Kim Ferguson, Zion National Park, UT

Commission Summaries

Interstate Commissions provide a forum for joint administration of large waterbodies that flow through or border multiple states and other jurisdictions, such as the Ohio River and the Delaware River and Estuarine System. Each Commission has its own set of objectives and protocols, but the Commissions share a cooperative framework that embodies many of the principles advocated by EPA's watershed management approach. For example, Interstate Commissions can examine and address factors throughout the basin that contribute to water quality problems without facing obstacles imposed by political boundaries. The information presented here summarizes the data submitted by four Interstate Commissions in their 2000 Section 305(b) reports.

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

Aquatic Life Support

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

Fish Consumption

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

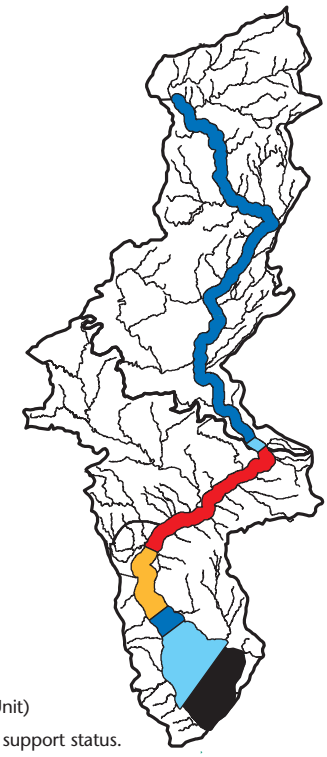
Shellfish Harvesting

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

Primary Contact Recreation – Swimming

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

Delaware River Basin Commission



Fully Supporting
Threatened
Partially Supporting
Not Supporting
Not Assessed
Basin Boundaries
(USGS 6-Digit Hydrologic Unit)

This map depicts aquatic life use support status.

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

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DRBC
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e-mail: zangwill@drbc.state.nj.us

Surface Water Quality

The Delaware River Basin covers portions of Delaware, New Jersey, New York, and Pennsylvania. For the purposes of the 305(b) report, the Delaware River Basin Commission (DRBC) has jurisdiction over this area, which consists of a 206-mile freshwater segment, a 25-square mile tidal freshwater reach, and the 841-square mile Delaware Estuary/Bay. Nearly 8 million people live in the basin, which is also home to industrial facilities and the port facilities of Philadelphia, Camden, and Wilmington.

Rivers within the Delaware River Basin are generally of good quality. Almost all fully support aquatic life and swimming. Most of the assessed estuarine area also supports aquatic life (91%) and swimming (100%). All surface water is impaired for fish consumption due to statewide advisories issued by New York and New Jersey. The New Jersey advisory calls for limited consumption of American eel and striped bass. The New York advisory covers all sport fish in the state's freshwaters. This is the first year the states' fish consumption advisories were considered, causing results that differ significantly from those reported in previous years. Fish samples taken from the estuary often contain PCBs. Eighty-five percent of the assessed estuarine area supports shellfish consumption.

Ground Water Quality

The DRBC did not report on the quality of ground water.

Programs To Restore Water Quality

The DRBC and the states have successfully reduced point sources of oxygen-demanding materials and other pollutants. Water quality has improved due to the reduction of conventional pollutants. However, the levels of toxic pollutants in water, sediment, and fish continue to be high, particularly in the tidal portion. The DRBC is developing a model to evaluate the impacts of point and nonpoint sources of pollutants on dissolved oxygen concentrations.

The first phase of the Estuary Toxics Management Program was completed in January 2000. The results of this study showed that the assimilative capacity of the estuary for dichloroethane, tetrachloroethane, and chronic and acute toxicity has been exceeded. Waste-load allocations for these parameters will be used by NPDES permitting agencies for establishing effluent limitations. In the next phase, Total Maximum Daily Loads (TMDLs) will be developed for PCBs, pesticides, and metals.

