

NATIONAL WATER INFORMATION SYSTEM USER'S MANUAL
VOLUME 2, CHAPTER 5. WATER-USE DATA SYSTEM
Part 1. Site-Specific Water-Use Data System (SSWUDS)

Compiled by Sharon B. Mathey

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NATIONAL WATER INFORMATION SYSTEM USER'S MANUAL
VOLUME 2, CHAPTER 5. WATER-USE DATA SYSTEM

Part 1. Site-Specific Water-Use Data System (SSWUDS)

Compiled by
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ABSTRACT

The Water-Use Data System (WUDS) is a water-use data storage and retrieval system. The WUDS is part of the National Water Information System (NWIS), which was developed by the U.S. Geological Survey (USGS). The National Water Information System is a distributed national data base in which data can be processed over a network of minicomputers at USGS offices throughout the United States. This system comprises the Automated Data Processing System, the Ground-Water Site Inventory System, the Water-Quality System, and the WUDS.

This manual reflects the status of WUDS for the 90.2 version of NWIS, and contains user information and discussion on the general operating procedures for the programs found within the WUDS menus. The WUDS comprises two subsystems, the Site-Specific Water-Use Data System (SSWUDS) and the Aggregate Water-Use Data System (AWUDS). This manual documents SSWUDS and covers the following major topics:

- Overall SSWUDS Concepts
- SSWUDS Menu Structures
- SSWUDS Data Entry Program
- SSWUDS Data Dictionary

1 INTRODUCTION

The National Water Information System (NWIS) documentation comprises three volumes to describe the use and operation of NWIS software: Volume 1, Administrator's Manual; Volume 2, User's Manual; and Volume 3, Programmer's Manual. Chapter 5 in each of these manuals pertains to the Water-Use Data System.

This section is an introduction to the Water-Use Data System User's Manual. It presents a management overview, description of the Water-Use Data System (WUDS), data collection, WUDS menus, purpose of the manual, an acknowledgment of personnel who contributed to completing the manual, and a list of suggested references.

1.1 Management Overview

The U.S. Geological Survey investigates the occurrence, quantity, quality, distribution, and movement of the surface and underground water resources of the Nation. Hydrologic data collected during investigations of our resources provide valuable information that can be used for practical management of America's water. Easy access to hydrologic data facilitates the management process.

NWIS is a data storage and retrieval system for hydrologic data collected by the U.S. Geological Survey and its cooperators. The WUDS System is a part of NWIS. The Automated Data Processing System (ADAPS), Quality of Water (QW) System, and Ground-Water Site Inventory (GWSI) comprise the other parts of the NWIS.

1.2 Description of the Water-Use Data System

The WUDS is the data compilation and storage component of the National Water-Use Information Program. WUDS comprises two data-base systems. The first system stores measurements and estimates of water use by individual users, and is called the Site-Specific Water-Use Data System (SSWUDS). The second system stores aggregated estimates of water use by county, hydrologic unit, and aquifer, and is called the Aggregate Water-Use Data System (AWUDS). This manual describes the SSWUDS; documentation for AWUDS exists within the system.

The Water-Use Data System is currently an interactive system on the U.S. Geological Survey's Prime* minicomputer. The system comprises computer programs, which are accessed through a series of menus and prompts.

The WUDS programs are used to enter and update existing water-use data. The programs also provide a way to selectively retrieve and display data that are stored in the District data base. Finally, the WUDS programs are used in performing routine file maintenance.

The programs access a set of data files for each data-base system. The Site-Specific Water-Use Data System accesses data files containing information about various types of measurement points along routes of conveyance in water-use networks. Descriptive information about water users and their measurement points also are a part of the systems. Water-use information is stored in SSWUDS in five types of data files--water user, measurement point, conveyance, annual measurements, and extended data. There are approximately 100 components that make up the descriptive elements of the SSWUDS. The data stored in SSWUDS falls into several broad categories.

"Water User" data describe who used the water, where the water was used, and how the water was used. Data in this category include:

- location of the facility (latitude, longitude, physical address, hydrologic unit),
- contact information (mailing address),
- purpose (use code and Standard Industrial Classification (SIC) code),
- permit number, if any, and
- cross reference to other data files.

* Use of firm names and trade names in this manual is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

"Measurement Point" data describe where the water was withdrawn or returned. Data in this category include:

- location of the withdrawals or returns (State, county, latitude, longitude, hydrologic unit),
- type of water body (name of surface water body, aquifer code, GWSI identification number),
- permits, and
- organization collecting water-quality information.

"Annual Measurements" data describe how much water was used, whether it was saline or fresh, and whether it was treated. Data in this category include:

- amounts (monthly and annual withdrawal and return amounts),
- validity information (accuracy, measuring method, measuring entity),
- salinity code, and
- treatment type.

"Conveyance" data describe how water user, measurement point and annual measurement data are linked. This type of data consists of internal identifiers that are:

- generated by the software and used to establish links among the water user, measurement point, and annual measurement data, and
- used to track the flow of water through a water-use system.

"Extended" data describe how and what types of water are used, and how much of a product is produced in the process. Extended data may also be used to estimate water use if annual measurements data are unavailable. Data in this category include:

- Irrigation crop data (acres irrigated, crop type, amount of water applied),
- Public supply data (connections served by type),
- Power data (power produced monthly, generating capacity), and
- Production data (quantity of product produced monthly).

Detailed information about each of these categories of data is available in the SSWUDS Data Elements Dictionary, which is Section 6 of this report.

1.3 Data Collection Mandate

The U.S. Geological Survey, Water Resources Division, was assigned the responsibility for coordinating the activities of all Federal agencies in the acquisition of certain water data by Bureau of the Budget Circular a-67 in 1964. In fiscal year 1978, Congress charged the Survey with the responsibility for obtaining consistent water-use information and the National Water-Use Information Program (NWUIP) was formed. The NWUIP is a Federal-State cooperative program designed to collect, store, and disseminate water-use data which will complement currently available data on quantity and quality of the Nation's water resources. Mann and others (1982) give a more detailed description of the National Water-Use Information Program.

The collection of water-use data has evolved since 1950 when the USGS began publishing estimated water-use summaries at 5-year intervals, until the present, with a distributed data base where data can be processed over a network of minicomputers at U.S. Geological Survey offices throughout the United States.

1.4 Purpose of the Manual

The purpose of the User's Manual is to document the operating modules of the WUDS system and provide additional operating instructions to the user. The documentation contained in the User's Manual is provided in the directory named WATSTORE>WATER_USE>SWUDS>DOC.

The WUDS User's Manual is updated periodically to reflect the current version of the WUDS system. This manual describes the primary functions of the SSWUDS system of WUDS for version 90.2, and is divided into six sections as follows:

- Abstract and Introduction
- Water-Use Data System (WUDS)
- Site-Specific Water-Use Data System (SSWUDS)
- SSWUDS Menus
- SSWUDS Keydisk Data Entry Program
- SSWUDS Data Dictionary

The Water-Use Data System (WUDS) (section 2 of this manual) describes the main menu of the WUDS system.

The Site-Specific Water-Use Data System (section 3) provides an introduction to the SSWUDS system for the new user, and serves as a reference tool for the experienced user. This section covers the basic concepts of the stored data and the essentials of coding, data entry, data retrieval, and trouble shooting. The Appendix provides a list of specific error codes.

The SSWUDS menus (section 4) describe the interactive menu and submenu options of WUDS. All menu options are explained except for the options under the submenu "ACCESS SSWUDS MAINTENANCE." Maintenance options are discussed in the National Water Information System Administrator's Manual, Volume 1, Chapter 5, Water-Use Data System, an online document.

The SSWUDS KEYDISK Data Entry Program (section 5) describes the functions and use of the KEYDISK data-entry program.

The SSWUDS Data Elements Dictionary (section 6) describes the data elements contained in the Site-Specific Water-Use Data System. Element descriptions include the data element name, coding reference, editing criteria, and definition.

1.5 Acknowledgments

In addition to the authors of the programs within the WUDS System, acknowledgment is given to several people who contributed in terms of software testing, and documentation preparation and revision. These personnel include:

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1.6 Selected References

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VOLUME 2, USER'S MANUAL

CHAPTER 5. WATER-USE DATA SYSTEM

Part 1. Site-Specific Water-Use Data System (SSWUDS)

Section 2. Water-Use Data System (WUDS)

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2 WATER-USE DATA SYSTEM (WUDS)

This section introduces the Water-Use Data System (WUDS) and gives an example of the WUDS menu.

2.1 Introduction

The WUDS System (WUDS) comprises two systems: the Site-Specific Water-Use Data System (SSWUDS) and the Aggregate Water-Use Data System (AWUDS). SSWUDS is a data management system used for storage and retrieval of site-specific water-use data (See sections 3 and 4 for more information on SSWUDS). The data stored in SSWUDS can be retrieved and aggregated for later entry into the AWUDS data base.

2.2 WUDS Menu

The WUDS menu is a Command Procedural Language (CPL) program that executes the SSWUDS and AWUDS systems. To bring up the WUDS menu, type "WUDS" at the command level and choose the system you wish to run. To bypass the WUDS menu, type "WUDS 1" to invoke the SSWUDS main menu or "WUDS 2" to invoke AWUDS. Following is an example of the WUDS menu.

