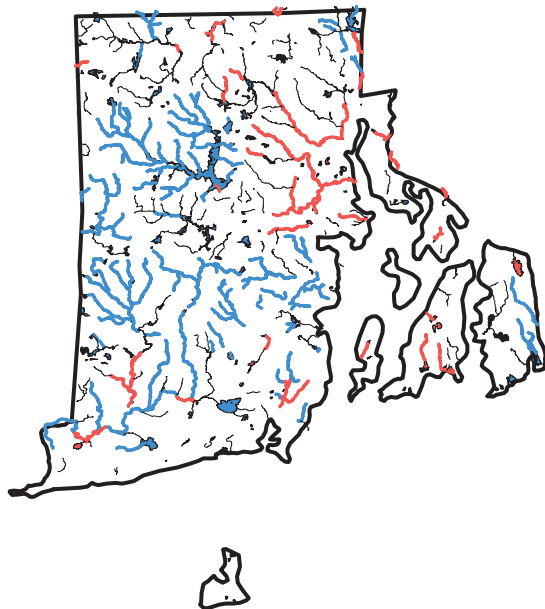


US EPA ARCHIVE DOCUMENT

Rhode Island



Aquatic Life Use Support

- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

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

Connie Carey
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Environmental Management
Office of Water Resources
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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

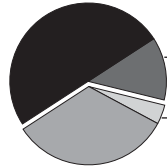
Monitored-Good 52%
Monitored-Impaired 30%



Evaluated-Good 15%
Evaluated-Impaired 3%

Lakes

Monitored-Good 50%
Monitored-Impaired 13%



Evaluated-Good 33%
Evaluated-Impaired 4%

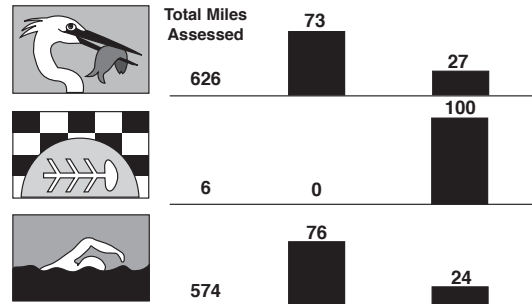
^a A subset of Rhode Island's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

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

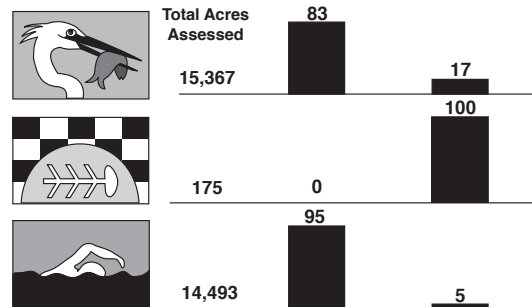
Individual Use Support in Rhode Island

Percent
Good (Fully Supporting or Threatened) Impaired (Partially Supporting or Not Supporting)

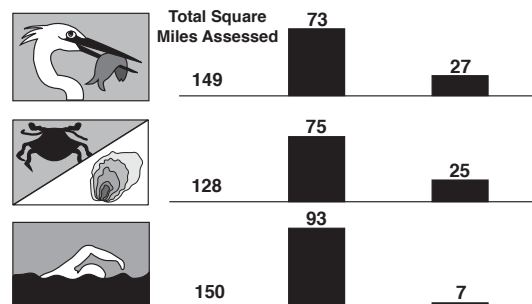
Rivers and Streams (Total Miles = 1,383)^b



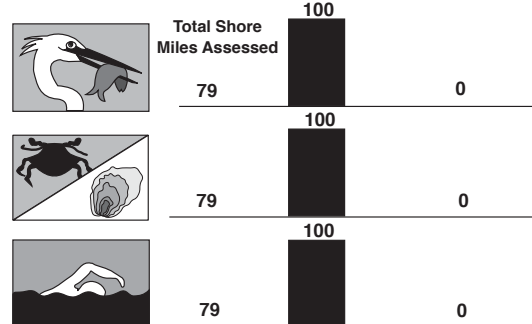
Lakes (Total Acres = 21,796)



Estuaries and Bays (Total Square Miles = 151)

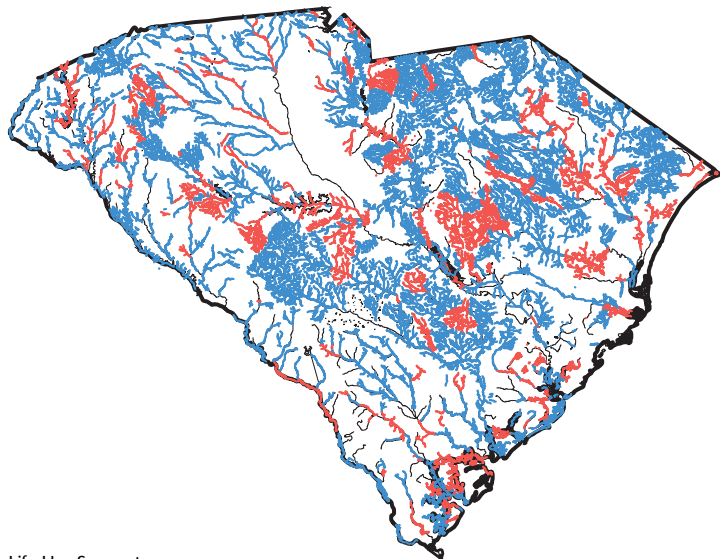


Ocean Shoreline (Total Shore Miles = 79)



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

South Carolina



Aquatic Life Use Support

- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

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

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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.

