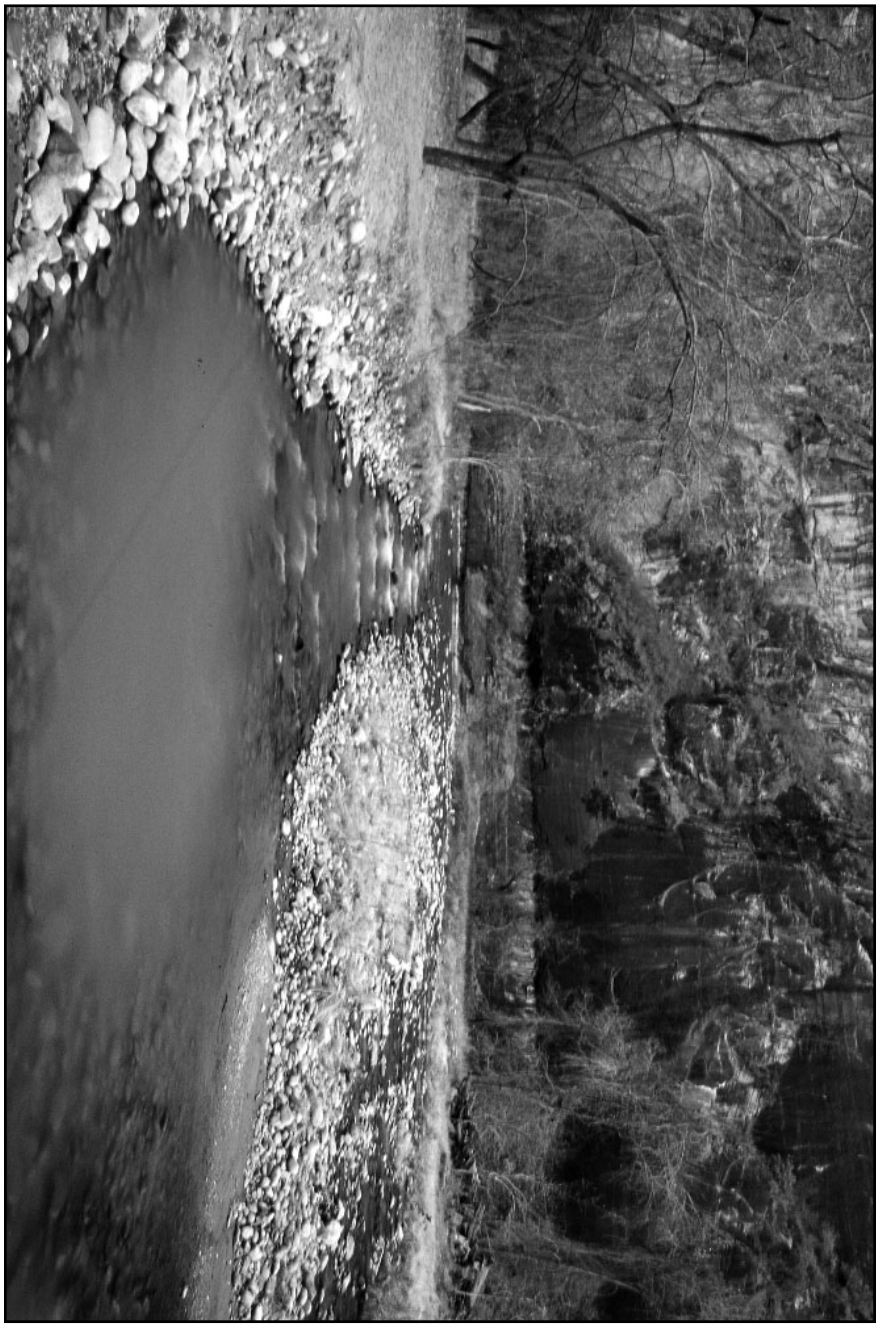
Part II

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

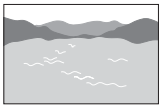
The waterbody supports a population of shellfish free from toxicants and pathogens that could pose a human health risk to consumers.

Primary Contact Recreation – Swimming

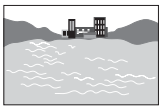
People can swim in the waterbody without risk of adverse human health effects (such as catching waterborne diseases from raw sewage contamination).

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

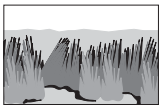
Rivers and and Streams



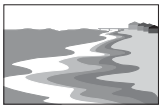
Lakes, Reervoirs, and Ponds



The Great Lakes



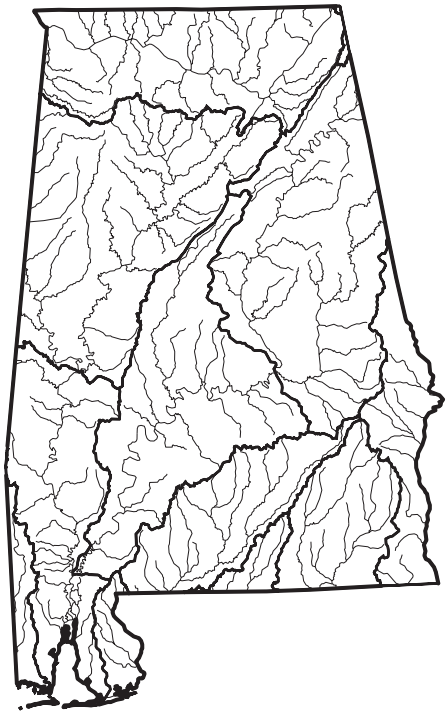
Estuaries



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 nonpoint 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).

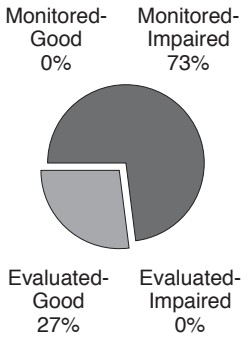
Programs To Assess Water Quality

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.

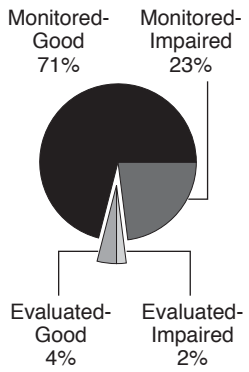
Data Quality

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.

