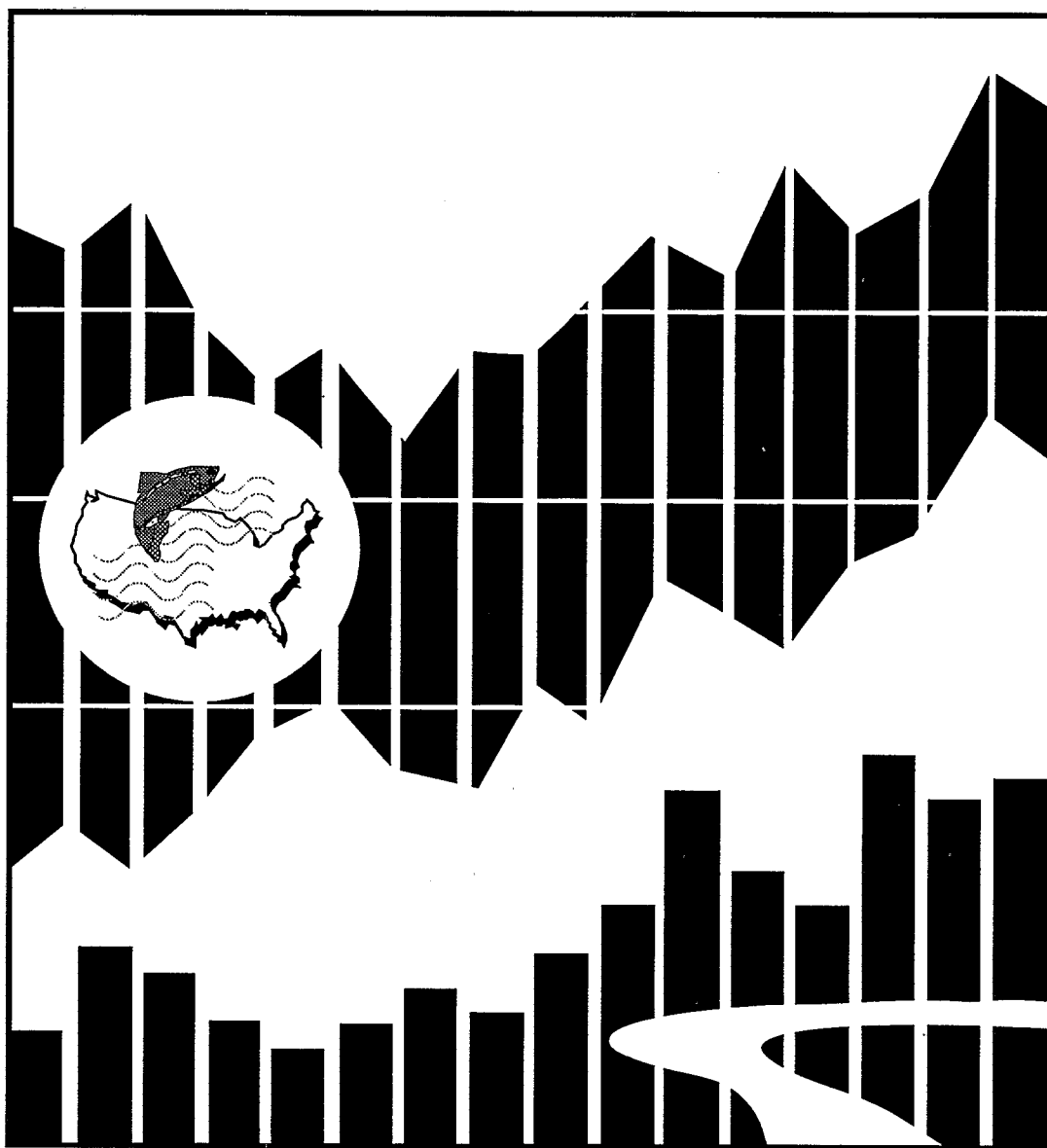
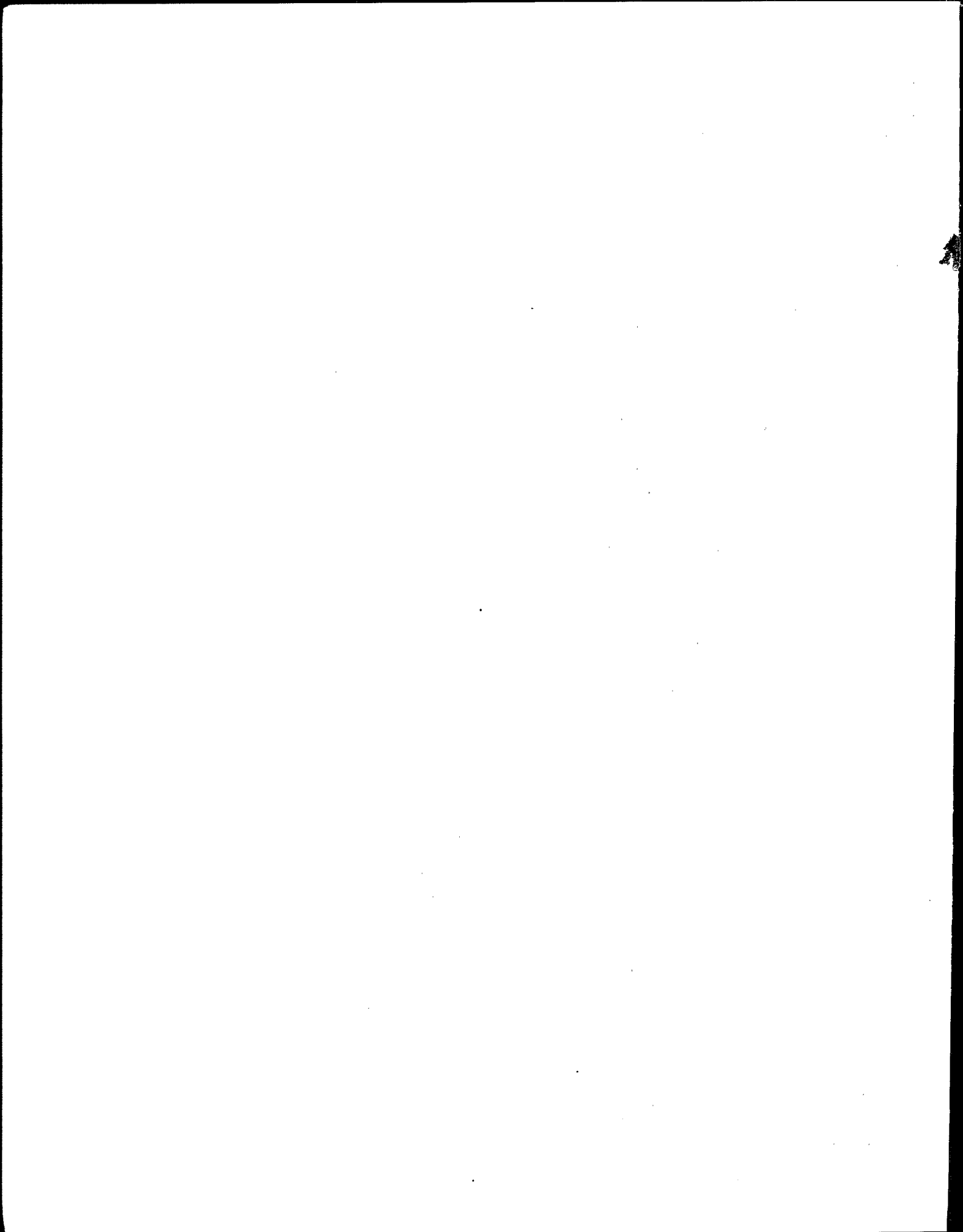




Guide to Federal Water Quality Programs and Information



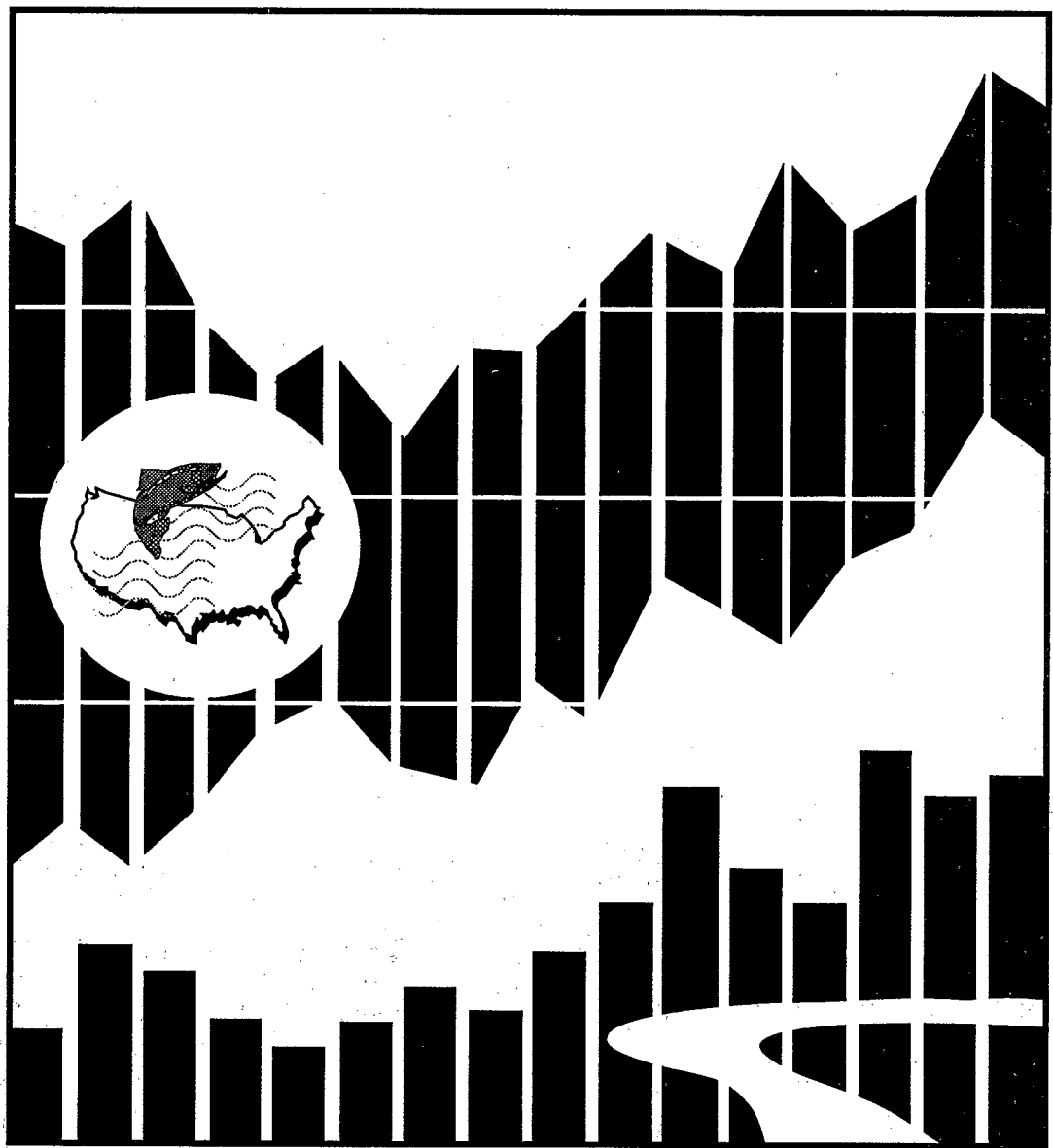
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Guide to Federal Water Quality Programs and Information



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Luis Hernandez, ViGYAN Inc.

Eleanor Leonard, ESID

James Morant, ESID

Ingrid Schultz, ESID

John Williams, JRW Associates

David Zoellner, Consultant

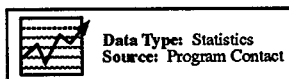
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Foreword

The overall goal of the *Guide to Federal Water Quality Programs and Information* is to help make key Federal information on water quality available to environmental analysts. In this time of increased environmental awareness it is vital to share as much information as possible, avoid duplication of effort, and limit the resources used to identify and collect necessary data.

Many factors are important in assessments of water quality. Specifically, the Guide includes information on 1) underlying demographic pressures; 2) the use of land, water, and resources; 3) pollutant loadings; 4) ambient water quality; 5) other effects of water pollution; and 6) a listing of programs established to preserve, protect and restore water quality. This encompasses statistics from the Bureau of the Census on demographic data, statistics from EPA's Toxics Release Inventory, statistics from the U.S. Department of Agriculture on pesticide use on crop lands, statistics on ambient water quality from several NOAA and USGS programs, information from the Centers for Disease Control on waterborne diseases, information from such control programs as EPA's Permitting and Enforcement programs, and other sources. An appendix includes information on additional sources of information such as directories, selected databases, individual water quality studies, clearinghouses, and analytical tools. The Guide also contains an index of keywords and phrases that can be used to locate desired programs.

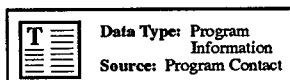
The entries in this Guide are arranged by the six categories of information described above. Included are programs that use documented procedures to collect statistics in a way that is consistent across the Nation and publish those statistics. Those programs can be identified by their two-column format and by the following special identification box.



The Guide references a number of programs which also appear in the *Guide to Selected National Environmental Statistics in the U.S. Government* (EPA, 1992). These entries are marked with the following special identification box. These programs have been included in this Guide as a convenience for the reader in locating programs with relevant information for water quality analyses.



The Guide also includes water related program entries. They appear in one-column format and are marked by the following special identification box.



Comments and suggestions concerning the Guide are welcomed. A comment/recommendation form is provided following the Keyword Index.

For additional copies of the printed version of the Guide, please contact:

Public Information Center (PIC)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

In addition to the printed version, a limited number of copies of the Guide will be available in an electronic version that can be viewed on an IBM-compatible personal computer with 640K of RAM memory, hard disk drive, DOS 3.0 or higher, and an EGA or VGA monitor. If you would like a copy of the electronic version of the Guide, please contact:

Tim Stuart, Ph.D.
Environmental Statistics and Information Division
U.S. Environmental Protection Agency (PM-222B)
401 M Street, SW
Washington, DC 20460

Guide to Federal Water Quality Programs and Information

*A Guide with Computer Software
Developed by the Interagency Work Group on Water Quality*

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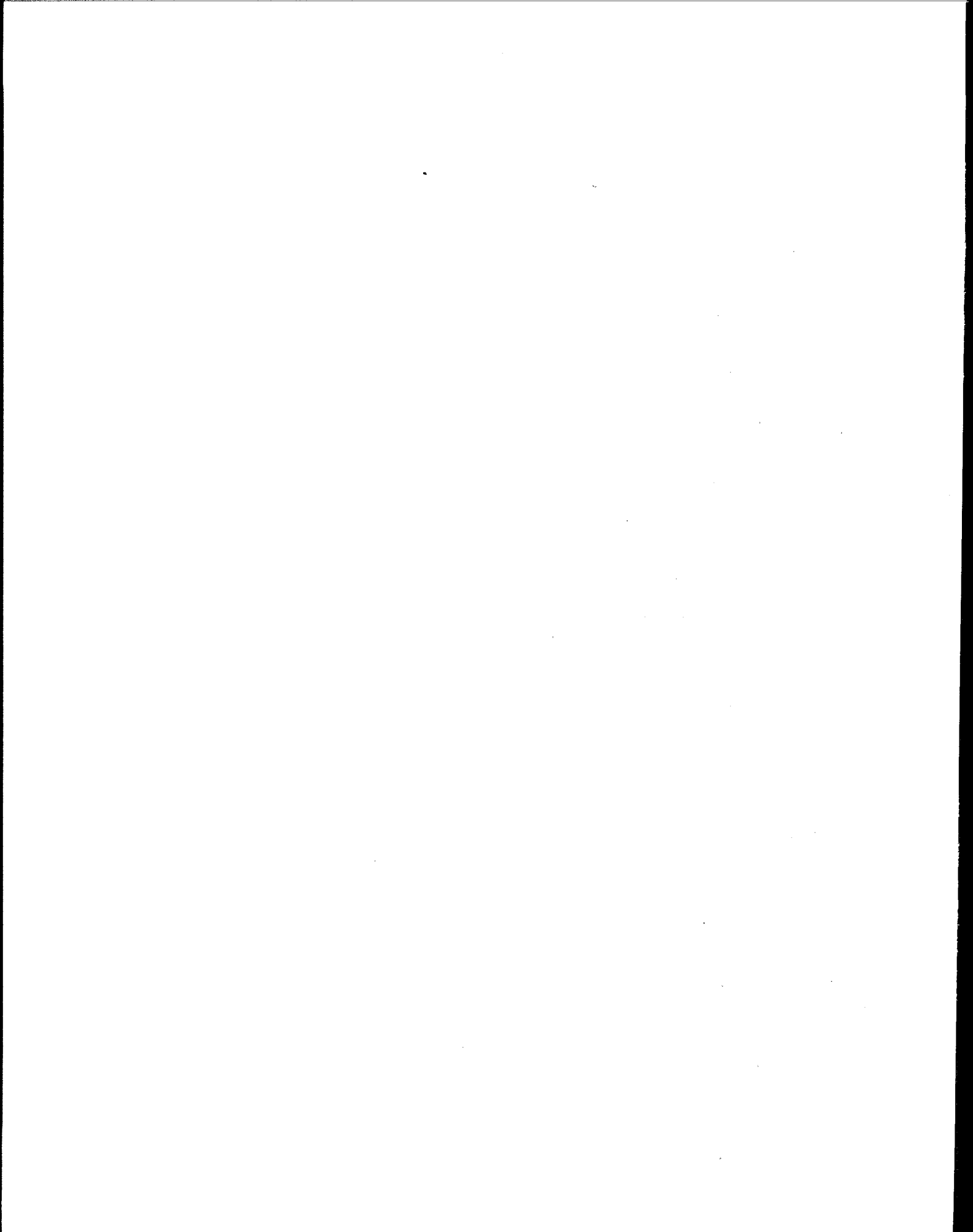
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Following the Keyword Index:

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Entry Updating Procedures
New Entry Submission Information



Introduction

The *Guide to Federal Water Quality Programs and Information* is designed to direct the reader to Federal programs with useful information on water quality programs and conditions. The Guide does not contain actual water quality data; instead it provides descriptions of programs and names, addresses, and phone numbers for program contacts. The program contacts generally will provide access to the actual data. Although the primary audience for the Guide is water quality analysts in the Federal Government, the Guide also should prove of interest to a much larger audience.

The Guide was developed by the Interagency Work Group on Water Quality through a series of meetings and discussions as an attempt to inventory all significant Federal water quality programs and information of a national scope or interest. We recognize that some important activities may have been overlooked and, as noted below, we would welcome suggestions for changes to the Guide.

In line with the Clean Water Act and recent EPA Policy¹, the Interagency Work Group took the approach that water quality includes the chemical, physical and biological/ecological integrity of the receiving waters. The definition of "water quality," as used in this Guide, thus includes habitat for aquatic life as well as the chemical quality of the sediment and water column. The Guide contains information on programs dealing with surface and ground waters in freshwater, estuarine and marine environments.

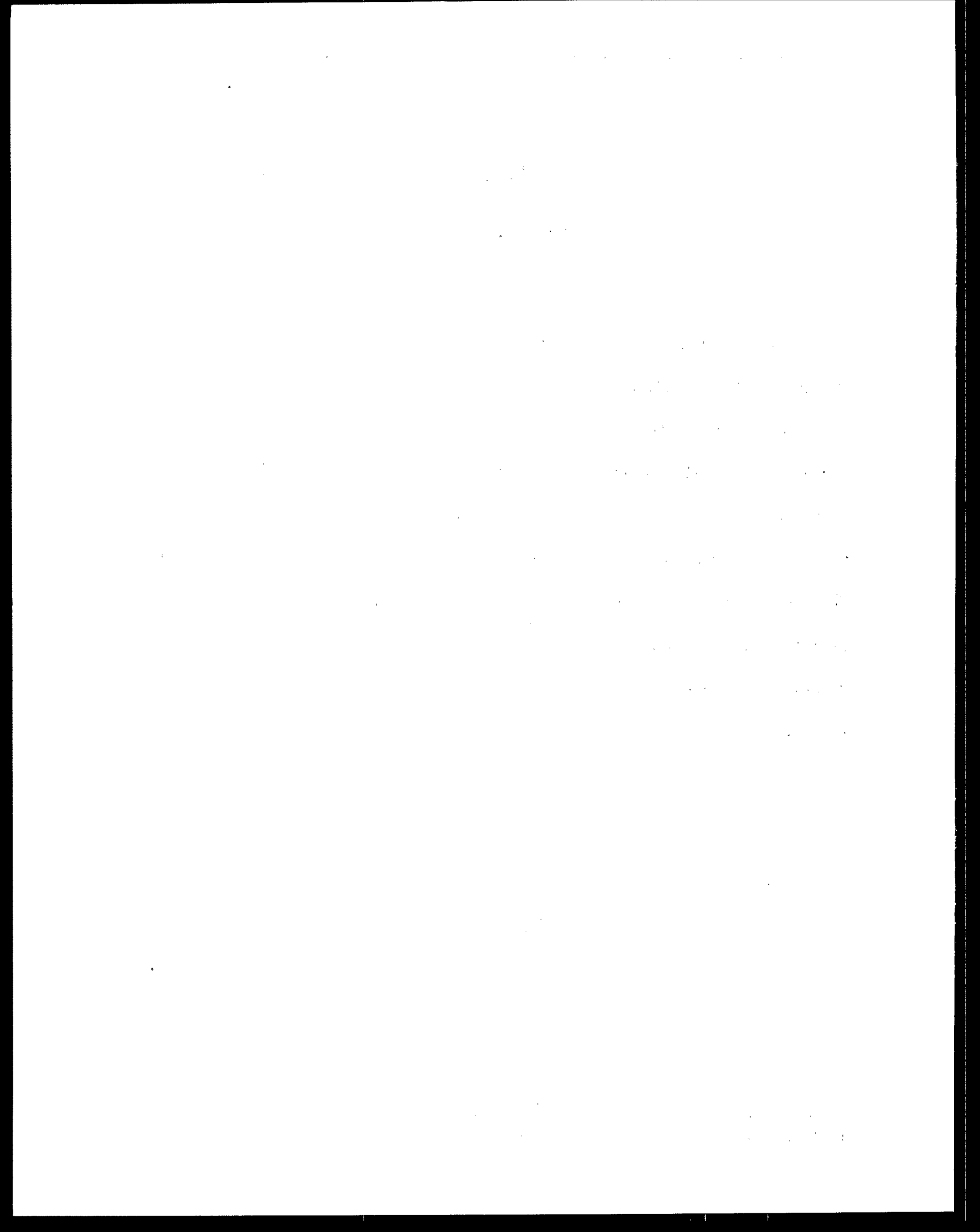
The Guide is divided into six sections. Each section consists of a brief discussion followed by a listing of one or more Federal programs. The first three sections address Federal programs with information on factors that affect water quality, i.e., underlying demographic pressures; the use of land, water and resources; and pollutant loadings. The fourth section contains information on ambient water quality, while the fifth section discusses other effects of water pollution such as waterborne disease. The final section includes information on Federal programs established to preserve, protect and restore water quality. The Appendix contains information on additional sources of information, including: individual studies; analytical tools; and clearinghouses, data centers, and additional directories.

In addition to the information on loadings and water quality impacts referenced in the Guide, additional estimates on pollutant loadings and water quality impacts can be developed by using the analytical tools, e.g., water quality models, referenced in the Appendix. For example, the Environmental Display Manager² will allow mapping, display, analysis support, and information management capabilities, and will provide estimates of water quality conditions using a number of national water quality databases at local, regional and national scales.

For this first edition of the Guide the focus is on national-level programs and information. Over time, the Guide may be expanded to provide more comprehensive coverage of water quality programs and information at Regional and State levels. As resources allow, we expect to update the Guide in the future. Therefore, we would welcome suggestions for changes to the Guide, including suggestions for additional Federal programs that should be included. A comment/recommendation form is provided following the Keyword Index.

¹ *Policy on the Use of Biological Assessments and Criteria in the Water Quality Program*, Office of Water, Environmental Protection Agency, June, 1991. Also see *Technical Support Document for Water Quality-based Toxics Control*, Environmental Protection Agency, Office of Water, 1991.

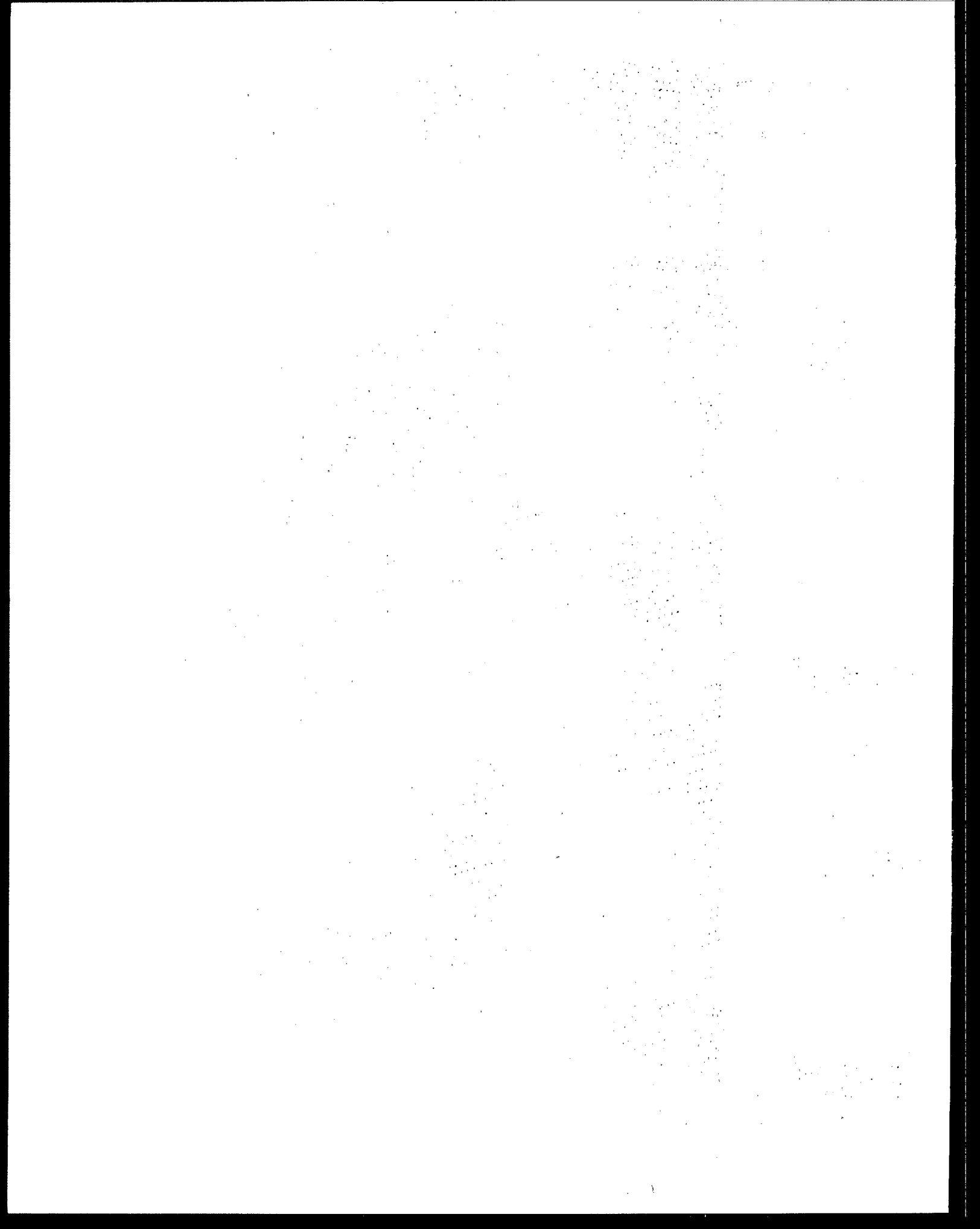
² See "The Environmental Display Manager: A Tool for Water Quality Data Integration." *Water Resources Bulletin*, Volume 27, Number 6, 1991.



Section I

Population Pressures

This Section provides information on several Bureau of the Census programs that track and project human population in the U.S. Such statistics are important in water quality assessment since some types of water pollutants, e.g., sewage, are directly related to population and population centers that produce urban runoff from streets and parking lots. Thus, changes in population and population density generally lead to changes in water quality. Of course, the water quality impact from a particular population level depends upon a number of factors discussed in later sections of this Guide. These factors include land use, water use, treatment and prevention programs, and the characteristics of the receiving waters. For example, a large urban area located on a small stream will most likely produce larger water quality impacts than a small town located on a large river.



DEPARTMENT OF COMMERCE

Decennial Census of Population



OFFICE:

Bureau of the Census
Population Division

SUMMARY PROGRAM DESCRIPTION:

The decennial census provides a comprehensive set of population statistics for the United States. Basic demographic characteristics are collected on a 100-percent basis. Social and economic characteristics are collected from a large sample of all households and persons in group quarters.

DATA COVERAGE:

The decennial census provides demographic (e.g., age, race, sex, relationship, Hispanic origin), social (e.g., education, migration, ancestry, language), and economic (e.g., occupation, industry, income, place of work) characteristics of the population of the United States, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Northern Marinas, and Palau. Trend data are available from previous decennial censuses.

COLLECTION METHODS:

Basic demographic data are collected from 100 percent of the population. Social and economic characteristics are collected from a large sample -- approximately one-in-six in 1980 and 1990.

COLLECTION FREQUENCY:

Decennial.

GEOGRAPHIC COVERAGE:

The 50 States, the District of Columbia, and substate areas such as counties, county subdivisions, cities, towns, villages, and census tracts. Also covers Puerto Rico, the Virgin Islands, Guam, American Samoa, the Northern Marinas, and Palau.

CONTACT:

Philip N. Fulton
Assistant Division Chief for Census Programs
Population Division, U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-7890

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

The results of the Census of Population are issued in various forms; printed reports, computer tape files, CD-ROM, and microfiche. Computer tape files are designed to provide statistics with greater detail than is feasible or desirable to provide in printed and microfiche reports. Many computer tape files also are released on CD-ROM. The following is a brief summary of 1990 census data releases:

P.L. 94-171, Population Counts - In accordance with Public Law (P.L.) 94-171, the Census Bureau has provided population tabulations to all States for legislative reapportionment/redistricting.

Summary Tape Files (STFs) 1A, 1B, and 1C, and 2A, 2B, and 2C - Complete count population and housing data summarized for a wide range of census geography (United States, metropolitan areas, urbanized areas, American Indian and Alaska Native areas, States, county subdivisions, places, census tracts, block numbering areas, block groups, and block).

Summary Tape Files (STFs) 3A and 3C - Sample population and housing data summarized for a wide range of census geography (as shown above - but excluding blocks).

Census/Equal Employment (EEO) Special File - Sample census data to support affirmative action planning.

Summary Population and Housing Characteristics (CPH-1) reports - Complete count population and housing data derived from STF 1.

Summary Social, Economic, and Housing Characteristics (CPH-5) reports - Sample population and housing data for local governments, including American Indian and Alaska Native areas.

General Population Characteristics (CP-1) reports - Detailed statistics on age, sex, race, and/or Hispanic origin, marital status and household relationship presented for States, counties, places of 1,000 or more inhabitants, etc.

The Census Bureau is in the process of releasing STF 1-B U.S. Summary File, and STF 2 Census Tracts and soon will begin releasing General Population Characteristics STF 1-C. STF 3, which presents social, economic, and detailed housing characteristics for geographic areas comparable to STF 1-A, and STF 4, which is the geographic counterpart to STF 2. STF-4 will be released in early 1993.

Customized special tabulations of census data may be obtained on a cost reimbursable basis.

DATABASE(S):

CENDATA

CENDATA is the Census Bureau's online information service. It is available through two information vendors, CompuServe and DIALOG.

For more information, contact:

Data User Services Division
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-2074

DEPARTMENT OF COMMERCE



National and Subnational Population Estimates and National and State Population Projections

OFFICE:

Bureau of the Census
Population Division
Population Estimates and Projections Branches

SUMMARY PROGRAM DESCRIPTION:

The Population Estimates and Projections Branches produce current estimates of the U.S. population (the 50 States, the District of Columbia, the counties, incorporated areas, Puerto Rico, and the territories) and project the future population.

DATA COVERAGE:

Statistics include: estimates of the total, resident, and civilian population of the United States by State, with components of change; estimates of national and State population by age, sex, race, and/or Hispanic origin; projections of future population by age and sex for States and by age, sex, race, and/or Hispanic origin for the United States; yearly estimates of county population; biennial estimates of the population of incorporated places and functional minor civil divisions; and estimates of populations of metropolitan and nonmetropolitan areas; population migration by religion; population density; and population growth rate.

COLLECTION METHODS:

Estimates of the U.S. population are derived by updating the total population including Armed Forces overseas at the time of the last census, year by year, through the components of population change. State population totals are estimated using vital statistics, school enrollment, internal migration (based on Federal income tax data), net internal migration, and Medicare enrollment. State estimates for age and sex are developed by a procedure that carries forward the decennial census data for each single year of age by State, and allows for births, deaths, and net migration. Net migration is estimated using school enrollment to obtain a school-age migration rate, which is then converted to rates for single years of age. The methodology to develop household estimates is based

on national trends and estimated State trends in adult per household, and on estimates of adult population for States. For detailed descriptions of specific methodologies, see reports referenced in Publications.

COLLECTION FREQUENCY:

Continuous.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

For national estimates:

Frederick W. Hollmann
National Projections Branch
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-7950

For national projections:

Jennifer Day
National Projections Branch
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-1902

For subnational estimates:

Edwin Byerly
Subnational Estimates Branch
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-5072

For state projection statistics:

Paul Campbell
Demographic Statistician
Population Division
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-1902

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Byerly, E. 1990. *State Population and Household Estimates: July 1, 1989*. Current Population Reports, Series P-25, No. 1058. U.S. Department of Commerce. Washington, DC.

Day, J. 1992. *Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1992 to 2050*. Current Population Reports, Publication Series P-25, No. 1092. U.S. Department of Commerce. Washington, DC.

Hollman, F.W. 1992. *U.S. Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1991*. Current Population Reports, Series P-25, No. 1095. U.S. Department of Commerce. Washington, DC.

Starnisinc, D.E. & R.L. Forstall. 1989. *Patterns of Metropolitan Area and County Population Growth: 1980-1987*. Current Population Reports, Series P-25, No. 1039. U.S. Department of Commerce. Washington, DC.

Bureau of the Census. 1990. *Population Estimates for Metropolitan Statistical Areas, July 1, 1988, 1987, and 1986*. Current Population Reports, Series P-25, No. 1088-B. U.S. Department of Commerce. Washington, DC.

--. *Estimates of the Population of the United States to August 1 (annual)*. Current Population Reports, publication Series P-25. U.S. Department of Commerce. Washington, DC.

Wetrogen, S.I. 1990. *Projections of the Population of States, by Age, Sex, and Race: 1989-2010*. Current Population Reports, Publication Series P-25, No. 1053. U.S. Department of Commerce. Washington, DC.

DATABASE(S):

CENDATA

The Census Bureau's online information service is available through two information vendors,

CompuServe and DIALOG, and on tape and diskette.

For more information contact:

Data User Services Division
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-2074

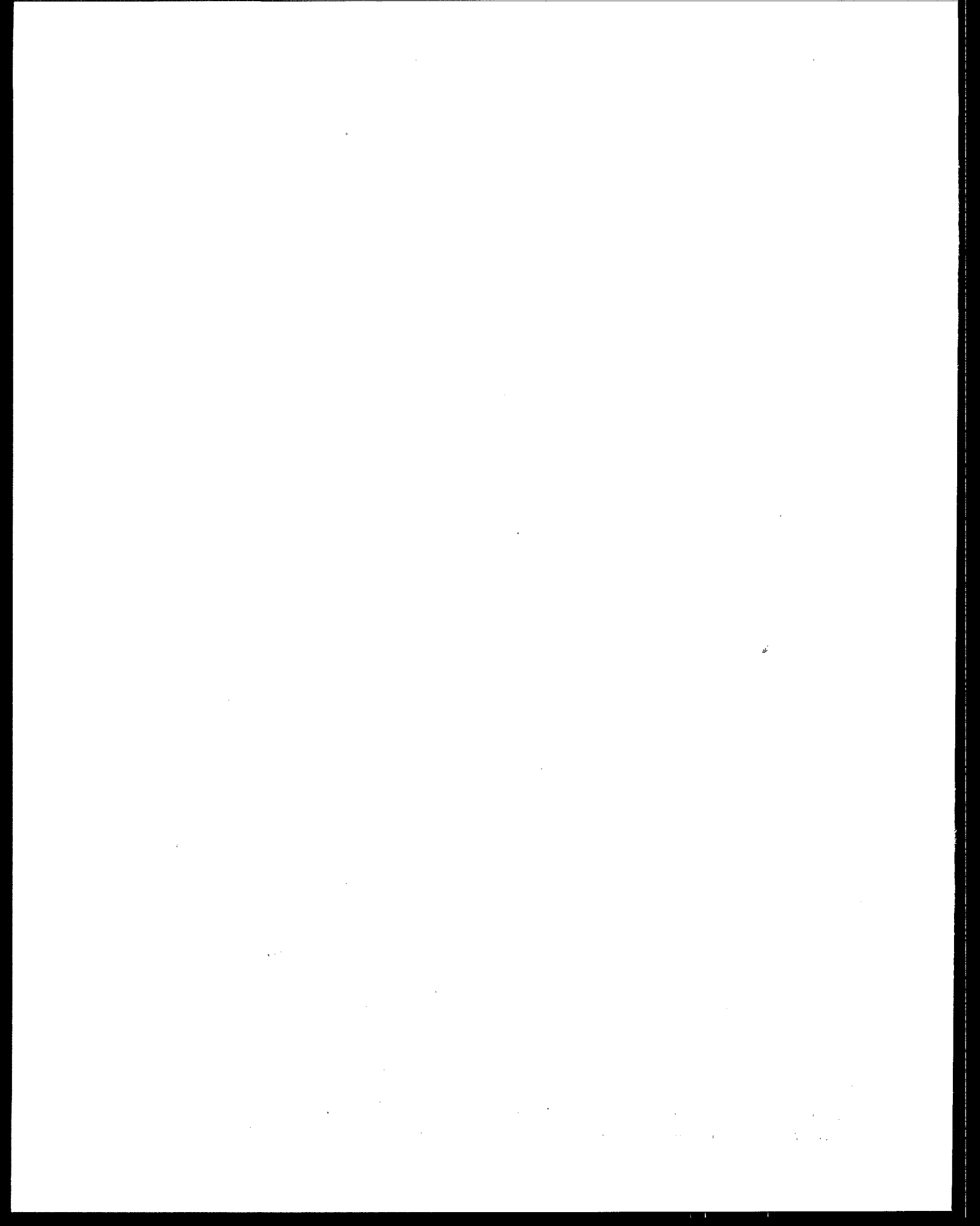
Section II

Use of Land, Water and Resources

The programs in this section have information on land use, water use, and resource use. These uses are important factors in determining water quality, since, as discussed earlier, they interact with human populations to determine pollutant loadings. For example, different types of land use usually provide different types and levels of pollutants; the amount of water in a stream affects its water quality, including its ecology. Resource uses such as timber harvesting often alter the quality and quantity of the runoff from the resource area.

Analytical tools, such as water quality models (see Appendix B), can be used to estimate the loadings and resulting water quality impacts associated with different population levels and land, water, and resource uses.

Additional information on precipitation records is provided in Appendix B. Information on land use as related to wetlands can be found in entries for the National Wetlands Inventory and the National Coastal Wetlands Inventory in Section IV, Ambient Surface and Ground Water Quality.



A. Land Use

DEPARTMENT OF AGRICULTURE



Major Uses of Land in the United States

OFFICE:

Economic Research Service
Resource and Technology Division
Land and Capital Assets Branch

SUMMARY PROGRAM DESCRIPTION:

For more than 50 years, the Economic Research Service and its predecessor agencies have estimated acreage and maintained an inventory of the major uses of land in the United States at intervals coinciding with the Census of Agriculture.

DATA COVERAGE:

Estimates are made for major land use classes: cropland; grassland pasture and range; forest land; special use; and unclassified use. Each major class is further classified by specified uses and some by ownership. Land uses are also designated as agricultural and nonagricultural.

Agricultural land uses include: cropland (cropland harvested, cropland failure, cultivated summer fallow, and idle cropland); grazing lands (cropland pasture and permanent pasture and range); grazed forest land; and miscellaneous agricultural uses (farmsteads, farm roads, and farm lanes).

Special land uses include: forest land not grazed; intensive uses (highways and roads, railroads, and airports); and extensive uses (national parks, State parks, wilderness areas, Federal wildlife areas, State wildlife areas, national defense areas, and Federal industrial facilities). Unclassified other land uses include: urban and other special uses not inventoried and other miscellaneous areas such as marshes, open swamps, bare rock areas, deserts, and tundra. Data are analyzed for trends.

COLLECTION METHODS:

Data from the Bureau of the Census, agencies of the Department of Agriculture, public land management and conservation organizations, and other sources are assembled, analyzed, and synthesized to estimate State, regional, and national land use acreage. Barnard and Hexem (1988) describe how the statistical series

on acreage of cropland and other land in the United States are constructed and used; they also identify sources of current and historical data and information used in constructing the series.

COLLECTION FREQUENCY:

The major uses of land are inventoried every 5 years coinciding with years in which the Census of Agriculture is completed. The inventories generally have been comparable in format and coverage since 1945. The series on "cropland used for crops" dates back to 1909.

GEOGRAPHIC COVERAGE:

All 50 States.

CONTACT:

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Agricultural Economist
Economic Research Service
U.S. Department of Agriculture
1301 New York Ave., NW, Room 408
Washington, DC 20005-4788
Phone: (202) 219-0424

Economic Research Service
U.S. Department of Agriculture
1301 New York Ave., NW Room 408
Washington, DC 20005-4788
Phone: (202) 219-0424

FOR PUBLIC INQUIRIES:

See Contacts.

PUBLICATIONS:

Barnard, C.H. and R.W. Hexem. 1988. *Land Values and Land Use*. Agricultural Handbook No. 671. Vol. 6, Major Statistical Series of the U.S. Department of Agriculture. Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture. Washington, DC.

Daugherty, A.B. 1991. *Major Uses of Land in the United States: 1987*. Agricultural Economic Report (AER) No. 643. Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture. Washington, DC.

Frey, H.T. and R.W. Hexem. 1985. *Major Uses of Land in the United States: 1982*. Agricultural Economic Report (AER) No. 535. Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

Major Land Uses Database (MLU) #89003

The MLU database contains State, regional, and national estimates of 15 major land use classes for Census of Agriculture years between 1945 and 1987. The MLU database is available on one 5.25" diskette in LOTUS 1-2-3 (Release 2) for \$25. It is also available on magnetic medium.

For information, contact:

ERS-NASS
341 Victoria Drive
Herndon, Virginia 22070
Phone: (800) 999-6779

DEPARTMENT OF AGRICULTURE

National Resources Inventory



OFFICE:

Soil Conservation Service
Resources Inventory Division

SUMMARY PROGRAM DESCRIPTION:

For 50 years, the Soil Conservation Service (SCS) has been conducting periodic inventories of the Nation's soil, water, and related resources. The National Resources Inventory (NRI), which is an extension and modification of earlier inventories, provides data on the status, condition, and trends of these resources of nonfederal land in the United States.

DATA COVERAGE:

The many types of data collected by the NRI process are organized into eight general categories: soil characteristics and interpretations (including agricultural land capability); land cover; land use (including irrigated and non-irrigated cropland, grazed and ungrazed forest land, prime farmland, etc.); erosion (such as sheet and rill, wind, and ephemeral gullies); land treatment (such as irrigation, tillage, and windbreaks); conservation treatment needs; vegetative conditions (such as wetlands, rangeland condition and species, and pasture management); and potential for conversion to cropland.

