



# WATER FACT SHEET

U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

### BACKGROUND

In 1991, the U.S. Geological Survey began a 4-year transition from a pilot National Water-Quality Assessment (NAWQA) program to a full-scale program. The design concepts to be implemented in the full-scale program are based in part on the pilot program that began in 1986. The long-term goals of the NAWQA program are to describe the status and trends in the quality of a large, representative part of the Nation's surface- and ground-water resources and to provide a sound, scientific understanding of the primary natural and human factors affecting the quality of these resources. In meeting these goals, the program will produce a wealth of water-quality information that will be useful to policy makers and managers at the national, state, and local levels.

### PROGRAM DESIGN

A major design feature of the NAWQA program will enable water-quality information at different spatial scales to be integrated. The program consists of two major components—study-unit investigations and national assessment activities.

#### Study-Unit Investigations

The principal building blocks of the NAWQA program are the study-unit investigations of hydrologic systems that include parts of most major river basins and aquifer systems. The study units cover areas of 1,200 to more than 60,000 square miles. The program will be accomplished through investigations of 60 study areas that are distributed throughout the Nation and that incorporate about 60 to 70 percent of the Nation's water use and population served by public water supply.

To make the program manageable, intensive assessment activities in each of the study units will be conducted on a rotational rather than a continuous basis. One-third of the study units will be studied intensively at a given time. For each study unit, 3 to 4 year periods of intensive data collection and analysis will be alternated with 6 to 7 year periods during which the assessment activities will be less intensive.

In the initial assessment period in each study unit, the present water-quality conditions and the factors that influence these conditions will be described. Subsequent intensive assessment periods will focus on improving this understanding and assessing changes that are occurring over time.

Long-term assessment activities in the study units are a key attribute of the program—not only to define trends—but also to build an evolving understanding of water quality in each of the study units. This understanding will be achieved through

careful analysis and interpretation of long-term data sets on the chemical and biological characteristics of the water resource relative to carefully compiled data on physical hydrology and changes in land use and management practices within the study units. Intensive assessment of these individual hydrologic systems will form a firm base of knowledge for resource decision making within the study units.

#### National Assessment Activities

The NAWQA program will focus on integrating results from the study-unit investigations and other programs to provide information at regional and national scales. The national assessment component of the program will address specific water-quality issues that are of concern in many areas of the Nation. A framework has been established to assure consistency nationwide in approach to each study, in field and laboratory methods, in water-quality measurements, and in supporting data requirements.

The first two national topics will focus on pesticides and on nutrients and sediment. Specific questions related to pesticides that will be addressed by the program include:

- What are the occurrences and concentrations of pesticides in selected river basins and aquifer systems nationwide?
- What is the relation of pesticide concentrations in surface and ground water to natural factors, changes in hydrologic conditions, pesticide use, chemical properties, and land-management practices?
- What significance do key findings have on current water-quality monitoring, management, and regulatory practices?

The NAWQA program is designed to address national water-quality concerns through comparative studies in a large set of hydrologic systems that are distributed in a wide range of environmental settings throughout the Nation.

### COMMUNICATION AND COORDINATION

Communication and coordination between Geological Survey personnel and other interested scientists and water-management organizations are critical components of the NAWQA program. Each of the study-unit investigations will have a local liaison committee consisting of representatives who have water-resource responsibilities from Federal, State, and local agencies, universities, and the private sector. Specific activities of each liaison committee will include (1) the exchange of information about water-quality issues of regional and local interest, (2) the identification of sources of data and information, (3) assistance in the design and scope of project products, and (4) the review of

project planning documents and reports. Liaison committees for the first 20 study units will be formed in 1991. A similar group will be formed at the national level to provide advice and guidance to the program.

Finally, an external scientific review committee will be formed to advise and comment on various technical aspects of the program. Participation of individuals on committees such as these will be extremely important in shaping the program and in ensuring that information needed for the formulation of

scientifically-based policy is provided by the program in a timely manner.

Information on technical reports and hydrologic data related to the NAWQA program can be obtained from:

National Water-Quality Assessment Program  
 U.S. Geological Survey  
 410 National Center  
 Reston, Virginia 22092

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STUDY UNITS COMPRISING THE NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

(\*denotes 1991 starts)

MAP IDENTIFICATION NUMBER	STUDY-UNIT NAME	STATE(S)	MAP IDENTIFICATION NUMBER	STUDY-UNIT NAME	STATE(S)
1	New Hampshire-Southern Maine Basins	ME, NH, MA	31	Eastern Iowa Basins	IA, MN, IL
2	Southeastern New England	MA, RI	* 32	Ozark Plateaus	MO, AR, OK, KS
* 3	Connecticut Valley Drainage	NH, VT, MA, CT	33	Central Oklahoma	OK
* 4	Hudson Basin	NY, VT, MA, NJ	* 34	Trinity River Basin	TX
5	Long Island	NY, VT, MA, CT, NJ	35	Balcones Fault Zone	TX
6	Delaware Basin	NY, NJ, PA, DE	* 36	Central Nebraska	NE
* 7	Lower Susquehanna Basin	PA, MD	37	Kansas River Basin	KS, NE, CO
8	Delmarva Peninsula	DE, MD, VA	38	Upper Arkansas River Basin	CO
* 9	Potomac Basin	WV, MD, VA, PA	39	Central High Plains	NM, KS, TX, OK, CO
10	Allegheny and Monongahela Basins	NY, PA, WV	40	Southern High Plains	TX, NM
11	Kanawha Basin	WV, VA, NC	* 41	South Platte Basin	CO, WY, NE
12	Lake Erie-Lake Saint Claire Drainage	MI, OH, IN	42	North Platte Basin	WY, CO, NE
13	Great and Little Miami River Basins	OH	43	Cheyenne and Belle Fourche Basins	SD, WY, MT, NE
* 14	White River Basin	IN	44	Yellowstone Basin	MT, WY, ND
15	Upper Illinois River Basin	IL, IN, WI	45	Upper Colorado Basin	CO, UT
16	Lower Illinois River Basin	IL	* 46	Rio Grande Valley	NM, CO
* 17	Western Lake Michigan Drainage	WI, MI	47	Great Salt Lake Basins	UT, ID, WY
18	Minneapolis-St. Paul Basin	MN	48	Northern Rockies Intermontane Basins	MT, ID, WA
* 19	Red River of the North	SD, MN, ND	* 49	Upper Snake River Basin	ID, MT, WY, NV, AZ
* 20	Albermarle-Pamlico Drainage	NC, VA	50	Southern Arizona	AZ
21	Upper Tennessee River Basin	TN, NC, VA	* 51	Mid-Columbia Basin	ID, WA
22	Santee Basin and Coastal Drainage	SC, NC	52	Yakima River Basin	WA
* 23	Apalachicola-Chattahoochee Basin	GA, FL, AL	53	Puget Sound Drainages	WA
* 24	Georgia-Florida Coastal Plain	FL, GA	* 54	Willamette Basin	OR
25	Southern Florida	FL	55	Sacramento Basin	CA, OR
26	Kentucky River Basin	KY	* 56	Nevada Basin and Range	NV, CA
27	Mobile River and Tributaries	AL, MS	* 57	San Joaquin-Tulare	CA
28	Mississippi Embayment	MS, LA, AR, MO	58	Santa Ana Basin	CA
29	Chicot-Evangeline	LA	59	Oahu	HI
30	Lower Tennessee River Basin	TN, AL, KY	60	Cook Inlet Basin	AK