Programs To Assess Water Quality

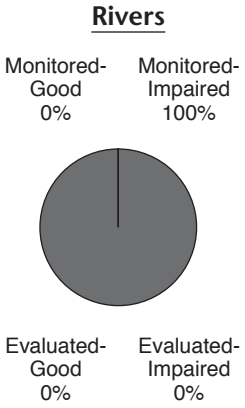
The Lower Delaware Monitoring Program collects chemical and biological data at 20 fixed river locations and 22 tributaries. During the summer of 1999, the freshwater portion of the lower Delaware was sampled several times at 22 stations for conventional parameters. The DRBC may revise the monitoring program in an effort to have the lower Delaware River designated as a "National Wild and Scenic and Recreational" river. A 1999 report recommended that fecal coliform and enterococcus be added to the monitoring effort. The DRBC is also developing an index of biotic integrity, assessing the impact of aquatic vegetation on water quality, and developing a list of invasive species along the river corridor.

The Comprehensive Conservation and Management Plan for the Delaware Estuary includes a sampling program that involves 18 stations. These stations are sampled 12 times each year for bacteria, heavy metals, nutrients, and conventional pollutants. Four additional sites have been added since 1999 and are sampled seven times per year. Since 1999, toxicity samples have been taken annually at 12 stations. Bacteriological data collected by New Jersey's Shellfish Program were used to assess swimming support on the New Jersey side of the bay. More than 1,000 samples were collected at 142 stations to monitor the shellfish beds.

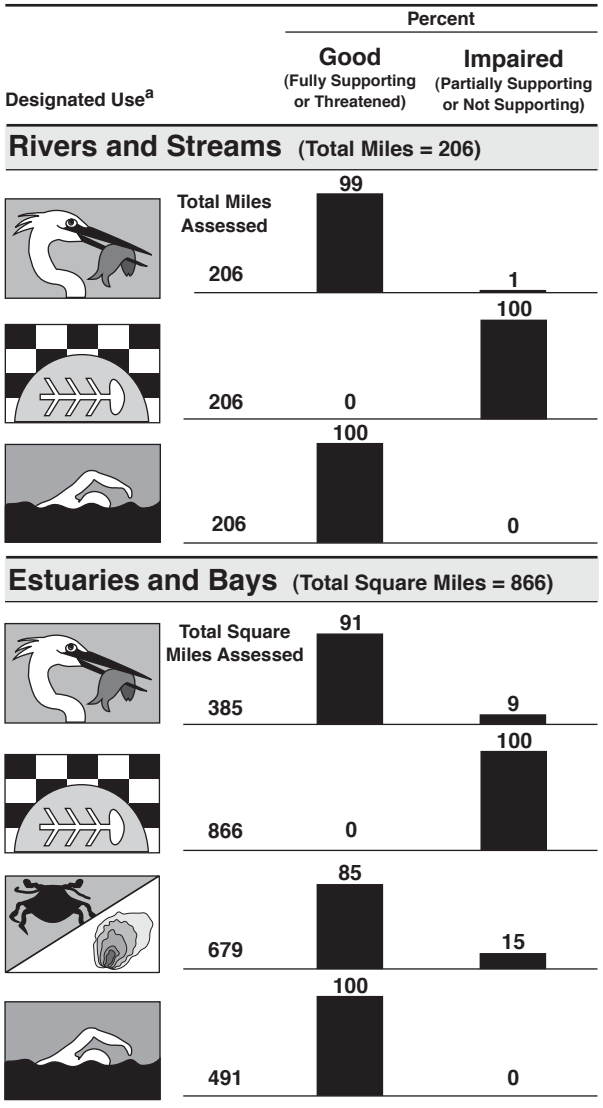
The DRBC may revise its water quality standards for the freshwater zone. Enterococcus may replace fecal coliform because it is a more sensitive measure of bacterial water quality. The pH standard may also be increased from 8.5 to 9.0 to be consistent with federal and state regulations. A standard of 9.0 pH units was applied for this assessment.