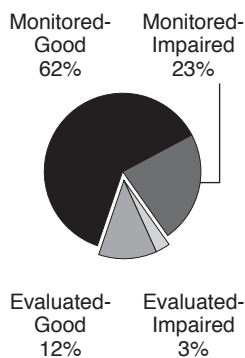
The Clean Lakes Program is aimed at defining the extent and source of lake pollution, implementing control strategies, and restoring lakes to their beneficial uses. Lake restoration techniques used include application of aquatic plant herbicides, biological control, point source control, and hypolimnetic 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.

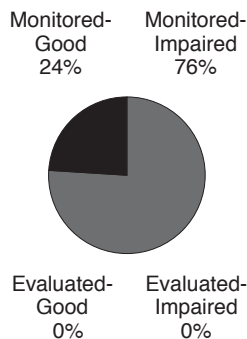
Data Quality

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



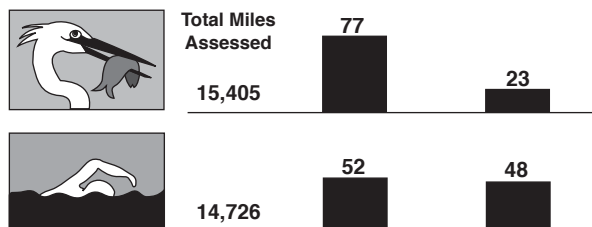
Lakes



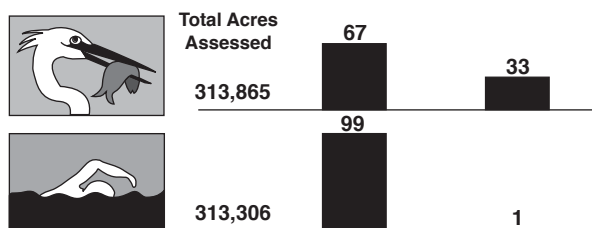
Individual Use Support in South Carolina

Designated Use ^a	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)

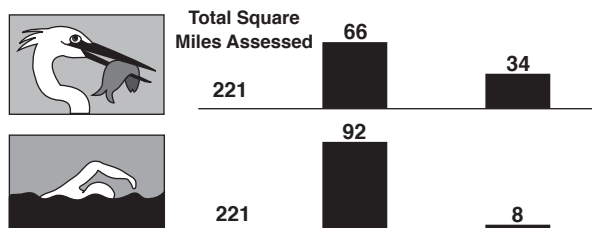
Rivers and Streams (Total Miles = 29,794)^b



Lakes (Total Acres = 407,505)



Estuaries and Bays (Total Square Miles = 401)

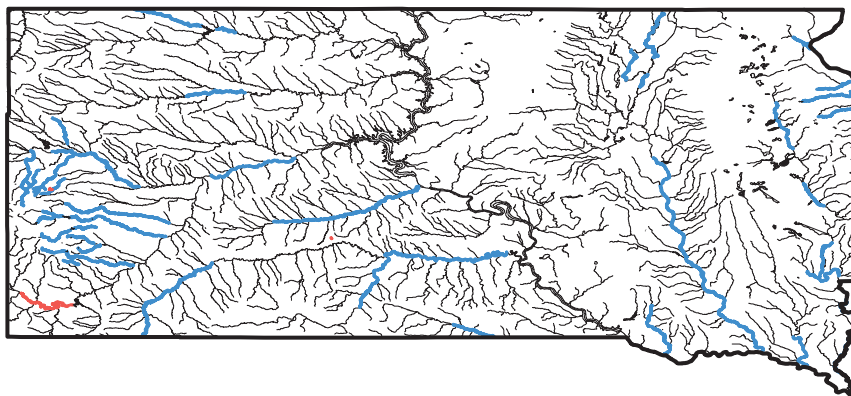


^a A subset of South Carolina's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

^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
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(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 non-point 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) waste-load 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

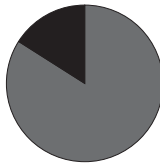
Monitored-Good 50% Monitored-Impaired 50%



Evaluated-Good 0% Evaluated-Impaired 0%

Lakes

Monitored-Good 16% Monitored-Impaired 84%

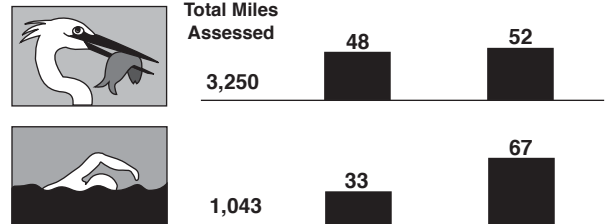


Evaluated-Good 0% Evaluated-Impaired 0%

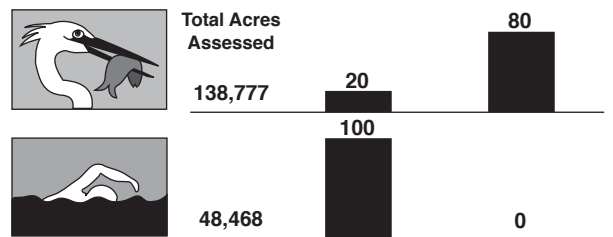
Individual Use Support in South Dakota

Designated Use ^a	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)

Rivers and Streams (Total Miles = 9,937)^b



Lakes (Total Acres = 750,000)

