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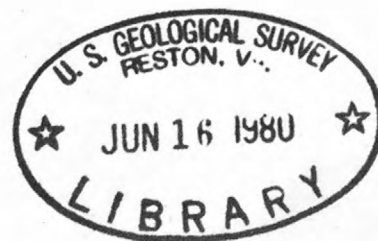
nawdex

NATIONAL WATER DATA EXCHANGE

INSTRUCTIONS FOR THE PREPARATION OF DATA FOR THE MASTER WATER DATA INDEX



U.S. GEOLOGICAL SURVEY
Open-File Report 80-415



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U.S. Geological Survey,

[Reports-Open file Series]

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INSTRUCTIONS FOR THE PREPARATION OF DATA FOR THE MASTER WATER DATA INDEX

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By MELVIN D. EDWARDS and WILLIAM A. KNECHT

U.S. GEOLOGICAL SURVEY
Open-File Report 80-415



1980

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UNITED STATES DEPARTMENT OF THE INTERIOR

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INSTRUCTIONS FOR THE PREPARATION OF DATA FOR THE MASTER WATER DATA INDEX

by

Melvin D. Edwards (USGS) and William A. Knecht (CACI, Inc.)

ABSTRACT

The Master Water Data Index (MWDI) of the U.S. Geological Survey's National Water Data Exchange (NAWDEX) is a computerized data base which contains information about water data collected at specific sites. The data base identifies the organization collecting the data, the site location, the major types of data collected, the period of collection, and the frequency of measurement of major parameters for each type of data. This manual contains instructions for the encoding and keypunching of information for entry into the MWDI.

INTRODUCTION

The Master Water Data Index (MWDI) of the U.S. Geological Survey's National Water Data Exchange (NAWDEX) serves as a computerized central index of water data available throughout the United States and parts of Canada and Mexico. It may also be used to store information about water data available from other foreign countries.

The MWDI stores information about water data collected and made available for specific sites. For each site, the data base contains information identifying the organization collecting the data, the location of the site, the major types of data collected, the time period of collection, and the frequency of measurement of major parameters for each type of data. This manual contains instructions for the encoding of new information for entry into the MWDI, the changing or deletion of information previously stored in the data base, and the keypunching of information encoded for entry into the data base.

The manual is divided into five sections to simplify its use. It also contains a set of appendixes containing codes and other information necessary to encode information for entry into the MWDI. Section I of the manual presents a brief description of the MWDI data base, including its physical and logical structure. Section II describes the procedures for adding an entirely new site to the MWDI. Section III describes the procedures for adding a new repeating group to a site already existing in the MWDI. Section IV contains detailed instructions for updating data values for a site already existing in the MWDI including how to delete a single value, how to delete an entire group of values, how to add a single value, and how to modify a single value. Section V contains instructions for the keypunching of information encoded as described in Sections II through IV for subsequent processing and entry into the data base.

ASSISTANCE IN DATA PREPARATION

An effort has been made to make the instructions in this manual as complete and understandable as possible. The Support Services Unit of the NAWDEX Program Office will, however, provide assistance in resolving unanswered questions or clarifying portions of the instructions that are unclear. For assistance, contact:

Support Services Unit
National Water Data Exchange
U.S. Geological Survey
421 National Center
Reston, Virginia 22092
Telephone: (703) 860-6031
(FTS) 928-6031

SUBMISSION OF DATA

Offices having computerized access to the Master Water Data Index are encouraged to submit data prepared in accordance with these instructions to the Master Water Data Index via their computer terminals using instructions contained in the manual entitled "Instructions for the Submission of Data to the Master Water Data Index." All other offices should submit the encoded forms, or punched cards, prepared according to these instructions to the Support Services Unit of the NAWDEX Program Office at the address given above for processing and entry into the Index.

SECTION I - SYSTEM OVERVIEW

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SECTION I - SYSTEM OVERVIEW

DATA BASE DESCRIPTION

The Master Water Data Index (MWDI) is designed to provide a national repository of information about sites at which water data are collected and made available to users of the data. The MWDI is used to assist those who need and use water data in learning what data are available nationwide and who can supply it. The data base serves as an index of the water data holdings of organizations in all sectors: Federal, State, and local governments, river authorities, water districts, educational institutions, international organizations, private organizations, and many more.

The Master Water Data Index, as currently defined, contains the following categories of data:

- Site Identification
- Surface Water
- Ground Water
- Quality of Water
 - Biological Water Quality
 - Physical Water Quality
 - Sediment Water Quality
 - Chemical Water Quality
- Data Collection Networks
- Other Sources of the Data

Forms used in recording these categories of data are shown in Appendix B. Sections II-IV explain in detail how to fill in the forms to update and enter data into the MWDI data base.

DATA BASE STRUCTURE

The Master Water Data Index data are managed and maintained through the generalized Data Base Management System, SYSTEM 2000¹. The logical organization of a SYSTEM 2000 data base is a hierarchical structure. All the data about a single major item (in this case, a water-data collection site) comprises a logical entry in the data base.

Individual pieces of information, such as the latitude of the site or the frequency of measurement of water temperature are data elements; logically related data elements are grouped into blocks called repeating groups. Data elements and repeating groups are called components of the data base. Detailed descriptions of each repeating group and data element are contained in the report entitled "Definitions of Components of the Master Water Data Index Maintained by the National Water Data Exchange."

¹The use of the brand name in this report is for identification purposes only and does not imply endorsement by the U.S. Geological Survey.

Under the concept of the hierarchical structure, every data element "belongs to" a repeating group, and every repeating group "belongs to" a higher-level repeating group (the logical entry is, itself, a repeating group at the highest level, belonging to the data base). Thus, information about biological water quality "belongs to" the set of information about water quality in general; the water quality information "belongs to" the site; and the site, the logical entry, is a repeating group belonging, in turn, to the data base as a whole.

A fundamental aspect of the repeating group is that it can occur once, many times, or not at all. Each logical entry "contains" all the information about an individual site, and because the logical entry is a repeating group that can occur many times, there can be information about many sites in the file. Similarly, for any particular logical entry, the repeating groups below it can have many occurrences. However, the MWDI is unique in one aspect because many of the repeating groups under the site can occur only once or not at all. The repeating groups that contain information on surface water, ground water, water quality, and biological, physical, sediment, and chemical water quality are restricted by design to a maximum of one occurrence per site. Other repeating groups under the site may have multiple occurrences.

MASTER WATER DATA INDEX ORGANIZATION

Figure I-1 identifies the various repeating groups which have been defined for the Master Water Data Index. They are arranged in a logical tree structure representing their hierarchical relationships to each other. That is, all those repeating groups, defined by boxes, which appear below the single box at the top of the figure, containing the data element named NAWDEX_ID, are groups of related data elements directly related to the description of the site. According to the individual site, these lower level repeating groups may occur only once, several times, or not at all. The absence of a repeating group may be the result of the lack of data or applicability to that particular site. For example, the repeating groups labeled "Ground Water" and "Surface Water" may not both exist for the same site.

An important aspect of the system is that logical entries can be of varying length. If a repeating group is not required, it is not stored and no space is reserved for it. If information that belongs in an initially nonexistent repeating group is added later, the repeating group is created and stored, in any available space, with pointers being automatically established to relate it back to the correct logical entry or parent.

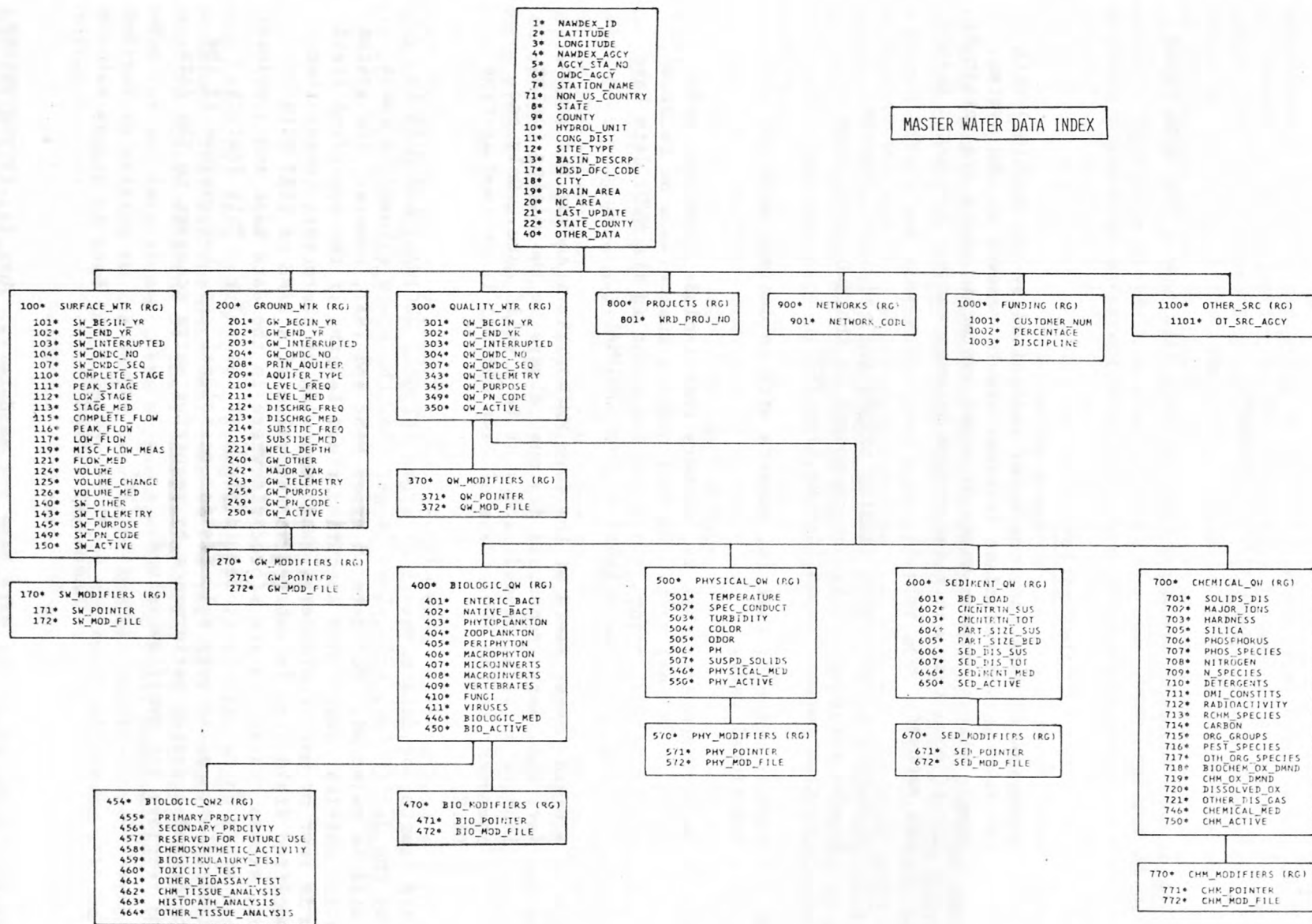


Figure I-1. Hierarchical Structure of the Master Water Data Index Data Base.

DATA ELEMENT FORMATS

Five types of data elements are stored in the MWDI data base. The data types and their definitions are:

<u>Data Type</u>	<u>Definition</u>
NAME	Alphanumeric data (any character recognized by the machine) with all leading and redundant internal blanks removed by the system. Single blanks between words or other syntactic units are retained; but if more than one blank occurs between words, the extra blanks are removed.
TEXT	Alphanumeric data with leading blanks and redundant internal blanks retained. Only one component in the MWDI data base (station number) is defined as type TEXT.
INTEGER	Integer numbers; that is, numbers with no decimal point or fractional part.
DECIMAL	Decimal numbers; that is, numbers that include a decimal point and a fractional part. Decimal numbers must always be recorded with a decimal point. Only one component in the MWDI data base (drainage area) is defined as type DECIMAL.
DATE	A fixed-format field of the form MM/DD/YYYY standing for month, day, and year. Month and day must always be two digits (using leading zeros if needed) and must be a valid date. Only one component in the MWDI (date of last update) is defined as type DATE.

The field length for data elements of types INTEGER, DECIMAL, and DATE is fixed by the definition, and values larger than the space allowed in these forms will be rejected. For data of types NAME and TEXT, however, the system allows for entries longer than specified field length, if the specified field length is four or more characters. When a string of characters longer than the specified field size is entered as the value of a NAME or TEXT data element, excess characters are stored elsewhere in the data base and a pointer to these extra characters is stored in place of the value. This feature, called overflow, can be very valuable for occasional use, but overuse of the feature degrades system performance by requiring extra accesses to the data base to retrieve the overflow values.

MANDATORY FIELDS

Certain data elements in the data base are mandatory. That is, if the values for these data elements are missing, the related entry or repeating group will not be established or added to the data base. An illegal value results in a missing value.

Data elements declared mandatory at the Site Identification Information level will result in the rejection of the total site if any one value is missing. Within lower level repeating groups, missing mandatory field values will result in rejection of that particular repeating group's occurrence and all of its subordinate repeating groups. Note: A lower level repeating group can exist only if all of its succeeding higher hierarchical levels are also present. Mandatory fields are identified on the encoding forms and in the following pages with an asterisk (*) before their descriptions.

FIELD OVERFLOW

All NAME (See previous discussion on DATA ELEMENT FORMATS) fields that exceed three characters in length can overflow in SYSTEM 2000. Fields where overflow is deemed likely and acceptable have been provided with a secondary area on the forms. The overflow space should not be used unless it is absolutely necessary because system performance and efficiency are seriously degraded if the number of overflow entries becomes too large. Every effort should be made to fit data into the defined space; use abbreviations and acronyms whenever possible.

NULL VALUES

The input forms cover the complete data base definition, and therefore include fields for which data may not be available. Such fields should be ignored, both by the person who completes the forms and by the person who punches the data. These unused fields are carried in the data base with a value of "null" - no value - and the fields are not normally included on output. DO NOT FILL UNUSED FIELDS WITH ZEROS, because the system distinguishes between entries of zeros and "null."

Note: Repeating groups with all their data elements "null" should not be added to the data base. If already in existence, they should be deleted. This will release unused space that can be used for another requirement.

CODE LISTS

Where codes for data elements are given in these instructions and listed on the forms¹, THEY ARE THE ONLY VALID VALUES FOR THAT DATA ELEMENT. Invalid codes are ALWAYS rejected by the input-edit program. If additional codes are needed for any data element, the proposed codes and their meanings must be submitted in writing to the NAWDEX Program Office for consideration. Proposed new codes cannot be used until approved. Upon approval, all users will be notified.

¹When codes are listed on the forms the user need only circle the appropriate code.

SECTION II
ADD A NEW SITE

SECTION II - ADD A NEW SITE

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SECTION II - ADD A NEW SITE

INTRODUCTION

Six preprinted forms (See Pages B-3 through B-8 of Appendix B) are provided for adding a new site to the Master Water Data Index (MWDI) data base. At the top right-hand side of each form, space is provided to enter the name of the person completing the form, the name of the organization by which the person is employed, and the date on which the form is completed. This space should be filled in for each form submitted. This information is not processed and stored in the MWDI but is important for future contact on any difficulties that may arise in the processing of data encoded on the form. At the top left-hand side of each form is an identifier which is to be punched in columns 1-29 of each data input card and must be filled in on each form submitted. The identifier must be coded exactly the same on each form for each new site. Instructions for coding the three parts of the identifier are given below, using the following notation for each field: the name of the field as it appears on the form comes first, followed by the component number and name in parentheses as they appear in the data base definition (See Appendix A). If there is no number/name in parentheses, the field has no corresponding element in the data base. An asterisk (*) denotes a mandatory field.

SITE IDENTIFIER

*SUBMITTING ORGANIZATION: Fill in the NAWDEX Organization Code for the organization submitting the form. NAWDEX Organization Codes are contained in the manual entitled "Identification Codes for Organizations Listed In Computerized Data Systems Of The U.S. Geological Survey." This may or may not be the same organization responsible for the site, i.e., an organization may submit information for one or more other organizations. To add a new site, the submitting organization must have an assigned NAWDEX Organization Code. If the proper code is not known, write the name of the submitting organization in the space provided and a code will be assigned by the NAWDEX Program Office. The purpose of this code is to identify the source of the information about the site, and to insure that reports printed by the computer program that edits the data are routed back to the proper organization. The Submitting Organization code is used only for these purposes and is not used to update the MWDI. If the NAWDEX Organization Code is less than five characters in length, it must be right-justified in the field and it must be coded the same way on each form submitted for a site.

*NAWDEX ID (001/NAWDEX ID): The NAWDEX ID is a unique identifier assigned to each site in the MWDI, and is used primarily as an internal control number within the computer files. It consists of two parts: Operating Organization

*Mandatory Data Field

and Site Identification Number, both of which are explained below. As with the Submitting Organization, the NAWDEX_ID must be coded exactly the same on each form submitted for a single site. If the site information code on the forms passes the editing criteria and the new site is added to the MWDI, the NAWDEX_ID assigned to that site will not change unless requested by the submitting organization and will be the means by which the site is located in the MWDI for all future updates.

Duplicate NAWDEX_ID numbers are not allowed in the MWDI. If another site with the same NAWDEX_ID already exists in the MWDI, a rejection of the information for the new site will occur and a two-digit sequence number must be appended to the NAWDEX_ID of the new site being added. If the data are being entered by the Program Office staff, the Submitting Agency is notified of the change. For example, if the NAWDEX_ID of a new site is USGS08153505 and that NAWDEX_ID already exists in the MWDI, the new site must be added with a NAWDEX_ID of USGS0815350501.

***OPERATING ORGANIZATION:** Fill in the NAWDEX Organization Code of the organization responsible for operation of or data collection at the site. NAWDEX Organization Codes are contained in the manual entitled "Identification Codes For Organizations Listed In Computerized Data Systems Of The U.S. Geological Survey." If the proper code is not known, write the name of the organization in the space provided and a code will be assigned by the NAWDEX Program Office. If the code is less than five characters in length, right-justify it in the field. This is the same as field number 004 (Operating Organization) in the main body of the form.

***SITE IDENTIFICATION NUMBER:** Fill in the station number used by the Operating Organization to identify the site. The station number may be any combination of numbers, letters, or special symbols (+, -, %, etc.) as required. An asterisk, however, is not allowed as a part of the site identification number. Space is provided for up to 17 characters, and if the station number exceeds this length, code only the first 17 characters. The station number must be left-justified and should not have multiple consecutive blanks within the number. That is, a number coded as 123A_bb15_bb_bX6 (b represents a blank) will be stored in the NAWDEX_ID as 123A_bb15_bX6. This is the same as field number 005 (Organization Station Number) in the main body of the form with two exceptions: (1) Multiple consecutive blanks are not allowed within the number. This rule is necessary to comply with the data-handling procedures of System 2000. (2) A two-digit sequence number must be added to the site identification number in the NAWDEX_ID if multiple site identification numbers exist within the organization.

If no station number exists for the site, enter the site's latitude and longitude, left-justified with no intervening blanks. The latitude and longitude must be coded exactly as they are for the Latitude and Longitude parameters in the main body of the form. Coding instructions for the latitude

***Mandatory Data Field**

and longitude are given in the following section. As an example, suppose that the Operating Organization is USAB, the site is not numbered, the latitude of the site is 33° 41' 07", and the longitude is 99° 26' 19". The NAWDEX_ID should be entered bUSAB3341070992619bb. (b = blanks.)

Duplicate Site Identification Numbers for an operating organization are not allowed in the Master Water Data Index. If duplicate numbers exist they must be coded with one or two digit sequence numbers immediately following the number to assure their uniqueness.

Do not leave the Site Identification Number blank or the site will not be entered into the MWDI data base.

SITE IDENTIFICATION INFORMATION

Part 1 of the "Add A New Site" form (See Figure II-1) is used to enter identification information for the site being indexed. Part 1 must be submitted for all new sites being added to the file: Enter the Submitting Organization and NAWDEX_ID as previously discussed.

*LATITUDE (002/LATITUDE): Enter the best available precision value for the latitude of the site in degrees, minutes, and seconds. Use leading zeros if needed; six digits must always be coded. Sites where minutes or seconds have not been determined should have double-zero codes in the proper positions (330000, for example). If the latitude of the site is south of the equator, code a minus sign (-) in the space provided. Do not code a plus sign for sites north of the equator.

*LONGITUDE (003/LONGITUDE): Enter the best available precision value for the longitude of the site in degrees, minutes, and seconds. Use leading zeros if needed; seven digits must always be coded (0992601, for example). Sites where minutes or seconds have not been determined should have double zeros coded in the proper positions. If the longitude of the site is east of the Greenwich Meridian, code a minus sign (-) in the space provided. Do not code a plus sign if the site is in the Western Hemisphere.

Latitude and longitude are mandatory entries; no data for the site is stored if either of these fields is missing or grossly in error.

*OPERATING ORGANIZATION (004/NAWDEX AGCY): Enter exactly the same NAWDEX Organization Code that was entered for Operating Organization in the NAWDEX_ID at the top of the form. If the code is fewer than five characters it should be right-justified. The Operating Organization is a mandatory entry. No data for the site is stored if this field is blank or contains a value other than one found in the manual entitled "Identification Codes For Organizations Listed In Computerized Data Systems of The U.S. Geological Survey." If the organization code is unknown, the proper code must be assigned by the NAWDEX Program Office.

*Mandatory Data Field

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE
INVENTORY OF HYDROLOGIC DATA

D M B No. 042 R1485
Approval Expires September 30, 1983.
This report is authorized by D.M.B. Circular
A 67. While organizations other than Federal
agencies are not required to respond, their
cooperation is needed to make the results of
this inventory complete.

ADD A NEW SITE—
PART 1

SITE IDENTIFIER	
*Submitting Organization	*NAWDEX-ID
*Operating Organization	*Site Identification Number
1	2
1	29

Submitting Organization _____ (Name)

Operating Organization _____ (Name)

Recorded By _____

Organization _____

Date _____

SITE IDENTIFICATION INFORMATION	
*Latitude	002 ± deg min sec
*Longitude	003 ± deg min sec
*Operating Organization	004
*Site Identification Number	005
OWDC Agency Code	006 For NAWDEX Use Only
Station Name	007 Overflow
FIPS Alpha Country Code	071 (only if outside U.S.)
*FIPS Numeric State Code	008
FIPS Numeric County Code	009
Hydrologic Unit Code	010 Overflow
Congressional District	011
*Site Type	012 SW LK CN DR ES SB GW SP SM ME SS OC OT ☐ New Code Assigned Stream Lake Canal Drain Estuary Sub-sidence Well Spring Soil Moisture Meteorological Specific Source Ocean Other
Basin Description	013 1 2 3 4 ☐ Other Site Type (OT) _____ Regulation Diversion Urban Natural Other (Circle up to three choices)
Office Code	017 Office Name _____
FIPS City Code (or Zip Code)	018
Drainage Area (Square Miles)	019
Noncontributing Area	020 Y N Yes No
Other Data	040 1 2 3 4 5 6 ☐ Other (Circle up to six characters) Precipitation Wind Evaporation Radiation Soil Moisture Datum

* Mandatory field.

Figure II-1.--Add a new site - Part 1: Site identification information

SITE IDENTIFICATION NUMBER (005/AGCY STA NO): This is essentially the same station number that was entered for Site Identification Number in the NAWDEX_ID at the top of the form, with slightly different rules for coding. The site identification number should be entered exactly as it is identified by the operating organization, including any leading, trailing, or multiple consecutive internal blanks. All blanks are significant characters and will be retained when stored. This field is provided in addition to the NAWDEX_ID to assure that a site is identified in exactly the same form and format as used in the operating organization's data system.

If the site does not have a station number, leave this field blank. It will be a null field in the data base. Do not substitute latitude/longitude or any other data value for station number. The Site Identification Number is mandatory for USGS stations. (If 004 is USGS, 005 cannot be blank).

OWDC AGENCY CODE (006/OWDC AGENCY): This field is for NAWDEX use only. Leave blank.

STATION NAME (007/STATION NAME): Enter the name of the site as used by the Operating Organization. If possible, enter a name no longer than 30 characters in length. Although names up to 48 characters in length will be accepted, the station name may often be truncated when retrieved and printed in tables using preprinted forms such as those used for the Office of Water Data Coordination's Catalog of Information On Water Data. Meaningful abbreviations may be used in the station name. The following are acceptable abbreviations for use:

AB	Above	P	Pond
BL	Below	R	River
B	Branch	RE	Reservoir
BK	Brook	RN	Run
CA	Canal	S	South
C	Creek	TR	Tributary
CL	Coulee	W	West
D	Ditch	EB	East Branch
DI	Distributary	MB	Middle Branch
E	East	NB	North Branch
ES	Estuary	SB	South Branch
F	Fork	WB	West Branch
LK	Lake	EF	East Fork
L	Little	MF	Middle Fork
M	Middle	NF	North Fork
NR	Near	SF	South Fork
N	North	WF	West Fork

Note: If Middle, North, or a similar adjective is part of the name of a water course rather than the name of a tributary, the name should be spelled out. Thus, one should write Middle C for Middle Creek, and MF North R for Middle Fork North River.

FIPS ALPHABETIC COUNTRY CODE (071/NON US CNTRY): If, and only if, the site is located outside the United States or one of its territories, enter the FIPS alphabetic country code. This applies strictly to the location of the site and bears no relationship to ownership or operation of the site. See Appendix C for valid FIPS country codes.

*FIPS NUMERIC STATE CODE (008/STATE): Enter the FIPS numeric code for the State or U.S. territory in which the site is located. Enter a preceding zero for values less than 10, e.g., 01, 09. The State code is a mandatory entry for all sites within the United States or its territories. No data are stored for the site if this field is blank or invalid. See Appendix D for valid FIPS State codes. A three-digit field is provided for use with foreign State-equivalent codes. Therefore, all two-digit FIPS State codes must be right-justified.

FIPS NUMERIC COUNTY CODE (009/COUNTY): Enter the FIPS numeric code for the county or county equivalent in which the site is located. Always enter three digits. Enter leading zeros for a value less than 100, e.g., 003, 097. If the site is outside the United States, leave this field blank. See Appendix D for valid FIPS county codes.

HYDROLOGIC UNIT CODE (010/HYDROL UNIT): Enter the eight-digit numeric code identifying the station's location with reference to the areal definitions shown on State Hydrologic Unit Maps. The format is RRSSAACCC where:

RR is the two-digit code for Water Resources Council Regions.

SS is the two-digit code for Water Resources Council Planning Subregions.

AA is the two-digit code for National Water Data Network Accounting Units.

CC is the two-digit code for Cataloging Units of the Catalog of Information on Water Data maintained by the Office of Water Data Coordination.

Hydrologic Unit Codes may be derived from "Hydrologic Unit Map - 1974, State _____." The sources of availability and prices of these maps are given in Table II-1. An order form for the maps is included as Appendix J of this manual.

Several organizations have defined a need to provide more detailed definition for hydrologic units. For this reason, additional space has been provided for the encoding of up to four additional characters to further define these smaller units. These characters may be arbitrarily assigned by the reporting organization but cannot be encoded unless the eight-digit Hydrologic Unit Code is also encoded.

The eight-digit Hydrologic Unit Code will be automatically assigned by the processing system of NAWDEX at the time the site is stored in the MWDI if the latitude (field number 002) and longitude (field number 003) are provided complete to the nearest second of accuracy. In this case, this field need not be coded. This does not apply to sites outside the areas defined in Table II-1.

*Mandatory Data Field

Also, automatic assignment of a Hydrologic Unit Code may fail if the latitude and longitude are inaccurately coded or if a site is located on or near a hydrologic unit boundary. Caution should, therefore, be taken in the use of the automatic-assignment option.

TABLE II-1 - STATE HYDROLOGIC UNIT MAPS

Order USGS State Hydrologic Unit Maps as follows:

A. For maps of areas EAST of the Mississippi River, including Minnesota, Puerto Rico, and the Virgin Islands: Branch of Distribution, Eastern Region, U.S. Geological Survey, 1200 S. Eads Street, Arlington, VA 22202 (telephone: commercial 703-557-2751, FTS-557-2751).