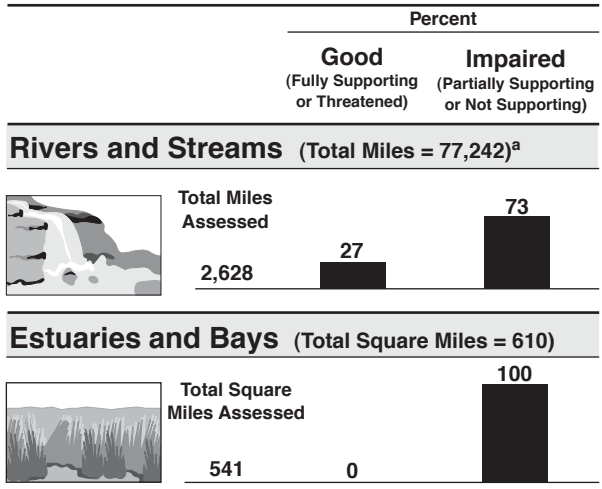
Rivers



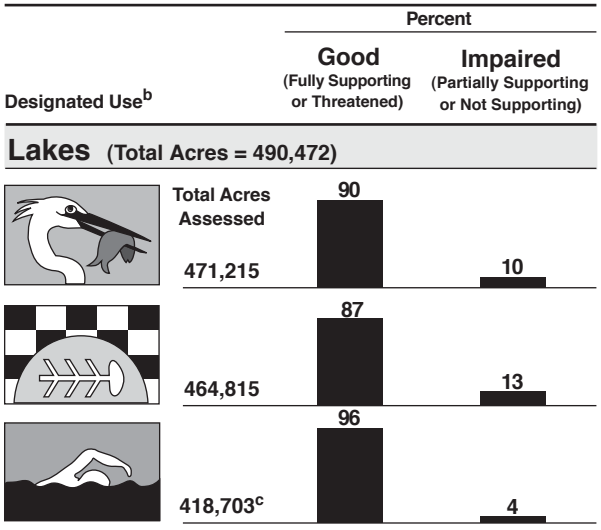
Lakes



Summary of Use Support in Alabama



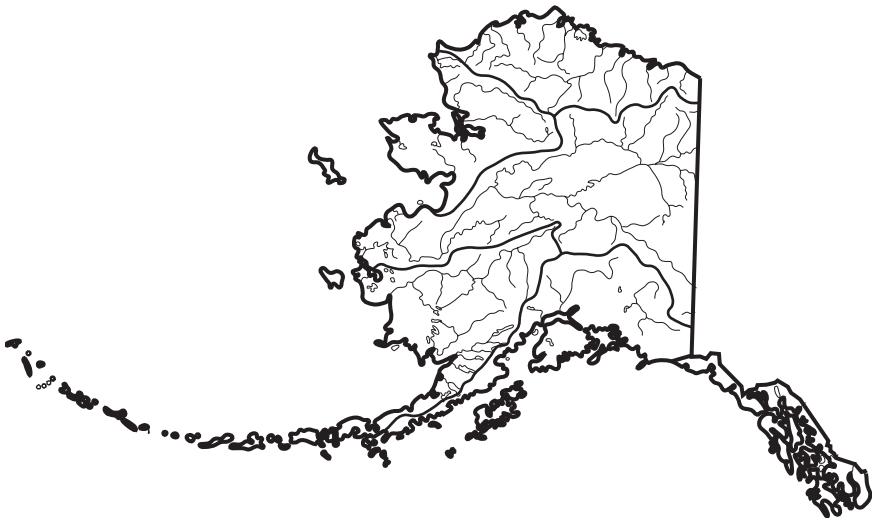
Individual Use Support in Alabama[b]



[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



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

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.

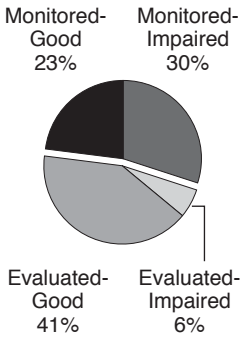
The ADEC Drinking Water Program maintains a database of water quality for public drinking water systems using ground water. When a regulated drinking water supply well is closed due to contamination, the Contaminated Sites Program assumes responsibility for remediation. ADEC's Contaminated Sites and 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.

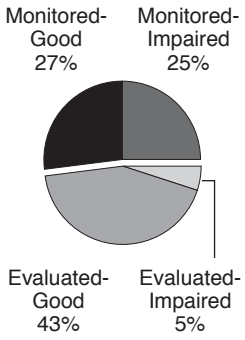
Data Quality

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.

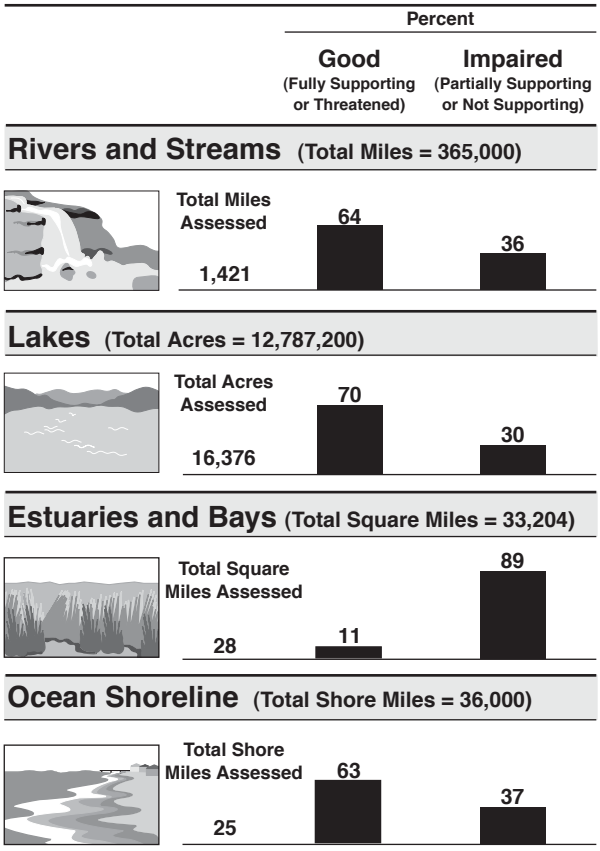
Rivers



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

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

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.

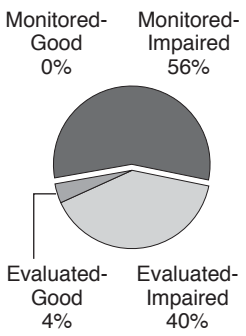
NPDES permit holders monitor Pago Pago Harbor to document compliance with their permits. Seventeen stations are used for water quality monitoring and seven sites are used for sediment monitoring. The water quality program will be updated and expanded in 2001.

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.