NWIS WATER-USE DATA SYSTEMS (WUDS) REV90.2

WATER-USE SYSTEMS SELECTION MENU

CODE

SELECTIONS

- | | |
|---|-----------------------------------|
| 1 | ACCESS SSWUDS, SITE-SPECIFIC DATA |
| 2 | ACCESS AWUDS, AGGREGATE DATA |

SELECT FROM THE ABOVE LIST OR
ENTER HELP code (for menu selection help), QUIT, or EXIT
(to return to PRIMOS)
:

NWIS 90.2

VOLUME 2, USER'S MANUAL

CHAPTER 5. WATER-USE DATA SYSTEM

Section 3. Site-Specific Water-Use Data System (SSWUDS)

Written by

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3 SITE-SPECIFIC WATER-USE DATA SYSTEM (SSWUDS)

The Site-Specific Water-Use Data System (SSWUDS), formerly known as the State Water-Use Data System (SWUDS), is, as the name implies, a data-base management system used for the storage and retrieval of site-specific water-use data. Data stored in SSWUDS can be extracted and aggregated by county, hydrologic basin, and aquifer for eventual entry into the Aggregate Water-Use Data System (AWUDS).

This section serves as an introduction to the new SSWUDS user, and as a reference tool to the experienced SSWUDS user. This section covers the basic concepts of the stored data and the essentials of coding that data. The primary source of information for this section was found in the State Water-Use Data System User's Manual (John W. Harding, C.A.C.I., Inc., written commun., 1982).

Separate SSWUDS data bases can be maintained for each State, even in multi-State Districts. There are variations in the way each State interprets and stores its data. Hence, to help the SSWUDS user decide the best ways to handle data for local processing needs, this manual addresses those data items which can be entered in different units of measurement or in different formats from State to State.

3.1 Data Processing Concepts

The primary purpose of this section is to provide the SSWUDS user with a foundation of knowledge related to the major concepts of the SSWUDS. This section guides the SSWUDS user through the overall structure of the data base, introduces several SSWUDS concepts through a series of definitions and examples, and explains the basics of coding data for entry into the data base.

This section is divided into three subsections: File Structure Concepts (section 3.1.1), which explains in very general terms the structure of the data base by describing the types of data stored in the SSWUDS and gives a brief definition of each type; Water-Use Systems (section 3.1.2), which gives examples of the various water-use systems; and Data Coding (section 3.1.3), which explains how to code data for entry into the data base and what problems to anticipate.

3.1.1 File Structure Concepts

There are five types of files in the SSWUDS data base. There is one file type for each major category of data which is stored in the SSWUDS data base. The five file types, and hence the major categories of data, are: (1) Water User, (2) Measurement Point, (3) Conveyance, (4) Annual Data, and (5) Extended Data. There is one data-base file for each file type, except for Annual Data, which has a separate file for each year of stored data.

This structure is used because it makes data retrieval more efficient, by not overwhelming the computer system with unmanageable files. For example, the Measurement-Point file may contain data for 10,000 separate sites; thus making this file fairly easy for a minicomputer to handle in a reasonable timeframe. However, if all the data for Annual Measurements were stored in one file with an annual measurement for every measurement point, the data file could be very large, making timely retrieval or editing impossible.

The Water-User file is related to the Measurement-Point file and the Measurement-Point file is related to the Annual-Measurements files through links established internally in the Conveyance file. The Water-User file is related directly to the Extended-Data file by the Water-User identifier.

The relationships allow the SSWUDS user to retrieve data for one specific Water User or one specific Measurement Point together with all related data from the Extended-Data file or the Annual-Measurements files, respectively.

These interrelationships affect the types of data that can be retrieved in the same report. If two files are unrelated, their respective data types cannot be printed in the same report. For example, the Extended-Data file does not contain a source/destination identifier, but is related to the Water-User file through the water-user identifier. Hence, the Extended-Data file cannot be referred to by the Measurement-Point file because the Measurement-Point file references other files only through the source/destination identifier.

3.1.1.1 Introduction

The following subsections describe the major data types. A detailed description of the major data types are presented to give a firm foundation of SSWUDS data concepts before going in depth to the actual coding, entry, and retrieval of data for SSWUDS. For more information on the major data types, refer to the Data Dictionary (section 6).

3.1.1.2 Detailed Description of a Water User

A Water User is an installation, institution, corporation, organization, or individual that uses water. Each Water User has a unique water-user identifier. Examples of Water Users include: domestic households, factories, farms, public suppliers, and waste-treatment facilities.

The water-user identifier is the most important data item in the SSWUDS data base, because it can be used to reference every other type of data. This identifier is assigned to a Water User by the SSWUDS Data-Base Administrator (DBA).

Water-user data, such as name and address of facility, are stored in the SSWUDS water-user file. "A" input records are used to enter "Water User" data. Water-user data must first be entered into the water-user file for new water users before measurement-point, annual-measurement, conveyance, or extended data can be entered into the other data files. Section 6.2 provides a detailed description of the data elements that compose the water-user file.

3.1.1.3 Detailed Description of a Measurement Point

A Measurement Point is the site or location at which data are collected. Measurement-point data should be site-specific if possible. It should represent a single point where water is withdrawn, delivered, released, or returned. Well fields may also be treated as site-specific, as in the case of withdrawals from multiple wells for public supply. A site-specific measurement-point identifier must be a standard NWIS identifier--either a latitude/longitude/sequence number combination, or a downstream order number. Each site-specific measurement point must have a valid corresponding record in the NWIS Site File. Measurement points representing data aggregated on any basis other than well fields must be flagged as an aggregate site (section 3.2.2.1.1). These aggregate measurement points do not require an NWIS site record. In addition to its primary identifier, any measurement point may be alternately identified by an alias identifier (section 3.2.2.1.1). The alias identifier may be used to satisfy the needs of local cooperators who do not wish to change their site identification procedures to conform to USGS standards. The measurement-point identifier is called the source/destination ID. This is a critical data element to verify during the data coding and entry process because the source/destination ID is the link between SSWUDS and the other National Water Information System data bases.

The data collected at the measurement point can be for water withdrawals, deliveries, releases, or returns. The data can be collected at such locations as lakes, streams, ponds, wells, or treatment plants.

3.1.1.4 Detailed Description of Conveyance Data

A Conveyance is the transfer of water from measurement point to measurement point. During the transfer of water from one point to another, there may be a loss (or a possible gain) in the amount of water. The losses or gains are known as conveyance losses or conveyance gains, respectively.

Conveyance data are used to track the flow of water through a water-use system. Conveyances identify the transfer of water from the site of withdrawal to a water user, from a water user to a site of return, or from one water user to another water user.

Conveyance data are stored in the SSWUDS conveyance file. When data for a measurement point are entered into the measurement-points file using a "B1" input record, the software internally enters conveyance data associated with the measurement point into the conveyance file. The primary internal function of conveyance data is to provide internal links from a water user to measurement points, and from measurement points to annual data.

3.1.1.5 Detailed Description of Annual Data

Annual Data is the amount of water measured at each measurement point. As the name implies, annual data are stored by year.

It is up to the individual State or District using SSWUDS to decide how the annual data will be stored, (e.g., as a total of all water measured during the year, as an average amount of water measured per day). The State or District must also decide what units to use for data storage (e.g., million gallons per day, gallons per day).

There is also a provision in the data base to store data on a monthly basis, thus making it possible to identify those months in which usage is high (or low).

Annual-measurement data, such as monthly and annual withdrawal amounts, are stored in the SSWUDS annual-measurement files. "C" input records are used to enter "Annual Measurement" data. Section 6.4 provides a detailed description of the data elements that compose the measurement-points file.

3.1.1.6 Detailed Description of Each Extended Data Type

Extended Data includes irrigation crop data (acres irrigated crop type, amount of water applied), public supply data (connections served by type), production, and power data (power produced monthly, generating capacity).

The extended-data information supplements the Standard Industrial Classification (SIC) codes included in the water-user file to provide a more detailed picture of how water is used. The extended-data file can only be referenced by the water-user ID. Hence, reports including both measurement-point data and extended data are not readily retrievable. Extended data are stored in the SSWUDS extended data files:

- "D" input records are used to enter irrigation data,
- "E" input records are used to enter public-supply/waste-treatment data,
- "F" input records are used to enter power data, and
- "G" input records are used to enter production data.

Sections 6.5 through 6.8 describe the data elements that compose the extended data file for each category of extended data.

3.1.2 Water-Use Systems

A water-use system is a group of conveyances that describe the transfer of water among a network of measurement points and potential measurement points and how the measurement points relate to a water user. The following sections describe each type of measurement point (section 3.1.1.3), and give examples of water-use systems that include each type of measurement point.

3.1.2.1 Introduction

Every water-use system has four potential measurement points: withdrawal, delivery, release, and return; however, not all of these points will be entered into the SSWUDS for each and every water user.

Each of the following subsections gives an example or two of each of the measurement-point types, by describing a potential water-use system.

3.1.2.2 Withdrawal

A withdrawal is the removal of water from a source, such as a stream, lake, or well, for eventual delivery to a water user.

For example, suppose a farmer by the name of Elmo Worrell has a well. Mr. Worrell needs to get water from his well to his barn to provide water for his cows. Hence, he installs a pump at his well and runs a pipe from his pump to the barn. The water drawn by the pump is a withdrawal, and the pipe opening at the pump is the measurement point for recording the actual pumpage, and thus the withdrawal.

For another example, suppose a company named FNT, Inc., needed water for the manufacture of widgets. FNT, Inc., has rights to pump water from a nearby stream, so they install a pump and a pipeline from the stream to their factory. As in the example above, the withdrawal point is at the pump at the stream. The withdrawal is measured by a meter on the pipe located near the pump.