<u>STATE</u>	<u>PRICE</u>	<u>STATE</u>	<u>PRICE</u>
Alabama	\$1.00	New Jersey	\$1.00
Caribbean Region ^{1/}	1.00	New York	1.25
Delaware (Maryland & D.C.)	1.00	North Carolina	1.25
Florida	1.25	Ohio	1.00
Georgia	1.00	Pennsylvania	1.00
Illinois	1.00	Puerto Rico ^{1/}	1.00
Indiana	1.00	Rhode Island (& Mass. & Conn)	1.00
Kentucky	1.25	South Carolina	1.00
Maine	1.00	Tennessee	1.00
Maryland (Delaware & D.C.)	1.00	Vermont (& N.H.)	1.00
Massachusetts (& R.I. & Conn)	1.00	Virginia	1.25
Michigan (2 sheets)	3.00	Virgin Islands ^{1/}	1.00
Minnesota	1.25	West Virginia	1.00
Mississippi	1.25	Wisconsin	1.25
New Hampshire (& Vermont)	1.00		

B. For maps of areas WEST of the Mississippi River, including Alaska, Hawaii, and Louisiana: Branch of Distribution, Central Region, U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225 (telephone: commercial 303-234-3832, FTS-234-3832).

<u>STATE</u>	<u>PRICE</u>	<u>STATE</u>	<u>PRICE</u>
Alaska	\$1.00	Nebraska	\$1.25
Arizona	1.25	Nevada	1.25
Arkansas	1.00	New Mexico	1.25
California (2 sheets)	3.00	North Dakota	1.25
Colorado	1.25	Oklahoma	1.25
Hawaii	1.25	Oregon	1.25
Idaho	1.25	South Dakota	1.25
Iowa	1.00	Texas (4 sheets)	3.50
Kansas	1.25	Utah	1.25

^{1/} Map for Caribbean Region (Puerto Rico and Virgin Islands also included in this series).

NOTE: Make check or money order payable to U.S. Geological Survey.

<u>STATE</u>	<u>PRICE</u>	<u>STATE</u>	<u>PRICE</u>
Louisiana	1.25	Washington	1.25
Missouri	1.25	Wyoming	1.25
Montana (2 sheets)	3.00		

CONGRESSIONAL DISTRICT (011/CONG DIST): Right-justify a two-digit numeric code of the U.S. Congressional District in which the site is located. Leave this field blank if the site is located outside the United States. This must be a valid Congressional District in the state where this site is located. The First Congressional District is represented as "01," Second Congressional District is represented as "02," etc. In States where Representatives are designated "At Large," the Congressional District is represented as "00." Congressional Districts may change. If so, the code may be changed at a later date using the instructions contained in Section IV.

Congressional Districts are identified and defined in the "Congressional Directory" which may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at a price of \$6.50 per copy.

*SITE TYPE (012/SITE TYPE): Circle the code that best describes the type of site. Site Type is a mandatory entry and no data is stored for the site if this field is blank or invalid. The codes and their meanings are:

SW-Stream - A body of water flowing in a natural or improved channel as distinct from a canal (See Canal below).

LK-Lake, reservoir - An inland body of standing water, an expanded part of a river, or an impoundment formed by a dam.

CN-Canal - An artificial waterway designed for navigation or for transporting water for municipal water supply, land irrigation, or drainage (See Drain below).

DR-Drain - A small artificial watercourse designed to drain swampy areas or irrigated lands. Theoretically it is actually a small canal that is referred to as a "drain" in many localities.

ES-Estuarine Zone or Estuary - The term "estuarine zone" means an environmental system consisting of an estuary and those transitional areas which are consistently influenced or affected by water from an estuary such as, but not limited to, salt marshes, coastal and intertidal areas, bays, harbors, lagoons, inshore water, and channels. The term "estuary" means that part of a river or stream, or other body of water having unimpaired connection with the open sea, where the sea water is measurably diluted with fresh water derived from land drainage. The term includes estuary-type areas of the Great Lakes.

*Mandatory Data Field

- SB-Subsidence - A site where data on land-surface lowering (subsidence) are obtained.
- GW-Well - An artificial excavation that derives some water from the interstices of the rocks or soil which it penetrates, and from which water can be drawn by means of a siphon.
- SP-Spring - A place where water flows naturally from a rock or soil upon the land surface or into a body of water.
- SM-Soil Moisture (soil water) - A site where phenomena on soil moisture is measured. Soil moisture is the water diffused in the soil immediately below the land surface (zone of aeration), from which water is discharged by the transpiration in plants or by evaporation from the soil.
- ME-Meteorological - A site where measurements are made to describe the scientific phenomena related to the atmosphere such as temperature, solar radiation, winds, quantity of precipitation, quality of precipitation, etc.
- SS-Specific Source - An artificial conduit or other conveyance where pollutants are discharged (from factories, sewage treatment plants, etc.) into a water body or aquifer.
- OC-Ocean - Sites located in any of the world's oceans.
- OT-Other - Other types of sites where hydrologically related data are collected. If "other" is circled, write in the type of site in the space provided.

As the need arises, additional site-type codes may be assigned by the NAWDEX Program Office. If an assigned code is used that is not preprinted on the form, enter the code in the space entitled "New Code Assigned" and circle the space.

BASIN DESCRIPTION 013/BASIN DESCRP): Circle the code or codes that best describe man's effect on the hydrologic characteristics of the drainage basin or aquifer in which the site exists. Up to three codes may be circled, with one restriction: codes three (Urban) and four (Natural) may not both be circled. The codes and their meanings are:

1. Regulation - the artificial manipulation of the flow of a stream. The term does not apply to ground-water stations.
2. Diversion - The taking of water from a stream or other body of water into a canal, pipe, or other conduit. This term applies to ground-water stations when pumping or recharge is significant.

3. Urban - The situation where streamflow patterns at a station are affected significantly by urban development. The effect is considered to be significant when approximately 20-25 percent or more of the drainage area is covered by a dense road grid. The term is also applied to the setting in which a ground-water station is situated, but it is based upon a macroscopic scale and not restricted just to the immediate vicinity of the station.

4. Natural - The converse of "Urban."

As the need arises, additional basin-description codes may be assigned by the NAWDEX Program Office. If an assigned code is used that is not preprinted on the form, enter the code in the space entitled "Other" and circle the space.

OFFICE CODE (017/WDSO OFC CODE): Enter the numeric code assigned by NAWDEX to identify the office of the organization that operates the site and/or provides the data collected at the site to the public. If unknown, leave this field blank, but use the space provided at the right of the field to write in the name of the office. An office code will then be assigned by the NAWDEX Program Office. Discrimination is made between an organization (004) and an office because many organizations have several offices and the appropriate office should be identified. This is the same office identification code used in the NAWDEX Water Data Sources Directory. If the office code is less than four digits, right-justify the code.

CITY CODE (018/CITY): Right-justify the four-digit numeric code of the city in which the office that operates the station is located. City codes are listed in the "Worldwide Geographical Location Codes" prepared in the Office of Finance, General Services Administration. If the office is not in a city, or if the city code is not known, enter the five-digit U.S. Postal ZIP Code for the office reporting this station. If the ZIP CODE is less than 10000, enter preceding zeros, e.g., 00460, 01060.

DRAINAGE AREA (019/DRAIN AREA): Enter the drainage area, in square miles, of the site. The drainage of the site is the area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the station. Any closed basins, or noncontributing areas, within the total drainage area should be included. Leave Drainage Area blank for ground-water sites (Site Type is GW, SB, and SP). If the accuracy of the drainage area is not known to hundredths, enter two zeros after the decimal point.

Provision is made for entering values to the hundredths place for small drainage areas by means of a precoded decimal point.

NONCONTRIBUTING AREA (020/NC AREA): Circle "Y" if the total drainage area contains a noncontributing drainage area. Circle "N" if no noncontributing drainage area exists. If this is not known, do not circle either choice.

021/LAST UPDATE and 022/STATE COUNTY: These two components exist in the Index but no field is provided for entering them because they are automatically supplied by the Edit/Update processing subsystem. LAST_UPDATE is the date on

which the site is loaded into the MWDI, and STATE_COUNTY is a concatenation of STATE (008) and COUNTY (009). If county is blank, three zeros are concatenated to the State code for STATE_COUNTY.

OTHER DATA (040/OTHER DATA): From one to six choices may be circled to indicate the availability of supplementary or special purpose data at the site. The codes and their meanings are:

1. Precipitation/Quantity - The discharge of water, in liquid or solid state, out of the atmosphere. Precipitation includes rainfall, snow, hail, and sleet. For the purposes of this data file, precipitation data collection refers specifically to the quantity of water that is precipitated (usually expressed in inches).
2. Wind - Air in natural motion parallel to the surface of the earth. Data parameters commonly measured are velocity (miles per hour) and direction in degrees from true north (clockwise).
3. Evaporation - The process by which water is changed from the liquid or the solid state into the vapor state. In hydrology, evaporation is vaporization that takes place at a temperature below the boiling point. It is usually measured with evaporation pans.
4. Radiation (solar) - The process in which energy (as waves or particles) is emitted from the sun, transmitted through space and absorbed by the earth. The rate of solar radiation is measured with a variety of instruments. A general method is to convert the sun's radiation into heat which can be accurately measured.
5. Soil Moisture (soil water) - The water diffused in the soil immediately below the land surface (zone of aeration), from which water is discharged by the transpiration in plants or by soil evaporation.
6. Datum - Any level surface, line, or point used as a reference in measuring elevations. For the purposes of this data file, datum refers to station datum that has been referenced to mean sea level.

As the need arises, additional "Other Data" codes may be assigned by the NAWDEX Program Office. If an assigned code is used that is not preprinted on the form, enter the code in the space entitled "Other" and circle the space.

SURFACE WATER INFORMATION

Surface water information is entered on Part 2 of the "Add A New Site" form (See Figure II-2). When adding a new site to the MWDI, Part 2 must be accompanied by Part 1. Because surface-water information and ground-water information may not be recorded at the same site location, do not submit both Parts 2 and 3 for the same site. Enter the Submitting Organization and NAWDEX_ID in the Site Identifier area exactly as on Part 1.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE
INVENTORY OF HYDROLOGIC DATA

O M B No. 042-R1485
Approval Expires September 30, 1983
This report is authorized by O M B Circular
A 67. While organizations other than Federal
agencies are not required to respond, their
cooperation is needed to make the results of
this inventory complete.

ADD A NEW SITE -
PART 2

SITE IDENTIFIER	
* Submitting Organization	* NAWDEX ID
* Operating Organization	* Site Identification Number
1	2
1	29

Recorded By _____
Organization _____
Date _____

Note: Do not submit this form and Part 3 for the same site. Surface and ground water information cannot both be present for the same site.

SURFACE WATER INFORMATION

* Beginning Year	30	33	101			
Ending Year	102					
Inter-rupted?	103	Y	N			
OWDC File ID	104					For NAWDEX Use Only
OWDC Sequence Number	107					For NAWDEX Use Only
Stage Frequency	110	A	B	C	D	E
Peak Stage Frequency	111	1	2	E		
Low Stage Frequency	112	1	2	E		
Media for Stage Data	113	C	D	E	F	G
Flow Frequency	115	1	2	3	4	E
Peak Flow Frequency	116	1	2	8	9	E
Low Flow Frequency	117	1	2	8	9	E

Miscellaneous Flow Frequency	119	A	B	C	D	E	I	J	M	N	O	P	Q	R	S	U	W	X	Y	Z
Media for Flow Data	121	C	D	E	F	G	M	P												
Volume Frequency	124	1	3	9	E															
Volume Change Frequency	125	1	3	9	E															
Media for Volume Data	126	C	D	E	F	G	M	P												
Other Data (Up to twelve choices)	140	1	2	3	4	5	6	7	8	9	A	B	C							
Telemetry Equipment Used	143	1	2	3	4	5	6	7	8											
Purpose of Station (Up to four choices)	145	A	B	C	F	H	L	R	S											
Planned/Needed	149	B	R	D	C	1	2	3	4											
* Currently Active?	150	Y	N																	

* Variable; field

Figure II-2.--Add a new site - Part 2: Surface-water information.

*BEGINNING YEAR (101/SW BEGIN YR): Enter a four-digit number identifying the calendar year in which the acquisition of surface water data first began at a site, regardless of the type of surface water data that were collected. This date should be the earliest year even though surface water data collection may have been deactivated and activated several times during a station's history. Beginning year is mandatory and no surface water information about the site will be added if it is blank or an invalid year.

ENDING YEAR (102/SW END YR): Enter a four-digit number identifying the calendar year in which all surface water data collection activity at the site was discontinued. If any surface water data are currently being collected at the site, leave this field blank. If an ending year is provided, the N in field number 150 must be circled.

INTERRUPTED? (103/SW INTERRUPTED): Circle "Y" if at any time during the site's history the collection of all surface water parameters was discontinued for a period of at least 12 consecutive months and later resumed. Circle "N" if this is not true, and circle neither code if it is not known if an interruption occurred.

OWDC FILE ID (104/SW OWDC NO): This field is for NAWDEX use only. Leave blank.

OWDC SEQUENCE NUMBER (107/SW OWDC SEQ): This field is for NAWDEX use only. Leave Blank.

NOTE: All remaining coding fields on this form except component 150 show blank spaces entitled "Other." As the need arises, additional codes may be assigned by the NAWDEX Program Office for use in these fields. If a code is used that is not preprinted on the form, enter the code in the space entitled "Other" and circle the space.

STAGE FREQUENCY (110/COMPLETE STAGE): Circle the one code that most accurately describes the frequency at which full range stage observations or instrument recorded stage determinations are made with respect to time. See Appendix E for a list of frequency codes and their explanations. If the site is a partial record site where stage determinations are purposely limited to only those above or below a predetermined stage, leave this field blank and account for the site in Peak Stage Frequency (111) or Low Stage Frequency (112) below.

PEAK STAGE FREQUENCY (111/PEAK STAGE): Circle the code that most accurately describes the frequency at which peak stage observations are obtained at the site. Value this field only if less than a complete record (full range) of stage is obtained at the site and Stage Frequency (110) is either not valued or valued with "E" (Eliminated). Peak stage codes and their meanings are:

- 1 - Year Round - Peak stage sensing devices are operated and determinations are made on a year-round basis.

*Mandatory Data Field

- 2 - Seasonal - Peak stage sensing devices are operated, and determinations are made only during certain portions of the year.
- E - Eliminated Activity - Peak stage data collection, on a year round or seasonal basis, has been conducted in the past but has since been discontinued.

LOW STAGE FREQUENCY (112/LOW STAGE): Circle the one code that most accurately describes the frequency at which low stage observations are recorded at the site. Value this field only if less than a complete record (full range) of stage is recorded at the site and Stage Frequency (110) is not valued. Low Stage codes and their meanings are:

- 1 - Year round - Low stage sensing devices are operated and determinations are made on a year-round basis.
- 2 - Seasonal - Low stage sensing devices are operated and determinations are made only during certain portions of the year.
- 3 - Eliminated Activity - Low stage data collection, on a year round or seasonal basis, has been conducted in the past but has since been discontinued.

MEDIA FOR STAGE DATA (113/STAGE MED): Circle the one code that describes the type(s) of storage media that the data values for stage are stored in and made available to users of the data. This component applies to Complete Stage, Peak Stage, and Low Stage together, so include all media in use for storing these data values.

FLOW FREQUENCY (115/COMPLETE FLOW): Circle the one code that most accurately describes the frequency at which a full range of flow measurements are recorded with respect to time. If the site is a partial record site where flow determinations are purposely limited to only those above or below a predetermined stage value, leave this field blank and account for the site in Peak Flow Frequency or Low Flow Frequency below. Complete flow codes and their meanings are:

<u>Year Round</u>	<u>Seasonal</u>	
1	2	Daily - Mean daily flow figures are determined either on a year-round basis or only during certain portions of a year, depending upon the code entered.
3	4	Monthly - Monthly totals and mean monthly flow figures are determined either on a year round basis or only during certain portions of the year, depending upon the code entered.
E		Eliminated activity- Complete flow figures have been determined in the past, but the activity has since been discontinued.

PEAK FLOW FREQUENCY (116/PEAK FLOW): Circle the one code that most accurately describes the frequency at which peak flows are determined for the site. Value this field only if less than a complete record (full range) of flow is determined for the site and Flow Frequency (115) is not valued. Peak Flow codes and their meanings are:

- 1 - Year round - Peak flow determinations are made on a year-round basis.
- 2 - Seasonal - Peak flow determinations are made only during certain portions of the year.
- 8 - Annual - Same as year round, except only the maximum peak flow for the year is obtained.
- 9 - Not specified - Peak flow data are collected at an irregular or unspecified frequency.
- E - Eliminated Activity - Peak flow data have been collected in the past but the activity has since been discontinued.

LOW FLOW FREQUENCY (117/LOW FLOW): Circle the one code that most accurately describes the frequency at which low flow is determined for the site. Value this field only if less than a complete record (full range) of flow is determined for the site and Flow Frequency (115) is not valued. Low Flow codes and their meanings are:

- 1 - Year round - Low flow determinations are made on a year round basis.
- 2 - Seasonal - Low flow determinations are made only during certain portions of the year.
- 8 - Annual - Same as year round, except only the minimum low flow for the year is determined.
- 9 - Not specified - Low flow data are collected at an irregular or unspecified frequency.
- E - Eliminated activity - Low flow data have been collected in the past but the activity has since been discontinued.

MISCELLANEOUS FLOW FREQUENCY (119/MISC FLOW MEAS): Circle the one code that most accurately describes the frequency at which field discharge measurements are made if the site is classified other than a partial-record or continuous year-round gaging station. See Appendix E for a list of frequency codes and their explanations.

MEDIA FOR FLOW DATA (121/FLOW MED): Circle the one code that describes the type(s) of storage media that the data values for flow are stored in and made available to users of the data. This component applies to Complete Flow, Peak Flow, Low Flow, and Miscellaneous Flow together, so include all media in use for storing these data values.

VOLUME FREQUENCY (124/VOLUME): Circle the one code that most accurately describes the frequency at which reservoir or lake volume, or "contents," measurements are recorded at the site. Volume codes and their meanings are:

- 1 - Daily Values - Total volume figures are computed once a day.
- 3 - Monthly Values - Total volume figures are computed once a month.
- 9 - Not Specified - Total volume figures are computed at an irregular or unspecified frequency.
- E - Eliminated Activity - Total volume figures have been computed in the past but the activity has since been discontinued.

VOLUME CHANGE FREQUENCY (125/CHANGE VOLUME): Circle the code that most accurately describes the frequency at which change in reservoir or lake volume, or "contents," measurements are recorded at the site. Change in volume codes and their meanings are:

- 1 - Daily Values - Total volume figures are computed once a day.
- 3 - Monthly Values - Total volume figures are computed once a month.
- 9 - Not Specified - Total volume figures are computed at an irregular or unspecified frequency.
- E - Eliminated Activity - Total volume figures have been computed in the past but the activity has since been discontinued.

MEDIA FOR VOLUME DATA (126/VOLUME MED): Circle the code that describes the type(s) of storage media that the data values for Volume or Change in Volume are stored in and made available to users of the data.

OTHER DATA (140/SW OTHER): Circle from one to twelve codes to indicate supplementary surface water data that have been or are currently available at or in connection with operation of the site. The codes and their meanings are:

- 1 - QW, recurring - Systematic water quality data collection takes place at the station.
- 2 - QW, nonrecurring - A one-time-only water quality data measurement is available.
- 3 - Flood hydrograph - Certain sites are equipped with special-purpose stage recorders that become activated when the stage exceeds a chosen base stage. A continuous record of stage and discharge with respect to time is produced, but only for the periods when the water elevation exceeds the chosen base; this record is called a flood hydrograph.
- 4 - Sediment studies - Data on fluvial sediment are collected at the site.

- 5 - Cross section - A two-dimensional representation of the profile of the flood plane land surface along a plane at right angles to a stream.
 - 6 - Flow duration - A cumulative frequency curve that shows the percentage of time that specified discharges are equaled or exceeded.
 - 7 - Flood frequency - A graph showing the number of times per year on the average, plotted as abscissa, that floods of magnitude, indicated by the ordinate, are equaled or exceeded; or a similar graph but with recurrence intervals of floods plotted as abscissa.
 - 8 - Coefficient of roughness - This is the "resistance to flow" variable used in hydraulic equations to determine peak discharges in natural channels by indirect methods. The factors that exert the greatest influence upon the coefficient of roughness are the character of the bed material, cross-section irregularities, depth of flow, vegetation, and alignment of the channel.
 - 9 - Time of travel - This refers to the movement of water or waterborne materials through the reach of stream channel for steady or gradually varied flow conditions. These studies are conducted by dye tracing methods where dye is injected at some location on a stream and detected at other locations downstream.
- A - Flood plain maps - These maps either define areas inundated by specific floods of record, or show areas potentially covered by floods of selected frequencies (e.g. 10, 50, 100, or 500 year recurrence intervals).
- B - Tides - Records of tidal stage collected at ocean gages or gages located in estuarine zones.
- C - Surface inflow-outflow - Studies related to stored water in lakes and reservoirs where inflow to and outflow from the water body is computed for the purpose of regulation or research.

TELEMETRY EQUIPMENT USED (143/SW TELEMETRY): Circle the one code that identifies, if applicable, the type of telemetry system in use at the site. Telemetry codes and their meanings are listed below, and a full explanation of each telemetry code is given in Appendix F.

- | | |
|-----------------------------|--------------------------------|
| 1 - Telemeter-land lines | 5 - DARDC |
| 2 - Telemeter-radio network | 6 - Other |
| 3 - LANDSAT | 7 - Two or more systems in use |
| 4 - GOES | 8 - Unspecified |

PURPOSE OF STATION (145/SW PURPOSE): Circle from one to four codes describing the purpose(s) (classification) of the site. Purpose codes and their meanings are listed below, and a full explanation of each purpose code is given in Appendix G.

A - Areal Analysis	H - Long-term Hydrologic
B - Benchmark	L - Compact or Legal
C - Current Operation	R - Research or Special Study
F - Forecasting	S - Assessment

PLANNED/NEEDED (149/SW PN CODE): This field indicates stations reported as either planned or needed by Federal organizations participating in the field coordination activity conducted by the Office of Water Data Coordination (OWDC) as part of its responsibility for coordinating Federal water-data activities. This field applies only to those sites so designated by Federal agencies and is not currently intended for use by other organizations to describe their own planned and needed sites. If applicable, circle the code that describes the status of an organization's planned or needed site. The planned/needed codes and their meanings are listed below, and a full explanation of each code is given in Appendix H.

B - Planned to be begun	1 - Needed to be begun
R - Planned to be re-established	2 - Needed to be re-established
D - Planned to be discontinued	3 - Needed to be discontinued
C - Planned to be changed	4 - Needed to be changed

***CURRENTLY ACTIVE? (150/SW ACTIVE):** Circle "Y" if one or more surface water parameters are actively being collected at the site. Circle "N" if one or more surface water parameters have been collected in the past, but none are presently being collected. If "Y" is circled, Ending Year (102) must be blank, and if "N" is circled, Ending Year must contain the year in which the surface water data collection activity ceased. This is a mandatory field and no surface-water information will be entered for the site unless this field is valued.

GROUND WATER INFORMATION

Ground water information is entered on Part 3 of the "Add A New Site" form (See Figure II-3). When adding a new site to the MWDI, Part 3 must be accompanied by Part 1. Because ground water information and surface water information may not be recorded at the same site location, do not submit both Parts 2 and 3 for the same site. Enter the Submitting Organization and NAWDEX ID in the Site Identifier area exactly as on Part 1.

***BEGINNING YEAR (201/GW BEGIN YR):** Enter a four-digit number identifying the calendar year in which the acquisition of ground-water data first began at a site, regardless of the type of ground-water data that were collected. This date should be the earliest year even though ground-water data collection may have been deactivated and activated several times during a station's history. Beginning year is mandatory and no ground water information about the site will be added if it is blank or an invalid year.

***Mandatory Data Field**

FORM 9 1981-3
JUNE 1977

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE

INVENTORY OF HYDROLOGIC DATA

O M B No. 042 R1485

Approval Expires September 30 1983
This report is authorized by O M B Circular
A 67. While organizations other than Federal
agencies are not required to respond, their
cooperation is needed to make the results of
this inventory complete.

Recorded By _____
Organization _____
Date _____

ADD A NEW
SITE—
PART 3

SITE IDENTIFIER

* Submitting Organization		* NAWDEX ID	
* Operating Organization	* Site Identification Number		
1	7	12	29

Note: Do not submit this form and Part 2 for the same site.
Surface and ground water information cannot be present for the same site.

GROUND WATER INFORMATION

* Beginning Year 30 33 201

Ending Year 202

Interrupted? 203 Y N

OWDC File ID 204 For NAWDEX Use Only

Principal Aquifer 208

Type of Aquifer 209 U N C M X

Level Frequency 210 A B C D E I J M N O P Q R S U W X Y Z

Media for Level Data 211 C D E F G M P

Discharge Frequency 212 A B C D E I J M N O P Q R S U W X Y Z

Media for Discharge Data 213 C D E F G M P

Subsidence Frequency 214 A B C D E I J M N O P Q R S U W X Y Z

Media for Subsidence Data 215 C D E F G M P

Depth of Well (in feet) 221

Other data (Up to six choices) 240 1 2 3 4 5 6 7 8 9 A B C D

Causes of Major Variations (Up to seven choices) 242 1 2 3 4 5 6 7

Telemetry Equipment Used 243 1 2 3 4 5 6 7 8

Purpose of Station (Up to four choices) 245 A B C F H L R S

Planned/Needed 249 B R D C 1 2 3 4

* Currently Active? 250 Y N

* Mandatory field

Figure II-3.--Add a new site - Part 3: Ground-water information.

ENDING YEAR (202/GW END YR): Enter a four-digit number identifying the calendar year in which all ground-water data collection activity at the site was discontinued. If any ground-water data are currently being collected at the site, leave this field blank. If an ending year is provided, the N in field number 250 must be circled.

INTERRUPTED? (203/GW INTERRUPTED): Circle "Y" if at any time during the site's history the collection of all ground-water parameters was discontinued for a period of at least 12 consecutive months and later resumed. Circle "N" if this is not true, and circle neither code if it is not known if an interruption occurred.

OWDC FILE ID (204/GW OWDC NO): This field is for NAWDEX use only. Leave blank.

PRINCIPAL AQUIFER (208/PRIN AQUIFER): Left-justify the geologic unit code identifying the aquifer supplying water to the well. If a well taps more than one aquifer the principal aquifer is the one that currently yields the greatest percentage of water. For geologic unit codes, see Appendix F of the WATSTORE User's Guide, U.S. Geological Survey, Open File Report 75-426, August 1975 or Appendix F of the NAWDEX Program Guide. Copies of the appendixes may be obtained from the NAWDEX Program Office.

NOTE: All remaining encoding fields on this form except Components 221 and 250 show blank spaces entitled "Other." As the need arises, additional codes may be assigned by the NAWDEX Program Office for use in these fields. If a code is used that is not preprinted on the form, enter the code in the space entitled "Other" and circle the space.

TYPE OF AQUIFER (209/AQUIFER TYPE): Circle the one code that best describes the type(s) of aquifer(s) supplying water to the well. Aquifer type codes and their meanings are:

- U - Unconfined single aquifer
- N - Unconfined multiple aquifers
- C - Confined single aquifer
- M - Confined multiple aquifers
- X - Mixed (confined and unconfined) multiple aquifers. This is also used when a multiple aquifer situation exists but confined/unconfined conditions have not been indicated.

LEVEL FREQUENCY (210/LEVEL FREQ): Circle the one code that most accurately describes the frequency at which water level measurements or instrument recorded water level determinations are made at the site with respect to time. See Appendix E for a complete list of frequency codes and their explanations.

MEDIA FOR LEVEL DATA (211/LEVEL MED): Circle the one code that describes the type(s) of storage media that the data values for water levels are stored in and made available to users of the data.

DISCHARGE FREQUENCY (212/DISCHRG FREQ): Circle the one code that most accurately describes the frequency at which well discharge measurements are made with respect to time at the site. See Appendix E for a complete list of frequency codes and their explanations.

MEDIA FOR DISCHARGE DATA (213/DISCHRG MED): Circle the one code that describes the type(s) of storage media that the data values for discharge measurements are stored in and made available to users of the data.

SUBSIDENCE FREQUENCY (214/SUBSIDE FREQ): Circle the one code that most accurately describes the frequency at which subsidence data are collected with respect to time at the site. See Appendix E for a complete list of frequency codes and their explanations.

MEDIA FOR SUBSIDENCE DATA (215/SUBSIDE MED): Circle the code that describes the type(s) of storage media that the data values for subsidence measurements are stored in and made available to users of the data.

