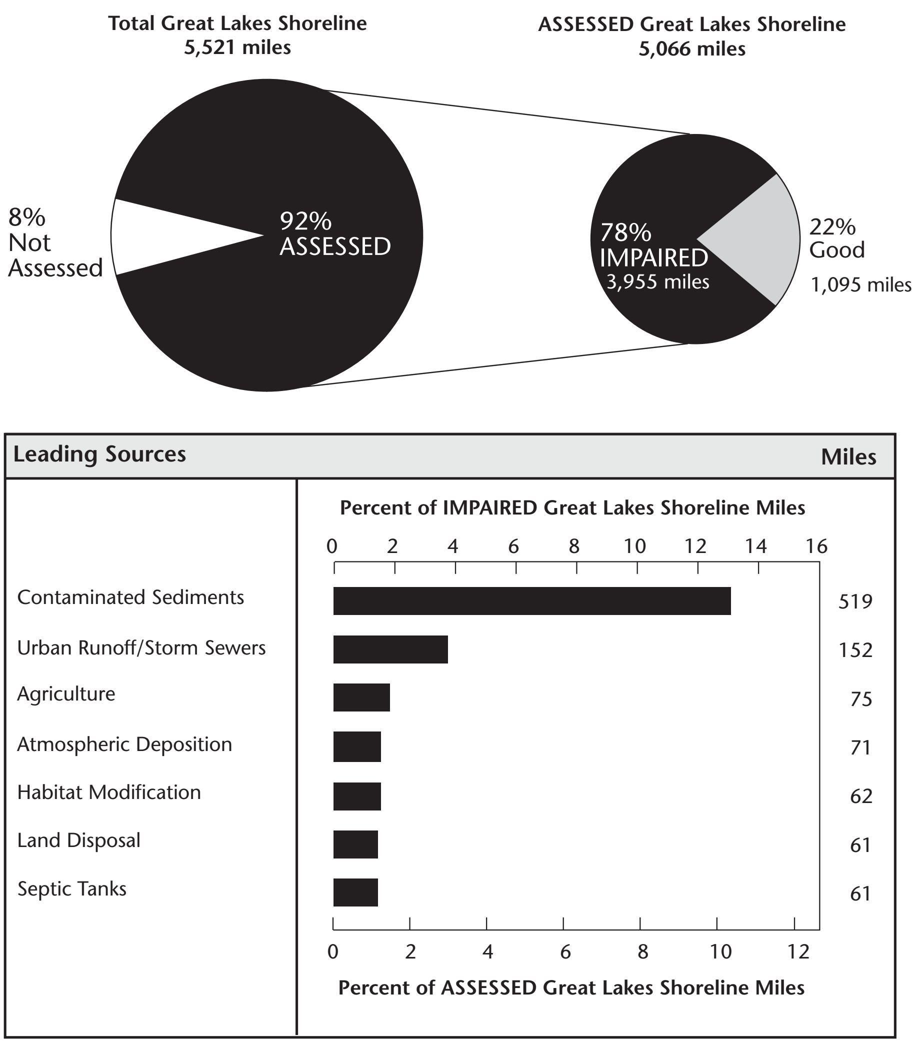
States assessed 92% of the total miles of Great Lakes shoreline for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 22% are rated as good and 78% as impaired. When states identify waters that are impaired, they describe the pollutants or processes causing or contributing to the impairment. The bar chart presents the leading causes and the number of Great Lakes shoreline miles impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these pollutants. The lower axis compares the miles impacted by the pollutant to the total ASSESSED miles. The upper axis compares the miles impacted by the pollutant to the total IMPAIRED miles.

Based on data contained in Appendix F, Table F-4.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a segment of Great Lakes shoreline.

Figure 4-8

Leading SOURCES of Great Lakes Shoreline Impairment



States assessed 92% of the total miles of Great Lakes shoreline for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 22% are rated as good and 78% as impaired. When states identify waters that are impaired, they also describe the sources of pollutants associated with the impairment. The bar chart presents the leading sources and the number of Great Lakes shoreline miles they impact. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these sources. The lower axis compares the miles impacted by the source to the total ASSESSED miles. The upper axis compares the miles impacted by the source to the total IMPAIRED miles.

Based on data contained in Appendix F, Table F-5.

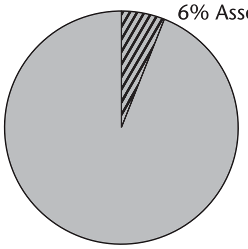
Note: Percentages do not add up to 100% because more than one pollutant or source may impair a segment of Great Lakes shoreline.

The pollutants/processes and sources shown here may not correspond directly to one another (i.e., the leading pollutant may not originate from the leading source). This may occur because a major pollutant may be released from many minor sources. It also happens when states do not have the information to determine all the sources of a particular pollutant/stressor.

Ocean Shoreline Waters Assessed by States

Including Alaska's Ocean Shoreline

2000 3,221 miles = 6% assessed
Total ocean shoreline miles = 58,618[a]



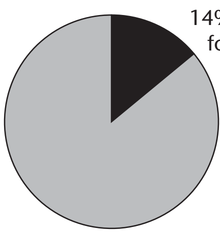
1998 3,130 miles = 5% assessed
Total ocean shoreline miles: 66,645[b]

1996 3,651 miles = 6% assessed Total ocean shoreline miles: 22,585[c]

1994 5,208 miles = 9% assessed
Total ocean shoreline miles: 58,421[d]

1992 3,398 miles = 17% assessed
Total ocean shoreline miles: 20,121[e]

Assessed Water Quality



[a]Source: 2000 state Section 305(b) reports.
[b]Source: 1998 state Section 305(b) reports.
[c]Source: 1996 state Section 305(b) reports.
[d]Source: 1994 state Section 305(b) reports.
[e]Source: 1992 state Section 305(b) reports.

OCEAN SHORE-LINE WATERS

The oceans are of incalculable value to our planet. The global ocean affects the health and safety of the world by providing food, recreation, local weather amelioration, and global climate stabilization. Predictions say that 75% of the U.S. population will live, work, or play along ocean coasts by the year 2015.

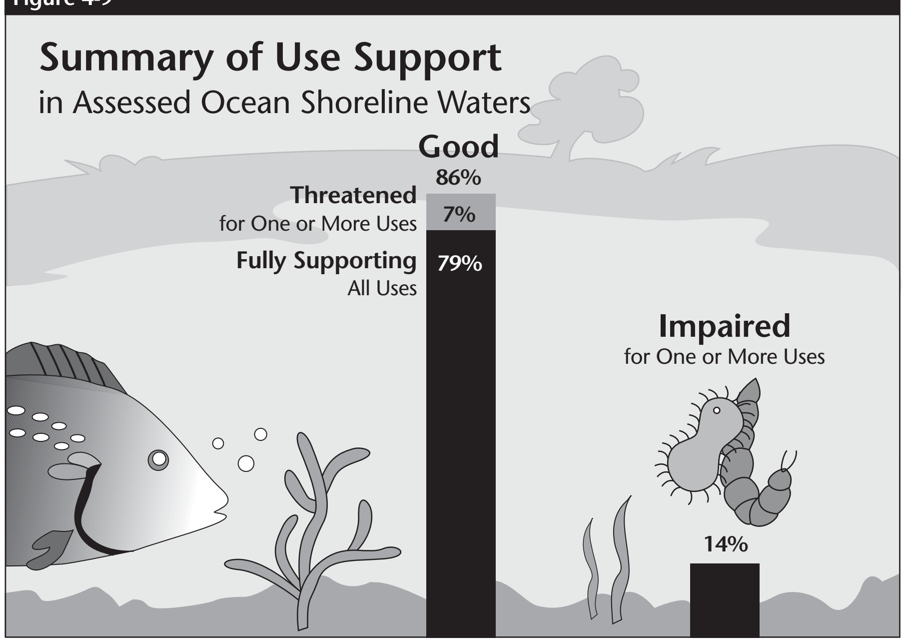
Fourteen of the 27 coastal states and territories rated general water quality conditions in some of their coastal waters (see Appendix C, Table C-6, for individual state information). Texas provided information on its ocean shoreline waters based on square miles rather than linear miles. Consequently, their data could not be aggregated with those reported by the other states.

Altogether, these states assessed 3,221 miles of ocean shoreline, which equals 5.5% of the nation's coastline (including Alaska's 36,000 miles of coastline) or 14% of the 22,618 miles of national coastline excluding Alaska. The states based 34% of their assessments on monitored data and 59% on qualitative information (see Appendix C, Table C-6, for individual state information). The states did not specify whether 7% of the assessed coastal shoreline waters were monitored or evaluated.

Summary of Use Support

The states reported that 86% (2,755 miles) of their assessed ocean shoreline miles have good quality that supports a healthy aquatic community and public activities (Figure 4-9). Of the assessed waters, 79% fully support designated uses and 7% are threatened for one or more uses. Some form of pollution or habitat degradation impairs the remaining 14% of the assessed shoreline.

Figure 4-9



This figure presents the status of the assessed miles of ocean shoreline. Of the 3,218 miles ocean shoreline assessed, 86% fully support their designated uses and 14% are impaired for one or more uses. Seven percent of the assessed waters are fully supporting uses but threatened.

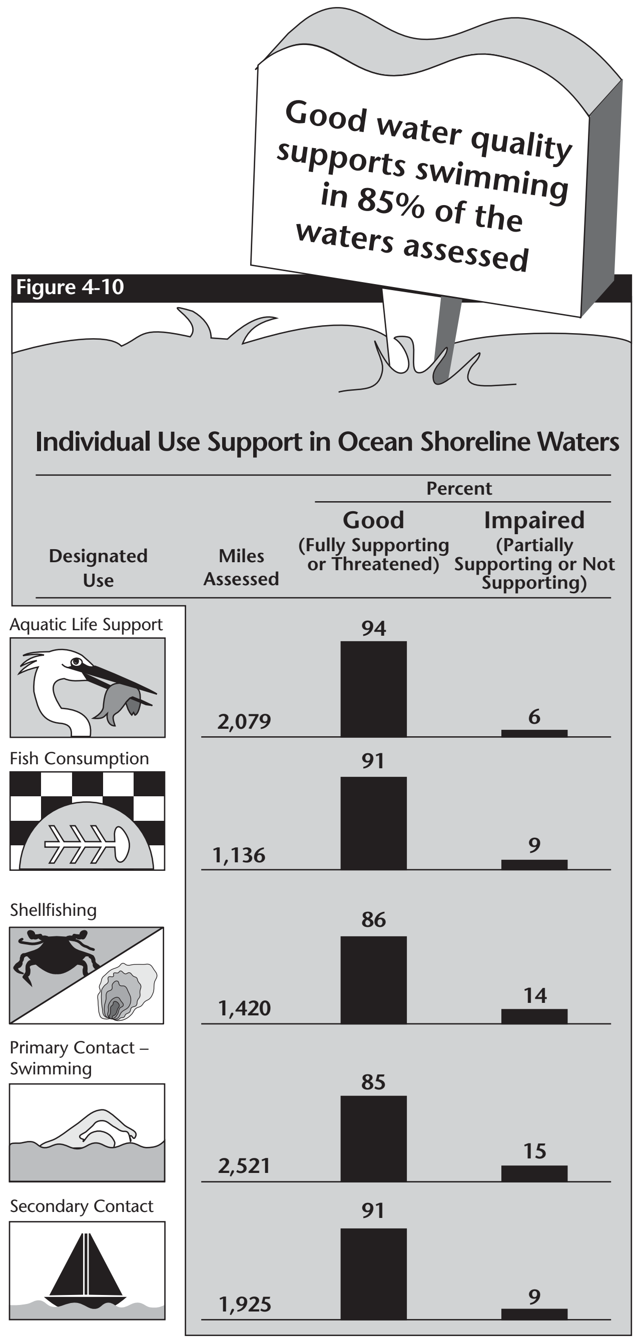
Note: Numbers may not add to 100% due to rounding.

Based on data contained in Appendix C, Table C-6.

Individual Use Support

The states establish specific designated uses for waterbodies through their water quality standards. For reporting purposes, the states consolidate their more detailed uses into five general use categories. The standard uses of ocean coastal waters consist of aquatic life support, fish consumption, shellfish harvesting, primary contact recreation (such as swimming and diving), and secondary contact recreation (such as boating). Few states designate saline ocean waters for drinking water supply and agricultural use because of high treatment costs.

The states provided limited information on individual use support in ocean shoreline waters (Appendix C, Table C-7, contains individual state information). Swimming was the most often rated use. Limited conclusions can be drawn from this fraction of the nation's ocean shoreline miles. The reporting states indicated that the greatest impacts to coastal shoreline are on swimming and shellfishing (Figure 4-10). It is important to note that 15 states have adopted statewide coastal fish consumption advisories for mercury, PCBs, and other pollutants. The effect of these advisories is not reflected in Figure 4-10.



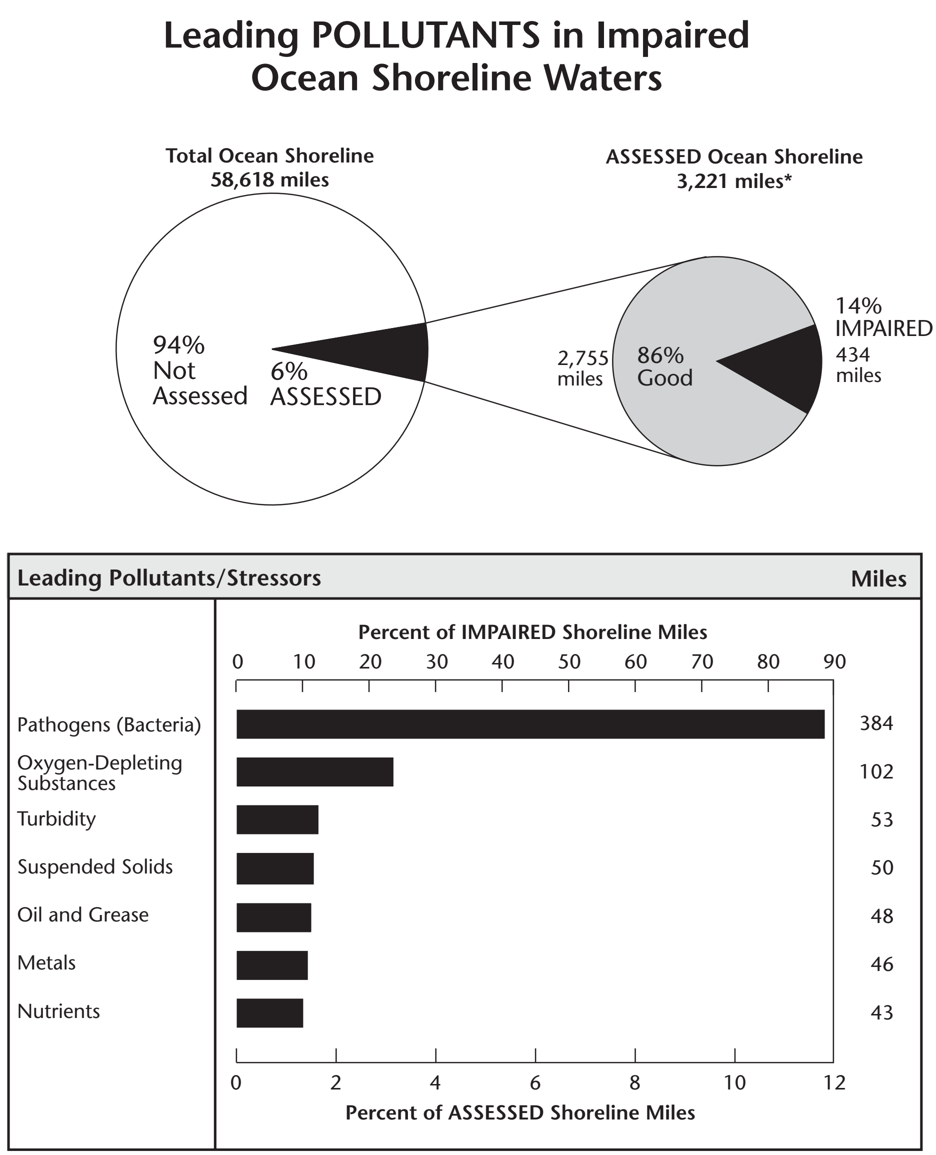
This figure presents a tally of the miles of ocean shoreline assessed by states for each category of designated use. For each category, the figure summarizes the proportion of the assessed waters rated according to quality.

Based on data contained in Appendix C, Table C-7.

Water Quality Problems Identified in Ocean Shoreline Waters

Of the 14 states that reported on coastal waters, 10 identified pollutants and sources of pollutants degrading ocean shoreline waters (Appendix C, Tables C-8 and C-9, contain individual state information). The primary pollutants and stressors reported by the 10 states include bacteria (pathogens), oxygen-depleting substances, turbidity and suspended solids, (Figure 4-11). The primary sources reported include urban runoff and storm sewers, nonpoint sources, land disposal of wastes, septic tanks, and municipal point sources (sewage treatment plants (Figure 4-12).

Figure 4-11



States assessed 6% of the total miles of ocean shoreline for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 86% are rated as good and 14% as impaired. When states identify waters that are impaired, they describe the pollutants or processes causing or contributing to the impairment. The bar chart presents the leading causes and the number of ocean shoreline miles impacted. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these pollutants. The lower axis compares the miles impacted by the pollutant to the total ASSESSED miles. The upper axis compares the miles impacted by the pollutant to the total IMPAIRED miles.

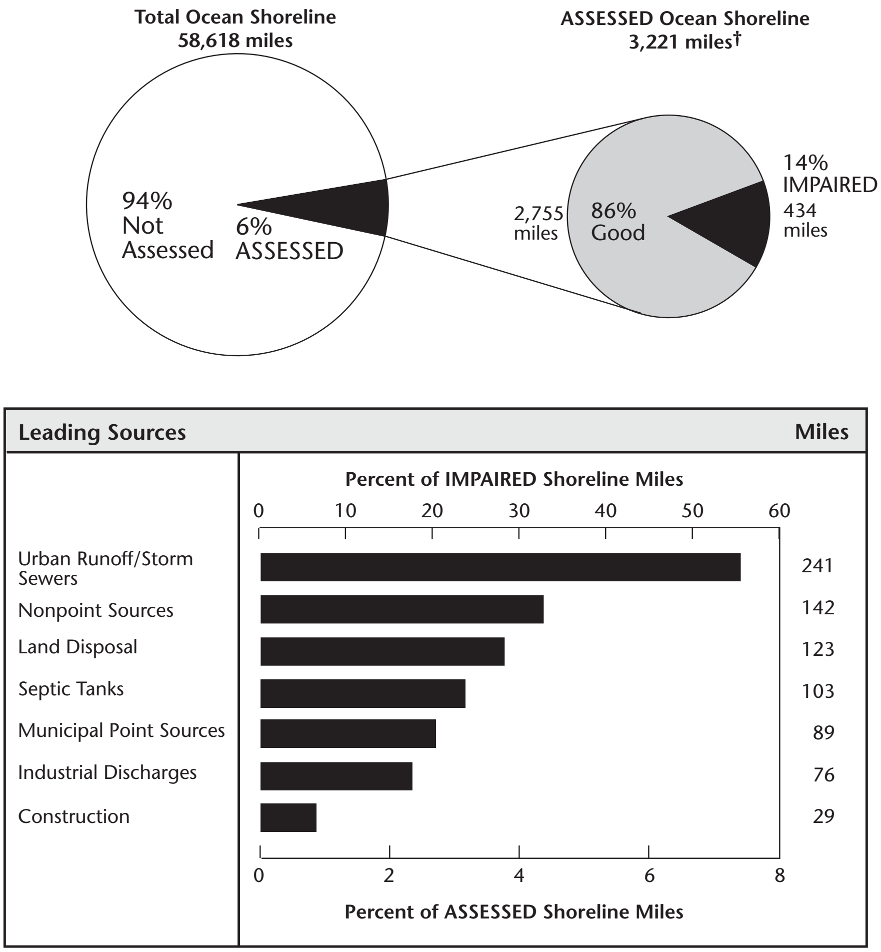
Based on data contained in Appendix C, Table C-8.

*Includes miles assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a segment of ocean shoreline.

Figure 4-12

Leading SOURCES of Ocean Shoreline Impairment*



States assessed 6% of the total miles of ocean shoreline for the 2000 report. The larger pie chart on the left illustrates this proportion. The smaller pie chart on the right shows that, for the subset of assessed waters, 86% are rated as good and 14% as impaired. When states identify waters that are impaired, they also describe the sources of pollutants associated with the impairment. The bar chart presents the leading sources and the number of ocean shoreline miles they impact. The percent scales on the upper and lower x-axes of the bar chart provide different perspectives on the magnitude of the impact of these sources. The lower axis compares the miles impacted by the source to the total ASSESSED miles. The upper axis compares the miles impacted by the source to the total IMPAIRED miles.

Based on data contained in Appendix C, Table C-9.

*Excludes natural sources.

†Includes miles assessed as not attainable.

Note: Percentages do not add up to 100% because more than one pollutant or source may impair a segment of ocean shoreline.

The pollutants/processes and sources shown here may not correspond directly to one another (i.e., the leading pollutant may not originate from the leading source). This may occur because a major pollutant may be released from many minor sources. It also happens when states do not have the information to determine all the sources of a particular pollutant/stressor.

CORAL REEFS

Coral reef systems are among the most diverse ecosystems on earth. Coral reefs are based on tiny individual coral animals called polyps, which secrete a hard calcium carbonate skeleton. They provide habitat for a large variety of organisms that use the coral as a source of food and shelter. Residents of coral reefs include various sponges; mollusks such as sea slugs, oysters, and clams; crustaceans such as crabs and shrimp; many kinds of sea worms; echinoderms such as starfish and sea urchins; other cnidarians such as jellyfish and sea anemones; various types of algae; sea turtles; and many species of fish.

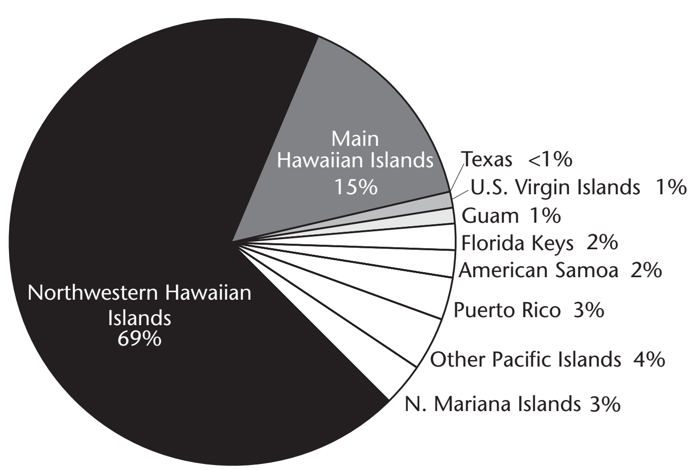
These reefs are living jewels that encircle the shoreline in many tropical areas, providing important assets to local and national economies, including fisheries for food, materials for new medicines, and income from tourism and recreation. Coral reefs also provide coastal communities with protection from storms.

Coral reef areas are found in only three states—Florida, primarily in the Florida Keys; Hawaii, throughout the Hawaiian archipelago; and Texas, in the offshore Flower Gardens (Figure 4-13). Lush reef areas are also found in five U.S. territories in both the Atlantic and Pacific regions, including American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

The proximity of coral reefs to land makes them particularly sensitive to impacts from human activities. Because they depend on light, coral reefs require clear water for growth and can be severely damaged by sediment or other factors that reduce water clarity or quality. Recent evidence indicates that coral reefs are deteriorating worldwide, and many are in crisis. Symptoms include loss of hard corals, increased abundance of algae, and a dramatic increase in bleaching episodes and disease outbreaks.

Figure 4-13

U.S. Coral Reef Areas



Coral Reef Degradation

Natural impacts to coral reefs occur as a result of hurricanes and severe storms. Outbreaks of Crown-of-Thorn starfish populations that feed voraciously on coral polyps kill large parts of Pacific Ocean reefs. Coral bleaching and other coral diseases are also stressing coral reef ecosystems in both the Atlantic and Pacific.

Human activities also can cause significant impacts to coral populations. These activities include:

- Introduction of alien species from ballast water of international cargo ships
- Removal of selected tropical fish and invertebrate species for the aquarium trade
- Commercial and recreational fishing pressures
- Marine debris, petroleum, and other toxic chemical spills
- Nutrient pollution from nonpoint source agricultural runoff or from point source discharges from sewage treatment facilities
- Sediment runoff
- Offshore dredging activities
- Marine tourism
- Urbanization of coastal areas.

In an effort to prevent further loss of coral reef ecosystems, the U.S. Coral Reef Task Force was established in 1998. The task force comprises many federal agencies including EPA, and is charged with mapping and monitoring coral reefs, researching coral reef degradation, working to implement measures to protect coral reefs, and promoting coral reef conservation worldwide. More information on the interagency efforts to study and protect coral reefs is available on the Internet at *http://coralreef.gov*.

In 2000, a major protection measure was enacted for the coral reefs of the northwest Hawaiian Islands, which represent nearly 70% of the coral reefs in U.S. waters. The area was designated as a federal Ecosystem Reserve and is the largest nature preserve ever established in the United States. It will protect more than 4,000 square miles of some of the most extensive and pristine coral reefs in U.S. waters. The reefs extend from near-shore areas just beneath the ocean surface to a depth of 600 feet, as much as 100 miles out to sea.

For more information on each of the states and territories with coral reef resources, refer to Chapter 10 (state summaries).

Jim Crawford, Ocracoke Island, NC

Wetlands

What Are Wetlands?

Wetlands occur where water and land come together for a prolonged period of time (Figure 5-1). They are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. They are found from the tundra to the tropics and on every continent except Antarctica. Two general categories of wetlands are recognized: coastal or tidal wetlands, and inland or freshwater wetlands. Included among the many types of wetlands found in the United States are peat lands, marshes, mires, vernal pools, swamps, muskegs, wet meadows, playas, bogs, pocosins, sloughs, potholes, and fens.

It is important to point out that unlike streams, rivers, lakes, and estuaries, some wetlands contain little or no surface water and are primarily influenced by high ground water tables. These wetlands are normally "dry" or have standing water for just a few months out of the year, but can be of extraordinary value.

Value of Wetlands

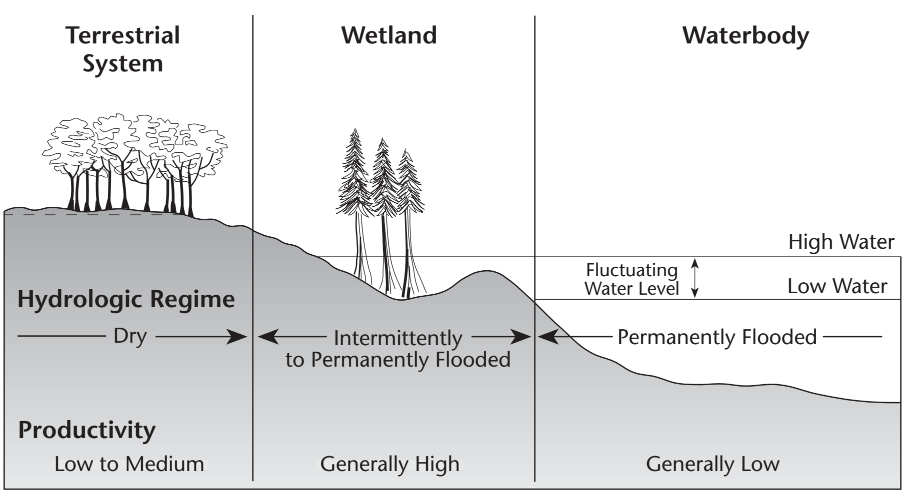
Maintaining and restoring the quality of our wetlands is important because of the many beneficial uses that they provide to humans, aquatic life, other wildlife, and the environment as a whole.

Wetlands can be thought of as biological "supermarkets." They produce great quantities of food that attract many animal species. The complex, dynamic feeding relationships among the organisms inhabiting wetland environments are referred to as food webs. The combination of shallow water, high levels of inorganic nutrients, and high rates of primary productivity (the synthesis of new plant biomass through photosynthesis) in many wetlands is ideal for the development of organisms that form the base of the food web—many species of insects, mollusks, and crustaceans, for example.

For many fish and wildlife species, wetlands are primary habitats, meaning that these species depend on them for survival; for others, wetlands provide important seasonal habitats, where food, water, and cover are plentiful. The U.S. Fish and Wildlife Service estimates that up to 43% of the federally threatened and endangered species rely directly or indirectly on wetlands for their survival. Because they produce so much plant biomass and invertebrate life, estuaries and

Figure 5-1

Depiction of Wetlands Adjacent to a Waterbody



Wetlands are often found at the interface between dry terrestrial ecosystems, such as upland forests and grasslands, and permanently wet aquatic ecosystems, such as lakes, rivers, bays, estuaries, and oceans.

Reprinted with modifications, by permission, from Mitsch/Gosselink: *Wetlands 1986*, fig. 1-4, p. 10. © 1986, Van Nostrand Reinhold.

Figure 5-2

Coastal Wetlands Produce Detritus that Supports Fish and Shellfish

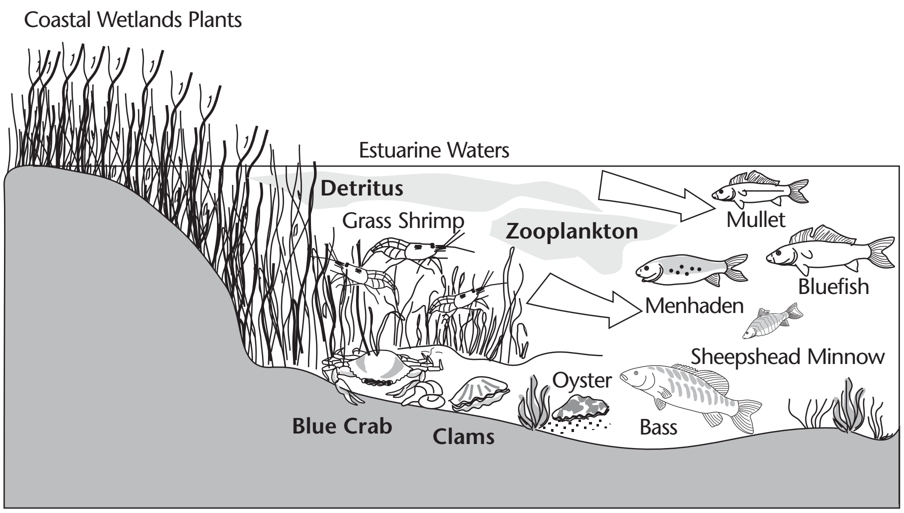
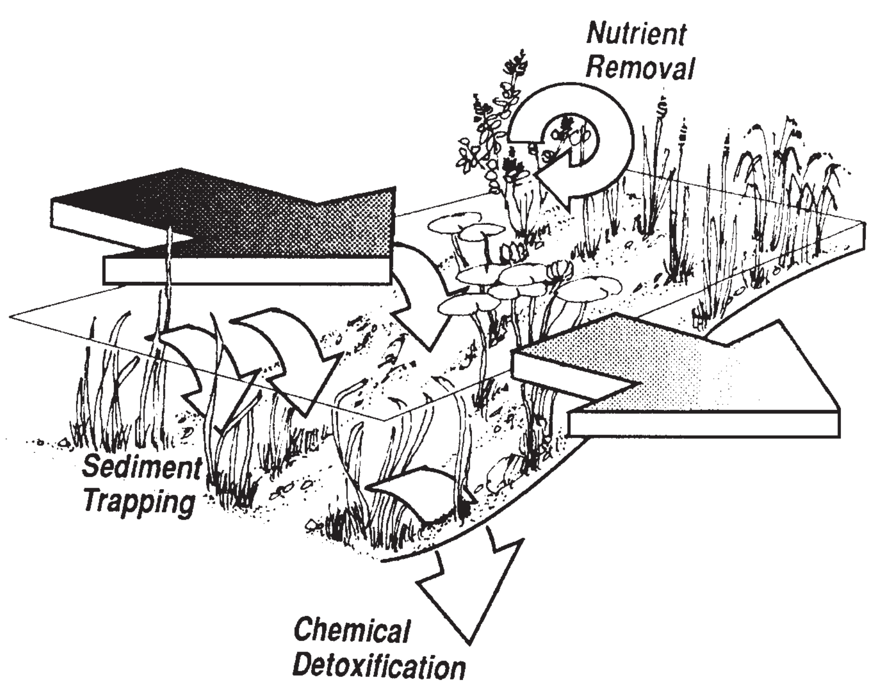


Figure 5-3

Water Quality Improvement Functions in Wetlands



Source: Washington State Department of Ecology.

their coastal marshes serve as important nursery areas for the young of many game and commercial fish and shellfish (Figure 5-2).

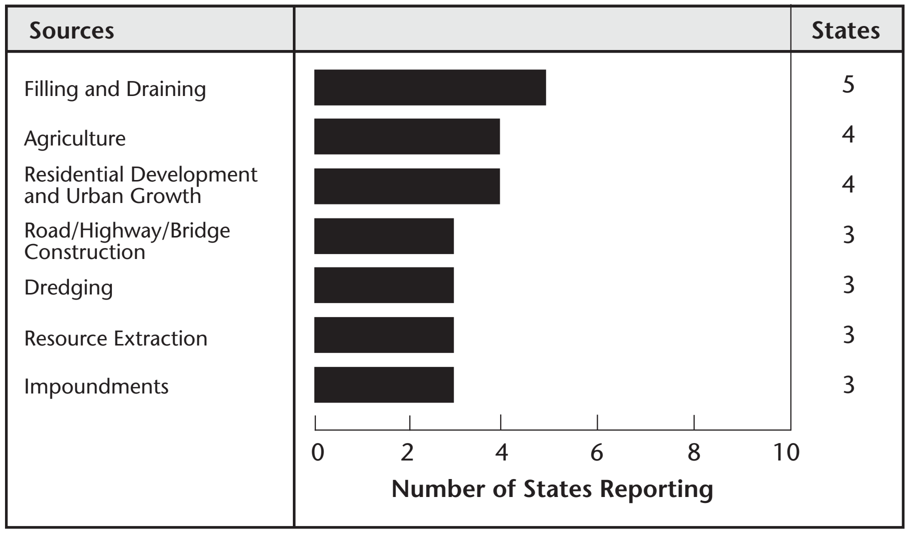
Wetlands are also valuable because they greatly influence the flow and quality of water. They help improve water quality, including drinking water, by intercepting surface runoff and removing or retaining inorganic nutrients, processing organic wastes, and reducing suspended sediments before they reach open water (Figure 5-3). In performing this filtering function, wetlands save us a great deal of money. For example, the Congaree Bottomland Hardwood Swamp in South Carolina removes a quantity of pollutants that would be equivalent to that removed annually by a $5 million wastewater treatment plant.

In addition to improving water quality through filtering, some wetlands maintain stream flow during dry periods; others replenish ground water. For instance, one calculation for a 5-acre Florida cypress swamp that is known to recharge ground water reveals that if 80% of the swamp was drained, available ground water would be reduced by an estimated 45%.

Because of their low topographic position relative to uplands, wetlands store and slowly release surface water, rain, snowmelt, ground water and flood waters. Trees and other wetland vegetation also impede the movement of flood waters and distribute them more slowly over floodplains. This combined water storage and slowing action lowers flood heights and reduces erosion downstream and on adjacent lands. Preserving and restoring wetlands can often afford a level of flood protection otherwise provided by expensive impoundments, dredging operations, and levees. In Minnesota, for example, the cost of replacing the natural flood control

Figure 5-4

Sources of Recent Wetland Losses
(9 States Reporting)



Based on data contained in Appendix D, Table D-4.

function of 5,000 acres of drained wetlands was found to be $1.5 million annually.

Wetlands at the margins of lakes, rivers, bays, and the ocean help protect shorelines and stream banks against erosion. Wetland plants hold the soil in place with their roots, absorb the energy of waves, and break up the flow of stream or river currents. The ability of wetlands to control erosion is so valuable that some states (e.g., Florida) are restoring wetlands in coastal areas to buffer the storm surges from hurricanes and tropical storms.

Lastly, wetlands play a major role in our economy. For instance:

- Wetlands that support timber harvests total about 55 million acres.
- Various plants like blueberries, cranberries, mints, and wild rice are produced in wetlands.
- About 96% of the commercial fish and shellfish harvest and more than 50% of the recreational catch depend on estuarine or coastal wetlands.
- The nation's harvest of muskrat pelts is valued at over $70 million annually.
- At least $18 billion in economic activity is generated annually from recreational fishing in coastal wetlands by 17 million Americans.
- Nationally, economic activity directly associated with recreational bird watching (closely tied to wetlands and aquatic habitats) generated 191,000 jobs and more than $895 million in tax revenues in 1991.

Wetland Loss in the United States

It is estimated that over 200 million acres of wetlands existed in the lower 48 states at the time of European settlement. Since then, extensive wetland acreage has been lost. Many of our original wetlands have been drained and converted to farmland and urban development. One of the surest ways to degrade the beneficial use of a wetland is to eliminate it through excavation, filling, or draining.

The average annual loss of wetlands has decreased over the past 40 years. According to a report issued by the National Wetland Inventory (*Status and Trends of Wetlands in the Conterminous United States 1986 to 1997*, U.S. Fish and Wildlife Service), the rate of wetland loss in the United States has decreased to an estimated annual loss of 58,500 acres (an 80% reduction compared to the previous decade). The Natural Resource Conservation Service's Natural Resource Inventory (NRI), reporting on the health of America's private lands, also shows significant reduction in wetland losses. The NRI found an average annual net loss of 32,600 acres of wetlands on nonfederal lands from 1992 to 1997 (a 58% reduction compared to the previous decade).

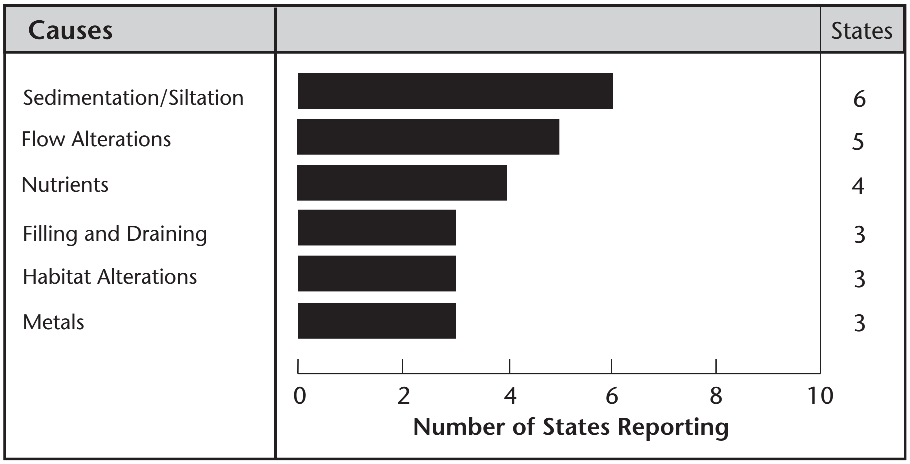
The decline in wetland losses is a result of several trends, including the decline in profitability of converting wetlands for agricultural production, the presence of Clean Water Act Section 404 permit programs as well as development of state management programs, greater public interest and support for wetland protection, and implementation of wetland restoration programs at the federal, state, and local levels. Filling and draining, agriculture, and development are the leading sources of recent wetland loss (Figure 5-4).

Assessing the Quality of Wetlands

Applying water quality standards to wetlands is a key goal of EPA's program to protect the nation's wetland resources. According to the

Figure 5-5

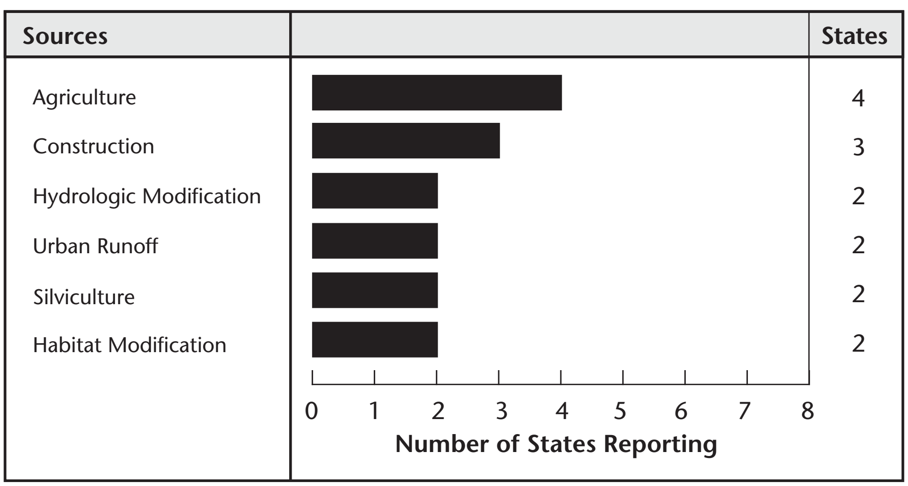
Causes Degrading Wetland Integrity
(9 States Reporting)



Based on data contained in Appendix D, Table D-2.

Figure 5-6

Sources Degrading Wetland Integrity
(9 States Reporting)



Based on data contained in Appendix D, Table D-3.

2000 water quality assessments, the states, tribes, and other jurisdictions are making progress incorporating wetlands into water quality standards and developing designated uses and criteria specifically for wetlands. Eleven states have at least a portion of their water quality standards already in place for wetlands, while six additional states have standards under development or proposed (see Appendix D, Table D-5). However, most states and tribes still lack wetland-specific designated uses, criteria, and monitoring programs for wetlands. Without these, they cannot evaluate support of designated uses in their wetlands.

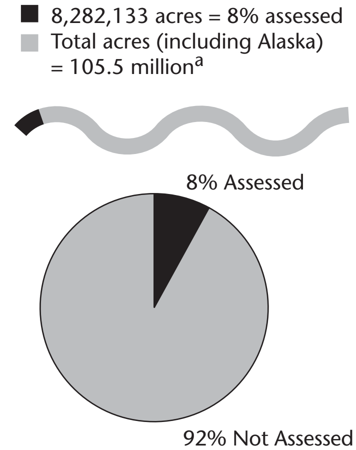
In their 2000 reports, only nine states and tribes reported the designated use support status for some of their wetlands (see Appendix D, Table D-1). EPA cannot draw national conclusions about water quality conditions in all wetlands because the states used different methodologies to survey only 8% of the total wetlands in the nation. Additionally, only one state used random sampling techniques and two used a targeted approach (monitoring where problems were known or suspected).

States reported in 2000 that the leading causes and sources of wetland degradation remained nearly unchanged from those reported in 1998. Sediment/siltation, flow alterations, and nutrients top the list of reported causes of pollution (Figure 5-5). Wetlands can sustain, and are particularly noted for counteracting, a certain amount of these sediments and nutrients. However, excessive amounts of nutrients such as nitrogen and phosphorous affect wetlands by causing too much vegetative growth and decay that can alter water chemistry and make vegetative communities less diverse. Excessive sedimentation can effectively smother a wetland by physically coating its surface and impeding vegetative growth, or in extreme cases by creating too much distance between the root zone and the ground water table, so that it no longer retains wetland characteristics. Flow alteration may occur two ways: as a result of the construction of drainage ditches or canals that intentionally or inadvertently dry out the wetland, or as a result of the construction of flood control berms, dikes, or levees that channel excess water into the wetland or cause the wetland to retain too much water, significantly oversaturating it or even transforming it to open water. Agriculture and construction are reported as important sources of degradation (Figure 5-6).

To adequately monitor the condition of their wetlands, states and tribes may apply a range of methods, including biological assessment, hydrogeomorphic (HGM) assessment, and geographic information system (GIS)-based landscape analyses. For instance, North Carolina does not use on-site monitoring to determine use support for most of the state's 7,175,000 acres of wetlands. Instead, the state often assigns use support designations to wetlands using soil maps, National Wetland Inventory maps, aerial photographs, and information on land use practices. Wetland area that has been converted to agricultural or urban uses, for example, has lost all or most of its original wetland uses, and would be classified as "not supporting." Wetlands where the vegetation, soil, and/or hydrology have been altered but most wetland uses remain intact are termed "partially supporting." North Carolina uses the support numbers determined with these methods to present a general idea of wetlands status throughout the state. In Louisiana, wetlands cover approximately 28% of the state's surface area. The state is now developing a designated use category for wetlands that will have specific water quality criteria to protect different types of wetlands. The state hopes this will be an improvement over the current system, which requires the development of site-specific criteria before a wetland can be classified. Louisiana is also reviewing projects that would alter the water quality standards to allow certain wetland systems to be used for wastewater management. The discharge of treated sanitary wastewater can help prevent wetland loss by preventing subsidence of the sediments, which is a significant problem facing some of Louisiana's wetlands.

EPA and its state, federal, local, and academic partners are developing technical guidance on elements of an adequate wetland monitoring program to support the efforts of states and tribes to accurately characterize the condition of their wetlands. Guidance on development of state water quality standards specifically tailored to the unique characteristics of wetlands is also underway.

Wetland Acres Assessed by States and Tribes



[a]From: National Wetland Inventory, 2000.

Source: 2000 Section 305(b) reports submitted by states, tribes, territories, and commissions.

More information on wetlands can be obtained from EPA's Wetlands Hotline at 1-800-832-7828, 9 a.m. to 5 p.m. Eastern Standard Time.

Conrad Conero, Shawangunk Mountains, NY

Ground Water Quality

Ground water is a vital national resource. In many parts of the nation, ground water serves as the only reliable source of drinking and irrigation water. However, ground water is vulnerable to contamination, and problems caused by elevated levels of petroleum hydrocarbon compounds, volatile organic compounds (VOCs), nitrate, pesticides, and metals have been detected in ground water across the nation. The detection of some relatively new contaminants (e.g., methyl tertiary butyl ether or MTBE) in ground water is also increasing.

Ground Water Use in the United States

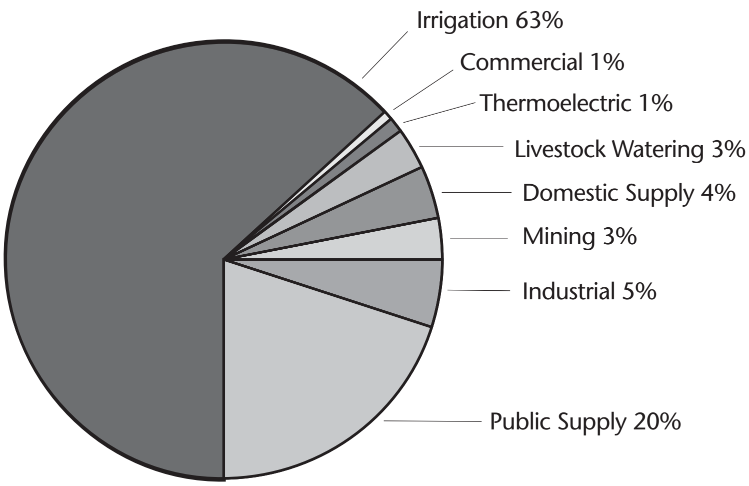
Ground water is an important component of our nation's freshwater resources. In 1995, the U.S. Geological Survey (USGS) reported that ground water supplied drinking water for 46% of the nation's overall population and 99% of the population in rural areas. Figure 6-1 illustrates how ground water is used nationwide. This figure indicates that irrigation (63%) and public water supply (20%) are the largest uses of ground water.

Ground Water Quality and Sources of Ground Water Contamination

Evaluating our nation's ground water quality is a complex task. Ground water quality can be adversely affected by human activities that introduce contaminants into the environment. It can also be affected by natural processes (such as leaching) that result in elevated concentrations of certain constituents. Ground water contamination can occur as relatively well-defined, localized plumes emanating from specific sources such as leaking underground storage tanks, spills, landfills, waste lagoons, and/or industrial facilities (Figure 6-2). Ground water quality degradation can also occur over a wide area due to diffuse nonpoint sources such as agricultural fertilizer and pesticide applications. Frequently, ground water contamination is discovered long after it has occurred. One reason for this is the slow movement of ground water through aquifers. In some cases, contaminants introduced into the subsurface decades ago are only now being discovered.

Figure 6-1

National Ground Water Use



Source: *Estimated Use of Water in the United States in 1995.* U.S. Geological Survey Circular 1200, 1998.

Sources frequently cited by states as potential threats to ground water quality include leaking underground storage tanks, septic systems, landfills, industrial facilities, and fertilizer applications. If similar sources are combined, four broad categories emerge as the most important potential sources of ground water contamination:

■ **Fuel Storage Practices** – Leakage from storage tanks can be a significant source of ground water contamination (Figure 6-3). MTBE, added to some fuel products to improve performance, is highly water soluble; incidents of MTBE contamination in ground water are widely reported across the nation.

■ **Waste Disposal Practices** – Systems and practices that can contaminate ground water if not handled properly include septic systems, landfills, surface impoundments, deep and shallow injection wells, waste piles, waste tailings, and land application of waste.

■ **Agricultural Practices** – Ground water contamination can result from routine applications, spillage, or misuse of pesticides and fertilizers during handling and storage, manure storage/spreading, improper storage of chemicals, and irrigation return drains serving as a direct conduit to ground water.

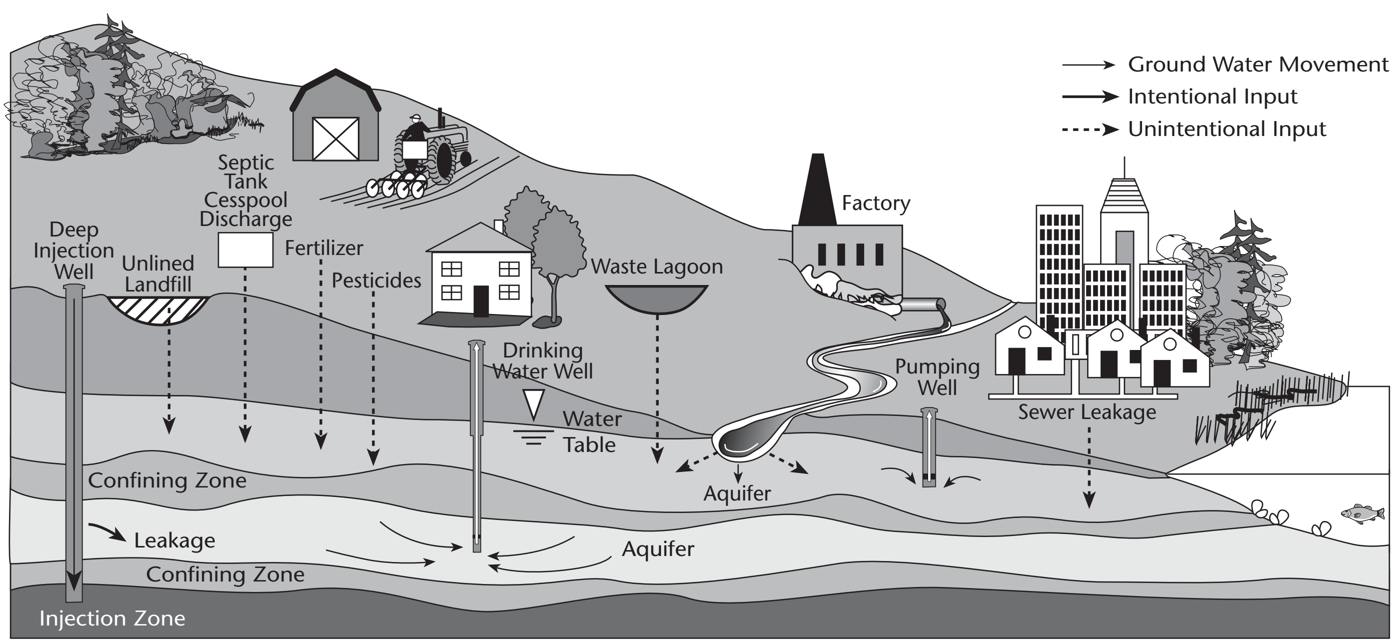
■ **Industrial Practices** – Raw materials and waste handling in industrial processes can pose a threat to ground water quality. Storage of raw materials at industrial sites can be a problem if the materials are stored improperly and leaks or spills occur.

Examples of State Assessments

Fifty-two states, tribes, and territories reported on ground water information in their 2000 reports (Figure 6-4). These states reported that the major sources of ground water contamination continue to be underground storage tanks, septic systems, and landfills (Figure 6-5). Of the six tribes

Figure 6-2

Sources of Ground Water Contamination



reporting on ground water, four identified septic systems as the major threat to ground water quality on tribal lands. Although positive strides were made in assessing ground water quality in 2000, ground water data collection under Section 305(b) is still too immature to provide comprehensive national assessments. Despite the lack of national coverage, many states have demonstrated strong ground water assessment programs. Two state ground water assessments are summarized below.

Massachusetts

In Massachusetts, 69% of the towns rely solely or partially on public ground water supply. The state currently has 2,648 ground water public supply sources, and due to increasing water demand there is a corresponding increase in the development of ground water sources. Because the number of ground water sources outnumbers surface water supplies by more than 13 to 1, the state is able to use public water supply (PWS) monitoring information to assess ground water quality across much of the state. Results of PWS monitoring show that the overwhelming majority of drinking water violations were due to coliform bacteria. However, VOCs were detected from sources across the state and with nitrates are currently the contaminants of greatest concern.

Protection of ground water from point sources of pollution (such as sanitary wastewater discharges and industrial discharges) is achieved through a Groundwater Discharge Permit Program in the state's Department of Environmental Protection. The permits require varying degrees of wastewater treatment based on the quality and use of the receiving ground water. However, additional controls are needed to eliminate contamination from septic systems and sludge disposal. Individual septic tanks serve about 30% of the state's population. Contamination of ground

Figure 6-3

Ground Water Contamination as a Result of Leaking Underground Storage Tanks

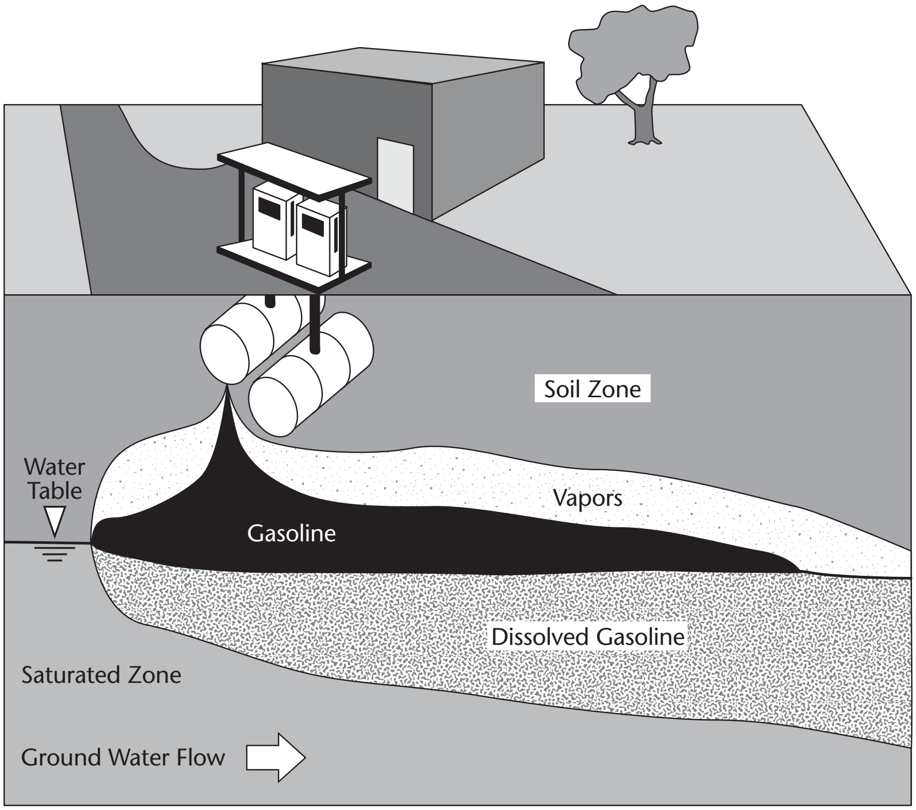
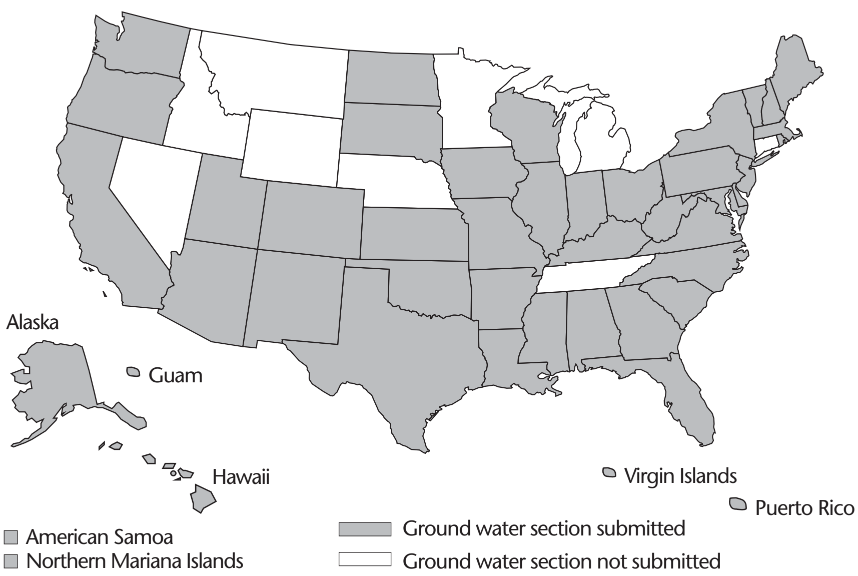


Figure 6-4

States Reporting Ground Water Data



water supplies used for drinking water has been a problem in densely populated areas where septic systems are used. The state anticipates that new technologies and regulatory changes will be needed to reduce the level of contamination from septic systems.

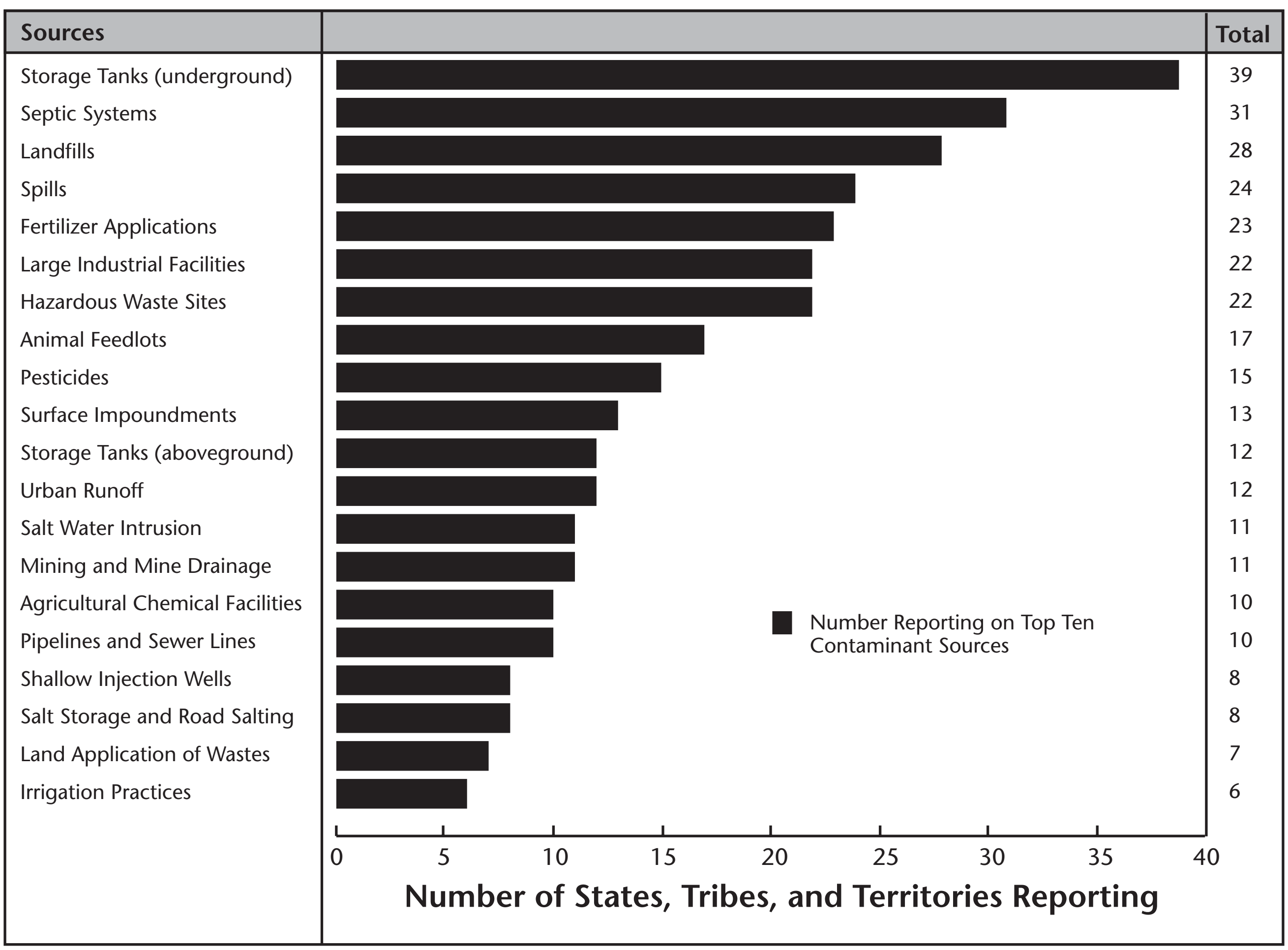
Recently, Massachusetts began work on its Source Water Assessment Program (SWAP), as required under Section 1453 of the Safe Drinking Water Act, and has established water supply protection areas for both ground water and surface water sources. Other regulatory requirements, such as the state's Underground Injection Control (UIC) Program, target the source water protection areas to implement controls preventing the migration of contaminants to ground water.

Arizona

Arizona assesses ground water quality using several different methods. The state monitors a network of ambient water quality index wells and compares these data to health-based Aquifer Water Quality Standards and to the Secondary Maximum Contaminant Level (SMCL) guidance (for contaminants that do not pose health risks). Data are also compiled from other monitoring programs, which are primarily targeted in areas of known or suspected contamination. To make water quality assess-

Figure 6-5

Major Sources of Ground Water Contamination



ments, monitoring data from the index wells and targeted wells are pulled together from the state departments of Environmental Quality and Water Resources, from the USGS, and from specific watershed programs such as the Salt River Project. For the 2000 305(b) assessments, Arizona compared the last 8 years of ground water monitoring results to the aquifer standards and SMCL guidance. The state then summarized the percentage of wells exceeding each different standard. About 28% of wells exceeded the standards for VOCs and semivolatile organic compounds (SVOCs), and 12% exceeded nitrate standards over the past 8 years. Fluoride and radiochemicals occur naturally in the soil and water across Arizona, and in some locations the levels of these chemicals exceed drinking water standards.

Ground water contamination varies significantly across Arizona. In the metropolitan areas, VOCs and SVOCs contaminate ground water due to inadequate historic practices for disposing of industrial solvents and dry-cleaning chemicals. These contamination areas are being remediated by the federal and state Superfund Programs. In addition, the requirements of the state's Aquifer Protection Permit Program have greatly reduced the threat of ground water contamination from point source discharges. To protect ground water resources from nonpoint sources, the state relies on the application of Best Management Practices and other nonregulatory actions.

Conclusions

Assessing the quality of our nation's ground water resources is no easy task. Required source water assessments under Section 1453 of the Safe Drinking Water Act should prove helpful in generating good quality data that can be used to evaluate ground water quality over time. Monitoring data from wellhead protection delineations, source inventories, and other data collection efforts will increase and improve the information that is used to make determinations on the quality of ground water across the nation.

Ken Gilland, Long Beach, CA

Public Health and Aquatic Life Concerns

This chapter describes how impaired water quality may affect public health and aquatic life. Several sections describe efforts to evaluate impacts on different beneficial uses. These uses include fish and wildlife consumption, shellfish consumption, drinking water, recreation, and aquatic life.

Public Health Concerns

Water pollution threatens both public health directly through the consumption of contaminated food or drinking water, or indirectly through skin exposure to contaminants present in recreational or bathing waters. Contaminants that threaten human health include toxic chemicals and waterborne disease-causing pathogens such as viruses, bacteria, and protozoans.

Toxic chemicals have been linked to human birth defects, cancer, neurological disorders, and kidney ailments. Waterborne pathogens can cause acute respiratory illness, gastrointestinal problems, jaundice, dehydration, inflammation of the brain, eye infections, and heart anomalies.

Fish and Wildlife Consumption Advisories

To protect the public from ingesting harmful quantities of toxic pollutants in contaminated noncommercial fish and wildlife, states and tribes issue fish and wildlife consumption advisories. Advisories may completely ban consumption in severely polluted waters or limit consumption to several meals per month in cases of less severe contamination. They may target a subpopulation at risk (such as children, pregnant women, or nursing mothers), specific fish species that concentrate toxic pollutants in their flesh, or larger fish within a species that may have accumulated higher concentrations of a pollutant over a longer lifetime than a smaller (i.e., younger) fish.

EPA evaluates the national extent of toxic contamination in noncommercial fish and shellfish by counting the total number of waterbodies with consumption advisories in effect. The National Listing of Fish and Wildlife Advisories (NLFWA) database, which centralizes fish consumption advisory information maintained by various state and tribal agencies, was updated in 2000 and can be accessed on the Internet at *http://www.epa.gov/ost/fish/*.

The 2000 EPA NLFWA listed 2,838 advisories in effect in 48 states, the District of Columbia, and American Samoa (Figure 7-1). An advisory may represent one waterbody or one type of waterbody within a state's jurisdiction. Statewide advisories are counted as one advisory (see Appendix E, Table E-1, for individual state data).

Many toxic chemicals concentrate in fish and shellfish.

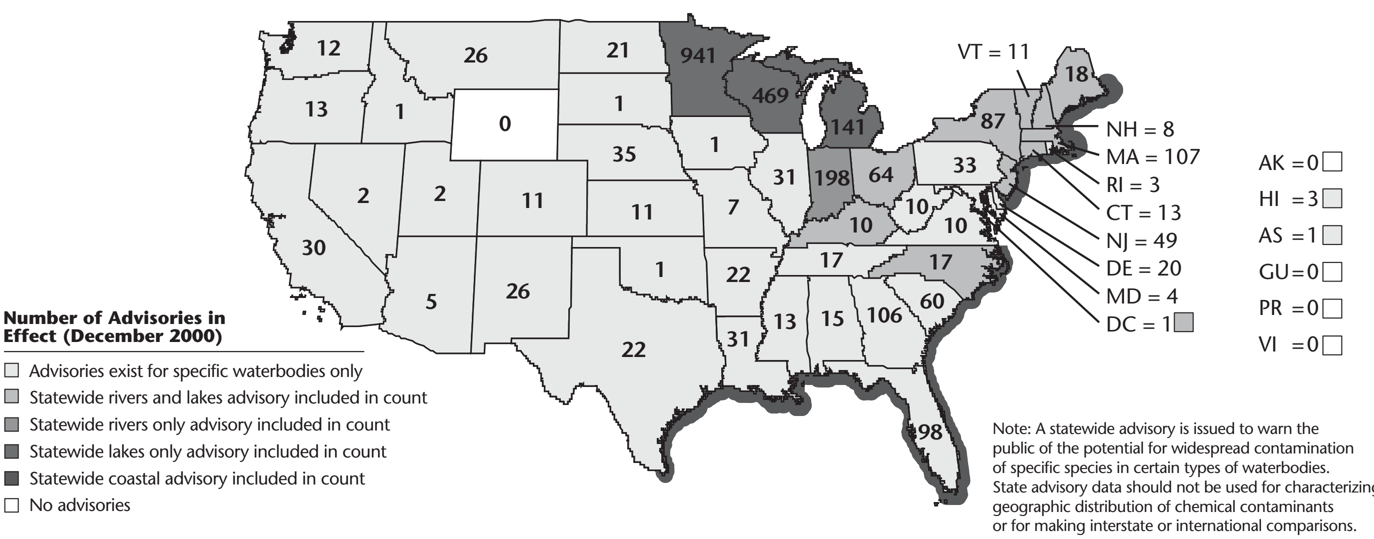
National statistics on advisories are difficult to interpret because the intensity and coverage of state monitoring programs vary widely. In addition, each state sets its own criteria for issuing advisories. EPA has provided guidance to the states and tribes for developing consistent criteria and methods for issuing and communicating fish consumption advisories in several recent publications and at conferences. However, it will be several years before states implement consistent methods and criteria and establish a baseline inventory of advisories. EPA expects the states to issue more advisories as they sample more sites and detect new areas of contamination.

Mercury, PCBs, chlordane, dioxins, and DDT (with its byproducts) caused 99% of all the fish consumption advisories in effect in 2000 (Figure 7-2). EPA banned or restricted the use of PCBs, chlordane, and DDT over 20 years ago, yet these chlorinated hydrocarbon compounds persist in sediments and fish tissues and still threaten public health.

The source of mercury contamination is difficult to identify because mercury occurs naturally in soils and rock formations. Natural processes, such as weathering of mercury deposits, release some mercury into surface waters. However, human activities have accelerated the rate at which mercury accumulates in our waters and enters the food web. Air pollution may, in fact, be the most significant source of mercury contamination in surface waters and fish. According to EPA's Toxics Release Inventory, almost all of the mercury released by permitted polluters enters the air; industries and waste treatment plants discharge very little mercury directly into surface waters.

Figure 7-1

Fish and Wildlife Consumption Advisories in the United States



Note: States that perform routine fish tissue analysis (such as the Great Lakes states) will detect more cases of fish contamination and issue more advisories than states with less rigorous fish sampling programs. In many cases, the states with the most fish advisories support the best monitoring programs for measuring toxic contamination in fish, and their water quality may be no worse than the water quality in other states.

Based on data contained in EPA's National Listing of Fish and Wildlife Advisories database acquired from the states in December 2000 (see Appendix E, Table E-1, for individual state data).

Shellfish Consumption Advisories

Contaminated shellfish pose a public health risk particularly to those who consume raw shellfish. Shellfish, such as oysters, clams, and mussels, extract their food (plankton) by filtering water over their gills. In contaminated waters, shellfish accumulate bacteria and viruses on their gills, mantle, and within their digestive systems. If shellfish grown in contaminated waters are not cooked properly, consumers may ingest live bacteria and viruses.

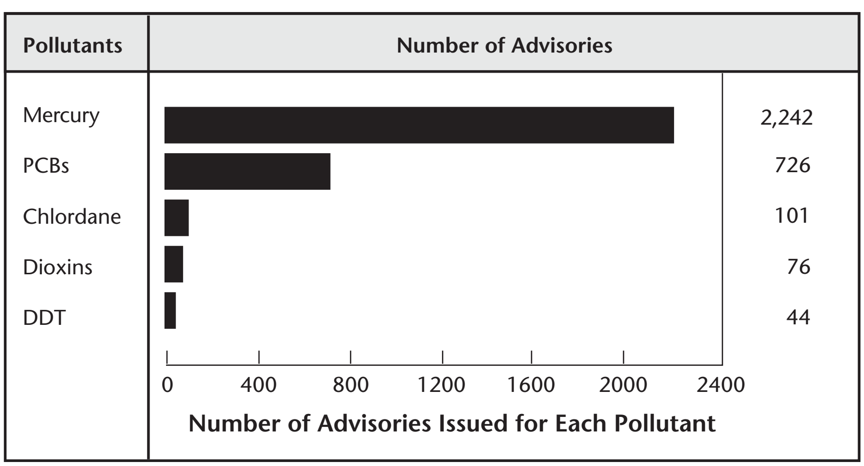
To protect public health, the U.S. Food and Drug Administration administers the National Shellfish Sanitation Program (NSSP). The NSSP establishes minimum quality monitoring requirements and criteria for state shellfish programs that want to sell and transport their shellfish in interstate commerce. Coastal states routinely monitor water quality in shellfish harvesting areas for bacterial contamination and restrict shellfish harvests in contaminated waters. Most often, states measure concentrations of fecal coliform or total coliform bacteria, which are bacteria that populate human digestive systems and occur in fecal wastes. Their presence in water samples is an indicator of sewage contamination that may pose a human health risk from pathogenic viruses and bacteria.

The size of waters with shellfishing restrictions is our most direct measure of impacts on shellfishing resources. However, only 10 of the 28 coastal states and territories reported the size of their estuarine waters affected by shellfish harvesting restrictions. With so few states reporting numerical data, EPA cannot summarize the national scope of shellfish harvesting conditions at this time. The National Oceanic and Atmospheric Administration is developing a database to track state restrictions that should provide a more complete profile of shellfishing conditions in the future.

The reporting states prohibit, restrict, or conditionally approve shellfish harvesting in 1,630 square

Figure 7-2

Pollutants Causing Fish and Wildlife Consumption Advisories in Effect in 2000



Note: An advisory can be issued for more than one pollutant.

Based on data contained in EPA's National Listing of Fish and Wildlife Advisories database acquired from the states in December 2000 (see Appendix E, Table E-2, for individual state data).

MERCURY is the most common contaminant found in fish.

miles of estuarine waters. About 11% of these waters are conditionally approved, so the public can harvest shellfish from these waters when the state lifts temporary closures. For comparison, nine states reported that over 7,300 square miles of estuarine waters are fully approved for harvesting shellfish at all times (Appendix E, Table E-3, contains individual state data).

Only three states reported the size of shellfish restrictions caused by specific sources of pathogen indicators (Figure 7-3). Other states provided narrative information about sources degrading shellfish waters. The reported sources included marinas, stormwater runoff, waterfowl, industrial and municipal discharges, agriculture, and septic tanks.

Drinking Water Contamination

Thanks to decades of effort by public and private organizations and the enactment of safe drinking water legislation, most Americans can turn on their taps without fear of receiving unsafe water. Ensuring consistently safe drinking water requires the cooperation of federal, state, tribal, and municipal governments to protect the water as it moves through three stages of the system—the raw source water, the water treatment plant, and the pipes that deliver treated water to consumers' taps. Polluted source waters greatly increase the level and expense of treatment needed to provide treated water that meets public health standards.

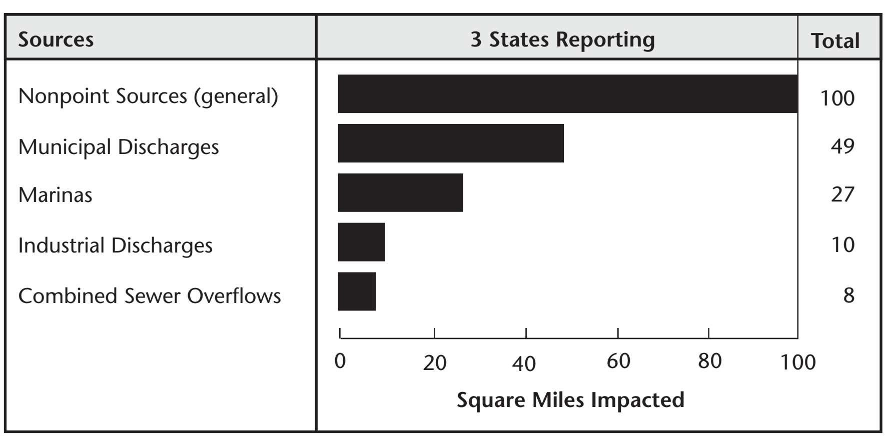
The Safe Drinking Water Act (SDWA) calls for states to determine the susceptibility of waters to contamination, and Section 305(b) of the Clean Water Act calls for them to assess the ability of waters to support drinking water use. States use the general criteria outlined in Table 7-1 to determine the degree of drinking water use support for their waterbodies. These criteria may be modified by the states to fit their individual situations.

In 2000, 39 states, tribes, or territories submitted drinking water use data in their reports. Table 7-2 shows the total number of miles of rivers and streams and acres of lakes and reservoirs assessed and the degree of drinking water use support for the entire nation. The majority of waterbodies assessed, 86% of river and stream miles and 84% of lake and reservoir acres, are considered to be supporting their drinking water use.

While reporting on drinking water use has improved over the past 10 years, many challenges still remain. Seventeen states did not report data on drinking water use support. Many of the 39 states that reported data did not present any information on how they classified their waterbodies for drinking water use support, and did not identify specific contaminants or sources of water contamination. This lack of information complicates data

Figure 7-3

Sources Associated with Shellfish Harvesting Restrictions



Based on data contained in Appendix E, Table E-4.

interpretation and presents challenges for accurately assessing and representing drinking water use support. Table 7-3 summarizes all of the contaminants cited as causing drinking water use impairment, based on the limited number of states identifying contaminants.

Recreational Restrictions

State reporting on recreational restrictions, such as beach closures, is often incomplete. Most state agencies rely on local health departments to voluntarily monitor and report beach closures, and this information may not always be shared with the state water quality agency. In addition, health departments that monitor infrequently will detect fewer bacteria violations than health departments with rigorous beach monitoring schedules.

Four states reported that no contact recreation restrictions were reported to them during the 2000 reporting cycle. Thirteen states and tribes identified 233 sites where recreation was restricted at least once during the reporting cycle (Appendix E, Table E-6, contains individual state data). Three states (California, Louisiana, and New Jersey) reported on the number of restrictions but did not specify the number of sites at which the restrictions occurred. Local health departments closed many sites more than once.

Most of the restrictions were caused by pathogen indicator bacteria. Other contaminants cited include gasoline from spills, debris found in the water, algal blooms, a cluster of Shigellosis cases, and pollutants in urban runoff.

The states identified sewage treatment plant bypasses and malfunctions, urban runoff storm sewers, faulty septic systems, and agricultural runoff as the most common sources of elevated bacteria concentrations in bathing areas. The states also reported that natural sources (e.g., migratory water fowl) and waste spills restricted recreational activities.

EPA initiated a Beach Watch program in 1997 to significantly reduce the risk of waterborne illness at the nation's beaches and recreational waters through improvements in recreational water protection programs, risk communication, and scientific advances. EPA conducted the third annual National Health Protection Survey of Beaches on the 2001 swimming season. State and local environmental and public health officials voluntarily returned information on 2,445 beaches—over 1,400 more beaches than in 1997, the first

Table 7-1. Criteria To Determine Drinking Water Use Support

Classification	Monitoring Data		Use Support Restrictions
Full support	Contaminants do not exceed water quality criteria	and/or	Drinking water use restrictions are not in effect
Full support but threatened	Contaminants are detected but do not exceed water quality criteria	and/or	Some drinking water use restrictions have occurred and/or the potential for adverse impacts to source water quality exists
Partial support	Contaminants exceed waterquality criteria intermittently	and/or	Drinking water use restrictions resulted in the need for more than conventional treatment
Nonsupport	Contaminants exceed water quality criteria consistently	and/or	Drinking water use restrictions resulted in closures
Unassessed	Source water quality has not been assessed		

Table 7-2. National Drinking Water Use Support*

Waterbody	Good	Impaired	Total Assessed
Rivers and Streams			
Miles	132,080	20,989	153,155
Percentage	86%	14%	
Lakes and Reservoirs			
Acres	6,041,725	1,202,850	7,259,955
Percentage	84%	17%	

*Does not include waters rated not attainable.

year of the survey. This information is now on the Beach Watch web site at *http://www.epa.gov/waterscience/beaches/*. The survey shows that 672 beaches (27% of the reported beaches) were affected by at least one advisory or closing. This percentage of beaches affected is essentially the same percentage reported over the last 2 years. The leading reasons cited for water quality impairment at beaches were elevated bacteria levels and rain events (stormwater runoff).

Aquatic Ecosystem Concerns

Although aquatic organisms can tolerate most viruses, bacteria, and protozoans harmful to humans, they may be more severely affected by the presence of toxic chemicals in their environment. Toxic chemicals have the potential to kill all or selected aquatic organisms within a community, increase their susceptibility to disease, interfere with reproduction, or reduce the viability of their young. Toxic chemicals may also affect aquatic organisms indirectly by altering the delicate physical and chemical balance that supports life in an aquatic community. Aquatic organisms are also susceptible to changes in the physical quality of their environments such as changes in pH, temperature, dissolved oxygen, amount of sediment, and habitat.

To strengthen their ability to protect the biological integrity of aquatic ecosystems, EPA encourages states to adopt designated uses or biological criteria that define the aquatic community structure and function for a specific waterbody or class of waterbodies. These can be descriptive characteristics or a numeric score based on multiple measures of community structure and function. The challenge for EPA is to summarize the states' individual assessments, which often are based on very diverse standards. The basis for EPA's summary is the information reported by the states on the extent to which their waters support the aquatic life use goal.

In 2000, states reported that aquatic life uses were supported in 66% of their river and stream miles, 71% of their lake and reservoir acres, 48% of their estuarine square miles, 94% of their coastal shoreline miles, and 82% of their Great Lakes shoreline miles.

Table 7-3. Sources of Drinking Water Use Impairment

Contaminant Group	Specific Contaminant	
Pesticides	Atrazine Metolachlor Triazine	Molinate Ethylene dibromide
Volatile organic chemicals	Trichloroethylene Tetrachloroethylene 1,1,1-Trichloroethane *cis*-1,2-Dichloroethylene Trihalomethanes Carbon tetrachloride Ethylbenzene 1,1,2,2-Tetrachloroethane	Dichloromethane 1,1-Dichloroethane 1,1-Dichloroethylene Toluene Benzene Dichlorobenzene Methyl tertiary butyl ether Xylene
Inorganic chemicals	Arsenic Nitrates Iron Copper Chloride	Fluoride Manganese Lead Sodium
Microbiological contaminants	Exceedance of total coliform rule	Exceedance of fecal coliform rule

Sediment Concerns (Sedimentation and Contamination)

Sedimentation (siltation) was the second most reported cause of impairment to rivers and streams, according to 2000 state 305(b) data. Sedimentation impairs 84,478 river and stream miles (12% of the assessed river and stream miles and 31% of the impaired river and stream miles). Sedimentation suffocates fish eggs and smothers the habitat of bottom-dwelling organisms such as aquatic insects. The loss of aquatic insects adversely impacts fish and other wildlife that prey on these insects. Excessive sedimentation can also interfere with drinking water treatment processes and recreational use of a river. Sources of sedimentation include agriculture, urban runoff, construction, and forestry.

Sediment contamination occurs when certain types of chemicals in water settle and collect in sediment. Chemicals in sediment often persist longer than those in water, in part because they tend to resist natural degradation and in part because conditions might not favor natural degradation. When present at elevated concentrations in sediment, contaminants can be taken up by organisms that dwell in or on sediments and can bioaccumulate up the food chain. Contaminants can also be released from sediment back into the water column. In both cases, excessive levels of chemicals in sediment may become hazardous to aquatic life and humans.

In their 2000 305(b) reports, 12 states and tribes listed 196 separate sites with contaminated sediments and identified specific pollutants detected in sediments. These states most frequently listed metals (e.g., lead, copper, cadmium), PCBs, pesticides, PAHs, and other priority organic toxic chemicals. These states also identified industrial and municipal discharges (past and present), landfills, railroad and construction sites, marinas, shipyards, and abandoned hazardous waste disposal sites (Superfund) sites as the primary sources of sediment contamination. Other states have not utilized numeric criteria for chemical contaminants in sediment or lack the analytical tools and resources to conduct extensive sediment sampling and analysis. Therefore, the limited information provided by states and tribes probably understates the extent of sediment contamination in the nation's surface waters.

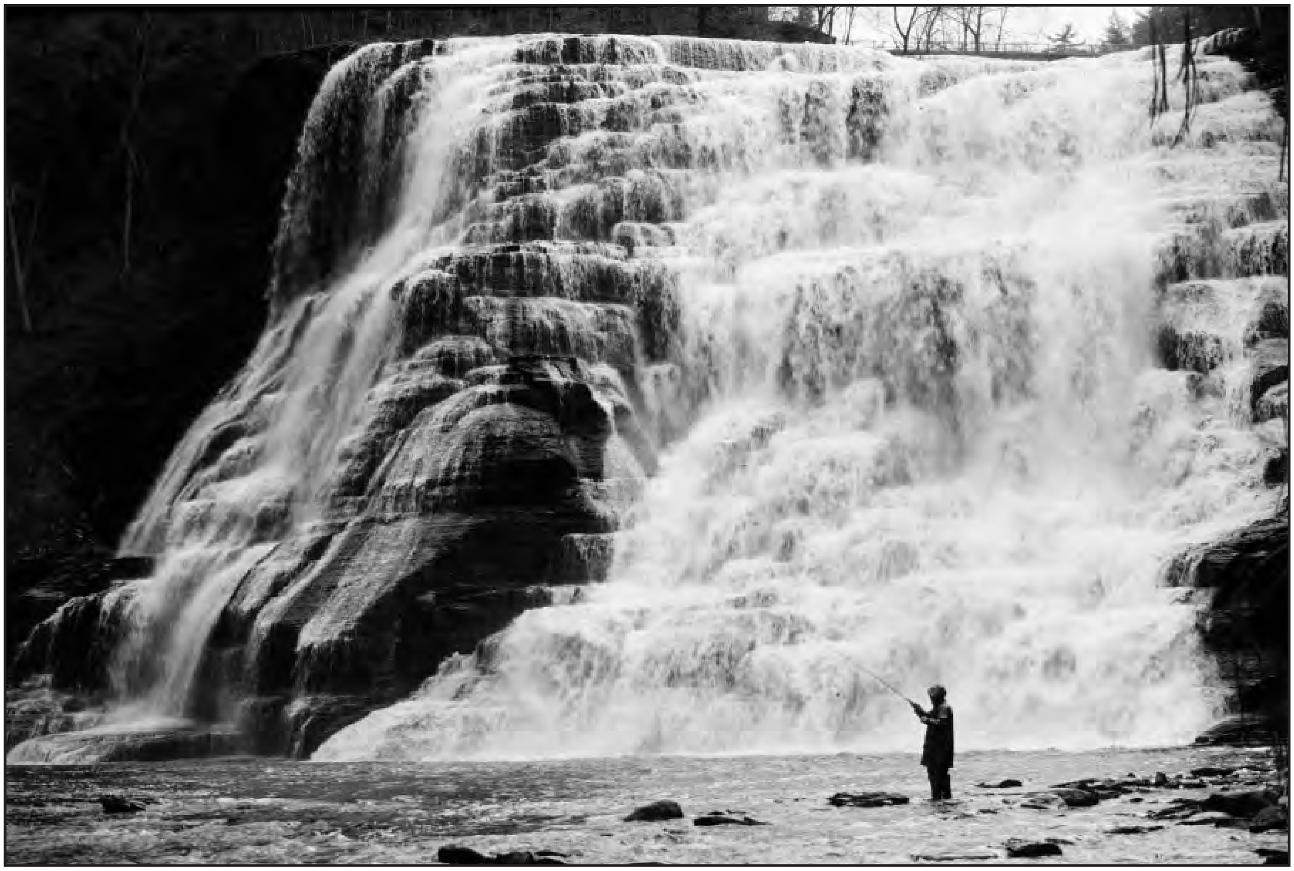
In 2002, EPA plans to release the first update to the initial *National Sediment Quality Survey* report published in 1997. This report to Congress identifies locations in the United States where data suggest that sediment is contaminated at levels potentially harmful to aquatic life or human health. EPA expects that this information can be used to target further investigations of sediment contamination on a national, regional, and site-specific scale.

In support of the *National Sediment Quality Survey*, EPA has developed the National Sediment Inventory (NSI) database. This database presents a compilation of environmental monitoring data (sediment chemistry, tissue residue, and toxicity) from a variety of sources for the nation's freshwater and estuarine ecosystems. EPA has also developed guidance and information sources to provide states with better tools for assessing and managing sediment contamination. For more information on EPA's contaminated sediment program, visit the program on the Internet at *http://www.epa.gov/waterscience/cs/*.

Invasive Species

Invasive species, also called nonindigenous, exotic, or nuisance species, are species of plants and animals that establish a new range in which they reproduce, spread, and persist, to the detriment of the native species and the natural environment. Over the past decade, an increasing number of these invasive species have been unintentionally introduced into nonnative aquatic environments resulting in harmful, sometimes devastating, ecological, public health, and socioeconomic effects. These invasive species include fauna such as the Asian clam, Asian green mussel, zebra mussel, and Japanese shore crab; plant species such as the salt marsh grass *Spartina alterniflora* and Eurasian water milfoil; and pathogens like cholera. Introduction of invasive species has occurred through several routes, most notably through fouling of ships hulls, discharge of ship ballast water, Atlantic and Pacific Ocean oyster shipments, and stocked fish and shellfish via mariculture operations or the aquarium trade.

Through predation and competition, invasive species have contributed to drastic reductions in some native species and eradication of others, thereby fundamentally altering the food chain. For instance, salt marsh grass has spread rapidly and displaced native wetland species in northern California, Oregon, and Washington.



John McShane, Ithaca, NY

Costs and Benefits of Water Quality Protection

Section 305(b) of the Clean Water Act calls for states to prepare estimates of the economic and social costs and benefits necessary to achieve the goals of the Act, i.e., water quality that is good enough to support a balanced population of shellfish, fish, and wildlife and allow recreational activities in and on the water. Unfortunately, this is a very daunting task. Data on the amount of money spent on pollution control by the public and private sectors can be difficult to obtain. Measuring benefits poses an even more complex challenge—it is easier to describe benefits than it is to put a dollar value on them because many types of benefits do not involve market transactions. Many argue that it is not appropriate to try to put a dollar value on all of the benefits of a clean environment.

Water Quality Costs and Benefits Identified by the States

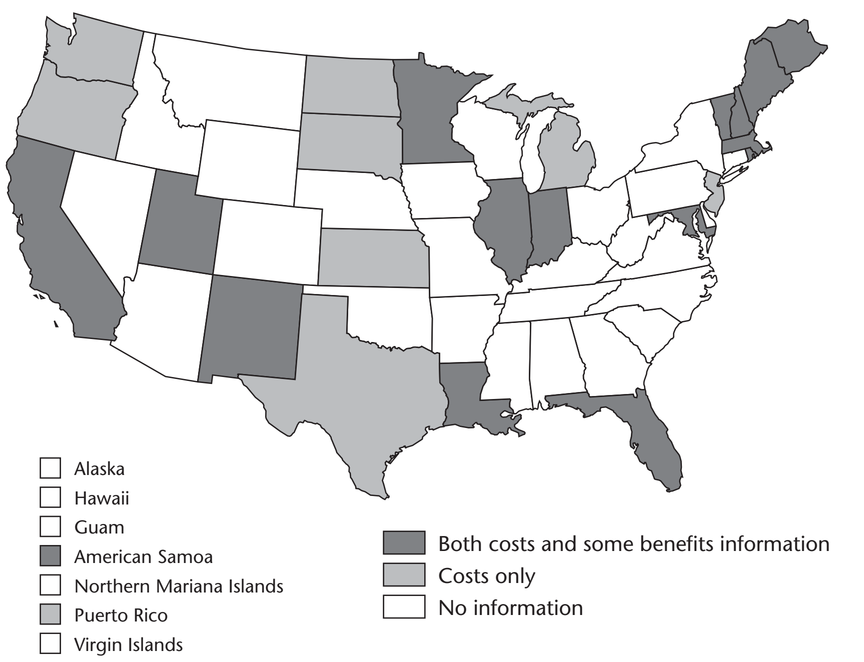
Most states reported that they encountered some difficulty in reporting on the economic and social costs and benefits of actions to achieve the goals of the Act. Many states were able to provide some estimates of expenditures on some aspects of water quality protection or restoration (Figure 8-1). Typically, this cost information included the amount of money provided through grants or loans to upgrade municipal wastewater treatment plants or the annual budget for the jurisdiction's water quality management program.

Reporting on benefits was more difficult than reporting on costs and most states provided only limited qualitative descriptions of the types of benefits accompanying implementation of the Clean Water Act. A few states, however, conducted cost/benefit analyses. The following examples highlight some of the data reported by states.

Many types of benefits, such as a healthy environment to pass on to our grandchildren, cannot be calculated.

Figure 8-1

States Reporting on Costs and/or Benefits



Based on state 2000 305(b) reports.

Maine

In 2000, the cost to administer all water-related programs in Maine was $11.1 million. This cost included licensing, compliance, enforcement, technical assistance, pollution prevention, wastewater engineering, environmental assessment, lake restoration, nonpoint source (NPS) controls, and ground water protection. Although the state did not provide an assessment of benefits for all of these programs, Maine did provide an assessment of the value of lakes to the state's economy.

Over the last 4 years, several studies have been completed by state and university researchers that have linked water quality in Maine's lakes to economic measures. A 1996 report, *Water Quality Affects Property Prices: A Case Study of Selected Maine Lakes*, analyzed the linkage between water clarity and property values. This valuation study was the first of its kind and led to a companion study using contingent valuation methods published in 1998, *Lakefront Property Owners' Economic Demand for Water Clarity in Maine Lakes*. A third investigation of the value of lakes to Maine's economy was completed in 1997, *Great Ponds Play an Integral Role in Maine's Economy*. A fourth study published in 1998 as a Ph.D. thesis, *Values and Impacts Associated with Access Users' Recreational Use of Maine's Great Ponds*, illustrates the value placed by transient users on water quality and their willingness to pay for water quality programs.

The results of all of these related studies provided a means to quantify the economic costs of lake water quality degradation and the benefits to the state of maintaining and further improving water quality. The state was able to determine that a 1 meter reduction of summertime minimum clarity (secchi transparency) resulted in a reduction of from 3 to 5% in expected market price of lakefront property. Further analysis by the state suggests that as much as 3 to 5% of the tax burden could be shifted from lakefront owners to others in the watershed, depending on the specific town involved. Preliminary estimates of aggregate property value loss on the 164 monitored low-color lakes (minimum clarity of 3 meters) ranged between $200 and $400 million.

More than a quarter of Maine's adults (>200,000 people) use lakes each year. These users spend about $100 million annually in recreational costs associated with lakes, which stimulates local economies. In addition, the consumer surplus, or the value derived in excess of what is paid for the recreational experience, exceeds $7.5 million annually. The study showed that this consumer surplus would decline by $1 to 2 million annually if small but measurable declines in lake water quality occurred.

Lake-based expenditures by all users support over 50,000 jobs in Maine and generate an estimated $1.8 billion in total direct expenditures. The state estimated that the net benefit of avoiding measurable water quality degradation in lakes exceeds $2 billion annually. Estimates of the willingness of access users to pay for water quality is estimated to be $2 to $6 million annually. The total value to the public of water quality protection for Maine lakes was very high, and substantially exceeds current public and private expenditures for water quality programs and services.

Michigan

Since 1972, the state has spent about $4.5 billion on about 1,100 municipal wastewater treatment plant improvement projects. Michigan estimates that $2 billion is needed to meet federal and state requirements for municipal wastewater treatment and an additional $1 billion is needed to meet optimal conditions that reflect water quality enhancement, growth capacity, and economic development. In addition, the state estimates costs of $700 million and $1.2 billion for combined sewer overflow initiatives in the Rouge and Detroit River basin communities, respectively.

During the latter part of 2000, Michigan promulgated rules to establish legal authority for a statewide water quality trading program designed to optimize the costs of improving water quality, facilitate Total Maximum Daily Load implementation, and provide economic incentives for nonpoint source pollutant reductions. Michigan's Water Quality Trading Program investigated the possibility of using market-based pollutant trading concepts to provide financial incentives for combined sources (industrial, agricultural, and municipal) and to improve overall water quality while minimizing costs. The results of the study indicate that trading has potential application to those watersheds that require nutrient loading reductions (e.g., Huron, Kalamazoo, Lake Macatawa, and Saginaw Bay watersheds). Through the implementation of effluent trading, the state expects to improve water quality, minimize costs, form partnerships, and provide greater flexibility for a sustained local economy in attaining water quality objectives.

North Dakota

The costs associated with municipal point source pollution control programs in North Dakota have been quite significant. Most of these expenditures have been in the area of capital investments. In 1998 and 1999, approximately $29 million from the State Revolving Fund (SRF) was used to construct wastewater system improvements. In addition to available SRF funding, several communities have upgraded their wastewater treatment facilities at their own expense. Beside construction costs, $7 million per year is spent on operating and maintenance costs of wastewater treatment facilities.

North Dakota did not quantify monetary benefits of water quality expenditures in their 305(b) report. The state notes that secondary wastewater treatment has been achieved in every municipality. The qualitative benefits of this include the elimination and reduction of point source waste loads to receiving waters and the reduction of stressors to public health. The state also notes an increased awareness of NPS pollution such as runoff from confined animal feeding operations and other types of NPS pollution by both the public and private sectors.

Jim Crawford, Eno River State Park, Durham, NC

State and Tribal Recommendations and Special Concerns

In their 2000 Section 305(b) reports, most states, territories, and commissions (hereafter referred to as states) and tribes included a section that focused on priority challenges and recommendations for improving water quality management programs. A wide and diverse array of concerns and suggestions were expressed, ranging from immediate technical needs to broad, long-term programmatic and policy directions. This discussion briefly summarizes key recommendations made by these organizations. No attempt is made to prioritize or critically assess these recommendations, and the discussion does not reflect EPA endorsement. Many of the directions mentioned, however, do coincide with current EPA program concerns and priorities.

The most commonly stated recommendations and issues of concern fell within seven general topic areas:

- Controlling nonpoint source (NPS) pollution
- Toxic contamination
- Protecting ground water
- Financial/resource needs
- Monitoring and data management
- Protecting ecological integrity
- Regulatory/legal concerns.

Controlling Nonpoint Source Pollution

Most states and tribes expressed a need for the continued and accelerated identification, prevention, and control of NPS pollution. These sources included both urban and rural sources and associated nutrients, mud and silt, litter, bacteria, pesticides, metals, oils, suds, other pollutants, and associated impacts to aquatic habitats. Water resource issues, primarily involving hydrologic modification, were also highlighted by several states.

The need for more public participation and outreach was seen by several jurisdictions as a fundamental challenge. Of particular interest was educating the public about NPS pollution and developing guidelines for best management practices. Some reports mentioned a need to emphasize pollution prevention, education, and voluntary efforts (in addition to regulatory efforts) to improve water quality. Examples of approaches included water use and conservation, pollution prevention demonstration projects, volunteer water quality monitoring efforts, wetland protection, and community assistance.

The most frequently reported recommendations address several major concerns:

- *Controlling nonpoint source pollution*
- *Toxic contamination*
- *Protecting ground water*
- *Financial/resource needs*
- *Monitoring and data management*
- *Protecting ecological integrity*
- *Regulatory/legal concerns*

Recommendations often cited by the states, tribes, and territories concern NPS pollution.

