This document contains the National Water Quality Inventory: Report to Congress, 2002 Reporting Cycle: Cover, Front Matter, Executive Summary

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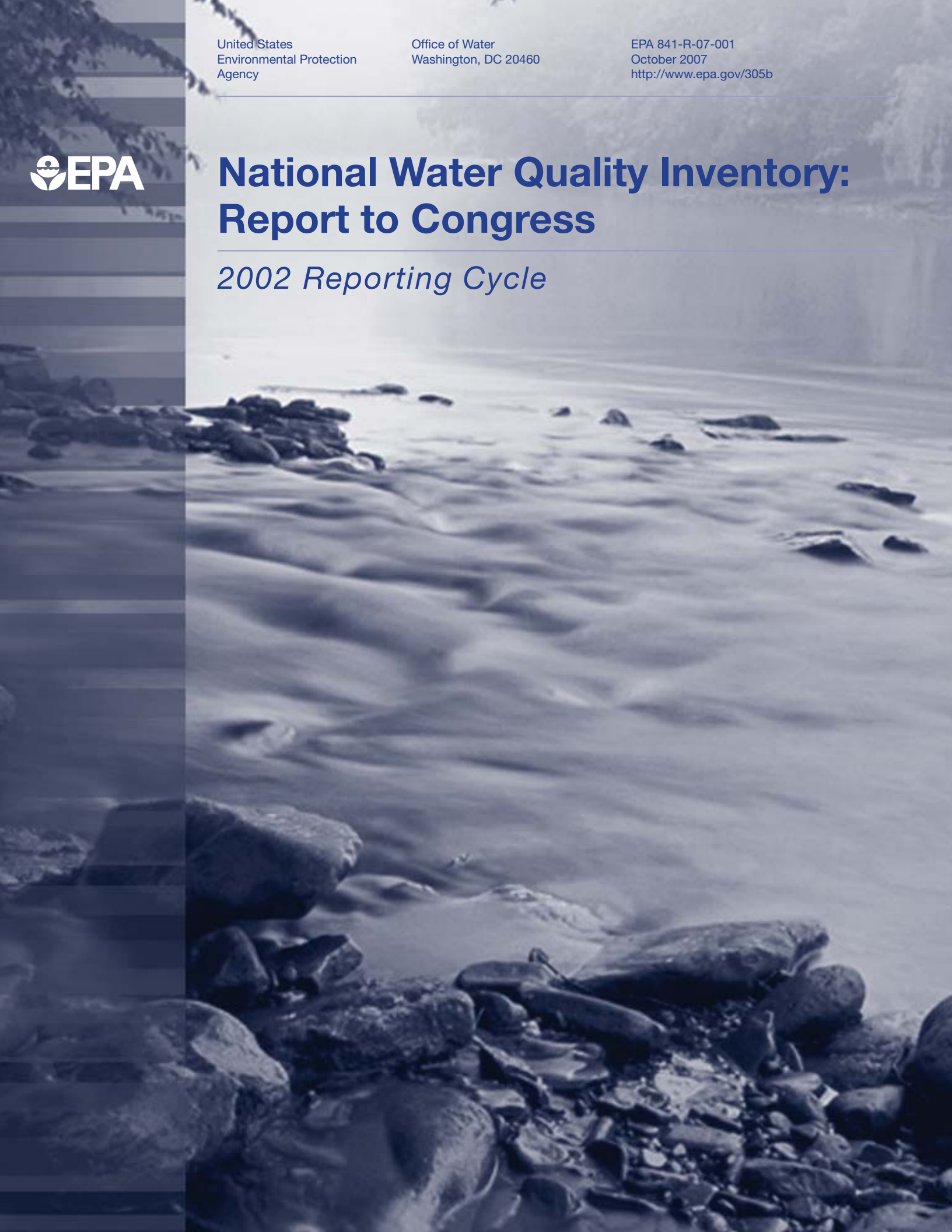
National Water Quality Inventory: Report to Congress

2002 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.

Photo courtesy of Paul Goetz

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List of Acronyms

BEACH	Beaches Environmental Assessment and Coastal Health
EPA	U.S. Environmental Protection Agency
FWS	U.S. Fish and Wildlife Service
NOAA	National Oceanic and Atmospheric Administration
PCBs	polychlorinated biphenyls
TMDLs	total maximum daily loads
USGS	U.S. Geological Survey

Executive Summary

Photo courtesy of John Theilgard

This *National Water Quality Inventory: Report to Congress*, prepared under Section 305(b) of the Clean Water Act, summarizes water quality reports submitted electronically by the states and territories to the U.S. Environmental Protection Agency (EPA) for the 2002 reporting cycle. This state water quality information is contained in EPA's National Assessment Database for the 2002 reporting cycle, available online at http://www.epa.gov/waters/305b.