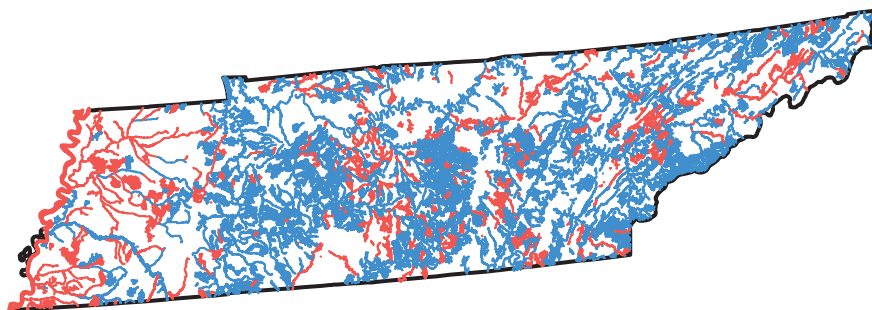


^a A subset of South Dakota's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

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

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

Tennessee



Aquatic Life Use Support

- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

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
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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 semi-volatile 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

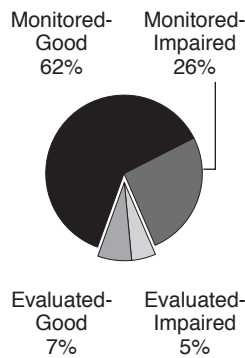
Tennessee's ambient monitoring network consists of 156 active stations sampled quarterly for conventional pollutants, nutrients, and selected metals. The state also performs intensive surveys, often including biological monitoring at streams where they suspect that human activities are degrading stream 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.

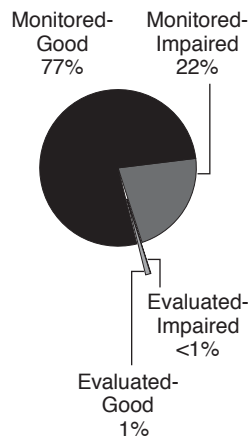
Data Quality

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.

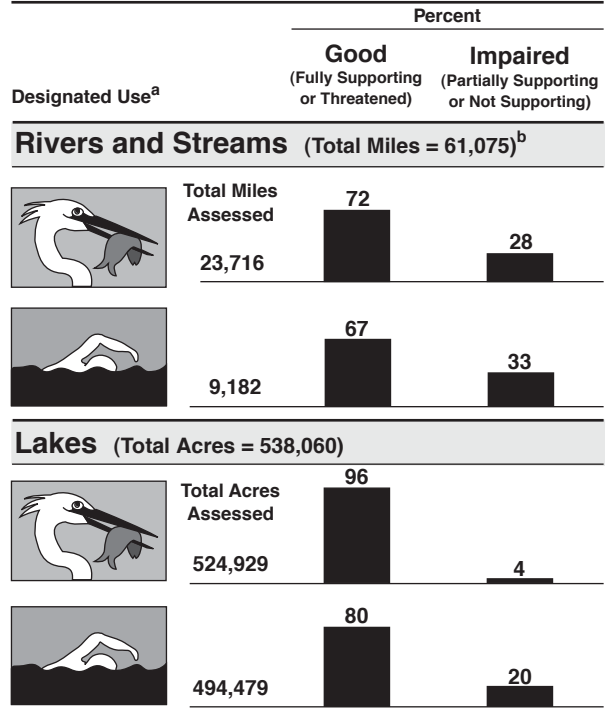
Rivers



Lakes



Individual Use Support in Tennessee

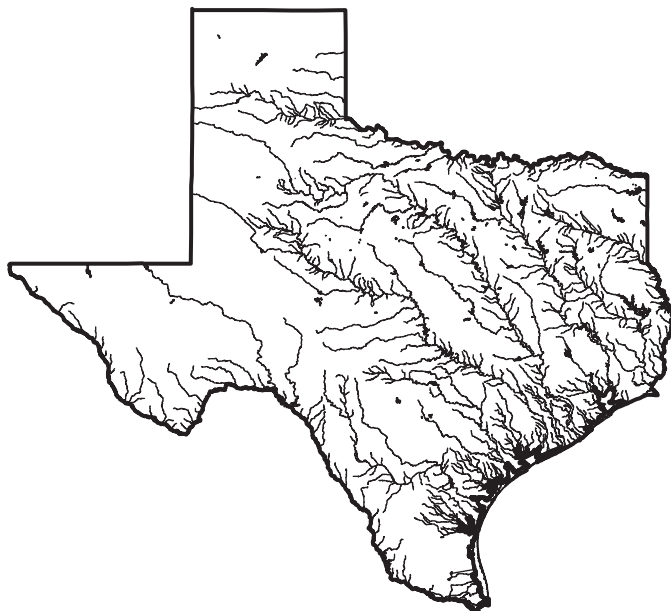


^a A subset of Tennessee's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

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

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

Texas



— Rivers
— State Border

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

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Texas Natural Resource Conservation
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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.

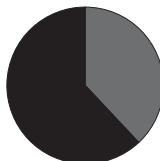
Rivers

Monitored-Good 70% Monitored-Impaired 30%



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.

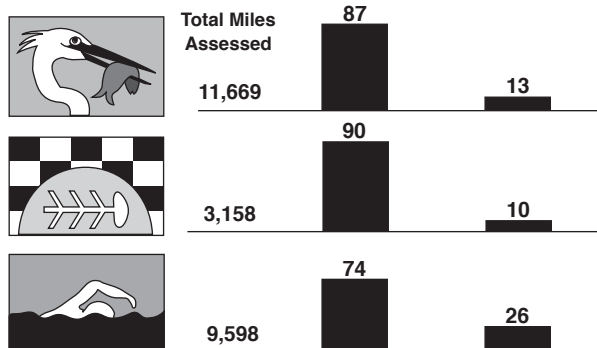
^b Includes nonperennial streams that dry up and do not flow all year.