States would like better coordination of ground water protection programs such as data collection, analysis, and research.

Better monitoring is needed as well as better coordination of monitoring programs.

Toxic Contamination

Problems in the cleanup and prevention of toxic contamination remain a priority concern for many jurisdictions. Sources of toxics were noted as being widespread, and included both point (municipal and industrial treated wastewater) and nonpoint (urban stormwater and agricultural runoff) sources. Some sources of toxic pollutants are ongoing—e.g., atmospheric deposition was suspected as the source of increasing levels of mercury in fish—while in other cases, toxic chemicals continue to persist in the environment even though they are no longer being used. The states cited a lack of understanding of sources of toxics in sediments, high expense and difficulties associated with cleanup, and other issues such as problems finding dredge and disposal sites or concerns about impacts of wetland creation with toxics present in the sediment. Several reports mentioned a lack of monitoring data and the need for an assessment framework to help determine impairments. Toxic pollutants in fish tissue have resulted in fish consumption advisories for persistent and carcinogenic organic compounds and highly bioaccumulating compounds that need improved detection limits. Several jurisdictions cited concerns about whether monitoring data that are based on total recoverable metal analyses and detection limits above aquatic life criteria accurately represent conditions toxic to aquatic life.

Protecting Ground Water

Several reports mentioned lack of coordination among the many federal, state, and local agencies responsible for various components of ground water protection programs such as data collection, analysis, and research. Sometimes this lack of coordination resulted in poor or incompatible data and lack of information sharing and, at other times, programs operating at cross-purposes. Resource constraints added to the problem of consistently preventing or dealing with standard violations. Finally, the absence of comprehensive ground water monitoring networks and the need for better educational programs for those involved in the application of farm chemicals, for transporters of hazardous waste, and for the general public were seen as a hindrance to ground water protection programs.

Financial and Resource Needs

Many states and tribes expressed the need for additional funds to meet priority needs or even maintain current levels of effort. The most commonly cited funding needs were for enhancing NPS management programs, monitoring and data management, "on-the-ground" pollution control construction and maintenance, controlling urban stormwater and combined sewer overflows, and toxics cleanup.

Typical suggestions to remedy funding problems included increased Congressional appropriations, increased State Revolving Fund (SRF) resources, and the removal of disparities in matching funds requirements. Other suggestions included additional general fund appropriations, authorizing increased discharge fees, full funding of Safe Drinking Water Act amendments, and use of federal highway funds to include stormwater treatment structures.

Monitoring and Data Management

A frequently cited recommendation was the need for increased quality and quantity of water data as well as better coordination and management of existing data among water quality programs at all levels. State recommendations for improvements in information and data were closely tied to needs for additional funding and priorities for monitoring programs. Some states noted a particular need for attention to better ground water data. Current ground water data are scattered and not readily accessible, impeding efforts to standardize and integrate ground water into assessment efforts.

Some states and tribes continued to recognize the need for improved data management capabilities. In some cases, training and technical transfer were seen as priorities. States also recommended improved hardware and software standards to aid data exchange across programs. Several states identified support for modernized STORET implementation and improved access to other federal databases as high priorities.

Protecting Ecological Integrity

Protection and restoration of aquatic life and ecological integrity was a common theme of many state and tribal comments. Topics raised included concern over habitat and riparian impacts, need to maintain biodiversity, need to strengthen wetlands protection and restoration, concern over fish and shellfish contamination, and concern over the Gulf of Mexico "dead zone."

Regulatory, Legal, and Jurisdictional Concerns

Several recommendations and challenges were provided in the 2000 305(b) reports that focused primarily on issues that are fundamentally regulatory, legal, or jurisdictional in nature. Many of these focused on either TMDLs and ongoing implementation of Section 303(d) of the Clean Water Act, or the need to develop new and improved water quality criteria and standards.

Conclusions

A considerable variety of challenges and recommendations were discussed in the 2000 reports. Many pressing problems seem to have root causes in resource constraints, lack of adequate monitoring data, or lack of coordination among multiple agencies responsible for the same issue areas. The states and other governing entities recommended that Congress address financial/resource problems so that, at the minimum, basic and priority activities can be implemented. The reports also indicated the need for proper coordination and data integration among different programs to improve efficiency and fully use scarce resources. The states recommended flexibility in developing programs tailored to individual conditions and needs, especially for issues that can vary widely between regions, such as ground water and NPS pollution management. And finally, the importance of wider public involvement was a common theme, especially for dealing with complex problems like NPS pollution, where control options are difficult or expensive.

Improved public outreach and education is needed, particularly concerning NPS pollution management, wastewater operation and maintenance, and general water quality and resource management.

Part II

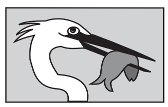
Individual Section 305(b) Report Summaries and Recommendations

Kim Ferguson, Zion National Park, UT

State and Territory Summaries

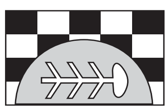
This section provides individual summaries of the water quality assessment data reported by the states and territories in their 2000 Section 305(b) reports and database submissions (where applicable). The summaries provide a general overview of water quality conditions and the most frequently identified water quality problems in each state and territory. However, the use support data contained in these summaries are not comparable because the states and territories do not use comparable criteria and monitoring strategies to measure their water quality. States and territories with strict criteria for defining healthy waters are more likely to report that a high percentage of their waters are in poor condition. Similarly, states with progressive monitoring programs are more likely to identify water quality problems and to report that a high percentage of their waters do not fully support designated uses. As a result, one cannot assume that water quality is worse in those states and territories that report a high percentage of impacted waters in the following summaries.

Section 305(b) of the CWA requires that the states biennially assess their water quality for attainment of the fishable and swimmable goals of the Act and report the results to EPA. The states, participating tribes, and other jurisdictions measure attainment of the CWA goals by determining how well their waters support their designated beneficial uses. EPA encourages states, tribes, and other jurisdictions to assess waterbodies for support of the following individual beneficial uses:



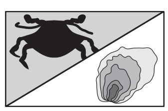
Aquatic Life Support

The waterbody provides suitable habitat for protection and propagation of desirable fish, shellfish, and other aquatic organisms.



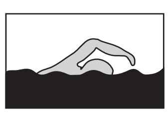
Fish Consumption

The waterbody supports fish free from contamination that could pose a human health risk to consumers.



Shellfish Harvesting

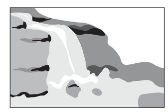
The waterbody supports a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers.



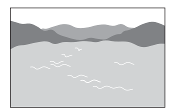
Primary Contact Recreation – Swimming

People can swim in the waterbody without risk of adverse human health effects (such as catching waterborne diseases from raw sewage contamination).

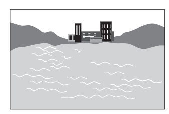
Where individual uses have not been assessed or were not reported, a summary of use support is presented for each type of waterbody:



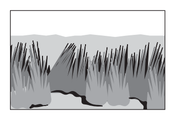
Rivers and and Streams



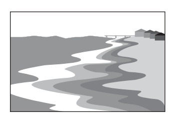
Lakes, Reervoirs, and Ponds



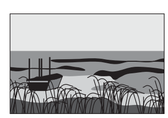
The Great Lakes



Estuaries

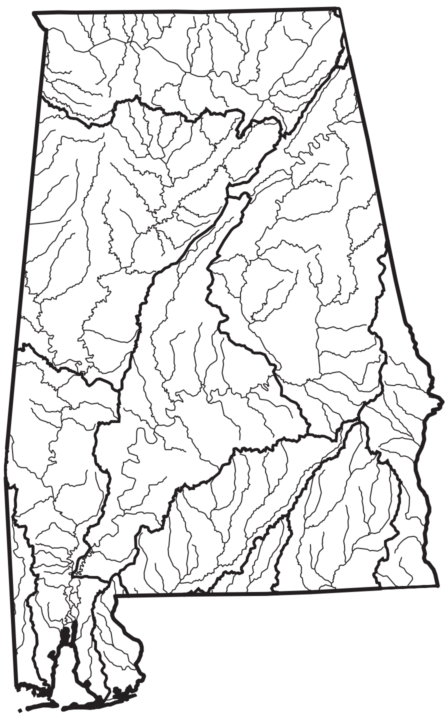


Ocean Shoreline Waters



Wetlands

Alabama



Rivers
Basin Boundaries (USGS 6-Digit Hydrologic Unit)
State Border

For a copy of the Alabama 2000 305(b) report, contact:

Michael J. Rief
Alabama Department of Environmental Management
Water Quality Branch
P.O. Box 301463
Montgomery, AL 36130-1463
(334) 271-7829
e-mail: mjr@adem.state.al.us

The report is also available on the Internet at: **http://www.adem.state.al.us/EnviroProtect/Water/wqrc305b2000/2000wqrc.htm**

Surface Water Quality

Since enactment of the Clean Water Act of 1972, water quality has substantially improved near industrial and municipal facilities. However, pollution prevents about 73% of the surveyed stream miles from fully supporting state-defined overall use. In addition, 10% of surveyed lake acres do not fully support aquatic life use. Oxygen-depleting wastes, pathogens, and alteration of natural habitat are the most common causes of water quality impairment in rivers. The leading sources of river pollution include agriculture, intensive animal feeding operations, municipal wastewater treatment plants, and land development and construction.

Water quality in lakes is most impacted by oxygen-depleting wastes, nutrients, and toxic priority organic chemicals. These toxic organic pollutants may accumulate in fish tissue at a concentration that greatly exceeds the concentration in the surrounding water, leading the state to issue fish consumption advisories for affected waters. Industrial dischargers are responsible for the greatest acreage of impaired lake waters, although unknown sources and contaminated sediments are also major sources of impairment to lakes.

Special state concerns include impacts from erosion, sedimentation, and animal waste runoff. Inspection and enforcement activities have increased at construction and mining sites to deal with erosion concerns, while the state is working with agricultural stakeholders to proactively address animal waste runoff problems.

Alabama did not report on the condition of wetlands, but described the state's efforts to develop a wetlands conservation plan.

Ground Water Quality

Alabama selected one ground water district for reporting in the 2000 cycle. Most of the public water supply wells in the Southern Pine Hills district were free from contamination, attributable in part to better enforcement of construction and operation standards by the state. In wells showing some contamination, volatile organic compounds (VOCs) and nitrates were the primary pollutants. Significant developments in Alabama's ground water program in the last few years include the completion of a study on pesticides in residential wells, the development of regulations to deal with concentrated animal feeding operations, and a series of festivals held in different areas of the state to teach students about ground water issues.

Programs To Restore Water Quality

Nonpoint source pollution remains a primary concern and threat to water quality in Alabama. The state's nonpoint source management program initiated a 5-year rotational watershed management schedule approach beginning in 1996. The approach involves assessing and identifying the causes and sources of nonpoint source impacts, prioritizing impacted watersheds, and providing resources to protect or improve water quality. Other priorities of the non-point source program include demonstrating best management practices (BMPs); raising public awareness through education, training, and initiatives; and developing, prioritizing, and implementing nonpoint source total maximum daily loads (TMDLs).

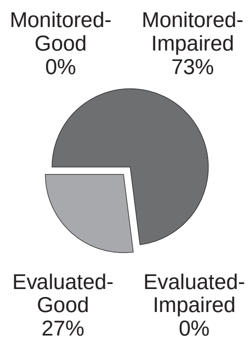
Programs To Assess Water Quality

During the 1980s, Alabama implemented a multifaceted approach to surface water quality monitoring. This approach included a fixed-station monitoring network, reservoir monitoring, intensive waterbody-specific studies, fish tissue sampling, and compliance monitoring of point source discharges. In 1996, the state proposed ASSESS, a watershed-based strategy to integrate surface water quality monitoring with defined water quality objectives and associated environmental indicators. The objectives of ASSESS include improving monitoring coverage within river basins, improving spatial detail of water quality assessments, and increasing total stream miles monitored over the 5-year rotation period.

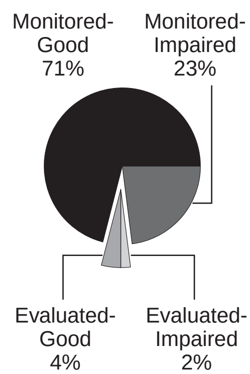
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

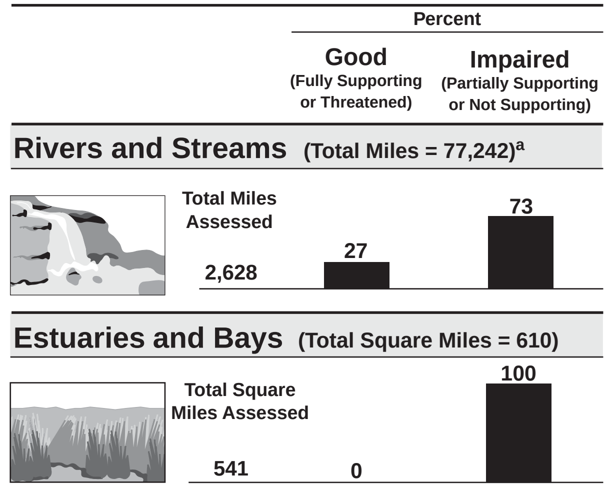
Rivers



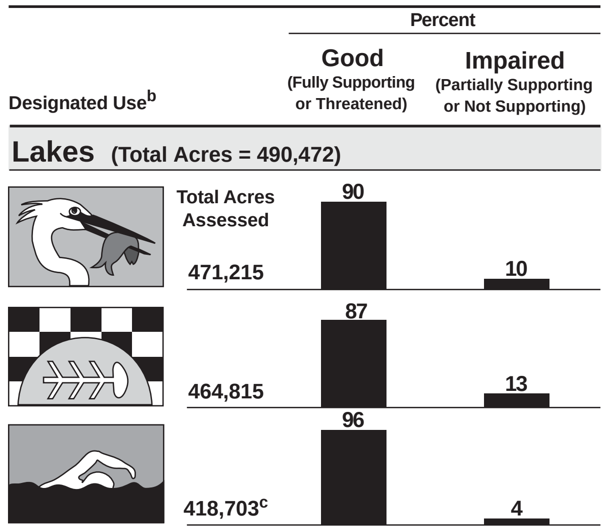
Lakes



Summary of Use Support in Alabama



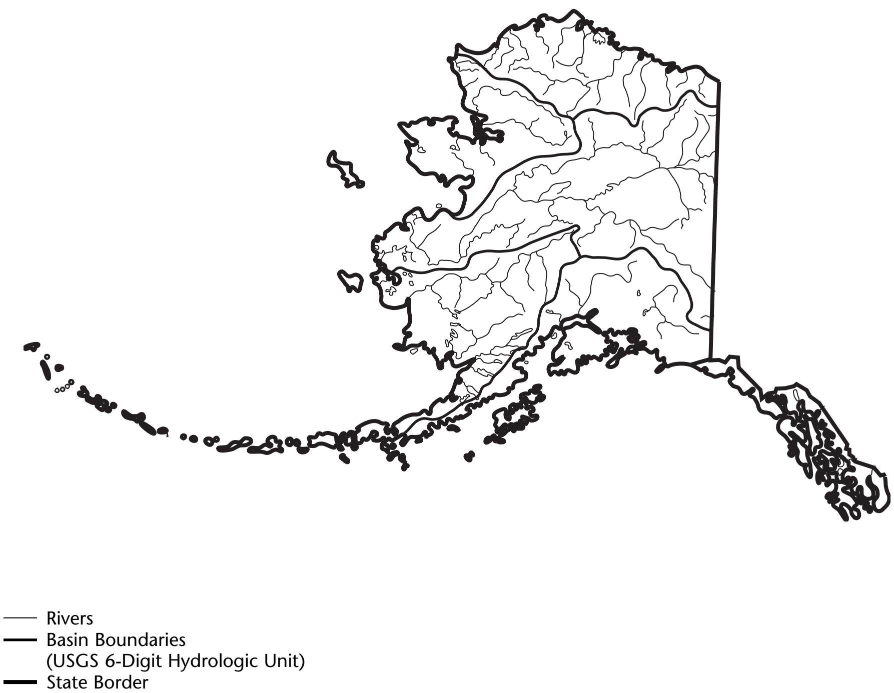
Individual Use Support in Alabama[b]



[a] Includes nonperennial streams that dry up and do not flow all year.
[b] A subset of Alabama's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[c] State combines assessment numbers for primary and secondary recreation.

Note: Figures may not add to 100% due to rounding.

Alaska



For a copy of the Alaska 2000 305(b) report, contact:

Drew Grant
Alaska Department of Environmental Conservation
Division of Air and Water Quality
410 Willoughby Street
Juneau, AK 99801-1795
(907) 465-5300
e-mail: dgrant@envircon.state.ak.us

Surface Water Quality

The vast majority of Alaska's watersheds, while not being monitored, are presumed to be in relatively pristine condition due to Alaska's size, sparse population, and general remoteness. However, Alaska has localized water pollution. Monitoring efforts are targeted toward these areas of known or suspected contamination. Surface water quality has been impaired or threatened from sources such as urban runoff (Fairbanks, Anchorage, and Juneau), mining operations in the interior and northwest Alaska, seafood processing facilities in the Aleutian Islands, and forest products facilities in southeast Alaska. A significant number of surface water impairments have originated from fecal coliform contamination as a result of septic systems. Other sources of surface water contamination include organic enrichment, turbidity, and oil and grease that result from urban runoff and resource extraction. Alaska chose not to report on the condition of its wetlands.

Ground Water Quality

Ground water is one of Alaska's least understood natural resources. It is the major source of fresh water for public and private drinking water supply systems, industry, aquaculture (including fish hatcheries), and agricultural development. Although ground water is presumed to be of excellent quality in most areas of the state, specific areas of generally good ground water quality have been degraded by human activities. Ground water impairment has been documented in various areas of the state and has been linked predominantly to aboveground and subsurface petroleum storage facilities, as well as operational and abandoned military installations. Approximately 90% of contaminated site areas contain petroleum products. Other contaminants of concern include chlorinated solvents, heavy metals, pesticides, cyanide, arsenic, nitrates, and fecal coliform.

Programs To Restore Water Quality

The Alaska Department of Environmental Conservation (ADEC) has developed the Alaska's Clean Water Actions (ACWA). ACWA is a new effort to assess the effectiveness of current programs, the health of Alaska's surface and ground waters, and the funding necessary to protect or restore waters that may be at risk of pollution. ADEC also supports additional water quality projects and programs statewide on pollution prevention, leaking underground storage tanks, contaminated sites, industrial permitting, waterbody assessments and recovery plans, water quality monitoring, water quality technical services, and public outreach and education from statewide public service offices.

Programs To Assess Water Quality

The Alaska Watershed Monitoring and Assessment Project (AWMAP) is a statewide water quality monitoring project involving local, state, and federal agencies, industry, schools, the University of Alaska, and other entities conducting water quality monitoring.

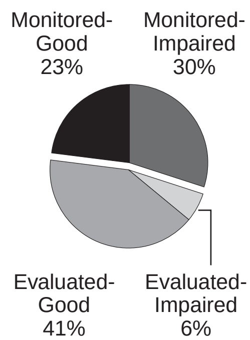
The ADEC Drinking Water Program maintains a database of water quality for public drinking water systems using ground water. When a regulated drinking water supply well is closed due to contamination, the Contaminated Sites Program assumes responsibility for remediation. ADEC's Contaminated Sites and Underground Storage Tank database is used to help identify areas that have contaminated ground water.

Other water quality monitoring activities are conducted by ADEC, other agencies, industry, and the public. Applicant self-monitoring of receiving waters is a common permit requirement associated with Alaska's major point source dischargers. ADEC, in cooperation with the Alaska Department of Natural Resources (ADNR), has periodically conducted water quality monitoring related to placer mining.

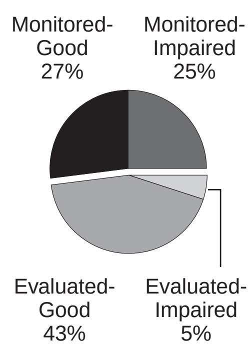
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

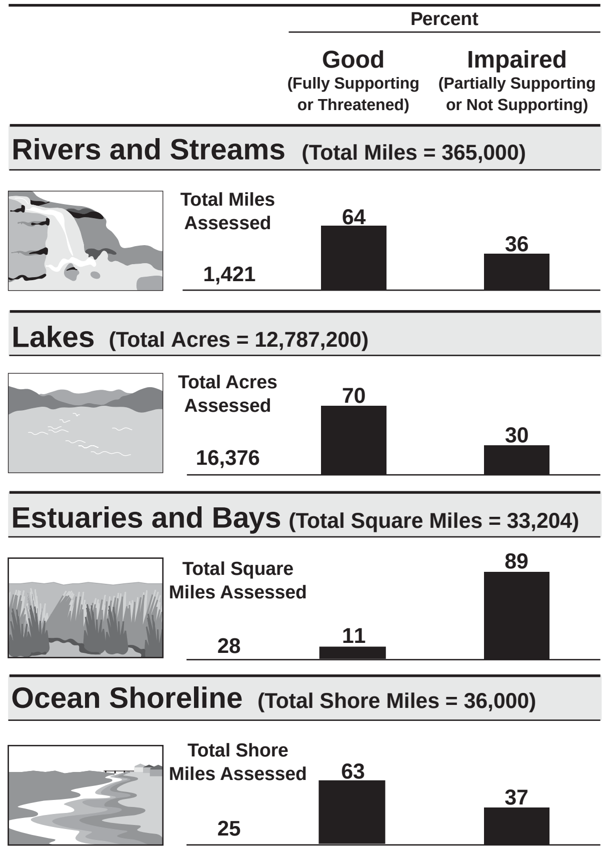
Rivers



Lakes



Summary of Use Support[a] in Alaska[b]



[a] A summary of use support data is presented because Alaska did not report individual use support in their 2000 Section 305(b) report.
[b] Alaska notes its assessments are biased toward those waters with known impairments.

Note: Figures may not add to 100% due to rounding.

American Samoa

For a copy of the American Samoa 2000 305(b) report, contact:

Carl Goldstein
USEPA Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 744-2170
e-mail: goldstein.carl@epa.gov

Surface Water Quality

The Territory of American Samoa (AS) is located in the Pacific Ocean, approximately 2,300 miles southwest of Hawaii and 1,600 miles northeast of New Zealand. American Samoa comprises seven islands. Tutuila, with an area of 53 square miles, is the largest and most populated island in the territory.

Of the river miles assessed, 9% fully support aquatic life. The AS Environmental Protection Agency (ASEPA) reports that stream water quality is most impacted by development that affects hydrology and degree of shading, or that increases erosion and contamination by sediments and nutrients. Poorly constructed human and pig waste disposal systems are additional sources of nutrients.

Wetlands are being lost or degraded by urban development. Approximately 23% of wetlands were lost between 1961 and 1990. Currently, 30% of the assessed wetland acres fully support aquatic life.

American Samoa has 116 miles of coastal shoreline. Of the assessed miles, 14% are impaired for aquatic life and 100% are impaired for swimming and fish consumption. The greatest threats to coastal water quality are sediments and nutrients from runoff. Solid waste (i.e., improperly disposed trash) is another source of pollution. Pago Pago Harbor is an industrialized embayment that is impacted by pollution from marina and port traffic, a shipyard, and effluent from tuna canneries and a sewage treatment plant. A fish consumption advisory is in effect for the Pago Pago Harbor due to elevated levels of lead and arsenic in fish tissue.

Ground Water Quality

The government-run drinking water facility utilizes ground water as its source. The volcanic stratum of Tutuila is highly permeable without a large filtering capacity, so there is a constant risk of ground water contamination. The greatest threats to ground water quality are pesticides, pollution associated with automobiles, and nutrients and bacteria from waste disposal systems. Droughts of 2 to 3 months' duration can result in drinking water shortages and saltwater intrusion. Chloride concentrations in excess of 500 mg/L have been reported.

Programs To Restore Water Quality

Region 9 USEPA administers the federal NPDES program in American Samoa with the assistance of ASEPA. There are currently five industrial and two municipal facilities permitted under this program.

ASEPA developed a Watershed Protection Plan to protect all inhabited watersheds in American Samoa. Through this process, ASEPA was able to identify waters and watersheds impaired by nonpoint source pollution. ASEPA began the Nonpoint Source Management Program to emphasize Best Management Practices.

Programs To Assess Water Quality

Since 1989, ASEPA has entered into yearly cooperative agreements with USGS to monitor ground water. The government-run drinking water system is also tested monthly for residual chlorine, total coliforms, and E. coli. The AS Power Authority tests wellheads weekly for chlorides and conductivity.

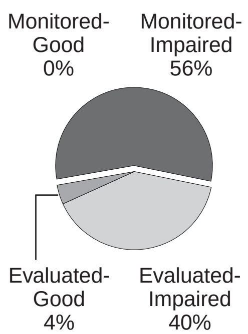
NPDES permit holders monitor Pago Pago Harbor to document compliance with their permits. Seventeen stations are used for water quality monitoring and seven sites are used for sediment monitoring. The water quality program will be updated and expanded in 2001.

The ASEPA and other agencies monitor water quality in embayments as part of the Coral Reef Initiative. Surveys are conducted biannually to assess the impact of wastewater discharges on nearby coral reefs. Other monitoring programs include the Village Water Supply Monitoring Program, Beach Monitoring Program, and Toxicity Monitoring Program.

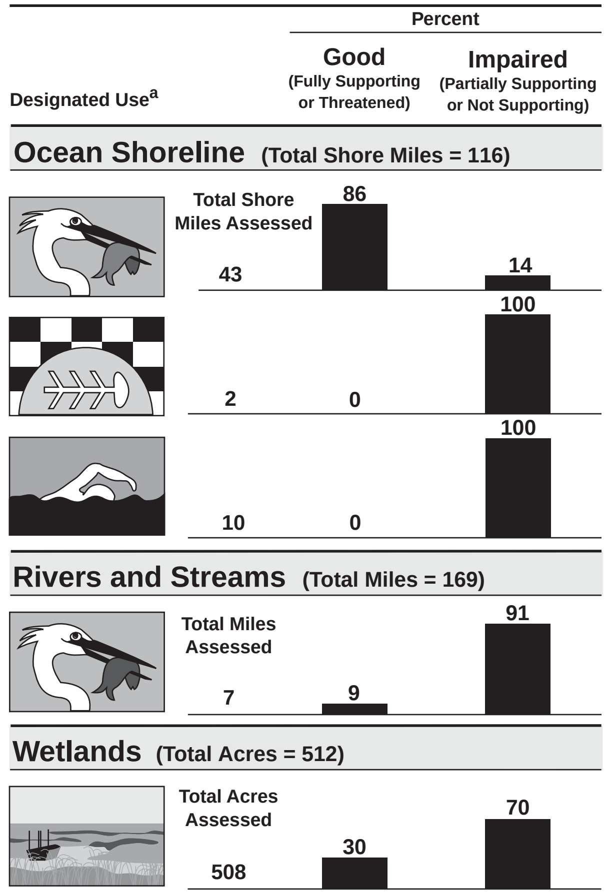
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



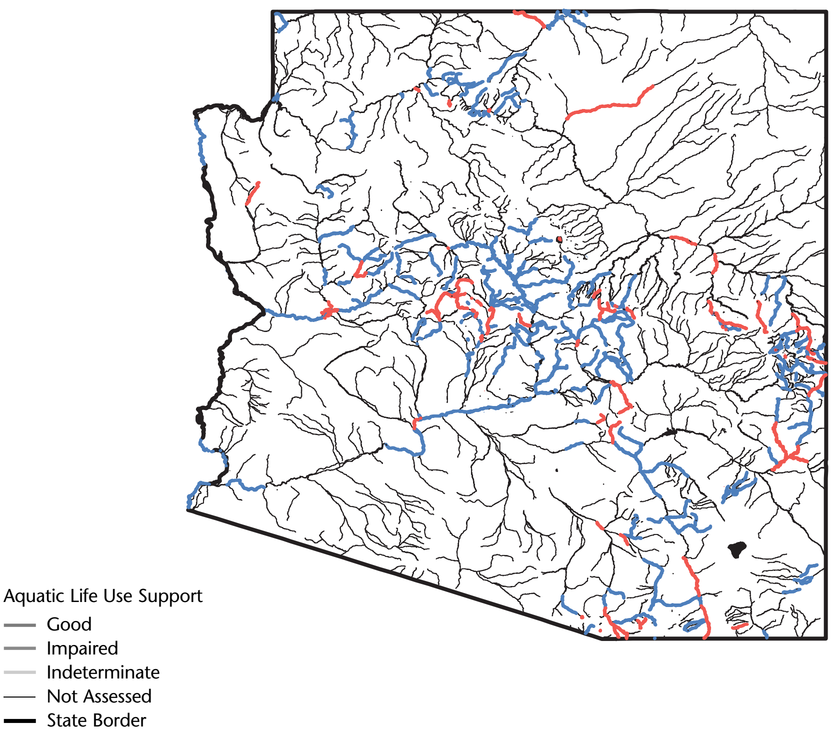
Individual Use Support in American Samoa



[a] A subset of American Samoa's designated uses appear in this figure. Refer to the territory's 305(b) report for a full description of the territory's uses.

Note: Figures may not add to 100% due to rounding.

Arizona



For a copy of the Arizona 2000 305(b) report, contact:

Diana Marsh
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, AZ 85012
(602) 207-4545
e-mail: marsh.diana@ev.state.az.us

The report is also available on the Internet at: **http://www.adeq.state.az.us/environ/water/assess/305/**

Surface Water Quality

Good water quality supports aquatic life uses in 79% of Arizona's assessed stream miles and 88% of its surveyed lake acres. This means that 21% of its assessed stream miles and 12% of its lake acres are impaired for aquatic life uses. Turbidity, metals, pesticides, and pH were the four stressors most frequently identified in streams. The leading stressors in lakes were inorganics, pH, organic enrichment leading to low dissolved oxygen levels, and pesticides. Hydromodification and natural sources were the two most common sources of stressors in lakes. In stream assessments, agriculture (including grazing), natural sources, and resource extraction were the primary sources of stressors to water quality. Arizona did not report on the condition of wetlands.

Ground Water Quality

Arizona monitors a network of ambient water quality index wells and compiles data from other monitoring programs, which are primarily targeted in areas of known or suspected contamination. Ground water contamination varies significantly across the state. In the metropolitan areas, volatile and semivolatile organic compounds (VOCs and SVOCs) contaminate the ground water due to inadequate historic practices for disposing of industrial solvents and dry-cleaning chemicals. These contamination areas are being remediated by the federal and state Superfund programs. Fluoride and radiochemicals occur naturally in the soil and water across Arizona, and in some locations the levels of these chemicals exceed drinking water standards.

Programs To Restore Water Quality

State and federal programs in Arizona are working toward the goal of identifying and remediating contaminated ground water and surface water sites. The state's Water Quality Assurance Revolving Fund and the federal Superfund Program work together to assess and clean up sites where water resources are contaminated by pollutants such as pesticides, metals, and industrial solvents. Activities that may result in nonpoint source pollution are governed by the state's Nonpoint Source Program, which has adopted Best Management Practices for agricultural irrigation and concentrated animal feeding operations. Aquifer Protection Permits to protect ground water quality are also required for many nonpoint source activities. Arizona is actively involved in the United States/Mexico Border XXI Program to improve water quality along our international border. One goal of the program is to implement or upgrade wastewater treatment facilities in border areas.

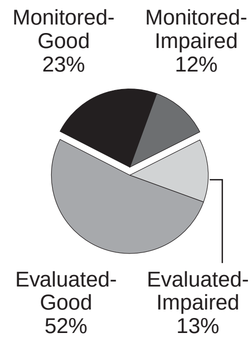
Programs To Assess Water Quality

The Arizona Department of Environmental Quality has initiated a rotating basin approach to monitoring and assessing water quality. Each year, 2 of the 10 watersheds in the state will be surveyed intensively while maintaining a statewide network. Sampling sites include a mixture of fixed long-term sites (to help determine trends in water quality), performance sites (selected to evaluate effectiveness of strategies implemented by permitted dischargers), and reference sites (to characterize regional conditions). The type of data collected at each site is determined by the purpose of the monitoring, land uses, and pollutants present in the watershed as well as the presence of threatened or endangered species.

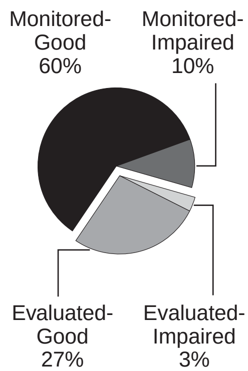
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

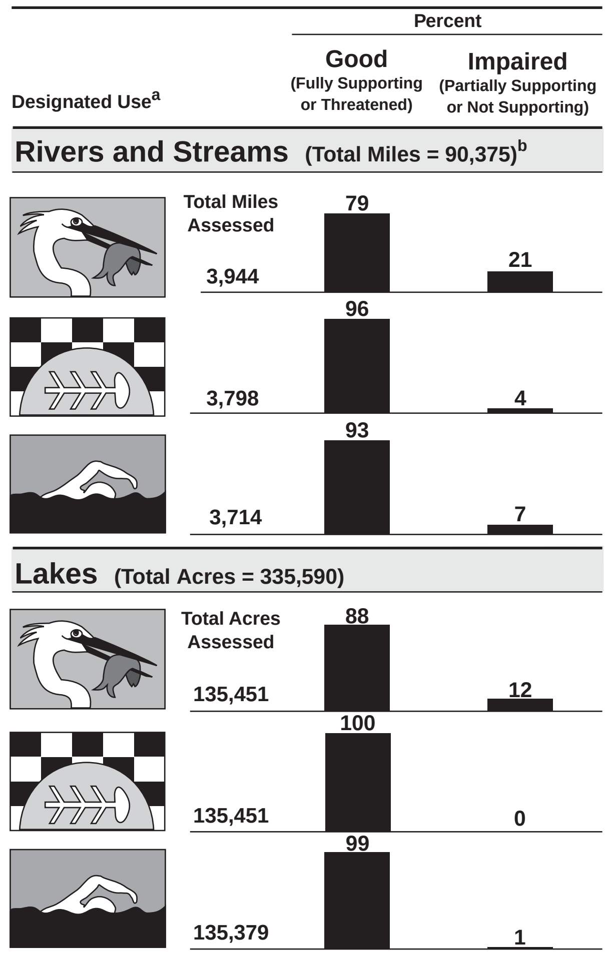
Rivers



Lakes



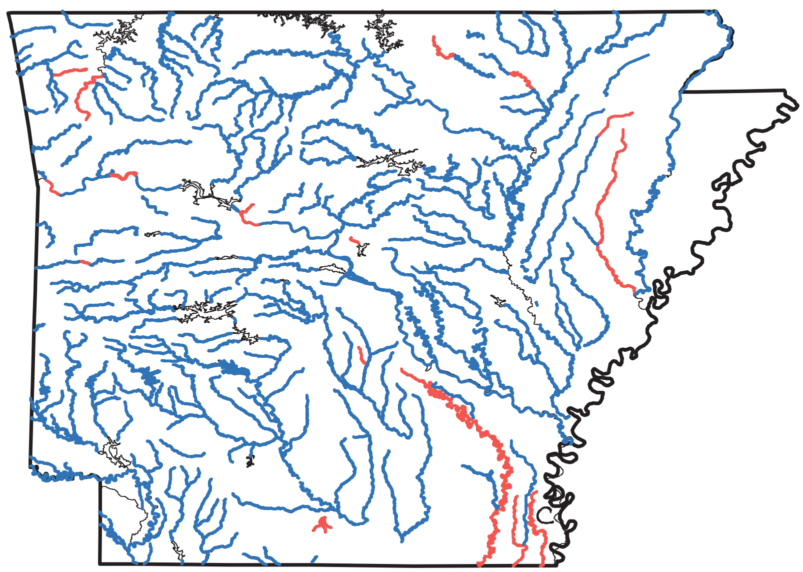
Individual Use Support in Arizona



[a] A subset of Arizona's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Arkansas



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Arkansas 2000 305(b) report, contact:

Bill Keith
Arkansas Department of Environmental Quality
P.O. Box 8913
Little Rock, AR 72219-8913
(501) 682-0660
e-mail: keith@adeq.state.ar.us

Surface Water Quality

The Arkansas Department of Environmental Quality reported that 90% of their surveyed rivers and streams and 100% of their surveyed lake acres have good water quality that fully supports aquatic life uses. Good water quality also fully supports swimming use in 100% of the surveyed river miles and 100% of the surveyed lake acres. Fish consumption is impaired in 5% of river miles surveyed and 5% of lake acres surveyed due to mercury contamination of fish tissue. Siltation and mercury are the most frequently identified pollutants impairing Arkansas' rivers and streams, and mercury is also the primary pollutant in lakes. Agriculture is the leading source of pollution in the state's rivers and streams. Arkansas has limited data on the extent of pollution in lakes.

Special state concerns include the development of TMDLs, elimination of toxic point source discharges, additional wetland protection mechanisms, and more effective methods to identify nonpoint source impacts. Arkansas is also concerned about impacts from the expansion of confined animal production operations and major sources of turbidity and silt including road construction, road maintenance, riparian land clearing, streambed gravel removal, and urban construction. Arkansas did not report on the condition of wetlands.

Ground Water Quality

In the past 5 years, Arkansas has increased its focus on the quality and quantity of ground water resources. Aquifer monitoring indicates that ground water quality is generally good. Sources of contamination that contribute to the degradation of ground water include disposal sites, underground storage sites, agricultural sources (such as animal feedlots, fertilizer and pesticide applications) and septic systems.

Programs To Restore Water Quality

The Arkansas Nonpoint Source Pollution Management Program was updated and approved in 1999. It provides for continued monitoring of water quality, research into the effectiveness of BMPs, and implementation strategies for BMPs. Beginning in 1997, a Priority Watershed Program was developed to target nonpoint-source-impacted watersheds for BMP implementation. Ten watersheds were selected for either more intensive survey activities or BMP implementation activities. The Piney Creek watershed assessment was completed in 1999, and the findings included recommendations to implement BMPs to reduce turbidity and bacteria levels and to stabilize stream banks. The state is also currently involved in projects to research and implement BMPs for confined animal feeding operations.

Programs To Assess Water Quality

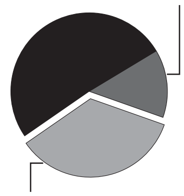
Arkansas classifies its water resources by ecoregion with similar physical, chemical, and biological characteristics. There are six ecoregions including the Delta, Gulf Coastal, Ouchita Mountain, Arkansas River Valley, Boston Mountain, and Ozark Mountain Regions. By classifying water resources in this manner, Arkansas can identify the most common land uses within each region and address the issues that threaten water quality.

The state's ambient monitoring network includes 140 fixed stations monitored monthly for over 30 key water quality parameters. In the last few years, 100 stations located in previously unassessed waters have been added and are sampled on a quarterly schedule. In the future, Arkansas believes it will be necessary to implement a biological community sampling program to supplement the chemical data that are currently used to assess the status of in-stream aquatic life.

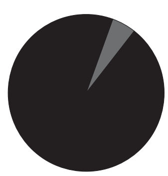
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

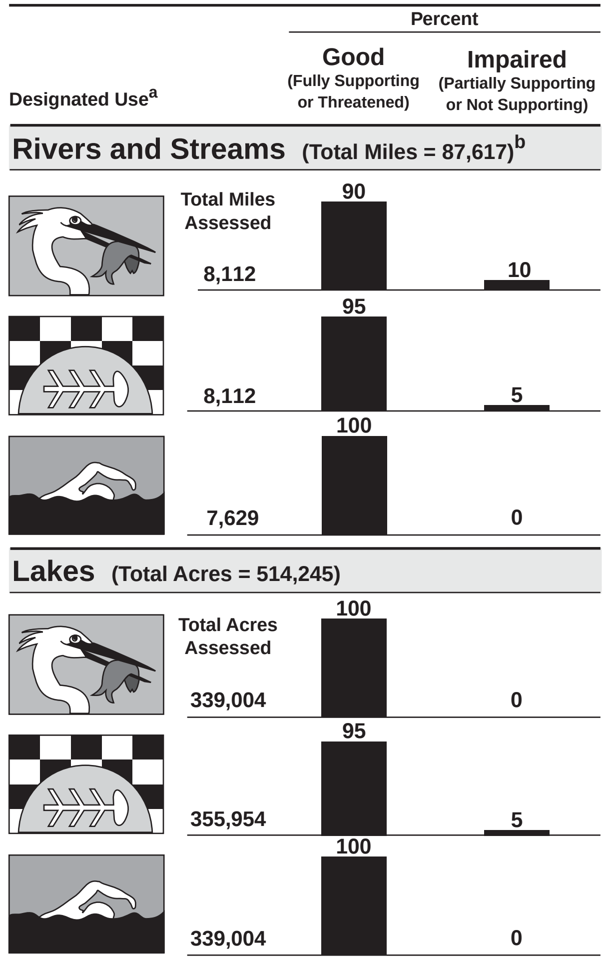
Rivers



Lakes



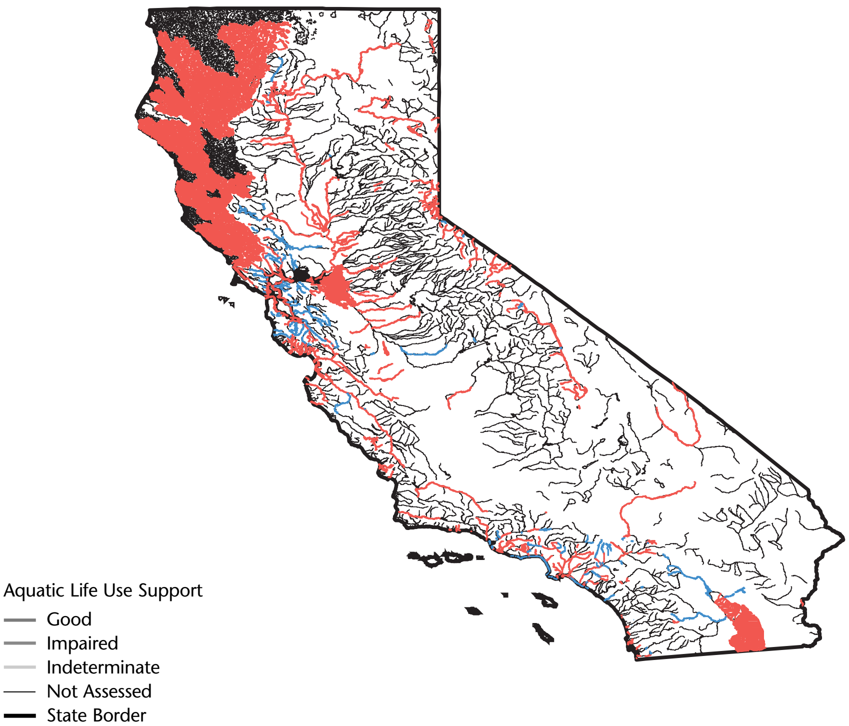
Individual Use Support in Arkansas



[a] A subset of Arkansas' designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

California



For a copy of the California 2000 305(b) report, contact:

Adam Morrill
California State Water Resources Control Board, M&A
Division of Water Quality
P.O. Box 944213
Sacramento, CA 94244-2130
(916) 341-5548
e-mail: morra@swrcb.ca.gov

Surface Water Quality

Most of the assessed river miles in California were impaired for aquatic life use support (85%), primary contact (80%), and fish consumption (80%). The primary contaminants cited for impairment of rivers were siltation, nutrients, pathogens, and suspended solids. The leading sources of degradation in California's rivers and streams are silviculture, habitat modification, agriculture, and hydrologic modification. Approximately 63% of the lake acres assessed for aquatic life use were also impaired. In lakes, nutrients and pesticides are among the most common pollutants. Agriculture, hydrologic modifications, construction, urban runoff/storm sewers, and resource extraction pose the greatest threat to lake water quality.

Metals, pesticides, priority organics, and organic enrichments are the most frequently identified pollutants in estuaries, harbors, and bays. Pathogens are the leading contaminant of coastal shorelines, with urban runoff, spills, and municipal and industrial point sources as the leading sources. Most of the assessed wetlands were impaired for supporting aquatic life (89%), fish consumption (100%), and primary contact (73%). Salinity, metals, and nutrients were the primary contaminants. In the past few years, California has had 26 fish advisories that primarily affected the lakes, estuaries, and bays. Mercury, PCBs, and DDT are the primary contaminants responsible for the advisories.

Ground Water Quality

Salinity, total dissolved solids, and chlorides are the most frequently identified pollutants impairing the use of ground water in California, followed by pesticides, nutrients, priority organic chemicals, nonpriority organic chemicals, and metals. Leading sources of ground water contamination include leaking underground storage tanks, septage disposal, land disposal, agriculture, and industrial point sources.

Programs To Restore Water Quality

Through California's stormwater permit program, two statewide general permits have been adopted addressing stormwater discharges associated with industrial activities. Dischargers are required to eliminate most non-storm-water discharges, develop a pollution prevention plan to minimize pollutants in stormwater runoff, and monitor their discharges. The Underground Tanks Cleanup Fund pays for corrective action and liability costs related to cleaning up leaking underground fuel tanks. Plans and policies have also been implemented, including the Containment Zone Policy, which serves to isolate and monitor segments of waterbodies that cannot meet their water quality objectives; the Pesticide Management Plan, which protects surface and ground water from pesticide contamination; and the Watershed Management Initiative, which focuses fiscal resources on managing water quality problems in targeted watersheds.

Programs To Assess Water Quality

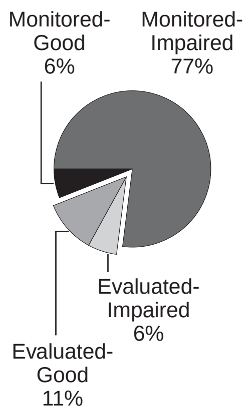
The State Water Resources Control Board (SWRCB) has developed programs to monitor state water quality. The Surface Water Ambient Monitoring Program (SWAMP) will focus on developing a sampling and monitoring program, documenting water quality conditions, and evaluating the sources of impairment in targeted watersheds. The Toxic Substances Monitoring Program evaluates specific toxic pollutants in areas with known or suspected impairment. The Toxicity Testing Program uses integrative measures of toxicity to establish patterns between surface water toxicity, chemical causes, and land use practices. The California State Mussel Watch Program analyzes toxic substances in mussels and clams sampled from bays, harbors, and estuaries. The SWRCB has also implemented a Nonpoint Source Pollution Management Program to address the link between land use and coastal water degradation. A Citizen Monitoring Program has been adopted to increase community participation and improve monitoring of waterbodies.

In 1999, the EPA approved California's listing of Section 303(d) impaired waters. The list will be updated in 2002.

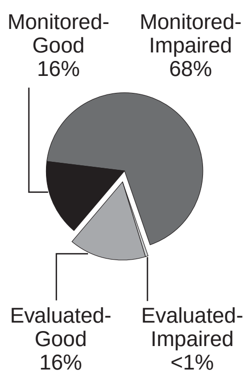
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



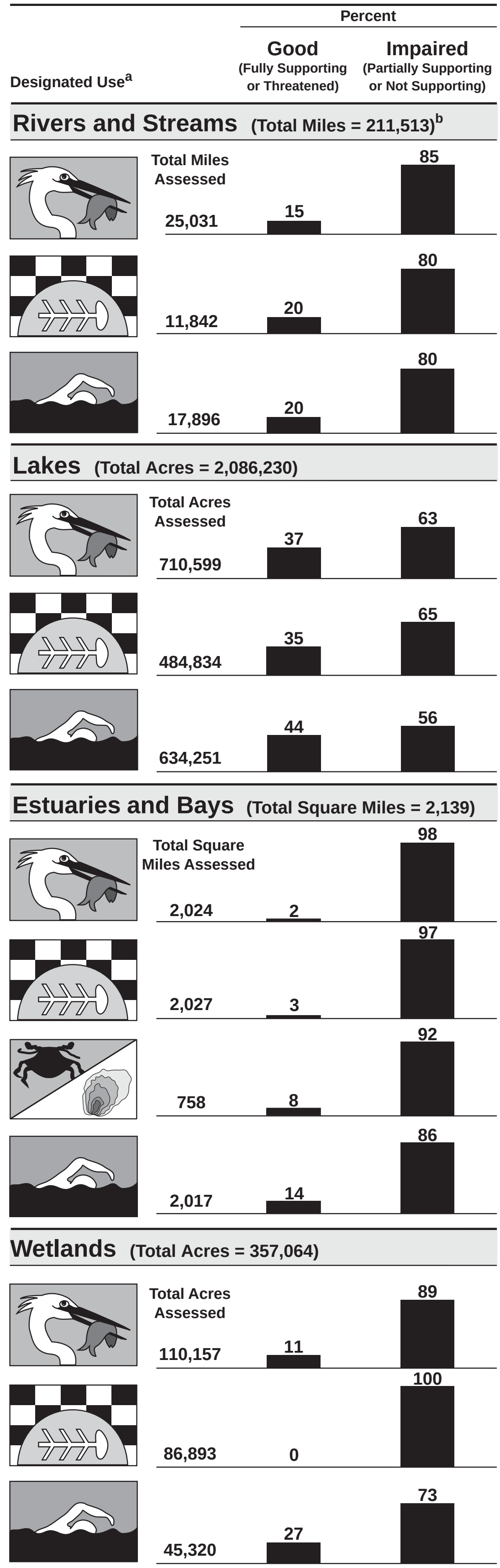
Lakes



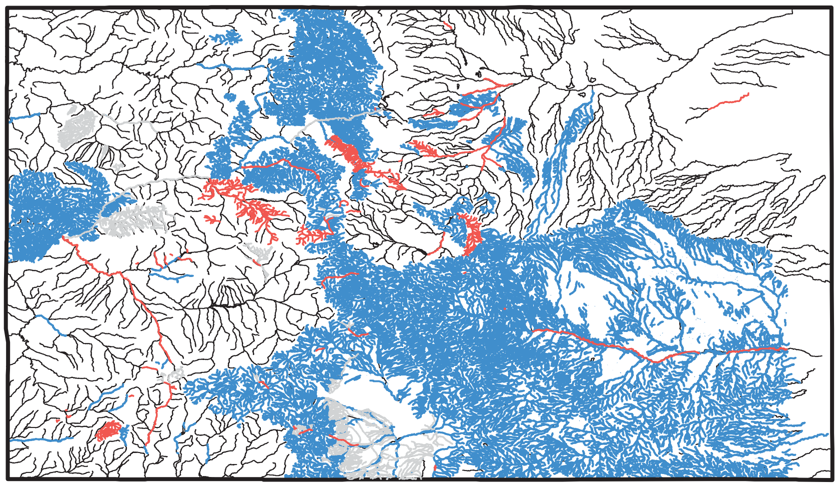
[a] A subset of California's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Individual Use Support in California



Colorado



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Colorado 2000 305(b) report, contact:

Aimee Majewski
Colorado Department of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Drive
Denver, CO 80246
(303) 692-3530
e-mail: aimee.majewski@state.co.us

The report is also available on the Internet at: **http://www.cdphe.state.co.us/op/wqcc/wqresdoc.html**

Surface Water Quality

Colorado reports that 93% of its surveyed river miles and 90% of its surveyed lake acres have good water quality that support aquatic life uses. Metals are the most frequently identified pollutant in rivers and lakes. Mining and agriculture are leading sources of pollution in both rivers and lakes, and industrial point sources are also a major contributor of pollution to lakes. Colorado did not report on the condition of wetlands.

Ground Water Quality

Ground water quality in Colorado ranges from excellent in mountain areas where snowfall is heavy, to poor in certain alluvial aquifers of major rivers. Naturally occurring soluble minerals along with human activities are responsible for significant degradation of some aquifers. Nitrates and salts from agricultural activities have contaminated many of Colorado's shallow, unconfined aquifers. In mining areas, acidic water and metals contaminate aquifers. Colorado protects ground water quality with numeric and narrative standards, and regulates discharges to ground water from wastewater treatment impoundments and land application systems with a permit system.

Programs To Restore Water Quality

Impaired waters in Colorado are identified on the 303(d) List of Impaired Waters, and addressed by the TMDL Program. TMDL Plans are prepared to outline how water quality can be improved so that the waterbodies can support their designated uses. The Water Quality Control Division has fostered extensive stakeholder participation in the development of the 303(d) list. Other programs in Colorado include the state's Water Pollution Control Revolving Fund, nonpoint source control program, and permits programs. In early 2000, the state implemented the Colorado Ground Water Quality Protection Council to develop a comprehensive and integrated ground water quality protection program. To protect drinking water quality, Colorado designed the Source Water Assessment and Protection (SWAP) Program; the delineation phase is underway, and a geographic information system (GIS) web site application is being developed to allow communities to access source water maps through the Internet.

Programs To Assess Water Quality

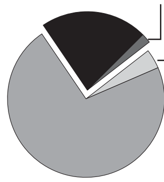
In 1999, the Colorado Water Quality Monitoring Council was established by an interested group of stakeholders and the state's Water Quality Control Division. The council was patterned after newly formed councils at the state and national level. It serves as a statewide collaborative body to help achieve collection, interpretation, and dissemination of water quality data and information.

In 1992, Colorado changed its monitoring approach from a statewide network of routine sites and special studies to basin-specific monitoring of one major watershed per year. During the 1998-1999 cycle, monitoring efforts were focused on the Arkansas River Basin and the Upper Colorado River Sub-basin. The basin monitoring program has several long-term objectives such as ensuring an adequate database to study changes over time, addressing spatial and temporal variability in water quality, evaluating the impact of point and nonpoint sources on water quality, determining lake trophic status, and developing a database for biological water quality criteria.

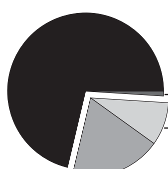
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

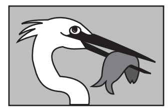
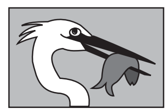
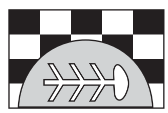
Rivers



Lakes



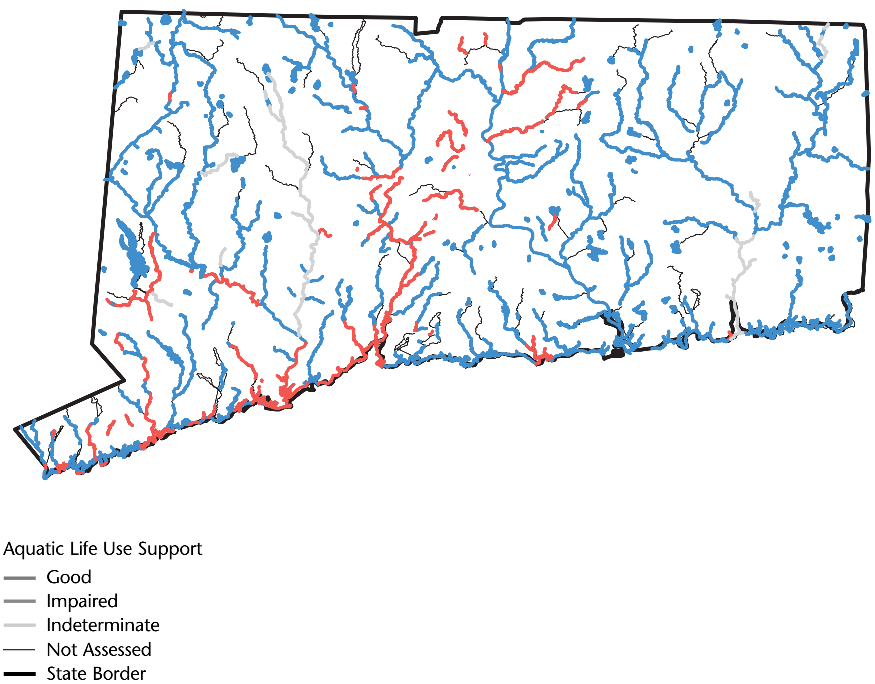
Individual Use Support in Colorado

Designated Use[a]		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 107,403)[b]	Total Miles Assessed		
	41,452[c]	93	3
	14,600	100	<1
Lakes (Total Acres = 164,029)	Total Acres Assessed		
	62,992	90	10
	5,975	0	100
	56,658	100	0

[a] A subset of Colorado's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Includes 1,754 miles rated not attainable.

Note: Figures may not add to 100% due to rounding.

Connecticut



For a copy of the Connecticut 2000 305(b) report, contact:

Ernest Pizzuto
Bureau of Water Management
PERD
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106-5127
(860) 424-3715
e-mail: ernest.pizzuto@po.state.ct.us

Surface Water Quality

Connecticut has restored over 300 miles of large rivers since enactment of Connecticut's State Clean Water Act in 1967. In 1967, about 663 river miles (or 74% of the state's 893 miles of large rivers and streams) were unfit for fishing and swimming. In 2000, Connecticut reported that 21% of river miles do not support aquatic life uses and 25% do not support swimming due to stressors such as bacteria, metals, oxygen-demanding wastes, nutrients, and habitat alteration. Sources of these pollutants include atmospheric deposition, urban runoff and storm sewers, municipal sewage treatment plants, and hydromodification. Although over 95% of assessed lake acres support aquatic life use and swimming, threats to Connecticut's lake quality include atmospheric deposition, upstream impoundments, urban runoff, and bottom deposits.

Hypoxia (low dissolved oxygen) is a widespread problem in Connecticut's estuarine waters in Long Island Sound. Bacteria also prevent shellfish harvesting, and an advisory restricts consumption of bluefish and striped bass contaminated with polychlorinated biphenyls (PCBs). Statewide fish consumption advisories are in effect due to mercury in freshwater and PCBs in saltwater. Connecticut's estuarine waters are impacted by municipal sewage treatment plants, combined sewer overflows, urban runoff, and atmospheric deposition. Historic waste disposal practices also contaminated sediments in Connecticut's harbors and bays. Connecticut did not report on the condition of wetlands.

Ground Water Quality

The state and U.S. Geological Survey (USGS) have identified about 1,600 contaminated public and private wells since the Connecticut Department of Environmental Protection (DEP) began keeping records in 1980. Connecticut's Wellhead Protection Program incorporates water supply planning, discharge permitting, water diversion, site remediation, prohibited activities, and numerous nonpoint source controls.

Programs To Restore Water Quality

Ensuring that all citizens can share in the benefits of clean water will require continued permit enforcement, additional advanced wastewater treatment, combined sewer separation, continued aquatic toxicity control, and resolution of nonpoint source issues.

The state has for decades been investing in efforts to abate pollution from industrial and municipal point sources. These efforts have been successful in improving water quality in many areas, but further improvements are important particularly for Long Island Sound and several rivers. For Long Island Sound, the state has set a goal to reduce the nitrogen load by 59% over 15 years. It is hoped that this reduction in nitrogen loading will alleviate the hypoxic conditions found in bottom waters of the sound.

To achieve this goal, a “nitrogen-trading program” will be implemented so that all sewage treatment plants in Connecticut will be given economic incentives to exceed the effluent quality criteria. To continue improving water quality in other areas, management efforts will focus on the control and prevention of nonpoint source pollution. Nonpoint source management includes education projects and a permitting program for land application of sewage, agricultural sources, and solid waste management facilities.

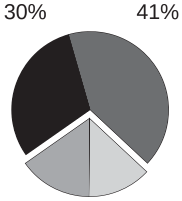
Programs To Assess Water Quality

In 1998, Connecticut implemented a rotating basin approach to monitor water quality. Basins assessed for the current reporting cycle are the Connecticut River, south central coast, and southwest coast, which together comprise 46% of the state’s land area. Connecticut samples physical and chemical parameters at 27 fixed stream sites and biological parameters at 47 stream sites. In wadeable streams, benthic community analysis is the primary method used for determining aquatic life use support status. Other activities include intensive biological surveys, toxicity testing, and fish and shellfish tissue sampling for accumulation of toxic chemicals.

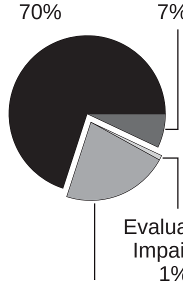
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

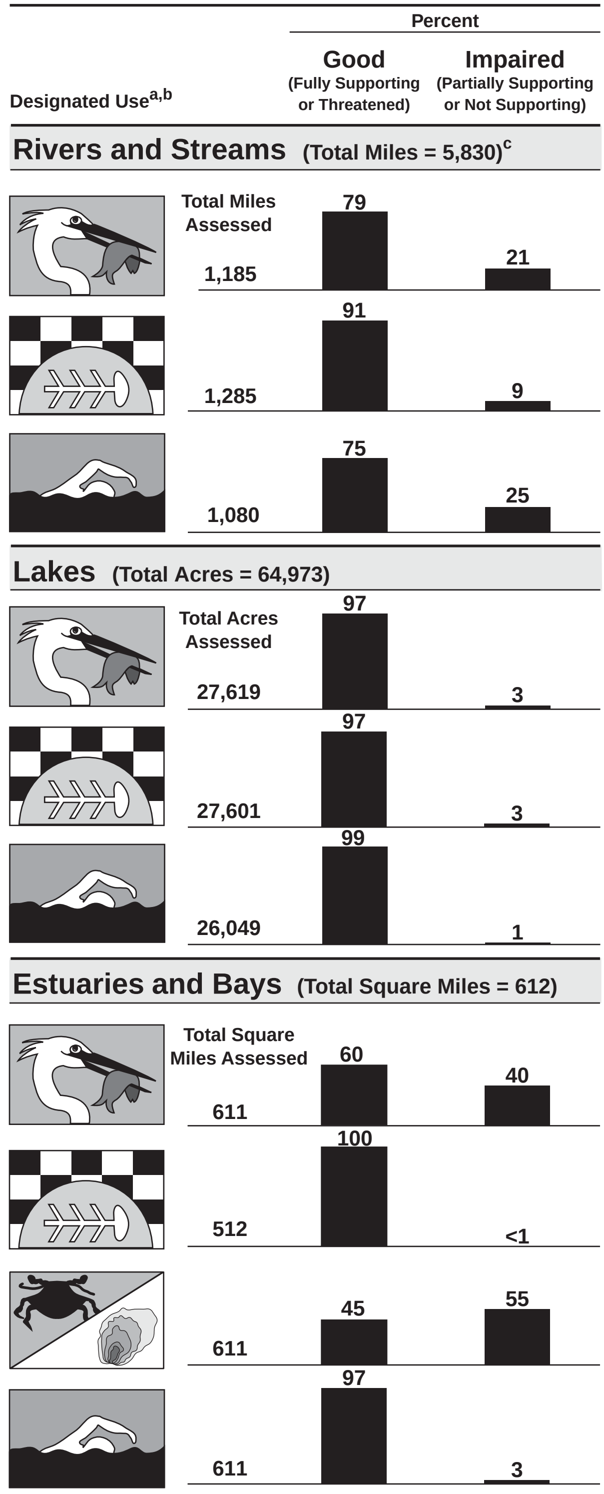


Lakes



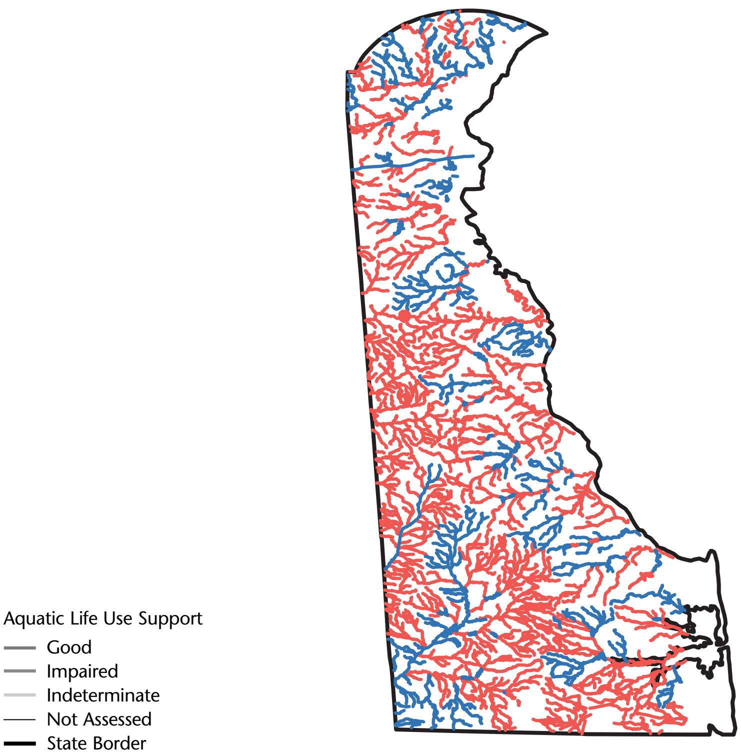
[a] A subset of Connecticut’s designated uses appear in this figure. Refer to the state’s 305(b) report for a full description of the state’s uses.
[b] Figures do not include statewide fish consumption advisory.
[c] Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Connecticut



Note: Figures may not add to 100% due to rounding.

Delaware



For a copy of the Delaware 2000 305(b) report, contact:

David Wolanski
Delaware Department of Natural Resources and Environmental Control
Division of Water Resources
P.O. Box 1401
Dover, DE 19903
(302) 739-4590
e-mail: dwolanski@state.de.us

The report is also available on the Internet at: **http://www.dnrec.state.de.us/water2000/Sections/Watershed/TMDL/2000305b.htm**

Surface Water Quality

The Department of Natural Resources and Environmental Control (DNREC) has found that 96% of the state's rivers and streams do not fully support the swimming use and 70% do not fully support the fish and wildlife use. Most of these waters do not meet the standards because of nonpoint source pollution impacts. DNREC has found that 69% of Delaware's freshwater ponds and lakes do not support the swimming use and 27% do not fully support fish and wildlife use. Bacteria are the most widespread contaminant in Delaware's surface waters, but nutrients and toxics pose the most serious threats to aquatic life and human health. Excessive nutrients stimulate algal blooms and growth of aquatic weeds. Toxics resulted in 20 fish consumption restrictions in the state. Agricultural runoff, urban runoff, municipal sewage treatment plants, and industrial dischargers are the primary sources of nutrients and toxics in Delaware's surface waters. Delaware did not report on the condition of wetlands.

Ground Water Quality

High-quality ground water provides two-thirds of Delaware's domestic water supply. However, nitrates, synthetic organic chemicals, saltwater, and iron contaminate isolated wells in some areas. Nitrates in ground water are derived mainly from septic systems and the land application of fertilizer and manure. Synthetic organic chemicals have entered some ground water from leaking industrial underground storage tanks, landfills, abandoned hazardous waste sites, chemical spills and leaks, septic systems, and agricultural activities.

Programs To Restore Water Quality

DNREC adopted a watershed approach to determine the most effective and efficient methods for protecting water quality or abating existing problems. Five basins and 41 watersheds have been delineated. Under the watershed approach, DNREC will evaluate all sources of pollution that may impact a waterway and target the most significant sources for management. In 1998, Whole Basin Management activities took place in the Inland Bay Basin, and in 1999 activities were initiated in the Delaware Bay Drainage Basin. Five watersheds have been targeted for development of integrated pollution control strategies: Appoquinimink River, Christina River, Indian River

Bay/Rehoboth Bay/Little Assawomen Bay, Murderkill River, and Nanticoke River.

Delaware's Wellhead Protection Program establishes cooperative arrangements with local governments to manage sources of ground water contamination. The state may assist local governments in enacting zoning ordinances, operating standards, and source prohibitions, and in conducting site plan reviews, public education, and ground water monitoring.

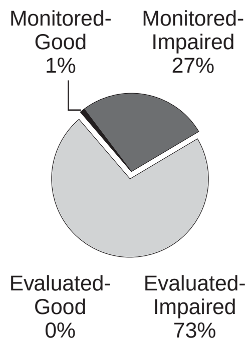
Programs To Assess Water Quality

Delaware's Ambient Surface Water Quality Program includes fixed-station monitoring and biological surveys employing rapid bioassessment protocols. Monitoring within the Fixed Station Network is conducted monthly to quarterly for each basin in Delaware. Delaware is developing and testing new protocols for sampling biological data to determine whether specific biological criteria can be developed to determine support of designated uses.

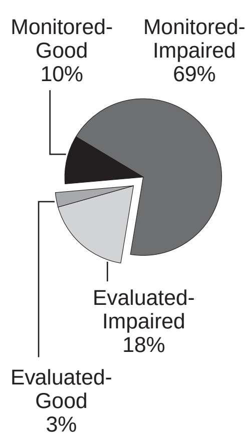
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



Lakes

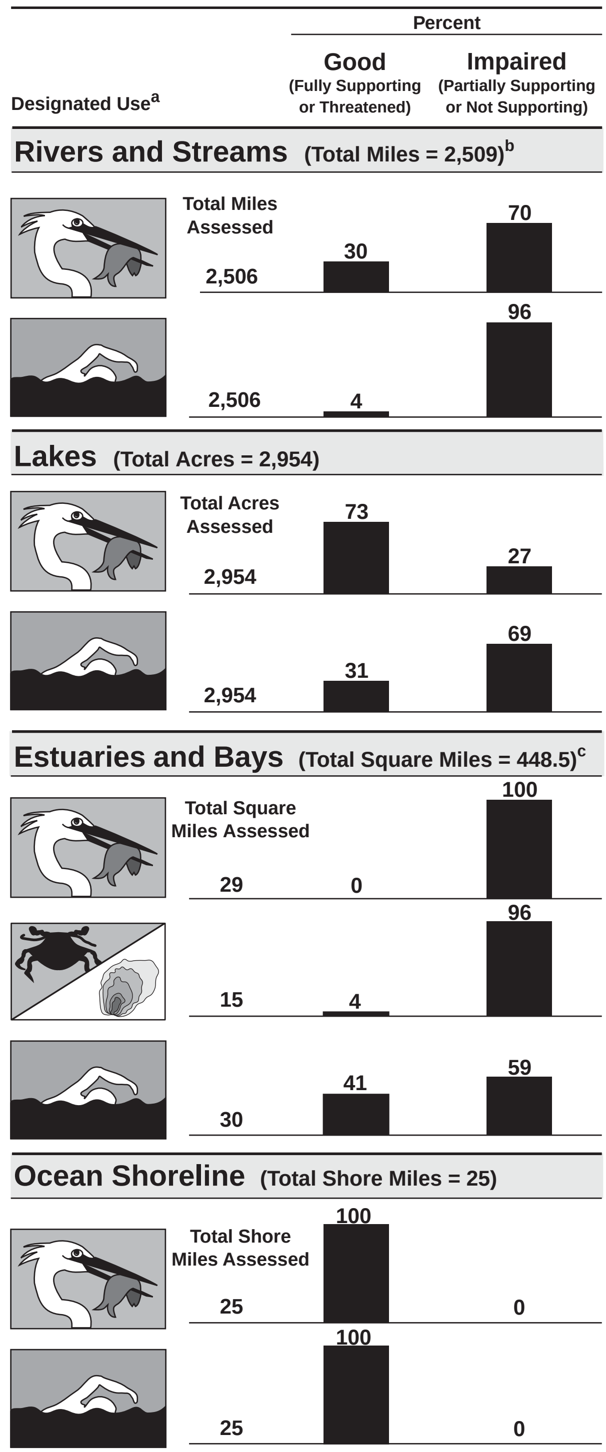


[a] A subset of Delaware's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

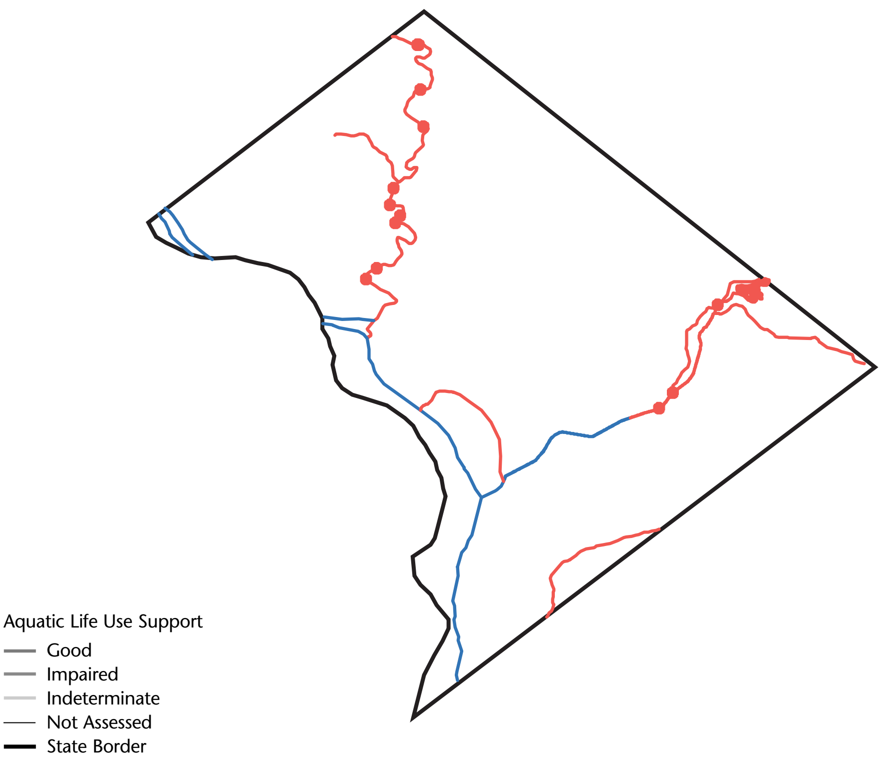
[c] Total size includes 419 mi^2 of estuary that are in Delaware but under the jurisdiction of the Delaware River Basin Commission (DRBC).

Individual Use Support in Delaware



Note: Figures may not add to 100% due to rounding.

District of Columbia



For a copy of the District of Columbia 2000 305(b) report, contact:

Nicoline Shulterbrandt
Attn: Water Quality Division
DC Department of Health
Environmental Health
Administration
5th Floor
51 N Steet, NE
Washington, DC 20002
(202) 535-2190

Surface Water Quality

Some small improvements have been observed, but water quality in the District of Columbia continues to be impaired. The uses that relate directly to human use of the waterbodies were generally not supported, while those uses that directly affected the quality of habitat for aquatic life were at least partially supported. None of the waterbodies monitored were in full support of all assigned uses. For example, the Anacostia River remains aesthetically and chemically polluted. However, the pollution is at a level that supports fish and other wildlife. Submerged aquatic vegetation (SAV) is found in the Anacostia and Potomac Rivers, with the Potomac supporting a diverse group of SAV species. The Potomac River continues to benefit from improvements to the city's wastewater treatment plant and combined sewer overflow system.

Major causes of impairment common to the District's waterbodies are total toxics, pathogens, and organic enrichment. The sources of impairment with major impacts are combined sewer overflows, urban runoff/storm sewers, and municipal point sources. These sources are associated with the land uses common in an urban area. Special concerns of the District include the control of toxic pollutants in river sediments, funding and implementation of wetlands programs, restoration of the Anacostia River, public education, and combined sewer overflow abatement. The District of Columbia did not report on the condition of wetlands.

Ground Water Quality

The drinking water source for the District of Columbia is surface water. The intake is located in the Potomac River north of the city's boundary. Consequently, ground water is not monitored on a regular, intensive basis. However, compliance monitoring data are scrutinized for ground water-related information whenever it is available.

Programs To Restore Water Quality

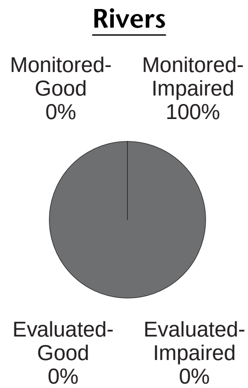
The District of Columbia's environmental quality programs are involved in activities to reduce the impairment of water quality. Because of the characteristics of the urban environment, nonpoint source pollution is of great concern. The sediment and stormwater control program provides technical assistance throughout the city in order to regulate land disturbance and to manage stormwater and flood plain areas. In addition, the nonpoint source program conducts outreach efforts to educate developers and residents about measures they can take to help with pollution prevention. Activities that might impact ground water quality (such as underground storage tank installation and remediation and pesticide use) are coordinated with the ground water protection program.

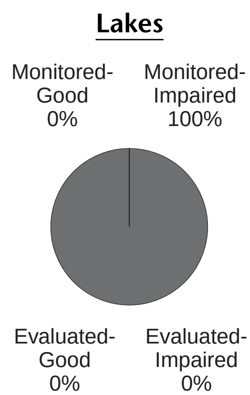
Programs To Assess Water Quality

The District of Columbia performs monthly physical and chemical sampling at 56 fixed stations on the Potomac and Anacostia Rivers and their tributaries. At each water chemistry station, four samples a year are collected for heavy metals analysis. Biological monitoring is also implemented in the District's tributaries. Twenty-seven sites are sampled at least once every 2 years for biological, fish, morphological, and water quality parameters.

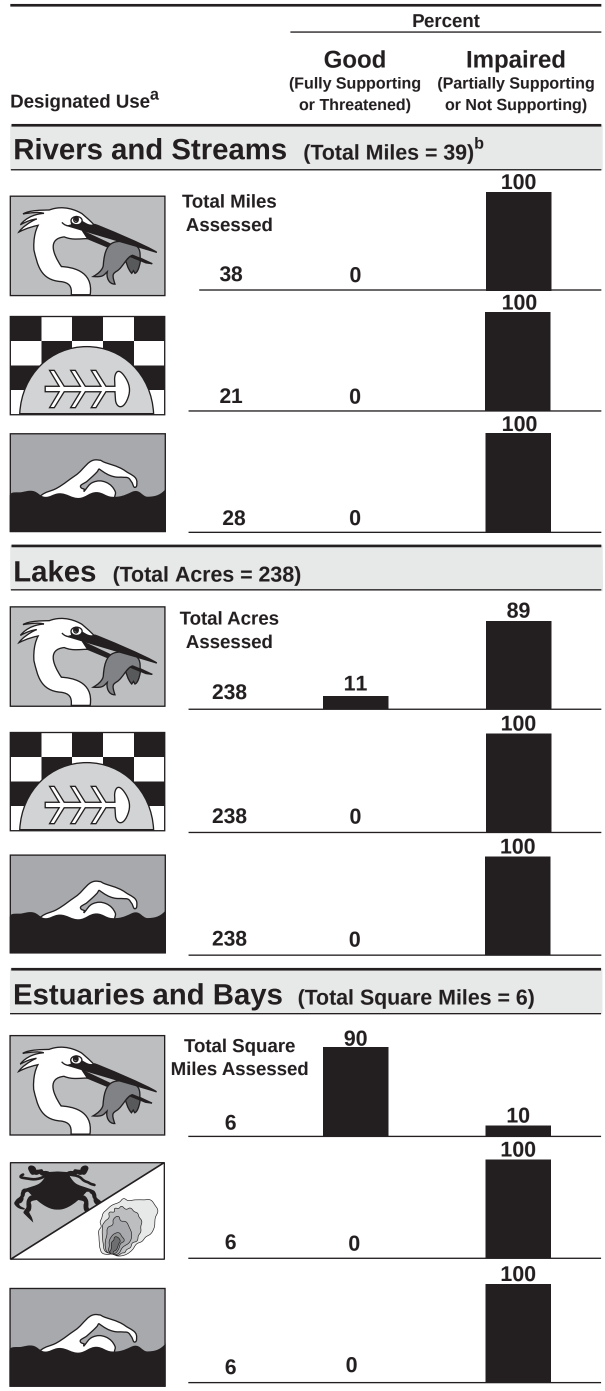
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.





Individual Use Support in the District of Columbia

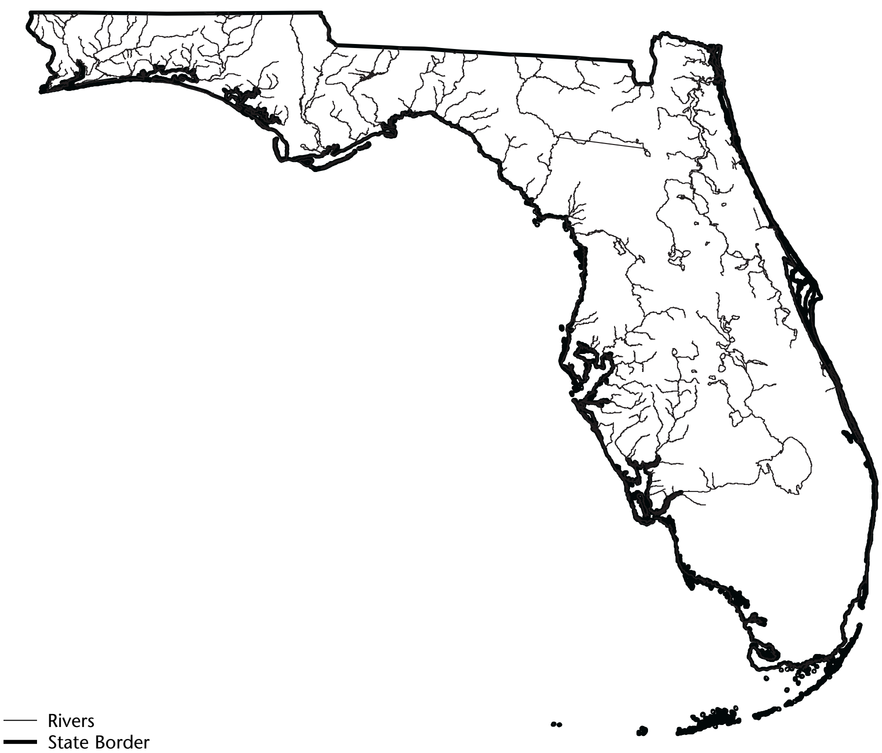


[a] A subset of the District of Columbia's designated uses appear in this figure. Refer to the district's 305(b) report for a full description of the district's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Florida



For a copy of the Florida 2000 305(b) report, contact:

Joe Hand
Florida Department of
Environmental Protection
Mail Station 3565
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 921-9441
e-mail: joe.hand@dep.state.fl.us

Surface Water Quality

Most surface waters in Florida are of good quality, but problems exist around densely populated urban areas, primarily in central and southern Florida. Continuing population growth and development are placing strain on the water resources of the state. Nutrient enrichment, organic enrichment, and pathogens are the leading causes of degraded water quality in rivers. Overall water quality is impaired for 48% of lake acres, resulting primarily from nutrient enrichment and algae. In estuaries, nutrient enrichment is the most common cause of degraded quality. Agricultural runoff and construction are the major sources of water pollution to surface waters in Florida.

The state recognizes the integrity of the following ecosystems as special state concerns: Everglades system, Florida Bay, Florida Keys, and Apalachicola River and Bay. Other issues of special concern are widespread mercury contamination in both marine and freshwater fish, protection of coastal areas and estuaries because of their ecological importance and significant contribution to Florida's economy, and integration of water quantity and quality decisions as water demands increase with population growth in the state.

Ground Water Quality

Ground water supplies about 87% of Florida's drinking water. Data from monitoring wells and private water supply wells in the state's ambient monitoring network indicate ground water quality is generally good, although local contamination problems exist. Agricultural chemicals, including aldicarb, alachlor, bromacil, simazine, and ethylene dibromide (EDB) have caused local and, in the case of EDB, regional problems. Other threats include petroleum products from leaking underground storage tanks, nitrates from dairy and other livestock operations, fertilizers and pesticides in stormwater runoff, toxic chemicals in leachate from hazardous waste sites, dry cleaner operations, and landfills. Florida has programs underway and in development to protect ground water quality, including discharge permitting programs and standards and criteria development. The state also plans to assess ground water quality and include additional information in future reports.

Programs To Restore Water Quality

Florida has established several programs focused on the restoration or preservation of state waters. The current goal of most restoration work is to correct problems caused by excess nutrient runoff. One method of restoration has been the construction of marsh flow-ways to filter out nutrients and other pollutants before they reach waterbodies of concern. The state also has several different programs that aim to improve water quality by purchasing environmentally sensitive lands for protection. In addition, the 1999 Florida Legislature enacted the Florida Watershed Restoration Act to provide a process for restoring waters through the establishment and implementation of TMDLs for pollutants of impaired waters.

Florida's point source permitting process was modified in 1995 with the delegation of the National Pollutant Discharge Elimination System (NPDES) program to Florida, but does not include stormwater permitting. The state wastewater program issues permits for facilities that discharge to either surface or ground water. The state permit for surface water dischargers now serves as the NPDES permit. The state also encourages reuse of treated wastewater (primarily for irrigation) and the use of constructed and natural wetlands for treatment of wastewater as alternatives to direct discharge.

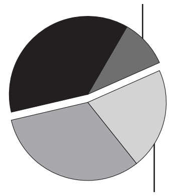
Programs To Assess Water Quality

Florida has adopted a tiered Integrated Water Resources Monitoring Network, which includes sampling of both surface and ground waters, to assess state waters. Tier I answers questions on a statewide or regional scale. Tier II addresses basin-specific or waterbody-specific questions. Tier III includes monitoring associated with regulatory permits and evaluations of TMDLs and BMPs. Florida is developing assessment methods and criteria for wetlands.

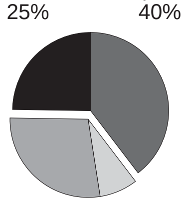
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

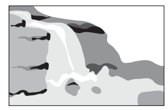


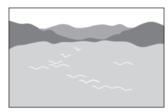
Lakes

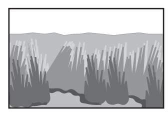


Summary of Use Support in Florida

	Assessed	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 51,858)[a]	Total Miles Assessed 10,154	69	31
Lakes (Total Acres = 2,085,120)	Total Acres Assessed 1,683,000	52	48
Estuaries and Bays (Total Square Miles = 4,437)	Total Square Miles Assessed 4,037	79	21







[a] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Georgia

For a copy of Georgia's 2000 305(b) report, contact:

W.M. Winn, III
Georgia Environmental Protection Division
Watershed Planning and Monitoring Program
4220 International Parkway – Suite 101
Atlanta, GA 30354
(404) 675-6236
e-mail: mork_winn@mail.dnr.state.ga.us

Surface Water Quality

The Georgia Environmental Protection Division (GAEPD) reported that, of the river miles assessed, 40% fully support beneficial water uses. Major causes of impairment include fecal coliform bacteria, low dissolved oxygen concentrations, mercury and/or PCB contamination in fish tissue, and metals. For lakes, 16% of the assessed acres fully support beneficial water uses. The major causes of impairment in lakes are metals, elevated pH, and fecal coliform bacteria. For both lakes and rivers, major sources of impairment include urban runoff and other nonpoint sources.

Of Georgia's assessed estuarine area, 59% fully supports beneficial water uses. Fecal coliform bacteria and metals were the major causes of impairment. Urban runoff and other nonpoint sources are sources of impairment to estuarine waters. Georgia did not report on the condition of its wetlands.

Ground Water Quality

Ground water is an important resource for the people, industry, and economy of Georgia. In 1995, ground water was used for 91% of the rural water supply, 23% of the total public water supply, and 66% of the irrigation supply. Across the state, ground water resources are generally of good quality, and no particular pollutant represents a significant threat at this time. Sources of ground water contamination include underground storage tanks, hazardous waste sites, industrial facilities, urban runoff, saltwater intrusion, pipelines, and sewer lines. To protect ground water quality, Georgia's regulatory programs follow an antidegradation policy to ensure that regulated activities will not become significant threats to water quality. In addition, pesticide monitoring indicates that pesticides do not threaten Georgia's drinking water aquifers at this time.

Programs To Restore Water Quality

During the 1998-1999 reporting cycle, river basin management planning was a major priority for the state. River basin management plans for the Chattahoochee, Flint, Coosa, Tallapoosa, and Oconee basins were adopted by the Board of Natural Resources in 1998. Georgia is also working with the EPA and South Carolina on the Savannah River

Watershed Project, and with Florida to conduct basin planning for the Suwannee River. The GAEPD also placed emphasis on other programs in 1998-1999, including monitoring and assessment, modeling and total maximum daily load allocations (TMDLs), NPDES permitting, pollution abatement, stormwater permitting, treatment plant financing, fish consumption guidance, and public participation projects.

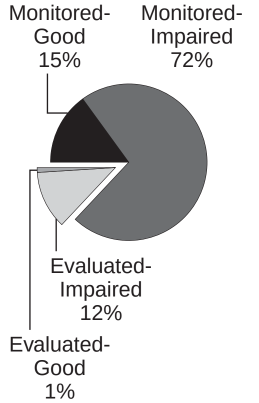
Programs To Assess Water Quality

The GAEPD conducts long-term ambient trend monitoring through a fixed station network, rotating basin monitoring, intensive surveys, fish tissue monitoring, lake water quality studies, coastal monitoring, facility compliance sampling, and NPDES discharger toxicity testing. In the assessment process, GAEPD also draws upon biotic data from the state's Wildlife Resources Division (WRD). The WRD uses the Index of Biotic Integrity (IBI) to identify impacted fish populations.

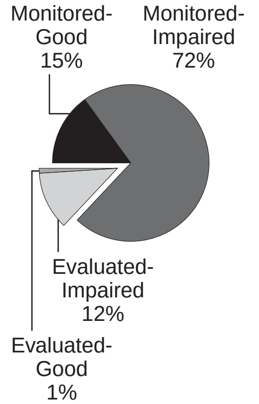
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

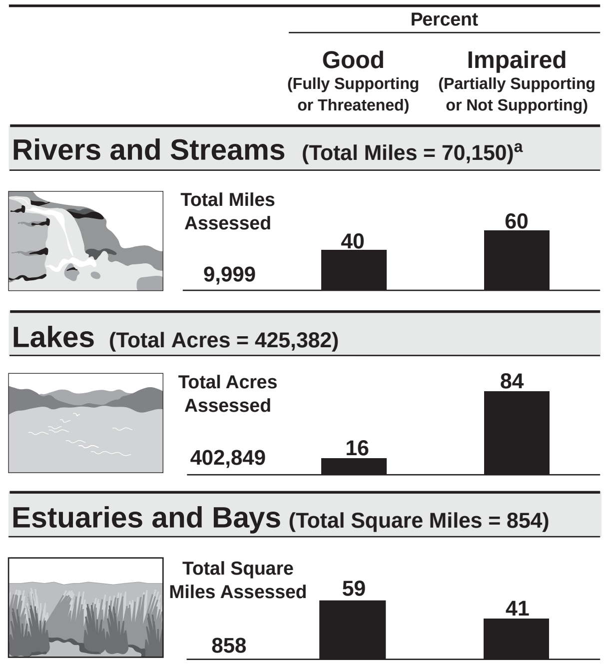
Rivers



Lakes



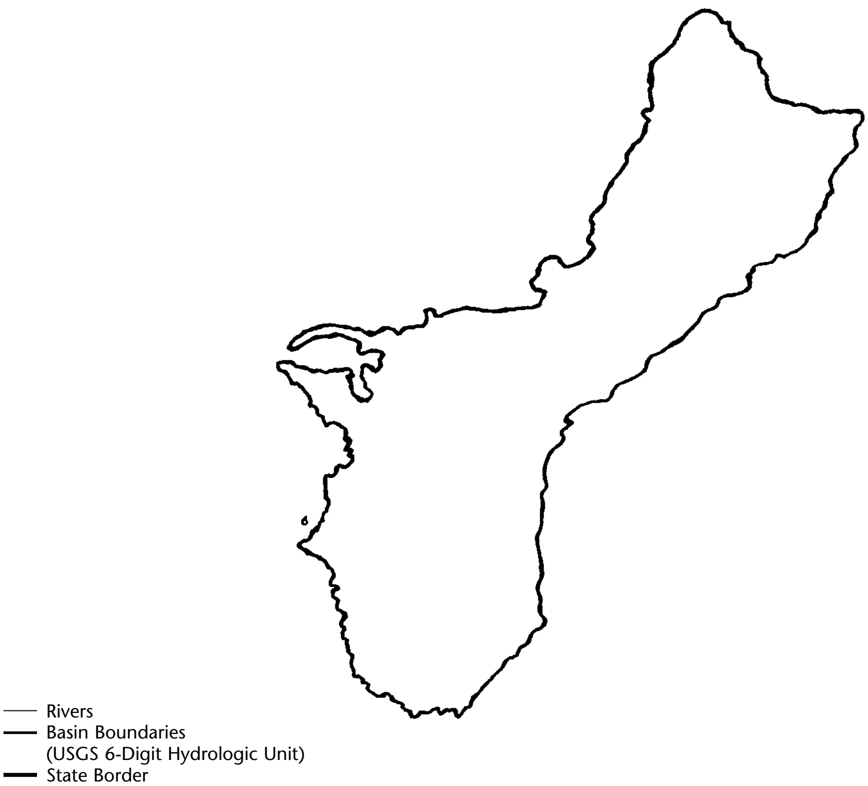
Summary of Use Support in Georgia



[a] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Guam



For a copy of the Guam 2000 305(b) report, contact:

Mike Gawel
Guam Environmental Protection Agency
Planning and Environmental Review Division
P.O. Box 22439 GMF
Barrigada, GU 96921
(671) 475-1662

Surface Water Quality

With an area of 212 square miles, Guam is the largest island in the Mariana Archipelago. It is the westernmost point of the United States, lying approximately 3,700 miles west of Honolulu.

Seventeen percent of the assessed river miles in Guam support aquatic life use. Three percent of the assessed miles support swimming. Contaminants that impact stream quality include suspended solids, organic compounds, habitat modifications, and nutrients.

Guam's marine waters are generally free of pollution except where localized runoff or discharges occur. Of the marine bay area assessed, 3% supports aquatic life use and 65% supports swimming. Suspended solids, metals, pathogens, and turbidity from urban runoff and municipal facilities were cited as impacting water quality.

Guam has 116.5 miles of ocean shoreline. Seven percent of the assessed miles support swimming. The primary cause of pollution in recreational beaches is microbial organisms.

The only inland body of water on Guam is the Fena Reservoir constructed by the U.S. Navy as a public drinking water supply. Guam did not report on the condition of its wetlands.

Ground Water Quality

Ground water supplies approximately 75% of the island's drinking water. The Northern Guam Lens is an aquifer under the northern half of the island fed by rainwater that has percolated through porous limestone and floats on denser seawater. EPA designated it as a principal source in 1978. Contaminants that threaten ground water quality include chlorides and organic compounds (e.g., trichloroethylene or TCE, tetrachloroethylene, and ethylene dibromide). Ground water in Chalan Pago has been contaminated by petroleum products released during a gasoline spill from an underground storage tank.

Programs To Restore Water Quality

The Guam Environmental Protection Agency (Guam EPA) plans to move toward a watershed approach as part of the strategy to improve water quality. Guam EPA requires an Underground Injection Control Permit for anyone constructing a well used primarily for drainage of storm water runoff. Ground water is additionally protected through its "Principal Source" designation, by storm water and septic tank leachate management under Land Use Permits, and through the Pesticide Management Program.

Programs To Assess Water Quality

The Guam Water Monitoring Strategy was implemented in 1978. Currently, monitoring data are collected at fixed locations using a rotating basin design. Guam EPA and the Department of Aquatic Wildlife Resources (DAWR) are the main agencies that participate in surface water monitoring. Four watersheds were selected at the beginning of fiscal year 1996 for freshwater monitoring by the DAWR. Planned revisions to the monitoring strategy include: (1) adopting a probabilistic-based approach; (2) incorporating a Rapid Bioassessment Protocol; (3) including additional water quality parameters; (4) establishing a Fish and Shellfish Consumption Advisory Program; and (5) conducting marine biological assessments.

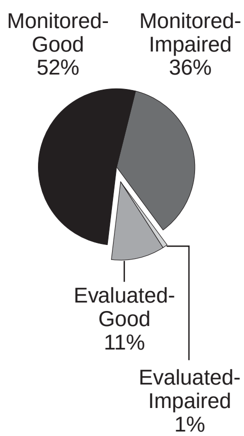
The Water and Energy Research Institute of the Western Pacific (WERI) conducted a study to measure heavy metals, PCBs, and polycyclic aromatic hydrocarbons (PAHs) in marine sediments and organisms. None of the organisms contained contaminant levels that exceeded current U.S. Food and Drug Administration standards.

An ambient ground water monitoring system was established to monitor pumping rates and chloride concentrations at all production wells. The USGS also monitors salinity and water levels within the Northern Guam Lens.

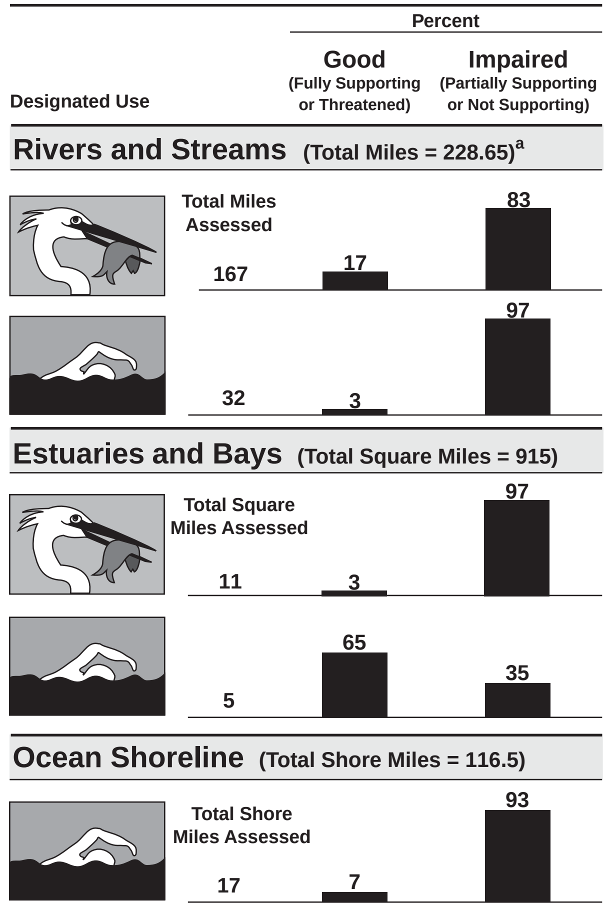
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



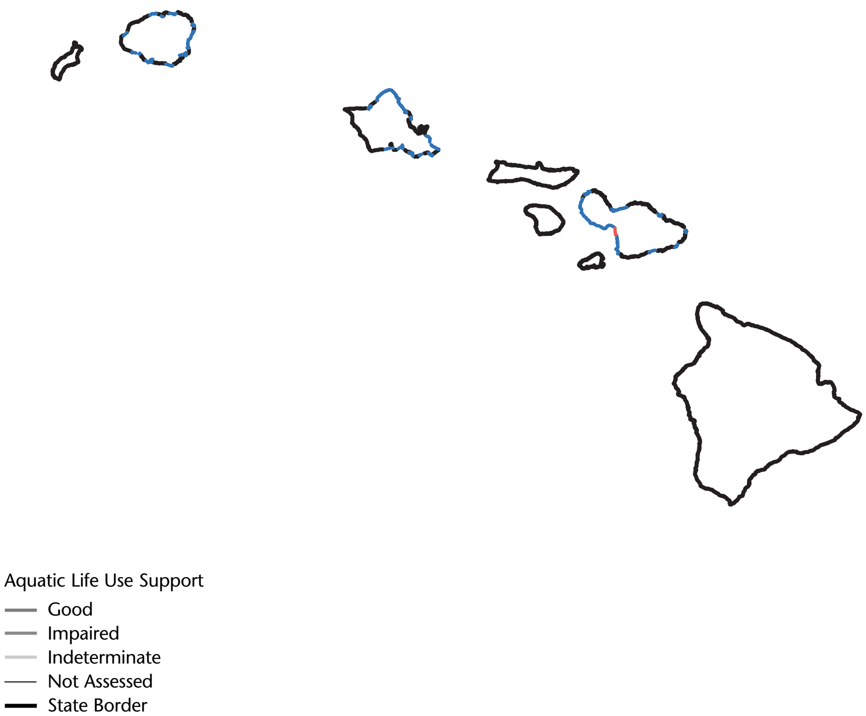
Individual Use Support in Guam



[a] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Hawaii



For a copy of the Hawaii 2000 305(b) report, contact:

Terence Teruya
Hawaii Department of Health
Clean Water Branch
919 Ala Moana Blvd., Room 301
Honolulu, HI 96814
(808) 586-4309
tteruya@eha.health.state.hi.us

Portions of the report may be downloaded from: **http://www.hawaii.gov/health/eh/cwb/2000-305b/**

Surface Water Quality

Most of Hawaii's waterbodies have variable water quality due to storm water runoff. During dry weather, most streams and estuaries have good water quality that fully supports beneficial uses, but the quality declines when storm water runoff carries pollutants into surface waters. The most significant pollution problems in Hawaii are siltation, turbidity, nutrients, organic enrichment, and pathogens from nonpoint sources, including agriculture and urban runoff. Introduced species and stream alteration are other stressors of concern. Very few point sources discharge into Hawaii's streams; most industrial facilities and wastewater treatment plants discharge into coastal waters. Other concerns include elevated levels of arsenic from a now-closed canoe plant and the spread of leptospirosis, a disease caused by pathogenic bacteria, through recreational contact. Hawaii did not report on the condition of wetlands.