COLLECTION METHODS:

The NRI is a multi-resource inventory based on soils and related resource data collected at scientifically selected random sample sites. The NRI sample design was developed by the Iowa State University (ISU) Statistical Laboratory at Ames. It uses census area and point methods for data collection. Data collection involves both field investigation and remote sensing (photo-interpretation).

COLLECTION FREQUENCY:

Data are collected on a 5-year cycle. Recent surveys were conducted in 1977, 1982, and 1987.

GEOGRAPHIC COVERAGE:

The 1987 NRI data were collected from nearly 300,000 sample sites from all counties of the United States except those in Alaska, and in Puerto Rico and the Virgin Islands. Most of these samples were part of the 1982 NRI which had nearly 1 million sample sites. The 1987 NRI data has a high degree of reliability at the State level and the 1982 NRI provides a high degree of reliability at the multi-county level. Data estimates can be made by Major Land Resources Areas; SCS Administrative Areas; Water Resources Council Aggregated Subareas; and other multi-county geographic subdivisions.

CONTACT:

Jeff Goebel
Resources Inventory and Geographic Information
Systems Division
Soil Conservation Service
U.S. Department of Agriculture
P.O. Box 2890
South Agricultural Building, Room 6175
Washington, DC 20013
Phone: (202) 720-4530

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- Soil Conservation Service. 1984. *Basic Statistics 1977 National Resources Inventory*. Statistical Bulletin No. 686. Department of Agriculture, SCS/ISU. Washington, DC.
- . 1987. *Basic Statistics 1982 National Resources Inventory*. Statistical Bulletin No. 756. Department of Agriculture, SCS/ISU. Washington, DC.

--. 1989. *Summary Report 1987 National Resources Inventory*. Statistical Bulletin No. 790. Department of Agriculture, SCS/ISU. Washington, DC.

DATABASE(S):

National Resources Inventory Database

The database contains 1977, 1982 and 1987 National Resources Inventory data sets.

For more information contact:

Iowa State University Computation Center
Ames, IA 50010
Phone: (515) 294-3402

DEPARTMENT OF THE INTERIOR

National Land Use and Land Cover Mapping Program



OFFICE:

U.S. Geological Survey
Office of Geographic and Cartographic Research

SUMMARY PROGRAM DESCRIPTION:

As part of its National Mapping Program, the USGS produces and distributes land use and land cover maps and digitized data. Land use refers to human activities that are directly related to the land. Land cover describes the vegetation, water, natural surface, and artificial constructions at the land surface. Associated maps display information on political units, hydrologic units, census county subdivisions, and in some cases, Federal land ownership.

DATA COVERAGE:

Land use and land cover areas are classified into nine major classes: urban or built-up land; agricultural land; rangeland; forest land; water areas; wetland; barren land; tundra; and perennial snow or ice. Each major class is subdivided into several minor classes, for 37 minor classes total. For example, forest lands are further classified as deciduous, evergreen, or mixed forest land, and water is further classified as streams and canals, lakes, reservoirs, or bays and estuaries.

COLLECTION METHODS:

Remote sensing methods are used, including satellite imagery, high-altitude imagery, medium-altitude remote sensing (1:20,000), and low-altitude imagery.

COLLECTION FREQUENCY:

Data were collected in the late 1970s and early 1980s.

GEOGRAPHIC COVERAGE:

1:250,000 maps are available for the continental United States. Digitized data at 1:250,000 scale are available for most of the East, Midwest, West Coast, and parts of the Rocky Mountain States and Texas. A few areas, including Hawaii, are available at 1:100,000 scale.

CONTACT:

Richard L. Kleckner
Office of Geographic and Cartographic Research
U.S. Geological Survey
590 National Center
Reston, VA 22092
Phone: (703) 648-5741

Kathy F. Lins
Office of Geographic and Cartographic Research
512 National Center
Reston, VA 22092
Phone: (703) 648-4535

FOR PUBLIC INQUIRIES:

Earth Sciences Information Center
U.S. Geological Survey
507 National Center
Reston, VA 22092
Phone: (703) 648-6045

To order maps, call 1-800-USA-MAPS.

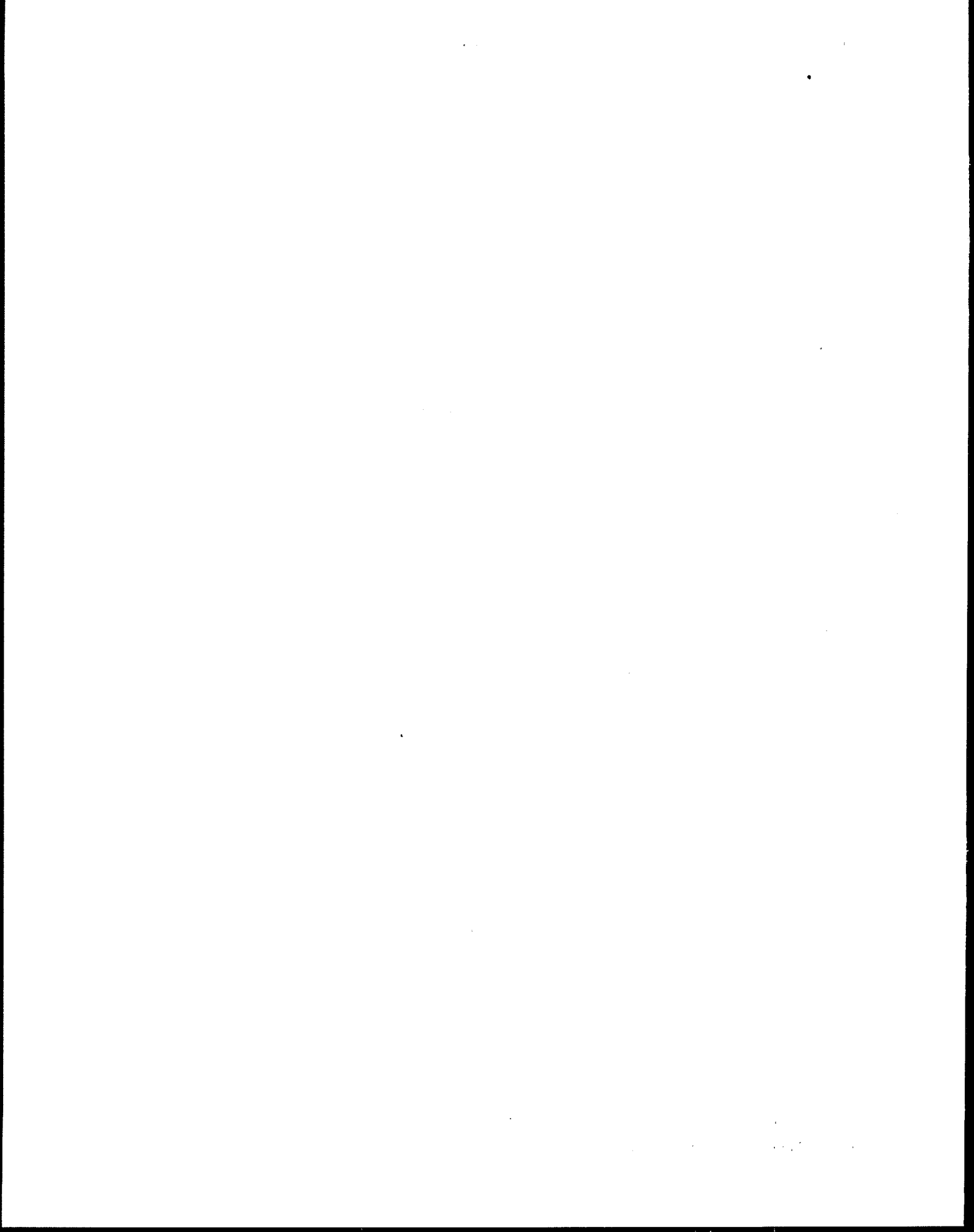
PUBLICATIONS:

Department of the Interior, U.S. Geological Survey.
1986. Land Use and Land Cover Digital Data from
1:250,000 and 1:100,000 Scale Maps, U.S. Geodata
Users Guide 4. Washington, DC: Department of the
Interior, U.S. Geological Survey.

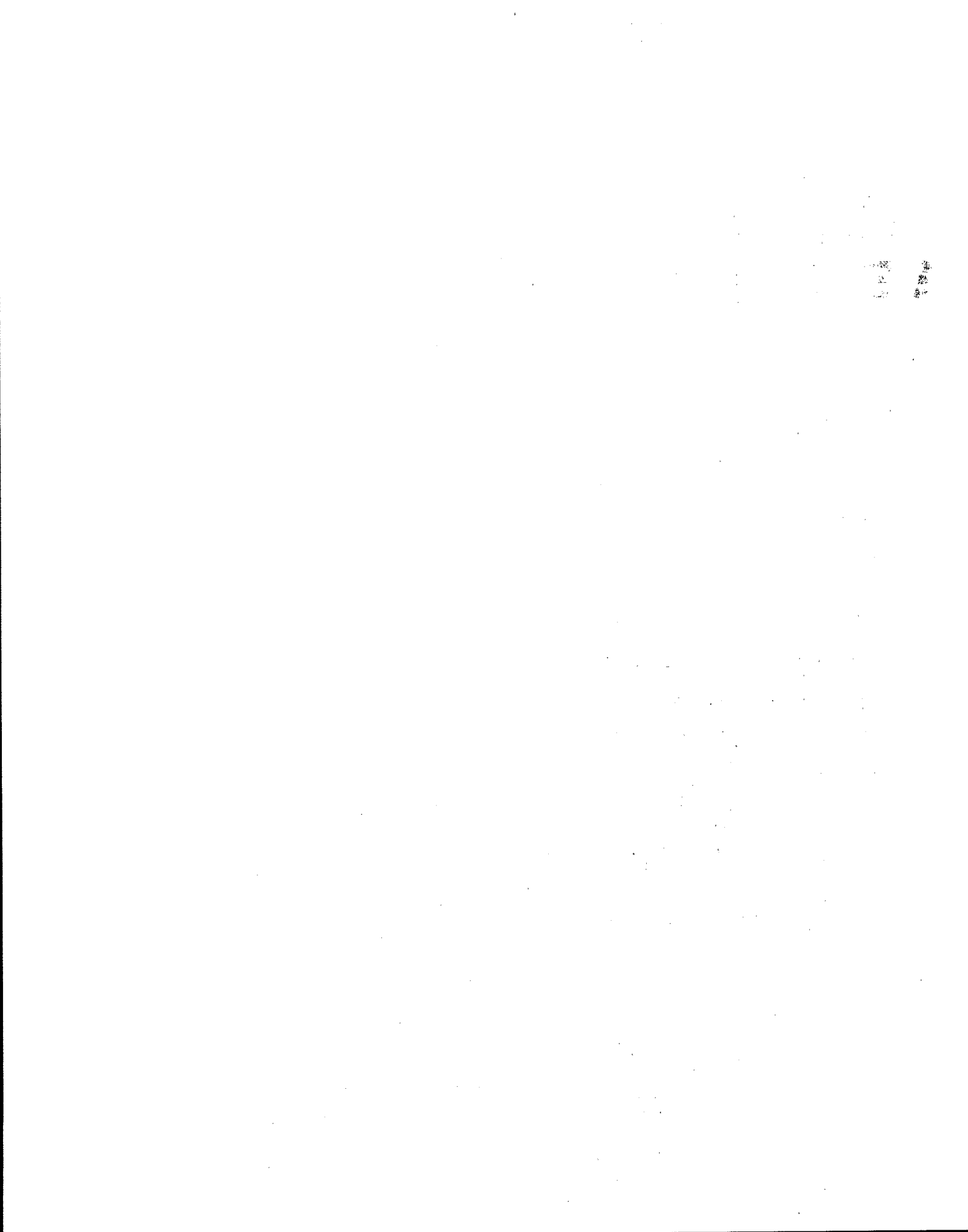
DATABASE(S):

U.S. GeoData

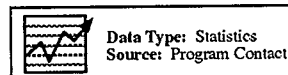
The U.S. GeoData database contains digitized data on land use and land cover (see above description), elevation models, digital line graphs for planimetric data, and geographic names information. Land use and land cover data are produced in two formats: the vector polygon and the composite theme grid cell and are available in ASCII character or in IBM binary format from the Earth Sciences Information Center. Summary land use data for census county subdivisions, hydrologic units, and political units are available on microfiche from the Earth Sciences Information Center.



B. Water Use



DEPARTMENT OF AGRICULTURE



Snow Survey and Water Supply Forecasting

OFFICE:

Soil Conservation Service
Resources Inventory Division

SUMMARY PROGRAM DESCRIPTION:

Snowpack and other hydrometeorological data are collected and analyzed to produce seasonal water supply forecasts and related conservation planning products.

STATISTICAL COVERAGE:

Variables estimated monthly for about 600 river forecast points include: most probable seasonal water supply, exceedance probabilities, and the 25-year seasonal average.

Variables measured daily for about 560 SNOTEL Automated Data Collection Sites include: accumulated snow water content, accumulated precipitation, average air temperature, maximum air temperature, minimum air temperature, and measurements by various sensors at select SNOTEL sites.

Trend data available include: western basin snow pack summaries provided monthly from January 1 through May 1 (in a few basins June 1). Mid-month data are made for some basins. Daily data are available by computer access. Comparative base in both cases is the 25-year average.

DATA COLLECTION METHODS:

Measurements at manual snow courses are made by trained snow surveyors using a line of about 10 sampling points of approximately 50 to 100 feet spacing to represent a particular area. Snow density is used to test consistency between points in a course. Automated SNOTEL sites report data from a variety of sensors. Sensor performance standards and ground truthing are monitored regularly. Correlations are made to test the effectiveness of data collection sites. Forecast accuracy is evaluated against measured seasonal flows.

COLLECTION FREQUENCY:

Data are collected monthly during the snow season at approximately 1,500 manual snow courses (twice a month in a few basins). Data from the 560 SNOTEL sites are measured throughout the year every 15 minutes and reported daily (or more frequently in some cases).

GEOGRAPHIC COVERAGE:

Eleven (11) western States: Alaska, Arizona, California (Great Basin only), Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

CONTACT:

David E. Johnson
Snow Survey Program Manager
USDA, Soil Conservation Service
511 N.W. Broadway, Room 248
Portland, OR 97209-3489
Phone: (503) 326-2843

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Soil Conservation Service. (Annual). *Water Supply Outlook for the Western U.S., January 1 through May 1*. U.S. Department of Agriculture. Washington, DC.

--. (Annual). *Water Supply Forecasts -- Individual Basins in Western States, January 1 through May 1* (some basins June 1). U.S. Department of Agriculture. Washington, DC.

--. (Annual). *Annual Data Summary* (with map of data collection sites). U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

Centralized Forecasting System (CFS)
The CFS contains data and products described above as well as related information.

DEPARTMENT OF COMMERCE



Farm and Ranch Irrigation Survey

OFFICE:

Bureau of the Census
Agriculture Division

SUMMARY PROGRAM DESCRIPTION:

The Farm and Ranch Irrigation Survey is conducted on a sample of the farms and ranches reporting irrigation in the Census of Agriculture to provide detailed data relating to on-farm irrigation practices.

DATA COVERAGE:

The survey generates statistics on: total acres of farm and ranch land irrigated; acres irrigated by category of land use; acres and yield of irrigated and nonirrigated crops; quantity of water applied; method of application to selected crops; acres irrigated and quantity of water used by source; acres irrigated by type of water distribution systems; and number of irrigation wells and pumps.

Also reported are irrigation expenditures for maintenance and repair of irrigation equipment and facilities; purchase of energy for on-farm pumping of irrigation water; investment in irrigation equipment, facilities, and land improvement; and cost of water received from off-farm water suppliers.

Additional information is provided on the number of irrigated farms; depth and pumping capacity of wells used; the number of pumps and quantity of energy used in irrigation; application of chemicals in irrigation; timing of irrigation; and crop yields from irrigated farms.

COLLECTION METHODS:

The survey is a probability sample of all irrigated farms and ranches identified in the Census of Agriculture, except farms in Alaska and Hawaii, horticultural specialty and abnormal farms. The survey is conducted by questionnaire. Two types of statistical estimation procedures are used to account for selection of survey sample and for nonresponse to the questionnaire. Methodologies are more generally described in the publications listed below.

COLLECTION FREQUENCY:

Farm and Ranch Irrigation Surveys were conducted in 1979, 1984, and 1988. The next survey is scheduled for 1993. Selected irrigation data for on-farm irrigation have been collected in the Census of Agriculture since 1890.

GEOGRAPHIC COVERAGE:

Estimates are made for the 27 leading irrigation States, 18 water resource areas, and the entire conterminous United States.

CONTACT:

Dave Peterson
Special Surveys Branch, Agriculture Division
Bureau of the Census
Room 436, Iverson Mall
Washington, DC 20233
Phone: (301) 763-8260

FOR PUBLIC INQUIRIES:

Public Information Office
Phone: (301) 763-1113

PUBLICATIONS:

Bureau of the Census. 1979, 1984, 1988. *Farm and Ranch Irrigation Survey* U.S. Department of Commerce. Washington, DC.

DATABASE(S):

Farm and Ranch Irrigation Survey

Data are available on flexible diskettes, computer tapes, compact disk read-only memory (CD-ROM), and online access.

For information on these services and published reports, contact Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

DEPARTMENT OF DEFENSE



Data Type: Statistics
Source: Program Contact

Major Water Projects and Their Characteristics

OFFICE:

U.S. Army Corps of Engineers
Hydraulic and Hydrology Branch
Engineering Division
Directorate of Civil Works

SUMMARY PROGRAM DESCRIPTION:

Listing of major Corps of Engineers projects and non-Corps projects which have Federal flood control or navigation storage.

STATISTICAL COVERAGE:

Data collected include: location, stream, purpose, storage, operating range, owner, legislation, year completed, hydraulic head, regulation capacities, hydropower capacities, drainage area, normal annual precipitation, average annual flow, and 100-year flow.

DATA COLLECTION METHODS:

None provided.

COLLECTION FREQUENCY:

Data are updated every 3 to 5 years or as necessary.

GEOGRAPHIC COVERAGE:

Entire U.S. and Puerto Rico.

CONTACT:

David Wingard
Hydraulic Engineer
U.S. Army Corps of Engineers
CECW-EH-W
20 Massachusetts Ave., NW
Washington, DC 20314-1000
Phone: (202) 272-8510

FOR PUBLIC INQUIRIES:

Charles Sullivan, Chief
Water Control/Quality Section
HQ U.S. Army Corps of Engineers
CECW-EH-W
20 Massachusetts Ave., NW
Washington, DC 20314-1000
Phone: (202) 272-8509

PUBLICATIONS:

None provided.

DATABASE(S):

Major Water Projects Database (ER240)

For more information contact David Wingard (address above).

DEPARTMENT OF THE INTERIOR



National Water Conditions Reporting System

OFFICE:

U.S. Geological Survey
Water Resources Division
Office of Scientific Information Management
Hydrologic Information Unit

SUMMARY PROGRAM DESCRIPTION:

This program collects and analyzes streamflow data from 190 sites in the U.S., Canada, and Puerto Rico; ground water levels from about 200 sites in the conterminous U.S.; reservoir contents from 100 reservoirs in the U.S. and Canada; and limited water-quality data from five sites on major rivers. These data, or summaries thereof, are published in the free monthly newsletter, "National Water Conditions."

DATA COVERAGE:

Streamflow data include maximum, minimum, and mean monthly discharge, and also maximum and minimum daily discharges for the period of record. Classed data (quartiles) for the current 30-year reference period (1951-80 at this time) include monthly, quarterly, and annual (water-year and calendar year) means. Period-of-record monthly averages, maximums and minimums are available for ground water levels, reservoirs, and water quality data.

Data reveal trends in stream flow and volume (for example, effects of droughts, floods, and reservoirs on discharges). Spatial data (e.g. maps) and descriptive text are generated from the data.

COLLECTION METHODS:

Sampling locations and rivers sampled are selected so as to provide an overall picture of conditions in the Nation. Selection criteria depend upon purpose (e.g., major rivers are chosen by streamflow). The data collection design is based on professional judgement that data are representative; a statistical design was not developed or implemented.

Data parameters are measured by recording instrumentation and stored in the WATSTORE database. USGS personnel extract the data from WATSTORE and the external source listed under

"Databases" (below) and conduct statistical analyses to produce trends in national water conditions.

COLLECTION FREQUENCY:

Frequency includes: monthly means for all streamflow with highest, lowest, and last available day of month for some sites; month end reservoir contents; and month end ground water levels.

GEOGRAPHIC COVERAGE:

Entire United States, Puerto Rico, and southern Canada. Streamflow sites were selected to provide enough data to define maps of streamflow conditions on a monthly basis. Reservoirs were selected to provide a general picture. Ground water network provides data on areas of significant ground water use.

CONTACT:

Thomas G. Ross, Chief
Hydrologic Information Unit
U.S. Geological Survey
419 National Center
Reston, VA 22092
Phone: (703) 648-6814

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

National Water Conditions Newsletter (monthly; since 1944.) Subscription free upon request.

DATABASE(S):

Water Data Storage and Retrieval System (WATSTORE)

WATSTORE contains surface water data and other water quality and water resource data from the National Hydrologic Benchmark Network. Data are available on magnetic medium and as hard copy.

Information about the data system and computer-related matters can be obtained from:

USGS Branch of Computer Technology
440 National Center
Reston, Virginia 22092
Phone: (703) 648-5605

Additional information used in the National Water Conditions Report is furnished by the Bureau of Reclamation, the Corps of Engineers, the National Ocean Service, the NOAA/USDA Joint Agricultural Weather Facility, and other sources.

DEPARTMENT OF THE INTERIOR



National Water Use Information Program

OFFICE:

U.S. Geological Survey
Water Resources Division
Program Coordination and Technical Support
Branch of Water Use Information

SUMMARY PROGRAM DESCRIPTION:

The National Water Use Information Program is a Federal-State cooperative program designed to collect, store, analyze, and disseminate water-use information both nationally and locally. The program began in 1978 to meet the need for a single source of uniform information on water use. The water-use information from the program complements long-term USGS data on the availability and quality of the Nation's water resources.

The objectives of the program are to determine, on a national level, how much fresh and saline surface water and ground water are withdrawn and for what purposes; how much of this water is consumed during use; and how much water is returned to the source after use.

DATA COVERAGE:

Water withdrawals from surface and ground water sources and consumptive use estimates are compiled by State and water resources regions for the following water-use categories: public supply, domestic, commercial, industry, mining, irrigation, livestock, thermoelectric power generation, and hydroelectric power generation. Instream use is estimated for hydroelectric power generation. Trend data are available at 5-year intervals from 1950 to 1990.

COLLECTION METHODS:

Water-Use data are based on direct measurements or estimation, depending on whether the parameter is metered or not. The data are compiled through a census, primarily mail surveys or permit reports required to meet State regulations. Personnel of cooperating States collect water-use data and aggregate these data by county and hydrologic unit. The point data are stored on State-level databases; the aggregated data are compiled by the USGS for incorporation into the national Aggregated Water Use Data System (AWUDS).

COLLECTION FREQUENCY:

National compilations of Estimated Use of Water in the United States have been published by the USGS since 1950 at 5-year intervals. Many States compile and publish monthly or annual water use data as part of the cooperative program.

GEOGRAPHIC COVERAGE:

Water use estimates are compiled for all 50 States, Puerto Rico, Virgin Islands, and the District of Columbia. Data are available for 1985 by county and four-digit hydrologic subregion.

CONTACT:

Wayne Solley, Chief
Branch of Water Use Information
U.S. Geological Survey
414 National Center
Reston, VA 22092
Phone: (703) 648-5670

FOR PUBLIC INQUIRIES:

Sandra Holmes
Technical Information Specialist
U.S. Geological Survey
419 National Center
Reston, VA 22092
Phone: (703) 648-6815

PUBLICATIONS:

U.S. Geological Survey. *Estimated Use of Water in the United States*. 1950, 1955, 1960, 1965, 1970, 1975, 1980, 1985, 1990. U.S. Department of Interior. Reston, VA.

--. 1992. *Preliminary Estimates of Water Use in the United States, 1990*. U.S. Geological Survey Open-File Report 92-63. U.S. Department of Interior. Reston, VA.

DATABASE(S):**Aggregated Water Use Data System (AWUDS)**

AWUDS contains estimates by source for various water-use categories. The database contains over 120 data elements for all 50 States, Puerto Rico, Virgin Islands, and Washington, DC. Latest information available is for 1985. The database is maintained in the USGS district office in Doraville, GA State Water Use Data System.

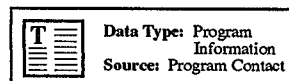
State Water Use Data System (SWUDS)

SWUDS provides specific water use information for each State. Databases are maintained by USGS in district offices in each State.

For more information, contact:

Robert Pierce, Hydrologist
U.S. Geological Survey
6481-B Peachtree Industrial Blvd.
Doraville, GA 30360
Phone: (404) 986-6860

DEPARTMENT OF THE INTERIOR



Water Supply Conditions for the Western United States

OFFICE:

Bureau of Reclamation
Earth Science Division
Surface Water Branch

SUMMARY PROGRAM DESCRIPTION:

This program does not collect any water quality data directly. However, some water quality information can be inferred due to expected runoff conditions. The program publishes monthly water supply forecasts during the spring runoff period when most western reservoirs are filled. The reports are based on many sources of data. These sources are the Palmer Drought Severity Index, spring and summer stream flow forecasts (Soil Conservation Service and National Weather Service) and Reclamation reservoir storage.

This summary information on water supply is based on a percentage of the normal water supply expected for the irrigation season. This allows the irrigation districts and irrigators to plan their operations to utilize the expected water supply. The acre feet of runoff and reservoir storage is measured. Snow pack data is measured in inches of water. Available 8 1/2- by 11-inch maps in a report show data in the 17 western United States.

Collection methods for this program are set by the agency collecting the basic data and represents professional judgement. The agency personnel collect the data under established procedures. The raw data has been collected for many years. The recent drought caused the need for providing the data to irrigation districts and irrigators so they would not plant more acres than could be irrigated. Direct measurements are made of precipitation, snow water content, reservoir storage and stream flow which are then analyzed statistically to predict the irrigation water supply. QA/QC measures are established by the agency collecting the data. Data is collected daily and monthly for the 17 western States.

CONTACT:

Dave King
Hydrologist
P.O. Box 25007 (D-5750)
Denver, CO 80225
Phone: (303) 236-3813
FAX: (404) 776-0199

FOR PUBLIC INQUIRIES:

See Contact.

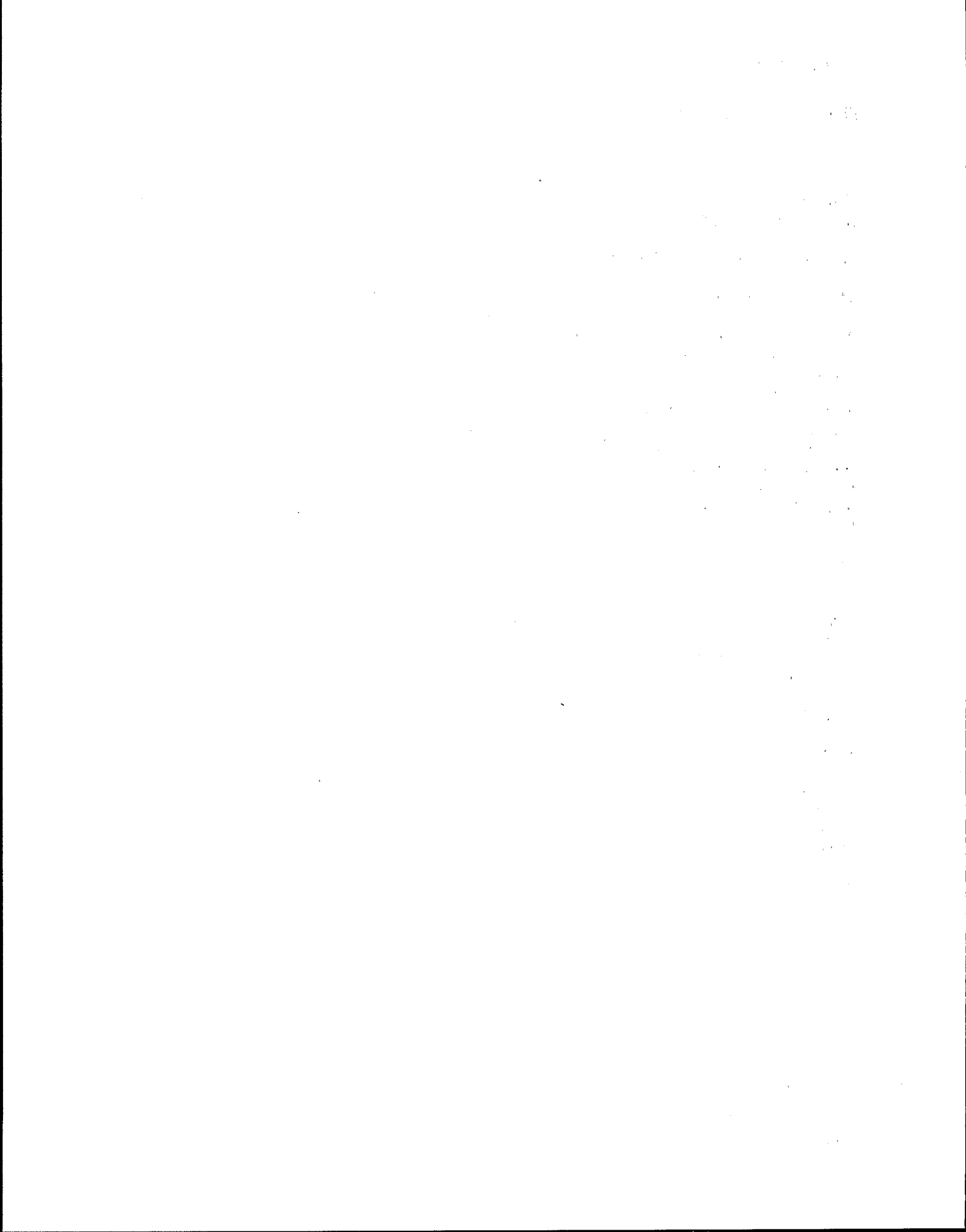
PUBLICATIONS:

Monthly report starting in January through runoff period, then quarterly. The November report is a summary and outlook for the next year.

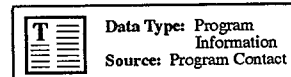
DATABASE(S):

None provided.

C. Resource Use



DEPARTMENT OF AGRICULTURE



Resource Planning Act Assessments

OFFICE:

U.S. Forest Service
Resources Program and Assessment Staff

SUMMARY PROGRAM DESCRIPTION:

The Resources Planning Act (RPA) Assessment includes an analysis of present and anticipated uses, demand for, and supply of the renewable resources of forest, range, and other associated lands with consideration of the international resource situation, and an emphasis on pertinent supply, demand and price relationship trends. The 1989 RPA Assessment Summary Document presents an overview analysis of the present situation and an outlook for the land base, outdoor recreation and wilderness, wildlife and fish, forest-range grazing, minerals, timber and water. Complete analyses for each of these resources are contained in seven supporting technical documents. The supporting appendix for water, entitled "An Analysis of the Water Situation in the United States: 1989-2040," discusses the environmental, social and economic effects of projected water withdrawals and consumption, and the implications and opportunities for water resource management. The supporting appendix for wildlife and fish, entitled "An Analysis of the Wildlife and Fish Situation in the United States: 1989-2040," discusses current status and recent trends in wildlife and fish resources, including habitat, populations, harvests, and use. The appendix also discusses projected inventories and uses of wildlife and fish and the implications and opportunities for wildlife and fish management.

This assessment is required by law once every 10 years. Information is derived from published literature and other information sources.

RPA legislation directed the Forest Service to follow two principles in conducting assessments. First, assessments were to analyze the resource situation from a national perspective-including all ownerships, public and private. Second, the Forest Service was to use, to the extent practicable, information collected by other public agencies on the resources studied.

Data are collected every 10 years for the entire U.S.

CONTACT:

Director
Resource Program and Assessment Staff
USDA, Forest Service
PO Box 96090
Washington, DC 20090-6090
Phone: (202) 205-1235

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

U.S. Forest Service. *The Resource Planning Act Assessment for 1989*. U.S. Department of Agriculture. Washington, DC.

--. 1989. *An Analysis of the Water Situation in the United States: 1989-2040: A Technical Document Supporting the 1989 USDA Forest Service RPA Assessment*. U.S. Department of Agriculture. Washington, DC.

--. 1989. *An Analysis of the Wildlife and Fish Situation in the United States: 1989-2040*. U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

None provided.

Federal Land Policy and Management Act (FLPMA) Assessments

OFFICE:

Bureau of Land Management
Soil, Water and Air Program Staff

SUMMARY PROGRAM DESCRIPTION:

The Federal Land Policy and Management Act established as a national policy that land use plans and programs be developed to manage natural resources on public lands based on the principles of multiple use and sustained yield. The lands are to be managed in the public interest in a manner that will protect the quality of the water resource, among other values. The Act directs that an inventory of all public lands and their resources be prepared and maintained on a continuing basis. In carrying out this direction, the BLM conducts baseline inventories of surface water quality to assist in evaluation of resource condition and capability for the development of management plans and programs. Samples also are taken periodically to determine the impacts of resource use and development activities. Water quality records are maintained at BLM field offices, as well as being stored in the EPA STORET database. The BLM is in the process of developing an agency-wide database for water quality data, as well as working with the EPA and the USGS on the expansion and improvement of national databases.

Public Water Supply Assessments

Water quality samples are taken at BLM facilities providing potable water sources to the public. This program is conducted under agreements with State public health agencies, and data collected are submitted to the State agencies as well as being stored by the responsible BLM field office.

Wilderness Monitoring Program

The BLM has established 19 monitoring stations in designated wilderness areas in the western United States which monitor water quality among other parameters. This is a long-term effort which is designed to assist in the assessment of condition and trend of these special designation, high priority areas on a continuing basis. Data from these stations are also being used as a part of the information base for the global climate change assessment effort, and these stations contribute to a nationwide, interagency monitoring network.

CONTACT:

Hydrologist
DOI/BLM
Washington Office (222)
18th and C Street, NW
Washington, DC 20240
Phone: (202) 653-9202
FAX: (202) 653-9118

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Bureau of Land Management. 1992. *Annual Report of Accomplishments for FY92*. U.S. Department of the Interior. Washington, DC.

DATABASE(S):

None provided.

DEPARTMENT OF THE INTERIOR



National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

OFFICE:

U.S. Fish and Wildlife Service
Federal Aid Division

SUMMARY PROGRAM DESCRIPTION:

The National Survey of Fishing, Hunting, and Wildlife-Associated Recreation has been conducted about every 5 years since 1955. It is one of the oldest and most comprehensive continuing recreation surveys.

The purpose of the survey is to gather information on the number of anglers, hunters, and nonconsumptive wildlife recreation participants in the United States, as well as how often they participate and how much money they spend on these activities. Nonconsumptive recreationists are those who enjoy photographing, observing, and feeding wildlife.

DATA COVERAGE:

Numerical data include: number of participants in different types of hunting, fishing, and wildlife-associated recreation activities; days of participation and trips; species hunted and fished; types of expenditures; and selected socioeconomic characteristics of participants.

COLLECTION METHODS:

The 1985 survey was conducted in two phases. In the first phase, a sample of almost 110,000 households nationwide was screened, mostly by telephone, to determine who in the household had participated in wildlife activities. The second phase of the survey consisted of detailed in-person interviews conducted with subsamples of anglers, hunters, and non-consumptive wildlife participants who were identified in the screening phase. Sample sizes were designed to provide statistically reliable results at the State level for the surveyed activities. In 1985, a total of 33,973 anglers and hunters and 30,177 non-consumptive users were in the detailed sample.

Some changes have been made in the 1991 survey design. For example, telephone interviews were conducted three times during the year (as opposed to once) and interviewees were asked to recall hunting, fishing, and non-consumptive activities for the previous four months (as opposed to one-year recall). Despite these changes, data from the 1991 survey will be comparable with previous survey results.

COLLECTION FREQUENCY:

Five year intervals (except between the 1985 and 1991 surveys because additional time was required to revise survey design). The 1991 survey will be available in May 1993.

GEOGRAPHIC COVERAGE:

The entire United States.

CONTACT:

Sylvia Cabrera
Federal Aid Division
U.S. Fish and Wildlife Service
Mailstop 322 ARLSQ
1849 C Street, N.W.
Washington, DC 20240
Phone: (703) 358-2156

FOR PUBLIC INQUIRIES:

Richard Aiken
Federal Aid Division
U.S. Fish and Wildlife Service
Mailstop 322 ARLSQ
1849 C Street, N.W.
Washington, DC 20240
Phone: (703) 358-2156

PUBLICATIONS:

Fish and Wildlife Service. 1988. 1985 *National Survey of Fishing, Hunting, and Wildlife-associated Recreation* (and earlier reports in this series). U.S. Department of the Interior. Washington, DC.

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- . 1988. *Net Economic Recreation Values for Deer, Elk, and Waterfowl Hunting and Bass Fishing, 1985*. Fish and Wildlife Service Report 85-1. U.S. Department of the Interior. Washington, DC.
 - . 1988. *Net Economic Values of Non-Consumptive Wildlife-Related Recreation, 1985*. Fish and Wildlife Service Report 85-2. U.S. Department of the Interior. Washington, DC.
 - . 1989. *Wildlife Related Recreation on Public Lands, 1985*. Fish and Wildlife Service Report 85-3. U.S. Department of the Interior. Washington, DC.
 - . 1989. *Hunting on Wetlands, 1985*. Fish and Wildlife Service Report 85-4. U.S. Department of the Interior. Washington, DC.
 - . 1989. *Black Bass Fishing in the U.S. Fish and Wildlife Service Report 85-6*. U.S. Department of the Interior. Washington, DC.
 - . 1989. *Trout Fishing in the U.S. Fish and Wildlife Service Report 85-7*. U.S. Department of the Interior. Washington, DC.

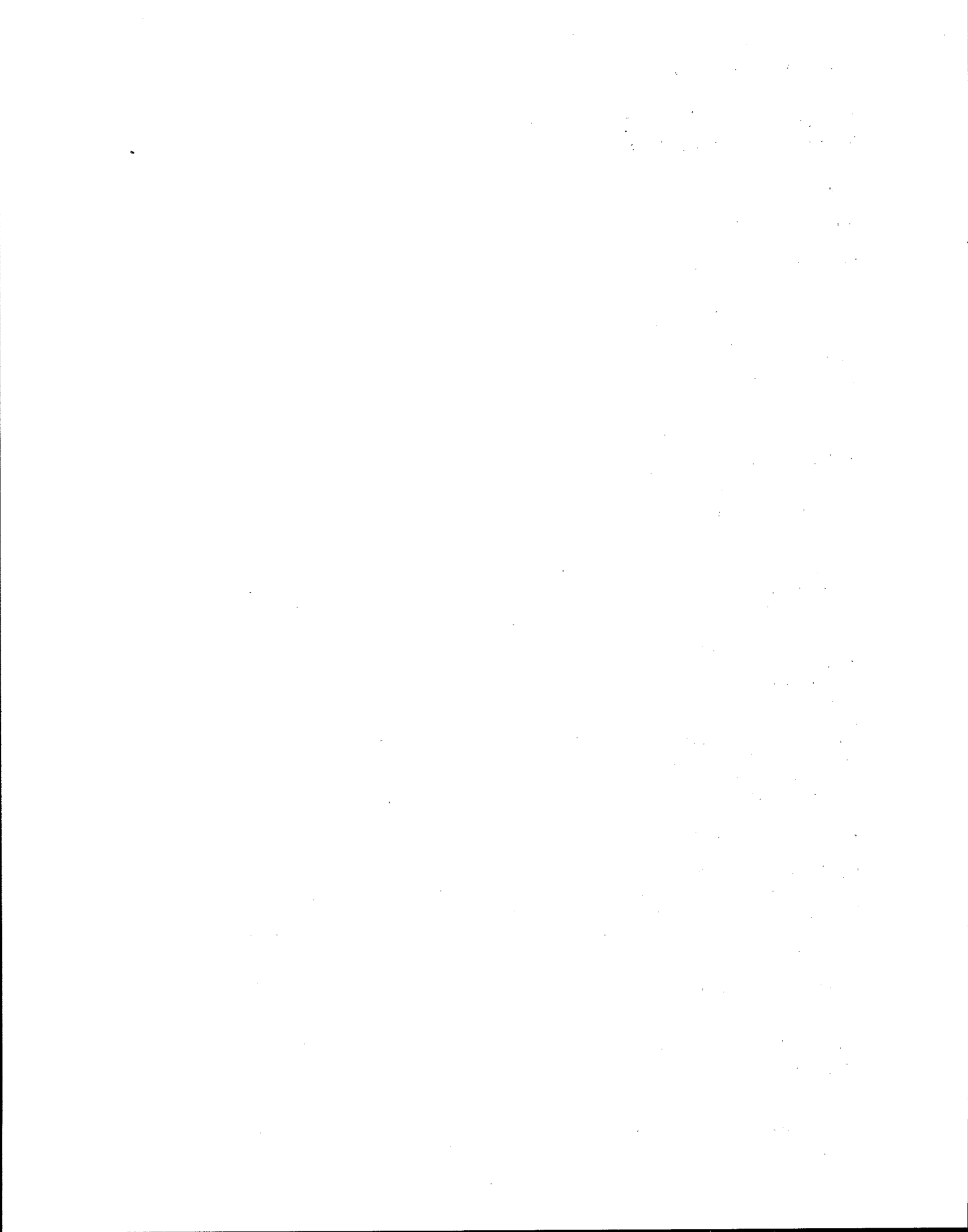
DATABASE(S):

The database provides the statistics described under Data Coverage. Public access by data tape or diskette is available.

Section III

Pollutant Loadings

This section references programs with information on pollutant loadings from both point sources of pollution, e.g., factories and sewage treatment plants, and nonpoint source of pollution such as sheet runoff from farms and cities. As noted earlier, information on loadings can be used with analytical tools such as water quality models to assess and project water quality conditions. The programs in this section of the guide provide information useful in estimating loadings from a number of source types, including agricultural lands, factories, sewage treatment plants, air deposition, hazardous waste sites, transportation activities and energy production. Also see the entries for the EPA Office of Wastewater and Permits and the National Effluent Guidelines Program in Section VI for additional information on loadings from point sources of water pollution. See the entry on the National Nonpoint Source Program in Section VI for additional information on loadings from nonpoint sources of water pollution.



INTERAGENCY PROGRAMS

National Acid Deposition Program/ National Trends Network



OFFICE:

Interagency Effort

SUMMARY PROGRAM DESCRIPTION

The National Acid Deposition Program/National Trends Network (NADP/NTN) was the first, and continues to be the only, U.S. network to monitor precipitation chemistry on a national scale. The current network consists of 196 sites in the conterminous U.S., Hawaii, Puerto Rico, and American Samoa. Sites are located in predominantly rural areas to avoid the localized influences of large point sources and major urban centers. Nearly 14 years of continuous data are available from the sites with the greatest longevity; many of these sites are associated with State Agricultural Experiment Stations.

The primary objective of the NADP/NTN network is the determination of geographical patterns of temporal trends in chemical deposition. The program provides scientists, managers and policy-makers with weekly precipitation chemistry data and information on geographical patterns and temporal trends in concentrations and deposition of hydrogen (H), sulfate (SO_4), nitrate (NO_3), ammonium (NH_4), calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), and chloride (Cl), and ortho-phosphate (PO_4) ions in precipitation. Final, quality assured data are available to a multitude of data users upon request, within six months of sample collection.

DATA COVERAGE:

Principal constituents monitored in precipitation and analyzed for trends are pH, specific conductance, hydrogen ions, sulfate and nitrate ions, ammonium and calcium ions, and chloride, magnesium, sodium, and potassium ions.