Individual Use Support in Texas

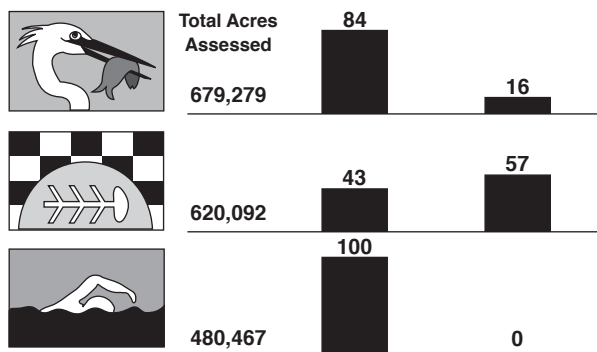
Percent

Good (Fully Supporting or Threatened) Impaired (Partially Supporting or Not Supporting)

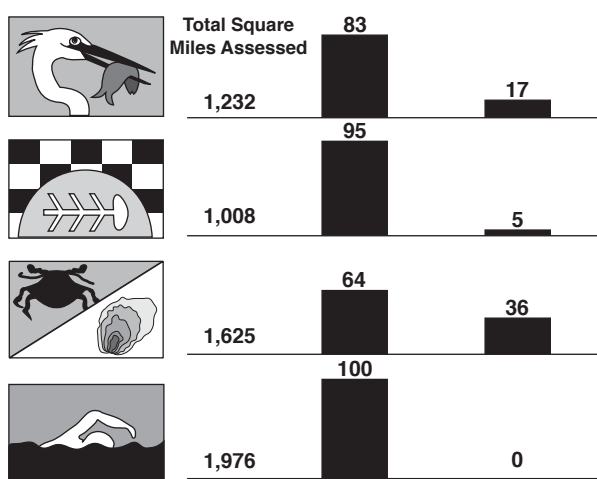
Rivers and Streams (Total Miles = 191,228)^b



Lakes (Total Acres = 3,065,600)

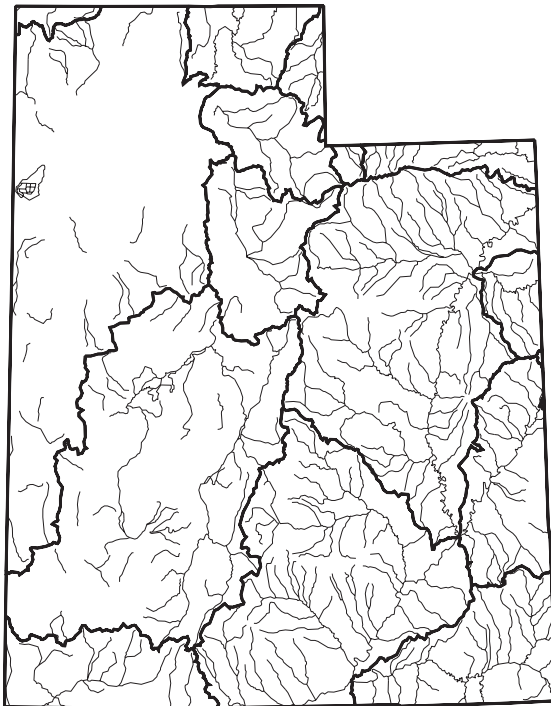


Estuaries and Bays (Total Square Miles = 1,991)



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

Utah



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

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

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 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 basin-wide 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.

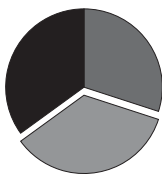
Utah has an extensive cooperative monitoring program with the U.S. Forest Service, U.S. Bureau of Land Management, U.S. National Park Service, Salt Lake City, Jordanelle Technical Advisory Committee, and several smaller entities. These programs are oriented primarily towards monitoring river water quality.

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

Monitored-Good 35% Monitored-Impaired 30%



Evaluated-Good 35% Evaluated-Impaired 0%

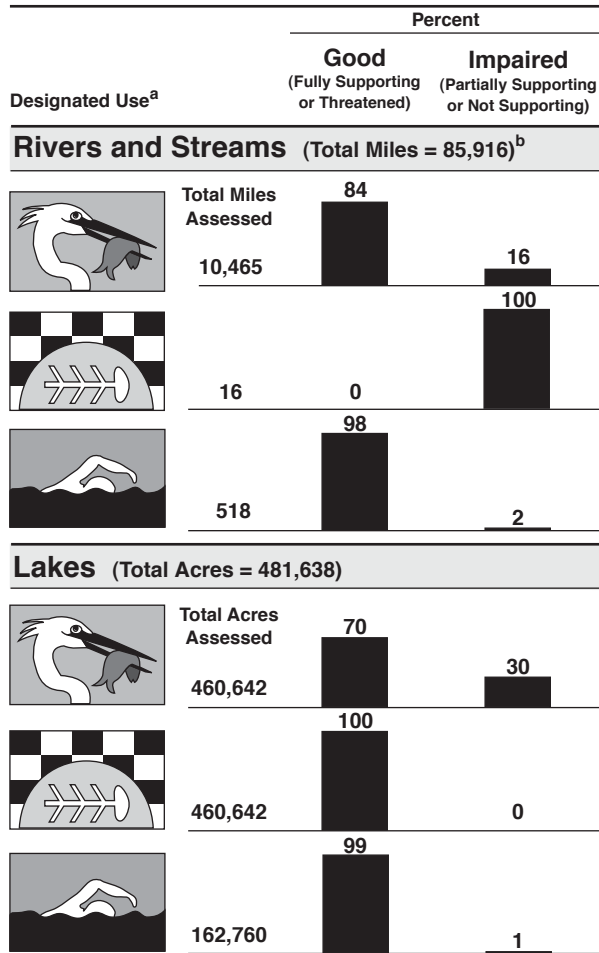
Lakes

Monitored-Good 35% Monitored-Impaired 30%



Evaluated-Good 35% Evaluated-Impaired 0%

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



— Rivers
— State Border

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

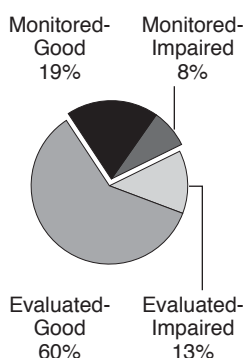
Vermont's monitoring activities balance short-term intensive and long-term trend monitoring. Notable activities include fixed-station monitoring of lakes and ponds, citizen monitoring, long-term acid rain monitoring of lakes, compliance monitoring for permitted dischargers, toxic discharge monitoring, 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 vernal 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.