Ground Water Quality

Compared to mainland states, Hawaii has very few ground water problems due to a long history of land use controls for ground water protection. Prior to 1961, the state designated watershed reserves to protect the purity of rainfall recharging ground water. The Underground Injection Control Program also prohibits wastewater injection in areas surrounded by "no-pass" lines. However, aquifers outside of reserves and no-pass lines may be impacted by landfills, leaking underground storage tanks, agricultural activities, and hazardous waste generators. Petroleum compounds, metals, nitrate, and organic pesticides pose the greatest risk for future contamination.

Programs To Restore Water Quality

The Polluted Runoff Control Program has supported approximately 35 grant proposals that address the reduction or elimination of nonpoint source pollution. The storm water program administers permits for entities that discharge significant quantities of storm water and is managed by the Clean Water Branch (CWB) of the Department of Health (DOH). The CWB participated in the Waimanalo Watershed Monitoring Project from 1998 to 1999. Other programs included a training project addressing erosion and sediment control, the He'eia Coastal Restoration Project that replaced alien coastal plants with native species, and a study that investigated the integration of aquaculture and taro production to reduce pollution.

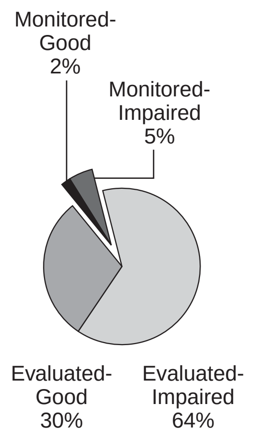
Programs To Assess Water Quality

The DOH restructured its monitoring program in 1999. Major changes include a reduction in the number of stations being monitored for microbiological contamination and the elimination of all analyses for physical and chemical contamination along the shoreline. The emphasis of the monitoring program has shifted toward assessment of ambient conditions in watersheds and the preparation of total maximum daily loads (TMDLs) when necessary. The CWB has completed its assessment of the Waimanalo watershed and will address the Kawa Stream watershed next. Although the fecal coliform standard remains in effect for Hawaii as an indicator of sewage contamination, enterococci and *Clostrida perfringens* are also routinely assayed. The use of *C. perfringens* may be preferable as an indicator because fecal coliform and eterococci are found naturally in Hawaii as part of the microbial flora in the soil.

Data Quality

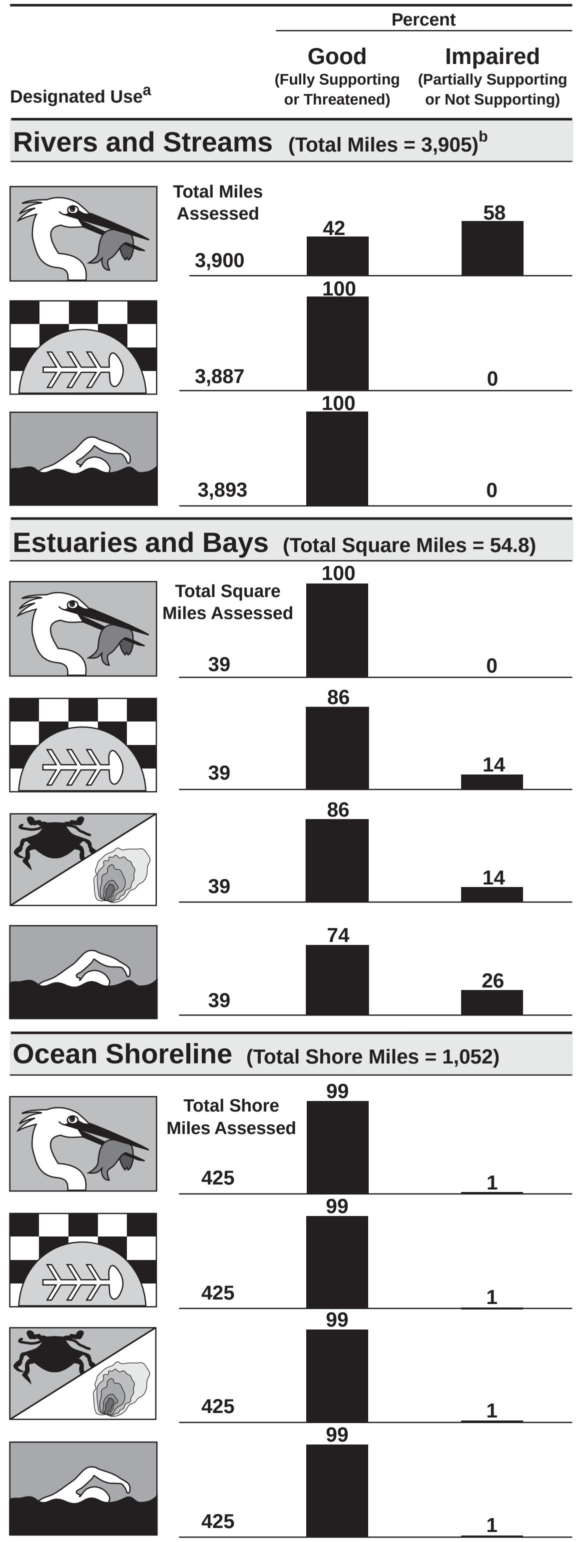
States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



[a] A subset of Hawaii's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Hawaii



Note: Figures may not add to 100% due to rounding.

Idaho

For a copy of the Idaho 2000 305(b) report, contact:

Michael McIntyre
Idaho Department of Health and Welfare
Division of Environmental Quality
1410 North Hilton
Statehouse Mall
Boise, ID 83720
(208) 373-0502
e-mail: mmcintyr@deq.state.id.us

Surface Water Quality

Idaho reports that 53% of river and stream miles support aquatic life. Based on the state's approved 1998 Section 303(d) list (approved by EPA in 1999), the major causes of impairment in Idaho's rivers and streams include siltation, nutrients, flow alterations, thermal modifications, and bacteria. Information on lake use support was not included in Idaho's 2000 305(b) report because the state is currently developing a lake and reservoir beneficial use assessment process. Based on the state's Section 303(d) list, the major causes of impairment in Idaho's lakes and reservoirs include siltation, nutrients, low dissolved oxygen, and flow alterations. There is also a fish consumption advisory for mercury in place for the Brownlee Reservoir. The state has not yet determined the sources of impairment to any surface water system. Idaho did not report on the condition of wetlands.

Ground Water Quality

More than 90% of Idaho's residents use ground water as their domestic water supply. The major sources of ground water contamination in Idaho are agricultural activities, waste storage and disposal, mining, and hazardous material transportation.

Data on ground water quality in Idaho come primarily from the Statewide Ambient Ground Water Quality Monitoring Network and the Public Water Systems. On a statewide basis, the ground water contaminants of greatest concern are nitrates, pesticides, and volatile organic compounds.

Programs To Restore Water Quality

EPA has primary responsibility for issuing National Pollutant Discharge Elimination System (NPDES) permits in Idaho. The Idaho Division of Environmental Quality (DEQ) is concerned that EPA does not have the staff to issue new permits or revise and reissue old permits. Major discharges are inspected annually but minor discharges do not receive this attention.

The nonpoint source program in Idaho is administered on a watershed basis and includes provisions for public education and technical protocol development. Project emphasis is placed on management effectiveness, beneficial use monitoring, public awareness, antidegradation, and endangered species issues.

Programs To Assess Water Quality

The DEQ is responsible for water quality monitoring in Idaho. Monitoring activities have focused on beneficial uses and ambient water quality trends. Sampling at 56 monitoring stations is conducted on a rotating basis to provide data for assessing trends in river water quality. A synoptic monitoring program was carried out in 1997, 1998, and 2000 to monitor lakes and reservoirs. Thus far, 60 lakes and reservoirs have been monitored.

Idaho currently bases their 305(b) assessment on their 303(d) listing of impaired waters. This practice biases the assessment toward more impaired waters, and may not be representative of overall water quality. Only monitored data were incorporated into the designated use assessment.

Idaho is planning to modify their Beneficial Use Reconnaissance Program (BURP) to include a plan on monitoring and assessing lakes, an expanded river monitoring system, and a new rotating basin monitoring plan. DEQ has reserved $50,000 from Section 319 grant funds to support this process. Idaho also plans to implement EPA's Assessment Database before the 2002 305(b) reporting cycle.

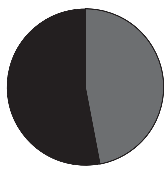
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

Monitored-Good 53%

Monitored-Impaired 47%

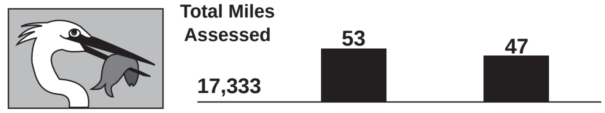


Evaluated-Good 0%

Evaluated-Impaired 0%

Individual Use Support in Idaho

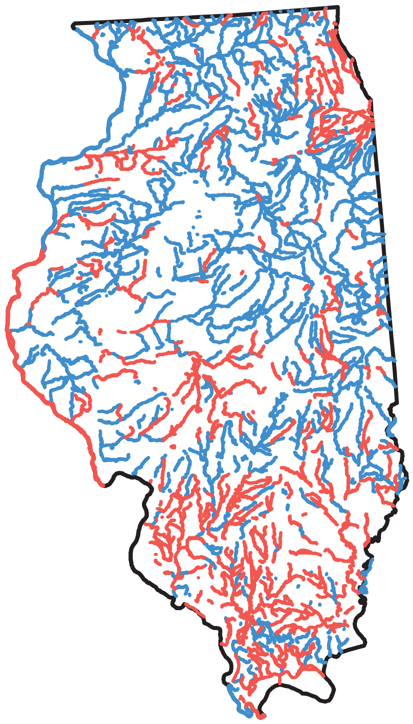
Designated Use[a]	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 115,595)[b]		



[a] A subset of Idaho's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Illinois



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Illinois 2000 305(b) report, contact:

Teri Holland
Illinois Environmental Protection Agency
Division of Water Pollution Control
P.O. Box 19276
Springfield, IL 62794-9276
(217) 782-3363
e-mail: Teri.Holland@epa.state.il.us

For more information, visit IEPA on the Internet at: **http://www.epa.state.il.us/water/water-quality/**

Surface Water Quality

The Illinois Environmental Protection Agency (IEPA) reported that over 62% of assessed stream miles fully support aquatic life use, which the state considers the single best indicator of overall stream conditions. The major causes of impairment in Illinois's rivers include nutrients, siltation, habitat/flow alteration, organic enrichment/dissolved oxygen depletion, metals, and suspended solids. Major sources include agriculture, point sources, hydrological/habitat modification, urban runoff, and resource extraction.

Fifty-two percent of Illinois's inland lake acres fully support aquatic life uses.

The major causes of impairment to Illinois's inland lakes include nutrients, siltation, suspended solids, and organic enrichment/dissolved oxygen depletion. Major sources include agriculture, contaminated sediments (in-place contaminants such as sediment or phosphorus attached to particles), and hydrological/habitat modification.

In the Illinois portion of Lake Michigan, all 63 miles support aquatic life use. Trophic status of Lake Michigan has improved from mesotrophic/eutrophic conditions in the 1970s to oligotrophic conditions today.

Illinois did not report on the condition of wetlands.

Ground Water Quality

Ground water quality is generally good, but past and present activities contaminate ground water in isolated areas. Major sources of ground water contamination include agricultural chemical operations, fertilizer and pesticide applications, above- and belowground storage tanks, septic systems, manufacturing/repair shops, surface impoundments, and waste piles.

Programs To Restore Water Quality

The IEPA has directed program resources toward a watershed-based framework to effectively protect and restore natural resources. This comprehensive approach will focus on the total spectrum of water resource issues, emphasizing involvement of citizens and the regulated community. The IEPA has restructured its program activities using a priority watershed management approach.

Illinois established a Great Lakes Program Office in FY93 to oversee all Lake Michigan programs on a multimedia basis. Activities include promotion of pollution prevention for all sources of toxics in all media (such as air and water).

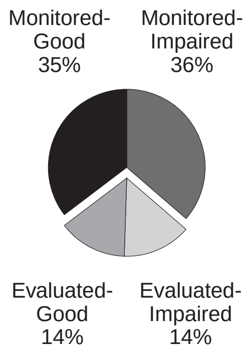
Programs To Assess Water Quality

The IEPA conducts a variety of water quality monitoring programs. Among these programs are the Ambient Water Quality Monitoring Network, Intensive River Basin Survey (in cooperation with the Illinois Department of Natural Resources), Facility-Related Stream Survey, Ambient and Volunteer Lake Monitoring Programs, and the National Nonpoint Source Monitoring Program. Data from more than 4,000 stations have been used in the assessment of surface water quality conditions. In addition, over 600 volunteers have participated in citizen monitoring of over 300 lakes as part of IEPA's Volunteer Lake Monitoring Program, which has been incorporated into the state's water quality assessments.

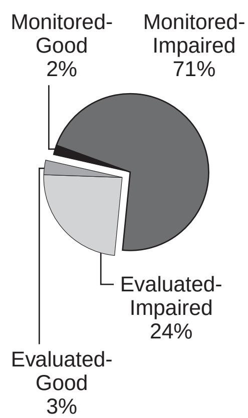
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

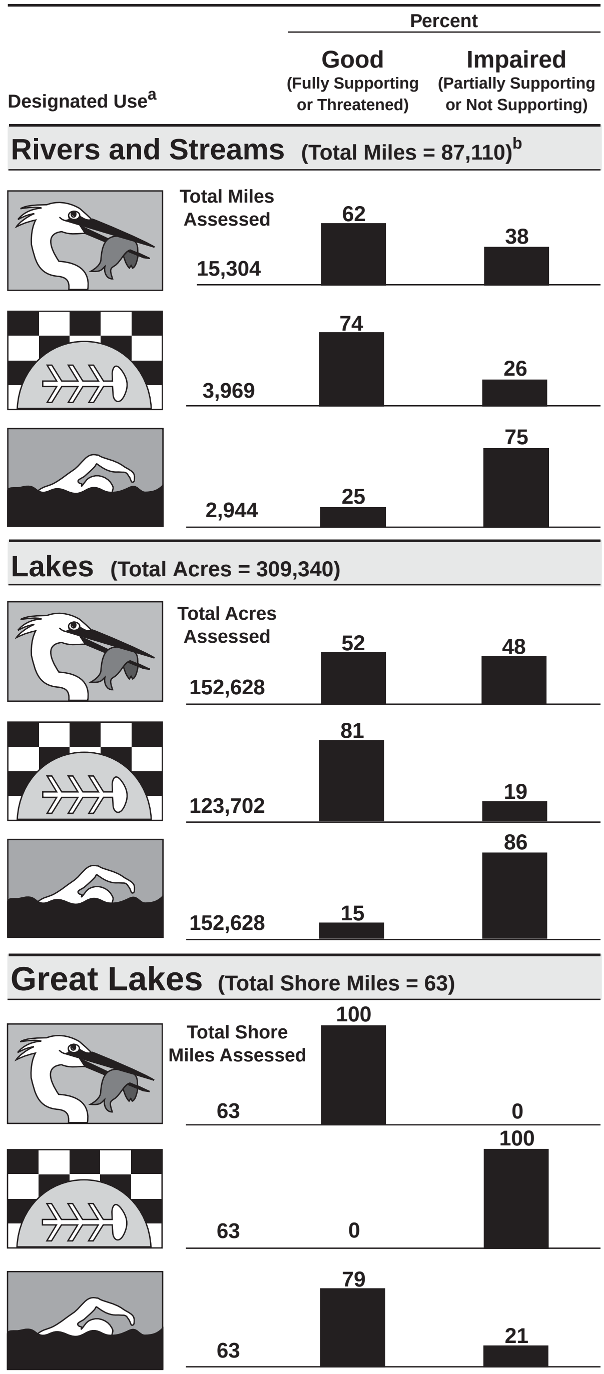
Rivers



Lakes



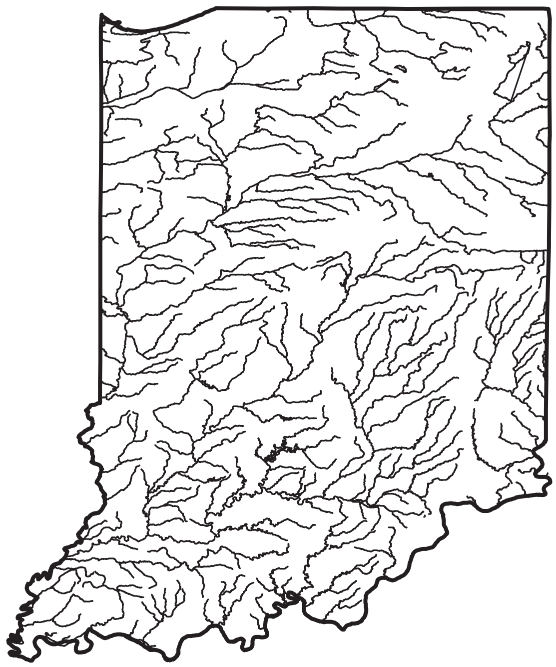
Individual Use Support in Illinois



[a] A subset of Illinois's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Indiana



Rivers
State Border

For a copy of the Indiana 2000 305(b) report, contact:

Linda Schmidt
Indiana Department of
Environmental Management
Office of Water Management
P.O. Box 6015
Indianapolis, IN 46206-6015
(317) 233-1432
e-mail: lschmidt@dem.state.in.us

The report is also available on the Internet at: **http://www.in.gov/idem/water/planbr/wqs/quality/IN305b00.pdf**

Surface Water Quality

All of the surveyed lake acres, Great Lakes shoreline, and 76% of the surveyed river miles have good water quality that fully supports aquatic life. However, 38% of the surveyed river miles do not support swimming due to high bacteria concentrations. All of the waters of the state are under a limited consumption advisory for at least some species of fish based on concentrations of polychlorinated biphenyls (PCBs) and mercury. The pollutants most frequently identified in Indiana waters include PCBs, metals (predominantly mercury), and pathogens. The sources of these pollutants most often identified include nonpoint sources, agricultural runoff, municipal point sources, and hydrologic modification. Many sources are unknown.

Ground Water Quality

Indiana has a plentiful ground water resource serving approximately 50% of the state's population for drinking water and filling many of the water needs of business, industry, and agriculture. In 1998, the state began sampling nearly 400 wells representing 22 hydrogeologic setting types. The major sources of ground water contamination in Indiana are commercial fertilizer application, confined animal feeding operations, underground storage tanks, surface impoundments, landfills constructed prior to 1989, septic systems, shallow injection wells, industrial facilities, materials spills, and salt storage and road salting. Contaminants from these sources include nitrate, salts, pesticides, petroleum compounds, metals, radionuclides, and bacteria. There are programs at all governmental levels to monitor, evaluate, and protect ground water resources in Indiana. The state is currently developing ground water quality standards. In addition, the source water assessment program will identify the watersheds and wellheads that supply drinking water, and 4,300 source water assessments are scheduled to be completed by May 2003.

Programs To Restore Water Quality

In February 1997, the Indiana Water Pollution Control Board adopted revised water quality standards for Great Lakes Basin waters. Water quality standards, including proposed sediment and wetland narrative criteria, for the area outside the Great Lakes Basin are being developed. Macroinvertebrate and fish community data are being evaluated for the purpose of developing biocriteria.

Point sources are regulated primarily through the NPDES program in Indiana. In 1999, the program focused on issuing new permits and renewing existing permits within state-required time frames. The Nonpoint Source Management Plan for Indiana was updated and approved by EPA in October 1999. This enables the state to receive a full allocation of Section 319 funding.

Programs To Assess Water Quality

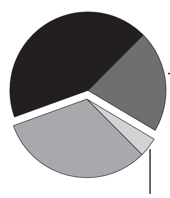
A new surface water monitoring strategy for Indiana was implemented in 1996 with the goal of monitoring all waters of the state by 2001 and reporting the assessments by 2003. Each year, approximately 20% of the waterbodies in the state will be assessed and reported the following year. Assessments highlighted in the 2000 305(b) report are the Upper Wabash, Whitewater, White, and East Fork basins. Elements of Indiana's sampling program include fixed station monitoring, TMDL development, trace metals monitoring, pesticide water column monitoring, bacteriological sampling, and targeted fish tissue and surficial aquatic sediment sites. The program also includes sites selected by probabilistic design and sampled for fish community biotic integrity, benthic aquatic macroinvertebrate community biotic integrity, fish tissue contaminants, surficial aquatic sediment contaminants, and water column chemistry.

Wetlands water quality standards are under development in Indiana.

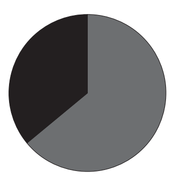
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

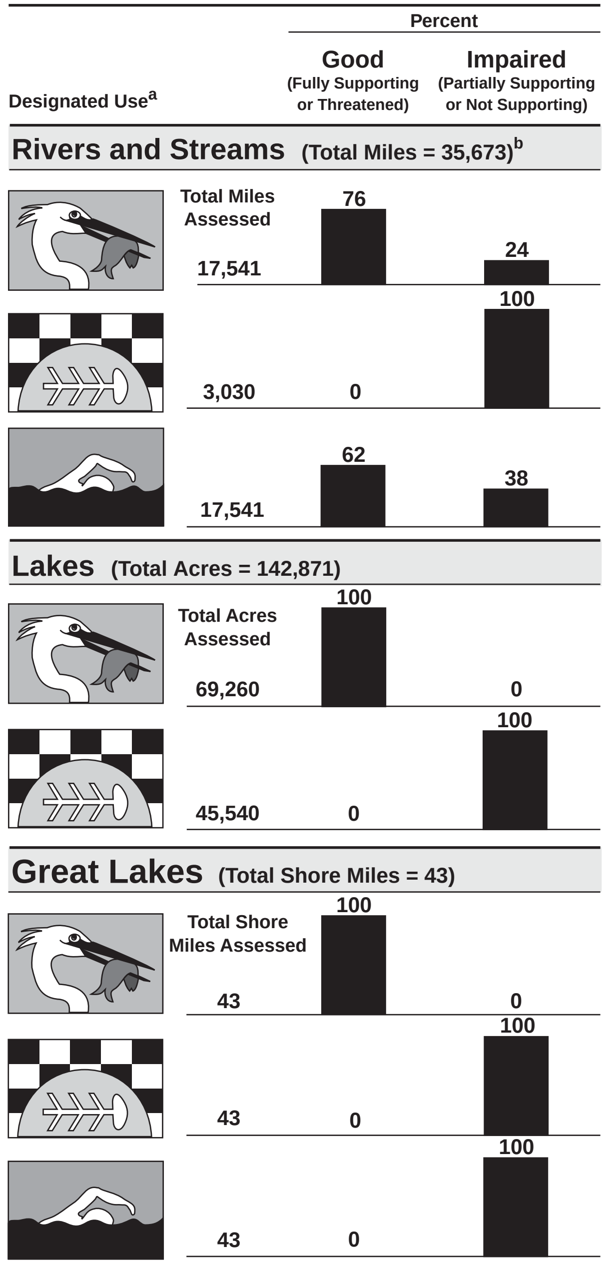
Rivers



Lakes



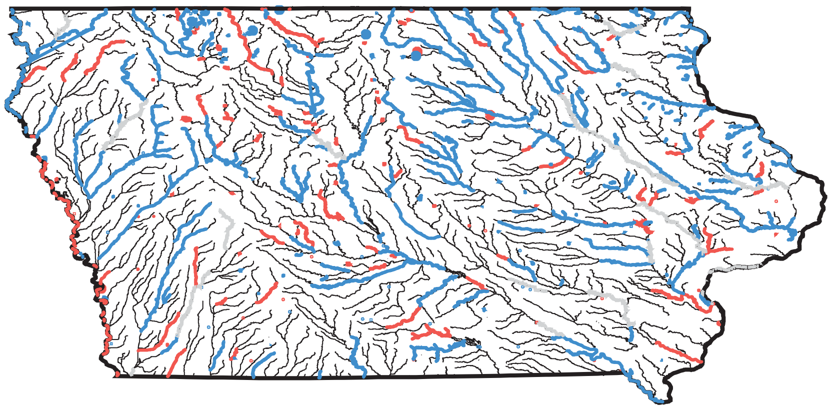
Individual Use Support in Indiana



[a] A subset of Indiana's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Iowa



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Iowa 2000 305(b) report, contact:

John Olson
Iowa Department of Natural Resources
Water Resources Section
502 East 9th Street
Des Moines, IA 50319
(515) 281-8905
e-mail: John.Olson@dnr.state.ia.us

Surface Water Quality

Aquatic life use is impaired in 26% of Iowa's assessed rivers and 32% of assessed lakes. Swimming use is impaired in 52% of surveyed river miles and 25% of assessed lakes. Siltation threatens beneficial uses at all reservoirs. Other common sources of lake and reservoir impairment include organic enrichment, siltation, and nutrients. Leading sources of lake and reservoir pollution include natural sources, agriculture, and internal nutrient recycling. Point sources still pollute about 2% of the assessed stream miles and two lakes. Pollution-caused fish kills are an increasing source of impairment in Iowa streams. Leading pollutants in Iowa's streams include habitat alteration, organic enrichment, pathogens, and un-ionized ammonia. Sources of river and stream contamination include agriculture, hydrologic modification, and channelization.

Ground Water Quality

Ground water supplies about 80% of Iowa's drinking water. Agricultural chemicals, underground storage tanks, agricultural drainage wells, livestock wastes, and improper management of hazardous substances all contribute to ground water contamination. Several studies have detected low levels of common agricultural pesticides and synthetic organic compounds in both untreated and treated ground water. The fuel oxygenate methyl tertiary butyl ether (MTBE) was the most frequently detected volatile organic compound (VOC) in a 1997 study of ground water quality in eastern Iowa. In most cases, the small concentrations of contaminants are thought to pose no immediate threat to public health, but little is known about the health effects of long-term exposure to low concentrations of these chemicals.

Programs To Restore Water Quality

Pollution from municipal and industrial point sources is controlled primarily through the Clean Water Act's National Pollutant Discharge Elimination System through permits, development and enforcement of water quality standards, and legal action. The program also includes control of stormwater runoff from urban and industrial areas.

Sediment is the greatest pollutant by volume in Iowa. The state adopted a nonpoint control strategy of education projects and cost-share programs. Later, it adopted rules requiring that land disposal of animal wastes not contaminate surface and ground waters. Landfill rules require annual inspections and permit renewals every 3 years. Iowa regulates construction in floodplains to limit erosion and impacts on aquatic life. In 1990, a Nonpoint Source Program was developed whereby state and federal agencies cooperate to implement water quality projects including education, demonstrations, and implementation of best management practices.

Programs To Assess Water Quality

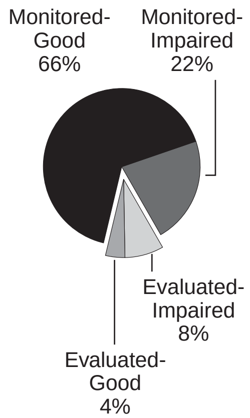
Iowa's Department of Natural Resources (DNR) either maintains or cooperates in long-term sampling networks for both surface and ground waters. DNR routinely monitors metals, ammonia, and residual chlorine at fixed sampling sites. Limited sampling for agricultural pesticides began in 1995 and was greatly expanded in 1999.

Information about toxic contaminants in fish is available from long-term DNR/EPA and other monitoring programs. Toxins in sediment are monitored as part of a special studies program. The role of biological sampling is growing, with over 100 reference sites sampled so far, and data assessment methods have been implemented. The continued expansion of Iowa's volunteer monitoring program (IOWATER) will provide an additional source of water quality information.

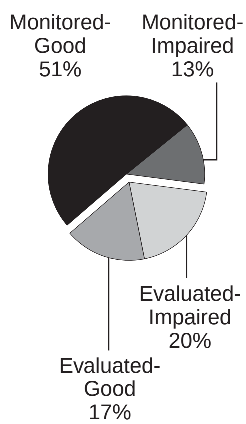
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

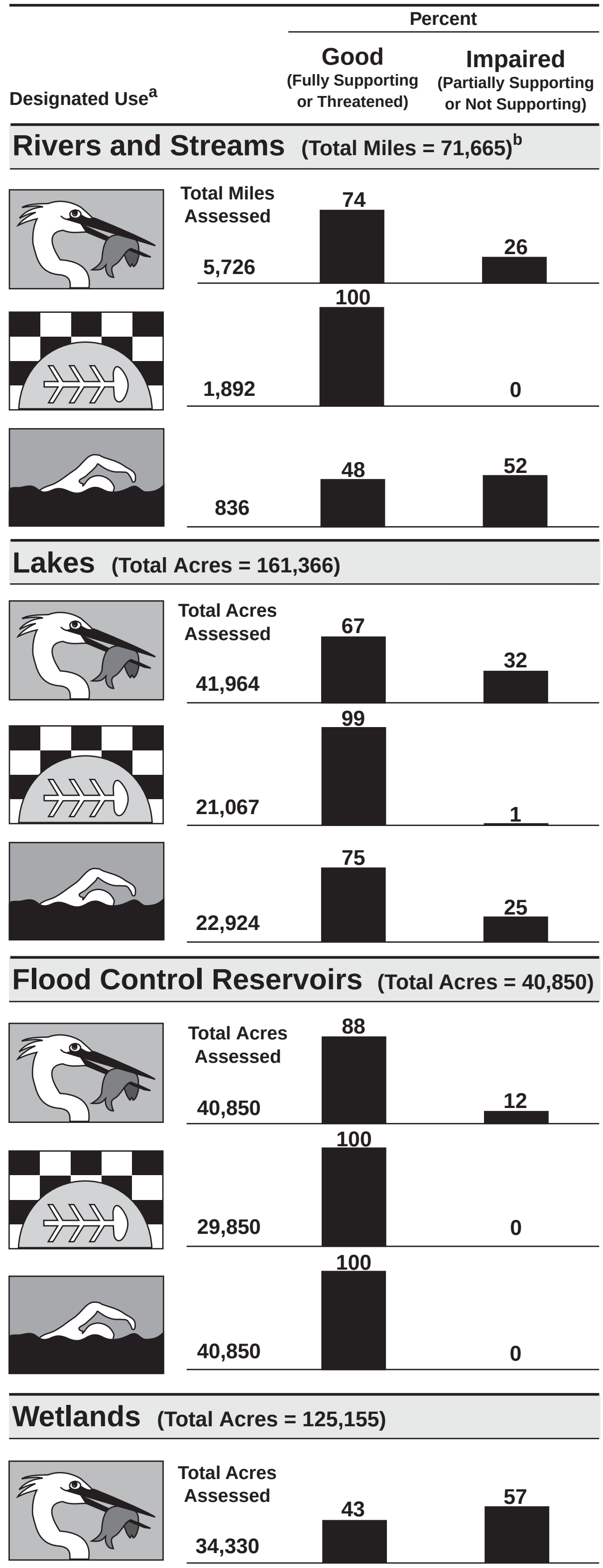
Rivers



Lakes



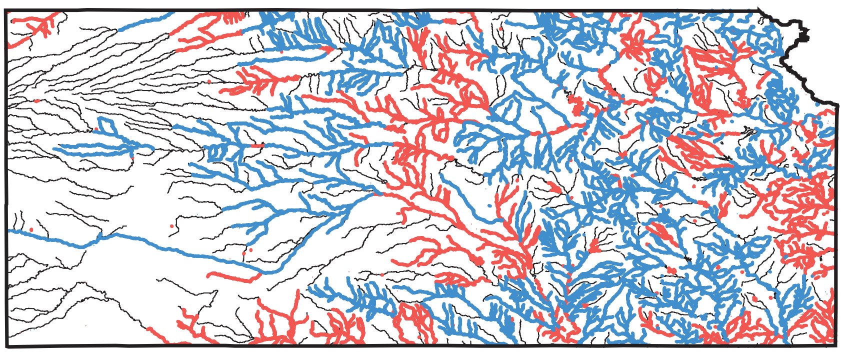
Individual Use Support in Iowa



[a] A subset of Iowa's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Excludes flood control reservoirs.

Note: Figures may not add to 100% due to rounding.

Kansas



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Kansas 2000 305(b) report, contact:

Theresa Hodges
Kansas Department of Health and Environment
Division of Environment
Bureau of Environmental Field Services
Suite #430, 4th Floor
1000 SW Jackson
Topeka, KS 66612-1367
(785) 296-1981
e-mail: thodges@kdhe.state.ks.us

The report is also available on the Internet at: **http://www.kdhe.state.ks.us/befs/305b_2000/**

Surface Water Quality

The Kansas Department of Health and Environment (KDHE) assessed water quality for 18,200 miles of rivers and streams for the 2000 reporting cycle. Of these, 64% support aquatic life use. KDHE determines aquatic life use support based on acute criteria only. Major causes of nonsupport are fecal coliform bacteria, organic enrichment, sulfates, chlorides, and metals. Impairment of streams is attributed to agriculture, natural sources, hydrologic modification, municipal point sources, and ground water withdrawal. Of the public lake acres assessed during the reporting period, 53% support but are threatened for aquatic life use. The major causes of impairment are sediment, turbidity, nutrients/eutrophication, and taste and odor problems.

Agriculture and natural processes are the major sources of impairment for lakes. The trophic status of 53% of the assessed lake acreage is stable over time.

Most Kansas wetlands are on private lands. Of the public wetlands assessed, 26% support aquatic life use but are considered threatened. The major impairments are excessive nutrient load, heavy metals, salinity, elevated pH, flow alterations, low dissolved oxygen, and turbidity/siltation. Agriculture, hydrologic modifications in watersheds, and natural processes are the sources of impairment. Trophic status studies indicate that 65% of the wetland acres are stable over time.

Ground Water Quality

The KDHE conducts the primary ambient ground water monitoring in the state. Of the ground water samples that exceeded federal drinking water maximum contaminant levels, 76% were due to nitrate contamination. Other ground water concerns included volatile organic compounds, heavy metals, petroleum products, and/or bacteria. The major sources of these contaminants included active industrial facilities, spills, leaking storage tanks, mineral extraction, and agricultural activities.

Programs To Restore Water Quality

The Local Environmental Protection Program provides financial assistance to 98 of the state's 105 counties to develop and implement a comprehensive plan for protection of the local environment.

The Point Source Pollution Program regulates wastewater treatment systems of municipal, federal, industrial, and commercial sewage facilities, stormwater, and larger livestock operations. Smaller livestock facilities and other sources of pollutants are addressed by the Nonpoint Source Control Program. Directed funds, mainly to upgrade large wastewater treatment facilities serving cities, have resulted in documented water quality improvements at several locations.

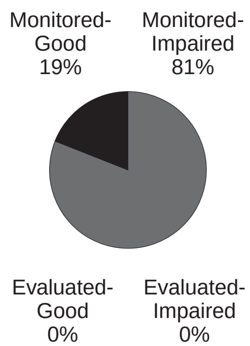
Programs To Assess Water Quality

Every year, KDHE collects and analyzes about 1,500 surface water samples, 50 aquatic macroinvertebrate samples, and 40 composite fish tissue samples from stations located throughout the state. Wastewater samples are collected at about 50 municipal sewage treatment plants, 20 industrial facilities, and 3 federal facilities to evaluate compliance with discharge permit requirements. KDHE also conducts special studies and prepares about 100 site-specific water quality summaries at the request of private citizens or other interested parties.

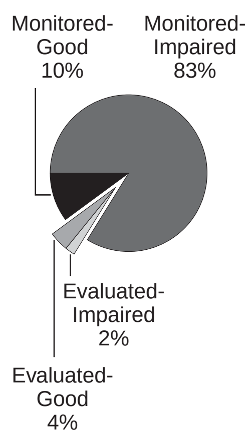
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

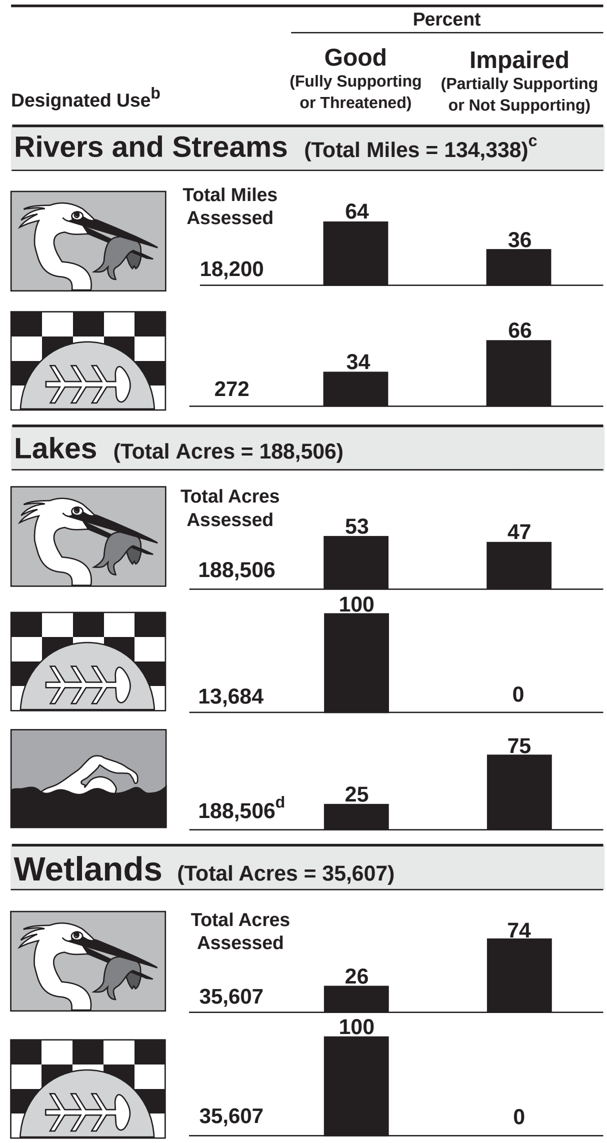
Rivers



Lakes



Individual Use Support in Kansas[a]



[a] Kansas determines aquatic life use support based on acute monitoring criteria only.

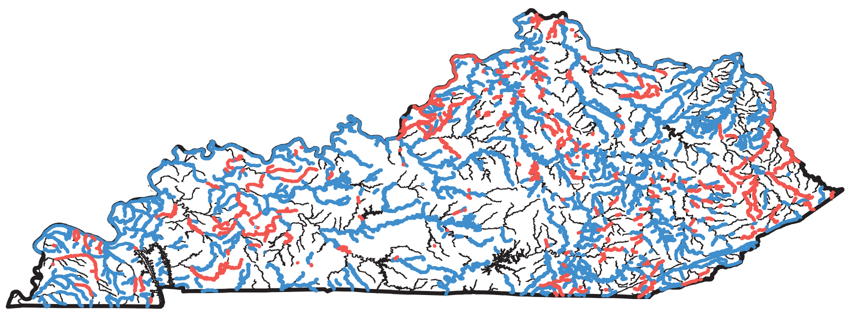
[b] A subset of Kansas's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[c] Includes nonperennial streams that dry up and do not flow all year.

[d] Kansas's designated uses do not address swimming beaches. Refer to the Kansas 305(b) report on contact recreational use.

Note: Figures may not add to 100% due to rounding.

Kentucky



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Kentucky 2000 305(b) report, contact:

Tom VanArsdall
Department for Environmental Protection
Division of Water
14 Reilly Road
Frankfort Office Park
Frankfort, KY 40601
(502) 564-3410
e-mail: tom.vanarsdall@mail.state.ky.us

The report is also available on the Internet at: **http://water.nr.state.ky.us/wq/305b/2000/2000_305b.pdf**

Surface Water Quality

About 78% of Kentucky's surveyed rivers (excluding the Ohio River) and 95% of surveyed lake acres have good water quality that fully supports aquatic life. Swimming use is fully supported in about 100% of the surveyed lake acres, but 73% of the river miles surveyed for bacteria do not fully support swimming. Fecal coliform bacteria, siltation, polychlorinated biphenyls (PCBs), and priority organics are the most common pollutants in Kentucky rivers. Frequently identified sources include urban runoff, resource extraction, sewage treatment facilities, land disposal of wastes, and agricultural activities. Nutrients, priority organics, and PCBs have the most widespread impacts on lakes. Potential sources include resource extraction, agriculture, land disposal, and industrial and municipal discharges.

Declining trends in chloride concentrations and nutrients provide evidence of improving water quality in Kentucky's rivers and streams. Swimming advisories remain in effect on 86 miles of the North Fork Kentucky River and in several streams in the Upper Cumberland River basin. Since the period covered in the 2000 305(b) report, the Kentucky Department for Environmental Protection (DEP) changed to a risk-based approach to evaluate fish tissue data. In April 2000, the DEP issued a limited statewide fish consumption advisory because of mercury.

Ground Water Quality

Since 1995, the Kentucky Division of Water has sampled ground water at approximately 170 sites. Underground storage tanks, septic tanks, spills, urban runoff, mining activities, agricultural activities, and landfills have been identified as the major sources of ground water contamination in Kentucky. Pathogens are the major pollutant in ground water. The state is concerned about the lack of ground water data, absence of ground water regulations, and the potential for ground water pollution in karst regions of the state.

Programs To Restore Water Quality

Kentucky requires toxicity testing for 160 point source discharges and permits for stormwater outfalls and combined sewer overflows. The state's

Nonpoint Source Pollution Control Program oversees projects addressing education, training, enforcement, technical assistance, and evaluation of best management practices.

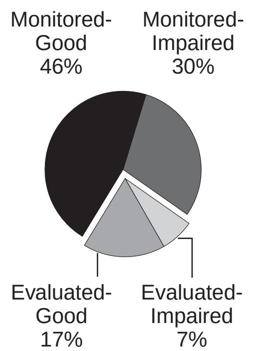
Programs To Assess Water Quality

Kentucky uses ambient water quality monitoring to assess conditions and detect long-term trends in the larger streams and rivers of the state. The state's ambient water quality network expanded from 44 to 71 fixed stations in May 1998. The ambient monitoring stations for each basin are sampled monthly during the year the unit is in the monitoring phase of the characterization cycle. During non-targeted years, sampling takes place bimonthly. The targeted basin for 1999 sampling was the Kentucky River Basin, which has 16 fixed stations. The state also conducts biological monitoring and fish tissue sampling. Approximately 25 water quality and 250 biological sites are sampled each year under the rotating watershed approach. A random survey of wadeable streams is also conducted to increase the miles assessed for aquatic life use. Seventeen lakes were sampled in the Kentucky basin to determine trophic status. Other data sources used by the state include discharge monitoring data, reports from the Kentucky Department of Fish and Wildlife Resources, and data from agencies such as the U.S. Geological Survey, the U.S. Army Corps of Engineers, the U.S. Forest Service, the Ohio River Valley Sanitation Commission, and the Lexington and Louisville local governments.

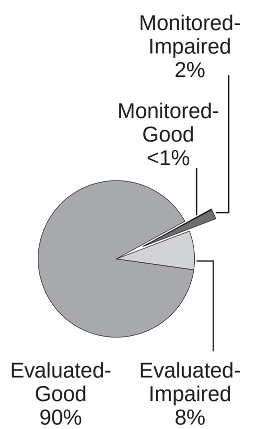
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

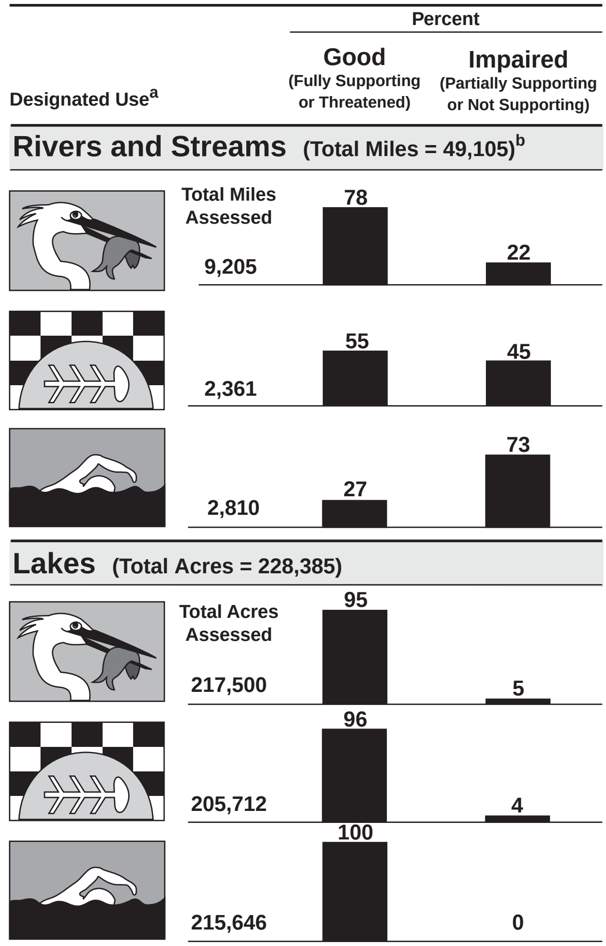
Rivers



Lakes



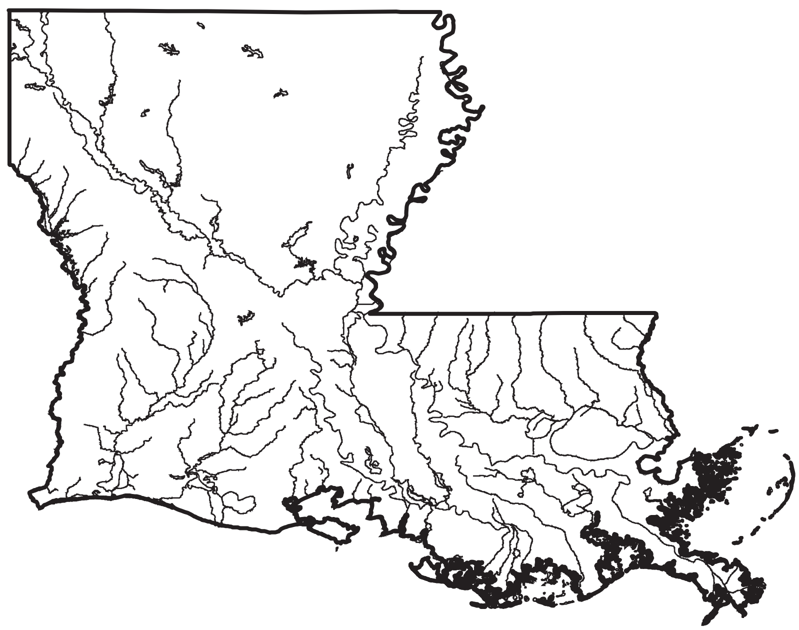
Individual Use Support in Kentucky



[a] A subset of Kentucky's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Louisiana



For a copy of the Louisiana 2000 305(b) report, contact:

Albert E. Hindrichs
Louisiana Department of
Environmental Quality
Office of Water Resources
Watershed Support Division
P.O. Box 82215
Baton Rouge, LA 70884-2215
(225) 765-0511
e-mail: al_h@deq.state.la.us

The report is also available on the Internet at: **http://www.deq.state.la.us/planning/305b/**

Surface Water Quality

About 16% of the assessed stream miles, 8% of the assessed lake acres, 8% of the assessed estuarine square miles, and 10% of assessed wetland acres in Louisiana have good water quality that fully supports aquatic life. Metals are cited as the largest suspected cause of impairment to the state's rivers, lakes, estuaries, and wetlands. This is due to closer scrutiny of metals criteria for water quality and the increased sampling of fish for mercury contamination. Contamination of samples may also have led to a high number of metals criteria exceedences – a follow-up study in 1999 found that all but one of the waterbodies tested were below metals criteria levels. As a result of that study, waterbodies with metals criteria exceedences will be reevaluated before any TMDLs are developed.

Organic enrichment/low dissolved oxygen and pathogens are also cited as major causes of stream impairment. Major sources of pollution to streams include agricultural practices, municipal point sources, and natural sources. Primary causes of lake impairment include organic enrichment/low dissolved oxygen, salinity/total dissolved solids, and pathogens. Major sources of lake impairment include natural sources, hydrologic modification, and agriculture. A large number of pollution sources to lakes are unknown. In estuarine waters, major causes of impairment include pathogen indicators and nutrients. Major sources of estuarine impairment include municipal point sources and land disposal although many sources are unknown. Atmospheric deposition and unknown sources are the pathways for metals impairing water quality in wetlands.

Ground Water Quality

Water in the state's major aquifer systems continues to be of good quality. For this reporting cycle, EPA encouraged states to select an aquifer of hydrogeologic unit setting and discuss available data that best reflect the quality of the resources. Louisiana chose to discuss the baseline monitoring network for the Mississippi River Alluvial Aquifer. The data show that water from this aquifer is of good quality to meet public health standards with the exception of two wells where arsenic levels were elevated. However, this aquifer is only of fair quality when considering aesthetic factors such as taste, odor, and appearance.

Programs To Restore Water Quality

The water pollution controls employed by the Louisiana Department of Environmental

Quality (LDEQ) include municipal and industrial wastewater discharge permits, enforcement of permit requirements, review and certification of projects affecting water quality, and implementation of best management practices for nonpoint sources. In 1997, LDEQ was granted NPDES delegation by EPA. The LDEQ's Water Quality Management Division has implemented a nonpoint source management program and has been successful in implementing voluntary controls and education efforts. This has been done through coordination with other concerned agencies, such as the State Department of Agriculture and Forestry, the U.S. Natural Resource Conservation Service, and the Louisiana State University Cooperative Extension Service.

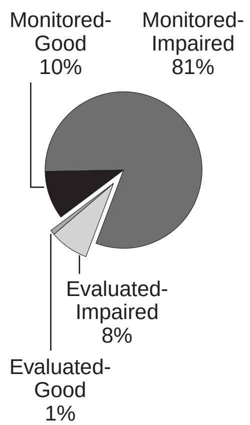
Programs To Assess Water Quality

Louisiana's surface water monitoring program consists of fixed-station long-term network sampling, intensive surveys, special studies, and wastewater discharge compliance sampling. The LDEQ has revised its fixed-station monitoring program to operate on a 5-year cycle with sample collections occurring in two or three basins each year and rotating from year to year. In addition, long-term trend sites on large rivers and Lake Pontchartrain will continue to be monitored statewide. While the state does not maintain a regular fish tissue monitoring program for organic compounds, fish are frequently sampled in response to complaints or as a result of enforcement actions. Louisiana does maintain an extensive fish tissue monitoring program to test for mercury contamination. This program samples approximately 100 locations per year.

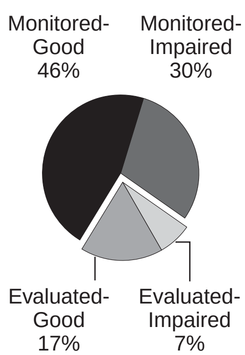
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

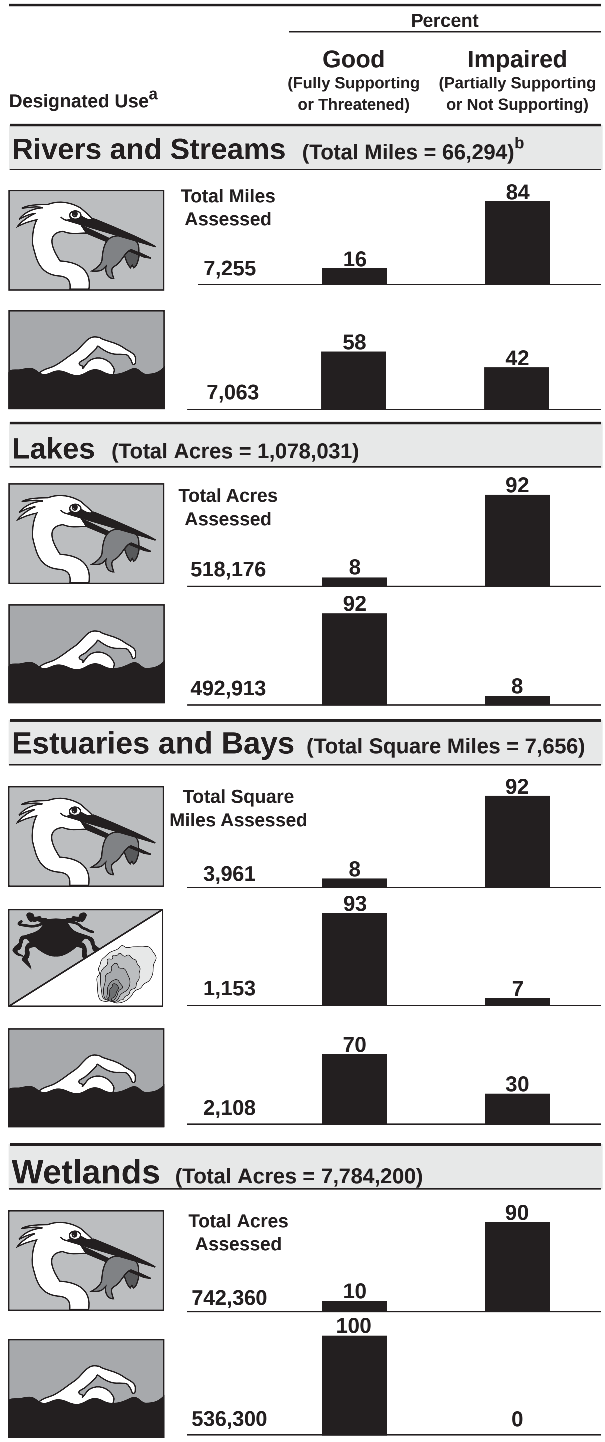
Rivers



Lakes



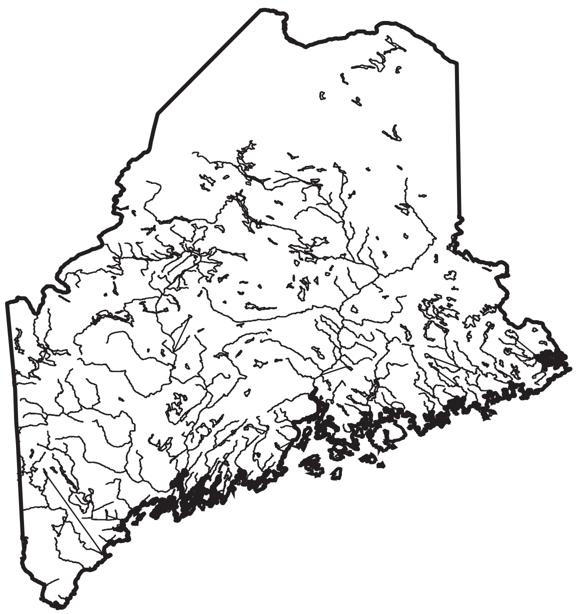
Individual Use Support in Louisiana



[a] A subset of Louisiana's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Maine



Rivers
State Border

For a copy of the Maine 2000 305(b) report, contact:

Dave Courtemanch
Bureau of Land and Water Quality
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333
(207) 287-7789
e-mail: dave.l.courtemanch@state.me.us

Surface Water Quality

Most of Maine's surface waters support aquatic life and swimming. Approximately 99% of all river miles support both of these uses. Industrial discharges, agriculture, and combined sewer overflows (CSOs) are the major sources of organic compounds and pathogens that contaminate streams and rivers. For lakes, 90% of the acres support aquatic life and 96% support swimming. Hydrologic modifications have impaired some lakes by altering water flow. Agriculture and urban runoff often result in excessive organic and nutrient enrichment that leads to oxygen depletion. Less than 1% of estuaries and bays are impaired for aquatic life and swimming. Although 100% of all Maine surface waters are included in this designated use summary, some waters were not assessed but were included into the estimates by assuming they fully supported these two uses.

All freshwater in Maine is classified as partially supporting fish consumption due to a statewide mercury advisory that limits fish consumption for a subpopulation of the state. Statewide consumption advisories are also in effect for coastal waters due to mercury and PCB contamination. About 11% of estuaries are impaired for shellfish consumption, primarily due to an advisory for lobster tomalley (an organ that concentrates dioxins). Maine currently does not have designated uses or criteria to assess wetlands.

Ground Water Quality

More than 60% of Maine households draw drinking water from ground water sources. A significant portion of Maine's ground water may be contaminated, particularly in unforested areas. Contaminants include arsenic, MTBE, petroleum compounds and halogenated solvents (from leaking storage tanks), and bacteria. Petroleum compounds and halogenated solvents contaminate ground water. Bacterial contamination occurs from injection of untreated wastewater into the subsurface. Ground water protection in Maine suffers from a lack of monitoring data, funding, and a centralized database. Although some ground water may be highly contaminated, none has been classified as undrinkable. Nonattainment areas have not been designated.

Programs To Restore Water Quality

The Department of Environmental Protection (DEP) is attempting to reduce point source pollution by seeking control of the NPDES program from EPA. In addition, new technology is being implemented to reduce dioxin loadings from pulp and paper mills.

Although CSOs serve 48 Maine communities, the DEP is trying to eliminate these systems. Since the 1998 report, 41 additional miles of river have met the swimming criteria as a result of eliminating CSOs.

Maine requires that all underground tanks be registered and that inadequate tanks be removed. Since 1986, approximately 23,000 tanks have been removed. Maine also regulates installation of new underground storage tanks and closure of landfills to protect ground water resources from future leaks.

Maine is implementing measures to protect the state's fish populations. In 1999, the Federal Energy Regulatory Agency ordered the removal of Edwards Dam from the Kennebec River to improve water quality and increase fish runs. An aggressive management program was adopted to aid the Atlantic salmon, which may be listed as a threatened species. A future goal is to manage excessive water withdrawals that result in fish kills.

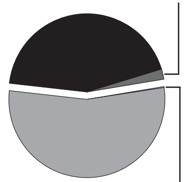
Programs To Assess Water Quality

Maine is divided into six major drainage basins. The DEP maintains a 5-year monitoring rotation. The ambient ground water quality monitoring network comprises 2,198 public water supplies. The Bureau of Remediation and Waste Management is responsible for sampling ground water to determine the impact of spills and landfills and to locate new water supplies when old supplies become contaminated from storage tanks. Volunteers collected 40% of the marine samples in 1999. Toxic pollutants are monitored by the Surface Water Ambient Toxics Program, the Dioxin Monitoring Program, Gulfwatch of the Gulf of Maine Council, and the Casco Bay Estuary Project.

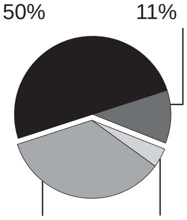
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



Lakes



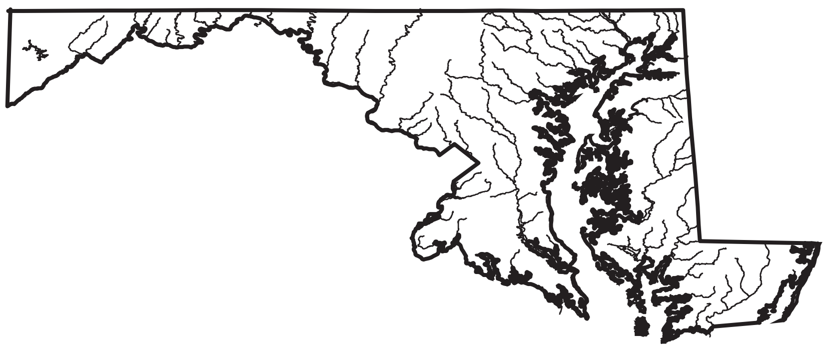
[a] A subset of Maine's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Maine includes coastal shoreline waters in their assessment of estuarine waters.

Individual Use Support in Maine

Designated Use[a]	Total Assessed	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 31,752)[b]	Total Miles Assessed		
	31,752	99	1
	31,752	99	1
	31,752	99	1
Lakes (Total Acres = 987,283)	Total Acres Assessed		
	987,283	90	10
	987,283	100	0
	987,283	96	4
Estuaries and Bays (Total Square Miles = 2,852)[c]	Total Square Miles Assessed		
	2,852	100	0
	2,852	100	0
	2,852	89	11
	2,852	100	0

Note: Figures may not add to 100% due to rounding

Maryland



For a copy of the Maryland 2000 305(b) report, contact:

Sherm Garrison
Maryland Department of Natural Resources
Resource Assessment Service/TEA
Tawes State Office Building, D-2
Annapolis, MD 21401
(410) 260-8624
e-mail: sgarrison@dnr.state.md.us

Surface Water Quality

Approximately 54% of Maryland's surveyed river and stream miles and 100% of the ocean shoreline support aquatic life. Siltation, loss of stream habitat, stream channelization, excess nutrients, or bacteria impact some rivers. In western Maryland, acidic waters from abandoned coal mines severely impact over 35 miles of streams. More than half of the assessed areas of lakes and estuaries in Maryland have impaired water quality that does not fully support aquatic life. Lake and estuarine waters are most often impaired due to low levels of oxygen that are a result of excess nutrients from agricultural runoff, urban runoff, atmospheric deposition, and natural nonpoint source runoff. Excess nutrients stimulate algal blooms and low dissolved oxygen levels that adversely affect aquatic life. Bacteria from agricultural, urban, and natural runoff and failing septic systems can affect shellfish harvesting and swimming in estuaries. PCBs and pesticides that accumulate in fish tissue impact a small percentage of lakes and estuaries. Harmful algal blooms and potentially toxic algae such as *Pfiesteria* are issues of concern, but currently do not negatively impact water quality in the state.

Maryland did not report on the condition of wetlands.

Ground Water Quality

Ground water is the only source of drinking water for the Eastern Shore and residents of southern Maryland. The state's ground water is generally of acceptable quality, although ground water is not used in metropolitan areas because of local contamination. Other localized problems with ground water quality are most common in the coastal plain and central and western areas of the state, where shallow aquifers and fractured bedrock cause the ground water supply to be more easily impacted by land use practices. Improper waste disposal, agricultural practices, and metals and acid mine drainage from abandoned coal mines all contribute to impairment of ground water quality in these areas. Across the state, extensive surveys for pesticides have revealed very little contamination. The state has been testing ground water for methyl tertiary butyl ether (MTBE) since 1995, and has found that 6.2% of public water suppliers detected the substance in their ground water sources.

Programs To Restore Water Quality

Maryland's General Assembly passed the Water Quality Improvement Act in 1998, a landmark piece of legislation designed to establish strategies for reducing nutrient levels in streams, rivers, and the Chesapeake Bay. Under this act, almost all farms in the state will be required to have nutrient management plans. The state will provide financial and technical assistance to farmers and offer cost-share assistance of up to 50% for farmers to have their nutrient management planes developed by a private consultant. The Agricultural Water Quality Cost-Share Program also pays up to 87.5% of the cost for farmers to install certain best management practices (BMPs) to protect water quality. As part of the Chesapeake Bay cleanup effort, Maryland has pledged to reforest 600 miles of streams and rivers by 2010. With federal and state funds, the Conservation Reserve Enhancement Program will help farmers create protective buffers of trees between farmland and streams in order to reduce harmful runoff to surface waters.

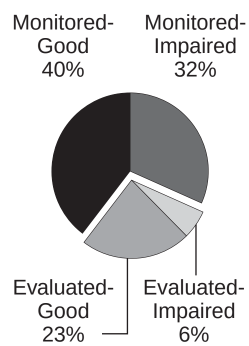
Programs To Assess Water Quality

Maryland's monitoring programs include a combination of water chemistry, compliance, aquatic resource, and habitat monitoring programs. In addition to traditional monitoring, Maryland also conducts an innovative randomized sampling program using a probabilistic approach to site selection, which has greatly increased the state's ability to assess more of its waters. Besides these programs, data from the Susquehanna River Basin Commission, local governments, and volunteer groups provide additional monitoring coverage in some areas of the state.

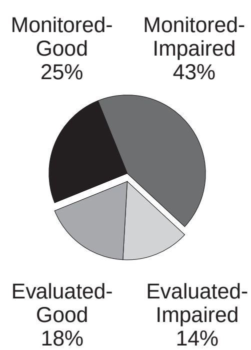
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



Lakes



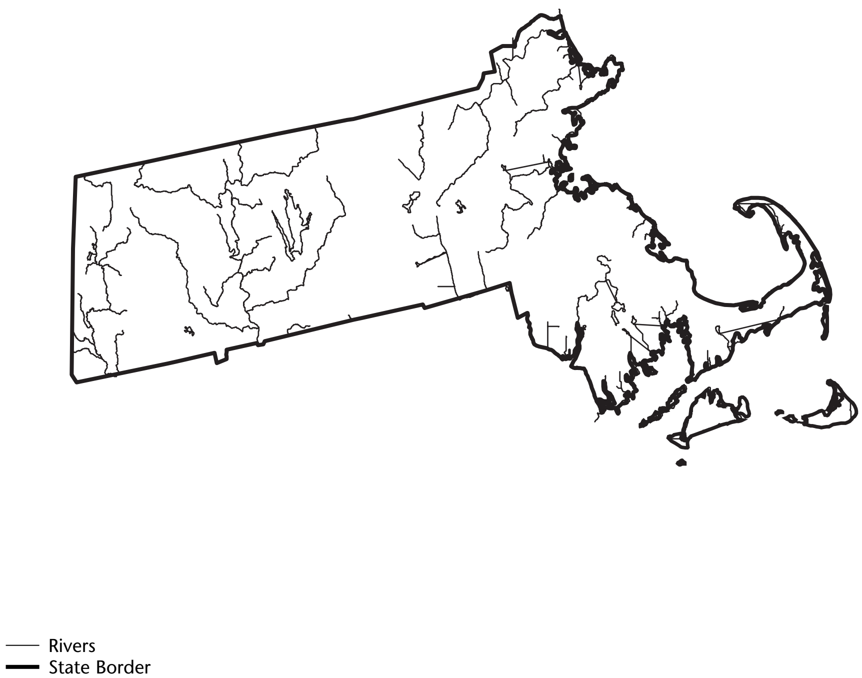
Individual Use Support in Maryland

Designated Use[a]		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 8,789)[b]			
	Total Miles Assessed 6,383	54	46
Lakes (Total Acres = 77,965)			
	Total Acres Assessed 21,012	42	58
Estuaries and Bays (Total Square Miles = 2,522)			
	Total Square Miles Assessed 2,478	37	63
Ocean Shoreline (Total Shore Miles = 32)			
	Total Shore Miles Assessed 32	100	0

[a] A subset of Maryland's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Massachusetts



For a copy of the Massachusetts 2000 305(b) report, contact:

Richard McVoy, Ph.D.
Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd Floor
Worcester, MA 01608
(508) 767-2877
e-mail: Richard.Mcvoy@state.ma.us

Surface Water Quality

Nearly half of the 1,344 river miles assessed by Massachusetts now fully support aquatic life. Over 30% of assessed miles fully support swimming. Swimming and boating in most of these waters 25 years ago would have been unthinkable. The state has seen marked success in efforts to reduce water quality impairment from municipal and industrial point sources. The completion of river cleanup will require targeting primarily nonpoint source pollution from stormwater runoff and combined sewer overflows (CSOs), and toxic contamination in sediments (largely historical).

Of the lake acres assessed, 49% support aquatic life and 69% support swimming. The causes of nonsupport include the presence of nonnative plants and the proliferation of aquatic plants. Nonpoint sources such as stormwater runoff and onsite wastewater systems may promote problems related to eutrophication. For lakes, 99% of the water assessed for fish consumption was impaired due to metals, PCBs, and dioxins that accumulate in fish tissue. Most assessments of Massachusetts's bays and estuaries were targeted toward areas of known pollution. The majority of estuarine area assessed fully supported swimming (69%) and aquatic life (52%). All 9.5 estuarine acres assessed for fish consumption were impaired for that use. Municipal point sources and other unknown sources are responsible for water quality impairment of estuaries.

Ground Water Quality

Protection of ground water from point sources of pollution is achieved through a Ground Water Discharge Permit Program. The permits require varying degrees of wastewater treatment based on the quality and use of the receiving ground water. However, additional controls are needed to eliminate contamination from septic systems and sludge disposal. Contamination of ground water supplies used for drinking water has been a problem in densely populated areas where septic systems are used. Other contaminants to ground water include metals, chlorides, bacteria, inorganic chemicals, radiation, nutrients, and pesticides.

Programs To Restore Water Quality

Although construction of wastewater treatment plants has significantly improved water quality, $4 billion worth of wastewater needs remain unfunded. The Nonpoint

Source Management Plan was updated in 1999 and is being implemented on a prioritized watershed basis to prevent, control, and reduce pollution from nonpoint sources. This watershed-based program uses state and federal Section 319 funds to provide technical assistance, regulatory enforcement, training, and watershed restoration efforts to combat nonpoint sources. The state has also adopted a CSO policy that provides engineering targets for cleanup and abatement projects.

Programs To Assess Water Quality

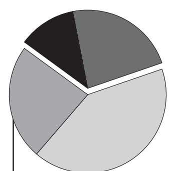
The Department of Environmental Protection (DEP) adopted a watershed planning approach to coordinate stream monitoring with wastewater discharge permitting, water withdrawal permitting, and nonpoint source control on a 5-year rotating schedule. The DEP is also adapting its monitoring strategies to provide information on nonpoint source pollution. For example, DEP will focus more on wet weather sampling and biological monitoring and less on chemical monitoring during dry periods in order to gain a more complete understanding of the integrity of water resources.

Massachusetts is also working with EPA under the 1999 Environmental Performance Partnership Agreement to expand the current monitoring and assessment program to include more resources for data collection, identification of impaired waters, and development of TMDLs. The state DEP relies largely on other organizations at the federal, state, and local levels (such as the Division of Marine Fisheries, the state Water Resources Authority, and the Buzzards Bay Program) to collect monitoring data for coastal areas.

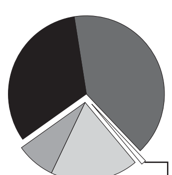
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

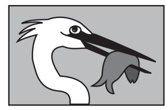
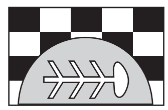
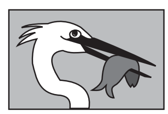
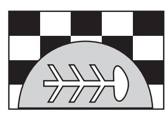
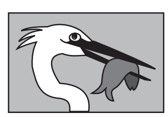
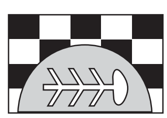


Lakes*



* Excludes the Quabbin Reservoir (25,000 acres).

Individual Use Support in Massachusetts

Designated Use[a]		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 8,229)[b]	Total Miles Assessed		
	1,344	48	52
	644	37	63
	933	50	50
Lakes (Total Acres = 151,173)	Total Acres Assessed[c]		
	54,583	49	51
	34,968	1	99
	45,309	69	31
Estuaries and Bays (Total Square Miles = 223)	Total Square Miles Assessed		
	27	52	48
	9.5	0	100
	77.5	69	31

[a] A subset of Massachusetts's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Includes the Quabbin Reservoir (25,000 acres).

Note: Figures may not add to 100% due to rounding.

Michigan

For a copy of the Michigan 2000 305(b) report, contact:

John Wuycheck
Surface Water Quality Division
Michigan Department of
Environmental Quality
P.O. Box 30273
Lansing, MI 48909-7773
(517) 335-4195
e-mail: Wuychecj@state.mi.us

A copy of the report may be downloaded from the Internet at:
http://www.deq.state.mi.us/documents/deq-swq-gleas-305b2000Report.doc

Surface Water Quality

The majority of Michigan's assessed river miles support designated uses (76%). PCB concentrations in fish are the major cause of nonsupport in rivers, followed by sediments, pathogens, mercury, and nutrients. Leading sources of pollution include unspecified nonpoint sources, agriculture, contaminated sediments, municipal and industrial discharges, combined sewer overflows (CSOs), and urban runoff. Water quality in Michigan's inland lakes is generally good; however, a general fish consumption advisory for all inland lakes is in effect due to widespread mercury contamination. Excessive nutrient loadings from sewage, fertilizers, detergents, and runoff cause nuisance plant and algal growth in some lakes.

Four of the five Great Lakes border Michigan. In general, Lakes Superior, Michigan, and Huron have good water quality except for a few degraded locations near their shores. Although water quality in the lakes has been greatly improved by reduced point source pollution, CSOs and urban stormwater runoff continue to cause bacterial contamination. All of the Great Lakes are under a fish consumption advisory due to contamination from PCBs, chlordane, and/or dioxin.

Michigan does not have a program that routinely monitors wetlands.

Ground Water Quality

Most of the ground water is of excellent quality, but certain aquifers have been contaminated with toxic materials leaking from waste disposal sites, businesses, or government facilities. The Michigan Ground Water Protection Strategy and Implementation Plan identifies specific program initiatives, schedules, and agency responsibilities for protecting the state's ground water resources.

Programs To Restore Water Quality

Major point source reductions in phosphorus and organic materials have been obtained through the NPDES program and legislation that requires detergents sold in Michigan to contain <0.5% phosphorous by weight. However, expanded efforts are needed to control nonpoint source pollution, eliminate CSOs, and reduce toxic contamination.

The Clean Michigan Initiative controls $50 million to fund programs that implement watershed management plans or address nonpoint sources of pollution. Section 319 grants are used to provide local governments with educational and technical assistance on watershed management. Michigan is also trying to implement a Water Quality Trading Program. This program would reduce costs of the TMDL Program and provide economic incentives for reduced loadings.

Michigan may attempt to remove contaminated sediments from White, Muskegon, and Deer Lakes. Contaminated sediments and fish were removed from Newburgh Lake in 1998. After the contaminated species were removed, the lake was repopulated with healthy fish. Although the effort was completed in 1999, its effectiveness has yet to be documented.

Programs To Assess Water Quality

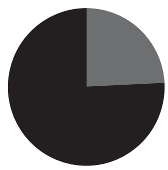
Michigan employs a 5-year watershed monitoring program to determine if state waters meet water quality standards. Each year the state focuses on 9 to 19 of the 57 major watersheds in Michigan. The state's surface water monitoring strategy was recently updated, and additional funding of $500,000 per year was provided to bolster both local and state monitoring efforts. The enhanced program consists of eight interrelated monitoring elements: fish contaminants, water chemistry, sediment chemistry, biological integrity, physical habitat, wildlife contaminants, inland lake quality and eutrophication, and stream flow. Michigan supplements water quality monitoring through volunteer programs.

Michigan is currently developing an inventory of all the wetlands in the state. The Department of Environmental Quality developed an Index of Biotic Integrity that may be used to assess coastal wetlands in the future.

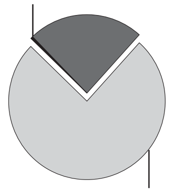
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



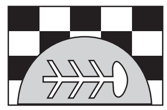
Lakes*



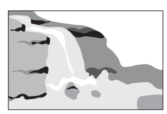
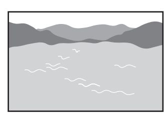
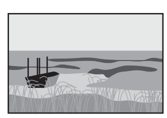
*Michigan considers all lakes impaired due to a statewide fish consumption advisory.

Note: Figures may not add to 100% due to rounding.

Individual Use Support in Michigan

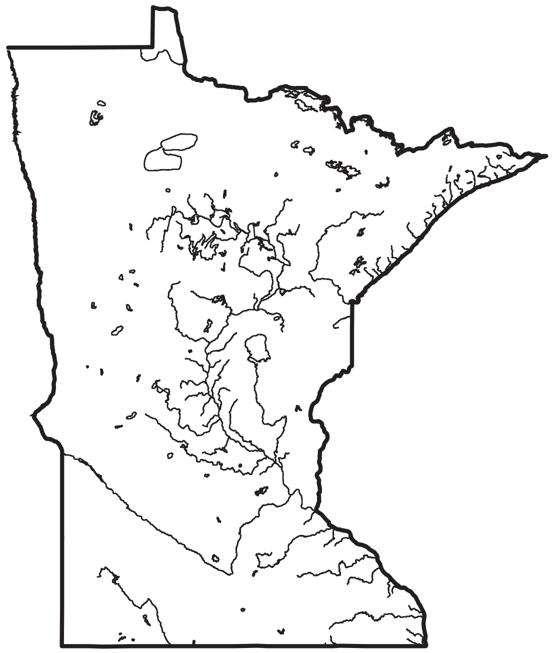
Designated Use[a]		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Great Lakes (Total Shore Miles = 3,250)			
	Total Shore Miles Assessed 3,250[b]	0	100

Summary of Use Support in Michigan

		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 49,136)[c]			
	Total Miles Assessed 10,309	76	24
Lakes (Total Acres = 889,600)			
	Total Acres Assessed[c] 891,225	<1	100
Wetlands (Total Acres = 6,239,763)			
	Total Acres Assessed 690	1	99

[a] A subset of Michigan's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes the effects of statewide fish advisories in assessments of lake waters.
[c] Includes nonperennial streams that dry up and do not flow all year.

Minnesota



Rivers
State Border

For a copy of the Minnesota 2000 305(b) report, contact:

Elizabeth Brinsmade
Minnesota Pollution Control Agency
Environmental Outcomes Division
520 Lafayette Road North
St. Paul, MN 55155
(651) 296-7312
e-mail: elizabeth.brinsmade@pca.state.mn.us

Surface Water Quality

As part of its basin management approach, Minnesota updated assessments for three basins for the 2000 305(b) report—the Cedar and Des Moines, Missouri, and Rainy River basins. Statewide, about 50% of the assessed river miles have good quality that supports aquatic life, and 26% of the assessed river miles and 68% of the assessed lake acres support primary contact. The most common problems identified in rivers are turbidity, pathogens, low dissolved oxygen, suspended solids, and nutrients. Nonpoint sources, such as land disposal and runoff, generate most of the pollution in rivers. Nutrients are the primary cause of pollution in lakes. Nonpoint sources contribute most of these nutrients. Minnesota's 272 miles of Lake Superior shoreline have consumption advisories for certain species and size classes of fish. Most of the pollution from point sources has been controlled, but atmospheric deposition and runoff still degrade water quality, particularly in agricultural regions. Each of the three river basins addressed in the 2000 report contain rivers and lakes with fish advisories due to elevated mercury and PCBs.

Ground Water Quality

Ground water supplies the drinking water needs for 70% of Minnesota's population. The Minnesota Pollution Control Agency's (MPCA) Ground Water Monitoring and Assessment Program evaluates the quality of ground water. The program published several major reports in 1998, including statewide assessments of over 100 ground water constituents, including nitrates. The program has now shifted its emphasis to problem investigation and effectiveness monitoring at local and small-regional scales.

Programs To Restore Water Quality

Minnesota will target specific waterbodies and watersheds for protection, restoration, or monitoring based on forthcoming Basin Information Documents (BIDs). These documents will include the 305(b) assessments as well as information on various water resource issues. The BIDs will also include GIS maps depicting the locations of permitted feedlots and relative numbers of animal units per feedlot by major watershed. In addition, Minnesota has identified specific contaminants that significantly contribute to water quality degradation. Excessive inputs of nitrogen in some river basins have contributed to the hypoxic zone in the Gulf of Mexico. Atmospheric deposition of mercury has resulted in widespread contamination of waterbodies.

Phosphorous from wastewater discharges and runoff has led to eutrophication in some surface waters. The MPCA is developing plans to reduce each of these contaminants.

Programs To Assess Water Quality

In the 2000 assessments, in addition to monitoring data collected by MPCA, data from the Big Fork River Watch, U.S. Geological Survey, South Dakota Environmental Natural Resources and Clean Water Partnership projects were used. Starting with the year 2000, Minnesota will only use monitored data in their surface water assessments.

Minnesota is developing a random sampling approach to select monitoring sites within river basins. Monitoring will focus on flow, basic measures of water quality, and biological measures. Criteria to assess stream health are being developed from the first phase of monitoring. Minnesota also maintains an Ambient Stream Monitoring Program with 82 sampling stations. Approximately half of these stations are sampled each year. The state also performs fish tissue sampling and lake assessments, and supports citizen monitoring programs.

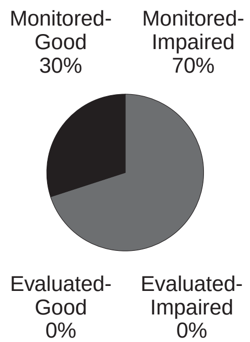
The MPCA continues to be involved with field investigations into the cause of frog malformations. Partnerships with the National Institute of Environmental Health Sciences and the USGS Water Resources Division and Biological Resources Division have been useful in carrying out teratogenic assays, histopathological studies, and water flow patterns at study sites.

The state is developing methods and criteria to assess depressional and riparian wetlands. A pilot effort is underway to develop a citizen wetland assessment program in cooperation with selected local governments.

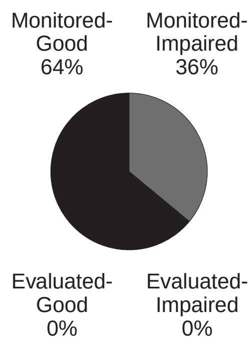
Data Quality*

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



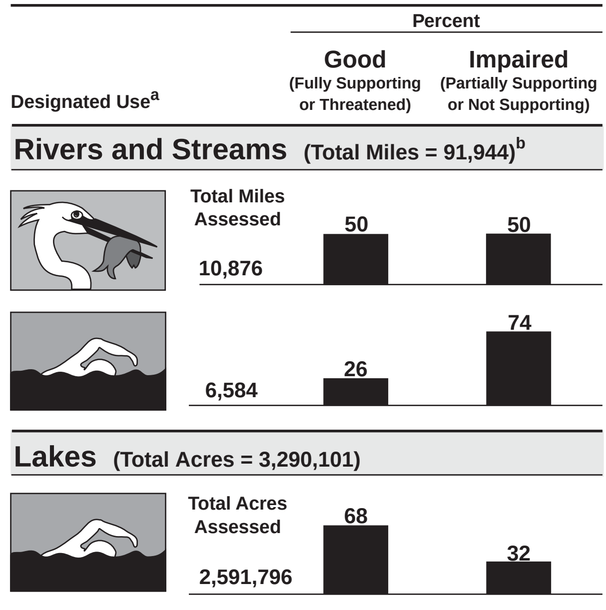
Lakes



* Minnesota does not use evaluated data for assessment purposes.

Note: Figures may not add to 100% due to rounding.

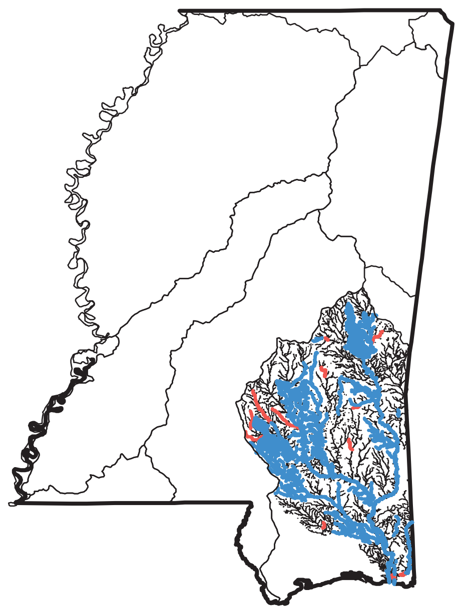
Individual Use Support in Minnesota



[a] A subset of Minnesota's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Mississippi



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

Mississippi uses a rotating basin approach.
The Pascagoula Basin was most recently assessed.

For a copy of the Mississippi 2000 305(b) report, contact:

Natalie Guedon
Water Quality Assessment Branch
Office of Pollution Control,
Surface Water Division
Mississippi Department of
Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5150
e-mail: Natalie_Guedon@deq.state.ms.us

A copy of the report may be downloaded from: **http://www.deq.state.ms.us/newweb/homepages.nsf**

Surface Water Quality

Surface waters in Mississippi are used for drinking, fishing, harvesting shellfish, processing food, and supporting aquatic life and recreational activities. Sources of nonpoint pollution, such as urban runoff and failing septic systems, are responsible for the majority of impaired surface waters. Of the river miles assessed, 72% have fair to poor ratings for aquatic life and 88% do not fully support swimming. For the 2000 report, most river assessments were based on evaluated data from areas of known or suspected contamination. Sediment, turbidity, and pesticides are the primary sources of contamination in rivers. DDT contamination of fish in the Mississippi Delta is also a concern, although concentrations in fish have decreased tenfold since 1972 when DDT use was banned. Most assessed lake acres support aquatic life (97%), swimming (100%), and fish consumption (90%). Organic enrichment, pesticides, and pathogens are the primary causes of contamination when impairment occurs. Most of the assessed bays and estuaries support aquatic life (90%), primary contact (98%), and fish consumption (100%). Metals and nutrients are the most common pollutants impacting bays and estuaries.

In the past, coastal waters suffered from elevated bacterial counts due to wastewater discharge from private and public sewage systems. This problem has been partially alleviated by the construction of regional wastewater treatment facilities, although expansions are needed to meet demand. Currently, the majority of assessed coastal waters support aquatic life (100%), swimming (82%), and fish consumption (100%).

Mississippi did not report on the condition of its wetlands. Some wetlands have been lost due to the conversion of land for agriculture and residential and commercial development.

Ground Water Quality

Ground water in Mississippi is of good quality because clay layers prevent widespread contamination in most aquifers. When contamination does occur, the most frequent sources are petroleum compounds from leaking underground storage tanks, bacteria and viruses from failing septic systems, and brine from petroleum exploration and production. Few data exist for domestic wells.

Programs To Restore Water Quality

Mississippi adopted comprehensive regulations for conducting Section 401 Water Quality Certifications, enabling the state to review federal licenses and permits for compliance with state water quality standards. Mississippi also expanded its definition of state waters to include wetlands and ground waters. Ground water protection efforts are focused on the Wellhead Protection Program, which addresses the compatibility between water quality databases and geographic information systems. The immediate goals of the Department of Environmental Quality (DEQ) are to establish sufficient wastewater collection and treatment along the coast and address nonpoint source pollution problems. Installing a weir, closing four distributaries, and enlarging the channel addressed the problem of low flow in the Pearl River. The increased flow rate should help to preserve the natural mussel habitat.

Programs To Assess Water Quality

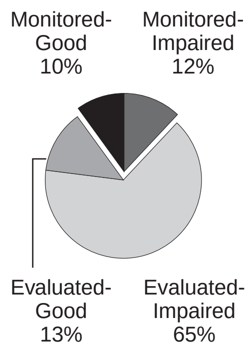
Mississippi has adopted a basin rotation approach to water quality monitoring and assessment. The state is divided into five basin management groups. Targeted waters in one basin management group are assessed each year. Under this plan, comprehensive statewide assessments will be completed every 5 years. The first of these annual assessments, of the Pascagoula River Basin, was reported in the 2000 305(b) report. Mississippi routinely monitors 143 stations per year.

Mississippi is developing an Index of Biological Integrity to ensure a reliable and scientifically defensible biological assessment methodology for wadeable streams and rivers. This effort involved sampling at more than 475 streams. These data will be used to reevaluate the 303(d) listing of impaired waters for streams that were listed without site-specific monitoring data.

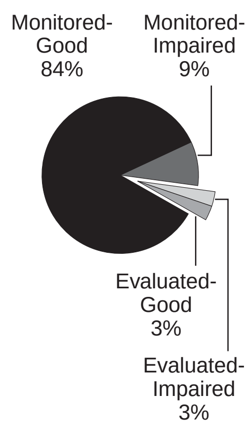
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

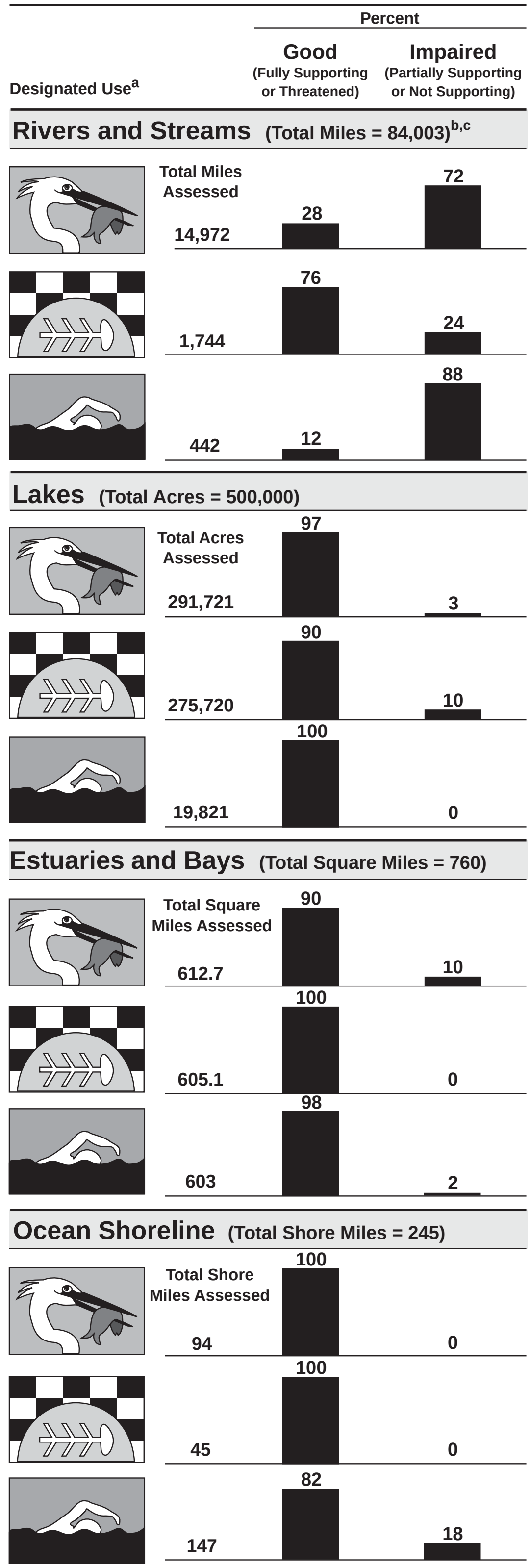


Lakes



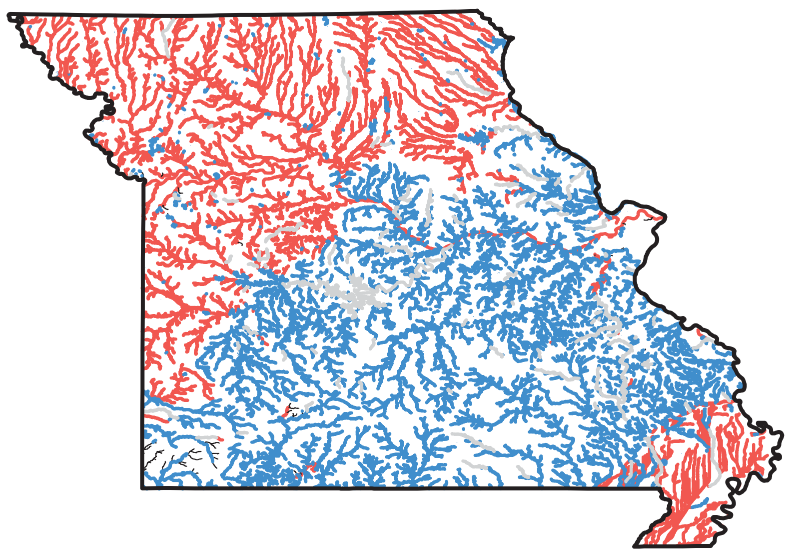
[a] A subset of Mississippi's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Mississippi notes its assessments are biased due to the state's extensive use of evaluated nonpoint source assessment data, which focused on problem areas.

Individual Use Support in Mississippi



Note: Figures may not add to 100% due to rounding.

Missouri



For a copy of the Missouri 2000 305(b) report, contact:

John Ford
Missouri Department of Natural Resources
Water Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-7024
e-mail: NRFordJ@mail.dnr.state.mo.us

Surface Water Quality

Almost half of Missouri's rivers and streams have impaired aquatic habitat due to a combination of factors including natural geology, climate, and agricultural land use. As a result of these factors, many streams suffer from low water volume, organic enrichment, channelization, and excessive siltation. In lakes, low dissolved oxygen from upstream dam releases, pesticides, and metals are the most common impairments. Agriculture, hydrologic modification, contaminated sediments, and urban runoff are the leading sources of lake degradation.

The Missouri Department of Health advises that the public restrict consumption of bottom-feeding fish (such as catfish, carp, and suckers) from urban waters and non-Ozark streams or lakes to 1 pound per week due to concentrations of chlordane, PCBs, and other contaminants in these fish. Mercury levels in fish in Arkansas and Missouri appear to be increasing over time. Atmospheric deposition is suspected as a major cause.

Missouri did not report on the condition of wetlands.

Ground Water Quality

In general, ground water quantity and quality increases from north to south and west to east. Deep ground water aquifers in northern and western Missouri are not suitable for drinking water due to high concentrations of minerals from natural sources. Nitrates, bacteria, and pesticides also contaminate wells in this region. It is estimated that 30% of the private wells occasionally exceed drinking water standards for nitrates, 30% for bacteria, and about 5% for pesticides. Statewide, the highest priority concerns include ground water contamination from septic tanks, pesticide and fertilizer applications, and underground storage tanks.

Programs To Restore Water Quality

The Missouri Clean Water Commission has revised its regulations to bring confined animal operations into the point source permit program consistent with federal requirements. Nonpoint source control efforts have been greatly expanded over the past few years. A dedicated state sales tax provides funds for watershed-level soil erosion control programs.

Programs To Assess Water Quality

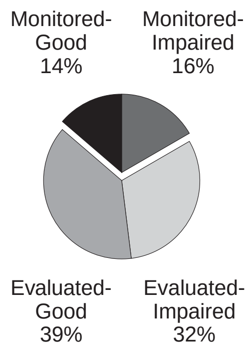
In 1998, a task force from state and federal agencies outlined a statewide aquatic resources monitoring plan. Missouri's water quality monitoring strategy features fixed-station chemical ambient monitoring sites, short-term intensive chemical monitoring studies, a rapid visual/aquatic invertebrate assessment program, and detailed biological sampling in support of development of biocriteria. Missouri now has in place programs that register and inspect underground storage tanks, programs for wellhead protection, sealing of abandoned wells, and closing of hazardous waste sites.

Missouri requires toxicity testing of effluents for all major dischargers; has a fish tissue monitoring program for selected metals, pesticides and PCBs; and monitors river sediments for toxic metals and organics and sediment pore water for toxicity. Several nonpoint source watershed projects related to management of manure or farm chemicals have their own monitoring programs.