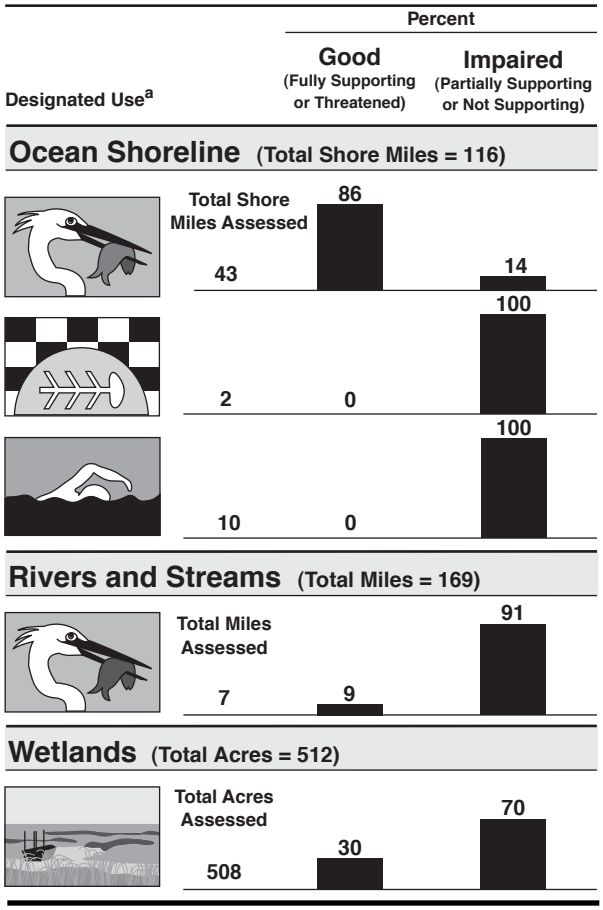
Data Quality

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



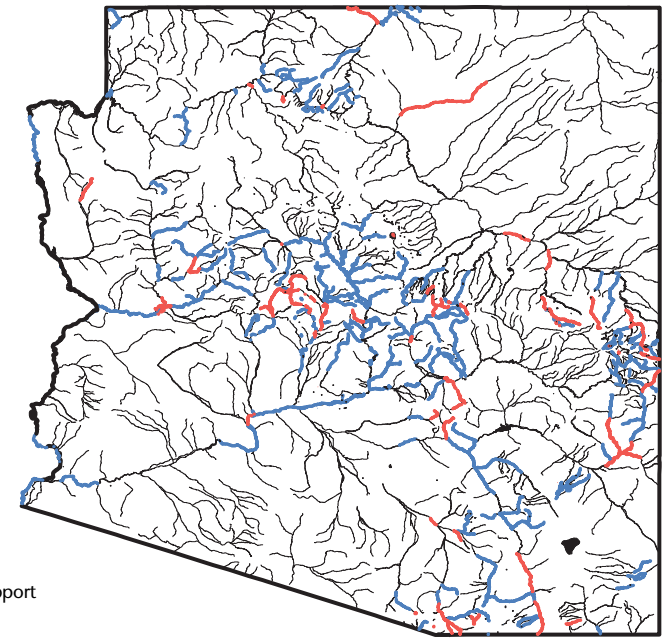
Individual Use Support in American Samoa



[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



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

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.

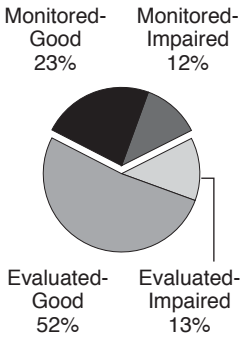
Programs To Assess Water Quality

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.

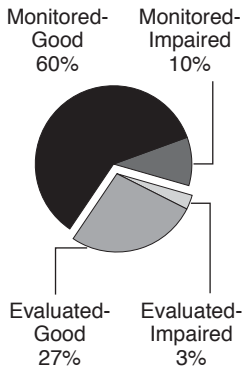
Data Quality

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



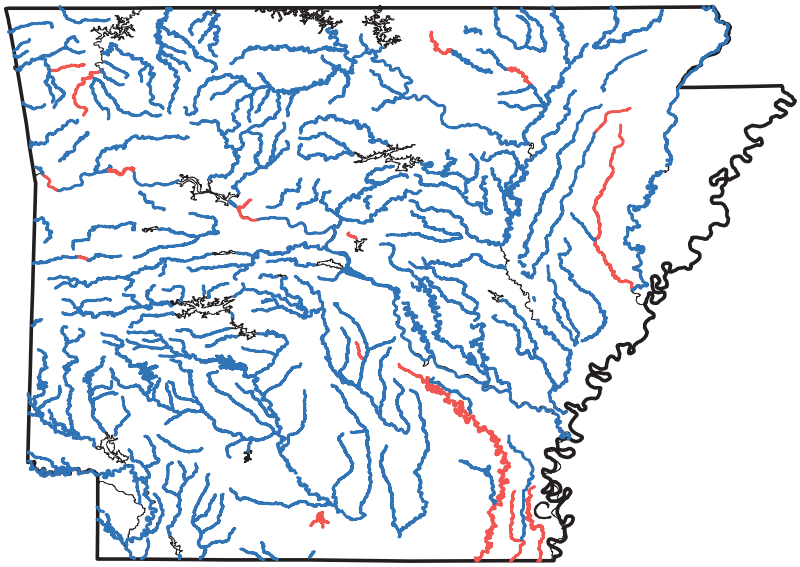
Individual Use Support in Arizona

Designated Use[a]		Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 90,375)[b]			
	Total Miles Assessed 3,944	79	21
	3,798	96	4
	3,714	93	7
Lakes (Total Acres = 335,590)			
	Total Acres Assessed 135,451	88	12
	135,451	100	0
	135,379	99	1

[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

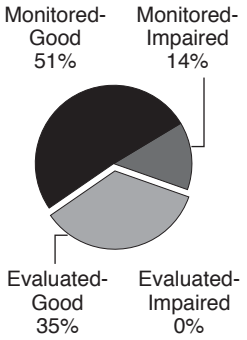
Arkansas classifies its water resources by ecoregion with similar physical, chemical, and biological characteristics. There are six ecoregions including the Delta, Gulf Coastal, Ouchita Mountain, Arkansas River Valley, Boston Mountain, and Ozark Mountain Regions. By classifying water resources in this 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.

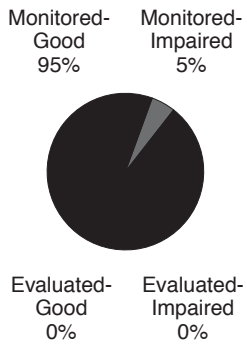
Data Quality

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.

