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National Water Quality Inventory: Report to Congress

2004 Reporting Cycle

Section 305(b) of the Clean Water Act

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

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

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

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

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

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

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

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

Cover photo courtesy of the National Park Service.

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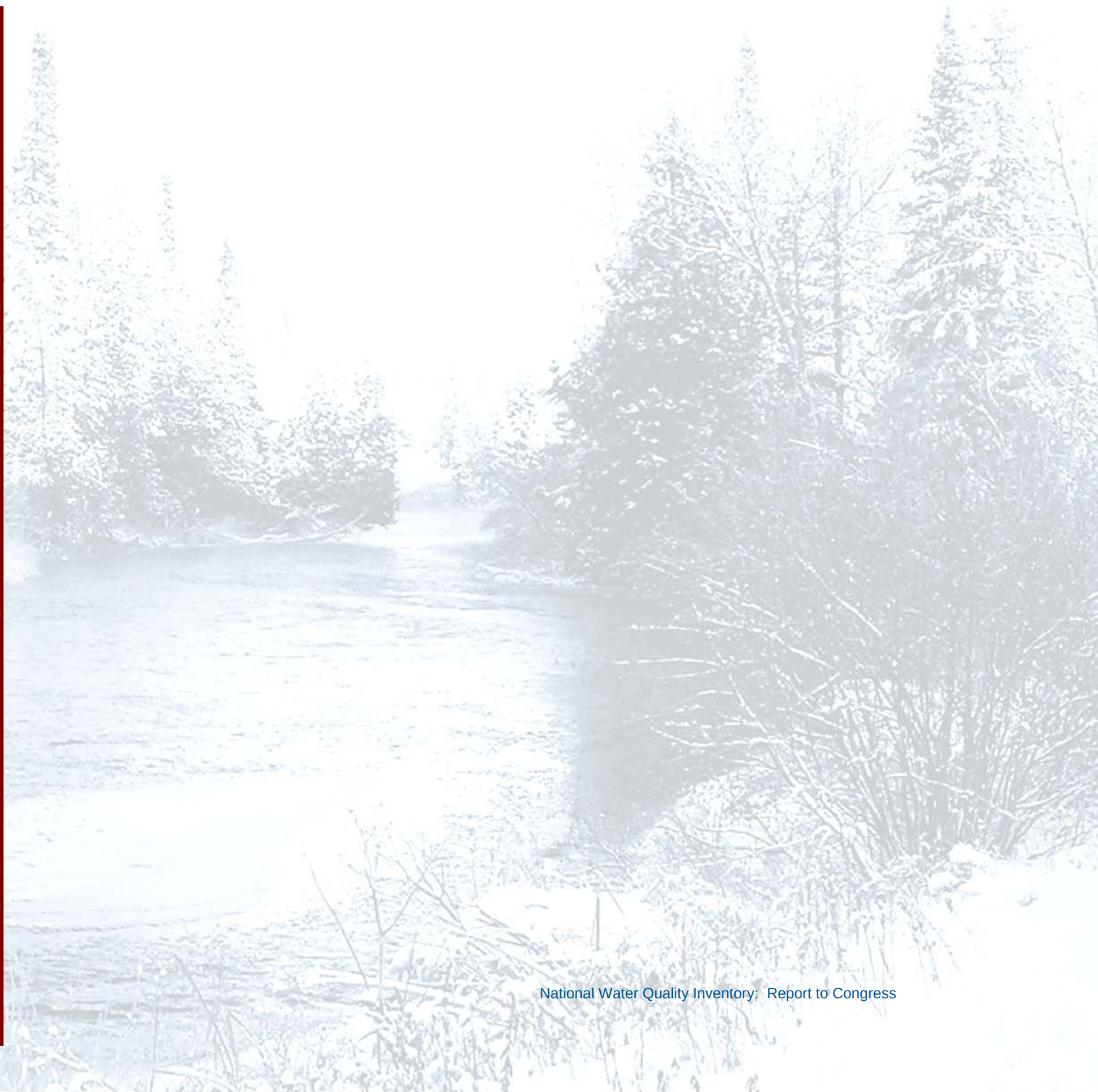
ATTAINS	**A**ssessment **T**MDL **T**racking **A**nd **I**mplementatio**N** **S**ystem (Water Quality Assessment and TMDL Information)
BEACH Act	Beaches Environmental Assessment and Coastal Health Act of 2000
EPA	U.S. Environmental Protection Agency
FWS	U.S. Fish and Wildlife Service
NES	National Eutrophication Survey
NLA	National Lakes Assessment
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
TMDL	total maximum daily load
USGS	U.S. Geological Survey



Executive Summary

This *National Water Quality Inventory: Report to Congress, 2004 Reporting Cycle,* prepared under section 305(b) of the Clean Water Act, summarizes water quality reports submitted electronically by 44 states, 2 territories, and the District of Columbia to the U.S. Environmental Protection Agency (EPA) for the 2004 reporting cycle. These state water quality assessment findings are contained in EPA's Water Quality Assessment and Total Maximum Daily Load (TMDL) Information database and website, known as ATTAINS (**A**ssessment **T**MDL **T**racking **A**nd **I**mplementatio**N** **S**ystem). The ATTAINS database is available online at the website *http://www.epa.gov/waters/ir*.