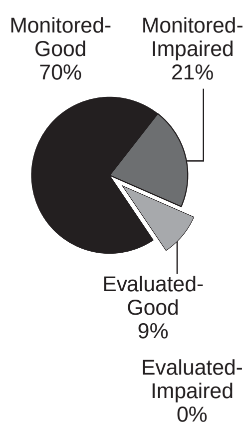
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

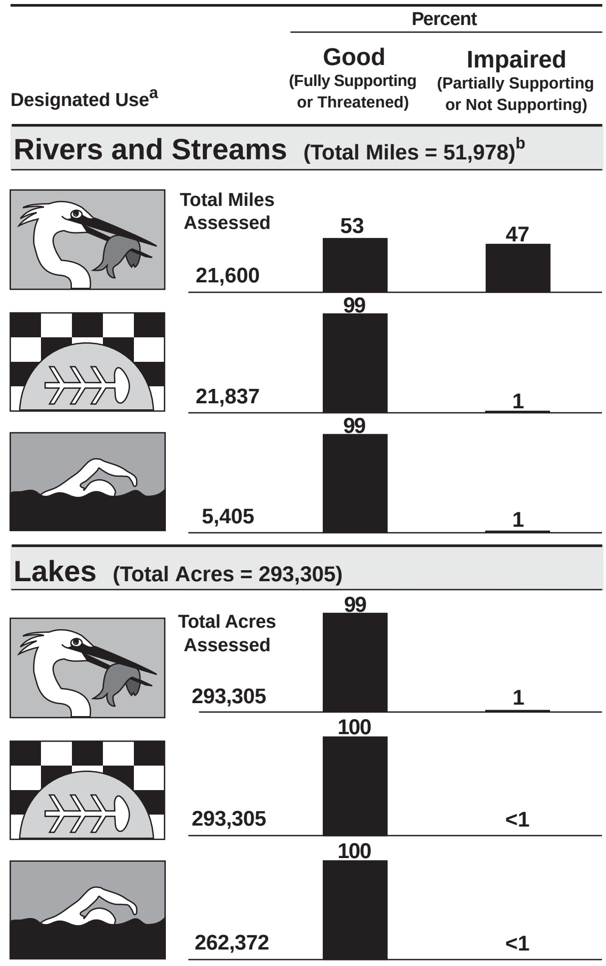
Rivers



Lakes



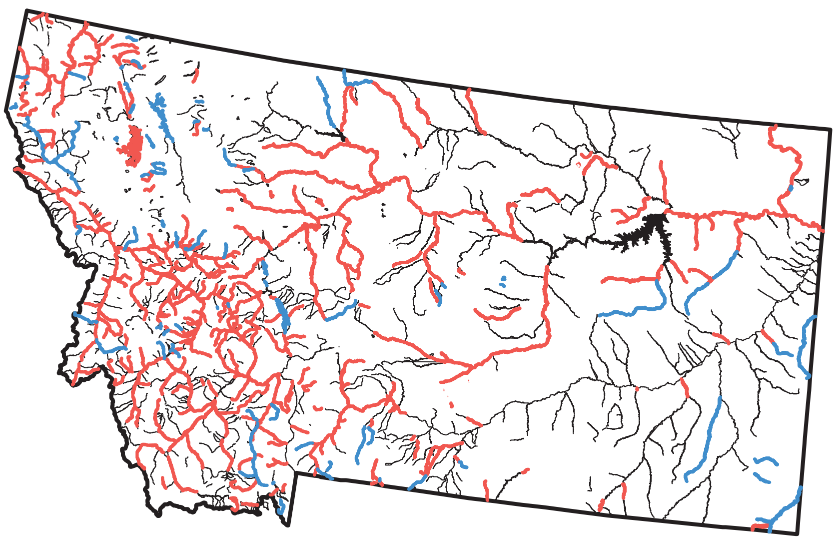
Individual Use Support in Missouri



[a] A subset of Missouri's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Montana



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For information about Montana's assessment program or 305(b) reporting process, contact:

Robert L. Barry
Montana Department of
Environmental Quality
2209 Phoenix Building
Helena, MT 59601
(406) 444-5342
e-mail: rbarry@state.mt.us

Montana's 2000 assessment data may be accessed in an interactive format on the Internet at: **http://nris.state.mt.us/wis/environet/**

Surface Water Quality

Most perennial streams, major lakes, and reservoirs are included in Montana's assessment database, but the coverage of intermittent streams and small, nonpublic lakes is limited. Of the river miles assessed, 18% fully support aquatic life and 51% fully support swimming. The primary causes of river impairment include flow and other habitat alterations, siltation, metals, and nutrients. The majority of lakes and reservoirs are impaired for aquatic life (69%) and swimming (60%). The main causes of impairment in lakes are metals, noxious plants, nutrients, siltation, and organic enrichment. Agriculture and resource extraction are the major sources of these impairments. Montana did not report on the condition of its wetlands.

Ground Water Quality

More than 50% of the state's population utilizes ground water sources for their domestic water supply. Ground water is plentiful and the quality is generally excellent, but Montana's aquifers are vulnerable to pollution from increased human activity associated with population growth.

Programs To Restore Water Quality

The Department of Environmental Quality (DEQ) administers several programs to restore surface water quality. Point source discharges are limited under the Montana Pollutant Discharge Elimination System (MPDES) permit program and Nondegradation Rules. The Source Water Protection Program helps identify the causes and sources of contamination in public water supplies, assess susceptibility to further contamination, implement protection programs, and communicate information to the public. The Water Pollution Control State Revolving Fund Loan Program is available to fund water pollution control projects. The DEQ is currently evaluating wetlands to determine their restoration and management needs.

The Ground Water Remediation Program is responsible for contaminated ground water sites that are not addressed by other state authorities. The Montana Ground Water Pollution Control System administers permits for sources that may pollute ground water (e.g., tailings and waste storage ponds) to minimize future contamination.

Programs To Assess Water Quality

Montana law mandates that "sufficient credible data" be used to designate waters as threatened or impaired. During the 2000 assessment cycle, Montana developed a new methodology to comply with this law. The revised protocol uses physical, chemical, and biological factors to determine when water quality standards are being violated. Waters that were designated as impaired using the previous methodology with insufficient data have been removed from the threatened and impaired list and are prioritized for future monitoring. Ambient water quality monitoring is also used to supplement monitoring data and provide unbiased information on statewide water quality and trends.

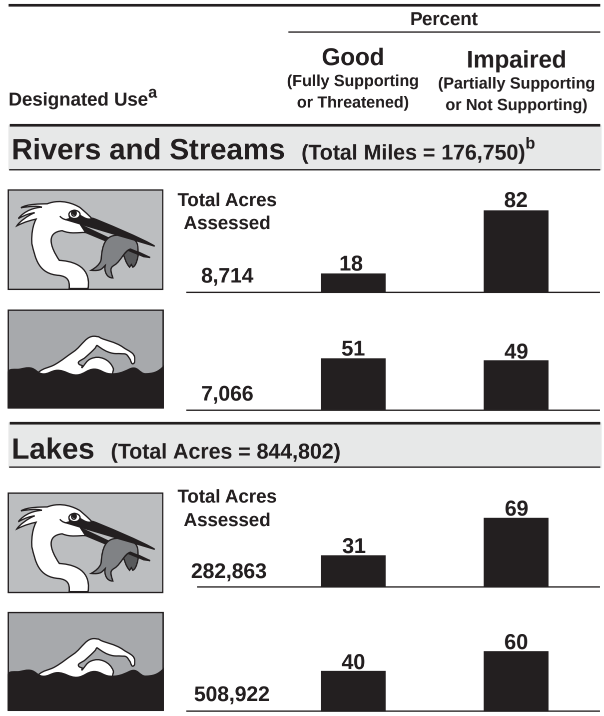
The Montana Bureau of Mines and Geology is primarily responsible for characterizing ground water quality. The Ground Water Monitoring Program provides a long-term record of ground water quality and levels. The statewide monitoring network currently contains about 830 wells that are monitored monthly or quarterly. The Ground Water Characterization Program maps the distribution, water quality, and physical properties of the state's aquifers. Ground water from aquifers in 28 areas will be characterized for availability, quality, vulnerability, and interaction with surface water. The USGS also monitors water level at 10 sites under a cooperative agreement.

All of Montana's assessment information is available on the Internet. Surface water assessments are maintained in the EnviroNet database. Ground water data are contained in the Ground Water Information Center (GWIC) database. Both systems are interactive and can be used to view individual or summary reports on water quality.

Data Quality

Due to recent changes in Montana's assessment program, a display of monitored and evaluated information is not an accurate representation of water quality in the state.

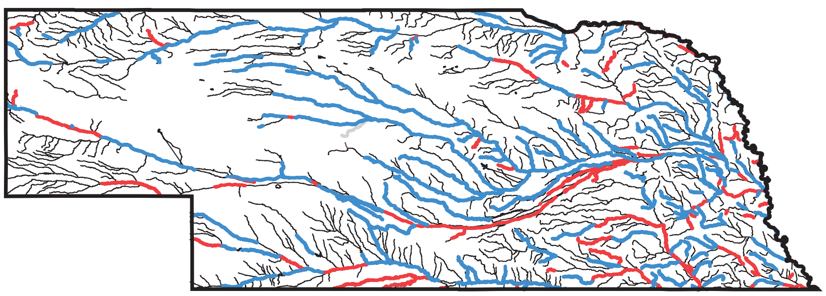
Individual Use Support in Montana



[a] A subset of Montana's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Nebraska



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Nebraska 2000 305(b) report, contact:

Michael Callam
Nebraska DEQ
Water Quality Division,
Surface Water Section
Suite 400, The Atrium
1200 N Street
P.O. Box 98922
Lincoln, NE 68509-8922
(402) 471-4249
e-mail: michael.callam@ndeq.state.ne.us

Surface Water Quality

Agriculture is the most widespread source of water quality problems in Nebraska, but urban runoff is also a concern. Agricultural runoff introduces excess sedimentation, bacteria, suspended solids, pesticides, and nutrients into surface waters. Municipal and industrial facilities may contribute ammonia, bacteria, and metals. Channelization and hydrologic modifications have impacted aquatic life in Nebraska streams by reducing the diversity and availability of habitat. Monitoring has revealed that current water quality criteria for the herbicide atrazine is being exceeded.

Nutrient enrichment and sedimentation were the most common water quality problems identified in lakes, followed by siltation, suspended solids, and nutrients. Sources of pollution in lakes include agriculture, construction, and urban runoff. Nebraska also has 35 fish consumption advisories in effect. The contaminants of concern include methylmercury, dieldrin, and PCBs.

Ground Water Quality

Although natural ground water quality in Nebraska is good, hundreds of individual cases of ground water contamination have been documented. Major sources of ground water contamination include agricultural activities, industrial facilities, leaking underground storage tanks, oil or hazardous substance spills, solid waste landfills, wastewater lagoons, brine disposal pits, and septic systems.

Programs To Restore Water Quality

Nebraska's Nonpoint Source (NPS) Management Program concentrates on protecting ground and surface water resources by performing watershed assessments and promoting implementation projects. Nebraska funded 19 major NPS-related projects under Section 319 of the federal Clean Water Act during 1998-1999.

Nebraska revised wetland water quality standards to protect beneficial uses of aquatic life, aesthetics, wildlife, and agricultural water supply. The state also protects wetlands with the water quality certification program and water quality monitoring.

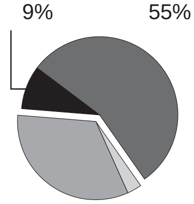
Programs To Assess Water Quality

The state's NPS Management Program cannot be effective without monitoring information to identify and prioritize waters impacted by NPS, develop NPS control plans, and evaluate the effectiveness of implemented best management practices. In response to this need, Nebraska developed an NPS surface water quality monitoring strategy that uses a rotating basin approach. In 1998, the Loup, Niobrara, and White/Hat Basins were assessed. In 1999, the Lower Platte and Nemaha Basins were assessed.

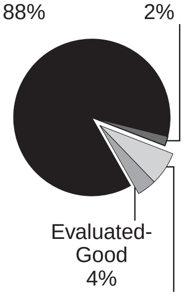
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

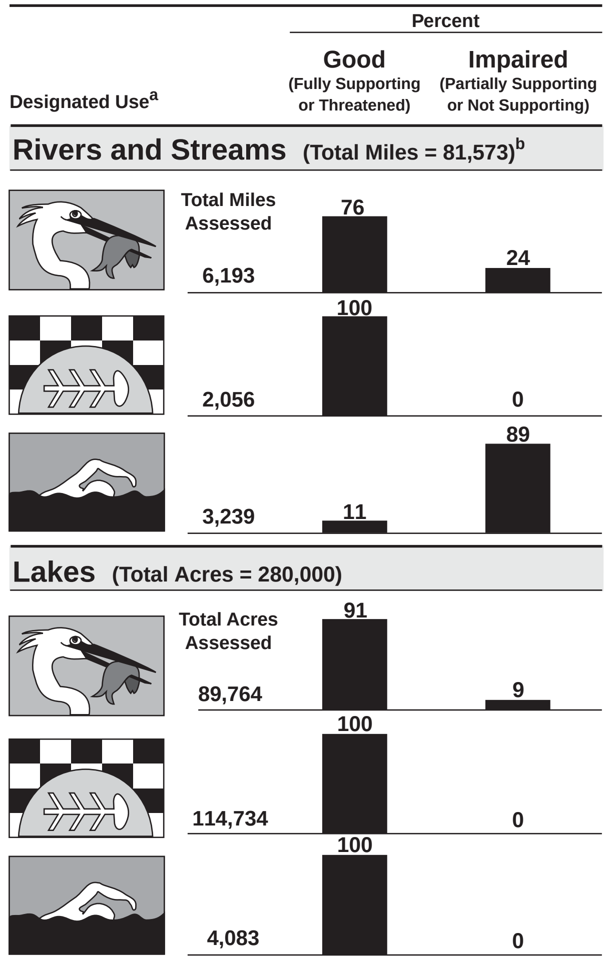
Rivers



Lakes



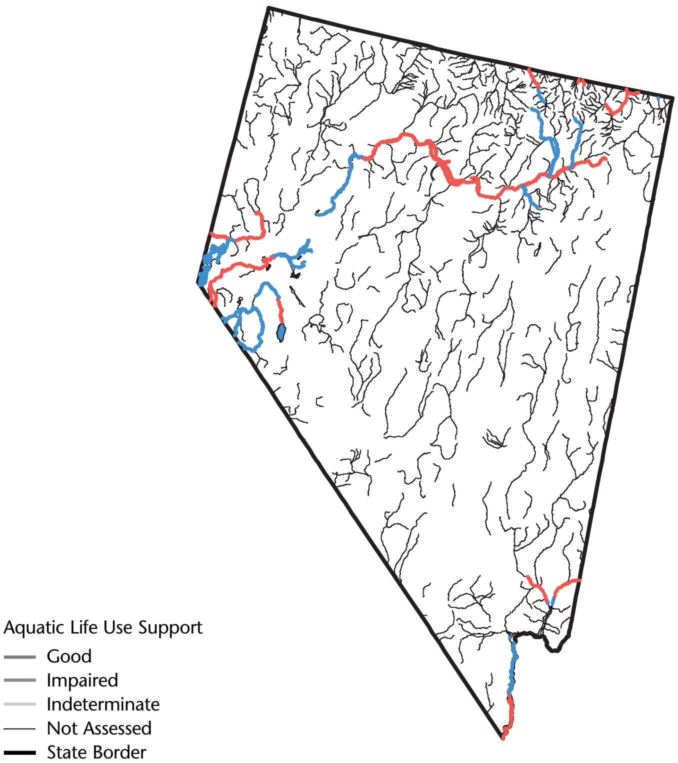
Individual Use Support in Nebraska



[a] A subset of Nebraska's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Nevada



For a copy of the Nevada 2000 305(b) report, contact:

Glen Gentry
Division of Environmental Protection
Bureau of Water Quality Planning
333 West Nye Lane, Suite 138
Carson City, NV 89706-0851
(775) 687-4670
e-mail: ggentry@ndep.carson-city.nv.us

Surface Water Quality

Only 10% (about 15,000 miles) of Nevada's rivers and streams flow year round, and most of these waters are inaccessible. For this reporting cycle, Nevada assessed 1,559 miles of the 3,000 miles of accessible perennial streams for aquatic life uses. Thirty-nine percent of the assessed stream miles fully supported this use. In lakes, 100% of the assessed acres fully supported aquatic life uses. Nevada assessed 19,326 acres of wetlands in this reporting cycle, all of which fully supported all assessed uses.

Agricultural practices (irrigation, grazing, and flow regulation) have the greatest impact on Nevada's water resources. Urban drainage systems contribute nutrients, heavy metals, and organic substances that deplete oxygen. Flow reductions also have a great impact on streams, limiting dilution of salts, minerals, and pollutants. A no-consumption fish advisory is in effect for portions of the Carson River and all of the waters in the Lahontan Valley. The advisory is in place due to high levels of mercury in fish tissue.

Ground Water Quality

Nevada lacks comprehensive ground water protection legislation, but the state does have statutes that control individual sources of contamination, including mining, underground storage tanks, septic systems, handling of hazardous materials and waste, solid waste disposal, underground injection wells, agricultural practices, and wastewater disposal. Land use statutes also enable local authorities to implement Wellhead Protection Plans by adopting zoning ordinances, subdivision regulations, and site plan review procedures. Local authorities can implement certain source control programs.

Programs To Restore Water Quality

Nevada's Nonpoint Source (NPS) Management Plan aims to reduce NPS pollution with interagency coordination, education programs, and incentives that encourage voluntary installation of best management practices. The program promotes public awareness, grazing and irrigation practices, and erosion control measures. The state's current approach to controlling NPSs is to seek voluntary compliance through nonregulatory programs of technical and financial assistance, training, technology transfer, demonstration projects, and education. Nevada has developed a Comprehensive State Ground Water Protection Program (CSGWPP). The core of the CSGWPP was endorsed by the EPA in November 1997.

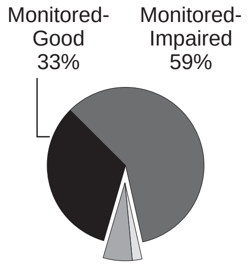
Programs To Assess Water Quality

Several state, federal, and local agencies regularly sample chemical and physical parameters in the 14 hydrologic regions of the state. The state also coordinates intensive field studies on Nevada's major river systems, the Truckee River Basin, Carson River Basin, Walker River Basin, and the Humboldt River Basin. The state also monitors several lakes and reservoirs. Additional monitoring data are provided by the U.S. Geological Survey and the Nevada Division of Agriculture.

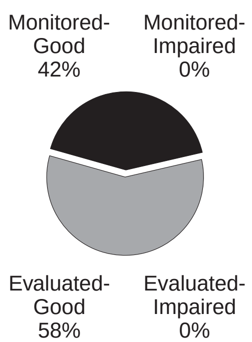
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

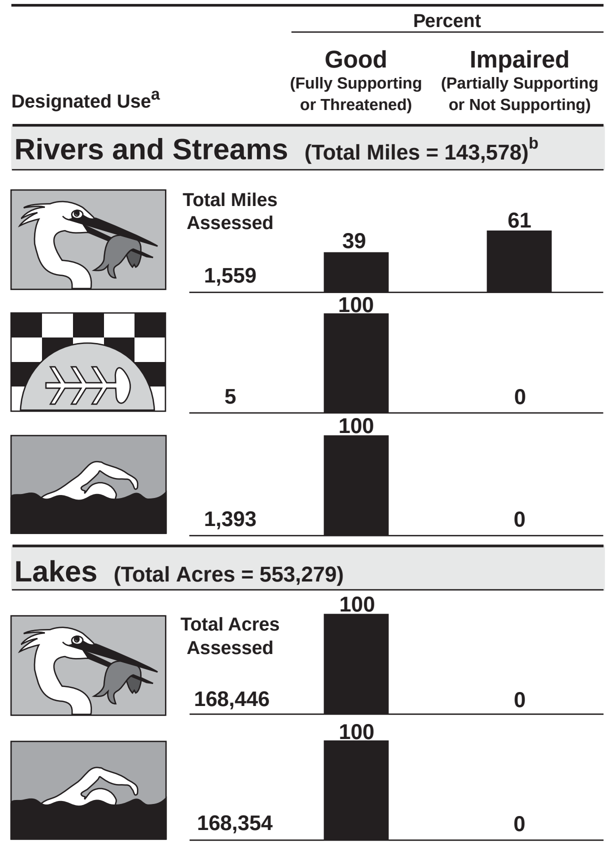
Rivers



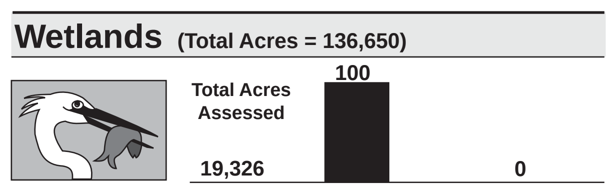
Lakes



Individual Use Support in Nevada



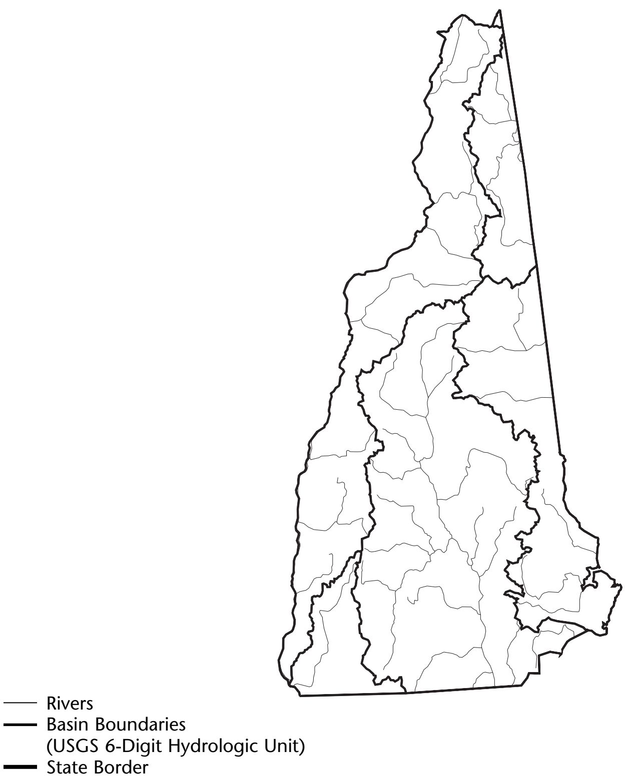
Summary of Use Support in Nevada



[a] A subset of Nevada's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

New Hampshire



For a copy of the New Hampshire 2000 305(b) report, contact:

Gregg Comstock
Water Division
Department of Environmental Services
State of New Hampshire
6 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
(603) 271-2457
e-mail: gcomstock@des.state.nh.us

A copy of the report may be downloaded from: **www.des.state.nh.us/wmb/wmbpubs.htm**

Surface Water Quality

In 1994, New Hampshire issued a statewide freshwater fish consumption advisory due to mercury levels found in fish tissue. The primary source of mercury is believed to be atmospheric deposition from both in-state and out-of-state sources. When this advisory is included in the assessment, all fresh surface waters are, by definition, less than fully supporting all uses. However, if this advisory is not included in the assessment, over 83% of assessed river and stream miles and 96% of assessed lake acres fully support all uses.

With respect to tidal waters, approximately 99% support swimming and aquatic life. However, none of New Hampshire's 18 miles of coastal shoreline, 54 miles of open ocean waters, or 21.24 square miles of estuaries fully supports all uses. This is primarily due to a bluefish consumption advisory for polychlorinated biphenyls (PCBs) in fish tissue. Portions of the estuaries are also considered impaired due to elevated PCB concentrations in lobster tomalley and bacteria contamination in waters designated for shellfish harvesting.

Excluding the statewide freshwater fish advisory, metals, PCBs, and bacteria are the leading causes of impairment in rivers. Low pH, exotic weeds, and nutrients are the major causes of impairment in lakes. Nonpoint sources are believed to be responsible for most of the pollution entering New Hampshire's waters.

New Hampshire has an estimated 7,500 acres of tidal wetlands, and 400,000 to 600,000 acres of nontidal wetlands. Permitted projects and violations over the past 2 years have impacted less than 0.04 percent of the state's nontidal wetlands and there have not been any net losses of tidal wetlands.

Ground Water Quality

New Hampshire is highly dependent on ground water for drinking water. Although natural ground water quality from stratified aquifers is generally good, aesthetic concerns such as taste, odor, and iron content exist. Water from bedrock wells is also generally of good quality, although this water can be impacted by naturally occurring contaminants (e.g. fluoride, arsenic, mineral radioactivity, and radon gas).

In addition to naturally occurring contamination, many areas are impacted by releases of petroleum and volatile organic compounds from local petroleum facilities, commercial and industrial operations, and landfills. Sodium used during winter as road salt is also a contaminant of concern.

Programs To Restore Water Quality

New Hampshire has numerous laws, regulations, and programs to abate pollution from point and nonpoint sources. All significant discharges of untreated municipal and industrial wastewater have been eliminated. To resolve remaining water pollution problems, the Department of Environmental Services (DES) created the Watershed Management Bureau in 1999 and is currently refining and implementing a watershed assessment approach.

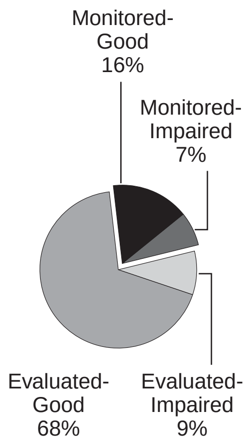
Programs To Assess Water Quality

The DES has several lake assessment programs, including an excellent volunteer monitoring program that was initiated in 1985. Additional programs include acid pond monitoring, beach monitoring, and trophic surveys. The DES implemented an in-stream biological monitoring program in 1985, a 3-year rotating watershed monitoring program for rivers in 1989, and a volunteer monitoring program for rivers in 1997. In the future, the DES will investigate alternatives to increase the percentage of assessed waters.

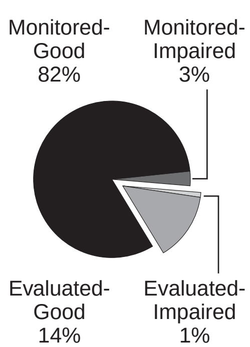
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

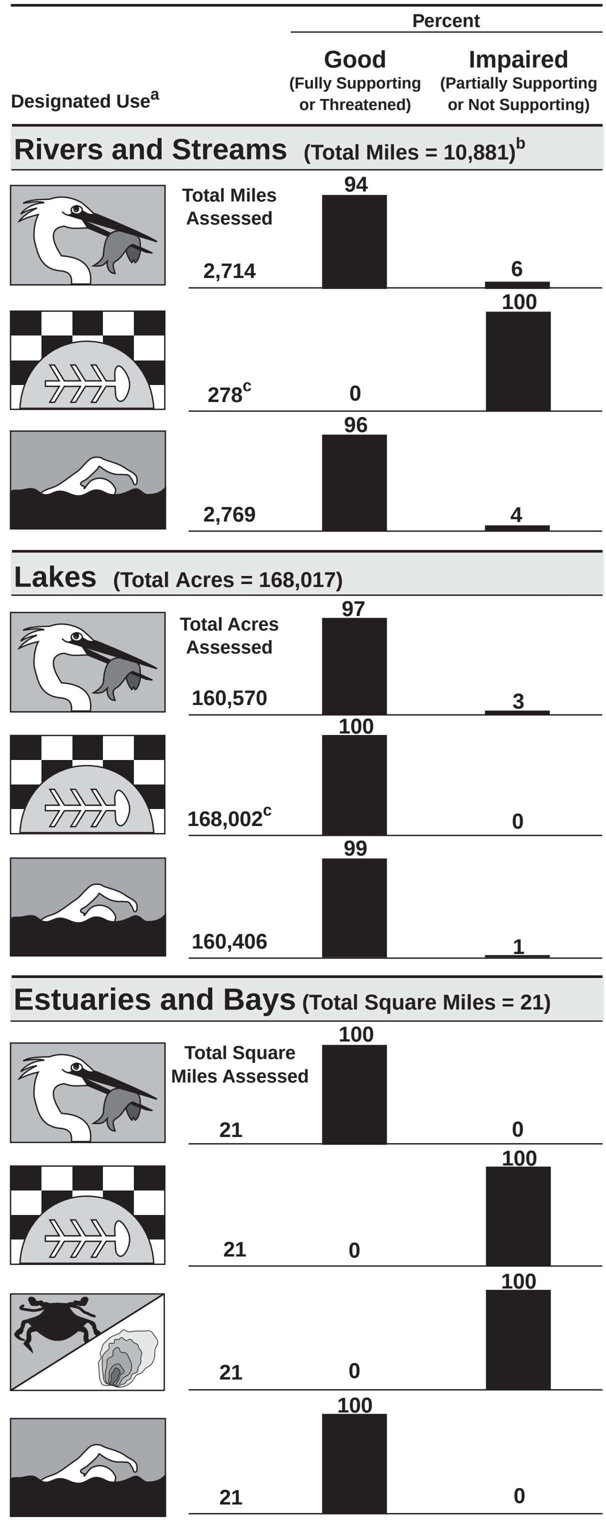


Lakes



[a] A subset of New Hampshire's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] Does not include statewide fish advisory.

Individual Use Support in New Hampshire



Note: Figures may not add to 100% due to rounding.

New Jersey

For a copy of the New Jersey 2000 305(b) report, contact:

Kevin Berry
Division of Science Research and Technology
New Jersey Department of Environmental Protection
401 East State Street, 1st Floor
P.O. Box 409
Trenton, NJ 08625-0409
e-mail: kberry@dep.state.nj.us

A copy of the report may be downloaded from: **http://www.state.nj.us/dep/dsr/watershed/305b/305b.htm**

Surface Water Quality

The majority of river and stream miles assessed for this reporting cycle are impaired for aquatic life support (63%), fish consumption (76%), and swimming (83%), although monitoring does not specifically target swimming areas. Most pineland rivers fully support swimming. Fish communities improved in the Passaic, Raritan, and Delaware basins. Of the lake acres assessed, 87% support aquatic life and 67% support swimming. Lakes in New Jersey are typically shallow impoundments that are prone to eutrophication. Only 1% of the assessed lake acres support fish consumption. This is due to statewide fish consumption advisories for chain pickerel and largemouth bass issued as a result of mercury contamination. New Jersey did not assess wetlands for designated use support.

Marine waters in New Jersey are typically of good quality. Of the estuarine area assessed, 77% support aquatic life and 98% support swimming. All coastal waters support aquatic life, fish consumption, and swimming. Fish consumption use was threatened due to advisories for striped bass, American eel, lobster, and bluefish due to organics contamination.

Fecal bacteria, nutrients, and mercury contribute to impairments identified in surface waters. Nutrients and fecal bacteria enter waterways from nonpoint sources such as geese, erosion, stormwater, and runoff. Localized issues arise from combined sewer overflows (CSOs), septic systems, occasional wastewater treatment plant malfunctions, and possibly livestock. Air deposition is a major source of mercury and nitrogen.

Ground Water Quality

There is generally an ample supply of good quality ground water in New Jersey. However, localized ground water quality issues occur from naturally occurring contaminants (e.g., radium, radon, arsenic) and pollutants (e.g., mercury, bacteria, pesticides). Over 6,000 sites are contaminated. New Jersey has established a Maximum Contaminant Level (MCL) of 10 parts per billion for arsenic. Six percent of wells sampled in the piedmont area exceeded this standard, although none exceeded the national MCL of 50 parts per billion.

Programs To Restore Water Quality

The Department of Environmental Protection (DEP) continues to implement traditional water pollution control programs as well as watershed management programs. Total Maximum Daily Loads

(TMDLs) were developed for nutrients in two lakes, volatile organic compounds in the Delaware River, and fecal bacteria in the Whippany River. Nonpoint source projects were focused on reducing biological impairments, nutrients, and bacteria. Further improvements are expected through municipal stormwater permitting and the CSO program. A Lake Restoration Task Force will issue recommendations on financing lake management and restoration activities. A Shellfish Action Plan aims to increase shellfish beds available for harvest from 88% to 90% by 2005.

Programs To Assess Water Quality

The 151 watersheds in New Jersey are aggregated into 20 Watershed Management Areas. River assessments were based on data from 79 stations in the Ambient Stream Monitoring Network and 200 additional sites that will be sampled for 2 years. Aquatic life assessments were based on data from fisheries and 820 stations in the Ambient Biological Monitoring Network. Contaminants in fish tissue were evaluated through special projects.

Marine waters are monitored through the Cooperative Coastal Monitoring Program, Marine and Coastal Water Quality Monitoring Program, and EPA Ocean Monitoring Program. The Shellfish Sanitation Program monitors coliform bacteria at 2,500 stations in shellfish harvesting areas. The DEP and U.S. Geological Survey redesigned the ground water monitoring network. The new Private Well Testing Act mandates sampling for domestic wells. Site-specific monitoring is conducted at contaminated sites.

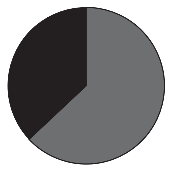
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Aquatic Life Use Support that was based on each type of data.

Rivers*

Monitored-Good 37%

Monitored-Impaired 63%

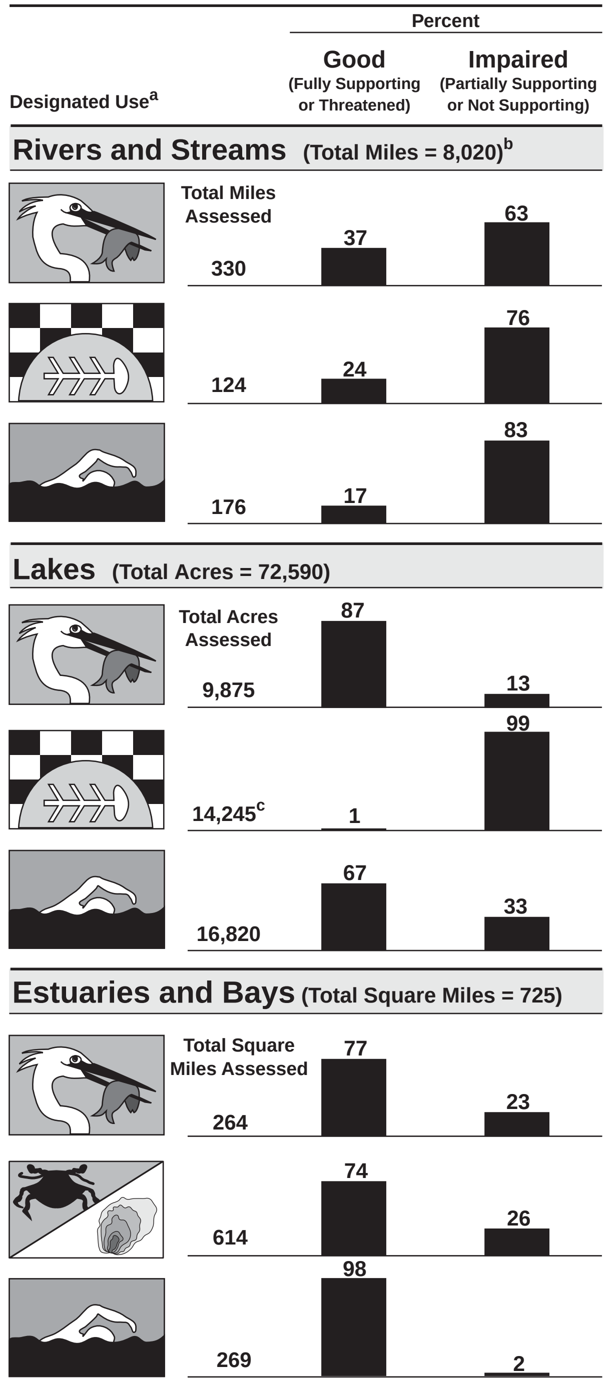


Evaluated-Good 0%

Evaluated-Impaired 0%

* Data for aquatic life use are given because a Summary of Use Support was not available.

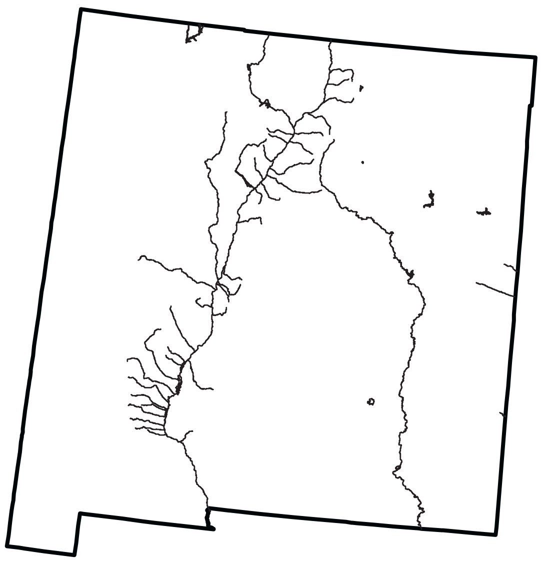
Individual Use Support in New Jersey



[a] A subset of New Jersey's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes intermittent streams.
[c] Includes statewide fish consumption advisory.

Note: Figures may not add to 100% due to rounding.

New Mexico



For a copy of the New Mexico 2000 305(b) report, contact:

Gary King
New Mexico Environment Department
Surface Water Quality Bureau
P.O. Box 26110
Santa Fe, NM 87502-6110
(505) 827-2928
e-mail: gary_king@nmenv.state.nm.us

Surface Water Quality

About 30% of New Mexico's surveyed stream miles have good water quality that supports aquatic life uses. Ninety-nine percent of the surveyed river and stream miles support swimming. The leading problems in streams include turbidity, thermal modifications, pathogens, and metals. Nonpoint sources are responsible for over 91% of the degradation in New Mexico's 2,675 impaired river and stream miles. Sources of impairment include agriculture, hydrologic and habitat modification, recreational activities, and resource extraction.

Agriculture and recreational activities are the primary sources of nutrients, siltation, reduced shoreline vegetation, and bank destabilization that impairs aquatic life use in 89% of New Mexico's surveyed lake acres. Mercury contamination from unknown sources appears in fish caught at 23 reservoirs. However, water and sediment samples from surveyed lakes and reservoirs have not detected high concentrations of mercury. Fish may contain high concentrations of mercury in waters with minute quantities of mercury because the process of bioaccumulation concentrates mercury in fish tissue.

New Mexico did not report on the condition of wetlands.

Ground Water Quality

Approximately 90% of the population of New Mexico depends on ground water for drinking water. The Environment Department identified at least 1,235 cases of ground water contamination between 1927 and December 1999. Contamination most often occurs in areas where the aquifer is vulnerable due to a shallow water table. Nonpoint sources of ground water contamination, which account for about 13% of contamination statewide, include small household septic tanks and cesspools, animal feedlot operations, urban runoff, and application of agricultural chemicals. Leaking underground storage tanks, injection wells, landfills, mining and milling, and miscellaneous industrial sources also contaminate ground water in New Mexico. New Mexico operates a ground water discharger permit program that includes ground water standards for intentional discharges and a spill cleanup provision for other discharges.

Programs To Restore Water Quality

New Mexico uses a variety of state, federal, and local programs to protect surface water quality. The federal NPDES program is used to protect waters from point source discharges. Nonpoint source surface water pollution is addressed by the State Nonpoint Source Water Pollution Management Program to prevent and abate pollution by implementing best management practices (BMPs). This program helps insure that state water quality standards are met and that wetlands are protected through the water quality certification process for Section 404 permits. The New Mexico Environment Department has also worked with the U.S. Forest Service to reduce nonpoint source pollution in many of the state's highest quality waters. These efforts have been quite successful in many cases and have resulted in the elimination of some longstanding nonpoint source problems.

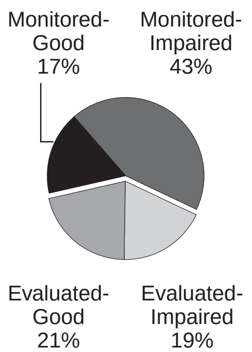
Programs To Assess Water Quality

New Mexico uses a wide variety of methods to assess its water quality. Second-party data including dischargers' reports, published literature, data stored in EPA's database, as well as data generated by the U.S. Geological Survey are routinely reviewed. The New Mexico Environment Department generates large amounts of data through intensive surveys, assessment of citizen complaints, special studies aimed at areas of special concern (e.g., mercury concentrations in water, sediments, and fish), volunteer monitoring programs, short- and long-term nonpoint source pollution monitoring, and effluent monitoring.

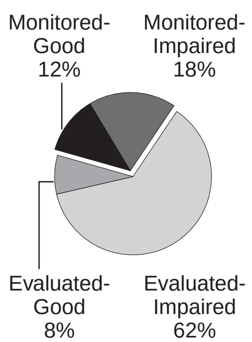
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

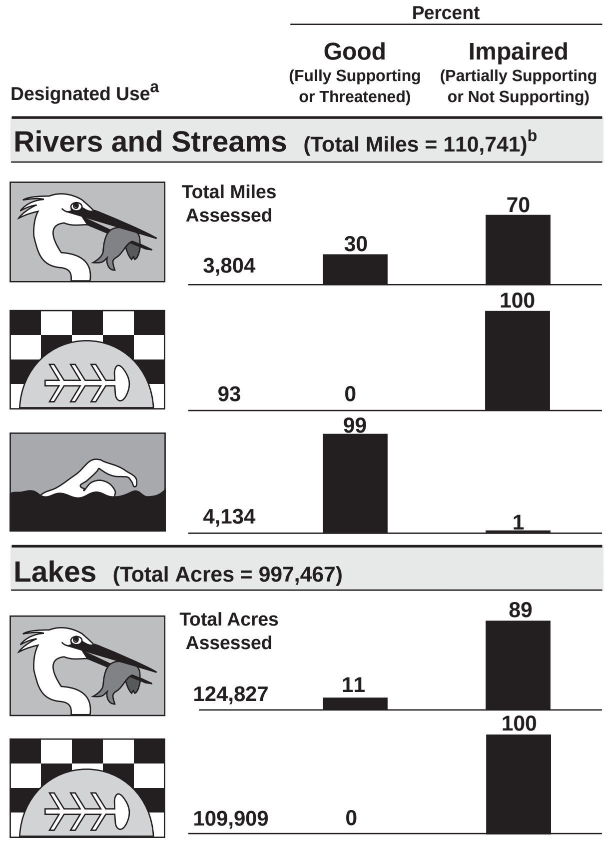
Rivers



Lakes



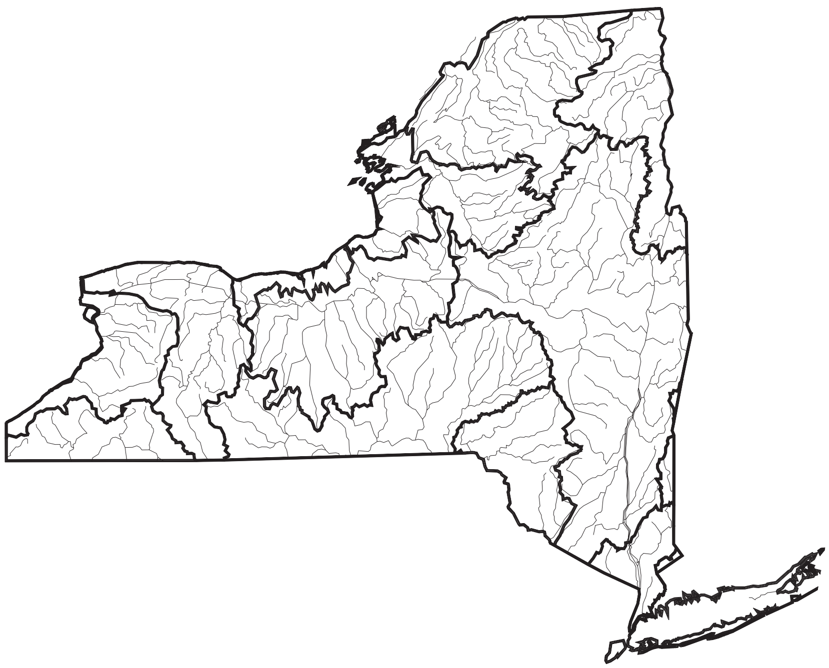
Individual Use Support in New Mexico



[a] A subset of New Mexico's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

New York



For a copy of the New York 2000 305(b) report, contact:

Jeff Myers
New York State Department of Environmental Conservation
Bureau of Watershed Assessment and Research
50 Wolf Road
Albany, NY 12233
(518) 457-7130
e-mail: jamyers@gw.dec.state.ny.us

Surface Water Quality

In previous years, New York has focused monitoring efforts on areas where water quality problems were reported or suspected to occur, and has assumed that all other waters in the state were unimpaired. During this reporting cycle, the state began revising their methods so that more good quality waters are monitored. In light of this transition, the assessment information reported for 2000 may underestimate the size of fully supporting waters in the state. Seventy-two percent of New York's assessed river and stream miles and 16% of assessed lake acres have good water quality that supports aquatic life uses. Swimming is supported in 52% of assessed river and stream miles and 26% of assessed lake acres. All of the 374 surveyed Great Lakes shoreline miles were impaired for fish consumption.

Agriculture is a major source of nutrients and silt that impact New York's rivers, lakes, and reservoirs. Erosion and urban runoff are other major sources of water quality impairment in rivers and lakes. Urban runoff, combined sewer overflows, and municipal wastewater treatment plants are the primary sources of pathogens and other contaminants causing impairment to 100% of the assessed square miles of estuaries. It should be noted that New York assessed only about one-quarter of the state's total estuarine area, and the remaining estuarine areas were not targeted for assessment because problems were not suspected. New York did not report on the condition of wetlands.

Ground Water Quality

One-third of New York residents (approximately 6 million people) use ground water as a source of drinking water. The state reports that 312 wells or springs statewide have been contaminated to some degree by organic pollutants. Nonpoint source contaminants such as bacteria, viruses, synthetic organic chemicals, nitrate, and chloride threaten ground water quality throughout the state. Of private wells contaminated by organic chemicals in upstate New York, the majority (65%) of cases results from petroleum-related contaminants such as methyl tertiary butyl ether (MTBE) and benzene.

Programs To Restore Water Quality

New York has recently begun a program to develop Watershed Restoration and Protection Action Strategies for all state watersheds. These strategies propose the priorities for water quality restoration in each watershed. A wide range of stakeholders including federal, state, local, and tribal representatives is involved in developing restoration strategies for the state's watersheds. New York's watershed approach has already focused on priority watersheds for various activities including water quality monitoring and restoration. For instance, over $5 million was allocated in 1999 to fund projects under the Water Resources Development Act to protect and enhance New York City's drinking water supply.

Programs To Assess Water Quality

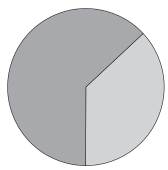
In 1987, New York implemented the Rotating Intensive Basin Studies (RIBS), an ambient monitoring program that concentrates monitoring activities on one-third of the state's hydrologic basins for 2-year periods. The RIBS strategy employs a tiered approach in which rapid biological screening methods are applied at a large number of sites during the first year of a 2-year study, and more intensive chemical monitoring is used to follow up the results of this biological effort in the second year. Historically, the Department of Environmental Conservation's limited resources were used to focus monitoring efforts on areas where pollution problems were reported or suspected to occur. The state began to address this bias in 1998, and the new RIBS strategy places emphasis on the monitoring and documentation of good quality waters.

Data Quality*

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

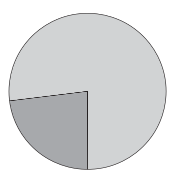
Monitored-Good 0% Monitored-Impaired 0%



Evaluated-Good 63% Evaluated-Impaired 37%

Lakes

Monitored-Good 0% Monitored-Impaired 0%



Evaluated-Good 23% Evaluated-Impaired 77%

* New York assessments are based only on evaluated data.

[a] New York notes its assessments are biased toward those waters with known impairments.

[b] A subset of New York's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[c] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Individual Use Support in New York[a]

Designated Use[b]	Total Assessed	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 52,337)[c]	Total Miles Assessed		
	2,048	72	28
	428	20	80
	157	52	48
Lakes (Total Acres = 790,782)	Total Acres Assessed		
	49,183	16	84
	151,557	0	100
	125,387	26	74
Great Lakes (Total Shore Miles = 577)	Total Shore Miles Assessed		
	374	0	100
	77	52	48
Ocean Shoreline (Total Shore Miles = 120)	Total Shore Miles Assessed		
	3	0	100
Estuaries and Bays (Total Square Miles = 1,530)	Total Square Miles Assessed		
	15	0	100
	116	0	100
	163	0	100
	97	0	100

North Carolina

Rivers
State Border

For a copy of the North Carolina 2000 305(b) report, contact:

Deanna Doohaluk
North Carolina Department of Environment and Natural Resources
Division of Water Quality
1617 Mail Service Center
Raleigh, NC 27699-1617
(919) 733-5083 ext. 577
e-mail: Deanna.Doohaluk@ncmail.net

The report is also available on the Internet at: **http://h2o.enr.state.nc.us/bepu/download.html**

Surface Water Quality

The majority of assessed lake acres support aquatic life (98%), primary contact (98%), and fish consumption (89%). Impaired lakes are impacted by excessive nutrient enrichment, siltation, and noxious aquatic plants. About 93% of the state's assessed river and stream miles have good water quality that supports overall use. North Carolina also surveyed about 5,600 river and stream miles but did not have sufficient data to assign a use support rating, so these waters were designated as "not rated" by the state (not assessed).

The major sources of impairment to rivers are agriculture, urban runoff, municipal point sources, and construction. These sources generate siltation, turbidity, and organic wastes that deplete dissolved oxygen and lead to habitat degradation. About 96% of the assessed estuarine area support designated uses. Urban runoff, leaking septic tanks, agriculture, wastewater treatment plants, and marinas are probable sources of bacteria, low dissolved oxygen, and chlorophyll *a* that degrade estuaries. As assessed by soil maps and aerial photographs, about 66% of the state's wetland area fully supports designated uses. Silviculture, agriculture, and urban development are the leading sources of wetland degradation. The state has 17 fish consumption advisories in effect, including an advisory for mercury in king mackerel covering all coastal waters.

Ground Water Quality

About half of the state's population uses ground water as their primary supply of drinking water. Ground water quality is generally good. The leading source of contamination is leaking underground storage tanks, which contaminate ground water with gasoline, diesel fuel, and heating oil. Comprehensive programs are underway to assess potential contamination sites and develop a ground water protection strategy for the state.

Programs To Restore Water Quality

North Carolina uses a watershed-level approach to address water quality problems. In 2000, the NC Division of Water Quality (DWQ) was working on its second set of basinwide management plans, which summarize water quality and develop strategies for addressing problems for each of 17 river basins. Through the Unified Watershed Assessment process, the DWQ identified 23 watersheds in need of restoration. Within these areas, 11 smaller catchments that are biologically impaired are being studied intensively to identify causes and sources of pollution and develop strategies to restore aquatic system health.

Addressing nonpoint source (NPS) pollution continues to be a state priority. The NPS program comprises a cooperative network of state and local agencies that extends to all counties. The DWQ has begun implementing rules that address nitrogen pollution from urban areas, agriculture, and fertilizer application across the entire Neuse and Tar-Pamlico River basins. In addition, a temporary rule is being implemented in these basins that protects riparian buffers adjacent to all perennial and intermittent streams, ponds, lakes, and estuaries. Riparian buffers are also being proposed for waters in the Catawba River basin. North Carolina is seeking final approval of its Coastal NPS Program from NOAA and EPA, and continues implementation of its Section 319 funding program for innovative NPS best management practices, public education and outreach, and restoration of impaired waters.

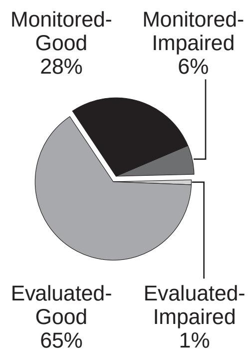
Programs To Assess Water Quality

Surface water quality in North Carolina was primarily evaluated using physical and chemical data collected by the DWQ from a statewide fixed-station network, in addition to biological assessments. These include macroinvertebrate (aquatic insect) community surveys, fish community structure analyses, fish tissue analyses, toxicity testing, phytoplankton analyses, bioassays, and limnological review of lakes and watersheds. Other sources of information were point source monitoring data, shellfish closure reports, lake trophic state studies, and reports prepared by other local, state, and federal agencies.

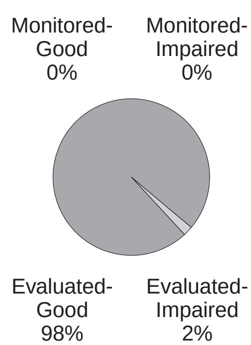
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

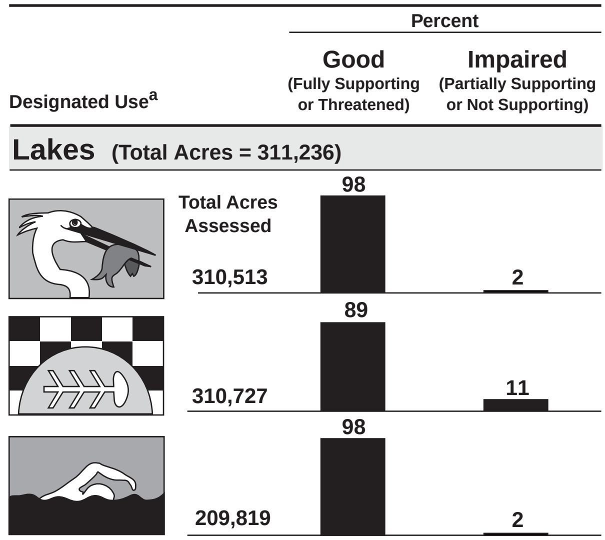


Lakes

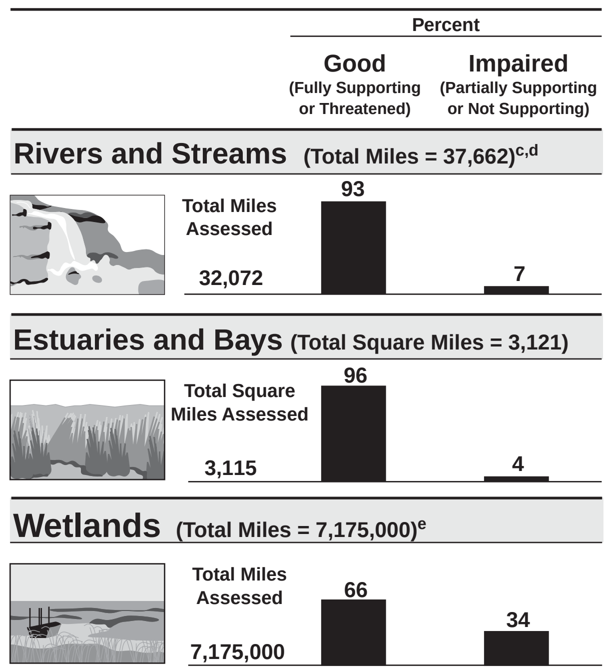


Note: Figures may not add to 100% due to rounding.

Individual Use Support in North Carolina



Summary of Use Support in North Carolina[b]



[a] A subset of North Carolina's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

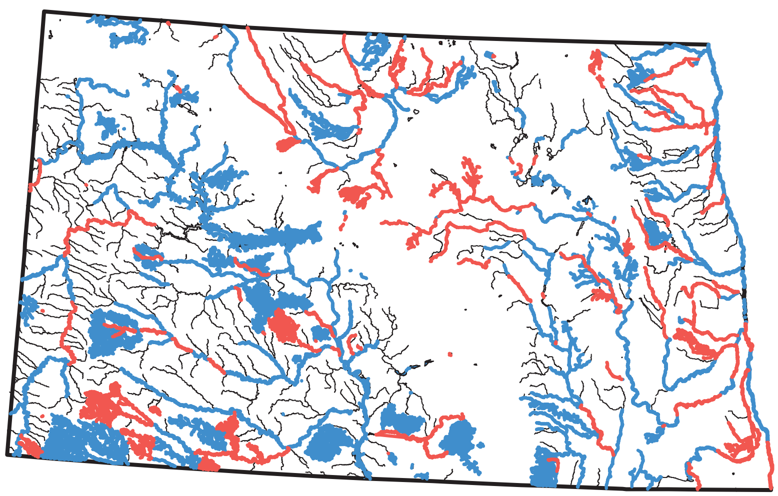
[b] A summary of use support data is presented because North Carolina did not report individual use support in rivers and estuaries in their 2000 305(b) report.

[c] Includes nonperennial streams that dry up and do not flow all year.

[d] The good category includes some stream miles that were not assessed, but were assumed to support designated uses because they had no known impairments.

[e] Assessment of wetlands was conducted with soil maps and aerial photographs.

North Dakota



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the North Dakota 2000 305(b) report, contact:

Michael Ell
North Dakota Department of Health
Division of Water Quality
P.O. Box 5520
Bismark, ND 58506-5520
(701) 328-5214
e-mail: mell@state.nd.us

The report is also available on the Internet at: **http://www.health.state.nd.us/ndhd/environ/wq/**

Surface Water Quality

North Dakota reports that 69% of its assessed rivers and streams have good water quality that fully support aquatic life uses, but use support is threatened in most of these streams. Fifty-six percent of the assessed rivers and streams fully support swimming. Monitoring data for 147 miles of rivers and streams are the basis of fish consumption use impairment in the state. Fish tissues have shown elevated methylmercury content. The major causes of impaired use support in the state are pathogens, habitat alterations, siltation, nutrients, and oxygen-depleting wastes. The leading sources of contamination are agriculture, drainage and filling of wetlands, hydromodification, and upstream impoundments. Natural conditions, such as low flows caused by water regulation, also contribute to aquatic life use impairment.

In lakes, 97% of the surveyed acres have good water quality that fully support aquatic life uses, and 79% of the surveyed acres fully support swimming. Twenty-one lakes and reservoirs are considered impaired for fish consumption use due to methylmercury contamination. The remaining 198 lakes and reservoirs were not assessed for this reporting cycle. Metals, siltation, nutrients, and oxygen-depleting substances are the most widespread pollutants in North Dakota's lakes. The leading sources of pollution in lakes are agricultural activities, urban runoff/storm sewers, hydrologic modification, and habitat modification. Natural conditions also prevent some waters from fully supporting designated uses.

Ground Water Quality

North Dakota has not identified widespread ground water contamination, although some naturally occurring compounds may make the quality of ground water undesirable in a few aquifers. Where human-induced ground water contamination has occurred, the impacts have been attributed primarily to petroleum storage facilities, agricultural storage facilities, feedlots, poorly designed wells, abandoned wells, wastewater treatment lagoons, landfills, septic systems, and the underground injection of waste.

Programs To Restore Water Quality

North Dakota's Nonpoint Source (NPS) Pollution Management Program was established to: (1) increase public awareness of NPS pollution, (2) reduce or prevent the delivery of NPS pollutants to waters of the state, and (3) disseminate information on effective solutions to NPS pollution. Since 1990, 39 projects have been completed and 32 are currently active.

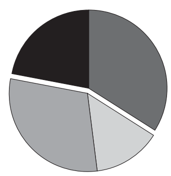
Programs To Assess Water Quality

The North Dakota Department of Health monitors physical and chemical parameters (such as dissolved oxygen, pH, total dissolved solids, nutrients, and toxic metals), toxic contaminants in fish, whole effluent toxicity, and fish and macroinvertebrate community structure. North Dakota's ambient water quality monitoring network consists of 27 sampling sites on 24 rivers and streams. The Department's biological assessment program has grown since 1993. Currently, biosurveys are conducted at approximately 50 sites each year.

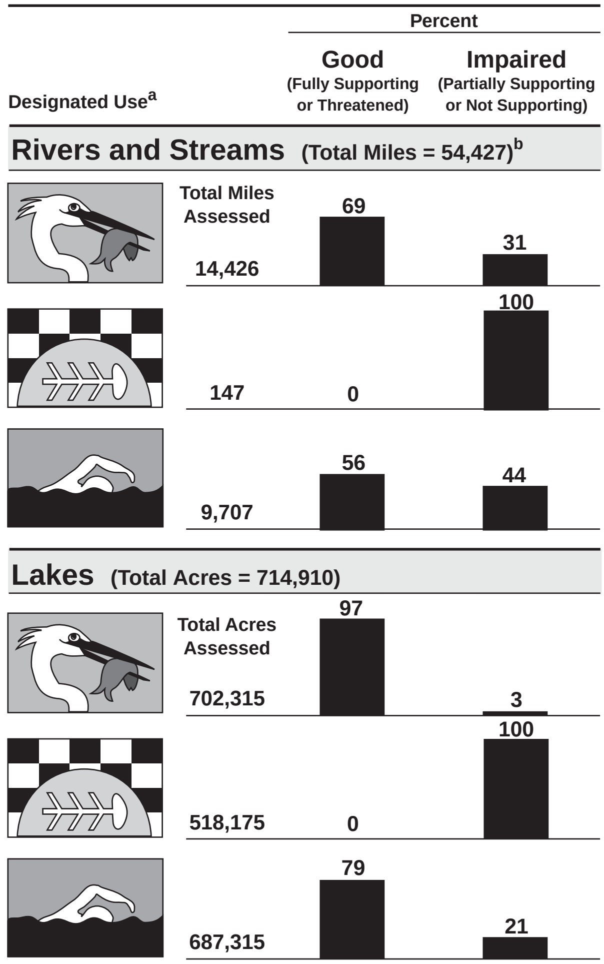
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



Individual Use Support in North Dakota

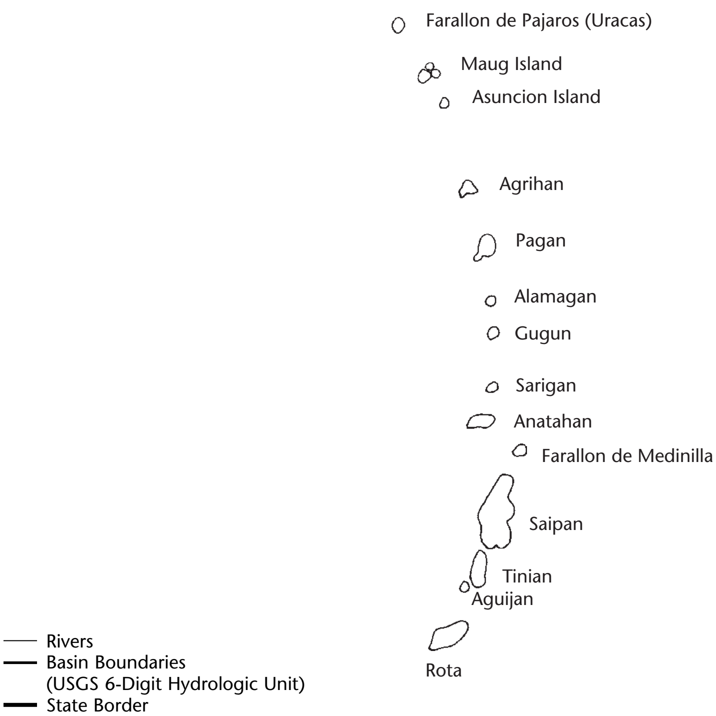


[a] A subset of North Dakota's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Commonwealth of the Northern Mariana Islands



For a copy of the Commonwealth of the Northern Mariana Islands 2000 305(b) report, contact:

Ike Cabrera
Commonwealth of the Northern Mariana Islands
Division of Environmental Quality
P.O. Box 1304
Saipan, MP 96950
(670) 664-8500

Surface Water Quality

The Commonwealth of the Northern Mariana Islands (CNMI) is an archipelago of 15 islands in the Western Pacific Ocean located north of Guam. The largest and most populated island is Saipan, with an area of 46 square miles and 52 miles of coastline.

Streams and wetlands are not currently monitored because they are not used for drinking water or recreation. Coastal marine waters are monitored because their quality affects the health of the coral reef ecosystem on which subsistence, recreation, storm protection, and tourism depend.

Both point and nonpoint sources affect water quality. Sewage outfalls, dredging, sedimentation from unpaved roads and development, and nutrients from golf courses and agriculture are the most significant stressors on coral reefs and marine water quality.

It is estimated that over 60% of Saipan's wetlands were lost as a result of farming prior to World War II. Increasing development continues to threaten wetlands on all of the islands.

Ground Water Quality

Ground water supplies 99% of the islands' drinking water. Ground water is also used for agriculture and irrigation of golf courses. Increasing demands for water have led to excessive ground water withdrawal. Overpumping ground water results in elevated chloride concentrations and saltwater intrusion. Garment factories, failing septic systems, and service industries (e.g., gasoline stations, automobile repair shops, and power generators) also affect ground water quality. Septic tanks can result in bacteriological and nitrate contamination, particularly when the systems are poorly designed. There is also concern about historical contamination resulting from military activities during the 1940-1960s (World War II and post-World War II), although the extent of this contamination has not been fully investigated.

The Division of Environmental Quality (DEQ) requires that all wells be permitted prior to exploration. Operators submit semiannual water quality data that includes chlorides, hardness, nitrates, total dissolved solids, conductivity, pH, and fecal coliform. Wells with elevated chloride concentrations are required to reduce their pumping rate. The DEQ is developing a database to maintain the monitoring data.

Programs To Restore Water Quality

The Puerto Rico dump threatens both surface and ground water quality on Saipan. Leachate from this area contains contaminants such as metals and synthetic organic compounds. The DEQ has prioritized closing this dump and improving water quality in the surrounding area.

The Nonpoint Source Program successfully constructed a wetland within the grounds of the American Memorial Park to reduce sediments discharged into the nearby shoreline.

The DEQ administers permitting programs for septic systems and earthmoving and erosion control. The DEQ also manages pesticide, underground and aboveground storage tank, and well drilling programs.

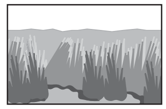
Programs To Assess Water Quality

Surface water monitoring in the CMNI focuses on marine waters and coral reefs. Thirty-one sites at the Saipan lagoon are monitored weekly for traditional water quality parameters and two sites are monitored for biological parameters. The DEQ uses Enterococci and fecal coliform as indicators of human or animal waste contamination. Marine water and ground water sampling was conducted to support the final closure design for the Puerto Rico dump.

The Marine Monitoring Team assesses the condition of coral reefs in the CNMI. The DEQ developed a Long Term Marine Monitoring Plan that uses biological criteria to determine ambient conditions and to determine long-term changes in the health of the coral reefs. Eight fixed monitoring stations are incorporated into this plan. Four stations are located on Saipan, two are located on Tinian, and two are located on Rota.

Summary of Use Support in Northern Mariana Islands[a]

	Percent	
	Good (Fully Supporting or Threatened)	**Impaired** (Partially Supporting or Not Supporting)
Estuaries and Bays (Total Square Miles =15,989)		
Total Square Miles Assessed: 0.8	0	100



[a] A summary of use support data is presented because the Northern Mariana Islands did not report individual use support in their 2000 305(b) report.

Note: Figures may not add to 100% due to rounding.

Ohio

Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Ohio 2000 305(b) report, contact:

Ed Rankin
Division of Surface Water
Ohio Environmental Protection Agency
1685 Westbelt Drive
Columbus, OH 43228
(614) 728-3388
e-mail: Ed.Rankin@epa.state.oh.us

A copy of the report may be downloaded from: **http://www.epa.state.oh.us/dsw/document_index/305b.html**

Surface Water Quality

Aquatic life and swimming are supported in half of the river and stream miles assessed in Ohio. Fish consumption is impaired due to mercury and PCB contamination in some rivers. The Ohio Environmental Protection Agency (EPA) would like to increase the percentage of river and stream miles that support aquatic life to 80% by 2010. The majority of lake acres support aquatic life (61%), swimming (67%), and fish consumption (88%). Of the assessed miles of Lake Erie shoreline, 84% support aquatic life and 100% swimming.

Ohio advises sensitive subpopulations such as children and pregnant women to restrict consumption of all fish caught in the state due to widespread mercury contamination. Individual waterbodies have fish consumption advisories due to lead, mercury, and PCB contamination.

The most common contaminants impairing Ohio's waterways are sediments, nutrients, pathogens, and toxic chemicals. Most surface waters are impacted by nonpoint source pollution that originates from combined storm and sewer systems, runoff, habitat modifications, and flow alterations. Although most point sources have been reduced through the NPDES program, permit violations from municipal and industrial facilities and small treatment plants also contribute to contamination. An increasing concern in some areas is the potential impact of exotic species such as the zebra mussel on the ecosystem.

Ground Water Quality

About 4.5 million Ohio residents depend on wells for domestic water. Each of the three main aquifer types (sand and gravel, carbonate, and sandstone) exhibits distinct water quality. Waste disposal, underground storage tank leaks, and spills are the dominant sources of ground water contamination in Ohio.

Programs To Restore Water Quality

To fully restore water quality, the Ohio EPA advocates an ecosystem approach that addresses degradation on shore as well as in the water. Ohio's programs aim to correct impacts, such as channel modification and the destruction of shoreline vegetation, that are not related to chemical contamination. The Nonpoint Source Program emphasizes voluntary actions to reduce pollution, especially through land management practices.

The Watershed Resource Restoration Sponsor Program utilizes loan interest to fund stream restoration projects at no cost to the loan applicant. The most important criterion for these projects is that they provide complete protection or restoration of aquatic habitat that is sufficient to meet the designated uses.

Programs To Assess Water Quality

In 1990, Ohio adopted a 5-year approach to watershed-based monitoring and NPDES permit issuance. However, given the current funding situation, some watersheds will only be monitored every 10 to 15 years. Ohio utilizes volunteers for qualitative sampling to screen potential problem areas.

Ohio pioneered the use of an ecosystem approach that incorporates physical, chemical, and biological factors into surface water assessments. Each year, the Ohio EPA conducts surveys in six to ten study areas with a total of 350 to 400 sampling sites.

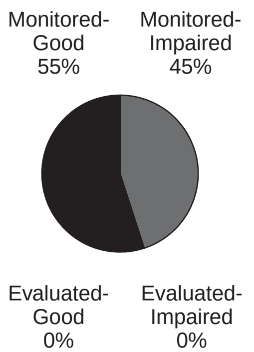
Lakes are assessed with a Lake Condition Index that includes 14 parameters. A lake is considered assessed if at least seven parameters have values. The Index of Biotic Integrity is used to assess the overall health of fish communities in rivers. Lake Erie is assessed using biological criteria involving fish and macroinvertebrate communities. Ohio is developing biological assessment methods and criteria for depressional and riparian wetlands.

The Ohio EPA is also responsible for monitoring ground water sources and assessing the extent of contamination. A database on untreated ground water has been collected through the Ambient Ground Water Monitoring Network. Information on treated ground water is compiled in the public water system compliance database.

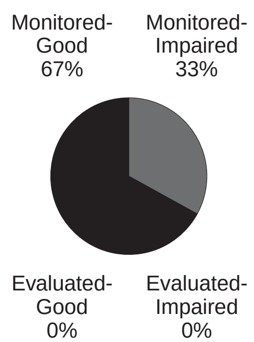
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

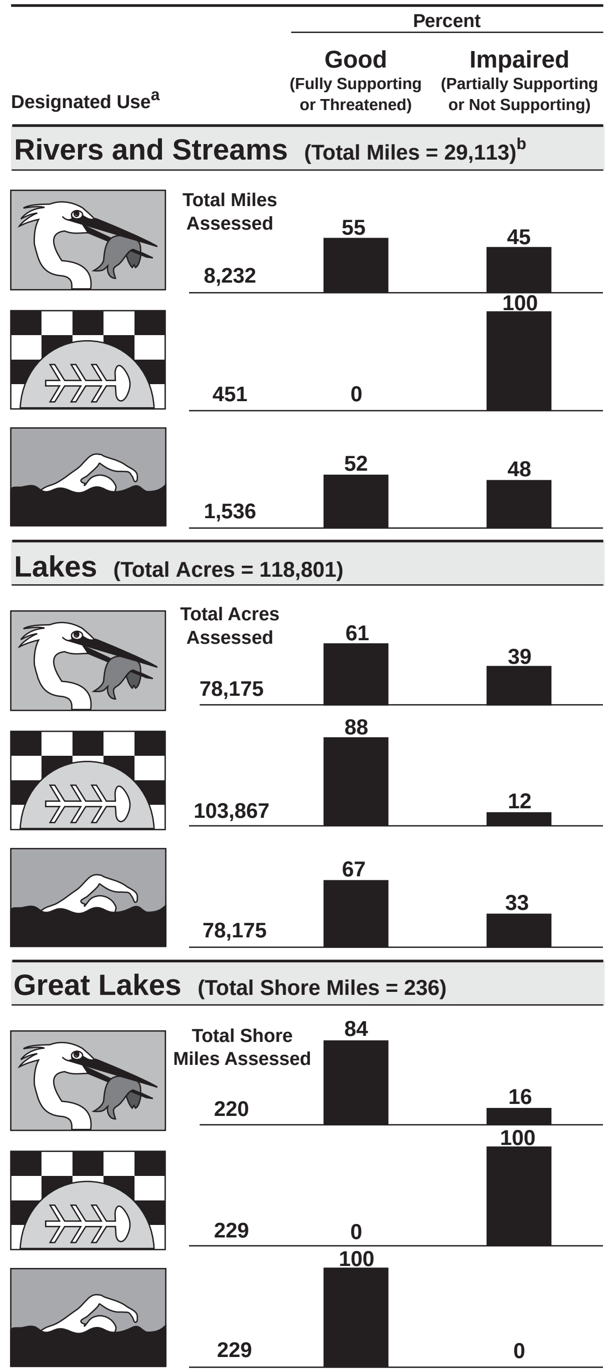
Rivers



Lakes



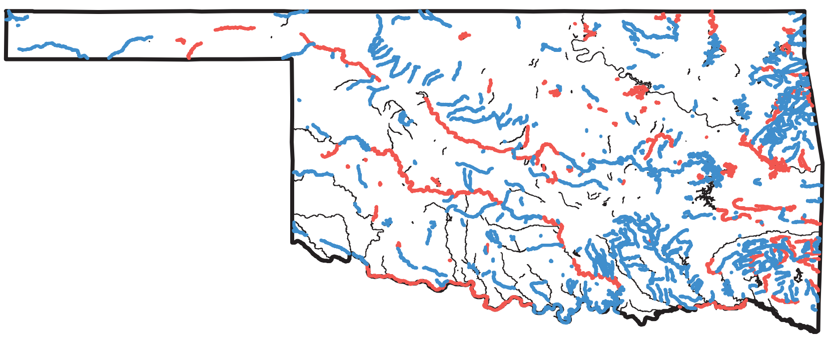
Individual Use Support in Ohio



[a] A subset of Ohio's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Oklahoma



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Oklahoma 2000 305(b) report, contact:

David Gann
Water Quality Division
Oklahoma Department of
Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677
(405) 702-8100
e-mail: David.Gann@deq.state.ok.us

A copy of the report may be found on the Internet at: **http://www.deq.state.ok.us/wqdnew/305b_303d/**

Surface Water Quality

Fifty-three percent of the assessed river and stream miles have good water quality that support aquatic life. Over 60% of the assessed miles support swimming. Fifty-nine percent of the assessed lake acres support aquatic life and 63% support swimming. The most widespread pollutants in Oklahoma's lakes, rivers, and streams are siltation, nutrients, suspended solids, and pesticides. Oklahoma rates agriculture (including animal feeding operations), hydrologic modification, resource extraction, and urban runoff as leading sources of pollution in both rivers and lakes. Several lakes are impacted by acid mine drainage, including the Gaines Creek arm of Lake Eufaula and the Lake O' the Cherokees. Oklahoma did not report on the condition of wetlands.

Ground Water Quality

Ambient ground water monitoring has detected elevated nitrate concentrations in some monitoring wells, isolated cases of hydrocarbon contamination, elevated selenium and fluoride concentrations (partially due to natural sources), chloride contamination from discontinued oil field activities, metals from past mining operations, and gross alpha activity. Industrial solvents contaminate a few sites around Tinker Air Force Base. The state rates agricultural activities, injection wells, septic tanks, surface impoundments, and underground storage tanks among the highest priority sources of ground water contamination.

Programs To Restore Water Quality

The Oklahoma Department of Environmental Quality (DEQ) coordinates development of total maximum daily loads (TMDLs). About 15 projects addressing a range of impairments are in various stages of development. The DEQ administers point source pollution control programs except for agriculture and oil production sources. The DEQ issues NPDES permits, is responsible for monitoring dischargers to ensure compliance, and reviews facilities' self-monitoring data. The DEQ also administers the stormwater permitting program.

Oklahoma's nonpoint source control program is a cooperative effort of state, federal, and local agencies, with the Conservation Commission serving as the lead technical agency. The program sponsors best management practices (BMPs), water quality monitoring before and after BMP implementation, technical assistance, education, and development of comprehensive watershed management plans.

Programs To Assess Water Quality

The Oklahoma Water Resources Board (OWRB) collects data through the Beneficial Use Monitoring Program (BUMP) to document impairments and sources, detect water quality trends, and provide information for Oklahoma's water quality standards. BUMP includes both fixed and rotating stations. Working with other agencies, the OWRB has developed Use Support Assessment Protocols to make impairment determinations consistently. The OWRB also administers the Clean Lakes Program, which comprises lake assessment, citizen monitoring, and diagnostic/feasibility studies.

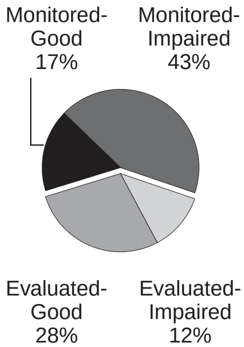
The U.S. Geological Survey (USGS) monitoring program gathers water quality, sediment, flow rate, and stream gauging data. The USGS has approximately 32 monitoring stations in the state.

The DEQ monitors toxic contaminants through the Toxic Monitoring in Reservoirs Program. The program began in 1980 and has monitored over 50 lakes in the state. Oklahoma also participates in the EPA Region 6 Ambient Biotoxicity Network that began sampling in 1990. The DEQ conducts project-specific monitoring and assessment related to TMDL development and impairment verification. The DEQ has developed a centralized, online database for water quality information. The map-based system may be accessed at: *http://www.deq.state.ok.us/wqdnew/305b_303d/2000_305b_report_final.pdf/*.

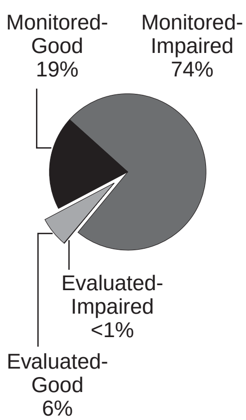
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

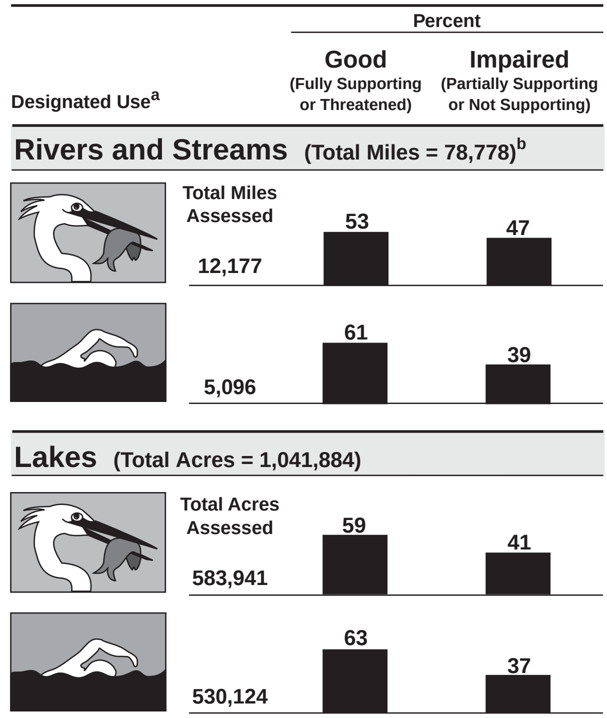
Rivers



Lakes



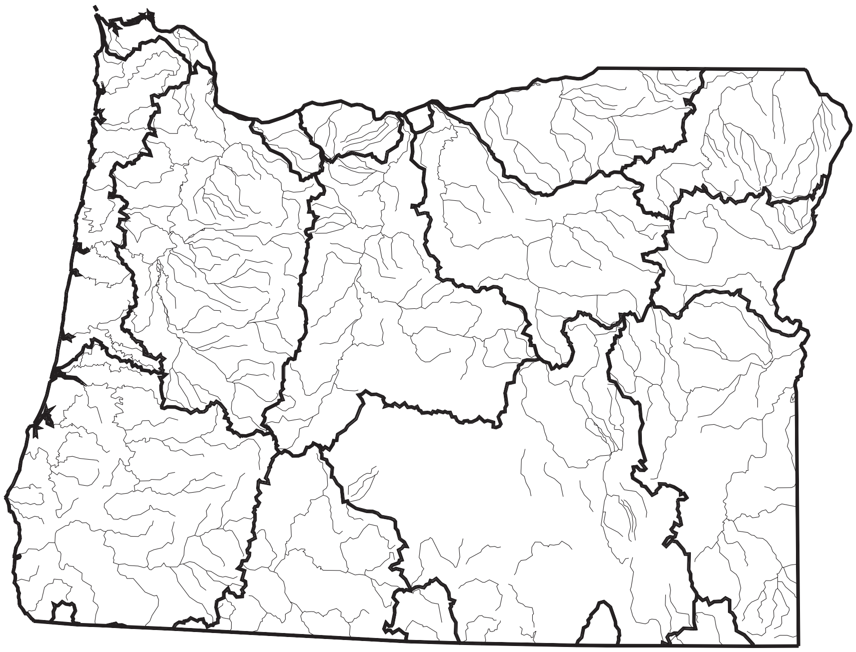
Individual Use Support in Oklahoma



[a] A subset of Oklahoma's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Oregon



For a copy of the Oregon 2000 305(b) report, contact:

Dick Pedersen
Oregon Department of
Environmental Quality
Water Quality Division
811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-6345
email: pedersen.dick@deq.state.or.us

The report is also available on the Internet at: **http://www.deq.state.or.us/wq/305bRpt/305bReport00a.pdf**

Surface Water Quality

Seventy-four percent of Oregon's surveyed rivers have good water quality that fully support aquatic life use. The most commonly reported problems in the state's rivers and streams include thermal modifications, pathogens, and habitat alterations. Suspected sources include agriculture, silviculture, and habitat and hydrologic modifications.

In lakes, 51% of the surveyed acres fully support aquatic life uses. Common problems in Oregon's lakes include nutrients, algae, acidity, organic enrichment, and metals. Agriculture, natural sources, and urban runoff/storm sewers are the most commonly reported sources of lake impairment.

Six percent of Oregon's surveyed estuarine waters fully support shellfishing use due to periodic violations of bacteria standards. Suspected sources of bacteria include municipal and industrial point sources, agriculture, collection system failures, and urban runoff/storm sewers.

In Oregon, 13,687 river miles and 30 lakes do not meet state water quality standards and are listed on the Water Quality Limited Waterbodies 303(d) list. Although the list is significantly larger than in the past, the increase does not signify that Oregon's waters are more degraded than a few years ago. The increase simply reflects the amount of new information considered in developing the list.

Oregon did not report on the condition of wetlands.

Ground Water Quality

Oregon has two ground water management areas and is studying ground water quality in several other parts of the state. Contaminants of concern include nitrate, pesticides, volatile organic compounds (VOCs) and bacteria. Suspected sources of contamination include agricultural activities, above- and belowground storage tanks, landfills, septic systems, hazardous waste sites, spills, and urban runoff.

Programs To Restore Water Quality

The Department of Environmental Quality (DEQ) is the state agency responsible for protecting Oregon's public water for a wide range of uses. The DEQ sets water quality standards to protect "beneficial uses" such as recreation, fish habitat, drinking water supplies, and aesthetics. The DEQ's top priorities have been and will continue to be developing Total Maximum Daily Loads for those waterbodies that appear on the state's 303(d) list and to participate in the Oregon plan to restore salmon populations.

The DEQ regulates approximately 630 municipal wastewater sewage treatment plants and 211 industrial dischargers through individual permits that set limits on pollutants discharged. In addition, approximately 2,880 facilities have general permits that limit discharges and 1,480 facilities are covered by stormwater general permits. The DEQ also permits and inspects septic system installations.

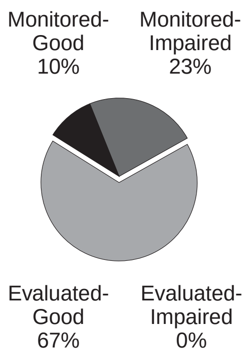
Programs To Assess Water Quality

The DEQ monitors water quality with regular sampling of more than 50 rivers and streams in the 18 designated river basins in Oregon. This sampling produces conventional pollutant data for determining trends, standards compliance, and problem identification. Biological monitoring is also conducted under one of three sampling strategies: probabilistic sampling for extrapolation of conditions of study units (e.g., ecoregion), best management practices effectiveness monitoring, and reference site monitoring. Other monitoring includes studies of mixing zones at effluent discharges, volunteer monitoring, and sampling of shellfish areas for bacteria.

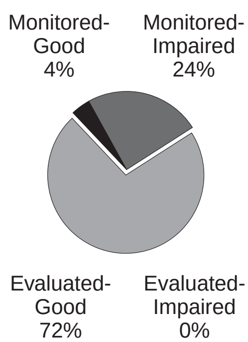
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

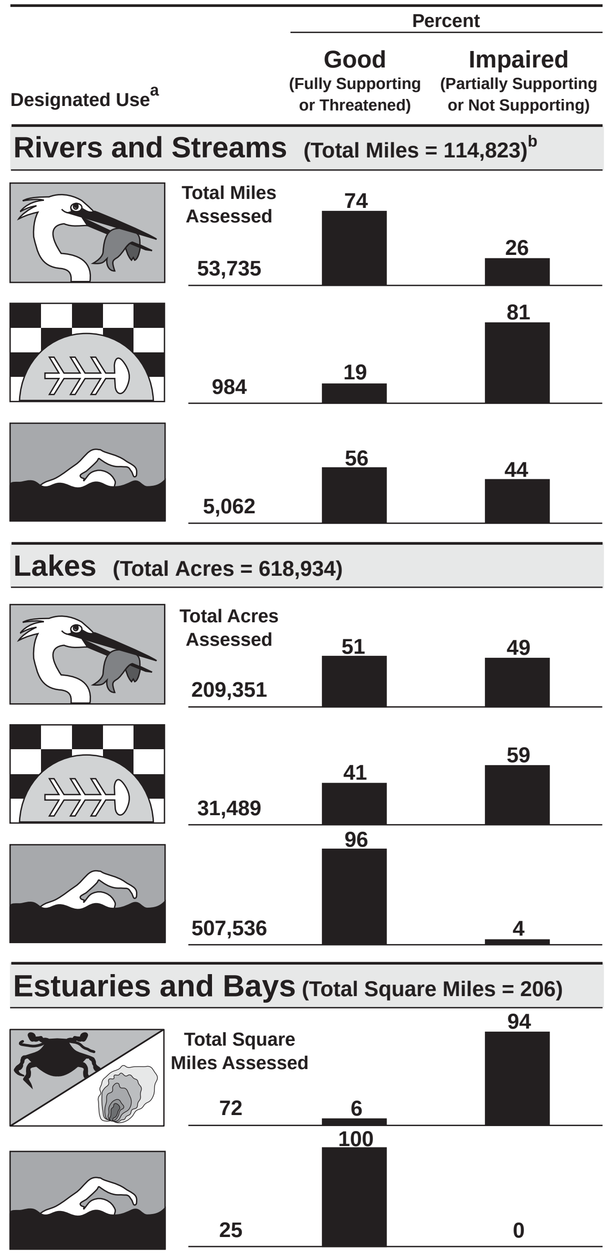
Rivers



Lakes



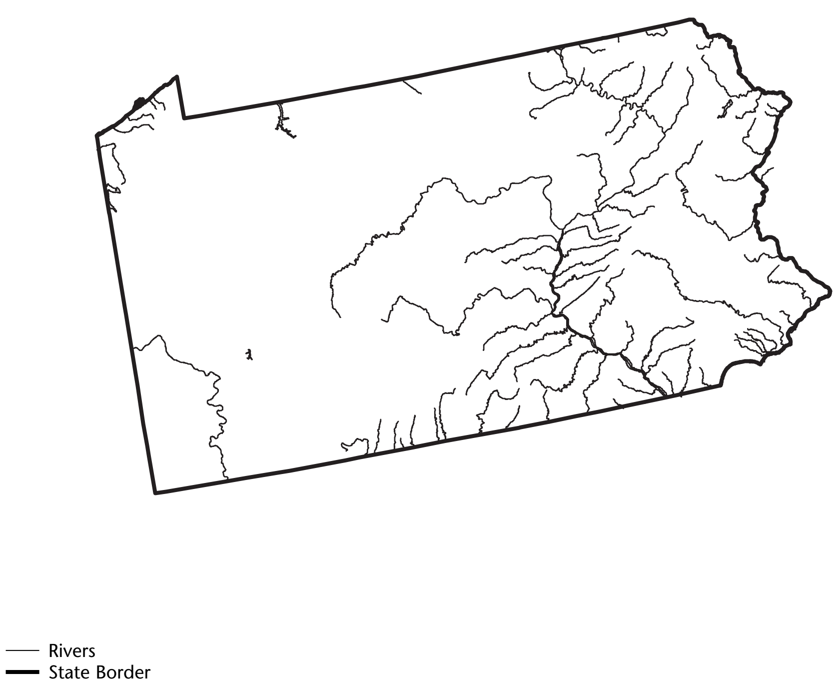
Individual Use Support in Oregon



[a] A subset of Oregon's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Pennsylvania



For a copy of the Pennsylvania 2000 305(b) report, contact:

Robert Frey
Pennsylvania Department of Environmental Protection
Bureau of Water Supply and Wastewater Management
Division of Water Quality Assessment and Standards
P.O. Box 8467
Harrisburg, PA 17105-8467
(717) 787-9637
e-mail: rofrey@state.pa.us

The report is also available on the Internet at: **http://www.dep.state.pa.us/dep/deputate/watermgt/wc/subjects/wqstandards.htm**

Surface Water Quality

Approximately 80% of the surveyed 35,496 river and stream miles in Pennsylvania have good water quality that support aquatic life uses. The most widespread pollutants impairing the remaining miles are siltation, which impacts 3,016 miles, and metals, which affect 2,536 miles. Other causes of impairment include nutrients and pH. Agriculture is the most significant source of surface water quality degradation, impacting 2,736 river and stream miles. Drainage from abandoned mining sites pollutes at least 2,711 miles of streams. Other sources of degradation include urban runoff/storm sewers and habitat modification. Of the lake acres assessed, 38% support aquatic life use. Organic enrichment, nutrients, thermal modifications, and suspended solids are commonly cited for impacting lakes. While agriculture is a large source of contamination, a significant portion of the contaminant sources remains unknown. Pennsylvania has issued 33 fish consumption advisories. Most are due to elevated concentrations of PCBs and chlordane in fish tissue, but two advisories have been issued for mirex and one for mercury.

Ground Water Quality

Pennsylvania has evaluated 10% of its ground water using data from its ambient ground water monitoring program. For 2000, Pennsylvania augmented ambient monitoring data from 49 ground water basins with information that was collected using the 20 major sub-basins of the state as reporting units. Major sources of ground water contamination include mining and mine drainage, aboveground and underground storage tanks, pipelines and sewer lines, surface impoundments, spills, landfills, hazardous waste sites, industrial facilities, and pesticide application. Petroleum and petroleum byproducts are the most common pollutants in ground water. Coal mining and oil and gas production have also elevated concentrations of several elements (e.g., chlorides and metals) in some regions. Pennsylvania continues to develop its Comprehensive State Ground Water Protection Program (CSGWPP) that provides a mechanism for Pennsylvania and EPA to collaboratively develop a comprehensive statewide approach to ground water protection.

Programs To Restore Water Quality

A new program in Pennsylvania called Growing Greener is the largest single environmental investment in its history. Growing Greener directs nearly $650 million over 5 years to the new Watershed Protection and

Environmental Stewardship Fund to protect watersheds, preserve open farmland, invest in parks and outdoor recreation, reclaim abandoned mines and wells, and upgrade water and sewer infrastructure. This program will provide grants to watershed groups, local governments, and others for the protection of Pennsylvania's water resources, including management and reduction of nonpoint pollution sources. The impact of acid mine drainage from abandoned mines is a widespread concern in Pennsylvania. The U.S. Office of Surface Mining and EPA Region 3 created the Appalachian Clean Streams Initiative to address water quality problems associated with mine drainage in Maryland, Ohio, Pennsylvania, and West Virginia. It is hoped that this initiative will involve private organizations and local citizens as well as government agencies in implementing solutions.

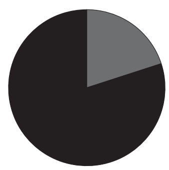
Programs To Assess Water Quality

The Water Quality Network monitors chemical and physical parameters almost monthly and biological parameters annually at fixed stations on rivers, streams, and Lake Erie. In addition, at least 3,000 sampling stations have been monitored by more than 140 volunteer citizen groups to help collect water quality data and to foster community stewardship of local water resources. Pennsylvania also conducts ambient ground water monitoring at 537 monitoring sites. A fund has been established, in cooperation with the National Fish and Wildlife Foundation, to assist permit applicants with the wetlands replacement requirements in commonwealth regulations. In addition, a Wetlands Net Gain Strategy has been developed.

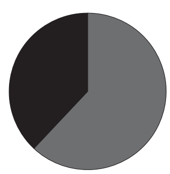
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



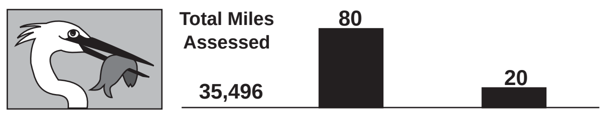
Lakes



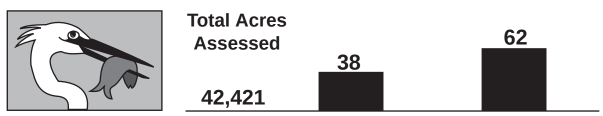
Individual Use Support in Pennsylvania

Designated Use[a] — Percent: Good (Fully Supporting or Threatened); Impaired (Partially Supporting or Not Supporting)

Rivers and Streams (Total Miles = 83,260)[b]



Lakes (Total Acres = 161,445)

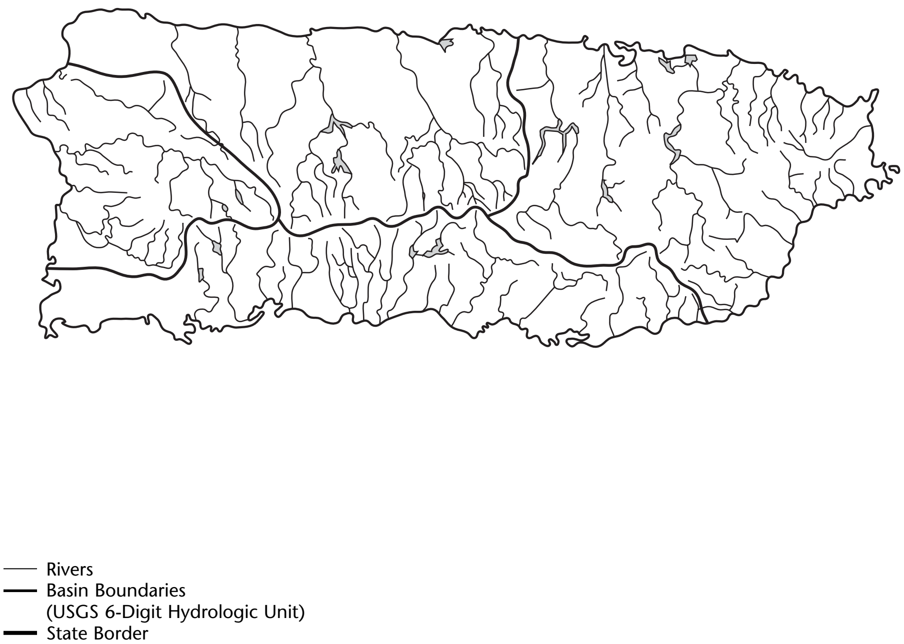


[a] A subset of Pennsylvania's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Puerto Rico



For a copy of the Puerto Rico 2000 305(b) report, contact:

Rubén González
Puerto Rico Environmental Quality Board
Water Quality Area
Box 11488
Santurce, PR 00910
(787) 751-5548

Surface Water Quality

Most of the rivers and streams in Puerto Rico are impaired for aquatic life (68%) and swimming (77%). The primary contaminants responsible for impairment include nonpriority organics, metals, and pathogens. They originate from onsite land disposal, agricultural activities, and sanitary collection system failures.

Lake water quality in Puerto Rico is generally good, with most assessed acres supporting aquatic life (74%) and swimming (79%). Low dissolved oxygen and high metal concentrations are responsible for most of the impaired lake acres.

Although Puerto Rico reports on the quality of their estuaries, they report in linear miles, which prevents comparison with other state estimates. Of 175 estuarine miles assessed for this reporting cycle, 23% support aquatic life and 28% support swimming. Pathogens, nonpriority organics, and metals are cited as causes of impairment. This does not include any monitoring data from the San Juan Bay Estuary System.

Eighty-six percent of coastal areas assessed support aquatic life and 88% support swimming. Urban runoff and sanitary sewer overflows are the primary sources of pathogens contaminating coastal waters.

Puerto Rico did not report on the condition of wetlands.

Ground Water Quality

Ground water supplies 16% of the population with drinking water. It is also used for various industrial and agricultural applications. During this reporting cycle, 86 wells were closed for various reasons. Volatile organic compounds and nitrates are frequently detected at concentrations that exceed national maximum contaminant levels. Bacteria, pesticides, halogenated solvents, and petroleum compounds are also common contaminants. The major sources of ground water contamination include agricultural activities, septic tanks, industrial facilities, storage tanks, and landfills.

Programs To Restore Water Quality

The Puerto Rico Environmental Quality Board (PREQB) administers a Nonpoint Source Control Program. In the past 2 years, regulations were passed to reduce sedimentation and confine animal wastes. A pilot project is operating in the Lake Plata watershed to reduce nutrient loadings to the lake. A compost processing plant converts poultry fecal waste into organic fertilizer that will be marketed to farmers.

The Point Source Control Program focuses activities on administering NPDES permits, controlling underground injection wells and storage tanks, and monitoring ground and surface water quality.

Programs To Assess Water Quality

For this reporting cycle, the PREQB included monitoring data from its fixed-station monitoring network. The PREQB has also developed a rotating watershed monitoring plan to prioritize Puerto Rico's 101 watersheds. The 2002 305(b) report will include a combination of data from the existing fixed monitoring network and the new rotating watershed approach. The PREQB established a Permanent Ground Water Monitoring Network to collect samples from 100 drinking water wells.

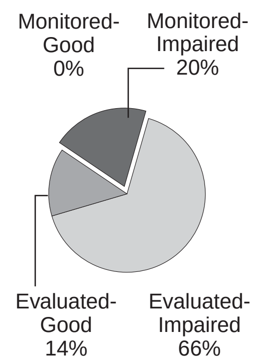
Eighty-eight coastal stations are sampled for fecal coliform and enterococcus bacteria. In 1999, the PREQB implemented volunteer monitoring at six of the stations.

To date, most monitoring has been limited to physical and chemical parameters. However, in 1996, the PREQB and EPA conducted a pilot project to determine if a Rapid Bioassessment Protocol could be implemented. Unfortunately, the study results indicated that no relationship was found between macroinvertebrates and chemical values or habitat assessment. Further studies will be conducted to develop biological water quality indicators and new bacteria and nutrient criteria.