COLLECTION METHODS:

The NADP/NTN monitoring program has developed criteria and protocols which ensure uniformity in siting, sampling methods, analytical techniques, data

handling, and overall network operations. Precipitation is collected by wet/dry precipitation collectors and rain gages. Analytical methods for the chemical variables measured are: laboratory pH; field pH; laboratory conductivity; electrometric detection of hydrogen (also reported as Ph); automated colorimetric detection of ammonium; atomic absorption spectrophotometric detection of calcium, magnesium, sodium, and potassium; and ion chromatographic detection of sulfate, nitrate, and chloride. Methodologies are described in National Atmospheric Deposition Program (1988) - See Publications. This interagency program involves participation by many Federal agencies.

COLLECTION FREQUENCY:

Samples are collected weekly. Data from some sites are available from 1979.

GEOGRAPHIC COVERAGE:

The entire United States; however, not all States have stations located within their boundaries. The trend analysis report covers 19 stations located mainly in the eastern United States.

CONTACT:

Ranard J. Pickering
U.S. Geological Survey
416 National Center
Reston, VA 22092
Phone: (703) 648-6875

FOR PUBLIC INQUIRIES:

Carol Simons
NADP/NTN Coordinator
Natural Resource Ecology Laboratory
Colorado State University
Ft. Collins, CO 80523
Phone: (303) 491-5580

PUBLICATIONS:

National Atmospheric Deposition Program. 1988. *NADP/NTN Site Operation Instruction Manual*. Colorado State University, Natural Resource Ecology Laboratory. Ft. Collins, CO.

--. 1991. *NADP/NTN Annual Data Summary: Precipitation Chemistry in the United States, 1990*. Colorado State University, Natural Resource Ecology Laboratory. Ft. Collins, CO.

Schertz, T.L. and R.M. Hirsch. 1985. *Trend Analysis of Weekly Acid Rain Data, 1978-83*. U.S. Geological Survey Water Resources Investigations Report WR185-4211. Reston, VA.

Sisterson, D.L., V.C. Bowersox, A.R. Olsen, T.P. Meyers and R.J. Vong. 1990. *Deposition Monitoring -- Methods and Results*. Report 6, Acidic Deposition: State of Science and Technology. National Acidic Precipitation Assessment Program. Washington, DC:

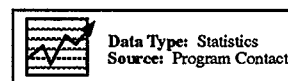
DATABASE(S):

The Acid Deposition System (ADS)

The ADS database contains all data from the NADP/NTN precipitation chemistry monitoring program along with data from several other North American precipitation chemistry networks.

For more information, see Contact.

DEPARTMENT OF AGRICULTURE



1989 Cotton Water Quality Database

OFFICE:

Economic Research Service
Resource and Technology Division
Resource Indicators Branch

SUMMARY PROGRAM DESCRIPTION:

The USDA conducted a survey of cotton producers in 1989 to provide a comprehensive accounting of pesticide and fertilizer use along with benchmark information about pest management, soil conservation, tillage, and water management practices. The survey provided an opportunity to pilot test chemical use and other data collection procedures prior to applying them to other crops.

STATISTICAL COVERAGE:

Available pesticide and fertilizer statistics include share of acres treated, average number of treatments, and application rate for each pesticide material or nutrient applied. Nonchemical pest management practices, irrigation conservation and management practices applied, soil characteristics including erodibility, general farm size, and operator characteristics were also a part of the survey questions.

DATA COLLECTION METHODS:

A statistical survey, using a combination of list and area frames, was designed by the National Agricultural Statistics Service to represent the commodity acreage in each State surveyed. Personal interviews were conducted with farm operators to obtain the information about the specific field selected for the survey. Local offices of the Soil Conservation Service provided the soils information.

COLLECTION FREQUENCY:

The survey was conducted as a pilot survey for the 1989 production year.

GEOGRAPHIC COVERAGE:

Cotton production region included the States of Alabama, Arkansas, Arizona, California, Georgia, Louisiana, Mississippi, Missouri, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas.

CONTACT:

Merritt Padgitt, Agricultural Economist
Economic Research Service, RTD
1301 New York Ave, NW, Rm 528
Washington, DC 20005-4788
Phone: (202) 219-0433

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Crutchfield, Stephen R. December 1990. *Cotton Agricultural Chemical Use and Farming Practices in 1989, An Overview of Survey Results*. ERS Staff Report AGES 9076. Washington, DC.

DATABASE(S):

The database is administratively confidential and is not accessible to outside users. Inquiries should be addressed to contacts.

DEPARTMENT OF AGRICULTURE



Data Type: Statistics
Source: Program Contact

Agricultural Chemical Use on Field Crops

OFFICE:

Economic Research Service
Resource and Technology Division
Resource Indicators Branch

SUMMARY PROGRAM DESCRIPTION:

The USDA conducts annual surveys of producers of major field crops to provide a comprehensive accounting of the pesticides, fertilizers, and tillage practices. This information is being linked to specific soils, water quality, and other data sources using the geographic identifiers for the sample points. The survey program began in 1990 and included wheat, corn, soybeans, cotton, rice, and potatoes. In 1991 it was expanded to include grain sorghum and peanuts.

STATISTICAL COVERAGE:

Available statistics include share of acres treated, average number of treatments, and application rate for each pesticide material or nutrient applied. Statistics are also available on yields, plant density, tillage types, seeding, and pest management practices used.

DATA COLLECTION METHODS:

A statistical survey, using a combination of list and area frames was designed by the National Agricultural Statistics Service to represent the commodity acreage in each State surveyed. Personal interviews were conducted with farm operators to obtain the information about the specific field selected for the survey.

COLLECTION FREQUENCY:

Annual. The specific crops and States included in the survey may change from year to year.

GEOGRAPHIC COVERAGE:

The survey includes all the dominate production States for each crop and is designed to represent about 80 to 90 percent of the U.S. acreage. The 1990 survey included 47 States and the 1991 and 1992 surveys include 35 States.

CONTACTS:

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Washington, DC 20005-4788
Phone: (202) 219-0433

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

National Agricultural Statistics Service and Economic Research Service, March 1991. *Agricultural Chemical Usage, 1990 Field Crop Summary* AgCh1(91). U.S. Department of Agriculture. Washington, DC.

National Agricultural Statistics Service and Economic Research Service, March 1992. *Agricultural Chemical Usage, 1991 Field Crop Summary*. AgCh1(91). U.S. Department of Agriculture.

DATABASE(S):

The database is administratively confidential and is not accessible to outside users. Inquiries should be addressed to contacts.

DEPARTMENT OF AGRICULTURE



Data Type: Statistics
Source: Program Contact

Agricultural Chemical Use on Fruits and Nuts

OFFICE:

Economic Research Service
Resource and Technology Division
Resource Indicators Branch

SUMMARY PROGRAM DESCRIPTION:

The USDA conducted a survey of fruit and nut producers in 1990 to provide a comprehensive accounting of pesticide and fertilizer use along with information on nonchemical pest management and other cultural practices used in fruit and nut production. Information was also obtained about farm sales and income, production expenditures, farm size, and other characteristics of fruit and nut farms and operators. USDA plans to conduct a similar survey in 1993 and at 2-year intervals thereafter.

STATISTICAL COVERAGE:

Available pesticide and fertilizer statistics include share of acres treated, average number of treatments, and application rate for each pesticide material or nutrient applied. Fruit and nut acreage and production along with acreage using non-chemical pest management practices, irrigation, and other applied practices are included. Information on farm sales and income, expenditures for purchased inputs, labor, assets and liabilities, and general characteristics of the farm operators are also a part of the database.

DATA COLLECTION METHODS:

A statistical survey was designed by the National Agricultural Statistics Service to represent the fruit and nut acreage in each State or region surveyed. A personal interview with the farm operators was conducted at the end of the growing season to obtain the information on acreage, production, applied pesticides and nutrients, and practices. A second personal interview was conducted to obtain the economic information.

COLLECTION FREQUENCY:

The first survey was conducted in 1991 and will be conducted every other year.

GEOGRAPHIC COVERAGE:

Fourteen predominant fruit and nut producing States were included in the 1991 survey.

CONTACT:

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Economic Research Service, RTD
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Phone: (202) 219-0433

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

National Agricultural Statistics Service and Economic Research Service, June 1992. *Agricultural Chemical Usage, 1991 Fruits and Nuts Summary*. AgCh1(92). U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

The database is administratively confidential and is not accessible to outside users. Inquiries should be addressed to contacts.

Agricultural Chemical Use on Vegetables

OFFICE:

Economic Research Service
Resource and Technology Division
Resource Indicators Branch

SUMMARY PROGRAM DESCRIPTION:

The USDA conducted a survey of vegetable producers in 1990 to provide a comprehensive accounting of pesticide and fertilizer use along with information on nonchemical pest management and other cultural practices used in vegetable production. Information was also obtained about farm sales and income, production expenditures, farm size, and other characteristics of vegetable farms and operators. USDA plans to conduct a similar survey in 1992 and at 2-year intervals thereafter.

STATISTICAL COVERAGE:

Available pesticide and fertilizer statistics include share of acres treated, average number of treatments, and application rate for each pesticide material or nutrient applied. Vegetable acreage and production along with acreage using non-chemical pest management practices, irrigation, soil conservation, and other applied practices are included. Information on farm sales and income, expenditures for purchased inputs, labor, assets and liabilities, and general characteristics of the farm operators are also a part of the database.

DATA COLLECTION METHODS:

A statistical survey was designed by the National Agricultural Statistics Service to represent the vegetable acreage in each State or region surveyed. A personal interview with the farm operators was conducted at the end of the growing season to obtain the information on acreage, production, applied pesticides and nutrients, and practices. A second personal interview was conducted to obtain the economic information.

COLLECTION FREQUENCY:

The first survey was conducted in 1990 and will be conducted every other year.

GEOGRAPHIC COVERAGE:

The predominate vegetable production States of Arizona, California, Florida, Michigan, and Texas, were included in the 1990 survey. The 1992 survey will include 14 States.

CONTACT:

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Phone: (202) 219-0433

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

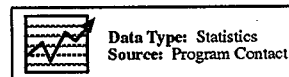
National Agricultural Statistics Service and Economic Research Service, June 1991. *Agricultural Chemical Usage, 1990 Vegetables Summary*. AgCh1(91). U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

The database is administratively confidential and is not accessible to outside users. Inquiries should be addressed to contacts.

DEPARTMENT OF AGRICULTURE

Chemical Use Surveys



OFFICE:

National Agricultural Statistics Service (NASS)
Research and Applications Division
Environmental Statistics Group

SUMMARY PROGRAM DESCRIPTION:

State level statistics on agricultural chemical usage for major field crops, fruits, nuts, and vegetables in the largest producing States.

STATISTICAL COVERAGE:

Beginning in 1990, chemical usage statistics for field crops, fruits and vegetables for major producing States. The time frame covered by these statistics is from 1990 through 1991.

DATA COLLECTION METHODS:

NASS field offices collect the data. Chemical use data were collected on winter wheat beginning in late May 1990, while data collection for corn, cotton, rice, soybeans, and other spring wheat, and durum wheat begin in late July 1990. The potato data collection period varied by State but most activity occurred in early fall. A total of 15,025 sample fields were included in the 1990 survey program.

A random sample of fields was selected for each crop so that the probability of selecting a particular field was directly proportional to the total acres planted to that crop in the State. Thus, each acre planted to a crop had exactly the same chance of selection. For winter wheat, the selection was based on acres standing for harvest rather than acres planted. Farmers operating the sample fields were contacted and they supplied information on chemical applications made to those specific fields.

The lists of fields and crops from which the sample fields were selected came from information obtained through two surveys of farm operators conducted earlier in the year. The survey for winter wheat acreage was conducted in March and the survey for other crops in June. In each case, all areas of land, called segments, were screened throughout the

country to determine which crops were growing. For winter wheat, rice, and potatoes, these area segments were supplemented with lists of farm operators to increase sampling efficiency.

COLLECTION FREQUENCY:

Data are collected yearly.

GEOGRAPHIC COVERAGE:

This depends a great deal on funding, specific studies, etc. but generally, the surveys cover the major field crops, fruits, nuts, and vegetable States.

CONTACT:

Van Johnson
Survey Statistician
USDA/NASS
14th and Independence Ave. SW
Room 4801 South Building
Washington, DC 20250-2000
Phone: (202) 720-7492

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

National Agricultural Statistics Service. 1990. *Agricultural Chemical Usage: 1990 Field Crops Summary*. U.S. Department of Agriculture. Washington, DC.

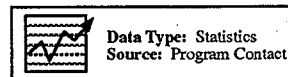
--. 1990. *Agricultural Chemical Usage: 1990 Vegetables Summary*. U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

Summarized data available at the State level.

DEPARTMENT OF AGRICULTURE

Fertilizer Use and Price Statistics



OFFICE:

USDA, Economic Research Service
Resource and Technology Division
Resource Indicators Branch

SUMMARY PROGRAM DESCRIPTION:

A spreadsheet of annual statistics of fertilizer nutrients applied to field crops and fertilizer prices. The data are available as an ERS electronic data file.

STATISTICAL COVERAGE:

U.S. fertilizer use and prices and nutrients applied per acre for major farm States, 1964 to 1991, for corn, cotton, soybeans, and wheat.

DATA COLLECTION METHODS:

None provided.

COLLECTION FREQUENCY:

Annual

GEOGRAPHIC COVERAGE:

Predominant States which produce the field crops. The States differ for each crop and may slightly differ between years.

CONTACT:

Harold Taylor, Agricultural Economist
Economic Research Service, RTD
1301 New York Ave, NW, Rm 428
Washington, DC 20005-4788
Phone: (202) 219-0464

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Vroomen, Harry. February 1987. *Fertilizer Use Statistics and Price Statistics, 1960-85*. SB 750. Economic Research Service, U.S. Department of Agriculture. Washington, DC.

DATABASE(S):

Data are available as an ERS electronic data product. The file is a LOTUS 1-2-3 (release 2) spreadsheet. It can be ordered from the contact person or from the ERS-NASS order desk (1-800-999-6779). Order No. 86016. Price \$25

DEPARTMENT OF AGRICULTURE



Data Type: Statistics
Source: Program Contact

Water Quality and Farm Chemical Studies

OFFICE:

Economic Research Service
Resource and Technology Division
Resource Policy Branch

SUMMARY PROGRAM DESCRIPTION:

This study is part of a national program to develop reliable information about water quality and related agricultural activities. The data collection effort provides information needed to understand the relationships among farming activities; resource characteristics such as soil type, terrain, and climate; and ground water quality. This is part of an inter-departmental activity in response to the Presidential Water Quality Initiative.

STATISTICAL COVERAGE:

The information includes detailed survey measurements on pesticide and fertilizer use, pest and nutrient management practices, cropping history, livestock enterprises, and other activities that may help determine the extent a ground water quality problems and potential solutions. The information is obtained at the same point used to develop a national inventory of soil resources (National Resource Inventory) by the Soil Conservation Service, and also coordinated with the ground water inventory efforts of the U.S. Geologic Survey.

DATA COLLECTION METHODS:

Personal enumeration of farm producers within selected study areas.

COLLECTION FREQUENCY:

One-time data collection effort.

GEOGRAPHIC COVERAGE:

A total of 12 sites plus an initial pilot study are to be conducted. The pilot study was conducted in 1990 for the DelMarVa Drainage area. In 1991 data collection was for the Lower Susquehanna Basin, White River Basin (Indiana), Central Nebraska Basin,

and Columbia River Basin (Washington). The 1992 studies are the Albemarle-Pamlico Basin, South Georgia, Iowa/Illinois, Snake River (Idaho).

CONTACT:

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1301 New York Ave, NW, Rm 528
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Phone: (202) 219-0433

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

None provided.

DATABASE(S):

The database is administratively confidential and is not accessible to outside users. Inquiries should be addressed to contacts.

DEPARTMENT OF COMMERCE



National Coastal Pollutant Discharge Inventory Program

OFFICE:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resources Conservation and Assessment
Strategic Environmental Assessments Division
Pollutant Source Characterization Branch

SUMMARY PROGRAM DESCRIPTION:

The National Coastal Pollutant Discharge Inventory (NCPDI) Program is a series of database development and analytical activities within the National Oceanic and Atmospheric Administration's Strategic Assessment Program of coastal and estuarine areas. The cornerstone of the program is a comprehensive database and computational framework that has been developed over the last 9 years. The database contains pollutant loading estimates for all major categories of point, nonpoint, and riverine sources located in coastal counties or the 200-mile Exclusive Economic Zone that discharge to the estuarine, coastal, and oceanic waters of the contiguous U.S. (excluding the Great Lakes).

DATA COVERAGE:

The pollutant discharge estimates in the NCPDI are made for the following base years for each coastal component: East Coast - 1982; West Coast - 1984; and Gulf Coast - 1987. The estimates can be considered to approximate pollutant discharge conditions for a 5-year period around the base year. Estimates are made for 9 major source categories and 17 pollutants. Source categories include: point sources, urban nonpoint sources, nonurban nonpoint sources, irrigation return flow, oil and gas operations, marine transportation operations, accidental spills, and dredging operations. Pollutant parameters include: flow (wastewater flow or surface runoff); oxygen-demanding materials (BOD); particulate matter; nutrients (total nitrogen and phosphorus); metals (arsenic, cadmium, chromium, copper, iron, lead, mercury, and zinc); petroleum hydrocarbons (oil and grease); pesticides (35 compounds); pathogens (fecal coliform bacteria); and wastewater treatment

sludges. The pollutant estimates can be aggregated by county, USGS hydrologic cataloging unit, or estuarine watershed.

COLLECTION METHODS:

Estimates are based on a combination of computed methodologies and actual monitored observations. Data sources include EPA's Permit Compliance System, Industrial Discharge file, and Construction Grants Needs Survey, USGS Land Use/Land Cover Database, and USDA's National Resource Inventory and SOILS-5 Database. For detailed descriptions of the methodologies, the reader is directed to the various reports listed under Publications.

COLLECTION FREQUENCY:

Estimates are seasonal (winter, spring, summer, and fall) for a base year. Updated discharge estimates for 1987 for the coastal areas of the Gulf of Mexico and for 1989 for the East Coast are being prepared.

GEOGRAPHIC COVERAGE:

Coastal areas of the continental United States, excluding the Great Lakes.

CONTACT:

Daniel R. Farrow, Chief
Pollutant Sources Characterization Branch
NOAA
6001 Executive Blvd., Room 220
Rockville, MD 20852
Phone: (301) 443-0454
FAX: (301) 468-6675

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Arnold, F.D. and D.G. Farrow. 1987. *The National Coastal Pollutant Discharge Inventory: Pollutant Discharge Concentrations for Industrial Point Sources*. National Oceanic and Atmospheric Administration. Rockville, MD.

Arnold, F.D., J.A. Lowe and D.G. Farrow. 1988. *The Coastal Pollutant Discharge Inventory: Analysis of Pollutant Dischargers from West Coast Point Sources* (DRAFT). National Oceanic and Atmospheric Administration. Rockville, MD.

Basta, D.J., B.T. Bower, C.N. Ehler, F.D. Arnold, B.P. Chambers, and D.G. Farrow. 1985. *The National Coastal Pollutant Discharge Inventory*. National Oceanic and Atmospheric Administration. Rockville, MD.

Farrow, D.G., F.D. Arnold, M.L. Lombardi, M.B. Main and P.D. Eichelberger. 1986. *The National Coastal Pollutant Discharge Inventory: Estimates for Long Island Sound*. National Oceanic and Atmospheric Administration. Rockville, MD.

DATABASE(S):

The National Coastal Pollutant Discharge Inventory

Agricultural Pesticide Use in Coastal Areas

DEPARTMENT OF TRANSPORTATION

Highway Statistics



OFFICE:

Federal Highway Administration
Office of Highway Information Management

SUMMARY PROGRAM DESCRIPTION:

The program includes the collection, analysis, summary, and dissemination of a broad range of data related to the physical characteristics of the Nation's highway system, as well as the traffic/travel and related performance activity which occurs on those systems.

DATA COVERAGE:

Data are compiled by the State highway and transportation agencies, using guidelines prepared by Federal Highway Administration (FHWA) and approved by the Office of Management and Budget. Data reported to FHWA include characteristics such as: traffic volumes; travel estimates (for example, miles traveled and fuel consumption per vehicle and per capita); vehicle speeds; distribution of vehicle types and weights by highway category; vehicle fuel efficiency ratings and motor fuel consumption; vehicle registrations and driver licensing (including revenues related to latter variables); State and local highway finance; Federal Highway Trust Fund status; highway mileage; pavement condition; and accidents. Data also include personal travel characteristics collected as part of the Nationwide Personal Transportation Study (NPTS). Trend data for many of the characteristics date back to the early 1990s.

COLLECTION METHODS:

Data collection methods vary by program. Some data are collected by a full census whereas other data are collected using statistical sample basis, such as collection of travel data. Methodologies are generally described in reference publications listed below.

COLLECTION FREQUENCY:

Highway statistics have been published annually since 1945. Most data are reported on an annual basis with the exception of speed data which are reported quarterly and traffic volumes/fuel consumption data which are reported monthly. NPTS data are available for 1969, 1977, 1983, and 1990.

GEOGRAPHIC COVERAGE:

National coverage with further stratification by State and functional highway category.

CONTACT:

Frank E. Jarema, Chief
National Data Management
and Dissemination Division
Federal Highway Administration, HPM-40
400 7th Street, SW
Washington, DC 20590
Phone: (202) 366-0160

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATIONS:

Federal Highway Administration, Office of Highway Information Management. 1992. *Highway Statistics 1991*. U.S. Department of Transportation, Washington, DC.

--. 1992. *Nationwide Personal Transportation Survey - Summary of Travel Trends 1990*. FHWA-PL-92-027. U.S. Department of Transportation. Washington, DC.

--. 1992. *New Perspectives in Commuting*. U.S. Department of Transportation. Washington, DC.

--. *Our Nations Highways: Selected Facts and Figures*. U.S. Department of Transportation. Washington, DC.

--. Research and Special Programs Administration.
1992. *National Transportation Statistics (Annual Report)*. VOLPE National Transportation Systems Center. Washington, DC.

--. *Selected Highway Statistics and Charts 1991*. FHWA-PL-93-001. U.S. Department of Transportation. Washington, DC.

--. 1992. *Travel Behavior Issues in the 90's*. U.S. Department of Transportation. Washington, DC.

Federal Highway Administration. 1985. *Highway Statistics: Summary to 1985*. U.S. Department of Transportation. Washington, DC.

--. 1992. *Highway Statistics 1991* (and earlier annual reports in this series). FHWA-PL-90-003. U.S. Department of Transportation. Washington, DC.

--. 1991. *Selected Highway Statistics and Charts 1989* (and earlier reports in this series). FHWA-PL-91-001. U.S. Department of Transportation. Washington, DC.

--. 1986. *Personal Travel in the United States; 1983-1984 Nationwide Personal Transportation Study*. (2 Vols.) U.S. Department of Transportation. Washington DC.

--. Driver Licenses (annual). FHWA-PL-(year)-002. U.S. Department of Transportation. Washington, DC.

--. Motor Fuel Reported by States (monthly). U.S. Department of Transportation. Washington, DC.

DATABASE(S):

Highway Statistics Information Retrieval System (HSIRS)

The HSIRS database contains "Highway Statistics Summary to 1985" and "Highway Statistics" for years 1986-1991.

For more information, contact:

Walter Hagan
Federal Highway Administration (HPM-40)
400 7th Street, SW
Washington, DC 20590
Phone: (202) 366-3208

DEPARTMENT OF TRANSPORTATION

Marine Pollution Retrieval System



OFFICE:

U.S. Coast Guard
Pollution Response

SUMMARY PROGRAM DESCRIPTION:

The Marine Pollution Retrieval System contains details of pollution incidents in the coastal zone where the Coast Guard is the on-scene coordinator and in the inland zone where Coast Guard personnel assist an on-scene coordinator for the Environmental Protection Agency (EPA).

DATA COVERAGE:

Records are kept on: oil spills (number, volume, date, substance, costs for Federally-funded responses, and case histories); spills of hazardous substances (substance name, CHRIS ID code, physical/chemical properties); geographic information (latitude and longitude and/or river mile number, waterbody name, city, State, and, where applicable, vessel name and ID); facility information (name, address, ID codes); and transportation information (air, land, inland, and coastal waterways).

COLLECTION METHODS:

The Federal Water Pollution Control Act, as amended (Section 311), and Executive Order 11735 require that any discharge of an oil or a hazardous substance in a harmful quantity be reported to the U.S. Coast Guard. Data are reported for actual spills only, i.e., discharges which entered the water. Incidents which are reported to EPA and occurred in waters under Coast Guard jurisdiction also are compiled. A sample data reporting form is provided in the Coast Guard publication listed below.

COLLECTION FREQUENCY:

Data are collected when spills occur.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

Commandant (G-MEP-2)
Marine Information Branch
U.S. Coast Guard
2100 Second St., SW
Washington, DC 20593
Phone: (202) 267-2611

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

United States Coast Guard. 1989. *Polluting Incidents In and Around U.S. Waters, 1984, 1985, and 1986* (and earlier reports in this series). COMDTINST M16450 series. United States Coast Guard. Washington, DC.

DATABASE(S):

Marine Pollution Retrieval System (MPRS)

MPRS is a computer-based system developed by the Coast Guard to support Pollution Response. Initially designed for the Collection and Maintenance of discharge data, subsequent modifications have been made to permit the inclusion of additional data describing clean-up (response) activities and penalty actions. MPRS is available to Congress, government agencies, academia, and private interests.

DEPARTMENT OF TRANSPORTATION

National Transportation Statistics



OFFICE:

Research and Special Programs Administration
Volpe National Transportation Systems Center
Center for Transportation Information

SUMMARY PROGRAM DESCRIPTION:

The program includes the collection, analysis, and summary of selected national transportation statistics from a wide variety of government and private sources.

DATA COVERAGE:

Statistics are generated for various transportation modes including air carrier, general aviation, automobile, bus, truck, local transit, rail, water, oil pipeline, and natural gas pipeline. For example, data are reported for passenger travel by automobile, airplane, bus, and railroad, and freight miles of travel by truck, railroad, airplane, pipeline, and waterway. Basic descriptions of U.S. transportation, such as operating revenues and expense, and vehicle and passenger miles, are provided. Supplementary data include transportation and the economy, and energy in transportation. Data show 10-year trends and, in some instances, extend back to 1955.

COLLECTION METHODS:

Data are abstracted from government and private data.

COLLECTION FREQUENCY:

Data are collected on an annual basis.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

Kathleen Bradley
Transportation Data Specialist
Volpe National Center for Transportation
Information
Transportation Systems Center
55 Broadway
Cambridge, MA 02142
Phone: (617) 494-2614

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- Research and Special Programs Administration.
1990. *National Transportation Statistics Annual Report, 1990*. DOT-TSC-ESPA-90-7. U.S. Department of Transportation. Cambridge, MA.
- . 1990. *Transportation Safety Information Report, 1989 Annual Summary*. DOT-TSC-RSPA-90-4. Department of Transportation, Volpe National Transportation Systems Center. Cambridge, MA.
- . 1990. *U.S. International Air Travel Statistics, CY 1989*. Department of Transportation, Volpe National Transportation Systems Center. Cambridge, MA.

DATABASE(S):

None provided.

ENVIRONMENTAL PROTECTION AGENCY



Comprehensive Environmental Response, Compensation and Liability Information System

OFFICE:

Office of Emergency and Remedial Response

SUMMARY PROGRAM DESCRIPTION:

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) contains information on abandoned or uncontrolled hazardous waste sites.

DATA COVERAGE:

The CERCLIS database contains information on the location of over 30,000 sites. In addition, the database contains information on pre-remedial actions such as the discovery date and the completion date of a preliminary assessment, site inspection, and the date of final hazardous ranking determination. Of the sites, over 1,200 are listed on the National Priority List (NPL). CERCLIS also contains information such as: description of NPL site (predominant land uses, waste treatment storage and disposal, distance to nearest population); owner/generator information; regulatory and response history; waste description (physical state, predominant waste type and quantity of waste); environmental impact information; water use information; and the remedial events occurring at the NPL sites, including planned and actual starts and completions, prior year obligations, current obligations, and outlays to date.

COLLECTION METHODS:

Data are collected during inventory, assessment, and cleanup of uncontrolled hazardous waste sites. EPA Regional Offices maintain the data in CERCLIS databases.

COLLECTION FREQUENCY:

On-line updating.

GEOGRAPHIC COVERAGE:

Sites throughout the entire United States and the territories.

CONTACT:

For telephone inquiries concerning the database, call (703) 538-7234.

FOR PUBLIC INQUIRIES:

Written requests for information should be addressed to:

Freedom of Information Officer
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

PUBLICATIONS:

Office of Solid Waste and Emergency Response.
1991. *Superfund NPL Characterization Project: National Results*. EPA/540/8-91/069. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

ENVIRONMENTAL PROTECTION AGENCY



National Air Pollution Control Program

OFFICE:

Office of Air Quality Planning and Standards
Data Analysis Section

SUMMARY PROGRAM DESCRIPTION:

The Air Pollution Control Program collects and analyzes data on ambient air quality and air pollution levels and compares them to National Ambient Air Quality Standards (NAAQS).

DATA COVERAGE:

Ambient concentrations of the following criteria air pollutants are monitored and analyzed for 10-year trends and recent changes: sulfur dioxide, nitrogen dioxide, carbon monoxide, total suspended particulates, ozone, and lead.

Emission estimates are available for particulates, sulfur oxides, nitrogen oxides, reactive volatile organic compounds, carbon monoxide, and lead. Data are broken down by the following emission sources: transportation (e.g., motor vehicles, aircraft); stationary fuel combustion (e.g., coal, natural gas); industrial processes (e.g., copper, pulp mills); solid waste disposal; and miscellaneous sources (e.g., forest fires, agricultural burning). Air quality trends for major urban areas are provided.

COLLECTION METHODS:

Ambient air quality conditions are based upon actual direct measurements. The data are analyzed for trends and these trends are supplemented with trends for nationwide emissions, which are based upon best available engineering calculations. Data are collected and reported to EPA by State and local agencies.

COLLECTION FREQUENCY:

Data are collected hourly and daily. Estimates are provided for 1940, 1950, 1960, and 1970 to give a historical perspective on national air quality and pollutant emissions and for 1975 to present as an indication of recent trends.

GEOGRAPHIC COVERAGE:

All 50 States, with metropolitan statistical areas (population greater than 500,000) more heavily analyzed.

CONTACT:

Thomas C. Curran, Chief
Data Analysis Section
Office of Air Quality Planning and Standards
Environmental Protection Agency, MD-14
Research Triangle Park, NC 27711
Phone: (919) 641-5558 or (919) 541-5467

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- U.S. Environmental Protection Agency. 1992. *National Air Quality and Emissions Trends Report, 1991* (and earlier reports in this series). EPA-450-R-92-013. U.S. Environmental Protection Agency. Research Triangle Park, NC.
- . 1992. *National Air Pollutants Emissions Estimates 1900-1991* (and earlier reports in this series). EPA-450-R-92-013. U.S. Environmental Protection Agency. Research Triangle Park, NC.

DATABASE(S):

Aerometric Information Retrieval System (AIRS)

The AIRS contains data on air quality and pollution collected from State and local agencies.

For more information, contact:

Andrea Kelsey
National Air Data Branch
Environmental Protection Agency
Research Triangle Park, NC 27711
Phone: (919) 541-5549

Howard Wright
National Air Data Branch
Environmental Protection Agency
Research Triangle Park, NC 27711
Phone: (919) 541-5584

ENVIRONMENTAL PROTECTION AGENCY



Toxics Release Inventory

OFFICE:

Office of Toxic Substances
Economics and Technology Division

SUMMARY PROGRAM DESCRIPTION:

The Toxics Release Inventory (TRI) is a mandatory annual inventory of the release of 328 toxic chemicals to air, water, land, and off-site disposal from more than 17,000 manufacturing facilities across the country.

DATA COVERAGE:

Data collected include: facility information, including Resource Conservation and Recovery Act and National Pollution Discharge Elimination System permit numbers; pounds/year emissions information for air, water, and land disposal, and off-site transfers of wastes; treatment processes and efficiencies; and waste reduction data.

COLLECTION METHODS:

The Emergency Planning and Community Right-to-Know Act requires manufacturers to report on the EPA and the States for amounts of over 300 toxic chemicals that they release directly to air, water, or land, or that they transfer to offsite facilities that treat or dispose of wastes. Facilities are required only to report data that are already known or reasonably ascertainable to them, e.g., engineering estimates. They are not required to measure or otherwise verify the data they submit. Survey submissions on forms are tabulated and stored by EPA on computer tape or disk, and the data are compiled into an annual inventory of releases and transfers.

COLLECTION FREQUENCY:

Data are collected yearly through mandatory industry reporting.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

Samuel Sasnett
Environmental Protection Specialist
Economics & Technology Division (TS-792A)
Office of Toxic Substances
Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460
Phone: (202) 260-1821

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

U.S. Environmental Protection Agency. 1991. *The Toxics Release Inventory: National and Local Perspectives*. EPA 560/4-91-014. U.S. Environmental Protection Agency. Washington, DC.

--. 1992. *1990 Toxic Release Inventory: Public Data Release*. EPA-700-S-92-002. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(s):

TOXNET/Toxic Release Inventory

All data from the Toxic Release Inventory include more than 74,000 reports filed by 17,000 manufacturing facilities on 328 toxic chemicals. Data are also available on disk, CD-ROM, tape, and microfiche.

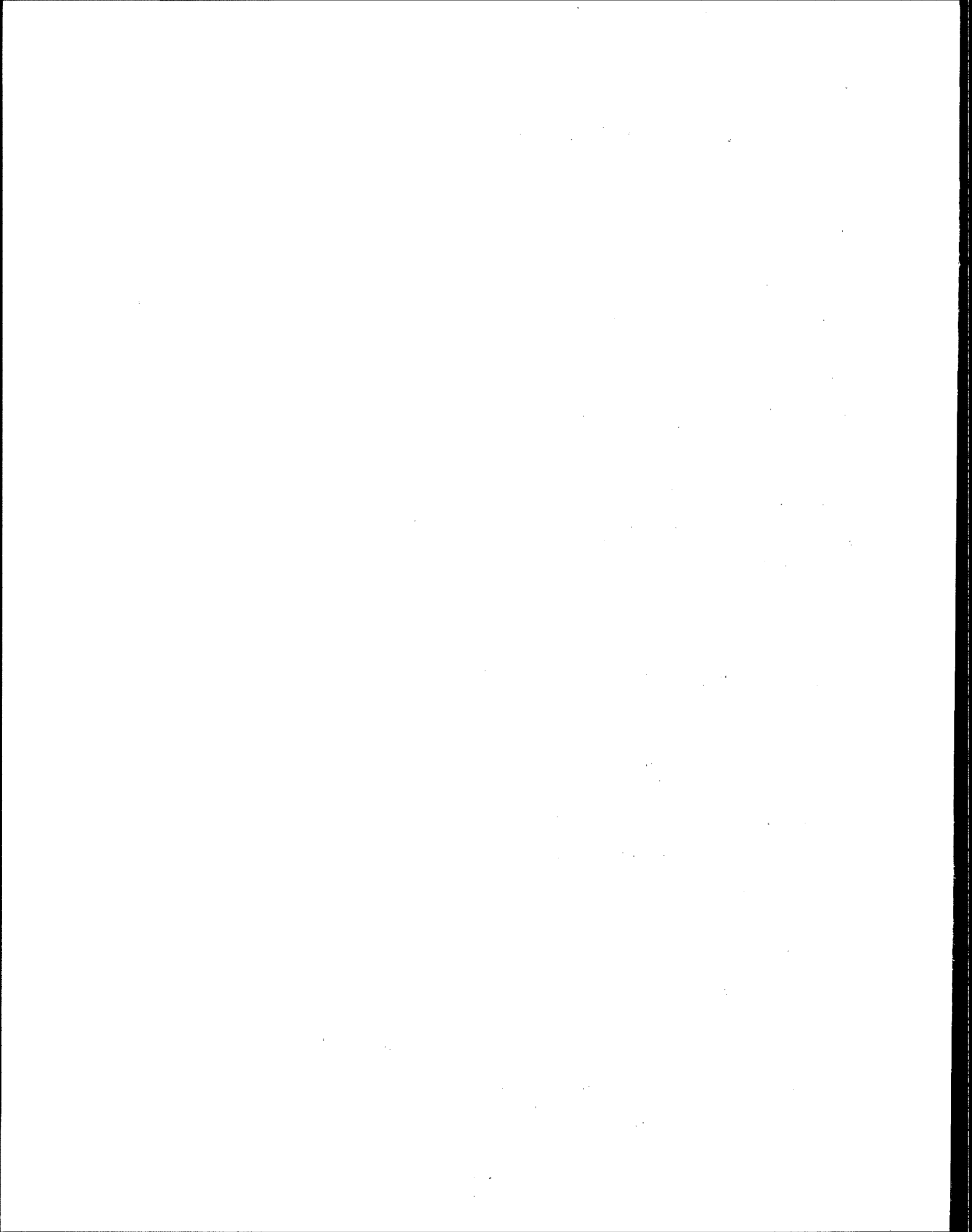
For more information, contact:

National Library of Medicine
Phone: (301) 496-6531

Other Items of Interest

Pollutant Loadings

The following entries were believed to be of less direct interest to most water quality analysts. More detail for the items marked with the "U.S. Guide Entry" identification box can be found in the *Guide to Selected Environmental Statistics in the U.S. Government* (EPA, 1992).



DEPARTMENT OF ENERGY



Month and State Current Emissions Trends

OFFICE:

Argonne National Laboratory
Energy and Environmental Systems Division
Policy and Economic Analysis Group
Energy Policy Section

SUMMARY PROGRAM DESCRIPTION:

The Month and State Current Emission Trends (MSCET) program provides emissions estimates for nitrogen oxides, sulfur dioxide, and nonmethane volatile organic compounds. The data set can be used to monitor regional and/or seasonal emissions trends or trends for specific emission source groups.

National and sectoral emissions estimates for nitrogen oxides, sulfur dioxide, and nonmethane volatile organic compounds are generated for all 48 States in the contiguous United States and Washington, DC. The database contains emissions data estimated by month and State for 68 emission source groups. Six general emission categories are:

electric utilities, industrial fuel combustion, commercial/residential fuel combustion, industrial processes, transportation, and miscellaneous. The database has been updated to include the National Acid Precipitation Assessments Program's emissions inventory.

CONTACT:

Dan Miller
Argonne National Laboratory
9700 South Cass Avenue
Argonne, IL 60439-4815
Phone: (708) 252-5775

National Energy Information Center

OFFICE:

Energy Information Administration
National Energy Information Center

SUMMARY PROGRAM DESCRIPTION:

The Energy Information Administration (EIA) is the Department of Energy's independent statistical and analytical agency, with a mandate to collect and publish data and prepare analyses on energy production, consumption, prices, and resources, and projections of energy supply and demand.

EIA collects and disseminates data on the following: energy sources; energy reserves; total production; consumption by source, by end use sector, per capita, and per GNP dollar; energy imports and exports; and related economic and statistical information, both historical and forecasted (e.g., energy efficient indicators). Also available are data on the production of specific fuel types (e.g., coal, oil and natural gas

plant liquids, and natural gas); production of nuclear and hydroelectric power; and use of certain renewable energy sources - such as solar, geothermal, wood, and wind; and production of electricity by source.

CONTACT:

National Energy Information Center
U.S. Department of Energy
Forrestal Building, 1F-048
Washington, DC 20585
Phone: (202) 586-8800



ENVIRONMENTAL PROTECTION AGENCY



Hazardous Waste Surveys

OFFICE:

Office of Solid Waste
Communications, Analysis and Budget Division
Information Management Staff

SUMMARY PROGRAM DESCRIPTION:

The office of Solid Waste manages two major national information systems to support the Resource Conservation and Recovery Act (RCRA) Subtitle C program: the Resource Conservation and Recovery System (RCRIS) and the Biennial Reporting System (BRS).

DATA COVERAGE:

RCRIS is a national program management and inventory system of RCRA hazardous waste handlers. Handlers are characterized as fitting one or more of the following categories: Treatment, storage and disposal facilities (TSDFs); large quantity generators (LQGs); small quantity generators (SQGs); and transporters. RCRIS captures identification and location on TSDFs regarding permit/closure status, compliance with Federal and State regulations, and cleanup activities.

BRS is a national system that collects data on the generation, management, and minimization of hazardous waste. BRS captures detailed data on the generation of hazardous waste from LQGs and data on waste management practices from TSDFs. These data are collected every other year and provide the ability to perform trend analysis.

COLLECTION METHODS:

Data are collected through the Biennial Hazardous Waste Report, EPA Forms (Notification and Part A Permit Application), other data submittals by hazardous waste facilities (Part B Permit Applications) as well as inspections and assessment of RCRA sites.

COLLECTION FREQUENCY:

Data maintained in the BRS are collected every 2 years. Data maintained in the RCRIS are collected as the event or activity occurs (i.e., as the Notification of Hazardous Waste Activity Form is submitted or as inspections are performed).

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

For RCRIS:

Kevin Phelps
OSW/Information Management Branch (OS-312)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-4697

For BRS:

John Fogarty
OSW/Information Management Branch (OS-312)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-4697

FOR PUBLIC INQUIRES:

Liza Hearn
OSW/Information Management Branch (OS-312)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-4697

PUBLICATIONS:

Office of Solid Waste. 1991. *1987 National Biennial RCRA Hazardous Waste Report*. U.S. Environmental Protection Agency. Washington, DC.

--. 1992. *Hazardous Waste FOIA Reports Catalog*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Biennial Reporting System (1989)

Resource Conservation and Recovery Information System (RCRIS)

ENVIRONMENTAL PROTECTION AGENCY



Non-Hazardous Waste Surveys

OFFICE:

Office of Solid Waste
Office of Policy, Planning and Information
Information Management Staff

SUMMARY PROGRAM DESCRIPTION:

Data are collected through survey and reporting mechanisms on non-hazardous ("solid") wastes generation and management. Various capabilities are available for retrieving and analyzing these data. Generally, the information available consists of regulated entities and waste volumes generated and managed.

DATA COVERAGE:

National statistics are available for wastes generated and managed. The data covers the industrial sector and the municipal landfill sector.

Industrial: Statistics are available on the amounts of non-hazardous waste by type of industry (e.g., textile, pulp and paper, water treatment), management practices (e.g., landfills, surface impoundments, incineration, recycling), and by size of establishment.

Municipal Landfills: Trend data are available on: quantity of materials generated in the municipal waste stream (including paper, glass, metal, and plastics, rubber, leather, textiles, wood, and other nonfood waste, and food, yard, and miscellaneous inorganic waste); quantity and type of waste accepted and refused (e.g., household, commercial, construction); size and capacity of facility, monitoring systems; types of liners and covers; hydrological characteristics and proximity to drinking water supplies; and number of persons using these sources.

COLLECTION METHODS:

Data are collected by survey methods and direct reporting.

COLLECTION FREQUENCY:

Data collection and reporting frequency range from once to every 2 years.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

Myra Galbreath, Chief
OSW/Information Management Branch (OS-312)
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-4697

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATIONS:

Office of Solid Waste and Office of Emergency Response. 1988. *National Survey of Solid Waste (Municipal) Landfill Facilities*. U.S. Environmental Protection Agency. Washington, DC.

--. 1990. *Characterization of Municipal Solid Waste in the United States: 1990 Update*. EPA-530-SW-90-042. U.S. Environmental Protection Agency. Washington, DC.