Data Quality

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

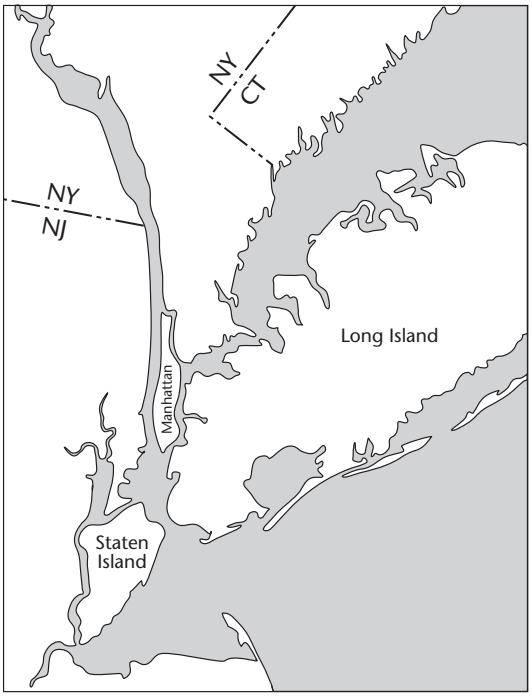


Individual Use Support in the Delaware River Basin



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

Interstate Environmental Commission



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

For a copy of the Interstate Environmental Commission 2000 305(b) report, contact:

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Principal Environmental Planner
Interstate Environmental Commission
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Surface Water Quality

The Interstate Environmental Commission (IEC; formerly the Interstate Sanitation Commission) is a joint agency between New York, New Jersey, and Connecticut. It serves as a regulatory and enforcement agency for 798 square miles of estuarine waters shared by the three states. The majority of assessed estuarine area supports aquatic life (85%) and swimming (76%). Eight percent of the assessed estuaries cannot attain their designated use of swimming. Organic compounds, nutrients, and pathogens are commonly cited pollutants. Some of the waters are severely oxygen depleted as a result of nutrient and organic enrichment. Other issues that threaten water quality include toxic contamination of sediments and pollution from combined sewer overflow (CSOs).

A majority of the assessed estuaries are impaired for fish consumption (83%) and shellfish consumption (63%). All three states have promulgated seasonal closures and restrictions on size and number for several finfish species. Habitat loss, chemical contamination, oxygen depletion, and excessive fishing contributed to these restrictions. Specific contaminants include pathogens, metals, pesticides, and inorganic compounds. In 1986, the IEC established a disinfection requirement for discharges to district waters. This reduced bacterial contamination and opened thousands of acres of shellfish beds for harvest on a year-round basis.

In 2000, there were 209 beach closures at 84 public bathing beaches. Rain, urban runoff, CSOs, and washed-up debris caused elevated levels of bacteria that led to the beach closings.

Ground Water Quality

The IEC does not have jurisdiction over ground water.

Programs To Restore Water Quality

The IEC enforces water quality regulations through sampling, analyses, research, legal activities, and coordination with the states and EPA. The IEC also provides technical assistance and support to its member states and disseminates information to the public and legislative bodies.

The IEC has established more stringent permit requirements to control and prevent pollutants from emptying into tri-state waterways. It also was instrumental in obtaining improved operational procedures at the Fresh Kills Landfill to prevent garbage from washing up along shorelines.

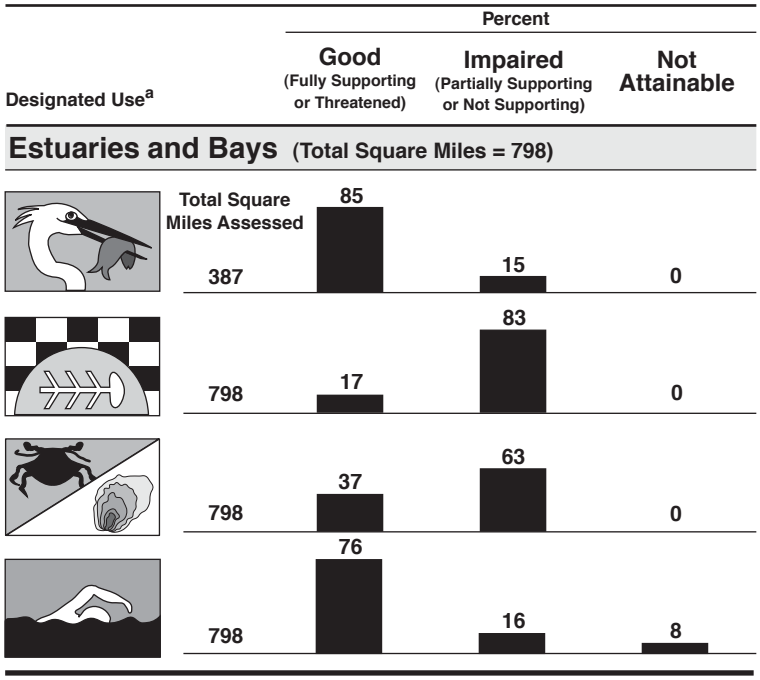
In 1999, there were 94 releases of raw or partially treated wastewater. The IEC chairs the Regional Bypass Work Group that developed a model to identify areas affected by unplanned bypasses of inadequately treated discharges. This group also developed regional notification and tracking procedures to protect bathers and shellfisheries. A 1997 regulation amended to the IEC Water Quality Regulations requires that IEC receive advance notification of all planned sewage bypasses.