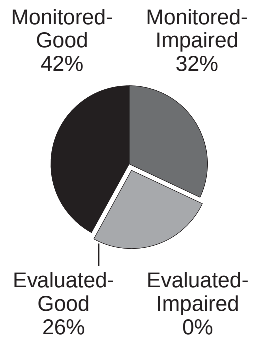
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

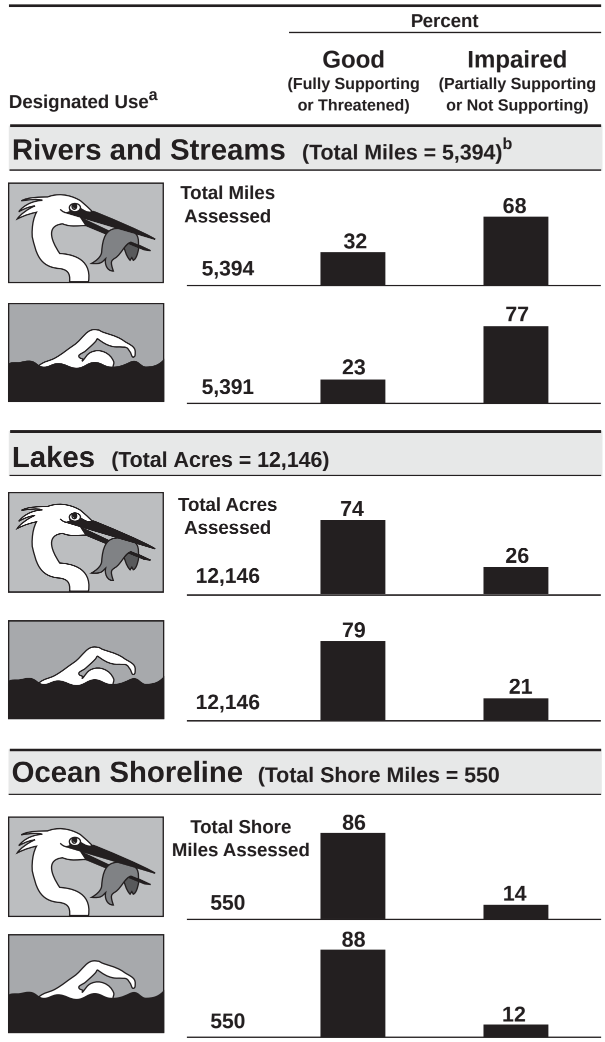
Rivers



Lakes



Individual Use Support in Puerto Rico

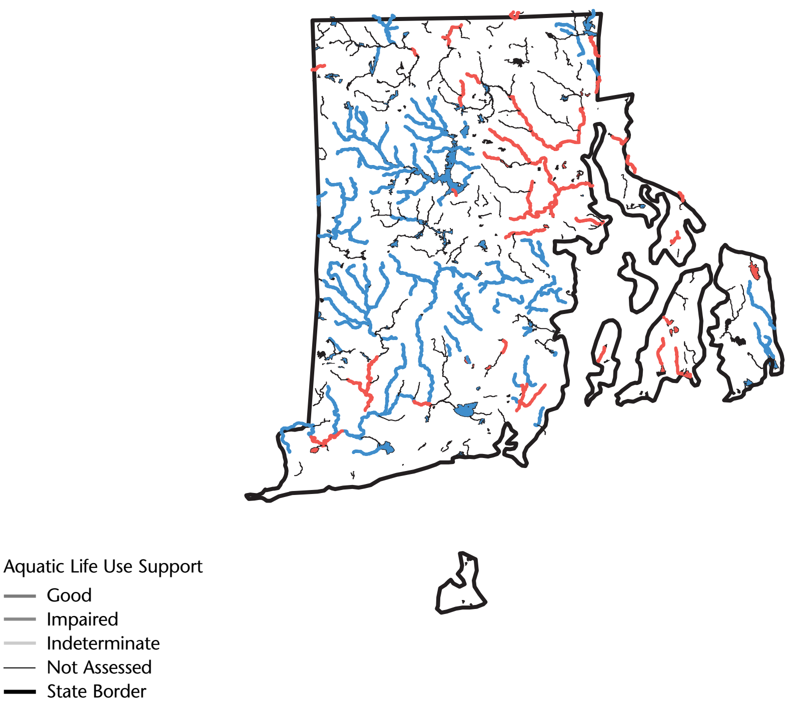


[a] A subset of Puerto Rico's designated uses appear in this figure. Refer to the commonwealth's 305(b) report for a full description of the commonwealth's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Rhode Island



For a copy of the Rhode Island 2000 305(b) report, contact:

Connie Carey
Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908
(401) 222-3961
e-mail: ccarey@dem.state.ri.us

A copy of the report may be downloaded from: **http://www.state.ri.us/dem/pubs/305b/index.htm**

Surface Water Quality

The majority of assessed river and stream miles support aquatic life (73%) and swimming (76%). Biodiversity impacts, pathogens, metals, and nutrients cause impairment in some rivers. Potential sources of these contaminants include urban runoff, land disposal, and municipal point sources. Of the lake acres assessed, 83% support aquatic life and 95% support swimming. High levels of bacteria and nutrients and low levels of dissolved oxygen impair lakes. Major sources of these contaminants are nonpoint sources such as urban and stormwater runoff. No assessed lakes or rivers support fish consumption. This is due to fish consumption advisories that result from dioxin, PCB, and mercury contamination.

Approximately 73% of the assessed estuarine waters support aquatic life and 93% support swimming. Seventy-five percent of the assessed estuarine waters fully support shellfish consumption. The impacts on estuaries are due to bacteria, nutrients, and low dissolved oxygen from combined sewer overflows, urban runoff, and municipal discharges. All 79 miles of ocean shoreline were found to support aquatic life, swimming, and shellfish consumption. Rhode Island did not report on the condition of its wetlands.

Ground Water Quality

About 26% of Rhode Island's population uses ground water as a source of drinking water. Although ground water quality is generally good to excellent, over 100 contaminants have been detected in localized areas. The most common pollutants are petroleum products, organic solvents, and nitrates. Although volatile organic compounds were detected in 15-30% of the wells tested, only two had concentrations above a drinking water standard. Significant pollution sources include leaking underground storage tanks, hazardous and industrial waste disposal sites, illegal or improper waste disposal, chemical and oil spills, landfills, septic systems, road salt storage and application, and fertilizer application.

Programs To Restore Water Quality

The Department of Environmental Management (DEM) is developing management plans for the South County and Woonasquatucket River watersheds. The Total Maximum Daily Load (TMDL) program is working on 26 projects across the state. The Rhode Island Pollutant Discharge Elimination System (RIPDES) program is issuing permits with nitrogen removal requirements and is implementing Phase II stormwater regulations. The DEM is promoting the use of nitrogen-reducing septic system technologies and is developing rules to mandate these technologies in areas near sensitive or critical waters.

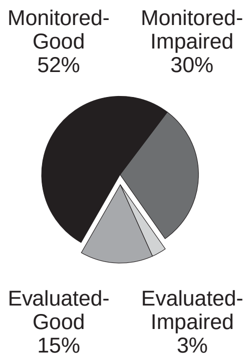
Programs To Assess Water Quality

The surface water monitoring program consists of fixed station sites, intensive surveys, special studies, and volunteer monitoring programs. Water quality data for licensed beaches are collected by the Department of Health. The DEM conducts intensive bacteriological monitoring of shellfishable waters. The DEM has also contracted the USGS to conduct monitoring at seven river stations in Rhode Island. Biological monitoring is conducted at six river stations in close proximity to the USGS fixed river stations. The EPA Rapid Bioassessment Protocols are followed for macroinvertebrate sampling at 45 stream sites around the state. The University of Rhode Island (URI) monitors 25 of these 45 stations for various conventional and toxic pollutants. Baseline monitoring of over 60 lakes is accomplished by volunteers coordinated through URI. With the assistance of EPA Region 1, the DEM has recently initiated a probability-based monitoring program by randomly selecting 50 sites across the state where habitat, biological, and chemical data are collected. Surface water monitoring activities are also conducted by many citizen monitoring groups who supply the RIDEM with supplemental water quality data for numerous rivers, lakes, ponds, and estuarine waters of the state.

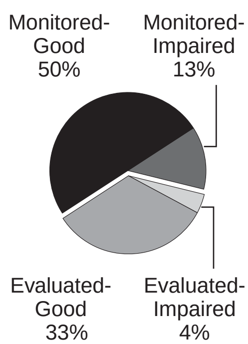
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

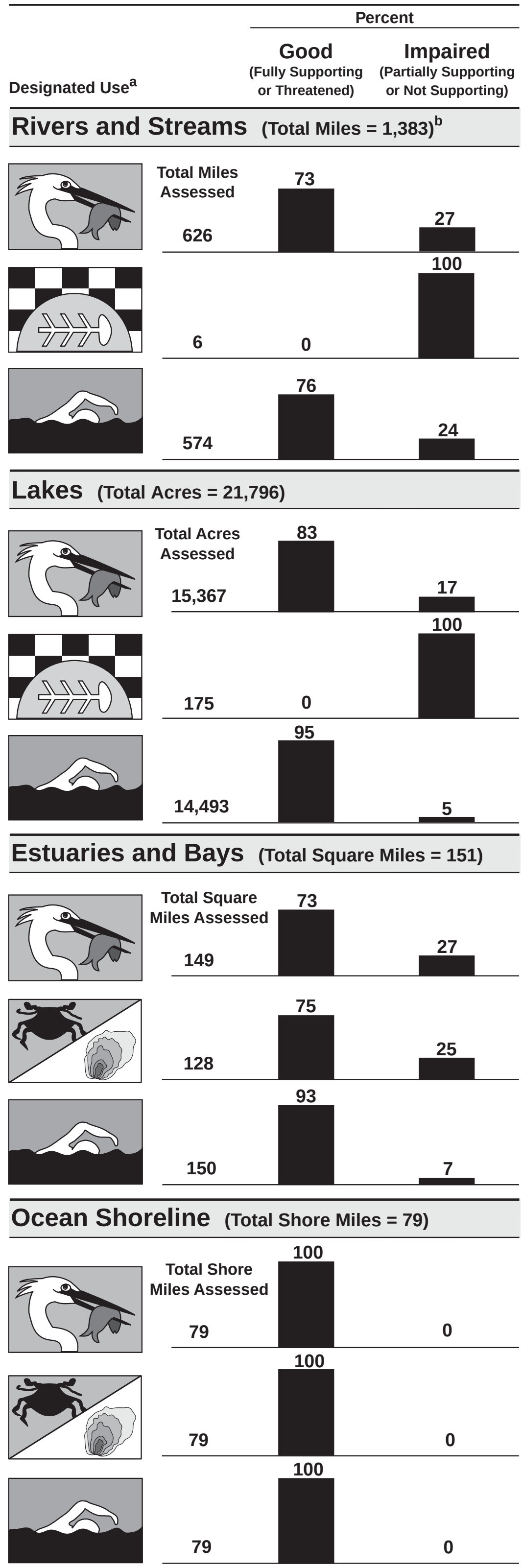


Lakes



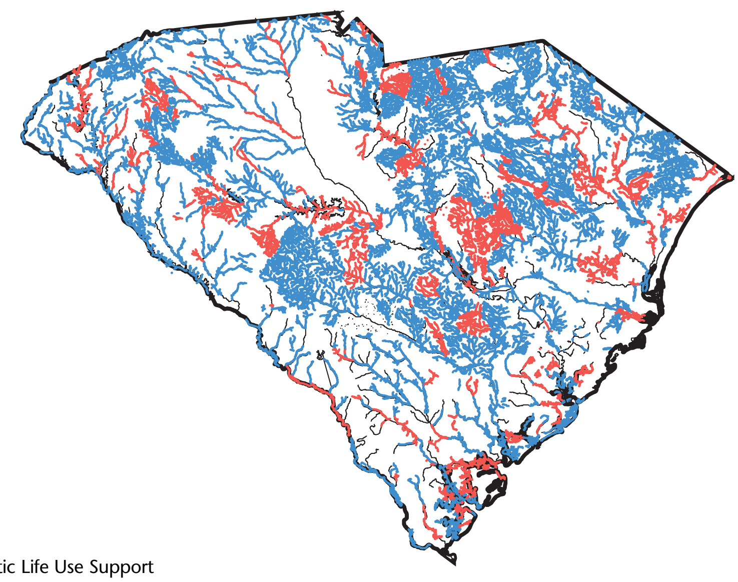
[a] A subset of Rhode Island's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Rhode Island



Note: Figures may not add to 100% due to rounding.

South Carolina



For a copy of the South Carolina 2000 305(b) report, contact:

Gina Kirkland
Bureau of Water
South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, SC 29201
(803) 898-4250
e-mail: kirklagl@columb32.dhec.state.sc.us

A copy of the report may be downloaded from: **http://www.scdhec.net/eqc/admin/html/eqcpubs.html#Water**

Surface Water Quality

The majority of assessed river and stream miles support aquatic life (77%) and swimming (52%). The principal problems in rivers are oxygen-depleting substances and elevated levels of fecal coliform bacteria and metals. These contaminants enter the waterways from urban runoff, agriculture, and municipal discharges.

Of the assessed lake acres, 67% support aquatic life and 99% support swimming. Most of the impaired acres result from metal, nutrient, and fecal coliform bacteria contamination. Industrial point sources and contaminated sediments are significant sources of pollution, although an overwhelming majority of the sources remain unidentified.

There are 55 fish consumption advisories in effect in South Carolina, and 32 are due to mercury contamination, including an advisory for king mackerel in all coastal waters.

Most of the assessed bays and estuaries support aquatic life (66%) and swimming (92%). Low dissolved oxygen concentrations caused by unknown sources and urban runoff are responsible for most of the impaired waterways. About 30% of the estuarine and river areas designated for shellfish harvesting are restricted or prohibited.

South Carolina did not report on the condition of its wetlands.

Ground Water Quality

Approximately 40% of the state's population utilizes ground water for drinking water. Overall ground water quality remains good. When contamination does occur, it typically consists of petroleum compounds, halogenated solvents, and metals that leak into aquifers from underground storage tanks. Other sources of pollution include spills, landfills, hazardous waste sites, and land application of waste. The state's ambient monitoring program samples each aquifer to determine its baseline quality. The Drinking Water Program is responsible for determining if wells have been influenced by surface water. Thus far, this type of contamination has not been observed.

Programs To Restore Water Quality

South Carolina's Nonpoint Source Management Program was updated in 1999. The primary focus of the program is reduction of nonpoint source pollution through regulatory and voluntary actions. The South Carolina Department of Health and Environmental Control (SCDHEC) issues state permits for facilities that discharge directly to land through spray irrigation. They also regulate stormwater discharges associated with industrial activities. The SCDHEC plans to revise its NPDES program so that permit renewals are completed every 5 years on a watershed basis.

Programs To Assess Water Quality

The SCDHEC employs a strategy to integrate monitoring, water quality modeling, planning, permitting, and other management activities by river drainage basins. The SCDHEC aggregated 280 minor watersheds into five monitoring and permitting areas. One area is targeted each year for development or revision of its management plan and monthly water quality monitoring to supplement the statewide network.

A statewide ambient monitoring network is maintained every year. Primary monitoring stations are located in high-use water areas and are sampled monthly every year. Secondary monitoring stations are located near point source discharges and are sampled monthly from May to October. Chemical and physical parameters are measured at each type of station.

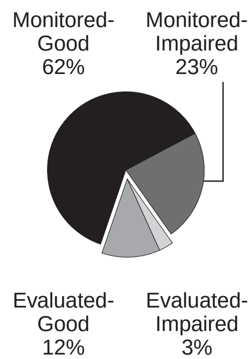
The Clean Lakes Program is aimed at defining the extent and source of lake pollution, implementing control strategies, and restoring lakes to their beneficial uses. Lake restoration techniques used include application of aquatic plant herbicides, biological control, point source control, and hypolimnetic aeration.

There is no legislation in South Carolina that provides specifically for a program to monitor wetlands. However, the SCDHEC was able to develop a Classification and Standards System for Wetlands with funding from the EPA.

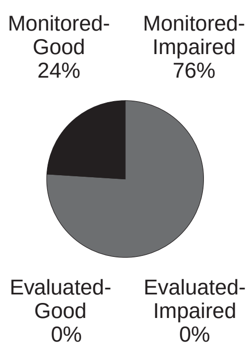
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

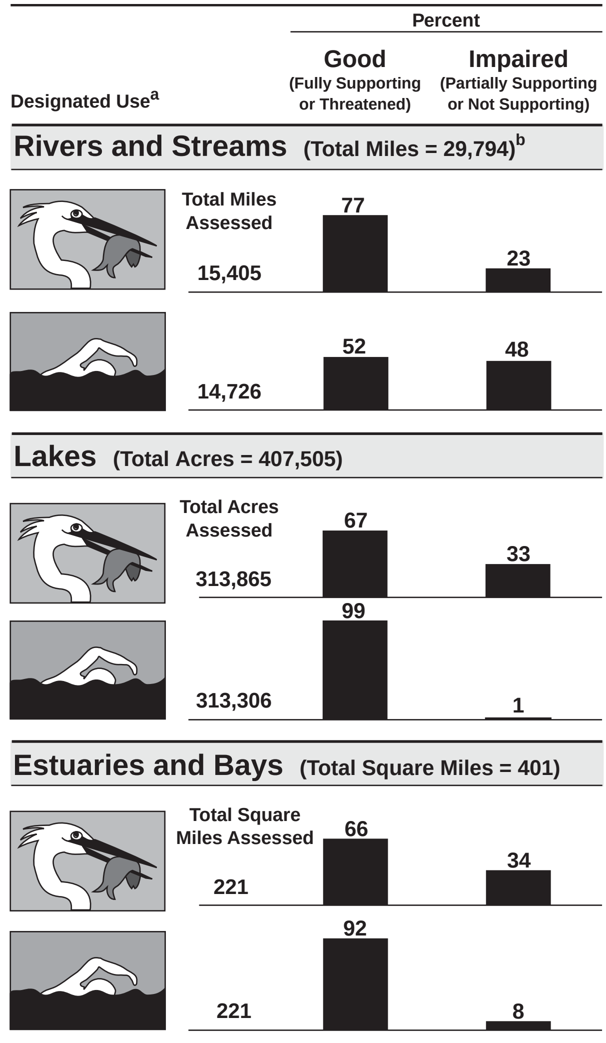
Rivers



Lakes



Individual Use Support in South Carolina

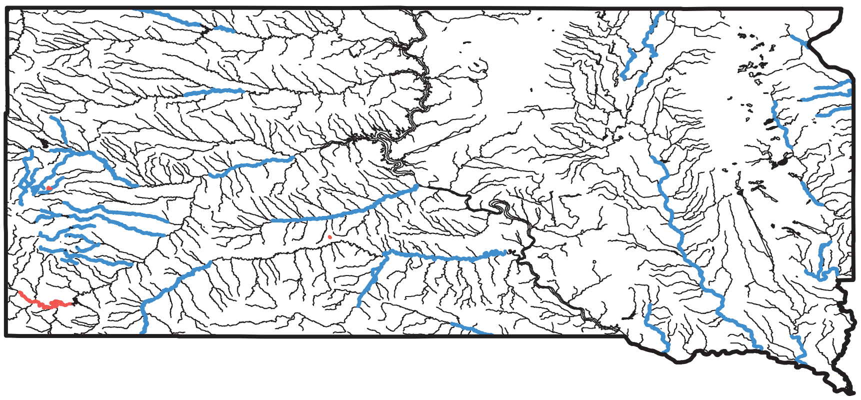


[a] A subset of South Carolina's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

South Dakota



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the South Dakota 2000 305(b) report, contact:

Andrew Repsys
South Dakota Department of Environment and Natural Resources
Division of Financial and Technical Assistance
Water Resources Assistance Program
523 East Capitol, Joe Foss Building
Pierre, SD 57501-3181
(605) 773-4046
e-mail: Andrew.Repsys@state.sd.us

The report is also available on the Internet at: **http://www.state.sd.us/denr/Documents/SD_2000_305b.pdf**

Surface Water Quality

Forty-eight percent of South Dakota's assessed river and stream miles fully support aquatic life uses and 33% of the assessed miles also support swimming. The most common pollutants impacting South Dakota rivers and streams are suspended solids due to water erosion from croplands, gully erosion from rangelands, and natural forms of erosion. The second most important cause of stream impairment is fecal coliform bacteria. High fecal coliform concentrations are primarily found in the lower reaches of the Cheyenne and Big Sioux Rivers.

Eighty percent of South Dakota's assessed lake acres do not fully support aquatic life uses. All of the assessed lake acres fully support swimming. The most common pollutants are nutrients and siltation from agricultural runoff and other nonpoint sources that produce dense algal blooms in many of the state's lakes.

South Dakota did not report on the condition of wetlands.

Ground Water Quality

More than three-quarters of South Dakota's population uses ground water for domestic needs. General ground water quality is highly variable. Deeper aquifers generally have poorer water quality than shallow aquifers (due to higher concentrations of dissolved salts) but are also generally less susceptible to pollution. The most significant ground water quality problems in the state are caused by nitrate and petroleum contamination through accidental releases, poor management practices, improper locating of pollutant-producing facilities, and contamination of shallow wells due to poor construction or location adjacent to pollutant sources.

Programs To Restore Water Quality

South Dakota regulates point sources through the National Pollutant Discharge Elimination System. The state also uses the Clean Water State Revolving Fund to address nonpoint source (NPS) pollution, wastewater, and stormwater. As of April 1, 2000, the program had made 106 loans totaling $93.4 million to 56 entities. South Dakota relies primarily on voluntary implementation of best management practices to control NPS pollution. However, the state acknowledges that the technical and financial assistance currently available is not sufficient to solve all the NPS problems in the state.

Programs To Assess Water Quality

South Dakota conducts ambient water quality monitoring at established stations, special intensive surveys, intensive fish surveys, total maximum daily load (TMDL) wasteload allocation surveys, and individual NPS projects. Biological sampling is also conducted for special studies and diagnostic/feasibility studies. The U.S. Geological Survey, U.S. Army Corps of Engineers, and U.S. Forest Service also conduct routine monitoring throughout the state. Water samples are analyzed for chemical, physical, biological, and bacteriological parameters.

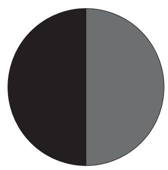
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

Monitored-Good 50%

Monitored-Impaired 50%



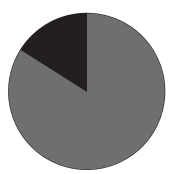
Evaluated-Good 0%

Evaluated-Impaired 0%

Lakes

Monitored-Good 16%

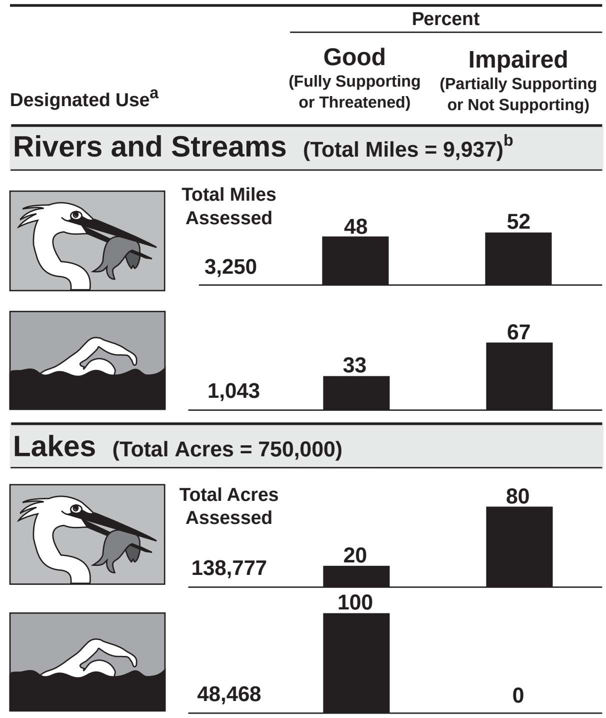
Monitored-Impaired 84%



Evaluated-Good 0%

Evaluated-Impaired 0%

Individual Use Support in South Dakota

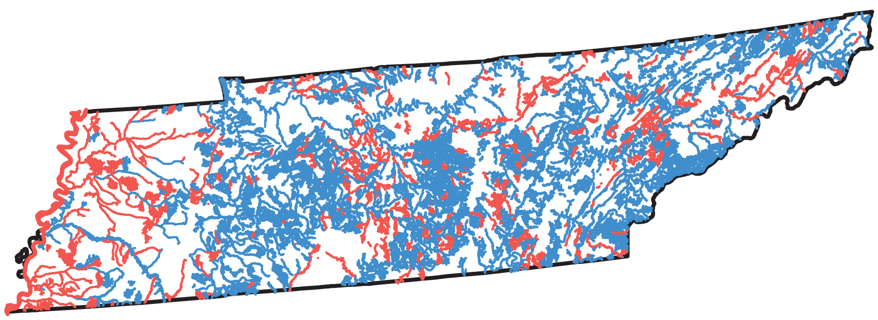


[a] A subset of South Dakota's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Tennessee



For a copy of the Tennessee 2000 305(b) report, contact:

Greg Denton
Tennessee Department of
Environment and Conservation
Division of Water Pollution Control
7th Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1534
(615) 532-0699
e-mail: gdenton@mail.state.tn.us

Surface Water Quality

Of assessed rivers and streams, 72% fully support aquatic life uses. The primary causes of stream impairment are siltation, habitat alteration, nutrients, oxygen-depleting substances, and pathogens. Major sources of pollutants include agriculture, hydrologic modification, and urban runoff. Intense impacts from mining occur in the Cumberland Plateau region, and poor quality water discharged from dams impacts streams in east and middle Tennessee.

Of assessed lakes, 96% fully support aquatic life uses. The most widespread problems in lakes include PCBs, chlordane, dioxins, nutrients, low dissolved oxygen, mercury, and siltation. Major sources of these pollutants are contaminated sediments, agriculture, construction of roads and bridges, land development, and internal nutrient recycling.

Tennessee identified 54,811 acres of impacted wetlands (approximately 7% of existing wetlands). Major threats include siltation from construction and residential development and loss of function due to channelization and levees.

The Department of Environment and Conservation (TDEC) maintains a monitoring program to identify public health threats. Swimming advisories were issued for 48 waterbodies due to elevated bacteria levels. Eight lakes and portions of seven rivers have fishing advisories due to fish tissue contamination. Sediment contamination due to chemicals released in the past remains a problem in some lakes and streams.

Ground Water Quality

Ground water quality is generally good, but pollutants contaminate (or are thought to contaminate) the resource in localized areas. These pollutants include volatile and semivolatile organic chemicals, bacteria, metals, petroleum products, pesticides, and radioactive materials.

Programs To Restore Water Quality

The Division of Water Pollution Control adopted a watershed approach to improving water quality and encouraging coordination with the public and other agencies. Each of the state's 54 watersheds is managed on a 5-year cycle coinciding with the duration of discharge permits. Tennessee is also conducting several total maximum daily load (TMDL) studies to allocate pollutant loading among all the point and nonpoint sources discharging into a stream or its tributaries.

The division is actively identifying strategies to reduce pollutant loadings at streams not currently meeting water quality standards. The TDEC, in partnership agreement with other agencies, has established a goal to implement 100 control strategies on TMDL-listed streams by 2003.

Programs To Assess Water Quality

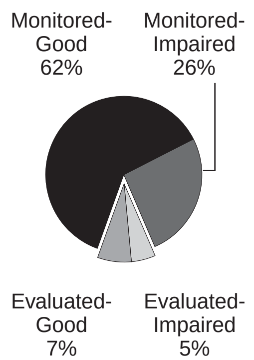
Tennessee's ambient monitoring network consists of 156 active stations sampled quarterly for conventional pollutants, nutrients, and selected metals. The state also performs intensive surveys, often including biological monitoring at streams where they suspect that human activities are degrading stream quality. The state samples toxic chemicals in fish and sediment at sites with suspected toxicity problems.

With assistance from EPA, Tennessee has delineated 25 ecological subregions and is characterizing water quality at 98 carefully selected reference streams to help set clean water goals on a regional, rather than statewide, basis.

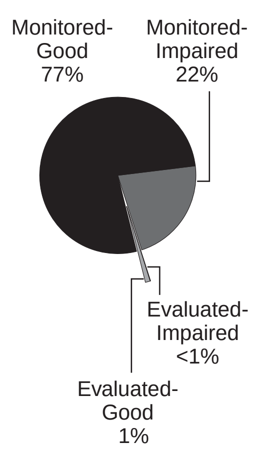
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

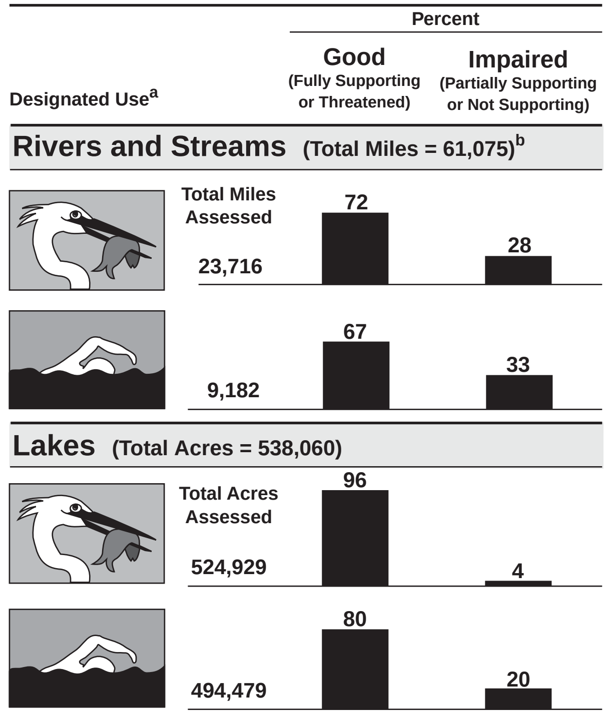
Rivers



Lakes



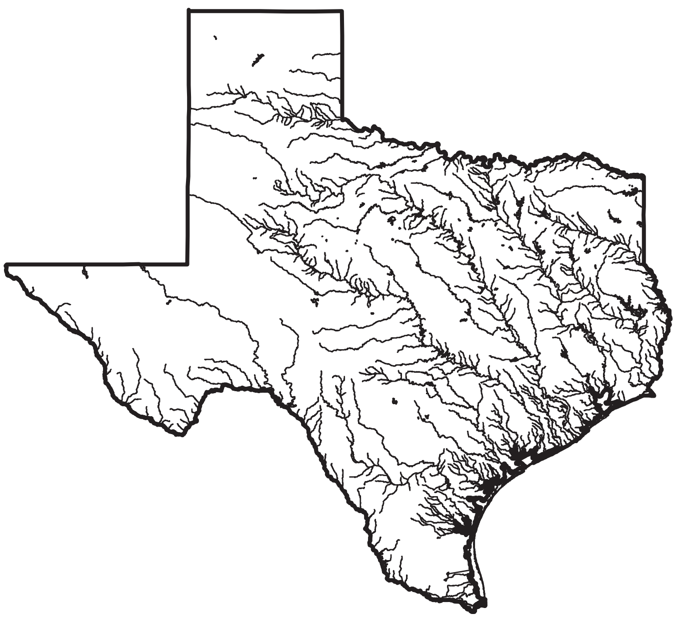
Individual Use Support in Tennessee



[a] A subset of Tennessee's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Texas



For a copy of the Texas 2000 305(b) report, contact:

Steve Twidwell
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, TX 78711-3087
(512) 239-4607
e-mail: stwidwel@tnrcc.state.tx.us

Surface Water Quality

About 87% of assessed river and stream miles fully support aquatic life uses. Swimming is impaired in about 26% of the assessed rivers and streams. The most common pollutants degrading rivers and streams are bacteria, oxygen-depleting substances, salinity, and sulfates. Major sources of pollution include municipal sewage treatment plants, agricultural runoff, and urban runoff.

In lakes and reservoirs, 84% of the assessed surface acres fully support aquatic life uses. Of the assessed lakes and reservoirs, all assessed acres fully support swimming. The most common problems in lakes and reservoirs are salinity, metals (including mercury), and low dissolved oxygen. Major sources that contribute to nonsupport of uses include atmospheric deposition, unspecified point and nonpoint sources, and agriculture.

Sixty-four percent of the surveyed estuarine waters fully support shellfishing use. All assessed estuary waters support swimming uses. The leading problem in estuaries is bacteria that contaminate shellfish beds. Another major cause of impairment was organic enrichment. Impairment comes mainly from unspecified point and nonpoint sources and natural sources.

Texas also assessed 3,879 square miles of ocean waters that did not support fish consumption uses. The leading cause of impairment was mercury from atmospheric deposition.

Texas did not report on the condition of wetlands.

Ground Water Quality

About 41% of municipal water in Texas is obtained from ground water sources. Identified ground water contaminant sources include storage tanks, surface impoundments, landfills, septic systems, and natural sources. The most commonly reported ground water contaminants from human activities are gasoline, diesel, and other petroleum products. Less commonly reported contaminants include volatile organic compounds and pesticides. The degradation of ground water quality from natural sources is also a major concern.

Programs To Restore Water Quality

The Texas Natural Resource Conservation Commission (TNRCC) uses a basin approach to water resource management with the Clean Rivers Program (CRP). This cooperative program uses a long-term, comprehensive, and integrated approach aimed at improving coordination of natural resource functions within the agency.

Implementation of coordinated basin monitoring is one of the priorities of the program. The goal of this activity is to provide a process in which monitoring groups will coordinate their activities with the TNRCC. Coordinated monitoring meetings are held in each of the 23 basins every spring to bring together key monitoring groups (state agencies, river authorities, cities, volunteer groups, U.S. Geological Survey, U.S. Army Corps of Engineers, etc.). At the meetings, schedules are cooperatively developed for fixed-station and special study monitoring to reduce duplication of effort, consolidate sampling and analysis protocols, and improve spatial coverage of monitoring sites.

Programs To Assess Water Quality

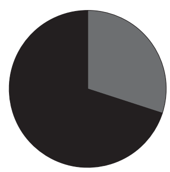
The TNRCC and CRP samples about 1,450 fixed stations as part of the Surface Water Quality Monitoring Program (SWQMP). Sampling parameters and the frequency of sampling at each site are selected to satisfy different needs. The TNRCC also conducts intensive surveys to evaluate potential impacts from point source dischargers during low flow conditions and special studies to investigate specific sources and pollutants. About 2,000 citizens also perform volunteer environmental monitoring in the Texas Watch Program.

Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

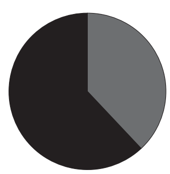
Monitored-Good 70% | Monitored-Impaired 30%



Evaluated-Good 0% | Evaluated-Impaired 0%

Lakes

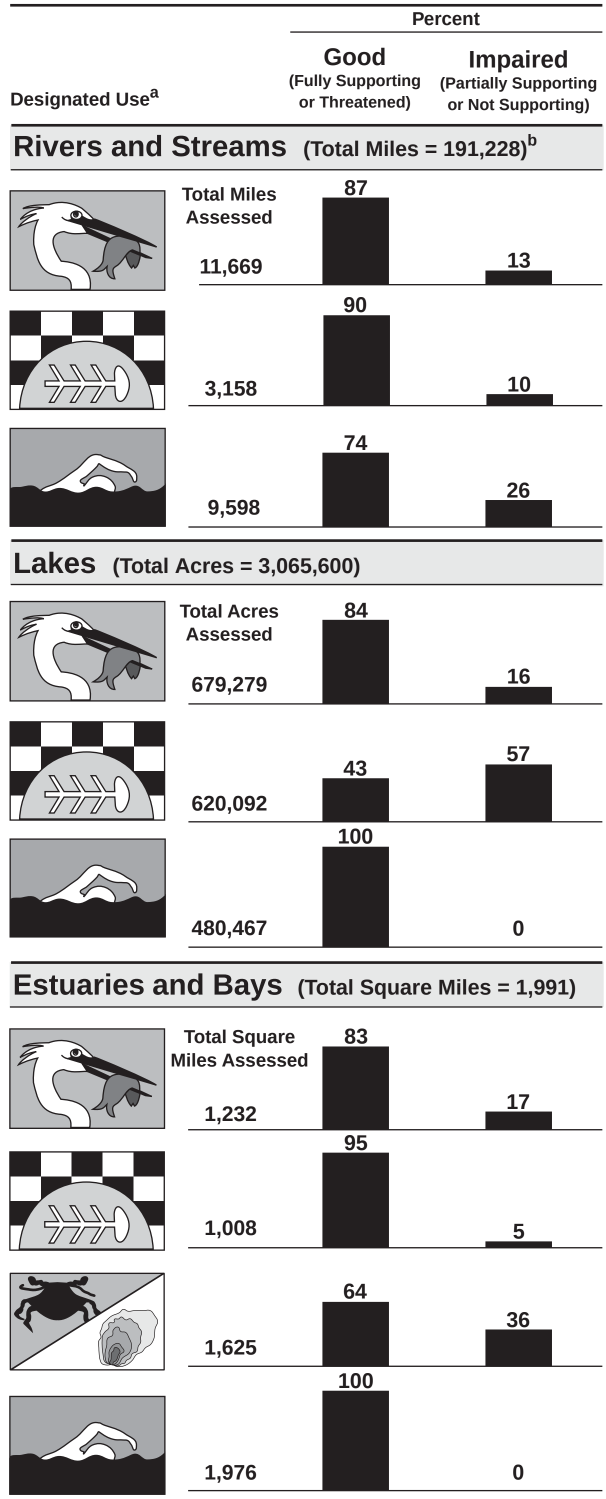
Monitored-Good 62% | Monitored-Impaired 38%



Evaluated-Good 0% | Evaluated-Impaired 0%

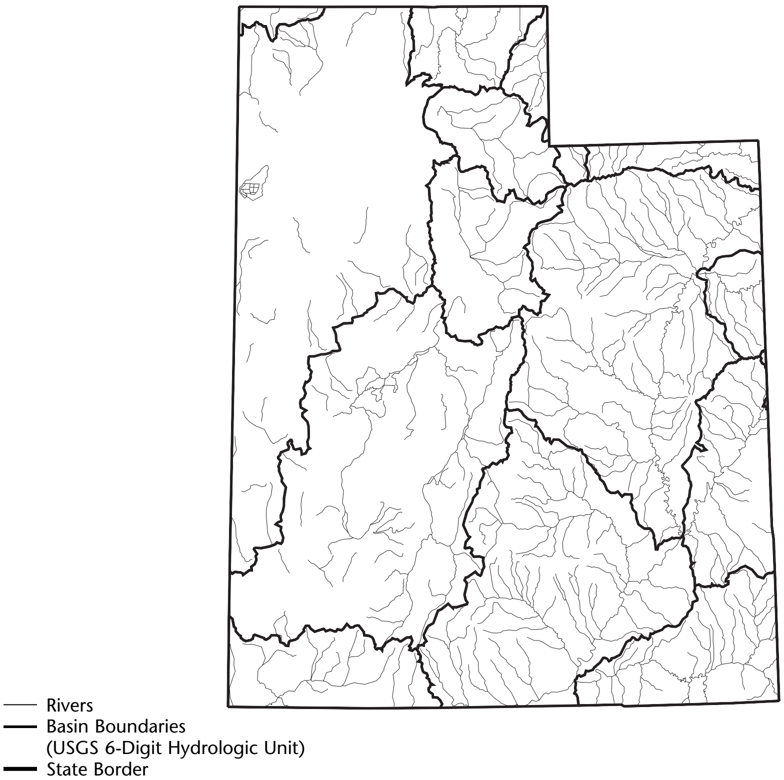
[a] A subset of Texas's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Texas



Note: Figures may not add to 100% due to rounding.

Utah



For a copy of the Utah 2000 305(b) report, contact:

Thomas W. Toole
Utah Department of Environmental Quality
Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870
(801) 538-6859
e-mail: ttoole@deq.state.ut.us

A summary of Utah's 2000 305(b) Report can be obtained from the Internet at: **http://www.deq.state.ut.us/eqwq/2000_305b_fact.pdf**

Surface Water Quality

Of the 10,465 river and stream miles assessed, 84% fully support aquatic life use. Approximately 74% of all river and stream miles assessed support all of their beneficial uses (e.g., drinking water, aquatic life, and agriculture). The most common pollutants impacting rivers and streams are total dissolved solids, habitat alterations, and nutrients. Agricultural practices, such as grazing, improper manure management, and irrigation, increase nutrient and sediment loads in streams. Point sources also contribute to nutrient loads, while natural conditions and stream channel modifications also result in impairment. The loss of riparian habitat impacts the fisheries on many streams.

About 70% of the assessed lake acres fully support aquatic life uses. The leading problems in lakes include nutrients, salinity, low dissolved oxygen, and thermal modifications. The major sources of pollutants are agricultural practices, urban runoff, and silviculture.

Fish and wildlife consumption advisories are posted on the lower portion of the Ashley Creek drainage area and Stewart Lake due to elevated levels of selenium found in fish, ducks, and American coots.

Utah did not report on the condition of wetlands.

Ground Water Quality

In general, the quality of ground water in Utah has remained relatively good throughout the state. Sources that present a risk for ground water contamination include agricultural chemical facilities, animal feedlots, storage tanks, surface impoundments, waste tailings, septic systems, road salt storage areas, spills, and urban runoff. The increase in corporate hog farming operations may impact ground water quality.

Programs To Restore Water Quality

The state's Nonpoint Source (NPS) Task Force is responsible for coordinating NPS programs in Utah. The task force is a broad-based group with representatives from federal, state, and local agencies, local governments, agricultural groups, conservation organizations, and wildlife advocates. The task force helped state water quality and agricultural agencies prioritize watersheds in need of NPS pollution controls. As best management practices are implemented, the task force will update and revise the priority list.

Programs To Assess Water Quality

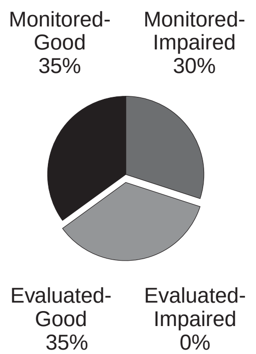
In 1993, Utah adopted a basinwide water quality monitoring approach. For this reporting cycle, intensive surveys were completed on the West Colorado River, Southeast Colorado River, Bear River, and Weber River watershed management units. This completes the first 5-year monitoring cycle. The second cycle began with the Bear and Weber River assessments. In addition, Utah has developed a network of 63 fixed stations to evaluate water quality trends throughout the state. Under the Division of Water Quality's lake assessment program, 130 lakes are monitored on a regular basis. Sampling is staggered so that half of the lakes are monitored during even-numbered years. The remaining lakes are monitored during odd-numbered years. Monitoring is conducted for Total Maximum Daily Load determinations, industrial and municipal facility compliance, and nonpoint source projects. Benthic macroinvertebrates are sampled at 18 stations.

Utah has an extensive cooperative monitoring program with the U.S. Forest Service, U.S. Bureau of Land Management, U.S. National Park Service, Salt Lake City, Jordanelle Technical Advisory Committee, and several smaller entities. These programs are oriented primarily towards monitoring river water quality.

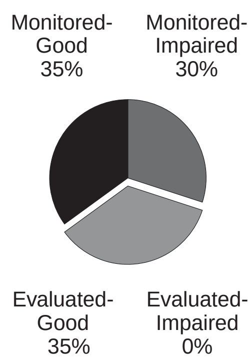
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

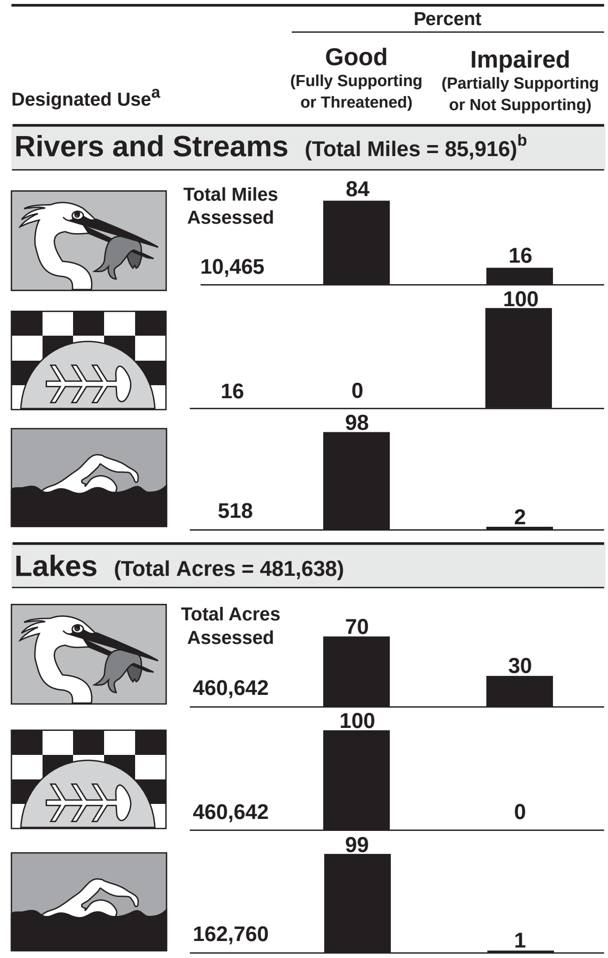
Rivers



Lakes



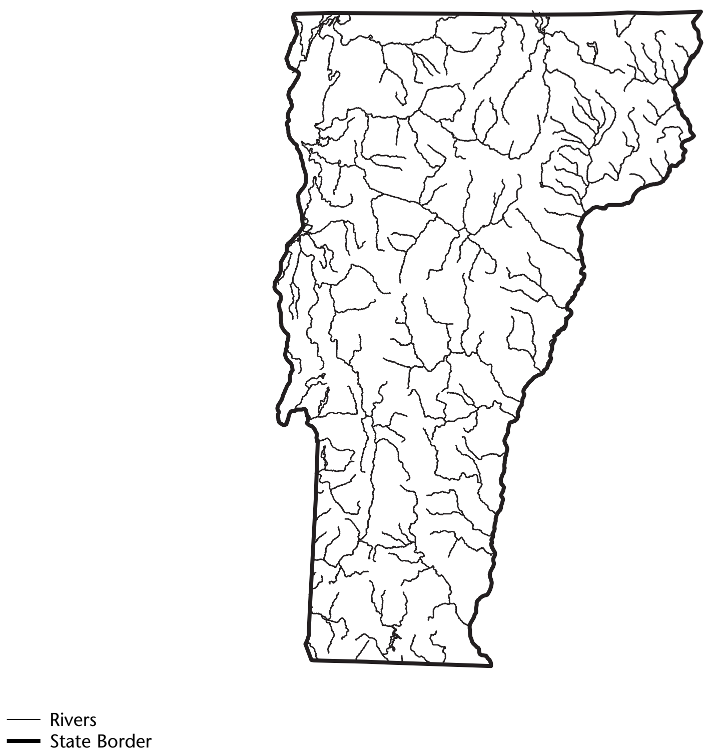
Individual Use Support in Utah



[a] A subset of Utah's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Vermont



For a copy of the Vermont 2000 305(b) report, contact:

Rick Hopkins
Vermont Agency of Natural Resources
Department of Environmental Conservation
Water Quality Division
103 South Main Street
Building 10 North
Waterbury, VT 05671-0408
(802) 241-3776
e-mail: rickh@dec.anr.state.vt.us

The report is also available on the Internet at: **http://www.anr.state.vt.us/dec/waterq/Planning/Assessment2000.pdf**

Surface Water Quality

Eighty-one percent of Vermont's assessed river and stream miles fully support aquatic life and 90% fully support swimming. For assessed lakes acres, 66% fully support aquatic life and 85% of assessed acres fully support swimming. Lakes and rivers are impacted by advisories that restrict fish consumption due to mercury contamination; however, the state's 305(b) assessments do not take into account the statewide advisory for all rivers and lakes.

Common pollutants found in the assessed waterbodies include silt, pathogens, and nutrients, which come from eroding banks, urban areas, and agricultural lands. Additional causes of pollution include thermal modifications, flow modifications, metals, priority organic contaminants, algae, pathogens, and low dissolved oxygen resulting from atmospheric deposition, natural sources, industrial and municipal point sources, flow regulation, and habitat alterations.

Vermont did not report on the condition of its wetlands.

Ground Water Quality

The majority of Vermont's citizens depend on ground water for drinking water and other uses. Generally, the quality of ground water in Vermont is considered excellent although no comprehensive studies have been completed due to a lack of funds. Contamination in a small number of drinking water supplies has been detected. Over 75% of the contamination can be attributed to leaking aboveground and belowground storage tanks. Each year, \$5-10 million is spent on remediation activities. Population growth and industrialization may further threaten ground water sources in the future.

Programs To Restore Water Quality

Vermont has a Point Source Control Program that finances wastewater treatment facility upgrades, combined sewer overflow corrections, sewer line extensions, and other system improvements. The Nonpoint Source Control Program develops activities to correct nonpoint source pollution in priority waterbodies. The program encourages the development of best management practices (BMPs) by farmers, developers, municipalities, lakeshore residents, and landowners to reduce or prevent polluted runoff. The Lake Champlain Basin Watershed Nation Monitoring Program evaluates the effectiveness of improved livestock grazing. The Vermont Better Backroads Program provides grant money to towns for BMPs.

Programs To Assess Water Quality

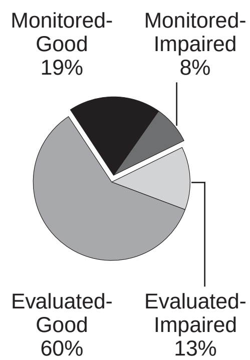
Vermont's monitoring activities balance short-term intensive and long-term trend monitoring. Notable activities include fixed-station monitoring of lakes and ponds, citizen monitoring, long-term acid rain monitoring of lakes, compliance monitoring for permitted dischargers, toxic discharge monitoring, fish contamination monitoring, and ambient biological monitoring of aquatic insects and fish. Volunteer associations provide supplemental monitoring data for 26 rivers and 32 lakes.

In 1997, Vermont began using rotating watershed assessments to monitor surface water quality. This approach is used to monitor the state's 17 major river basins over a 5-year period. Two rounds of assessment have been completed and a third round is currently underway. New monitoring activities include an effort to evaluate the use of biocriteria in certain wetlands such as venal pools and white cedar swamps. The Lake Bioassessment Program is still underway as is the Assessment of Mercury in Hypolimnetic Sediments in both Vermont and New Hampshire.

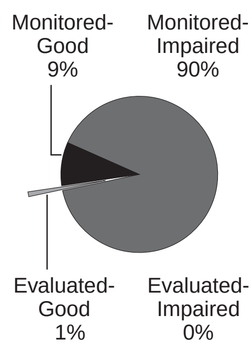
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

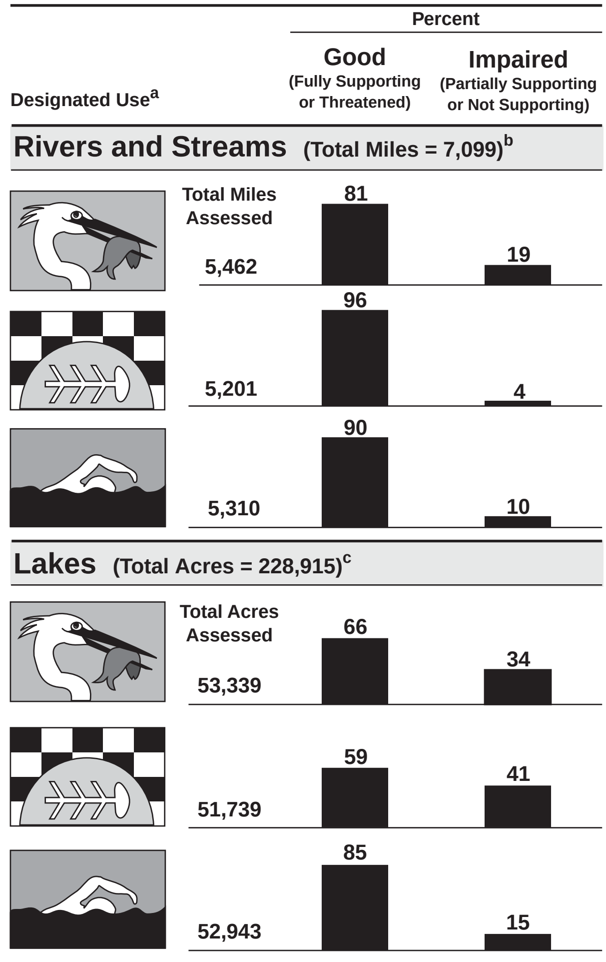
Rivers



Lakes



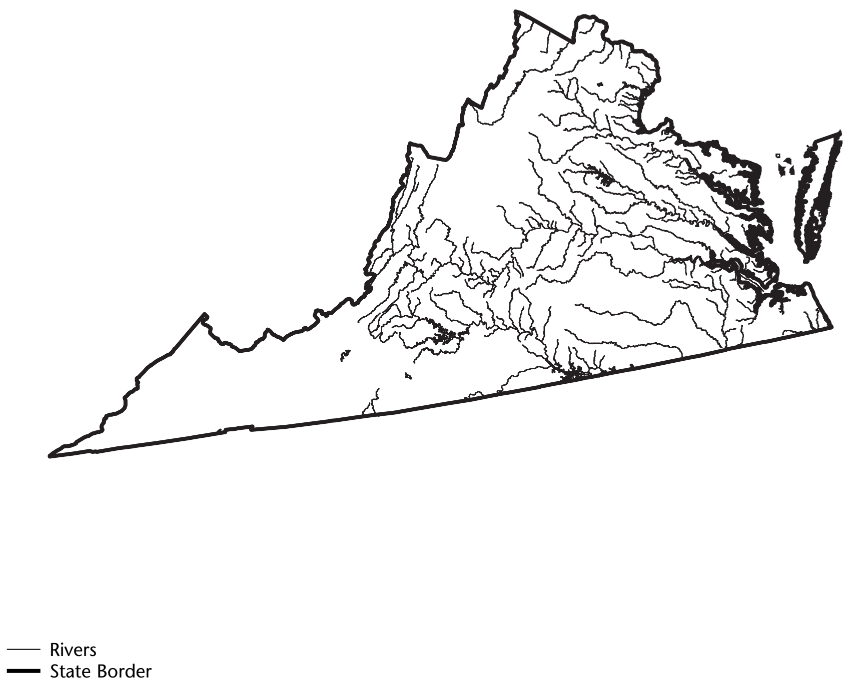
Individual Use Support in Vermont



[a] A subset of Vermont's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes perennial streams only.
[c] Excludes Lake Champlain.

Note: Figures may not add to 100% due to rounding.

Virginia



For a copy of the Virginia 2000 305(b) report, contact:

Harry H. Augustine, III
Virginia Department of Environmental Quality
Water Division
Office of Water Resources Management
P.O. Box 10009
Richmond, VA 23219-0009
(804) 698-4037
e-mail: hhaugustin@deq.state.va.us

The report is also available on the Internet at: **http://www.deq.state.va.us/water/305b.html**

Surface Water Quality

The majority of assessed river and stream miles in Virginia support aquatic life (77%), swimming (53%), and fish consumption (96%). As in past years, fecal coliform bacteria are by far the most commonly cited problem in rivers and streams. Agriculture and grazing-related sources contribute much of the bacteria. Other causes of impairment include organic enrichment and acidity. Urban runoff significantly impacts all surface water quality in Virginia.

All assessed publicly owned lakes support fish consumption and swimming uses. Over 97% of the assessed lake acres also support aquatic life use. Acidity, siltation, and pathogens from nonpoint sources threaten approximately 4,000 acres.

Water quality in assessed estuaries is generally good. Of the estuarine area assessed, 83% support aquatic life and 98% support swimming. All assessed estuarine waters support fish consumption use and 95% fully support shellfish harvesting. Exceeding water quality standards based on benthic macroinvertebrates is the leading cause of impairment in estuaries. Organic enrichment, pathogens, and nutrients are also commonly cited problems. Identified sources of impairment include natural sources as well as industrial and municipal point sources. All coastal waters are evaluated to be fully supporting their fishable and swimmable goals.

Currently, the Virginia Department of Health (VDH) Division of Health Hazard Controls has six health advisories in effect to restrict and one advisory to prohibit fish consumption.

Virginia did not report on the condition of wetlands.

Ground Water Quality

Ground water programs in Virginia strive to maintain the existing high water quality. Sources of ground water contamination in the state include fertilizer and pesticide applications, underground storage tanks, landfills, septic systems, mining, and urban runoff. The Virginia Ground Water Protection Steering Committee meets bimonthly to share information, direct attention to ground water issues, and take the lead on interagency ground water protection initiatives.

Programs To Restore Water Quality

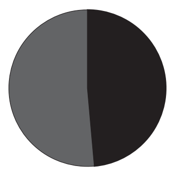
Virginia's Department of Environmental Quality (DEQ) recommends control measures for water quality problems identified in the 305(b) report in their Water Quality Management Plans (WQMPs). WQMPs establish a strategy for bringing impaired waters up to water quality standards and preventing the degradation of high-quality waters. Control measures are implemented through Virginia's point source permit program and application of best management practices (BMPs) for nonpoint sources.

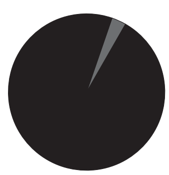
Programs To Assess Water Quality

The Ambient Water Quality Monitoring Program includes approximately 1,400 DEQ monitoring stations. An estimated 1,400 additional stations from other federal, state, and citizen monitoring programs provide sampling information during the 5-year monitoring cycle. Stations are located to gather information from industrial, urban, rural, and undeveloped areas of the state. Virginia's 305(b) assessments also utilize information from fish tissue and benthic macroinvertebrates.

Data Quality[a]

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.





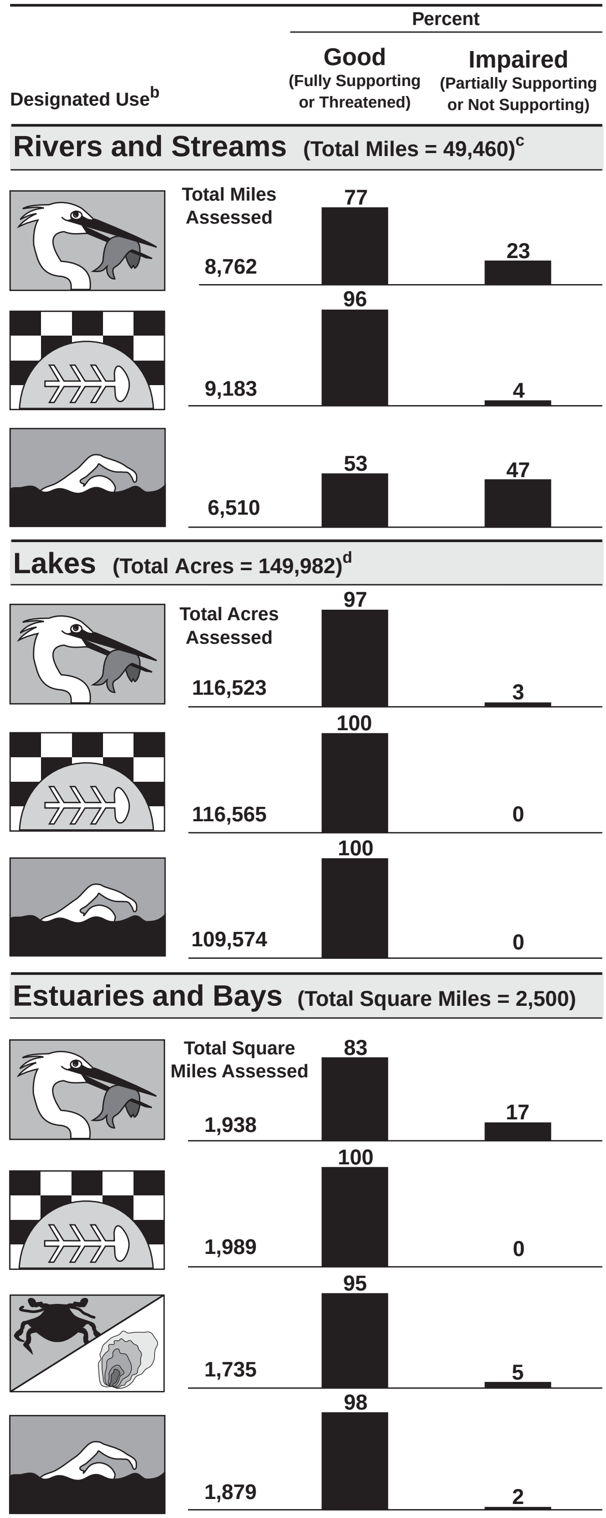
[a] Only monitored data are presented in this summary. Please refer to Virginia's 305(b) report for information on evaluated data.

[b] A subset of Virginia's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[c] Includes nonperennial streams that dry up and do not flow all year.

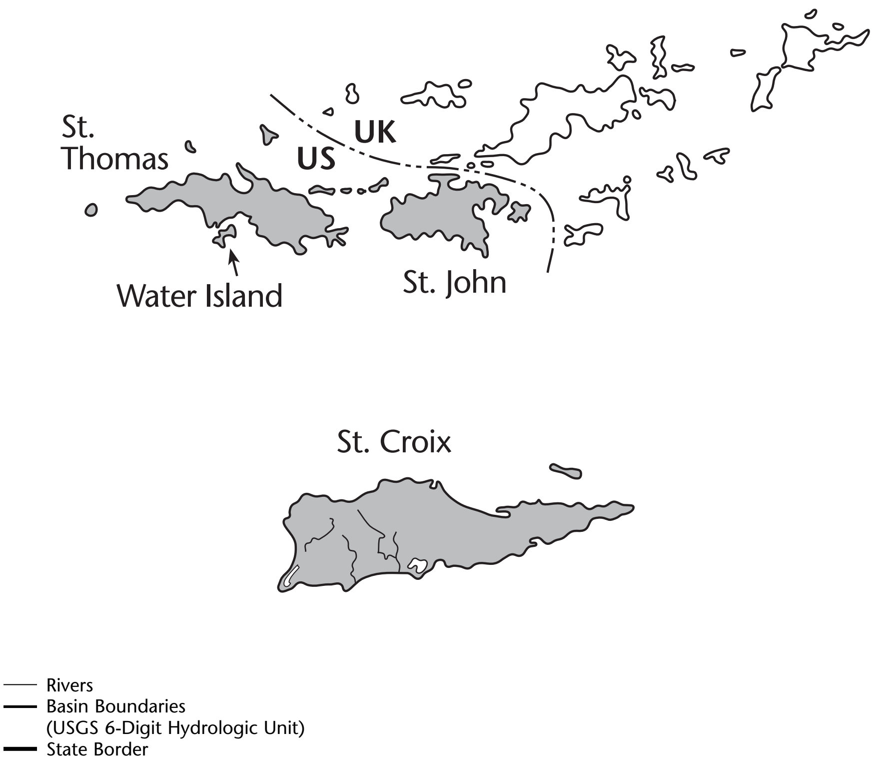
[d] Size of significant publicly owned lakes, a subset of all lakes in Virginia.

Individual Use Support in Virginia[a]



Note: Figures may not add to 100% due to rounding.

U.S. Virgin Islands



For a copy of the Virgin Island's 2000 305(b) report, contact:

Hector A. Squiabro
U.S. Virgin Islands Department
of Planning and Natural Resources
Division of Environmental Protection
Cyril E. King Airport Terminal
Building, Second Floor
St. Thomas, VI 00802
(340) 774-3320, ext. 5177
e-mail: envprotj@viaccess.net

Surface Water Quality

The U.S. Virgin Islands consists of four main islands (St. Croix, St. Thomas, St. John, and Water Island) in addition to over 50 smaller islands and cays located in the Caribbean Sea. The islands lack perennial streams and large freshwater lakes or ponds. Because of the absence of perennial streams, there are no definitive estuaries in the Virgin Islands. There are a few square miles of estuary-like area, and those areas are included in the ocean shoreline assessments. Water quality in the Virgin Islands is generally good but declining due to increased point source and nonpoint source discharges into the marine environment. Approximately 85% of the surveyed ocean shoreline miles support swimming, and 73% of surveyed miles support aquatic life use. Low dissolved oxygen and organic enrichment were the causes of impairment to most shoreline miles, in addition to turbidity, pH, and pathogens. The source impairing the greatest number of coastal miles was recreational and tourism activities, although urban runoff, marinas, accidental spills, municipal point sources, and combined sewer overflows also contribute to coastal water quality impairment.

The Virgin Islands' municipal sewage treatment plants, operated by the Virgin Islands Department of Public Works (DPW), are a major source of water quality violations in the territory. Poor preventive maintenance practices attributed to the lack of funding within the DPW and negligence result in numerous bypasses due to frequent breakdowns at pump stations, as well as clogged and collapsed pipelines that frequently cause discharges into surface waters. Furthermore, stormwater runoff overwhelms the sewage treatment plant, resulting in numerous bypasses of raw or undertreated sewage into bays and lagoons. Other water quality problems result from unpermitted discharges, permit violations by private industrial dischargers, oil spills, and unpermitted filling or dredging activities in mangrove swamps. Nonpoint sources of concern include failing septic systems, lack of erosion control measures for coastal development, lack of control measures for urban stormwater runoff, and the disposal of vessel wastes into marine waters.

Ground Water Quality

The Virgin Islands' ground water is routinely contaminated with bacteria, saltwater, and volatile organic compounds (VOCs). Leaking septic tanks, municipal sewer lines, and sewage bypasses contaminate ground water with pathogenic bacteria. The overpumping of aquifers causes saltwater intrusion of ground water sources. The leaking of underground storage tanks and indiscriminant dischargers of waste oil cause VOC contamination.

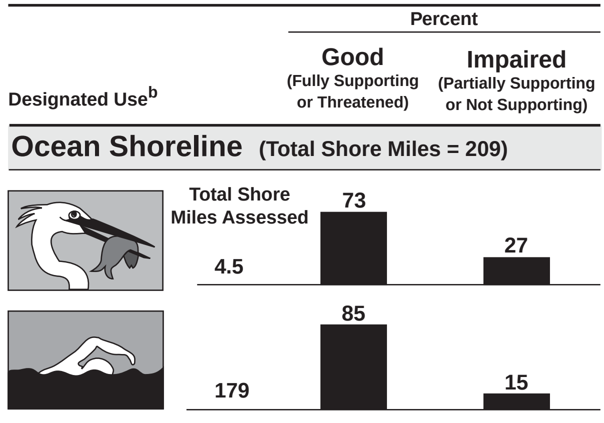
Programs To Restore Water Quality

The Territorial Pollutant Discharge Elimination System (TPDES) program requires that all point source dischargers obtain a permit to discharge low concentrations of pollutants into waters. The Division of Environmental Protection (DEP) performs quarterly compliance inspections. The Virgin Islands is strengthening its Local Water Pollution Control Act and Water Quality Standards, developing new regulations for urban stormwater runoff and for siting and constructing onsite sewage disposal systems, and advocating best management practices. The territory will also be developing Total Daily Maximum Loads for various waterbodies identified in the 1998 303(d) listing.

Programs To Assess Water Quality

The Ambient Monitoring Program performs quarterly sampling at 64 fixed stations around St. Croix, 57 stations around St. Thomas, 19 stations around St. John, and 5 stations on Water Island. Samples are analyzed for fecal coliform bacteria, turbidity, dissolved oxygen, temperature, Secchi depth, and salinity. On St. Croix, 20 stations were also sampled for phosphorus, nitrogen, and suspended solids. Intensive surveys are conducted at selected sites that may be adversely affected by coastal development. The Virgin Islands do not monitor bacteria in shellfish or toxins in fish, water, or sediment.

Individual Use Support in the Virgin Islands[a]

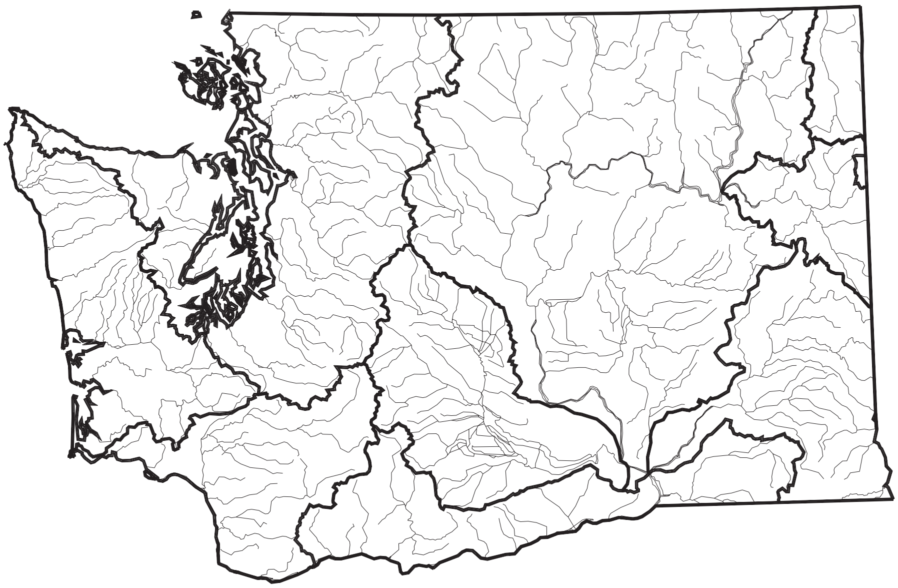


[a] The Virgin Islands do not assess estuarine area. The islands do not have waterbodies that are true estuaries.

[b] A subset of the Virgin Islands' designated uses appear in this figure. Refer to the territory's 305(b) report for a full description of the state's uses.

Note: Figures may not add to 100% due to rounding.

Washington



For a copy of the Washington 2000 305(b) report, contact:

Alison Beckett
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
(360) 407-6456
e-mail: abec461@ecy.wa.gov

The report is also available on the Internet at: **http://www.ecy.wa.gov/programs/wq/303d/305b%20report/2000_305b.html**

Surface Water Quality

Washington reports that 46% of their assessed river and stream miles fully support all assessed uses. Sixty-two percent of Washington's lakes fully support state-defined "overall" use. Twenty-one percent of the surveyed estuarine waters fully support all assessed uses.

In rivers and streams, agriculture is the major source of water quality degradation, followed by hydrologic habitat modification, natural sources, and septic tanks. Causes of water quality impairment from these sources include thermal modification, pathogens, pH, metals, and low dissolved oxygen. Major causes of impairment in lakes include nutrients and noxious aquatic plants. Agriculture, nonpoint source pollution, and natural conditions are the predominant sources of impairment in lakes. Other sources include urban runoff, municipal point sources, septic tanks, and hydrologic modification. Agricultural runoff, municipal point sources, industrial point sources, and combined sewer overflows are the major sources of impairment in estuaries. Low levels of dissolved oxygen, temperature, pH, and fecal coliform bacteria are the major causes of impairment of designated uses in estuaries.

Washington did not report on the condition of wetlands.

Ground Water Quality

Washington reports ground water contamination by metals, trace elements, nitrates, pesticides, petroleum, and synthetic organic chemicals. Sources include industrial activities, agriculture, municipal wastewaters, mining, and onsite sewage systems.

Programs To Restore Water Quality

Washington provides financial incentives to encourage compliance with permit requirements, the principal vehicle for regulating point source discharges. The state also has extensive experience developing, funding, and implementing nonpoint source pollution prevention and control programs since the early 1970s. The state has developed nonpoint source control plans with best management practices for forest practices, dairy waste, irrigated agriculture, dryland agriculture, and urban stormwater. The state is now focusing attention on watershed planning. The watershed approach is designed to synchronize water quality monitoring, inspections, permitting, nonpoint activities, and funding.

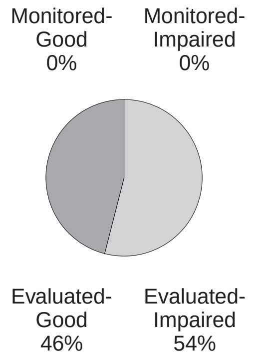
Programs To Assess Water Quality

Washington carries out an aggressive program to monitor the quality of lakes, estuaries, and rivers and streams. The program uses fixed-station monitoring to track spatial and temporal water quality changes to ascertain the effectiveness of various water quality programs and be able to identify desirable adjustments to the programs.

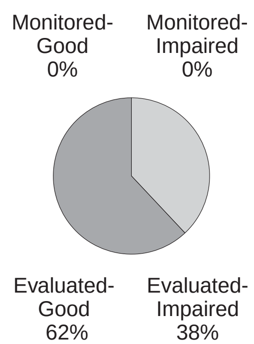
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

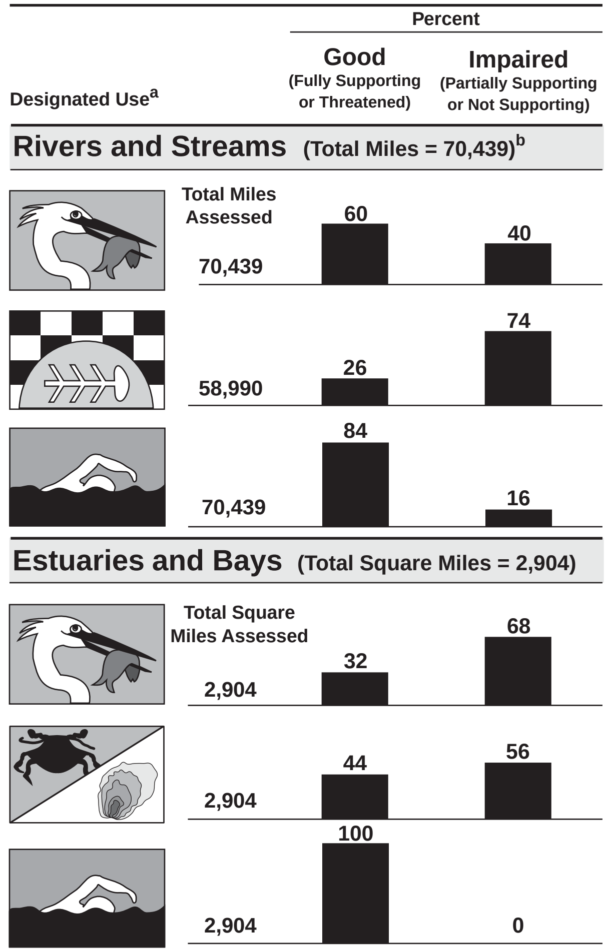
Rivers



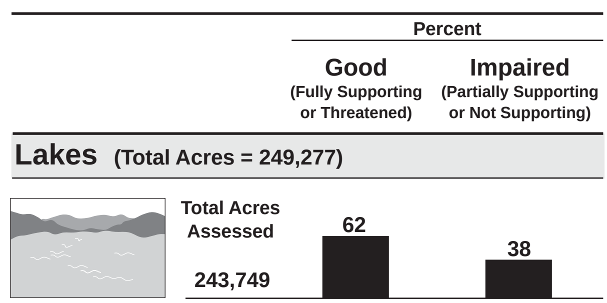
Lakes



Individual Use Support in Washington



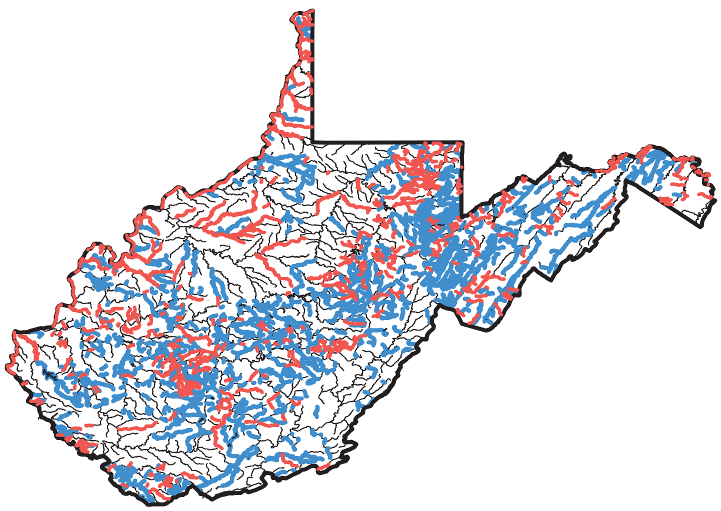
Summary of Use Support in Washington[c]



[a] A subset of Washington's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.
[c] A summary of use support data is presented because Washington did not report individual use support for lakes in their 2000 Section 305(b) report.

Note: Figures may not add to 100% due to rounding.

West Virginia



For a copy of the West Virginia 2000 305(b) report, contact:

Mike Arcuri
West Virginia Department of
Environmental Protection
Division of Water Resources
1201 Greenbrier Street
Charleston, WV 25311
(304) 558-2108
e-mail: marcuri@mail.dep.state.wv.us

The report is also available on the Internet at: **http://www.dep.state.wv.us/Docs/453305b2000.pdf**

Surface Water Quality

West Virginia reports that 58% of assessed river and stream miles have good water quality that fully supports aquatic life uses, and 82% fully support swimming. In lakes, 41% of the assessed acres have good water quality that fully supports aquatic life uses and 100% fully support swimming.

Habitat alteration and siltation are the most common water quality problems in West Virginia's rivers. Nutrients, turbidity, and oxygen-depleting substances also impair a large number of river miles. In lakes, siltation, metals, low dissolved oxygen content, and algal growth impair the greatest number of acres. Resource extraction, primarily abandoned mining operations, impaired the most stream miles, followed by agriculture, forestry, and land disposal. Resource extraction was the leading source of degraded water quality in lakes, followed by petroleum activities, forestry, and agriculture.

West Virginia reported that fish consumption advisories are posted for the Kanawha River, Pocatalico River, Armour Creek, Ohio River, Shenandoah River, North Branch of the Potomac River, Potomac River, and Flat Fork Creek. Five of the advisories were issued because of elevated dioxin concentrations in bottom feeders or nonsport species. The other advisories address PCBs, chlordane, and dioxin in suckers, carp, and channel catfish.

West Virginia did not report on the condition of wetlands.

Ground Water Quality

West Virginia ranked mining and mine drainage as the highest priority source of ground water contamination in the state, followed by municipal landfills, surface water impoundments (including oil and gas brine pits), abandoned hazardous waste sites, and industrial landfills. West Virginia has documented or suspects that ground water has been contaminated by pesticides, petroleum compounds, other organic chemicals, bacteria, nitrates, brine/salinity, arsenic, and other metals.

Programs To Restore Water Quality

The Division of Water Resources (DWR) is the lead agency for West Virginia's nonpoint source program. The DWR works with other state agencies in assessing nonpoint source impacts and implementing projects to reduce pollutant loads from agricultural, forestry, resource extraction, urban runoff, hydrologic modification, and construction activities. Program initiatives are based on education, technical assistance, financial incentives, and demonstration projects. Current projects address nutrient management from livestock operations, erosion control, neutralization of acid mine drainage, pesticide usage, and road stabilization.

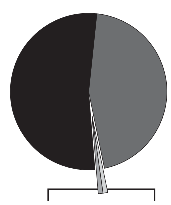
Programs To Assess Water Quality

West Virginia's surface water monitoring program includes compliance inspections, intensive site-specific surveys, ambient water quality monitoring, monitoring of contaminant levels in aquatic organisms, benthic and toxicity monitoring to assess perturbations, and special surveys and investigations. The state's Watershed Assessment Program (WAP) is charged with evaluating the health of West Virginia's watersheds. The WAP assesses the health of a watershed by evaluating as many streams as possible, as close to their mouths as possible. The program collects and interprets water quality, biological, and habitat information on watersheds on a 5-year rotating cycle. The WAP began evaluating random sites in each watershed beginning in 1997.

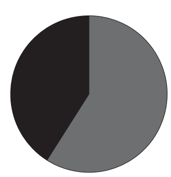
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

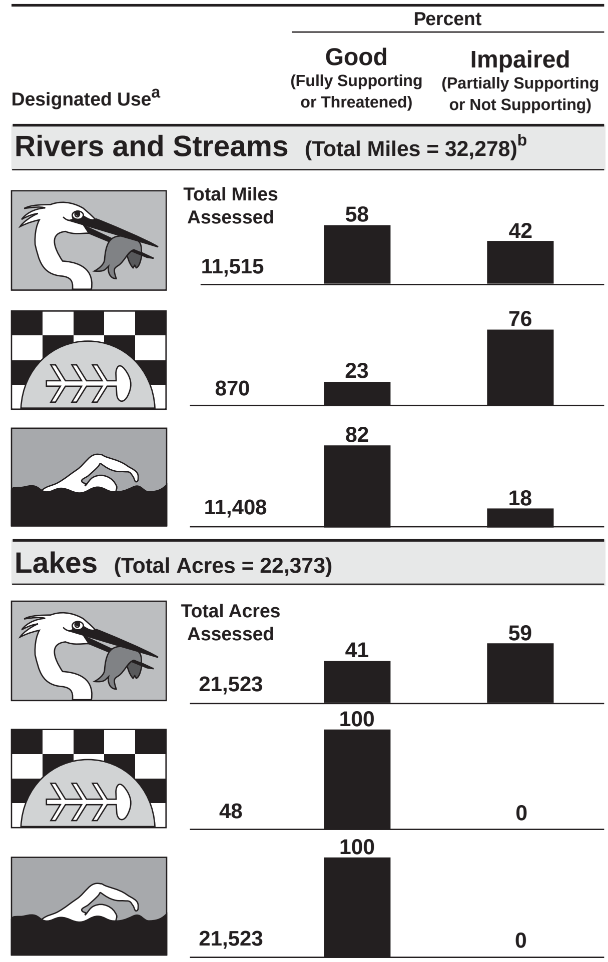
Rivers



Lakes



Individual Use Support in West Virginia

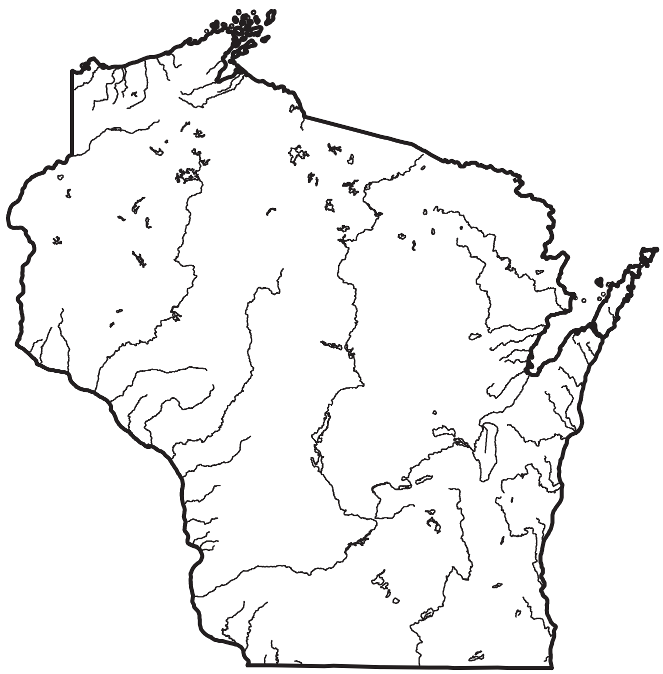


[a] A subset of West Virginia's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Wisconsin



For a copy of the Wisconsin 2000 305(b) report, contact:

Lisa Helmuth
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, WI 53707
(608) 266-7768
e-mail: HelmuL@mail01.dnr.state.wi.us

A copy of the report may be downloaded from: **http://www.dnr.state.wi.us/org/water/wm/summary.html**

Surface Water Quality

The majority of assessed rivers in Wisconsin support aquatic life (56%) and fish consumption (67%). The primary causes of contamination include habitat alterations, excessive siltation and sedimentation, and nutrient enrichment. Rivers continue to be affected by nonpoint sources such as agriculture and grazing, hydrologic modification, and habitat degradation. Of the lake acres assessed, about 70% support aquatic life and fish consumption. Only 16% support swimming. Noxious aquatic plants, nutrients, mercury, and other metals are significant causes of lake impairment. Lakes are degraded by urban runoff, construction, and land development. The Department of Natural Resources (DNR) identifies dams, mercury, exotic species, and cranberry operations as special concerns that threaten water quality. Wisconsin did not report on the condition of wetlands.

All 1,017 miles of Great Lakes shoreline have been assessed. Over 79% of the miles support aquatic life. All miles are impaired for fish consumption.

Ground Water Quality

Ground water is used by 70% of the state's population for drinking water. There is a growing concern about the overall availability of ground water with adequate flow and quality. Radionuclides, arsenic, nitrate, atrazine, and volatile organic compounds (VOCs) have been detected in ground water samples. Nitrate comes from agricultural sources (90%), septic systems (9%), and other sources (1%). Atrazine use has been restricted in Wisconsin and is prohibited in areas where contamination exceeds enforcement standards. VOCs originate from landfills and leaking underground storage tanks.

Programs To Restore Water Quality

The Nonpoint Source (NPS) Program administers financial assistance, stormwater management, and animal waste programs. Livestock operations are regulated if they significantly impact water quality or have at least 1,000 animal units. Other programs address erosion, agricultural runoff, and urban NPSs.

The Wisconsin Pollutant Discharge Elimination System (WPDES) program oversees wastewater discharge permits. Industrial facilities are required to treat their waste prior to discharging to a municipal facility. All plans for new or upgraded municipal facilities must be submitted for approval by the DNR.

Several grant programs are aimed at lake restoration and protection. The Aquatic Plant Management Program identifies lakes that need protection and, in extreme cases, administers permits for chemical treatment to alleviate severe problems.

The DNR helped to develop Lakewide Management Plans for Lakes Michigan and Superior. Wisconsin also participates in the Lake Superior Binational Program, which aims to reduce toxic discharges.

Programs To Assess Water Quality

In 1999, the DNR initiated an ambient monitoring program that standardized techniques for assessing aquatic habitat, macroinvertebrates, and fish. Monitoring sites are selected by stratified random sampling. The DNR also supports a USGS network of continuous flow monitoring stations and operates a fish tissue monitoring program. Over 400 aquatic invertebrate samples and 930 fish tissue samples are collected each year. Additional monitoring targets the Mississippi and Wisconsin Rivers. Over 1,000 volunteers supplement this monitoring data.

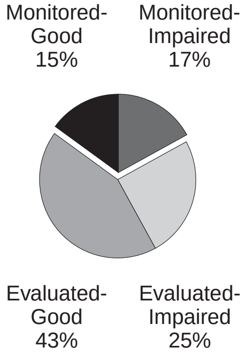
Ground water levels are measured at 140 wells. In 1994, EPA approved Wisconsin's Comprehensive Ground Water Protection Plan, which establishes protection strategies and policies on pesticides. The Groundwater Coordinating Council assists in the exchange of information between agencies with jurisdiction over ground water.

Mercury is measured under several programs. The Environmental Contaminants Section monitors total and methylmercury in tributaries to Lake Superior. A second project uses the common loon to model the physiological impact of consuming fish containing mercury. A third project measures mercury in the atmosphere, lakes and bogs, and fish tissue.

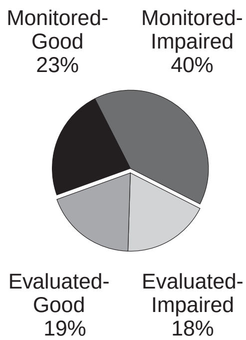
Data Quality

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

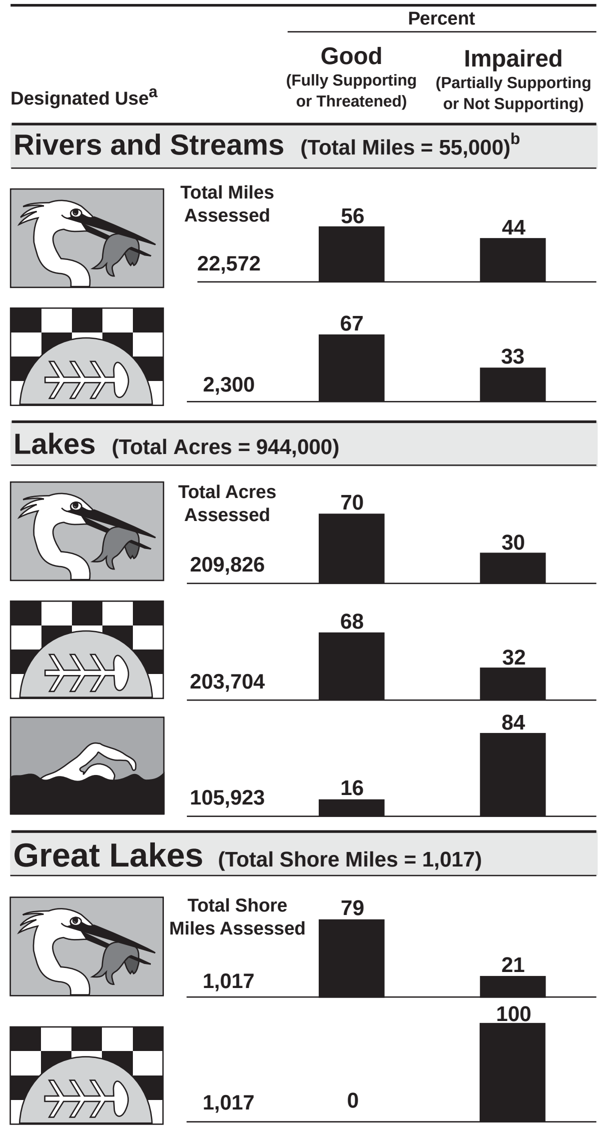
Rivers



Lakes



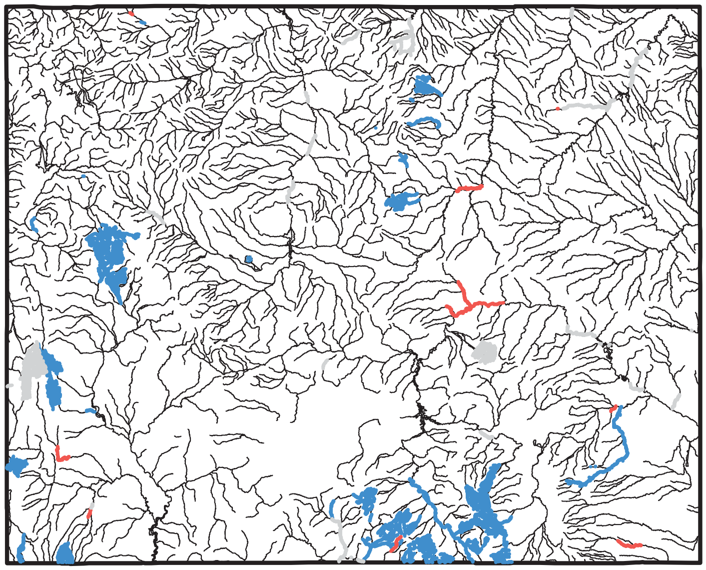
Individual Use Support in Wisconsin



[a] A subset of Wisconsin's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Wyoming



Aquatic Life Use Support
- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

For a copy of the Wyoming 2000 305(b) report, contact:

Mark Conrad
Wyoming Department
of Environmental Quality
Water Quality Division
Herschler Building
122 West 25th Street
Cheyenne, WY 82002
(307) 777-5802
email: mconra@state.wy.us

The report is also available on the Internet at: **http://deq.state.wy.us/wqd/watershed/01452-doc.pdf**

Surface Water Quality

Historic land and water management activities, compounded by climatological events, led to accelerated loss of streamside vegetation in many parts of Wyoming during the early part of this century. Implementing changes in land and water management, along with improved treatment of discharges, has improved the water quality in Wyoming over the last several decades.

Overall, the water quality is excellent to good in most of the state. Currently, the leading causes of stream contamination are pathogens and metals (including selenium, arsenic, and cadmium). Sources of stream contamination include unknown sources, agriculture, and natural sources. Causes of lake and reservoir contamination include nutrients (including phosphorus) and siltation. Lake contamination is attributed to unspecified nonpoint sources.

Ground Water Quality

Petroleum hydrocarbons are the most common contaminants impacting Wyoming's ground water, followed by halogenated solvents, salinity/brine, nitrates, and pesticides. Common sources of contamination include leaking above- and underground storage tanks, fertilizer and pesticide application, spills, landfills, pipelines, and sewer lines. Natural contaminants are also found in Wyoming's ground water. These include radionuclides, flouride, metals, and salts whose sources are primarily subsurface geologic materials.

Programs To Restore Water Quality

The state Department of Environmental Quality (DEQ) oversees the NPDES program in Wyoming. The DEQ reviews industrial and municipal permit applications and ensures that proper design criteria are implemented. Wyoming's nonpoint source (NPS) control program is nonregulatory and relies on voluntary cooperative efforts to control NPS pollution. Program efforts focus on providing information and education to the public; demonstrating, implementing, and cost-sharing best management practices; and coordinating with local, state, and federal agencies.

Programs To Assess Water Quality

In the past, Wyoming relied primarily on information from other agencies to determine which waterbodies had water quality impairments and should be listed on the 303(d) list. In the 1999 Legislative Session of the State of Wyoming, Enrolled Act #47 (Credible Data Law) was enacted. The law requires chemical, physical, and biological monitoring to be conducted prior to decisions concerning designated use support. Prior data that do not meet this standard are not discussed in the 2000 305(b) report.

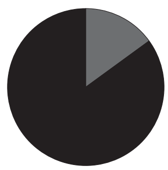
In 1998, Wyoming tripled the size of its monitoring staff to better conduct comprehensive (biological, chemical, and physical) water quality assessments on those waterbodies on the 1996 303(d) list that lacked conclusive and valid data. Wyoming has committed to monitoring all those waterbodies by the year 2002 and developing total maximum daily loads (TMDLs) on those waterbodies that need them by the year 2007. In addition, many conservation districts have begun training to conduct credible and comprehensive water quality assessments to provide data needed for locally led water quality improvement programs.

Data Quality*

States report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. These pie charts show the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers

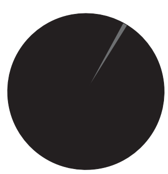
Monitored-Good 85% | Monitored-Impaired 15%



Evaluated-Good 0% | Evaluated-Impaired 0%

Lakes†

Monitored-Good 100% | Monitored-Impaired <1%

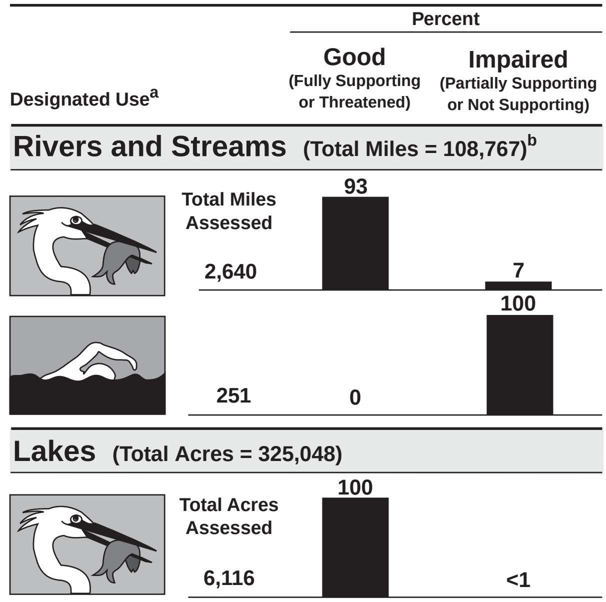


Evaluated-Good 0% | Evaluated-Impaired 0%

* A new state law in Wyoming prohibits the use of evaluated data for water quality assessments.

† Represents Aquatic Life Use Support.

Individual Use Support in Wyoming



[a] A subset of Wyoming's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

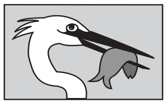
Note: Figures may not add to 100% due to rounding.

Kim Ferguson, Great Smokey Mountains National Park, NC

Tribal Summaries

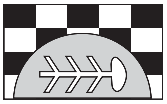
This chapter provides individual summaries of the water quality assessment data reported by five American Indian tribes in their 2000 Section 305(b) reports. Tribal participation in the Section 305(b) process grew from two tribes in 1992 to eight tribes during the 1998 reporting cycle, but tribal water quality remains unrepresented in this report for the hundreds of other tribes throughout the country. Many of the other tribes are in the process of developing water quality programs and standards but have not yet submitted a Section 305(b) report. As tribal water quality programs become established, EPA expects tribal participation in the Section 305(b) process to increase rapidly. To encourage tribal participation, EPA has sponsored water quality monitoring and assessment training sessions at tribal locations, prepared streamlined 305(b) reporting guidelines for tribes that wish to participate in the process, and published a brochure, *Knowing Our Waters: Tribal Reporting Under Section 305(b)*. EPA hopes that subsequent reports will contain more information about water quality on tribal lands.

Section 305(b) of the CWA requires that the states biennially assess their water quality for attainment of the fishable and swimmable goals of the Act and report the results to EPA. The states, participating tribes, and other jurisdictions measure attainment of the CWA goals by determining how well their waters support their designated beneficial uses. EPA encourages states, tribes, and other jurisdictions to assess waterbodies for support of the following individual beneficial uses:



Aquatic Life Support

The waterbody provides suitable habitat for protection and propagation of desirable fish, shellfish, and other aquatic organisms.

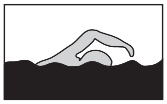


Fish Consumption

The waterbody supports fish free from contamination that could pose a human health risk to consumers.

Shellfish Harvesting

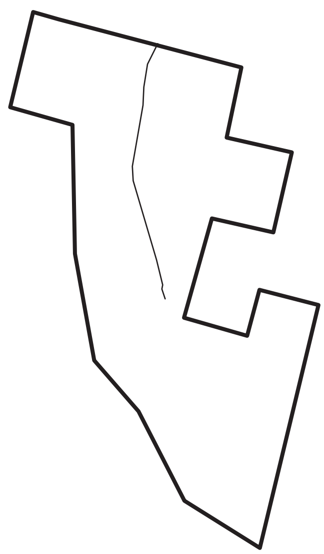
The waterbody supports a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers.



Primary Contact Recreation – Swimming

People can swim in the waterbody without risk of adverse human health effects (such as catching waterborne diseases from raw sewage contamination).

Big Sandy Rancheria



Location of Reservation

For a copy of the Big Sandy Rancheria 2000 305(b) report, contact:

Big Sandy Rancheria
Environmental Programs Office
P.O. Box 337
Auberry, CA 93602

Surface Water Quality

The Big Sandy Rancheria covers approximately 264 acres of land in Fresno County, California. Approximately 100 tribal members live on the reservation. The majority of residents are of Western Mono descent. The Rancheria consists of 30 households, a Head Start school, and a casino. In the next year, a new gaming facility and hotel will put additional demands on the water supply and wastewater treatment system.

The Rancheria's drainage area is approximately 1.75 square miles. Surface waters include the headwaters of Backbone Creek and three unnamed tributaries. The tribe did not report on the quality of their surface waters.

Ground Water Quality

Ground water is used as the drinking water source for the Rancheria. Water is provided by five community wells, eight domestic wells, and one open well. These wells produce water from near-surface alluvium and deeper fractured bedrock. Three of the community wells are used for drinking water, and one is reserved for landscaping and fire protection. The total community well production is 70 gallons per minute. Each household consumes approximately 277 gallons of water per day.

The primary source of ground water contamination is coliform bacteria that leach from septic tanks. The community water supply is chlorinated to alleviate this problem. There does not appear to be any chemical contamination in the ground water supply.