3.1.2.3 Delivery

A delivery is the amount of water delivered to a point of use. One reason that the delivery is defined independently from the withdrawal is because during the transport of the water from point-to-point, there may be a loss (or gain) in the volume of water. Also, the source of the water and the site of the water user may be miles apart.

Taking the example of the farmer used to explain a withdrawal, the delivery point is the barn. Hence, the amount of water delivered is the amount of water received at the barn.

Similarly, the delivery point for the factory in our example is the end of the pipe at the factory, and the delivery amount is the volume of water received at the factory.

3.1.2.4 Release

A release is the amount of water released from a point of use, after use; e.g., into a conduit for eventual return to the environment.

Again, using the example of our farmer, suppose Mr. Worrell uses some of the water pumped to his barn to clean his cows and the floor of the barn. The water runs through grates on the floor of his barn into a small drain pipe. The water exiting the barn through the drain pipe is a release. Mr. Worrell has installed a meter just outside the barn to measure the amount of water entering the pipe. The location of the meter is the measurement point.

Again, using the example of the widget factory, suppose the factory simply uses water for cooling machines and newly forged widgets. After the machines and widgets are cooled, the company passes the water through a large network of coils for cooling down before releasing into a sewage pipe. The company has installed a meter to measure the volume of water being released into the sewage pipe. Again, the location of the meter is the measurement point for the release.

3.1.2.5 Return

A return is water that reaches a ground- or surface-water source, after release from a point of use, and thus becomes available for future use.

Using our example of the farmer, suppose Mr. Worrell's drain pipe runs from his barn and across his farm to a catfish pond. He uses the water to refill his pond, and the solids washed from his barn to supplement the feed for the catfish. The water leaving the pipe and entering the pond is a return. To ensure the integrity of his drain pipe, he meters the water as it exits the pipe.

Again, with the example of the factory, the factory's sewage pipe runs back to the stream from which they made their original withdrawal. The water that enters the stream is a return. The factory measures the amount of water exiting the pipe.

3.1.2.6 Various Combinations of Systems

The valid combinations are Withdrawal/Delivery and Release/Return. These combinations are used when the Withdrawal and Delivery (or Release and Return) points are at the same location, or if they are so close that the difference in location is insignificant. In the case of these combinations, only one measurement point is coded for both the withdrawal and the delivery (or the release and the return), and hence only one annual measurement is recorded.

For example, suppose The John W. Powell Primary School uses water from a well for its cafeteria. The well is only 20 feet from the cafeteria's kitchen. Hence, the distance from the withdrawal point (the well) to the delivery point (the kitchen) is not geographically significant. Thus, only one measurement point is coded for both the withdrawal and the delivery.

For another example, suppose the Big Fud Crab House uses water to wash out their crab shelling machine and filters. The Big Fud Crab House is located on a pier in Beach City. When they wash out their crab shellers, the water runs off the machine and directly into the ocean. Hence, the release and return points are actually at the exact same site. Thus, this site is called a Release/Return point.

3.1.2.7 Conveyance

As previously stated, a conveyance is the transfer of water from one measurement point to another. Many examples of a conveyance have already been given in the section above (e.g., the conveyance of water from Mr. Worrell's well to his barn).

One special case for conveyances is that of public water suppliers. Suppose a public supplier is supplying water to the Big Fud Crab House in our previous example. The point of release of water going to the Crab House is a release in the view of the supplier, but a withdrawal in the view of the Crab House. Similarly, the point that looks like a delivery in the view of the Crab House looks remarkably like a return to the public supplier. In cases like this, only one measurement point is coded for each point; the release on the public supplier's end and the delivery on the Crab House's end, and the two points are shared between these two water users.

3.1.3 Data Coding

This section provides a complete set of blank SSWUDS coding forms and several examples demonstrating how to fill them out. It is very important to refer to the SSWUDS Data Elements Dictionary (section 6) frequently while reading this section.

3.1.3.1 Introduction

This section is intended for use by the District's water-use specialist and the SSWUDS data-base administrator (DBA) as a template for writing a local data coding manual.

3.1.3.2 Coding Forms

The coding forms are organized into a series of independent one-page forms. The particular forms that must be coded to enter a water user into the system are dependent on how the water-use system is being represented, what data are available, and what coding standards have been adopted by a particular State. No single water user will ever require all of the forms listed below. Following is a list of forms available for entering SSWUDS data into the system:

<u>Form Name</u>	<u>Page Number</u>
Water User, General	3-17
Water User, Public-Supplied	3-18
Withdrawal	3-20
Delivery	3-22
Release	3-24
Return	3-26
Withdrawal/Delivery	3-28
Release/Return	3-30
Annual Data, General	3-32
Annual Data, Extended (Irrigation, Public Supplier/Waste Treatment, Power, Production)	3-33

Each SSWUDS form includes items that are precoded. These precoded items are included on the forms to either simplify the coding process, or provide static data necessary for SSWUDS processing (such as record codes). These precoded fields are:

- Record codes (all forms)
- Transaction codes (all forms)
- Source/Destination type (Withdrawal, Delivery, Withdrawal/Delivery, Release, Return, Release/Return, Annual Data--General, and Water User--Public-Supplied forms).
- Action code (Withdrawal, Delivery, Withdrawal/Delivery, Release, Return, Release/Return, Annual Data--General, and Water User--Public-Supplied forms).
- Reclaimed Waste Water (Delivery, Release, and Water User--Public-Supplied forms)
- Measuring Method (Annual Data--General form)
- Accuracy (Annual Data--General form)
- Restrictions (Annual Data--General form)
- Salinity (Annual Data--General form)

Several of these precoded items have options. For instance, the Source Type item on the Delivery form can be either GW, SW, or TW, meaning ground water, surface water, or transferred water, respectively. Circle only the appropriate value, then continue coding the items corresponding to this item. Hence, if selecting GW to describe a delivery from a well, continue by coding a GWSI identifier (ID) and the aquifer items.

Because this is an on-line document, it is impossible to circle precoded items that have options in the following examples (section 3.1.3.4). Therefore, keep in mind that the optional item selected is the one followed by corresponding datum or data. Nonselected items are followed by fields coded as "N/A" and should be disregarded.

On all of the coding forms, there are notes to duplicate columns of data. An example of this type of note is:

DUPLICATE 3-10

There are also numbers at the top of each item's coding box. An example of these numbers are the 1 and 2 shown below:

Record Code

1 2
A 3

These notes and numbers are provided as aids to the persons keying the data for batch entry into SSWUDS. The notes describe the data element to be coded. For example, A3 is one of the valid SSWUDS record codes. The numbers identify the beginning and ending column positions in the data record in which the information should be entered. For example, the record code A3 should be entered beginning in column 1 of the data record and ending in column 2.

A valid agency code on the B1 record is required for all new measurement points. For new site-specific ground- and surface-water measurement-point entries, an NWIS site identifier is also required in the B1 record field source/destination identifier. If the new measurement point being entered is not site-specific (e.g., an estimate of total domestic withdrawals for a city), then the site must be entered as an aggregate using a B0 record. Sites identified as aggregate sites on the B0 record bypass the site-validation test. The B0 record with "A" in column 30 must come immediately before the B1 record for the new entry to be processed and added to the data base as an aggregate site. To process a new entry as site-specific, either leave the aggregate flag field (column 30) blank on the B0 record or do not use the B0 record. If an alias identifier is appropriate, place the identifier in columns 31-45 of the B0 record. For more information on B0 and B1 record data, see sections 3.1.1.3 and 3.2.2.1.1.

SSWUDS CODING FORMS

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	
	M Modify	Water User Name or Description
	D Delete 11	35

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10*		

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
32 51	52 66

FIPS City Code	FIPS County Code	FIPS State Code
67 71	72 74	75 76

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4	DUPLICATE 3-10*

City	State	Zip Code
36 50	51 52	53 61

*Item must be specified to permit computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER PUBLIC SUPPLIED
Page 1 of 2

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	
	M Modify	Water User Name or Description
	D Delete	11 35

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number
36 37 38	43 44	49 50 55 56	64

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10*		

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
32 51	52 66

FIPS City Code	FIPS County Code	FIPS State Code
67 71	72 74	75 76

*Item must be specified to permit computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER
PUBLIC-SUPPLIED
Page 2 of 2

Complete this form for each facility.

WATER USER MAILING ADDRESS

Record Code*

1 2

|A|4|

DUPLICATE 3-10*

Street (if applicable)

11

35

| | | | | | | | | | | | | | | | | | | | | |

City

36

50

State

51

52

Zip Code

53

61

| | | | | | | | | | | | | | | | |

| | |

| | | | | | | | | | |

DELIVERY DESCRIPTION

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action
Code*

11 12

|D|L|

Source
Type*

13 14

|T|W|

15 Supplier id 21

| | | | | | | |

SKIP 22-37

Reclaimed
Waste Water

38

|Y|

|N|

SKIP 39-40

Permit Number

41

49

| | | | | | | | | |

Permitting
Agency

50

54

| | | | | |

Water-Quality
Organization

55

59

| | | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | | |

*Item must be specified to allow computer processing.