For the first time, the National Assessment Database provides the public with easy Internet access to a wide range of state water quality assessment results. The database contains summary assessment information as reported electronically by the states to EPA and includes a set of national tables that summarize key water quality assessment findings (as in previous Section 305(b) reports). Users can also view assessments of individual waterbodies within any state or watershed included in the National Assessment Database, which presents data in a format designed for quick reference by water quality professionals and individuals familiar with water quality reporting. The database also provides Internet addresses for all the state water quality reports to users interested in learning more about a particular state's water quality protection program.

The key findings of the 2002 National Assessment Database are presented in this report. It is important to note that the information about specific sources and causes of impairment is incomplete because the

states do not always report the pollutant or source of pollutants affecting every impaired waterbody. In some cases, states may recognize that water quality does not fully support a designated use; however, they may not have adequate data to document the specific pollutant or source responsible for the impairment. In past national reports, unknown or unspecified causes and sources were included only as footnoted material to summary statistics. For the first time, this report includes unspecified causes and sources in all summary statistics to more clearly represent what states are reporting to EPA.

Rivers and Streams

States assessed 19% of the nation's 3.7 million miles of rivers and streams for the 2002 reporting cycle. Of these waterbodies, 45% were reported as impaired or not clean enough to support their designated uses, such as fishing and swimming. States found the remaining 55% to be fully supporting of all designated uses. Sediment, pathogens, and habitat alterations were cited as the leading causes of impairment in rivers and streams, and top sources of impairments included agricultural activities, unknown/unspecified sources, and hydrologic modifications (such as water diversions and channelization).

Lakes, Ponds, and Reservoirs

States assessed 37% of the nation's 40.6 million acres of lakes, ponds, and reservoirs during the 2002 reporting cycle. Of these waterbodies, 47% were reported as impaired and 53% were fully supporting all designated uses. Nutrients, metals (primarily mercury), and organic enrichment/low dissolved oxygen were cited as the leading causes of impairment in lakes. Top sources of pollutants to lakes, ponds, and reservoirs included unknown/unspecified sources, agricultural activities, and atmospheric deposition.

States assessed 19% of U.S. river and stream miles, and of those, 55% fully support all designated uses, such as aquatic life harvesting and aesthetic value (Photo courtesy of Luther Goldman, U.S. Fish and Wildlife Service).

Bays and Estuaries

States assessed 35% of the nation's 87,370 square miles of bays and estuaries for the 2002 reporting cycle. Of these waterbodies, 32% were reported as impaired and the remaining 68% fully supported all designated uses. Metals (primarily mercury), nutrients, and organic enrichment/low dissolved oxygen were the leading causes of impairment in bays and estuaries. Top sources of impairment to bays and estuaries included unknown/unspecified sources, industrial sources, and municipal discharges (e.g., sewage treatment plants).

States reported nutrients, metals, and organic enrichment/low dissolved oxygen to be the leading causes of impairment in lakes, ponds, and reservoirs (Photo courtesy of Karen Rodriguez, EPA).

Boating, fishing, swimming, and bird watching are just a few of the recreational activities people enjoy in estuaries (Photo courtesy of John Theilgard).

National Studies of Water Quality

Statistically valid, probability-based studies can complement targeted monitoring and assessment programs and add substantially to our understanding of state, regional, and national water quality conditions, including how broad water quality conditions may change over time. These studies select sites at random to represent the condition of waters in regions that share similar ecological characteristics and are a more cost-effective approach to monitoring than more traditional census-type or targeted approaches.

EPA and its partners have embarked on three national probability-based studies that are discussed later in this report: the National Coastal Assessment, the National Study of Chemical Residues in Lake Fish Tissue, and the Wadeable Streams Assessment. EPA is also funding pilot projects that will provide a foundation for a future comprehensive assessment of the nation's lakes. National, regional, and state-wide probability-based studies will provide much-needed information on water quality throughout the United States.

Future Reporting

States are working to strengthen their water monitoring and assessment programs by developing long-term monitoring strategies that identify the specific actions needed to move toward more comprehensive and consistent reporting of water quality conditions. In addition, states and EPA are streamlining water quality monitoring and assessment by integrating various Clean Water Act reporting requirements and moving toward improved electronic reporting of water data. The results of these efforts will be more comprehensive information that can be easily accessed by water quality managers and the public.

Data collected from probability-based studies and targeted monitoring efforts can be combined to broaden our understanding of water quality conditions (Photo courtesy of Tetra Tech, Inc.).