Programs To Restore Water Quality

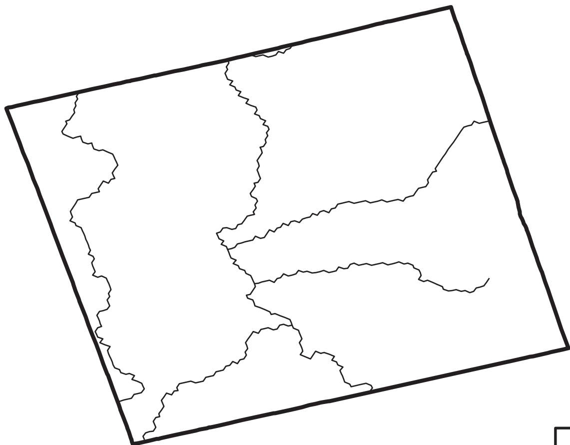
The Tribal Council has passed an ordinance to prohibit discharge of any pollutants to reservation waters. Infractions are punishable by civil fines up to $5,000. The Environmental Programs Office (EPO) also participates in the CALFED Bay-Delta Program, which aims to restore ecological health and improve water management of the Bay-Delta system.

Programs To Assess Water Quality

The surface water quality assessment was detained due to funding constraints. However, the tribe has received a Clean Water Act Section 106 grant to resume the assessment. The EPO staff members collect all water samples with technical assistance from a consulting engineer. The surface water samples collected thus far were taken from springs located within the Rancheria boundaries and were analyzed by an outside laboratory.

The tribe is currently establishing water quality standards for the Rancheria using funds from the General Assistance Plan and Clean Water Act Section 106 Program.

Hoopa Valley Tribe



Location of Reservation

For a copy of the Hoopa Valley Tribe 2000 305(b) report, contact:

Kevin McKernan or **Ken Norton**
Hoopa Valley Tribal EPA
Hoopa, CA 95546
(530) 625-5515
e-mail: kevinmck@pcweb.net or
kentepa@pcweb.net

Surface Water Quality

The Hoopa Valley Indian Reservation in northwestern California is home to more than 3,000 people. The reservation contains 320 miles of rivers and streams, including a portion of the Trinity River, and 3,200 acres of wetlands. It does not contain any lakes.

In the 1950s and 1960s, lumber mills that operated on the reservation resulted in degraded water quality and impaired salmon and steelhead fisheries. Areas that were prone to landslide were logged and roads were constructed within riparian zones. These practices led to significant contamination by sediments. Water diversions, such as a dam on the Trinity River above the reservation, also stressed fisheries by lowering stream volume and flow velocity. Low flow rates reduced flushing and further contributed to the accumulation of sediment. Currently, 16% of assessed river miles support aquatic life, and 100% support swimming and fish consumption.

Ground Water Quality

In the past 4 years, domestic wells, soil, and ground water pools have been sampled to assess ground water contamination. Sampling revealed elevated levels of metals, toxic pollutants, and fecal coliform bacteria in some wells. Leaking underground storage tanks, septic systems, and abandoned hazardous waste sites contribute to ground water contamination. At Masonite Mill Creek, an underground storage tank may have leaked as much as 10,000 gallons of petroleum products. Fecal coliform bacteria from septic tanks is an increasing threat to ground water as population grows, indicating an increased need for wastewater treatment facilities. As contamination increases, it becomes more difficult to utilize ground water as a source of drinking water.

The Hoopa Valley Tribe is addressing ground water contamination in several ways. Some abandoned wells have been capped and underground storage tanks removed. Serious efforts have been concentrated on removing or cleaning contaminated sediments. At Masonite Mill Creek, no petroleum products were measured in soil and ground water samples after contaminated sediments were removed. Also, bioremediation of sediments has been implemented. This process encourages microbial activity that breaks down organic materials by aerating soil that has been mixed with wood chips.

Programs To Restore Water Quality

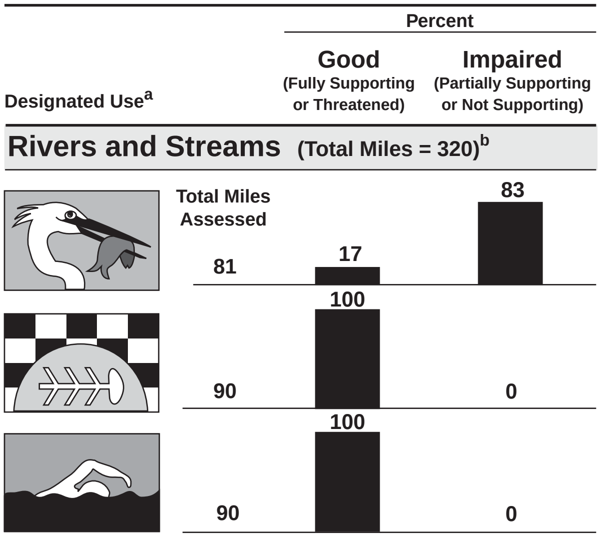
In 1994, a forest management plan was adopted and certified as ecologically sustainable. Key points of the plan include reduction of timber sales and inactivation of 35 miles of abandoned or failing log roads. In 1997, the Tribal Environmental Protection Agency (EPA) established a water quality control plan that included beneficial uses, criteria and standards, and antidegradation policies. The tribe received a Nonpoint Source Program grant to remove contaminated soils from Supply Creek and Trinity River. The tribe is currently developing a Total Maximum Daily Load Standard for sediments in the Supply Creek watershed.

Programs To Assess Water Quality

In 1998, the tribe completed its Unified Watershed Assessment. Geographic information systems enable comprehensive analysis of watershed characteristics and impacts from land use. The Tribal Public Utilities District monitors surface and ground water quality at domestic intake locations and some posttreatment locations. The Tribal EPA monitors physical, chemical, and biological parameters in surface and ground waters. Through Clean Water Act funds, the current network of monitoring stations gives nearly complete coverage of reservation waters.

In 1999, the Tribal EPA and Humboldt University collaborated on a 1-year project funded by the U.S. EPA to locate wetlands with geographic information systems and aerial photographs. A continuing wetlands program will depend upon procurement of additional funding. The Tribal EPA is using Indian Environmental General Assistance Program funds to monitor the integrity of its wetlands and develop a Wetlands Conservation Plan.

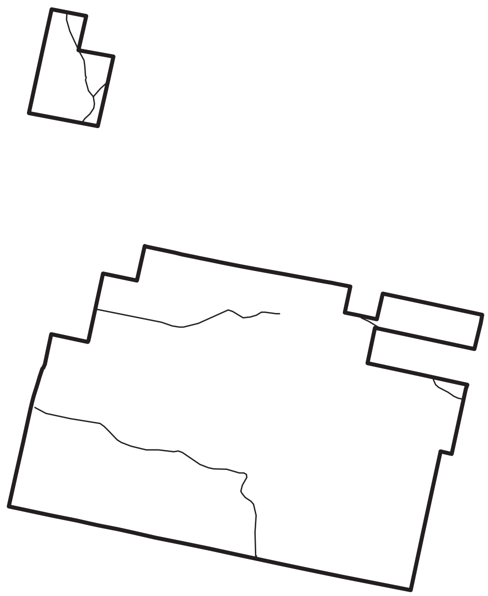
Individual Use Support for the Hoopa Valley Tribe



[a] A subset of Hoopa Valley Tribe's designated uses appear in this figure. Refer to the tribe's 305(b) report for a full description of the tribe's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

La Posta Band of Mission Indians



Location of Reservation

For a copy of La Posta Band's 2000 305(b) report, contact:

Gwendolyn Parada
Environmental Protection Office
La Posta Band of Mission Indians
P.O. Box 1048
Boulevard, CA 91905
(619) 478-2113

Surface Water Quality

La Posta Reservation is located in San Diego County in southern California. It consists of two distinct land parcels: La Posta (3,500 acres) and Little La Posta (200 acres). Nineteen of 23 tribal members reside on the reservation. La Posta contains 11.3 miles of streams, a 2-acre lake that is manmade, and 1.5 acres of wetlands. The only surface water feature in Little La Posta consists of 1 mile of intermittent stream. Springs and seeps (ground water pools) with sustained seasonal flows have been documented within the reservation. No surface water is used for drinking.

In 1994, surface water samples were collected from two springs and La Posta Creek. Radium, metals, and manganese were detected at elevated levels. In 1998, two samples were collected from La Posta Lake. Iron and manganese concentrations were measured at concentrations that exceed the U.S. EPA's maximum contaminant levels. Coliform bacteria were also measured in the water.

Reservation soils are prone to erosion during periods of heavy precipitation. Other sources of erosion include uncontrolled grazing in riparian habitats and watersheds and inadequate maintenance. The movements of nontribal cattle across reservation lands may need to be monitored. Nonpoint sources of contamination include runoff. Runoff that comes from Interstates 8 and 80 is considered a point source of pollution because it is discharged through a drain system. This contributes petroleum compounds and debris. The other potential source of pollution is an adjacent landowner who repairs and maintains automobiles. This may contribute contamination from metals, hydrocarbons, and chlorinated organics.

Ground Water Quality

Ground water is used as the source of drinking water. Five wells supply drinking water, three wells are used for monitoring, and four wells have been abandoned. Wells yield 5 to 25 gallons per minute and are located in shallow alluvium and underlying bedrock. Iron and manganese were detected in some ground water samples. Although no bacteria were detected, localized problems may occur from septic systems.

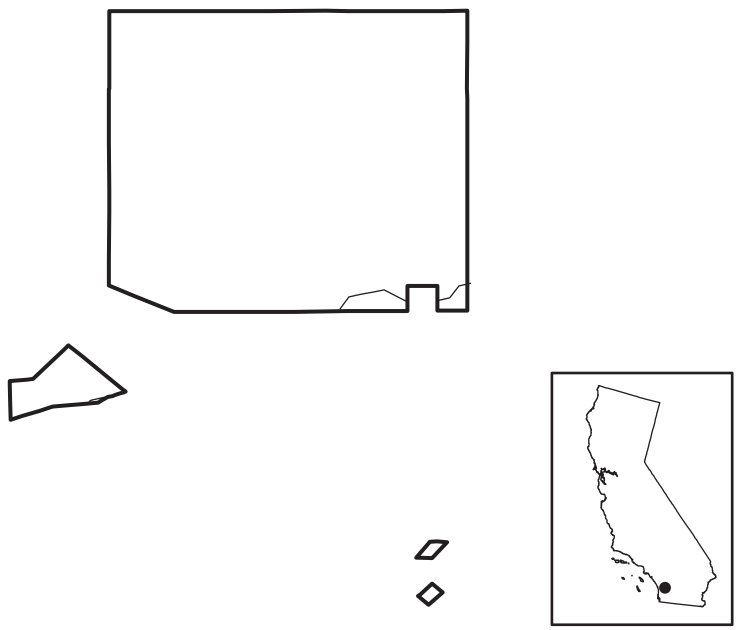
Programs To Restore Water Quality

There are no formal pollution control measures for surface or ground water on La Posta Reservation.

Programs To Assess Water Quality

Currently, waters of the reservation are subject only to federal water quality criteria. In the next 2 or 3 years, the tribe may choose to adopt these or other criteria. Until tribal standards and beneficial use designations have been adopted, the tribe will use the San Diego Regional Water Quality Control Board's Basin Plan as a guide for water quality testing, analyses, and assessment. The La Posta Environmental Protection Agency would like to establish regular surface and ground water monitoring programs.

Pauma Band of Mission Indians



For a copy of the Pauma Band 2000 305(b) report, contact:

Chris Devers
Pauma Band of Mission Indians
P.O. Box 369
Pauma Valley, CA 92061

Surface Water Quality

The Pauma Band of Mission Indians resides in southern California. The tribal lands consist of four distinct parcels: the Pauma Reservation (230 acres), the Mission Reserve (5,711 acres), and the North and South Yuima Tracts (12 acres each). Approximately 170 people of Luiseno heritage live on these lands. The reservation supports an agricultural business that grows citrus and avocados.

Surface water resources consist of 23 miles of rivers and an indeterminate amount of wetlands. Twenty of the stream miles are intermittent. Pauma Creek is used as the primary source of irrigation water. Although not used as a drinking water source, it is hydraulically linked to the aquifer that supplies drinking water. This means water quality problems in Pauma Creek could translate into problems with drinking water quality.

Nearly all of the river and stream miles assessed support aquatic life, swimming, and fish consumption. Less than 1 mile of stream was threatened for aquatic life support due to elevated levels of nitrate and sulfate. Most of the surface waters are impacted by nonpoint sources of pollution, including a closed landfill, storage tanks, orchard heaters with fuel tanks, septic systems, and fertilizers and pesticides that are applied for agriculture. The tribal lands are also extremely susceptible to erosion, and sedimentation has been the most significant problem in surface waters.

Ground Water Quality

There are four distinct aquifers that supply ground water. Three wells that are used to supply domestic water have elevated levels of nitrate, although none of the concentrations exceeded Safe Drinking Water Act regulations. The most significant threats to ground water quality are nitrate and bacteria from individual sewage disposal systems and chemicals used in agriculture. Elevated levels of iron and turbidity present aesthetic problems.

Programs To Restore Water Quality

The tribe supports several water pollution control programs, including a Water Quality Management Program, the Wellhead Protection Plan, the Nonpoint Source Management Plan, and the Multi-Media Environmental Assessment. The Wetlands Management Plan provides a framework for protecting wetland and riparian resources. The Agribusiness Environmental Management Plan recommends Best Management Practices to minimize the impact of agricultural activities on water resources and the environment. The Air Quality Management Plan addresses air quality issues that are related to deposition and recycling of pollutants between the atmosphere, water, and land. The tribe is attempting to establish a Tribal Environmental Protection Agency.

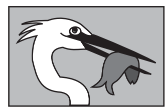
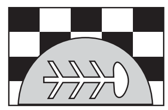
Programs To Assess Water Quality

The surface water monitoring program has been active since 1996 due to a Section 106 grant under the Clean Water Act. Most of the monitoring has focused on Pauma Creek, as it is used for agriculture and also impacts the aquifer that supplies drinking water. Monthly sampling was conducted at one location upstream of the reservation. Some monitoring has also been conducted at other streams and springs. Tribal personnel have been largely responsible for sampling and testing the water as well as maintaining a database. A consulting firm provided assistance and managed the final database that was used to generate the 2000 305(b) report. Five wells are sampled as part of the ground water monitoring effort. The tribe is currently developing water quality standards. This process will include the establishment of designated beneficial uses or the adoption of California water quality standards.

Additional surface water, soil, and ground water monitoring was conducted under the General Assistance Program. Under this program, an EPA-approved laboratory conducted analyses for metals and other inorganic compounds.

Wetlands were mapped using the National Wetland Inventory database, although sufficient detail was not included to delineate the total area of wetlands in the tribal lands. Full implementation of wetland protection activities depends upon procurement of additional funds.

Individual Use Support for the Pauma Band of Mission Indians

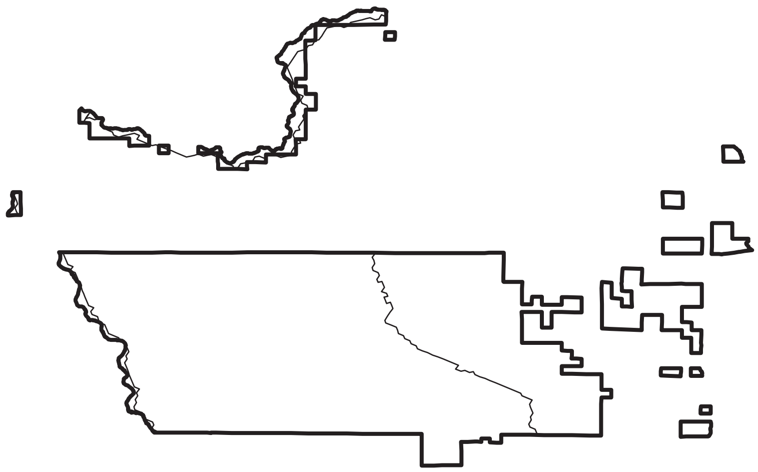
Designated Use[a]	Total Miles Assessed	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 23)[b]			
	23	100	0
	23	100	0
	23	100	0

[a] A subset of Pauma Band of Mission Indians' designated uses appear in this figure. Refer to the tribe's 305(b) report for a full description of the tribe's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Round Valley Indian Tribes



Location of Reservation

For a copy of the Round Valley Indian Tribes' 2000 305(b) report, contact:

Steven Casebier, Director
Tribal Environmental Protection Agency
Round Valley Indian Tribes
P.O. Box 448
Covelo, CA 95428
(707) 983-8478

Surface Water Quality

The Round Valley Indian Tribes consist of seven tribes (Yuki, Pit River, Achomawi, Pomo-Concow, Wailaki, Nomelaki, and Wintun). Approximately 800 people live on the Round Valley Indian Reservation, which is located in northern California. The reservation consists of 45 square miles of land that support rural housing, ranching, and farming. The surface water consists of 424 miles of river, 1.5 acres of reservoir, and an indeterminate amount of wetlands. The Eel River forms the western boundary of the reservation and is the principal drainage for the region.

The State Water Resources Control Board (SWRCB) has not designated beneficial uses for the stream reaches within the reservation. Surface waters are currently used for ground-water recharge, wildlife habitat, and recreation. Flow through the reservation has decreased greatly as a result of upstream diversions by industrial facilities. Low flows may result in high water temperature and low dissolved oxygen conditions that impair fish populations. However, the Eel River and its tributaries support their existing uses. The primary sources of contamination are agriculture, grazing, timber operations, resource extraction, and hydrologic and habitat modification. High levels of iron have been detected.

The tribes did not report on the condition of wetlands.

Ground Water Quality

Ground water is the primary source of water supporting the reservation. Approximately 230 wells supply irrigation, stock, and drinking water. Increased ground water withdrawals outside of the reservation have lowered the ground water table and caused some wells to dry up intermittently. High levels of turbidity, iron, manganese, and sulfur have been measured in the ground water. There are no known occurrences of ground water contamination on the reservation. However, the potential does exist from storage tanks, unregulated dumping, septic tanks, mine drainage, biocide and fertilizer use, and sewage lagoons. Leachate from a community dump that receives solid wastes and sludge from the Covelo sewage treatment plant may enter the ground water system and appear in wells.

The levels of iron and manganese detected in surface and ground water can be removed through treatment and do not necessarily preclude the water from being used.

Programs To Restore Water Quality

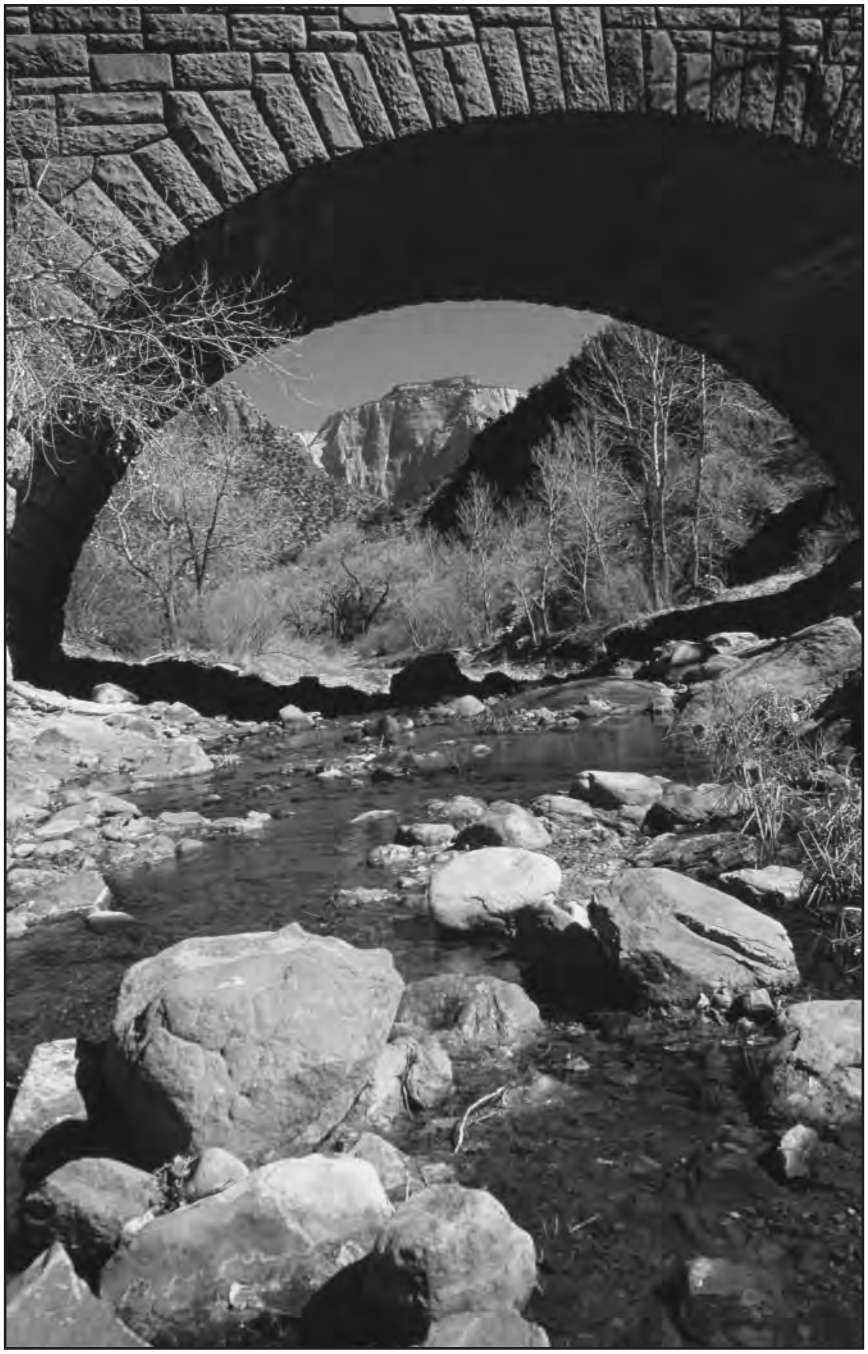
The tribes lack any pollution prevention or control programs. Only six regulated point source discharges occur within the reservation. The Regional Board oversees monitoring and remediation at one of these sites. The tribe is seeking Section 106 Authority from the EPA, which will permit them to adopt water quality standards and regulate waste discharges to waters within their jurisdiction. Until then, the tribes will continue to use water quality standards from the EPA and SWRCB for domestic use, irrigation, industrial use, and fishing.

The tribes received a Set-Aside Grant from the Indian Health Services to upgrade their sewage treatment systems. They also used General Assistance Program (GAP) funds to certify tribal members as water treatment plant operators. In the future, they will be using GAP funding to develop a tribal Sewage Treatment Plant.

Soil excavation and removal alleviated contamination occurring from an old sawmill. Soils in this area were contaminated with petroleum hydrocarbons, pentachlorophenol (a known carcinogen), and tetrachlorophenol.

Programs To Assess Water Quality

A monitoring program began in 1997 and is highly dependent on continued funding for implementation as a permanent program. The data contained in this report were collected from 10 surface water sites and 10 wells. The samples were analyzed for physical and chemical parameters, including boron, iron, and manganese. All ground water monitoring sites are sampled quarterly. In the future, the tribes would like to incorporate total and fecal coliform bacteria testing for drinking water wells and areas of suspected septic system failure.

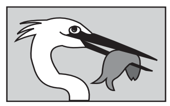


Kim Ferguson, Zion National Park, UT

Commission Summaries

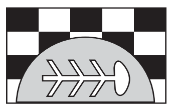
Interstate Commissions provide a forum for joint administration of large waterbodies that flow through or border multiple states and other jurisdictions, such as the Ohio River and the Delaware River and Estuarine System. Each Commission has its own set of objectives and protocols, but the Commissions share a cooperative framework that embodies many of the principles advocated by EPA's watershed management approach. For example, Interstate Commissions can examine and address factors throughout the basin that contribute to water quality problems without facing obstacles imposed by political boundaries. The information presented here summarizes the data submitted by four Interstate Commissions in their 2000 Section 305(b) reports.

Section 305(b) of the CWA requires that the states biennially assess their water quality for attainment of the fishable and swimmable goals of the Act and report the results to EPA. The states, participating tribes, and other jurisdictions measure attainment of the CWA goals by determining how well their waters support their designated beneficial uses. EPA encourages states, tribes, and other jurisdictions to assess waterbodies for support of the following individual beneficial uses:



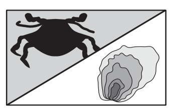
Aquatic Life Support

The waterbody provides suitable habitat for protection and propagation of desirable fish, shellfish, and other aquatic organisms.



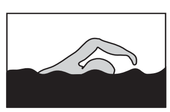
Fish Consumption

The waterbody supports fish free from contamination that could pose a human health risk to consumers.



Shellfish Harvesting

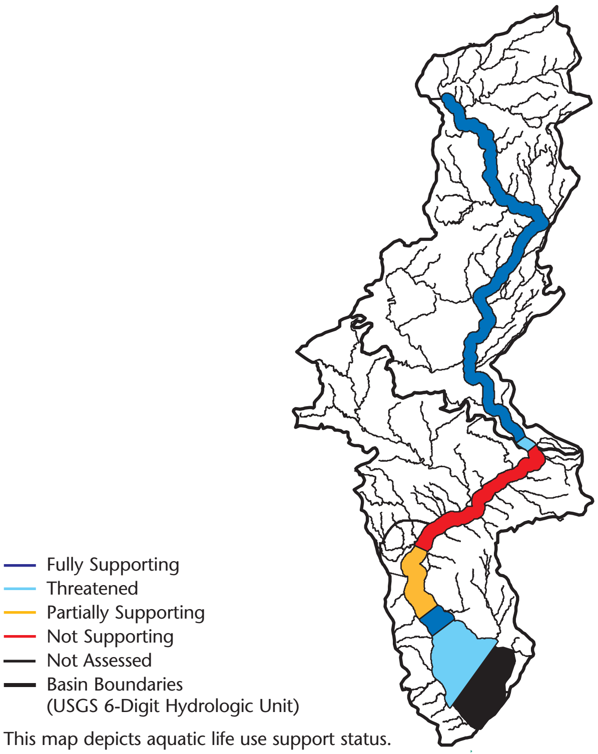
The waterbody supports a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers.



Primary Contact Recreation – Swimming

People can swim in the waterbody without risk of adverse human health effects (such as catching waterborne diseases from raw sewage contamination).

Delaware River Basin Commission



This map depicts aquatic life use support status.

For a copy of the DRBC 2000 305(b) report, contact:

Jonathan Zangwill
DRBC
25 State Police Road
P.O. Box 7360
West Trenton, NJ 08628
(609) 883-9500
e-mail: zangwill@drbc.state.nj.us

Surface Water Quality

The Delaware River Basin covers portions of Delaware, New Jersey, New York, and Pennsylvania. For the purposes of the 305(b) report, the Delaware River Basin Commission (DRBC) has jurisdiction over this area, which consists of a 206-mile freshwater segment, a 25-square mile tidal freshwater reach, and the 841-square mile Delaware Estuary/Bay. Nearly 8 million people live in the basin, which is also home to industrial facilities and the port facilities of Philadelphia, Camden, and Wilmington.

Rivers within the Delaware River Basin are generally of good quality. Almost all fully support aquatic life and swimming. Most of the assessed estuarine area also supports aquatic life (91%) and swimming (100%). All surface water is impaired for fish consumption due to statewide advisories issued by New York and New Jersey. The New Jersey advisory calls for limited consumption of American eel and striped bass. The New York advisory covers all sport fish in the state's freshwaters. This is the first year the states' fish consumption advisories were considered, causing results that differ significantly from those reported in previous years. Fish samples taken from the estuary often contain PCBs. Eighty-five percent of the assessed estuarine area supports shellfish consumption.

Ground Water Quality

The DRBC did not report on the quality of ground water.

Programs To Restore Water Quality

The DRBC and the states have successfully reduced point sources of oxygen-demanding materials and other pollutants. Water quality has improved due to the reduction of conventional pollutants. However, the levels of toxic pollutants in water, sediment, and fish continue to be high, particularly in the tidal portion. The DRBC is developing a model to evaluate the impacts of point and nonpoint sources of pollutants on dissolved oxygen concentrations.

The first phase of the Estuary Toxics Management Program was completed in January 2000. The results of this study showed that the assimilative capacity of the estuary for dichloroethane, tetrachloroethane, and chronic and acute toxicity has been exceeded. Waste-load allocations for these parameters will be used by NPDES permitting agencies for establishing effluent limitations. In the next phase, Total Maximum Daily Loads (TMDLs) will be developed for PCBs, pesticides, and metals.

Programs To Assess Water Quality

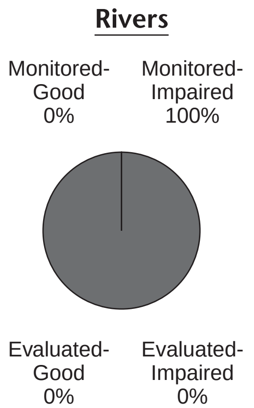
The Lower Delaware Monitoring Program collects chemical and biological data at 20 fixed river locations and 22 tributaries. During the summer of 1999, the freshwater portion of the lower Delaware was sampled several times at 22 stations for conventional parameters. The DRBC may revise the monitoring program in an effort to have the lower Delaware River designated as a “National Wild and Scenic and Recreational” river. A 1999 report recommended that fecal coliform and enterococcus be added to the monitoring effort. The DRBC is also developing an index of biotic integrity, assessing the impact of aquatic vegetation on water quality, and developing a list of invasive species along the river corridor.

The Comprehensive Conservation and Management Plan for the Delaware Estuary includes a sampling program that involves 18 stations. These stations are sampled 12 times each year for bacteria, heavy metals, nutrients, and conventional pollutants. Four additional sites have been added since 1999 and are sampled seven times per year. Since 1999, toxicity samples have been taken annually at 12 stations. Bacteriological data collected by New Jersey’s Shellfish Program were used to assess swimming support on the New Jersey side of the bay. More than 1,000 samples were collected at 142 stations to monitor the shellfish beds.

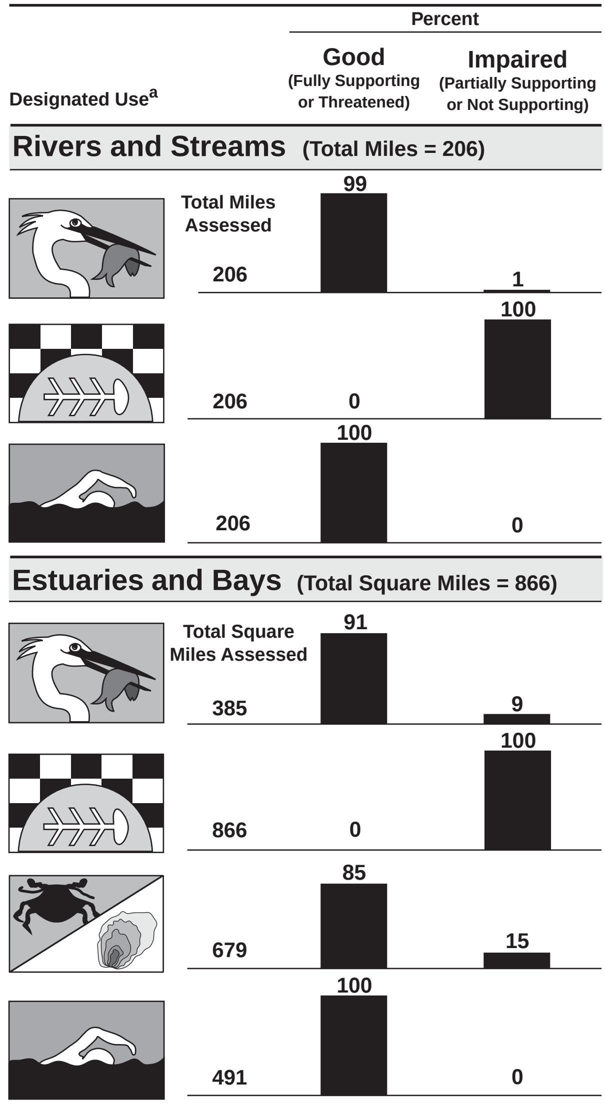
The DRBC may revise its water quality standards for the freshwater zone. Enterococcus may replace fecal coliform because it is a more sensitive measure of bacterial water quality. The pH standard may also be increased from 8.5 to 9.0 to be consistent with federal and state regulations. A standard of 9.0 pH units was applied for this assessment.

Data Quality

Commissions report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Summary of Use Support that were based on each type of data.

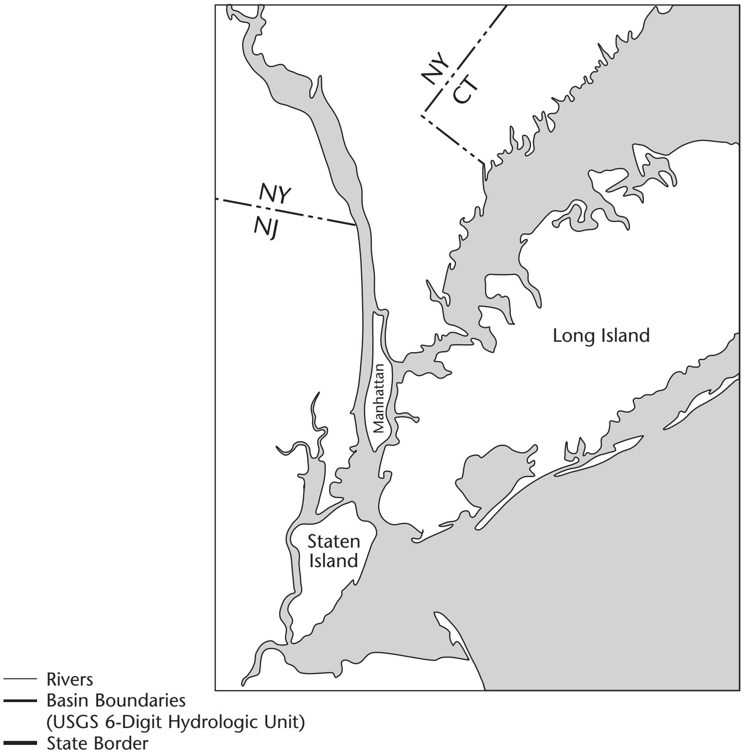


Individual Use Support in the Delaware River Basin



[a] A subset of the Delaware River Basin Commission’s designated uses appear in this figure. Refer to the commission’s 305(b) report for a full description of the commission’s uses.

Interstate Environmental Commission



For a copy of the Interstate Environmental Commission 2000 305(b) report, contact:

Peter L. Sattler
Principal Environmental Planner
Interstate Environmental Commission
311 West 43rd Street - Suite 201
New York, New York 10036
(212) 582-0380
e-mail: psattler@iec-nynjct.org

Surface Water Quality

The Interstate Environmental Commission (IEC; formerly the Interstate Sanitation Commission) is a joint agency between New York, New Jersey, and Connecticut. It serves as a regulatory and enforcement agency for 798 square miles of estuarine waters shared by the three states. The majority of assessed estuarine area supports aquatic life (85%) and swimming (76%). Eight percent of the assessed estuaries cannot attain their designated use of swimming. Organic compounds, nutrients, and pathogens are commonly cited pollutants. Some of the waters are severely oxygen depleted as a result of nutrient and organic enrichment. Other issues that threaten water quality include toxic contamination of sediments and pollution from combined sewer overflow (CSOs).

A majority of the assessed estuaries are impaired for fish consumption (83%) and shellfish consumption (63%). All three states have promulgated seasonal closures and restrictions on size and number for several finfish species. Habitat loss, chemical contamination, oxygen depletion, and excessive fishing contributed to these restrictions. Specific contaminants include pathogens, metals, pesticides, and inorganic compounds. In 1986, the IEC established a disinfection requirement for discharges to district waters. This reduced bacterial contamination and opened thousands of acres of shellfish beds for harvest on a year-round basis.

In 2000, there were 209 beach closures at 84 public bathing beaches. Rain, urban runoff, CSOs, and washed-up debris caused elevated levels of bacteria that led to the beach closings.

Ground Water Quality

The IEC does not have jurisdiction over ground water.

Programs To Restore Water Quality

The IEC enforces water quality regulations through sampling, analyses, research, legal activities, and coordination with the states and EPA. The IEC also provides technical assistance and support to its member states and disseminates information to the public and legislative bodies.

The IEC has established more stringent permit requirements to control and prevent pollutants from emptying into tri-state waterways. It also was instrumental in obtaining improved operational procedures at the Fresh Kills Landfill to prevent garbage from washing up along shorelines.

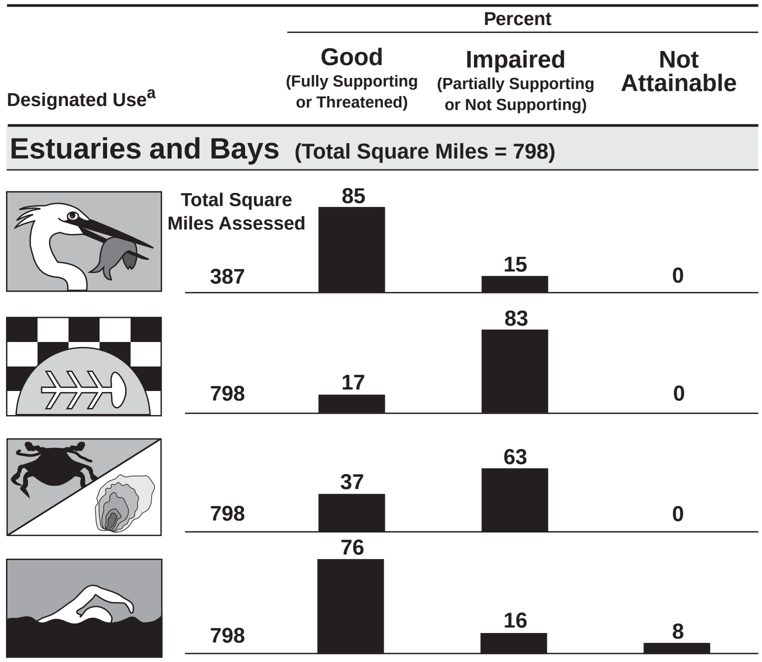
In 1999, there were 94 releases of raw or partially treated wastewater. The IEC chairs the Regional Bypass Work Group that developed a model to identify areas affected by unplanned bypasses of inadequately treated discharges. This group also developed regional notification and tracking procedures to protect bathers and shellfisheries. A 1997 regulation amended to the IEC Water Quality Regulations requires that IEC receive advance notification of all planned sewage bypasses.

Programs To Assess Water Quality

The IEC, in conjunction with other agencies, participates in several ambient water quality surveys. Each summer, the Long Island Sound Study monitors dissolved oxygen, temperature, salinity, and chlorophyll *a*. Since 1998, water samples have been collected and delivered to Nassau County Health Department for identification of phytoplankton species. Since 1999, additional samples have been collected to determine the presence of a toxic dinoflagellate, *Pfiesteria piscicida*. The IEC also conducts surveys of shellfish-harvesting waters in the New Jersey portion of western Raritan and Sandy Hook Bays to assess these waters under worst-case conditions.

The IEC coordinates its compliance monitoring with EPA and the states' environmental departments. The IEC regularly samples discharges from municipal and industrial facilities that are permitted under the NPDES program and are subject to IEC Water Quality Regulations. Effluent surveys are conducted at approximately 72 municipal treatment facilities several times a year. Five investigations are conducted each year at industrial facilities.

Individual Use Support for the Interstate Environmental Commission



[a] A subset of the Interstate Environmental Commission's designated uses appear in this figure. Refer to the commission's 305(b) report for a full description of the commission's uses.

Note: All waters under the jurisdiction of the Interstate Environmental Commission are estuarine.

Ohio River Valley Water Sanitation Commission (ORSANCO)

For a copy of the ORSANCO 2000 305(b) report, contact:

Public Information Department
Ohio River Valley Water Sanitation Commission
5735 Kellogg Avenue
Cincinnati, Ohio 45228-1112

Surface Water Quality

The Ohio River provides drinking water to nearly 3 million people. It also serves as a transportation route, recreational water body, habitat for aquatic life, and water source for manufacturing and power generation. More than 25 million people reside in its river basin. The Ohio River flows through Pennsylvania and forms part of the state boundaries for Ohio, Indiana, Illinois, West Virginia, and Kentucky. The Ohio River Valley Water Sanitation Commission (ORSANCO) is an interstate agency responsible for abating existing pollution and preventing further degradation in the Ohio River basin.

The majority of assessed river miles support aquatic life (94%). The most common contaminants cited for impairing rivers include PCBs, priority organics, and mercury. Sources of contamination include agriculture and industrial and municipal point sources. Approximately 95% of the assessed miles are impaired for swimming. This estimate may be biased as contaminated areas are emphasized when monitoring for swimming support. In addition to the sources mentioned above, there are also 49 combined sewer systems located along the Ohio River that contribute significant amounts of bacteria. ORSANCO estimated 1,000 combined sewer overflows (CSOs) on the Ohio River, which is 10% of the national total.

Fish consumption use was based primarily on the states' issuance of fish consumption advisories. The entire Ohio River is covered by at least one restricted fish consumption advisory due to PCBs, mercury, or chlordane. During 1999, there were several reports of fish kills that are most likely a result of point source discharge.

Ground Water Quality

ORSANCO does not have jurisdiction over ground water in the Ohio River basin.

Programs To Restore Water Quality

In 1992, an interagency group developed a CSO program to coordinate the states' strategies. In 1993, ORSANCO added CSO requirements to the Pollution Control Standards for the Ohio River and adopted a strategy for monitoring impacts of CSOs on water quality. ORSANCO has several wet weather studies aimed at quantifying CSO and nonpoint sources of pollution. These projects also quantify improvements in water quality from CSO controls.

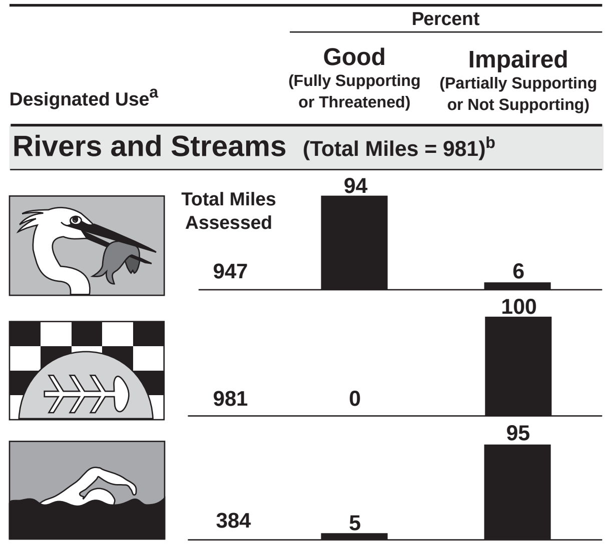
The Ohio River Watershed Pollutant Reduction Program addresses pollutants, such as PCBs and chlordane, on a watershed basis. The objectives of the program are to assess the extent of impairment, identify sources and their relative impacts, and recommend abatement strategies.

Programs To Assess Water Quality

ORSANCO conducts several monitoring programs on behalf of the states. The Bimonthly Sampling Program analyzes grab samples from 17 stations every 2 months. In addition, quarterly samples are analyzed for metals and selenium. The Dissolved Metals Sampling Program analyzes total and dissolved metal concentrations from five stations every 2 months. The Contact Recreation Season Monitoring Program samples monthly at six stations for fecal coliform and *E. coli* bacteria. In addition, ORSANCO receives bacteria monitoring data from seven public water utilities. The Ohio River Watershed Pollutant Reduction Program analyzes samples for dioxin. The Organics Detection System includes twelve stations at public water supply intakes. Water samples are collected daily and are analyzed for volatile organic compounds. Three of the stations give concentration data, and nine report whether the compounds are detected or not. This network is used primarily for detecting spills.

Biological monitoring includes fish population surveys and fish tissue analyses. ORSANCO is using the Modified Index of Well Being (MIWB) to assess fish population data until they develop a more suitable index based on the Index of Biotic Integrity. The MIWB incorporates species diversity, biomass, and total fish counts. Fish tissue is analyzed for some metals, PCBs, dioxins, and pesticides. ORSANCO is also working to develop a macroinvertebrate index.

Individual Use Support in the Ohio River Valley Basin

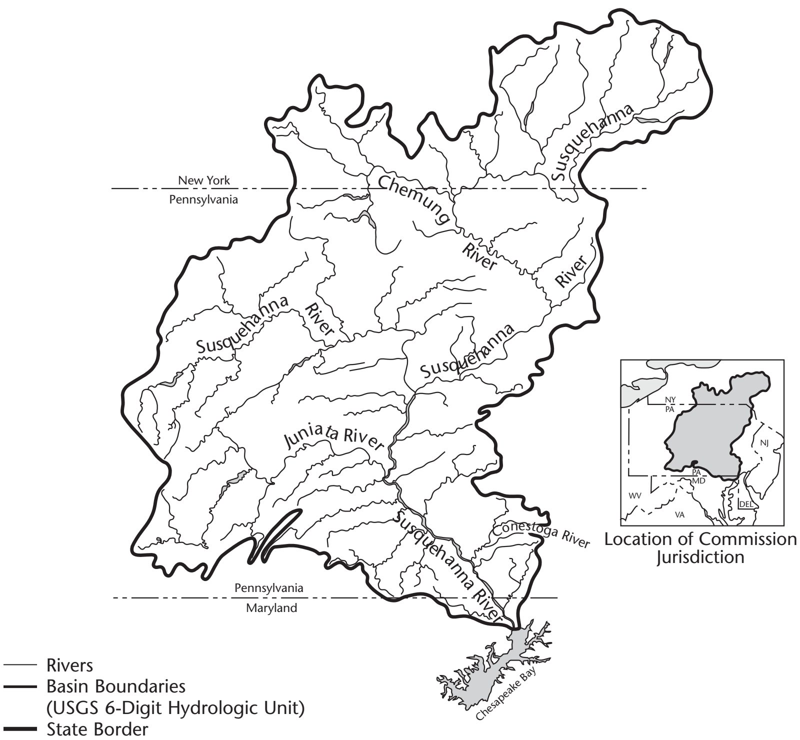


[a] A subset of ORSANCO's designated uses appear in this figure. Refer to the commission's 305(b) report for a full description of the commission's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Note: Figures may not add to 100% due to rounding.

Susquehanna River Basin Commission



For a copy of the SRBC 2000 305(b) report, contact:

Jen Hoffman
Susquehanna River Basin Commission
1721 N. Front Street
Harrisburg, PA 17102
(717) 238-0425
e-mail: Jhoffman@srbc.net

Surface Water Quality

The Susquehanna River drains 27,510 square miles from portions of New York, Pennsylvania, and Maryland. It contributes over half of the freshwater inflow to the Chesapeake Bay. The surface water in the river basin consists of 31,193 miles of rivers and 79,687 acres of lakes. The Susquehanna River Basin Commission (SRBC) assessed over 400 miles of rivers and streams for the 2000 305(b) report. The SRBC did not assess lake quality during this cycle.

The majority of assessed river miles support aquatic life (71%) and swimming (100%). Major causes of impairment include metal and nutrient enrichment, siltation, and habitat alteration. These impairments arise from a variety of sources, including agriculture, acid mine drainage, hydrologic modification, municipal point sources, and urban runoff.

Ground Water Quality

Studies have shown that man-made problems affecting ground water quality are generally confined to a small number of wells. Many of the ground water contaminants occur naturally (e.g., dissolved solids). Contamination occurs from various metals and inorganic compounds, including chromium, iron, lead, manganese, sulfate, and nitrate.

Programs To Restore Water Quality

The SRBC coordinates all activities in the Susquehanna River basin that relate to water quality management and compliance. The point source program is focused on upgrading and developing public and private waste treatment facilities. The SRBC also reviews discharge permits and provides comments to agencies on matters within their jurisdiction. The nonpoint source program focuses on controlling stormwater runoff and pollution by fulfilling the objectives of the Chesapeake Bay Program.

Programs To Assess Water Quality

The data contained in this report originate from the 1999 Interstate Streams Water Quality Network survey and from past subbasin surveys. The SRBC coordinates water quality standards among states to avoid conflicts over interstate streams. The Interstate Water Quality Monitoring Network monitors the interstate streams for chemical and biological parameters. Benthic macroinvertebrate populations are used to assess biological conditions. Thirty-one streams are monitored as part of this program. Depth-integrated samples are collected quarterly or annually depending on the stream's potential for degradation.

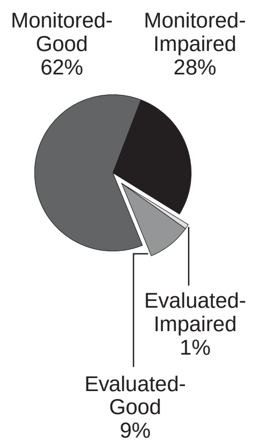
There are six major subbasins in the Susquehanna River basin. Each sampling cycle lasts 12 years, with 2 years of sampling per subbasin. During the first year, the subbasin is sampled intensively for 3 weeks between midsummer and early fall. Grab samples are usually collected, but depth-integrated samples can be taken from bridges on larger streams. Each site is given a habitat assessment score based on several physical and chemical parameters. The results from the first year of monitoring are used to select watersheds that will be targeted during the second year.

The SRBC obtains ground water quality data from withdrawal permits, investigations, cooperative studies, and ambient monitoring programs. Anyone who proposes to withdraw more than 100,000 gallons per day for any consecutive 30-day period must obtain approval to do so. As part of the approval process, the applicant is obligated to sample the ground water and report on its quality every 3 years.

Data Quality*

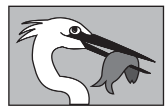
Commissions report whether their assessments are based on recent monitoring data or older, more qualitative evaluated data. This pie chart shows the proportions of waters assessed for Summary of Use Support that were based on each type of data.

Rivers



* Data represent aquatic life use support.

Individual Use Support in the Susquehanna River Basin

Designated Use[a]	Total Miles Assessed	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 31,193)[b]			
	428	71	29
	428	100	0

[a] A subset of the SRBC's designated uses appear in this figure. Refer to the commission's 305(b) report for a full description of the commission's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

U.S. Environmental Protection Agency Regional Offices

For additional information about water quality in your region, please contact your EPA Regional Section 305(b) Coordinator listed below:

Diane Switzer
EPA Region 1
60 Westview Street
Lexington, MA 02421
(781) 860-4377
switzer.diane@epa.gov
Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont

Heather Barnhart
EPA Region 2
DEPP-CEPB 24th Floor
290 Broadway
New York, NY 10007
barnhart.heather@epa.gov
(202) 637-3793
New Jersey, New York, Puerto Rico, Virgin Islands

Mark Barath
EPA Region 3
1650 Arch Street
Philadelphia, PA 19103-2029
barath.mark@epa.gov
(215) 814-2759
Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia

David Melgaard
EPA Region 4
61 Forsyth Street
Atlanta, GA 30303
(404) 562-9265
melgaard.david@epa.gov
Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Dave Stoltenberg
EPA Region 5
Water Division (WT-15J)
77 West Jackson Boulevard
Chicago, IL 60604-3590
(312) 353-5784
stoltenberg.david@epa.gov
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

Paul Koska
EPA Region 6 (6WQ-EW)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
(214) 665-8357
koska.paul@epa.gov
Arkansas, Louisiana, New Mexico, Oklahoma, Texas

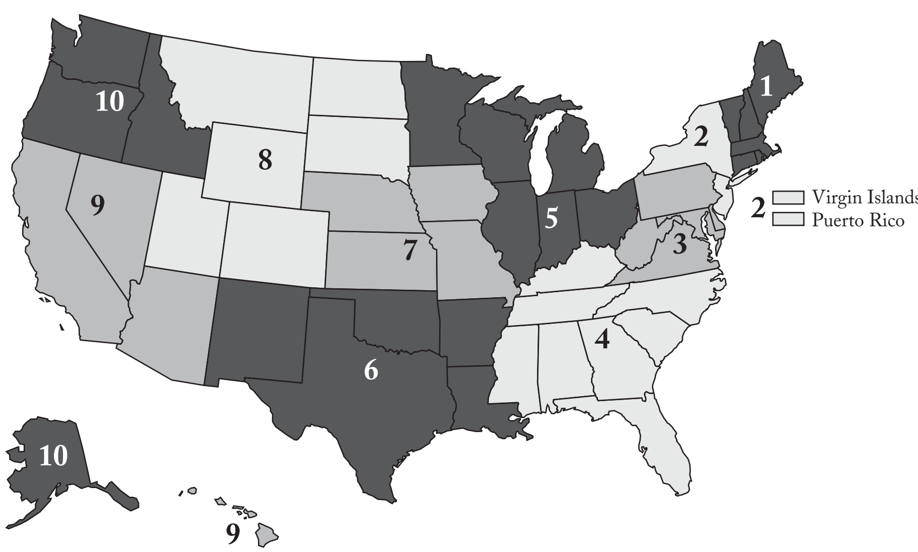
Robert Steiert
EPA Region 7
901 North Fifth Street
Kansas City, KS 66101
(913) 551-7433
steiert.robert@epa.gov
Iowa, Kansas, Missouri, Nebraska

Tina Laidlaw
EPA Region 8
999 18th Street, Suite 500
Denver, CO 80202-2450
(303) 312-6880
laidlaw.tina@epa.gov
Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

Janet Hashimoto
EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 744-1933
hashimoto.janet@epa.gov
Arizona, California, Hawaii, Nevada, American Samoa, Guam

Theresa Pimentel
EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-0257
pimentel.theresa@epa.gov
Alaska, Idaho, Oregon, Washington

U.S. EPA Regions



For additional information about water quality in your state or other jurisdiction, please contact your Section 305(b) Coordinator listed in Chapters 10, 11, or 12.

Table No.	Sheet Name	File Name	Description	Size Unit
A-1	TableA-1	AppendA.xls	Total Miles of Rivers and Streams in the Nation	Mile
A-2	TableA-2	AppendA.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers and Streams	Mile
A-3a	TableA-3a	AppendA.xls	Aquatic Life Use Support in Assessed Rivers and Streams	Mile
A-3b	TableA-3b	AppendA.xls	Fish Consumption Use Support in Assessed Rivers and Streams	Mile
A-3c	TableA-3c	AppendA.xls	Swimming Use Support in Assessed Rivers and Streams	Mile
A-3d	TableA-3d	AppendA.xls	Secondary Contact Use Support in Assessed Rivers and Streams	Mile
A-3e	TableA-3e	AppendA.xls	Drinking Water Use Support in Assessed Rivers and Streams	Mile
A-3f	TableA-3f	AppendA.xls	Agriculture Use Support in Assessed Rivers and Streams	Mile
A-4	TableA-4	AppendA.xls	Leading Pollutants and Stressors Impairing Assessed Rivers and Streams	Mile
A-5	TableA-5	AppendA.xls	Leading Sources Impairing Assessed Rivers and Streams	Mile
B-1	TableB-1	AppendB.xls	Total Lake, Reservoir, and Pond Acres in the Nation	Acre
B-2	TableB-2	AppendB.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds	Acre
B-3a	TableB-3a	AppendB.xls	Aquatic Life Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre
B-3b	TableB-3b	AppendB.xls	Fish Consumption Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre
B-3c	TableB-3c	AppendB.xls	Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre
B-3d	TableB-3d	AppendB.xls	Secondary Contact Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre
B-3e	TableB-3e	AppendB.xls	Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre

Table No.	Sheet Name	File Name	Description	Size Unit
B-3f	TableB-3f	AppendB.xls	Agriculture Use Support in Assessed Lakes, Reservoirs, and Ponds	Acre
B-4	TableB-4	AppendB.xls	Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs, and Ponds	Acre
B-5	TableB-5	AppendB.xls	Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds	Acre
C-1	TableC-1	AppendC.xls	Total Estuarine and Ocean Shoreline Waters in the Nation	Sq. Mi/Mile
C-2	TableC-2	AppendC.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Estuaries	Sq. Mile
C-3a	TableC-3a	AppendC.xls	Aquatic Life Use Support in Assessed Estuaries	Sq. Mile
C-3b	TableC-3b	AppendC.xls	Fish Consumption Use Support in Assessed Estuaries	Sq. Mile
C-3c	TableC-3c	AppendC.xls	Shellfishing Use Support in Assessed Estuaries	Sq. Mile
C-3d	TableC-3d	AppendC.xls	Swimming Use Support in Assessed Estuaries	Sq. Mile
C-3e	TableC-3e	AppendC.xls	Secondary Contact Use Support in Assessed Estuaries	Sq. Mile
C-4	TableC-4	AppendC.xls	Leading Pollutants and Stressors Impairing Assessed Estuaries	Sq. Mile
C-5	TableC-5	AppendC.xls	Leading Sources Impairing Assessed Estuaries	Sq. Mile
C-6	TableC-6	AppendC.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Ocean Shoreline Waters	Mile
C-7a	TableC-7a	AppendC.xls	Aquatic Life Use Support in Assessed Ocean Shoreline Waters	Mile
C-7b	TableC-7b	AppendC.xls	Fish Consumption Use Support in Assessed Ocean Shoreline Waters	Mile
C-7c	TableC-7c	AppendC.xls	Shellfishing Use Support in Assessed Ocean Shoreline Waters	Mile
C-7d	TableC-7d	AppendC.xls	Swimming Use Support in Assessed Ocean Shoreline Waters	Mile

Table No.	Sheet Name	File Name	Description	Size Unit
C-7e	TableC-7e	AppendC.xls	Secondary Contact Use Support in Assessed Ocean Shoreline Waters	Mile
C-8	TableC-8	AppendC.xls	Leading Pollutants and Stressors Impairing Assessed Ocean Shoreline Waters	Mile
C-9	TableC-9	AppendC.xls	Leading Sources Impairing Assessed Ocean Shoreline Waters	Mile
D-1	TableD-1	AppendD.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Wetlands	Acre
D-2	TableD-2	AppendD.xls	Leading Pollutants and Stressors Impairing Assessed Wetlands	Count
D-3	TableD-3	AppendD.xls	Leading Sources Impairing Assessed Wetlands	Count
D-4	TableD-4	AppendD.xls	Leading Sources of Recent Wetlands Losses	Count
D-5	TableD-5	AppendD.xls	Development of Wetland Water Quality Standards by States, Tribes, and Territories	Count
E-1	TableE-1	AppendE.xls	Number of Fish Consumption Advisories (from the National Listing of Fish and Wildlife Advisories)	Count
E-2	TableE-2	AppendE.xls	Number of Fish Advisories Caused by Individual Pollutants (from the National Listing of Fish and Wildlife Advisories)	Count
E-3	TableE-3	AppendE.xls	Shellfish Harvesting Restrictions due to Pathogens Reported by States, Territories, and Commissions	Count/Sq. Mi
E-4	TableE-4	AppendE.xls	Sources Associated with Shellfish Harvest Restrictions due to Pathogens	Count/Sq. Mi
E-6	TableE-6	AppendE.xls	Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions	Count
E-10	TableE-10	AppendE.xls	Sediment Contamination Reported by States, Tribes, Territories, and Commissions	Count
F-1	TableF-1	AppendF.xls	Total Miles of Great Lakes Shoreline in the Nation	Mile
F-2	TableF-2	AppendF.xls	Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Great Lakes Shoreline	Mile

Table No.	Sheet Name	File Name	Description	Size Unit
F-3a	TableF-3a	AppendF.xls	Aquatic Life Use Support in Assessed Great Lakes Shoreline	Mile
F-3b	TableF-3b	AppendF.xls	Fish Consumption Use Support in Assessed Great Lakes Shoreline	Mile
F-3c	TableF-3c	AppendF.xls	Swimming Use Support in Assessed Great Lakes Shoreline	Mile
F-3d	TableF-3d	AppendF.xls	Secondary Contact Use Support in Assessed Great Lakes Shoreline	Mile
F-3e	TableF-3e	AppendF.xls	Drinking Water Use Support in Assessed Great Lakes Shoreline	Mile
F-3f	TableF-3f	AppendF.xls	Agriculture Use Support in Assessed Great Lakes Shoreline	Mile
F-4	TableF-4	AppendF.xls	Leading Pollutants and Stressors Impairing Assessed Great Lakes Shoreline	Mile
F-5	TableF-5	AppendF.xls	Leading Sources Impairing Assessed Great Lakes Shoreline	Mile

2000 Water Quality Report Table A-1 Total Miles of Rivers and Streams in the Nation

Jurisdiction	**Total Miles**	**Assessed Miles**	**Percent Assessed**	**Comment**
Alabama	77,242	2,628	3%	
Alaska	365,000	1,421	0%	
American Samoa	169	17	10%	
Arizona	127,505	4,052	3%	Included ephemeral streams and tribal streams
Arkansas	87,617	8,112	9%	
Big Sandy Rancheria		0		
California	211,513	25,269	12%	
Colorado	107,403	41,837	39%	
Connecticut	5,830	1,207	21%	
Delaware	2,506	2,506	100%	
Delaware River Basin	206	206	100%	
District of Columbia	39	38	98%	
Florida	51,858	10,159	20%	
Georgia	70,150	9,996	14%	
Guam	228	167	73%	
Hawaii	3,905	3,904	100%	
Hoopa Valley Tribe	320	90	28%	Total river miles increased due to land acquistions containing water resources.
Idaho	115,595	17,333	15%	
Illinois	87,110	15,587	18%	
Indiana	35,673	17,541	49%	
Iowa	71,665	6,390	9%	
Kansas	134,338	18,236	14%	
Kentucky	49,105	9,923	20%	
La Posta Band		0		Available data do not support quanitative or qualitative assessment.
Louisiana	66,294	7,359	11%	
Maine	31,752	31,752	100%	
Maryland	8,789	8,617	98%	Used a more accurate state estimate of total waters in 2000
Massachusetts	8,229	1,496	18%	
Michigan	51,438	13,117	26%	
Minnesota	91,944	11,403	12%	
Mississippi	84,003	14,972	18%	
Missouri	51,978	21,615	42%	
Montana	176,750	11,443	6%	
N. Mariana Islands	59	0	0%	
Nebraska	83,258	6,500	8%	

Table A-1 Total Miles of Rivers and Streams in the Nation

Jurisdiction	Total Miles	Assessed Miles	Percent Assessed	Comment
Nevada	143,578	1,564	1%	
New Hampshire	10,881	2,677	25%	
New Jersey	8,050	330	4%	
New Mexico	110,741	4,284	4%	
New York	52,337	2,914	6%	NY reports that 49,423 miles were either "not assessed" or "fully supporting". For reporting purposes, these waters will be termed "not assessed"
North Carolina	37,662	37,662	100%	
North Dakota	54,427	14,965	27%	
Ohio	29,113	8,232	28%	
Ohio River Valley	981	981	100%	Appears that all miles were assessed
Oklahoma	78,778	14,071	18%	
Oregon	115,472	53,735	47%	
Pauma Band	23	23	100%	
Pennsylvania	83,161	35,496	43%	Stepped up efforts to assess waters previously unsurveyed.
Puerto Rico	5,394	5,394	100%	
Rhode Island	1,383	649	47%	
Round Valley Tribes	384	35	9%	
South Carolina	29,794	15,405	52%	
South Dakota	9,937	3,564	36%	
Tennessee	61,075	24,326	40%	
Texas	191,228	15,101	8%	
Utah	85,916	10,519	12%	
Vermont	7,099	5,462	77%	
Virginia	49,460	9,190	19%	Based on revisions submitted March 2001 - on request of State and Region, includes monitoring data only
Washington	70,439	70,439	100%	
West Virginia	32,278	11,550	36%	
Wisconsin	55,000	23,530	43%	No citation given for total waters estimate - used 1998 value
Wyoming	108,767	2,955	3%	Wyoming discounted almost all assessments based on evaluated data - part of the state's "credible data" law.
Total	3,692,830	699,946 19.0%		

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	**Full Support - Evaluated**	**Full Support - Monitored**	**Full Support - Not Specified**	**Full Support - Total**	**Threatened - Evaluated**	**Threatened - Monitored**	**Threatened - Not Specified**	**Threatened - Total**
Alabama	698.4			698.4				0.0
Alaska	575.6	327.0		902.6	0.0	0.0		0.0
American Samoa	0.7			0.7				0.0
Arizona			3,066.0	3,066.0				0.0
Arkansas	2,809.9	4,125.8		6,935.7				0.0
Big Sandy Rancheria								
California	1,530.0	933.0	0.0	2,463.0	1,249.0	613.0	0.0	1,862.0
Colorado			40,226.0	40,226.0				0.0
Connecticut			479.4	479.4			334.2	334.2
Delaware			740.8	740.8			0.0	0.0
Delaware River Basin	0.0	0.0		0.0	0.0	0.0		0.0
District of Columbia	0.0	0.0		0.0	0.0	0.0		0.0
Florida	3,150.0	3,310.0	0.0	6,460.0	142.0	410.0	0.0	552.0
Georgia	1,058.0	2,955.0		4,013.0				0.0
Guam	1.1	22.0		23.1	17.0	64.0		81.0
Hawaii	1,194.0	60.8		1,254.7	0.0	0.0		0.0
Hoopa Valley Tribe								
Idaho	0.0	8,434.0		8,434.0	0.0	669.0		669.0
Illinois	2,225.1	5,448.9		7,674.1	18.5	50.7		69.2
Indiana			13,310.0	13,310.0			0.0	0.0
Iowa	117.5	1,585.1		1,702.6	163.3	2,620.8		2,784.0
Kansas	0.0	3,417.0		3,417.0	0.0	0.0		0.0
Kentucky	1,594.3	4,360.5		5,954.8	82.8	197.3		280.1
La Posta Band								
Louisiana	0.0	723.0		723.0	61.0	0.0		61.0
Maine	17,217.0	13,806.0		31,023.0				0.0
Maryland	1,976.3	3,429.0		5,405.3				0.0

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total
Massachusetts	326.5	153.4		479.9	28.0	19.0		47.0
Michigan		7,829.0		7,829.0		24.0		24.0
Minnesota	30.8	1,118.8		1,149.6	1,529.8	651.9		2,181.7
Mississippi			3,263.2	3,263.2			855.5	855.5
Missouri	8,287.0	2,842.5		11,129.5	65.5	98.7		164.2
Montana	1,835.1	1,023.1		2,858.2	8.1	0.0		8.1
N. Mariana Islands				0.0				0.0
Nebraska	2,159.0	582.0		2,741.0				0.0
Nevada	91.4	520.1		611.5				0.0
New Hampshire	1,814.1	419.0		2,233.1				0.0
New Jersey	0.0	121.0	0.0	121.0	0.0	0.0	0.0	0.0
New Mexico	887.7	721.1		1,608.8				0.0
New York				0.0	1,833.0			1,833.0
North Carolina	20,843.0	9,086.0		29,929.0				0.0
North Dakota	354.0	1,302.8		1,656.9	4,080.4	2,003.1		6,083.5
Ohio		3,857.2		3,857.2		631.8		631.8
Oklahoma	572.2	986.1		1,558.3	3,384.6	1,380.2		4,764.8
Oregon	16,605.0	5,687.0		22,292.0	23,506.0			23,506.0
Pauma Band		22.9		22.9				0.0
Pennsylvania			28,235.0	28,235.0				0.0
Puerto Rico	150.4	0.0		150.4	590.5	0.0		590.5
Rhode Island	94.1	337.5		431.6				0.0

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total
Round Valley Tribes				0.0				0.0
South Carolina	1,820.8	9,573.2		11,394.0				0.0
South Dakota		1,786.0		1,786.0				0.0
Tennessee	1,757.0	14,998.2		16,755.2	0.0	33.6		33.6
Texas	0.0	10,449.6		10,449.6	0.0	104.0		104.0
Utah	828.0	6,865.9		7,693.9	0.0	0.0		0.0
Vermont			3,105.3	3,105.3			1,188.4	1,188.4
Virginia		4,088.0		4,088.0		636.0		636.0
Washington	32,717.8			32,717.8				0.0
West Virginia	25.0	3,066.8	0.0	3,091.8	8.9	3,136.1	0.0	3,145.0
Wisconsin	5,010.6	1,847.4		6,858.0	5,022.0	1,612.8		6,634.8
Wyoming	0.0	2,124.1		2,124.1	1.3	377.9		379.2
Total	130,357.4	144,345.6	92,425.7	367,128.7	41,791.6	15,333.9	2,378.1	59,503.6
Percent of assessed for summary of use support	18.7%	20.7%	13.3%	52.7%	6.0%	2.2%	0.3%	8.5%

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Impaired - Evaluated	Impaired - Monitored	Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Monitored - Total
Alabama		1,929.5		1,929.5				0.0	1,929.5
Alaska	91.0	426.9		517.9	0.0	0.0		0.0	753.9
American Samoa	6.7	9.5		16.2				0.0	9.5
Arizona			986.0	986.0				0.0	0.0
Arkansas	38.7	1,138.6		1,177.3				0.0	5,264.4
Big Sandy Rancheria									
California	1,458.0	19,491.0	0.0	20,949.0				0.0	21,037.0
Colorado			1,244.0	1,244.0				0.0	0.0
Connecticut			389.4	389.4			4.2	4.2	0.0
Delaware			1,765.0	1,765.0				0.0	0.0
Delaware River Basin	0.0	206.0		206.0				0.0	206.0
District of Columbia	0.0	38.4		38.4				0.0	38.4
Florida	2,162.0	985.0	0.0	3,147.0				0.0	4,705.0
Georgia	652.0	5,334.0		5,986.0				0.0	8,289.0
Guam	2.0	61.0		63.0				0.0	147.0
Hawaii	2,538.9	198.2		2,737.1	0.0	2.0		2.0	261.0
Hoopa Valley Tribe									
Idaho	0.0	8,229.6		8,229.6				0.0	17,332.6
Illinois	2,218.5	5,625.4		7,843.9	0.0	0.0		0.0	11,125.1
Indiana			4,230.0	4,230.0			1.0	1.0	0.0
Iowa	490.7	1,412.4		1,903.1	0.0	0.0		0.0	5,618.2
Kansas	0.0	14,819.0		14,819.0				0.0	18,236.0
Kentucky	666.5	3,021.3		3,687.8	0.0	0.0		0.0	7,579.1
La Posta Band									
Louisiana	595.0	5,980.0		6,575.0	0.0	0.0		0.0	6,703.0
Maine	60.0	669.0		729.0				0.0	14,475.0
Maryland	498.1	2,713.4		3,211.5				0.0	6,142.4

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Impaired - Evaluated	Impaired - Monitored	Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Monitored - Total
Massachusetts	622.6	346.7		969.3				0.0	519.1
Michigan		2,456.0		2,456.0				0.0	10,309.0
Minnesota	5,060.4	2,839.2		7,899.6	0.8	171.7		172.5	4,781.6
Mississippi			10,824.2	10,824.2			29.2	29.2	0.0
Missouri	6,960.6	3,360.8		10,321.4				0.0	6,302.0
Montana	702.6	7,873.8		8,576.4	0.0	0.0		0.0	8,896.9
N. Mariana Islands				0.0				0.0	0.0
Nebraska	182.0	3,577.0		3,759.0				0.0	4,159.0
Nevada	27.8	925.1		952.8				0.0	1,445.2
New Hampshire	249.1	195.2		444.3	0.0	0.0		0.0	614.2
New Jersey	0.0	209.0	0.0	209.0				0.0	330.0
New Mexico	823.8	1,851.4		2,675.2	0.0	0.0		0.0	2,572.5
New York	1,081.0			1,081.0				0.0	0.0
North Carolina	365.0	1,778.0		2,143.0				0.0	10,864.0
North Dakota	2,106.9	5,117.3		7,224.2				0.0	8,423.2
Ohio		3,742.6		3,742.6		0.0		0.0	8,231.6
Oklahoma	1,643.2	6,004.2		7,647.4	98.2	2.1		100.3	8,372.6
Oregon		13,937.0		13,937.0				0.0	19,624.0
Pauma Band				0.0				0.0	22.9
Pennsylvania			7,261.0	7,261.0				0.0	0.0
Puerto Rico	3,556.6	1,096.7		4,653.3				0.0	1,096.7
Rhode Island	22.1	195.1		217.2	0.0	0.0		0.0	532.6

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Impaired - Evaluated	Impaired - Monitored	Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Monitored - Total
Round Valley Tribes			34.5	34.5				0.0	0.0
South Carolina	499.3	3,511.4		4,010.6				0.0	13,084.5
South Dakota		1,778.0		1,778.0				0.0	3,564.0
Tennessee	1,312.9	6,224.7		7,537.6	0.0	0.0		0.0	21,256.5
Texas	0.0	4,547.8		4,547.8	0.0	0.0		0.0	15,101.4
Utah	40.5	2,784.3		2,824.8				0.0	9,650.2
Vermont			1,168.5	1,168.5				0.0	0.0
Virginia		4,466.0		4,466.0				0.0	9,190.0
Washington	37,721.7			37,721.7				0.0	0.0
West Virginia	50.8	5,262.1	0.0	5,312.9			0.0	0.0	11,465.0
Wisconsin	5,916.4	4,112.9		10,029.3	5.2	3.0		8.2	7,576.1
Wyoming	0.0	451.5		451.5	0.0	0.0		0.0	2,953.5
Total	80,423.3	160,932.0	27,902.6	269,257.9	104.1	178.8	34.4	317.4	320,790.3
Percent of assessed for summary of use support	11.6%	23.1%	4.0%	38.7%	0.0%	0.0%	0.0%	0.0%	46.1%

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Evaluated - Total	Assessed - Total	Comment
Alabama	698.4	2,627.9	Values reported for partially supporting, not supporting, and less than full support uses were summed and classifed as impaired. Values are from 1998 final 303(d) list. Pages VI-3 and VI-39.
Alaska	666.6	1,420.5	Values reported in ADB
American Samoa	7.4	16.9	
Arizona	0.0	4,052.0	Excludes tribal land. Pie charts in state summary reflect additional NAD details.
Arkansas	2,848.6	8,113.0	
Big Sandy Rancheria		0.0	
California	4,237.0	25,274.0	
Colorado	0.0	41,470.0	State also reports 367 assessed miles with no aquatic life use. Pie charts in state summary reflect NAD details.
Connecticut	0.0	1,207.2	State reported overall use support status. Pie charts in state summary reflect NAD details.
Delaware	0.0	2,505.8	From ADB - ALUS. Additional NAD details in summary pie chart.
Delaware River Basin	0.0	206.0	
District of Columbia	0.0	38.4	
Florida	5,454.0	10,159.0	State reported overall use support status
Georgia	1,710.0	9,999.0	
Guam	20.1	167.1	
Hawaii	3,732.9	3,993.8	
Hoopa Valley Tribe		0.0	
Idaho	0.0	17,332.6	
Illinois	4,462.1	15,587.2	
Indiana	0.0	17,541.0	Entered aquatic life use support in lieu of summary use support. State provided summary pie chart details in email.
Iowa	771.5	6,389.7	
Kansas	0.0	18,236.0	
Kentucky	2,343.6	9,922.7	Entered "overall" use support because the state did not report on summary use support.
La Posta Band		0.0	
Louisiana	656.0	7,359.0	Entered data from ADB.
Maine	17,277.0	31,752.0	
Maryland	2,474.4	8,616.8	

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	Evaluated - Total	Assessed - Total	Comment
Massachusetts	977.1	1,496.2	
Michigan	0.0	10,309.0	River miles represent data for 5-year period. State also reports miles modified due to permitting activities and miles requiring further assessment.
Minnesota	6,621.8	11,403.4	State summary pie chart reflects details received via email after deadline.
Mississippi	0.0	14,972.2	Projections from ALUS. Additional pie chart details from NAD.
Missouri	15,313.1	21,615.1	
Montana	2,545.8	11,442.7	Montana requested pie chart not be used in state summary.
N. Mariana Islands	0.0	0.0	No data. Miles not assessed b/c not use for drinking or recreation/
Nebraska	2,341.0	6,500.0	
Nevada	119.1	1,564.3	
New Hampshire	2,063.2	2,677.4	Excludes the effect of statewide fish consumption advisory for mercury.
New Jersey	0.0	330.0	Entered aquatic life use support; no data on summary use support. State reports 330 miles were assessed using ambient biological monitoring network (page II-2).
New Mexico	1,711.5	4,284.0	State reported overall use support status. Of the "fully supporting" miles, 405.3 (176.1 evaluated and 229.2 monitored) were reported as "fully supporting, impacts observed".
New York	2,914.0	2,914.0	Report states that all assessments should be considered as evaluated values (page 54). Value for fully supporting miles includes miles not assessed - so considered not assessed
North Carolina	21,208.0	32,072.0	P. 8
North Dakota	6,541.3	14,964.5	
Ohio	0.0	8,231.6	Entered aquatic life use support (monitored level data) in lieu of summary use support.
Oklahoma	5,698.1	14,070.8	
Oregon	40,111.0	59,735.0	Data from page 58
Pauma Band	0.0	22.9	Table 5.
Pennsylvania	0.0	35,496.0	State reports that assessment is based on aquatic life use only. Details from NAD used to break out state summary pie chart.
Puerto Rico	4,297.5	5,394.2	
Rhode Island	116.2	648.8	

Table A-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Rivers Streams

Jurisdiction	**Evaluated - Total**	**Assessed - Total**	**Comment**
Round Valley Tribes	0.0	34.5	all miles assessed were impaired by specific sources
South Carolina	2,320.1	15,404.6	Entered data from table 11 on categories of data used in ALUS assessments (15,404.57 assessed miles).
South Dakota	0.0	3,564.0	
Tennessee	3,069.9	24,326.4	
Texas	0.0	15,101.4	Entered values from ADB.
Utah	868.5	10,518.7	
Vermont	0.0	5,462.2	additional mon/eval details from NAD
Virginia	0.0	9,190.0	USED DATA FROM 3/2001 REVISION AT REQUEST OF STATE AND REGION
Washington	70,439.5	70,439.5	Values estimated using the sample survey approach are considered to be evaluated data.
West Virginia	84.6	11,549.6	Entered statewide data from NAD2000.
Wisconsin	15,954.2	23,530.3	Entered data from ADB.
Wyoming	1.3	2,954.8	
Total	252,676.3	696,207.5	Does not exactly equal total assessed because states do not report on summary of use support for all waters assessed.
Percent of assessed for summary of use support	36.3%		

Table A-3a Aquatic Life Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa	0.7			6.7		7
Arizona	3133		400	411		3,944
Arkansas	7309.6			802.4		8,112
Big Sandy Rancheria						0
California	2228	1632	19294	1877		25,031
Colorado	38482	0	1074	142	1754	41,452
Connecticut	674.7	258.8	200.8	46.9	4.2	1,185
Delaware	732.14	0	517.81	1256.12	0	2,506
Delaware River	201	3	2	0	0	206
District of Columbia	0	0	35	3.4		38
Florida	5998	552	2345	629		9,524
Georgia						0
Guam	23	6	88	50		167
Hawaii	1623.54	0	0	2276.1	0	3,900
Hoopa Valley Tribe	0	14.4	66.6	0	0	81
Idaho	8434	669		8229.6		17,333
Illinois	9405.8	92.17	5572.96	233.47	0	15,304
Indiana	13310	0	720	3510	1	17,541
Iowa	1554.49	2695.56	1320.35	155.12	0	5,726
Kansas	11696	33	3731	2740	0	18,200
Kentucky	6888.25	326.3	1124.4	866.2	0	9,205
La Posta Band						0
Louisiana	1105	40	729	5381	0	7,255
Maine	31421		0	331	0	31,752
Maryland	3457		262	2664		6,383
Massachusetts	581.5	67.5	237.3	457.88		1,344
Michigan				903		903
Minnesota	1245.9	4210.2	1486	3923.1	11	10,876
Mississippi	3263.2	855.53	10535.63	288.61	29.2	14,972
Missouri	11398.9		9973.3	228.1		21,600
Montana	1540.6	0	5319.2	1854	0	8,714
N. Mariana Islands						0
Nebraska	4676		1081	436		6,193
Nevada	606.21		335.68	617.15		1,559
New Hampshire	2558.2		134.2	21.7	0	2,714

Table A-3a Aquatic Life Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New Jersey	121	0	206	3		330
New Mexico	1128.4		1247.45	1427.7		3,804
New York		1476.3	500.6	70.8		2,048
North Carolina						0
North Dakota	1531.31	8392	3968.31	534.8		14,426
Ohio	3857.2	631.8	1690.8	2051.8		8,232
Ohio River Valley	880.6		66.1	0		947
Oklahoma	1641.87	4770.71	1139.02	4324.8	300.71	12,177
Oregon	16292	23506		13937		53,735
Pauma Band	22.62	0.27				23
Pennsylvania	28235			7261		35,496
Puerto Rico	910.1	811.3	16.8	3656	0	5,394
Rhode Island	460.33	0	107.46	58.61		626
Round Valley Tribes						0
South Carolina	11393.94		1178.39	2832.23		15,405
South Dakota	1574		390	1286	0	3,250
Tennessee	17083	33.6	5288.3	1310.7	0	23,716
Texas	10108.8	0	842.15	718.4	0	11,669
Utah	8750.7	0	1275.4	438.5	0	10,465
Vermont	3203.8	1196.4	829.5	232.5		5,462
Virginia	5,615.9	1,153.2	928.7	1,063.7	0	8,762
Washington	42340.6		16936.3	11162.5		70,439
West Virginia	4020.93	2606.11	3706.38	1181.92	0	11,515
Wisconsin	6891.41	5849	8211.8	1605.6	14.2	22,572
Wyoming	2124.07	338.22	136.99	40.35	0	2,640
TOTAL	341,735.3	62,220.4	115,251.7	95,538.4	2,114.3	616,860
Percent of assessed for use	55.4%	10.1%	18.7%	15.5%	0.3%	

Table A-3a Aquatic Life Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	Values reflect sum of cold 1,2 and warm 1,2 aquatic life uses.
Connecticut	Updated information provided by state.
Delaware	
Delaware River	
District of Columbia	
Florida	
Georgia	No individual use assessments in report
Guam	
Hawaii	
Hoopa Valley Tribe	Data reported in percent converted to miles.
Idaho	
Illinois	Entered data from NAD2000.
Indiana	
Iowa	
Kansas	Data reflects acute aquatic life.
Kentucky	
La Posta Band	No data.
Louisiana	Entered data from ADB for fish and wildlife propagation use support.
Maine	
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	
Michigan	State does not report miles supporting aquatic life use support in 5-year data. Used Sum of support for charts
Minnesota	database differs - basin rotation system
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	No data.
Nebraska	
Nevada	
New Hampshire	2714.1 miles were assessed for this use.

Table A-3a Aquatic Life Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New Jersey	State reports 330 miles assessed for aquatic life use support.
New Mexico	Of the "fully supporting" miles, 405.3 miles were reported as "fully supporting, impacts observed".
New York	Data for full support miles not available; value reflects miles for entire state, so not included for reporting purposes
North Carolina	No data.
North Dakota	
Ohio	Entered monitored level data.
Ohio River Valley	
Oklahoma	
Oregon	p 60. Oregon DEQ did not differentiate between partial and non-support, so no data is listed for partial support.
Pauma Band	
Pennsylvania	State reports 7261 miles as impaired
Puerto Rico	Entered "propagation and preservation of desirable species" use support status.
Rhode Island	
Round Valley Tribes	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from NAD2000.
Utah	
Vermont	
Virginia	Entered from Monitored ALUS data in the ADB - because report revision March 2001 did not include individual use support
Washington	
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Entered data from ADB.
Wyoming	
TOTAL	
Percent of assessed for use	

Table A-3b Fish Consumption Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa						
Arizona	3632		21	145		3,798
Arkansas	7739.1			372.9		8,112
Big Sandy Rancheria						0
California	1638	715	9352	137		11,842
Colorado						0
Connecticut	1174.5	0	56.1	54.5	0	1,285
Delaware	53.8	0	0	12.8	0	67
Delaware River Basin	0	0	201	5	0	206
District of Columbia	0	0	0	24.3		24
Florida	1002	0	2538	231		3,771
Georgia						0
Guam						
Hawaii	3873.5	0	0	13.44	0	3,887
Hoopa Valley Tribe		90	0	0	0	90
Idaho	0	0	0	0		0
Illinois	2919.54	0	848.9	200.13	0	3,969
Indiana	0	0	2550	480	0	3,030
Iowa	1451.57	440.63	0	0	0	1,892
Kansas	92	0	0	179	0	271
Kentucky	1573.9	0	663.9	122.7	0	2,361
La Posta Band						0
Louisiana						0
Maine	31325		339	88	0	31,752
Maryland	8616.7		0	0		8,617
Massachusetts	239.7	0	0	404.1		644
Michigan				1402		1,402
Minnesota						0
Mississippi	1005.12	321.98	371.46	45.9	0	1,744
Missouri	21671.4		8.2	156.9		21,837
Montana	1509.7	8.1	5647.4	1914.3	0	9,080
N. Mariana Islands						
Nebraska	2056		0	0		2,056
Nevada	5.25		0	0		5
New Hampshire	0		265.4	13.4	0	279

Table A-3b Fish Consumption Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New Jersey	0	30	94	0		124
New Mexico	0		93.4	0	0	93
New York	0	86	259.9	81.5		427
North Carolina						0
North Dakota			146.69			147
Ohio	0		450.9	0		451
Ohio River Valley	0		981			981
Oklahoma	0	0	0	9.57	0	10
Oregon	84	103		797		984
Pauma Band	22.89					23
Pennsylvania						0
Puerto Rico						0
Rhode Island	0	0	0	6.25		6
Round Valley Tribes						
South Carolina						0
South Dakota	170					170
Tennessee						0
Texas	2841.45	0	64	252.8	0	3,158
Utah	0	0	0	16	0	16
Vermont	4956.40	13.20	108.80	122.70		5,201
Virginia	8715.91865	124.21999	280.69999	62.41	0	9,183
Washington	15293.6		4369.6	39326.4		58,990
West Virginia	201.05	0	668.75	0	0	870
Wisconsin	1076.55	454.9	741.3	24	3	2,300
Wyoming						0
Total	124,941	2,387	31,121	46,701	3	205,153
Percent of assessed for use	60.9%	1.2%	15.2%	22.8%	0.0%	

Table A-3b Fish Consumption Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	No data.
Connecticut	Page 28. This data is for fish consumption based on PCB contamination. Connecticut has a statewide fish consumption advisory for mercury.
Delaware	
Delaware River Basin	
District of Columbia	
Florida	not in database
Georgia	No data on miles
Guam	
Hawaii	
Hoopa Valley Tribe	Data reported in percent converted to miles.
Idaho	
Illinois	Entered data from NAD2000.
Indiana	
Iowa	
Kansas	
Kentucky	
La Posta Band	No data.
Louisiana	No data.
Maine	Excludes effect of statewide advisory for mercury.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	
Michigan	State does not report miles supporting fish consumption use in -year data.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	Summed values for "cold water fishery - trout" and "warm water fishery."
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	Excludes the effect of a statewide fish consumption advisory for mercury. 278.8 miles were assessed for this use.

Table A-3b Fish Consumption Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New Jersey	State reports 124 miles assessed for fish consumption use support.
New Mexico	
New York	Data for full support miles not available; value reflects miles for entire state, so not included for reporting purposes
North Carolina	No data.
North Dakota	
Ohio	Entered data for Ohio River (page 3-16) in lieu of data on degree of contaminated fish tissue.
Ohio River Valley	Reported values for "impaired" waters include partial and nonsupporting miles.
Oklahoma	Entered "trout fishery" use support.
Oregon	p 60. Oregon DEQ did not differentiate between partial and non-support, so no data is listed for partial support.
Pauma Band	
Pennsylvania	No data.
Puerto Rico	No data.
Rhode Island	
Round Valley Tribes	
South Carolina	No data.
South Dakota	
Tennessee	No data.
Texas	Entered data from ADB.
Utah	
Vermont	from database
Virginia	Entered from NAD, monitored only, on request of region.
Washington	
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Entered data from ADB.
Wyoming	State does not assess fish consumption use support.
Total	
Percent of assessed for use	

Table A-3c Swimming Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa						0
Arizona	3457		158	99		3,714
Arkansas	7595.8			33.1		7,629
Big Sandy Rancheria						0
California	2151	1343	12415	1987		17,896
Colorado	14572	0	28	0	0	14,600
Connecticut	619.3	191.7	132.7	132.8	3.8	1,080
Delaware	99.22	0	755.75	1651.1	0	2,506
Delaware River Basin	194	12	0	0	0	206
District of Columbia	1.7	0	0	36.7		38
Florida	5998	552	2345	629		9,524
Georgia						0
Guam	1		8	23		32
Hawaii	3892.3	0	0	0.6	0	3,893
Hoopa Valley Tribe	90	0	0	0	0	90
Idaho	0	0	0	0		0
Illinois	742.42	0	1486.75	714.73	0	2,944
Indiana	4510	0	130	2660	0	7,300
Iowa	253.6	148.53	249.47	184.07	0	836
Kansas					1697	1,697
Kentucky	695.6	70.9	604	1439		2,810
La Posta Band						0
Louisiana	4030	74	192	2767	0	7,063
Maine	31576		73	103	0	31,752
Maryland	8616.7		0	0		8,617
Massachusetts	456.65	8.8	186.6	280.63		933
Michigan				555		555
Minnesota	1727.1	0.5	601.8	4243.3	11	6,584
Mississippi	37.1	16.3	234.92	153.3	0	442
Missouri	5355.3		4.3	45.7		5,405
Montana	3620.3	0	2909.3	536.8	0	7,066
N. Mariana Islands						0
Nebraska	365		499	2375		3,239
Nevada	1387.54		0	5.25		1,393
New Hampshire	2657.2		43.4	68.5	0	2,769
New Jersey	30	0	17	129		176
New Mexico	4102.9		16	15	0	4,134

Table A-3c Swimming Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New York	0	81.8	56.1	19		157
North Carolina						0
North Dakota	3483.85	1938.36	3537.07	747.42		9,707
Ohio	804.5		154.9	576.7		1,536
Ohio River Valley	20.9		158.3	197.1		376
Oklahoma	1112.41	2015.5	1009.12	958.68	0	5,096
Oregon	2777	48		2237		5,062
Pauma Band	22.89					23
Pennsylvania						0
Puerto Rico	193.4	1008.1	0.9	4188.2	3.6	5,394
Rhode Island	434.34	0	47.98	91.79		574
Round Valley Tribes						0
South Carolina	7672		3881.6	3172.28		14,726
South Dakota	342		291	410	0	1,043
Tennessee	6116.8	0	1982.9	1081.9	0	9,182
Texas	7083.75	0	0	2514.7	0	9,598
Utah	507.8	0	0	9.8	0	518
Vermont	4114.7	649.7	446.5	99.5		5,310
Virginia	3,455.7	4.7	1,829.5	1,220.0		6,510
Washington	58892		0	11547.4		70,439
West Virginia	6790.01	2614.69	895.82	1107.63	0	11,408
Wisconsin						0
Wyoming	0	0.6	6.37	243.85	0	251
Total	212,658.8	10,779.2	37,388.0	51,290.6	1,715.4	313,832
Percent of assessed for use	67.8%	3.4%	11.9%	16.3%	0.5%	

Table A-3c Swimming Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	
Connecticut	Page 28.
Delaware	
Delaware River Basin	
District of Columbia	
Florida	not in database
Georgia	No summary data provided
Guam	
Hawaii	
Hoopa Valley Tribe	Data reported in percent converted to miles.
Idaho	
Illinois	NAD2000.
Indiana	
Iowa	
Kansas	Category not applicable.
Kentucky	
La Posta Band	No data.
Louisiana	Entered data from ADB.
Maine	Includes secondary contact use.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	
Michigan	State does not report miles supporting swimming use in 5-year data.
Minnesota	
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	2769.1 miles were assessed for this use.
New Jersey	State reports 176 miles assessed for primary contact recreation use support.
New Mexico	Of the "fully supporting" miles, 15.3 were reported as "fully supporting, impacts observed".

Table A-3c Swimming Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New York	Data for full support miles not available; value reflects miles for entire state, so not included for reporting purposes
North Carolina	No data.
North Dakota	Includes secondary contact (boating, wading, or any other recreational use relying on water)
Ohio	Includes primary and secondary contact uses.
Ohio River Valley	
Oklahoma	
Oregon	p 60. Oregon DEQ did not differentiate between partial and non-support, so no data is listed for partial support.
Pauma Band	
Pennsylvania	No data.
Puerto Rico	The 3.6 miles listed as nonattainable are underground river segments where swimming cannot be attained.
Rhode Island	
Round Valley Tribes	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Data from ADB - monitored only, because ind. Use not included in state revised 305(b) report
Washington	
West Virginia	Entered statewide data from NAD2000.
Wisconsin	No data.
Wyoming	
Total	
Percent of assessed for use	

Table A-3d Secondary Contact Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa						
Arizona	187		11	42		240
Arkansas	8112			0		8,112
Big Sandy Rancheria						0
California	2810	1096	10426	1839		16,171
Colorado	26183	0	62	0	0	26,245
Connecticut						0
Delaware	2506.07	0	0	0	0	2,506
Delaware River Basin						0
District of Columbia	8.4	0	6.5	23.5		38
Florida	5998	552	2345	629		9,524
Georgia						0
Guam	3		11	20		34
Hawaii	3899.04	0	0	0.6	0	3,900
Hoopa Valley Tribe						0
Idaho	8434	669		8229.6		17,333
Illinois	37.6	0	41.31	0.58	0	79
Indiana						0
Iowa						0
Kansas	6733	0	7319	4104	0	18,156
Kentucky						0
La Posta Band						0
Louisiana	5810	216	196	914	0	7,136
Maine						0
Maryland						0
Massachusetts	643.55	36.8	160	118.73		959
Michigan				0		0
Minnesota						0
Mississippi	265	13.9	2908.19	323.71	0	3,511
Missouri						0
Montana						0
N. Mariana Islands						
Nebraska						0
Nevada	1558.09		0	0		1,558
New Hampshire	10881.2		0	0	0	10,881
New Jersey						0
New Mexico	3613.4		42.3	6.2	0	3,662

Table A-3d Secondary Contact Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New York	0	27.9	18.5	0		46
North Carolina						0
North Dakota						0
Ohio						0
Ohio River Valley						0
Oklahoma	149.33	22.59	2.48	0	0	174
Oregon	2777	48		2237		5,062
Pauma Band	22.89					23
Pennsylvania						0
Puerto Rico	1324.3	2050.2	344.8	1671.3	3.6	5,394
Rhode Island						0
Round Valley Tribes						0
South Carolina						0
South Dakota	2104		232	283	0	2,619
Tennessee						0
Texas	27	0	0	0	0	27
Utah	507.8	0	0	9.8	0	518
Vermont	4563	384.4	309.1	150.2		5,407
Virginia						0
Washington	62356.2		0	8083.2		70,439
West Virginia	3.6	0	0	0	0	4
Wisconsin						0
Wyoming	0	0.6	0	17.4	0	18
Total	161,517	5,117	24,435	28,703	4	219,776
Percent of assessed for use	73.5%	2.3%	11.1%	13.1%	0.0%	

Table A-3d Secondary Contact Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	
Connecticut	No data.
Delaware	
Delaware River Basin	
District of Columbia	
Florida	
Georgia	No summary data
Guam	
Hawaii	
Hoopa Valley Tribe	No data.
Idaho	
Illinois	Entered data from NAD2000.
Indiana	No data.
Iowa	No data.
Kansas	
Kentucky	No data.
La Posta Band	No data.
Louisiana	Entered data from ADB
Maine	Included with swimming use.
Maryland	Included in swimming use (page 7).
Massachusetts	
Michigan	State does not report miles supporting secondary contact in 5-year data.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	No data.
Montana	No data.
N. Mariana Islands	
Nebraska	No data.
Nevada	
New Hampshire	10881.2 miles were assessed for this use.
New Jersey	No data.
New Mexico	

Table A-3d Secondary Contact Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New York	Data for full support miles not available; value reflects miles for entire state, so not included for reporting purposes
North Carolina	No data.
North Dakota	No data. Secondary contact included in swimming use.
Ohio	Included in swimming use.
Ohio River Valley	No data.
Oklahoma	
Oregon	p 60. Oregon DEQ did not differentiate between partial and non-support, so no data is listed for partial support.
Pauma Band	
Pennsylvania	No data.
Puerto Rico	The 3.6 miles listed as nonattainable are underground river segments where swimming cannot be attained.
Rhode Island	Included in swimming use (page III.C-6).
Round Valley Tribes	
South Carolina	Included in swimming use.
South Dakota	
Tennessee	No data.
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Included in swimming use support.
Washington	
West Virginia	Entered statewide data from NAD2000.
Wisconsin	No data.
Wyoming	
Total	
Percent of assessed for use	

Table A-3e Drinking Water Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa				10		10
Arizona	695		37	20		752
Arkansas	7,782			78		7,860
Big Sandy Rancheria						0
California	2,356	1,038	8,907	981		13,282
Colorado	15,931	0	488	6	0	16,425
Connecticut						0
Delaware	199	0	0	6	0	205
Delaware River Basin	206	0	0	0	0	206
District of Columbia						0
Florida	289	0	67	2		358
Georgia						0
Guam						0
Hawaii	3,884	0	0	1	0	3,884
Hoopa Valley Tribe						0
Idaho						0
Illinois	994	0	333	0	0	1,327
Indiana						0
Iowa	44	92	33	36	0	206
Kansas	4,829	0	344	2,510		7,683
Kentucky	1,080	682	0	0	0	1,762
La Posta Band						0
Louisiana	1,150	0	28	0	0	1,178
Maine	31,751		0	1	0	31,752
Maryland						0
Massachusetts						0
Michigan				0		0
Minnesota						0
Mississippi	45	15	0	0	0	60
Missouri	2,975		0	211		3,186
Montana	3,164	0	141	2,549	0	5,854
N. Mariana Islands						0
Nebraska	590		0	0		590
Nevada	819		140	412		1,370
New Hampshire	245		0	0	0	245
New Jersey						0
New Mexico	1,396		5	1	0	1,401

Table A-3e Drinking Water Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New York	3,964	85	56	0		4,105
North Carolina						0
North Dakota	215	259				474
Ohio	451		0	0		451
Ohio River Valley	977		4	0		981
Oklahoma	391	74	49	110	0	624
Oregon	678					678
Pauma Band						0
Pennsylvania						0
Puerto Rico	1,525	1,553	203	2,113	0	5,394
Rhode Island	5	0	0	0		5
Round Valley Tribes						0
South Carolina	15,405		0	0		15,405
South Dakota	923		0	0	0	923
Tennessee	3,339	0	0	21	0	3,360
Texas	8,777	104	0	0	0	8,881
Utah	3,630	0	45	39	0	3,713
Vermont	4,064	272	85	33		4,453
Virginia	1,276	0	2	0	0	1,278
Washington						0
West Virginia	1,782	81	620	220	86	2,788
Wisconsin						0
Wyoming	0	0	45	0	0	45
Total	127,824	4,256	11,632	9,357	86	153,155
Percent of assessed for use	83.5%	2.8%	7.6%	6.1%	0.1%	

Table A-3e Drinking Water Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	
Connecticut	No data.
Delaware	
Delaware River Basin	
District of Columbia	No data.
Florida	
Georgia	No use support summary for this use
Guam	
Hawaii	
Hoopa Valley Tribe	No data.
Idaho	No data.
Illinois	
Indiana	No data.
Iowa	
Kansas	
Kentucky	
La Posta Band	The report states results of surface water sampling show elevated levels of iron and manganese.
Louisiana	Entered data from ADB
Maine	
Maryland	No data.
Massachusetts	No data.
Michigan	State does not report miles supporting drinking water use in 5-year data.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	Entered "municipal or domestic supply" use support status
New Hampshire	Mileage reflects rivers/streams currently used as public water supplies. 245 miles were assessed for this use.
New Jersey	No data. State assesses drinking water use according to number of systems meeting microbiological and chemical standards for finished drinking
New Mexico	

Table A-3e Drinking Water Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New York	Total miles classified for use as potable water supply is 4,605 miles.
North Carolina	No data.
North Dakota	
Ohio	Entered data for Ohio River (page 3-16) in lieu of data on degree of contaminated fish tissue.
Ohio River Valley	
Oklahoma	
Oregon	p 60. Oregon DEQ did not have available data for for drinking water miles that were threatened. All other categories are listed as not applicable (N
Pauma Band	Not applicable.
Pennsylvania	No data.
Puerto Rico	Entered "raw source of drinking water supply" use support status.
Rhode Island	
Round Valley Tribes	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Entered data from NAD, monitored only, on request of Region.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	No data.
Wyoming	
Total	
Percent of assessed for use	

Table A-3f Agriculture Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa						0
Arizona	3312		194	133		3,639
Arkansas	8112			0		8,112
Big Sandy Rancheria						0
California	3077	955	8275	437		12,744
Colorado	40905	0	89	0	0	40,994
Connecticut						0
Delaware	1959.11	0	0	0	0	1,959
Delaware River Basin	206	0	0	0	0	206
District of Columbia						0
Florida						0
Georgia						0
Guam						0
Hawaii	3899.04	0	0	0.6	0	3,900
Hoopa Valley Tribe						0
Idaho	8434	669		8229.6		17,333
Illinois						0
Indiana						0
Iowa						0
Kansas	7315	0	31	266		7,612
Kentucky						0
La Posta Band						0
Louisiana	1510	0	0	0	0	1,510
Maine	31752		0	0	0	31,752
Maryland						0
Massachusetts						0
Michigan				0		0
Minnesota						0
Mississippi						0
Missouri						0
Montana	7191.8	0	724.6	92.1	0	8,009
N. Mariana Islands						0
Nebraska	1973		23	0		1,996
Nevada	1564.29		0	0		1,564
New Hampshire	2696.4		0.5	0	0	2,697
New Jersey	176	0	0	0		176
New Mexico	4845.9		19.6	74.3	0	4,940

Table A-3f Agriculture Use Support in Assessed Rivers and Streams

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New York						0
North Carolina						0
North Dakota						0
Ohio						0
Ohio River Valley						0
Oklahoma	2539.35	555.29	428.55	1037.44	0	4,561
Oregon	53735	0		0		53,735
Pauma Band	22.89					23
Pennsylvania						0
Puerto Rico						0
Rhode Island						0
Round Valley Tribes						0
South Carolina	15404.57		0	0		15,405
South Dakota	3397		18	99	0	3,514
Tennessee	24119	0	0	0	0	24,119
Texas	8901.5	0	188	1128	0	10,218
Utah	8218	0	480.7	1156.7	0	9,855
Vermont	3864.7	147.9	45.9	24.9		4,083
Virginia						0
Washington						0
West Virginia	5.76	0	0	0	0	6
Wisconsin						0
Wyoming	0	40.99	0	34.78	0	76
Total	249,136	2,368	10,518	12,713	0	274,736
Percent of assessed for use	90.7%	0.9%	3.8%	4.6%	0.0%	

Table A-3f Agriculture Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
Alabama	No data.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	Agricultural use includes industry
Big Sandy Rancheria	
California	
Colorado	
Connecticut	No data.
Delaware	
Delaware River Basin	
District of Columbia	No data.
Florida	No data.
Georgia	No data
Guam	
Hawaii	
Hoopa Valley Tribe	No data.
Idaho	
Illinois	No data.
Indiana	No data.
Iowa	No data.
Kansas	Entered data for livestock watering
Kentucky	No data.
La Posta Band	No data.
Louisiana	Entered data from ADB
Maine	
Maryland	No data.
Massachusetts	No data.
Michigan	State does not report miles supporting agricultural use in 5-year data.
Minnesota	No data.
Mississippi	No data.
Missouri	No data.
Montana	
N. Mariana Islands	
Nebraska	
Nevada	Entered "irrigation" use support status.
New Hampshire	2696.9 miles were assessed for this use.
New Jersey	State reports 176 miles assessed for agriculture use support.
New Mexico	Entered "livestock watering" use support status. Of the "fully supporting" miles, 26.9 were reported as "fully supporting, impacts observed."