DEPTH OF WELL (221/WELL DEPTH): Right-justify an integer equal to the depth of the well, in whole feet. Well depth is the greatest depth below land surface at which water can enter the well.

OTHER DATA (240/GW OTHER): Circle from one to six codes to indicate supplementary ground-water data that have been or are currently collected at the site. The codes and their meanings are:

- 1 - Total annual pumpage or flow - The total volume of water withdrawn from a well in a year's time.
- 2 - Depth of well.
- 3 - Casing record - Information on well casing material, diameter, and length (with reference to top and bottom).
- 4 - Screen record - Information about openings that permit water to enter well including perforations and uncased sections of the aquifer.
- 5 - Drillers log - Description of the earthen materials penetrated by the driller from the land surface to the greatest depth of the well.
- 6 - Geologic log - Same as preceding code "5" except that the description is made by a geologist.
- 7 - Instrument log - Measurement of physical phenomena about the well or natural phenomena in the earth surrounding the well hole, or responses of the earth material around the well hole to induce stimuli such as radiation, electric current, induced magnetic field, etc.
- 8 - Hydraulic conductivity - The rate at which water moves through aquifer material under a unit hydraulic gradient.
- 9 - Transmissivity - The rate at which water moves through the aquifer as a whole.
- A - Storage coefficient - The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head.

- B - Construction - Information about the construction of the well such as the means of drilling, hole diameter, date drilled, driller's name, type of finish (screening, perforations), type of casing, etc.
- C - Lift - The means by which water is removed from the well such as type of pump, etc.
- D - Discharge-drawdown - The difference between the static water level and the water level during the largest sustainable discharge rate.

CAUSES OF MAJOR VARIATIONS (242/MAJOR VAR): Circle from one to seven codes to describe the cause(s) of major variations, if any, in data values collected at the site. Variance codes and their meanings are:

- 1 - Pumping - The artificial removal of water from an aquifer.
- 2 - Evapotranspiration - Water withdrawn from a land area by evaporation from water surfaces and moist soil and by plant transpiration.
- 3 - Changes in stream or lake stage - The transfer of water to and from ground water and surface water bodies.
- 4 - Aquifer recharge from soil moisture - The downward percolation from the unsaturated zone (soil moisture or soil water) to the saturated zone of an aquifer.
- 5 - Infiltration - The infusion of water into an aquifer from surface water sources such as spreading ponds, storage lagoons, disposal pits, etc.
- 6 - Natural dissolution - The dissolving of minerals (such as limestone) resident in the aquifer.
- 7 - Injection of fluids - Deep well artificial recharge of fluids into an aquifer.

TELEMETRY EQUIPMENT USED (243/GW TELEMETRY): Circle the one code that identifies, if applicable, the type of telemetry system in use at the site. Telemetry codes and their meanings are listed below, and a full explanation of each telemetry code is given in Appendix F.

- | | |
|-----------------------------|--------------------------------|
| 1 - Telemeter-land lines | 5 - DARDC |
| 2 - Telemeter-radio network | 6 - Other |
| 3 - LANDSAT | 7 - Two or more systems in use |
| 4 - GOES | 8 - Unspecified |

PURPOSE OF STATION (245/GW PURPOSE): Circle from one to four codes describing the purpose(s) (classification) of the site. Purpose codes and their meanings are listed below, and a full explanation of each purpose code is given in Appendix G.

A - Areal Analysis	H - Long-term Hydrologic
B - Benchmark	L - Compact or Legal
C - Current Operation	R - Research or Special Study
F - Forecasting	S - Assessment

PLANNED/NEEDED (249/GW PN CODE): This field indicates stations reported as either planned or needed by Federal organizations participating in the field coordination activity conducted by the Office of Water Data Coordination (OWDC) as part of its responsibility for coordinating Federal water-data activities. This field applies only to those sites so designated by Federal agencies and is not currently intended for use by other organizations to describe their own planned and needed sites. If applicable, circle the code that describes the status of an organization's planned or needed site. The planned/needed codes and their meanings are listed below, and a full explanation of each code is given in Appendix H.

B - Planned to be begun	1 - Needed to be begun
R - Planned to be re-established	2 - Needed to be re-established
R - Planned to be discontinued	3 - Needed to be discontinued
C - Planned to be changed	4 - Needed to be changed

*CURRENTLY ACTIVE? (250/GW ACTIVE): Circle "Y" if one or more ground-water parameters are actively being collected at the site. Circle "N" if one or more ground-water parameters have been collected in the past, but none are presently being collected. If "Y" is circled, Ending Year (202) must be blank, and if "N" is circled, Ending Year must contain the year in which the ground-water data collection activity ceased. This is a mandatory field and no ground-water information will be entered for the site unless this field is valid.

*Mandatory Data Field

QUALITY OF WATER INFORMATION

Quality of water information is entered on Part 4 of the "Add A New Site" form (See Figure II-4). When adding a new site to the MWDI, Part 4 must be accompanied by Part 1. Either Part 2 (Surface Water Information) or Part 3 (Ground Water Information) may also be submitted along with Part 4 for the same site, if applicable. Enter the Submitting Organization and NAWDEX_ID in the Site Identifier area exactly as on Part 1.

*BEGINNING YEAR (301/QW BEGIN YR): Enter a four-digit number identifying the calendar year in which the acquisition of quality of water data first began at a site, regardless of the type of quality of water data that were collected. This date should be the earliest year even though quality of water data collection may have been deactivated and activated several times during a station's history. Beginning year is mandatory and no quality of water information about the site will be added if it is blank or an illegal year.

ENDING YEAR (302/QW END YR): Enter a four-digit number identifying the calendar year in which all quality of water data collection activity at the site was discontinued. If any quality of water data are currently being collected at the site, leave this field blank. If an ending year is provided, the N in field number 350 must be circled.

INTERRUPTED? (303/QW INTERRUPTED): Circle "Y" if at any time during the site's history the collection of all quality of water parameters was discontinued for a period of at least 12 consecutive months and later resumed. Circle "N" if this is not true, and circle neither code if it is not known if an interruption occurred.

OWDC FILE ID (304/QW OWDC NO): This field is for use by NAWDEX only. Leave Blank.

OWDC SEQUENCE NUMBER (307/QW OWDC SEQ): This field is for use by NAWDEX only. Leave blank.

NOTE: All remaining encoding fields on this form except Component 350 show blank spaces entitled "Other." As the need arises, additional codes may be assigned by the NAWDEX Program Office for use in these fields. If a code is used that is not preprinted on the form, enter the code in the space entitled "Other" and circle the space.

TELEMETRY EQUIPMENT USED (343/QW TELEMETRY): Circle the one code that identifies, if applicable, the type of telemetry system in use at the site. Telemetry codes and their meanings are listed below, and a full explanation of each telemetry code is given in Appendix F.

*Mandatory Data Field

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A 67. While organizations other than Federal
agencies are not required to respond, their
cooperation is needed to make the results of
this inventory complete.

ADD A NEW SITE—
PART 4

Recorded by _____
Organization _____
Date _____

* Submitting Organization		* NAWDEX-ID	
* Operating Organization		* Site Identification Number	
1			2
1	7	12	29

QUALITY OF WATER INFORMATION									
* Beginning Year	30	33							
Ending Year	302								
Inter-rupted?	303	Y	N						
		Yes	No						
OWDC File ID	304	For NAWDEX Use Only							
OWDC Sequence Number	307	For NAWDEX Use Only							
Telemetry Equipment Used	343	1	2	3	4	5	6	7	8
		Telemeter	Radio	Landsat	GOES	DAROC	Other	Two or More	Not Specified
Purpose of Station (Circle up to 4 choices)	345	A	B	C	F	H	L	R	S
		Areal Analysis	Bench mark	Current Operation	Forecasting	Hydrologic	Compact/Legal	Research/Special Study	Assessment
Planned/Needed	349	B	R	D	C	1	2	3	4
		Planned to be Begun	Planned to be Re-established	Planned to be Discontinued	Planned Change	Needed to be Begun	Needed to be Re-established	Needed to be Discontinued	Needed change
* Currently Active?	350	Y	N						
		Yes	No						

* Mandatory field.

Figure II-4.--Add a new site - Part 4: Quality-of-water information.

- | | |
|-----------------------------|--------------------------------|
| 1 - Telemeter-land lines | 5 - DARDC |
| 2 - Telemeter-radio network | 6 - Other |
| 3 - LANDSAT | 7 - Two or more systems in use |
| 4 - GOES | 8 - Unspecified |

PURPOSE OF STATION (345/QW PURPOSE): Circle from one to four codes describing the purpose(s) (classification) of the site. Purpose codes and their meanings are listed below, and a full explanation of each purpose code is given in Appendix G.

- | | |
|-----------------------|-------------------------------|
| A - Areal Analysis | H - Long-term Hydrologic |
| B - Benchmark | L - Compact or Legal |
| C - Current Operation | R - Research or Special Study |
| F - Forecasting | S - Assessment |

PLANNED/NEEDED (349/QW PN CODE): This field indicates stations reported as either planned or needed by Federal organizations participating in the field coordination activity conducted by the Office of Water Data Coordination (OWDC) as part of its responsibility for coordination of Federal water-data activities. This field applies only to those sites so designated by Federal agencies and is not currently intended for use by other organizations to describe their own planned and needed sites. If applicable, circle the code that describes the status of an organization's planned or needed site. The planned/needed codes and their meanings are listed below, and a full explanation of each code is given in Appendix H.

- | | |
|----------------------------------|---------------------------------|
| B - Planned to be begun | 1 - Needed to be begun |
| R - Planned to be re-established | 2 - Needed to be re-established |
| D - Planned to be discontinued | 3 - Needed to be discontinued |
| C - Planned to be changed | 4 - Needed to be changed |

*CURRENTLY ACTIVE (350/QW ACTIVE): Circle "Y" if one or more quality of water parameters are actively being collected at the site. Circle "N" if one or more quality of water parameters have been collected in the past, but none are presently being collected. If "Y" is circled, Ending Year (302) must be blank, and if "N" is circled, Ending Year must contain the year in which the quality water data collection activity ceased. This is a mandatory field and no quality of water information will be entered for the site unless this field is valued.

BIOLOGICAL QUALITY OF WATER INFORMATION

Biological quality of water information is entered on Part 5 of the "Add A New Site" form (See Figure II-5). When adding a new site to the MWDI, if Part 5 is filled in it must be accompanied at least by Parts 1 and 4. Enter the Submitting Organization and NAWDEX_ID exactly as on Part 1. Part 5 also is used for recording Physical, Sediment, and Chemical quality of water information, which is discussed on the following pages. Leave any section of Part 5 blank if it is not applicable to the site.

COMPONENTS 401 THROUGH 411: Immediately to the right of each parameter's component number, from 401 through 411, is a single blank space which should be filled in with the frequency code that most accurately represents how often a sample of the parameter listed underneath is collected with respect to time. Frequency codes and their meanings are listed at the bottom of Part 5 and additional codes are also found in Appendix E. If a parameter has never been collected at the site, leave it blank; fill in frequency codes only for the parameters that are now or have been collected at the site.

MEDIA FOR BIOLOGICAL QW DATA (446/BIOLOGICAL MED): Fill in a code describing the type(s) of storage media that the data values for biological quality of water parameters are stored in and made available to users of the data. Data storage media codes and their meanings are found in the lower right-hand corner of Part 5.

*CURRENTLY ACTIVE? (450/BIOLOGICAL): Circle "Y" if one or more biological quality of water parameters (components 401 through 464) are actively being collected at the site. Circle "N" if one or more of these parameters have been collected in the past, but none are presently being collected. Circle this field only if at least one of Components 401 through 411 or Components 455 through 464 have been coded.

COMPONENTS 455 THROUGH 464: Fill in the frequency code that most accurately represents how often a sample of the parameter is collected with respect to time. Choose from among the frequency codes listed at the bottom of Part 5 (additional codes are also listed in Appendix E). If a parameter has never been collected at the site, leave it blank.

*Mandatory Data Field

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cooperation is needed to make the results of
this inventory complete.

ADD A NEW SITE—
PART 5

Recorded by _____
Organization _____
Date _____

* Submitting Organization		* NAWDEX ID	
* Operating Organization		* Site Identification Number	
2			2
1	7	12	29

* Mandatory field

Note: If a new site is being added,
this form must be accompanied by Part 4.

BIOLOGICAL QUALITY OF WATER INFORMATION											
30	33	38	43	48	53	58	63	68	73	78	
401	402	403	404	405	406	407	408	409	410		
Enteric Bacteria	Native Bacteria	Phyto-plankton	Zoo-plankton	Peri-phyton	Macro-phyton	Micro-inverts	Macro-inverts	Verte-brates	Fungi		
411	446	450	Y	N							
Viruses	Media for Biological OW Data	Currently Active?	Yes	No							
30											
455	456	458	459	460	461	462	463	464			
Primary Produc-tivity	Secondary Produc-tivity	Chemo-Synthetic Activity	Biostim-ulatory Test	Toxicity Test	Other Bioassay Test	Chemical Tissue Analysis	Histo-Pathological Analysis	Other Tissue Analysis			
PHYSICAL QUALITY OF WATER INFORMATION											
30											
501	502	503	504	505	506	507	546	550	Y	N	
Temperature	Specific Conductance	Turbidity	Color	Odor	pH	Suspended Solids	Media for Physical OW Data	Currently Active?	Yes	No	
SEDIMENT QUALITY OF WATER INFORMATION											
30											
601	602	603	604	605	606	607	646	650	Y	N	
Bedload	Suspended Concen-tration	Total Concen-tration	Suspended Particle size	Bed Particle Size	Suspended Sediment Discharge	Total Sediment Discharge	Media for Sediment OW Data	Currently Active?	Yes	No	
CHEMICAL QUALITY OF WATER INFORMATION											
30											
701	702	703	705	706	707	708	709	710	711		
Dissolved Solids	Major Ions	Hardness	Silica	Phos-phorous	Phos-phorous Species	Nitrogen	Nitrogen Species	Deter-gents	Other Minor Constituents		
30											
712	713	714	715	716	717	718	719	720	721		
Radio-activity	Radio-Chemical Species	Carbon	Organic Groups	Pesticide Species	Other Organic Species	Biochemical Oxygen Demand	Chemical Oxygen Demand	Dissolved oxygen	Other Dissolved Gases		
30											
746	750	Y	N								
Media for Chemical OW Data	Currently Active?	Yes	No								

FREQUENCY CODES			
Code	Meaning	Year-Round	Seasonal
U	Unique (one time) measurement	I Continuous - Recorder	J
S	Semiannual (twice per year)	C Continuous - Nonrecorder	D
A	Annual (once per year)	O Daily	P
B	Other, periodic (less often than one per year)	W Weekly	X
Y	Seasonal (no time period specified)	M Monthly	N
Z	Data collected at an irregular or unspecified frequency	Q Quarterly	R
E	Eliminated activity	F Biweekly	G
		H Simonthly	K

Data Storage Media Codes	
C	Computer recognizable
D	Computer and published
E	Computer and microform
F	Computer, published, and microform
G	Microform and published
M	Microform
P	Published

Figure II-5.--Add a new site - Part 5: Biological, physical, sediment and chemical quality of water information.

PHYSICAL QUALITY OF WATER INFORMATION

Physical quality of water information is entered on Part 5 of the "Add A New Site" form (See Figure II-5). When adding a new site to the MWDI, if Part 5 is filled in it must be accompanied at least by Parts 1 and 4. Enter the Submitting Organization and NAWDEX ID exactly as on Part 1. Part 5 also is used for recording Biological, Sediment, and Chemical quality of water information, which is discussed on other pages. Leave any section of Part 5 blank if it is not applicable to the site, and if nothing on Part 5 is applicable to the site, then do not submit Part 5.

COMPONENTS 501 THROUGH 507: Immediately to the right of each parameter's component number, from 501 through 507, is a single blank space which should be filled in with the frequency code that *most accurately represents how often* a sample of the parameter listed underneath is collected with respect to time. Frequency codes and their meanings are listed at the bottom of Part 5 and additional codes are also found in Appendix E. If a parameter has never been collected at the site, leave it blank; fill in frequency codes only for the parameters that are now or have been collected at the site.

MEDIA FOR PHYSICAL QW DATA (546/PHYSICAL MED): Fill in a code describing the type(s) of storage media that the data values for physical quality of water parameters are stored in and made available to users of the data. Data storage media codes and their meanings are found in the lower right-hand corner of Part 5.

*CURRENTLY ACTIVE? (550/PHYSICAL): Circle "Y" if one or more physical quality of water parameters (components 501 through 507) are actively being collected at the site. Circle "N" if one or more of these parameters have been collected in the past, but none are presently being collected. Circle this field only if at least one of Components 501 through 507 have been encoded.

*Mandatory Data Field

SEDIMENT QUALITY OF WATER INFORMATION

Sediment quality of water information is entered on Part 5 of the "Add A New Site" form (See Figure II-5). When adding a new site to the MWDI, if Part 5 is filled in it must be accompanied at least by Parts 1 and 4. Enter the Submitting Organization and NAWDEX_ID exactly as on Part 1. Part 5 also is used for recording Biological, Physical, and Chemical quality of water information, which is discussed on other pages. Leave any section of Part 5 blank if it is not applicable to the site, and if nothing on Part 5 is applicable to the site, then do not submit Part 5.

COMPONENTS 601 THROUGH 607: Immediately to the right of each parameter's component number, from 601 through 607, is a single blank space which should be filled in with the frequency code that most accurately represents how often a sample of the parameter listed underneath is collected with respect to time. Frequency codes and their meanings are listed at the bottom of Part 5 and additional codes are also found in Appendix E. If a parameter has never been collected at the site, leave it blank; fill in frequency codes only for the parameters that are now or have been collected at the site.

MEDIA FOR SEDIMENT QW DATA (646/SEDIMENT MED): Fill in a code describing the type(s) of storage media that the data values for sediment quality of water parameters are stored in and made available to users of the data. Data storage media codes and their meanings are found in the lower right-hand corner of Part 5.

*CURRENTLY ACTIVE? (650/SEDIMENT): Circle "Y" if one or more sediment quality of water parameters (components 601 through 607) are actively being collected at the site. Circle "N" if one or more of these parameters have been collected in the past, but none are presently being collected. Circle this field only if at least one of Components 601 through 607 have been encoded.

*Mandatory Data Field

CHEMICAL QUALITY OF WATER INFORMATION

Chemical quality of water information is entered on Part 5 of the "Add A New Site" form (See Figure II-5). When adding a new site to the MWDI, if Part 5 is filled in it must be accompanied at least by Parts 1 and 4. Enter the Submitting Organization and NAWDEX ID exactly as on Part 1. Part 5 also is used for recording Biological, Physical, and Sediment quality of water information, which is discussed on previous pages. Leave any section of Part 5 blank if it is not applicable to the site, and if nothing on Part 5 is applicable to the site, then do not submit Part 5.

COMPONENTS 701 THROUGH 721: Immediately to the right of each parameter's component number from 701 through 721 is a single blank space which should be filled in with the frequency code that most accurately represents how often a sample of the parameter listed underneath is collected with respect to time. Frequency codes and their meanings are listed at the bottom of Part 5 and additional codes are also found in Appendix E. If a parameter has never been collected at the site, leave it blank; fill in frequency codes only for the parameters that are now or have been collected at the site.

MEDIA FOR CHEMICAL QW DATA (746/CHEMICAL MED): Fill in a code describing the type(s) of storage media that the data values for chemical quality of water parameters are stored in and made available to users of the data. Data storage media codes and their meanings are found in the lower right-hand corner of Part 5.

*CURRENTLY ACTIVE? (750/CHEMICAL): Circle "Y" if one or more chemical quality of water parameters (components 701 through 721) are actively being collected at the site. Circle "N" if one or more of these parameters have been collected in the past, but none are presently being collected. Circle this field only if at least one of Components 701 through 721 have been encoded.

*Mandatory Data Field

NETWORKS INFORMATION

If a site belongs to a designated network of sites established by the Operating Organization, this fact may be noted by filling in the Network Information box in Part 6 (See Figure II-6) of the "Add A New Site" form. Enter Submitting Organization and NAWDEX_ID exactly as on Part 1.

NETWORK CODE (901/NETWORK CODE): Fill in a code up to four alphanumeric characters in length denoting the network to which the site belongs. Provision is made for up to four network codes in the event the site belongs to more than one network. Presently established network codes are given in Appendix I. If a code is not available to identify the network to be entered, write the name of the network in the space provided and a code will be assigned by the NAWDEX Program Office.

OTHER SOURCE INFORMATION

If data collected at the site are stored and made available to users by organization(s) other than or in addition to the Operating Organization (designated in component 004, Part 1), those "other sources" of that data should be noted in the Other Source Information box in Part 6 (See Figure II-6) of the "Add A New Site" form. Enter Submitting Organization and NAWDEX_ID exactly as on Part 1.

OTHER SOURCE ORGANIZATION CODE (1101/OT SRC AGCY): Enter the NAWDEX Organization Code of the organization storing and making available data collected at the site. Organization codes for other source organizations may be obtained from the manual entitled "Identification Codes For Organizations Listed In Computerized Data Systems of the U.S. Geological Survey." If the organization code for the other source organization is not known, write the name of the organization in the space provided and a code will be provided by the NAWDEX Program Office. Provision is made for up to four different NAWDEX Organization Codes in the event data collected at the site are available from several other sources. The code entered here must not be equal to the Operating Organization code (component 004, Part 1). If the organization code is less than five characters, it must be right-justified in the field.

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cooperation is needed to make the results of
this inventory complete.

ADD A NEW SITE—
PART 6

Recorded by _____
Organization _____
Date _____

* Submitting Organization		* NAWDEX-ID	
* Operating Organization		* Site Identification Number	
3			2
1	7	12	29

NETWORKS INFORMATION	
Network Code # 1	30 34 0901
Network Code # 2	0901
Network Code # 3	0901
Network Code # 4	0901

OTHER SOURCE INFORMATION	
Other Source Organization Code # 1	30 34 1101
Code # 2	1101
Code # 3	1101
Code # 4	1101

* Mandatory field.

Figure II-6.--Add a new site - Part 6: Networks and other source information.

SECTION III - ADD A NEW REPEATING GROUP TO AN EXISTING SITE

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SECTION III - ADD A NEW REPEATING GROUP TO AN EXISTING SITE

Appendix A shows the twelve repeating groups that define all the data about a site in the MWDI data base. Any site in the MWDI may have data stored in one to eleven repeating groups (all twelve are not permitted for a single site because the Surface Water and Ground Water repeating groups are mutually exclusive). All sites must have data in the Site Identification repeating group, but one or more of the remaining repeating groups might not be present, either because they are not applicable, or they were rejected by the edit program, or because the data were unavailable when the site was added to the MWDI.

If a site currently exists in the MWDI and lacks one or more repeating groups, it is possible to add the missing repeating group(s) by use of the same forms and instructions presented in Section II (pages II-1 through II-36). A new repeating group may be added only if the Site Identification repeating group is already in the MWDI and the repeating group to be added does not currently exist for the site.

Note: If at least one component value of a repeating group exists on the data base for a site, then that repeating group is said to exist for the site. If the repeating group exists and it is required to add additional component values to any existing repeating group, follow the instructions on pages IV-10 through IV-12.

At the upper left-hand corner of each "Add A New Site" form is space for entering a Submitting Organization and a NAWDEX_ID. This field is mandatory and must be filled in correctly or the repeating group will not be added.

*SUBMITTING ORGANIZATION: See page II-5 for instructions on filling in this field.

*NAWDEX ID (001): The NAWDEX_ID is a unique identifier assigned to each site in the MWDI, so in order to add a repeating group to an existing site the NAWDEX_ID of that site must be known. Enter the NAWDEX_ID exactly as it is stored for the site in the MWDI.

SITE IDENTIFICATION INFORMATION: This information (Part 1 of the "Add A New Site" form) is already on the data base because the site exists in the MWDI, so do not submit a Part 1 form to add a repeating group to an existing site.

SURFACE WATER INFORMATION: If no values for components 101 through 150 currently exist for the site, a Surface Water repeating group may be added by filling in and submitting Part 2 of the "Add A New Site" form. Follow the rules for coding components 101 through 150 on pages II-15 through II-22, and do not submit this form if a Ground Water repeating group currently exists for the site.

*Mandatory Data Field

GROUND WATER INFORMATION: If no values for components 201 through 250 currently exist for the site, a Ground Water repeating group may be added by filling in and submitting Part 3 of the "Add A New Site" form. Follow the rules for coding components 201 through 250 on pages II-22 through II-27, and do not submit this form if a Surface Water repeating group currently exists for the site.

QUALITY OF WATER INFORMATION: If no values for component 301 through 350 currently exist for the site, a Quality of Water repeating group may be added by filling in and submitting Part 4 of the "Add A New Site" form. Follow the rules for coding components 301 through 350 on pages II-28 through II-30. A Quality of Water repeating group may exist alongside either a Surface Water or Ground Water repeating group for the same site.

BIOLOGICAL QUALITY OF WATER INFORMATION:

PHYSICAL QUALITY OF WATER INFORMATION:

SEDIMENT QUALITY OF WATER INFORMATION:

CHEMICAL QUALITY OF WATER INFORMATION: Any or all of these repeating groups may be added by filling in and submitting Part 5 of the "Add A New Site" form. The repeating group(s) being added must not already exist for the site, and a Quality of Water Information repeating group must exist for the site or be added along with the Biological, Physical, Sediment, and/or Chemical repeating group(s). Follow the instructions on pages II-31 through II-35 for filling in Part 5.

NETWORKS INFORMATION: It is permissible to have more than one occurrence of the Networks Information repeating group for a single site as long as no individual Network code value occurs more than once. Therefore, a new Network repeating group may be added to an existing site regardless of the existence of other Network repeating groups under the site. Use the top half of Part 6 of the "Add A New Site" form, coding from one to four new Network codes in spaces provided, according to instructions on page II-36.

OTHER SOURCE INFORMATION: It is permissible to have more than one occurrence of the Other Source Information repeating group for a single site as long as no individual Other Source organization code value occurs more than once. Therefore, a new Other Source repeating group may be added to an existing site regardless of the existence of other Other Source repeating groups under the site. Use the bottom box on Part 6 of the "Add A New Site" form, coding from one to four Other Source organization codes in the spaces provided according to the instructions on page II-36.

SECTION IV

DELETE A SINGLE VALUE
DELETE A REPEATING GROUP
ADD A SINGLE VALUE
MODIFY A SINGLE VALUE

SECTION IV - DELETE A SINGLE VALUE, DELETE A REPEATING GROUP,
ADD A SINGLE VALUE, MODIFY A SINGLE VALUE

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ILLUSTRATIONS

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SECTION IV - DELETE A SINGLE VALUE, DELETE A REPEATING GROUP,
ADD A SINGLE VALUE, MODIFY A SINGLE VALUE

Once information for a site is loaded onto the MWDI, it is possible to delete or modify one or more component values for the site, to delete an entire repeating group, or to add one or more component values that are currently null. Two forms are available for performing these functions, and which form to use depends on which repeating group is affected by the transaction. Part 8 of the encoding forms (Figure IV-1) is for use with repeating groups Site Identification (000), Surface Water (100), Ground Water (200), Quality of Water (300), Biological Quality of Water (400), Physical Quality of Water (500), Sediment Quality of Water (600), and Chemical Quality of Water (700). Part 9 of the encoding forms (Figure IV-2) is for use with repeating groups SW_Modifiers (170), GW_Modifiers (270), QW_Modifiers (370), Bio_Modifiers (470), Phy_Modifiers (570), Sed_Modifiers (670), Chm_Modifiers (770), Networks (900), and Othr_Src (1100).

Note: Repeating groups 170, 270, 370, 470, 570, 670, and 770 are for administrative use and transactions against them are submitted only by the NAWDEX Program Office.

Regardless of which form is submitted, the user must fill in the Submitting Organization and NAWDEX_ID for each individual delete, add, or modify transaction. Transactions against different sites can be coded together on a single form, so the NAWDEX_ID on each line may be different.

SUBMITTING ORGANIZATION: Fill in the submitting organization code according to the rules on page II-5, except in this case if the proper code is not known, it must be obtained from the NAWDEX Program Office. It should be coded exactly the same on each line of the Delete, Add, Modify form, and on all other forms submitted to update the MWDI.

NAWDEX ID: Left-justify the NAWDEX_ID (001) of the site affected by the transaction. The NAWDEX_ID is a unique identifier assigned to each site in the MWDI, so in order to delete, add, or modify a single component value in the site, the NAWDEX_ID of that site must be known. Enter the NAWDEX_ID exactly as it is stored for the site in the MWDI.