--. 1992. *Characterization of Municipal Solid Waste in the United States: 1992 Update*. EPA-530-R-92-019. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Industrial Subtitle D Survey

Municipal Landfill Subtitle D Survey

Section IV

Ambient Surface and Ground Water Quality

This section provides information on programs which assess ambient surface and ground water quality. The programs in the general section, while they may collect biological data, primarily assess the chemical aspects of water quality, while the programs in the ecological section focus on biological and ecological conditions, including the extent of wetlands. Measures of ambient water quality are useful for assessing current conditions, changes in water quality over time, and as a baseline for developing projections of future conditions. As discussed in the Introduction, water quality assessments increasingly include measures of toxicity and biological/ecological integrity to complement the classical chemical/physical parameters. Of course, biological and ecological conditions are influenced by factors other than water pollution, e.g., drought, disease, introduction of exotic species and harvesting pressures.

Several of the studies in Appendix A, e.g., the 1982 National Fisheries Survey and the USDA Nitrate Study, also address ambient water quality conditions.

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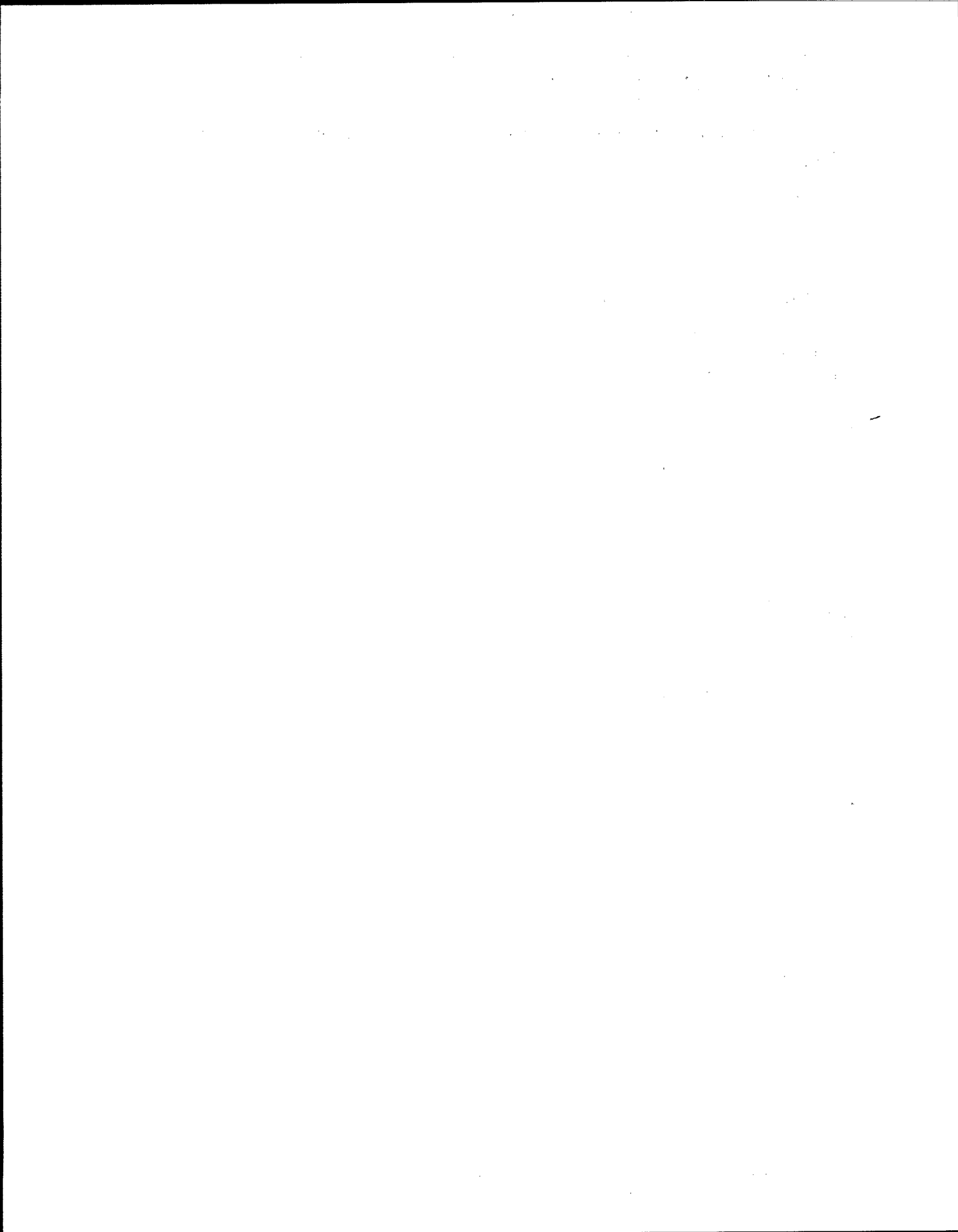
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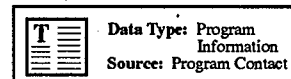
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A. General



DEPARTMENT OF AGRICULTURE



Watershed Management and Rehabilitation Research Program

OFFICE:

U.S. Forest Service
Forest Environment Research Staff

SUMMARY PROGRAM DESCRIPTION:

Nationwide program of site-specific research related to watershed management problems. The program was initiated in 1910 with the Wagon Wheel Gap studies in Colorado and has continued to the present. The present program encompasses research at 27 locations nationwide.

Statistics are site specific but are often continuous over long periods of time (i.e., Conesta Hydrologic Laboratory - continuous hydrologic research since 1934). Measurements vary depending on research objectives at each location.

The data collected is national in scope.

CONTACT:

Staff Specialist (Watershed Research Program)
Forest Environment Research
USDA, Forest Service
PO Box 96090
Washington, DC 20090-6090
Phone: (202) 205-1524
FAX: (202) 205-1530

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATIONS:

See Contact.

DATABASE(S):

None provided.

DEPARTMENT OF COMMERCE



National Status and Trends Program

OFFICE:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resource Conservation and
Assessment

SUMMARY PROGRAM DESCRIPTION:

Beginning in 1984, NOAA undertook the task of providing information on the status and trends of environmental quality in estuarine and coastal areas. The program defines the geographic distribution of contaminant concentrations in tissues of marine organisms and in sediments.

DATA COVERAGE:

Status and trends data are available from the Mussel Watch and Benthic Surveillance for 4 major elements, 12 trace elements, DDT and its metabolites, selected chlorinated pesticides, selected PCB congeners, approximately 22 polyaromatic hydrocarbons, and ancillary sediment and tissue parameters.

COLLECTION METHODS:

Samples have been collected since 1984 at about 50 Benthic Surveillance sites and since 1986 at about 150 Mussel Watch sites. Sediment samples are collected at all sites. At Benthic Surveillance sites, benthic fishes are collected and their livers excised and stored for subsequent chemical analysis. At Mussel Watch sites, bivalve mollusks are collected for analysis.

COLLECTION FREQUENCY:

Data are collected annually.

GEOGRAPHIC COVERAGE:

National coverage of all coasts including Alaska and Hawaii.

CONTACT:

Thomas P. O'Connor, Manager
National Status and Trends Program
National Oceanic and Atmospheric Administration
6001 Executive Blvd.
Ocean Assessments Division
Rockville, MD 20852
Phone: (301) 443-8655

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- National Oceanic and Atmospheric Administration.
1991. *National Status and Trends Program for Marine Environmental Quality Progress Report*. Second summary of chemical contaminants in sediments from the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 59. U.S. Department of Commerce. Washington, DC.
- . 1990. *Coastal Environmental Quality in the United States, 1990*. Chemical contamination in sediments and tissues. A special NOAA 20th Anniversary Report. U.S. Department of Commerce. Washington, DC.
- . 1990. "The Potential for Biological Effects of Sediment-sorbed Contaminants Tested in the National Status and Trends Program." NOAA Technical Memorandum NOS OMA 52. Seattle, WA.
- . 1989. "National Status and Trends Program for Marine Environmental Quality Progress Report. A Summary of Data on Tissue Contamination from the First Three Years (1986-1988) of the Mussel Watch Project." NOAA Technical Memorandum NOS OMA 49. U.S. Department of Commerce. Washington, DC

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- . 1988. "National Status and Trends Program for Marine Environmental Quality Progress Report. A Summary of Selected Data on Chemical Contaminants in Sediments Collected During 1984, 1985, 1986, and 1987." NOAA Technical Memorandum NOS OMA 44. U.S. Department of Commerce. Washington, DC.
 - . 1988. "PCB and Chlorinated Pesticide Contamination in U.S. Fish and Shellfish: A Historical Assessment Report." NOAA Technical Memorandum NOS OMA 39. U.S. Department of Commerce. Washington, DC.
 - . 1987. National Status and Trends Program for Marine Environmental Quality Progress Report. A Summary of Selected Data on Chemical Contaminants in Tissues Collected During 1984, 1985, and 1986. NOAA Technical Memorandum NOS OMA 38. U.S. Department of Commerce. Washington, DC.

DATABASE(S):

National Status and Trends Database

This database contains all data for site and station information and chemical concentrations of all matrices for the Mussel Watch and Benthic Surveillance programs.

For more information contact:

National Status and Trends Program
NOAA
6001 Executive Blvd.
Rockville, MD 20852
Phone: (301) 443-8655

Note: In the latest version of *A Guide To Selected National Environmental Statistics in the U.S. Government*, this entry has been divided into the Benthic Surveillance Project and the Mussel Watch Project entries.

National Contaminant Biomonitoring Program

OFFICE:

U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Division of Environmental Contaminants

SUMMARY PROGRAM DESCRIPTION:

The National Contaminant Biomonitoring Program (NCBP) is maintained by the Fish and Wildlife Service (FWS) to document temporal and geographic trends in concentrations of certain persistent environmental contaminants that may threaten fish and wildlife. The Program originated as the FWS segment of the National Pesticide Monitoring Program, a multi-agency monitoring effort by the member agencies of the Federal Committee on Pest Control. Since 1965, FWS periodically has determined concentrations of potentially toxic elements and selected organochlorine chemicals in fish and wildlife collected from a nationwide network of stations. The NCBP is being phased out with the implementation of the broader Biomonitoring of Environmental Status and Trends (BEST) Program.

DATA COVERAGE:

Organochlorine chemical residues measured in freshwater fish, starlings, and waterfowl samples and analyzed for trends include: p,p'-DDT and DDT-metabolites p,p'-DDE and p,p'-DDD (TDE); PCBs (aroclor 1242, 1248, 1254, 1260); aldrin, dieldrin, endrin; heptachlor; heptachlor epoxide; chlordane (five isomers); toxaphene; benzene hexachloride; lindane; hexachlorobenzene; methoxychlor; mirex; pentachloranisole; and dacthal. In addition, freshwater fish are analyzed for elemental contaminants, including: arsenic, cadmium, copper, lead, mercury, selenium, and zinc.

COLLECTION METHODS:

Composite samples of whole freshwater fish are collected in replicate from 112 stations in major rivers throughout the United States and in the Great Lakes. Preferred fish species, methods of collecting, shipping, archiving, and preparing samples, and data analysis procedures are described in Ribick et al., 1983; Lowe et al., 1985; Schmitt et al., 1990; Schmitt and Brumbaugh, 1990. (See Publications.)

Quality control samples are analyzed to estimate accuracy and precision of results.

Starlings are collected in replicate from 139 terrestrial sites in the contiguous 48 States. Chemical and statistical methodologies are described in Bunck et al., 1987.

Wings of mallards and black ducks shot by hunters in the continental United States are collected to assess body burden of organochlorine compounds in migratory birds. Procedures for collecting, pooling, sample preparation, chemical analysis, and statistical analysis are described in Cain, 1981 and Prouty and Bunck, 1986.

COLLECTION FREQUENCY:

This monitoring program has continued at 2- to 4-year intervals since 1965.

GEOGRAPHIC COVERAGE:

The fish monitoring network covers the major rivers of the United States and the Great Lakes. Starling collection sites are located within each 5-degree block of latitude and longitude in the contiguous 48 States. Mallards are collected throughout the continental United States and black ducks are collected from the Atlantic Flyway.

CONTACT:

•
Chief
Division of Environmental Contaminants
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
Suite 330
Arlington, VA 22203
Phone: (703) 358-2148

Fish data:

Christopher J. Schmitt
Fishery Biologist
U.S. Fish and Wildlife Service
National Fisheries Contaminant Research Center
4200 New Haven Road
Columbia, MO 65201
Phone: (314) 875-1800

All data:

James K. Andreasen
U.S. Fish and Wildlife Service
Division of Environmental Contaminants
4401 N. Fairfax Drive, Suite 330
Arlington, VA 22203
Phone: (703) 358-2148

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Bunck, C.M., R.M. Prouty, and A.J. Krynsky. 1987. "Residues of Organochlorine Pesticides and Polychlorobiphenyls in Starlings (*Sturnus vulgaris*) from the Continental United States, 1982." *Environ. Mon. Assess.* 8:59-75.

Cain, B.W. 1981. "Nationwide Residues of Organochlorine Compounds in Wings of Adult Mallards and Black Ducks, 1979-80." *Pesticide Mon. J.* 15:128-134.

Lowe, T.P., T.W. May, W.G. Brumbaugh, and D.A. OKane. 1985. "National Contaminant Biomonitoring Program: Concentrations of Seven Elements in Freshwater Fish, 1978-1981." *Arch. Environ. Contam. Toxicol.* 14:363-388.

Prouty, R.M. and C.M. Bunck. 1986. "Organochlorine Residues in Adult Mallard and Black Duck Wings, 1981-82." *Environ. Mon. Assess.* 6:49-57.

Schmitt, C.J. and W.G. Brumbaugh. 1990. "National Contaminant Biomonitoring Program: Concentrations of Arsenic, Cadmium, Copper, Lead, Mercury, Selenium, and Zinc in U.S. Freshwater Fish, 1976-1984." *Arch. Environ. Contam. Toxicol.* 19:731-747.

Schmitt, C.J., M.A. Ribick, J.L. Ludke, and T.W. May. 1983. *Organochlorine Residues in Freshwater Fish, 1976-1979*. U.S. Fish and Wildlife Service Publication 152. U.S. Fish and Wildlife Service. Washington, DC.

Schmitt, C.J., J.L. Zajicek and M.A. Ribick. 1985. "National Pesticide Monitoring Program: Residues of Organochlorine Chemicals in U.S. Freshwater Fish, 1980-81." *Arch. Environ. Contam. Toxicol.* 14:225-260.

Schmitt, C.J., J.L. Zajicek and P.H. Peterman. 1990. "National Contaminant Biomonitoring Program: Residues of Organochlorine Chemicals in U.S. Freshwater Fish, 1976-1984." *Arch. Environ. Contam. Toxicol.* 19:748-782.

Schmitt, C.J. 1990. "Persistent Organochlorine and Elemental Contaminants in Freshwater Fish of the United States." *Environmental Monitoring, Restoration, and Assessment: What Have We Learned?* Proceedings of the 28th Hanford Symposium. R. Gray, Ed. Pp. 5-14. Battelle Press. Columbus, OH.

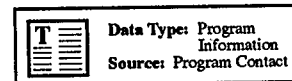
DATABASE(S):

Environmental Contaminant Data Management System (ECDMS)

ECDMS is the cataloging, sample management, and data storage system for residue data from field studies conducted by the Fish and Wildlife Service. Data are from sample matrices consisting of animal and plant tissues, sediments, soils and water. The system contains data on pesticides, elements, PCBs and other compounds. Requests for information from the database should be directed to:

James K. Andreasen
U.S. Fish and Wildlife Service
Division of Environmental Contaminants
4401 N. Fairfax Drive, Suite 330
Arlington, VA 22203
Phone: (703) 358-2148

DEPARTMENT OF THE INTERIOR



Colorado River Salinity Program

OFFICE:

Bureau of Reclamation
Assistant Commissioner-Resources Management
Colorado River Salinity Program Coordinator

SUMMARY PROGRAM DESCRIPTION:

This program uses historical salinity data, collects current data, and evaluates programs designed to reduce salinity of the main stem Colorado River in the lower basin States below Lee Ferry. Biennial reports are submitted showing program status. The reports were started in 1963. Reclamation is required by law to implement this program and provide the progress reports.

Salinity of Colorado River - Total dissolved solids are monitored at various points in the Colorado River Basin and are compared to the model generated values based on predicted salt load removal for each project implemented or being considered for implementation.

Data collection for this program are conducted by the agency personnel under established procedures. General water quality data which include total dissolved solids have been collected since about 1940. The preconstruction data are used to establish baseline conditions. QA/QC measures are established by the agency collecting the data. Data is collected daily and monthly for the 17 western States. Modeling is used to evaluate impacts of salinity control projects which reduce salt loading from both naturally occurring and man-induced salt inputs to the river. Control projects are selected based on predicted improvements to the river and cost of implementation. The most cost effective projects are selected for construction.

CONTACT:

Stan Gappa
Colorado River Salinity Program Coordinator
P.O. Box 25007 (D-003)
Denver, CO 80225
Phone: (303) 236-6782
FAX: (303) 236-6763

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Individual project planning report/environmental impact statements and biennial progress reports are published. The progress reports give program status and progress in meeting program goals.

DATABASE(S):

None provided.

DEPARTMENT OF THE INTERIOR



National Hydrologic Bench-Mark Network Program

OFFICE:

U.S. Geological Survey
Water Resources Division
Office of Water Quality

SUMMARY PROGRAM DESCRIPTION:

The National Hydrologic Bench-Mark Network Program was initiated in 1964 to provide a nationally uniform basis for assessing long-term trends in the physical and chemical characteristics of surface waters largely unaffected by land use activities. Water quality monitoring is carried out in basins where there are generally no man-made storage, regulation, or diversion. Ground water in hydrologic benchmark basins is not affected by pumping, and the probability is small that human activity would increase within the basin.

DATA COVERAGE:

Principal constituents monitored in freshwater and analyzed for trends are pH, alkalinity, sulfate, nitrate, phosphorus, calcium, magnesium, sodium, potassium, chloride, suspended sediment, fecal coliform bacteria, fecal streptococcal bacteria, dissolved oxygen, and dissolved oxygen deficit. Trace elements monitored in freshwater and analyzed for trends are arsenic, cadmium, chromium, iron, lead, manganese, mercury, selenium, and zinc. The following radionuclides are also monitored but have not been analyzed for trends: gross alpha, gross beta, radium-226, and uranium.

COLLECTION METHODS:

Data-collection stations are maintained at selected locations to provide standardized records on surface- and ground water conditions. A variety of automated instruments are used to measure and record water conditions.

COLLECTION FREQUENCY:

Data are collected monthly at 4 percent of the sites, bimonthly at 18 percent of the sites, and quarterly at 78 percent of the sites. Trace element collection is quarterly only, and radionuclides are only collected semiannually.

GEOGRAPHIC COVERAGE:

Coverage includes 58 locations in 37 States.

CONTACTS:

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Richard B. Alexander, Hydrologist
Water Resources Division
U.S. Geological Survey
410 National Center
Reston, VA 22092
Phone: (703) 648-6869

Timothy Miller
National Networks Coordinator
Water Resources Division
U.S. Geological Survey
412 National Center
Reston, VA 22092
Phone: (703) 648-6868

FOR PUBLIC INQUIRES:

For general information about the USGS water data program, contact the National Water Information Clearinghouse at (800) 426-9000.

For State-level information about the USGS water data program, contact the District Chief of the USGS District Office in the State of interest. Addresses and telephone numbers for each District office are given in the Water Resources Division Information Guide.

For information about the USGS water data program networking, contact Timothy Miller (see Contacts above).

For information about the USGS water data program administration, contact:

Assistant Chief Hydrologist for Operations
U.S. Geological Survey
441 National Center
Reston, VA 22092
Phone: (703) 648-5031
FAX: (703) 648-5295

PUBLICATIONS:

Data on streamflow, ground water levels, and water quality of surface and ground water are available for each State by water year in a publication series entitled *U.S. Geological Survey Water-Data Reports*. These reports may be purchased from the National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Reference copies can be inspected at appropriate USGS offices nationwide. Data are also available in tables, charts, and machine-readable files.

DATABASE(S):

Water Data Storage and Retrieval System
(WATSTORE)

WATSTORE contains surface water data and other water quality and water resource data from the National Hydrologic Bench-Mark Network. Data are available on magnetic medium and as hard copy.

Information about the data system and computer-related matters can be obtained from:

USGS Branch of Computer Technology
440 National Center
Reston, VA 22092
Phone: (703) 648-5605

National Stream Quality Accounting Network

OFFICE:

U.S. Geological Survey
Water Resources Division
Office of Water Quality

SUMMARY PROGRAM DESCRIPTION:

The National Stream Quality Accounting Network (NASQAN) program, started in 1972, provides a nationally uniform basis for assessing large-scale and long-term trends in the physical, chemical, and biological characteristics of the Nation's surface waters. Water quality monitoring is carried out at the stations which are generally located on major rivers at the downstream end of the accounting unit.

DATA COVERAGE:

Principal constituents monitored in freshwater and analyzed for trends are pH, alkalinity, sulfate, nitrate, phosphorus, calcium, magnesium, sodium, potassium, chloride, suspended sediment, fecal coliform bacteria, fecal streptococcal bacteria, dissolved oxygen, and dissolved oxygen deficit.

Trace elements monitored in freshwater and analyzed for trends are arsenic, cadmium, chromium, iron, lead, manganese, mercury, selenium, and zinc.

Operating within NASQAN is the Radio Chemical Surveillance Network consisting of 46 sampling sites. The following radionuclides are also monitored at 46 sites but have not been analyzed for trends: gross alpha, gross beta, radium-226, and uranium. Additional radiochemical data are collected from the tritium Network, which monitors Tritium concentrations at 13 streamflow and 9 atmospheric precipitation sampling sites throughout the United States.

COLLECTION METHODS:

Data-collection stations are maintained at selected locations to provide standardized records on surface- and ground water conditions. A variety of automated instruments are used to measure and record water conditions. Standard laboratory analyses are performed on samples according to the substance

being measured. Quality control procedures are carried out in the laboratory.

COLLECTION FREQUENCY:

Data are collected bimonthly at 58 percent of sites and quarterly at 42 percent of sites. Trace element collection is quarterly and radionuclides are collected semiannually. Annual data summaries are available for each state.

GEOGRAPHIC COVERAGE:

Coverage includes: 21 water resource regions, 213 water resource subregions, 411 monitoring stations, and the 50 States plus Puerto Rico.

CONTACTS:

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Richard Alexander, Hydrologist
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Timothy Miller
National Networks Coordinator
Water Resources Division
U.S. Geological Survey
412 National Center
Reston, VA 22092
Phone: (703) 648-6868

FOR PUBLIC INQUIRIES:

For general information about the USGS water data program, contact the National Water Information Clearinghouse at (800) 426-9000.

For State-level information about the USGS water data program, contact the District Chief of the USGS District Office in the State of interest. Addresses and telephone numbers for each District office are given in the Water Resources Division Information Guide.

For information about the USGS water data program networking, contact Timothy Miller (see contacts above).

For information about the USGS water program administration, contact:

Assistant Chief Hydrologist for Operations
U.S. Geological Survey
441 National Center
Reston, VA 22092
Phone: (703) 648-5031

PUBLICATIONS:

Alexander, R.B. and R.A. Smith. 1988. "Trends in Lead Concentrations in Major U.S. Rivers and Their Relation to Historical Changes in Gasoline-Lead Consumption." *Water Resources Bulletin*. 24:557-569.

Gilliom, R.J., R.B. Alexander, and R.A. Smith. 1985. *Pesticides in the Nation's Rivers, 1975-1980 and Implications for Future Monitoring*. U.S. Geological Survey Water Supply Paper No. 2271. U.S. Department of the Interior. Reston, VA.

Hirsch, R.M., J.R. Slack, and R.A. Smith. 1982. "Techniques of Trend Analysis for Monthly Water Quality Data." *Water Resources Research* 18:107-121.

Smith, R.A., R.B. Alexander, and G. Wolman. 1987. "Water Quality Trends in the Nation's Rivers." *Science* 235: 1607-1615.

--. 1987. *Analysis and Interpretation of Water-Quality Trends in Major U.S. Rivers, 1974-81*. U.S. Geological Survey Water-Supply Paper No. 2307. U.S. Department of the Interior Reston, VA.

Smith, R.A. and R.B. Alexander. 1985. "Trends in Concentrations of Dissolved Solids, Suspended Sediment, Total Phosphorus, and Inorganic Nitrogen at U.S. Geological Survey National Stream Quality Accounting Network Stations." In: U.S. Geological Survey Water-Supply Paper No. 2275. U.S. Department of the Interior. Reston, VA.

--. 1983. *A Statistical Summary of Data from the U.S. Geological Survey's National Water Quality Networks*. U.S. Geological Survey Open-File Report No. 85-533. U.S. Department of the Interior. Reston, VA.

--. 1982. *A Study of Trends in Dissolved Oxygen and Fecal Coliform Bacteria at NASQAN Stations*. U.S. Geological Survey Open-File Report No. 82-1019. U.S. Department of the Interior. Reston, VA.

Smith, R.A., R.M. Hirsch, and J.R. Slack. 1982. *A Study of Trends in Total Phosphorus Measurements at NASQAN Stations*. U.S. Geological Survey Water-Supply Paper No. 2190. U.S. Department of the Interior. Reston, VA.

DATABASE(S):

WATSTORE

WATSTORE contains surface water data and other water quality and water resource data from the National Hydrologic Bench-Mark Network. Data are available on magnetic medium and as hard copy. Information about the data system and computer-related matters can be obtained from:

Branch of Computer Technology
USGS
440 National Center
Reston, Virginia 22092
Phone: (703) 648-5605

National Water Quality Assessment Program

Note: The following program is now being implemented. Only limited data is available at this time.

The long-term goals of the NAWQA program, administered by the U.S. Geological Survey, 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. A major design feature of the NAWQA program will enable water quality information at different scales to be integrated. The program consists of two major components: study unit investigations and national assessment activities.

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 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.

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 ensure nationwide consistency in approach to each study, in field and laboratory methods, in water quality measurements, and in supporting data requirements.

CONTACT:

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Watershed Protection Program: Park-Based Water Quality Data Management System

OFFICE:

National Park Service

SUMMARY PROGRAM DESCRIPTION:

The Watershed Protection Program was initiated in 1991 to: (1) expand the professional water quality expertise in the National Parks Service; (2) integrate the appropriate technical, legal, and regulatory water quality methodologies to resolve critical park-based water quality issues; (3) assist in the development and initiation of park-based water quality issues; and (4) assist in the development and initiation of park-based water quality inventorying and monitoring and data acquisition programs. The Watershed Protection Program also coordinates and promotes interagency communication and coordination for water quality planning, regulation, and applied research, and wetlands inventorying, monitoring, and restoration.

The Park-Based Water Quality Data Management System is a major 1992 initiative of the Watershed Protection Program to develop an interactive national park-based water quality data storage, retrieval, and management system. The cornerstone of the system is a PC-based water quality data shell that is highly user oriented, and permits park staff to create, from a parameter pick list, a database tailored to park needs. The system also is designed to be interactive with STORET; thus, park specific water quality data can be uploaded, archived, and retrieved by the Water Resources Division for national-level statistical summaries.

Initially, databases for 30 parks will be established in 1993 by downloading existing STORET data into a water quality shell. This process will entail the creation of digital descriptions of park boundaries to define the scope of the STORET retrieval, downloading of all physical, chemical, and biological data that reside in STORET for each park, reformatting of the data for the NPS data management system, and the completion of a basic statistical analysis of the data. Ultimately, the data management program will incorporate data from about 300 units of the National Park System.

CONTACTS:

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FOR PUBLIC INQUIRIES:

Chief, Water Resources Division
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Phone: (303) 225-3501

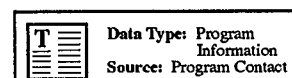
PUBLICATIONS:

User's Guide under development and scheduled for completion by the end of 1993.

DATABASE(S):

Under development for 1993.

DEPARTMENT OF THE INTERIOR



Water Resources Assessment Program

OFFICE:

U.S. Geological Survey
Water Resources Division
Office of Water Assessment and Data Coordination
Branch of National Water Summary

SUMMARY PROGRAM DESCRIPTION:

The principal goal of the program is to develop summary level statistics on water resources at the State and national levels appropriate for the preparation of USGS's biennial report, National Water Summary. Each report is oriented toward a specific water resource theme (e.g., ground water quality).

Statistics for major subjects covered at the national and State levels include: water availability (e.g., surface and ground water potential, use, and development); water quality (e.g., point and nonpoint sources of pollution, eutrophication, bottom sediment contamination, saline-water intrusion, hazardous wastes, radioactive wastes, and acidic precipitation); hydrologic hazards and land use (e.g., flooding, land subsidence, sinkholes, erosion, sedimentation, wetlands, and resource development); and institutional and management activities. Also covered are seasonal hydrologic conditions and hydrologic events such as precipitation, streamflow, floods, and storms.

Data summarized in the National Water Summary are compiled from existing U.S. Geological Survey and other agency data files and cover the entire United States, Puerto Rico, and Trust Territories.

CONTACT:

Richard W. Paulson, Chief
Branch of National Water Summary
U.S. Geological Survey
407 National Center
Reston, VA 22092
Phone: (703) 648-6851

FOR PUBLIC INQUIRIES:

Publications are for sale and can be acquired by contacting:
Books and Open File Reports Section, USGS
Federal Center, Box 25425
Denver, CO 80225-0425
Phone: (303) 236-7476

PUBLICATIONS:

U.S. Geological Survey. 1991. *National Water Summary 1988-89, Hydrologic Events and Floods and Droughts*. Water Supply Paper No. 2375. U.S. Department of the Interior. Washington, DC.

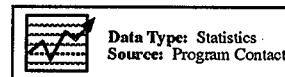
U.S. Geological Survey. 1990. *National Water Summary 1987 - Hydrologic Events and Water Supply and Use*. Water-Supply Paper No. 2350. U.S. Department of the Interior. Washington, DC.

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- . 1988. *National Water Summary 1986 - Hydrologic Events and Ground Water Quality*. Water-Supply Paper No. 2325. U.S. Department of the Interior. Washington, DC.
 - . 1986. *National Water Summary 1985 - Hydrologic Events and Surface Water Resources*. Water-Supply Paper No. 2300. U.S. Department of the Interior. Washington, DC.
 - . 1985. *National Water Summary 1984: Hydrologic Events, Selected Water-Quality Trends, and Ground Water Resources*. Water-Supply Paper No. 2275. U.S. Department of the Interior. Washington, DC.
 - . 1984. *National Water Summary 1983 - Hydrologic Events and Issues*. Water-Supply Paper No. 2250. U.S. Department of the Interior. Washington, DC.

DATABASE(S):

Because this program uses existing U.S. Geological Survey and other agency databases, it is not a database source.

ENVIRONMENTAL PROTECTION AGENCY



Great Lakes Fish Monitoring Program

OFFICE:

Great Lakes National Program Office

FOR PUBLIC INQUIRIES:

See Contact.

SUMMARY PROGRAM DESCRIPTION:

This program collects lake trout, rainbow smelt, and chinook salmon in the Great Lakes and analyzes the fish for contamination.

PUBLICATIONS:

DeVault, D.S. 1985. "Contaminants in Fish from Great Lakes Harbors and Tributary Mouths." *Environ. Contam. Toxicol.* 14:587.

STATISTICAL COVERAGE:

For lake trout and rainbow smelt, measured variables include age, length, weight, PCB (as A1254), DDT and metabolites, chlordane, dieldrin, toxaphene, and mirex (Lake Ontario only). Annual data on DDT and PCB are available back to 1970. Dioxins, furans, and other special studies are done periodically. For fillets of coho (even number years) and chinook (odd number years), the above variables are measured as well as hexachlorobenzene, dacthal, endrin, lindane, heptachlor epoxide, and pentachlorophenyl methyl ether. Trend data are available for each lake (e.g., Lake Superior, Lake Michigan, Lake Huron, Lake Erie, and Lake Ontario).

--. et al. 1986. "Contaminant Trends from the Upper Great Lakes." *Arch. Environ. Contam. Toxicol.* 15:349.

--. 1989. "Polychlorinated Dibenzofurans and Polychlorinated Dibenzo-p-dioxins in Great Lakes Fish: A Baseline and Interlake Comparison." *Environ. Contam. Toxicol. and Chem.*

DATABASE(S):

None provided.

DATA COLLECTION METHODS:

Described in Publications (see below).

COLLECTION FREQUENCY:

Most data are collected annually, some biennially.

GEOGRAPHIC COVERAGE:

Great Lakes.

CONTACT:

David DeVault, Coordinator
Great Lakes Fish Monitoring Program
U.S. Environmental Protection Agency
Great Lakes National Program Office 5GL
230 S. Dearborn St.
Chicago, IL 60604
Phone: (312) 353-1375

ENVIRONMENTAL PROTECTION AGENCY



National Surface Water Survey

OFFICE:

Office of Ecological Processes and Effects Research
Environmental Research Laboratory

SUMMARY PROGRAM DESCRIPTION:

The National Surface Water Survey consists of two parts: the National Lake Survey and the National Stream Survey.

The purpose of the National Lake Survey is to quantify, with known statistical confidence, the current status, extent, and chemical and biological characteristics of lakes in regions of the United States that are potentially sensitive to acidic deposition.

The purpose of the National Stream Survey (NSS) is to determine the percentage, extent, and location of streams in the United States that presently are acidic or have low acid-neutralizing capacity and may, therefore, be susceptible to future acidification, as well as to identify streams that represent important classes in each region for possible use in more intensive studies or long-term monitoring. The NSS provides an overview of stream water chemistry in regions of the United States that are expected, on the basis of previous alkalinity data, to contain predominantly low acid-neutralizing capacity waters.

DATA COVERAGE:

Variables monitored include: acid neutralizing capacity (ANC), aluminum, ammonium, base cations, conductance, major ions, metals, nitrate, organics, pH, and sulfate.

COLLECTION METHODS:

A randomly selected subset of lakes was sampled using appropriate methods. The sample results were then weighted to estimate the chemical compositions of lake populations with known confidence. Uncertainties with time of sampling, spatial variability, and population definition are included in specific research projects to improve confidence in estimates.

The NSS employed a randomized, systematic sample of regional stream populations and used rigorous quality assurance protocols for field sampling and laboratory chemical analysis.

COLLECTION FREQUENCY:

"Index" sample taken at the time of the fall overturn for lakes and high and low flow for streams.

GEOGRAPHIC COVERAGE:

Northeastern, Southeastern, Upper Midwest, and Western United States for lakes, and Middle Atlantic, Southeast, and Southern Blue Ridge Province for streams.

CONTACT:

Dixon Landers
U.S. Environmental Protection Agency
Environmental Research Laboratory
200 SW 35th St.
Corvallis, OR 97333
Phone: (503) 754-4427

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Brakke, D.F., D.H. Landers and J.M. Eilers. 1988. "Chemical and Physical Characteristics of Lakes in the Northeastern United States." *Environ. Sci. Technol.* 22:155-163.

Brakke, D.F., D.H. Landers and J.M. Eilers. 1987. "Hydrologic and Chemical Characteristics of Darkwater, Clearwater, and Acidic Lakes in the United States." Proceedings of UNESCO/IHP Symposium.

Eilers, J.M., D.F. Brakke, D.H. Landers and P.E. Kellar. 1988. "Characteristics of Lakes in Mountainous Areas of the Western United States." *Verh. Internat. Verein. Limnol.* 23:144-151.

- Eilers, J.M., D.H. Landers and D.F. Brakke. 1988. "Chemical and Physical Characteristics of Lakes in the Southeastern United States." *Environ. Sci. Technol.* 22:172-177.
- Eilers, J.M., D.F. Brakke and D.H. Landers. 1987. "Chemical and Physical Characteristics of Lakes in the Upper Midwest, United States." *Environ. Sci. Technol.* 22:164-172
- Eilers, J.M., P. Kanciruk, R.A. McCord, W.S. Overton, L. Hook, D.J. Blick, D.F. Brakke, P.E. Lellar, M.S. DeHan, M.E. Silverstein and D.H. Landers. 1987. "Characteristics of Lakes in the Western United States." Vol. 2, *Data Compendium for Selected Physical and Chemical Variables*. EPA/600/3-86-054b. U.S. Environmental Protection Agency. Washington, DC.
- Herlihy, A.T., P.R. Kaufmann and M.E. Mitch. 1991. "Chemical Characteristics of Streams in the Eastern United States: II. Sources of Acidity and Low ANC Streams." *Water Resources Research*. 27:624-642.
- Herlihy, A.T., P.R. Kaufmann, M.E. Mitch and D.D. Brown. 1990. "Regional Estimates of Acid Mine Drainage Impacts on Streams of the Mid-Atlantic and Southeastern United States." *Water, Air, and Soil Pollution*. 50:91-107.
- Kaufmann, P.R., A.T. Herlihy, M.E. Mitch and W.S. Overton. 1991. "Chemical Characteristics of Streams in the Eastern United States: I. Synoptic Survey Design, Acid Base Status, and Regional Patterns." *Water Resources Research*. 27:611-627.
- Kaufmann, P.R., A.T. Herlihy, J.W. Elwood, M.E. Mitch, W.S. Overton, M.J. Sale, J.J. Messer, K.A. Cougan, D.V. Peck, K.H. Reckhow, A.J. Kinney, S.J. Christie, D.D. Brown, C.A. Hagley, and H.I. Jager. 1988. "Chemical Characteristics of Streams in the Mid-Atlantic and Southeastern United States." Vol. 1, *Population Descriptions and Physiochemical Relationships*. EPA/600/3-88/021a. U.S. Environmental Protection Agency. Washington, DC.
- Landers, D.H., W.S. Overton, R.A. Linthurst and D.F. Brakke. 1988. "Eastern Lake Survey: Regional Estimates of Lake Chemistry." *Environ. Sci. Technol.* 22:128-135.
- Landers, D.H., J.M. Eilers, D.F. Brakke, W.S. Overton, P.E. Kellar, M.E. Silverstein, R.D. Schonbrod, R.E. Crowe, R.A. Linthurst, J.M. Omernik, S.A. Teague and E.P. Meier. 1987. "Characteristics of Lakes in the Western United States." Vol. 1, *Population Descriptions and Physicochemical Relationships*. EPA/600/3-86/054a. U.S. Environmental Protection Agency. Washington, DC.
- Linthurst, R.A., D.H. Landers, J.M. Eilers, D.F. Brakke, W.S. Overton, E.P. Meier and R.E. Crowe. 1986. "Characteristics of Lakes in the Eastern United States." Vol. 1, *Population Descriptions and Physicochemical Relationships*. EPA/600/4-86/007a. U.S. Environmental Protection Agency. Washington, DC.
- Mitch, M.E., P.R. Kaufmann, A.T. Herlihy, W.S. Overton, and M.J. Sale. 1990. *National Stream Survey Database Guide*. EPA/600/8-90/055.2. U.S. Environmental Protection Agency. Washington, DC.
- Overton, W.S., P. Kanciruk, L.A. Hook, J.M. Eilers, D.H. Landers, D.F. Brakke, D.J. Blick, Jr., R.A. Linthurst, M.D. DeHaan and J.M. Omernik. 1986. "Characteristics of Lakes in the Eastern United States." Vol. 2, *Lakes Samples and Descriptive Statistics for Physical and Chemical Variables*. EPA/600/4-86/007b. U.S. Environmental Protection Agency. Washington, DC.
- Sale, M.J., P.R. Kaufmann, H.I. Jager, J.M. Coe, K.A. Cougan, A.J. Kinney, M.E. Mitch and W.S. Overton. 1988. "Chemical Characteristics of Streams of the Mid-Atlantic and Southeastern United States." Volume 2, *Streams Sampled, Descriptive Statistics, and Compendium of Physical and Chemical Data*. EPA/600/3-88/021b. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

The database is available: see Contact, and Mitch, et al. (1990) under Publications.

National Water Quality Monitoring Program

OFFICE:

Office of Water
Office of Wetlands, Oceans and Watersheds
Assessment and Watershed Protection Division
Monitoring Branch

SUMMARY PROGRAM DESCRIPTION:

The mission of the Monitoring Program is to develop and implement national surface water quality assessment and monitoring guidelines, protocols, and programs as well as develop and manage the associated database and analysis programs.

Section 305(b) of the Clean Water Act requires States to report to EPA on the extent to which their waters are meeting the goals of the Act and to recommend how these goals can be achieved. States enter information on the status of specific waterbodies, including causes and sources of water quality impairments, into a national database system known as the Waterbody System (WBS). The Waterbody System ties data to an individual, geographically-defined waterbody and produces assessment reports on specified dates. A waterbody may be any discrete hydrogeologic entity that is useful for assessment and management purposes, such as a river, lake, estuary, ocean, or wetland with a boundary that remains constant over time. EPA compiles information from State reports and transmits this biennially as a National Water Quality Inventory report to Congress. The 1992 report summarizes the States' 1990 and 1991 data collection activities and analyses.

Water quality is reported as attainment or non-attainment of water quality standards as well as through indicators of environmental conditions. States use fixed-station network data, surveys, ecological and habitat assessment, remote sensing, modeling, and other data and estimating techniques to prepare assessments for the entire United States and territories.

In addition, the Office of Water, Monitoring Programs jointly manages, with the Office of Information Resources Management, one of the Nation's largest water information systems, STORET (Storage and Retrieval of U.S. waterways parametric data). This system contains water and related resource data from various Federal, State, local and private sources.

As the Office of Water continues to expand and strengthen its water monitoring programs, EPA is providing new guidance for the States on effective biological habitat and watershed monitoring as well as developing local volunteer monitoring programs. National conferences and workshops and other technical tools support these activities.

CONTACT:

Policy:
Mary L. Belefski, Chief
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Information Management:

Robert King, Chief
Information Services Section
U.S. Environmental Protection Agency
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401 M Street, SW
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FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

U.S. Environmental Protection Agency. 1992. *National Water Quality Inventory: 1990 Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.

Office of Wetlands, Oceans and Watersheds. 1991. *Guidelines for the Preparation of the 1992 State Water Quality Assessments* (305(b) reports). U.S. Environmental Protection Agency. Washington, DC.

--. 1990. *National Water Quality Inventory: 1988 Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.

--. 1989. *Guidelines for the Preparation of the 1990 State Water Quality Assessments*. U.S. Environmental Protection Agency. Washington, DC.

--. 1989. *Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish*. U.S. Environmental Protection Agency. Washington, DC.

--. 1992. *PC Waterbody System User's Guide*. 3rd edition., (version 3.0). U.S. Environmental Protection Agency. Washington, DC.

--. 1988. *National Water Quality Inventory: 1986 Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.

--. 1987. *Guidelines for the Preparation of the 1988 State Water Quality Assessments*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

STORET (STORage and RETrieval of U.S. waterways parametric data):

STORET is one of the oldest and largest water information systems in use. The Office of Water and the Office of Information Resources Management jointly manage STORET. STORET has three main information areas: Water Quality System (WQS), Biological System (BIOS), and Daily Flow System (DFS). The WQS contains chemical and physical information; BIOS contains information on the distribution, abundance, and physical condition of aquatic organisms; and DFS contains daily observations of flow and water quality parameters collected at the gaging stations belonging to the U.S. Geological Survey. There are over 800,000 sampling stations which have detailed locational information and more than 180 million parametric observations covering 13,000 water quality parameters. EPA is restructuring and improving STORET so that it can be more responsive to Agency data needs.

Ocean Data Evaluation System (ODES):

EPA designed ODES in 1985 to support managers and analysts in meeting regulatory objectives of the Office of Wetlands, Oceans and Watersheds. ODES contains over two million records from a wide range of EPA programs including the 301(h) sewage discharge program, the National Pollutant Discharge Program (NPDES), the ocean dumping program, and the National Estuary Program (NEP). Records include information on water quality, oceanographic description, sediment pollutants, physical/chemical/biological characteristics, and estuary information.

For more information on STORET or ODES contact:

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401 M Street, SW
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Phone: (202) 260-7028

For more information on ODES contact:

Kevin Perry
U.S. Environmental Protection Agency
WH-556F
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-6833

Waterbody System (WBS);

The Waterbody System includes a software package and database to manage State water quality assessment and related information. The WBS facilitates State preparation of the biennial report of water quality status required by Section 305(b) of the Clean Water Act. It does not store or analyze raw monitoring data but does include information on water quality, user support, status, causes of impairment, and sources of pollution for each waterbody. A waterbody is defined as any discrete hydrologic entity that is useful for assessment purposes, such as a river, lake, estuary, ocean, or wetland.