Table A-3f Agriculture Use Support in Assessed Rivers and Streams

Jurisdiction	Comments
New York	No data.
North Carolina	No data.
North Dakota	No data.
Ohio	No data.
Ohio River Valley	No data.
Oklahoma	
Oregon	p 60. Oregon DEQ did not differentiate between partial and non-support, so no data is listed for partial support.
Pauma Band	
Pennsylvania	No data.
Puerto Rico	No data.
Rhode Island	No data.
Round Valley Tribes	
South Carolina	
South Dakota	
Tennessee	Entered "irrigation" use support.
Texas	Entered general use support data from ADB.
Utah	
Vermont	
Virginia	No data.
Washington	No data.
West Virginia	Entered statewide data from NAD2000 for livestock watering.
Wisconsin	No data.
Wyoming	
Total	
Percent of assessed for use	

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	PATHOGENS	SEDIMENT/SILTATION	OTHER HABITAT ALTERATIONS	ORGANIC ENRICHMENT/LOW DO	NUTRIENTS
Alabama	545.3	899	458.7	884.6	344.1
Alaska	63.3	49		8	
American Samoa	9.5		6.7		
Arizona	260.92		13.61	29.71	32.11
Arkansas	33.1	705.5		79.6	45.2
Big Sandy Rancheria					
California	5688.56	17376.56	11778.65	4917.41	8327.49
Colorado	106.63	202.46		26.71	54.36
Connecticut	464.9	44.5	76.8	101.4	176
Delaware	1026.92			87.68	134.08
Delaware River Basin					
District of Columbia	27.7	0.3	0.8	21.9	
Florida	1386.3			2846.7	2265.2
Georgia	3474			1457	
Guam	30.55		105.08	58.44	17.14
Hawaii	1684.53	592.7	918.23	2	1498
Hoopa Valley Tribe					
Idaho	1738.1	6483.13	1223.95	1145.39	2754.17
Illinois	37.05	2353.36	2833.66	2872.07	3233.53
Indiana	1564.58			16.3	6.05
Iowa	433.53	338.97	810.36	495.32	217.09
Kansas	11423.32	229.24		2642.6	184.35
Kentucky	1792.1	1006.7	435.2	387.3	445
La Posta Band					
Louisiana	3081	141	133	2906	213
Maine	176		17.5	243	
Maryland	223.5	601.7		94.48	29.24
Massachusetts	447.6	43.9	107.83	316.4	240.6
Michigan	551	556	159	226	307
Minnesota	4055	84.9	3003.3	3204	857.4
Mississippi	3556.07	9611.37	133.91	9103.21	10198.39
Missouri	47.5	7672.9	3701.9	51.4	4
Montana	454	3025.3	10616.9	181.8	2209
N Mariana Islands					
Nebraska	2874	34		20	35
Nevada				2.3	641.33
New Hampshire	107.9	56	11.1	37.7	6
New Jersey					
New Mexico	515.9	0.5		313.6	

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	PATHOGENS	SEDIMENT/SILTATION	OTHER HABITAT ALTERATIONS	ORGANIC ENRICHMENT/LOW DO	NUTRIENTS
New York	938.6	2022.4		658.7	1764.3
North Carolina	321.51	491.1	364.8	276	108.93
North Dakota	9032.88	6345.8	6735.8	2328.7	5304.48
Ohio	194.88	1836.05	1512.69	1348.96	996.86
Ohio River Valley	958		61		
Oklahoma	841.74	3355.8	39.88	1124.91	1686.33
Oregon	2429	1354	2103	1044	240
Pauma Band	0	0	0	0	0
Pennsylvania	15.96	3016.2	506.35	845.48	1704.77
Puerto Rico	1341.3	0	0	36.6	1.4
Rhode Island	135.78			35.55	26.75
Round Valley Tribe					
South Carolina	7023.52			1685.25	10.94
South Dakota	996.4			338.9	
Tennessee	2922.4	4163.5	3297.2	1177.5	1534.7
Texas	2514.7			2664.8	
Utah	33.1	584.86	600	221.95	803.8
Vermont	556.9	1017.5	380.4	548.2	643.5
Virginia	3034.28	344.16	15.11	988.12	458.56
Washington	6789.906			3394.953	
West Virginia	4171.97	3032.34	1025.74	619.57	839.6
Wisconsin	1047.2	4830.25	5602.95	1279.4	2270.2
Wyoming	250.22		15.4		
Total	**93,430.6**	**84,503.0**	**58,806.5**	**55,397.6**	**52,870.0**
Percent of Impaired	34.7%	31.4%	21.8%	20.6%	19.6%
Percent of Assessed	13.3%	12.1%	8.4%	7.9%	7.6%

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	THERMAL MODIFICATIONS	METALS	FLOW ALTERATION	PESTICIDES	PH	TURBIDITY	SALINITY/TDS/CHLORIDES
Alabama	15	297.1	18	55.5	346.5	86.4	
Alaska		16.2		7		291.6	
American Samoa							
Arizona		486.44		296.34	277.26	497.6	
Arkansas		323.8					109
Big Sandy Rancheria							
California	8056.16	4353.8	8831.47	4888.64	366.14	962.14	1866.58
Colorado		1814.37			548.74		
Connecticut	0.8	573.65	139.25	7.1		53.9	3.2
Delaware		57.6		12.8			
Delaware River Basin		206		206	2		
District of Columbia		12.4	1.8		7.1		
Florida		480.3				980.7	
Georgia	9	599		0	19		
Guam					2.92	5.95	8.83
Hawaii		12.84	390.79	155.04		1560.32	
Hoopa Valley Tribe							
Idaho	1769.4	257.43	2047.02	137.82	209.68		42.19
Illinois	21.62	1634.29	430.98		588.91		910.27
Indiana		1136.7		4.29			12.15
Iowa			177.93	101.1		73.91	
Kansas	729.12	1571.51			836.24		2372.16
Kentucky	7.5	175	75.5	5.3	230.5	43.5	69.7
La Posta Band							
Louisiana	23	4471	155	269	140	598	765
Maine		4			1		
Maryland	64.1		1		91.54		
Massachusetts	24	344.88	138.3	4	67.7	162.5	14.1
Michigan	44		180	6			
Minnesota		262.9				4490.9	11.2
Mississippi	6.8	852.67	35.3	9207.93	759.55	316.24	139.52
Missouri	1.4	324.5		24	14.8		47
Montana	1401	3147.7	5341.4		60.6	105	783.6
N Mariana Islands							
Nebraska	112	80	22	249	54		37
Nevada	286.6	217.3			6.5	581.75	
New Hampshire	0	306.1	5.1	0	1	0	0
New Jersey							
New Mexico	1030.1	823.4		2.8	354.9	957.7	315.3

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	THERMAL MODIFICATIONS	METALS	FLOW ALTERATION	PESTICIDES	PH	TURBIDITY	SALINITY/TDS/CHLORIDES
New York	583.7	376.9	369.7	410.9	76.1		177.5
North Carolina		26.48		29	126.08	158.23	
North Dakota		802.82	1248.15	104.46			277.74
Ohio	20.01	574.97	931.22	137.12	275.11	48.93	51.39
Ohio River Valley		807.8					
Oklahoma		1169	28.01	3234.05	869.82	1909.89	2025.79
Oregon	12102	718	1624	285	1083	66	
Pauma Band	0	0	0	0	0	0	0
Pennsylvania	56.81	2507.88	1036.91	20.14	1390.86	223.43	117.03
Puerto Rico	0	206.7	0	0	1.6	0	0
Rhode Island		136.55					
Round Valley Tribe							
South Carolina		1593.22		4.04	196.97		
South Dakota	459.7	2.1			414.1		449
Tennessee	98.8	521.9	253.2	3	437.2		22.4
Texas	103	189		103	171		2472
Utah	293.24	162.45	107.22		61.58		1478.91
Vermont	657.4	293.6	392.7	25	70.1	230.3	1
Virginia	206.19	249.11		13.29	668.4		
Washington	15843.114	3394.953			8298.774		
West Virginia	70.9	2339.26	283.74	462.38	1021.15	446.88	16.47
Wisconsin	865.6	314	1089.7	365.45	22	1600.5	
Wyoming		170.22			22.53		24.29
Total	**44,962.1**	**41,399.8**	**25,355.4**	**20,836.5**	**20,193.0**	**16,452.3**	**14,620.3**
Percent of Impaired	16.7%	15.4%	9.4%	7.7%	7.5%	6.1%	5.4%
Percent of Assessed	6.4%	5.9%	3.6%	3.0%	2.9%	2.4%	2.1%

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	SUSPENDED SOLIDS	MERCURY	PHOSPHORUS	UNKNOWN TOXICITY	DEBRIS/FOAM-SCUMS-FLOCS	CAUSE UNKNOWN
Alabama				39.8		
Alaska		0			23	
American Samoa						
Arizona		30	16.62	8.68		
Arkansas		307				
Big Sandy Rancheria						
California	4288.57	1542		1529.15	6064.77	40.11
Colorado		0				140.64
Connecticut	12.6	680	9			59
Delaware		0				
Delaware River Basin		206		194		
District of Columbia	4	0		7.4		
Florida	579.7	380	1523.9			
Georgia				83		
Guam	30.59					
Hawaii	25.9	0		4		1
Hoopa Valley Tribe						
Idaho						1078.06
Illinois	1515.31	65	1614.48			174.95
Indiana		901				
Iowa		0		81.37		166.76
Kansas		0				
Kentucky	88.7	6		10.1		107.9
La Posta Band						
Louisiana	284	3391	213			
Maine						
Maryland		0				
Massachusetts	73.8	0		121.8		192.3
Michigan	16	394		5		
Minnesota	875.1	0	799.4	2579.7		
Mississippi	329.32	254		37.69		9.8
Missouri	18.8	0		0.2		20.5
Montana	424.2	551	361.6			
N Mariana Islands						
Nebraska						
Nevada	254.25	59	641.33			
New Hampshire	0			0		0
New Jersey						
New Mexico			53.6	62		109.6

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	SUSPENDED SOLIDS	MERCURY	PHOSPHORUS	UNKNOWN TOXICITY	DEBRIS/FOAM-SCUMS-FLOCS	CAUSE UNKNOWN
New York				155		74
North Carolina		0				
North Dakota		147	152.06			60.8
Ohio	108.56	0		168.51		271.73
Ohio River Valley		808				981
Oklahoma	2957.05	0		1157.18		35.91
Oregon						
Pauma Band	0			0		0
Pennsylvania	416.03	0		30.33		548.52
Puerto Rico	0	56		0		0
Rhode Island	5.28	0		5.69		
Round Valley Tribe						
South Carolina		0				499.27
South Dakota	1634.7	0				
Tennessee	18	27	263.2	111.8		85.8
Texas		64		110.75		
Utah		0	803.8			
Vermont	98.6	0		28		18.6
Virginia		182	87.35			78.68
Washington						
West Virginia	12	0	78.82	22.91	8.13	737.81
Wisconsin	6	0		13		143
Wyoming		0				
Total	**14,077.1**	**10,050.0**	**6,618.2**	**6,567.1**	**6,095.9**	**5,635.7**
Percent of Impaired	5.2%	3.7%	2.5%	2.4%	2.3%	2.1%
Percent of Assessed	2.0%	1.4%	0.9%	0.9%	0.9%	0.8%

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	COPPER
Alabama	
Alaska	
American Samoa	
Arizona	196
Arkansas	
Big Sandy Rancheria	
California	688.71
Colorado	422.62
Connecticut	12
Delaware	
Delaware River Basin	
District of Columbia	
Florida	21.4
Georgia	
Guam	
Hawaii	
Hoopa Valley Tribe	
Idaho	
Illinois	172.87
Indiana	18.2
Iowa	
Kansas	
Kentucky	
La Posta Band	
Louisiana	2349
Maine	
Maryland	
Massachusetts	
Michigan	3
Minnesota	
Mississippi	
Missouri	
Montana	903.7
N Mariana Islands	
Nebraska	
Nevada	
New Hampshire	
New Jersey	
New Mexico	

Table A-4 Leading Pollutants and Stressors Impairing Assessed Rivers and Streams

Jurisdiction	COPPER
New York	
North Carolina	7.68
North Dakota	329.9
Ohio	68.22
Ohio River Valley	
Oklahoma	
Oregon	
Pauma Band	
Pennsylvania	
Puerto Rico	166.9
Rhode Island	
Round Valley Tribe	
South Carolina	
South Dakota	2.1
Tennessee	82.1
Texas	7
Utah	22.7
Vermont	
Virginia	2.84
Washington	
West Virginia	12.6
Wisconsin	
Wyoming	17.45
Total	**5,507.0**
Percent of Impaired	2.0%
Percent of Assessed	0.8%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	AGRICULTURE	HYDROMODIFICATION	CROP-RELATED SOURCES	GRAZING RELATED SOURCES	SOURCE UNKNOWN
Alabama	111.2			463.8	54.4
Alaska		13			
American Samoa					
Arizona	538.85		131.73	407.12	105.01
Arkansas	705.5				318.2
Big Sandy Rancheria					
California	17064.33	9217.46	6758.39	8050.74	1274
Colorado	123.3	4.7			660.91
Connecticut	120.5	177.45	7.7	18.4	158.65
Delaware	984.03				52.3
Delaware River Basin	206				
District of Columbia		8.8			15.9
Florida	1833.4	1189.6			738.9
Georgia	0	65			
Guam					
Hawaii	1553.45	958.84	582.99	240.05	5.75
Hoopa Valley Tribe					
Idaho					
Illinois	4395.06	2613.12	1195.26	135.31	345.8
Indiana	124.84	81.91	18.74	75.51	1911.32
Iowa	1018.04	790.99	264.21	327.2	655.05
Kansas	13128.31	1171.84	3772.93	9268.6	200.56
Kentucky	1133.2	172.2	189.6	327.5	380.8
La Posta Band					
Louisiana	2021	810	139	267	4758
Maine	174.8				6.5
Maryland	351.82	1136.33			214.5
Massachusetts	39.6	146.1			725.88
Michigan	1059	248			
Minnesota	6601.2	3889.7			1158.5
Mississippi	10471.5	224.3	9759.27	111.58	1510.12
Missouri	7624.4	3758.9	7602.3	8.5	4
Montana	5833.6	3620.4	2932.1	4045	511.3
N Mariana Islands					
Nebraska					
Nevada	593.7	247.8		101.1	3.25
New Hampshire	59	11.1	43.5	9	642.2
New Jersey					
New Mexico	2531.85	376.7			684.8

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	AGRICULTURE	HYDROMODIFICATION	CROP-RELATED SOURCES	GRAZING RELATED SOURCES	SOURCE UNKNOWN
New York	1485.6	589.1			160.1
North Carolina	1201.71	166	272.4	28.8	89.5
North Dakota	6982.77	2621.39	6070.36	6283.08	856.33
Ohio	1820.49	2887.33	1602.08	547.8	312.85
Ohio River Valley	981				
Oklahoma	4481.18	867.38	3815.83	3625.49	3795.82
Oregon		1624	2577	2028	
Pauma Band	0				0
Pennsylvania	2426.95	186.17	392.68	484.48	160.82
Puerto Rico	699.6	70.1			0
Rhode Island	35.07	27.62			82.94
Round Valley Tribe	15.5	14		15.5	17.4
South Carolina	1462.35	35.55		438.58	4832.91
South Dakota	1623.5		962.1	1417.6	
Tennessee	3886.6	2672.6	906.9	1621.4	583.5
Texas	545		311		3133.7
Utah	2298.25	887.8	797.4	512.53	311.63
Vermont	688.8	418.3	20.5	2.5	107.5
Virginia	1105.35	18.27		8.5	1854.17
Washington	11316.51	6789.906			1508.868
West Virginia	1760.29	346.75	333.44	702.57	2166.52
Wisconsin	3539.9	2693.25	1506.7	1895.8	1631.85
Wyoming	101.1		101.1		353.04
Total	**128,859**	**53,850**	**53,067**	**43,469**	**39,056**
Percent of Impaired	47.9%	20.0%	19.7%	16.1%	14.5%
Percent of Assessed	18.4%	7.7%	7.6%	6.2%	5.6%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	HABITAT MODIFICATION (OTHER THAN HYDROMODIFICATION)	URBAN RUNOFF/STORM SEWERS	NATURAL SOURCES
Alabama		282.6	12
Alaska	21	109.8	
American Samoa	6.7		
Arizona	30.29	120.22	804.87
Arkansas		13.5	
Big Sandy Rancheria			
California	11662.3	2204.68	4906.15
Colorado		244.16	474.05
Connecticut	9	188.6	7.5
Delaware		304.07	423.51
Delaware River Basin		206	2
District of Columbia	17.6	38.4	8.3
Florida		1126.6	
Georgia		1925	433
Guam			
Hawaii	573.78	1566.25	1820.74
Hoopa Valley Tribe			
Idaho			
Illinois	795.31	1020.47	137.19
Indiana	38.35	113.25	0.3
Iowa	399.29	45.05	98.63
Kansas	5911.66	1295.94	6148.69
Kentucky	235.3	1053.7	21.3
La Posta Band			
Louisiana	121	839	2364
Maine	23.6	101.5	
Maryland	1006.02	650.68	1104.17
Massachusetts	29.9	361.1	
Michigan	108	344	30
Minnesota		2889	35.6
Mississippi	177.82	634.07	235.4
Missouri	21	44.5	154.5
Montana	2093.7	159	656.3
N Mariana Islands			
Nebraska			
Nevada		61.75	589.33
New Hampshire	11.5	13.4	8
New Jersey			
New Mexico	2103.35	97.1	422.7

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	HABITAT MODIFICATION (OTHER THAN HYDROMODIFICATION)	URBAN RUNOFF/STORM SEWERS	NATURAL SOURCES
New York	1340.2	944	
North Carolina	8.7	900.15	37
North Dakota	2458.94	501.38	509.75
Ohio	47.22	556.96	301.41
Ohio River Valley			
Oklahoma	1423.18	779.58	86.26
Oregon	2103	505	
Pauma Band	0	0	0
Pennsylvania	590.22	1526.45	43.28
Puerto Rico	0	556.4	0.5
Rhode Island	7.99	151.1	29.32
Round Valley Tribe		8	23
South Carolina		2862.6	
South Dakota	200	48.3	1172.1
Tennessee	425	1030.8	
Texas		796	212.1
Utah	960.41	85.79	1377.24
Vermont	771.6	367.5	373.6
Virginia	44.8	766.49	1054.72
Washington		2263.3	3772.17
West Virginia	392.74	1157.03	14.87
Wisconsin	1483.05	989.7	1082.5
Wyoming		20.88	45.18
Total	**37,654**	**34,871**	**31,033**
Percent of Impaired	14.0%	13.0%	11.5%
Percent of Assessed	5.4%	5.0%	4.4%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	SILVICULTURE	MUNICIPAL POINT SOURCES	RESOURCE EXTRACTION	NONIRRIGATED CROP PRODUCTION
Alabama		151.3		297.1
Alaska	16.5		309.3	
American Samoa				
Arizona		51.27	301	
Arkansas		97.9	24	
Big Sandy Rancheria				
California	14140.2	3266.88	6838.16	329.73
Colorado	10.52	145.1	757.46	
Connecticut		194.3	27.3	
Delaware		118.42		
Delaware River Basin		206		
District of Columbia		0.9		
Florida	411.1	205.8	465.7	
Georgia	0	203	0	
Guam		1.67		
Hawaii	29.8	18.7	20	
Hoopa Valley Tribe				
Idaho				
Illinois		1640.98	1047.79	3051.14
Indiana		71.34		
Iowa		105.43	17.14	
Kansas		4882.77	2107.05	
Kentucky	100.9	609.9	705.7	103.4
La Posta Band				
Louisiana	286	1798	383	85
Maine	1	93.5	1	
Maryland		181.23	56.69	
Massachusetts		221.35	1.7	
Michigan		423	24	
Minnesota	279.5	524.3	591.4	
Mississippi	707.32	566.7	151.91	6174.16
Missouri		92.8	179.7	7602.3
Montana	810.7	371.9	2534.3	495.9
N Mariana Islands				
Nebraska				
Nevada				
New Hampshire	0	11.9	0	
New Jersey				
New Mexico	196	262.8	596.2	

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	SILVICULTURE	MUNICIPAL POINT SOURCES	RESOURCE EXTRACTION	NONIRRIGATED CROP PRODUCTION
New York	100	545.9	268	
North Carolina	126.6	398.58	11.88	180.5
North Dakota		556.7	489.06	38.02
Ohio	11.5	978.19	720.22	1595.98
Ohio River Valley		981		
Oklahoma	197.5	190.49	1157.31	3685.3
Oregon	7707			
Pauma Band	0	0	0	
Pennsylvania	3.43	258.54	2728.57	
Puerto Rico	0	43	63.5	
Rhode Island		35.99	6.53	
Round Valley Tribe	24		14.5	
South Carolina		679.09	23.49	
South Dakota	26.2		2.1	734.9
Tennessee	14.9	451.9	602.7	870.7
Texas		1398.2	44	
Utah		125.39	205.16	
Vermont	45.4	202.9	67.1	
Virginia		162.85	140.95	
Washington	1508.86	2263.3	1131.65	
West Virginia	1311.83	1016.42	2706.79	297.92
Wisconsin	89.3	1169	153.9	1287.7
Wyoming		11.7	17.45	
Total	**28,156**	**27,988**	**27,695**	**26,830**
Percent of Impaired	10.5%	10.4%	10.3%	10.0%
Percent of Assessed	4.0%	4.0%	4.0%	3.8%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	INTENSIVE ANIMAL FEEDING OPERATIONS	CHANNELIZATION	BANK OR SHORELINE MODIFICATION/DESTABILIZATION
Alabama	159.3		55
Alaska			8
American Samoa	9.5		
Arizona			30.29
Arkansas			
Big Sandy Rancheria			
California	1272.55	6891.02	8955.84
Colorado			
Connecticut	17.9	12.5	1
Delaware			
Delaware River Basin			
District of Columbia		8.8	9.9
Florida			
Georgia			
Guam			
Hawaii	61.49	790.55	
Hoopa Valley Tribe			
Idaho			
Illinois	151.45	1787.99	497.47
Indiana		80.09	
Iowa	303.14	765.19	390.14
Kansas	10475.84		
Kentucky	53.8	76	77.4
La Posta Band			
Louisiana	91	183	70
Maine	2		
Maryland		621.91	1006.02
Massachusetts			
Michigan		248	108
Minnesota			
Mississippi	3892.6	49.7	89.32
Missouri	12.7	3697.9	21
Montana	320.9	1361.9	1124.6
N Mariana Islands			
Nebraska			
Nevada			
New Hampshire	6.5		
New Jersey			
New Mexico		231.7	1831.45

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	INTENSIVE ANIMAL FEEDING OPERATIONS	CHANNELIZATION	BANK OR SHORELINE MODIFICATION/DESTABILIZATION
New York			
North Carolina	253.2	118.1	8.7
North Dakota	4694.8	888.1	331.23
Ohio	98.21	2527.55	401.98
Ohio River Valley			
Oklahoma	928.47	607.56	581.89
Oregon			
Pauma Band	0		
Pennsylvania	2.94	50.38	41.72
Puerto Rico			
Rhode Island	21.51		
Round Valley Tribe	3		
South Carolina	289.04		
South Dakota	196.9		200
Tennessee	85.5	1896.9	85.2
Texas	234		
Utah	30.91		
Vermont	2.5	89.1	681.7
Virginia	1.23	1.16	10.99
Washington			
West Virginia	14.69	221.85	244.63
Wisconsin	928.8	588.45	1176.5
Wyoming			
Total	**24,616**	**23,795**	**18,040**
Percent of Impaired	9.1%	8.8%	6.7%
Percent of Assessed	3.5%	3.4%	2.6%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	REMOVAL OF RIPARIAN VEGETATION	LAND DISPOSAL	IRRIGATED CROP PRODUCTION	EROSION AND SEDIMENTATION
Alabama	55			
Alaska	8	108.6		20.5
American Samoa				
Arizona		54.19	127.03	
Arkansas				
Big Sandy Rancheria				
California	9490.76	667.86	6791.37	15783.24
Colorado				170.41
Connecticut	4.4	40.6		21.4
Delaware		213.44		
Delaware River Basin				
District of Columbia	7.8	9.8		
Florida		916.3		
Georgia		0		
Guam		6.51		
Hawaii	573.18	1	332.96	
Hoopa Valley Tribe				
Idaho				
Illinois	596.54	37.51	6.4	
Indiana		71.05		
Iowa	80.9	24		
Kansas		575.59		
Kentucky	85.5	1308.5		9.6
La Posta Band				
Louisiana		1501		
Maine		35.5		
Maryland		9.29		
Massachusetts		83.1		
Michigan	79	9		2
Minnesota		3630		
Mississippi	1.6	415.15	3886.81	
Missouri		0.3		
Montana	1040.5	172.7	2148.3	
N Mariana Islands				
Nebraska				
Nevada				
New Hampshire		7.4		
New Jersey				
New Mexico	2103.35	149.4	440	

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	**REMOVAL OF RIPARIAN VEGETATION**	**LAND DISPOSAL**	**IRRIGATED CROP PRODUCTION**	**EROSION AND SEDIMENTATION**
New York		1467.3		
North Carolina		38.4	27	8.5
North Dakota	606.39	97.25		40
Ohio	456.15	450.74	2	
Ohio River Valley				
Oklahoma	1266.24	847.63	2247.32	
Oregon				
Pauma Band		0		
Pennsylvania	147.64	117.02		
Puerto Rico		2079.9		
Rhode Island		60.28		
Round Valley Tribe		10		
South Carolina		219.4		
South Dakota			360.9	
Tennessee	291.9	332.5	9.3	
Texas		33.3	311	
Utah			797.4	
Vermont	450.2	335.4		
Virginia	20.8	46.35		5.34
Washington		377.217		
West Virginia	284.64	1208.95		21.46
Wisconsin	261.25	51.3	77.8	55
Wyoming			101.1	
Total	**17,912**	**17,821**	**17,667**	**16,137**
Percent of Impaired	6.7%	6.6%	6.6%	6.0%
Percent of Assessed	2.6%	2.5%	2.5%	2.3%

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	UNSPECIFIED NONPOINT SOURCE
Alabama	
Alaska	
American Samoa	
Arizona	
Arkansas	
Big Sandy Rancheria	
California	7324.78
Colorado	
Connecticut	8.9
Delaware	
Delaware River Basin	
District of Columbia	
Florida	
Georgia	
Guam	
Hawaii	
Hoopa Valley Tribe	
Idaho	
Illinois	
Indiana	688.47
Iowa	
Kansas	
Kentucky	
La Posta Band	
Louisiana	172
Maine	
Maryland	
Massachusetts	
Michigan	
Minnesota	
Mississippi	
Missouri	
Montana	
N Mariana Islands	
Nebraska	
Nevada	
New Hampshire	
New Jersey	
New Mexico	

Table A-5 Leading Sources Impairing Assessed Rivers and Streams

Jurisdiction	UNSPECIFIED NONPOINT SOURCE
New York	
North Carolina	54.6
North Dakota	
Ohio	
Ohio River Valley	908.6
Oklahoma	
Oregon	
Pauma Band	
Pennsylvania	
Puerto Rico	
Rhode Island	
Round Valley Tribe	
South Carolina	
South Dakota	
Tennessee	
Texas	3117.2
Utah	
Vermont	
Virginia	41.9
Washington	
West Virginia	
Wisconsin	3663.95
Wyoming	7.7
Total	**15,988**
Percent of Impaired	5.9%
Percent of Assessed	2.3%

2000 Water Quality Report Table B-1 Total Lake, Reservoir, and Pond Acres in the Nation

Jurisdiction	Total Lake Acres	Assessed Acres	Percent Assessed	Comment
Alabama	490,472	464,811	95%	
Alaska	12,787,200	16,376	0%	Data from ADB. Number of significant lakes (over 5 acres) from 1986 report.
American Samoa				
Arizona	400,720	135,451	34%	Includes tribal land.
Arkansas	514,245	355,954	69%	
California	1,672,684	754,737	45%	
Colorado	164,029	62,920	38%	
Connecticut	64,973	27,669	43%	data from pages 2 and 28.
Delaware	2,954	2,954	100%	
District of Columbia	238	238	100%	
Florida	2,085,120	1,683,000	81%	
Georgia	425,382	402,849	95%	State sent correct numbers in December 2001 - included only lakes numbers because original lakes numbers were incorrect.
Guam	169	0	0%	
Hawaii	2,168	0	0%	Entered total acres from 1998 report because State did not include an estimate.
Idaho	700,000	0	0%	No data.
Illinois	309,340	154,795	50%	
Indiana	142,871	71,120	50%	Total lake waters based on USEPA estimate in the state's 1998 report because no estimate was presented in the 2000 report.
Iowa	161,366	84,118	52%	Iowa's assessed acreage is split between freshwater lakes (43,269 acres) and flood control reservoirs (40,850 acres).
Kansas	188,506	188,506	100%	
Kentucky	228,385	217,422	95%	Total acreage estimate based on the state's 1996 305(b) report.
Louisiana	1,078,031	518,176	48%	
Maine	987,283	987,283	100%	
Maryland	77,965	21,010	27%	
Massachusetts	151,173	92,042	61%	
Michigan	889,600	491,931	55%	does not include statewide fish advisory, which is included in summary of use support calculations
Minnesota	3,290,101	2,591,796	79%	Entered assessed acres from ADB because State did not include summary data in their report.
Mississippi	500,000	291,721	58%	Entered 1998 values for total lake acres and assessed acres for aquatic life use from ADB.
Missouri	293,305	293,305	100%	

Table B-1 Total Lake, Reservoir, and Pond Acres in the Nation

Jurisdiction	Total Lake Acres	Assessed Acres	Percent Assessed	Comment
Montana	844,802	547,929	65%	
N. Mariana Islands				
Nebraska	280,000	125,031	45%	
Nevada	533,239	168,446	32%	
New Hampshire	168,017	160,590	96%	State reports more accurate values than previous values from total waters database (page III-5-2) shown in atlas (page III-5-2).
New Jersey	72,235	18,359	25%	
New Mexico	997,467	136,986	14%	State also assessed 236 lake acres as unknown degree of use support.
New York	790,782	402,486	51%	"Fully supporting or not assesed" category not included. Report states all sampled waters are considered significant public acres (page 77).
North Carolina	311,071	311,071	100%	p. 15. State estimated 1500 lakes greater than 10 acres in area.
North Dakota	714,910	702,315	98%	State reports all lakes and reservoirs are considered significantly publicly owned (page II-2).
Ohio	118,461	0	0%	Significant lakes defined at page 2-18; total lake acres represents EPA estimate from atlas.
Oklahoma	1,041,884	592,147	57%	
Oregon	618,934	507,536	82%	Page 4. 203 listed significant publically-owned lakes/reservoirs/ponds. Total assessed from page 95.
Pennsylvania	161,445	42,421	26%	
Puerto Rico	12,146	12,146	100%	Entered 1998 values for significant lakes because report states there have been no significant changes. Entered total assessed acres as total lake acres.
Rhode Island	21,796	16,555	76%	Total lake acres based on more accurate State GIS hydrography.
Round Valley Tribes	2	0	0%	
South Carolina	407,505	313,865	77%	Entered more accurate estimate of total lake acres based on RF3 (page 34) in lieu of total lake acres cited in atlas (521,737).
South Dakota	750,000	138,857	19%	State also reports 565 significant lakes classified for beneficial uses (pages 36 and 55) , but does not report significant public acres for these lakes.
Tennessee	538,060	530,619	99%	Entered size of public lakes, a subset of total lake acreage, because the state did not report total lake acreage.
Texas	1,994,600	1,547,955	78%	Reported on reservoirs >10 acres only in 2000, while previous years included all small ponds, etc. Got new number from EPA.

Table B-1 Total Lake, Reservoir, and Pond Acres in the Nation

Jurisdiction	Total Lake Acres	Assessed Acres	Percent Assessed	Comment
Utah	481,638	460,642	96%	Entered assessed acres from page III-116 (restated in text at page I-3) in lieu of 460,561 acres cited in Figure I-2 and in review.
Vermont	228,920	53,608	23%	
Virginia	149,982	139,122	93%	Entered size of significant public lakes, a subset of total lake acerage, because State did not report total lake acerage.
Washington	466,296	248,682	53%	Entered total lake acres from 1998 report because State did not provide an estimate.
West Virginia	22,373	21,523	96%	Assessed acres is a statewide value from NAD2000.
Wisconsin	944,000	230,006	24%	Entered total assessed acres from ADB.
Wyoming	325,048	0	0%	Entered total waters values from 1998 report because State did not include them their abbreviated report and did not indicate they had changed.
Total	40,603,893.4	17,339,080.0	42.7%	

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total
Alabama	17215	200216		217431	0	131587		131587
Alaska	6967.74	4470.6		11438.34	0	0		0
American Samoa				0				0
Arizona			118361	118361				0
Arkansas		339004		339004				0
California	116843	58439	0	175282	3640	60996	0	64636
Colorado			56669	56669				0
Connecticut			19144.7	19144.7			6984.4	6984.4
Delaware				0				0
District of Columbia	0	0		0	0	0		0
Florida	437120	334720	0	771840	29440	80640	0	110080
Georgia	5551	59615		65166				0
Guam				0				0
Hawaii				0				0
Idaho				0				0
Illinois	4601.6	3253.6		7855.2	0	0		0
Indiana	0	25580		25580	0	0		0
Iowa (flood control reservoirs)	0	19000		19000	0	16950		16950
Iowa (lakes)	981	9355		10336	6142	12553		18695
Kansas	0	0		0	8255	18629		26884
Kentucky	99869	578		100447	94839	0		94839
Louisiana	48	40211		40259	1926	0		1926
Maine	344712	413369		758081	833	79301		80134
Maryland	3747.8	5174.5		8922.3				0
Massachusetts	5098.6	21866.3		26964.9	569.9	82		651.9
Michigan	0	0		0	0	1625		1625
Minnesota	532585	1237101		1769686	0	557		557

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total
Mississippi			190239.06	190239.06			92654.8	92654.8
Missouri	15676	94513		110189	10192	112049		122241
Montana	21251.5	42894.8		64146.3	0	7549.9		7549.9
N. Mariana Islands				0				0
Nebraska	4616	112342		116958				0
Nevada	97561	70885		168446				0
New Hampshire	22723	130468		153191	0	1123		1123
New Jersey	0	0	5550	5550	0	0	12409	12409
New Mexico	11751	18659		30410				0
New York				0	90944			90944
North Carolina	305247			305247				0
North Dakota				0				0
Ohio		641		641		51921		51921
Oklahoma	4498	71690		76188	32202	43475		75677
Oregon	275179	20994		296173	88786			88786
Pennsylvania			16157	16157				0
Puerto Rico	1261	5143		6404	1878	0		1878
Rhode Island	5482.7	8258.8		13741.5	0	5		5
South Carolina		74043.97		74043.97				0
South Dakota		22831		22831				0
Tennessee	3127	409411		412538	0	0		0
Texas	0	858967		858967	0	97522		97522
Utah	162760	158693		321453	0	0		0
Vermont			10452	10452			12488	12488

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total
Virginia		25265		25265		87254		87254
Washington	151763			151763				0
West Virginia	3.1	2423.3		2426.4	0	6295		6295
Wisconsin	30314	21786		52100	14348	30258		44606
Wyoming				0				0
Total	2,688,553.0	4,921,861.9	416,572.8	8,026,988	383,994.9	840,371.9	124,536.2	1,348,903
Percent of assessed for summary of use suport	15.7%	28.8%	2.4%	47.0%	2.2%	4.9%	0.7%	7.9%

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Impaired - Evaluated	Impaired - Monitored	Impaired - Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total
Alabama	11165	104628		115793				0
Alaska	857	4081		4938	0	0		0
American Samoa				0				0
Arizona			17090	17090				0
Arkansas		16950		16950				0
California	4194	510625	0	514819				0
Colorado			6251	6251				0
Connecticut			1540	1540			0	0
Delaware				0				0
District of Columbia	0	238.4		238.4				0
Florida	126720	674360	0	801080				0
Georgia	48270	289413		337683				0
Guam				0				0
Hawaii				0				0
Idaho				0				0
Illinois	37788.5	109151.5		146940	0	0		0
Indiana	0	45540		45540	0	0		0
Iowa (flood control reservoirs)	0	4900		4900	0	0		0
Iowa (lakes)	8719	5518		14237	0	0		0
Kansas	4797	156825		161622				0
Kentucky	16768	5368		22136	0	0		0
Louisiana	19881	456110		475991	0	0		0
Maine	43822	105246		149068				0
Maryland	2959.7	9127.6		12087.3				0
Massachusetts	12406.4	27018.9		39425.3	270	436.4		706.4
Michigan	678620	210980		889600				0
Minnesota	168354	653199		821553	0	0		0

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Impaired - Evaluated	Impaired - Monitored	Impaired - Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total
Mississippi			8827.1	8827.1			0	0
Missouri	0	60875		60875				0
Montana	1600	474632.5		476232.5	0	0		0
N. Mariana Islands				0				0
Nebraska	8562	2406		10968				0
Nevada	0	0		0				0
New Hampshire	1513	4756		6269				0
New Jersey	0	0	400	400				0
New Mexico	95598	28542		124140	0	0		0
New York	311542			311542				0
North Carolina	5266			5266				0
North Dakota				0				0
Ohio		25613		25613				0
Oklahoma	387	439895		440282	0	0		0
Oregon		122577		122577				0
Pennsylvania			26264	26264				0
Puerto Rico	0	3864		3864				0
Rhode Island	647.1	2160.4		2807.5	0	0		0
South Carolina		239821.27		239821.27				0
South Dakota		116026		116026				0
Tennessee	293	117788		118081				0
Texas	0	591466		591466	0	0		0
Utah	15	139174		139189				0
Vermont			30410	30410				0

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	**Impaired - Evaluated**	**Impaired - Monitored**	**Impaired - Not Specified**	**Impaired - Total**	**Not Attainable - Evaluated**	**Not Attainable - Monitored**	**Not Attainable - Not Specified**	**Not Attainable - Total**
Virginia		3880		3880				0
Washington	91986.4			91986.4				0
West Virginia	2	12799.1		12801.1	0	0		0
Wisconsin	40586	92714		133300	0	0		0
Wyoming				0				0
Total	1,743,319.1	5,868,268.7	90,782.1	7,702,369.9	270.0	436.4	0.0	706
Percent of assessed for summary of use suport	10.2%	34.4%	0.5%	45.1%	0.0%	0.0%	0.0%	0.0%

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Monitored - Total	Evaluated - Total	Not Specified - Total	Assessed - Total	Comment
Alabama	436,431	28,380	0	464,811	
Alaska	8,552	7,825	0	16,376	Data from ADB
American Samoa	0	0	0	0	
Arizona	0	0	135,451	135,451	Excludes tribal land. Mon/eval details from NAD.
Arkansas	355,954	0	0	355,954	
California	630,060	124,677	0	754,737	
Colorado	0	0	62,920	62,920	Mon/eval pie chart contains details later retrieved from NAD
Connecticut	0	0	27,669	27,669	Page 28. State reported overall use support. NAD hs details for pie chart.
Delaware	0	0	0	0	No data. State reports a total of 625.5 acres evaluated and 2328.4 monitored. Mon/eval details from NAD used in summary.
District of Columbia	238	0	0	238	
Florida	1,089,720	593,280	0	1,683,000	State reported overall use support status.
Georgia	349,028	53,821	0	402,849	
Guam	0	0	0	0	
Hawaii	0	0	0	0	No data.
Idaho	0	0	0	0	No data.
Illinois	112,405	42,390	0	154,795	Data from NAD2000.
Indiana	71,120	0	0	71,120	
Iowa (flood control reservoirs)	40,850	0	0	40,850	
Iowa (lakes)	27,426	15,842	0	43,268	
Kansas	175,454	13,052	0	188,506	
Kentucky	5,946	211,476	0	217,422	Entered "overall" use support because the state did not report on summary use support.
Louisiana	496,321	21,855	0	518,176	Entered data from ADB
Maine	597,916	389,367	0	987,283	Estimates miles includes estuarine/marine waters. Excludes effect of statewide advisories for mercury in fish from lakes. Values include unassessed nonsignificant lake waters.
Maryland	14,302	6,708	0	21,010	
Massachusetts	49,404	18,345	0	67,749	Excludes Quabbin Reservoir (25,000 acres). This waterbody fully supports all designated uses except fish consumption.
Michigan	212,605	678,620	0	891,225	Data includes effect of statewide fish consumption advisory for mercury. State reports acres of threatened waters due to nutrient impairment.
Minnesota	1,890,857	700,939	0	2,591,796	State summary pie chart reflects details received via email after deadline.

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Monitored - Total	Evaluated - Total	Not Specified - Total	Assessed - Total	Comment
Mississippi	0	0	291,721	291,721	Entered Statewide projection from ADB for aquatic life use in lieu of summary use data for Pascagoula River Basin. State reports that 7550.9 acres in the basin were assessed using monitoring data. Additional pie chart details from NAD.
Missouri	267,437	25,868	0	293,305	
Montana	525,077	22,852	0	547,929	
N. Mariana Islands	0	0	0	0	
Nebraska	114,748	13,178	0	127,926	
Nevada	70,885	97,561	0	168,446	
New Hampshire	136,347	24,236	0	160,583	Excludes the effect of statewide fish consumption advisory for mercury. State reports that values for monitored and evaluated data based on new definitions.
New Jersey	0	0	18,359	18,359	Entered aquatic life use support.
New Mexico	47,201	107,349	0	154,550	State reported overall use support. Of the fully supporting acres, 25752 acres were reported as "fully supporting, impacts observed." Used State total assessed acres (136986) rather than EPA total of 154,786.
New York	0	402,486	0	402,486	Report states that all assessments should be considered as evaluations (page 54). Value for "full supporting acres or acres not assessed" is not included, because no way to tell the two apart..
North Carolina	0	310,513	0	310,513	p. 17.
North Dakota	0	0	0	0	No data.
Ohio	78,175	0	0	78,175	Entered aquatic life use support in lieu of summary use support.
Oklahoma	555,060	37,087	0	592,147	
Oregon	143,571	363,965	0	507,536	page 95. Not data available for items left blank
Pennsylvania	0	0	42,421	42,421	Excludes Lake Erie/Presque Isle Bay and Levittown Lake impaired for fish consumption. Mon/eval details from NAD.
Puerto Rico	9,007	3,139	0	12,146	
Rhode Island	10,424	6,130	0	16,554	
South Carolina	313,865	0	0	313,865	
South Dakota	138,857	0	0	138,857	
Tennessee	527,199	3,420	0	530,619	
Texas	1,547,955	0	0	1,547,955	Entered values from ADB.
Utah	297,867	162,775	0	460,642	
Vermont	0	0	53,350	53,350	State reports overall use support. Additional mon/eval details from NAD

Table B-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Monitored - Total	Evaluated - Total	Not Specified - Total	Assessed - Total	Comment
Virginia	116,399	0	0	116,399	Entered data from March 2001 revisions
Washington	0	243,749	0	243,749	Values from sample survey approach are considered as evaluated data.
West Virginia	21,517	5	0	21,523	Entered statewide data from NAD2000.
Wisconsin	144,758	85,248	0	230,006	Entered data from ADB.
Wyoming	0	0	0	0	No data.
Total	11,630,939	4,816,137	631,891	17,078,967	May be less than total assessed, because not all states report on summary of use support for all waters
Percent of assessed for summary of use suport	68.1%	28.2%	3.7%		

Table B-3a Aquatic Life Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama	243,141	179,054	41,010	8,010	0	471,215
Alaska						0
American Samoa			0			
Arizona	118,697		16,366	388		135,451
Arkansas	339,004					339,004
California	200,843	63,193	292,490	154,073		710,599
Colorado	56,669	0	6,109	214	0	62,992
Connecticut	23,274	3,635	710	0	0	27,619
Delaware	2,159	0	300	495	0	2,954
District of Columbia	27	0	211	0		238
Florida	760,960	110,080	304,000	85,760		1,260,800
Georgia						0
Guam						
Hawaii						0
Idaho						0
Illinois	80,019	0	72,609	0	0	152,628
Indiana	69,260	0	0	0	0	69,260
Iowa (flood control reservoirs)	19,000	16,950	4,900	0	0	40,850
Iowa (lakes)	10,267	17,951	13,623	123	0	41,964
Kansas		99,079	64,031	25,396	0	188,506
Kentucky	158,204	49,239	6,925	3,132	0	217,500
Louisiana	40,259	1,926	255,189	250,802	0	548,176
Maine	874,857	13,135	99,291	0	0	987,283
Maryland	8,922		12,087	0		21,010
Massachusetts	1,397	553	27,239	394	706	30,289
Michigan				8,761		8,761
Minnesota						0
Mississippi	190,239	92,655	8,827	0	0	291,721
Missouri	291,525		50	1,730		293,305
Montana	80,861	7,550	188,019	6,433	0	282,863
N. Mariana Islands						
Nebraska	81,828		7,526	410		89,764
Nevada	168,446		0	0		168,446
New Hampshire	155,506	54	3,231	1,779	0	160,570
New Jersey	5,950	2,635	1,290			9,875
New Mexico	13,693		111,116	18	0	124,827
New York		7,814	34,739	6,630		49,183

Table B-3a Aquatic Life Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
North Carolina	305,247		5,266	0		310,513
North Dakota	651,324	32,249	18,742			702,315
Ohio	641	51,921	24,094	1,519		78,175
Oklahoma	133,759	212,764	192,144	45,274	0	583,941
Oregon	470	107,110		101,771		209,351
Pennsylvania						0
Puerto Rico	7,990	977	0	3,179	0	12,146
Rhode Island	12,776	0	1,892	699		15,367
South Carolina	74,851		15,060	223,955		313,865
South Dakota	27,444		36,934	74,399	0	138,777
Tennessee	504,505	0	14,112	6,312	0	524,929
Texas	568,529	0	83,804	26,946	0	679,279
Utah	321,453	0	135,218	3,971	0	460,642
Vermont	19,906	15,193	14,815	3,425		53,339
Virginia	96,302	16,446	2,261	1,514		116,523
Washington						0
West Virginia	2,428	6,295	12,800	0	0	21,523
Wisconsin	107,794	38,685	7,993	55,354	0	209,826
Wyoming		6100.00	15.79			6,116
Total	6,830,425	1,153,243	2,137,039	1,102,866	706	11,224,279
Percent of assessed for use	60.9%	10.3%	19.0%	9.8%	0.0%	

Table B-3a Aquatic Life Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	Page 28.
Delaware	
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	NAD2000.
Indiana	
Iowa (flood control reservoirs)	
Iowa (lakes)	
Kansas	
Kentucky	
Louisiana	Entered data from ADB for fish and wildlife use support.
Maine	
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	Excludes Quabbin Reservoir (25,000 acres). This waterbody supports aquatic life.
Michigan	Entered warmwater biota classification for acres not supporting aquatic life. State reports an unknown acreage supports aquatic life use.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	Excludes the effect of statewide fish consumption advisory for mercury.
New Jersey	
New Mexico	Of "fully supporting" acres, 13019 were reported as "fully supporting, impacts observed".
New York	does not include "fully supporting or not assessed"

Table B-3a Aquatic Life Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	**Comment**
North Carolina	P. 18.
North Dakota	
Ohio	
Oklahoma	
Oregon	page 96. Blank items listed as category not applicable.
Pennsylvania	No data.
Puerto Rico	Entered "propagation and preservation of desirable species" use support status.
Rhode Island	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from ADB.
Utah	
Vermont	inland lakes. Database may include Lake Champlain
Virginia	Entered only monitored data from NAD at request of state and region.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Entered data from ADB.
Wyoming	Data in database only, not in report
Total	
Percent of assessed for use	

Table B-3b Fish Consumption Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama	391,952	12,650	30,200	30,013	0	464,815
Alaska						0
American Samoa						0
Arizona	134,896			555		135,451
Arkansas	339,004			16,950		355,954
California	104,952	64,678	162,481	152,723		484,834
Colorado	0	0	0	5,975	0	5,975
Connecticut	26809.30	0	736.40	55.00	0	27,601
Delaware						0
District of Columbia	0	0	0	238		238
Florida	654,720	0	229,120	0		883,840
Georgia						0
Guam						0
Hawaii						0
Idaho						0
Illinois	100,646	0	17,781	5,275	0	123,702
Indiana	0	0	43,580	1,960	0	45,540
Iowa (flood control reservoirs)	29,850	0	0	0	0	29,850
Iowa (lakes)	20,844	59	0	164	0	21,067
Kansas		13,683	0	1	0	13,684
Kentucky	197,502	0	8,210	0	0	205,712
Louisiana						0
Maine	987,283	0	0	0	0	987,283
Maryland	20,910		100	0		21,010
Massachusetts	193	0	0	9,775	706	10,674
Michigan	0			889,600		889,600
Minnesota						0
Mississippi	134,638	112,579	28,459	44	0	275,720
Missouri	292,365		0	940		293,305
Montana	215,435	7,550	53,791	6,971	0	283,747
N. Mariana Islands						0
Nebraska	114,734		0	0		114,734
Nevada						0
New Hampshire	168,002	0	0	0	0	168,002
New Jersey	0	114	14,131	0		14,245
New Mexico	410		109,499	0	0	109,909
New York		0	151,384	173		151,557

Table B-3b Fish Consumption Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
North Carolina	275547.00		35180.00			310,727
North Dakota			518,175			518,175
Ohio	28,682	62,385	12,800			103,867
Oklahoma						0
Oregon	0	13,008		18,481		31,489
Pennsylvania						0
Puerto Rico						0
Rhode Island	0	0	175	0		175
South Carolina						0
South Dakota	31,438		0	0	0	31,438
Tennessee						0
Texas	265,599	0	340,184	14,309	0	620,092
Utah	460,642	0	0	0	0	460,642
Vermont	30,781	0	20,958	0		51,739
Virginia	45,487	71,078	0	0		116,565
Washington						0
West Virginia	48	0	0	0	0	48
Wisconsin	116,474	22,504	57,906	6,820	0	203,704
Wyoming						0
TOTAL	5,189,844	380,288	1,834,849	1,161,023	706	8,566,710
Percent of assessed for use	60.6%	4.4%	21.4%	13.6%	0.0%	

Table B-3b Fish Consumption Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	
Alaska	No data.
American Samoa	
Arizona	
Arkansas	Eleven additional public and private lakes have fish consumption advisories.
California	
Colorado	
Connecticut	v. confusing, use updated NAD numbers which account for advisories other than statewide only
Delaware	No data.
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	NAD2000.
Indiana	
Iowa (flood control reservoirs)	
Iowa (lakes)	
Kansas	
Kentucky	
Louisiana	No data.
Maine	Excludes effect of statewide advisory for mercury in fish from lake waters.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	Excludes Quabbin Reservoir (25,000 acres). This waterbody does not support fish consumption.
Michigan	Acres not supporting fish consumption use reflect statewide fish consumption advisory for all inland lakes and other advisories for PCBs and/or
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	Summed values for "cold water fishery - trout" and "warm water fishery."
N. Mariana Islands	
Nebraska	
Nevada	No data.
New Hampshire	Excludes effect of statewide fish consumption advisory for mercury.
New Jersey	State reports 14,245 miles assessed for fish consumption.
New Mexico	All the "fully supporting" acres were reported as "fully supporting, impacts observed".
New York	does not include "fully supporting or not assessed"

Table B-3b Fish Consumption Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
North Carolina	data from database submission, not in report
North Dakota	
Ohio	
Oklahoma	No data.
Oregon	page 96. Blank items listed as category not applicable.
Pennsylvania	No data.
Puerto Rico	No data.
Rhode Island	
South Carolina	No data.
South Dakota	
Tennessee	No data.
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Entered only monitored data from NAD at request of state and region.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Entered data from ADB.
Wyoming	No data.
TOTAL	
Percent of assessed for use	

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assesse
Alabama	318,593	82,955	16,955	200	0	418,703
Alaska						0
American Samoa						0
Arizona	134,320		545	514		135,379
Arkansas	339,004					339,004
California	202,876	77,465	200,941	152,969		634,251
Colorado	56,650	0	8	0	0	56,658
Connecticut	16,767	9,011	195	76	0	26,049
Delaware	911	0	1,136	907	0	2,954
District of Columbia	0	0	0	238		238
Florida	760,960	110,080	304,000	85,760		1,260,800
Georgia						0
Guam						0
Hawaii						0
Idaho						0
Illinois	22,129	0	118,580	11,918	0	152,628
Indiana	0	0	0	0	0	0
Iowa (flood control reservoirs)	40,850	0	0	0	0	40,850
Iowa (lakes)	16,091	1,041	5,719	73	0	22,924
Kansas		47,903	107,524	33,079	0	188,506
Kentucky	215,427	0	219	0	0	215,646
Louisiana	453,343	0	24	39,546	0	492,913
Maine	879,314	71,105	36,864	0	0	987,283
Maryland	5,069		0	0		5,069
Massachusetts	2,022	4,190	5,461	8,636	706	21,015
Michigan				3,770		3,770
Minnesota	1,769,686	557	498,406	323,147	0	2,591,796
Mississippi	19,821	0	0	0	0	19,821
Missouri	261,757		10	605		262,372
Montana	205,107	0	265,303	38,512	0	508,922
N. Mariana Islands						0
Nebraska	4,083		0	0		4,083
Nevada	168,354		0	0		168,354
New Hampshire	158,034	1,085	1,287	0	0	160,406
New Jersey	11,343	0	4,571	906		16,820
New Mexico						0
New York		32,371	88,723	4,293		125,387

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assesse
North Carolina	204,626		5,193	0		209,819
North Dakota	511,376	28,881	147,057			687,315
Ohio	641	51,921	24,094	1,519		78,175
Oklahoma	61,635	271,024	165,565	31,900	0	530,124
Oregon	479,174	9,428	9,574	9,360		507,536
Pennsylvania						0
Puerto Rico	7,741	1,878	1,398	1,129	0	12,146
Rhode Island	13,792	0	216	485		14,493
South Carolina	310,027.9		3,160.2	117.9		313,306.0
South Dakota	48,468		0	0	0	48,468
Tennessee	395,923	0	15,555	83,001	0	494,479
Texas	480,067	0	0	400	0	480,467
Utah	161,760			1,000	0	162,760
Vermont	34,256	10,712	4,120	3,855		52,943
Virginia	109,469	0	0	105		109,574
Washington						0
West Virginia		4,430	0	0	0	4,430
Wisconsin	3,623	1,367	86,838	1,835	0	93,663
Wyoming						0
Total	8,885,090	817,405	2,119,241	839,856	706	12,662,298
Percent of assessed for use	70.2%	6.5%	16.7%	6.6%	0.0%	

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	State combines swimming and secondary contact uses.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	page 28.
Delaware	
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	data from NAD2000.
Indiana	
Iowa (flood control reservoirs)	
Iowa (lakes)	
Kansas	
Kentucky	
Louisiana	
Maine	
Maryland	Includes only lakes where swimming is a defined function. Used numbers from electronic submission because did not receive cla
Massachusetts	Excludes Quabbin Reservoir (25,000 acres). This waterbody supports swimming.
Michigan	State reports an unknown acreage supports swimming use.
Minnesota	
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	Excludes effect of statewide fish consumption advisory for mercury.
New Jersey	State reports 17,473 miles assessed for primary contact recreation.
New Mexico	No data.
New York	does not include "fully supporting or not assessed"

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
North Carolina	P. 18.
North Dakota	Swimming includes secondary contact (boating, wading, or any other use associated with water)
Ohio	Includes primary and secondary contact recreational uses.
Oklahoma	
Oregon	page 96. Blank items listed as category not applicable.
Pennsylvania	No data.
Puerto Rico	
Rhode Island	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Entered only monitored data from NAD at request of state and region.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Entered data from ADB.
Wyoming	No data.
Total	
Percent of assessed for use	

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	
Alabama	
Alaska	
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	
Delaware	
District of Columbia	
Florida	
Georgia	
Guam	
Hawaii	
Idaho	
Illinois	
Indiana	
Iowa (flood control reservoirs)	
Iowa (lakes)	
Kansas	
Kentucky	
Louisiana	
Maine	
Maryland	arification from state.
Massachusetts	
Michigan	
Minnesota	
Mississippi	
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	
New Jersey	
New Mexico	
New York	

Table B-3c Swimming Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming
Total
Percent of assessed for use

Table B-3d Secondary Contact Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa						0
Arizona	33		15	24		72
Arkansas	339,004					339,004
California	216,080	64,473	268,135	152,752		701,440
Colorado	6,262	0	0	0	0	6,262
Connecticut						0
Delaware	1,545	0	1,251	158	0	2,954
District of Columbia	0	0	136	103		238
Florida	760,960	110,080	304,000	85,760		1,260,800
Georgia						0
Guam						0
Hawaii						0
Idaho						0
Illinois	6,282		118,670	27,676		152,628
Indiana						0
Iowa (flood control reservoirs)						0
Iowa (lakes)						0
Kansas		105,987	79,176	3,343	0	188,506
Kentucky	118,825	93,700	4,000	0	0	216,525
Louisiana	456,761	0	0	36,128	0	492,889
Maine	987,283	0	0	0	0	987,283
Maryland						0
Massachusetts	43,414	4,976	4,260	8,523	706	61,879
Michigan				0		0
Minnesota						0
Mississippi	37	16	235	153	0	442
Missouri						0
Montana						0
N. Mariana Islands						0
Nebraska						0
Nevada	168,446		0	0		168,446
New Hampshire	168,002	0	0	0	0	168,002
New Jersey						0
New Mexico	201		127	13	0	341
New York		994	8,784	0		9,778

Table B-3d Secondary Contact Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
North Carolina	305,247		5,266	0		310,513
North Dakota						0
Ohio						0
Oklahoma						0
Oregon	479,174	9,428	9,574	9,360		507,536
Pennsylvania						0
Puerto Rico	10,289	728	0	1,129	0	12,146
Rhode Island						0
South Carolina						0
South Dakota	48,468		0	0	0	48,468
Tennessee						0
Texas	0	0	0	524	0	524
Utah	161,760			1,000	0	162,760
Vermont	28,371	9,729	11,032	3,862		52,994
Virginia						0
Washington						0
West Virginia		2,700	47	0	0	2,747
Wisconsin						0
Wyoming						0
Total	4,306,444	402,811	814,708	330,508	706	5,855,176
Percent of assessed for use	73.5%	6.9%	13.9%	5.6%	0.0%	

Table B-3d Secondary Contact Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	No data. Secondary contact data combined with swimming.
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	No data.
Delaware	
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	Entered recreational use support data.
Indiana	No data.
Iowa (flood control reservoirs)	No data.
Iowa (lakes)	No data.
Kansas	
Kentucky	
Louisiana	Entered data from ADB
Maine	
Maryland	Included in swimming use (page 7).
Massachusetts	Excludes Quabbin Reservoir (25,000 acres). This waterbody supports secondary contact.
Michigan	State reports an unknown acreage supports secondary contact use.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	No data.
Montana	No data.
N. Mariana Islands	
Nebraska	No data.
Nevada	
New Hampshire	Excludes effect of statewide fish consumption advisory for mercury.
New Jersey	No data.
New Mexico	All "fully supporting" acres were reported as "fully supporting, impacts observed."
New York	does not include "fully supporting or not assessed"

Table B-3d Secondary Contact Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	**Comment**
North Carolina	p. 18.
North Dakota	No data. Secondary contact included in swimming uses.
Ohio	Included in swimming use.
Oklahoma	No data.
Oregon	page 96. Blank items listed as category not applicable.
Pennsylvania	No data.
Puerto Rico	
Rhode Island	Included in swimming use support.
South Carolina	Included in swimming use.
South Dakota	
Tennessee	No data.
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Included in swimming use support.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	Included in swimming use support.
Wyoming	No data.
Total	
Percent of assessed for use	

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama	25,093	50,971	0	0	0	76,064
Alaska						0
American Samoa						
Arizona	115,968		111	0		116,079
Arkansas	339,004					339,004
California	195,506	30,974	186,617	28,013		441,110
Colorado	45,876	0	0	6	0	45,882
Connecticut						0
Delaware	296	0	0	0	0	296
District of Columbia						0
Florida	10,880	0	407,680	640		419,200
Georgia						0
Guam						
Hawaii						0
Idaho						0
Illinois	63,826	0	11,129	0	0	74,955
Indiana						0
Iowa (flood control reservoirs)	0	11,000	0	0	0	11,000
Iowa (lakes)	10,516	1,208	90	387	0	12,201
Kansas		38,531	65,109	84,866		188,506
Kentucky	190,864	0	2,508	458	0	193,830
Louisiana	205,373	0	0	0	0	205,373
Maine	987,283	0	0	0	0	987,283
Maryland	9,651		0	0		9,651
Massachusetts						0
Michigan						0
Minnesota						0
Mississippi	45	15	0	0	0	60
Missouri	85,367		1,478	13,012		99,857
Montana	175,052	0	953	301,800	0	477,804
N. Mariana Islands						
Nebraska	150		0	0		150
Nevada	29,230		0	0		29,230
New Hampshire	11,699		0	0	0	11,699
New Jersey						0
New Mexico						0

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
New York		49,246	16,809	0		66,055
North Carolina	169,907		0	0		169,907
North Dakota	368,231	2,168				370,399
Ohio	1,392	39,292	31,044	6,768		78,496
Oklahoma	56,145	6,306	28,010	10,190	0	100,651
Oregon						0
Pennsylvania						0
Puerto Rico	5,665	0	0	1,713	0	7,378
Rhode Island	5,601	5	56	0		5,662
South Carolina	313,865		0	0		313,865
South Dakota	5,975		0	0	0	5,975
Tennessee	505,162	0	0	0	0	505,162
Texas	1,393,300	120,352	0	3,280	0	1,516,932
Utah	252,643	0	0	0	0	252,643
Vermont	1,022	8	123	0		1,153
Virginia	104,275	0	0	0		104,275
Washington						0
West Virginia	3,307	3,480	0	0	0	6,787
Wisconsin						0
Wyoming						0
TOTAL	5,688,169	353,556	751,718	451,133	0	7,244,575
Percent of assessed for use	78.5%	4.9%	10.4%	6.2%	0.0%	

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	No data.
Delaware	
District of Columbia	No data.
Florida	
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	NAD2000.
Indiana	No data.
Iowa (flood control reservoirs)	
Iowa (lakes)	
Kansas	
Kentucky	
Louisiana	Entered data from ADB
Maine	
Maryland	Includes only lakes where drinking wter source is a defined function. Used numbers from electronic submission because did not receive clarific
Massachusetts	No data reported. Report states Quabbin Reservoir (excluded from individual use data) supports drinking water supply.
Michigan	No data.
Minnesota	No data.
Mississippi	Entered Statewide projections from ADB.
Missouri	
Montana	
N. Mariana Islands	
Nebraska	
Nevada	
New Hampshire	Excludes effect of statewide fish consumption advisory for mercury. Acerage reflects lakes/ponds currently used as public water supplies.
New Jersey	No data.
New Mexico	No data.

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	**Comment**
	does not include "fully supporting or not assessed"
New York	. 'Total acres classified for use as potable water is 417,987 acres.
North Carolina	p. 18.
North Dakota	
Ohio	
Oklahoma	
Oregon	page 96. Blank items listed as category not applicable or no data available.
Pennsylvania	No data.
Puerto Rico	Entered "raw source of drinking water supply" use support status.
Rhode Island	
South Carolina	
South Dakota	
Tennessee	
Texas	Entered data from ADB.
Utah	
Vermont	
Virginia	Entered only monitored data from NAD at request of state and region.
Washington	No data.
West Virginia	Entered statewide data from NAD2000.
Wisconsin	No data.
Wyoming	No data.
TOTAL	
Percent of assessed for use	

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction
Alabama
Alaska
American Samoa
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Guam
Hawaii
Idaho
Illinois
Indiana
Iowa (flood control reservoirs)
Iowa (lakes)
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
N. Mariana Islands
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico

m state.

Table B-3e Drinking Water Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming
TOTAL
Percent of assessed for use

Table B-3f Agriculture Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama	0	0	0	0	0	0
Alaska						0
American Samoa						0
Arizona	131,365		3,617	378		135,360
Arkansas	339,004					339,004
California	193,968	32,281	58,035	153,434		437,718
Colorado	62,920	0	0	0	0	62,920
Connecticut						0
Delaware	2,765	0	0	0	0	2,765
District of Columbia						0
Florida						0
Georgia						0
Guam						0
Hawaii						0
Idaho						0
Illinois						0
Indiana						0
Iowa (flood control reservoirs)						0
Iowa (lakes)						0
Kansas		106,409	78,941	3,156		188,506
Kentucky						0
Louisiana	346,848	0	0	0	0	346,848
Maine						0
Maryland						0
Massachusetts						0
Michigan				0		0
Minnesota						0
Mississippi						0
Missouri						0
Montana	233,157	0	48,753	3,619	0	285,529
N. Mariana Islands						0
Nebraska	116,209		0	0		116,209
Nevada	168,446		0	0		168,446
New Hampshire	168,002	0	0	0	0	168,002
New Jersey						0
New Mexico	12,863		12,110	1,942	0	26,915
New York						0

Table B-3f Agriculture Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
North Carolina						0
North Dakota						0
Ohio						0
Oklahoma	58,434	1,599	0	5,833	0	65,866
Oregon						0
Pennsylvania						0
Puerto Rico						0
Rhode Island						0
South Carolina	313,865		0	0		313,865
South Dakota			4,693	0	0	4,693
Tennessee	493,829	0	0	0	0	493,829
Texas	812,950	0	39,937	184,083	0	1,036,970
Utah	460,225	0	0	0	0	460,225
Vermont	0	0	0	0		0
Virginia						0
Washington						0
West Virginia						0
Wisconsin						0
Wyoming						0
TOTAL	3,914,850	140,289	246,086	352,445	0	4,653,670
Percent of assessed for use	84.1%	3.0%	5.3%	7.6%	0.0%	

Table B-3f Agriculture Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
Alabama	
Alaska	No data.
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	No data.
Delaware	
District of Columbia	No data.
Florida	No data.
Georgia	No data
Guam	
Hawaii	No data.
Idaho	No data.
Illinois	No data.
Indiana	No data.
Iowa (flood control reservoirs)	No data.
Iowa (lakes)	No data.
Kansas	Entered irrigation use support status.
Kentucky	No data.
Louisiana	Entered data from ADB
Maine	No data.
Maryland	No data.
Massachusetts	No data.
Michigan	State reports an unknown acreage supports agricultural use.
Minnesota	No data.
Mississippi	No data.
Missouri	No data.
Montana	
N. Mariana Islands	
Nebraska	
Nevada	Entered "irrigation" use support status
New Hampshire	Excludes effect of statewide fish consumption advisory for mercury.
New Jersey	No data.
New Mexico	Entered "livestock watering" use support status. All the "fully supporting " acres were reported as "fully supporting, impacts observed."
New York	No data.

Table B-3f Agriculture Use Support in Assessed Lakes, Reservoirs, and Ponds

Jurisdiction	Comment
North Carolina	No data.
North Dakota	No data.
Ohio	No data.
Oklahoma	
Oregon	page 96. Blank items listed as category not applicable or no data available.
Pennsylvania	No data.
Puerto Rico	No data.
Rhode Island	No data.
South Carolina	
South Dakota	
Tennessee	Entered "irrigation" use support.
Texas	Entered general use support data from ADB.
Utah	
Vermont	Entered "agricultural water supply" use support status.
Virginia	No data.
Washington	No data.
West Virginia	No data.
Wisconsin	No data.
Wyoming	No data.
TOTAL	
Percent of assessed for use	

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	NUTRIENTS	METALS	MERCURY	SEDIMENT/SILTATION	SALINITY/TDS/CHLORIDES	ORGANIC ENRICHMENT/LOW DO
Alabama	6,085	1,850		60		24,285
Alaska		2				1,137
American Samoa						
Arizona		195	169			4,096
Arkansas			16,950			
Big Sandy Rancheria						
California	444,909	604,827	155,588	355,371	800,964	26,034
Colorado		6,243	5,975			
Connecticut	106	1,020	1,870	98	45	1,522
Delaware	150					
District of Columbia		103		103		103
Florida	725,824	473,856	407,488			
Georgia		40,773				45
Guam						
Hawaii						
Idaho						
Illinois	127,908	13,199	5,322	118,761	26	87,386
Indiana		206	206			
Iowa	6,137			6,633		14,754
Kansas	155,230	18,183			32,555	11,124
Kentucky	14,321	452		1,940		5,156
La Posta Band						
Louisiana		395,035	337,715		53,037	68,746
Maine	53,605			31,424		69,983
Maryland	11,953			208		12,045
Massachusetts	333	33,705		150		2,037
Michigan	6,102	2,659	155,842			
Minnesota	821,552					
Mississippi	8,827	28,458	458	6,271		5,267
Missouri	1,478	10,000				1,780
Montana	178,049	61,665	42,980	129,339	8,072	129,816
N Mariana Islands						
Nebraska	5,884			1,365		7,141
Nevada						
New Hampshire	0			0	0	0
New Jersey						
New Mexico	35,051	63,200		83,371	6,177	116

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	NUTRIENTS	METALS	MERCURY	SEDIMENT/SILTATION	SALINITY/TDS/CHLORIDES	ORGANIC ENRICHMENT/LOW DO
New York	255,632	136,648		194,220	63,046	90,034
North Carolina	280			35		
North Dakota	165,683	518,175	518,175	158,087	104	62,328
Ohio	16,453	3,228		26,340	1,838	7,795
Oklahoma	148,866	84,928		284,349	23,542	57,581
Oregon	92,411	18,481				71,847
Pennsylvania	12,363	300	5,700			13,093
Puerto Rico	0	1,000		0	0	1,822
Rhode Island	1,579	880		109	26	1,446
Round Valley Tribe						
South Carolina	21,885	83,560				294
South Dakota	111,333	65		111,268	4,693	
Tennessee	4,788	3,254	1,000	18,186		16,377
Texas		347,849	340,181		404,164	221,414
Utah	115,585				96,900	34,030
Vermont	182,271	194,342	19,108	46,991	9	13,864
Virginia				450		
Washington	34,955					
West Virginia	2,862	7,583		10,238	2,630	3,680
Wisconsin	69,917	64,726				55,254
Wyoming	16			16		
Total	**3,840,383**	**3,220,650**	**2,014,727**	**1,585,383**	**1,497,828**	**1,123,432**
Percent of Impaired	49.9%	41.8%	26.2%	20.6%	19.4%	14.6%
Percent of Assessed	22.1%	18.6%	11.6%	9.1%	8.6%	6.5%

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	ALGAL GRWTH/CHLOROPHYLL A	PHOSPHORUS	NITROGEN	PESTICIDES	PCB'S	PATHOGENS	FLOW ALTERATION
Alabama				4,770		15,155	
Alaska						3,716	
American Samoa							
Arizona				1,158		300	
Arkansas							
Big Sandy Rancheria							
California	2,218			92,889	341	274,480	297,703
Colorado				156		8	
Connecticut	121	45		50	75	251	
Delaware						935	
District of Columbia						238	
Florida	526,912	724,544	706,176				
Georgia				0		22,277	
Guam							
Hawaii							
Idaho							
Illinois	55,261	67,368	65,646	8,080	15,682	6,096	
Indiana							
Iowa	5,348			983		234	
Kansas				15,353		592	16,848
Kentucky					8,210		
La Posta Band							
Louisiana					2,260	37,296	
Maine							65,067
Maryland				100		46	
Massachusetts				171			192
Michigan				28,117		3,770	
Minnesota						192	
Mississippi				5,865		100	
Missouri				3,894		132	50
Montana	129,507		5,600	3,800			83,738
N Mariana Islands							
Nebraska				393			435
Nevada							
New Hampshire	425			0	0	18	0
New Jersey							
New Mexico	9,704	27		1,240		0	0

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	ALGAL GRWTH/CHLOROPHYLL A	PHOSPHORUS	NITROGEN	PESTICIDES	PCB'S	PATHOGENS	FLOW ALTERATION
New York				183,576		172,532	51,227
North Carolina							
North Dakota				19,936	148		
Ohio		12,700	13,327	1,862	180	120	757
Oklahoma				204,868		17,292	24,832
Oregon	88,474					9,360	850
Pennsylvania					481,918	1,150	
Puerto Rico				0		2,527	0
Rhode Island	1,128					701	
Round Valley Tribe							
South Carolina						3,278	
South Dakota	115,916						15,481
Tennessee					94,468	5,183	494
Texas	1,200			54,951	6,641	924	
Utah		115,585					
Vermont	17,276			5		1,099	9,517
Virginia						105	
Washington							
West Virginia	3,598						
Wisconsin							
Wyoming		16					
Total	**957,088**	**920,285**	**790,749**	**632,217**	**609,923**	**580,107**	**567,191**
Percent of Impaired	12.4%	11.9%	10.3%	8.2%	7.9%	7.5%	7.4%
Percent of Assessed	5.5%	5.3%	4.6%	3.6%	3.5%	3.3%	3.3%

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	PRIORITY ORGANICS	SELENIUM	SUSPENDED SOLIDS	PH	NOXIOUS AQUATIC PLANTS	CADMIUM	CAUSE UNKNOWN
Alabama	57,463			1,850			21,525
Alaska							
American Samoa							
Arizona				8,089	605		
Arkansas							
Big Sandy Rancheria							
California	819	466,695	59	96,948	90,369	61,705	211,426
Colorado		126		142			
Connecticut	1,027		3	387	352	5	
Delaware	158						
District of Columbia			103	136			
Florida		47,168				47,168	
Georgia	0			1,138			
Guam							
Hawaii							
Idaho							
Illinois	31,776		111,903	4,748	71,604	65	639
Indiana							
Iowa	150				707		14
Kansas				15,866	2,129		
Kentucky	8,210		1,100	219			
La Posta Band							
Louisiana	2,260					137,452	
Maine							
Maryland				20	85		
Massachusetts	1,063				10,131		
Michigan	119,856				6,102		
Minnesota							
Mississippi	44		82	101			
Missouri							
Montana		13,275		20	44,280		
N Mariana Islands							
Nebraska							
Nevada							
New Hampshire	0		0	5,010	74		0
New Jersey							
New Mexico	0			107	9,704		0

Table B-4 Leading Pollutants and Stressors Impairing Assessed Lakes, Reservoirs,and Ponds

Jurisdiction	PRIORITY ORGANICS	SELENIUM	SUSPENDED SOLIDS	PH	NOXIOUS AQUATIC PLANTS	CADMIUM	CAUSE UNKNOWN
New York	133,360			22,438			
North Carolina					4,986		
North Dakota					74		
Ohio	805		6,550	180	5,526		679
Oklahoma	38,492		254,748	15,022	5,680		5,814
Oregon			9,360	86,163	9,574		
Pennsylvania			10,425	2,478			
Puerto Rico	0		0	0	0		0
Rhode Island			26		299		
Round Valley Tribe							
South Carolina				2,092			
South Dakota		65	11,470		2,409		
Tennessee				10,971	4,555		
Texas	2,731	7,625		61,704			
Utah				554			
Vermont	166,177		515	6,759	6,022		815
Virginia				3,775			
Washington							
West Virginia					60		
Wisconsin				8,324	79,237		
Wyoming							
Total	**564,391**	**534,954**	**406,344**	**355,241**	**354,564**	**246,395**	**240,912**
Percent of Impaired	7.3%	6.9%	5.3%	4.6%	4.6%	3.2%	3.1%
Percent of Assessed	3.3%	3.1%	2.3%	2.0%	2.0%	1.4%	1.4%

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	SOURCE UNKNOWN	AGRICULTURE	HYDROMODIFICATION	URBAN RUNOFF/STORM SEWERS	CROP-RELATED SOURCES
Alabama	39,785	3,355		2,460	
Alaska				1,364	
American Samoa					
Arizona	637	561	25,787	551	386
Arkansas					
Big Sandy Rancheria					
California	679,364	371,639	318,037	132,997	466,739
Colorado	5,819	134			
Connecticut	108	50	975	254	
Delaware	158	749		490	
District of Columbia				238	
DRBC				206	
Florida	105,344	610,496	95,424	238,720	
Georgia				132,918	
Guam					
Hawaii					
Hoopa Valley Tribe					
Idaho					
Illinois	825	125,875	6,406	48,530	125,126
Indiana	206				
Iowa	8,582	12,915	69	850	1,469
Kansas		148,946	25,903	6,784	
Kentucky	10,216	9,029			555
La Posta Band					
Louisiana	394,135	27,088	27,981	1,161	
Maine	10,756	85,972	72,932	79,734	
Maryland	4,000	315		142	
Massachusetts	63,916	43	67		
Michigan	204,879	3,347		1,265	
Minnesota	89,067				
Mississippi	28,458	8,705	22	22	6,405
Missouri	132	4,566	116,850	825	4,566
Montana	3,800	313,566	175,439	126,007	22,577
N Mariana Islands					
Nebraska	35	5,338	435	513	
Nevada					
New Hampshire	295	0		34	

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	SOURCE UNKNOWN	AGRICULTURE	HYDROMODIFICATION	URBAN RUNOFF/STORM SEWERS	CROP-RELATED SOURCES
New Jersey					
New Mexico	109,011	92,834	35	18	
New York	135,263	310,888	51,601	119,641	
North Carolina					
North Dakota	517,015	165,683	138,913	127,872	165,683
Ohio	0	28,483	17,220	3,794	27,776
Ohio River Valley	5				
Oklahoma	130,052	342,866	141,987	97,236	324,969
Oregon	188	37,244	11,438	6,410	
Pauma Band	0			0	
Pennsylvania	493,193	12,348		2,890	
Puerto Rico	0	765	512	376	
Rhode Island	495	735	128	2,373	42
Round Valley Tribe					
South Carolina	87,823	333	22	384	
South Dakota	1,248	100,746		1,467	23,056
Tennessee		16,140	499	2,054	15,500
Texas	463,489	113,320	100	33,868	113,320
Utah	2,500	4,700	100	400	1,100
Vermont	1,831	177,131	183,822	174,877	9,334
Virginia		105		105	
Washington	70,830	5,519	920	3,679	
West Virginia	441	3,438		39	
Wisconsin		12,426		15,779	12,259
Wyoming					
Total	**3,663,901**	**3,158,393**	**1,413,624**	**1,369,327**	**1,320,862**
Percent of Impaired	47.6%	41.0%	18.4%	17.8%	17.1%
Percent of Assessed	21.1%	18.2%	8.2%	7.9%	7.6%

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	NATURAL SOURCES	UNSPECIFIED NONPOINT SOURCE	ATMOSPHERIC DEPOSITION	MUNICIPAL POINT SOURCES	OTHER
Alabama	6,025			810	13,330
Alaska					
American Samoa					
Arizona	16,695		169	174	
Arkansas					
Big Sandy Rancheria					
California	527,504	273,478	86,713		68,715
Colorado				8	
Connecticut	35	73	1,995	318	
Delaware	476				
District of Columbia					
DRBC	2				
Florida				152,192	
Georgia				328	
Guam					
Hawaii					
Hoopa Valley Tribe					
Idaho					
Illinois	7,752	103,828		29,300	764
Indiana					
Iowa	13,617			193	
Kansas	50,081				
Kentucky	2,331	174		4,309	
La Posta Band					
Louisiana	94,276		204,487		60
Maine	10,174			4,534	
Maryland	12,026	7,568			7,280
Massachusetts				86	730
Michigan			204,879	5,040	
Minnesota				136,159	706,759
Mississippi	2,430				2,474
Missouri					
Montana	44,361		126,007	161,187	
N Mariana Islands					
Nebraska	10,039			123	
Nevada					
New Hampshire	0		4,958		800

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	NATURAL SOURCES	UNSPECIFIED NONPOINT SOURCE	ATMOSPHERIC DEPOSITION	MUNICIPAL POINT SOURCES	OTHER
New Jersey					
New Mexico	11,357			0	
New York			46,093	84,822	101,384
North Carolina					
North Dakota	132,843			127,420	1,308
Ohio	10,529		3,136	22,194	45
Ohio River Valley					
Oklahoma	18,634				
Oregon	54,224		0	0	4,051
Pauma Band	0		0		0
Pennsylvania			5,965	2,550	1,944
Puerto Rico	417		0	0	0
Rhode Island	42			43	
Round Valley Tribe					
South Carolina					2,077
South Dakota	15,220				
Tennessee				4,443	
Texas	2,620	463,489	225,684	31,244	
Utah	300			500	100
Vermont	12,701	179,258	73,850	174,798	105
Virginia	3,775				
Washington	6,439			920	2,760
West Virginia				20	
Wisconsin		17,152			
Wyoming		16			
Total	**1,066,925**	**1,045,036**	**983,936**	**943,715**	**914,686**
Percent of Impaired	13.9%	13.6%	12.8%	12.3%	11.9%
Percent of Assessed	6.2%	6.0%	5.7%	5.4%	5.3%

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	LAND DISPOSAL	CONSTRUCTION	GRAZING RELATED SOURCES	UNSPECIFIED POINT SOURCE
Alabama				
Alaska	3,574			
American Samoa				
Arizona	151		175	
Arkansas				
Big Sandy Rancheria				
California	107,731	217,489	30,024	3,489
Colorado				
Connecticut	33	45		
Delaware	88			
District of Columbia				
DRBC				
Florida	145,344	85,312		
Georgia				
Guam				
Hawaii				
Hoopa Valley Tribe				
Idaho				
Illinois	26,895	11,836	34,683	
Indiana				
Iowa		172		
Kansas				130,846
Kentucky	4,196			
La Posta Band				
Louisiana	1,168		26,880	
Maine	1,849	32		
Maryland				
Massachusetts	249			
Michigan	1,587			
Minnesota				
Mississippi	100	22		
Missouri				
Montana	35,180	35,864	3,332	
N Mariana Islands				
Nebraska		513		
Nevada				
New Hampshire	0	0		

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	LAND DISPOSAL	CONSTRUCTION	GRAZING RELATED SOURCES	UNSPECIFIED POINT SOURCE
New Jersey				
New Mexico	340	0		
New York	278,704	113,726		
North Carolina				
North Dakota	2,096	1,721	165,336	
Ohio	21,180	2,786	7,734	
Ohio River Valley				
Oklahoma	21,585	29,333	330,601	
Oregon				
Pauma Band	0			
Pennsylvania	3,765			
Puerto Rico	1,732	0		
Rhode Island	1,117	69		
Round Valley Tribe				
South Carolina	115			
South Dakota	21,118		8,336	
Tennessee			11	
Texas				424,976
Utah	700	800	4,700	
Vermont	175,973	178,134	3,313	
Virginia				
Washington	0	0		
West Virginia	16	130		
Wisconsin		13,116		
Wyoming				
Total	**856,586**	**691,100**	**615,125**	**559,311**
Percent of Impaired	11.1%	9.0%	8.0%	7.3%
Percent of Assessed	4.9%	4.0%	3.5%	3.2%

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	HABITAT MODIFICATION (OTHER THAN HYDROMODIFICATION)	PASTURE GRAZING - RIPARIAN AND/OR UPLAND
Alabama		
Alaska		
American Samoa		
Arizona		120
Arkansas		
Big Sandy Rancheria		
California	90,533	7,574
Colorado		
Connecticut	108	
Delaware		
District of Columbia		
DRBC		
Florida		
Georgia		
Guam		
Hawaii		
Hoopa Valley Tribe		
Idaho		
Illinois	116,231	32,789
Indiana		
Iowa	950	
Kansas		
Kentucky		
La Posta Band		
Louisiana		
Maine		
Maryland		
Massachusetts		
Michigan		
Minnesota		
Mississippi	22	
Missouri		
Montana	3,781	
N Mariana Islands		
Nebraska	435	
Nevada		
New Hampshire	0	

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	HABITAT MODIFICATION (OTHER THAN HYDROMODIFICATION)	PASTURE GRAZING - RIPARIAN AND/OR UPLAND
New Jersey		
New Mexico	35	
New York	105,314	
North Carolina		
North Dakota	135,609	153,811
Ohio	1,157	7,734
Ohio River Valley	61	
Oklahoma	53,990	328,429
Oregon		
Pauma Band	0	
Pennsylvania		
Puerto Rico	512	
Rhode Island		
Round Valley Tribe		
South Carolina		
South Dakota		1,941
Tennessee		11
Texas		
Utah		2,500
Vermont	29,349	3,302
Virginia		
Washington		
West Virginia	48	
Wisconsin	2,072	
Wyoming		
Total	**540,207**	**538,211**
Percent of Impaired	7.0%	7.0%
Percent of Assessed	3.1%	3.1%

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	NONIRRIGATED CROP PRODUCTION	IRRIGATED CROP PRODUCTION	FLOW REGULATION/MODIFICATION	INDUSTRIAL POINT SOURCES
Alabama				60,443
Alaska				
American Samoa				
Arizona		386	26	
Arkansas				
Big Sandy Rancheria				
California		242,587	224,688	295
Colorado				156
Connecticut				23
Delaware				
District of Columbia				
DRBC				
Florida				118,720
Georgia				650
Guam				
Hawaii				
Hoopa Valley Tribe				
Idaho				
Illinois	124,866		706	14,328
Indiana				
Iowa	746			150
Kansas				
Kentucky	555			8,210
La Posta Band				
Louisiana				2,260
Maine				
Maryland				
Massachusetts				152
Michigan				4,834
Minnesota				
Mississippi	3,300	4,705	22	
Missouri	4,566		11,780	
Montana	675	18,102	143,089	
N Mariana Islands				
Nebraska				
Nevada				
New Hampshire				

Table B-5 Leading Sources Impairing Assessed Lakes, Reservoirs, and Ponds

Jurisdiciton	NONIRRIGATED CROP PRODUCTION	IRRIGATED CROP PRODUCTION	FLOW REGULATION/MODIFICATION	INDUSTRIAL POINT SOURCES
New Jersey				
New Mexico				0
New York				47,282
North Carolina				
North Dakota	614		896	660
Ohio	21,887	2,892	1,862	17,669
Ohio River Valley				
Oklahoma	324,969	115,160	77,687	
Oregon				0
Pauma Band				
Pennsylvania				
Puerto Rico				0
Rhode Island				43
Round Valley Tribe				
South Carolina				9,672
South Dakota	22,916	140		
Tennessee	15,500			1,000
Texas		87,210	100	6,303
Utah	100	1,000		200
Vermont	3,926	20	9,640	172,132
Virginia				
Washington				0
West Virginia				1,200
Wisconsin	12,259			
Wyoming				
Total	**536,879**	**472,202**	**470,496**	**466,382**
Percent of Impaired	7.0%	6.1%	6.1%	6.1%
Percent of Assessed	3.1%	2.7%	2.7%	2.7%

2000 Water Quality Report Table C-1 Total Estuarine and Ocean Shoreline Waters in the Nation

	Estuaries			Ocean Shoreline Waters		
Jurisdiction	**Total Sq. Miles**	**Assessed Sq. Miles**	**Percent Assessed**	**Total Miles**	**Assessed Miles**	**Percent Assessed**
Alabama	610	541	88.6%	337		0.0%
Alaska	33,204	28	0.1%	36,000	25	0.1%
American Samoa	184	0	0.0%	116	53	45.7%
California	2,139	2,033	95.0%	1,609	997	62.0%
Connecticut	612	611	99.8%	380		0.0%
Delaware	449	30	6.6%	25	25	100.0%
Delaware River	866	866	100.0%			
District of Columbia	6	6	97.2%			
Florida	4,437	4,038	91.0%	8,460	0	0.0%
Georgia	854	854	100.0%	100		0.0%
Guam	1	0	0.0%	117	17	14.8%
Hawaii	55	54	99.3%	1,052	871	82.8%
Louisiana	7,656	4,036	52.7%	397	0	0.0%
Maine	2,852	2,783	97.6%	5,296		0.0%
Maryland	2,522	2,478	98.3%	32	32	100.0%
Massachusetts	223	128	57.2%	1,519		0.0%
Mississippi	760	613	80.6%	245	94	38.4%
N Mariana Islands	15,989	1	0.0%	52	0	0.0%
New Hampshire	21	21	100.0%	18	18	100.0%
New Jersey	725	614	84.7%	127	127	100.0%
New York	1,530	401	26.2%	120	3	2.5%
North Carolina	3,121	3,121	100.0%	320		0.0%
Oregon	206	54	26.1%	362		0.0%
Puerto Rico				550	550	100.0%
Rhode Island	151	151	100.0%	79	79	100.0%
South Carolina	401	221	55.1%	190		0.0%
Texas	2,394	1,993	83.3%	624		0.0%
Virgin Islands	3		0.0%	209	209	100.0%
Virginia	2,494	2,494	100.0%	120	120	100.0%
Washington	2,904	2,904	100.0%	163	0	0.0%
Total	87,369	31,072	35.6%	58,618	3,221	5.5%

Table C-1 Total Estuarine and Ocean Shoreline Waters in the Nation

Jurisdiction	Comment
Alabama	Page 4. Assessed estuary square miles page 104.
Alaska	612 square miles of estuaries and 380 miles of coastline were obtained from the state's water resources atlas
American Samoa	Includes area inside fringing coral reef
California	p. 13.
Connecticut	
Delaware	State revised atlas value because it had previously included Delaware Bay miles in New Jersey.
Delaware River	Data from ADB. Separate values reported for estuaries and bays (in acres, converted to square miles) were summed. Value for shore miles from 198
District of Columbia	
Florida	
Georgia	Includes 25 square miles of freshwater estuary.
Guam	Cannot be determined because it includes near coastal ocean waters
Hawaii	
Louisiana	State reports assessment based on 269 square miles of estuaries and all 446 square miles of ocean waters in NJ jurisdiction (page II-7).
Maine	State reports more accurate estimate of total estuarine square miles based on computer-generated 1:24,000 scale mapping.
Maryland	
Massachusetts	State includes coastal shoreline waters in assessment of estuarine waters.
Mississippi	Entered 1998 values for total estuarine square miles and shore miles; for assessed miles, entered values for aquatic life use from ADB.
N Mariana Islands	includes bays, estuarine areas, and lagoons
New Hampshire	State reports 32 miles of shoreline include in 96 square miles of ocean waters.
New Jersey	
New York	More accurate estimate of total estuarine area based on GIS coverage of NWI maps.
North Carolina	Assessed estuarine sq. mi. from percent method (page 3.3-4) for estuaries and page 3.3-2 for shore miles.
Oregon	Remove this record from database.
Puerto Rico	Puerto Rico assessed estuarine use support in linear miles rather than square miles.
Rhode Island	Entered total waters from 1998 report because State did not include an estimate.
South Carolina	Entered data from ADB
Texas	Texas assessed coastal waters in square miles (3879) rather than coastal miles. Total shore miles from 1998 report because State did not include th
Virgin Islands	1998 report was incorrect, VI has very little area of estuaries
Virginia	
Washington	Entered total estuarine sq. mi. from 1998 report in lieu of atlas value.(3 sq. mi.) on page 9. Total shore miles from page 75 in lieu of atlas value on pa
Total	

Table C-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Estuaries

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total	Impaired - Evaluated	Impaired - Monitored
Alabama				0				0		541
Alaska	2	1		3	0	0		0	0	25
American Samoa				0				0		
California	18	16		35	1	0		1	22	1,975
Connecticut			139	139			14	14		
Delaware				0				0		
Delaware River	0	0		0	0	0		0	0	866
District of Columbia	0	0		0	0	0		0	0	6
Florida	2,390	665	0	3,055	42	79	0	121	270	591
Georgia	499	10		509				0	177	172
Guam		0		0				0		11
Hawaii	0	23		23	0	0		0	1	30
Louisiana	0	318		318	7	0		7	816	2,895
Maine	2,173	300		2,473				0	0	310
Maryland	0	918		918				0	0	1,560
Massachusetts	46	0		46	0	0		0	81	0
Mississippi			0	0			62	62		
N. Mariana Islands				0				0	0	0
New Hampshire	0	0		0				0	7	14
New Jersey	0	0	456	456	0	0	0	0	0	0
New York				0	11			11	391	
North Carolina			3,006	3,006				0		
Oregon	0	8		8		11		11	0	35
Puerto Rico				0				0		
Rhode Island	1	103		103	0	0		0	1	47
South Carolina			136	136				0		
Texas	0	1,236		1,236	0	0		0	0	758
Virgin Islands				0				0		
Virginia		773		773		796		796		422
Washington	611			611				0	2,293	
TOTAL	5,741	4,371	3,738	13,850	60	886	76	1,023	4,060	10,256
Percent of assessed for summary of use support	18.8%	14.3%	12.2%	45.3%	0.2%	2.9%	0.2%	3.3%	13.3%	33.6%

Table C-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Estuaries

Jurisdiction	Impaired - Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Total Evaluated	Total Monitored
Alabama		541				0	0	541
Alaska		25				0	2	26
American Samoa		0				0	0	0
California		1,997				0	41	1,992
Connecticut	458	458				0	0	0
Delaware		0				0	0	0
Delaware River		866				0	0	866
District of Columbia		6				0	0	6
Florida	0	861				0	2,702	1,335
Georgia		349				0	676	182
Guam		11				0	0	11
Hawaii		31				0	1	53
Louisiana		3,711				0	823	3,213
Maine		310				0	2,173	610
Maryland		1,560				0	0	2,478
Massachusetts		82				0	128	0
Mississippi	551	551				0	0	0
N. Mariana Islands		1				0	0	0
New Hampshire		21				0	7	14
New Jersey	158	158				0	0	0
New York		391				0	402	0
North Carolina	109	109				0	0	0
Oregon		35				0	0	54
Puerto Rico		0				0	0	0
Rhode Island		47				0	2	149
South Carolina	85	85				0	0	0
Texas		758				0	0	1,993
Virgin Islands		0				0	0	0
Virginia		422				0	0	1,991
Washington		2,293				0	2,904	0
TOTAL	1,360	15,676	0	0	0	0	9,861	15,513
Percent of assessed for summary of use support	4.5%	51.3%	0.0%	0.0%	0.0%	0.0%	32.3%	50.8%

Table C-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Estuaries

Jurisdiction	Total Unspecified	Total Assessed
Alabama	0	541
Alaska	0	28
American Samoa	0	0
California	0	2,033
Connecticut	611	611
Delaware	0	0
Delaware River	0	866
District of Columbia	0	6
Florida	0	4,037
Georgia	0	858
Guam	0	11
Hawaii	0	54
Louisiana	0	4,036
Maine	0	2,783
Maryland	0	2,478
Massachusetts	0	128
Mississippi	613	613
N. Mariana Islands	0	1
New Hampshire	0	21
New Jersey	614	614
New York	0	402
North Carolina	3,115	3,115
Oregon	0	54
Puerto Rico	0	0
Rhode Island	0	151
South Carolina	221	221
Texas	0	1,993
Virgin Islands	0	0
Virginia	0	1,991
Washington	0	2,904
TOTAL	5,174	30,548
Percent of assessed for summary of use support	16.9%	

Table C-2 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Estuaries

Jurisdiction	Comment
Alabama	
Alaska	Data from ADB. Separate values for estuaries and bays (acres, converted to square miles) reported by State were summed
American Samoa	
California	
Connecticut	State reported overall use support.
Delaware	No data. State reports 0.59 evaluated square miles of estuaries and 28.95 monitored. 25 miles of shore line were monitored.
Delaware River	
District of Columbia	
Florida	
Georgia	
Guam	
Hawaii	
Louisiana	Entered data from ADB
Maine	Excludes effect of statewide advisory for dioxin in lobster tomalley.
Maryland	
Massachusetts	Includes shoreline waters. Excludes separate shellfishing assessment for 2728 square miles of estuaries.
Mississippi	Entered Statewide projections from ADB for aquatic life support.
N. Mariana Islands	
New Hampshire	
New Jersey	Entered shellfishing use support use based on assessment of 614 square miles.
New York	Report states that all assessments should be considered as evaluated values (page 54). Value for fully supporting square miles includes unassess
North Carolina	p. 13. Converted data from acres.
Oregon	Page 104. Blanks listed as no data available
Puerto Rico	Puerto Rico reported linear miles of estuarine use support rather than square miles. Of the 175.4 miles assessed, 10.9 miles support all uses, 17.7
Rhode Island	
South Carolina	
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Entered data from March 2001 revisions (section 1.1-3)
Washington	Values from the sample survey approach used for the assessment are considered to be evaluated data.
TOTAL	May be less than total assessed, because not all states report on summary of use support for all waters
Percent of assessed for summary of use support	

Table C-3a Aquatic Life Use Support in Assessed Estuaries

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	34.9	0.9	1,738.6	249.9		2,024.3
Connecticut	366.4	0.0	235.0	9.5	0.0	610.9
Delaware	0.0	0.0	25.0	4.0	0.0	29.0
Delaware River	198.0	152.0	0.0	35.0	0.0	385.0
District of Columbia	5.3	0.0	0.6	0.0		5.9
Florida	1,652.0	10.0	538.0	68.0		2,268.0
Georgia						0.0
Guam	0.3			10.5		10.8
Hawaii	39.0	0.0	0.0	0.0	0.0	39.0
Louisiana	334.0	0.0	2,409.5	1,217.0	0.0	3,960.5
Maine	2,851.1	0.0	0.5	0.0	0.0	2,851.6
Maryland	921.3		1,469.3	87.6		2,478.2
Massachusetts	13.8	0.3	1.2	11.6		27.0
Mississippi	0.0	62.2	550.5	0.0	0.0	612.7
New Hampshire	21.1		0.2	0.0	0.0	21.2
New Jersey	203.0	0.0	61.0	0.0		264.0
New York		0.0	14.2	0.4		14.6
North Carolina						0.0
Oregon						0.0
Puerto Rico						0.0
Rhode Island	108.9	0.0	5.5	34.9		149.3
South Carolina	144.9		22.7	53.5		221.1
Texas	1,021.0	0.0	194.9	16.1	0.0	1,232.0
Virgin Islands						0.0
Virginia	792.1	806.7	257.4	82.3		1,938.4
Washington	917.0		662.3	1,324.6		2,903.9
Total	9,624	1,032	8,186	3,205	0	22,047
Percent of assessed for use	43.7%	4.7%	37.1%	14.5%	0.0%	

Table C-3a Aquatic Life Use Support in Assessed Estuaries

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	page 28
Delaware	
Delaware River	
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	
Louisiana	Entered data from ADB for fish and wildlife propagation use support.
Maine	Includes propagation of fish and shellfish.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	Includes shoreline waters.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	Assessment based on 264 square miles. State reports portions of waters may be duplicated by DRBC and ISC 305(b) reports.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Page 105. Blank categories listed as not applicable or no data available.
Puerto Rico	Puerto Rico reported linear miles of estuarine use support rather than square miles.
Rhode Island	
South Carolina	
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Entered only monitored data from NAD
Washington	
Total	
Percent of assessed for use	

Table C-3b Fish Consumption Use Support in Assessed Estuaries

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	35	19	1,729	245		2,027
Connecticut	503	0	9	0	0	512
Delaware						0
Delaware River	0	0	803	63	0	866
District of Columbia	0	0	0	6		6
Florida	88	0	261	18		367
Georgia						0
Hawaii	33	0	0	6	0	39
Louisiana						0
Maine	0	0	2,852	0	0	2,852
Maryland	2,452		71	0		2,522
Massachusetts	0	0	0	10		10
Mississippi	2	603	0	0	0	605
New Hampshire	0		21	0	0	21
New Jersey						0
New York		0	110	6		116
North Carolina						0
Oregon						0
Puerto Rico						0
Rhode Island						0
South Carolina						0
Texas	961	0	0	48	0	1,008
Virgin Islands						0
Virginia	1,958	31	0	0		1,989
Washington						0
Total	6,032	653	5,855	400	0	12,940
Percent of assessed for use	46.6%	5.0%	45.3%	3.1%	0.0%	

Table C-3b Fish Consumption Use Support in Assessed Estuaries

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	The above fish consumption data is for mercury. All estuaries (610.9 square miles) are listed as partially supporting the use due to PCB contamir
Delaware	No data.
Delaware River	
District of Columbia	
Florida	
Georgia	No data
Hawaii	
Louisiana	No data.
Maine	Based on statewide fish/shellfish comsumption advisory.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	Includes shoreline waters.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	No data. Estuary advisories reported by DRBC and ISC.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Page 105. Blank categories listed as no data available.
Puerto Rico	No data.
Rhode Island	No data.
South Carolina	No data.
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Entered only monitored data from NAD
Washington	No data.
Total	
Percent of assessed for use	

Table C-3c Shellfishing Use Support in Assessed Estuaries

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	43	19	466	231		758
Connecticut	273	0	14	324	0	611
Delaware	1	0	14	0	0	15
Delaware River	579	0	38	62	0	679
District of Columbia						0
Florida	1,398	111	256	0		1,765
Georgia						0
Hawaii	33	0	0	6	0	39
Louisiana	1,078	0	0	75	0	1,153
Maine	2,542	0	49	261	0	2,852
Maryland	1,672		58	108		1,839
Massachusetts	2,254		48	224		2,526
Mississippi	550	2	26	0	0	579
New Hampshire	0		8	13	0	21
New Jersey	456	0	115	43		614
New York		0	6	157		163
North Carolina						0
Oregon	4	0	68	0	0	72
Puerto Rico	0	0	0	0	0	0
Rhode Island	96	0	22	10		128
South Carolina	613		159	119		891
Texas	1,037	0	160	427	0	1,625
Virgin Islands						0
Virginia	1,642	2	68	24		1,735
Washington	1,274		764	866		2,904
total	15,545	134	2,339	2,949	0	20,967
Percent of assessed for use	75.7%	0.6%	10.5%	13.2%	0.0%	
	74.1%	0.6%	11.2%	14.1%	0.0%	

Table C-3c Shellfishing Use Support in Assessed Estuaries

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	Page 28
Delaware	
Delaware River	
District of Columbia	No data.
Florida	
Georgia	No data
Hawaii	
Louisiana	Entered data from ADB
Maine	Excludes effect of statewide advisory for dioxin in lobster tomalley from estuarine waters.
Maryland	Used numbers from electronic submission because did not receive clarification from state.
Massachusetts	Data from separate shellfishing assessment in Table 5.4 (acres converted to square miles).
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	Assessment based on 614 square miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Page 105.
Puerto Rico	
Rhode Island	
South Carolina	
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Entered only monitored data from NAD
Washington	
total	
Percent of assessed for use	

Table C-3d Swimming Use Support in Assessed Estuaries

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	275	2	1,732	8		2,017
Connecticut	584	6	13	7	0	611
Delaware	12	0	16	2	0	30
Delaware River	485	6	0	0	0	491
District of Columbia	0	0	0	6		6
Florida	1,652	10	538	68		2,268
Georgia						0
Guam	3		0	1		5
Hawaii	29	0	4	7	0	39
Louisiana	1,093	385	568	62	0	2,108
Maine	2,844	0	6	0	0	2,850
Maryland	2,522		0	0		2,522
Massachusetts	53	0	0	24		77
Mississippi	0	588	15	0	0	603
New Hampshire	21		0	0	0	21
New Jersey	264		5	0		269
New York		0	95	3		97
North Carolina						0
Oregon	25	0		0	0	25
Puerto Rico						0
Rhode Island	140	0	5	5		150
South Carolina	204		10	7		221
Texas	1,971	0	0	5	0	1,976
Virgin Islands						0
Virginia	1,844	0	21	13		1,879
Washington	2,904		0	0		2,904
Total	16,925	998	3,028	217	0	21,169
Percent of assessed for use	80.0%	4.7%	14.3%	1.0%	0.0%	

Table C-3d Swimming Use Support in Assessed Estuaries

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	Page 28.
Delaware	
Delaware River	
District of Columbia	
Florida	
Georgia	No data
Guam	
Hawaii	
Louisiana	Entered data from ADB
Maine	Includes secondary contact use.
Maryland	State should review value for full support miles (2522) which are higher than the value for assessed square miles (2478.3). Use
Massachusetts	Includes shoreline waters.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	Assessment based on 269.15 square miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Page 105. Blank categories listed as not applicable.
Puerto Rico	Puerto Rico reported linear miles of estuarine use support rather than square miles.
Rhode Island	
South Carolina	
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Entered only monitored data from NAD
Washington	
Total	
Percent of assessed for use	

Table C-3d Swimming Use Support in Assessed Estuaries

Jurisdiction
Alabama
Alaska
California
Connecticut
Delaware
Delaware River
District of Columbia
Florida
Georgia
Guam
Hawaii
Louisiana
Maine
Maryland
Massachusetts
Mississippi
New Hampshire
New Jersey
New York
North Carolina
Oregon
Puerto Rico
Rhode Island
South Carolina
Texas
Virgin Islands
Virginia
Washington
Total
Percent of assessed for use

ed numbers from electronic submission because did not receive clarification from state.