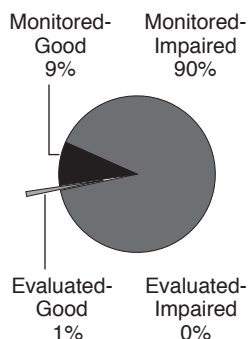
Data Quality

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.

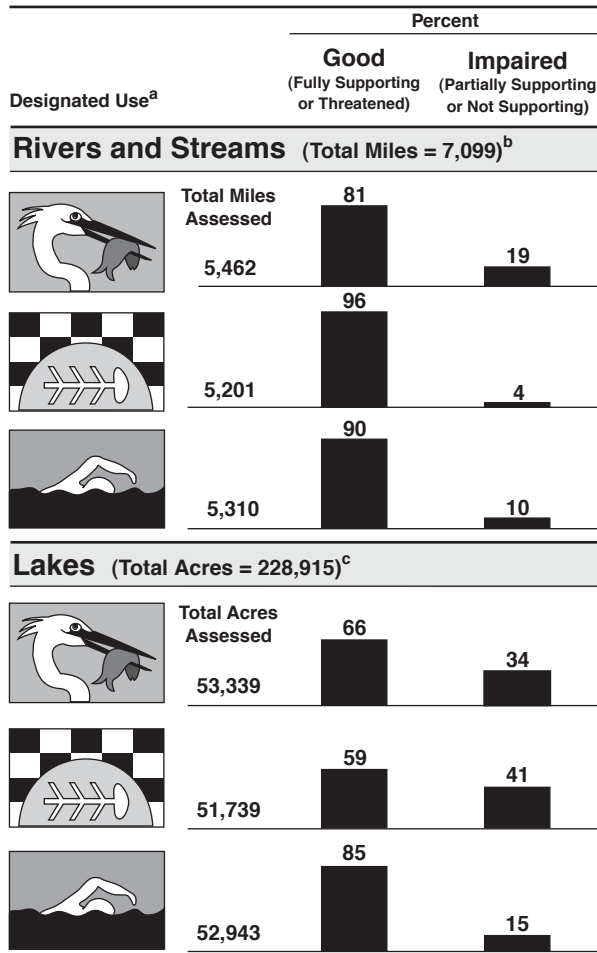
Rivers



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



— Rivers
— State Border

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

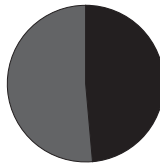
The Ambient Water Quality Monitoring Program includes approximately 1,400 DEQ monitoring stations. An estimated 1,400 additional stations from other federal, state, and citizen monitoring programs provide sampling information during the 5-year monitoring cycle. Stations are located to gather information 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.

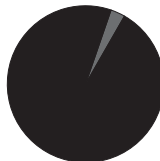
Rivers

Monitored-Good 51% Monitored-Impaired 49%



Lakes

Monitored-Good 97% Monitored-Impaired 3%



Evaluated-Good 0% Evaluated-Impaired 0%

^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.

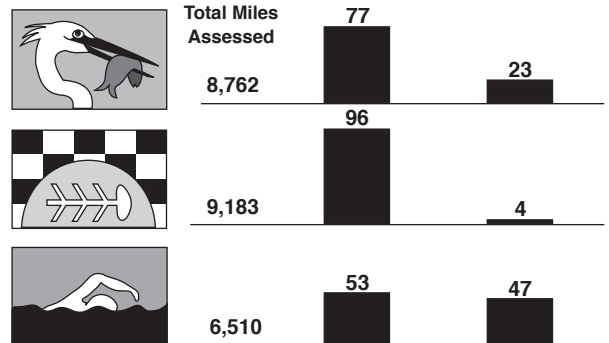
^c Includes nonperennial streams that dry up and do not flow all year.

^d Size of significant publicly owned lakes, a subset of all lakes in Virginia.

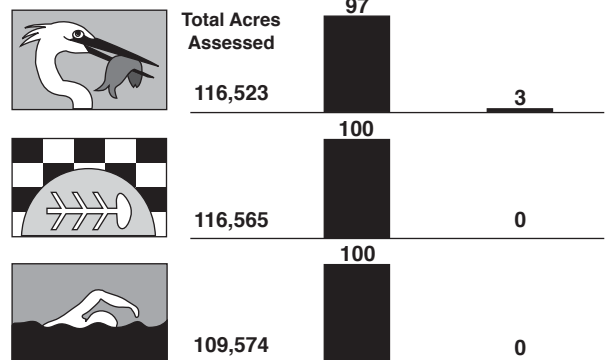
Individual Use Support in Virginia^a

Designated Use ^b	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)