For more information on WBS contact:

Jack Clifford
U.S. Environmental Protection Agency
WH-553
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-3667

Water Resources and Ecological Monitoring

OFFICE:

Water Resources Division

SUMMARY PROGRAM DESCRIPTION:

TVA conducts a continuing program of water resource quality monitoring to evaluate ecological health and suitability for body-contact recreation of reservoirs and major streams in the Tennessee Valley, and to evaluate the suitability for human consumption of the fish in those water bodies.

STATISTICAL COVERAGE:

The program includes systematic measurement of physical, chemical and biological variables. Physical variables monitored include streamflow, water clarity, turbidity and suspended solids, depth profiles of temperature and conductivity, habitat evaluation, and sediment particle size distribution. Chemical measurements include depth profiles of dissolved oxygen and pH, nutrients, major cations and anions, hardness, selected metals in water, sediments, and fish tissue, and selected toxic organics in sediments and fish tissue. In addition to fish tissue contaminants, biological variables include chlorophyll, benthic invertebrate abundance and community structure, fisheries abundance and community structure (fisheries Index of Biotic Integrity), fish biomass estimates, autopsy-based evaluation of health of largemouth bass, and toxicity screening bioassays using sediment pore water and overlying lake/stream water.

DATA COLLECTION METHODS:

Depth profile data are collected using Hydrolab or comparable field instruments, and clarity is measured using secchi disks. Water is collected using peristaltic pumps for depth-integrated photic zone samples and either Kemmerer or Van Dorn bottles for near-bottom samples and stream samples (collected at mid-depth). Sediment samples for chemical analysis and particle size consist of composites of the upper 3 cm. from 10 or more gravity cores collected along a transverse transect. Benthic invertebrates in lakes are collected using Eckman, Petersen, or Ponar dredges. Stream invertebrates are collected using Surber and Hess

samplers, and D-nets for sampling along the shoreline. Electroshocking is used to collect fish in streams and near-shore areas of lakes, and various nets in the pelagic zone of lakes. Biomass estimates are based on hydroacoustic data calibrated with trawling to validate species and size.

COLLECTION FREQUENCY:

In streams, physical/chemical data are collected bimonthly; sediments and biological samples are collected annually. In lakes, physical/chemical and chlorophyll samples and data are collected once in winter (fully mixed conditions), then monthly from April through September or October. Sediments and biological samples are collected annually in most cases.

GEOGRAPHIC COVERAGE:

Tennessee Valley streams and reservoirs: 12 major tributary streams, 9 mainstem Tennessee River reservoirs (forebay, transition zone, and inflow), and 22 tributary reservoirs (1 to 4 stations each).

CONTACT:

Any of the following:

Dr. Neil E. Carriker	(615) 751-7330
Mr. Ronald W. Pasch	(615) 751-7309
Mr. Donald L. Dycus	(615) 751-7322
Mr. Dennis L. Meinert	(615) 751-8962
Mr. Donald W. Anderson	(615) 751-7329

at the following address:

HB-2C
TVA-Water Resources Division
1101 Market Street
Chattanooga, TN 37402

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATIONS:

Public Information Documents:

Tennessee Valley Authority. 1992. *RiverPulse-1991*. 20 pp.

Tennessee Valley Authority. 1990-1992. Reservoir Status Report series. Includes monographs on Cherokee, Norris, Wheeler, Blue Ridge, Chatuge, and Melton Hill reservoirs, and on the three Ocoee River projects.

Technical Reports:

Dycus, D.L. and D.L. Meinert. 1992. *Reservoir Vital Signs Monitoring-1991; Summary of Vital Signs and Use Impairment Monitoring on Tennessee Valley Reservoirs*. TVA/WR-92-8. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Meinert, D.L. and J.P. Fehring. 1992. *Reservoir Vital Signs Monitoring-1991; Physical/Chemical Characteristics of Water and Sediment*. TVA/WRD-92-1. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Moses, J. and DC Wade. 1992. *Reservoir Vital Signs Monitoring-1991; Acute Toxicity Screening of Reservoir Water and Sediment*. TVA/WR-92-2. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Wilson, W.K. 1992. *Reservoir Vital Signs Monitoring-1991; Hydroacoustic Estimates of Fish Abundance*. TVA/WR-92-4. Tennessee Valley Authority Water Resources Division. Chattanooga, TN.

Masters, A.E. 1992. *Reservoir Vital Signs Monitoring-1991; Benthic Macroinvertebrate Community Results*. TVA/WR-92-3. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Scott, E.M., G.D. Hickman, and A.M. Brown. 1992. *Reservoir Vital Signs Monitoring-1991; Fish Community Results*. TVA/WR-92-5. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Bates, J.A., G.E. Hall, and D.L. Dycus. 1992. *Reservoir Monitoring-1991; Fish Tissue Studies in the Tennessee Valley in 1990*. TVA/WR-92-7. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Fehring, J.P. 1992. *Reservoir Monitoring-1991, Bacteriological Conditions in the Tennessee Valley: Third Annual Report*. TVA/WR-92-6. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Parr, K.P.. 1991. *Water Quality of the TVA Fixed-Station Monitoring Network*. TVA/WR-91-13. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Fehring, J.P. 1992. *Upper Hiwassee River Basin Reservoirs- 1989 Water Quality Assessment*. TVA/WR-92-1. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

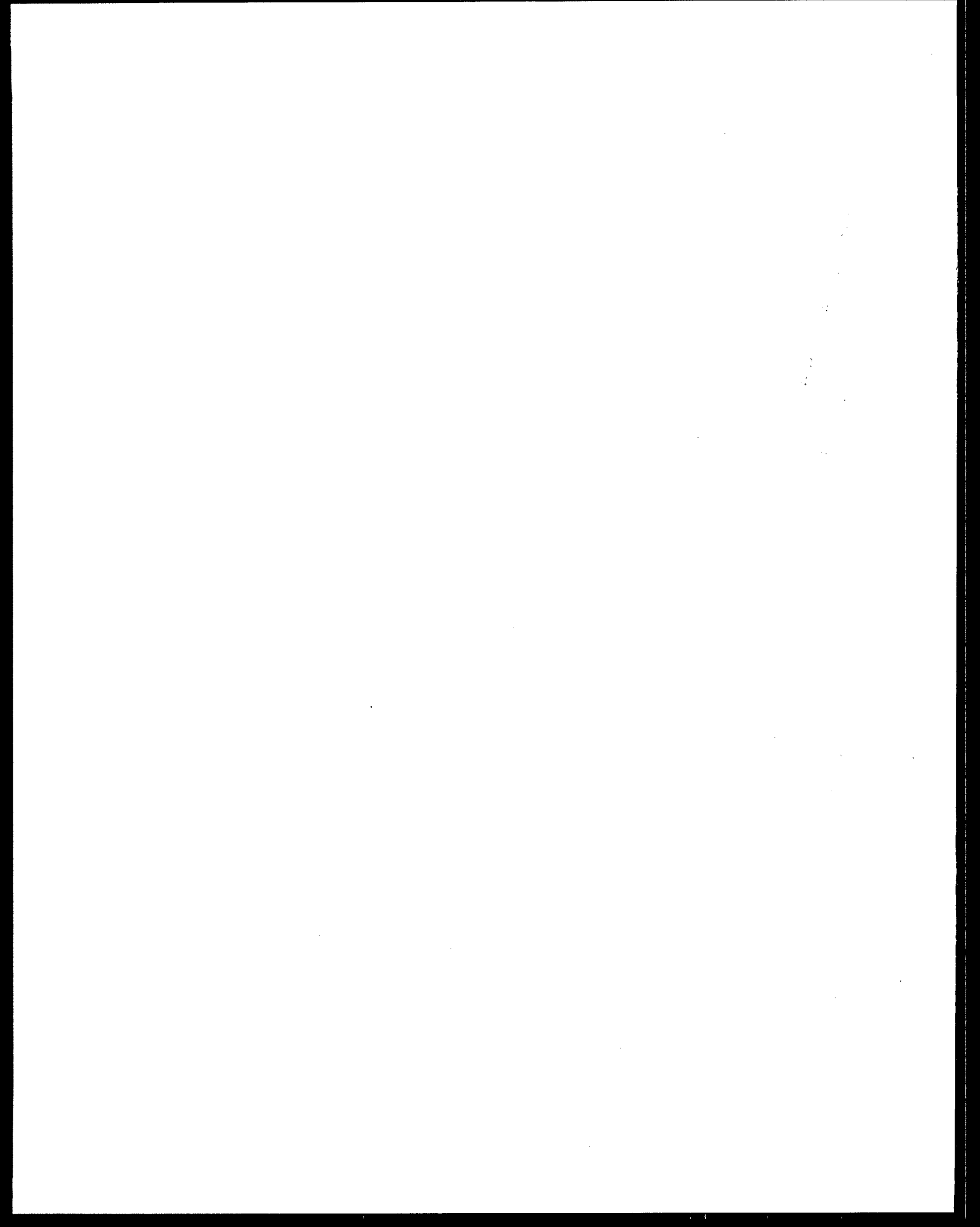
Dierberg, F.E. 1991. *Feasibility of Using Remote Sensing Platforms as an Aid to Water Quality Monitoring in the Tennessee Valley--Capabilities and Costs*. TVA/WR-91-8. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

Dierberg, F.E. 1992. *Remote Sensing for Water Quality Monitoring in the Tennessee Valley--Field Tests of Two Systems*. TVA/WR-92-17. Tennessee Valley Authority, Water Resources Division. Chattanooga, TN.

DATABASE(S):

None provided.

B. Ecological



DEPARTMENT OF COMMERCE

Fisheries Statistics Program



OFFICE:

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Research and Environmental Information
Fishery Statistics Division, F/RE1

SUMMARY PROGRAM DESCRIPTION:

The Fishery Statistics Division develops and maintains a national collection of statistics (biological, economic, and sociological) on domestic commercial and recreational fisheries, as well as joint ventures and foreign catch in the U.S. Exclusive Economic Zone (EEZ). It maintains data files on the processing, freezing, and holding of fishery products, and monthly information on imports and exports of fishery products. The Division also aids in developing policies and operational guidelines for the coordinated collection and publication of basic fishery statistics. It develops, implements, and manages computerized data systems for handling, archiving, and retrieving statistical databases.

DATA COVERAGE:

The following data are collected: monthly and annual commercial landings (catch) in pounds and value by species, State, county, year, waterbody, and distance from shore; annual operating units and number of vessels and fishermen by State, year, and country; annual processed products data by State, county, plant, species, and type of processing; annual world catch by species, country, and area; weekly shrimp imports by country and count size; and recreational finfish saltwater catch by species and geographic area.

COLLECTION METHODS:

Commercial data are obtained through census of first buyers of seafood, review of logbooks, intercept surveys, and reporting by observers. Recreational data are collected through extensive telephone and intercept surveys designed as a stratified random sample. Approximately 44,000 households in coastal counties are contacted for the telephone survey. On-site interviews are conducted with as many as 56,000 marine recreational anglers for an intercept survey.

COLLECTION FREQUENCY:

Data are collected daily, monthly, and/or yearly depending on subject and area covered.

GEOGRAPHIC COVERAGE:

All commercial catch by U.S. flag-vessels landed in the continental United States, Puerto Rico, and other 50 ports outside the 50 states. Recreational information covers marine waters only.

CONTACT:

Mark Holliday
Fishery Statistics Division, F/RE1
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
1335 East West Highway., Rm. 8313
Silver Spring, MD 20910
Phone: (301) 713-2328

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

National Oceanic and Atmospheric Administration, National Marine Fisheries Service. 1984. *Marine Recreational Fishery Statistic Survey, Pacific Coast, 1979-1980*. Current Fishery Statistics No. 8392. U.S. Department of Commerce. Washington, DC.

--. 1987. *Marine Recreational Fishery Statistic Survey, Pacific Coast, 1986*. Current Fishery Statistics No. 8393. U.S. Department of Commerce. Washington, DC.

--. 1992. *Fisheries of the United States 1991* (and earlier reports in this series.) Current Fishery Statistics No. 8900. U.S. Department of Commerce. Washington, DC.

DATABASE(S):

Databases are maintained by field offices of the National Fisheries Service, Fisheries Statistics Division in Silver Spring, MD.

DEPARTMENT OF COMMERCE



Living Marine Resources

OFFICE:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resources Conservation and
Assessment
Strategic Environmental Assessment Division

SUMMARY PROGRAM DESCRIPTION:

The Living Marine Resources Program gathers data from published sources on spatial and temporal distributions of marine species (invertebrates, fishes, seabirds, and mammals). Information includes distributions by life stage, statistics on commercial harvest, and status of seabird colonies. In 1990, additional information was gathered on sampling programs.

DATA COVERAGE:

Gulf of Mexico: spatial and temporal distributions for adult, juvenile, and reproductive life stages of 73 species of invertebrates and fishes.

Gulf of Mexico shrimp harvest: 1960-1988 (by month) harvest weight for seven shrimp species.

Gulf of Mexico estuaries: spatial and temporal distributions for adult, juvenile, reproductive, larval and egg life stages of 44 species of invertebrates and fishes in 25 estuaries.

Bering, Chukchi, and Beaufort Seas: spatial and temporal distributions for adult and juvenile stages of 102 species of invertebrates, fishes and marine mammals.

West Coast: spatial and temporal distributions for adult, juvenile, and reproductive life stages of 130 species of invertebrates, fishes, and marine mammals.

Southeast estuaries: spatial and temporal distributions for adult, juvenile, reproductive, larval and egg life stages of 40 species of invertebrates and fishes in 20 estuaries.

COLLECTION METHODS:

Alaska seabird colonies: populations of 30 species of seabirds within 1,300 individual colonies.

Data are compiled from published literature and agency databases.

COLLECTION FREQUENCY:

Ongoing.

GEOGRAPHIC COVERAGE:

Entire U.S., Exclusive Economic Zone including Alaska, excluding Hawaii, Puerto Rico, and protectorates.

CONTACTS:

Tom LaPointe, Operations Research Analyst
National Oceanic and Atmospheric Administration
6001 Executive Blvd., Room 220
Rockville, MD 20852
Phone: (301) 443-0453

Robert Wolotira, Fisheries Biologist
National Oceanic and Atmospheric Administration
6001 Executive Blvd., Room 220
Rockville, MD 20852
Phone: (301) 443-0453

FOR PUBLIC INQUIRIES:

See Contacts.

PUBLICATIONS:

Bulger, A.J., B.P. Hayden, M.E. Monaco, and M.G. McCormick-Ray. 1989. *Towards a Biogeographic Estuarine Salinity Classification*. National Oceanic and Atmospheric Administration. Rockville, MD.

Monaco, M.E., T. Czapla, D.M. Nelson, and M. Pattilo. 1989. *Estuarine Living Marine Resources Project: Texas Component*. National Oceanic and Atmospheric Administration. Rockville, MD.

Monaco, M.E. and R.L. Emmett. 1988. *Living Marine Resources Program: Estuarine Living Marine Resources Project: Washington State Component*. National Oceanic and Atmospheric Administration. Rockville, MD.

Monaco, M.E. 1986. *National Estuarine Inventory: Living Marine Resources Component Preliminary West Coast Study*. National Oceanic and Atmospheric Administration. Rockville, MD.

Ray, G.C., M.G. McCormick-Ray, J.A. Dobbin, D.N. Ehler, and D.J. Basta. 1980. *Eastern United States Coastal and Ocean Zones Data Atlas*. National Oceanic and Atmospheric Administration. Rockville, MD.

National Oceanic and Atmospheric Administration, Strategic Assessment Branch. 1989. *Bering, Chukchi, and Beaufort Seas Coastal, and Ocean Zones Strategic Assessment: Data Atlas*. Government Printing Office. Washington, DC.

--. Strategic Assessment Branch and Northwest and Alaska Fisheries Center. 1988. *West Coast of North America Strategic Assessment: Data Atlas, Marine Mammal Volume, Pre-Publication Edition*. National Oceanic and Atmospheric Administration. Rockville, MD.

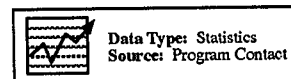
--. Strategic Assessment Branch and Southeast Fisheries Center. 1986. *Gulf of Mexico Coastal and Ocean Zones Strategic Assessment: Data Atlas*. Government Printing Office. Washington, DC.

DATABASE(S):

Computer Mapping and Analysis System (CMAS)

CMAS is a geo-referenced database. It requires a Macintosh microcomputer. For more information, see Contacts.

DEPARTMENT OF COMMERCE



National Coastal Wetlands Inventory

OFFICE:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Conservation and Assessment

Rockville, MD 20852
Phone: (301) 443-0453

FOR PUBLIC INQUIRIES:

See Contact.

SUMMARY PROGRAM DESCRIPTION:

The program is developing a database to estimate the distribution and abundance of coastal wetlands in the conterminous United States.

PUBLICATIONS:

Alexander, C.E., M.A. Broutman, and D.W. Field.
1986. *An Inventory of Coastal Wetlands of the USA*. National Oceanic and Atmospheric Administration. Rockville, MD.

Field, D.W., C.E. Alexander, and M.A. Broutman.
1988. "Towards Developing an Inventory of Coastal Wetlands of the USA." *Marine Fisheries Review*. 50(1): 40-46.

Reyer, A.J., D.W. Field, J.E. Cassells, C.E. Alexander, and C.L. Holland. 1988. *National Coastal Wetlands Inventory-the Distribution and Areal Extent of Coastal Wetlands in Estuaries of the Gulf of Mexico*. National Oceanic and Atmospheric Administration. Rockville, MD.

Office of Ocean Conservation and Assessments. 1989. *National Estuarine Inventory: Data Atlas. Vol 3, Coastal Wetlands - New England Region*. National Oceanic and Atmospheric Administration. Rockville, MD.

--. 1989. *National Estuarine Inventory: Data Atlas. Vol. 5, Coastal Wetlands - Gulf of Mexico Region*. National Oceanic and Atmospheric Administration. Rockville, MD.

--. 1988. *National Estuarine Inventory: Data Atlas. Vol. 4, Public Recreation Facilities in Coastal Areas*. National Oceanic and Atmospheric Administration. Rockville, MD.

STATISTICAL COVERAGE:

Estimates of areas are summarized for 12 wetland habitats and 3 non-wetland habitats. The database was completed in October 1989 and contains information from 5,290 NWI maps, most of which are 1:24,000 scale.

DATA COLLECTION METHODS:

The data are generated by using a grid sampling technique on maps produced by the National Wetlands Inventory (NWI) of the U.S. Fish and Wildlife Service. The grid sampling procedure is a stratified systematic sampling technique. On a 1:24,000 scale map, there are approximately 850-900 sampling points. The grid cell size associated with each sampling point is equal to 45 acres.

COLLECTION FREQUENCY:

Data were collected on a one-time basis.

GEOGRAPHIC COVERAGE:

All coastal counties and estuaries as described in NOAA's National Estuarine Inventory program, on the East, West and Gulf Coasts of the United States.

CONTACT:

Don Field
Marine Resource Specialist
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Conservation and Assessment
6001 Executive Blvd., Room 300 (N/OMA31)

DATABASE(S):

National Coastal Wetlands Inventory

Data are now being loaded into SPANS Geographic Information System.

Biomonitoring of Environmental Status and Trends (BEST) Program

Note: The following program is now being implemented. Only limited data is available at this time.

OFFICE:

U.S. Fish and Wildlife Service
Division of Environmental Contaminants
Branch of Contaminant
Investigations and Monitoring

SUMMARY PROGRAM DESCRIPTION:

The BEST Program will monitor and respond to the effects of contemporary environmental contaminant problems associated with fish and wildlife resources. When fully operational, the BEST Program will identify the extent, magnitude, and location of contaminant-related ecosystem degradation and will provide information to answer many questions, some of which include:

- What are the major contaminant threats to FWS trust resources?
- Are contaminant impacts to FWS trust resources increasing or decreasing?
- Which trust resources are degrading or improving on a national, regional and local level?
- What contaminants are affecting National Wildlife Refuges and what are the probable contaminant sources and exposure pathways?

The BEST Program is the only Federal biomonitoring program that will document the current level of contaminant impacts to the Nation's fish and wildlife resources in a predictive and action-oriented manner. The information it produces, in conjunction with other Federal biomonitoring programs, will support numerous Federal, State, and local efforts to evaluate and protect fish and wildlife from contaminant-related impacts.

The BEST Program will use a comprehensive, ecosystem-based approach to address the transport, fate, and effects of environmental contaminants on trust resources. An integrated biomonitoring network will be established to evaluate contaminant impacts at the tissue, organism, population, community, and ecosystem levels.

To determine the status, trends, and effects of contaminants on fish and wildlife resources, the BEST Program will use bioassessment techniques from four broad categories.

- Ecological Surveys will be used to assess changes in composition, structure, and function of plant and animal communities.
- Organism health or biomarkers such as physiological anomalies will be used to measure fish and wildlife exposure to contaminants.
- Bioassays and toxicity tests will measure the relative species responses to contaminant exposure in natural systems.
- Residue analysis will determine the ecological pathways and prevalence of various contaminants.

Collection methods development is still underway at this time. Pilot studies to be conducted during FY94 will test proposed methods.

The specific frequency of data collection has not been determined at this point in the development process.

The BEST Program's sampling approach has been designed around two major components, trust resources on FWS lands (primarily National Wildlife Refuges) and trust species found outside of Service lands. Distinct sampling designs will be implemented for each component.

CONTACT:

Chief
Division of Environmental Contaminants
U.S. Fish and Wildlife Service
4401 North Fairfax Drive, Room 330
Arlington, VA 22203
Phone: (703) 358-2148

DEPARTMENT OF THE INTERIOR

National Wetlands Inventory



OFFICE:

U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Branch of Coastal and Wetland Resources

SUMMARY PROGRAM DESCRIPTION:

In 1975, the U.S. Fish and Wildlife Service established the National Wetlands Inventory (NWI) to develop technically sound and comprehensive information on the characteristics and extent of wetland resources in the United States.

DATA COVERAGE:

Status and trends information is available for selected wetland types including: estuarine wetlands; palustrine wetlands; lacustrine wetlands; and deepwater habitats in the lower 48 States. In addition, statistical data are available for coastal waters and bay bottoms, coastal marshlands and mangroves, recent changes in inland vegetated wetlands, recent changes in lacustrine deepwater habitats, estimates of current annual wetland losses, estimates of wetland losses by flyways, States with significant changes in wetland resources, indicators of development pressures on wetland resources, and causes of wetland losses. The Emergency Wetlands Resources Act of 1986 requires that updates of the wetland status and trends be produced on a 10-year cycle with reports due in 1990, 2000, 2010, etc.

COLLECTION METHODS:

A stratified random sample is used with the basic data strata being formed by State boundaries and the 35 physical subdivisions described by E.H. Hammond (1970). Additional strata specific to the study are special coastal strata encompassing the Marine Intertidal category, the Estuarine System, and other strata encompassing the Great Lakes. This results in over 200 strata for the study. Sample units are allocated to strata in proportion to the expected amount of wetland and deepwater habitat acreage as estimated by earlier work. Each sample unit is a 4-square-mile area, 2 miles on each side. After the units are selected at random within strata and plotted on U.S. Geological Survey topographic maps, aerial

photography is obtained for the new time period. All wetland and deepwater habitat changes are marked as to cause, either natural or human induced. The photointerpreted data for each unit is then prepared for computer analysis. Several quality control checks are routinely made to eliminate errors.

COLLECTION FREQUENCY:

Data are collected continuously with updates on a ten-year cycle. The 1990 update provides trend data on wetlands losses and gains between the 1970s and the 1980s.

GEOGRAPHIC COVERAGE:

The wetland mapping phase of the project has produced map coverage for approximately 70 percent of the lower 48 States, 22 percent of Alaska, and all of Hawaii, Puerto Rico, and Guam. Wetland status and trends information is designed to provide statistical estimates on a national basis (lower 48 States). In addition, regional intensification studies are available for the Chesapeake Bay Region (Delaware, Maryland, Pennsylvania, West Virginia, and Virginia), and the Central Valley of California. Other statewide status information is available for the States of Florida, Delaware, New Jersey, Illinois, Washington, Maryland, and Connecticut. Status reports covering the coastal wetlands of Alaska and the Prairie Pothole Region (North Dakota, South Dakota, Minnesota) are also available.

CONTACTS:

Thomas E. Dahl - for wetlands status and trends information

Linda Shaffer - for digital wetland map information

National Wetlands Inventory
U.S. Fish and Wildlife Service
9720 Executive Center Drive
Suite 101 Monroe Bldg.
St. Petersburg, FL 33702-2440
Phone: (813) 893-3624

FOR PUBLIC INQUIRIES:

Earth Sciences Information Center
U.S. Geological Survey
507 National Center
Reston, VA 22092
Phone: (703) 860-6045

National Wetland Inventory maps can be obtained by calling: 1-800-USA-MAPS. In Virginia, call (703) 648-6045.

PUBLICATIONS:

Dahl, T.E. and H.R. Pywell. 1989. "National Status and Trends Study: Estimating Wetland Resources in the 1980s." *Wetlands: Concerns and Successes*. American Water Resources Assoc.

Dahl, T.E. and C.E. Johnson. 1991. *Status and Trends of Wetlands in the Conterminous United States, 1970s to 1980s*. U.S. Department of the Interior, Fish and Wildlife Service. Washington, DC.

Frazer, W.E., T.J. Monahan, DC Bowden, and F.A. Graybill. 1983. *Status and Trends of Wetlands and Deepwater Habitats in the Conterminous United States 1950s to 1970s*. Colorado State University: Department of Forest and Wood Science.

Hammond, E.H. 1970. "Physical Subdivisions of the United States." *National Atlas of the United States*. U.S. Geological Survey. Reston, VA.

Hefner, J.M. and J.D. Brown. 1985. *Wetland Trends in the Southeastern United States*. Fish and Wildlife Service. Atlanta, GA.

Tiner, R.W. Jr. 1984. *Wetlands of the United States: Current Status and Recent Trends*. Department of the Interior, Fish and Wildlife Service. Washington, DC.

Wilén, B.O. and W.E. Frazer. 1988. "Status and Trends of U.S. Forested Wetlands." *Proceedings of the International Forested Wetlands Resource: Identification and Inventory*. Baton Rouge, LA.

--, and R.W. Tiner Jr. 1989. "The National Wetlands Inventory - the First Ten Years." *Wetlands: Concerns and Successes*. American Water Resources Assoc.

DATABASE(S):

Wetland Plant Species Database

The database is a listing of plants occurring in wetlands, as defined by the U.S. Fish and Wildlife Service's wetland definition and classification system. It lists scientific and common names and distribution of 6,728 plant species. It can be accessed by family, scientific, or common name, region, State, and wetland indicator status. The database is updated as additional information is received.

State and regional subdivisions of the Wetland Plant Species Database are available on floppy disks from:

BIODATA, Inc.
13950 W. 20th Avenue
Golden, CO 80401
Phone: (303) 278-1046

Books

Books contains bibliographic citations for almost 300 sources such as national, regional, and State floras, checklists, and botanical manuals used to compile the Wetland Plant Species Database.

Wetland Values Citation Database

This is a bibliographic database with over 12,000 listings of worldwide published scientific literature on wetland functions and values. It has an extensive number of searchable fields, including geographic descriptors, hydrological units, ecological regions, and wetlands types, as well as subject, title, and abstract fields. It includes literature from the 1950s to the present.

Information on the Wetlands Values Citation Database is available from:

Paul Alford
U.S. Fish and Wildlife Service
National Wetlands Inventory
9720 Executive Center Drive
Monroe Blvd., Suite 101
St. Petersburg, FL 33702-2440
Phone: (813) 893-3624

Wetland Geographic Information System

The National Wetlands Inventory is constructing a geo-referenced wetland database using geographic information system (GIS) technologies. Three systems comprise the GIS:

- (1) The Wetlands Analytical Mapping System (WAMS);
- (2) The Map Overlay and Statistical System (MOSS); and
- (3) The Cartographic Output System (COS). To date, more than 7,746 NWI maps representing 12.8 percent of the continental United States have been digitized. Statewide databases have been built for New Jersey, Indiana, Washington, Illinois, Delaware, and Maryland, and are in progress for Virginia, Minnesota, South Dakota, and South Carolina. NWI digital data are also available for portions of 33 other States. Wetland GIS database files may be purchased from The National Wetlands Inventory office in St. Petersburg, FL (see Contacts).

DEPARTMENT OF THE INTERIOR



North American Breeding Bird Survey

OFFICE:

U.S. Fish and Wildlife Service
Office of Migratory Bird Management
Patuxent Wildlife Research Center

SUMMARY PROGRAM DESCRIPTION:

The Breeding Bird Survey Program, started in 1966, provides a uniform basis for assessing long-term trends in avian populations throughout North America.

DATA COVERAGE:

Total number of individuals recorded by species, survey route, and State are available. Long-term trend analyses are performed every 2 years.

COLLECTION METHODS:

Field procedures provide uniform sampling of bird populations by major physiographic regions across the continent. The data collection methods, which involve censusing of birds by sight and sound for specified periods of time along established survey routes during the breeding season (usually the month of June), and methods for data processing and analysis are described in Robbins, Bystrak and Geissler (1986).

COLLECTION FREQUENCY:

Data are collected annually.

GEOGRAPHIC COVERAGE:

Randomly distributed roadside routes have been established within each one degree block of latitude and longitude in the conterminous United States and the roaded areas of Alaska and Canada.

CONTACT:

Bruce Peterjohn, Ornithologist
Patuxent Wildlife Research Center
U.S. Fish and Wildlife Service
Department of the Interior
Laurel, MD 20708
Phone: (301) 498-0330

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Droege, S. and J.R. Sauer. 1990. "North American Breeding Bird Survey Annual Summary 1989." *Stud. Avian Biol.* 90(8). U.S. Fish and Wildlife Service. Washington, DC.

Robbins, C.S., D. Bystrak and P. Geissler. 1986. *The Breeding Bird Survey: Its First 15 Years, 1965-1979*. Resource Pub. No. 157. Department of the Interior, Fish and Wildlife Service. Washington, DC.

DATABASE(S):

Breeding Bird Survey Database

This database contains raw counts, weather information, route histories, and observer information.

DEPARTMENT OF THE INTERIOR



Waterfowl Breeding Population and Habitat Survey

OFFICE:

U.S. Fish and Wildlife Service
Office of Migratory Bird Management

SUMMARY PROGRAM DESCRIPTION:

This survey is designed to provide annual breeding population estimates and measure breeding habitat changes over a major portion of the duck breeding range in North America.

DATA COVERAGE:

Variables measured include number of breeding waterfowl by species (for example, northern pintail and mallard, Canada goose, canvasback and redhead, and Tundra swan) and number of waterbodies (ponds) available during the breeding season. Annual comparisons and long-term trend information are available.

COLLECTION METHODS:

This survey is an aerial plot survey. Individual duck, goose, and swan populations by species and ponds are counted on strip transects that total 71,110 kilometers for an approximately one percent sample of the total surveyed area. Detectability bias is corrected through the use of a double-sampling scheme. Waterfowl along a small portion of the transect lengths are counted from the ground. These counts represent a census, allowing the correction of the aerial counts by using ratio estimators. The number of breeding waterfowl for each species and the number of waterbodies is the target population.

COLLECTION FREQUENCY:

Data collected on an annual basis.

GEOGRAPHIC COVERAGE:

Includes the 50 States, Yukon Territory, Northwest Territories, Alberta, Manitoba, Saskatchewan, western Ontario, North and South Dakota, and Montana.

CONTACT:

Dr. Robert J. Blohm, Chief
Branch of Operations
Office of Migratory Bird Management
U.S. Fish and Wildlife Service
Mailstop 634 ARLSQ
1849 C Street, N.W.
Washington, DC 20240
Phone: (703) 358-1838

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

U.S. Fish and Wildlife and Canadian Wildlife Service. 1987. *Standard Operating Procedures for Aerial Waterfowl Breeding Ground Population and Habitat Surveys in North America*. Washington, DC.

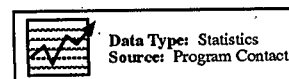
--. *Trends in Duck Breeding Populations* (annual). U.S. Fish and Wildlife Service, Office of Migratory Bird Management. Laurel, MD.

--. *Status of Waterfowl and Fall Flight Forecast* (annual). U.S. Fish and Wildlife Service, Office of Migratory Bird Management. Laurel, MD.

DATABASE(S):

For data information, see Contact.

ENVIRONMENTAL PROTECTION AGENCY



Environmental Monitoring and Assessment Program (EMAP)

Note: The following program is now being implemented. Only limited data is available at this time.

In 1988, EPA's Science Advisory Board recommended implementing a program within EPA to monitor the status and trends of ecological conditions and to develop innovative methods for anticipating emerging problems before they become crises. In response, EPA initiated EMAP. EMAP objectives include:

- estimation of the current status, changes, and trends in indicators of the conditions of the Nation's ecological resources on a regional basis;
- monitoring of indicators of pollutant exposure and habitat condition;
- identification of associations between human-induced stresses and ecological conditions;
- and generation of periodic statistical summaries and interpretive reports on status and trends to resource managers and the public.

When fully implemented, in cooperation with other agencies that share resource monitoring responsibilities, this coordinated research and monitoring effort will provide the information needed to document the current condition of our ecological resources, understand why that condition exists, and predict what it may be in the future under various management alternatives. Such information will enable EPA to take proactive steps that will minimize future risk or to revise current efforts that fall short of their intended results.

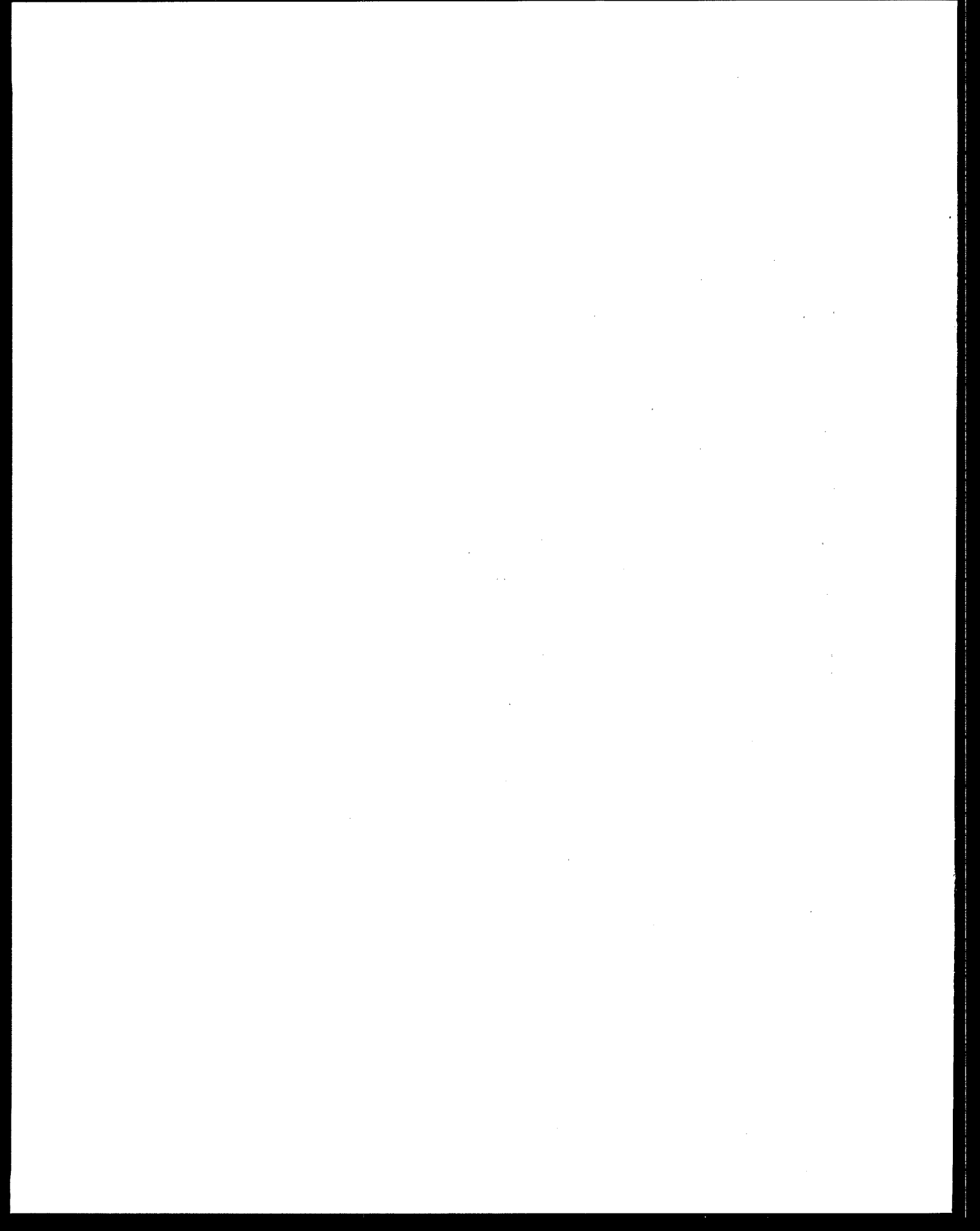
CONTACT:

Tom Dixon
Office of Research and Development (RD-680)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7238
FAX: (202) 260-4346

Section V

Other Effects of Water Pollution

In addition to the direct effects of water pollution evident in assessments of ambient water quality, water pollution has other impacts such as increased incidence of waterborne disease and interference with the beneficial uses of the ambient waters. This section describes programs that track waterborne disease outbreaks and shellfish bed closures. Additional information on impacts upon beneficial uses, including fishing bans and beach closures, is provided by the National Water Monitoring Program described in Section IV.



Classified Shellfishing Waters

OFFICE:

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean Resources Conservation and
Assessment
Strategic Environmental Assessment Division

SUMMARY PROGRAM DESCRIPTION:

Classified shellfishing waters are monitored as an indicator of bacterial water quality nationwide. Waters are classified for the commercial harvest of oysters, clams, and mussels based on the presence of actual or potential pollution sources and coliform bacteria levels in surface waters. Each shellfish-producing State classifies its waters in accordance with guidelines established by the National Shellfish Sanitation Program.

DATA COVERAGE:

Approximately 2,000 classified shellfishing areas are defined by name, location (nautical chart number, estuary, State, region), classification (approved, prohibited, conditionally approved, or restricted), size, and pollution sources (identified for all non-approved areas).

Trends in classification by region from 1966 to 1990 and by selected estuaries in the Northeast, Southeast, Gulf of Mexico, and Pacific from 1971 to 1990 are available. Areas that were reclassified because of improved or diminished water quality are distinguished from those that were reclassified as a result of improved monitoring.

Data also are collected on administration of State programs, including: identification of State agencies responsible for monitoring waters, assigning classification, analyzing water samples, etc.; number of personnel; budgets; number of sampling stations; frequency of sampling; and other factors that may influence classification.

COLLECTION METHODS:

Data are collected by questionnaire and followed by interviews. Classifications are noted on 265 Nautical Charts (NOS 1:80,000).

COLLECTION FREQUENCY:

Data were compiled in 1966, 1971, 1974, 1980, 1985, and 1990. The next survey is scheduled for 1995.

GEOGRAPHIC COVERAGE:

East, West, and Gulf Coasts of the United States.

CONTACT:

Sharon Adamany
Environmental Analysts
NOAA, N/ORCA
6001 Executive Blvd.
Rockville, MD 20852
Phone: (301) 443-8843

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Strategic Assessment Branch, National Oceanic and Atmospheric Administration. 1989. *The Quality of Shellfish Growing Waters on the West Coast*. National Oceanic and Atmospheric Administration, Department of Commerce. Rockville, MD.

--. 1991. *The 1990 National Shellfish Register of Classified Estuarine Waters*. National Oceanic and Atmospheric Administration, Department of Commerce. Rockville, MD.

Leonard, D.L., M.A. Broutman, and K.E. Harkness. 1989. *The Quality of Shellfish Growing Waters on the East Coast of the United States*. National Oceanic and Atmospheric Administration. Rockville, MD.

Broutman, M.A. and D.L. Leonard. 1988. *National Estuarine Inventory: The Quality of Shellfish Growing Waters in the Gulf of Mexico*. National Oceanic and Atmospheric Administration. Rockville, MD.

--. 1986. *National Estuarine Inventory: Classified Shellfish Growing Waters by Estuary*. National Oceanic and Atmospheric Administration. Rockville, MD.

DATABASE(S):

National Shellfish Register

This database contains shellfish area name, size, classification, chart number, State, and region. Also included are pollution sources, contact persons, budget data, and sampling stations.

Waterborne Disease Outbreak Surveillance

OFFICE:

Centers for Disease Control and Prevention
Public Health Service
National Center for Infectious Diseases
Division of Parasitic Diseases
Parasitic Diseases Branch

SUMMARY PROGRAM DESCRIPTION:

Since 1971, in collaboration with EPA, CDC has tabulated data concerning waterborne disease outbreaks in the United States and has compiled the data in surveillance summaries. The summaries include data about a) outbreaks associated with water intended for drinking, b) outbreaks associated with water used for recreational purposes, and c) outbreaks of gastroenteritis (whether food or waterborne) on ocean-going passenger vessels that call on U.S. ports. A goal of the surveillance systems is characterization of the epidemiology of waterborne diseases. Other goals include the identification of water system deficiencies and identification of etiologic agents associated with outbreaks, so that improved water systems can be designed.

Summary information data is collected on outbreaks associated with water intended for drinking and water used for recreational purposes. Outbreaks are characterized by location (State), date, number of cases, etiologic agent, water source, type of water supply (e.g., community, noncommunity, or private), and water system deficiency. Information about the type of water treatment will be available starting in 1991. Data collection is ongoing from 1971.

A largely passive surveillance system is used and therefore relies on voluntary reporting to CDC by State health departments. The extent of under-reporting is unknown. The likelihood that individual cases of illness will be linked epidemiologically to a water source varies among locations and depends upon consumer awareness, physician interest, and surveillance of State health and environmental agencies. Large outbreaks and those involving community water systems are most likely to be reported. Therefore, the data cannot be used to determine the true incidence of waterborne disease outbreaks. However, the data may be useful for looking at regional and year-to-year trends.

Local and State health departments carry out epidemiologic investigation of disease outbreaks. Analysis of water samples is carried out by local and State laboratories. Analysis of clinical samples may be carried out by local, State, or private laboratories. Most of the data provided are directly measured or observed, i.e., etiologic agents have been identified by laboratory analysis and cases have been identified by clinical or laboratory criteria. However, for large outbreaks, the numbers reported are generally estimates based on the epidemiology. The method and accuracy of the approximations vary among outbreaks.

The quality of the data implicating water varies widely among outbreaks. Factors influencing the quality of the data include the financial resources of health department, laboratory resource, and the timing of the investigation with respect to the course of the outbreak. Reports by the States to CDC use a standardized form.

Samples are collected when a potential outbreak is identified. Reporting of outbreaks occurs after epidemiologic investigation. Surveillance is ongoing for the entire U.S.

CONTACT:

Waterborne Disease Outbreak Surveillance Coordinator
Parasitic Disease Branch, F-13
Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30333
Phone: (404) 488-4050
FAX: (404) 488-4492

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Statistics are available as surveillance summaries published in Morbidity and Mortality Weekly Report (MMWR). The summaries include tables and charts and are published every 2-3 years.

Centers for Disease Control. 1992. "Water-Borne Disease Outbreaks, 1989-1990." MMWR 40(SS-3): 1-21. Centers for Disease Control, Department of Health and Human Services. Atlanta, GA.

--. 1990. "Water-Borne Disease Outbreaks, 1986-1988. MMWR 30(SS-1): 1-13. Centers for Disease Control, Department of Health and Human Services. Atlanta, GA.