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL

Complete this page for each withdrawal.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|W|D|

Source

Source id*

Type*

(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI) 29

| | | | | | | | | | | | | | | | | | | | |

30 Aquifer 37

| | | | | | | | | | | | | | | | |

SKIP 38

13 14

|S|W|

15 Surface water 29

| | | | | | | | | | | | | | | | |

SKIP 30-38

Source
subtype

39 40

| | | |

Permit Number

41 49

| | | | | | | | | | | | | | | | |

Permitting
Agency

50 54

| | | | | | |

Water-Quality
Organization

55 59

| | | | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30 44

| | | | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | |

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30 35

| | | | | | |

Longitude

36 42

| | | | | | |

Hydrologic Unit

43 50

| | | | | | | | | | |

State

51 52

| | |

County

53 55

| | | |

*Item must be specified to permit computer processing.

SITE-SPECIFIC WATER-USE DATA SYSTEM

DELIVERY

Complete this page for each delivery.

Record code*

 1 2
 |B|0|

DUPLICATE 3-10*

Action code*

 11 12
 |D|L|

Destination

Destination id*

Type*

(NWIS site id or aggregate id)

 13 14
 |G|W|

 15 Ground water (GWSI) 29
 | | | | | | | | | | | | | | | |

 13 14
 |S|W|

 15 Surface water 29
 | | | | | | | | | | | | | | | |

Aggregate Flag

Alias Identifier

 30
 |A| aggregate site
 | | site-specific

 31 45
 | | | | | | | | | | | | | | | |

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier. B0 records are not allowed for transferred water records.

SITE-SPECIFIC WATER-USE DATA SYSTEM

DELIVERY

Complete this page for each delivery.

Record code*

 1 2
 |B|1|

DUPLICATE 3-10*

Action code*

 11 12
 |D|L|

Source

Source id*

Type* (NWIS id, if available)

 13 14
 |G|W|

 15 Ground Water (GWSI) 29
 | | | | | | | | | | | | | | | | | | | | |

 30 Aquifer 37
 | | | | | | | | | | | | | | | | | | | | |

SKIP 38

 13 14
 |S|W|

 15 Surface Water 29
 | | | | | | | | | | | | | | | | | | | | |

SKIP 30-38

 13 14
 |T|W|

 15 Supplier id 21
 | | | | | | | | | | | | | | | | | | | | |

SKIP 22-37

Reclaimed Waste Water

 38
 |Y|
 |N|

Permit Number

Permitting Agency

Water-Quality Organization

SKIP 39-40

 41 49
 | | | | | | | | | | | | | | | | | | | | |

 50 54
 | | | | | | | | | | | | | | | | | | | | |

 55 59
 | | | | | | | | | | | | | | | | | | | | |

Record Code*

 1 2
 |B|2|

DUPLICATE 3-29*

Description

 30 44
 | | | | | | | | | | | | | | | | | | | | |

Additional Data

 45 74
 | | | | | | | | | | | | | | | | | | | | |

*Item must be specified to allow computer processing.

RELEASE

Record code*

1 2

11 12

$$|\overline{B}| \overline{0}|$$

DUPLICATE 3-10*

$$\overline{RL}$$

Destination id*

Type*

(NWIS site id or aggregate id)

13 14

15 Ground Water (GWSI)

29

$$\overline{|G|W|}$$

13 14

15 Surface Water

29

SW

Alias Identifier

30

31

45

$$|\bar{A}|$$

aggregate site

□

site-specific

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier.

B0 records are not allowed for transferred water records.

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE

Complete this page for each release.

Record code*

Action code*

1 2

11 12

B	1
---	---

DUPLICATE 3-10*

RL

Destination
Type*

```
Destination id*
3, if available)
```

13 14

15 Ground Water (GWSI) 29

G	W
---	---

SKIP 30-38

13 14

15 Surface Water 29

S	W
---	---

SKIP 30-38

13 14

15 Water User 21

T W

SKIP 22-37

Reclaimed Waste Water

38

$$\begin{array}{|c|} \hline \mathbf{Y} \\ \hline \mathbf{N} \\ \hline \end{array}$$

Permit Number

Permitting
AgencyWater-Quality
Organization

41 49

50 54

55 59

SKIP 39-40

Record Code*

Description

1 2

30 44

B 2

DUPLICATE 3-29*

Additional Data

45 _____ 74

*Item must be specified to allow computer processing.

SITE-SPECIFIC WATER-USE DATA SYSTEM

RETURN

Complete this page for each return.

Record code*

1 2

|B|0|

DUPLICATE 3-10*

Action code*

11 12

|R|T|

Destination

Type*

Destination id*

(NWIS site id or aggregate site)

13 14

15 Ground water (GWSI) 29

|G|W|

| | | | | | | | | | | | | | | |

13 14

15 Surface water 29

|S|W|

| | | | | | | | | | | | | | | |

Aggregate Flag

Alias Identifier

30

|A|

aggregate site

31

| | | | | | | | | | | | | | | |

45

| |

site-specific

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier. B0 records are not allowed for transferred water records.

SITE-SPECIFIC WATER-USE DATA SYSTEM

RETURN

Complete this page for each return.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|T|

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI) 29

| | | | | | | | | | | | | | | | |

30 Aquifer 37

| | | | | | | | | | |

SKIP 38

13 14

|S|W|

15 Surface water 29

| | | | | | | | | | | | | | | | |

SKIP 30-38

Source
subtype

39 40

| | | |

Permit Number

41 49

| | | | | | | | | | |

Agency
Code

50 54

| | | | |

Water-Quality
Organization

55 59

| | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30 44

| | | | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

RETURN LOCATION

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30 35

| | | | |

Longitude

36 42

| | | | |

Hydrologic Unit

43 50

| | | | | | | |

State

51 52

| | |

County

53 55

| | | |

*Item must be specified to permit computer processing.

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/DELIVERY

Complete this page for each withdrawal/delivery.

Record code*

 1 2
 |B|0|

DUPLICATE 3-10*

Action code*

 11 12
 |W|L|

Source

Source id*

Type*

(NWIS site id or aggregate id)

 13 14
 |G|W|

 15 Ground water (GWSI) 29
 | | | | | | | | | | | | | | | | | |

 13 14
 |S|W|

 15 Surface water 29
 | | | | | | | | | | | | | | | | | |

Aggregate Flag

 30
 |A|

aggregate site

| |

sitge-specific

Alias Identifier

31

45

| | | | | | | | | | | | | | | | | |

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier. B0 records are not allowed for transferred water records.

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/DELIVERY

Complete this page for each withdrawal/delivery.

Record code*		Action code*	
1__2	DUPLICATE 3-10*	11__12	
B 1		W L	

Source	Source id*		
Type*	(NWIS id, if available)		
13__14	15__29	30__37	
G W	Ground water (GWSI)	Aquifer	SKIP 38
13__14	15__29	SKIP 30-38	
S W	Surface water		

Source	Permit Number	Agency	Water-Quality
subtype		Code	Organization
39__40	41__49	50__54	55__59

Record Code*	Description
1__2	30__44
B 2	
DUPLICATE 3-29*	

Additional Data	
45__74	

WITHDRAWAL LOCATION

Record Code*	Latitude	Longitude
1__2	30__35	36__42
B 3		
DUPLICATE 3-29*		

Hydrologic Unit	State	County
43__50	51__52	53__55

*Item must be specified to permit computer processing.

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE/RETURN

Complete this page for each release/return.

Record code*

1 2

|B|0|

DUPLICATE 3-10*

Action code*

11 12

|R|E|

Destination

Destination id*

Type*

(NWIS site id or aggregate id)

13 14

15 Ground water (GWSI) 29

|G|W|

| | | | | | | | | | | | | | | | | |

13 14

15 Surface water 29

|S|W|

| | | | | | | | | | | | | | | | | |

Aggregate Flag

Alias Identifier

30

|A| aggregate site

31

| | | | | | | | | | | | | | | | | | 45

| | site-specific

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier.
B0 records are not allowed for transferred water records.

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE/RETURN

Complete this page for each release/return.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|E|

Destination
Type*Destination id*
(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI) 29

| | | | | | | | | | | | | | | |

30 Aquifer 37

| | | | | | | | | |

SKIP 38

13 14

|S|W|

15 Surface water 29

| | | | | | | | | | | | | | | |

SKIP 30-38

Destination
Subtype

39 40

| | | |

Permit Number

41 49

| | | | | | | | | |

Agency
Code

50 54

| | | | |

Water-Quality
Organization

55 59

| | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30 44

| | | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

RETURN LOCATION

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30 35

| | | | |

Longitude

36 42

| | | | |

Hydrologic Unit

43 50

| | | | | | | |

State

51 52

| | |

County

53 55

| | | |

*Item must be specified to permit computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER ANNUAL DATA - GENERAL

Complete this form yearly for each withdrawal, release, etc.