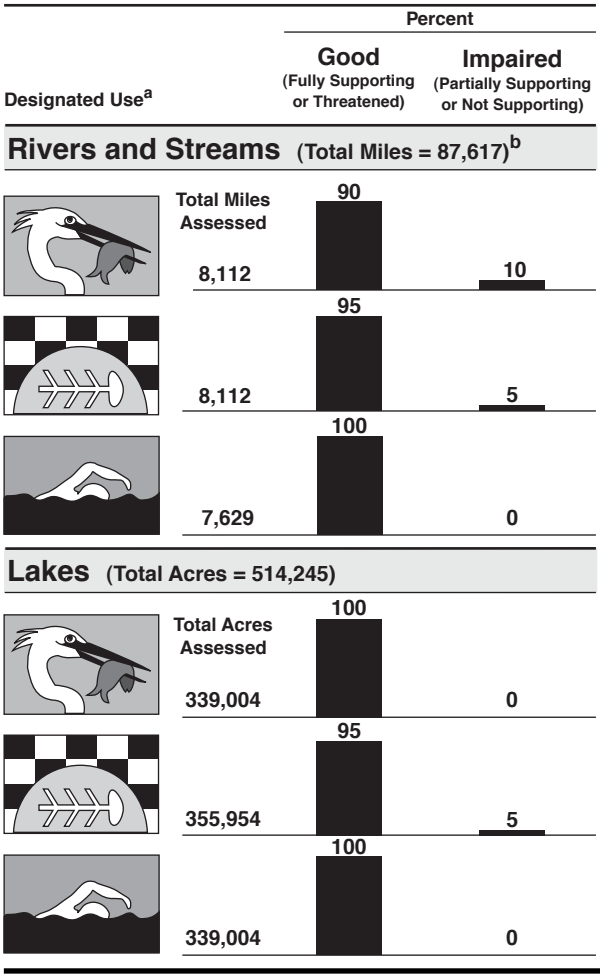
Rivers



Lakes



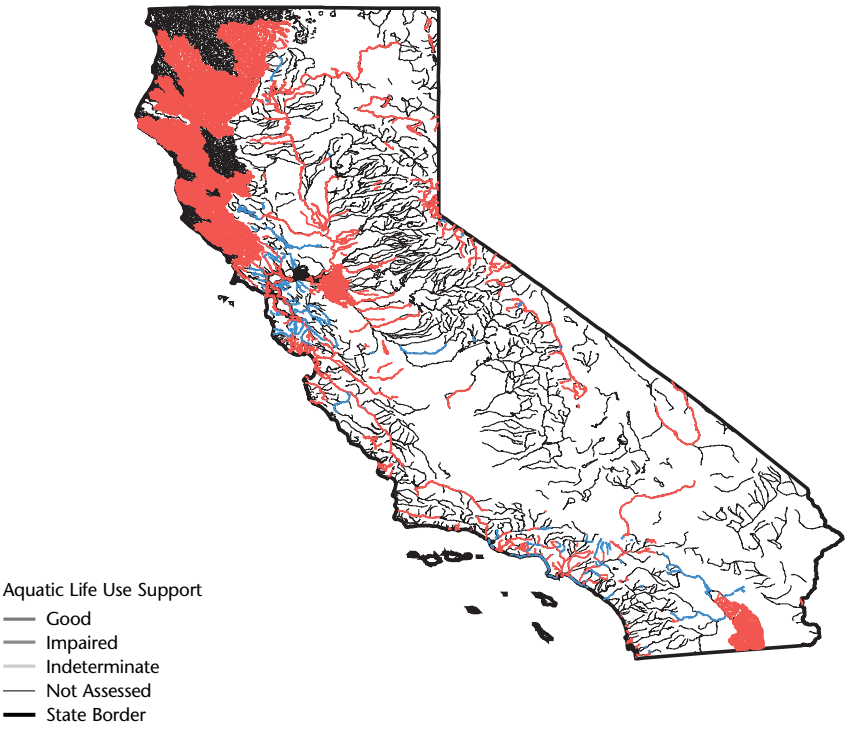
Individual Use Support in Arkansas



[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

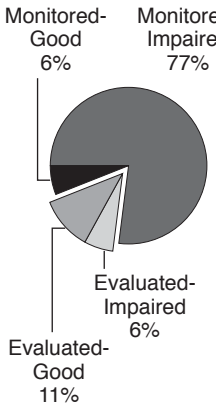
The State Water Resources Control Board (SWRCB) has developed programs to monitor state water quality. The Surface Water Ambient Monitoring Program (SWAMP) will focus on developing a sampling and monitoring program, documenting water quality conditions, and evaluating the sources of impairment in targeted 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.