Programs To Assess Water Quality

The IEC, in conjunction with other agencies, participates in several ambient water quality surveys. Each summer, the Long Island Sound Study monitors dissolved oxygen, temperature, salinity, and chlorophyll *a*. Since 1998, water samples have been collected and delivered to Nassau County Health Department for identification of phytoplankton species. Since 1999, additional samples have been collected to determine the presence of a toxic dinoflagellate, *Pfiesteria piscicida*. The IEC also conducts surveys of shellfish-harvesting waters in the New Jersey portion of western Raritan and Sandy Hook Bays to assess these waters under worst-case conditions.

The IEC coordinates its compliance monitoring with EPA and the states' environmental departments. The IEC regularly samples discharges from municipal and industrial facilities that are permitted under the NPDES program and are subject to IEC Water Quality Regulations. Effluent surveys are conducted at approximately 72 municipal treatment facilities several times a year. Five investigations are conducted each year at industrial facilities.

Individual Use Support for the Interstate Environmental Commission



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

Note: All waters under the jurisdiction of the Interstate Environmental Commission are estuarine.

Ohio River Valley Water Sanitation Commission (ORSANCO)

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

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

Public Information Department
Ohio River Valley Water Sanitation Commission
5735 Kellogg Avenue
Cincinnati, Ohio 45228-1112

Surface Water Quality

The Ohio River provides drinking water to nearly 3 million people. It also serves as a transportation route, recreational water body, habitat for aquatic life, and water source for manufacturing and power generation. More than 25 million people reside in its river basin. The Ohio River flows through Pennsylvania and forms part of the state boundaries for Ohio, Indiana, Illinois, West Virginia, and Kentucky. The Ohio River Valley Water Sanitation Commission (ORSANCO) is an interstate agency responsible for abating existing pollution and preventing further degradation in the Ohio River basin.

The majority of assessed river miles support aquatic life (94%). The most common contaminants cited for impairing rivers include PCBs, priority organics, and mercury. Sources of contamination include agriculture and industrial and municipal point sources. Approximately 95% of the assessed miles are impaired for swimming. This estimate may be biased as contaminated areas are emphasized when monitoring for swimming support. In addition to the sources mentioned above, there are also 49 combined sewer systems located along the Ohio River that contribute significant amounts of bacteria. ORSANCO estimated 1,000 combined sewer overflows (CSOs) on the Ohio River, which is 10% of the national total.

Fish consumption use was based primarily on the states' issuance of fish consumption advisories. The entire Ohio River is covered by at least one restricted fish consumption advisory due to PCBs, mercury, or chlordane. During 1999, there were several reports of fish kills that are most likely a result of point source discharge.

Ground Water Quality

ORSANCO does not have jurisdiction over ground water in the Ohio River basin.

Programs To Restore Water Quality

In 1992, an interagency group developed a CSO program to coordinate the states' strategies. In 1993, ORSANCO added CSO requirements to the Pollution Control Standards for the Ohio River and adopted a strategy for monitoring impacts of CSOs on water quality. ORSANCO has several wet weather studies aimed at quantifying CSO and nonpoint sources of pollution. These projects also quantify improvements in water quality from CSO controls.