EPA developed the **A**ssessment **T**MDL **T**racking **A**nd **I**mplementatio**N** **S**ystem (ATTAINS) database and website to combine two formerly separate sites—the National Assessment Database (for 305(b) water quality assessment information) and the National Total Maximum Daily Loads (TMDL) Tracking System (for 303(d) impaired waters information). The ATTAINS database/website includes state-reported assessment decisions on the support of designated uses (such as recreation) in assessed waters; lists of state waters that are impaired; the causes of impairment (such as pathogens); the sources of impairment (such as agriculture); and the status of actions (TMDLs) to help restore impaired waters.

ATTAINS contains this information for each waterbody assessed by the states and summarizes key waterbody information by state, by region, and nationally. If a state did not provide waterbody-specific information electronically to EPA by the reporting deadline, it was not included in this report. EPA worked extensively with the states to assist in data submittal.

Summary findings of the 2004 state water quality reports are presented below. It is important to note that this information is for a relatively small subset of the nation's total waters and may not be representative of the waterbodies that were not assessed. Because many states target their limited monitoring resources to waterbodies suspected as being impaired, there may be a lower percentage of impaired waters among the non-assessed (and total) waters than among the assessed waters. Information about the specific sources and causes of impairment is incomplete because the states do not always report the cause or source of pollution affecting every impaired waterbody. In some cases, a state may recognize that water quality does not fully support a designated use; however, adequate data may be unavailable to document the specific pollutant or source responsible for the impairment. In addition, EPA made changes in how specific causes and sources of impairment are categorized for 2004, and in some cases, these changes may affect how these source and cause findings compare to findings of previous years. Readers are urged to consult the ATTAINS website for detailed listings of the causes and sources of impairment reported by the states.

Rivers and Streams

This report includes states' assessments of 16% of the nation's 3.5 million miles of rivers and streams for the 2004 reporting cycle. Of these assessed waterbodies, 44% were reported as impaired, or not clean enough to support at least one of their designated uses (e.g., fishing, swimming). The states found the remaining 56% to be fully supporting all assessed uses. Pathogens, habitat alterations, and organic enrichment/oxygen depletion were cited as the leading causes of impairment in rivers and streams, and the top sources of impairment included agricultural activities, hydrologic modifications (e.g., water diversions, channelization), and unknown/unspecified sources.

Lakes and Reservoirs

This report includes states' assessments of 39% of the nation's 41.7 million acres of lakes, ponds, and reservoirs during the 2004 reporting cycle. Of these assessed waterbodies, 64% were reported as impaired and 36% were fully supporting all assessed uses. Mercury, polychlorinated biphenyls (PCBs), and nutrients were cited as the leading causes of impairment in lakes. The top sources of pollutants to lakes, ponds, and reservoirs included atmospheric deposition, unknown/unspecified sources, and agriculture.

Bays and Estuaries

This report includes states' assessments of 29% of the nation's 87,791 square miles of bays and estuaries for the 2004 reporting cycle. Of these assessed waterbodies, 30% were reported as impaired, and the remaining 70% fully supported all assessed uses. Pathogens, organic enrichment/oxygen depletion, and mercury were reported as the leading causes of impairment in bays and estuaries. The top sources of impairment to bays and estuaries included atmospheric deposition, unknown/unspecified sources, and municipal discharges/sewage.

Probability Studies of Water Quality

EPA and the states have embarked on a series of probability-based surveys (discussed later in this report) to complement more traditional targeted monitoring and assessment programs and to add substantially to our understanding of state, regional, and national water quality conditions. These surveys select sites at random to provide estimates of the condition of a population of waters throughout a state, region, or the nation. They describe the percentage of waters in a state or region supporting Clean Water Act goals and the percentage of waters affected by the stressors included in the study design; this can help inform protection and restoration priorities. Probabilistic surveys are a cost-effective approach for tracking changes in condition and stressors across the population

of waters of the United States. As more states adopt probabilistic monitoring, EPA will be able to more accurately report on water quality trends. This effort will also help inform water quality policy and ensure that resources are appropriately targeted. As of 2008, 30 states were participating in probabilistic water quality surveys, and EPA has set a goal of having the participation of all 50 states by 2011. To date, EPA has provided $65 million in additional section 106 grant monitoring funds to help the states improve water quality monitoring programs and implement probabilistic survey designs.

Future Reporting

The states are working to strengthen their water monitoring and assessment programs by developing long-term monitoring strategies that identify the specific actions needed to achieve more comprehensive and consistent reporting of water quality conditions. In addition to the combination of probability-based survey monitoring described above and more traditional monitoring targeted to waters of interest, the states and EPA have streamlined water quality assessment and reporting by integrating various Clean Water Act reporting requirements and facilitating and improving electronic reporting of water data. These efforts will result in more comprehensive and valid information that can be easily accessed by water quality managers and the public in a timely fashion and used to describe water quality on a state, regional, or national scale.