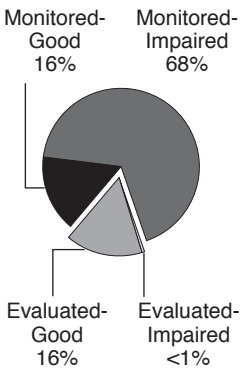
Data Quality

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



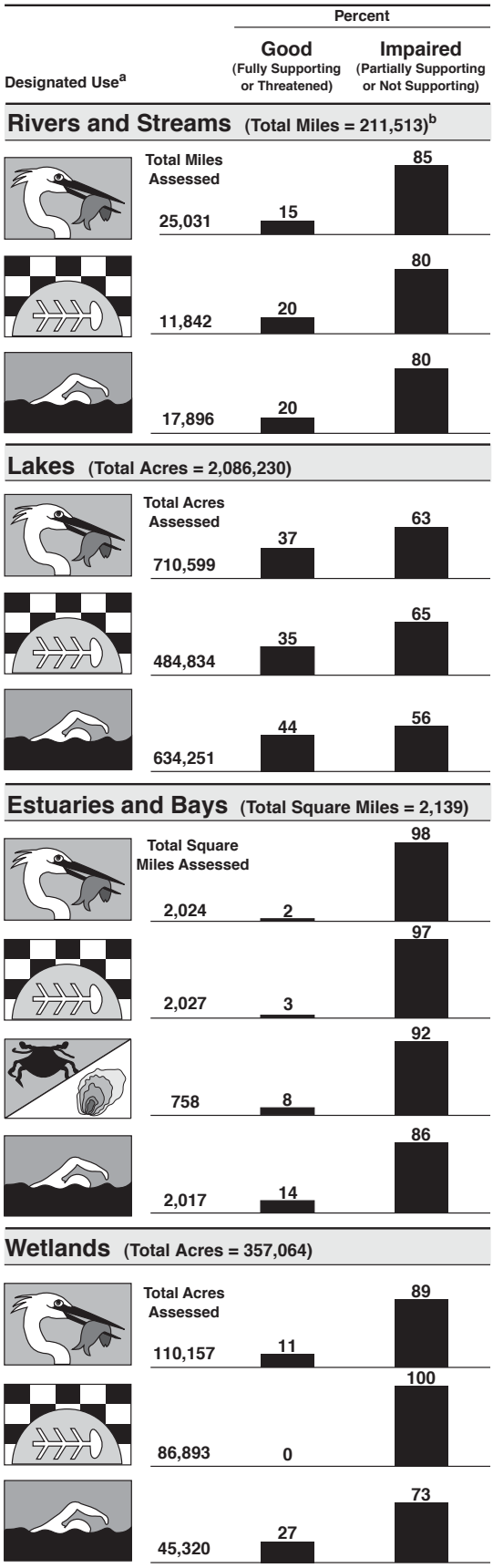
Lakes



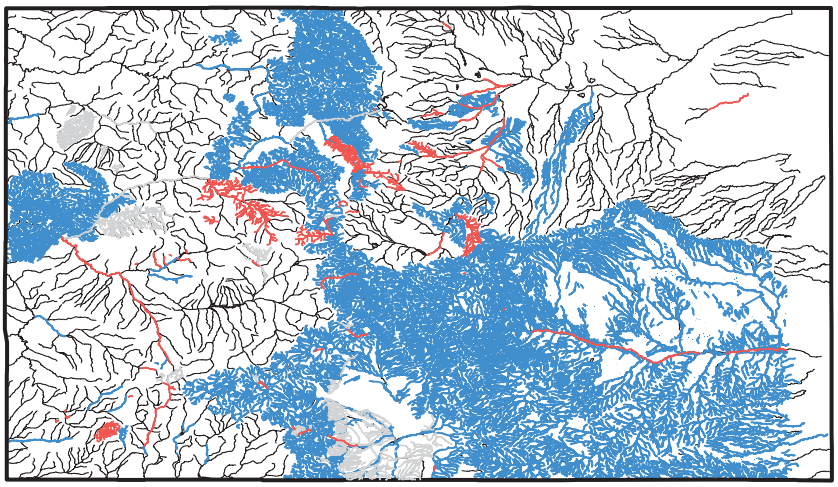
[a] A subset of California's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

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

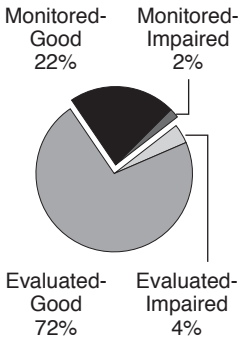
In 1999, the Colorado Water Quality Monitoring Council was established by an interested group of stakeholders and the state's Water Quality Control Division. The council was patterned after newly formed councils at the state and national level. It serves as a statewide collaborative body to help achieve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

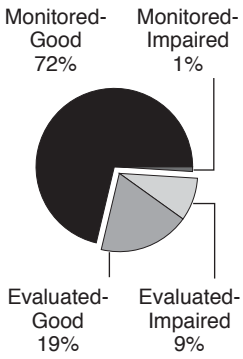
Data Quality

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



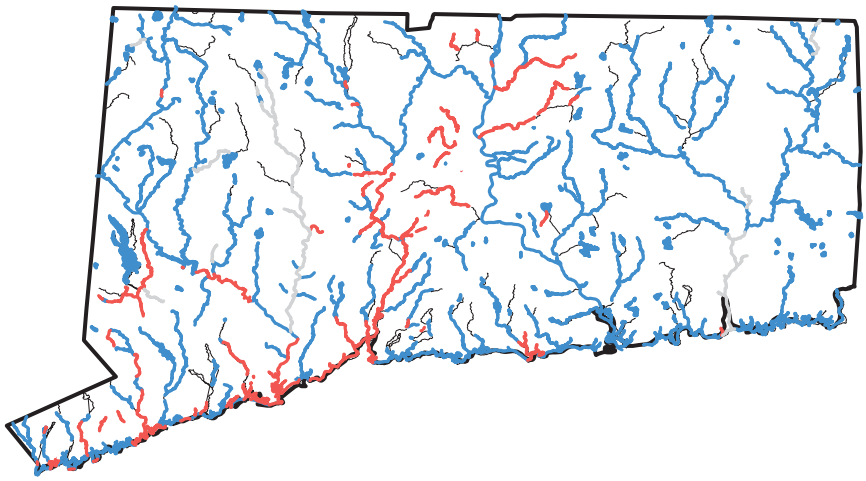
Individual Use Support in Colorado

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



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

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.

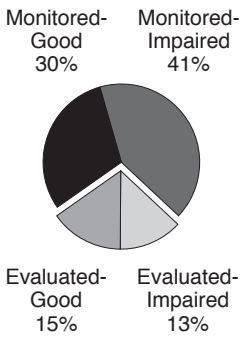
Programs To Assess Water Quality

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.

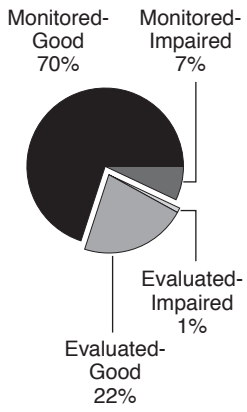
Data Quality

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



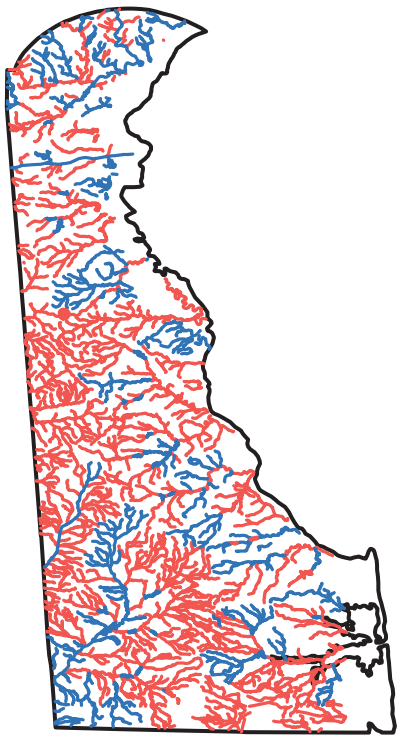
[a] A subset of Connecticut's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.
[b] Figures do not include statewide fish consumption advisory.
[c] Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Connecticut

Designated Use[a,b]	Percent Good (Fully Supporting or Threatened)	Percent Impaired (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 5,830)[c]		
Total Miles Assessed	1,185	79 / 21
	1,285	91 / 9
	1,080	75 / 25
Lakes (Total Acres = 64,973)		
Total Acres Assessed	27,619	97 / 3
	27,601	97 / 3
	26,049	99 / 1
Estuaries and Bays (Total Square Miles = 612)		
Total Square Miles Assessed	611	60 / 40
	512	100 / <1
	611	45 / 55
	611	97 / 3

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

Delaware



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

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.

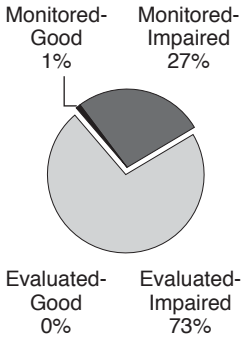
Programs To Assess Water Quality

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.