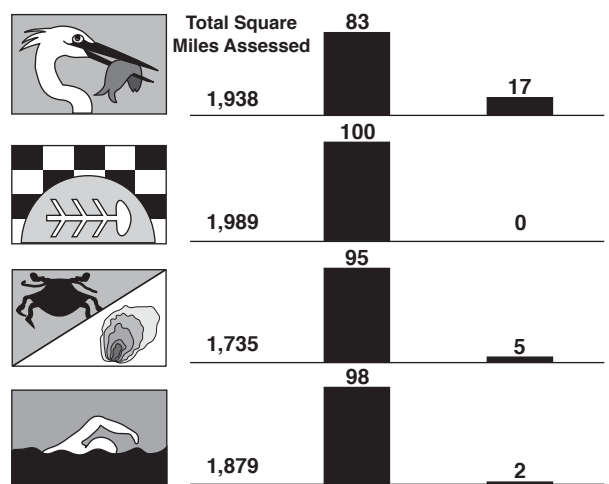
Rivers and Streams (Total Miles = 49,460)^c



Lakes (Total Acres = 149,982)^d

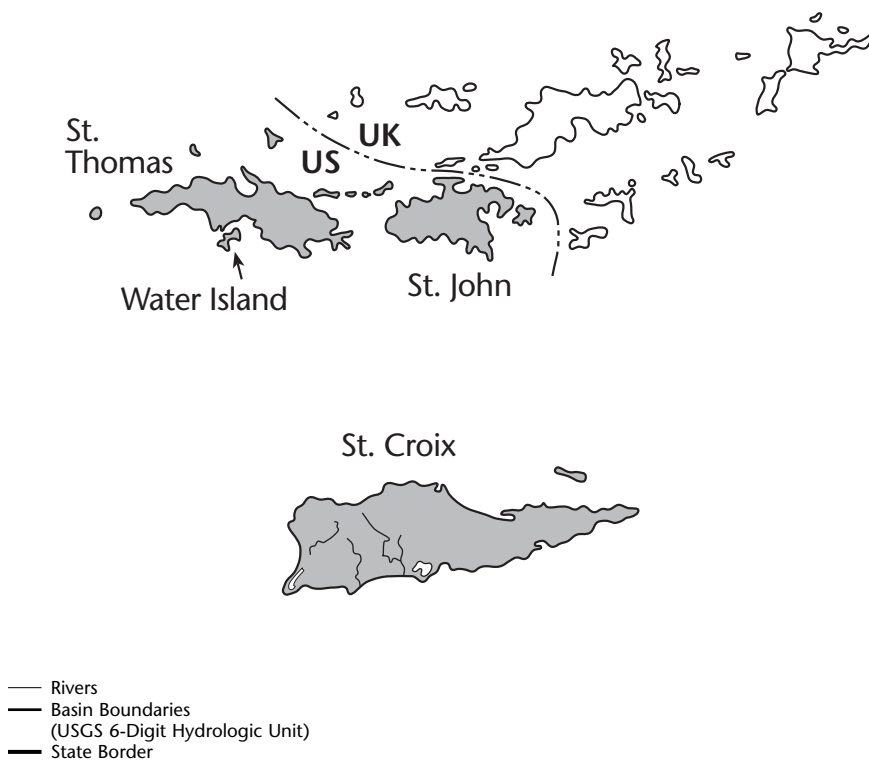


Estuaries and Bays (Total Square Miles = 2,500)



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

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of Planning and Natural Resources
Division of Environmental Protection
Cyril E. King Airport Terminal
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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.

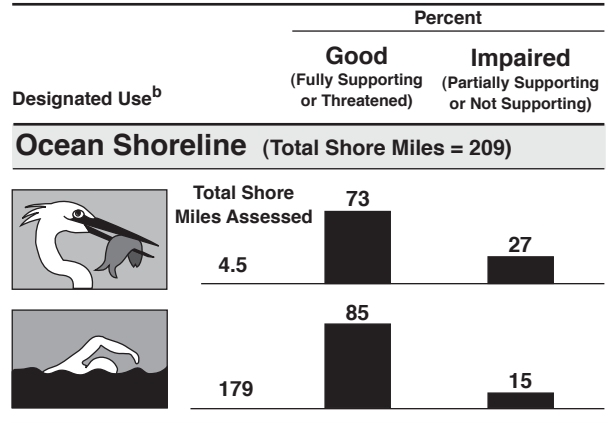
Programs To Restore Water Quality

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



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

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

Alison Beckett
 Washington Department of Ecology
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 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

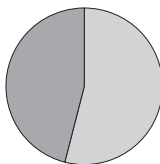
Washington carries out an aggressive program to monitor the quality of lakes, estuaries, and rivers and streams. The program uses fixed-station monitoring to track spatial and temporal water quality changes to ascertain the effectiveness of various water quality programs and be able to identify desirable 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

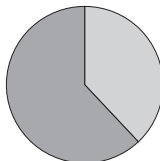
Monitored-Good 0% Monitored-Impaired 0%



Evaluated-Good 46% Evaluated-Impaired 54%

Lakes

Monitored-Good 0% Monitored-Impaired 0%



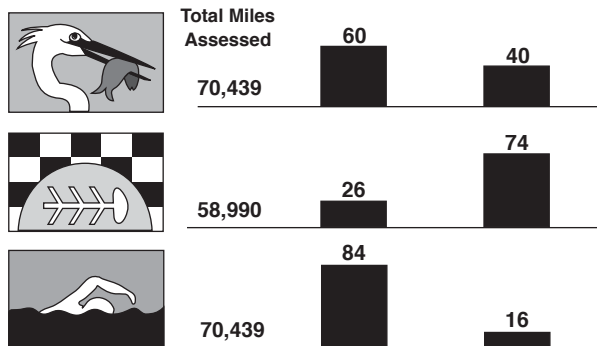
Evaluated-Good 62% Evaluated-Impaired 38%