CONTROL FIELDS

Because repeating groups 170, 270, 370, 470, 570, 670, 770, 900, and 1100 can have more than one occurrence per site, the specific repeating group occurrence containing the value to be deleted, added, or modified must be identified by use of a Control Field. A Control Field is a component whose value uniquely identifies a specific occurrence of the repeating group. A list of Control Fields and their associated repeating groups is shown below.

DELETE A SINGLE VALUE
DELETE A REPEATING GROUP
ADD A SINGLE VALUE
MODIFY A SINGLE VALUE
PART 9

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE
INVENTORY OF HYDROLOGIC DATA

O M R No. 042 H1485
Approved Expires September 30 1983
This report is authorized by O M R Circular
A 67. While organizations other than Federal
agencies are not required to respond, their
cooperation is needed to make the results of
this inventory complete.

Recorded by _____
Organization _____
Date _____

FOR USE ONLY WITH REPEATING GROUPS 170, 270, 370, 470, 570, 670, 770, 800, 900, 1000 and 1100

[illegible]

Figure IV-2.--Delete a single value or a repeating group, add a single value, or modify a single value - Part 9 of inventory of hydrologic data.

<u>Repeating Group</u>		<u>Control Field</u>	
<u>Name</u>	<u>Number</u>	<u>Name</u>	<u>Number</u>
SW_MODIFIERS	170	SW_POINTER	171
GW_MODIFIERS	270	GW_POINTER	271
QW_MODIFIERS	370	QW_POINTER	371
BIO_MODIFIERS	470	BIO_POINTER	471
PHY_MODIFIERS	570	PHY_POINTER	571
SED_MODIFIERS	670	SED_POINTER	671
CHM_MODIFIERS	770	CHM_POINTER	771
NETWORKS	900	NETWORK_CODE	901
OTHR_SRC	1100	OT_SRC_AGCY	1101

In order to delete, add, or modify the value of any component belonging to one of the repeating groups listed above, the value of the repeating group's Control Field must be supplied in the space provided on the Part 9 form (Figure IV-2). Specific examples are included in the instructions on the following pages.

DELETE A SINGLE VALUE

The effect of deleting a single component value is to remove the value, making it null. To delete a component value, first select the correct form to use, according to the repeating group to which the component belongs. The applicable repeating groups are listed at the top of each form. Then fill in the Submitting Organization and NAWDEX_ID according to previous instructions, circle the "1" to indicate a delete transaction, and right-justify the number of the component to be deleted in the space provided. If the component belongs to repeating groups 0, 100, 200, 300, 400, 500, 600, or 700 (See Figure IV-1), then nothing further is required; leave blank the space marked "New Value." If the component belongs to any other repeating group (See Figure IV-2), then the field marked "Control Value" must be filled in with the value of the Control Field (see page IV-8) in the specific occurrence of the repeating group for which the component value is to be deleted. The "Control Value" is the value stored in the repeating group which is to be deleted.

Warning: Certain components are mandatory within their repeating group and are, therefore, prohibited from being individually deleted. If an attempt is made to delete any of the components listed below the transaction will be rejected and an error message generated:

<u>Component Number</u>	<u>Component Name</u>	<u>Component Number</u>	<u>Component Name</u>
1	NAWDEX_ID	250	GW_ACTIVE
2	LATITUDE	271	GW_POINTER
3	LONGITUDE	301	QW-BEGIN-YR
4	NAWDEX_AGCY	350	QW_ACTIVE
8	STATE	371	QW_POINTER
12	SITE_TYPE	471	BIO_POINTER
17	OFC_CODE	571	PHY_POINTER
21	LAST_UPDATE	671	SED_POINTER

Component Number	Component Name	Component Number	Component Name
22	STATE_COUNTY	771	CHM-POINTER
101	SW_BEGIN_YR	901	NETWORK_CODE
150	SW_ACTIVE	1101	OT_SRC_AGCY
201	GW_BEGIN_YR		

Deleting the Station Number: The station number assigned by the operating organization is stored in component AGCY_STA_NO (005) and can be deleted if necessary. However, doing so will result in a change in NAWDEX_ID (001), the unique identifier for the site. This is because the NAWDEX_ID is normally a concatenation of NAWDEX_AGCY (004) and AGCY_STA_NO (005), and if 005 changes or is deleted then 001 must also change in order to be consistent. If a transaction is submitted to delete 005, it will be accepted and the Data Base Administrator (DBA) of the NAWDEX Program Office will be notified of the deletion. The DBA will in turn make the appropriate change to the NAWDEX_ID of the site and will notify the operating organization of the change. From that point on, the new value of NAWDEX_ID must be used to reference the site in the MWDI.

Examples:

1. The U.S. Geological Survey wants to delete the frequency code currently stored for miscellaneous flow measurements for site USGS08176500 (this is the NAWDEX_ID of the site as it is stored in the MWDI). It is also necessary to delete the frequency code for silica for site USGS4631-B3. The frequency code for miscellaneous flow measurements is stored in component 119, MISC_FLOW_MEAS, which belongs to repeating group 100. The frequency code for silica is stored in component 705, SILICA, which belongs to repeating group 700. The same form can be used to code both transactions.

Submitting Organization	NAWDEX_ID	Transaction Code (Circle One)			Component Number	New Value
		Delete	Add	Modify		
1 U S G S	USGS08176500	(1)	3	4	119	
1 U S G S	USGS4631-B3	(1)	3	4	705	

2. The U.S. Geological Survey has removed site USGS07150000 from the National Stream Quality Accounting Network and therefore needs to delete the reference to that network for the site.

In component 901, NETWORK_CODE, is a value of 'NSQN' for site USGS07150000. The form shown in figure IV-2 must be used for transactions against any component in the 900 repeating group. However, values for component 901 cannot be individually deleted, according to the list on the previous page. To delete a value of component 901, the occurrence of the 900 repeating group to which it belongs must be identified. Instructions for deleting repeating groups are on page IV-10.

Transaction Code
(Circle one)

Submitting Organization	NAWDEX ID	Delete	Add	Modify	Component Number	Control Value	New Value
3 U S G S	USGS07150000	(1)	3	4	900	NSQN	

DELETE A REPEATING GROUP

The effect of deleting a repeating group is to remove all values in the repeating group plus all values in all of its descendant repeating groups. Examine the block diagram of the MWDI data base in Appendix A. If a user deletes repeating group SURFACE_WTR (100) for a site, then repeating group 100 and repeating group SW_MODIFIERS (170) are deleted for that site. If repeating group QUALITY_WTR (300) is deleted for a site, then repeating groups QW_MODIFIERS (370), BIOLOGIC_QW (400), BIOLOGIC_QW (454), BIO_MODIFIERS (470), PHYSICAL_QW (500), PHY_MODIFIERS (570), SEDIMENT_QW (600), SED_MODIFIERS (670), CHEMICAL_QW (700), and CHM_MODIFIERS (770) are also deleted for the site.

To delete a repeating group, first select the correct form to use, according to the repeating group to be deleted. The applicable repeating groups are listed at the top of each form. Then fill in the Submitting Organization and NAWDEX_ID according to previous instructions, circle the "1" to indicate a delete transaction, and right-justify the number of the repeating group to be deleted in the space provided. If repeating group 0, 100, 200, 300, 400, 500, 600, or 700 (See Figure IV-1) is being deleted, then nothing further is required; leave blank the space marked "New Value." If any other repeating group is being deleted (See Figure IV-2), then the field marked "Control Value" must be filled in with the value of the Control Field (see page IV-8) in the specific occurrence of the repeating group to be deleted.

Note: Deleting repeating group 0 deletes all information about a site from the data base. Do not do this just because a site is discontinued. Delete a site only if it is discontinued and data collection at the site in the past is no longer available from any source to users of the data. This rule applies to other repeating groups also. For example, do not delete the SURFACE_WTR repeating group for a site just because collection of surface water data at the site has been discontinued. Provision is made in each repeating group to store information about discontinued data collection programs. Repeating groups 170, 270, 370, 470, 570, 670, and 770 should not be deleted except by the NAWDEX Program Office.

ADD A SINGLE VALUE

The effect of adding a single value is to insert a value into an existing repeating group for a single component whose current value is null (no value exists). In order to add a single component value, the repeating group to which the component belongs must exist for the site and the current value of

the component for that site must be null (i.e.; no previous value has been stored). If the repeating group does not currently exist for the site, follow the instructions for adding a new repeating group in Section III. If the repeating group exists but the component value is not null, follow the instructions for modifying a component value on page IV-12 and IV-13.

To add a single component value, first select the correct form to use, according to the repeating group to which the component belongs. The applicable repeating groups are listed at the top of each form. Then fill in the Submitting Organization and NAWDEX_ID according to previous instructions, circle the "3" to indicate an "add value" transaction, and right-justify the number of the component to be valued in the space provided. If the component belongs to repeating groups 0, 100, 200, 300, 400, 500, 600, or 700 (See Figure IV-1), then left-justify the value to be added in the space provided. If the component belongs to any other repeating group (See Figure IV-2), then the field marked "Control Value" must be filled in with the value of the Control Field (see page IV-8) in the specific occurrence of the repeating group for which the component value is to be added. Then the new value to be added must be left-justified in the field marked "New Value."

Unlike the "Add A New Site" forms, nothing is supplied on the "Delete, Add, Modify" form to aid the user in filling in the correct value of the component, so it is up to the user to fill in the right value and to check it for accuracy before submitting the form. The instructions for adding a new site (Section II) describe the permitted values for each component.

Warning: If a repeating group number (100, 200, 300, etc.) or the number of a component that is already valued is entered, the transaction will be rejected and no change will be made to the data base. Also, many components are mandatory and therefore are always valued if their repeating group exists for a site (see page IV-8 for a list of mandatory components). With the exception of LATITUDE (002), LONGITUDE (003), and OFC_CODE (017), none of the components listed on page IV-8 should be individually added to an existing site.

Examples:

1. The U.S. Geological Survey wants to record the fact that turbidity is now being measured monthly year-round at site USGS08176500 (this is the NAWDEX_ID of the site). Other physical quality parameters have been collected at the site and that information is currently stored in the MWDI. The user has checked the MWDI to insure that the PHYSICAL_QW (500) repeating group exists for the site and that TURBIDITY (503) is null. The frequency code to indicate monthly measurements is "M".

Submitting Organization	NAWDEX ID	Transaction Code (Circle one)			Component Number	New Value
		Delete	Add	Modify		
1 U S G S	USGS08176500	1	3	4	503	M

2. The U.S. Geological Survey began measuring silica and phosphorous monthly year round at site USGS09142700 in 1976, and this information must be added to the MWDI. No chemical quality parameters had been collected at the site prior to 1976. Also, at site USGS05125050 measurements of wind, precipitation, and soil moisture are now being collected for the first time and the MWDI should reflect the existence of these parameters.

A check of the MWDI shows that for site USGS09142700 there is no occurrence of repeating group CHEMICAL_QW (700) and therefore an "add a new repeating group" transaction is necessary to add the information about the measurement of silica and phosphorous. Therefore, Part 5 of the "Add A New Site" form is filled in according to the instructions on page II-35. A check of the MWDI also shows that component OTHER_DATA (040) is currently null for site USGS05125050, so a value can be added to this component to reflect the existence of precipitation, wind, and soil moisture data at the site. The example illustrates the transaction.

FOR USE ONLY WITH REPEATING GROUPS 0,100,200,300,400,500,600, AND 700

Transaction Code
(Circle one)

Submitting Organization	NAWDEX ID	Delete	Add	Modify	Component Number	New Value
1 U S G S	USGS05125050	1	<u>3</u>	4	40	125

MODIFY A SINGLE VALUE

To modify a single component value, first select the correct form to use, according to the repeating group to which the component belongs. The applicable repeating groups are listed at the top of each form. Then fill in the Submitting Organization and NAWDEX ID according to previous instructions, circle the "4" to indicate a modify value transaction, and right-justify the number of the component to be modified in the space provided. If the component belongs to repeating groups 0, 100, 200, 300, 400, 500, 600, or 700 (See Figure IV-1), then left-justify the new value in the space provided. If the component belongs to any other repeating group (See Figure IV-2), then the field marked "Control Value" must be filled in with the value of the Control Field (see page IV-8) in the specific occurrence of the repeating group for which the component value is to be changed. Then the new value of the component must be left-justified in the field marked "New Value."

Unlike the "Add A New Site" forms, nothing is supplied on the "Delete, Add, Modify" form to aid the user in filling in the correct value of the component, so it is up to the user to fill in the right value and to check it for accuracy before submitting the form. The instructions for adding a new site

(Section II) describes the permitted values for each component. If the component belongs to repeating group 170, 270, 370, 470, 570, 670, or 770 modifications can be made only by the NAWDEX Program Office.

Warning: There are four components which cannot directly be modified by the user: NAWDEX_ID (001), NAWDEX_AGCY (004), LAST_UPDATE (021), and STATE_COUNTY (022). NAWDEX_ID is normally a concatenation of NAWDEX_AGCY (004) and AGCY_STA_NO (005) and therefore is modified only when 004 or 005 is modified. Users wishing to modify 004, the NAWDEX code of the organization operating the site, must submit a request for the change in writing to the NAWDEX Data Base Administrator. Transactions to modify 004 submitted on the "Delete, Add, Modify" form are rejected. If the DBA approves the change to 004, the change is made by the DBA, who also makes a corresponding change to 001. If the user submits a transaction to modify 005, the change is made and the DBA is automatically notified. The DBA then makes the corresponding change to 001 and notifies the user. The new value of 001 must be used to reference the site from that time onward. LAST_UPDATE is the latest date on which any change was made to the information about the site in the MWDI. It is automatically updated each time a change is made and therefore is not under the control of the user. STATE_COUNTY is a concatenation of STATE (008) and COUNTY (009) and therefore is modified only when 008 or 009 is modified. Any modification of 008 or 009 automatically results in a corresponding change to 022.

Examples:

1. The U.S. Geological Survey is now measuring nitrogen at site 4361-Z16A quarterly year round rather than quarterly seasonal as before. This change in frequency must be recorded in the MWDI. Also, the site identification number of site 05146520 has been changed to 05146500. At site 04390000, a quality water monitoring program in which biological parameters were measured was discontinued in 1976.

FOR USE ONLY WITH REPEATING GROUPS 0,100,200,300,400,500,600, AND 700

		Transaction Code (Circle one)			Component Number	New Value
Submitting Organization	NAWDEX ID	Delete	Add	Modify		
1 U S G S	USGS4361-Z16A	1	3	(4)	708	Q
1 U S G S	USGS05146520	1	3	(4)	5	05146500
1 U S G S	USGS04390000	1	(3)	4	302	1976
1 U S G S	USGS04390000	1	3	(4)	350	N
1 U S G S	USGS04390000	1	3	(4)	450	N

The first entry on the form above shows a modification of component 708 (NITROGEN) at site USGS4361-Z16A (the NAWDEX ID). The new value is Q, indicating quarterly year-round sampling. The second entry shows a modification of component 5 (AGCY_STA_NO) at site USGS05146520. The

station number is changed to 05146500 and the Data Base Administrator will change the NAWDEX ID (001) of the site to USGS05146500. The third entry shows the addition of a new value to component 302 (QW_END_YR), since the monitoring program was discontinued in 1976 and QW_END_YR was formerly null. The next two entries show that the quality-of-water monitoring activities at the site are now inactive.

1. Introduction
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SECTION V
 KEY PUNCHING

SECTION V - KEY PUNCHING

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SECTION V - KEY PUNCHING

General Instructions

The MWDI Data Coding Forms (Appendix B) are designed to be used both for recording data and for preparing it for computer input. Cards in three different formats are punched from the eight forms. On pages V-9 through V-11 is a description of each of the three formats, intended for use in preparation of a drum card or entry of a keypunch program to facilitate punching. The keypunch operator can determine which format to use by noting a preprinted number in Column 1 of each form. The number is always either 1, 2, 3, denoting formats 1, 2, 3. All the cards punched from a single form are in the same format.

Columns 1 - 29

Regardless of which format is being used, Columns 1 - 29 of every MWDI Data Coding Form are identical in format. On six of the forms (pages B-3 through B-8 of Appendix B) Columns 1 - 29 are displayed only once, at the upper left-hand side of the form. On the other two forms (pages B-9 and B-10) Columns 1 - 29 are displayed in each line that is coded by the user.

Columns 1 and 29 contain a preprinted number and Columns 2 - 28 are filled in by the user. Punch exactly what is shown on the form. The forms shown on pages B-9 and B-10 have a choice of three numbers (1, 3, or 4) in Column 29, one of which the user must circle. Punch only the circled number, and if none or more than one of the numbers is circled, do not punch the card. Obtain clarification from the person who filled in the form.

One card must be punched for every line of data coded by the user on the form. For the forms with Columns 1 - 29 in the upper left-hand part of the form (pages B-3 through B-8), every card punched from the same form must have the same data punched in Columns 1 - 29. For example, up to 18 cards can be punched from Part 1 of the "Add A New Site" form (page B-3), and every one of them should be identical in Columns 1 - 29. The forms shown on pages B-9 and B-10 may have different data in Columns 1 - 29 of each card, depending on what is coded by the user.

Columns 30 - 80

Columns 30 - 80 contain one or more three or four-digit numbers (usually printed on the form) and values either filled in or circled by the user. If, on any line of a form, the user neither fills in nor circles a value, do not punch a card for that line regardless of the amount of preprinted data on that line. If at least one value has been filled in or circled, punch the card. In many cases several values are preprinted on the form and the user is supposed to circle one or more of them. Punch only the circled value(s) without skipping any spaces in between. For example, if a line of the form is

245 A B C F H L R S

the card should be punched as

245BFS

Other rules for punching Columns 30 - 80 depend on which of the three formats is being used.

Format #1

Format #1 is always identified by a "1" preprinted in Column 1 of the form. In Format #1, a three-digit number is punched in Columns 30 - 32, followed by a value in Columns 33 - 80. For the forms shown on pages B-3 through B-6 the three-digit number is preprinted on the form. For the form shown on page B-9 the user fills in the three-digit number. If the user fills in a value in Columns 33 - 80, punch it in the columns encoded by the user. If the user circles one or more preprinted values, punch the first value in Column 33, the second value (if any) in Column 34, and so on. Do not punch a card for a line with no value filled in or circled.

Format #2

Format #2 is always identified by a "2" preprinted in Column 1 of the form. In Format #2, a three-digit number (preprinted on the form) is punched in columns 30 - 32, and from one to ten values are coded by the user and punched in columns 33, 38, 43, 48, 53, 58, 63, 68, 73, and/or 78. The form shown on page B-7 is the only one that uses Format #2. The user fills in a one-letter code in the boxes provided or circles "Y" or "N" where shown. Punch one card per line, and punch cards only for those lines where the user has filled in at least one box or has circled "Y" or "N." Punch values filled in by the user only in the designated column; if a box is blank skip it and go on to the next. If a line is being punched, it is mandatory to punch the first preprinted number on the line in columns 30 - 32, even if the accompanying box is not filled in. However, all the remaining preprinted numbers on the line may be skipped (or punched, if desired) as long as any values filled in by the user are punched in the correct columns.

For example, the form below

401M 402M 403A 404 405 406Z 407 408 409 410Q

411 446 450 (Y)N

455 456 458Y 459 460Y 461 462 463 464

should be punched as

401M 402M 403A 406Z 410Q

411 450Y

455 458Y 460Y

Format #3

In format #3, a four-digit number is punched in Columns 30 - 33, followed by a value in Columns 34 - 38, and if the form on page B-10 is in use, a value is also punched in Columns 49 - 53. For the form shown on page B-8 the four-digit number is preprinted on the form. For the form on page B-10 the user enters the four-digit number. Punch cards only for those lines in which the user has filled in Columns 34 - 38.

CARD FORMAT #1

(Forms on pages B-3 through B-6, and B-9)

<u>Columns</u>	<u>Field Name</u>	<u>Permitted Values</u>
1	Format Number	Always a "1"
2 - 28	NAWDEX_ID	Punch exactly as coded by the user
29	Transaction Type	Punch the integer pre-printed on the form (For the form on p. B-10, punch the integer circled by the user)

(Columns 1 - 29 should be duplicated on every card punched from the same form, for forms on pages B-3 through B-6)

30 - 32	Component Number	Punch the integer pre-printed on the form (On form on page B-10, the user fills in this field).
33 - 80	Component Value	Punch whatever is filled in by the user. If one or more preprinted values are circled, <u>left-justify</u> the value(s) with no intervening spaces. If nothing is filled in or circled in this field, do not punch a card.

CARD FORMAT #2

(Form on page B-7)

<u>Columns</u>	<u>Field Name</u>	<u>Permitted Values</u>
1	Format Number	Always a "2"
2 - 28	NAWDEX_ID	Punch exactly as coded by the user
29	Transaction Type	Always a "2"
(Columns 1 - 29 should be duplicated on every card punched from the same form)		
30 - 32	Component Number	Punch the integer pre-printed on the form
33	Component Value	Punch the value filled in by the user
34		Skip
35 - 37	Component Number	Punch the integer pre-printed on the form
38	Component Value	Punch the value filled in by the user
39		Skip
40 - 42	Component Number	Punch the integer pre-printed on the form
43	Component Value	Punch the value filled in by the user
44		Skip
45 - 47	Component Number	Punch the integer pre-printed on the form
48	Component Value	Punch the value filled in by the user
49		Skip
50 - 52	Component Number	Punch the integer pre-printed on the form
53	Component Value	Punch the value filled in by the user

<u>Columns</u>	<u>Field Name</u>	<u>Permitted Value</u>
54		Skip
55 - 57	Component Number	Punch the integer pre-printed on the form
58	Component Value	Punch the value filled in by the user
59		Skip
60 - 62	Component Number	Punch the integer pre-printed on the form
63	Component Value	Punch the value filled in by the user
64		Skip
65 - 67	Component Number	Punch the integer pre-printed on the form
68	Component Value	Punch the value filled in by the user
69		Skip
70 - 72	Component Number	Punch the integer pre-printed on the form
73	Component Value	Punch the value filled in by the user
74		Skip
75 - 77	Component Number	Punch the integer pre-printed on the form
78	Component Value	Punch the value filled in by the user
79 - 80		Skip

In some cases the user may circle "Y" or "N", and the circled value should be punched. If neither is circled, leave the field blank. Punch a card only if one or more values on a line are filled in or circled by the user, and punch all values exactly in columns indicated.

CARD FORMAT #3

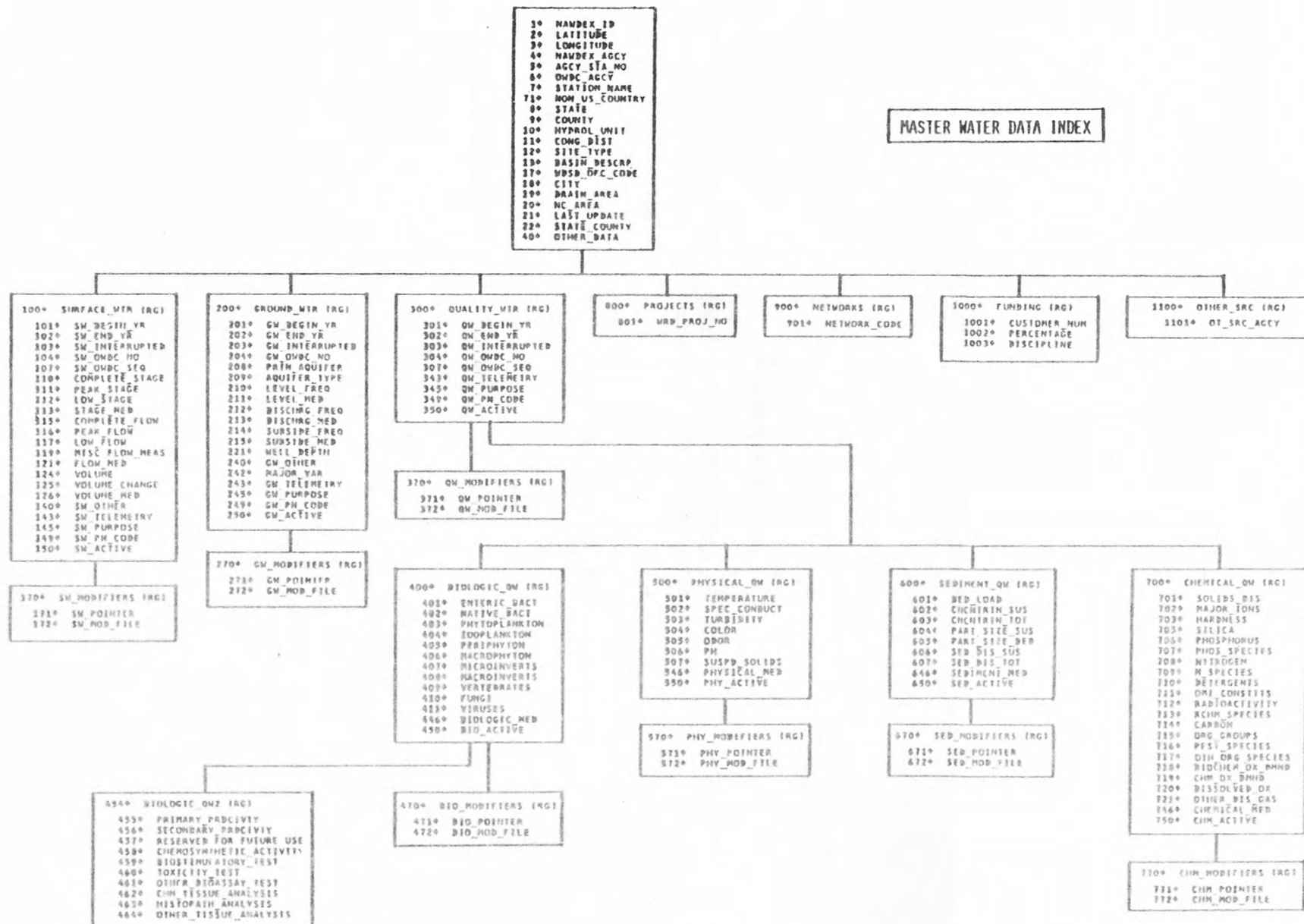
(Forms on pages B-8 and B-10)

<u>Columns</u>	<u>Field Name</u>	<u>Permitted Values</u>
1	Format Number	Always a "3"
2 - 28	NAWDEX_ID	Punch exactly as coded by the user
29	Transaction Type	Punch the integer pre-printed on the form (From the form on page B-10, punch the integer circled by the user)
30 - 33	Component Number	Punch the integer pre-printed on the form or filled in by the user
34 - 38	Component Value	Punch the value filled in by the user
39 - 48		Skip
49 - 53	Component Value	Form on page B-10, only. Punch the value filled in by the user
54 - 80		Skip

APPENDIX A

HIERARCHICAL STRUCTURE OF THE MASTER WATER DATA INDEX DATA BASE

MASTER WATER DATA INDEX



Hierarchical Structure of the Master Water Data Index Data Base

APPENDIX B

MWDI DATA CODING FORMS
(Inventory of Hydrologic Data)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE
INVENTORY OF HYDROLOGIC DATA

O.M.B. No. 042-R1485
Approval Expires September 30, 1983.
This report is authorized by O.M.B. Circular
A 67. While organizations other than Federal
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this inventory complete.

ADD A NEW SITE—
PART 1

SITE IDENTIFIER

*Submitting Organization	*NAWDEX ID	
*Operating Organization	*Site Identification Number	
1	7	29

Recorded By _____
Organization _____
Date _____
Submitting Organization _____ (Name)
Operating Organization _____ (Name)

SITE IDENTIFICATION INFORMATION

*Latitude	30 33	002	± deg min sec
*Longitude	003	± deg min sec	
*Operating Organization	004		
*Site Ident- ification Number	005		
OWDC Agency Code	006	For NAWDEX Use Only	
Station Name	007		Overflow
FIPS Alpha Country Code	071	(only if outside U.S.)	
*FIPS Numeric State Code	008		
FIPS Numeric County Code	009		
Hydrologic Unit Code	010		Overflow
Congressional District	011		
*Site Type	012	SW LK CN DR ES SB GW SP SM ME SS OC OT	New Code Assigned
Basin Description	013	1 2 3 4	Other Site Type (OT) _____
Office Code	017		Office Name _____
FIPS City Code (or Zip Code)	018		
Drainage Area (Square Miles)	019		
Noncontributing Area	020	Y N	Yes No
Other Data	040	1 2 3 4 5 6	Other (Circle up to six characters)

* Mandatory field.