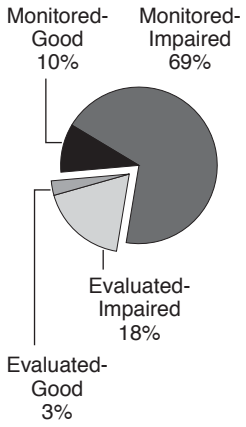
Data Quality

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

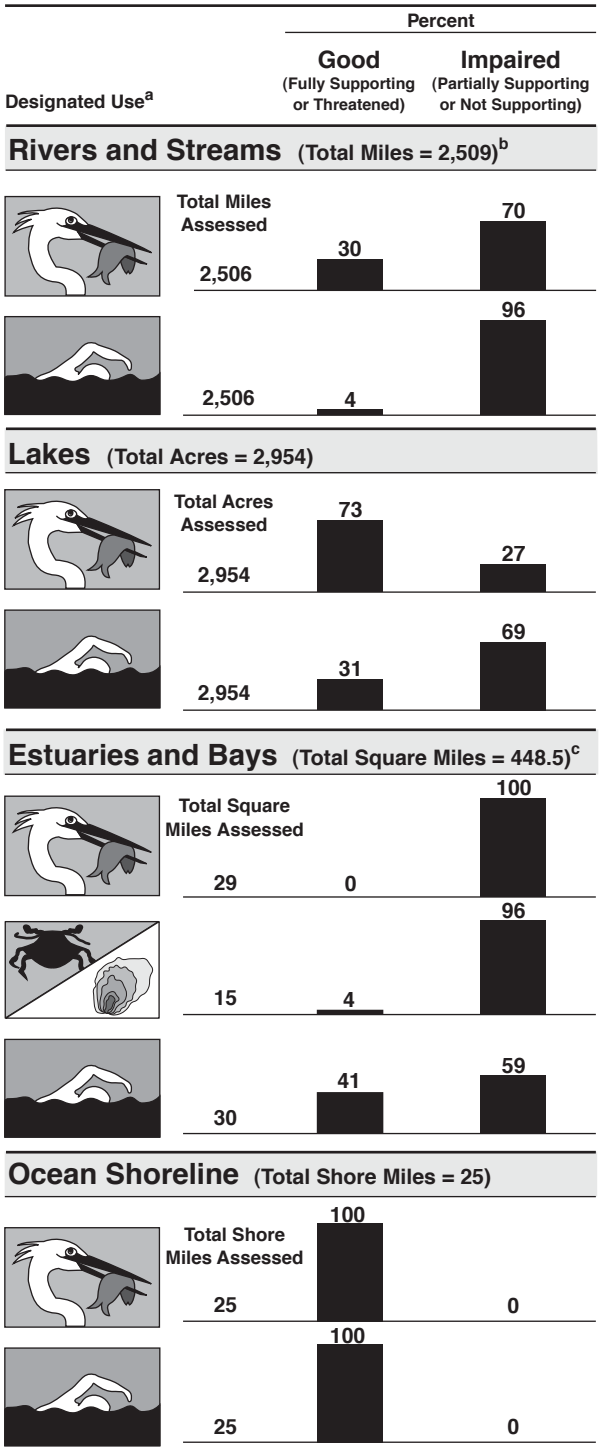


[a] A subset of Delaware's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

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

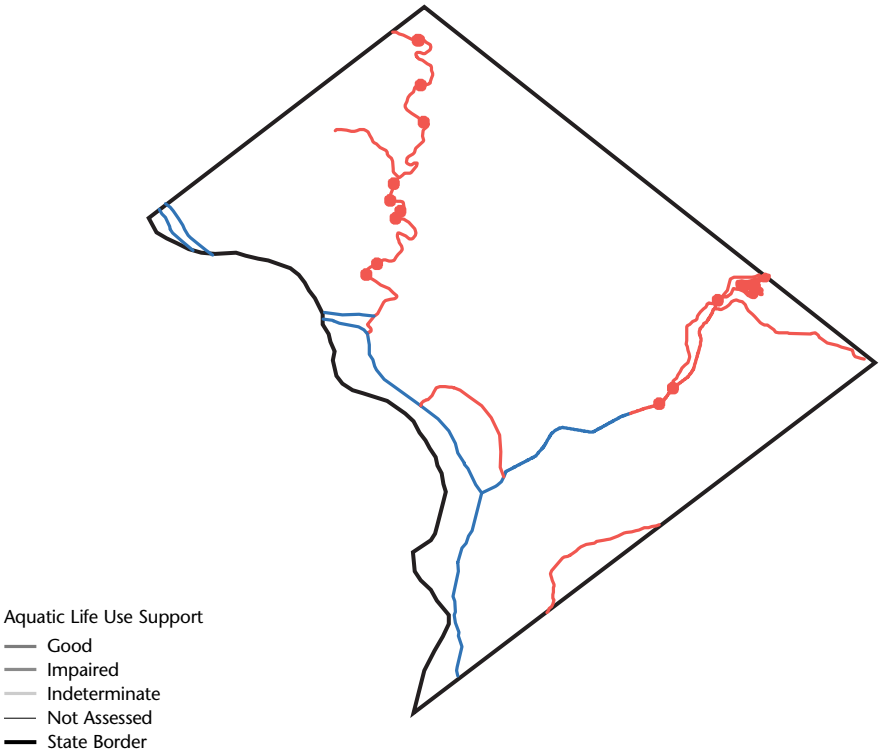
[c] Total size includes 419 mi² of estuary that are in Delaware but under the jurisdiction of the Delaware River Basin Commission (DRBC).

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.

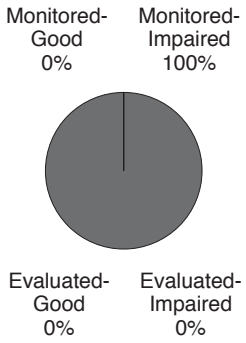
Programs To Assess Water Quality

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.

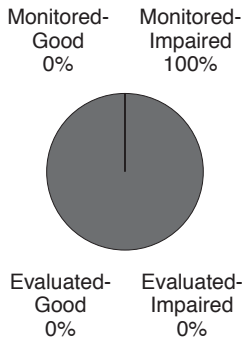
Data Quality

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.