--. 1988. "Water-Borne Disease Outbreaks, 1985." MMWR 37(SS-2): 15-24. Centers for Disease Control, Department of Health and Human Services. Atlanta, GA.

Craun G.F., ed. 1986. *Water-Borne Diseases in the United States*. CRC Press. Boca Raton.

Craun G.F. 1988. "Surface Water Supplies and Health." *J. American Water Works Assoc.* 80:4-0-52.

Hayes E.B., Matte T.D., O'Brien T.R., et al. 1989. "Large Community Outbreak of Cryptosporidiosis Due to Contamination of a Filtered Public Water Supply." *New England Journal of Medicine* 320 1372-1376.

DATABASE(S):

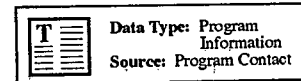
None provided.

Section VI

Preservation, Protection, and Restoration Programs

This section references programs carried out by a number of Federal Agencies (and in many cases, the States). These programs collect and present water pollution data, control existing sources, protect existing water quality, construct needed treatment facilities, assess ambient conditions, estimate the costs and benefits of abatement efforts, and clean up existing problems.

DEPARTMENT OF AGRICULTURE



Forest Service Water Quality Program

OFFICE:

Watershed and Air Management

SUMMARY PROGRAM DESCRIPTION:

The Forest Service is responsible for managing approximately 191 million acres of public lands that have been reserved from the public domain for the purpose of ensuring favorable conditions of water flow, and to furnish a continuous supply of timber. In addition, Congress has directed that these lands are to be managed for multiple use purposes including timber, range, recreation, minerals, wildlife, fish, soil and water.

Nonpoint source pollution management program: Nonpoint source pollution that may result from land management activities is controlled by designing practices that are expected to meet water quality objectives, monitoring to ensure that such practices are implemented, monitoring to ensure practices are effective, mitigation to correct for unexpected problems, and adjustment in land management design criteria where necessary. This program is coordinated with individual States to ensure compliance with State water quality requirements.

Watershed restoration program: The Forest Service Watershed Improvement Program targets over 35,000 acres annually, treating those National Forest lands adversely affected by past uses and events. Significant improvements in water quality and watershed condition are attained through this program.

In addition, the Forest Service has an affirmative program to protect, wisely use, and improve valuable wetlands in the National Forests. The Forest Service provides leadership in research on forested wetlands, and provides technical assistance to private landowners through the State foresters.

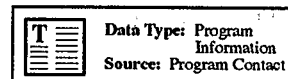
Forest Service wetlands policy recognizes wetlands as specific management areas in the National Forests. The goal is to preserve and enhance the natural and beneficial values of wetlands, and to avoid adverse impacts which may be associated with their destruction, loss, or degradation.

CONTACT:

Director, Watershed and Air Management
Forest Service - USDA
201 14th Street, SW, Auditors 3S
Washington, DC 20250
Phone: (202) 205-1473
FAX: (202) 205-1096

DEPARTMENT OF AGRICULTURE

SCS Water Quality Programs



OFFICE:

Soil Conservation Service

SUMMARY PROGRAM DESCRIPTION:

The Soil Conservation Service (SCS) provides leadership and administers programs to help people conserve, improve, and sustain our natural resources and environment. SCS is expanding and improving technical assistance for water quality utilizing the Agency's extensive field delivery system through local Soil and Water Conservation Districts. As a part of USDA's Water Quality Initiative, SCS is providing increased technical assistance for selected agricultural watersheds or aquifer-recharge areas called "Nonpoint Source Hydrologic Unit Areas" (HUA's). This assistance is being provided to address agricultural nonpoint pollution concerns identified by States under Section 319 of the Water Quality Act of 1987. SCS also is supporting demonstration projects to encourage the application of effective and efficient conservation practices to benefit water quality programs and designated estuaries of national significance. SCS provides assistance to State agencies in developing both surface and ground water practices, programs, and policies.

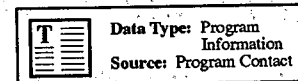
SCS is implementing new programs and accelerating ongoing programs to address agriculture-related water quality concerns. SCS has developed and is implementing a 5-year Water Quality Plan in support of the USDA initiative. The principal objective of the USDA initiative is to provide farmers and ranchers the educational, technical, and financial means to respond voluntarily and independently to on-farm environmental concerns and related State water quality requirements. SCS objectives are to:

- Increase technical assistance in areas with concerns about water quality and quantity and demonstrate available technology that will protect or improve water quality.
- Help State water quality management agencies and appropriate State soil and water conservation agencies to develop and implement programs to manage nonpoint source pollution.
- Evaluate pollutant loads (sediment, pesticides, nutrients, animal waste, salts, and trace elements) to determine the level of contribution from agricultural sources relative to other sources.
- Plan and implement a system of conservation practices to improve water quality and quantity affected by agricultural operations.
- Evaluate the effects of conservation systems and conservation practices in reducing or preventing agricultural nonpoint source pollution.

CONTACT:

Peter Tidd
U.S. Department of Agriculture
Soil Conservation Service
P.O. Box 2890, Room 6002-S
Washington, DC 20013-2890
Phone: (202) 720-1870
FAX: (202) 720-0630

DEPARTMENT OF AGRICULTURE



Working Group on Water Quality

OFFICE:

Working Group on Water Quality
Office of the Secretary

SUMMARY PROGRAM DESCRIPTION:

President Bush proposed an initiative in 1989 to protect ground water and surface water from contamination by fertilizers and pesticides. The U.S. Department of Agriculture (USDA), U.S. Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), and the National Oceanic and Atmospheric Administration (NOAA) were given definitive roles under the initiative. The USDA, as the lead agency, released its Water Quality Program in July 1989, a multiyear plan to guide its agencies in implementing activities designed for and directed to protecting water quality. A USDA Working Group on Water Quality was established, made up of 11 Agency administrators, who, in turn, organized four program committees: Education and Technical/Financial Assistance, Research and Development; Database and Evaluation; and Information. USDA is cooperating with other federal agencies in defining water quality problems.

Under the joint leadership of USDA's ASCS, ES, and SCS, 74 hydrologic unit areas were selected in FY'90 and FY'91 and provided with increased technical, information and education, and financial assistance to solve agricultural non-point source pollution problems identified in State water quality plans. In addition, 16 demonstration projects were selected to show the economic and environmental effectiveness of conservation practices in reducing non-point source pollution problems.

By 1995, USDA is to have identified areas where the agricultural threat to water quality is most serious and to have taught farmers and ranchers in those areas how to use agricultural chemicals in ways that are safe to the environment, yet economically practical. These methods will reduce the loss of agricultural chemicals that leach into ground water or run off to surface water, ensuring that agricultural impacts on water quality are minimized. The USDA is evaluating the progress of Agency programs to identify strengths or weaknesses and make shifts in programs, where needed, to increase their effectiveness. NASS and ERS have published the results of a chemical use and cropping practices survey on corn, cotton, potatoes, rice, soybeans, and wheat in the major producing States. The results of a Vegetable Chemical Use Survey in the five major vegetable-producing States was published in June 1991. A Fruit and Nut Chemical Usage Survey was begun during 1991. A second annual Field Crops Chemical Use Survey is being planned. A comprehensive evaluation strategy was developed to identify key questions that each Initiative component should address and outlines a process for collecting data. The Working Group is using this strategy to assess progress and to make corrections to present activities.

Water quality monitoring for the USDA water quality projects is done by USGS, EPA, and the States through various agreements and the data are analyzed to determine the effectiveness of the control measures being implemented. Monitoring results are analyzed annually. USDA agencies involved collect data on crops, acres, animal units, etc., and these data are used to assess the progress of programs. The data collection is ongoing, year-round for the entire U.S. where projects/activities are located.

CONTACT:

Fred N. Swader
U.S. Department of Agriculture
14th and Independence Ave. SW
Room 324-A Admin. Bldg.
Washington, DC 20250-0100
Phone: (202) 720-4751

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Numerous technical and research documents--

Contact:

Water Quality Information Center
National Agricultural Library
Room 1402
1301 Baltimore Blvd.
Beltsville, MD 20705-2351
Phone: (301) 504-6077

DATABASES:

Agricultural Chemical Use Database

Annual Surveys of Government Finances and Government Employment

OFFICE:

Bureau of the Census
Governments Division

SUMMARY PROGRAM DESCRIPTION:

These parallel surveys of State and local government finances and employment cover all aspects of State and local government activities and contain detailed data for some specific activities that relate to the environment.

DATA COVERAGE:

The finance survey variables include: functions and services such as health, sanitation, environmental services (natural resources, parks and recreation, sewerage, and solid waste management), housing and community development, and water utilities; character and object items such as current operations, construction, and land and equipment; and revenue items.

The employment survey variables are: employees -- full-time, part-time, and full-time equivalent; payroll; and functions that are the same as those described under the finance survey.

The finance survey produces detailed data for expenditures for both current operations and capital outlay. The employment survey contains data for these same functions, showing number of employees and monthly payroll.

Both the finance and employment surveys are designed primarily to generate data on the total activity of State and local governments. This provides analysts with the ability to determine the relationships among the various functions of government - for example, comparing education or police expenditures with sewerage outlays or the percentage any specific function is of the total.

Trend data for both series are available in national summations that go back to the early 1950s for employment and early 1900s for finance data.

Individual government data for the largest units of government (cities greater than 50,000 population, counties greater than 100,000 population, and all the State governments) follow relatively consistent patterns for about the past 30 years.

COLLECTION METHODS:

The sample is the same for both surveys. It is a stratified random sample of local governments in the United States. Units include: all State governments; all county governments with a population of 50,000 or more; all municipalities with a population of 25,000 or more; and other units of local government that meet specified financial or functional criteria. Estimates of major U.S. totals, such as total revenue or total expenditures, are subject to a computed sampling variability of less than one-half of one percent. Other local government totals, such as functional expenditures, are generally subject to sampling variability of less than one percent.

COLLECTION FREQUENCY:

Surveys are conducted annually.

GEOGRAPHIC COVERAGE:

The data are aggregated to national totals and to totals for each of the 50 States and the District of Columbia. The surveys also publish data for large individual governments such as county governments (population greater than 100,000), municipal governments (populations greater than 75,000), and each of the State governments.

CONTACT:

Gerald T. Keffer
Finance and Taxation Branch
Governments Division
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-5356
FAX: (301) 763-8290

FOR PUBLIC INQUIRIES:

Concerning purchase of tapes, microfiche or publications, call or write:

Customer Services
Data User Services Division
U.S. Bureau of the Census
Washington, DC 20233
Phone: (301) 763-4100
FAX: (301) 763-4794

samples for the Annual Finance and Annual Employment Surveys are the same. The difference in the counts between Finance File A and the Employment File is that the former includes additional units in States where it was possible to obtain universe data annually instead of relying on the sample.)

PUBLICATIONS:

Department of Commerce, Bureau of the Census.
State Government Finances. (annual).

--. *City Government Finances.* (annual).

--. *Government Finances.* (annual).

--. *County Government Finances.* (annual).

--. *Public Employment.* (annual).

--. *City Employment.* (annual).

--. *County Government Employment.* (annual).

DATABASE(S):**Annual Survey of Government Finance**

File A is a data file for a sample of approximately 35,000 individual units of government containing revenue, expenditures, debt, and assets for each unit. File B is a data file for U.S. and State area aggregations. The totals of each State area are divided into eight different records (State and local summation, State government only, local government summation, county government summation, municipal government summation, township government summation, special district government summation, and school district summation). This file contains 416 records.

Annual Survey of Government Employment

This is a single data file for a sample of approximately 23,000 individual units of government containing employment and payroll data for the month of October. (Note: The

Survey of Pollution Abatement Costs and Expenditures

OFFICE:

Bureau of the Census
Industry Division
Special Surveys Branch

SUMMARY PROGRAM DESCRIPTION:

The survey collects information on annual operating costs and capital expenditures for pollution abatement activities in manufacturing industries. The survey was started in 1973 and has been conducted annually except for 1987. The survey provides estimates of pollution abatement spending for detailed levels of industrial classification.

DATA COVERAGE:

Estimates of pollution abatement operating costs and capital expenditures are made for manufacturing plants with 20 employees or more (except the apparel group). Detailed estimates are provided by pollution type and for the following three-digit standard industrial classification (SIC) industries: food and kindred products; tobacco manufacturers; textile mill products; lumber and wood products; furniture and fixtures; paper and allied products; printing and publishing; chemicals and allied products; petroleum and coal products; rubber and miscellaneous plastics products; leather and leather products; stone, clay, and glass products; primary metal industries; fabricated metal products; machinery, except electrical; electric and electronic equipment; transportation equipment; instruments and related products; and miscellaneous manufacturing industries. Detail also is provided for expenditures by sector, for industries by four-digit SIC codes, and for States by two-digit SIC codes. Capital expenditures are provided for air and water pollution abatement by abatement technique (changes-in-production processes and end-of-line techniques), for air pollution abatement by type of pollution abated, and for hazardous and nonhazardous solid waste management. Operating costs include labor, depreciation, materials and supplies, services, equipment leasing, and other costs. Costs recovered by manufacturing plants from their pollution abatement activities also are given.

COLLECTION METHODS:

The probability sample includes about 20,000 manufacturing plants. The sample is selected as a subsample of the Annual Survey of Manufacturers which represents about 360,000 plants in the country. The probability of selection is based on the plant size in terms of total value of shipments. Response to the survey is about 90 percent.

COLLECTION FREQUENCY:

Except for 1987, when no survey was conducted, data have been collected annually since 1973.

GEOGRAPHIC COVERAGE:

The sample is selected to represent the entire United States. Estimates are given also for States and regions, but with less detail.

CONTACT:

Jesse Havard
Industry Division
Bureau of the Census
Washington, DC 20233
Phone: (301) 763-1755

Gretchen Dickson
Industry Division
Bureau of the Census
Washington, DC 20233
Phone: (301) 763-1755

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Bureau of the Census. 1991. *Manufacturers' Pollution Abatement Capital Expenditures and Operating Costs. Current Industrial Reports* MA200(91)-1 (and earlier reports in this series.) Bureau of the Census, Department of Commerce. Washington, DC.

DATABASE(S):

None available for public access.

Defense Environmental Restoration Program

SUMMARY PROGRAM DESCRIPTION:

The Defense Environmental Restoration Program (DERP) was established in 1984 to promote and coordinate efforts for the evaluation and cleanup of contamination at Department of Defense (DoD) installations. The program currently includes:

- (1) The Installation Restoration Program (IRP), where potential contamination at DoD installations and formerly owned or used properties is investigated and, as necessary, site cleanups are conducted; and
- (2) Other Hazardous Waste (OHW) Operations, through which research, development, and demonstration programs aimed at improving remediation technology and reducing DoD waste generation rates are conducted.

The IRP conforms to the requirements of the National Oil Hazardous Substances Pollution Contingency Plan (NCP). EPA guidelines are applied in conducting investigation and remediation work in the program. The initial stage, a Preliminary Assessment, is an installation-wide study to determine if sites are present that may pose hazards to public health or the environment. The next step, a Site Inspection, consists of sampling and analysis to determine the existence of actual site contamination. Contaminated sites are investigated fully in the Remedial Investigation/Feasibility Study. After agreement is reached with appropriate EPA and/or State regulatory authorities on how to clean up the site, Remedial Design/Remedial Action work begins. During this phase, detailed design plans for the cleanup are prepared and implemented.

By the end of FY 1991, a total of 17,660 sites at 1,877 installations were included in the IRP, and 90 DoD installations were listed on or proposed for the NPL (National Priorities List).

By the end of FY 1991, 6,336 projects were underway at sites throughout the Nation. The end point for IRP sites is closeout - when no further actions are considered appropriate and no further response action is planned. At the end of FY 1991, DoD components had identified 6,736 sites as closed out.

CONTACT:

For copies of the report contact:

National Technical Information Service (NTIS)
Phone: (800) 553-6847 or (703) 487-4650
1991 Annual Report Document # ADA 244196

PUBLIC INQUIRIES:

Each step in the IRP process is thoroughly documented in reports available to the general public. Individuals or organizations can obtain copies of these documents by contacting the Public Affairs Offices at the installations in which they are interested.

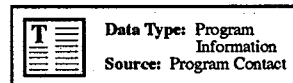
PUBLICATIONS:

U.S. Department of Defense. February 1992. *Defense Environmental Restoration Program, Annual Report to Congress for Fiscal Year 1991*. U.S. Department of Defense.

DATA BASES:

None provided.

DEPARTMENT OF ENERGY



Environmental Restoration Program

OFFICE:

Office of Environmental Restoration and Waste Management
Office of Environmental Restoration

SUMMARY PROGRAM DESCRIPTION:

The Office of Environmental Restoration is responsible for reducing and/or eliminating risks to human health and safety and the environment posed by past Department of Energy (DOE) practices which have resulted in radioactive waste, hazardous waste, and mixed waste contamination at DOE facilities. The goal of this program is the cleanup of the current inventory of contaminated and legislatively authorized sites within 30 years (by the year 2019) in accordance with the Department's policy of compliance with Federal, State, and local health, safety and environmental statutes. The strategy of the environmental restoration program is to first clean up the highest risk situations and then turn to the long-term contamination problems on a priority basis.

Program requirements are derived primarily from the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, and the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. In addition, the Department's remediation efforts are conducted in full compliance with the National Environmental Policy Act. The scopes, schedules, and cleanup standards for these activities are negotiated with the Environmental Protection Agency and the States, and are the subject of RCRA permits, Consent Orders and Compliance Agreements, and CERCLA Federal Facility Agreements.

CONTACT:

U.S. Department of Energy
Office of Environmental Restoration and Waste Management
Office of Environmental Restoration (EM-40)
Washington, DC 20585-0002
Phone: (202) 586-6331

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATIONS:

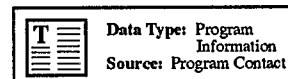
January 1993. *Environmental Restoration and Waste Management Five-Year Plan for Fiscal Years 1994-1998*. Office of Environmental Restoration and Waste Management, U.S. Department of Energy. Washington, DC.

May 1992. Office of Environmental Restoration and Waste Management, U.S. Department of Energy. *CERCLA Section 120(e)(5) Annual Report to Congress for Fiscal Year 1991*. Office of Environmental Restoration and Waste Management, U.S. Department of Energy. Washington, DC.

DATABASES (S):

None available for public access.

DEPARTMENT OF THE INTERIOR



National Irrigation Water Quality Program

SUMMARY PROGRAM DESCRIPTION:

The purpose of the National Irrigation Water Quality Program (NIWQP) is to determine from existing information and reconnaissance investigations whether irrigation drainage has caused or has the potential to cause harmful effects on human health, fish and wildlife, or reduce the utility of return flow from other uses. When problems are identified, detailed studies are conducted to: (1) determine the geographical extent and severity of existing and potential irrigation-induced water quality problems; and (2) provide the scientific understanding for development of reasonable alternatives to remediate problems.

In December 1985, a Department of the Interior (DOI) Interbureau Task Group developed the NIWQP management strategy which created NIWQP and committed the program to addressing irrigation-induced contamination problems in the following areas: (1) project irrigation or drainage facilities constructed or managed by DOI; (2) National Wildlife Refuges that receive irrigation drainage water from DOI projects; and (3) other migratory bird or endangered species management areas that receive water from Department-funded projects.

CONTACT:

For further information concerning NIWQP and reports contact:

Richard A. Engberg
Manager, National Irrigation WQ Program
U.S. Department of the Interior
1849 C Street, N.W.
MS 6640-MIB
Washington, DC 20240
Phone: (202) 208-4367
Fax: (202) 371-2815

FOR PUBLIC INQUIRES:

See Contact.

PUBLICATION:

As of October 1992, the NIWQP has published reconnaissance investigation reports for 19 areas in 14 western States and 4 interpretive or data reports for 3 areas. A list of publications is available from the Contact.

DATABASE(S):

All data collected by the U.S. Geological Survey are stored in the survey's WATSTORE system and in EPA's STORET system.

DEPARTMENT OF THE INTERIOR



National Wild and Scenic Rivers System

OFFICE:

National Park Service
Park Planning and Protection Division

SUMMARY PROGRAM DESCRIPTION:

This program is designed to collect data on wild, free-flowing, scenic rivers of the Nation which have outstanding natural, recreational, or cultural values and that provide for public enjoyment without destroying those values.

DATA COVERAGE:

The basic statistics are: number of rivers in National Wild and Scenic Rivers System; river miles in the system, including miles by agency administration and classification (wild, scenic, and recreational); number of rivers formally studied pursuant to congressional direction; and number of rivers and river mileage potentially eligible for designation as listed on the Nationwide Rivers Inventory.

COLLECTION METHODS:

Inventory of designated and proposed wild and scenic rivers.

COLLECTION FREQUENCY:

Data for the Nationwide Rivers Inventory were collected in the late 1970s and early 1980s. National Wild and Scenic River designations are updated biennially or as designations occur.

GEOGRAPHIC COVERAGE:

Entire United States.

CONTACT:

John Haubert
Outdoor Recreation Planner
National Park Service
P.O. Box 37127
Washington, DC 20013-7127
Phone: (202) 208-4290

FOR PUBLIC INQUIRIES:

For Nationwide Rivers Inventory contact:

Chris Brown
Outdoor Recreation Planner
National Park Service
P.O. Box 37127
Washington, DC 20013-7127
Phone: (202) 343-3765

PUBLICATIONS:

National Park Service. 1982. *The Nationwide Rivers Inventory*. U.S. Department of the Interior. Washington, DC.

Olson, W.K. 1988. *Natural Rivers and the Public Trust*. Washington, DC.

Watanabe, A. 1988. *Two Decades of River Protection: A Report on the National Wild and Scenic Rivers System*. Washington, DC.

DATABASE(S):

River Mileage Classification for Components of the National Wild and Scenic Rivers System.

DEPARTMENT OF THE INTERIOR



U.S. Fish and Wildlife Service Lands

OFFICE:

U.S. Fish and Wildlife Service
Division of Realty
Branch of Operations

SUMMARY PROGRAM DESCRIPTION:

Two primary data series are compiled and reported to the general public: the *Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service* and the *Migratory Bird Conservation Commission Annual Report*.

DATA COVERAGE:

The following data are collected: unit number and acreage, acquisition type, and location of FWS properties, including National Wildlife Refuges, Waterfowl Production Areas, National Fish Hatcheries, coordination areas, and administrative sites.

COLLECTION METHODS:

Inventories of property are conducted for the Real Property Management Information System.

COLLECTION FREQUENCY:

Updated annually since 1945.

GEOGRAPHIC COVERAGE:

The contiguous United States, Alaska, Hawaii, and associated governments and possessions.

CONTACT:

Olivia A. Short
Chief, Branch of Operations
Division of Realty
U.S. Fish and Wildlife Service
Mailstop 622 ARLSQ
1849 C Street, N.W.
Washington, DC 20240
Phone: (703) 358-1811

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Fish and Wildlife Service. 1990. *Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service as of September 30, 1990*. U.S. Department of the Interior. Washington, DC.

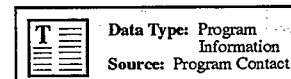
--. 1990. *Migratory Bird Conservation Commission: 1990 Annual Report*. U.S. Department of the Interior. Washington, DC.

DATABASE(S):

Real Property Information System (using Paradox software).

DEPARTMENT OF THE INTERIOR

Bureau of Land Management Initiatives



OFFICE:

Bureau of Land Management

SUMMARY PROGRAM DESCRIPTION:

These programs are major BLM initiatives and have non-point source control benefits.

Recreation 2000

The principal goal of the BLM's recreation policy is to ensure the availability of public lands for a variety of outdoor activities. Specific goals include the following: improve information and interpretive services to visitors; protect vital recreation resources; publicize the BLM's recreation management and support programs; distribute information about recreation opportunities through Federal, State, local and private partnerships; and expand public outreach initiatives.

The BLM contracted with a national computer recreation information service to distribute data to home computer users and the travel industry. The system is scheduled to be expanded to give up-to-date information on recreation events and volunteer opportunities.

The BLM continues to publish and broadcast in-house information through its bulletins, program notes, catalogs, and videos. The agency also sponsors interpretive training courses and workshops.

Fish and Wildlife 2000

This initiative seeks to improve the management of fish and wildlife habitat on all BLM-administered public lands. Pertinent natural resource data, including that for water resources, is gathered to support this initiative.

An automated information system is being developed to track and analyze accomplishments which will enable the BLM to prepare accomplishment reports in a more timely and efficient manner.

Riparian-Wetlands Initiative for the 1990's

This initiative was developed as a blueprint to manage and restore riparian-wetland areas covering 23.7 million acres managed by the BLM. The initiative recognizes that riparian-wetland areas are biologically, economically, and environmentally valuable and sets a series of goals and strategies to meet healthy conditions on the riparian-wetlands managed by the BLM. The initiative establishes four general goals: (1) restoration and maintenance, (2) protection and expansion, (3) information and education, and (4) coordination and cooperation.

Forestry Program

Forest Management Support for Improving Water Quality

The maintenance and improvement of water resources in association with the timber harvest program begins at elevations far above the stream bed and continues down through the sale area and beyond in association with road construction, use, and maintenance. Disturbance of vegetation and soil resources is closely monitored and Best Management Practices (BMPs) are used to maintain and enhance water quality. Baseline watershed monitoring programs are frequently being established to determine long range trends. Due regard is given to improvements necessary to conserve waters for the propagation of fish and aquatic life as well as other forms of wildlife.

CONTACT:

Hydrologist
DOI/BLM
Washington Office (222)
18th and C Street, NW
Washington, DC 20240
Phone: (202) 653-9202
FAX: (202) 653-9118

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Bureau of Land Management. 1988. *The Annual Report of Accomplishments for Fish and Wildlife 2000*. U.S. Department of the Interior. Washington, DC.

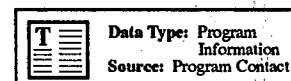
Bureau of Land Management. September 1991. *Meeting the Challenge in 1991, Recreation 2000, Fish and Wildlife 2000, Riparian-Wetland Initiative for the 1990's*. U.S. Department of the Interior. Washington, DC.

Bureau of Land Management. *Riparian-Wetland Initiative for the 1990's*. U.S. Department of the Interior. Washington, DC.

DATABASES:

None provided.

ENVIRONMENTAL PROTECTION AGENCY



Construction Grants/State Revolving Fund Programs

OFFICE:

Office of Water
Office of Wastewater Enforcement and Compliance
Municipal Support Division
Program Management Branch

SUMMARY PROGRAM DESCRIPTION:

The Construction Grants Program provided grant assistance to municipalities for the building of wastewater treatment projects. Construction Grants Program objectives were to ensure that the highest priority treatment facilities were expeditiously constructed to achieve the maximum environmental benefit. EPA's State Revolving Loan Fund (SRF) program replaced the Construction Grants Program. It is designed to give individual States the responsibility for developing and operating their own programs, including providing financial assistance for POTW construction and other eligible activities. Financial assistance provided by SRFs can include loans and various forms of credit enhancements, but not grants. A key element of SRFs is their "revolving" nature--loan repayments to the fund are used to provide assistance to additional recipients. The SRF program is a significant step in restoring the responsibility for financing wastewater treatment facilities to the States and Municipalities. SRF assistance can be used for a broader range of water quality management activities than construction grants assistance, such as the implementation of nonpoint source management programs and the development and implementation of comprehensive conservation and management plans under the National Estuary Program.

Construction Grants Program data consists of administrative, financial, technical, and project status information on each construction grant funded by EPA. Construction grants data are analyzed to determine the number of projects awarded; number of projects that have initiated operation; the number of projects closed out, and other appropriate program information.

The State Revolving Fund capitalization grant data consists of identification and financial information on Capitalization Grants funded by EPA. SRF project data consists of administrative, financial, technical, and limited project status information on each SRF project. SRF capitalization grant and project data is analyzed to track progress of the SRF program from a national perspective; to provide aggregate level information to identify patterns and trends or to make comparisons among Regions or States which will serve to guide program judgements; to assist in assessing the financial status and operation of the SRF program; and to provide information on the implementation of the States' SRF progress to assist in the Annual Review.

Grants Information and Control System (GICS) reports provide detailed information on the characteristics and status of individual projects and can be used to compare, analyze, monitor, and evaluate information on a large number of projects. GICS is used to generate lists, tables, and summary reports.

Data is entered directly into the Grants Information and Control System (GICS) by the Regions and States. National data entry screens and instruction manuals are developed by EPA Headquarters Office of Water and Office of Information Resources Management staff. Program is monitored on a monthly basis through the use of GICS national reports generated through the GICS database. There is also an annual review process conducted at the regional office by the headquarters staff.

Data is updated continuously in the GICS system for Construction Grants Projects and twice a year for SRF programs. The data covers the entire United States.

CONTACT:

Jannie Latta, Chief
Systems Management Section (WH-547)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-5831
FAX: (202) 260-1827

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Computer generated GICS national reports programmed in ADABAS in the Natural 2 environment are available.

Other publications published by EPA:

Construction Grants and State Revolving Fund GICS Users Guides.

SRF Instructional Manual.

State Revolving Fund Report to Congress-Financial Status and Operations of Water Pollution Control Funds. 1991.

Funding of Expanded Uses Activities by State Revolving Fund Programs-Examples and Program Recommendations. 1990.

GICS Reports Library for the Construction Grants and State Revolving Fund Programs.

State Water Pollution Control Revolving Fund Management Manual.

Construction Grants and SRF Data Element Dictionaries.

DATABASE(S):

Grants Information and Control System (GICS)

The system contains administrative, financial, technical, and project status information for the Construction Grants and State Revolving Fund Programs. Access can be provided by the GICS ADABAS Administrator. Database resides on an IBM-3090 computer at the EPA National Computer Center.

For GICS information contact:

Connie Dwyer
Office of Information Resources Management (PM-218)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-5300

Needs Survey

The Needs Survey is an automated inventory, maintained by the Office of Wastewater, Enforcement and Compliance (OWEC), of all existing or proposed Publicly Owned Treatment Works (POTWs) that need construction or renovation to meet the requirements of the Clean Water Act. The 1990 database contains over 27,000 records, each of which includes over 230 data elements organized by 19 subject areas. Among the information included is: location and characteristics of POTWs, construction cost estimates and how they were documented, population served by collection, and treatment, flow capacity, effluent characteristics, and treatment processes. All past Needs Survey information is open to the public. Current Needs Survey information is only accessible to authorized EPA and State users.

Contact:

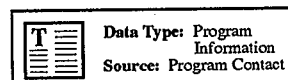
Len Fitch

Office of Wastewater, Enforcement and Compliance

Municipal Support Division

Phone: (202) 260-5858

ENVIRONMENTAL PROTECTION AGENCY



National Clean Lakes Program

OFFICE:

Office of Water
Office of Wetlands, Oceans and Watersheds

SUMMARY PROGRAM DESCRIPTION:

The Clean Lakes Program, established under Section 314 of the Clean Water Act, is committed to supporting total lake and watershed management from initial diagnosis through post-restoration monitoring. Continuing its grass-roots orientation as the Federal partner in State lake restoration and protection programs, the Clean Lakes Program consists of four phases: 1) State/Tribal Lake Water Quality Assessments must be performed biennially by States or Tribes to attain or maintain eligibility for Clean Lakes Program funding. In submitting their 1990 Clean Water Act section 305(b) reports, States were to include the information required by section 314; 2) Diagnostic/Feasibility Studies (phase I) must be completed to determine the actual work that needs to be accomplished in phase II; 3) Restoration/Implementation Projects (phase II) put into effect the recommendations of the phase I studies; and 4) Post-restoration Monitoring Studies (phase III) determine through monitoring the longevity, progress, and success of the phase II project. Data coverage and collection frequency are specific to each project and include the entire United States.

CONTACT:

Frank Lapensee
U.S. Environmental Protection Agency
Office of Water, Clean Lakes Program (WH-553)
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7105

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- U.S. Environmental Protection Agency, 1991. *Clean Lakes Demonstration Program: 1990 Annual Report to Congress*. Draft. U.S. Environmental Protection Agency. Washington, DC.
- . 1991. *Clean Lakes Program: 1991 Annual Report (Distributed by Terrene Institute)*. U.S. Environmental Protection Agency. Washington, DC.
- . 1990. *Lake and Reservoir Restoration Guidance Manual*. U.S. Environmental Protection Agency. Washington, DC.
- . 1990. *Monitoring Lake and Reservoir Restoration*. U.S. Environmental Protection Agency. Washington, DC.
- . 1989. *Clean Lakes Demonstration Program: 1989 Annual Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):**Clean Lakes Clearinghouse**

Description of Services: Collects, organizes, and disseminates information on lake issues: restoration, management, and protection. The database includes citations and abstracts of technical reports, conference papers, journal articles, and other publications, indexed by keywords, title, author, State/region, and date. The database currently is maintained on the U.S EPA mainframe, with periodic downloads for use on computerized bulletin boards and user PCs. The Clearinghouse staff responds to inquiries and provides printed bibliographies on lake topics.

For more information, contact:

Terrain Institute
Phone: (800) 726-LAKE
Fax: (202) 466-8554

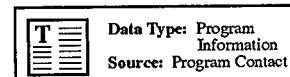
Clean Lakes Grants Management System

Provides extensive information on grants awarded under Section 314 of the CWA, including: type of grant (LWQA, Phase I, II, and III), basic financial information, description of the project and project goals.

For more information, contact:

Susan Ratcliffe
Phone: (202) 260-5404

ENVIRONMENTAL PROTECTION AGENCY



National Effluent Guidelines Program

OFFICE:

Office of Water
Office of Science and Technology
Engineering and Analysis Division

SUMMARY PROGRAM DESCRIPTION:

The major objective of this regulatory program is the development of national technology-based effluent regulations, e.g., the national categorical effluent limitations guidelines and standards required under Sections 306, 307, and 304 of the Clean Water Act. These limitations and standards are established by this program for industrial facilities which discharge or may discharge directly into waterways of the United States, or which discharge or may discharge into publicly owned treatment works. The national guidelines and standards specify the achievable effluent pollution reduction attainable based upon performance or treatment technologies actually employed within an industrial category. Effluent guidelines have been promulgated for 51 categories. Twenty new or revised regulations will be promulgated between 1993 and 2003.

Summary information is available of information collected by the Office of Science and Technology on an industry-by-industry basis to support development of technology-based effluent guidelines, as required by the Clean Water Act. Information collection includes questionnaires covering engineering and economic information on individual plants. The questionnaires are supplemented by sampling and analyses from wastewater discharge points, and secondary engineering and economic information. Information collected includes: plant name and location, plant size (by production and/or employment), wastewater characteristics, wastewater controls, treatment technologies, plant age, types of products/services, water use, costs of wastewater treatment, and pollution prevention practices.

Information is collected on an as-needed basis to develop or revise effluent guidelines on an industry-specific basis. Wastewater samples are collected by contractors. Although the basic information collected is generally similar across studies, there is great variation of the particular parameters. Efforts are underway to standardize data definitions and collection and analysis methods. Most information is collected at one time only, although wastewater sampling for some industries may include short-term series. Over the last 10 years, all sample and analysis information has been managed by a sample control center, where the information is checked for accuracy and consistency. Questionnaires are usually sent to a stratified sample of the population; for some industries a census may be conducted.

CONTACT:

Eric Strassler
U.S. Environmental Protection Agency
Office of Science and Technology
Engineering and Analysis Division
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7120

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

None provided.


DATABASE(S):

Effluent Guidelines Studies (EGS). Databases vary from study to study.

EGS are a collection of information collected by the Office of Science and Technology on an industry-by-industry basis to support development of technology-based effluent guidelines, as required by the Clean Water Act. These guidelines are designed to control discharges into waterways and publicly owned treatment works resulting from the industrial processes. Regulations are set for both direct and indirect dischargers based on available technology.

See Contact above.

ENVIRONMENTAL PROTECTION AGENCY

	Data Type: Program
	Information
Source: Program Contact	

National Marine and Estuarine Programs

OFFICE:

Office of Water
Office of Wetlands, Oceans and Watersheds
Oceans and Coastal Protection Division

SUMMARY PROGRAM DESCRIPTION:

The Oceans and Coastal Protection Division (OCPD) implements EPA's program to protect the Nation's oceans and coastal waters. OCPD carries out the following activities: establish and oversee regulatory and monitoring policies for ocean disposal activities; support the development and implementation of comprehensive management plans for estuaries of national importance; support the Great Lakes and Chesapeake Bay Programs; coordinate marine research activities; provide a coordination point for interagency and international ocean and coastal actions and issues, and implement the Clean Water Act (CWA) Section 301(h) and 403 programs related to the control of point source discharges to marine waters.

Information is available on several programs, including OWOW's Ocean Dumping Program, the objective of which is to minimize any impacts of ocean disposal through permitting, site designation, monitoring, and enforcement programs and actions; the Aquatic Debris program, the objective of which is to minimize the impact of floating persistent debris on the marine environment; point source control activities, the objective of which is to ensure protection of the marine ecosystem through controls on point source discharges; Near Coastal Water program, the objective of which is to prevent the further degradation of estuaries and other near coastal waters; and the National Estuary Program, the purpose of which is to protect and restore the environmental quality of estuarine water through the development and implementation of local planning and demonstration programs.

A wide variety of monitoring programs is conducted by EPA to determine whether the waste disposal is causing any unexpected adverse effects, and to assess other anthropogenic impacts on coastal biological communities.

EPA has designed and conducted programs for monitoring environmental conditions at disposal and discharging sites. EPA also operates an Ocean Survey Vessel, the Peter W. Anderson, for ocean monitoring and other field studies.

Monitoring is being conducted and data are collected on an ongoing, year-round basis at load sites in all eight of EPA's Coastal Regions.

CONTACT:

Kevin Perry
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
Oceans and Coastal Protection Division
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-6833

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- U.S. Environmental Protection Agency. *National Estuary Program Report*. U.S. Environmental Protection Agency. Washington, DC.
- . 1992. Implementation of Section 403(c), Phase I (Point source discharges into the marine environment). U.S. Environmental Protection Agency. Washington, DC.
- . 1990. *Harbor Studies Program: Final Data Report for the Study of Floatable Debris in U.S. Waters*. U.S. Environmental Protection Agency. Washington, DC.
- . 1989. *Marine and Estuarine Protection: Program and Activities*. U.S. Environmental Protection Agency. Washington, DC.
- . 1989. *Near Coastal Waters Program: Restoring and Protecting the Nation's Coastal Areas*. U.S. Environmental Protection Agency. Washington, DC.
- . 1989. *Ocean Disposal Monitoring Programs in Response to the Ocean Dumping Ban Act: Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.
- . 1990. *Progress in the National Estuary Program, Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Ocean Data Evaluation System (ODES):

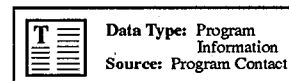
EPA designed ODES in 1985 to support managers and analysts in meeting regulatory objectives of the Office of Wetlands, Oceans and Watersheds. ODES contains over two million records from a wide range of EPA programs including the CWA 301(h) program, the Ocean Dumping Program, and the National Estuary Program (NEP). Records include parametric data on water quality, oceanographic description, sediment pollutants, physical/chemical/biological characteristics, and permit conditions.

For more information on ODES contact:

Kevin Perry
U.S. Environmental Protection Agency
WH-556F
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-6833

ENVIRONMENTAL PROTECTION AGENCY

National Nonpoint Source Program



OFFICE:

Office of Water
Office of Wetlands, Oceans and Watersheds

SUMMARY PROGRAM DESCRIPTION:

In 1987, Congress enacted section 319 of the Clean Water Act, which established a national program to control nonpoint sources of water pollution. EPA's Office of Water provides guidance for the States to use in developing/updating their nonpoint source assessments and management programs. EPA also provides guidance and oversight to EPA Regions in making annual section 319 grant awards to the States for the purpose of implementing approved nonpoint source management programs. The Office of Water sponsors national conferences and workshops and issues technical and programmatic guidance to assist States and localities in implementing effective nonpoint source control and prevention activities.

Section 319 requires States to develop nonpoint source assessment reports describing their nonpoint source pollution problems and to adopt nonpoint source management programs to control pollution. EPA issued guidance in December 1987 that established the submission and approval process for assessment reports and management programs. All States have approved assessment reports and approved management programs.

CONTACT:

Dov Weitman
U.S. Environmental Protection Agency
Office of Water
Nonpoint Source Program (WH-553)
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7085

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Environmental Protection Agency. 1991. *Managing Nonpoint Source Pollution*. Nonpoint Source Program Report to Congress. U.S. Environmental Protection Agency. Washington, DC.

--. 1991. *The National Clean Water Program; A Report*. U.S. Environmental Protection Agency. Washington, DC.

--. 1991. *Monitoring Guidelines - Forest Streams in the Pacific Northwest and Alaska. Region 10*. U.S. Environmental Protection Agency. Washington, DC.

--. 1990. *Share the Costs - Share the Benefits: Agricultural Nonpoint Source Cost Share Programs*. U.S. Environmental Protection Agency. Washington, DC.

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- . 1990. *Livestock Grazing on Western Riparian Areas. Region 8.* U.S. Environmental Protection Agency. Washington, DC.
 - . 1990. *Urban Targeting and Best Management Practice Selection. Region 5.* U.S. Environmental Protection Agency. Washington, DC.
 - . 1989. *Selecting Priority Nonpoint Source Projects: You Better Shop Around.* U.S. Environmental Protection Agency. Washington, DC.
 - . 1988. *Creating Successful Nonpoint Source Programs: The Innovative Touch.* U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Nonpoint Source Bulletin Board System.

This system provides an active national center for the exchange of information and environmental education concerning the nature of nonpoint source (NPS) pollution, NPS management techniques and methods, and institutional arrangements for the planning and implementation of NPS management, including financial arrangements. The system is used to obtain timely and relevant NPS information by Federal, State and local agencies; private organizations; businesses; and individuals. It also is used to exchange computer text and program files and as an information resource and forum for open discussions. Several "mini-bulletin boards" allow parties with specialized interests to share information. The Clean Lakes Clearinghouse and NPS News-Notes database also are available on-line.

Contacts: Hal Wise or Elaine Bloom - (202) 260-3665.

Nonpoint Source Grants Reporting and Tracking System

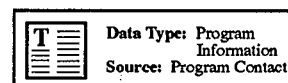
This system provides information on all grants awarded under Section 319 of the CWA, including basic financial information and descriptive information on how States plan to expend funds by NPS category.

For more information, contact:

Don Kunkowski
Phone: (202) 260-7103

ENVIRONMENTAL PROTECTION AGENCY

National Public Water Supply Supervision Program



OFFICE:

Office of Water
Office of Ground Water and Drinking Water

SUMMARY PROGRAM DESCRIPTION:

The Office of Ground Water and Drinking Water (OGWDW) is responsible for the implementation of the Public Water Supply Supervision (PWSS) program established under the auspices of the Safe Drinking Water Act (SDWA) of 1974, Public Law 93-523. Two of OGWDW's major responsibilities under the Act are to set national standards for drinking water quality and to ensure that States that have assumed primary enforcement responsibility (primacy) are complying with these standards. The program publishes a Yearly Compliance Report and data on violation of maximum contaminant levels (MCLs) and enforcement actions. Contaminants that exceed the MCL are reported as violations of the SDWA. Data is collected and reported quarterly. Individual States collect the data, which covers all States, territories, and Indian lands.

CONTACT:

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Senior Systems Analyst
Data Management Section (WH-550E)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-2804
FAX: (202) 260-3464

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

U.S. Environmental Protection Agency. 1991. Drinking Water Publications List. Includes information on available Regulatory Impact Analyses (RIA), Health Advisories and Drinking Water Criteria are available for various pollutants, as well as the following:

- . 1984. National Statistical Assessment of Rural Water Conditions. Volumes I-IV. U.S. Environmental Protection Agency. Washington, DC.
- . 1990. National Survey of Pesticides in Drinking Water. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):**Federal Reporting Data System (FRDS)**

Information on public water supply systems inventory, violations of the MCL and enforcement actions for public water systems. User aids include: FRDS Interactive Users Guide, FRDS Data Entry Instructions, FRDS Data Entry Package, FRDS Data Element Dictionary.