Individual Use Support in Washington

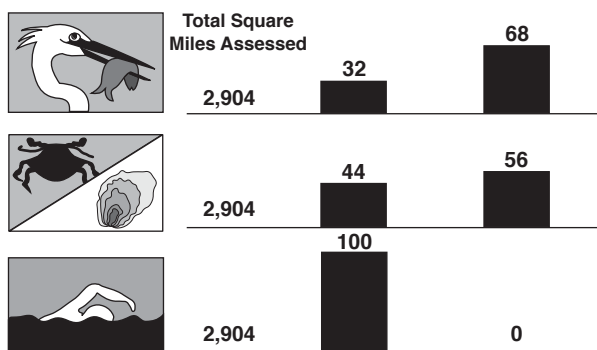
Percent

Designated Use ^a	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)

Rivers and Streams (Total Miles = 70,439)^b



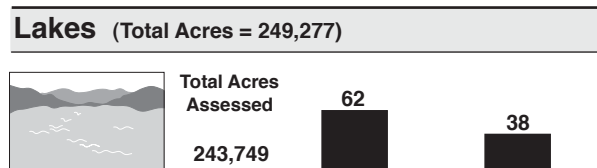
Estuaries and Bays (Total Square Miles = 2,904)



Summary of Use Support in Washington^c

Percent

Lakes (Total Acres = 249,277)	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)



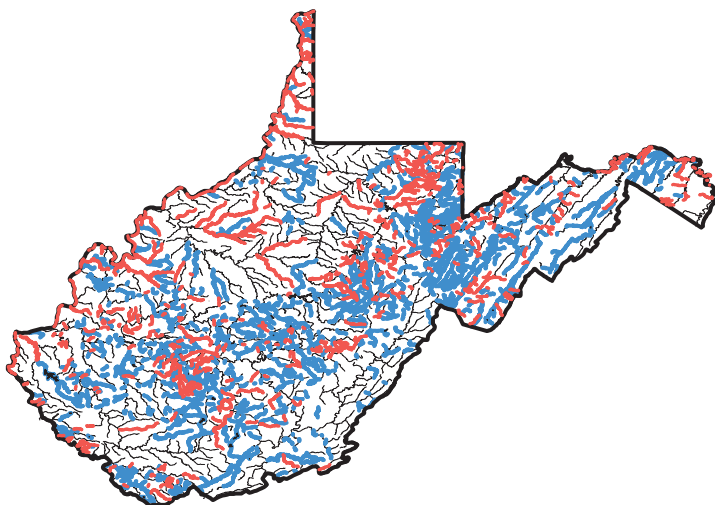
^a A subset of Washington's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

^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



Aquatic Life Use Support

- Good
- Impaired
- Indeterminate
- Not Assessed
- State Border

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

Mike Arcuri

West Virginia Department of
Environmental Protection
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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

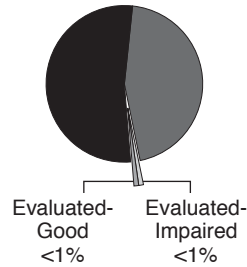
West Virginia's surface water monitoring program includes compliance inspections, intensive site-specific surveys, ambient water quality monitoring, monitoring of contaminant levels in aquatic organisms, benthic and toxicity monitoring to assess perturbations, and special surveys and investigations. 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.

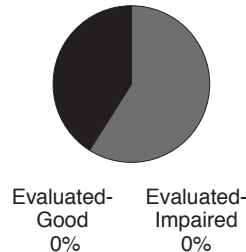
Rivers

Monitored-Good 54%
Monitored-Impaired 46%

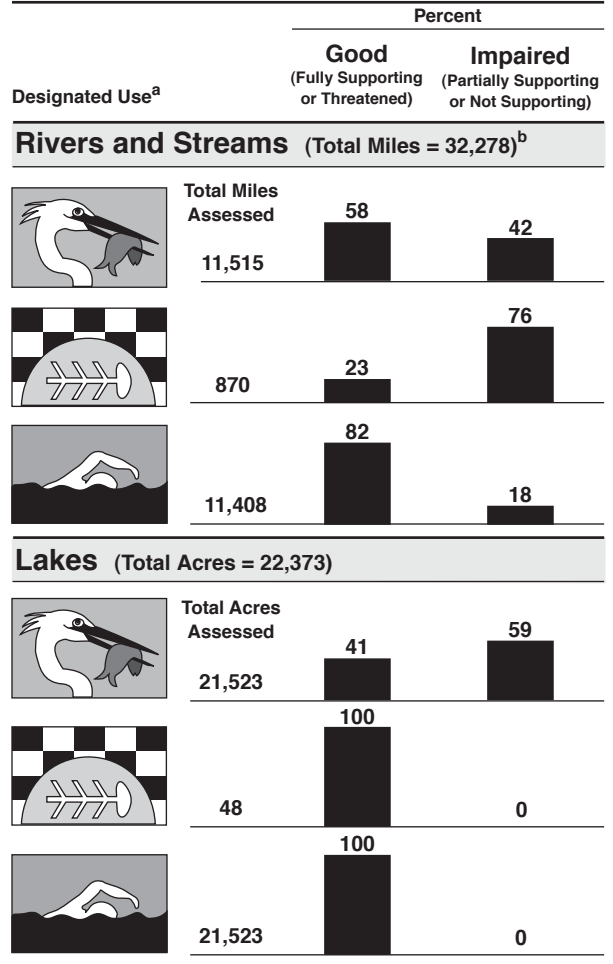


Lakes

Monitored-Good 41%
Monitored-Impaired 59%



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



— Rivers
 — State Border

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: HelmuthL@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.