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Recorded By _____

Organization _____

Date _____

Note: Do not submit this form and Part 3 for the same site. Surface and ground water information cannot both be present for the same site.

SURFACE WATER INFORMATION

★ Submitting Organization							★ NAWDEX-ID																			
							★ Operating Organization						★ Site Identification Number													
1													2													
1							7						29													

30	33													
★ Beginning Year	101													
Ending Year	102													
Interrupted?	103	Y	N											
		Yes	No											
OWDC File ID	104	For NAWDEX Use Only												
OWDC Sequence Number	107	For NAWDEX Use Only												
Stage Frequency	110	A B C D E I J M N O P Q R S U W X Y Z										Other		
		(Circle one - See NAWDEX frequency codes)												
Peak Stage Frequency	111	1	2	E										
		Year Round	Seasonal	Eliminated	Other									
Low Stage Frequency	112	1	2	E										
		Year Round	Seasonal	Eliminated	Other									
Media for Stage Data	113	C	D	E	F	G	M	P						
		Computer	Computer, Published	Computer, Microform	Computer, Published, Microform	Microform, Published	Microform	Published	Other					
Flow Frequency	115	1	2	3	4	E								
		Daily	Daily	Monthly	Monthly	Eliminated	Other							
		Year Round	Seasonal	Year Round	Seasonal									
Peak Flow Frequency	116	1	2	8	9	E								
		Year Round	Seasonal	Annual	Non-specific	Eliminated	Other							
Low Flow Frequency	117	1	2	8	9	E								
		Year Round	Seasonal	Annual	Non-specific	Eliminated	Other							

30	33	Miscellaneous Flow Frequency																											
119		A	B	C	D	E	I	J	M	N	O	P	Q	R	S	U	W	X	Y	Z						Other			
(Circle one - see NAWDEX frequency codes)																													
Media for Flow Data	121		C	D	E	F	G	M	P																	Other			
			Compute		Computer, Published		Computer, Microform		Computer, Published, Microform		Microform, Published		Microform		Published														
Volume Frequency	124		1	3	9	E																							
			Daily		Monthly		Non-specific		Eliminated																	Other			
Volume Change Frequency	125		1	3	9	E																							
			Daily		Monthly		Non-specific		Eliminated																	Other			
Media for Volume Data	126		C	D	E	F	G	M	P																	Other			
			Computer		Computer, Published		Computer, Microform		Computer, Published, Microform		Microform, Published		Microform		Published														
Other Data (Up to twelve choices)	140		1	2	3	4	5	6	7	8	9	A	B	C															
			QW Recur- ring		QW Non- recur.		Flood Hydro- graph		Sedi- ment Studies		Cross Section		Flow Dur- ation		Flood Fre- quency		Coef. of Rough.		Time of Travel		Flood Plain Maps		Tides		Surface Inflow- Outflow		Other		
Telemetry Equipment Used	143		1	2	3	4	5	6	7	8																			
			Telemeter Land Lines				Radio Network		Land- sat		GOES		DARDC		Other		Two or More		Not Specified.										
Purpose of Station (Up to four choices)	145		A	B	C	F	H	L	R	S																			
			Areal Analysis		Bench Mark		Current Operation		Fore- casting		Hydro- logic		Compact/ Legal		Research, Special Study		Assess- ment										Other		
Planned/ Needed	149		B	R	D	C	1	2	3	4																			
			Planned to be Begun		Planned to be Re- established		Planned to be Dis- continued		Planned Change		Needed to be Begun		Needed to be Re- established		Needed to be Dis- continued		Needed Change								Other				
* Currently Active?	150		Y	N																									
			Yes		No																								

ADD A NEW
SITE—
PART 3OFFICE OF WATER DATA COORDINATION
and
NATIONAL WATER DATA EXCHANGE

INVENTORY OF HYDROLOGIC DATA

OMB No. 4332-0046
Approval Expires September 30, 1983
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A-67. While organizations other than Federal
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this inventory complete.

Recorded By _____

Organization _____

Date _____

SITE IDENTIFIER

* Submitting Organization	* Operating Organization	* NAWDEX ID	* Site Identification Number
1	7	12	29

Note: Do not submit this form and Part 2 for the same site.
Surface and ground water information cannot be present for the same site.

GROUND WATER INFORMATION

* Beginning Year	30 33 201
Ending Year	202
Interrupted?	203 Y N
OWDC File ID	204 For NAWDEX Use Only
Principal Aquifer	208
Type of Aquifer	209 U N C M X
Level Frequency	210 A B C D E I J M N O P Q R S U W X Y Z
Media for Level Data	211 C D E F G M P
Discharge Frequency	212 A B C D E I J M N O P Q R S U W X Y Z
Media for Discharge Data	213 C D E F G M P

Subsidence Frequency	30 33 214 A B C D E I J M N O P Q R S U W X Y Z
Media for Subsidence Data	215 C D E F G M P
Depth of Well (in feet)	221
Other data (Up to six choices)	240 1 2 3 4 5 6 7 8 9 A B C D
Causes of Major Variations (Up to seven choices)	242 1 2 3 4 5 6 7
Telemetry Equipment Used	243 1 2 3 4 5 6 7 8
Purpose of Station (Up to four choices)	245 A B C F H L R S
Planned/Needed	249 B R D C 1 2 3 4
* Currently Active?	250 Y N

* Mandatory field

U. S. DEPARTMENT OF THE INTERIOR
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Recorded by _____
Organization _____
Date _____

ADD A NEW SITE —
PART 4

SITE IDENTIFIER

* Submitting Organization	* NAWDEX-ID	
* Operating Organization	* Site Identification Number	
1	2	2
1	7	29

QUALITY OF WATER INFORMATION

* Beginning Year	30	33	301								
Ending Year			302								
Inter-rupted?			303	Y	N						
				Yes	No						
OWDC File ID			304	For NAWDEX Use Only							
OWDC Sequence Number			307	For NAWDEX Use Only							
Telemetry Equipment Used			343	1	2	3	4	5	6	7	8
				Telemeter	Radio	Landsat	GOES	DARDC	Other	Two or More	Not Specified
				Land Lines	Network						
Purpose of Station (Circle up to 4 choices)			345	A	B	C	F	H	L	R	S
				Areal Analysis	Bench-mark	Current Operation	Forecasting	Hydro-logic	Compact/Legal	Research, Special Study	Assessment
											Other
Planned/Needed			349	B	R	D	C	1	2	3	4
				Planned to be Begun	Planned to be Re-established	Planned to be Dis-continued	Planned Change	Needed to be Begun	Needed to be Re-established	Needed to be Dis-continued	Needed change
											Other
* Currently Active?			350	Y	N						
				Yes	No						

* Mandatory field.

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ADD A NEW SITE—
PART 5

Recorded by _____
Organization _____
Date _____

* Mandatory field

Note: If a new site is being added,
this form must be accompanied by Part 4.

SITE IDENTIFIER

* Submitting Organization	* NAWDEX-ID	
* Operating Organization	* Site Identification Number	
2	7	29

BIOLOGICAL QUALITY OF WATER INFORMATION

30	33	38	43	48	53	58	63	68	73	78
401	402	403	404	405	406	407	408	409	410	
Enteric Bacteria	Native Bacteria	Phyto-plankton	Zoo-plankton	Peri-phyton	Macro-phyton	Micro-inverts	Macro-inverts	Verte-brates	Fungi	
411	446	450	Y	N						
Viruses	Media for Biological QW Data	Currently Active?	Yes	No						
30										
455	456	458	459	460	461	462	463	464		
Primary Productivity	Secondary Productivity	Chemo-Synthetic Activity	Bio-stim-ulatory Test	Toxicity Test	Other Bioassay Test	Chemical Tissue Analysis	Histo-Pathological Analysis	Other Tissue Analysis		

PHYSICAL QUALITY OF WATER INFORMATION

30										
501	502	503	504	505	506	507	546	550	Y	N
Temperature	Specific Conductance	Turbidity	Color	Odor	pH	Suspended Solids	Media for Physical QW Data	Currently Active?	Yes	No

SEDIMENT QUALITY OF WATER INFORMATION

30										
601	602	603	604	605	606	607	646	650	Y	N
Bedload	Suspended Concentration	Total Concentration	Suspended Particle size	Bed Particle Size	Suspended Sediment Discharge	Total Sediment Discharge	Media for Sediment QW Data	Currently Active?	Yes	No

CHEMICAL QUALITY OF WATER INFORMATION

30										
701	702	703	705	706	707	708	709	710	711	
Dissolved Solids	Major ions	Hardness	Silica	Phos-phorous	Phos-phorous Species	Nitrogen	Nitrogen Species	Deter-gents	Other Minor Constituents	
30										
712	713	714	715	716	717	718	719	720	721	
Radio-activity	Radio-Chemical Species	Carbon	Organic Groups	Pesticide Species	Other Organic Species	Biochemical Oxygen Demand	Chemical Oxygen Demand	Dissolved oxygen	Other Dissolved Gases	
30										
746	750	Y	N							
Media for Chemical QW Data	Currently Active?	Yes	No							

FREQUENCY CODES

Code	Meaning	Year-Round	Seasonal
U	Unique (one time) measurement	I Continuous - Recorder	J
S	Semiannual (twice per year)	Instrument used	
A	Annual (once per year)	C Continuous - Nonrecorder	D
B	Other, periodic (less often than one per year)	O Daily	P
Y	Seasonal (no time period specified)	W Weekly	X
Z	Data collected at an irregular or unspecified frequency	M Monthly	N
E	Eliminated activity	Q Quarterly	R
		F Biweekly	G
		H Simonthly	K

Data Storage Media Codes

C	Computer recognizable
D	Computer and published
E	Computer and microform
F	Computer, published, and microform
G	Microform and published
M	Microform
P	Published

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Recorded by _____
Organization _____
Date _____

ADD A NEW SITE—
PART 6

SITE IDENTIFIER

* Submitting Organization	* Operating Organization	* NAWDEX-ID * Site Identification Number
3		2
1	7	12
		29

NETWORKS INFORMATION

	30	34	
Network Code # 1	0901		Network Name _____
Network Code # 2	0901		Network Name _____
Network Code # 3	0901		Network Name _____
Network Code # 4	0901		Network Name _____

OTHER SOURCE INFORMATION

	30	34	
Other Source Organization Code # 1	1101		Organization Name _____
Code # 2	1101		Organization Name _____
Code # 3	1101		Organization Name _____
Code # 4	1101		Organization Name _____

* Mandatory field.

B-9

DELETE A SINGLE VALUE
DELETE A REPEATING GROUP
ADD A SINGLE VALUE
MODIFY A SINGLE VALUE
PART 9

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OFFICE OF WATER DATA COORDINATION

and

NATIONAL WATER DATA EXCHANGE

INVENTORY OF HYDROLOGIC DATA

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Recorded by _____

Organization _____

Date _____

FOR USE ONLY WITH REPEATING GROUPS 170, 270, 370, 470, 570, 670, 770, 800, 900, 1000 and 1100

Transaction Code

(circle one)

Component

Submitting Organization

NAWDEX ID

Delete Add Modify

Number

Control Value

New Value

[illegible]

B-10

Country	FIPS Code	Country	FIPS Code
AFGHANISTAN	001	GUINEA-BISSAU	624
ALBANIA	002	GUINEA	625
ALGERIA	003	GUINEA-BISSAU	626
ANDORRA	004	GUINEA	627
ANGOLA	005	GUINEA-BISSAU	628
ANTIGUA AND BARBUDA	006	GUINEA	629
ARGENTINA	007	GUINEA-BISSAU	630
ARMENIA	008	GUINEA	631
ARUBA	009	GUINEA-BISSAU	632
AUSTRALIA	010	GUINEA	633
AUSTRIA	011	GUINEA-BISSAU	634
AZERBAIDZHAN	012	GUINEA	635
BAHAMAS	013	GUINEA-BISSAU	636
BAHRAIN	014	GUINEA	637
BANGLADESH	015	GUINEA-BISSAU	638
BARBADOS	016	GUINEA	639
BEAR	017	GUINEA-BISSAU	640
BERMUDA	018	GUINEA	641
BHUTAN	019	GUINEA-BISSAU	642
BOLIVIA	020	GUINEA	643
BONIN ISLANDS	021	GUINEA-BISSAU	644
BOSNIA AND HERZEGOVINA	022	GUINEA	645
BOTSWANA	023	GUINEA-BISSAU	646
BRAZIL	024	GUINEA	647
BRUNEI DARUSSALAM	025	GUINEA-BISSAU	648
BURKINA FASO	026	GUINEA	649
BURUNDI	027	GUINEA-BISSAU	650
CAMBODIA	028	GUINEA	651
CAMEROUN	029	GUINEA-BISSAU	652
CANADA	030	GUINEA	653
CAYMAN ISLANDS	031	GUINEA-BISSAU	654
CELEBES ISLANDS	032	GUINEA	655
CHAD	033	GUINEA-BISSAU	656
CHINA	034	GUINEA	657
CHINA	035	GUINEA-BISSAU	658
CHINA	036	GUINEA	659
CHINA	037	GUINEA-BISSAU	660
CHINA	038	GUINEA	661
CHINA	039	GUINEA-BISSAU	662
CHINA	040	GUINEA	663
CHINA	041	GUINEA-BISSAU	664
CHINA	042	GUINEA	665
CHINA	043	GUINEA-BISSAU	666
CHINA	044	GUINEA	667
CHINA	045	GUINEA-BISSAU	668
CHINA	046	GUINEA	669
CHINA	047	GUINEA-BISSAU	670
CHINA	048	GUINEA	671
CHINA	049	GUINEA-BISSAU	672
CHINA	050	GUINEA	673
CHINA	051	GUINEA-BISSAU	674
CHINA	052	GUINEA	675
CHINA	053	GUINEA-BISSAU	676
CHINA	054	GUINEA	677
CHINA	055	GUINEA-BISSAU	678
CHINA	056	GUINEA	679
CHINA	057	GUINEA-BISSAU	680
CHINA	058	GUINEA	681
CHINA	059	GUINEA-BISSAU	682
CHINA	060	GUINEA	683
CHINA	061	GUINEA-BISSAU	684
CHINA	062	GUINEA	685
CHINA	063	GUINEA-BISSAU	686
CHINA	064	GUINEA	687
CHINA	065	GUINEA-BISSAU	688
CHINA	066	GUINEA	689
CHINA	067	GUINEA-BISSAU	690
CHINA	068	GUINEA	691
CHINA	069	GUINEA-BISSAU	692
CHINA	070	GUINEA	693
CHINA	071	GUINEA-BISSAU	694
CHINA	072	GUINEA	695
CHINA	073	GUINEA-BISSAU	696
CHINA	074	GUINEA	697
CHINA	075	GUINEA-BISSAU	698
CHINA	076	GUINEA	699
CHINA	077	GUINEA-BISSAU	700
CHINA	078	GUINEA	701
CHINA	079	GUINEA-BISSAU	702
CHINA	080	GUINEA	703
CHINA	081	GUINEA-BISSAU	704
CHINA	082	GUINEA	705
CHINA	083	GUINEA-BISSAU	706
CHINA	084	GUINEA	707
CHINA	085	GUINEA-BISSAU	708
CHINA	086	GUINEA	709
CHINA	087	GUINEA-BISSAU	710
CHINA	088	GUINEA	711
CHINA	089	GUINEA-BISSAU	712
CHINA	090	GUINEA	713
CHINA	091	GUINEA-BISSAU	714
CHINA	092	GUINEA	715
CHINA	093	GUINEA-BISSAU	716
CHINA	094	GUINEA	717
CHINA	095	GUINEA-BISSAU	718
CHINA	096	GUINEA	719
CHINA	097	GUINEA-BISSAU	720
CHINA	098	GUINEA	721
CHINA	099	GUINEA-BISSAU	722
CHINA	100	GUINEA	723
CHINA	101	GUINEA-BISSAU	724
CHINA	102	GUINEA	725
CHINA	103	GUINEA-BISSAU	726
CHINA	104	GUINEA	727
CHINA	105	GUINEA-BISSAU	728
CHINA	106	GUINEA	729
CHINA	107	GUINEA-BISSAU	730
CHINA	108	GUINEA	731
CHINA	109	GUINEA-BISSAU	732
CHINA	110	GUINEA	733
CHINA	111	GUINEA-BISSAU	734
CHINA	112	GUINEA	735
CHINA	113	GUINEA-BISSAU	736
CHINA	114	GUINEA	737
CHINA	115	GUINEA-BISSAU	738
CHINA	116	GUINEA	739
CHINA	117	GUINEA-BISSAU	740
CHINA	118	GUINEA	741
CHINA	119	GUINEA-BISSAU	742
CHINA	120	GUINEA	743
CHINA	121	GUINEA-BISSAU	744
CHINA	122	GUINEA	745
CHINA	123	GUINEA-BISSAU	746
CHINA	124	GUINEA	747
CHINA	125	GUINEA-BISSAU	748
CHINA	126	GUINEA	749
CHINA	127	GUINEA-BISSAU	750
CHINA	128	GUINEA	751
CHINA	129	GUINEA-BISSAU	752
CHINA	130	GUINEA	753
CHINA	131	GUINEA-BISSAU	754
CHINA	132	GUINEA	755
CHINA	133	GUINEA-BISSAU	756
CHINA	134	GUINEA	757
CHINA	135	GUINEA-BISSAU	758
CHINA	136	GUINEA	759
CHINA	137	GUINEA-BISSAU	760
CHINA	138	GUINEA	761
CHINA	139	GUINEA-BISSAU	762
CHINA	140	GUINEA	763
CHINA	141	GUINEA-BISSAU	764
CHINA	142	GUINEA	765
CHINA	143	GUINEA-BISSAU	766
CHINA	144	GUINEA	767
CHINA	145	GUINEA-BISSAU	768
CHINA	146	GUINEA	769
CHINA	147	GUINEA-BISSAU	770
CHINA	148	GUINEA	771
CHINA	149	GUINEA-BISSAU	772
CHINA	150	GUINEA	773
CHINA	151	GUINEA-BISSAU	774
CHINA	152	GUINEA	775
CHINA	153	GUINEA-BISSAU	776
CHINA	154	GUINEA	777
CHINA	155	GUINEA-BISSAU	778
CHINA	156	GUINEA	779
CHINA	157	GUINEA-BISSAU	780
CHINA	158	GUINEA	781
CHINA	159	GUINEA-BISSAU	782
CHINA	160	GUINEA	783
CHINA	161	GUINEA-BISSAU	784
CHINA	162	GUINEA	785
CHINA	163	GUINEA-BISSAU	786
CHINA	164	GUINEA	787
CHINA	165	GUINEA-BISSAU	788
CHINA	166	GUINEA	789
CHINA	167	GUINEA-BISSAU	790
CHINA	168	GUINEA	791
CHINA	169	GUINEA-BISSAU	792
CHINA	170	GUINEA	793
CHINA	171	GUINEA-BISSAU	794
CHINA	172	GUINEA	795
CHINA	173	GUINEA-BISSAU	796
CHINA	174	GUINEA	797
CHINA	175	GUINEA-BISSAU	798
CHINA	176	GUINEA	799
CHINA	177	GUINEA-BISSAU	800
CHINA	178	GUINEA	801
CHINA	179	GUINEA-BISSAU	802
CHINA	180	GUINEA	803
CHINA	181	GUINEA-BISSAU	804
CHINA	182	GUINEA	805
CHINA	183	GUINEA-BISSAU	806
CHINA	184	GUINEA	807
CHINA	185	GUINEA-BISSAU	808
CHINA	186	GUINEA	809
CHINA	187	GUINEA-BISSAU	810
CHINA	188	GUINEA	811
CHINA	189	GUINEA-BISSAU	812
CHINA	190	GUINEA	813
CHINA	191	GUINEA-BISSAU	814
CHINA	192	GUINEA	815
CHINA	193	GUINEA-BISSAU	816
CHINA	194	GUINEA	817
CHINA	195	GUINEA-BISSAU	818
CHINA	196	GUINEA	819
CHINA	197	GUINEA-BISSAU	820
CHINA	198	GUINEA	821
CHINA	199	GUINEA-BISSAU	822
CHINA	200	GUINEA	823
CHINA	201	GUINEA-BISSAU	824
CHINA	202	GUINEA	825
CHINA	203	GUINEA-BISSAU	826
CHINA	204	GUINEA	827
CHINA	205	GUINEA-BISSAU	828
CHINA	206	GUINEA	829
CHINA	207	GUINEA-BISSAU	830
CHINA	208	GUINEA	831
CHINA	209	GUINEA-BISSAU	832
CHINA	210	GUINEA	833
CHINA	211	GUINEA-BISSAU	834
CHINA	212	GUINEA	835
CHINA	213	GUINEA-BISSAU	836
CHINA	214	GUINEA	837
CHINA	215	GUINEA-BISSAU	838
CHINA	216	GUINEA	839
CHINA	217	GUINEA-BISSAU	840
CHINA	218	GUINEA	841
CHINA	219	GUINEA-BISSAU	842
CHINA	220	GUINEA	843
CHINA	221	GUINEA-BISSAU	844
CHINA	222	GUINEA	845
CHINA	223	GUINEA-BISSAU	846
CHINA	224	GUINEA	847
CHINA	225	GUINEA-BISSAU	848
CHINA	226	GUINEA	849
CHINA	227	GUINEA-BISSAU	850
CHINA	228	GUINEA	851
CHINA	229	GUINEA-BISSAU	852
CHINA	230	GUINEA	853
CHINA	231	GUINEA-BISSAU	854
CHINA	232	GUINEA	855
CHINA	233	GUINEA-BISSAU	856
CHINA	234	GUINEA	857
CHINA	235	GUINEA-BISSAU	858
CHINA	236	GUINEA	859
CHINA	237	GUINEA-BISSAU	860
CHINA	238	GUINEA	861
CHINA	239	GUINEA-BISSAU	862
CHINA	240	GUINEA	863
CHINA	241	GUINEA-BISSAU	864
CHINA	242	GUINEA	865
CHINA	243	GUINEA-BISSAU	866
CHINA	244	GUINEA	867
CHINA	245	GUINEA-BISSAU	868
CHINA	246	GUINEA	869
CHINA	247	GUINEA-BISSAU	870
CHINA	248	GUINEA	871
CHINA	249	GUINEA-BISSAU	872
CHINA	250	GUINEA	873
CHINA	251	GUINEA-BISSAU	874
CHINA	252	GUINEA	875
CHINA	253	GUINEA-BISSAU	876
CHINA	254	GUINEA	877
CHINA	255	GUINEA-BISSAU	878
CHINA	256	GUINEA	879
CHINA	257	GUINEA-BISSAU	880
CHINA	258	GUINEA	881
CHINA	259	GUINEA-BISSAU	882
CHINA	260	GUINEA	883
CHINA	261	GUINEA-BISSAU	884
CHINA	262	GUINEA	885
CHINA	263	GUINEA-BISSAU	886
CHINA	264	GUINEA	887
CHINA	265	GUINEA-BISSAU	888
CHINA	266	GUINEA	889
CHINA	267	GUINEA-BISSAU	890
CHINA	268	GUINEA	891
CHINA	269	GUINEA-BISSAU	892
CHINA	270	GUINEA	893
CHINA	271	GUINEA-BISSAU	894
CHINA	272	GUINEA	895
CHINA	273	GUINEA-BISSAU	896
CHINA	274	GUINEA	897
CHINA	275	GUINEA-BISSAU	898
CHINA	276	GUINEA	899
CHINA	277	GUINEA-BISSAU	900
CHINA	278	GUINEA	901
CHINA	279	GUINEA-BISSAU	902
CHINA	280	GUINEA	903
CHINA	281	GUINEA-BISSAU	904
CHINA	282	GUINEA	905
CHINA	283	GUINEA-BISSAU	906
CHINA	284	GUINEA	907
CHINA	285	GUINEA-BISSAU	908
CHINA	286	GUINEA	909
CHINA	287	GUINEA-BISSAU	910
CHINA	288	GUINEA	911
CHINA	289	GUINEA-BISSAU	912
CHINA	290	GUINEA	913
CHINA	291	GUINEA-BISSAU	914
CHINA	292	GUINEA	915
CHINA	293	GUINEA-BISSAU	916
CHINA	294	GUINEA	917
CHINA	295	GUINEA-BISSAU	918
CHINA	296	GUINEA	919
CHINA	297	GUINEA-BISSAU	920
CHINA	298	GUINEA	921
CHINA	299	GUINEA-BISSAU	922
CHINA	300	GUINEA	923
CHINA	301	GUINEA-BISSAU	924
CHINA	302	GUINEA	925
CHINA	303	GUINEA-BISSAU	926
CHINA	304	GUINEA	927
CHINA	305	GUINEA-BISSAU	928
CHINA	306	GUINEA	929
CHINA	307	GUINEA-BISSAU	930
CHINA	308	GUINEA	931
CHINA	309	GUINEA-BISSAU	932
CHINA	310	GUINEA	933
CHINA	311	GUINEA-BISSAU	934
CHINA	312	GUINEA	935
CHINA	313	GUINEA-BISSAU	936
CHINA	314	GUINEA	937
CHINA	315	GUINEA-BISSAU	938
CHINA	316	GUINEA	939
CHINA	317	GUINEA-BISSAU	940
CHINA	318	GUINEA	941
CHINA	319		

APPENDIX C

COUNTRY CODES

The codes listed in this appendix are contained in the Federal Information Processing Standards Publication (FIPS PUB) 10-2, Countries, Dependencies, and areas of special sovereignty.