Record Code*	Transaction Code*	User Identifier*	Code*	Source
1 2	3	4 10	11 12	Destination Type*
<u>C</u> <u>1</u>	<u>A</u> Add <u>M</u> Modify <u>D</u> Delete	<u> </u>	<u>W</u> <u>D</u> Withdrawal <u>R</u> <u>T</u> Return <u>D</u> <u>L</u> Delivery <u>R</u> <u>L</u> Release <u>W</u> <u>L</u> With./Del. <u>R</u> <u>E</u> Return/Release	13 14 <u>G</u> <u>W</u> Ground Water <u>S</u> <u>W</u> Surface Water <u>T</u> <u>W</u> Transfer

Source/Destination Identifier*	Year*	Annual Amount	Measuring Method
15 29	30 31	32 41	42
<u> </u>	<u> </u>	<u> </u>	<u>E</u> Estimated <u>M</u> Metered <u>C</u> Calculated

Measuring Entity	Accuracy	Restrictions	Salinity	Treatment Type
43 47	48	49	50	51
<u> </u>	<u>E</u> Excellent <u>G</u> Good <u>F</u> Fair <u>P</u> Poor	<u>Y</u> <u>N</u>	<u>F</u> Fresh <u>S</u> Saline <u>U</u> Unknown	<u> </u>

Record Code*	Other Annual Data
1 2	32 61
<u>C</u> <u>2</u> DUPLICATE 3-31*	<u> </u>

Record Code*	January Amount	February Amount	March Amount
1 2 Duplicate	32 41	42 51	52 61
<u>C</u> <u>3</u> 3-31*	<u> </u>	<u> </u>	<u> </u>

Record Code*	April Amount	May Amount	June Amount
1 2 Duplicate	32 41	42 51	52 61
<u>C</u> <u>4</u> 3-31*	<u> </u>	<u> </u>	<u> </u>

Record Code*	July Amount	August Amount	September Amount
1 2 Duplicate	32 41	42 51	52 61
<u>C</u> <u>5</u> 3-31*	<u> </u>	<u> </u>	<u> </u>

Record Code*	October Amount	November Amount	December Amount
1 2 Duplicate	32 41	42 51	52 61
<u>C</u> <u>6</u> 3-31*	<u> </u>	<u> </u>	<u> </u>

*Item must be specified to allow computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

IRRIGATION APPLICATION

Complete this form yearly for each crop irrigated.

Record Code*	Transaction Code*	Irrigator Identifier*	Year*	Crop Type*
1 <u> </u> 2	3 <u> </u>	4 <u> </u> 10	11 <u> </u> 12	13 <u> </u> 18
D 1	A Add M Modify D Delete	_ _ _ _ _ _ _	_ _	_ _ _ _ _ _

Acres Irrigated	Annual Production	Annual Amount Applied
19 <u> </u> 24	25 <u> </u> 32	33 <u> </u> 40
_ _ _ _ _ _	_ _ _ _ _ _	_ _ _ _ _ _

Record Code*

1 2
|D|2|

DUPLICATE 3-18*

January Amount Applied	February Amount Applied	March Amount Applied
19 <u> </u> 26	27 <u> </u> 34	35 <u> </u> 42
_ _ _ _ _ _	_ _ _ _ _ _	_ _ _ _ _ _
April Amount Applied	May Amount Applied	June Amount Applied
43 <u> </u> 50	51 <u> </u> 58	59 <u> </u> 66
_ _ _ _ _ _	_ _ _ _ _ _	_ _ _ _ _ _

Record Code*

1 2
|D|3|

DUPLICATE 3-18*

July Amount Applied	August Amount Applied	September Amount Applied
19 <u> </u> 26	27 <u> </u> 34	35 <u> </u> 42
_ _ _ _ _ _	_ _ _ _ _ _	_ _ _ _ _ _
October Amount Applied	November Amount Applied	December Amount Applied
43 <u> </u> 50	51 <u> </u> 58	59 <u> </u> 66
_ _ _ _ _ _	_ _ _ _ _ _	_ _ _ _ _ _

*Item must be specified to allow computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

PUBLIC SUPPLIER/
WASTE TREATMENT ANNUAL

Complete this form yearly for each public supplier/waste treatment facility.

Record Code*	Transaction Code*	Facility Identifier*	Year*	SIC Code*
1 2	3	4 10	11 12 13 18	
E 1	A Add M Modify D Delete			

Domestic Population
Served

19 25
| | | | | | |

Agricultural Connections
Served

26 32
| | | | | | |

Commercial Connections
Served

33 39
| | | | | | |

Domestic Connections
Served

40 46
| | | | | | |

Industrial Connections
Served

47 53
| | | | | | |

Irrigation Connections
Served

54 60
| | | | | | |

Power Connections
Served

61 67
| | | | | | |

Mining Connections
Served

68 74
| | | | | | |

*Item must be specified to allow computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

POWER GENERATION

Complete this form yearly for each facility that generates power.

Record Code*	Transaction Code*	Facility Identifier*	Year*	SIC Code*
1 <u> </u> 2	3 <u> </u>	4 <u> </u> 10	11 <u> </u> 12	13 <u> </u> 18
F 1	A Add M Modify D Delete			

Generating Capacity

 19 26
 | | | | | | | |

Annual Power Produced

 27 34
 | | | | | | | |

Record Code*

1 2

|F|2|

DUPLICATE 3-18*

January Power Produced

 19 26
 | | | | | | | |

February Power Produced

 27 34
 | | | | | | | |

March Power Produced

 35 42
 | | | | | | | |

April Power Produced

 43 50
 | | | | | | | |

May Power Produced

 51 58
 | | | | | | | |

June Power Produced

 59 66
 | | | | | | | |

Record Code*

1 2

|F|3|

DUPLICATE 3-18*

July Power Produced

 19 26
 | | | | | | | |

August Power Produced

 27 34
 | | | | | | | |

September Power Produced

 35 42
 | | | | | | | |

October Power Produced

 43 50
 | | | | | | | |

November Power Produced

 51 58
 | | | | | | | |

December Power Produced

 59 66
 | | | | | | | |

*Item must be specified to allow computer processing.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

ANNUAL PRODUCTION

Use this form to report production data for all use codes except power production.

Record Code*	Transaction Code*	Facility Identifier*	Year*	SIC Code*
1 <u> </u> 2 G 1	3 <u> </u> A Add M Modify D Delete	4 <u> </u> 10 _ _ _ _ _ _ _ _	11 <u> </u> 12 _ _	13 <u> </u> <u> </u> 18 _ _ _ _ _ _ _ _
Annual Production				
19 <u> </u> 26 _ _ _ _ _ _ _ _				

Record Code* 1 <u> </u> 2 G 2 DUPLICATE 3-18*		
January Production 19 <u> </u> 26 _ _ _ _ _ _ _ _	February Production 27 <u> </u> 34 _ _ _ _ _ _ _ _	March Production 35 <u> </u> 42 _ _ _ _ _ _ _ _
April Production 43 <u> </u> 50 _ _ _ _ _ _ _ _	May Production 51 <u> </u> 58 _ _ _ _ _ _ _ _	June Production 59 <u> </u> 66 _ _ _ _ _ _ _ _

Record Code* 1 <u> </u> 2 G 3 DUPLICATE 3-18*		
July Production 19 <u> </u> 26 _ _ _ _ _ _ _ _	August Production 27 <u> </u> 34 _ _ _ _ _ _ _ _	September Production 35 <u> </u> 42 _ _ _ _ _ _ _ _
October Production 43 <u> </u> 50 _ _ _ _ _ _ _ _	November Production 51 <u> </u> 58 _ _ _ _ _ _ _ _	December Production 59 <u> </u> 66 _ _ _ _ _ _ _ _

*Item must be specified to allow computer processing.

3.1.3.3 Coding Requirements

Several fundamental coding requirements must be understood before a SSWUDS user can begin coding data. Coding requirements are necessary to meet (a) SSWUDS functional requirements, (b) NWIS functional requirements and related national policies, and (c) locally defined requirements and policies.

To meet SSWUDS functional requirements, a minimum set of items must be coded and entered. These mandatory items are marked with an asterisk (*) on the coding forms. Examples of mandatory items are the Water-User Identifier, which is necessary to relate water-user information to measurement-point information, and the Source/Destination Identifier, which relates the measurement-point information to the annual-measurements data.

The Source/Destination Identifier is one of the key mandatory items. Not only does it link elements of the SSWUDS data base, but it also relates data in the SSWUDS data base to the other NWIS data bases. Because this item is the primary link between SSWUDS and the other NWIS data bases, a Source/Destination identifier for each measurement point must be entered into the NWIS Site File as a site identifier before the identifier can be entered into SSWUDS. When entering the site identifier, you also must provide an agency code. This agency code must correspond to the Permitting Agency in the SSWUDS Measurement Points file. For more information on developing site identifiers and entering site identifiers and agency codes, refer to the GWSI Coding Instructions (Babcock and others, 1990).

Before coding data, decide what units of measure to use for items such as annual amount. For example, determine prior to coding whether data will be stored in thousands of gallons, millions of gallons, or thousands of gallons per day. A list of locally defined rules should be written and appended to the end of this section for future use. Other items that can be locally defined are discussed in sections 3.1.3.6 and 3.1.3.7.