For more information, contact:

Abe Seigel
Phone: (202) 260-2804

Hazardous Waste Injection Well Database

Automated inventory of Class I - Hazardous Waste injection wells as defined in the Safe Drinking Water Act. The system stores information that was obtained during a special study to collect information for the 1985 Report to Congress on Injection of Hazardous Waste. Information in the system includes: facility or well owner/operator, identification and well class codes, chemical information concerning the injectate, well construction information, hydrogeological information about the area where injection occurs, waste information, and RCRA codes and volumes. The database is maintained on a PC and is not directly accessible. Users can obtain information from the national manager in disk and report form.

For more information, contact:

Mario Salazar
Office of Ground Water and Drinking Water
Ground Water Protection Division
Phone: (202) 260-5530

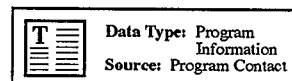
Summary of State/Federal Drinking Water Standards and Guidelines

This system contains the results of the 1989 survey of State and Federal drinking water standards and guidelines as of January 1, 1989, conducted by the Federal/State Toxicology and Regulatory Alliance Committee (FSTRAC). The database contains information on existing and planned standards, descriptions of State drinking water programs, and State recommendations on contaminants for which there should be future Federal standard development.

For more information, contact:

Bruce Mintz
Phone: (202) 260-9569

ENVIRONMENTAL PROTECTION AGENCY



National Water Quality Standards, Water Quality Criteria, and Total Maximum Daily Load (TMDL) Programs

OFFICE:

Office of Water

Office of Science and Technology; and Office of Wetlands, Oceans, and Watersheds

SUMMARY PROGRAM DESCRIPTION:

Standards: Section 303 of the Clean Water Act authorizes the water quality standards program. In establishing water quality standards, States define the water quality goals for their water by designating uses for the water bodies and adopting water quality criteria to protect the designated uses. Standards are set taking into consideration the use and value of the water body for public water supply, propagation of fish, shellfish and wildlife and for recreational, agricultural, industrial, and navigational purposes. Water quality standards also contain an antidegradation policy that, at a minimum, ensures the maintenance and protection of existing uses and water quality necessary to protect those uses, provides for the protection of high quality waters, and maintains water quality in waters that are outstanding natural resources. By establishing the goals for a water body, water quality standards provide the regulatory and legal basis for point source and non-point source water quality-based controls beyond those required by the uniform minimal technological requirements of the CWA. Water quality standards are enforced through the National Pollutant Discharge Elimination System (NPDES) permits for point source discharges and through non-point source control programs.

Criteria: Under the authority of the CWA section 304(a), EPA has developed methodologies and specific criteria to protect aquatic life and human health. EPA criteria are guidance to be used in the adoption of formal water quality standards. The EPA criteria methodologies are intended to provide protection for all surface water on a national basis. The methodologies have been subject to public review, as have the additional criteria documents. Additionally, the methodologies have been reviewed by EPA's Science Advisory Board.

An *aquatic life criterion* derived using EPA's Section 304(a) method represents an estimate of the highest concentration, of a pollutant in water that does not present a significant risk to aquatic organisms, per se, or to their use. The combination of a criteria maximum concentration (CMC), a one-hour average acute limit, a criteria continuous concentration (CCC), and a 4-day average concentration chronic limit, provides protection from acute and chronic toxicity to animals and plants, and from bioconcentration by aquatic organisms, without being as restrictive as a one-number criterion would have to be. EPA's section 304(a) criteria for *human health* are based on two types of biological endpoints: 1) carcinogenicity, and 2) systemic toxicity (i.e., all other adverse effects other than cancer).

TMDL: A TMDL is a tool for implementing State water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable chemical loadings and pollution reductions necessary to attain water quality standards for a water body. It thereby provides the basis for States to establish water quality-based controls in discharge permits and implement other pollution control measures.

Section 303(d) of the CWA established the TMDL process to provide for more stringent water quality-based controls when technology based controls are inadequate to achieve State water quality standards. The TMDL process can broaden the opportunity for public participation, expedite water quality-based NPDES permitting, and lead to technically sound and legally defensible decisions for attaining and maintaining water quality standards.

Like water quality standards, TMDLs are established by the State, with EPA having responsibility if a State fails to act.

States have data for activities within their borders. The Program covers the entire United States and territories.

CONTACT:

Standards: David K. Sabock, Chief
U.S. Environmental Protection Agency
Water Quality Standards Branch
Office of Science and Technology
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-1315

Criteria: Robert April, Chief
U.S. Environmental Protection Agency
Office of Water
Health and Ecological Criteria Division
Office of Science and Technology
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-5389

TMDL Program: Bruce Newton, Chief
U.S. Environmental Protection Agency
Watershed Branch
Assessment and Watershed Protection Division
Office of Wetlands, Oceans and Watersheds
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7074

TMDL Modeling: Russel Kinerson, Chief
U.S. Environmental Protection Agency
Watershed Branch
Assessment and Watershed Protection Division
Office of Wetlands, Oceans and Watersheds
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-1330

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- U.S. Environmental Protection Agency. 1991. *Technical Support Document for Water Quality-Based Toxics Control*. U.S. Environmental Protection Agency. Washington, DC.
- . 1991. *Guidance for Water Quality-Based Decisions: The TMDL Process*. U.S. Environmental Protection Agency. Washington, DC.
- . 1990. *Reference Guide to Water Quality Standards for Indian Tribes*. U.S. Environmental Protection Agency. Washington, DC.
- . September 1988. *Introduction to Water Quality Standards*. U.S. Environmental Protection Agency. Washington, DC.
- . 1988. *Water Quality Standards Criteria Summaries: A Compilation of State/Federal Criteria*. U.S. Environmental Protection Agency. Washington, DC.
- . 1988. *Guidance for State Implementation of Water Quality Standards for CWA Section 303(c)(2)(B)*. U.S. Environmental Protection Agency. Washington, DC.
- . 1988. *State Water Quality Standards Summaries*. U.S. Environmental Protection Agency. Washington, DC.

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- . 1986. *Quality Criteria for Water*. (Also called the "Gold Book"). U.S. Environmental Protection Agency. Washington, DC.
 - . 1983. *Water Quality Standards Handbook*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

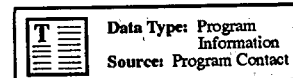
Technical Guidance Document Database

This database is an automated inventory of the technical guidance documents which are presently distributed by the Exposure Assessment Branch through the OST/OGWDW Resource Center. This database is in dBase III format with 8 fields of information. It currently is distributed in xeroxed form and is expected to be accessible through the TMDL special interest group (SIG) for the NPS Bulletin Board System (NPS/BBS) by January 1993.

Watershed Model Database

This database serves to highlight the many tools and applications used in the development of TMDLs. It includes over 20 water quality models, interfaces and subroutines. The database is compiled in dBase III format with 15 fields of information. It serves as a quick guide for determining the application of each model as it pertains to a particular watershed or ecosystem. It currently is distributed in xeroxed form and is expected to be accessible through the TMDL special interest group (SIG) for the NPS Bulletin Board System (NPS/BBS) by January 1993.

ENVIRONMENTAL PROTECTION AGENCY



National Wetlands Program

OFFICE:

Office of Water
Office of Wetlands, Oceans and Watersheds
Wetlands Division

SUMMARY PROGRAM DESCRIPTION:

The Environmental Protection Agency protects wetlands through a variety of regulatory and nonregulatory tools. The cornerstone of these efforts is the section 404 program of the Clean Water Act, which EPA jointly administers with the Army Corps of Engineers. EPA has primary roles in the development of the environmental guidelines by which permit applications must be evaluated; review of proposed permits; prohibition of discharges with unacceptable adverse impacts; approval and oversight of State assumption of the program; establishment of jurisdictional scope of waters of the United States; and interpretation of section 404 exemptions. Enforcement authority is shared between EPA and the Corps.

EPA also pursues a variety of nonregulatory activities to take advantage of other opportunities to protect wetlands. These efforts include influencing Federal agency policies and programs; information and educational materials/curricula; promoting and influencing international activities; integrating consideration of wetlands into EPA programs and developing strategies; and improving the scientific information base. Some specifics under these programs include: floodplain management, wetlands management on public lands, agricultural policy, multiobjective river corridor management, section 401 certification, State assumption of section 404, international coordination, Superfund and nonpoint source coordination, stormwater management, coastal zone management, and water quality standards development.

CONTACT:

Wetlands and Aquatic Resources Regulatory Branch (A-104F)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-1799

Wetlands Strategies and State Programs Branch (A-104F)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-9043

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Office of Water, Wetlands Division. July 1990. *Beyond the Estuary: The Importance of Upstream Wetlands in Estuarine Processes*. U.S. Environmental Protection Agency. Washington, DC.

Office of Water. February 1988. *America's Wetlands: Our Vital Link Between Land and Water*. U.S. Environmental Protection Agency. Washington, DC.

Office of Water. July 1990. *Water Quality Standards for Wetlands (National Guidance)*. U.S. Environmental Protection Agency. Washington, DC.

Office of Water. April 1989. *Wetlands and 401 Certification: Opportunities and Guidelines for States and Eligible Indian Tribes*. U.S. Environmental Protection Agency. Washington, DC.

Office of Water. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

None provided.

Office of Wastewater Enforcement and Compliance Permits Program

OFFICE:

Office of Water
Office of Wastewater Enforcement and Compliance

SUMMARY PROGRAM DESCRIPTION:

The Office of Wastewater Enforcement and Compliance at EPA is responsible for administering the programs aimed at reducing and eliminating pollution to the Nation's water from point sources. This is accomplished through implementation of the National Pollutant Discharge Elimination System (NPDES) permit, pretreatment and sludge programs, and aggressive enforcement of these program requirements. The States have joined with the Federal government to implement these control programs.

Each discrete source of wastewater (known as "point source") must obtain a NPDES permit which regulates the facility's discharge of pollutants into waters of the United States. This approach to control and eliminate water pollution is focused on the pollutant source determined to be harmful to receiving waters.

Responding to the problem of polluted storm water runoff, Congress amended the Clean Water Act in 1987 establishing specific schedules for EPA to develop controls for storm water discharges associated with industrial activity and discharges from municipal separate storm sewer systems as part of the NPDES program. This covers over 100,000 industrial facilities and municipal separate storm sewers located in 173 cities and 47 counties identified by EPA. A more complete definition of these terms is located in 40 CFR Part 122. Storm water discharge permits will provide a mechanism for monitoring the discharge of pollutants to waters of the United States and for establishing source controls where necessary.

The National Pretreatment Program, a cooperative effort of Federal, State, and local officials is implementing the practice of "pretreatment," removing or eliminating pollutants from industrial wastewater before discharging them into the municipal sewage treatment system, on a nationwide basis. By reducing the level of pollutants discharged by industry into municipal sewage systems, the program ensures that industrial development vital to the well-being of a community will be compatible with a healthy environment.

The Nation's success in treating its wastewater has given rise to another challenge-proper management and disposal of sludges (the solids that are removed from wastewater during treatment) which may contain concentrations of toxic and nonconventional pollutants. EPA's primary responsibility is to develop and enforce the technical standards and oversee State programs. In 1987, Congress amended Section 405 of the CWA to emphasize EPA's role in sludge management. The new provisions made it clear that NPDES permits (or other permits affording equivalent regulation) are to be used to regulate the use and disposal of sewage sludge to protect public health and the environment and to promote beneficial use of sludge.

The ultimate goal of the water enforcement program is to improve environmental quality through compliance with environmental laws. More specifically, EPA's water enforcement program is designed to accomplish four major objectives: identify instances of noncompliance, return the violator to compliance; recover any economic advantage obtained by the violator's noncompliance; and deter other regulated facilities from noncompliance.

The permittees report self-monitored data on a Discharge Monitoring Report (DMR) and submit it to either the appropriate State agency or EPA regional office. The data covers point sources discharging to waters of the U.S. in all States, territories and Indian lands.

CONTACT:

U.S. Environmental Protection Agency
Office of Water
Office of Wastewater Enforcement and Compliance (WH-540)
401 M Street, SW
Washington, DC 20460

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

- Office of Wastewater Enforcement and Compliance. 1992. *Storm Water Overview*. U.S. Environmental Protection Agency. Washington, DC.
- . 1991. *Guidance Manual for the Preparation of NPDES Permit Applications for Storm Water Discharges Associated with Industrial Activity*. U.S. Environmental Protection Agency. Washington, DC.
- . 1991. *Technical Support Document for Water Quality-Based Toxics Control*. U.S. Environmental Protection Agency. Washington, DC.
- . 1991. *National Pretreatment Program Report to Congress*. U.S. Environmental Protection Agency. Washington, DC.
- . July 1986. *Environmental Regulations and Technology*. The National Pretreatment Program (available through NTIS) U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

Permit Compliance System (PCS)

PCS is a computerized management information system which contains data on the NPDES permit-holding facilities. PCS keeps extensive records on more than 65,000 active water-discharge permits nationwide. There are 13 types of data within PCS: permit facility, permit event, compliance schedule violation, outfall schedule, permit limits, discharge monitoring reports, inspection, single event violation, enforcement action, pretreatment compliance inspection/audit, pretreatment performance summary, and evidentiary hearing. Each permit record contains many types of information including that which identifies and describes the facility to which the permit has been granted, specifies the pollutant discharge limits for that facility, records the actual amounts of pollutants measured in the facility waste water discharges, and tracks the facility's compliance schedule and violations.

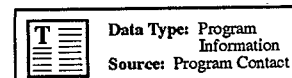
Two levels of edit checking are used. The first level verifies the completeness and validity of data in each transaction. Required fields are checked for values, numeric fields are checked to ensure that the value entered was numeric; and code fields are checked against valid PCS values. The second level verifies the transaction's relationship to existing data for that facility (for example, an outfall schedule cannot be added unless the facility record exists).

The system resides on ADABAS NATURAL software and there are no retrieval access restrictions for EPA and state water organizations. Available user documentation includes the following: *Inquiry User's Guide*, *Generalized Retrieval User's Guide*, *Data Entry, Edit and Update User's Guide*, *Data Element Dictionary*, *PCS-PAL User's Guide*, and *Guide to National Computing Center Services*.

For more information contact:

PCS User's Support Line (202) 260-8529 (CML) 8:00 a.m. to 4:00 p.m. (EST) Monday-Friday

ENVIRONMENTAL PROTECTION AGENCY



Wellhead Protection Program/Comprehensive State Ground Water Protection Program (CSGWPP)

OFFICE:

Office of Water
Office of Ground Water and Drinking Water
Ground Water Protection Division

SUMMARY PROGRAM DESCRIPTION:

The Ground Water Protection Division has responsibility for Federal administration and oversight of the Wellhead Protection Program and currently is providing support for EPA's implementation of the Agency's new Ground Water Protection Strategy for the 1990s. GWPD is assisting EPA and the States in defining Comprehensive State Ground Water Protection Programs, the Strategy's key approach to protecting the Nation's ground water.

Authorized by the 1986 amendments to the Safe Drinking Water Act, the Wellhead Protection Program was established to protect supplies of ground water used as public drinking water from contamination. The program is based on the concept that development and application of land-use controls and other preventive measures can protect ground water. States develop and implement Wellhead Protection Programs and submit program plans for EPA approval.

EPA's new Ground Water Protection Strategy, released in 1991, established CSGWPPs as the Agency's overall approach to adequately protect ground water from contamination. EPA is working with the States to define the program. States will have the primary role in designing and implementing CSGWPPs in accordance with distinctive local needs and conditions.

CONTACT:

Safe Drinking Water Act Hotline (800) 426-4791

FOR PUBLIC INQUIRIES:

See Contact.

PUBLICATIONS:

Office of Ground Water and Drinking Water. 1991. *Protecting the Nation's Ground-Water: EPA's Strategy for the 1990s*. U.S. Environmental Protection Agency. Washington, DC.

--. 1989. Wellhead Protection Program: Tools for Local Governments. U.S. Environmental Protection Agency. Washington, DC.

DATABASE(S):

There is no national ground water database. Some States place ground water data in STORET.

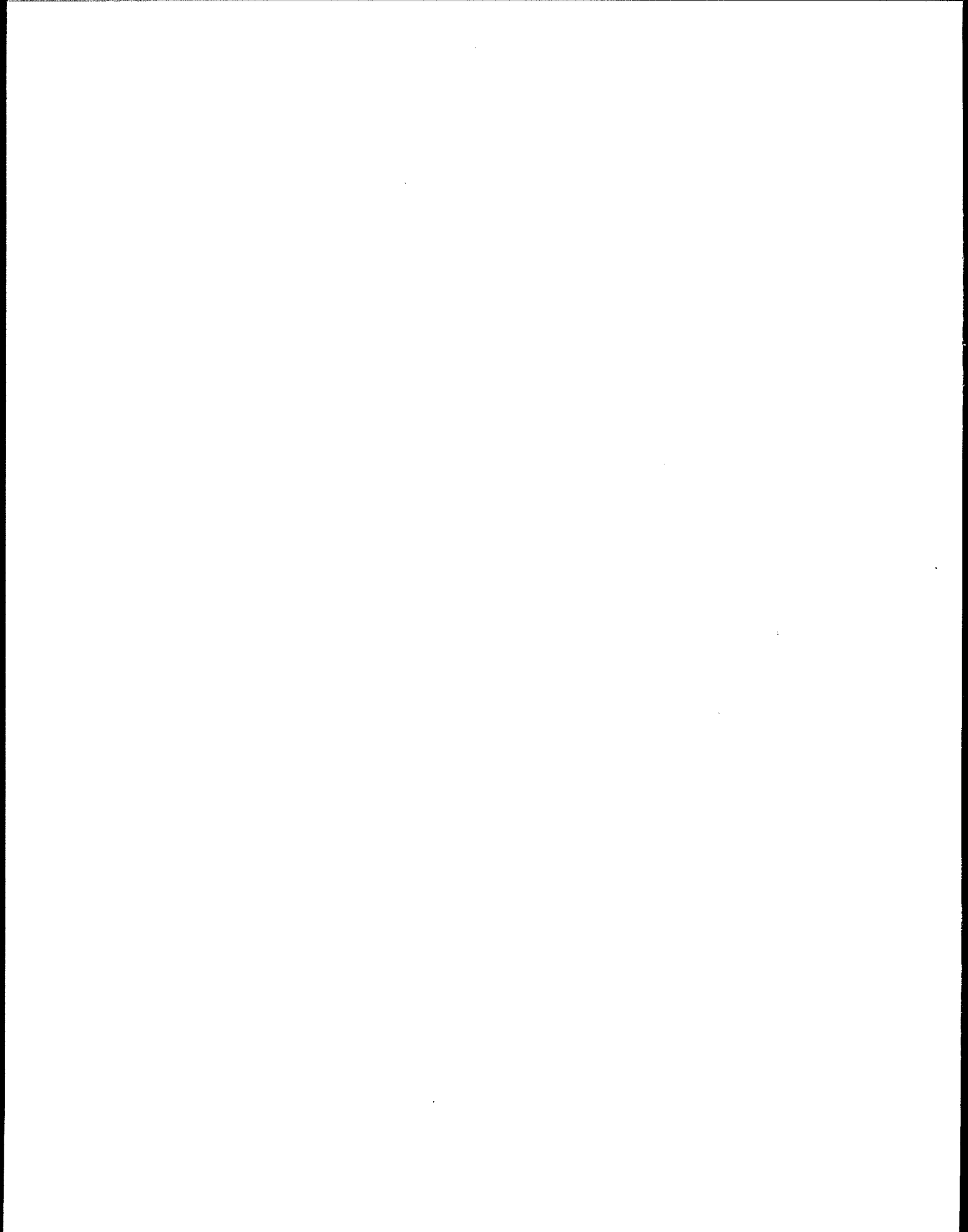
APPENDICES

These appendices reference selected Federal sources of information on water quality conditions and programs not discussed in the previous sections of the Guide.

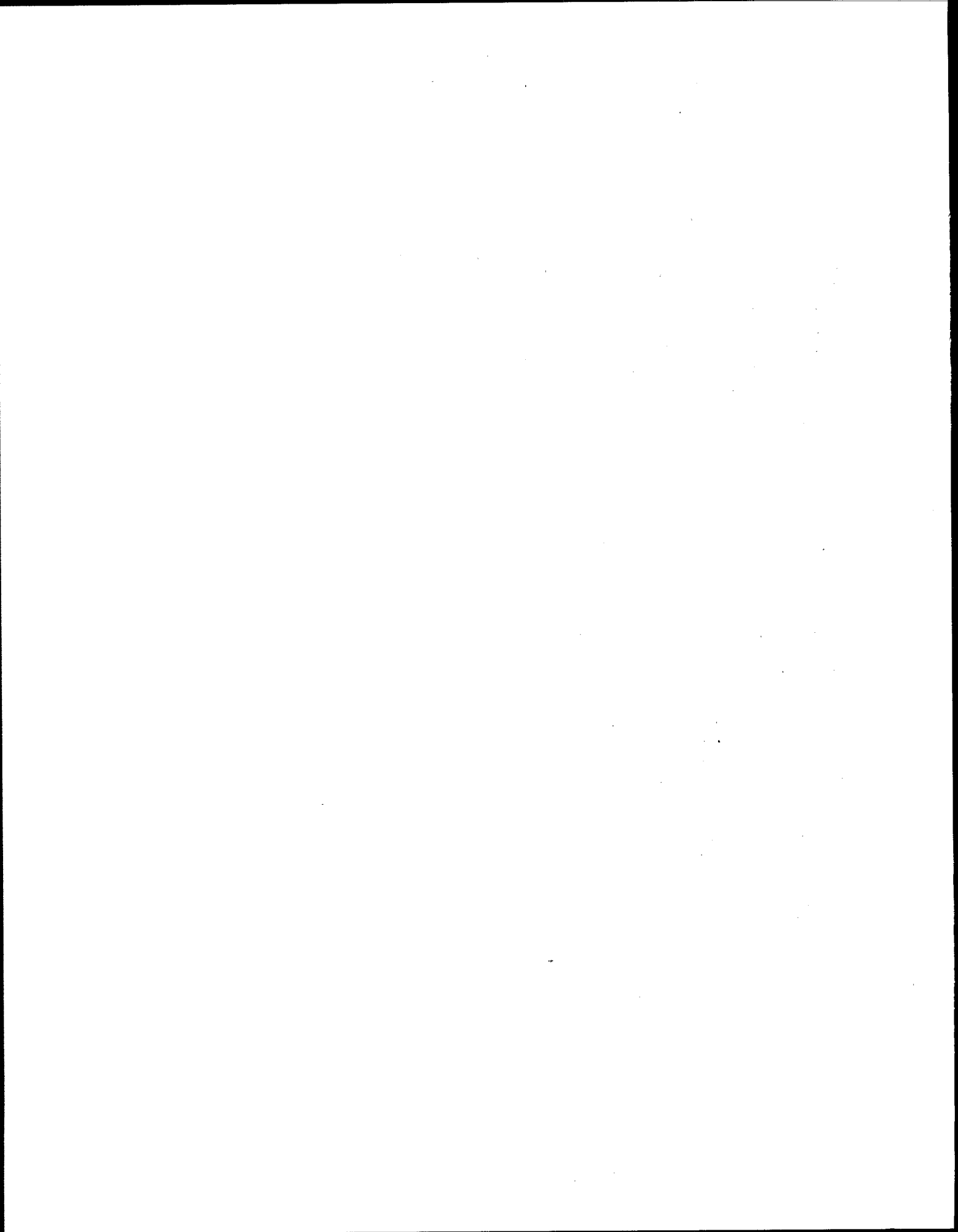
Appendix A - Individual Water Quality Studies

Appendix B - Analytical Tools

Appendix C - Clearinghouses, Data Centers, and Directories



A. Individual Water Quality Studies



ENVIRONMENTAL PROTECTION AGENCY AND U.S. FISH AND WILDLIFE SERVICE

1982 National Fisheries Survey

The National Fisheries Survey was an assessment of the biological condition of the Nation's waters conducted jointly by the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service (FWS). Sport fish species, Federally-designated threatened and endangered fish species, and State-designated fish species of special concern were used as indicators of biological status. For the purposes of this survey, the Nation's waters were defined as all flowing waters in the contiguous 48 United States, including main stem impoundments but excluding the Great Lakes, estuaries, coastal waters, and wetland areas. The survey was based on a statistically selected sample of 1,303 river segments from across the Nation using a questionnaire developed by the EPA, FWS, and their contractors. The respondents were State fish management experts with an average of nine years of experience in the selected cataloging units or watersheds. An assessment of the fisheries information collected shows that 40 percent of the reaches had been quantitatively or qualitatively sampled. Sampling occurred in surrounding cataloging units for an additional 33 percent of the reaches. Twelve hundred and eighty-five questionnaires, 98.5 percent of the total distributed, were completed and returned to the survey project team. The survey design, the probability structure used to select the sample reaches, the experience level of the respondents, and the high response rate combine to provide reliable estimates of the status of the Nation's waters, accurate appraisals of their ability to support fish communities, and informed judgements on limiting factors affecting those fish communities.

CONTACT:

Assessment and Watershed Protection Division
Office of Water
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

ENVIRONMENTAL PROTECTION AGENCY

Environmental Investments: The Cost of A Clean Environment

This report to Congress is in response to Section 312(a) of the Clean Air Act and Section 516(b) of the Clean Water Act. Unlike previous such reports, however, it goes beyond the requirements of these sections, by presenting a broader picture of environmental pollution control expenditures reflecting the Environmental Protection Agency's broad mandate. In general, this report presents data on environmental pollution control costs during the period 1972 to 1987, projects these costs for each subsequent year to the year 2000 under a number of assumptions, and breaks them down in a variety of ways. These ways include differentiating among capital, operating, and annualized costs, as well as the medium where the pollution is controlled, the sector (e.g., public, private) from which the control is funded, new versus existing regulations, whether the control is primarily a result of a Federal mandate or the result of local initiative, and to the extent permitted by the data, by pollutant controlled.

CONTACT:

Alan Carlin
Economic Analysis and Innovations Division
Office of Policy Analysis
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-5499

ENVIRONMENTAL PROTECTION AGENCY

Environmental Monitoring Methods Index

The Environmental Modeling Methods Index system (EMMI) is an automated inventory of information on environmentally significant analyses monitored by EPA and methods for their analysis. The EMMI database includes information on more than 2,600 analyses from over 80 regulatory and non-regulatory lists and more than 900 analytical methods. EMMI includes analyses from the Clean Water Act, Comprehensive Environmental Response, Compensation, and Liability Act, Superfund Amendments Reauthorization Act, Resource Conservation and Recovery Act, Safe Drinking Water Act, and the Clean Air Act, as well as from analyses from other Agency and State lists. The database provides a comprehensive cross-reference between analyses and analytical methods, and contains information on related laws and organizations and additional databases for further information.

CONTACT:

EMMI User Support
U.S. Environmental Protection Agency
Sample Control Center
P.O. Box 1407
Alexandria, VA 22313
FAX: (703) 684-0610

ENVIRONMENTAL PROTECTION AGENCY

National Pesticide Survey

The National Pesticide Survey was a one-time survey to determine the national occurrence of pesticides and nitrates in domestic (private) and public community water supply wells currently used for drinking water, and assess the relationships between patterns of contamination and aquifer vulnerability and agricultural activity such as pesticide use.

Data were collected on the occurrence of 126 pesticides and nitrates in water supply wells. In order to assess the relationship between patterns of contamination and aquifer vulnerability and agricultural activity, the following data were collected at each level: hydro-geologic vulnerability; well construction; pesticide use patterns; and other sources and causes for contamination.

Stratified random sampling, involving 3 ground water vulnerability strata and 4 "pesticide use" strata, was used. Community water supplies using ground water were randomly chosen from the Federal Reporting Data System database. Domestic water supplies were chosen randomly from counties that met strata criteria.

CONTACT:

Jeanne Briskin, Director
National Pesticide Survey
U.S. Environmental Protection Agency (WH-550)
401 M. Street, SW
Washington, DC 20460
Phone: (202) 260-5508

Safe Drinking Water Hotline
Phone: 1-800-426-4791
In Washington, DC Phone: (202) 260-5533

ENVIRONMENTAL PROTECTION AGENCY

National Study of Chemical Residues in Fish

The report for EPA's National Study of Chemical Residues in Fish was prepared by the Office of Science and Technology, Standards and Applied Science Division. The Study was a one-time screening investigation to determine the prevalence, concentration, and sources of selected bioaccumulative pollutants in fish, which may not be detected in routine water monitoring. In addition, estimates were made of human health risks for those pollutants studied for which cancer potency factors and/or reference doses have been established. Initiated in 1986, this study contains analysis for 60 pollutants including PCBs, dioxins, furans, pesticides/herbicides, mercury, biphenyl, and other organic compounds. The sites sampled included 314 "targeted" sites thought to be contaminated by various point and nonpoint pollutant sources. Targeted sites included pulp and paper mills (using chlorine and non-chlorine bleaching processes, wood preserving operations, certain refineries, Superfund sites, publicly-owned treatment works (POTWs), sites near industrial complexes, and sites that could be contaminated by runoff from urban or agricultural areas. Other sites included 35 background locations and 39 United States Geological Survey National Stream Quality Accounting Network (NASQAN) sites. To obtain a copy of the report, interested parties should submit a written request to: Office of Water Resources Center (RC-4100), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Phone: (202) 260-7786. Please provide your name, mailing address, and the EPA document numbers, EPA-823-R-92-008A (Volume 1) and EPA-823-R-92-008B (Volume 2).

CONTACT:

Richard Healy (WH-585)
U.S. Environmental Protection Agency
Standards and Applied Science Division
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7812

ENVIRONMENTAL PROTECTION AGENCY

National Urban Runoff Program

The National Urban Runoff Program (NURP) investigates the nature of urban nonpoint source pollution and preventive measures that might reduce impacts on water quality. The program consists of 28 component studies carried out in the early 1980s. Each study focused on an urban runoff problem for which one or more approaches could be evaluated. Data on water quality and quantity were collected for 19 cities. There are 2,000 site-events at 70 sites. All land uses except heavy industrial were monitored. The complete data set has over three million observations. Fixed-site data include catchment area, land use, drainage type and coverage, soil moisture data, and USGS quad map name. Water quality data include rainfall/runoff, solids loading, oxygen demand, pH, nutrients, metals, and priority pollutants. Management data include surface loading data, particle size distribution, nutrient loads, priority pollutants, and load removed by management practice. Basin maps showing location, land use, topography, drainage also are available. Data were collected hourly during storm events for 19 cities nationwide. Summary reports are available for these 19 cities.

CONTACT:

Illinois State Water Survey
Environmental Protection Agency
2204 Griffith Drive
Champaign, IL 61820
Phone: (217) 333-9544

DEPARTMENT OF AGRICULTURE

Nitrate Occurrence in U.S. Waters

Development of this reference summary of published information on nitrate occurrence in U.S. waters and related questions was undertaken in 1990 by the USDA Working Group on Water Quality. The summary is intended to provide the USDA a broad perspective on the proportions of the problem of ground and surface water and estuary contamination associated with nitrate from agricultural sources. This summary largely is based on the published data, analyses, and reports available in the U.S. literature. The information from these diverse sources is not strictly additive due to differences in methodology and study designs. Nor does it fully reflect the dimensions of the problem of nitrate contamination in U.S. waters. Nevertheless, the amount of quantitative information available is substantial and reflects what is known of the distribution and levels of nitrate contamination and the factors influencing its occurrence in U.S. waters and water wells.

The formal assessment of water quality conditions is primarily the role of USGS and EPA at the Federal level and primarily of the States at the local level. However, the USDA uses the information from such assessments along with its own research to establish the dimension of the problem and to shape the direction of programs and project priorities.

CONTACT:

Office of Budget and Program Analysis
Office of the Secretary
US Department of Agriculture
Washington, DC 20250

FEDERAL HIGHWAY ADMINISTRATION

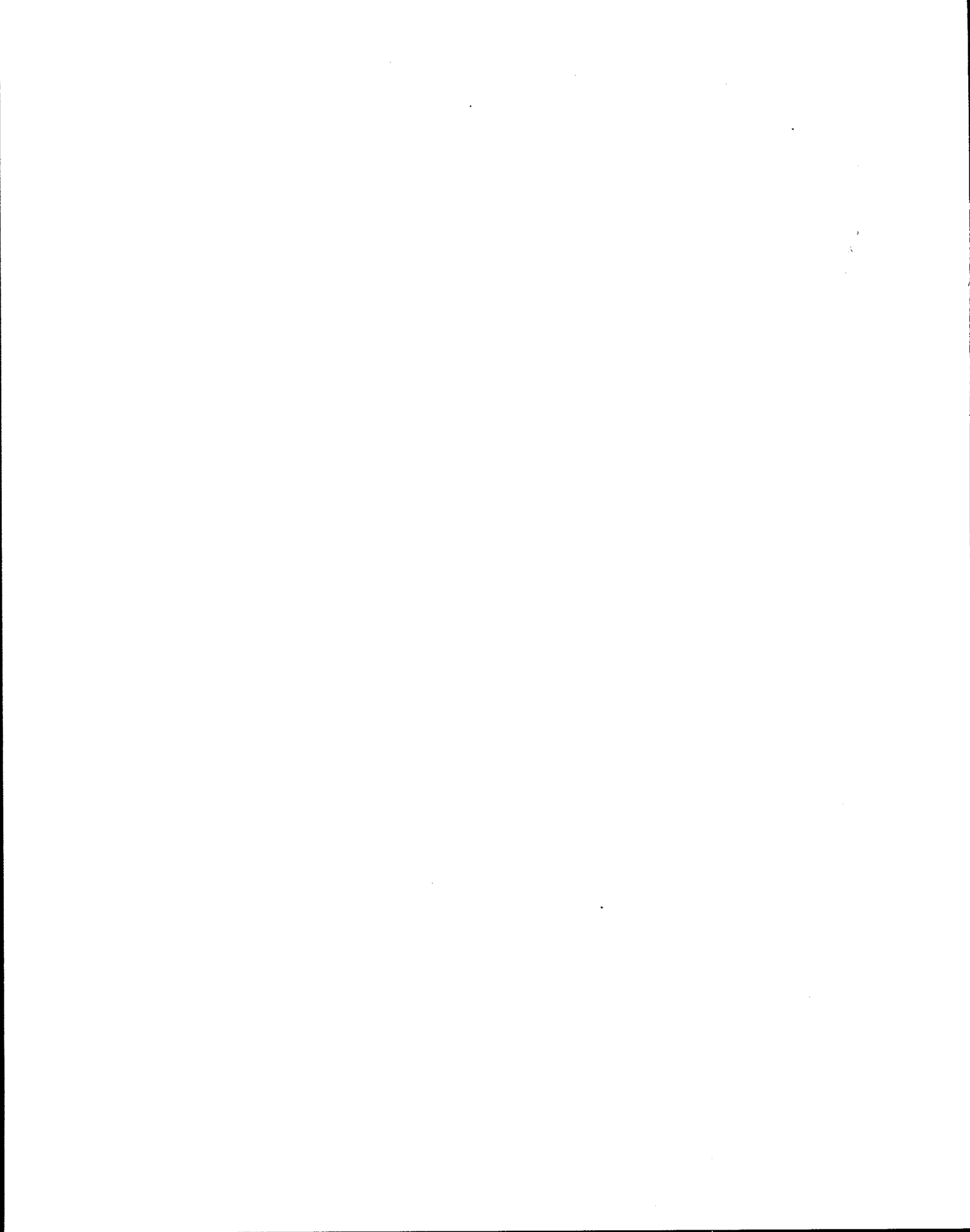
Pollutant Loadings and Impacts From Highway Stormwater Runoff

The primary purpose of this investigation was to develop a probabilistic procedure to estimate pollutant loadings from highway stormwater runoff. Based on this procedure, the study also developed methods to determine whether receiving water sites for highway runoff water are adversely impacted, the significance of these impacts, and guidance to deal with the impacts. The procedure is available in both a practical workbook format and an interactive user interface system available on personal computer software.

CONTACT:

Fred G. Bank, Ecologist
Federal Highway Administration
Environmental Quality Branch, (HEP-42)
400 Seventh Street, SW
Washington, DC 20590
Phone: (202) 366-5004

B. Analytical Tools



ENVIRONMENTAL PROTECTION AGENCY

Environmental Display Manager

The Environmental Display Manager (EDM) is a development system on an IBM 3090 mainframe at the U.S. EPA National Computer Center in Research Triangle Park, North Carolina. EDM provides mapping, display, analysis support, and information management capabilities to workstations located across the United States, and is connected to EPA through Federal, State, academic, and private communications networks. Through interactive software, EDM can support analyses quickly, create maps and graphics, and generate reports that integrate millions of pieces of environmental data. The concept of EDM is to provide easy access to environmental information, to provide automated environmental analyses and reports, and then to provide data, graphics, images, text, and documents that can be used by numerous output devices, software packages, and computers. EDM is described in more detail in W.B. Samuels, et al., *Water Resources Bulletin*, Vol. 27, Number 6, 1991.

CONTACT:

U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
Assessment and Watershed Protection Division
401 M Street, SW
Washington, DC 20460
Phone: (202) 260-7046

MULTIPLE AGENCY

Geographic Information Systems (GIS) Program

EPA GIS Program

A Geographic Information System is a series of software/hardware "tools" combining multiple map layers or themes, with spatially related data or attributes, to produce a variety of cause and effect scenarios for improved environmental decision making. GIS activities are increasing at a rapid rate in Federal agencies, aided by recent technical developments, e.g., high powered yet inexpensive work stations with CD-ROM.

EPA's GIS Program was established by the Office of Information Resources Management (OIRM), to provide the Agency with advanced computer capabilities to analyze complex environmental issues in a common geographic framework. The most important components of EPA's GIS program are the environmental analysts and managers who operate and support the technology. The National GIS Program is comprised of multidisciplinary teams within EPA's regions and laboratories and is coordinated by OIRM's Program Systems Division.

State activities in GIS have recently been summarized in Warnecke, L., et al., *State Geographic Information Activities Compendium*, Lexington, KY: The Council of State Governments. 1992.

CONTACT:

Thomas Dewald
U.S. Environmental Protection Agency (3405 R)
401 M Street, SW
Washington, DC 20460
Phone: (703) 557-3083
FAX: (703) 557-3186

USGS GIS Program

A geographic information system (GIS) is a computer system designed to allow users to collect, manage, and analyze large volumes of spatially referenced data. The use of GIS technology has revolutionary implications for the way the Geological Survey conducts research and presents the results. As the Nation's primary producer of cartographic, geographic, hydrologic, and geological data, the Geological Survey is using advanced GIS technologies to improve greatly its ability to perform traditional missions of earth science data collection, research, and information delivery.

The Geological Survey and other bureaus and offices of the Department of the Interior have created a number of digital spatial databases that are being used in geographic information systems. Among these are the National Digital Cartographic Data Base, the Federal Mineral Land Information System, the Land Use and Land Cover Mapping Program, the National Coal Resources Data System, the National Uranium Resources Evaluation System, the Rock Analysis Storage System, and the National Water Data System. The Geological Survey is increasingly being required to serve as a central repository as well as the Federal authority on information regarding such critical issues as the Nation's energy and mineral potential, the assessment of risks from natural hazards, and questions of the quantity and quality of water supplies. Because GIS technology allows scientists to process and interrelate many more kinds of data than were previously feasible. GIS applications research can provide new scientific understanding of these issues.

CONTACT:

James VanDriel
USGS National Center 586
Reston, VA 22092
Phone: (703) 648-4185

Public Inquiries: 1-800-USA-MAPS

MULTIPLE AGENCY

Water Quality Modeling

Water quality modeling is used by a number of Federal agencies for a number of activities related to water quality, including assessments and the development of discharge controls. Water quality modeling can range from the simplistic, e.g., dilution calculations, to the complex, e.g., dynamic models of estuaries and is generally used to assess the impact of a loading upon the receiving water.

EPA uses water quality modeling in a number of program areas, particularly in the development of discharge controls under the Clean Water Act (see the entry on the National Water Quality Standards, Water Quality Criteria and Total Maximum Daily Loads Programs in Section VII above). Support for EPA water quality modeling comes from both the program offices and from the EPA Center for Exposure Assessment Modeling (CEAM). CEAM was established in July 1987 to meet the scientific and technical exposure assessment needs of the U.S. EPA's program and regional offices and the various State environmental agencies. To support environmental risk-based decisions concerning protection of air, water and soil, CEAM provides proven predictive exposure assessment techniques for aquatic, atmospheric, terrestrial and multimedia pathways for organic chemicals and metals. A wide range of analysis techniques is provided, ranging from simple desktop techniques suitable for screening analysis through computerized steady-state models to sophisticated, state-of-the-art continuous simulation models. CEAM maintains a distribution center for continually updated models (codes and documentation) and databases for users. All computer code distributed by CEAM is considered to be in the public domain and freely available to users.

Additional information on the use of water quality models in EPA programs for assessing and controlling water quality impacts is provided in the Technical Support Document for Water Quality-Based Toxics Control (EPA, Office of Water, 1991) and the Office of Water Environmental and Program Information Systems Compendium (EPA, Office of Water, 1991).

CONTACT:

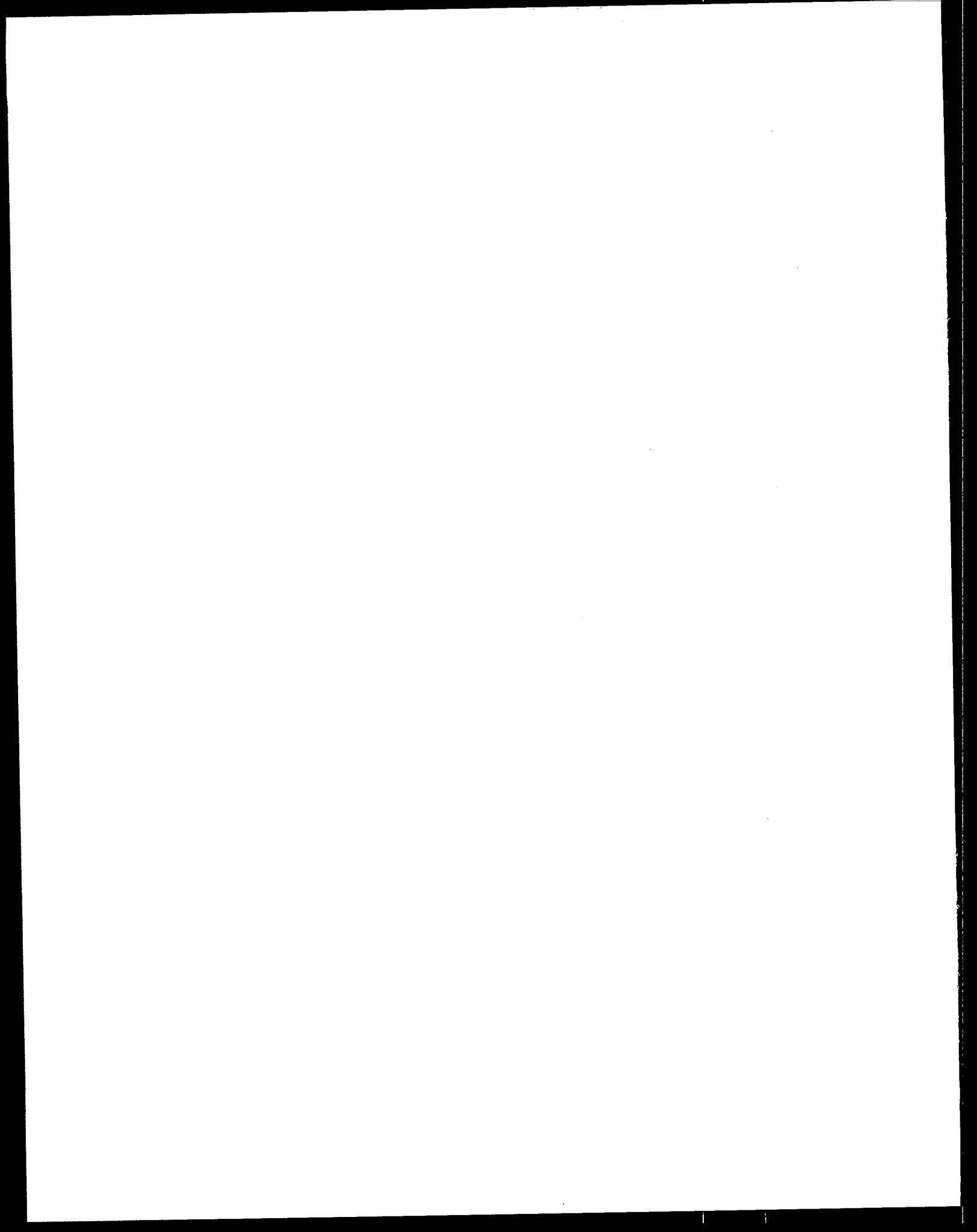
Policy Aspects:

Assessment and Watershed Protection Division
Office of Water
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Technical Aspects:

Exposure Assessment Branch
Standards and Applied Science Division
Office of Water
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Center for Exposure Assessment Modeling
Environmental Research Laboratory
U.S. Environmental Protection Agency
College Station Road
Athens, GA 31613



**C. Clearinghouses, Data Centers,
and
Additional Directories**

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861.