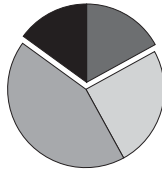
Mercury is measured under several programs. The Environmental Contaminants Section monitors total and methylmercury in tributaries to Lake Superior. A second project uses the common loon to model the physiological impact of consuming fish containing mercury. A third project measures mercury in the atmosphere, 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

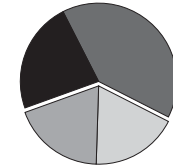
Monitored-Good 15% Monitored-Impaired 17%



Evaluated-Good 43% Evaluated-Impaired 25%

Lakes

Monitored-Good 23% Monitored-Impaired 40%



Evaluated-Good 19% Evaluated-Impaired 18%

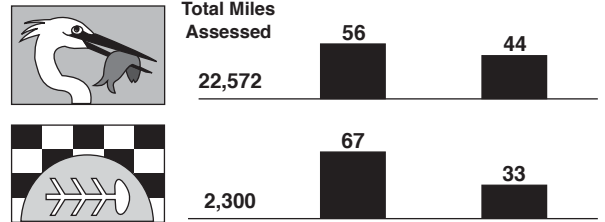
Individual Use Support in Wisconsin

Percent

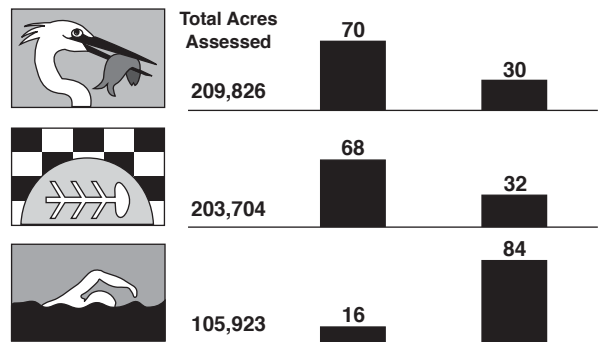
Good (Fully Supporting or Threatened) Impaired (Partially Supporting or Not Supporting)

Designated Use^a

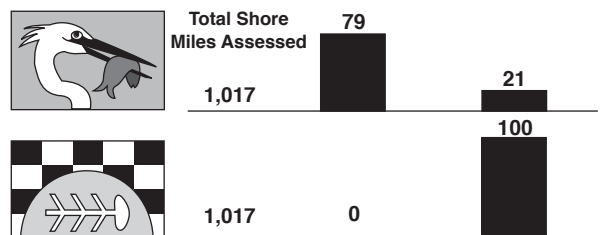
Rivers and Streams (Total Miles = 55,000)^b



Lakes (Total Acres = 944,000)



Great Lakes (Total Shore Miles = 1,017)

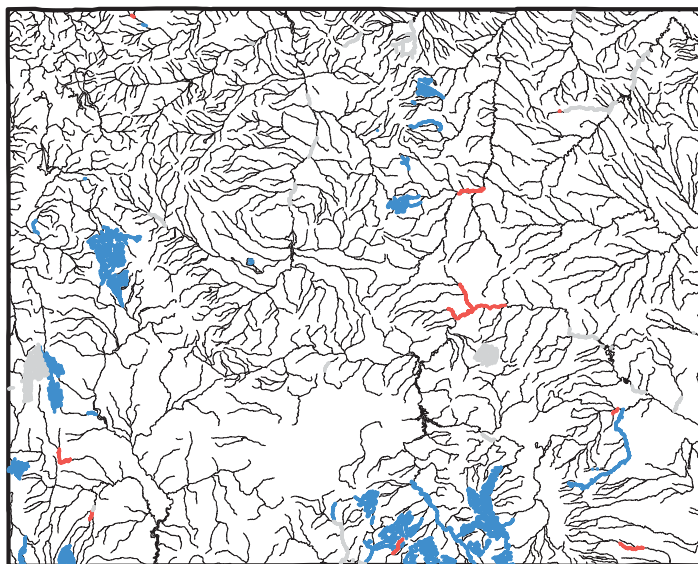


^a A subset of Wisconsin's designated uses appear in this figure. Refer to the state's 305(b) report for a full description of the state's uses.

^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/wqdwatershed/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, fluoride, 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.

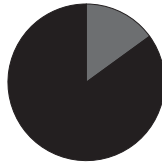
In 1998, Wyoming tripled the size of its monitoring staff to better conduct comprehensive (biological, chemical, and physical) water quality assessments on those waterbodies on the 1996 303(d) list that lacked conclusive and valid data. Wyoming has committed to monitoring all those waterbodies by the 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

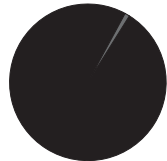
Monitored-Good 85% Monitored-Impaired 15%



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.

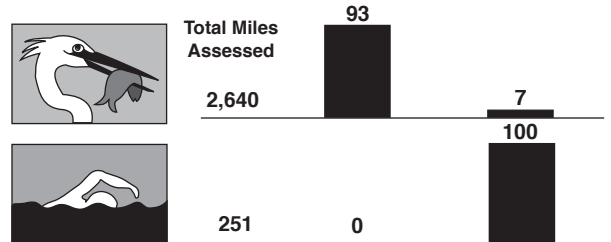
† Represents Aquatic Life Use Support.

Individual Use Support in Wyoming

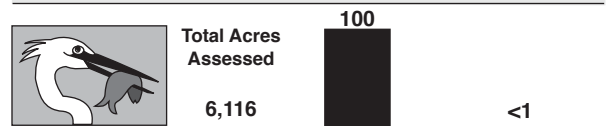
Percent

Designated Use ^a	Percent	
	Good (Fully Supporting or Threatened)	Impaired (Partially Supporting or Not Supporting)

Rivers and Streams (Total Miles = 108,767)^b



Lakes (Total Acres = 325,048)



^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.