<u>Code</u>	<u>Name</u>	<u>Code</u>	<u>Name</u>
	A	CE	SRI LANKA
AC	ANTIGUA	CF	CONGO
AF	AFGHANISTAN	CG	ZAIRE
AG	ALGERIA	CH	CHINA
AL	ALBANIA	CI	CHILE
AN	ANDORRA	CJ	CAYMAN ISLANDS
AO	ANGOLA	CK	COCOS (KEELING) ISLANDS
AQ	AMERICAN SAMOA	CM	CAMERON
AR	ARGENTIA	CN	COMOROS ISLANDS
AS	AUSTRALIA	CO	COLOMBIA
AU	AUSTRIA	CQ	NORTHERN MARIANA ISLANDS
AV	ANGUILLA	CS	COSTA RICA
AY	ANTARCTICA	CT	CENTRAL AFRICAN REPUBLIC
	B	CU	CUBA
BA	BAHRAIN	CV	CAPE VERDE, REPUBLIC OF
BB	BARBADOS	CW	COOK ISLANDS
BC	BOTSWANA	CY	CYPRUS
BD	BERMUDA	CZ	CZECHOSLOVAKIA
BE	BELGIUM		D
BF	BAHAMAS	DA	DENMARK
BG	BANGLADESH	DM	BENIN
BH	BELIZE	DO	DOMINICA
BL	BOLIVIA	DR	DOMINICAN REPUBLIC
BM	BURMA		E
BP	SOLOMON ISLANDS	EC	ECUADOR
BQ	NAVASSA ISLAND	EG	EGYPT
BR	BRAZIL	EI	IRELAND
BT	BHUTAN	EK	EQUATORIAL GUINEA
BU	BULGARIA	ES	EL SALVADOR
BV	BOUVET ISLAND	ET	ETHIOPIA
BX	BRUNEI		F
BY	BURUNDI	FA	FALKLAND ISLANDS (ISLAS MALVINAS)
BZ	GERMANY, BERLIN	FG	FRENCH GUIANA
	C	FI	FINLAND
CA	CANADA		
CB	KAMPUCHEA		
CD	CHAD		

<u>Code</u>	<u>Name</u>	<u>Code</u>	<u>Name</u>
FJ	FIJI	IV	IVORY COAST
FO	FAROE ISLANDS	IZ	IRAQ
FP	FRENCH POLYNESIA		J
FR	FRANCE		
FS	FRENCH SOUTHERN AND ANTARACTIC LANDS (excluding Terre Adelie)	JA	JAPAN
		JM	JAMAICA
		JO	JORDAN
FT	FRENCH TERRITORY OF AFARS AND ISSAS	JQ	JOHNSTON ATOLL
		JS	SVALBARD AND JAN MAYEN
	G		K
GA	GAMBIA	KE	KENYA
GB	GABON	KN	KOREA, DEMOCRATIC PEOPLES REPUBLIC
GC	GERMAN DEMOCRATIC REPUBLIC	KS	KOREA, REPUBLIC OF
GE	GERMANY, FEDERAL REPUBLIC OF	KT	CHRISTMAS ISLAND (Indian Ocean)
GH	GHANA	KU	KUWAIT
GI	GIBRALTAR	KR	KIRIBATI
GJ	GRENADA		L
GL	GREENLAND	LA	LAOS
GP	GUADELOUPE	LE	LEBANON
GQ	GUAM	LI	LIBERIA
GR	GREECE	LS	LIECHTENSTEIN
GT	GUATEMALA	LT	LESOTHO
GV	GUINEA	LU	LUXEMBOURG
GY	GUYANA	LY	LIBYA
GZ	GAZA STRIP		M
	H		
HA	HAITI	MA	MADAGASCAR
HK	HONG KONG	MB	MARTINIQUE
HM	HEARD ISLAND AND McDONALD ISLANDS	MC	MACAO
HO	HONDURAS	MG	MONGOLIA
HU	HUNGARY	MH	MONTESERRAT
	I	MI	MALAWI
		ML	MALI
IC	ICELAND	MN	MONACO
ID	INDONESIA	MO	MOROCCO
IN	INDIA	MP	MAURITIUS
IO	BRITISH INDIAN OCEAN TERRITORY	MQ	MIDWAY ISLANDS
IQ	UNITED STATES MISC. PACIFIC ISLANDS	MR	MAURITANIA
IR	IRAN	MT	MALTA
IS	ISRAEL	MU	OMAN
IT	ITALY	MV	MALDIVES
		MX	MEXICO

<u>Code</u>	<u>Name</u>	<u>Code</u>	<u>Name</u>
MY	MALAYSIA		
MZ	MOZAMBIQUE		S
	N	SA	SAUDI ARABIA
		SB	ST. PIERRE AND MIQUELON
NA	NETHERLANDS ANTILLES	SC	ST. CHRISTOPHER-NEVIS-ANGUILLA
NC	NEW CALEDONIA	SE	SEYCHELLES
NE	NIUE	SF	SOUTH AFRICA
NF	NORFOLK ISLAND	SG	SENEGAL
NG	NIGER	SH	ST. HELENA
NH	NEW HEBRIDES	SL	SIERRA LEONE
NI	NIGERIA	SM	SAN MARINO
NL	NETHERLANDS	SN	SINGAPORE
NO	NORWAY	SO	SOMALIA
NP	NEPAL	SP	SPAIN
NQ	TRUST TERRITORY OF PACIFIC ISLANDS	ST	ST. LUCIA
NR	NAURU	SU	SUDAN
NS	SURINAME	SW	SWEDEN
NU	NICARAGUA	SY	SYRIA
NZ	NEW ZEALAND	SZ	SWITZERLAND
	P		T
PA	PARAGUAY	TC	UNITED ARAB EMIRATES
PC	PITCAIRN ISLANDS	TD	TRINIDAD AND TOBAGO
PE	PERU	TH	THAILAND
PF	PARACEL ISLANDS	TK	TURKS AND CAICOS ISLANDS
PG	SPRATLY ISLANDS	TL	TOKELAU
PK	PAKISTAN	TN	TONGA
PL	POLAND	TO	TOGO
PN	PANAMA	TP	SAO TOME AND PRINCIPE
PO	PORTUGAL	TS	TUNISIA
PP	PAPUA NEW GUINEA	TU	TURKEY
PU	GUINEA-BISSAU	TV	TUVALU
	Q	TW	CHINA (TAIWAN)
		TZ	TANZANIA, UNITED REPUBLIC OF
QA	QATAR		U
	R	UG	UGANDA
		UK	UNITED KINGDOM
RE	REUNION	UR	UNION OF SOVIET SOCIALIST REPUBLICS
RH	SOUTHERN RHODESIA	US	UNITED STATES
RO	ROMANIA	UV	UPPER VOLTA
RP	PHILIPPINES	UY	URUGUAY
RQ	PUERTO RICO		
RW	RWANDA		

<u>Code</u>	<u>Name</u>
V	
VC	ST. VINCENT AND THE GRENADINES
VE	VENEZUELA
VI	BRITISH VIRGIN ISLANDS
VM	VIETNAM
VQ	VIRGIN ISLANDS OF THE U.S.
VT	VATICAN CITY

W	
WA	NAMIBIA
WF	WALLIS AND FUTUNA
WI	WESTERN SAHARA
WQ	WAKE ISLAND
WS	WESTERN SAMOA
WZ	SWAZILAND

Y	
YE	YEMEN (SANA)
YO	YUGOSLAVIA
YS	YEMEN (ADEN)

Z	
ZA	ZAMBIA

APPENDIX D

FIPS NUMERIC STATE, COUNTY, AND
INDEPENDENT CITY CODES; AND
ALASKA DIVISION AND
PLACE CODES

APPENDIX D

STATE CODES

The codes for States and outlying areas of the United States are taken from the Federal Information Processing Standards Publication (FIPS PUB) 5-1, dated June 15, 1970.

STATE	CODE	STATE	CODE
Alabama	01	Oklahoma	40
Alaska	02	Oregon	41
Arizona	04	Pennsylvania	42
Arkansas	05	Rhode Island	44
California	06	South Carolina	45
Colorado	08	South Dakota	46
Connecticut	09	Tennessee	47
Delaware	10	Texas	48
District of Columbia	11	Utah	49
Florida	12	Vermont	50
Georgia	13	Virginia	51
Hawaii	15	Washington	53
Idaho	16	West Virginia	54
Illinois	17	Wisconsin	55
Indiana	18	Wyoming	56
Iowa	19	CODES FOR OUTLYING AREAS OF THE	
Kansas	20	UNITED STATES	
Kentucky	21	American Samoa	60
Louisiana	22	Canal Zone	61
Maine	23	Guam	66
Maryland	24	Johnston Atoll	67
Massachusetts	25	Midway Islands	71
Michigan	26	Puerto Rico	72
Minnesota	27	Trust Territories of the	
Mississippi	28	Pacific Islands	75
Missouri	29	U.S. Miscellaneous	
Montana	30	Pacific Islands	77
Nebraska	31	Virgin Islands	78
Nevada	32	Wake Island	79
New Hampshire	33		
New Jersey	34		
New Mexico	35		
New York	36		
North Carolina	37		
North Dakota	38		
Ohio	39		

APPENDIX D--Continued

COUNTY CODES

(Includes independent city codes for some States)

The county codes presented in this appendix appear in the Federal Information Processing Standards Publication (FIPS PUB) 6-2, Counties and County Equivalents to the States of the United States.

	Con.	Con.	Con.	Con.	Con.
Alabama	125 Tuscaloosa	115 Pope	055 Napa	063 Kit Carson	021 Collier
County	127 Walker	117 Prairie	057 Nevada	065 Lake	023 Columbia
001 Autauga	129 Washington	119 Pulaski	059 Orange	067 La Plata	025 Dade
003 Baldwin	131 Wilcox	121 Randolph	061 Placer	069 Larimer	027 De Soto
005 Barbour	133 Winston	123 St. Francis	063 Plumas	071 Las Animas	029 Dixie
007 Bibb	Arkansas	125 Saline	065 Riverside	073 Lincoln	031 Duval
009 Blount	County	127 Scott	067 Sacramento	075 Logan	033 Escambia
011 Bullock	001 Arkansas	129 Searcy	069 San Benito	077 Mesa	035 Flagler
013 Butler	003 Ashley	131 Sebastian	071 San Bernardino	079 Mineral	037 Franklin
015 Calhoun	005 Baxter	133 Sevier	073 San Diego	081 Moffat	039 Gadsden
017 Chambers	007 Benton	135 Sharp	075 San Francisco	083 Montezuma	041 Gilchrist
019 Cherokee	009 Boone	137 Stone	077 San Joaquin	085 Montrose	043 Glades
021 Chilton	011 Bradley	139 Union	079 San Luis Obispo	087 Morgan	045 Gulf
023 Choctaw	013 Calhoun	141 Van Buren	081 San Mateo	089 Otero	047 Hamilton
025 Clarke	015 Carroll	143 Washington	083 Santa Barbara	091 Ouray	049 Hardee
027 Clay	017 Chicot	145 White	085 Santa Clara	093 Park	051 Hendry
029 Cleburne	019 Clark	147 Woodruff	087 Santa Cruz	095 Phillips	053 Hernando
031 Coffee	021 Clay	149 Yell	089 Shasta	097 Pitkin	055 Highlands
033 Colbert	023 Cleburne	Arizona	091 Sierra	099 Prowers	057 Hillsborough
035 Conecuh	025 Cleveland	County	093 Siskiyou	101 Pueblo	059 Holmes
037 Coosa	027 Columbia	001 Apache	095 Solano	103 Rio Blanco	061 Indian River
039 Covington	029 Conway	003 Cochise	097 Sonoma	105 Rio Grande	063 Jackson
041 Crenshaw	031 Craighead	005 Coconino	099 Stanislaus	107 Routt	065 Jefferson
043 Cullman	033 Crawford	007 Gila	101 Sutter	109 Saguache	067 Lafayette
045 Dale	035 Crittenden	009 Graham	103 Tehama	111 San Juan	069 Lake
047 Dallas	037 Cross	011 Greenlee	105 Trinity	113 San Miguel	071 Lee
049 De Kalb	039 Dallas	013 Maricopa	107 Tulare	115 Sedgewick	073 Leon
051 Elmore	041 Desha	015 Mohave	109 Tuolumne	117 Summit	075 Levy
053 Escambia	043 Drew	017 Navajo	111 Ventura	119 Teller	077 Liberty
055 Etowah	045 Faulkner	019 Pima	113 Yolo	121 Washington	079 Madison
057 Fayette	047 Franklin	021 Pinal	115 Yuba	123 Weld	081 Manatee
059 Franklin	049 Fulton	023 Santa Cruz	Colorado	125 Yuma	083 Marion
061 Geneva	051 Garland	025 Yavapai	County	Connecticut	085 Martin
063 Greene	053 Grant	027 Yuma	001 Adams	County	087 Monroe
065 Hale	055 Greene	California	003 Alamosa	001 Fairfield	089 Nassau
067 Henry	057 Hempstead	County	005 Arapahoe	003 Hartford	091 Okaloosa
069 Houston	059 Hot Spring	001 Alameda	007 Archuleta	005 Litchfield	093 Okeechobee
071 Jackson	061 Howard	003 Alpine	009 Baca	007 Middlesex	095 Orange
073 Jefferson	063 Independence	005 Amador	011 Bent	009 New Haven	097 Osceola
075 Lamar	065 Izzard	007 Butte	013 Boulder	011 New London	099 Palm Beach
077 Lauderdale	067 Jackson	009 Calaveras	015 Chaffee	013 Pinellas	101 Pasco
079 Lawrence	069 Jefferson	011 Colusa	017 Cheyenne	015 Windham	103 Pinellas
081 Lee	071 Johnson	013 Contra Costa	019 Clear Creek	District of Columbia	105 Polk
083 Limestone	073 Lafayette	015 Del Norte	021 Conejos	Washington	107 Putnam
085 Lowndes	075 Lawrence	017 El Dorado	023 Costilla	001 District of Columbia	109 St. Johns
087 Macon	077 Lee	019 Fresno	025 Crowley	Delaware	111 St. Lucie
089 Madison	079 Lincoln	021 Glenn	027 Custer	County	113 Santa Rosa
091 Marengo	081 Little River	023 Humboldt	029 Delta	001 Kent	115 Sarasota
093 Marion	083 Logan	025 Imperial	031 Denver	003 New Castle	117 Seminole
095 Marshall	085 Lonoke	027 Inyo	033 Dolores	005 Sussex	119 Sumter
097 Mobile	087 Madison	029 Kern	035 Douglas	Florida	121 Suwannee
099 Monroe	089 Marion	031 Kings	037 Eagle	County	123 Taylor
101 Montgomery	091 Miller	033 Lake	039 Elbert	001 Alachua	125 Union
103 Morgan	093 Mississippi	035 Lassen	041 El Paso	003 Baker	127 Volusia
105 Perry	095 Monroe	037 Los Angeles	043 Fremont	005 Bay	129 Wakulla
107 Pickens	097 Montgomery	039 Madera	045 Garfield	007 Bradford	131 Walton
109 Pike	101 Newton	041 Marin	047 Gilpin	009 Brevard	133 Washington
111 Randolph	103 Ouachita	043 Mariposa	049 Grand	011 Broward	Georgia
113 Russell	105 Perry	045 Mendocino	051 Gunnison	013 Calhoun	County
115 St. Clair	107 Phillips	047 Merced	053 Hinsdale	015 Charlotte	001 Appling
117 Shelby	109 Pike	049 Modoc	055 Huerfano	017 Citrus	003 Atkinson
119 Sumter	111 Poinsett	051 Mono	057 Jackson	019 Clay	005 Bacon
121 Talladega	113 Polk	053 Monterey	061 Kiowa		007 Baker
123 Tallapoosa					009 Baldwin

Appendix D - County Codes - Continued

Con.	Con.	Con.	Con.	Con.	Con.
011 Banks	193 Macon	031 Cedar	007 Bear Lake	093 Kendall	063 Hendricks
013 Barrow	195 Madison	033 Cerro Gordo	009 Banewah	095 Knox	065 Henry
015 Bartow	197 Marion	035 Cherokee	011 Bingham	097 Lake	067 Howard
017 Ben Hall	199 Meriwether	037 Chickasaw	013 Blaine	099 La Salle	069 Huntington
019 Berrien	201 Miller	039 Clarke	015 Boise	101 Lawrence	071 Jackson
021 Bibb	205 Mitchell	041 Clay	017 Bonner	103 Lee	073 Jasper
023 Blackley	207 Monroe	043 Clayton	019 Bonneville	105 Livingston	075 Jay
025 Brantley	209 Montgomery	045 Clinton	021 Boundary	107 Logan	077 Jefferson
027 Brooks	211 Morgan	047 Crawford	023 Butte	109 McDonough	079 Jennings
029 Bryan	213 Murray	049 Dallas	025 Cumas	111 McHenry	081 Johnson
031 Bulloch	215 Muscogee	051 Davis	027 Canyon	113 McLean	083 Knox
033 Burke	217 Newton	053 Decatur	029 Caribou	115 Macon	085 Kosciusko
035 Butts	219 Oconee	055 Delaware	031 Cassia	117 Macoupin	087 Lagrange
037 Calhoun	221 Oglethorpe	057 Des Moines	033 Clark	119 Madison	089 Lake
039 Camden	223 Paulding	059 Dickinson	035 Clearwater	121 Marion	091 La Porte
043 Candler	225 Peach	061 Dubuque	037 Custer	123 Marshall	093 Lawrence
045 Carroll	227 Pickens	063 Emmet	039 Elmore	125 Mason	095 Madison
047 Catoosa	229 Pierce	065 Fayette	041 Franklin	127 Massac	097 Marion
049 Charlton	231 Pike	067 Floyd	043 Fremont	129 Menard	099 Marshall
051 Chatham	233 Polk	069 Franklin	045 Gem	131 Mercer	101 Martin
053 Chattahoochee	235 Polaski	071 Fremont	047 Gooding	133 Monroe	103 Miami
055 Chattooga	237 Putnam	073 Greene	049 Idaho	135 Montgomery	105 Monroe
057 Cherokee	239 Quitman	075 Grundy	051 Jefferson	137 Morgan	107 Montgomery
059 Clarke	241 Rabun	077 Guthrie	053 Jerome	139 Moultrie	109 Morgan
061 Clay	243 Randolph	079 Hamilton	055 Kootenai	141 Ogle	111 Newton
063 Clayton	245 Richmond	081 Hancock	057 Latah	143 Peoria	113 Noble
065 Clinch	247 Rockdale	083 Hardin	059 Lemhi	145 Perry	115 Ohio
067 Cobb	249 Schley	085 Harrison	061 Lewis	147 Platt	117 Orange
069 Coffee	251 Screven	087 Henry	063 Lincoln	149 Pike	119 Owen
071 Colquitt	253 Seminole	089 Howard	065 Madison	151 Pope	121 Parke
073 Columbia	255 Spalding	091 Humboldt	067 Minidoka	153 Pulaski	123 Perry
075 Cook	257 Stephens	093 Ida	069 Nez Perce	155 Putnam	125 Pike
077 Coweta	259 Stewart	095 Iowa	071 Oneida	157 Randolph	127 Porter
079 Crawford	261 Sumter	097 Jackson	073 Owyhee	159 Richland	129 Posey
081 Crisp	263 Talbot	099 Jasper	075 Payette	161 Rock Island	131 Pulaski
083 Dade	265 Taliaferro	101 Jefferson	077 Power	163 St. Clair	133 Putnam
085 Dawson	267 Tattall	103 Johnson	079 Shoshone	165 Saline	135 Randolph
087 Decatur	269 Taylor	105 Jones	081 Teton	167 Sangamon	137 Ripley
089 De Kalb	271 Telfair	107 Kokuk	083 Twin Falls	169 Schuyler	139 Rush
091 Dodge	273 Terrell	109 Kosuth	085 Valley	171 Scott	141 St. Joseph
093 Dooley	275 Thomas	111 Lee	087 Washington	173 Shelby	143 Scott
095 Dougherty	277 Tift	113 Linn		175 Stark	145 Shelby
097 Douglas	279 Toombs	115 Louisa	Illinois	177 Stephenson	147 Spencer
099 Early	281 Towns	117 Lucas	County	179 Tazewell	149 Starke
101 Echols	283 Treutlen	119 Lyon	001 Adams	181 Union	151 Steuben
103 Effingham	285 Troup	121 Madison	003 Alexander	183 Vermillion	153 Sullivan
105 Elbert	287 Turner	123 Mahaska	005 Bond	185 Wabash	155 Switzerland
107 Emanuel	289 Twigg	125 Marion	007 Boone	187 Warren	157 Tippecanoe
109 Evans	291 Union	127 Marshall	009 Brown	189 Washington	159 Tipton
111 Fannin	293 Upson	129 Mills	011 Bureau	191 Wayne	161 Union
113 Fayette	295 Walker	131 Mitchell	013 Calhoun	193 White	163 Vanderburgh
115 Floyd	297 Walton	133 Monona	015 Carroll	195 Whiteside	165 Vermillion
117 Forsyth	299 Ware	135 Monroe	017 Cass	197 Will	167 Vigo
119 Franklin	301 Warren	137 Montgomery	019 Champaign	199 Williamson	169 Wabash
121 Fulton	303 Washington	139 Muscatine	021 Christian	201 Winnebago	171 Warren
123 Gilmer	305 Wayne	141 O'Brien	023 Clark	203 Woodford	173 Warrick
125 Glascock	307 Webster	143 Osceola	025 Clay		175 Washington
127 Glynn	309 Wheeler	145 Page	027 Clinton	Indiana	177 Wayne
129 Gordon	311 White	147 Palo Alto	029 Coles	County	179 Wells
131 Grady	313 Whitfield	149 Plymouth	031 Cook	001 Adams	181 White
133 Greene	315 Wilcox	151 Pocahontas	033 Crawford	003 Allen	183 Whitley
135 Gwinnett	317 Wilkes	153 Polk	035 Cumberland	005 Bartholomew	
137 Habersham	319 Wilkinson	155 Pottawattamie	037 De Kalb	007 Benton	Kansas
139 Hall	321 Worth	157 Poweshiek	039 De Witt	009 Blackford	County
141 Hancock		159 Ringgold	041 Douglas	011 Boone	001 Allen
143 Haralson	Hawaii	161 Sac	043 Du Page	013 Brown	003 Anderson
145 Harris	County	163 Scott	045 Edgar	015 Carroll	005 Atchison
147 Hart	001 Hawaii	165 Shelby	047 Edwards	017 Cass	007 Barber
149 Heard	003 Honolulu	167 Sioux	049 Effingham	019 Clark	009 Barton
151 Henry	005 Kauai	169 Story	051 Fayette	021 Clay	011 Bourbon
153 Houston	007 Maui	171 Tama	053 Ford	023 Clinton	013 Brown
155 Irwin	009 Maui	173 Taylor	055 Franklin	025 Crawford	015 Butler
157 Jackson		175 Union	057 Fulton	027 Daviess	017 Chase
159 Jasper	Iowa	177 Van Buren	059 Gallatin	029 Dearborn	019 Chautauqua
161 Jeff Davis	County	179 Wapello	061 Greene	031 Decatur	021 Cherokee
163 Jefferson	001 Adair	181 Warren	063 Grundy	033 De Kalb	023 Cheyenne
165 Jenkins	003 Adams	183 Washington	065 Hamilton	035 Delaware	025 Clark
167 Johnson	005 Allamakee	185 Wayne	067 Hancock	037 Dubois	027 Clay
169 Jones	007 Appanoose	187 Webster	069 Hardin	039 Elkhart	029 Cloud
171 Lamar	009 Audubon	189 Winnebago	071 Henderson	041 Fayette	031 Coffey
173 Lanier	011 Benton	191 Winnechick	073 Henry	043 Floyd	033 Comanche
175 Laurens	013 Black Hawk	193 Woodbury	075 Iroquois	045 Fountain	035 Cowley
177 Lee	015 Boone	195 Worth	077 Jackson	047 Franklin	037 Crawford
179 Liberty	017 Bremer	197 Wright	079 Jasper	049 Fulton	039 Decatur
181 Lincoln	019 Buchanan		081 Jefferson	051 Gibson	041 Dickinson
183 Long	021 Buena Vista	Idaho	083 Jersey	053 Grant	043 Doniphan
185 Lowndes	023 Butler	County	085 Jo Daviess	055 Greene	045 Douglas
187 Lumpkin	025 Calhoun	001 Ada	087 Johnson	057 Hamilton	047 Edwards
189 McDuffie	027 Carroll	003 Adams	089 Kane	059 Hancock	049 Elk
191 McIntosh	029 Cass	005 Bannock	091 Kankakee	061 Harrison	051 Ellis

Appendix D - County Codes - Continued

Cos.	Cos.	Cos.	Cos.	Cos.	Cos.	Cos.
053 Ellsworth	021 Boyle	205 Rowan	009 Essex	065 Ingham	077 Lake of the Woods	
055 Finney	023 Brackeen	207 Russell	011 Franklin	067 Ionia	079 Le Sueur	
057 Ford	025 Breckthitt	209 Scott	013 Hampden	069 Iosco	081 Lincoln	
059 Franklin	027 Breckinridge	211 Shelby	015 Hampshire	071 Iron	083 Lyon	
061 Geary	029 Bullitt	213 Simpson	017 Middlesex	073 Isabella	085 McLeod	
063 Gove	031 Butler	215 Spencer	019 Nantucket	075 Jackson	087 Mahanomen	
065 Graham	033 Caldwell	217 Taylor	021 Norfolk	077 Kalamazoo	089 Marshall	
067 Grant	035 Calloway	219 Todd	023 Plymouth	079 Kalkaska	091 Martin	
069 Gray	037 Campbell	221 Trigg	025 Suffolk	081 Kent	093 Meeker	
073 Greeley	039 Carlisle	223 Trumble	027 Worcester	083 Keweenaw	095 Mille Lacs	
075 Hamilton	041 Carroll	225 Union		085 Lake	097 Morrison	
077 Harper	043 Carter	227 Warren	Maryland	087 Lapeer	099 Mower	
079 Harvey	045 Casey	229 Washington	County	089 Leelanau	101 Murray	
081 Haskell	047 Christian	231 Wayne	001 Allegany	091 Lenawee	103 Nicollet	
083 Hodgeman	049 Clark	233 Webster	003 Anne Arundel	093 Livingston	105 Nobles	
085 Jackson	051 Clay	235 Whitley	005 Baltimore	095 Luce	107 Norman	
087 Jefferson	053 Clinton	237 Wolfe	009 Calvert	097 Mackinac	109 Olmsted	
089 Jewell	055 Crittenden	239 Woodford	011 Caroline	099 Macomb	111 Otter Tail	
091 Johnson	057 Cumberland		013 Carroll	101 Manistee	113 Pennington	
093 Kearny	059 Daviess	Louisiana	015 Cecil	103 Marquette	115 Pine	
095 Kingman	061 Edmonson	County	017 Charles	105 Mason	117 Pipestone	
097 Kiowa	063 Elliott	001 Acadia	019 Dorchester	107 Mecosta	119 Polk	
099 Labette	065 Estill	003 Allen	021 Frederick	109 Menominee	121 Pope	
101 Lane	067 Fayette	005 Ascension	023 Garrett	111 Midland	123 Ramsey	
103 Leavenworth	069 Fleming	007 Assumption	015 Harford	113 Missaukee	125 Red Lake	
105 Lincoln	071 Floyd	009 Avoyelles	027 Howard	115 Monroe	127 Redwood	
107 Linn	073 Franklin	011 Beauregard	029 Kent	117 Montcalm	129 Renville	
109 Logan	075 Fulton	013 Bienville	031 Montgomery	119 Montmorency	131 Rice	
111 Lyon	077 Gallatin	015 Bossier	033 Prince Georges	121 Muskegon	133 Rock	
113 McPherson	079 Garrard	017 Caddo	035 Queen Annes	123 Newaygo	135 Roseau	
115 Marion	081 Grant	019 Calcasieu	037 St. Marys	125 Oakland	137 St. Louis	
117 Marshall	083 Graves	021 Caldwell	039 Somerset	127 Oceana	139 Scott	
119 Meade	085 Grayson	023 Cameron	041 Talbot	129 Ogemaw	141 Sherburne	
121 Miami	087 Green	025 Catahoula	043 Washington	131 Ontonagon	143 Sibley	
123 Mitchell	089 Greenup	027 Claibourne	045 Wicomico	133 Osceola	145 Stearns	
125 Montgomery	091 Hancock	029 Concordia	047 Worcester	135 Oscoda	147 Steele	
127 Morris	093 Harbin	031 De Soto	Independent City	137 Otsego	149 Stevens	
129 Morton	095 Harlan	033 East Baton Rouge	510 Baltimore City	139 Ottawa	151 Swift	
131 Nemaha	097 Harrison	035 East Carroll		141 Presque Isle	153 Todd	
133 Neosho	099 Hart	037 East Feliciana	Maine	143 Roscommon	155 Traverse	
135 Ness	101 Henderson	039 Evangeline	County	145 Saginaw	157 Wabasha	
137 Norton	103 Henry	041 Franklin	001 Androscoggin	147 St. Clair	159 Wadena	
139 Osage	105 Hickman	043 Grant	003 Arrostook	149 St. Joseph	161 Waseca	
141 Osborne	107 Hopkins	045 Iberia	005 Cumberland	151 Sanilac	163 Washington	
143 Ottawa	109 Jackson	047 Iberville	007 Franklin	153 Schoolcraft	165 Watonwan	
145 Pawnee	111 Jefferson	049 Jackson	009 Hancock	155 Shawassee	167 Wukon	
147 Phillips	113 Jessamine	051 Jefferson	011 Kennebec	157 Tuscola	169 Winona	
149 Pottawatomie	115 Johnson	053 Jefferson Davis	013 Knox	159 Van Buren	171 Wright	
151 Pratt	117 Kenton	055 Lafayette	015 Lincoln	161 Washenaw	173 Yellow Medicine	
153 Rawlins	119 Knott	057 Lafourche	017 Oxford	163 Wayne		
155 Reno	121 Knox	059 La Salle	019 Penobscot	165 Wexford	Missouri	
157 Republic	123 Larue	061 Lincoln	021 Piscataquis		County	
159 Rice	125 Laurel	063 Livingston	023 Sagadahoc	Minnesota	001 Adair	
161 Riley	127 Lawrence	065 Madison	025 Somerset	County	003 Andrew	
163 Rooks	129 Lee	067 Morehouse	027 Waldo	001 Aitkin	005 Atchison	
165 Rush	131 Leslie	069 Natchitoches	029 Washington	003 Anoka	007 Audrain	
167 Russell	133 Letcher	071 Orleans	031 York	005 Becker	009 Barry	
169 Saline	135 Lewis	073 Ouachita		007 Beltrami	011 Barton	
171 Scott	137 Lincoln	075 Plaquemines	Michigan	009 Benton	013 Bates	
173 Sedgwick	139 Livingston	077 Pointe Coupee	County	011 Big Stone	015 Benton	
175 Seward	141 Logan	079 Rapides	001 Alcona	013 Blue Earth	017 Bollinger	
177 Shawnee	143 Lyon	081 Red River	003 Alger	015 Brown	019 Boone	
179 Sheridan	145 McCracken	083 Richland	005 Allegan	017 Carlton	021 Buchanan	
181 Sherman	147 McCreary	085 Sabine	007 Alpena	019 Carver	023 Butler	
183 Smith	149 McLean	087 St. Bernard	009 Antrim	021 Cass	025 Caldwell	
185 Stafford	151 Madison	089 St. Charles	011 Arenac	023 Chippewa	027 Callaway	
187 Stanton	153 Magoffin	091 St. Helena	013 Baraga	025 Chisago	029 Camden	
189 Stevens	155 Marion	093 St. James	015 Barry	027 Clay	031 Cape Girardeau	
191 Sumner	157 Marshall	095 St. John The Baptist	017 Bay	029 Clearwater	033 Carroll	
193 Thomas	159 Martin	097 St. Landry	019 Benzie	031 Cook	035 Carter	
195 Trego	161 Mason	099 St. Martin	021 Berrien	033 Cottonwood	037 Cass	
197 Wabunsee	163 Meade	01 St. Mary	023 Branch	035 Crow Wing	039 Cedar	
199 Wallace	165 Menifee	03 Tammany	025 Calhoun	037 Dakota	041 Chariton	
201 Washington	167 Mercer	05 Tangipahoa	027 Cass	039 Dodge	043 Christian	
203 Wichita	169 Metcalf	07 Tenas	029 Charlevoix	041 Douglas	045 Clark	
205 Wilcox	171 Monroe	09 Terrebonne	031 Charboygan	043 Fairbault	047 Clay	
207 Woodson	173 Montgomery	111 Union	033 Chippewa	045 Fillmore	049 Clinton	
209 Wyandotta	175 Morgan	113 Vernison	035 Clare	047 Freeborn	051 Cole	
	177 Muhlenberg	115 Vernon	037 Clinton	049 Goodhue	053 Cooper	
	179 Nelson	117 Washington	039 Crawford	051 Grant	055 Crawford	
	181 Nicholas	119 Webster	041 Delta	053 Hennepin	057 Dade	
	183 Ohio	121 West Baton Rouge	043 Dickinson	055 Hubbard	059 Dallas	
	185 Oldham	123 West Carroll	045 Eaton	057 Iantti	061 Davies	
	187 Owen	125 West Feliciana	047 Emmet	059 Jackson	063 De Kalb	
	189 Owale	127 Winn	049 Genesee	061 Itasca	065 Dent	
	191 Pendleton		051 Gladwin	063 Jackson	067 Douglas	
	193 Perry	Massachusetts	053 Gogebic	065 Kanabec	069 Dunkin	
	195 Filts	County	055 Grand Traverse	067 Kandiyohi	071 Franklin	
	197 Powell	001 Bernstable	057 Griotit	069 Kittson	073 Gasconade	
	199 Puhski	003 Berkshire	059 Hillsdale	071 Koochiching	075 Gentry	
	201 Robertson	005 Bristol	061 Houghton	073 Lac Qui Parle	077 Greene	
	203 Rockcastle	007 Dukes	063 Huron	075 Lake	079 Grundy	