2. The second part is a report from the Secretary of the Treasury, dated January 1, 1861.

3. The third part is a report from the Secretary of the Interior, dated January 1, 1861.

4. The fourth part is a report from the Secretary of the Navy, dated January 1, 1861.

5. The fifth part is a report from the Secretary of the War, dated January 1, 1861.

6. The sixth part is a report from the Secretary of the State, dated January 1, 1861.

7. The seventh part is a report from the Secretary of the Army, dated January 1, 1861.

8. The eighth part is a report from the Secretary of the Navy, dated January 1, 1861.

9. The ninth part is a report from the Secretary of the War, dated January 1, 1861.

10. The tenth part is a report from the Secretary of the State, dated January 1, 1861.

11. The eleventh part is a report from the Secretary of the Army, dated January 1, 1861.

12. The twelfth part is a report from the Secretary of the Navy, dated January 1, 1861.

13. The thirteenth part is a report from the Secretary of the War, dated January 1, 1861.

14. The fourteenth part is a report from the Secretary of the State, dated January 1, 1861.

15. The fifteenth part is a report from the Secretary of the Army, dated January 1, 1861.

16. The sixteenth part is a report from the Secretary of the Navy, dated January 1, 1861.

17. The seventeenth part is a report from the Secretary of the War, dated January 1, 1861.

18. The eighteenth part is a report from the Secretary of the State, dated January 1, 1861.

19. The nineteenth part is a report from the Secretary of the Army, dated January 1, 1861.

20. The twentieth part is a report from the Secretary of the Navy, dated January 1, 1861.

COUNCIL ON ENVIRONMENTAL QUALITY

Annual Report to Congress

The Council on Environmental Quality is required, by the National Environmental Policy Act of 1969, to report on the status and the condition of the environment; current and foreseeable trends in the quality, management, and utilization of the environment; and the effects of environmental trends. The Council reports to Congress in an annual report and maintains an archive of national environmental statistics, which it updates and publishes periodically in the annual report as statistical tables, and in environmental trends reports as charts, graphs, and maps.

CONTACT:

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DEPARTMENT OF AGRICULTURE

Water Quality Information Center

The Water Quality Information Center is part of the National Agricultural Library (NAL), which is an agency of the U.S. Department of Agriculture. As the focal point of NAL's water quality efforts, the Center collects, organizes, and disseminates information on the scientific, educational, and public policy aspects of water quality and agriculture.

The Water Quality Information Center manages the Water Information Network (WIN)--a computer conference on NAL's electronic bulletin board, the Agricultural Library Forum. Examples of information found on WIN include bibliographies on water quality topics, announcements of upcoming meetings, and a directory of water-related hotlines. Contact the Center for a WIN user's guide.

Other activities of the Center include producing bibliographies, performing brief literature searches, and recommending additions to NAL's collection. In carrying out its functions, the Center often collaborates with individuals and organizations with similar interests.

CONTACT:

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DEPARTMENT OF COMMERCE

Climate Analysis Center

OFFICE:

National Oceanic and Atmospheric Administration
National Weather Service/National Meteorological Center

SUMMARY DESCRIPTION:

The Climate Analysis Center (CAC) is a combined operational, research, and development division of the National Meteorological Center (NMC). CAC is a major element of both the NOAA and National Climate Programs, and has the lead within the U.S. Government for most operational climate monitoring and prediction activities.

The principal missions are to maintain a continuous watch of short-term climate fluctuations in order to diagnose and predict them, and to monitor long-term climate trends. These efforts are designed to assist agencies both inside and outside the Federal Government in coping with climate-related problems such as food supply, energy allocation, and water resources. See contact for information on the CAC system that allows access to on-line data sets.

CONTACT:

David Miskus
NOAA/NWS/NMC
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Washington, DC 20233
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DEPARTMENT OF COMMERCE

Earth System Data Directory

SUMMARY DESCRIPTION:

The NOAA Earth System Data Directory (NOAADIR) is an on-line computer guide to environmental data held by the National Oceanic and Atmospheric Administration. It serves two major purposes:

1. It provides NOAA with a common system for documenting data held in NOAA offices.
2. It provides the general research and scientific community with a way to locate NOAA data sets that are useful for their studies.

This directory is part of an international network of Data Directories based on the NASA Master Directory. Most of the directories on the network use identical software developed for the NASA Master Directory system.

The cornerstone for the NOAADIR and the Master Directory is the Directory Interchange Format or DIF, that was developed by the NASA/NOAA/USGS team as the standard for documenting high level information about space and environmental data sets. All of the directories in the Master Directory system use the DIF layout or can exchange data using the DIF.

A wide variety of earth science dataset descriptions is included in the directory. The fields represented in the directory include: meteorology, oceanography, marine biology, fisheries, and geology. You can search by scientific discipline, measured parameters, time period, geographic location, sensor and source, project, and other criteria.

Any user in the United States can access NOAADIR using computer terminal dial-in telephone lines, including a toll free 800 number, the NASA Dec-Net (formerly SPAN), and the Internet Networks. The user connects to NOAADIR using a controlled VAX account called NOAADIR. This account enables the user to search only the NOAA directory, not any other software on the VAX, thus keeping the system secure. The NOAADIR contains only descriptions, not the actual data, and refers the user to the holder of the data. The referenced data have a wide variety of classification schemes, standards, formats, reference systems, resolutions, and are of varied degrees of accuracy and currentness. They are drawn from many sources of meteorological, oceanographical, marine biological, and geological data.

Data descriptions are displayed on the user's terminal in a screen oriented presentation. The user may request off line printer listings from the NOAADIR office.

SYSTEM CONTACT:

Gerald S. Barton
Environmental Information Services
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Washington, DC 20235
Phone: (202) 606-4548
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DEPARTMENT OF COMMERCE

National Climatic Data Center

OFFICE:

National Oceanic and Atmospheric Administration
National Climatic Data Center
Climate Services Division

SUMMARY DESCRIPTION:

The National Climatic Data Center (NCDC) collects and maintains all United States weather records and is the largest climatic data center in the world. It is a unique central source of historical weather information and related products. NCDC holds all weather records routinely collected by the U.S. Federal Government, as well as large quantities of data acquired from foreign sources and from cooperative exchanges with State or local agencies and various research activities. These data include surface observations from land stations, ocean weather stations, and moving ships. Daily climatological observations from cooperative observing stations, upper air observations, and radar observations are also archived at NCDC. NCDC's archive of historical weather data includes observations from the 1800s to the present. National weather service products such as forecasts, warnings and analyses, are archived at NCDC through a system known as the Service Records Retention System. A component of NCDC is the Satellite Data Services Division located in Washington, DC. They handle requests for meteorological satellite and satellite derived data. In addition to providing data, NCDC provides analysis and preparation of statistical summaries of archive holdings, library search services, publications, (including reference manuals), catalogs of holdings, data reports, atlases, and certification of records and publications for litigation.

Precipitation parameters related to water quality include: amounts, days with, rate, and duration of liquid and frozen precipitation; drizzle; hail; ice crystals; ice pellets; rain; snow; snow grains; snow pellets; and convective precipitation. Evaporation parameters include: humidity; dewpoint; water vapor; and vapor pressure. Ice parameters include: forms of; stages of development; and thickness on water. Soil/crop moisture parameters include: supply and demand, drought and wet spills. Satellite parameters include: ocean color Coastal Zone Color Scanner (CZCS); radiance Synthetic Aperture Radar (SAR); water vapor, and sea ice Selected Microwave Mapping Radiometer (SMMR).

CONTACT:

National Climatic Data Center
Climate Services Division
NOAA/NESDIS E/CC3
Federal Building
Asheville, NC 28801-2696
Phone: (704) 259-0682
FAX: (704) 259-0876

National Climatic Data Center
Satellite Data Services Division
NOAA/NESDIS E/CC6
Princeton 100 Camp Springs
Laurel, MD
Phone: (301) 763-8111

DEPARTMENT OF COMMERCE

National Environmental Data Referral Service (NEDRES)

SUMMARY DESCRIPTION:

The National Environmental Data Referral Service, NEDRES, is a National Oceanic and Atmospheric Administration (NOAA) program. Users may access a broad range of environmental information through the NEDRES on-line computer directory. The NEDRES database is a computer catalog of environmental data that identifies the existence, location, characteristics, and availability of environmental data.

NEDRES is a unique database on a major commercial information service computer system, BRS Information Technologies. Most of the databases on these information systems contain bibliographic descriptions of literature such as the National Technical Information Service Database, or contain the entire text such as the New York Times Database. NEDRES is the only database on a commercially operated system with worldwide, public access that describes environmental data. With NEDRES, the user can locate and then obtain the data from the contact given in the data description.

The database documents environmental data from the sun through the atmosphere to the earth and the oceans. Solar and upper atmosphere physics, satellite remote sensing, oceanography, climatology, meteorology, pollution, toxic substances, geophysics and geology, geochemistry, and freshwater and marine fisheries are some of the areas included. It contains only descriptions, not the actual data, and refers the user to the holder of the data. The database documents several types of environmental information descriptions. It includes:

1. Data centers, programs and organizations;
2. data files not in published form;
3. serial publications of data;
4. published data sets;
5. atlases or published data in graphic or analog form;
6. publications containing extensive compilations, analyses or applications of data;
7. manuals, user guides, or documentations of data sets; and
8. data catalogs, inventories, or bibliographies.

A search of the NEDRES database provides a complete description of available data sources that satisfy the search specifications. The resulting information describes the data in sufficient detail, allowing the user to decide whether to contact the data holder for specific details or to arrange to acquire the data.

The BRS system offers a variety of powerful text searching capabilities for the database. Every word in a data description is indexed so a user can record, or can be limited to specific fields such as CO, the contact, or GE, the Geographic Place Name. The full range of Boolean operations is supported. Complete citations or selected paragraphs may be viewed on the user's terminal, and off-line listings can be printed and mailed to the user.

Anyone may use the database who has an account with BRS Information Technologies, a commercial information service, telephone 1-800-289-4BRS. Most users are from the United States, but there are users from all over the world who use the international telecommunications networks to connect with BRS. Researchers and scientists who use the NEDRES database are from all disciplines including users from academic, private, corporate, and government organizations.

CONTACT:

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DEPARTMENT OF COMMERCE

National Geophysical Data Center

OFFICE:

National Oceanic and Atmospheric Administration
National Geophysical Data Center
Information Services Division

SUMMARY DESCRIPTION:

The National Geophysical Data Center (NGDC) combines, in a single data center, the fields of seismology, geomagnetism, marine geology and geophysics, solar phenomena, the ionosphere, and snow and ice. NGDC collects, organizes, archives, publishes, and disseminates solid earth, solar terrestrial physics, paleoclimate, and snow and ice data from worldwide sources. The National Snow and Ice Data Center is co-located with NGDC. Earthquake and tsunami data are also part of NGDC's holdings. Geomagnetic data consist primarily of worldwide geomagnetic, and aeromagnetic survey measurements, observatory magnetograms, digital values of various sample ratings, and indexes of magnetic activity. Holdings include more than one million magnetograms, most held on 35-mm microfilm, and hundreds of magnetic tapes containing digital data derived from magnetograms and survey, measurements. Solid earth geophysics data include a large number of files pertaining to common depth point, seismic data, gravity, and topography data. Geothermic holdings include data and maps on volcanoes, geothermal energy, and global heat flow. In the marine geology and geophysics area, users can access gravimetric, magnetic, bathymetric, and seismic data, along with geotechnical textural, petrologic, and paleontologic analyses and descriptions of sediment and rock samples. The solar-terrestrial data division includes data on solar flares, solar radio emission events, sudden ionospheric disturbances and satellite measurements of the solar wind, ultraviolet, x-ray, and particle emissions.

The National Snow and Ice Center holds data on all forms of snow and ice: one million transparencies and negatives of DMSP imagery; 400 magnetic tapes containing sea ice, snow cover, lake ice and ice core data; 200 microfiche and film reels of lake ice, climatological and snow cover data; and 10,000 historical glacier photos. The marine geology and geophysics holdings include 10.2 million track miles of underway geophysical data, 35.5 million National Ocean Survey hydrographic records, information on 132,000 ocean bottom geologic core samples, and geochemical analyses of over 5,100 marine samples. NGDC can supply specialized data services on a reimbursable basis utilizing geographic information systems and tabular database processing.

Marine geophysical parameters related to water quality include: depths, hazardous features, bottom characteristics, SESAT gridded gravity, marine gravity survey, seismic reflection, seiche, sea level and lake level variations, and tsunamis.

Marine geological parameters include: geological composition; oil; gas; well velocity; split well cores; time, velocity, and depth; shotpoint location; stacking velocities; marine well logs; manganese nodules; heavy minerals; calcium carbonate; phosphorites; polymetallic sulfides; and paleomagnetic intensity, inclination and declination.

Geothermal parameters include: thermal springs, world heat flow, and geothermal resources.

Snow and ice data include: sea ice coverage; sea ice extent and concentration; sea ice position; snow ice thickness; thickness on water; slush ice thickness; ice condition; ice characteristics; ice form; ice type; ice profile; ice pattern; ice transect width; total ice area; ice drift and velocity; icebergs; glaciers; melting stage; polar ice soundings; Oxygen-18; Great Lakes ice; lake ice concentration; and SSM/I satellite data (sea ice extent, sea ice concentration, and multi-year fraction).

CONTACT:

National Geophysical Data Center
Information Services Division
NOAA/NESDIS E/GC4
325 Broadway
Boulder, CO 80303-3328
Phone: (303) 497-6958
FAX: (303) 497-6513

DEPARTMENT OF COMMERCE

National Oceanographic Data Center

OFFICE:

National Oceanic and Atmospheric Administration
National Oceanographic Data Center
User Services Division

SUMMARY DESCRIPTION:

The National Oceanographic Data Center (NODC) maintains and stores a large, multidisciplinary marine scientific database, through activities that include acquisition, processing, storage, and retrieval of oceanographic data. The principle types of data stored at NODC are serial oceanographic station data, bathythermograph, current, biological and sea surface observations. About 1,500 marine scientific publications, reports and articles are also received by NODC. NODC maintains several data inventory systems to answer detailed inquiries about data availability. Users can be supplied with various types of data inventory products. Data can be provided to users in a number of forms from simple magnetic tape copies of data to complicated computer-generated data summaries, statistical analyses, and graphic plots. Components of NODC beside the operating divisions include the following: Ocean Pollution Data and Information Network (OPDIN), the NOAA Library Information Network (NLIN), and Coastwatch.

Water pollution parameters archived at NODC include: hydrocarbons, heavy metals, organochlorides, pesticides, polychlorinated biphenyls, sediments, and marine samples.

Chemical parameters include: chlorophyll, phaeopigment, C-14 assimilation, phosphate, ammonia, nitrate, nitrite, silicate, salinity, secchi depth, oxygen, pH, turbidity, and transmissivity, water color and transparency, clay and mud fraction, particulate matter, sediment color and size, suspended solids, dissolved organic carbon, and particulate organic carbon.

Land/Ocean property parameters include: snow cover depth, melt stage, ice bearing, ice characteristics, ice coverage, ice deformation, ice form, ice level, ice pattern, ice transect width, ice type, water level, and discharge.

Meteorological variables: include precipitation amount, humidity, and dewpoint.

The *NODC Users Guide* is a document that describes the data available from NODC.

CONTACT:

National Oceanographic Data Center
User Services Division
NOAA/NESDIS E/OC21
1825 Connecticut Avenue, NW
Washington, DC 20235
Phone: (202) 606-4549
FAX: (202) 606-4586

DEPARTMENT OF COMMERCE

National Weather Service

SUMMARY DESCRIPTION:

The National Weather Service (NWS) maintains a constant watch for life-threatening situations from weather such as hurricanes, tornadoes, winter storms, and floods. This service is carried out by field offices and supported by national centers that serve the entire U.S. The National Hurricane Center in Miami, the Pacific hurricane office in Honolulu, the National Severe Storms Forecast Center in Kansas City, Missouri and a number of River Forecast Centers are on round-the-clock vigil for dangerous weather situations. In addition, NOAA has tsunami warning centers in Alaska and Hawaii.

NOAA collects weather observations from hundreds of stations across the U.S. These data include: surface and upper air data collected by weather radar, ocean data buoys, ships, satellites, and volunteer observers. At the National Meteorological Center (NMC) in Maryland, more than 100,000 weather observations are ingested in the numerical physical models of the atmosphere that produce forecasts out to 10 days in advance. Monthly and seasonal forecasts are produced by the Climate Analysis Center (CAC) in Camp Springs, Maryland. NMC guidance is transmitted electronically to all regions of the U.S., where local meteorologists prepare forecasts using this information.

Presently, the National Weather Service is undergoing a modernization plan that will replace the outdated equipment of the 1960's with the most modern technological advances, which include Next Generation Radar (NEXRAD), Automated Surface Observing Stations (ASOS), more sophisticated weather satellites, and a computerized system for the processing and communication of weather information. These tools will enable the operational forecaster to pinpoint more accurately the location and timing of severe storms.

International agreements, both bilateral and through the United Nations specialized agencies (particularly the World Meteorological Organizations), provide access to foreign weather data which helps NOAA provide global analyses and forecast services.

The main components of the National Weather Service are the Office of Hydrology, Office of Meteorology, the National Meteorological Center, Office of Systems Development, Office of Systems Operations, the NOAA Data Buoy Data Center, and the NWS Training Centers.

CONTACT:

Office of Hydrology:

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Phone: (301) 713-0624

Office of Meteorology:

Andrew Horvitz
Systems Requirement Branch, Room 13228
Silver Spring Metro Center II
1335 East-West Highway
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Phone: (301) 713-1867

Mike Uhart
Marine Services Branch, Room 14472
Silver Spring Metro Center II
1335 East-West Highway
Silver Spring, MD 20910
Phone: (301) 713-1677

NOAA Data Buoy Data Center:

Eric Meindl
Stennis Space Center
SSC, MS 39529-6000
Phone: (601) 688-1717

The National Meteorological Center:

Paul Julian
Quality Assurance, Room 301
World Weather Building
5200 Auth Road
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Office of Systems Development:

David Kitzmiller
Techniques Development Laboratory, Room 10390
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1335 East-West Highway
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Office of Systems Operations:

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1200 Westheimer Drive
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DEPARTMENT OF COMMERCE

Ocean Pollution Data and Information Network

OFFICE:

National Oceanic and Atmospheric Administration
Ocean Pollution Data and Information Network

SUMMARY DESCRIPTION:

The NODC established the Ocean Pollution Data and Information Network (OPDIN) in response to the National Ocean Pollution Planning Act of 1978. OPDIN's goals are to facilitate access to Federal ocean and Great Lakes pollution data and information, and to enhance communication and coordination among Federal agencies conducting ocean and Great Lakes activities related to pollution. During 1991, OPDIN staff developed a new, user-friendly desktop information delivery system, AESOP (Automated Electronic System for Ocean Pollution), that links together 4 major databases. AESOP is PC-based and operates in a WINDOWS environment. At present, AESOP's component databases include:

- National Marine Pollution Information System (NMPIS) - searchable inventory of Federally funded pollution projects, including information on project research, geographic area, pollution type, funding, oceanographic zone, and principal investigator,
- Handbook of Federal Systems and Services - inventory of Federal systems and services which house ocean and Great Lakes pollution data or information, like EPA's ODES, STORET, and USGS's NAWDEX,
- Pollution Literature - almost 5,000 citations from ASFA (Aquatic Science and Fisheries Abstracts), BIOSIS, MPA (Marine Pollution Abstracts), NTIS (National Technical Information Service), CCOD (Current Contents on Diskette) are included in this database,
- Guide to Marine Pollution-Related Data - database of selected NMPIS projects including information about types of data generated, data location, and data access.

All of the databases except the literature are available in hardcopy form as well.

OPDIN provides information on Federal ocean and Great Lakes pollution activities and information on access to data generated by these activities. The NMPIS database is updated annually and extends back to 1978. This time series could be searched to provide summary statistics on trends in Federal pollution research (pollutants studied, geographic areas, funding, etc.).

CONTACT:

Roz Cohen, Chief OPDIN
NOAA/NESDIS/NODC E/OC24
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Washington, DC 20235
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DEPARTMENT OF COMMERCE

Office of Hydrology

SUMMARY DESCRIPTION:

The Office of Hydrology serves as the primary interface between the National Weather Service Headquarters and the field service programs on all operating matters and technical aspects of hydrologic service programs and procedures. The Office is responsible for handling all hydrologic matters at a national level within NWS in cooperation with other NWS headquarters offices and for representing NWS on all interagency matters concerning hydrology. The Office establishes policies and develops plans for hydrologic procedures, including the collection and processing of hydrologic data for river, flood, and water-supply forecasts and warnings. It supports the integrity and operational readiness of technological support systems employed by the hydrology program of NWS and conducts research and development programs for improving field services. It manages overall hydrologic field operations and coordinates functions supporting these activities. The Office conducts surveys and policy-review studies to determine the effectiveness of hydrologic field programs. It serves as advisor and consultant to the Assistant Administrator for Weather Services on hydrology, both nationally and internationally.

CONTACT:

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Silver Spring, MD 20910
Phone: (301) 713-1660

DEPARTMENT OF THE INTERIOR

Earth Science Data Directory

SUMMARY DESCRIPTION:

The Earth Science Data Directory (ESDD) is being developed by the U.S. Geological Survey as a system for readily determining the availability of specific earth science and natural resource data. It offers online access to a USGS mainframe computer repository of information about earth science and natural resource databases. The referenced databases are both automated and non-automated, and they belong to many different entities. ESDD participants include governmental agencies, academic institutions, and those from the private sector.

The term "earth science and natural resource data" as used for the ESDD, is an all-embracing term referring to any systematic body of knowledge, automated or not, relating to the Earth, its environment and its energy, mineral, water, land, plant, animal and other resources. The ESDD can enable users to locate everything from complex computerized indices, systems, and files to paper records, maps and files.

Databases referenced in the ESDD include those concerned with the geologic, hydrologic, cartographic and biologic sciences. References to databases that support the protection and management of natural resources are also included. Geographic, sociologic, economic, and demographic databases are among those cataloged. Arctic region database entries are included in the Arctic Environmental Data Directory as an ESDD subset. The ESDD is also the USGS repository of information on databases related to interagency Global Change activities. Many of this full range of data sources offer potential as leads to base and/or overlay input for geographic information system (GIS) applications.

CONTACT:

ESDD Project Manager
U.S. Geological Survey
801 National Center
Reston, VA 22092
Phone: (703) 648-7112

DEPARTMENT OF THE INTERIOR

Global Land Information System (GLIS)

SUMMARY DESCRIPTION:

The GLIS is an interactive computer system developed by the U.S. Geological Survey (USGS) providing sources of information about the Earth's land surfaces. GLIS contains metadata - descriptive information about data sets - arranged in 3 levels of detail: directories, user guides, and inventories. Through GLIS, researchers can evaluate data sets, determine their availability, and place online requests for products. Users can bring up outlines of the geographic areas covered by the data sets. Using digital browse functions to manipulate data, they can determine such information as the amount of cloud coverage or the quality of individual scenes. Online requests can be placed via GLIS for the earth science data. The producing organization will receive the request and provide the researcher with price and ordering information.

GLIS contains references to regional, continental, and global land information including land use, land cover, and soils data; cultural and topographic data; and remotely sensed satellite and aircraft data. Continual updates of information, and the addition of new data set descriptions as they are contributed by the global change scientific community, will allow GLIS to remain current.

CONTACT:

For system access information, please contact GLIS User Assistance:

U.S. Geological Survey
EROS Data Center
GLIS User Assistance
Sioux Falls, SD 57198 USA

1-800-252-GLIS (1-800-252-4547)
Commercial: (605) 594-6099

DEPARTMENT OF THE INTERIOR

National Water Data Exchange (NAWDEX)

The National Water Data Exchange (NAWDEX) is a national confederation of water-oriented organizations working together to improve access to water data. Its primary objective is to assist users of water data in the identification, locations and acquisition of needed data. NAWDEX consists of member organizations from the water data community. The members are linked so that their water data holdings may be readily exchanged for maximum use. A central Program Office coordinates this linkage and provides overall management of the program. The office provides data exchange policy and guidelines to all participants in the NAWDEX Program. It encompasses 4 major areas of operation: (1) maintaining an internal data center, including access to automated data processing facilities for maintenance and use of its information files; (2) indexing water data held by participating organizations; (3) providing facilities and personnel for responding to requests for water data; and (4) formulating recommended water data handling and exchange standards.

CONTACT:

National Water Data Exchange
U.S. Geological Survey
421 National Center
Reston, VA 22092
Phone: (703) 648-6848

DEPARTMENT OF THE INTERIOR

National Water Data Storage and Retrieval System (WATSTORE)

The National Water Data Storage and Retrieval System (WATSTORE) was established in 1971 to modernize the Geological Survey's existing water data processing procedures and techniques and to provide for more effective and efficient management of its data releasing activities. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, VA.

The WATSTORE system consists of several files in which data are grouped and stored by common characteristics and data collection frequencies. The system also is designed to allow for the inclusion of additional data files as needed. Currently, files are maintained for the storage of (1) surface water, quality-of-water, and ground water data measured on a daily or continuous basis; (2) annual peak values for streamflow stations; (3) chemical analyses for surface and ground water sites; (4) water data parameters measured more frequently than daily; (5) geologic and inventory data for ground water sites; and (6) summary data on water use. In addition, an index file of sites for which data are stored in the system also is maintained.

CONTACT:

WATSTORE Program Office
Branch of Computer Technology
USGS
440 National Center
Reston, Virginia 22092
Phone: (703) 648-5605

DEPARTMENT OF THE INTERIOR

National Water Information Clearinghouse

The National Water Information Clearinghouse (NWIC) is a new and emerging program designed to manage and coordinate the exchange of water resources information with Federal, State, and local governmental agencies, academia, industry, and the general public. Clearinghouse activities include education outreach and training; information/data dissemination, including water-data indexing and literature abstracting; and data-systems modernization. The NWIC will be decentralized with regional centers located across the country. It will not be a data repository but will operate primarily as a referral center to other Federal and State data and information systems. When practical, however, the Clearinghouse will provide information directly to requestors so as to streamline the exchange of information. A Federal and non-Federal advisory committee will be established to provide guidance relative to clearinghouse services. Two Clearinghouse pilot centers are in operation. One center in Reston, VA, is focusing on developing linkages with Federal agencies and the technical and general user communities in the Washington, DC, metropolitan area. The Sacramento, CA, pilot is focusing on developing computerized interfaces with State and local agencies and creating an automated tracking system for Clearinghouse requests. A nationwide toll-free number, 1-800-H2O-9000 (1-800-426-9000) has been established to promote easy access to the Clearinghouse.

CONTACT:

Chief, National Water Information Clearinghouse
U.S. Geological Survey
423 National Survey
Reston, VA 22092
Phone: 1-800-426-9000 or (703) 648-6832
FAX: (703) 648-5704

DEPARTMENT OF INTERIOR

National Water Information System

The U.S. Geological Survey is in the process of designing and developing a new National Water Information System (NWIS). The goal of the NWIS effort is to develop and implement a highly flexible hydrologic data management and processing system; one that can be easily changed and expanded in a rapidly changing technological environment. The NWIS will replace the National Water Data Storage and Retrieval System (WATSTORE) and the National Water Data Exchange System (NAWDEX), both of which reside on the mainframe computer at USGS headquarters in Reston, Virginia. NWIS will be a single integrated system that will have the functionality of current data systems plus expanded capability for processing and managing additional chemical constituent, sediment, biological and spatial data.

CONTACT:

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Chief, National Water Information System
U.S. Geological Survey
437 National Center
Reston, VA 22092
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FAX: (703) 648-5295

ENVIRONMENTAL PROTECTION AGENCY

ACCESS EPA

ACCESS EPA is a guide to EPA information resources, services and products. Its purpose is to make environmental information useful for citizens, environmental organizations and businesses, as well as EPA staff.

Each chapter in ACCESS EPA begins with a brief introduction and a table of contents. In some instances, supplementary material is provided at the end of the chapter. ACCESS EPA includes information on EPA clearinghouses, hotlines, bulletin boards, dockets, records programs libraries, scientific models, major environmental databases and state environmental libraries. The publication includes a list of acronyms that appear throughout ACCESS EPA, a state information index and a name/title/subject index.

ACCESS EPA is updated annually and is available for reference at Federal Depository Librarian and Public Libraries nationwide. ACCESS EPA is available in paper copy for \$21.00 at the addresses listed below.

CONTACT:

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954
Phone: (202) 783-3298
FAX: (202) 512-2250

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Phone: (703) 487-4650
FAX: (703) 321-8547

Online Access is now available through the following:
(GPO) Federal Bulletin Board System (202) 512-1387
EPA Library Online Library System (OLS) (919) 549-0720

INTERNET: EPA.IBM.RTPNC.GOV "Public Access"; "OLS"
For additional information contact ACCESS EPA (202) 260-2049

ENVIRONMENTAL PROTECTION AGENCY INTERAGENCY EFFORT

Guide to Selected National Environmental Statistics in the U.S. Government

A Guide to Selected National Environmental Statistics in the U.S. Government is a reference to national-level, time-series environmental statistics that are compiled and distributed by the U.S. Government on a regular basis. It is a guide to statistical programs and the primary and secondary summary statistics they generate, not a guide to raw data or databases. The Guide is a starting point to learning more about various environmental statistical programs of the U.S. Government. It is not meant to supplant information that can be obtained directly from the Government agencies. Furthermore, it is not an inclusive guide to U.S. environmental statistical programs, but one to selected programs that produce frequently sought-after, national-level statistics.

The development of the Guide was an effort requiring input from seven U.S. Government Agencies including: Department of Agriculture, Department of Commerce, Department of Health and Human Services, Department of Transportation, and the Environmental Protection Agency.

Contents of the Guide include: statistical programs on environmental quality such as ambient air and water quality and on natural resources such as water resources and land use; statistical programs on energy, mining, agriculture, manufacturing, transportation, and other human activities that have direct impacts on the environment; and statistical programs on activities and expenditures to prevent or control pollution, establish parks and protected areas, protect critical ecosystems, fight forest fires, and manage fisheries.

The statistical programs in the Guide are arranged by Government department and agency. Each entry contains information about a separate statistical program (e.g., program purpose, data coverage and collection methods, geographic coverage, agency contacts, pertinent publications, and database access options). Information in the records was prepared and provided by Government agencies in response to a questionnaire.

The Guide also contains an index of over 150 keywords and phrases and an index of 55 databases that can be used to locate desired records.

In addition to the hardcopy version, the Guide is available in an electronic version that can be viewed on an IBM-compatible personal computer with 640K of memory, DOS version 3.0 or higher, and an EGA or VGA monitor.

CONTACT:

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ENVIRONMENTAL PROTECTION AGENCY

INFOTERRA/USA Directory of Environmental Sources

INFOTERRA is the international environmental information exchange network coordinated by the United Nations Environment Programme. INFOTERRA was established in 1975 following recommendations from the Stockholm Conference. At present, the INFOTERRA network comprises a partnership of 140 countries which have designated national focal points to promote the exchange of environmental information.

Each national focal point prepares a "Who's Who" of environmental information sources in its country and selects the best sources for inclusion in the *INFOTERRA International Directory of Environmental Sources*. Several countries including Bangladesh, Canada, China, Guyana, Japan, Nepal, Thailand, and the United States publish their own national directories. These together with the international directories serve as a primary reference tool for the INFOTERRA network in its mission to provide reliable, comprehensive and timely environmental information to requestors.

The *INFOTERRA/USA Directory of Environmental Sources* lists 445 national information sources which have agreed to provide environmental information free or at a minimal fee to international requestors. Each entry contains contact information, fields of environmental enterprise, and a description of services.

CONTACT:

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ENVIRONMENTAL PROTECTION AGENCY

Office of Water Environmental and Program Information Systems Compendium

The Federal Statutes that govern water programs convey a unique stewardship role to EPA and its State counterparts: protecting and restoring the integrity of the Nation's water resources. In order to carry out this mission, the Agency and its partners collect and manage large amounts of information. The type of information collected ranges from site-specific information on water and sediment chemistry, biota, and hydrogeology to national summary information on water programs implementation. The purpose of this Compendium is to increase the awareness of water program managers about the kinds of information available for their use as they make policy and program decisions. This is accomplished with a combined text and graphic profile of 20 key Office of Water information systems. These profiles highlight the type of information contained in the 20 systems and the management tools (statistical, graphical, and linkage packages) associated with each.

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ENVIRONMENTAL PROTECTION AGENCY

STOrage RETrieval (STORET)

STORET is an information system that contains information on ambient water quality, the results of intensive surveys, information on effluents, and biological water quality monitoring data. Data is contributed by a number of Federal, State, and private organizations (approximately 800 organizations). Each organization is responsible for its own data. There are over 800,000 sampling stations in STORET, which have locational information, and more than 180 million parametric observations covering 13,000 water quality parameters.

For additional information, see the entry in Section V above for the EPA National Water Quality Monitoring Program.

CONTACT:

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ENVIRONMENTAL PROTECTION AGENCY

Waterbody System

The Waterbody System was designed to simplify the management of assessment information at the State level and provide a systematic way to process assessment data in a more standard form for national analysis. WBS includes PC and Mainframe versions. The system includes provisions for geo-referencing by indexing waterbodies to Reach File 3 using PCRF3, but this feature was not yet implemented widely in 1992. Information is available on counts and size estimates of categories of designated use support for each assessed waterbody, counts and indications of magnitude of non-support attributable to various source and causes of water pollution for each assessed waterbody, various CWA parameters (e.g., TMDLs, Toxic) for each waterbody. The time frame covered by this information varies by State, but information entered in 1988, 1990, and 1992, most clearly corresponds to the current guidelines for preparation of the 305(b) report and includes information collected to meet the requirements of the 1987 amendments to the CWA.

For additional information, see the entry in Section V above for the EPA National Water Quality monitoring Program.

CONTACT:

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INTERAGENCY EFFORT

Intergovernmental Task Force on Monitoring Water Quality (ITFM)

The Intergovernmental Task Force on Monitoring Water Quality (ITFM) is a 3-year effort to design and arrange implementation of an intergovernmental strategy to link individual water monitoring activities into a comprehensive nationwide effort. This integrated monitoring will support effective decision making with quality information and will use resources most effectively.

The ITFM includes 20 members: 10 Federal agencies (EPA, USGS, USDA, USFWS, NOAA, the Corps, DOE, TVA, NPS, and OMB) and 10 State and Interstate agencies (Arizona, California, Colorado, Delaware River Basin Commission, New Jersey, Ohio, South Carolina, Washington, and Wisconsin, and a vacancy to be filled).

The Task Force is chaired by EPA, with USGS as vice-chair and executive secretariat. The ITFM operates under USGS Water Information Program established under OMB memorandum M-92-01.

Five Task Groups address: the nationwide institutional framework, environmental indicators, data collection methods, data management and information sharing, and assessment and reporting. Over 80 Federal and State staff sit on the four Task Groups.

The effort began in April 1991 and will disband in favor of full implementation activities in December 1994. The ITFM produces reports and recommendations in December of each year.

The ITFM also produces "building block products" they and other monitoring programs can use. Draft products to date include a national monitoring vision and principles, an optimal monitoring program outline, a matrix for choosing environmental indicators and environmental indicator selection criteria.

During its first year, the ITFM recommended the development of a nationwide monitoring strategy built upon the existing monitoring players and stations. The strategy would result in status and trends information of water resource quality across the nation. This information would be collected using consistent or comparable monitoring methods and common parameters. The data would be stored so as to allow use by others, and would be used in an integrated nationwide water quality report.

Other recommendations will result in a methods Comparability Council, standard, data descriptions to allow system to share data easily, and links between data systems for data transfer.

CONTACT:

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INTERAGENCY EFFORT

Inventory of Exposure-Related Data Systems Sponsored by Federal Agencies

The *Inventory of Exposure-Related Data Systems Sponsored by Federal Agencies* report (May 1992), was a result of a combined effort among the U.S. Environmental Protection Agency, Office of Health Research; Centers for Disease Control, National Center for Health Statistics, Office of Analysis and Epidemiology; and Agency for Toxic Substances and Disease Registry, Division of Health Studies.

This report is a compilation of information on Federally-managed data systems that contain exposure information. These systems access collections of analytical related to environmental media such as air, soil, or water, as well as analytical results from food, human samples, or bulk chemicals. The inventory focuses on data systems that: (1) contain information on a large geographic area (national, State, regional); (2) have data or summary documents that generally are available for research or other purposes; and (3) are supported, at least in part, by public funds.

The report consists of a brief overview of the purpose, scope, method, limitations, organization, and findings of the inventory, followed by detailed summaries of each data system. This inventory includes detailed descriptions of 67 data collection systems managed by 17 lead Government agencies, the United Nations Environment Programme, and the World Health Organization. Twelve data handling systems are also included. The majority (54) of the data systems contain environmental concentration measurements. The geographic coverage of most of the included data collection systems was national (44). The primary objective of the data collection systems was monitoring (36). The primary focus of other systems was regulatory support (19), and research (29).

CONTACT:

The report (EPA document # EPA/600/R-92/078) can be obtained by contacting:

EPA-ORD Publications
Center for Environmental Research Information
26 Martin Luther King Drive
Cincinnati, OH 45268
Phone: (513) 569-7562

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Global Change Master Directory

OFFICE:

National Space Science Data Center

SUMMARY DESCRIPTION:

The Global Change Master Directory (GCMD) is a free, on-line, multidisciplinary directory of data sets that are of potential interest to the earth and space sciences research community. The primary contents of the Master Directory are descriptions of data sets - not the data sets themselves. The GCMD is intended to be an initial reference to a wide variety of data. Every entry names a person or institution to contact for more information. As a source of leads to datasets over a very broad area, the GCMD is unprecedented.

The MD's descriptions are indexed by a variety of keywords as well as by spatial and temporal coverage, instrument, investigator, and data center (when such information is available for the data set). In addition, supplementary information is available for other data systems and archives, campaigns and projects with significant data collections, data-gathering sensors, and sources (such as spacecraft) which carry sensors.

The MD is more than just a directory, however. In order to simplify the process of finding more detailed information or accessing on-line data, the MD provides automatic connections - called LINKs - to a number of data systems such as NOAA's National Climate Data Center (NCDC), the NASA Climate Data System (NCDS), and the Pilot Land Data System (PLDS), and others; as of late 1991, 47 such systems were LINKed to the MD. It represents the first major step in the Catalog Interoperability Project, whose objective is to enable researchers to identify, obtain information about, and get access to space and earth sciences data quickly and efficiently.

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Guide to Federal Water Quality Programs and Information

Comments / Recommendations Form

Please circle one number per question (scale 1=low rating, 5=highest rating)

1. How would you rate overall usefulness of the Guide? 1 2 3 4 5
2. How would you rate the usefulness of the Keyword Index? 1 2 3 4 5

To aid us in identifying the users of the Guide, briefly describe your work/goals and your agency/organization.

Comments / Recommendations:

Return the Comments /
Recommendations Form
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U.S. Environmental Protection Agency
OPPE
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Attn: Guide to Federal Water Quality Programs and Information
401 M Street, SW
Washington, DC 20460

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Guide to Federal Water Quality Programs and Information

Entry Updating Procedures

We would like to keep this Guide current. To update an entry you may photocopy the entry and mail or fax a marked-up version to:

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Washington, DC 20460

FAX: (202) 260-4968

Please identify a contact person and phone number with the update, in case clarification of the edits/fax is necessary.

Guide to Federal Water Quality Programs and Information

New Entry Submission Information

We realize with the first print of this guide that water-related programs and information may have been overlooked. Please help to make the Guide complete by sending in entries on additional water-related programs and information that should be included in the Guide.

Individual programs to be included in the Guide should provide National statistics or summary information on water quality. For this Guide, National statistics are defined as collections of quantitative data computed on a National basis using a consistent methodology for either a defined sample or a complete census. An example of National statistics would include median level of chemical contaminants found in samples from a National water quality monitoring network or the number of pulp and paper mills in the U.S. (census). Summary information is defined as nonquantitative information (or quantitative information that has not been collected using a consistent methodology on a National basis). Examples of summary information would include a listing of chemicals with EPA water quality criteria, or National estimates of the number of stream miles meeting designated uses.

While the focus of the Guide is on water quality statistics and information on a National level, some regional information (e.g., Great Lakes) can be of National importance due to the key nature of the resource. This type of information is of recognized importance and will be included in the Guide to the extent resources allow.

The National statistics and summary information included in the Guide should relate to (1) underlying demographic and socio-cultural pressures such as population growth, (2) resulting proximate or direct effects such as pollution loadings, (3) the state of the environment such as levels of chemicals in the water column, (4) resulting impacts on society such as beach closures and water-borne disease, and (5) societal responses such as regulatory actions.

National statistics included in the Guide should (1) reflect meaningful conditions or variations related to water quality, (2) allow for aggregation of data to display National trends in water quality related conditions, and (3) be measurable and of sufficient coverage to reveal trends over time, or conditions at a point in time.

National statistics included in the Guide should also describe conditions or trends using some numerical measure. Although it is recognized that few environmental data sets meet the requirements for inferential statistical testing, the measures should be suitable for developing descriptive measures that summarize the data in various ways, e.g., spatially or temporally.

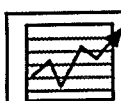
Guide to Federal Water Quality Programs and Information

New Entry Submission Information *(continued)*

Please use the entries in the Guide as a sample format for the information to be included for each entry. The categories of information needed for the two types of entries is summarized below:

Statistical Entry:

Statistical entries are defined throughout the Guide by the box below:



Data Type: Statistics
Source: Program Contact

These entries contain statistical information. Please include the following items:

- OFFICE
- SUMMARY PROGRAM DESCRIPTION
- STATISTICAL COVERAGE
- DATA COLLECTION METHODS
- COLLECTION FREQUENCY
- GEOGRAPHIC COVERAGE
- CONTACT
- FOR PUBLIC INQUIRES
- PUBLICATIONS
- DATABASE(S)

Program Entry:

Program entries are defined throughout the Guide by the box below:



Data Type: Program
Information
Source: Program Contact

These entries contain a brief program description. Please include the following items:

- OFFICE
- SUMMARY PROGRAM DESCRIPTION
- CONTACT
- FOR PUBLIC INQUIRES
- PUBLICATIONS
- DATABASE(S)

Please submit the entry to:

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401 M Street, SW
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Please identify a contact person and phone number, so that we can contact you concerning your proposed Guide entry.