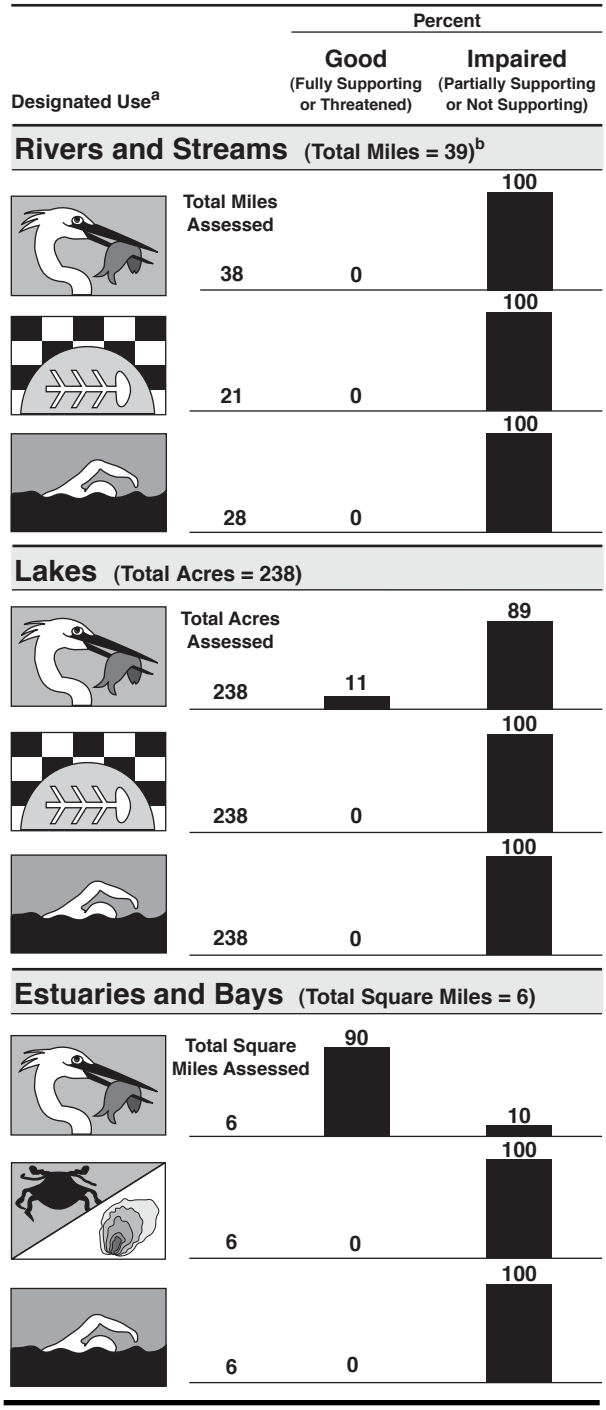
Rivers



Lakes



Individual Use Support in the District of Columbia

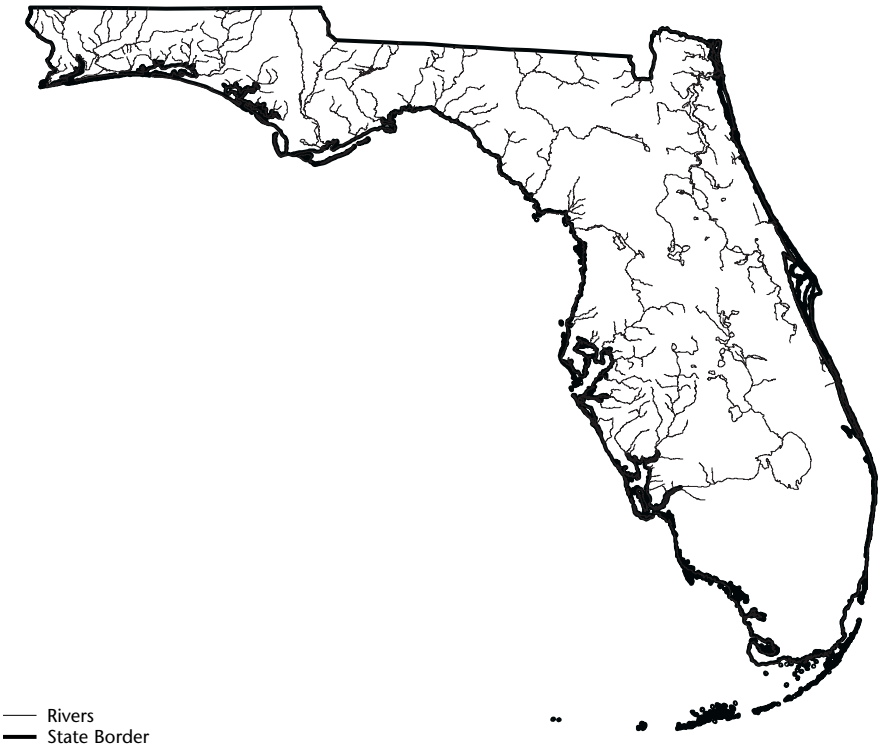


[a] A subset of the District of Columbia's designated uses appear in this figure. Refer to the district's 305(b) report for a full description of the district's uses.

[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.

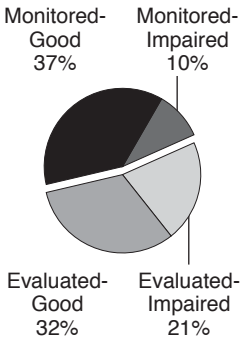
Programs To Assess Water Quality

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.

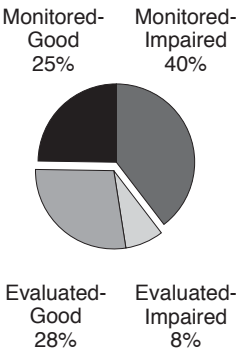
Data Quality

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

	Percent	
	Good (Fully Supporting or Threatened)	**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

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

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.

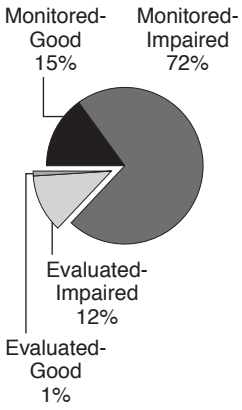
Programs To Assess Water Quality

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.

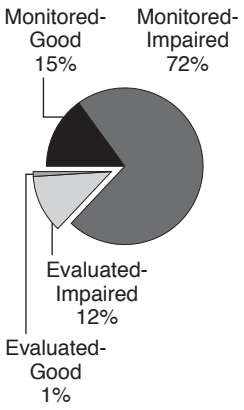
Data Quality

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

	Percent	
	Good (Fully Supporting or Threatened)	**Impaired** (Partially Supporting or Not Supporting)
Rivers and Streams (Total Miles = 70,150)[a]		
Total Miles Assessed	9,999	40 / 60
Lakes (Total Acres = 425,382)		
Total Acres Assessed	402,849	16 / 84
Estuaries and Bays (Total Square Miles = 854)		
Total Square Miles Assessed	858	59 / 41

[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

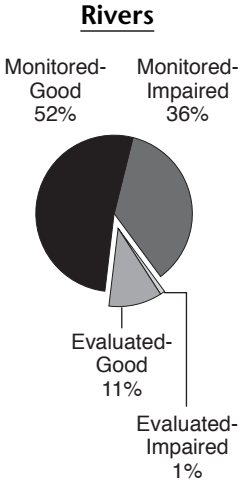
The Guam Water Monitoring Strategy was implemented in 1978. Currently, monitoring data are collected at fixed locations using a rotating basin design. Guam EPA and the Department of Aquatic Wildlife Resources (DAWR) are the main agencies that participate in surface water monitoring. Four watersheds were 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.