Table C-3e Secondary Contact Use Support in Assessed Estuaries

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	517	0	1,494	7		2,017
Connecticut						0
Delaware	29	0	0	0	0	29
Delaware River	15	0	0	0	0	15
District of Columbia	3	0	1	1		6
Florida	1,652	10	538	68		2,268
Georgia						0
Hawaii	39	0	0	0	0	39
Louisiana	1,652	385	71	0	0	2,108
Maine						0
Maryland						0
Massachusetts	69	0	0	8		77
Mississippi	0	1	10	0	0	11
New Hampshire	21		0	0	0	21
New Jersey						0
New York		0	0	0		0
North Carolina						0
Oregon	25	0		0	0	25
Puerto Rico						0
Rhode Island						0
South Carolina						0
Texas	3	0	0	0	0	3
Virgin Islands						0
Virginia						0
Washington	2,904		0	0		2,904
Total	6,929	396	2,114	84	0	9,524
Percent of assessed for use	72.8%	4.2%	22.2%	0.9%	0.0%	

Table C-3e Secondary Contact Use Support in Assessed Estuaries

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	No data.
Delaware	
Delaware River	
District of Columbia	
Florida	
Georgia	No data
Hawaii	
Louisiana	Entered data from ADB
Maine	Included in swimming use.
Maryland	Included in swimming use (page 7).
Massachusetts	Includes shoreline waters
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	No data.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Page 105. Blank categories listed as not applicable.
Puerto Rico	Puerto Rico reported linear miles of estuarine use support rather than square miles.
Rhode Island	Included in swimming use (page III.C-6).
South Carolina	Included in swimming use.
Texas	Entered data from ADB.
Virgin Islands	Included in coastal shoreline assessment.
Virginia	Included in swimming support use.
Washington	
Total	
Percent of assessed for use	

Table C-4 Leading Pollutants and Stressors Impairing Assessed Estuaries

Jursisdiction	METALS	MERCURY	ORGANIC ENRICHMENT/LOW DO	PESTICIDES	PATHOGENS	PRIORITY ORGANICS	PCB'S
Alaska	0		0				
California	2694	2262	1207	5096	107	2296	1170
Connecticut	9	0	231	0	605	13	389
District of Columbia	1		1	1	6	1	
Delaware			28		25		
Delaware River Basin	835	825		855	714	854	866
Florida	142	83					
Hawaii	10			6	12	6	6
Louisiana	3555	3464	157		1083	72	72
Massachusetts	3		11		79	9	
Maryland	32		1326	27	146	88	68
Mississippi	570		573		36	11	
North Carolina			14		44		
Rhode Island	8		40		42		
South Carolina	27		72		17		
Texas	59	14	390		564		
Virginia	10	1	141		175	13	30
Alabama	0		0		1		
American Samoa							
Georgia	2		77		337	2	
Guam	0		1		1		
Maine			1		310		
N Mariana Islands					1		
New Hampshire	0		0	0	14	0	21
New Jersey							
New York	120		160	0	350	287	
Oregon					26		
Puerto Rico							
Virgin Islands							
Washington			894		69		
Total	**8,077**	**6,649**	**5,324**	**5,985**	**4,764**	**3,652**	**2,622**
Percent of Impaired	51.5%	42.4%	34.0%	38.2%	30.4%	23.3%	16.7%
Percent of Assessed	26.0%	21.4%	17.1%	19.3%	15.3%	11.8%	8.4%

Table C-4 Leading Pollutants and Stressors Impairing Assessed Estuaries

Jursisdiction	SALINITY/TDS/CHLORIDES	UNKNOWN TOXICITY	DDT	NUTRIENTS	COPPER	DIOXINS	DIAZINON	NITROGEN	PHOSPHORUS	PH
Alaska	20			5		0			5	
California	2473	1747	1958	57	880	910	1712	0		
Connecticut		12		239		0				
District of Columbia										5
Delaware				28						
Delaware River Basin		46				841				
Florida				838	90			838	795	
Hawaii				23						
Louisiana				405	846			405	405	
Massachusetts				5						
Maryland				33	4					7
Mississippi		550		37						586
North Carolina										
Rhode Island		0		24						
South Carolina										4
Texas					16	34				
Virginia				131	0				0	5
Alabama										
American Samoa										
Georgia										
Guam	1			1						1
Maine										
N Mariana Islands		1								
New Hampshire	0	0		0		0				0
New Jersey										
New York	0	4		103						0
Oregon										
Puerto Rico										
Virgin Islands										
Washington										527
Total	**2,494**	**2,360**	**1,958**	**1,929**	**1,836**	**1,785**	**1,712**	**1,243**	**1,205**	**1,135**
Percent of Impaired	15.9%	15.1%	12.5%	12.3%	11.7%	11.4%	10.9%	7.9%	7.7%	7.2%
Percent of Assessed	8.0%	7.6%	6.3%	6.2%	5.9%	5.7%	5.5%	4.0%	3.9%	3.7%

Table C-4 Leading Pollutants and Stressors Impairing Assessed Estuaries

Jursisdiction	TOTAL TOXICS	THERMAL MODIFICATIONS	SELENIUM
Alaska	0	20	
California	0	10	620
Connecticut			
District of Columbia	6		
Delaware			
Delaware River Basin	838		
Florida			
Hawaii		0	
Louisiana			
Massachusetts	10	1	
Maryland			
Mississippi	0	2	
North Carolina			
Rhode Island	1		
South Carolina			
Texas			
Virginia			
Alabama			
American Samoa			
Georgia			
Guam			
Maine			
N Mariana Islands			
New Hampshire	0	0	
New Jersey			
New York		4	
Oregon			
Puerto Rico			
Virgin Islands			
Washington		802	
Total	**855**	**839**	**620**
Percent of Impaired	5.5%	5.4%	4.0%
Percent of Assessed	2.8%	2.7%	2.0%

Table C-5 Leading Sources Impairing Assessed Estuaries

Jurisdiction	SOURCE UNKNOWN	MUNICIPAL POINT SOURCES	URBAN RUNOFF/STORM SEWERS	NATURAL SOURCES
Alabama		0.04	0.81	
Alaska			0.02	
American Samoa				
California	1,701.31	1,924.90	1,793.66	652.22
Connecticut	385.21	436.88	474.16	296.68
Delaware	3.00	25.00		3.00
Delaware River Basin		782.00	753.00	
District of Columbia	1.68	4.43	5.93	3.75
Florida	342.20	311.90	402.80	
Georgia		131.00	77.00	
Guam		3.69	2.17	
Hawaii	4.16	1.20	28.32	19.45
Louisiana	3,555.00	725.00	155.00	419.00
Maine		261.00	48.50	
Maryland	48.59	163.62	52.91	1,294.86
Massachusetts	60.65	12.35	40.05	
Mississippi	565.30	36.50	587.00	586.50
N Mariana Islands			0.62	
New Hampshire	35.42			
New Jersey				
New York	31.20	258.30	266.00	
North Carolina		78.00	89.79	51.09
Oregon		56.20	31.00	
Puerto Rico				
Rhode Island	1.18	34.54	44.46	0.91
South Carolina	60.75	0.54	6.25	
Texas	521.40	97.50	79.90	167.90
Virgin Islands				
Virginia	183.64	113.27	14.44	119.60
Washington	91.70	320.96	91.70	825.34
Total	**7,592.40**	**5,778.82**	**5,045.49**	**4,440.30**
Percent of Impaired	48.4%	36.9%	32.2%	28.3%
Percent of Assessed	24.4%	18.6%	16.2%	14.3%

Table C-5 Leading Sources Impairing Assessed Estuaries

Jurisdiction	INDUSTRIAL POINT SOURCES	ATMOSPHERIC DEPOSITION	AGRICULTURE	OTHER	HYDROMODIFICATION	RESOURCE EXTRACTION
Alabama	0.04					
Alaska	0.02657					0.00
American Samoa						
California	1960.9	650.02	1,745.88	255.11	1,798.71	1,728.01
Connecticut	76.29	219.93	6.22			
Delaware			12.00			
Delaware River Basin	782					
District of Columbia					0.80	0.80
Florida	315.2		472.60		368.20	184.00
Georgia	109.00					
Guam						
Hawaii	0.3	0.02	16.51	0.02		
Louisiana	162.5	2,808.00	91.00	117.00		
Maine						
Maryland	146.73		32.92	1,393.19		
Massachusetts	11.27		3.36		1.15	
Mississippi	37				0.50	
N Mariana Islands						
New Hampshire						
New Jersey						
New York	52.70		13.50	201.20	1.70	0.00
North Carolina			59.49	51.09		
Oregon	41.70		56.20			
Puerto Rico						
Rhode Island	9.67		2.87			
South Carolina	13.92		0.14	1.52		
Texas	94.2	13.70				
Virgin Islands						
Virginia	119.03			173.16		
Washington	183.41		298.04	45.85		
Total	**4,115.88**	**3,691.67**	**2,810.73**	**2,238.14**	**2,171.06**	**1,912.81**
Percent of Impaired	26.3%	23.5%	17.9%	14.3%	13.8%	12.2%
Percent of Assessed	13.2%	11.9%	9.0%	7.2%	7.0%	6.2%

Table C-5 Leading Sources Impairing Assessed Estuaries

Jurisdiction	LAND DISPOSAL	OTHER URBAN RUNOFF	COMBINED SEWER OVERFLOW	DREDGING	UNSPECIFIED NONPOINT SOURCE
Alabama					
Alaska	0.02	0.00			
American Samoa					
California	50.75	0.17		1,490.57	459.76
Connecticut	27.08	243.03	249.09		
Delaware	13.00				
Delaware River Basin			782.00		
District of Columbia		0.40	5.63	0.80	
Florida	477.40				
Georgia					
Guam					
Hawaii		0.08			
Louisiana	917.00	244.00			69.00
Maine			48.50		
Maryland	7.11				305.24
Massachusetts	11.77		32.23		
Mississippi	25.10	1,173.50		0.50	
N Mariana Islands					
New Hampshire			0.01		
New Jersey					
New York	74.60		232.10		
North Carolina	30.95				
Oregon					
Puerto Rico					
Rhode Island	7.92		24.27		
South Carolina	1.56	21.03			
Texas					520.80
Virgin Islands					
Virginia					113.00
Washington	68.78		91.70		
Total	**1,713.04**	**1,682.21**	**1,465.53**	**1,491.87**	**1,467.80**
Percent of Impaired	10.9%	10.7%	9.3%	9.5%	9.4%
Percent of Assessed	5.5%	5.4%	4.7%	4.8%	4.7%

Table C-5 Leading Sources Impairing Assessed Estuaries

Jurisdiction	CROP-RELATED SOURCES	CONTAMINATED SEDIMENTS	ONSITE WASTEWATER SYSTEMS (SEPTIC TANKS)
Alabama			0.19
Alaska		0.01	
American Samoa			
California	1,294.72	247.18	
Connecticut		19.02	22.44
Delaware			13.00
Delaware River Basin			
District of Columbia			
Florida			
Georgia			
Guam			
Hawaii	6.18		
Louisiana			917.00
Maine			
Maryland			
Massachusetts		12.83	
Mississippi		570.00	25.10
N Mariana Islands			
New Hampshire			
New Jersey			
New York		273.70	51.80
North Carolina			30.95
Oregon			
Puerto Rico			
Rhode Island		0.91	
South Carolina			
Texas			
Virgin Islands			
Virginia		0.93	
Washington			68.78
Total	**1,300.90**	**1,124.59**	**1,129.26**
Percent of Impaired	8.3%	7.2%	7.2%
Percent of Assessed	4.2%	3.6%	3.6%

Table C-5 Leading Sources Impairing Assessed Estuaries

Jurisdiction	MINOR INDUSTRIAL POINT SOURCE	MINOR MUNICIPAL POINT SOURCE
Alabama		
Alaska		
American Samoa		
California		
Connecticut		
Delaware		
Delaware River Basin	782.00	782.00
District of Columbia		
Florida		
Georgia		
Guam		
Hawaii		
Louisiana	91.00	91.00
Maine		
Maryland		
Massachusetts		
Mississippi	37.00	
N Mariana Islands		
New Hampshire		
New Jersey		
New York		
North Carolina		
Oregon		
Puerto Rico		
Rhode Island		
South Carolina		
Texas		
Virgin Islands		
Virginia		
Washington		
Total	**910.00**	**873.00**
Percent of Impaired	5.8%	5.6%
Percent of Assessed	2.9%	2.8%

Table C-6 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total	Impaired - Evaluated
Alabama				0				0	
Alaska	1	15		16				0	9
American Samoa	7			7	30			30	6
California	691	84		775				0	41
Connecticut				0				0	
Delaware				0				0	
Florida				0				0	
Georgia				0				0	
Guam		1		1		6		6	
Hawaii	382	452		834	6	2		8	7
Louisiana				0				0	
Maine				0				0	
Maryland		32		32				0	
Massachusetts				0				0	
Mississippi			53	53			41	41	
N. Mariana Islands				0				0	
New Hampshire				0				0	18
New Jersey			127	127				0	
New York				0				0	3
North Carolina				0				0	
Oregon				0				0	
Puerto Rico	157	145		302	131			131	73
Rhode Island		79		79				0	
South Carolina				0				0	
Texas				0				0	
Virgin Islands	173			173	21			21	9
Virginia	120			120				0	
Washington									
Total	1,531	807	180	2,518	188	8	41	237	166
Percent of assessed for summary of use support	48.0%	25.3%	5.6%	79.0%	5.9%	0.2%	1.3%	7.4%	5.2%

Table C-6 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Ocean Shoreline Waters

Jurisdiction	Impaired - Monitored	Impaired - Not Specified	Impaired - Total	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Total Evaluated	Total Monitored
Alabama			0				0	0	0
Alaska			9				0	10	15
American Samoa	10		16				0	43	10
California	181		222				0	732	265
Connecticut			0				0	0	0
Delaware			0				0	0	0
Florida			0				0	0	0
Georgia			0				0	0	0
Guam	10		10				0	0	17
Hawaii	22		29				0	395	476
Louisiana			0				0	0	0
Maine			0				0	0	0
Maryland			0				0	0	32
Massachusetts			0				0	0	0
Mississippi			0				0	0	0
N. Mariana Islands			0				0	0	0
New Hampshire			18				0	18	0
New Jersey			0				0	0	0
New York			3				0	3	0
North Carolina			0				0	0	0
Oregon			0				0	0	0
Puerto Rico	44		117				0	361	189
Rhode Island			0				0	0	79
South Carolina			0				0	0	0
Texas			0				0	0	0
Virgin Islands			9				0	202	0
Virginia			0				0	120	0
Washington									
Total	268	0	434	0	0	0	0	1,885	1,083
Percent of assessed for summary of use support	8.4%	0.0%	13.6%	0.0%	0.0%	0.0%	0.0%	59.1%	34.0%

Table C-6 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Ocean Shoreline Waters

Jurisdiction	Total Unspecified	Total Assessed
Alabama	0	0
Alaska	0	25
American Samoa	0	53
California	0	997
Connecticut	0	0
Delaware	0	0
Florida	0	0
Georgia	0	0
Guam	0	17
Hawaii	0	871
Louisiana	0	0
Maine	0	0
Maryland	0	32
Massachusetts	0	0
Mississippi	94	94
N. Mariana Islands	0	0
New Hampshire	0	18
New Jersey	127	127
New York	0	3
North Carolina	0	0
Oregon	0	0
Puerto Rico	0	550
Rhode Island	0	79
South Carolina	0	0
Texas	0	0
Virgin Islands	0	202
Virginia	0	120
Washington		
Total	221	3,189
Percent of assessed for summary of use support	6.9%	

Table C-6 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Ocean Shoreline Waters

Jurisdiction	Comment
Alabama	No data.
Alaska	Data from ADB.
American Samoa	
California	error in report - called state for answer 12/4/01
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	Data not available. State reports 25 monitored shoreline miles.
Florida	
Georgia	
Guam	
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Coastal shoreline miles (32) included in 96 square miles of ocean waters assessed by the State.
Massachusetts	No data. Included in estuary waters.
Mississippi	Entered Statewide projections from ADB for aquatic life support.
N. Mariana Islands	
New Hampshire	
New Jersey	Entered swimming use support. NJ reports impairment to shellfishing but asesses that use in square miles rather than shoreline (linear) miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon grouped estuaries and coastal waters.
Puerto Rico	
Rhode Island	State reports bacteria data were available to assess the entire coastal shoreline.
South Carolina	No data.
Texas	State reports square miles of coastal use support rather than shoreline miles - cannot be combined with national total.
Virgin Islands	Page 83.
Virginia	Report states that based on limited available information, all 120 coastal miles were evaluated as fully supporting State designated uses (page 1.1-
Washington	No data.
Total	
Percent of assessed for summary of use support	

Table C-7a Aquatic Life Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0.0
Alaska						0.0
Am. Samoa	7.0	30.0	4.0	2.0		43.0
California	768.0	0.0	41.0	0.0		809.0
Connecticut						0.0
Delaware	25.0	0.0	0.0	0.0	0.0	25.0
Florida						0.0
Georgia						0.0
Guam						0.0
Hawaii	422.0	0.0	0.0	2.7	0.0	424.7
Louisiana						0.0
Maine						0.0
Maryland	32.0		0.0	0.0		32.0
Massachusetts						0.0
Mississippi	52.8	41.3	0.0	0.0	0.0	94.1
New Hampshire	18.0		0.0	0.0	0.0	18.0
New Jersey						0.0
New York		0.0	0.0	0.0		0.0
North Carolina						0.0
Oregon						0.0
Puerto Rico	382.5	88.8	0.0	78.6	0.0	549.9
Rhode Island	79.0					79.0
South Carolina						0.0
Texas						
Virgin Islands	3.3		0.0	1.2		4.5
Virginia						0.0
Washington						0.0
Total	1,790	160	45	85	0	2,079
Percent of assessed for use	86.1%	7.7%	2.2%	4.1%	0.0%	

Table C-7a Aquatic Life Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
Am. Samoa	
California	
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	
Florida	
Georgia	
Guam	not applicable
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Coastal shoreline miles (32) included in 96 square miles of ocean waters assessed by the State.
Massachusetts	No data. Included with estuaries.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	NJ reports on impairment of aquatic life, but assesses that use in square miles rather than shoreline (linear) miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon Grouped estuaries and coastal waters.
Puerto Rico	Entered "propagation and preservation of desirable species" use support status.
Rhode Island	Data from database
South Carolina	No data.
Texas	Data in square miles
Virgin Islands	
Virginia	No data.
Washington	No data.
Total	
Percent of assessed for use	

Table C-7b Fish Consumption Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa				2		2
California	538	0	44	33		615
Connecticut						0
Delaware						0
Florida						0
Georgia						0
Hawaii	422	0	0	3	0	425
Louisiana						0
Maine						0
Maryland	32		0	0		32
Massachusetts						0
Mississippi	0	45	0	0	0	45
New Hampshire	0		18	0	0	18
New Jersey						0
New York		0	0	0		0
North Carolina						0
Oregon						0
Puerto Rico						0
Rhode Island						0
South Carolina						0
Texas	0	0	0	0	0	0
Virgin Islands						0
Virginia						0
Washington						0
Total	992	45	62	38	0	1,136
Percent of assessed for use	87.3%	3.9%	5.5%	3.3%	0.0%	

Table C-7b Fish Consumption Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	**Comment**
Alabama	No data.
Alaska	No data.
American Samoa	
California	
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	Data not available
Florida	
Georgia	
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Coastal shoreline miles (32) incuded in 96 square milles of ocean waters assessed by the State.
Massachusetts	No data. Included with estuaries.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	NJ reports impairment to fish consumption but assesses that use in square miles rather than shoreline(linear) miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon Grouped estuaries and coastal waters.
Puerto Rico	No data.
Rhode Island	No data.
South Carolina	No data.
Texas	Data in square miles
Virgin Islands	No data.
Virginia	No data.
Washington	No data.
Total	
Percent of assessed for use	

Table C-7c Shellfishing Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	694	0	44	22		760
Connecticut						0
Delaware	1	0	14	0	0	15
Florida						0
Georgia						0
Hawaii	422	0	0	3	0	425
Louisiana						0
Maine						0
Maryland	32		0	0		32
Massachusetts						0
Mississippi	0	0	89	0	0	89
New Hampshire	0		18	0	0	18
New Jersey						0
New York		0	0	3		3
North Carolina						0
Oregon						0
Puerto Rico	0	0	0	0	0	0
Rhode Island	79					79
South Carolina						0
Texas						0
Virgin Islands						0
Virginia						0
Washington						0
Total	1,227	0	165	28	0	1,420
Percent of assessed for use	86.4%	0.0%	11.6%	2.0%	0.0%	

Table C-7c Shellfishing Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	Data from Table III-3 for estuaries.
Florida	
Georgia	
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Coastal shoreline miles (32) incuded in 96 square milles of ocean waters assessed by the State.
Massachusetts	No data. Included with estuaries.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	NJ reports impairment to shellfishing, but assesses this use in square miiles rather than shoreline (linear) miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon Grouped estuaries and coastal waters.
Puerto Rico	
Rhode Island	
South Carolina	No data.
Texas	No data.
Virgin Islands	No data.
Virginia	No data.
Washington	No data.
Total	
Percent of assessed for use	

Table C-7d Swimming Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
American Samoa			6	4		10
California	695	0	97	121		913
Connecticut						0
Delaware	25	0	0	0	0	25
Florida						0
Georgia						0
Guam	1		6	10		17
Hawaii	421	0	1	3	0	425
Louisiana						0
Maine						0
Maryland	32		0	0		32
Massachusetts						0
Mississippi	28	93	26	0	0	147
New Hampshire	18		0	0	0	18
New Jersey	127	0	0	0		127
New York		0	0	0		0
North Carolina						0
Oregon						0
Puerto Rico	358	124	12	56	0	550
Rhode Island	79					79
South Carolina						0
Texas	0	0	0	0	0	0
Virgin Islands	152		20	7		179
Virginia						0
Washington						0
Total	1,936	216	167	202	0	2,521
Percent of assessed for use	76.8%	8.6%	6.6%	8.0%	0.0%	

85.4%

Table C-7d Swimming Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
American Samoa	
California	
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	
Florida	
Georgia	
Guam	
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Coastal shoreline miles (32) incuded in 96 square milles of ocean waters assessed by the State.
Massachusetts	No data. Included with estuaries.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	NJ reports impairment to recreational use, but assesses that use in square miles rather than shoreline (linear) miles.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon Grouped estuaries and coastal waters.
Puerto Rico	
Rhode Island	
South Carolina	No data.
Texas	Data in square miles
Virgin Islands	
Virginia	No data.
Washington	No data.
Total	
Percent of assessed for use	

Table C-7e Secondary Contact Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Alabama						0
Alaska						0
California	754	0	58	69		881
Connecticut						0
Delaware						0
Florida						0
Georgia						0
Guam	1		0	1		2
Hawaii	422	0	0	3	0	425
Louisiana						0
Maine						0
Maryland						0
Massachusetts						0
Mississippi	0	6	26	0	0	31
New Hampshire	18		0	0	0	18
New Jersey						0
New York		0	0	0		0
North Carolina						0
Oregon						0
Puerto Rico	468	74	0	8	0	550
Rhode Island						0
South Carolina						0
Texas						0
Virgin Islands	18		1	0		19
Virginia						0
Washington						0
						0
Total	1,680	80	84	81	0	1,925
Percent of assesed for use	87.3%	4.2%	4.4%	4.2%	0.0%	

Table C-7e Secondary Contact Use Support in Assessed Ocean Shoreline Waters

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
California	
Connecticut	Connecticut grouped coastal waters with estuaries.
Delaware	No data
Florida	
Georgia	
Guam	
Hawaii	
Louisiana	No data.
Maine	Included in assessment of estuarine waters.
Maryland	Including in swimming use (page 7).
Massachusetts	No data. Included with estuaries.
Mississippi	Entered Statewide projections from ADB.
New Hampshire	
New Jersey	No data.
New York	"fully supporting or not assessed" not included
North Carolina	No data.
Oregon	Oregon Grouped estuaries and coastal waters.
Puerto Rico	
Rhode Island	Included in swimming use (page III.C-6).
South Carolina	No data.
Texas	Included in swimming use support.
Virgin Islands	
Virginia	No data.
Washington	No data.
Total	
Percent of assesed for use	

Table C-8 Leading Pollutants and Stressors Impairing Assessed Ocean Shoreline Waters

Jurisdiciton	**PATHOGENS**	**ORGANIC ENRICHMENT/LOW DO**	**TURBIDITY**	**SUSPENDED SOLIDS**
Alabama				
Alaska				
American Samoa	10		2	
California	192	44		44
Connecticut				
Delaware	25			
Florida				
Georgia				
Guam	17			
Hawaii	6	1	11	6
Louisiana				
Maine				
Maryland				
Massachusetts				
Mississippi	85	29	26	
N Mariana Islands				
New Hampshire				
New Jersey				
New York	3			
North Carolina				
Oregon				
Puerto Rico	42	3	2	
Rhode Island				
South Carolina				
Texas				
Virgin Islands	4	25	12	
Virginia				
Washington				
Total	384	102	53	50
Percent of Impaired	88.5%	23.5%	12.2%	11.5%
Percent of Assessed	11.9%	3.2%	1.6%	1.6%

Table C-8 Leading Pollutants and Stressors Impairing Assessed Ocean Shoreline Waters

Jurisdiciton	OIL AND GREASE	METALS	NUTRIENTS	PH	PRIORITY ORGANICS	PESTICIDES
Alabama						
Alaska	4					
American Samoa			3			
California	44	16			6	20
Connecticut						
Delaware						
Florida						
Georgia						
Guam						
Hawaii		1	14			
Louisiana						
Maine						
Maryland						
Massachusetts						
Mississippi		29	26	26	26	
N Mariana Islands						
New Hampshire						
New Jersey						
New York						
North Carolina						
Oregon						
Puerto Rico						
Rhode Island						
South Carolina						
Texas						
Virgin Islands				10		
Virginia						
Washington						
Total	48	46	43	36	32	20
Percent of Impaired	11.1%	10.6%	9.9%	8.3%	7.4%	4.6%
Percent of Assessed	1.5%	1.4%	1.3%	1.1%	1.0%	0.6%

Table C-8 Leading Pollutants and Stressors Impairing Assessed Ocean Shoreline Waters

Jurisdiciton	**NONPRIORITY ORGANICS**	**CAUSE UNKNOWN**	**PCB'S**	**SEDIMENT/SILTATION**
Alabama				
Alaska				
American Samoa				6
California				
Connecticut				
Delaware				
Florida				
Georgia				
Guam				
Hawaii				8
Louisiana				
Maine				
Maryland				
Massachusetts				
Mississippi	26			
N Mariana Islands				
New Hampshire		18	18	
New Jersey				
New York				
North Carolina				
Oregon				
Puerto Rico				
Rhode Island				
South Carolina				
Texas				
Virgin Islands				
Virginia				
Washington				
Total	26	18	18	14
Percent of Impaired	6.0%	4.1%	4.1%	3.2%
Percent of Assessed	0.8%	0.6%	0.6%	0.4%

Table C-8 Leading Pollutants and Stressors Impairing Assessed Ocean Shoreline Waters

Jurisdiciton	**UNIONIZED AMMONIA**
Alabama	
Alaska	
American Samoa	
California	
Connecticut	
Delaware	
Florida	
Georgia	
Guam	
Hawaii	
Louisiana	
Maine	
Maryland	
Massachusetts	
Mississippi	
N Mariana Islands	
New Hampshire	
New Jersey	
New York	
North Carolina	
Oregon	
Puerto Rico	5
Rhode Island	
South Carolina	
Texas	
Virgin Islands	
Virginia	
Washington	
Total	5
Percent of Impaired	1.2%
Percent of Assessed	0.2%

Table C-9 Leading Sources Impairing Assessed Ocean Shoreline Waters

Jurisdiction	URBAN RUNOFF/STORM SEWERS	OTHER URBAN RUNOFF	UNSPECIFIED NONPOINT SOURCE	LAND DISPOSAL
Alabama				
Alaska				
American Samoa	16			
California	93	5	142	26
Connecticut				
Delaware	25			
Florida				
Georgia				
Guam				
Hawaii	10	8		
Louisiana				
Maine				
Maryland				
Massachusetts				
Mississippi	85	136		75
N Mariana Islands				
New Hampshire				
New Jersey				
New York				
North Carolina				
Oregon				
Puerto Rico	6			22
Rhode Island				
South Carolina				
Texas				
Virgin Islands	6	7		
Virginia				
Washington				
Total	**241**	**155**	**142**	**123**
Percent of Impaired	55.5%	35.7%	32.8%	28.3%
Percent of Assessed	7.5%	4.8%	4.4%	3.8%

Table C-9 Leading Sources Impairing Assessed Ocean Shoreline Waters

Jurisdiction	ONSITE WASTEWATER SYSTEMS (SEPTIC TANKS)	MUNICIPAL POINT SOURCES	MAJOR MUNICIPAL POINT SOURCE
Alabama			
Alaska			
American Samoa			
California			
Connecticut			
Delaware			
Florida			
Georgia			
Guam			
Hawaii			
Louisiana			
Maine			
Maryland			
Massachusetts			
Mississippi	75	85	85
N Mariana Islands			
New Hampshire			
New Jersey			
New York		3	
North Carolina			
Oregon			
Puerto Rico	28		2
Rhode Island			
South Carolina			
Texas			
Virgin Islands	0	1	1
Virginia			
Washington			
Total	**103**	**89**	**88**
Percent of Impaired	23.8%	20.4%	20.2%
Percent of Assessed	3.2%	2.8%	2.7%

Table C-9 Leading Sources Impairing Assessed Ocean Shoreline Waters

Jurisdiction	INDUSTRIAL PERMITTED	SOURCE UNKNOWN	INDUSTRIAL POINT SOURCES	MINOR INDUSTRIAL POINT SOURCE	NATURAL SOURCES
Alabama					
Alaska			5		
American Samoa		2			
California			0		16
Connecticut					
Delaware					
Florida					
Georgia					
Guam					
Hawaii		5	2	2	11
Louisiana					
Maine					
Maryland					
Massachusetts					
Mississippi	76	29	43	43	9
N Mariana Islands					
New Hampshire		18			
New Jersey					
New York					
North Carolina					
Oregon					
Puerto Rico				2	
Rhode Island					
South Carolina					
Texas					
Virgin Islands		0		0	
Virginia					
Washington					
Total	**76**	**54**	**50**	**47**	**37**
Percent of Impaired	17.6%	14.4%	11.5%	10.7%	8.4%
Percent of Assessed	2.4%	1.9%	1.6%	1.4%	1.1%

Table C-9 Leading Sources Impairing Assessed Ocean Shoreline Waters

Jurisdiction	CONSTRUCTION	SEPTAGE DISPOSAL	LAND DEVELOPMENT	CONTAMINATED SEDIMENTS	OTHER	AGRICULTURE
Alabama						
Alaska						
American Samoa						6
California	3	26				2
Connecticut						
Delaware						
Florida						
Georgia						
Guam						
Hawaii					1	12
Louisiana						
Maine						
Maryland						
Massachusetts						
Mississippi	26		26	26		
N Mariana Islands						
New Hampshire					18	
New Jersey						
New York						
North Carolina						
Oregon						
Puerto Rico						
Rhode Island						
South Carolina						
Texas						
Virgin Islands					2	
Virginia						
Washington						
Total	**29**	**26**	**26**	**26**	**21**	**20**
Percent of Impaired	6.6%	6.0%	5.9%	5.9%	4.8%	4.6%
Percent of Assessed	0.9%	0.8%	0.8%	0.8%	0.7%	0.6%

Table C-9 Leading Sources Impairing Assessed Ocean Shoreline Waters

Jurisdiction	CROP-RELATED SOURCES	IRRIGATED CROP PRODUCTION
Alabama		
Alaska		
American Samoa		
California		
Connecticut		
Delaware		
Florida		
Georgia		
Guam		
Hawaii	8	8
Louisiana		
Maine		
Maryland		
Massachusetts		
Mississippi		
N Mariana Islands		
New Hampshire		
New Jersey		
New York		
North Carolina		
Oregon		
Puerto Rico		
Rhode Island		
South Carolina		
Texas		
Virgin Islands		
Virginia		
Washington		
Total	**8**	**8**
Percent of Impaired	1.9%	1.9%
Percent of Assessed	0.3%	0.3%

2000 Water Quality Report Table D-1 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Wetlands

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total	Impaired - Evaluated
American Samoa	151			151				0	357
California	5,205	6,835		12,040	308	497		805	43,799
Iowa	1,900	0		1,900	12,992			12,992	19,438
Kansas				0			9,124	9,124	
Louisiana	4,480	72,320		76,800				0	
Michigan		10		10				0	
Nevada	19,326			19,326				0	
North Carolina			4,706,000	4,706,000				0	
Tennessee				0				0	54,811
Total	31,062	79,165	4,706,000	4,816,227	13,300	497	9,124	22,921	118,405
Percent of assessed	0.4%	1.0%	56.8%	58.2%	0.2%	0.0%	0.1%	0.3%	1.4%

Table D-1 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Wetlands

Jurisdiction	Impaired - Monitored	Impaired - Not Specified	Impaired - Total	Total Evaluated	Total Monitored	Total Unspecified	Total Assessed
American Samoa			357	508	0	0	508
California	162,817		206,616	49,312	170,149	0	219,461
Iowa			19,438	34,330	0	0	34,330
Kansas		26,483	26,483	0	0	35,607	35,607
Louisiana	665,600		665,600	4,480	737,920	0	742,400
Michigan	680		680	0	690	0	690
Nevada			0	19,326	0	0	19,326
North Carolina		2,469,000	2,469,000	0	0	7,175,000	7,175,000
Tennessee			54,811	54,811	0	0	54,811
Total	829,097	2,495,483	3,442,985	162,767	908,759	7,210,607	8,282,133
Percent of assessed	10.0%	30.1%	41.6%	2.0%	11.0%	87.1%	8%

Table D-1 Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Wetlands

Jurisdiction	Comment
American Samoa	
California	
Iowa	
Kansas	Entered aquatic life use support status because State did not report on summary use. State reports 25069 monitored and 10538 evaluated acres.
Louisiana	Data from ADB, overall use support
Michigan	
Nevada	
North Carolina	p. 21.
Tennessee	Acres considered "impacted" (p. 20)
Total	
Percent of assessed	total 105.5 million, from NWI 2000.

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Sediment/ Siltation	Nutrients	Flow Alterations	Habitat Alterations	Filling and Draining	Pesticides
Alabama	X					
Arkansas						
California						
DRBC						
District of Columbia						
Florida						
Georgia						
Indiana						
Iowa	X	X	X	X		X
Kansas	X	X		X		X
Louisiana			X	X	X	
Maine						
Maryland						
Michigan						
Minnesota						
Mississippi						
Montana						
Nebraska	X		X			
Nevada	X	X	X			
New Mexico						
New York						
North Carolina						
North Dakota	X	X	X		X	
Oregon						
Pennsylvania						
South Carolina						
South Dakota						
Tennessee						
Texas						
Utah						
Washington						
West Virginia						
Wisconsin					X	
Total	6	4	5	3	3	2

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Sediment/ Siltation	Nutrients	Flow Alterations	Habitat Alterations	Filling and Draining	Pesticides
X = The state, tribe, territory, or commission reported that the pollutant impairs wetland quality.						

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Metals	Salinity/ TSS/ Chlorides	Pathogens	Unknown Toxicity	Ammonia	Low DO
Alabama						
Arkansas						
California						
DRBC						
District of Columbia						
Florida						
Georgia						
Indiana						
Iowa						
Kansas	X	X				X
Louisiana	X					
Maine						
Maryland						
Michigan	X					
Minnesota						
Mississippi						
Montana						
Nebraska						
Nevada						
New Mexico						
New York						
North Carolina						
North Dakota						
Oregon						
Pennsylvania						
South Carolina						
South Dakota						
Tennessee						
Texas						
Utah						
Washington						
West Virginia						
Wisconsin						
Total	3	1	0	0	0	1

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Metals	Salinity/ TSS/ Chlorides	Pathogens	Unknown Toxicity	Ammonia	Low DO
X = The state, tribe, te						

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Oil and Grease	Water Diversions	Weeds	Natural	Salt/ Fresh Water Balance	
Alabama						
Arkansas						
California						
DRBC						
District of Columbia						
Florida						
Georgia						
Indiana						
Iowa				X		
Kansas						
Louisiana						
Maine						
Maryland						
Michigan						
Minnesota						
Mississippi						
Montana						
Nebraska						
Nevada						
New Mexico						
New York						
North Carolina						
North Dakota						
Oregon						
Pennsylvania						
South Carolina						
South Dakota						
Tennessee						
Texas						
Utah						
Washington						
West Virginia						
Wisconsin						
Total	0	0	0	1	0	

Table D-2 Leading Pollutants and Stressors Impairing Assessed Wetlands

Jurisdiction	Oil and Grease	Water Diversions	Weeds	Natural	Salt/ Fresh Water Balance	
X = The state, tribe, te						

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Industrial point sources	Municipal point sources	Agriculture	Silviculture	Construction	Urban Runoff	Resource Extraction	Land Disposal	Septage Disposal
Alabama									
Alaska									
American Samoa			X		X				
Arizona									
Arkansas									
Big Sandy Rancheria						X	X	X	X
California	X	X	X	X	X				
Colorado									
Connecticut									
Delaware									
District of Columbia									
Florida									
Georgia									
Guam									
Hawaii									
Hoopa Valley Tribe									
Idaho									
Illinois						X			
Indiana									
Iowa			X						
Kansas									
Kentucky									
La Posta Band									
Louisiana									
Maine									
Maryland									
Massachusetts									
Michigan									
Minnesota									
Mississippi									
Missouri									
Montana									
N Mariana Islands									
Nebraska									
Nevada									
New Hampshire									

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Industrial point sources	Municipal point sources	Agriculture	Silviculture	Construction	Urban Runoff	Resource Extraction	Land Disposal	Septage Disposal
New Jersey									
New Mexico									
New York									
North Carolina			X	X	X				
North Dakota									
Ohio									
Oklahoma									
Oregon									
Pauma Band									
Pennsylvania									
Puerto Rico									
Rhode Island									
Round Valley Tribe									
South Carolina									
South Dakota									
Tennessee									
Texas									
Utah									
Vermont									
Virgin Islands									
Virginia									
Washington									
West Virginia									
Wisconsin									
Wyoming									
Total	1	1	4	2	3	2	1	1	1

X = The state, tribe, territory, or commission reported that the source causes impairment to wetlands

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Hydromodification	Flow Regulation/Modification	Habitat Modification (other than Hydromodification)	Bank or Shoreline Modification/Destabilization
Alabama				
Alaska				
American Samoa				
Arizona				
Arkansas				
Big Sandy Rancheria	X		X	
California				
Colorado				
Connecticut				
Delaware				
District of Columbia				
Florida				
Georgia				
Guam				
Hawaii				
Hoopa Valley Tribe				
Idaho				
Illinois	X	X	X	X
Indiana				
Iowa				
Kansas				
Kentucky				
La Posta Band				
Louisiana				
Maine				
Maryland				
Massachusetts				
Michigan				
Minnesota				
Mississippi				
Missouri				
Montana				
N Mariana Islands				
Nebraska				
Nevada				
New Hampshire				

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Hydromodification	Flow Regulation/Modification	Habitat Modification (other than Hydromodification)	Bank or Shoreline Modification/Destabilization
New Jersey				
New Mexico				
New York				
North Carolina				
North Dakota				
Ohio				
Oklahoma				
Oregon				
Pauma Band				
Pennsylvania				
Puerto Rico				
Rhode Island				
Round Valley Tribe				
South Carolina				
South Dakota				
Tennessee				
Texas				
Utah				
Vermont				
Virgin Islands				
Virginia				
Washington				
West Virginia				
Wisconsin				
Wyoming				
Total	2	1	2	1

X = The state, tribe, ter

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Atmospheric Deposition	Leaking Underground Storage Tanks	Highway Maintenance and Runoff	Spills	Contaminated Sediments	Natural Sources
Alabama						
Alaska						
American Samoa						
Arizona						
Arkansas						
Big Sandy Rancheria		X	X	X	X	X
California						
Colorado						
Connecticut						
Delaware						
District of Columbia						
Florida						
Georgia						
Guam						
Hawaii						
Hoopa Valley Tribe						
Idaho						
Illinois						X
Indiana						
Iowa						
Kansas						
Kentucky	X					
La Posta Band						
Louisiana						
Maine						
Maryland						
Massachusetts						
Michigan						
Minnesota						
Mississippi						
Missouri						
Montana						
N Mariana Islands						
Nebraska						
Nevada						
New Hampshire						

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Atmospheric Deposition	Leaking Underground Storage Tanks	Highway Maintenance and Runoff	Spills	Contaminated Sediments	Natural Sources
New Jersey						
New Mexico						
New York						
North Carolina						
North Dakota						
Ohio						
Oklahoma						
Oregon						
Pauma Band						
Pennsylvania						
Puerto Rico						
Rhode Island						
Round Valley Tribe						
South Carolina						
South Dakota						
Tennessee						
Texas						
Utah						
Vermont						
Virgin Islands						
Virginia						
Washington						
West Virginia						
Wisconsin						
Wyoming						
Total	1	1	1	1	1	2

X = The state, tribe, ter

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Recreation and Tourism Activities (other than Boating)	Groundwater Loadings	Other	Unknown
Alabama				
Alaska				
American Samoa				
Arizona				
Arkansas				
Big Sandy Rancheria	X	X	X	X
California				
Colorado				
Connecticut				
Delaware				
District of Columbia				
Florida				
Georgia				
Guam				
Hawaii				
Hoopa Valley Tribe				
Idaho				
Illinois				X
Indiana				
Iowa				
Kansas				
Kentucky				X
La Posta Band				
Louisiana				
Maine				
Maryland				
Massachusetts				
Michigan				
Minnesota				
Mississippi				
Missouri				
Montana				
N Mariana Islands				
Nebraska				
Nevada				
New Hampshire				

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Recreation and Tourism Activities (other than Boating)	Groundwater Loadings	Other	Unknown
New Jersey				
New Mexico				
New York				
North Carolina				
North Dakota				
Ohio				
Oklahoma				
Oregon				
Pauma Band				
Pennsylvania				
Puerto Rico				
Rhode Island				
Round Valley Tribe				
South Carolina				
South Dakota				
Tennessee				
Texas				
Utah				
Vermont				
Virgin Islands				
Virginia				
Washington				
West Virginia				
Wisconsin				
Wyoming				
Total	1	1	1	3

X = The state, tribe, ter

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Comment
Alabama	
Alaska	
American Samoa	No data.
Arizona	
Arkansas	
Big Sandy Rancheria	
California	
Colorado	
Connecticut	
Delaware	
District of Columbia	
Florida	
Georgia	No data.
Guam	No data.
Hawaii	
Hoopa Valley Tribe	
Idaho	No data.
Illinois	
Indiana	No data.
Iowa	
Kansas	No data.
Kentucky	Entered data from ADB, converted to acres.
La Posta Band	
Louisiana	No data.
Maine	
Maryland	No data.
Massachusetts	No data.
Michigan	No data.
Minnesota	No data.
Mississippi	
Missouri	No data.
Montana	
N Mariana Islands	NH tracks overall loss of wetlands but does not assess water quality as numeric water quality standards for wetlands have not yet been developed.
Nebraska	
Nevada	
New Hampshire	

Table D-3 Leading Sources Impairing Assessed Wetlands

Juris	Comment
New Jersey	p. 21
New Mexico	No data.
New York	No data.
North Carolina	
North Dakota	
Ohio	No data.
Oklahoma	
Oregon	No data.
Pauma Band	No data.
Pennsylvania	No data.
Puerto Rico	No data.
Rhode Island	
Round Valley Tribe	No data.
South Carolina	No data.
South Dakota	No data.
Tennessee	No data.
Texas	No data.
Utah	No data.
Vermont	No data.
Virgin Islands	No data.
Virginia	No data.
Washington	
West Virginia	
Wisconsin	
Wyoming	
Total	

X = The state, tribe, ter

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Residential Development and Urban Growth	Agriculture	Road/Highway/ Bridge Construction	Hydrologic Modifications	Industrial Development	Filling and Draining	Channelization	Dredging	Silviculture
Alabama									
Alaska									
Arizona									
Arkansas									
Big Sandy Rancheria									
California									
Colorado									
Connecticut									
Delaware									
District of Columbia									
Florida									
Georgia									
Hawaii									
Hoopa Valley Tribe									
Idaho									
Illinois									
Indiana									
Iowa									
Kansas									
Kentucky									
La Posta Band									
Louisiana									
Maine									
Maryland									
Massachusetts									
Michigan									
Minnesota	X	X	X	X	X	X	X	X	X
Mississippi									
Missouri									
Montana									
Nebraska									
Nevada									
New Hampshire	X	X	X		X	X		X	X
New Jersey									
New Mexico									

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Residential Development and Urban Growth	Agriculture	Road/Highway/ Bridge Construction	Hydrologic Modifications	Industrial Development	Filling and Draining	Channelization	Dredging	Silviculture
New York									
North Carolina									
North Dakota									
Ohio									
Oklahoma									
Oregon									
Pauma Band									
Pennsylvania									
Puerto Rico									
Rhode Island						X			
South Carolina									
South Dakota						X			
Tennessee									
Texas									
Utah									
Vermont		X							
Virgin Islands									
Virginia									
Washington	X					X		X	
West Virginia									
Wisconsin									
Wyoming	X	X	X						
Total	4	4	3	1	2	5	1	3	2

X = The state, tribe, territory, or commission reported that the source contributes to wetland loss

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Resource Extraction	Construction (General)	Impoundments	Commercial Development	Utilities	Recreation	Marinas	Public Projects	Construction of Wharves, Piers, Bulkheads	Oil Fields
Alabama										
Alaska										
Arizona										
Arkansas										
Big Sandy Rancheria										
California										
Colorado										
Connecticut										
Delaware										
District of Columbia										
Florida										
Georgia										
Hawaii										
Hoopa Valley Tribe										
Idaho										
Illinois										
Indiana										
Iowa										
Kansas										
Kentucky										
La Posta Band										
Louisiana										
Maine										
Maryland										
Massachusetts										
Michigan										
Minnesota	X	X	X	X	X		X			
Mississippi										
Missouri										
Montana										
Nebraska										
Nevada										
New Hampshire	X	X	X	X		X		X	X	
New Jersey										
New Mexico										

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	**Resource Extraction**	**Construction (General)**	**Impoundments**	**Commercial Development**	**Utilities**	**Recreation**	**Marinas**	**Public Projects**	**Construction of Wharves, Piers, Bulkheads**	**Oil Fields**
New York										
North Carolina										
North Dakota										
Ohio										
Oklahoma										
Oregon										
Pauma Band										
Pennsylvania										
Puerto Rico										
Rhode Island										
South Carolina										
South Dakota										
Tennessee										
Texas										
Utah										
Vermont										
Virgin Islands										
Virginia										
Washington			X							
West Virginia										
Wisconsin										
Wyoming	X					X				
Total	3	2	3	2	1	2	1	1	1	0
X = The state, tribe, terr										

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Land Disposal	Landfills	Flooding	Mosquito Control	Peat Mining
Alabama					
Alaska					
Arizona					
Arkansas					
Big Sandy Rancheria					
California					
Colorado					
Connecticut					
Delaware					
District of Columbia					
Florida					
Georgia					
Hawaii					
Hoopa Valley Tribe					
Idaho					
Illinois					
Indiana					
Iowa					
Kansas					
Kentucky					
La Posta Band					
Louisiana					
Maine					
Maryland					
Massachusetts					
Michigan					
Minnesota	X	X		X	X
Mississippi					
Missouri					
Montana					
Nebraska					
Nevada					
New Hampshire		X			
New Jersey					
New Mexico					

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Land Disposal	Landfills	Flooding	Mosquito Control	Peat Mining
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					
Oregon					
Pauma Band					
Pennsylvania					
Puerto Rico					
Rhode Island					
South Carolina					
South Dakota					
Tennessee					
Texas					
Utah					
Vermont					
Virgin Islands					
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming					
Total	1	2	0	1	1
X = The state, tribe, terr					

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
Arizona	No data.
Arkansas	No data.
Big Sandy Rancheria	
California	No data.
Colorado	No data.
Connecticut	Connecticut did not provide wetlands data.
Delaware	No data.
District of Columbia	No data.
Florida	
Georgia	
Hawaii	No data.
Hoopa Valley Tribe	No data.
Idaho	No data.
Illinois	No data.
Indiana	No data.
Iowa	No data.
Kansas	No data.
Kentucky	
La Posta Band	No data.
Louisiana	No data.
Maine	No data.
Maryland	No data.
Massachusetts	State does not have a monitoring program
Michigan	No data.
Minnesota	Entered information from 1998 report because State did not include this information in their abbreviated report and did not indicate it had changed.
Mississippi	No data.
Missouri	No data.
Montana	No data.
Nebraska	No data.
Nevada	
New Hampshire	All sources of wetland loss are regulated by State law and are small in size.
New Jersey	No data.
New Mexico	No data.

Table D-4 Leading Sources of Recent Wetlands Losses

Jurisdiction	Comment
New York	No data.
North Carolina	
North Dakota	No data.
Ohio	No data.
Oklahoma	
Oregon	No data is available to fill this table. Wetlands are included to some extent, in the summaries for rivers, lakes, and estuaries. Page 108.
Pauma Band	No data.
Pennsylvania	Report states net gain in wetland through DEP wetlands initiative
Puerto Rico	No data.
Rhode Island	State reports wetland losses due to illegal alterations (page III.G-8). Historic losses attributable to urbanization, State transportation projects, and reside
South Carolina	No data.
South Dakota	Page 137.
Tennessee	
Texas	No data.
Utah	No data.
Vermont	
Virgin Islands	No data.
Virginia	No data.
Washington	Page 5
West Virginia	No data.
Wisconsin	No data.
Wyoming	Entered data from 1998 report because State did not include it in their abbreviated report and did not indicate it had changed.
Total	
X = The state, tribe, terr	

Table D-5 Development of Wetland Water Quality Standards by States, Tribes, and Territories

	In Place						Under Development						Proposed					
Jurisdiction	Use Classification	Narrative Criteria	Numeric Criteria	Narrative Biocriteria	Numeric Biocriteria	Antidegradation	Use Classification	Narrative Criteria	Numeric Criteria	Narrative Biocriteria	Numeric Biocriteria	Antidegradation	Use Classification	Narrative Criteria	Numeric Criteria	Narrative Biocriteria	Numeric Biocriteria	Antidegradation
Alabama																		
Arkansas																		
California																		
DRBC																		
District of Columbia	X					X				X							X	
Florida	X	X	X	X	X	X				X	X					X	X	
Georgia																		
Indiana							X	X				X						
Iowa	X	X		X														
Kansas	X	X		X		X											X	
Louisiana							X		X									
Maine										X	X	X						
Maryland																		
Michigan																		
Minnesota	X	X	X			X				X	X							
Mississippi		X																
Nebraska	X			X		X					X							
Nevada																		
New Mexico																		
New York							X	X										
North Carolina																		
North Dakota									X		X		X			X		X
Oregon																		
Pennsylvania																		
South Carolina																		
South Dakota	X			X		X												
Tennessee																		
Texas																		
Utah						X												

Table D-5 Development of Wetland Water Quality Standards by States, Tribes, and Territories

	In Place						Under Development						Proposed					
Washington																		
West Virginia						X				X	X		X					
Wisconsin	X	X		X		X												
Total	8	6	2	6	1	9	3	2	2	5	6	2	2	0	0	2	3	1

Table D-5 Development of Wetland Water Quality Standards by States, Tribes, and Territories

Jurisdiction	Implementation Procedure
Alabama	Waters in wetlands are "Waters of the State"
Arkansas	Wetlands are "Waters of the State"
California	
DRBC	
District of Columbia	Wetlands are "Waters of the District of Columbia", antideg specifically applied to wetlands
Florida	Wetlands are "Waters of the State", regulated using the same standards as other waterbodies.
Georgia	
Indiana	Wetland water quality standards to be adopted by end of 2000
Iowa	Wetlands are "Waters of the State", no distinction with other waterbodies, three uses specifically applied
Kansas	Wetlands are "Waters of the State", designations for noncontact recreation, food procurement and aquatic life
Louisiana	
Maine	Wetlands are "Waters of the State", bioassessment program being developed (IBI)
Maryland	
Michigan	Wetlands are "Waters of the State", bioassessment program being developed (IBI)
Minnesota	Wetlandspecific numeric criteria in place and being further developed with bioassessment program (IBI).
Mississippi	Wetlands are "Waters of the State", narrative criteria are being used with more being considered.
Nebraska	Wetlandspecific standards in 1993, incl designated uses, narrative criteria, numeric toxics criteria.
Nevada	
New Mexico	Wetlands are "Waters of the State", designated for livestock watering and wildlife habitat use.
New York	Wetlands are "Waters of the U.S.", biossessment program being developed (IBI)
North Carolina	Wetlands are"Waters of the State"; protected by State water quality laws and rules.
North Dakota	Wetlands are "Waters of the State", bioassessment program being developed (IBI)
Oregon	Wetlands are "Waters of the State"
Pennsylvania	Wetlands are "'Waters of the Commonwealth", subject to all provisions of PA's water quality standards.
South Carolina	Wetlands assume standards of adjacent waterbodies; the State is considering wetlandsspecific standards.
South Dakota	Wetlands are "Waters of the State", designated for wildlife propagation and stock watering.
Tennessee	
Texas	
Utah	Antidegradation applies to wetlands, waters of the State.

Table D-5 Development of Wetland Water Quality Standards by States, Tribes, and Territories

Washington	
West Virginia	
Wisconsin	Wetlandspecific program and criteria in place (IBI).
Total	

Jurisdiction	Rivers	Lakes, Reservoirs, Ponds	Great Lakes	Estuaries	Bayous	Coastal	Canal	Wetland	Multi-class Waters	Regional	Statewide	Total Advisories
Alabama	11	2				1				1		15
Alaska												0
American Samoa				1								1
Arizona	3	2										5
Arkansas	8	10			3				1			22
California	4	12		2		11			1			30
Colorado		11										11
Connecticut	5	6		1							1	13
Delaware	6	5		8			1					20
District of Columbia											1	1
Florida	27	52				8	1		10			98
Georgia	68	33		3		1		1				106
Hawaii	2			1								3
Idaho		1										1
Illinois	19	11	1									31
Indiana	127	69	1								1	198
Iowa		1										1
Kansas	10	1										11
Kentucky	7	1							1		1	10
Louisiana	8	12		1	6	1			1			29
Maine	15					1					2	18
Maryland	1	1		2								4
Massachusetts	17	83		4		1			1		1	107
Michigan*	62	64	13					1			1	141
Minnesota*	89	850	1								1	941
Mississippi	8	3				1				1		13
Missouri	5								1	1	1	8
Montana	3	23										26
Nebraska	15	20					2					37
Nevada	1	1										2
New Hampshire	1	3				1					1	6
New Jersey	14	25		6		2			1		1	49
New Mexico	3	23										26
New York	27	45	8	3		3					1	87
North Carolina	6	7		1		1				1	1	17
North Dakota	2	18					1					21
Ohio	53	9	1								1	64
Oklahoma	1											1
Oregon	6	7										13
Pennsylvania	28	2	2	1								33
Rhode Island	1	1				1						3
South Carolina	39	17				1	2		1			60
South Dakota		1										1
Tennessee	7	9							1			17
Texas	4	15		2		1						22
Utah	1	1										2

Appendix E-1. Number of Fish Consumption Advisories

Jurisdiction	**Comment**
Alabama	coastal advisory extends statewide
Alaska	
American Samoa	
Arizona	
Arkansas	
California	
Colorado	
Connecticut	coastal advisory extends statewide
Delaware	
District of Columbia	
Florida	coastal advisory extends statewide
Georgia	coastal advisory extends statewide
Hawaii	
Idaho	
Illinois	
Indiana	
Iowa	
Kansas	
Kentucky	
Louisiana	coastal advisory extends statewide
Maine	coastal advisory extends statewide
Maryland	
Massachusetts	
Michigan*	
Minnesota*	
Mississippi	coastal advisory extends statewide
Missouri	
Montana	
Nebraska	
Nevada	
New Hampshire	coastal advisory extends statewide
New Jersey	coastal advisory extends statewide
New Mexico	
New York	coastal advisory extends statewide
North Carolina	coastal advisory extends statewide
North Dakota	
Ohio	
Oklahoma	
Oregon	
Pennsylvania	
Rhode Island	coastal advisory extends statewide
South Carolina	coastal advisory extends statewide
South Dakota	
Tennessee	
Texas	coastal advisory extends statewide
Utah	

Appendix E-1. Number of Fish Consumption Advisories

Jurisdiction	Rivers	Lakes, Reservoirs, Ponds	Great Lakes	Estuaries	Bayous	Coastal	Canal	Wetland	Multi-class Waters	Regional	Statewide	Total Advisories
Vermont	1	9									1	11
Virginia	10											10
Washington	1	1		8		2						12
West Virginia	10											10
Wisconsin*	101	364	4								1	470
Totals	837	1,831	31	44	9	37	7	2	19		17	2,838

Data from the National Listing of Fish and Wildlife Advisories.
* Includes Tribal and joint State/Tribal advisories

Appendix E-1. Number of Fish Consumption Advisories

Jurisdiction	Comment
Vermont	
Virginia	
Washington	
West Virginia	
Wisconsin*	
Totals	

Data from the National Listi

* Includes Tribal and joint St

Appendix E-2. Number of Fish Advisories Caused by Individual Pollutants (from the National Listing of Fish and Wildlife Advisories)

Jurisdiction	Mercury	PCBs (Total)	Chlordane	Dioxins	Other Pesticides	DDT, DDE, DDD	Selenium	Comment
Alabama	7	5	2			2		
Alaska								
American Samoa	1	1				1		
Arizona	2		3			3		
Arkansas	20	1		1				
California	13	13	1			13	3	
Colorado	8		3				1	
Connecticut	6	6	2					
Delaware	5	20		10		3		
District of Columbia		1						
Florida	97			1				
Georgia	94	21	1			1		
Hawaii		1						
Idaho	1							
Illinois	2	22	9					
Indiana	148	138						
Iowa		1	1					
Kansas			11					
Kentucky	2	8	1					
Louisiana	24	4		2				
Maine	2	13		9		3		
Maryland		1	3					
Massachusetts	89	21	4	1		3		
Michigan*	74	109	15	12		3		
Minnesota*	937	84						
Mississippi	10	4				2		
Missouri	2	3	3					
Montana	25	5						
Nebraska	17	20						
Nevada	2							
New Hampshire	7	1		1				
New Jersey	30	13	6	9				
New Mexico	26							
New York	23	48	14	8		4		
North Carolina	12			4			1	
North Dakota	21							
Ohio	34	43	2					
Oklahoma						1		
Oregon	12	2		1		1		
Pennsylvania	2	28	6					
Puerto Rico								
Rhode Island	2	2		1				
South Carolina	57	2						
South Dakota	1							
Tennessee	2	11	6	1				
Texas	9	7	6	1		6	3	
Utah							2	
Vermont	9	2						
Virginia	3	6						
Virgin Islands								
Washington	1	3		3		3		
West Virginia		3	1	8				
Wisconsin*	423	56		2				
Wyoming								
Total	2,262	729	100	75	0	49	10	

Data from the National Listing of Fish and Wildlife Advisories.

Appendix E-2. Number of Fish Advisories Caused by Individual Pollutants (from the National Listing of Fish and Wildlife Advisories)

Jurisdiction	Mercury	PCBs (Total)	Chlordane	Dioxins	Other Pesticides	DDT, DDE, DDD	Selenium	Comment

* Includes Tribal and joint State/Tribal advisories

Appendix E-3. Shellfish Harvesting Restrictions due to Pathogens Reported by States, Territories, and Commissions

Jurisdiction	Number of Waterbodies with Restriction	Approved (sq. miles)	Conditionally Approved[a] (sq. miles)	Restricted[b] (sq. miles)	Prohibited[c] (sq. miles)	Management Closures[d] (sq. miles)	Total Area Affected[e] (sq.
Alabama							
Alaska							
American Samoa							
California							
Connecticut							
Delaware							
District of Columbia							
Florida							
Georgia							
Guam							
Hawaii							
Louisiana	26						
Maine							
Maryland	36	1,672	58	108	0		1,838
Massachusetts		2,254		41	224	201.1	2,720
Mississippi							
N. Mariana Islands							
New Hampshire	11	7	1	2	11	0.81	21
New Jersey		808		115	130		1,053
New York		1,563			313		1,875
North Carolina							
Oregon	8	16	17				32
Puerto Rico							
Rhode Island	19	96	22		10		128
South Carolina		613	8	151	119		891
Texas						346.1	346
Virgin Islands							
Virginia				3	148		151
Washington		342	47		104		492
Total	100	7,371	151	420	1,059	548	9,549

[a] Conditionally approved waters do not always meet criteria for harvesting shellfish, but may be harvested when cı
[b] Restricted water may be harvested if the shellfish are purified with clean water following harvest.
[c] Shellfish may not be harvested in prohibited waters.
[d] Preventative closures due to a lack of data or proximity to point sources or marinas.
[e] Includes waters that are classified as conditionally approved, restricted, prohibited, and management closures.

Appendix E-3. Shellfish Harvesting Restrictions due to Pathogens Reported by States, Territories, and Commissions

Jurisdiction	**Comment**
Alabama	Data reported for closures and reopenings (page V-9)
Alaska	No data.
American Samoa	
California	No data.
Connecticut	page 20: "In 2000, approximately 257 square miles of assessed waters did not meet direct harvest or relay conditions appropriate for use designations." The number of restrictions w
Delaware	No data.
District of Columbia	No data.
Florida	
Georgia	
Guam	
Hawaii	No data.
Louisiana	
Maine	Maine reports shellfish openings and closures but does not report the size of the area.
Maryland	Acres were converted to square miles. Maryland routinely monitors sanitary quality of shellfish and tidal waters including sampling and sanitary surveys (page 103). Fecal coliform ba
Massachusetts	Data from separate assessment in Table 5.4 (acres converted to square miles). Various category classified as restricted.
Mississippi	No data. State reports shellfish growing areas in a map format.
N. Mariana Islands	
New Hampshire	The 54 miles of open ocean water under NH jurisdiction also are closed for shellfishing because a sanitary survey has not been recently conducted in accordance with NSSP guidelin
New Jersey	These values include both estuary/bay and ocean waters. Special restricted area include partially supporting waters.
New York	Converted acres to square miles (see page 118).
North Carolina	No advisories listed
Oregon	Conditionally approved areas are listed as having some areas that are restricted. 35.44 square miles are listed as "Conditionally Approved, Restricted, and Prohibited." Page 121
Puerto Rico	No data.
Rhode Island	These data were provided by the State under separate cover.
South Carolina	Values reported in acres converted to square miles.
Texas	State references maps depicting restricted area but does not probivide summary data.
Virgin Islands	No data.
Virginia	Shellfishing is also prohibited in Elizabeth and Layayette Rivers and Little Creek (page 2.5-4).
Washington	
Total	

[a] Conditionally approved wat
[b] Restricted water may be ha
[c] Shellfish may not be harves
[d] Preventative closures due t
[e] Includes waters that are cla

Appendix E-3. Shellfish Harvesting Restrictions due to Pathogens Reported by States, Territories, and Commissions

Jurisdiction
Alabama
Alaska
American Samoa
California
Connecticut
Delaware
District of Columbia
Florida
Georgia
Guam
Hawaii
Louisiana
Maine
Maryland
Massachusetts
Mississippi
N. Mariana Islands
New Hampshire
New Jersey
New York
North Carolina
Oregon
Puerto Rico
Rhode Island
South Carolina
Texas
Virgin Islands
Virginia
Washington
Total

icator for pathogenic organisms.

[a] Conditionally approved wat
[b] Restricted water may be ha
[c] Shellfish may not be harves
[d] Preventative closures due t
[e] Includes waters that are cla

Appendix E-4. Sources Associated with Shellfish Harvesting Restrictions due to Pathogens

Jurisdiction	Urban Runoff/Storm Sewers Number of Restrictions	Urban Runoff/Storm Sewers Sq. Miles	Municipal Discharges Restrictions	Municipal Discharges Sq. Miles	NPS (General) Restrictions	NPS (General) Sq. Miles	Point Sources (General) Restrictions	Point Sources (General) Sq. Miles	Industrial Discharges Restrictions	Industrial Discharges Sq. Miles
Alabama										
Alaska										
American Samoa										
California										
Connecticut										
Delaware										
District of Columbia										
Florida										
Georgia										
Guam										
Hawaii										
Louisiana										
Maine										
Maryland	2.0	6.4	16.0	48.7	32.0	87.2			4.0	9.6
Massachusetts										
Mississippi										
N. Mariana Islands										
New Hampshire					11.0	14.1				
New Jersey										
New Mexico										
New York										
North Carolina										
Oregon	1.0		6.0						6.0	
Puerto Rico										
Rhode Island										
South Carolina										
Texas										
Virgin Islands										
Virginia										
Washington										
Total	3.0	6.4	22.0	48.7	43.0	101.2	0.0	0.0	10.0	9.6

Appendix E-4. Sources Associated with Shellfish Harvesting Restrictions due to Pathogens

Jurisdiction	CSOs Number of Restrictions	CSOs Sq. Miles	Septic Tanks Restrictions	Septic Tanks Sq. Miles	Marinas Restrictions	Marinas Sq. Miles
Alabama						
Alaska						
American Samoa						
California						
Connecticut						
Delaware						
District of Columbia						
Florida						
Georgia						
Guam						
Hawaii						
Louisiana						
Maine						
Maryland	1.0	8.4	2.0	6.4	8.0	27.1
Massachusetts						
Mississippi						
N. Mariana Islands						
New Hampshire						
New Jersey						
New Mexico						
New York						
North Carolina						
Oregon			6.0		6.0	
Puerto Rico						
Rhode Island						
South Carolina						
Texas						
Virgin Islands						
Virginia						
Washington						
Total	1.0	8.4	8.0	6.4	14.0	27.1

Appendix E-4. Sources Associated with Shellfish Harvesting Restrictions due to Pathogens

Jurisdiction	Comment
Alabama	No data.
Alaska	No data.
American Samoa	
California	No data.
Connecticut	While marinas, stormwater runoff, and waterfowl were cited as causes, no specifics were listed on page 20.
Delaware	No data.
District of Columbia	No data.
Florida	
Georgia	
Guam	
Hawaii	No data.
Louisiana	No data.
Maine	Maine reports industrial and municipal dischargers as the major sources associated with impairment of estuarine waters.
Maryland	Multiple causes are reported for the restrictions on 36 waterbodies. State also reports poor flushing as a partial cause for 10 restrictions affecting 29.11 square miles.
Massachusetts	No data.
Mississippi	No data. State reports NPS, urban runoff, and unsewered communitites as causes of restrictions.
N. Mariana Islands	
New Hampshire	The 14.06 square miles include 0.61 square miles that classified "conditionally approved" which are open during dry weather but closed after certain rain events.
New Jersey	State reports sources in detailed survey in Table A.7.2.3-1 (draft version). State needs to tabulate final version in report format.
New Mexico	No data.
New York	No data.
North Carolina	No restrictions listed
Oregon	multiple causes are listed for each restriction. They include agriculture, wildlife, municipal, marina, septic, and industrial. P. 121.
Puerto Rico	No data.
Rhode Island	No data.
South Carolina	No data.
Texas	No data.
Virgin Islands	No data.
Virginia	State provides qualitative description of sources, including point source discharges and elevated fecal coliform bacteria levels (page 2.5-4).
Washington	State cites general sources of bateria incuding stormwater, sewage treatement plants, and septic tanks.
Total	

Appendix E-6. Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Contact Recreation Restrictions	Number of Sites Affected	Reasons for Restriction	Comment
Alabama	35	20	Fecal coliform	
Alaska				No data.
American Samoa				
Arizona		5	Bacteria and sediment	State reports closures rather than restrictions
Arkansas				No data.
Big Sandy Rancheria				
California	91		Sewer lines, urban runoff, wildlife, rain, unknown.	
Colorado				State has no contact recreations restrictions on rivers at this time. No data on lakes.
Connecticut	175	73	included heavy rain, debris in water, elevated levels of bacteria (most common cause), gasoline spill, floating	Beach closures for 1998 and 1999.
Delaware				No data.
District of Columbia				No data.
Florida				
Georgia	1	1	Fecal coliform	Uncertain from text if outdated
Guam				
Hawaii				No data.
Hoopa Valley Tribe				No data.
Idaho	4	4	Algae bloom, fecal coliform (from cattle and sewage spill), pathogens, swimmers itch.	
Illinois				No data.
Indiana				No data.

Appendix E-6. Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Contact Recreation Restrictions	Number of Sites Affected	Reasons for Restriction	Comment
Iowa				No data.
Kansas				No data.
Kentucky				
La Posta Band				No data.
Louisiana	7		Organic contamination, sediment contamination, fecal coliform.	
Maine	1	1	CSO	State also reports 2 warnings posted for 1 site and 4 for another.
Maryland	12	12	Bacteria from nonpoint source runoff (including agriculture), septic discharge, sewer overflow, marinas, wildlife, and undetermined sources.	Entered restrictions for 1998-1999 only. Bathing advisories from local health departments are not identified as restrictions or closures.
Massachusetts				No data. State does not compile monitoring data on beach closures.
Michigan				No quantitative data. Several beaches on two Great Lakes periodically closed due to elevated bacteria counts in 1998 and 1999 (page 8).
Minnesota				No data.
Mississippi	0	0	State reports one lake closed voluntarily due to cluster of shigellois cases.	State reports data from 1992-1997 period.
Missouri				No data.
Montana				No data.
N. Mariana Islands				

Appendix E-6. Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Contact Recreation Restrictions	Number of Sites Affected	Reasons for Restriction	Comment
Nebraska				No data.
Nevada				No data.
New Hampshire	17	13	Bacteria from heavy swim loads or stormwater runoff.	8 beaches in 1998 and 9 in 1999 were posted. 3 beaches were closed temporarily in 1998 and 4 in 1999.
New Jersey	35		Fecal coliform exceedances and suspected pollution events	14 closures of ocean beaches and 21 closures of bay beaches in 1999 (page 1); 39 (3 ocean beaches and 36 bay beaches) in 1998 (appendix A-5.2.2).
New Mexico				No data on restrictions. State reports 0 closures and 20 cases of giardiasis due to infected surface waters.
New York				No data.
North Carolina				No data.
North Dakota	0			
Ohio	5	5	Bacterial contamination	
Ohio River Valley				No data on number of restrictions and sites although report includes the number of months certain cites experienced fecal coliform and e-coli violations during the contact recreation season.
Oklahoma				
Oregon	0	0		
Pennsylvania				No data.
Puerto Rico				No data.

Appendix E-6. Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Contact Recreation Restrictions	Number of Sites Affected	Reasons for Restriction	Comment
Rhode Island	24	14	Most closures in 1998 and 1999 due to fecal coliform bacterial levels (Tables 3H-8 and 3H-9).	
South Carolina	29	25	Exceeded acceptable fecal coliform levels.	
South Dakota	84	53	Fecal coliform levels	Data from 1998 and 1999 closures.
Susquehanna River Basin				No data.
Tennessee				
Texas				State reports waterbodies that do not support designated use for contact recreation but does not specify whether restriction were issued.
Utah				No data.
Vermont	18	7	Bacteria from urban runoff, septic systems, and unknown sources.	
Virgin Islands				No data; qualitative description on page 92.
Virginia				No data.
Washington				No data.
West Virginia	0			Restrictions data apply to 11 basins covered by the report.
Wisconsin				No data.
Wyoming				No data.

Appendix E-6. Contact Recreation Restrictions Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Contact Recreation Restrictions	Number of Sites Affected	Reasons for Restriction	Comment
TOTALS	**538**	**233**		

Appendix E-10. Sediment Contamination Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Number of Sites Assessed	Number of Sites with Toxics	Number of Sites of Concern	Contaminants Detected	Contaminants of Concern	Sources of Contaminants	Comment
Alabama							No data.
Alaska							No data.
American Samoa							
Arizona							No data.
Arkansas							No data.
Big Sandy Rancheria							
California							No data.
Colorado							State adopted guidance to use for sediment assessments.
Connecticut							No data.
Delaware							No data.
District of Columbia							No data.
Florida							
Georgia							
Guam							
Hawaii							No data.
Hoopa Valley Tribe							No data.
Idaho							No data.
Illinois							No data.
Indiana							No data.
Iowa							No data.

Appendix E-10. Sediment Contamination Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Number of Sites Assessed	Number of Sites with Toxics	Number of Sites of Concern	Contaminants Detected	Contaminants of Concern	Sources of Contaminants	Comment
Kansas							No data.
Kentucky							
La Posta Band							No data.
Louisiana		1		PCBs			
Maine		25	25	Lead, copper, PCBs, cadmium, organics, and chlorinated solvents		salvage, plating, landfill, superfund site, recycling, textile mill, pulp mill, and unknown sources for lead.	Sites sampled from 1977 through 1994,
Maryland							No data.
Massachusetts			24		metals and priority organics (PAH, PCB, dioxin)		No data. State does not have numerical criteria
Michigan			4				No specific data but State reports evaluations or feasiblily studies underway for Deer, Torch, White, and Muskegon Lakes (page 16). Monitoring to evaluate PCB removal from Newburgh
Minnesota							No data.
Mississippi		16		Priority organics, nonpriority organics, metals, unknown toxicity		Industrial and municipal point sources, urban runoff/storm sewers, marinas, land disposal, hazardous waste.	Data from 1998 report.
Missouri							No data.
Montana							No data.

Appendix E-10. Sediment Contamination Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Number of Sites Assessed	Number of Sites with Toxics	Number of Sites of Concern	Contaminants Detected	Contaminants of Concern	Sources of Contaminants	Comment
N. Mariana Islands							
Nebraska							No data.
Nevada							No data.
New Hampshire							No data. NH does not currently have numeric water quality criteria for sediments.
New Jersey							No data.
New Mexico							No data.
New York					PCBs, pesticides, and heavy metals		Contaminated sediment is the primary caluse of impairment in about 550 river miles, 151,600 lake acres, 130 square miles of esturaries, and 370 miles of Great Lakes shoreline (page
North Carolina							No data
North Dakota			1		Pesticides	Runnoff from abandoned landfill and pesticides formulation plant	

Appendix E-10. Sediment Contamination Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Number of Sites Assessed	Number of Sites with Toxics	Number of Sites of Concern	Contaminants Detected	Contaminants of Concern	Sources of Contaminants	Comment
Ohio					Heavy metal and organic contaminants.		contaminants are a major source of impairment in 36 miles of rivers and streams and a moderal influence in 97 miles. Waterbodies with elevated metals in bottom sediments listed in appendix H.
Ohio River Valley							No data.
Oklahoma							
Oregon		11	11	metals, PCBs, PAHs, petroleum, pesticides, dioxins/furans, tributyl tin,	metals, PCBs, PAHs, petroleum, pesticides, dioxins/furans, tributyl tin,	industrial facilities, railroad, manufactured gas plant, construction site, marinas, shipyards, sawmills	Data presented for 6 rivers, 1 creek, 1 slough, and 3 intertidal/estuary zones
Pennsylvania							No data.
Puerto Rico							No data.
Rhode Island			25		VOCs, chlorinated solvents, hydrocarbons, metals, pesticides, PCBs, and other hazardous materials		These are site remediation projects.
South Carolina							No data.
South Dakota							No data.
Susquehanna River Basin							No data.
Tennessee							

Appendix E-10. Sediment Contamination Reported by States, Tribes, Territories, and Commissions

Jurisdiction	Number of Sites Assessed	Number of Sites with Toxics	Number of Sites of Concern	Contaminants Detected	Contaminants of Concern	Sources of Contaminants	Comment
Texas			36		Metals		State reports 21 streams and rivers, 6 estuaries, 9 reservoirs of concern (pages 11, 12, 15)
Utah							No data.
Vermont	1	1	1	Research continuing.	Research continuing.	Research continuing.	Data supplied by State.
Virgin Islands							No data.
Virginia							No data.
Washington							No data.
West Virginia							No data.
Wisconsin	56				PCBs, PAHs, metals		State also reports status of sediment contaimination at 15 additional sites (mainly Superfund) where remediation is pending or an investigation is ongoing.
Wyoming							No data.
Totals	57	54	127				

2000 Water Quality Report Appendix F-1. Total Miles of Great Lakes Shoreline in the Nation

Jurisdiction	Total Miles	Assessed Miles	Percent Assessed
Illinois	63	63	100%
Indiana	43	43	100%
Michigan	3,250	3,250	100%
Minnesota	272	0	0%
New York	577	457	79%
Ohio	236	236	100%
Pennsylvania	63	0	0%
Wisconsin	1,017	1,017	100%
Total	5,521	5,066	92%

Appendix F-1. Total Miles of Great Lakes Shoreline in the Nation

Jurisdiction	Comment
Illinois	
Indiana	
Michigan	
Minnesota	Entered value from 1998 report because state did not include it in their abbreviated report and did not indicate it had changed.
New York	Does not include miles classified as "fully supporting or not assessed"
Ohio	ADB lists more assessed waters than total waters for GL shoreline
Pennsylvania	Includes GL as acres in the electronic submission. No information for shoreline.
Wisconsin	No GL shoreline miles in the ADB - and no assessment info in the report. Number from later communication with state.
Total	

Appendix F-2. Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Great Lakes Shoreline

Jurisdiction	Full Support - Evaluated	Full Support - Monitored	Full Support - Not Specified	Full Support - Total	Threatened - Evaluated	Threatened - Monitored	Threatened - Not Specified	Threatened - Total	Impaired - Evaluated	Impaired - Monitored	Impaired - Not Specified
Illinois				0	63			63			
Indiana				0	0	0		0	0	43	
Michigan				0				0	3,250		
Minnesota				0				0			
New York				0	40			40	417		
Ohio				0			185	185			35
Pennsylvania				0				0			
Wisconsin				0			807	807			210
								0			
Total				0	103		992.1	1,095	3667	43	244.8
Percent of assessed for summary of use support	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	19.6%	21.7%	72.6%	0.9%	4.8%

Appendix F-2. Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Great Lakes Shoreline

Jurisdiction	Impaired - Total
Illinois	0
Indiana	43
Michigan	3,250
Minnesota	0
New York	417
Ohio	35
Pennsylvania	0
Wisconsin	210
	0
Total	3,955
Percent of assessed for summary of use support	78.3%

Appendix F-2. Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Great Lakes Shoreline

Jurisdiction	Not Attainable - Evaluated	Not Attainable - Monitored	Not Attainable - Not Specified	Not Attainable - Total	Total Evaluated	Total Monitored	Total Unspecified	Total Assessed
Illinois				0	63	0	0	63
Indiana				0	0	43	0	43
Michigan				0	3,250	0	0	3,250
Minnesota				0	0	0	0	0
New York				0	457	0	0	457
Ohio				0	0	0	220	220
Pennsylvania				0	0	0	0	0
Wisconsin				0	0	0	1,017	1,017
Total				0	3,770	43	1,237	5,050
Percent of assessed for summary of use support	0.0%	0.0%	0.0%	0.0%	74.7%	0.9%	24.5%	

Appendix F-2. Summary of Fully Supporting, Threatened, and Impaired Waters in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	
Indiana	
Michigan	Includes effect of fish consumption advisories for each of the four Great Lakes.
Minnesota	No data.
New York	Does not include waters listed as "fully supporting or not assessed." Report states that all assessments should be considered as evaluated values (page 54).
Ohio	Entered aquatic life use support in lieu of summary use data.
Pennsylvania	No data.
Wisconsin	From ALUS
Total	
Percent of assessed for summary of use support	

Appendix F-3a. Aquatic Life Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Illinois		63				63
Indiana	43	0	0	0	0	43
Michigan						0
Minnesota						0
New York		0	0	0		0
Ohio		185	11	24		220
Pennsylvania						0
Wisconsin		807	210			1,017
Total	43	1,055	221	24	0	1,343
	3.2%	78.6%	16.4%	1.8%	0.0%	

Appendix F-3a. Aquatic Life Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	
Indiana	
Michigan	No data. Included in fish consumption use support.
Minnesota	No data.
New York	All miles classified as "fully supporting or not assessed", cannot tell the difference
Ohio	
Pennsylvania	No data.
Wisconsin	data from state in email 10/29/01
Total	

Appendix F-3b. Fish Consumption Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Illinois				63		63
Indiana	0	0	43	0	0	43
Michigan	0			3,250		3,250
Minnesota						0
New York		0	374	0		374
Ohio			229			229
Pennsylvania						0
Wisconsin			1,017			1,017
Total	0	0	1,663	3,313	0	4,976
	0.0%	0.0%	33.4%	66.6%	0.0%	

Appendix F-3b. Fish Consumption Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	
Indiana	
Michigan	
Minnesota	No data.
New York	203 miles classified as "fully supporting or not assessed"
Ohio	
Pennsylvania	No data. State reports Lake Erie/Presque Isle impaired for fish consumption
Wisconsin	data from state in email 10/29/01
Total	

Appendix F-3c. Swimming Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Illinois	50		13			63
Indiana	0	0	43	0	0	43
Michigan	3,242			8		3,250
Minnesota						0
New York		40	37	0		77
Ohio		229				229
Pennsylvania						0
Wisconsin						0
Total	3,292	270	93	8	0	3,663
	89.9%	7.4%	2.5%	0.2%	0.0%	

Appendix F-3c. Swimming Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	
Indiana	
Michigan	
Minnesota	No data.
New York	507 miles reported as "fully supporting or not assessed"
Ohio	Includes primary and secondary contact recreational uses.
Pennsylvania	No data.
Wisconsin	No data.
Total	

Appendix F-3d. Secondary Contact Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Illinois						
Indiana						
Michigan	3,250					3,250
Minnesota						
New York			6			6
Ohio						0
Pennsylvania						
Wisconsin						
Total	3,250	0	6	0	0	3,256
	99.8%	0.0%	0.2%	0.0%	0.0%	

Appendix F-3d. Secondary Contact Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	No data.
Indiana	No data.
Michigan	
Minnesota	No data.
New York	531 miles classified as "fully supporting or not assessed"
Ohio	Included in swimming use support.
Pennsylvania	No data.
Wisconsin	No data.
Total	

Appendix F-3e. Drinking Water Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed
Illinois	63					63
Indiana						
Michigan	3,170			80		3,250
Minnesota						
New York						0
Ohio						
Pennsylvania						
Wisconsin						
Total	3,233	0	0	80	0	3,313
	97.6%	0.0%	0.0%	2.4%	0.0%	

Appendix F-3e. Drinking Water Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Comment
Illinois	
Indiana	No data.
Michigan	
Minnesota	No data.
New York	577 miles classified as "fully supporting or not assessed"
Ohio	No data.
Pennsylvania	No data.
Wisconsin	No data.
Total	

Appendix F-3f. Agriculture Use Support in Assessed Great Lakes Shoreline

Jurisdiction	Full Support	Threatened	Partial Support	Not Supporting	Not Attainable	Total Assessed	Comment
Illinois							No data.
Indiana							No data.
Michigan	3,250					3,250	
Minnesota							No data.
New York							No data.
Ohio							No data.
Pennsylvania							No data.
Wisconsin							No data.
Total	3,250	0	0	0	0	3,250	
	100%	0%	0%	0%	0%		

Appendix F-4. Leading Pollutants and Stressors Impairing Assessed Great Lakes Shoreline

Jurisdiction	Priority organics	Nutrients	Pathogens	Siltation	Organic enrichment/Low DO	Taste and odor	PCB's	Metals	Mercury	Pesticides
Illinois	63									
Indiana			43				43	43	43	
Michigan										
Minnesota										
New York	433.2	82.3	58.8	79.3	68.3	52.8				23
Ohio	0.5	26.77		18.58	5.05					
Pennsylvania										
Wisconsin										
Total	**496.7**	**109.07**	**101.8**	**97.88**	**73.35**	**52.8**	**43**	**43**	**43**	**23**
Percent of impaired	12.6%	2.8%	2.6%	2.5%	1.9%	1.3%	1.1%	1.1%	1.1%	0.6%
Percent of assessed	9.8%	2.2%	2.0%	1.9%	1.4%	1.0%	0.8%	0.8%	0.8%	0.5%

Appendix F-4. Leading Pollutants and Stressors Impairing Assessed Great Lakes Shoreline

Jurisdiction	**Unknown toxicity**	**Other habitat alterations**
Illinois		
Indiana		
Michigan		
Minnesota		
New York	21	
Ohio		16.39
Pennsylvania		
Wisconsin		
Total	**21**	**16.39**
Percent of impaired	0.5%	0.4%
Percent of assessed	0.4%	0.3%

Appendix F-4. Leading Pollutants and Stressors Impairing Assessed Great Lakes Shoreline

Jurisdiction	**Salinity/TDS/chlorides**
Illinois	
Indiana	
Michigan	
Minnesota	
New York	12.8
Ohio	
Pennsylvania	
Wisconsin	
Total	**12.8**
Percent of impaired	0.3%
Percent of assessed	0.3%

Appendix F-5. Leading Sources Impairing Assessed Great Lakes Shoreline

Jurisdiction	Contaminated Sediments	Urban Runoff/Storm Sewers	Agriculture	Atmospheric Deposition	Habitat Modification (other than Hydromodification
Illinois	63	63		63	
Indiana					
Michigan					
Minnesota					
New York	456.2	85.6	57.3	7.8	59.3
Ohio		3.28	17.83		2.4
Pennsylvania					
Wisconsin					
Total	**519.2**	**151.88**	**75.13**	**70.8**	**61.7**
Percent of impaired	13.1%	3.8%	1.9%	1.8%	1.6%
Percent of assessed	10.2%	3.0%	1.5%	1.4%	1.2%

Appendix F-5. Leading Sources Impairing Assessed Great Lakes Shoreline

Jurisdiction	Land Disposal	Onsite Wastewater Systems (Septic Tanks)	Combined Sewer Overflow	Industrial Point Sources	Construction
Illinois			10	16	
Indiana					
Michigan					
Minnesota					
New York	61.3	61.3	42	21	48.5
Ohio			3.78	13.99	
Pennsylvania					
Wisconsin					
Total	**61.3**	**61.3**	**55.78**	**50.99**	**48.5**
Percent of impaired	1.5%	1.5%	1.4%	1.3%	1.2%
Percent of assessed	1.2%	1.2%	1.1%	1.0%	1.0%

Appendix F-5. Leading Sources Impairing Assessed Great Lakes Shoreline

Jurisdiction	Source Unknown	Spills
Illinois		
Indiana	43	
Michigan		
Minnesota		
New York	1	44
Ohio		
Pennsylvania		
Wisconsin		
Total	**44**	**44**
Percent of impaired	1.1%	1.1%
Percent of assessed	0.9%	0.9%

Appendix F-5. Leading Sources Impairing Assessed Great Lakes Shoreline

Jurisdiction	Other	Municipal Point Sources	Hydromodification	Nonirrigated Crop Production	Bank or Shoreline Modification/Destabilization
Illinois					
Indiana					
Michigan					
Minnesota					
New York	32.8	28.5	6		
Ohio	0.75	3.78	16.39	17.83	13.99
Pennsylvania					
Wisconsin					
Total	**33.55**	**32.28**	**22.39**	**17.83**	**13.99**
Percent of impaired	0.8%	0.8%	0.6%	0.5%	0.4%
Percent of assessed	0.7%	0.6%	0.4%	0.4%	0.3%

Appendix F-5. Leading Sources Impairing Assessed Great Lakes Shoreline

Jurisdiction	Major Municipal Point Source	Highway Maintenance and Runoff	Highway/Road/Bridge Runoff
Illinois			
Indiana			
Michigan			
Minnesota			
New York		12.8	6.8
Ohio	13.99		
Pennsylvania			
Wisconsin			
Total	**13.99**	**12.8**	**6.8**
Percent of impaired	0.4%	0.3%	0.2%
Percent of assessed	0.3%	0.3%	0.1%