3.1.3.4 Coding Procedures for Each Form

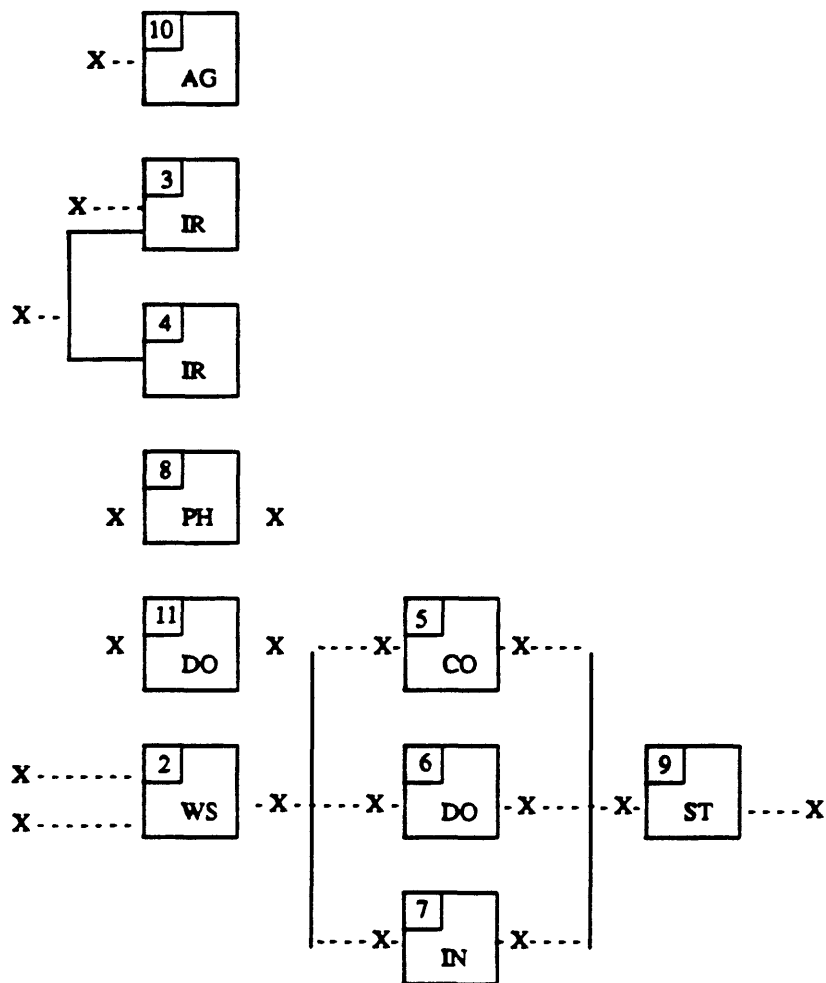
Coding data on forms is tedious; however, it is an important job related to SSWUDS data entry. Therefore, this subsection gives very detailed examples of how to code data for each form for many different types of water-use systems. These examples are not intended to recommend coding standards to a State or District; rather they are designed to demonstrate how various water-use systems can be represented in the SSWUDS framework.

Since this subsection deals primarily with determining which forms should be coded to represent various coding situations only, it is recommended that the Data Dictionary (section 6) be used frequently for additional information concerning individual data items.

The following pages briefly explain the water-use system being represented, and present the completed coding forms. A schematic diagram for each system presented is also shown for reference.

3.1.3.4.1 Schematic of Demonstration Data Base Entries

Following is a schematic overview of all the sample cases presented in this section:



Explanation:



Water user (facility identifier in upper left corner)

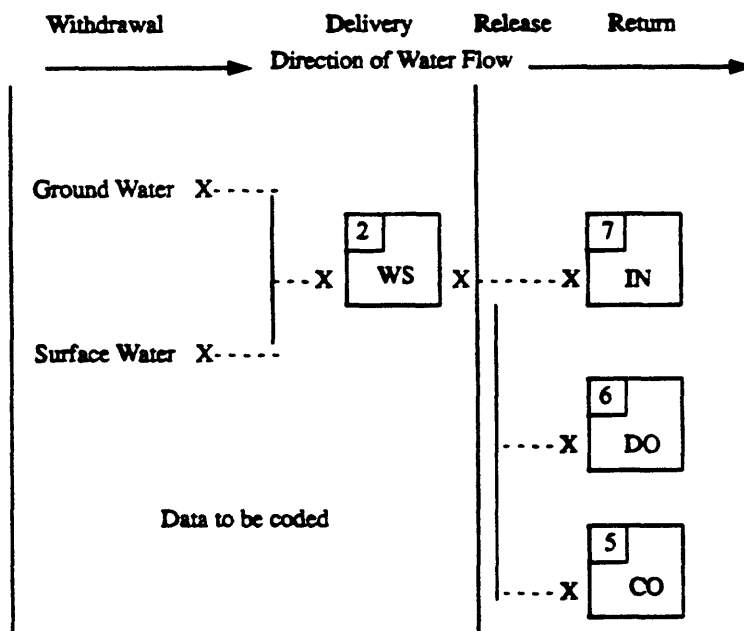
X Measurement Point
 -- Conveyance of Water
 AG Agriculture
 IR Irrigation
 PH Power Hydroelectric

DO Domestic
 WS Water Supplier
 CO Commercial
 IN Industrial
 ST Waste (sewage) Treatment

Figure 1.--Overview of demonstration data base entries

3.1.3.4.2 Public Water Supplier

The water user (public water supplier) in the following example is withdrawing water from two natural sources, and is releasing water into the supply system from which three water users are receiving a delivery. As previously described (section 3.1.2.7), this example shows shared measurement points and a transfer of water.



Explanation:

X Measurement Point



Water user

Water Conveyance

Figure 2.--Sample public water supplier

To represent this water-use system with SSWUDS coding forms, the following form types must be submitted:

- 1 - Water-User form
- 2 - Withdrawal forms
- 2 - Delivery forms
- 3 - Release forms

Note that the measurement points associated with the three publicly-supplied water-users, labeled Return/Delivery, are not coded at this time. They will be handled as deliveries at a later time when the individual water users are entered.

The following pages contain the coding forms necessary to enter this water user into the network.

PUBLIC WATER SUPPLIER

Water User Form

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*	
1 2	3	4 10	
A 1	A Add M Modify D Delete	2	
	11	Water User Name or Description	35
		T R I - C O U N T Y W A T E R A U T H	

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
W S	4 9 4 1		W 3 7 8 2	A L 0 0 1

Record Code*	Other Water User Descriptive Information	
1 2	11	40
A 2	DUPLICATE 3-10*	

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10* 3 1 0 2 0 0	0 8 5 1 3 0 0	0 3 1 3 0 0 1 2

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
---	---------------------------------------

32	51	52	66
5 4 0 0 N M O R G A N S T		G O R D O N	

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
1 4 1 0	0 6 9	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)	
1 2	11	35
A 4	DUPLICATE 3-10* P O B O X 1 0 7 1	

City	State	Zip Code
36	51 52	53
G O R D O N	A L	3 6 3 4 3

*Item must be specified to permit computer processing.

-

PUBLIC WATER SUPPLIER (continued)

Ground-Water Withdrawal

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL

Complete this page for each withdrawal.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|W|D|

Source

Source id*

Type*

(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI) 29

|3|1|3|0|0|0|0|8|5|0|8|0|0|0|1|

30 Aquifer 37

|1|2|4|0|C|A|L| SKIP 38

13 14

|S|W|

15 Surface water 29

|N|/|A| | | | | | | | | | | | | | |

SKIP 30-38

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40

|W|E|

41 49

| | | | | | | | | | |

50 54

|A|L|0|0|7|

55 59

| | | | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | |

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30 35

|3|1|3|0|0|0|

Longitude

36 42

|0|8|5|0|8|0|0|

Hydrologic Unit

43 50

|0|3|1|3|0|0|1|2|

State

51 52

|0|1|

County

53 55

|0|6|9|

*Item must be specified to permit computer processing.

-

DOMESTIC SELF-SUPPLIED (continued)

Withdrawal/Delivery form

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL

Complete this page for each withdrawal.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|W|D|

Source

Source id*

Type*

(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI)

29

|N|/|A| | | | | | | | | |

30 Aquifer

37

| | | | | | | | | |

SKIP 38

13 14

|S|W|

15 Surface water

29

|0|2|0|0|1|5|0|0| | | | | |

SKIP 30-38

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40

|S|T|

41 |N|/|A| | | | | |

49

50 |A|L|0|0|7|

54

55 | | | | |

59

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | |

Additional Data

45

74

|W|D| |F|R|O|M| |B|I|G| |B|R|U|S|H| |S|T|R|E|A|M| | | | |

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30

35

|3|1|2|4|0|0|

Longitude

36

42

|0|8|6|1|1|4|5|

Hydrologic Unit

State

County

43

50

|0|3|1|4|0|2|0|2|

51

52

|0|1|

53

55

|0|3|1|

*Item must be specified to permit computer processing.

PUBLIC WATER SUPPLIER (continued)

Delivery from
Ground-Water Withdrawal

SITE-SPECIFIC WATER-USE DATA SYSTEM

DELIVERY

Complete this page for each delivery.

Record code*

Action code*

1 2

11 12

|B|1|

DUPLICATE 3-10*

|D|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14

15 Ground Water (GWSI)

29

30 Aquifer 37

|G|W|

|3|1|3|0|0|0|0|8|5|0|8|0|0|0|1|

|1|2|4|O|C|A|L|

SKIP 38

13 14

15 Surface Water

29

|S|W|

|N|/|A| | | | | | | | | | | | | |

SKIP 30-37

13 14

15 Supplier id 21

Reclaimed Waste Water

|T|W|

|N|/|A| | | | |

SKIP 22-37

38

|Y|

|N|

Permit Number

Agency
Code

Water-Quality
Organization

41 49

50 54

55 59

SKIP 39-40

| | | | W|3|7|8|2|

|A|L|0|0|7|

|A|L|0|0|7|

Record Code*

Description

1 2

30

44

|B|2|

DUPLICATE 3-29*

| | | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | | |

PUBLIC WATER SUPPLIER (continued)

Delivery from

Surface-Water Withdrawal

SITE-SPECIFIC WATER-USE DATA SYSTEM

DELIVERY

Complete this page for each delivery.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|D|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14

15 Ground Water (GWSI)

29

30

Aquifer

37

|G|W|

|N|/|A|

|

|

|

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|

|

|

|

|

|

|

|

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|

|

|

|

|

|

SKIP 38

13 14

15 Surface Water

29

|S|W|

|0|2|0|0|1|5|0|0|

|

|

|

|

|

|

|

|

SKIP 30-38

13 14

15 Supplier id 21

Reclaimed Waste Water

|T|W|

|N|/|A|

|

|

|

|

|

|

|

|

SKIP 22-37

38

|Y|

|N|

Permit Number

Agency
Code

Water-Quality
Organization

41

49

50

54

55

59

SKIP 39-40

|

|

|

|W|3|7|8|2|

|

|

|

|

|A|L|0|0|7|

|

|

|

|

|

|

|

|

|

|

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

|

|

|

|

|

|

|

|

|

|

|

|

|

Additional Data

45

74

|D|L|

|

|F|R|O|M|

|

|B|I|G|

|

|B|R|U|S|H|

|

|S|T|R|E|A|M|

|

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|

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|

|

*Item must be specified to allow computer processing.