The Ohio River Watershed Pollutant Reduction Program addresses pollutants, such as PCBs

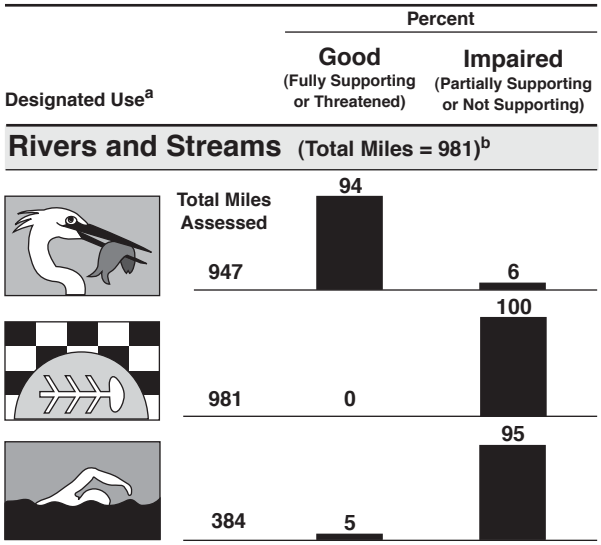
and chlordane, on a watershed basis. The objectives of the program are to assess the extent of impairment, identify sources and their relative impacts, and recommend abatement strategies.

Programs To Assess Water Quality

ORSANCO conducts several monitoring programs on behalf of the states. The Bimonthly Sampling Program analyzes grab samples from 17 stations every 2 months. In addition, quarterly samples are analyzed for metals and selenium. The Dissolved Metals Sampling Program analyzes total and dissolved metal concentrations from five stations every 2 months. The Contact Recreation Season Monitoring Program samples monthly at six stations for fecal coliform and *E. coli* bacteria. In addition, ORSANCO receives bacteria monitoring data from seven public water utilities. The Ohio River Watershed Pollutant Reduction Program analyzes samples for dioxin. The Organics Detection System includes twelve stations at public water supply intakes. Water samples are collected daily and are analyzed for volatile organic compounds. Three of the stations give concentration data, and nine report whether the compounds are detected or not. This network is used primarily for detecting spills.

Biological monitoring includes fish population surveys and fish tissue analyses. ORSANCO is using the Modified Index of Well Being (MIWB) to assess fish population data until they develop a more suitable index based on the Index of Biotic Integrity. The MIWB incorporates species diversity, biomass, and total fish counts. Fish tissue is analyzed for some metals, PCBs, dioxins, and pesticides. ORSANCO is also working to develop a macroinvertebrate index.

Individual Use Support in the Ohio River Valley Basin

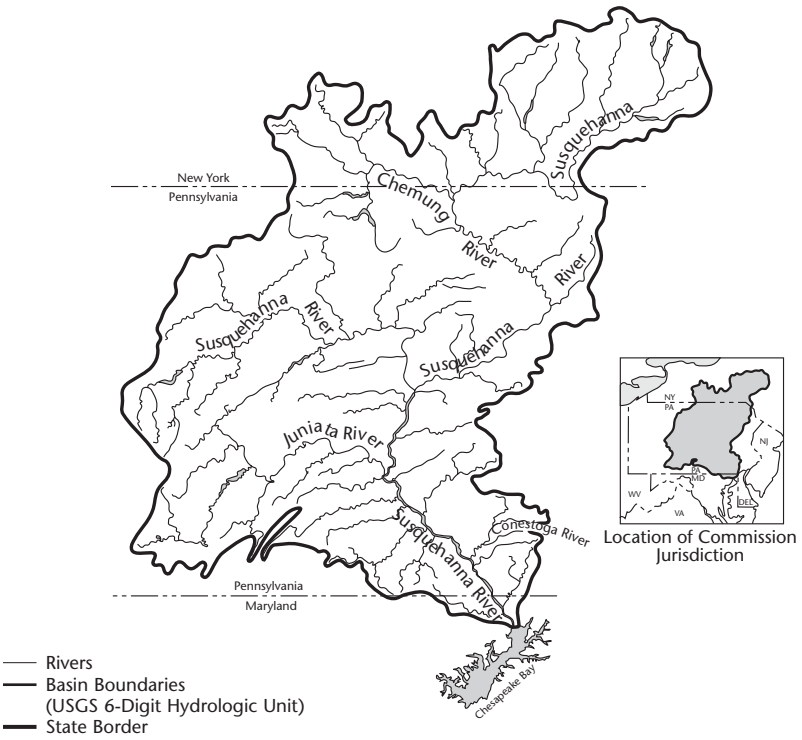


[a] A subset of ORSANCO's designated uses appear in this figure. Refer to the commission's 305(b) report for a full description of the commission's uses.