Appendix D - County Codes - Continued

081	Perkins	027	Cookson	041	Hill	103	Kays Falls	095	Hyde	075	Russville
083	Henry	029	Copiah	043	Jefferson	105	Kimbrell	097	Iredell	077	Richland
085	Hickory	031	Covington	045	Jackson	107	Knox	099	Jackson	079	Richmond
087	Holt	033	De Soto	047	Lake	109	Lancaster	101	Johnston	081	Sargent
089	Howard	035	Farrout	049	Lewis and Clark	111	Lincoln	103	Jones	083	Shelby
091	Howell	037	Franklin	051	Liberty	113	Logan	105	Lee	085	Shoux
093	Iron	039	George	053	Linn	115	Loop	107	Lowell	087	Slope
095	Jackson	041	Greene	055	McCone	117	McPherson	109	Linn	089	Stark
097	Jasper	043	Greene	057	Madison	119	Madison	111	McDowell	091	Steele
099	Jefferson	045	Hancock	059	Magher	121	Marrick	113	Macon	093	Stetson
101	Johnson	047	Harrison	061	Manassas	123	Morrill	115	Madison	095	Towner
103	Knox	049	Hinds	063	Mason	125	Morris	117	Martin	097	Traill
105	Laclede	051	Holmes	065	Mason	127	Morris	119	McDonald	099	Wahkiakum
107	Lafayette	053	Murphy	067	Park	129	Muckelbauer	121	Mitchell	101	Ward
109	Lavaca	055	Lebanon	069	Petroleum	131	Otto	123	Montgomery	103	Wells
111	Lewis	057	Hurwaha	071	Phillips	133	Purvis	125	Moore	105	Williams
113	Linn	059	Jackson	073	Powder River	135	Perkins	127	Nash		
115	Linn	061	Jasper	075	Powder River	137	Phelps	129	New Hanover		New Hampshire
117	Livingston	063	Jefferson	077	Powell	139	Pierce	131	Northampton		County
119	McDonald	065	Jefferson Davis	079	Pratt	141	Platte	133	Onondaga	031	Belknap
121	Madison	067	Jones	081	Ravalli	143	Folk	135	Osage	033	Carroll
123	Madison	069	Kemper	083	Richland	145	Red Willow	137	Panama	035	Cherokee
125	Marion	071	Lafayette	085	Roosevelt	147	Richardson	139	Pasquotank	037	Cook
127	Marion	073	Lamar	087	Roosevelt	149	Rack	141	Pender	039	Griffin
129	Marion	075	Lauderdale	089	Sanders	151	Selins	143	Perquimans	041	Hillsboro
131	Miller	077	Lawrence	091	Sheridan	153	Serpy	145	Person	043	Merrimack
133	Mississippi	079	Leake	093	Silver Bow	155	Smathers	147	Putt	045	Rockingham
135	Montana	081	Lee	095	Stillwater	157	Scotts Bluff	149	Polk	047	Sumford
137	Montana	083	Lefflore	097	Sweet Grass	159	Seward	151	Randolph	049	Sullivan
139	Montgomery	085	Lincoln	099	Teton	161	Sheridan	153	Richmond		
141	Morgan	087	Loveland	101	Toole	163	Sherman	155	Robeson		New Jersey
143	New Madrid	089	Madison	103	Tyler	165	Shoux	157	Rockingham		County
145	Newton	091	Marion	105	Valley	167	Stanton	159	Rowan	001	Atlantic
147	Nodaway	093	Marshall	107	Whiteland	169	Thayer	161	Rutherford	003	Bergen
149	Onaga	095	Morroe	109	Wibaux	171	Thomas	163	Sampson	005	Washington
151	Ogawa	097	Montgomery	111	Yellowstone	173	Thurston	165	Scotland	007	Camden
153	Ozark	099	Nebraska	113	Yellowstone	175	Valley	167	Stokes	009	Cape May
155	Panama	101	Nebraska		Park - Part	177	Washington	169	Stokes	011	Cumberland
157	Perry	103	Nebraska		Notre Dame	179	Wayne	171	Surry	013	Essex
159	Pettis	105	Nebraska		County	181	Webster	173	Suain	015	Gloucester
161	Phelps	107	Nebraska		County	183	Whelan	175	Transylvania	017	Hudson
163	Pike	109	Nebraska		County	185	York	177	Tyrell	019	Hunterdon
165	Pike	111	Perry	001	Adams			179	Union	021	Marion
167	Polk	113	Pike	003	Antelope			181	Vance	023	Middlesex
169	Polk	115	Postotoc	005	Arthur		North Carolina	183	Wake	025	Monmouth
171	Putnam	117	Putnam	007	Baker	001	Alamance	185	Warren	027	Morris
173	Rails	119	Quitman	009	Baldwin	003	Alexander	187	Washington	029	Ocean
175	Randolph	121	Randolph	011	Boone	005	Allegheny	189	Watauga	031	Panama
177	Ray	123	Scott	013	Boone	007	Anson	191	Wayne	033	Salem
179	Raymond	125	Shelby	015	Boyd	009	Ash	193	Wayne	035	Somerset
181	Reynolds	127	Simpson	017	Brown	011	Avery	195	Wilson	037	Sussex
183	St. Charles	129	Smith	019	Buffalo	013	Beaufort	197	Yadkin	039	Union
185	St. Clair	131	Spencer	021	Burt	015	Bertie	199	Yancey	041	Warren
187	St. Francis	133	Sandhopper	023	Butler	017	Bladen				
189	St. Louis	135	Tallahatchie	025	Cass	019	Brunswick		North Dakota		New Mexico
191	St. Lawrence	137	Tate	027	Cedar	021	Bacon		County		County
193	Saline	139	Tippah	029	Class	023	Burke	001	Adams	001	Bernalillo
195	Schuyler	141	Tioga	031	Clary	025	Cabernus	003	Barnes	003	Catron
197	Scott	143	Tulsa	033	Cherokee	027	Caldwell	005	Benson	005	Chaves
199	Sevier	145	Union	035	Clay	029	Candlen	007	Billings	007	Colfax
201	Sevier	147	Walsh	037	Colfax	031	Carters	009	Boothman	009	Curry
203	Shelby	149	Warren	039	Cumby	033	Cass	011	Bowman	011	De Baca
205	Shelby	151	Washington	041	Carter	035	Catawba	013	Burke	013	Doña Ana
207	Stoddard	153	Wayne	043	Dakota	037	Chatham	015	Burlingame	015	Eddy
209	Stones	155	Webster	045	Davis	039	Cherokee	017	Cass	017	Grant
211	Sullivan	157	Wilkinson	047	Dawson	041	Chowan	019	Cavalier	019	Guadalupe
213	Taney	159	Winson	049	Deuel	043	Chay	021	Dickey	021	Harding
215	Texas	161	Yalobusha	051	Dixon	045	Cleveland	023	Dixie	023	Hidalgo
217	Vernon	163	Yazoo	053	Dodge	047	Columbus	025	Dunn	025	Lea
219	Warren			055	Douglas	049	Cumby	027	Eddy	027	Lincoln
221	Washington			057	Dundy	051	Cumberland	029	Emmons	029	Los Alamos
223	Wayne		Montana	059	Fillmore	053	Cherokee	031	Golden Valley	031	Luna
225	Webster		County	061	Franklin	055	Dare	033	Grand Forks	033	McKinley
227	Worth	001	Beaverhead	063	Frontier	057	Devils	035	Grant	035	Mora
229	Wright	003	Big Horn	065	Furnas	059	Devils	037	Griggs	037	Otero
	Independent City	005	Blaine	067	Gage	061	Duplin	041	Hatteras	041	Quay
510	St. Louis City	007	Broadwater	069	Gardner	063	Durham	043	Kidder	043	Rio Arriba
	Mississippi	009	Carbon	071	Garfield	065	Edgcombe	045	La Moure	045	Roosevelt
	County	011	Carter	073	Gowen	067	Forsyth	047	Logan	047	Sandoval
001	Adams	013	Cascade	075	Grant	069	Franklin	049	McHenry	049	San Juan
003	Alcona	015	Cherokee	077	Gonzalez	071	Gaston	051	McIntosh	051	San Miguel
005	Armita	017	Custer	079	Hall	073	Gates	053	McKean	053	Santa Fe
007	Attala	019	Dunklin	081	Hamilton	075	Graham	055	McLean	055	Sierra
009	Benton	021	Dawson	083	Harlan	077	Granville	057	Mercer	057	Socorro
011	Bolivar	023	Deer Lodge	085	Hayes	079	Greene	059	Morton	059	Taos
013	Calhoun	025	Fallon	087	Hitchcock	081	Holt	061	Moutrell	061	Torrance
015	Carroll	027	Fergus	089	Holt	083	Halifax	063	Nelson	063	Union
017	Chickasaw	029	Flathead	091	Hooker	085	Harnett	065	Oliver	065	Valencia
019	Choctaw	031	Gallatin	093	Howard	087	Haywood	067	Pembina		
021	Cherokee	033	Garfield	095	Jefferson	089	Henderson	069	Pierce		Nevada
023	Clarke	035	Glacier	097	Johnson	091	Hartford	071	Ransom		County
025	Clay	037	Golden Valley	099	Kearney	093	Hoke	073	Ransom	001	Churchill
		039	Granite	101	Kelth						

Appendix D - County Codes - Continued

003 Clark	015 Brown	017 Canadian	041 Lincoln	007 Providence	079 Lake
005 Douglas	017 Butler	019 Carter	043 Linn	009 Washington	081 Lawrence
007 Elko	019 Carroll	021 Cherokee	045 Malheur		083 Lincoln
009 Esmeralda	021 Champaign	023 Choctaw	047 Marion	South Carolina	085 Lyman
011 Eureka	023 Clark	025 Cimarron	049 Morrow	County	087 McCook
013 Humboldt	025 Clermont	027 Cleveland	051 Multnomah	001 Abbeville	089 McPherson
015 Lander	027 Clinton	029 Coal	053 Polk	003 Aiken	091 Marshall
017 Lincoln	029 Columbiana	031 Comanche	055 Sherman	005 Allendale	093 Meade
019 Lyon	031 Coshocton	033 Cotton	057 Tillamook	007 Anderson	095 Mellette
021 Mineral	033 Crawford	035 Craig	059 Umatilla	009 Bamberg	097 Miner
023 Nyc	035 Cuyahoga	037 Creek	061 Union	011 Barnwell	099 Minnehaha
027 Pershing	037 Darke	039 Custer	063 Wallowa	013 Beaufort	101 Moody
029 Storey	039 Defiance	041 Delaware	065 Wasco	015 Berkeley	103 Pennington
031 Washoe	041 Delaware	043 Dewey	067 Washington	017 Calhoun	105 Perkins
033 White Pine	043 Erie	045 Ellis	069 Wheeler	019 Charleston	107 Potter
Independent City	045 Fairfield	047 Garfield	071 Yamhill	021 Cherokee	109 Roberts
510 Carson City	047 Fayette	049 Garvin		023 Chester	111 Sanborn
	049 Franklin	051 Grady	Pennsylvania	025 Chesterfield	113 Shannon
New York	051 Fulton	053 Grant	County	027 Clarendon	115 Spink
County	053 Gallia	055 Greer	001 Adams	029 Colleton	117 Stanley
001 Albany	055 Geauga	057 Harmon	003 Allegheny	031 Darlington	119 Sully
003 Allegany	057 Greene	059 Harper	005 Armstrong	033 Dillon	121 Todd
005 Bronx	059 Guernsey	061 Haskell	007 Bedford	035 Dorchester	123 Tripp
007 Broome	061 Hamilton	063 Hughes	009 Berks	037 Edgefield	125 Turner
009 Cattaraugus	063 Hancock	065 Jackson	011 Blair	039 Fairfield	127 Union
011 Cayuga	065 Hardin	067 Jefferson	013 Blair	041 Florence	129 Walworth
013 Chautauqua	067 Harrison	069 Johnston	015 Bradford	043 Georgetown	131 Washabaugh
015 Chemung	069 Henry	071 Kay	017 Bucks	045 Greenville	135 Yankton
017 Chenango	071 Highland	073 Kingfisher	019 Butler	047 Greenwood	137 Ziebach
019 Clinton	073 Hocking	075 Kiowa	021 Cambria	049 Hampton	
021 Columbia	075 Holmes	077 Laitimer	023 Cameron	051 Horry	Tennessee
023 Cortland	077 Huron	079 Le Flore	025 Carbon	053 Jasper	County
025 Delaware	079 Jackson	081 Lincoln	027 Centre	055 Kershaw	001 Anderson
027 Dutchess	081 Jefferson	083 Logan	029 Chester	057 Lancaster	003 Bedford
029 Erie	083 Knox	085 Love	031 Clarion	059 Laurens	005 Benton
031 Essex	085 Lake	087 McClain	033 Clearfield	061 Lee	007 Bledsoe
033 Franklin	087 Lawrence	089 McCurtain	035 Clinton	063 Lexington	009 Blount
035 Fulton	089 Licking	091 McIntosh	037 Columbia	065 McCormick	011 Bradley
037 Genesee	091 Logan	093 Major	039 Crawford	067 Marion	013 Campbell
039 Greene	093 Lorain	095 Marshall	041 Cumberland	069 Marlboro	015 Cannon
041 Hamilton	095 Lucas	097 Mayes	043 Dauphin	071 Newberry	017 Carroll
043 Herkimer	097 Madison	099 Murray	045 Delaware	073 Oconee	019 Carter
045 Jefferson	099 Mahoning	101 Muskogee	047 Elk	075 Orangeburg	021 Cheatham
047 Kings	101 Marion	103 Noble	049 Erie	077 Pickens	023 Chester
049 Lewis	103 Medina	105 Nowata	051 Fayette	079 Richland	025 Claiborne
051 Livingston	105 Neigs	107 Okfuskee	053 Forest	081 Saluda	027 Clay
053 Madison	107 Mercer	109 Oklahoma	055 Franklin	083 Spartanburg	029 Cocke
055 Monroe	109 Miami	111 Okmulgee	057 Fulton	085 Sumter	031 Coffee
057 Montgomery	111 Monroe	113 Ome	059 Greene	087 Union	033 Crockett
059 Nassau	113 Montgomery	115 Ottawa	061 Huntington	089 Williamsburg	035 Cumberland
061 New York	115 Morgan	117 Pawnee	063 Indiana	091 York	037 Davidson
063 Niagara	117 Morrow	119 Payne	065 Jefferson		039 Decatur
065 Oneida	119 Muskingum	121 Pittsburg	067 Juniata	South Dakota	041 De Kalb
067 Onondaga	121 Noble	123 Pontotoc	069 Lackawanna	County	043 Dickson
069 Ontario	123 Ottawa	125 Pottawatomie	071 Lancaster	003 Aurora	045 Dyer
071 Orange	125 Paulding	127 Pushmataha	073 Lawrence	005 Beadle	047 Fayette
073 Orleans	127 Perry	129 Roger Mills	075 Lebanon	007 Bennett	049 Fentress
075 Oswego	129 Pickaway	131 Rogers	077 Lehigh	009 Bon Homme	051 Franklin
077 Otsego	131 Pike	133 Seminole	079 Luzerne	011 Brookings	053 Gibson
079 Putnam	133 Portage	135 Sequoyah	081 Lycoming	013 Brown	055 Giles
081 Queens	135 Preble	137 Stephens	083 McKean	015 Brule	057 Grainger
083 Rensselaer	137 Putnam	139 Texas	085 Mercer	017 Buffalo	059 Greene
085 Richmond	139 Richland	141 Tillman	087 Mifflin	019 Butte	061 Grundy
087 Rockland	141 Ross	143 Tulsa	089 Monroe	021 Campbell	063 Hamblen
089 St Lawrence	143 Sandusky	145 Wagoner	091 Montgomery	023 Charles Mix	065 Hamilton
091 Saratoga	145 Scioto	147 Washington	093 Montour	025 Clark	067 Hancock
093 Schenectady	147 Seneca	149 Washita	095 Northampton	027 Clay	069 Hardeeman
095 Schoharie	149 Shelby	151 Woods	097 Northumberland	029 Codrington	071 Hardin
097 Schuyler	151 Stark	153 Woodward	099 Perry	031 Corson	073 Hawkins
099 Seneca	153 Summit		101 Philadelphia	033 Custer	075 Haywood
101 Sieuben	155 Trumbull	Oregon	103 Pike	035 Davison	077 Henderson
103 Suffolk	157 Tuscarawas	County	105 Potter	037 Day	079 Henry
105 Sullivan	159 Union	001 Baker	107 Schuykill	039 Deuel	081 Hickman
107 Tioga	161 Van Wert	003 Benton	109 Snyder	041 Dewey	083 Houston
109 Tompkins	163 Vinton	005 Clackamas	111 Somerset	043 Douglas	085 Humphreys
111 Ulster	165 Warren	007 Claiborne	113 Sullivan	045 Edmunds	087 Jackson
113 Warren	167 Washington	009 Columbia	115 Susquehanna	047 Fall River	089 Jefferson
115 Washington	169 Wayne	011 Coos	117 Tioga	049 Faulk	091 Johnson
117 Wayne	171 Williams	013 Crook	119 Union	051 Grant	093 Knox
119 Westchester	173 Wood	015 Curry	121 Venango	053 Gregory	095 Lake
121 Wyoming	175 Wyandot	017 Deschutes	123 Warren	055 Haakon	097 Lauderdale
123 Yates		019 Douglas	125 Washington	057 Hamlin	099 Lawrence
	Ohio	021 Gilliam	127 Wayne	059 Hand	101 Lewis
County	County	023 Grant	129 Westmoreland	061 Hanson	103 Lincoln
001 Adams	001 Adair	025 Harney	131 Wyoming	063 Harding	105 Loudon
003 Allen	003 Alfalfa	027 Hood River	133 York	065 Hughes	107 McMinn
005 Ashland	005 Atoka	029 Jackson		067 Hutchinson	109 McNairy
007 Ashtabula	007 Beaver	031 Jefferson	Rhode Island	069 Hyde	111 Macon
009 Athens	009 Beckham	033 Josephine	County	071 Jackson	113 Madison
011 Auglaize	011 Blaine	035 Klamath	001 Bristol	073 Jerauld	115 Marion
013 Belmont	013 Bryan	037 Lake	003 Kent	075 Jones	117 Marshall
	015 Caddo	039 Lane	005 Newport	077 Kingsbury	119 Maury

Appendix D - County Codes - Continued

Con.	Con.	Con.	Con.	Con.	Con.
121 Moigs	109 Calhoun	293 Limestone	477 Washington	085 Hancock	830 Williamsburg
123 Monroe	111 Dallas	295 Lipscomb	479 Webb	087 Harico	840 Winchester
125 Montgomery	113 Dallas	297 Leno Oak	481 Wharton	089 Nueces	
127 Moore	115 Dawson	299 Llano	483 Wharton	091 Highland	VT Vermont
129 Morgan	117 Deaf Smith	301 Loving	485 Wichita	093 Isle of Wight	County
131 Morton	119 Delta	303 Lubbock	487 Wilbarger	095 James City	001 Addison
133 Overton	121 Dutton	305 Lynn	489 Willacy	097 King and Queen	003 Bennington
135 Perry	123 De Witt	307 McCulloch	491 Williamson	099 King George	005 Calodonia
137 Pickett	125 Dickens	309 McLennan	493 Wilson	101 King William	007 Chittenden
139 Polk	127 Dinwiddie	311 McMullen	495 Winkler	103 Lancaster	009 Essex
141 Putnam	129 Dooley	313 Madison	497 Wise	105 Lee	011 Franklin
143 Rhea	131 Duval	315 Martin	499 Wood	107 Loudoun	013 Grand Isle
145 Roane	133 Eastland	317 Martin	501 Yoakum	109 Louisa	015 Lamoille
147 Robertson	135 Ector	319 Mason	503 Young	111 Lunenburg	017 Orange
149 Rutherford	137 Edwards	321 Matagorda	505 Zapata	113 Madison	019 Orleans
151 Scott	139 Ellis	323 Maverick	507 Zavala	115 Mathews	021 Rutland
153 Sequestria	141 El Paso	325 Medina		117 Mecklenburg	023 Washington
155 Sevier	143 Erath	327 Menard	Utah	119 Middlesex	025 Windham
157 Shelby	145 Falls	329 Midland	County	121 Montgomery	027 Windsor
159 Smith	147 Fannin	331 Milam	001 Beaver	123 Newsumond	Washington
161 Stewart	149 Fayette	333 Mills	003 Box Elder	125 Nelson	County
163 Sullivan	151 Fisher	335 Mitchell	005 Cache	127 New Kent	001 Adams
165 Sumner	153 Floyd	337 Montague	007 Carbon	131 Northampton	003 Asotin
167 Tipton	155 Ford	339 Montgomery	009 Daggett	133 Northumberland	005 Benton
169 Trousdale	157 Fort Bend	341 Moore	011 Davis	135 Nottingham	007 Chelan
171 Unicoi	159 Franklin	343 Moority	013 Duchesne	137 Orange	009 Chatham
173 Union	161 Freestone	345 Motley	015 Emery	139 Page	011 Clark
175 Van Buren	163 Frio	347 Nacogdoches	017 Garfield	141 Patrick	013 Columbia
177 Warren	165 Galois	349 Navarro	019 Grand	143 Pittsylvania	015 Cowitz
179 Washington	167 Galveston	351 Newton	021 Iron	145 Powhatan	017 Douglas
181 Wayne	169 Garza	353 Nolan	023 Juab	147 Prince Edward	019 Ferry
183 Weekley	171 Gillespie	355 Nueces	025 Kane	149 Prince George	021 Franklin
185 White	173 Glascock	357 Ochiltree	027 Millard	153 Prince William	023 Garfield
187 Williamson	175 Goliad	359 Oldham	029 Morgan	155 Palasti	025 Grant
189 Wilson	177 Gonzales	361 Orange	031 Pinto	157 Rappahannock	027 Grays Harbor
	179 Gray	363 Palo Pinto	033 Rich	159 Richmond	029 Island
Texas	181 Grayson	365 Pecos	035 Salt Lake	161 Roanoke	031 Jefferson
County	183 Gregg	367 Parker	037 San Juan	163 Rockbridge	033 King
001 Anderson	185 Grimes	369 Parmer	039 Seaputa	165 Rockingham	035 Kittap
003 Andrews	187 Guadalupe	371 Pecos	041 Sevier	167 Russell	037 Kittitas
005 Angelina	189 Hale	373 Polk	043 Summit	169 Scott	039 Kittitit
007 Aransas	191 Hall	375 Potter	045 Tooele	171 Shenandoah	041 Lewis
009 Archer	193 Hamilton	377 Presidio	047 Uintah	173 Smyth	043 Lincoln
011 Armstrong	195 Hansford	379 Rains	049 Utah	175 Southampton	045 Mason
013 Atascosa	197 Hardeman	381 Randall	051 Wasatch	177 Spottsylvania	047 Hancock
015 Austin	199 Hardin	383 Reagan	053 Washington	179 Stafford	049 Pacific
017 Bailey	201 Harris	385 Real	055 Wayne	181 Surry	051 Pend Oreille
019 Bandera	203 Harrison	387 Red River	057 Weber	183 Sussex	053 Pierce
021 Bastrop	205 Hartley	389 Reeves		185 Tazewell	055 San Juan
023 Baylor	207 Haskell	391 Refugio	Virginia	187 Warren	057 Skagit
025 Bee	209 Hays	393 Roberts	County	191 Washington	059 Skamania
027 Bell	211 Hemphill	395 Robertson	001 Accomack	193 Westmoreland	061 Snohomish
029 Bexar	213 Henderson	397 Rockwall	003 Albemarle	195 Wise	063 Spokane
031 Blanco	215 Hidalgo	399 Runnels	005 Allegany	197 Wythe	065 Stevens
033 Borden	217 Hill	401 Ruak	007 Amelito	199 York	067 Thurston
035 Bosque	219 Hockley	403 Sabine	009 Amherst	Independent City	069 Wahkiakum
037 Bowie	221 Hood	405 San Augustine	011 Appomattox	510 Alexandria	071 Walla Walla
039 Brazoria	223 Hopkins	407 San Jacinto	013 Arlington	515 Bedford	073 Whatcom
041 Brazos	225 Houston	409 San Patricio	015 Augusta	520 Bristol	075 Whitman
043 Brewster	227 Howard	411 San Saba	017 Bath	530 Buena Vista	Yakima
045 Briscoe	229 Hudspeth	413 Schleicher	019 Bedford	540 Charlottesville	
047 Brooks	231 Hunt	415 Scurry	021 Bland	550 Chesapeake	
049 Brown	233 Hutchinson	417 Shackelford	023 Botetourt	560 Clifton Forge	Wisconsin
051 Burleson	235 Irion	419 Shelby	025 Brunswick	570 Colonial Heights	County
053 Burnet	237 Jack	421 Sherman	027 Buchanan	580 Covington	001 Adams
055 Caldwell	239 Jackson	423 Smith	029 Buckingham	590 Danville	003 Ashland
057 Calhoun	241 Jasper	425 Somervell	031 Campbell	595 Emporia	005 Barron
059 Callahan	243 Jeff Davis	427 Starr	033 Caroline	600 Fairfax	007 Bayfield
061 Cameron	245 Jefferson	429 Stephens	035 Carroll	610 Falls Church	009 Brown
063 Camp	247 Jim Hogg	431 Sterling	036 Charles City	620 Franklin	011 Buffalo
065 Carson	249 Jim Wells	433 Stonewall	037 Charlotte	630 Fredericksburg	013 Burnett
067 Cas	251 Johnson	435 Sutton	041 Chesterfield	640 Galax	015 Calumet
069 Castro	253 Jones	437 Swisher	043 Clarke	650 Hampton	017 Chippewa
071 Chambers	255 Karnes	439 Tarrant	045 Craig	660 Harrisonburg	019 Clark
073 Cherokee	257 Kaufman	441 Taylor	047 Culpeper	670 Hopewell	021 Columbia
075 Childress	259 Kendall	443 Terrell	049 Cumberland	678 Lexington	023 Crawford
077 Clay	261 Kennedy	445 Terry	051 Dickinson	680 Lynchburg	025 Dane
079 Cochran	263 Kent	447 Throckmorton	053 Dinwiddie	690 Martinsville	027 Dodge
081 Coke	265 Kerr	449 Titus	057 Essex	700 Newport News	029 Door
083 Coleman	267 Kimble	451 Tom Green	059 Fairfax	710 Norfolk	031 Douglas
085 Collin	269 King	453 Travis	061 Fauquier	720 Norton	033 Dunn
087 Collingsworth	271 Kinney	455 Trinity	063 Floyd	730 Petersburg	035 Eau Claire
089 Colorado	273 Kleberg	457 Tyler	065 Fluvanna	740 Portsmouth	037 Florence
091 Comal	275 Knox	459 Upshur	067 Franklin	750 Radford	039 Fond Du Lac
093 Comanche	277 Lamar	461 Upton	069 Frederick	760 Richmond	041 Forest
095 Concho	279 Lamb	463 Uvalde	071 Giles	770 Roanoke	043 Grant
097 Cooke	281 Lampasas	465 Val Verde	073 Gloucester	775 Salem	045 Green
099 Coryell	283 La Salle	467 Van Zandt	075 Goochland	780 South Boston	047 Green Lake
101 Cottle	285 Lavaca	469 Victoria	077 Grayson	790 Staunton	049 Iowa
103 Crane	287 Lee	471 Walker	079 Greene	800 Suffolk	051 Iron
105 Crockett	289 Leon	473 Waller	081 Greenville	810 Virginia Beach	053 Jackson
107 Crosby	291 Liberty	475 Ward	083 Halifax	820 Waynesboro	055 Jefferson