PUBLIC WATER SUPPLIER (continued)

Release Form

Water User 2 Releases to Water User 5

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE

Complete this page for each release.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|L|

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

|G|W|

15 Ground Water (GWSI)

29

|N|/|A| | | | | | | | | |

SKIP 30-38

13 14

|S|W|

15 Surface Water

29

|N|/|A| | | | | | | | | |

SKIP 30-38

13 14

|T|W|

15 Water User 21

Reclaimed Waste Water

|5| | | | | | | | | |

SKIP 22-37

38 39

|Y|

|N|

Permit Number

41

49

| | | | |W|3|7|8|2|

Agency

Code

50

54

|A|L|0|0|7|

Water-Quality

Organization

55

59

|A|L|0|0|7|

SKIP 39-40

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | |

PUBLIC WATER SUPPLIER (continued)

Release Form

Water User 2 Releases to Water User 6

RELEASE

SSWUDS Description/Forms

PUBLIC WATER SUPPLIER (continued)

Release Form

Water User 2 Releases to Water User 7

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE

Complete this page for each release.

Record code*

Action code*

1 2

11 12

|B|1|

DUPLICATE 3-10*

|R|L|

Destination

Destination id*

Type*

(NWIS id, if available)

13 14

15 Ground Water (GWSI) 29

|G|W|

|N|/|A| | | | | | | | | | | |

SKIP 30-38

13 14

15 Surface Water 29

|S|W|

|N|/|A| | | | | | | | | | | |

SKIP 30-38

13 14

15 Water User 21

|T|W|

|7| | | | | | |

SKIP 22-37

Reclaimed Waste Water

38 39

|Y|

|N|

Permit Number

Agency

Code

Water-Quality

Organization

41 49

50 54

55 59

SKIP 39-40

| | | | |W|3|7|8|2|

|A|L|0|0|7|

|A|L|0|0|7|

Record Code*

Description

1 2

30

44

|B|2|

DUPLICATE 3-29*

| | | | | | | | | | | | | | | |

Additional Data

45

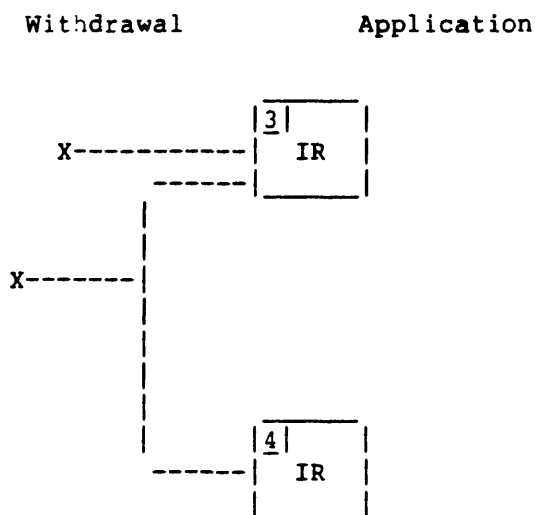
74

| | | | | | | | | | | | | | | | | | | | | |

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3.1.3.4.3 Irrigation

The two water users in this example are irrigating crops with water withdrawals from two ground-water sources, one of which is shared by the two users. Measurements are being conducted at the site of the withdrawals. The withdrawal used exclusively by water-user No. 3 could, for example, be a simple center pivot system, while the shared withdrawal might involve a longer supply conveyance.



To represent these data with SSWUDS coding forms, the following form types must be submitted:

- 3 - Withdrawal/Delivery forms
- 2 - Water-User forms

IRRIGATION (continued)
Water-User form (user #3)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	3
	M Modify	Water User Name or Description
	D Delete	11 35
		W I L L I A M D U N N F A R M

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
I R	0 1 3 9	0 1 1 5		

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10* 3 1 0 0 0 0	0 8 5 1 5 0 0	0 3 1 3 0 0 1 2

Location of Water User (Route #,
Highway, Street, etc., if applicable)

Rural Community,
Town or City Name

32 51	52 66
A L H W Y 5 3	C O T T O N W O O D

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
0 7 9 0	0 6 9	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4	DUPLICATE 3-10* R O U T E 7

City	State	Zip Code
36 50	51 52	53 61
D O T H A N	0 1	3 6 3 0 1

*Item must be specified to permit computer processing.

-

IRRIGATION (continued)

Withdrawal/Delivery form

WITHDRAWAL/
DELIVERY

SSWUDS Description/Forms

IRRIGATION (continued)
Withdrawal/Delivery form

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/
DELIVERY

Complete this page for each withdrawal.

Record code*

Action code*

1 2

11 12

|B|1|

DUPLICATE 3-10*

|W|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14

15 Ground water (GWSI) 29

30 Aquifer 37

|G|W|

|3|1|2|0|0|0|0|8|5|1|5|0|0|0|1|

| | | | | | | |

SKIP 38

13 14

15 Surface water 29

|S|W|

|N|/|A| | | | | | | | | | |

SKIP 30-38

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40

41 49

50 54

55 59

| | |

| | | | | | | | | |

|A|L|0|0|7|

| | | | |

Record Code*

Description

1 2

30 44

|B|2|

DUPLICATE 3-29*

| | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

Record Code*

Latitude

Longitude

1 2

30 35

36 42

|B|3|

DUPLICATE 3-29*

|3|1|0|0|0|0|

|0|8|5|1|5|0|0|

Hydrologic Unit

State

County

43 50

51 52

53 55

|0|3|1|3|0|0|1|2|

|0|1|

|0|6|9|

*Item must be specified to permit computer processing.

IRRIGATION (continued)

Water-User No. 4

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add M Modify D Delete	4
	11	Water User Name or Description
		35
		C H A R L E S G O O D E F A R M

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
I R	0 3 1 9	0 1 1 5		

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10* 3 1 0 2 0 0	0 8 5 1 3 0 0	0 3 1 3 0 0 1 2

Location of Water User (Route #,
Highway, Street, etc., if applicable)

Rural Community,
Town or City Name

32 51	52 66
H O U S T O N C O 7 5	G O R D O N

FIPS City Code	FIPS County Code	FIPS State Code
67 71	72 74	75 76
1 4 1 0	0 6 9	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)	
1 2	11 35	
A 4	DUPLICATE 3-10* R O U T E 1	
City	State	Zip Code
36 50	51 52	53 61
G O R D O N	A L	3 6 3 4 3

*Item must be specified to permit computer processing.

IRRIGATION (continued)
Withdrawal/Delivery form

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/
DELIVERY

Complete this page for each withdrawal.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|W|L|

Source

Type*

Source id*

(NWIS id, if available)

13 14

|G|W|

15

Ground water (GWSI)

29

|3|1|0|2|0|0|0|8|5|1|3|0|0|0|0|

30

Aquifer

37

|1|2|4|0|C|A|L|

SKIP 38

13 14

|S|W|

15

Surface water

29

|N|/|A| | | | | | | | | | | |

SKIP 30-38

Source
subtype

39 40

| | |

Permit Number

41

49

| | | | | | | | | |

Agency
Code

50

54

|A|L|0|0|7|

Water-Quality
Organization

55

59

| | | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | | |

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30

35

|3|1|0|2|0|0|

Longitude

36

42

|0|8|5|1|3|0|0|

Hydrologic Unit

43

50

|0|3|1|3|0|0|1|2|

State

51

52

|0|1|

County

53

55

|0|6|9|

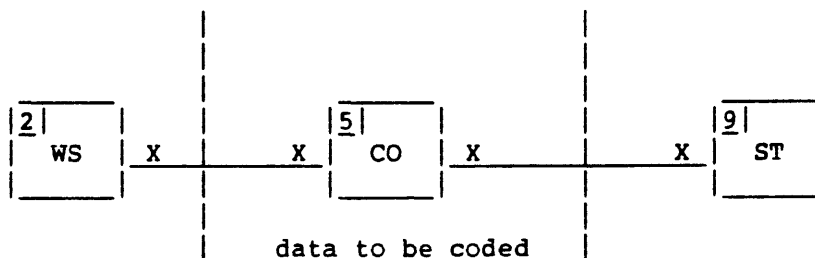
*Item must be specified to permit computer processing.

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3.1.3.4.4 Public-Supplied Commercial

The water user in the following example is a commercial motel, which is supplied by a public water supplier and returns water to a public waste treatment facility.

Commercial



In order to represent this water user with SSWUDS coding forms, the following forms should be coded:

- 1 - Water User form
- 1 - Delivery form
- 1 - Release form

Note that the measurement points which are theoretical "withdrawal" and "return" points for user 5 are not coded at this time; they will be entered with the data for water users 2 and 9, respectively.