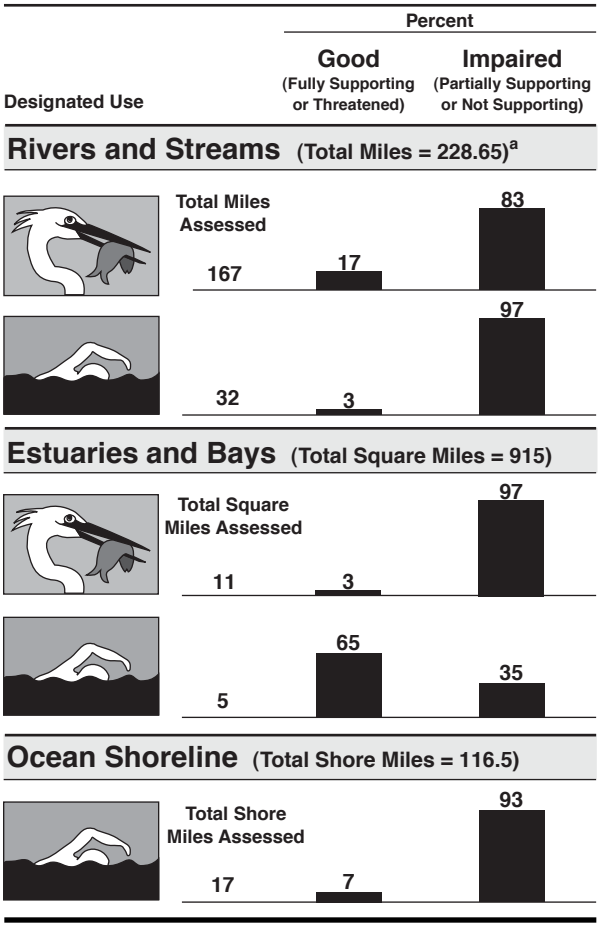
An ambient ground water monitoring system was established to monitor pumping rates and chloride concentrations at all production wells. The USGS also monitors salinity and water levels within the Northern Guam Lens.

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.



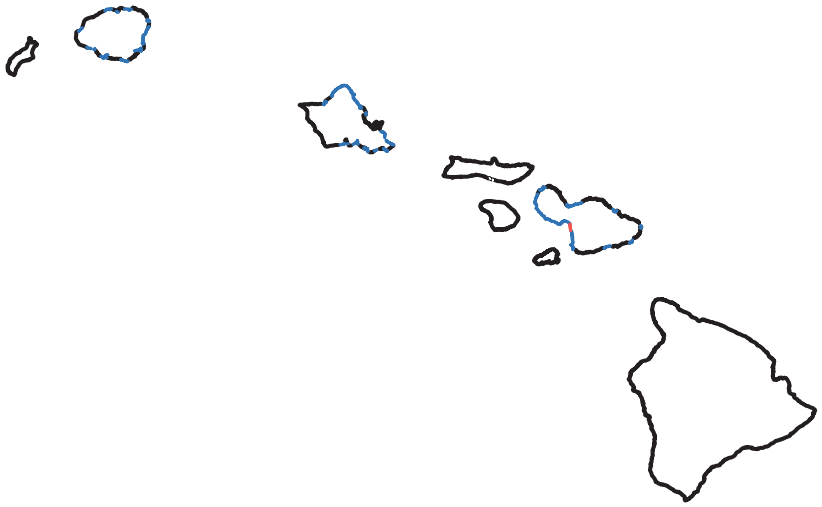
Individual Use Support in Guam



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

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

Hawaii



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

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

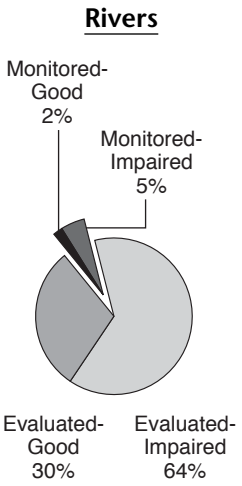
native species, and a study that investigated the integration of aquaculture and taro production to reduce pollution.

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.

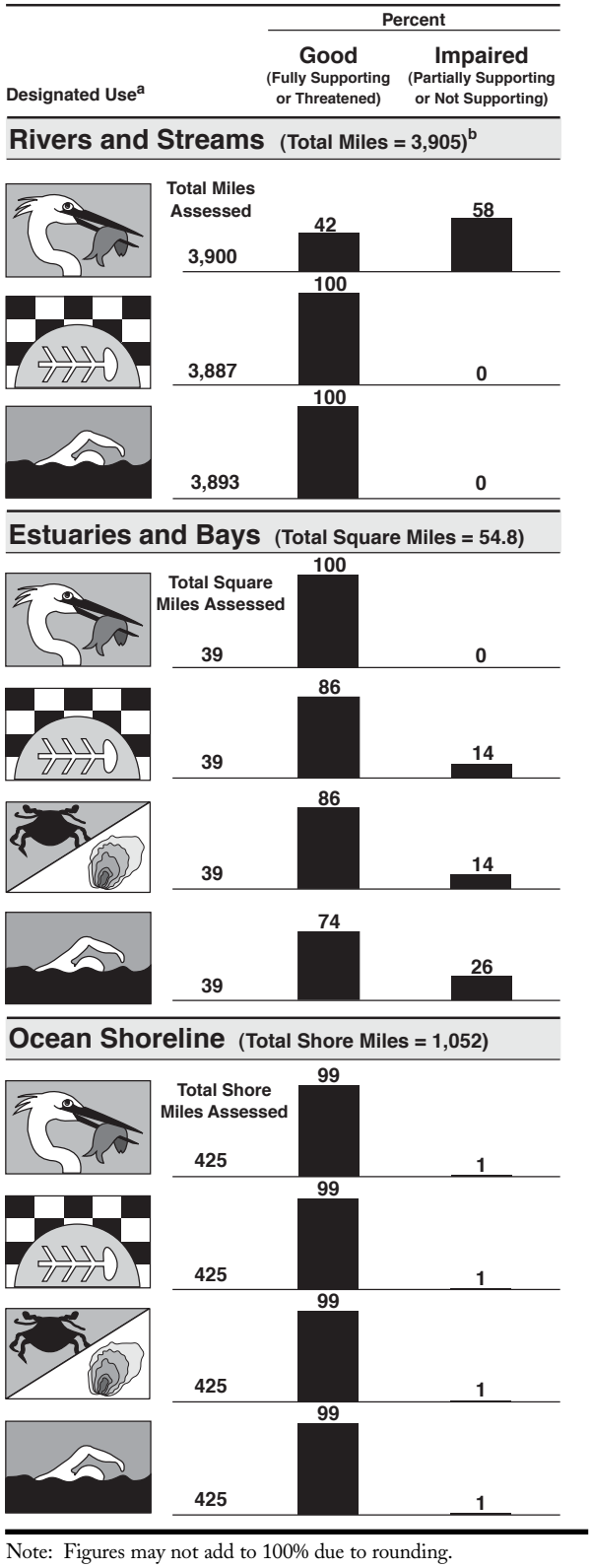
Data Quality

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.



[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.