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

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

Susquehanna River Basin Commission



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

Jen Hoffman
Susquehanna River Basin Commission
1721 N. Front Street
Harrisburg, PA 17102
(717) 238-0425
e-mail: Jhoffman@srbc.net

Surface Water Quality

The Susquehanna River drains 27,510 square miles from portions of New York, Pennsylvania, and Maryland. It contributes over half of the freshwater inflow to the Chesapeake Bay. The surface water in the river basin consists of 31,193 miles of rivers and 79,687 acres of lakes. The Susquehanna River Basin Commission (SRBC) assessed over 400 miles of rivers and streams for the 2000 305(b) report. The SRBC did not assess lake quality during this cycle.

The majority of assessed river miles support aquatic life (71%) and swimming (100%). Major causes of impairment include metal and nutrient enrichment, siltation, and habitat alteration. These impairments arise from a variety of sources, including agriculture, acid mine drainage, hydrologic modification, municipal point sources, and urban runoff.

Ground Water Quality

Studies have shown that man-made problems affecting ground water quality are generally confined to a small number of wells. Many of the ground water contaminants occur naturally (e.g., dissolved solids). Contamination occurs from various metals and inorganic compounds, including chromium, iron, lead, manganese, sulfate, and nitrate.

Programs To Restore Water Quality

The SRBC coordinates all activities in the Susquehanna River basin that relate to water quality management and compliance. The point source program is focused on upgrading and developing public and private waste treatment facilities. The SRBC also reviews discharge permits and provides comments to agencies on matters within their jurisdiction. The nonpoint source program focuses on controlling stormwater runoff and pollution by fulfilling the objectives of the Chesapeake Bay Program.

Programs To Assess Water Quality

The data contained in this report originate from the 1999 Interstate Streams Water Quality Network survey and from past subbasin surveys. The SRBC coordinates water quality standards among states to avoid conflicts over interstate streams. The Interstate Water Quality Monitoring Network monitors the interstate

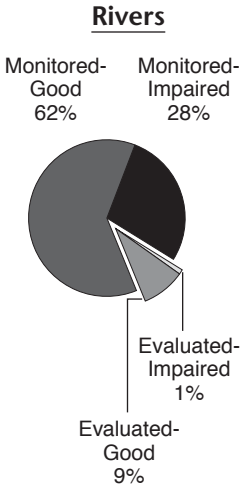
streams for chemical and biological parameters. Benthic macroinvertebrate populations are used to assess biological conditions. Thirty-one streams are monitored as part of this program. Depth-integrated samples are collected quarterly or annually depending on the stream's potential for degradation.

There are six major subbasins in the Susquehanna River basin. Each sampling cycle lasts 12 years, with 2 years of sampling per subbasin. During the first year, the subbasin is sampled intensively for 3 weeks between midsummer and early fall. Grab samples are usually collected, but depth-integrated samples can be taken from bridges on larger streams. Each site is given a habitat assessment score based on several physical and chemical parameters. The results from the first year of monitoring are used to select watersheds that will be targeted during the second year.

The SRBC obtains ground water quality data from withdrawal permits, investigations, cooperative studies, and ambient monitoring programs. Anyone who proposes to withdraw more than 100,000 gallons per day for any consecutive 30-day period must obtain approval to do so. As part of the approval process, the applicant is obligated to sample the ground water and report on its quality every 3 years.

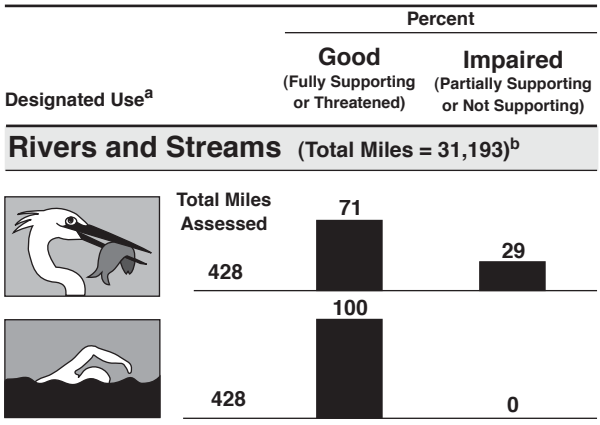
Data Quality*

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



* Data represent aquatic life use support.

Individual Use Support in the Susquehanna River Basin



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

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