Appendix D - County Codes - Continued

Coa.	Coa.	West Virginia County	Coa.	Coa.	Coa.
057 Juneau	099 Price	001 Barbour	041 Lewis	083 Randolph	009 Converse
059 Kenosha	101 Racine	003 Berkeley	043 Lincoln	085 Ritchie	011 Crook
061 Keweenaw	103 Richland	005 Boone	045 Logan	087 Roane	013 Fremont
063 La Crosse	105 Rock	007 Braxton	047 McDowell	089 Summers	015 Goshen
065 Lafayette	107 Rusk	009 Brooke	049 Marion	091 Taylor	017 Hot Springs
067 Langlade	109 St. Croix	011 Cabell	051 Marshall	093 Tucker	019 Johnson
069 Lincoln	111 Sauk	013 Calhoun	053 Mason	095 Tyler	021 Laramie
071 Manitowoc	113 Sawyer	015 Clay	055 Mercer	097 Upshur	023 Lincoln
073 Marathon	115 Shawano	017 Doddridge	057 Mineral	099 Wayne	025 Natrona
075 Marinette	117 Sheboygan	019 Fayette	059 Mingo	101 Webster	027 Niobrara
077 Marquette	119 Taylor	021 Glümer	061 Monongalia	103 Wetzel	029 Park
078 Menominee	121 Trempealeau	023 Grant	063 Monroe	105 Wirt	031 Platte
079 Milwaukee	123 Vernon	025 Greenbrier	065 Morgan	107 Wood	033 Sheridan
081 Monroe	125 Vilas	027 Hampshire	067 Nicholas	109 Wyoming	035 Sublette
083 Oconto	127 Walworth	029 Hancock	069 Ohio		037 Sweetwater
085 Oneida	129 Washburn	031 Hardy	071 Pendleton	Wyoming County	039 Teton
087 Outagamie	131 Washington	033 Harrison	073 Pleasants	001 Albany	041 Uinta
089 Ozaukee	133 Waukesha	035 Jackson	075 Pocahontas	003 Big Horn	043 Washakie
091 Pepin	135 Waupeca	037 Jefferson	077 Preston	005 Campbell	045 Weston
093 Pierce	137 Wauwata	039 Kanawha	079 Putnam	007 Carbon	
095 Polk	139 Winnebago		081 Raleigh		
097 Portage	141 Wood				

APPENDIX D—Continued

ALASKA DIVISION CODES

CODE	DIVISION NAME
010	Aleutian Islands Division
020	Anchorage Division
030	Angoon Division
040	Barrow-North Slope, Division
050	Bethel Division
060	Bristol Bay Borough Division
070	Bristol Bay Division
080	Cordova-McCarthy Division
090	Fairbanks Division
100	Haines Division
110	Juneau Division
120	Kenai-Cook Inlet Division
130	Ketchikan Division
140	Kobuk Division
150	Kodiak Division
160	Kustkokwim Division
170	Matanuska-Susitna Division
180	Nome Division
190	Outer Ketchikan Division
200	Prince of Wales Division
210	Seward Division
220	Sitka Division
230	Skagway-Yakutat Division
240	Southeast Fairbanks Division
250	Upper Yukon Division
260	Valdez-Chitina-Whittier Division
270	Wade Hampton Division
280	Wrangell-Petersburg
290	Yukon-Koyukuk Division

APPENDIX D--Continued

ALASKA PLACES

Place Name	Census Division Code	Borough Code	Place Name	Census Division Code	Borough Code
A			B		
ADAK STATION.....	010	999	BOSWELL BAY.....	080	999
AKAHAMUT.....	270	999	BREVIK MISSION.....	180	999
AKHIOK.....	150	999	BUCKLAND.....	140	999
AKIACHAK.....	050	999	BUTTE.....	170	891
AKIAK.....	050	999	C		
AKOLMIUT.....	050	999	CAMPBELL.....	200	999
AKUTAN.....	010	999	CANDLE.....	140	999
ALAKANUK.....	270	999	CANTWELL.....	290	999
AKEKNAGIK.....	070	999	CANYON VILLAGE.....	250	999
ALLAKAKET.....	290	999	*CAPE LISBURNE.....	040	899
AMBLER.....	140	999	CAPE POLE.....	200	999
*ANAKTUVUK PASS.....	040	899	CENTRAL.....	250	999
ANCHOR POINT.....	120	863	CHAKWAKTOLIK.....	050	999
ANCHORAGE.....	020	827	CHALKYITSIK.....	250	999
ANDERSON.....	290	999	CHANELIAK.....	270	999
ANGOON.....	030	999	CHANILIUT.....	270	999
ANLAK.....	160	999	CHATANIKA.....	090	818
ANNETTE.....	190	999	CHEFORNAK.....	050	999
ANVIK.....	160	999	CHENEGA.....	260	999
ARCTIC VILLAGE.....	250	999	CHEVAK.....	270	999
ATKA.....	010	999	CHICKALOON.....	250	999
ATTU.....	010	999	CHICKEN.....	170	891
AUKE BAY.....	110	836	CHIGNIK.....	010	999
AURORA JOHNSTON.....	090	818	CHIGNIK LAGOON.....	010	999
B			CHIGNIK LAKE.....	010	999
*BARROW.....	040	899	CHISTOCHINA.....	260	999
BASHER.....	020	827	CHITINA.....	260	999
BAY CITY.....	170	891	CHUATHBALUK.....	160	999
BEAVER.....	250	999	CHUGIAK.....	020	827
BELKOFSKI.....	010	999	CIRCLE.....	250	999
BETHEL.....	050	999	CIRCLE HOT SPRINGS.....	250	999
BETTLES.....	290	999	CLAM GULCH.....	120	863
BIG LAKE.....	170	891	CLARKS POINT.....	070	999
BILL MOORES.....	270	999	CLEAR.....	290	999
BIORKA.....	010	999	CLOVER PASS.....	130	872
BIRCH CREEK.....	250	999	COHOE.....	120	863
BIRCHWOOD.....	020	827	COLD BAY.....	010	999
BIRD.....	020	827	COLLEGE.....	090	818

Places indicated with (*) formerly located in the unorganized BOROUGH (CODE 999) are now part of the newly created NORTH SLOPE BOROUGH (CODE 899) and the BARROW-NORTH SLOPE DIVISION (CODE 040).

Place Name	Census Division Code	Borough Code	Place Name	Census Division Code	Borough Code
C			F		
COOPER LANDING.....	210	863	FORT RICHARDSON.....	020	999
COPPER CENTER.....	260	999	FORT WAINWRIGHT.....	090	999
CORDOVA.....	080	999	FORT YUKON.....	250	999
CRAIG.....	200	999	FRITZ COVE.....	110	836
CROOKED CREEK.....	160	999	FRITZ CREEK.....	120	863
D			G		
DEADHORSE.....	040	899	GAKONA.....	260	999
DEERING.....	040	999	GALENA.....	290	999
DELTA JUNCTION.....	240	999	GAMBELL.....	180	999
DILLINGHAM.....	070	999	GEORGETOWN.....	160	999
DIOMEDE.....	180	999	GIRDWOOD.....	020	827
DONNELLY.....	240	999	GLEN ALPS.....	020	827
DOT LAKE.....	240	999	GLENNALLEN.....	260	999
DOUGLAS.....	110	836	GOLOVIN.....	180	999
E			GOOSE BAY.....	170	891
EAGLE.....	250	999	GRAEHL.....	090	818
EAGLE RIVER.....	020	827	GRAYLING.....	160	999
EDNA BAY.....	200	999	GULKANA.....	260	999
EEL.....	050	999	GUSTAVUS.....	230	999
ELEGIK.....	070	999	H		
EIELSON.....	090	818	HAINES.....	100	854
EKLUTNA.....	020	827	HALIBUT COVE.....	120	863
EKUK.....	070	999	HAMILTON.....	270	999
EKWOK.....	070	999	HEALY.....	290	999
ELFIN COVE.....	230	999	HERRING COVE.....	130	872
ELIM.....	180	999	HOLIKACHUK.....	160	999
ELMENDORF.....	020	999	HOLLIS.....	200	999
EMANGUK.....	270	999	HOLY CROSS.....	160	999
ENGLISH BAY.....	120	863	HOMER.....	120	863
ESKA.....	170	891	HOONAH.....	230	999
ESTER.....	090	818	HOOPER BAY.....	270	999
EVANSVILLE.....	290	999	HOPE.....	210	863
F			HOUSTON.....	170	891
FAIRBANKS.....	090	818	HUGHES.....	290	999
FALSE PASS.....	010	999	HUSLIA.....	290	999
FIRE LAKE.....	020	827	HYDABURG.....	200	999
FLAT.....	160	999	HYDER.....	190	999
FORT GREELY.....	240	999			

Place Name	Census		Place Name	Census	
	Division Code	Borough Code		Division Code	Borough Code
I			L		
IGUIGIG.....	070	999	LAKE MINCHUMINA.....	290	999
ILIAMNA.....	070	999	LARSEN BAY.....	150	881
IVANOF BAY.....	010	999	LEMETA.....	090	818
J			LEMON CREEK.....	110	836
JAKOLOF BAY.....	120	863	LENA COVE.....	110	836
JUNEAU.....	110	836	LEVELOCK.....	070	999
K			LIGNITE.....	290	999
KACHEMAK.....	120	863	LIME VILLAGE.....	160	999
KAGUYAK.....	150	881	LIVENGOOD.....	290	999
KAKE.....	280	999	LONG ISLAND.....	170	891
KAKHONAK.....	070	999	LOWER KALSKAG.....	160	999
*KAKTOVIK.....	040	899	LOWER MENDENHALL VALLEY...	110	836
KALSKAG.....	160	999	M		
KALTAG.....	290	999	MANLEY HOT SPRINGS.....	290	999
KARLUK.....	150	881	MANOKOTAK.....	070	999
KASAAN.....	200	999	MARSHALL.....	270	999
KASILOF.....	120	863	MARY'S IGLOO.....	180	999
KENAI.....	120	863	MCGRATH.....	160	999
KETCHIKAN.....	130	872	MCKENZIE PARK.....	170	891
KIANA.....	140	836	MCKINLEY.....	290	999
KING COVE.....	010	999	*MEADE RIVER.....	040	899
KING SALMON.....	060	809	MEAKERVILLE.....	080	999
KIPNUK.....	050	999	MEKORYUK.....	050	999
KIVALINA.....	140	999	MENDENHALL FLATS.....	110	836
KLAWOCK.....	200	999	MENTASTA LAKE.....	260	999
KLUKWAN.....	100	854	METLAKATLA.....	190	999
KODIAK.....	150	881	MINTO.....	290	999
KODIAK STATION.....	150	999	MONTANA.....	170	891
KOKRINES.....	290	999	MOOSE PASS.....	210	863
KOLIGANEK.....	070	999	MOUNT EDGE CUMBE.....	220	845
KONGIGANAK.....	050	999	MOUNTAIN VILLAGE.....	270	999
KOTLIK.....	270	999	MOUNTAIN POINT.....	130	872
KOTZEBUE.....	140	999	MUD BAY.....	130	872
KOYUK.....	180	999	MUMTRAK.....	050	999
KOYUKUK.....	290	999	MYERS CHUCK.....	190	999
KWETHLUK.....	050	999	N		
KWIGILLINGOK.....	050	999	NABESNA.....	240	999
			NAKNEK.....	060	809
			NAPAISKAK.....	050	999
			NAPAKIAK.....	050	999

Place Name	Census		Place Name	Census	
	Division	Borough		Division	Borough
	Code	Code		Code	Code
N			P		
NAVY TOWN.....	010	999	PITKAS POINT.....	270	999
NELSON LAGOON.....	010	999	PLATINUM.....	050	999
NENANA.....	290	999	POINT BAKER.....	200	999
NEWHALEN.....	070	999	*POINT HOPE.....	040	899
NEW STUYAHOK.....	070	999	*POINT LAY.....	040	899
NEWTOK.....	050	999	POINT WHITSHEDE.....	080	999
NIGHTMUTE.....	050	999	PORT ALEXANDER.....	220	845
NIKOLAI.....	160	999	PORT ALSWORTH.....	070	999
NIKOLSKI.....	010	999	PORT CHILKOOT.....	100	854
NINILCHIK.....	120	863	PORT GRAHAM.....	120	863
NOATAK.....	140	999	PORT HEIDEN.....	070	999
NOME.....	180	999	PORT HIGGINS.....	130	872
NONDALTON.....	070	999	PORT LIONS.....	150	881
NOORVIK.....	140	999	PORTAGE.....	020	827
NORTH DOUGLAS.....	110	836	*PRUDHOE BAY.....	040	899
NORTH NENANA.....	290	999			
NORTH POLE.....	090	818	Q		
NORTHEAST CAPE.....	180	999			
NORTHWAY.....	240	999	QUINHAGAK.....	050	999
NULATO.....	290	999			
NYAC.....	050	999	R		
O					
OHGSENAKALE.....	060	809	RAMPART.....	290	999
OHOGAIUT.....	270	999	RED DEVIL.....	160	999
OLD HARBOR.....	150	881	REFUGE COVE.....	130	872
OSCARVILLE.....	050	999	RUBY.....	290	999
OUZINKIE.....	150	881	RUSSIAN MISSION.....	270	999
P			S		
PALMER.....	170	891	ST GEORGE.....	010	999
PAVLOF HARBOR.....	010	999	ST MARYS.....	270	999
PAXSON.....	260	999	ST MICHAEL.....	180	999
PEDRO BAY.....	070	999	ST PAUL.....	010	999
PELICAN.....	230	999	SALMON CREEK.....	110	836
PENINSULA POINT.....	130	872	SAND LAKE.....	020	827
PENNOCK ISLAND.....	130	872	SAND POINT.....	010	999
PERRYVILLE.....	010	999	SAVOONGA.....	180	999
PETERS CREEK.....	020	827	SAXMAN.....	130	872
PETERSBURG.....	280	999	SCAMMON BAY.....	270	999
PILOT POINT.....	070	999	SCOW BAY.....	280	999
PILOT STATION.....	270	999	SELAWIK.....	140	999
			SELDOVIA.....	120	863
			SEWARD.....	210	863

Place Name	Census Division Code	Borough Code
S		
SHAGELUK.....	160	999
SHAKTOLIK.....	180	999
SHELDON POINT.....	270	999
SHEMYA STATION.....	010	999
SHISHMAREF.....	180	999
SHORELINE DRIVE.....	130	872
SHUNGNAK.....	140	999
SHUNGNAK VILLAGE.....	140	999
SITKA.....	220	845
SKAGWAY.....	230	999
SLEETMUTE.....	160	999
SOLDOTNA.....	120	863
SOLOMON.....	180	999
SOUTH BJERREMARK.....	090	818
SOUTH NAKNEK.....	060	809
SPENARD.....	020	827
SQUAW HARBOR.....	010	999
STEBBINS.....	180	999
STERLING.....	120	863
STEVENS VILLAGE.....	250	999
STONY RIVER.....	160	999
SUMMIT.....	170	891
SUNTRANA.....	290	999
SUSITNA.....	170	891
SUTTON.....	170	891
T		
TAKOTNA.....	160	999
TALKEETNA.....	170	891
TANACROSS.....	240	999
TANANA.....	290	999
TANUNAK.....	050	999
TATITLEK.....	260	999
TELLER.....	180	999
TENAKEE SPRINGS.....	030	999
TETLIN.....	240	999
THORNE BAY.....	200	999
TOGLAK.....	070	999
TOK.....	240	999
TOKSOOK BAY.....	050	999
TULUKSAK.....	050	999
TUNTUTULIAK.....	050	999
TWIN HILLS.....	070	999

Place Name	Census Division Code	Borough Code
T		
TYONEK.....	120	863
U		
UGASHIK.....	070	999
UKIVOK.....	180	999
UMIAT.....	040	999
UNALAKLEET.....	180	999
UNALASKA.....	010	999
UNGA.....	010	999
UPPER MENDENHALL VALLEY...	110	836
USIBELLI.....	290	999
USIBELLI MINE.....	290	999
V		
VALDEZ.....	260	999
VENETIE.....	250	999
W		
WAINWRIGHT.....	040	999
WALES.....	180	999
WARD COVE.....	130	872
WASILLA.....	170	891
WEST PETERSBURG.....	280	999
WHITE MOUNTAIN.....	180	999
WHITTIER.....	260	999
WILDWOOD STATION.....	120	999
WILLOW.....	170	891
WOODY ISLAND.....	150	881
WRANGELL.....	280	999
Y		
YAKATAGA.....	080	999
YAKUTAT.....	230	999

APPENDIX E

NAWDEX FREQUENCY CODES

1. (times per year)

2. (times per year)

3. (times per year)

4. (times per year)

5. (times per year)

6. (times per year)

7. (times per year)

8. (times per year)

APPENDIX E

NAWDEX Frequency Codes

<u>CATEGORY</u>	<u>Year-Round</u>	<u>Seasonal</u>	<u>Eliminated</u> <u>1/</u>
Continuous-Recorder Instrument	I	J	L
Continuous-Nonrecorder	C	D	T
Daily	O	P	2
Weekly	W	X	3
Bi-weekly	F	G	4
Monthly	M	N	5
Bi-monthly	H	K	6
Quarterly	Q	R	7
Semiannual (twice per year)	S		8
Annual (once per year)	A		9
Other Periodic (less often than once per year)	B		
Seasonal (no time period specified)		Y	
Data Collected at an irregular or unspecified frequency	Z		
Unique (one-time) measurement	U		
Eliminated Activity	E		

1/ The Eliminated Frequency Codes may be used to indicate that the collection of data for a single parameter, or data component, has been discontinued at a site and that data were being collected at the frequency indicated at the time of discontinuance. These codes are not shown on the data encoding forms. They may therefore, be written beside the appropriate encoding field and circled.

Definition

The following definitions apply to the terms used in this document:
Telemetry - Information transmitted from a remote source to a receiving station.
Telemetry system - A system for transmitting information from a remote source to a receiving station.
Line of sight - A direct line of sight between a transmitting station and a receiving station.
Line of sight telemetry - A telemetry system in which the transmitting station and the receiving station are in direct line of sight.

NAVDEX - A worldwide telemetry system used to relay data from ships and aircraft daily from the ship's command.

NAVTEX (Naval Telemetry System) - A worldwide telemetry system used to relay data from ships and aircraft daily from the ship's command.

NAVEX (Naval Telemetry System) - A worldwide telemetry system used to relay data from ships and aircraft daily from the ship's command.

NAVDEX TELEMETRY CODES

Other - Other telemetry system.

The following system is used in the ship's command.

Telemetry system used in the ship's command.

APPENDIX F

NAWDEX Telemetry Codes

Following are the codes permitted for elements SW_TELEMETRY (C143), GW_TELEMETRY (C243), and QW_TELEMETRY (C343):

<u>Code</u>	<u>Meaning</u>
1	Telemetry-land lines - A telemetry system that uses electrical current conducting wires (telephone, etc.) to transmit data from a station to a distant receiving site.
2	Telemeter-radio network - A telemetry system that uses terrestrial line of sight radios (wireless transmission of electric impulses) to transmit data from a station to a distant receiving point.
3	LANDSAT - A satellite telemetry system used to relay data two or more times daily from in situ sensors.
4	GOES (Geostationary Operational Environmental Satellite) - A satellite telemetry system used to relay data, normally every three hours around the clock, from in situ sensors.
5	DARDC (Device for Automatic Remote Data Collection) - A telemetry system interface normally used to enter in situ sensors data into a landline, line of sight radio, or satellite telemetry system.
6	Other - Other telemetry systems.
7	Two or more systems in use at the site.
8	Telemetry equipment used but type not specified.

- 1. General information - Information concerning the project, including the title, objectives, location, and other pertinent data.
- 2. Research - Information concerning the research project, including the objectives, methods, results, and conclusions.
- 3. Current operations - Information providing information necessary for the management and operation of hydrologic projects, including, but not limited to, water distribution, water disposal, etc. These stations would be operated as long as the project is in operation.
- 4. Engineering - Information concerning the design and construction of hydrologic projects, including, but not limited to, the design and construction of dams, levees, etc.

.APPENDIX G

NAWDEX PURPOSE CODES

- 1. Current operations - Information providing data used for current operations, including, but not limited to, the design and construction of dams, levees, etc.
- 2. Research - Information concerning the research project, including the objectives, methods, results, and conclusions.
- 3. Engineering - Information concerning the design and construction of hydrologic projects, including, but not limited to, the design and construction of dams, levees, etc.

APPENDIX G

NAWDEX Purpose Codes

Following are the codes permitted for elements SW_PURPOSE (C145), GW_PURPOSE (C245), and QW_PURPOSE (C345):

- A Areal analysis - Stations to provide data for the hydrologic definition of an area or basin. These stations would generally be expected to be in operation until satisfactory areal definition is achieved.
- B Benchmark - Stations measuring natural phenomena in areas where man's activity has essentially no effect. These station would be expected to continue at least as long as natural conditions exist.
- C Current Operation - Stations providing information necessary for the management and operation of hydrologic projects, water supplies, pollution abatement, waste disposal, etc. These stations would be operated as long as the specific need exists.
- F Forecasting - Stations to provide data for purpose of forecasting hazardous or critical conditions.
- H Long-term hydrologic - Stations intended for the development of general hydrologic knowledge and/or trends having local as well as transfer value to other points.
- L Compact or legal - Stations providing data used for surveillance or recordkeeping to fulfill legal requirements or compacts.
- R Research or special study - Stations identified with research projects or special studies, including modeling, as part of a specific plan for developing specialized water information. These stations would be operated during the period of the research project or special study.
- S Assessment - Stations operated for the specific purpose of national accounting, or determining trends, or general hydrologic planning.

APPENDIX H

NAWDEX PLANNED/NEEDED CODES

APPENDIX H

NAWDEX Planned/Needed Codes

<u>Code</u>	<u>Meaning</u>
B	Planned to be begun - The establishment of a new station is planned.
R	Planned to be reestablished - The reestablishment of a discontinued station is planned.
D	Planned to be discontinued - An active station is planned to be discontinued.
C	Planned to be changed - A change in the parameter types or frequency of data collection at an active station is planned.
1	Needed to be begun - There is a need for the establishment of a discontinued station.
2	Needed to be reestablished - There is a need for the reestablishment of a discontinued station.
3	Needed to be discontinued - There is a need for discontinuing an active station.
4	Needed to be changed - A change in the parameter types or frequency of data collection at an active site is needed.

APPENDIX I
NETWORK CODES

APPENDIX I

NETWORK CODES

- CQMI - California Surface Water Quality Monitoring Inventory (California Water Resources Control Board)
- NSQN - National Stream Quality Accounting Networks (U.S. Geological Survey)
- NWQS - National Water Quality Surveillance System (U.S. Environmental Protection Agency)
- NWSF - River gages used by the National Weather Service for river and flood forecasting
- NWSP - River gages that the National Weather Service plans to use in river or water-supply forecasting
- NWSS - River gages used by the National Weather Service for water-supply forecasting only

APPENDIX J

HYDROLOGIC UNIT MAPS - MAP ORDER FORM

HYDROLOGIC UNIT MAPS

MAP ORDER FORM

DATE: _____

FROM: Name _____

Street Address _____

City _____ State _____ Zip Code _____

PREPAYMENT REQUIRED

This order must be accompanied by check or money order payable to U.S. Geological Survey. List prices given include cost of surface transportation.

DISCOUNT

On an order amounting to Three Hundred Dollars or more, a 30% discount is allowed. No other discount is applicable.

SURCHARGE

For transmittal of maps outside of the United States (except for Canada and Mexico), a surcharge of 25 percent of the net bill will be added to cover surface transportation. Special service will be charged at full cost of service.

Customers ordering maps of areas located WEST of the Mississippi River including Alaska, Hawaii, Louisiana, Guam and American Samoa—Mail this order form to:

**BRANCH OF DISTRIBUTION, CENTRAL REGION
U.S. GEOLOGICAL SURVEY
BOX 25286, FEDERAL CENTER
DENVER, COLORADO 80225**

Quantity	Available from Geological Survey (Denver)	
	ALASKA	\$1.
	ARIZONA	\$1.25
	ARKANSAS	\$1.
	CALIFORNIA (2 sheets)	per set. \$3.
	COLORADO	\$1.25
	HAWAII	\$1.25
	IDAHO	\$1.25
	IOWA	\$1.
	KANSAS	\$1.25
	LOUISIANA	\$1.25
	MISSOURI	\$1.25
	MONTANA (2 sheets)	per set. \$3.

Quantity	Available from Geological Survey (Denver)	
	NEBRASKA	\$1.25
	NEVADA	\$1.25
	NEW MEXICO	\$1.25
	NORTH DAKOTA	\$1.25
	OKLAHOMA	\$1.25
	OREGON	\$1.25
	SOUTH DAKOTA	\$1.25
	TEXAS (4 sheets)	per set. \$3.50
	UTAH	\$1.25
	WASHINGTON	\$1.25
	WYOMING	\$1.25

Customers ordering maps of areas located EAST of the Mississippi River including Minnesota, Puerto Rico and the Virgin Islands—Mail this order to:

**BRANCH OF DISTRIBUTION, EASTERN REGION
U.S. GEOLOGICAL SURVEY
1200 SOUTH EADS STREET
ARLINGTON, VIRGINIA 22202**

Quantity	Available from Geological Survey (Arlington)
	ALABAMA \$1.
	FLORIDA \$1.25
	GEORGIA \$1.
	ILLINOIS \$1.
	INDIANA \$1.
	KENTUCKY \$1.25
	MAINE \$1.
	MARYLAND, DELAWARE and D. C. \$1.
	MASSACHUSETTS, RHODE ISLAND CONN \$1.
	MICHIGAN (2 sheets) per set. \$3.
	MINNESOTA \$1.25
	MISSISSIPPI \$1.25

Quantity	Available from Geological Survey (Arlington)
	NEW HAMPSHIRE and VERMONT \$1.
	NEW JERSEY \$1.
	NEW YORK \$1.
	NORTH CAROLINA \$1.
	OHIO \$1.
	PENNSYLVANIA \$1.
	SOUTH CAROLINA \$1.
	TENNESSEE \$1.
	VIRGINIA \$1.
	WEST VIRGINIA \$1.
	WISCONSIN \$1.
	* CARIBBEAN REGION \$1.

* includes Puerto Rico and Virgin Islands

USE SPACE BELOW FOR OTHER MAPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



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