COMMERCIAL (continued)

Water User form

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	5
	M Modify	Water User Name or Description
	D Delete	11 35
		E C O N O L O D G E M O T E L

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
C O	7 0 1 1	7 0 2 1		

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2 DUPLICATE 3-10*	

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3 DUPLICATE 3-10*	3 1 2 1 4 5	0 8 5 5 8 4 5	0 3 1 4 0 2 0 2

Location of Water User (Route #,
Highway, Street, etc., if applicable)

Rural Community,
Town or City Name

32 51	52 66
1 1 2 5 W B R O A D S T R E E T	S A M S O N

FIPS City Code

FIPS County Code

FIPS State Code

67 71
0 6 9 9 1

72 74
0 3 1

75 76
0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4 DUPLICATE 3-10*	P O B O X 9 3 9

City	State	Zip Code
36 50	51 52	53 61
S A M S O N	A L	3 6 4 7 7

*Item must be specified to permit computer processing.

-
COMMERCIAL (continued)

Delivery form

COMMERCIAL (continued)

Release form

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE

Complete this page for each release.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|L|

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

|G|W|

15 Ground Water (GWSI)

29

| | | | | | | | | | | | | | | | |

SKIP 30-38

13 14

|S|W|

15 Surface Water

29

| | | | | | | | | | | | | | | | |

SKIP 30-38

13 14

|T|W|

15 Water User 21

|9| | | | | | |

SKIP 22-37

Reclaimed Waste Water

38

|Y|

|N|

Permit Number

41

49

| | | | | | | | | | |

SKIP 39-40

Agency

Code

50

54

|A|L|0|0|7|

Water-Quality

Organization

55

59

| | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | |

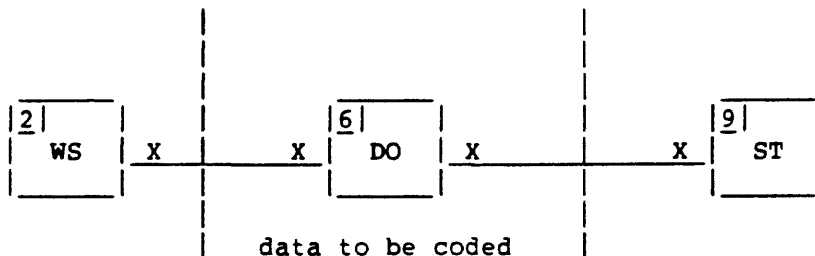
-

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3.1.3.4.5 Public-Supplied Domestic Aggregate

The water user in this example is used to represent a group of similar domestic users, i.e., domestic users who live in the same county and hydrologic unit; and who are connected to the same supply system. These users are coded as a single entry to save manpower and computer resources.

Domestic Aggregate



The following forms are needed to represent these water users:

- 1 - Water User form
- 1 - Delivery form
- 1 - Release form

Note that the theoretical "withdrawal" and "return" points for these water users are not coded at this time; they will be coded with the data for water users 2 and 9, respectively.

DOMESTIC AGGREGATE - PUBLIC SUPPLIED (continued)

Water User form

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER PUBLIC-SUPPLIED

Complete this form for public supply systems only.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	6
	M Modify	
	D Delete	
	11	Water User Name or Description
		35
		G O R D O N D O M E S T I C U S E R S

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number
36 37	38 43	44 49 50 55	56 64
D 0	8 8 1 1		

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2 DUPLICATE 3-10*	

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3 DUPLICATE 3-10*			0 3 1 3 0 0 1 2

Location of Water User (Route #,
Highway, Street, etc., if applicable)

Rural Community,
Town or City Name

32 51	52 66
N / A	G O R D O N

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
1 4 1 0	0 6 9	0 1

*Item must be specified to permit computer processing.

DOMESTIC AGGREGATE - PUBLIC SUPPLIED (continued)

Water User form (page 2 of 2 - Delivery Description)

WATER USER
PUBLIC-SUPPLIED
Page 2 of 2

Record Code* 1 <u> 2 </u> <div style="border: 1px solid black; padding: 2px; display: inline-block;">A4</div> DUPLICATE 3-10*	Street (if applicable) <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
City <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	State <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Zip Code <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	City <div style="border: 1px solid black; height: 20px; width: 100%;"></div>

Record code*	Action Code*	Source Type*	Supplier id
1 2	11 12	13 14	15 21
<u>B</u> <u>1</u>	<u>D</u> <u>L</u>	<u>T</u> <u>W</u>	<u>2</u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u>
DUPLICATE 3-10*			SKIP 22-37

Reclaimed Waste Water	Permit Number	Agency Code	Water-Quality Organization
38	41	49	50
54	55	59	
<u>Y</u>	<u> </u> <u> </u> <u> </u> <u> </u> <u>W</u> <u>3</u> <u>7</u> <u>8</u> <u>2</u>	<u>A</u> <u>L</u> <u>0</u> <u>0</u> <u>7</u>	<u>A</u> <u>L</u> <u>0</u> <u>0</u> <u>7</u>
<u>N</u>			
SKIP 39-40			

Record Code*		Description	
1	2	30	44
B	2	DUPLICATE 3-29*	
		Additional Data	
45	74		

DOMESTIC AGGREGATE - PUBLIC SUPPLIED (continued)

Release form

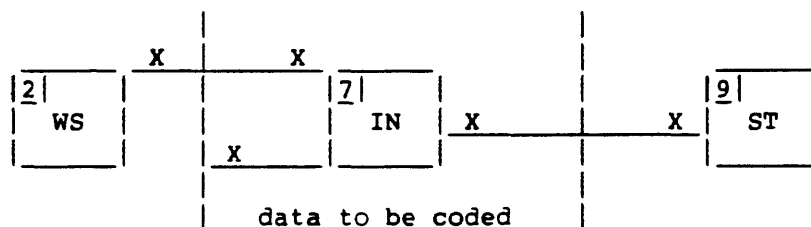
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3.1.3.4.6 Public-Supplied Industrial

This industrial facility is a dairy, which processes milk and produces various related products. It receives water from two sources, a private well and the local public supplier, and returns water to the waste treatment (ST) facility (see below).

Industrial Supply System



The following coding forms are needed to represent this data system:

- 1 - Water User form
- 1 - Withdrawal/Delivery form
- 1 - Delivery form
- 1 - Release form

Note that two measurement points shown on the diagram are not entered at this time because they will be entered in conjunction with the Water Supplier and Waste Treatment facilities, respectively.

INDUSTRIAL (continued)

Water User form

SITE-SPECIFIC WATER-USE DATA SYSTEM

Complete this form for each facility.

WATER USER DESCRIPTION

WUSE		Primary						Secondary						Permit				Agency													
Use Code		SIC Code						SIC Codes						Number				Code													
36	37	38				43	44					49	50				55	56					64	65			69				
I	N		2	0	2	6		2	0	2	1		2	0	2	4		0	-	4	7	-	0	0	9	4	A	L	0	1	9

Record Code*		Other Water User Descriptive Information	
1	2	11	40
A	2	DUPLICATE 3-10*	

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	3 1 0 9 0 0	0 8 5 2 8 3 0	0 3 1 3 0 0 1 2

DUPLICATE 3-10*

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
---	---------------------------------------

32											51											52											66	
	1	0	0	7	C	U	L	P	E	P	P	E	R	R	D						D	O	T	H	A	N								

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

$$\begin{array}{c} 67 \quad 71 \\ \hline | \quad | \quad | \quad | \quad | \\ \hline \end{array} \quad \begin{array}{c} 72 \quad 74 \\ \hline | \quad | \quad | \quad | \\ \hline \end{array} \quad \begin{array}{c} 75 \quad 76 \\ \hline | \quad | \quad | \quad | \\ \hline \end{array}$$

WATER USER MAILING ADDRESS

Record Code*		Street (if applicable)
1 2	11	35
A 4	P O B O X 3 3 9	
DUPLICATE 3-10*		

City State Zip Code

36 50 51 52 53 61

D O T H A N A L 3 6 3 0 1

*Item must be specified to permit computer processing.

INDUSTRIAL (continued)
Withdrawal/Delivery form

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/DELIVERY

Complete this page for each withdrawal/delivery.

Card code*

1 2
|B|1|

DUPLICATE 3-10*

Action code*

11 12
|W|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14
|G|W|

15 Ground water (GWSI) 29
|3|1|0|9|0|0|0|8|5|2|8|3|0|0|0|

30 Aquifer 37
|1|2|4|O|C|A|L|

SKIP 38

13 14
|S|W|

15 Surface water 29
|N|/|A| | | | | | | | | |

SKIP 30-37

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40
| | |

41 Permit Number 49
| | | | | | | | | |

50 Agency Code 54
|A|L|0|0|7|

55 Water-Quality Organization 59
| | | | |

Record Code*

1 2
|B|2|

DUPLICATE 3-29*

Description

30 Description 44
| | | | | | | | | |

Additional Data

45 Additional Data 74
|C|L|E|A|N| |U|P| |W|A|T|E|R| |O|N|L|Y| | | | | | | | | |

WITHDRAWAL LOCATION

Record Code*

1 2
|B|3|

DUPLICATE 3-29*

Latitude

30 Latitude 35
|3|1|0|9|0|0|

Longitude

36 Longitude 42
|0|8|5|2|8|3|0|

Hydrologic Unit

43 Hydrologic Unit 50
|0|3|1|3|0|0|1|2|

State

51 State 52
|0|1|

County

53 County 55
|0|6|9|

*Item must be specified to permit computer processing.

INDUSTRIAL (continued)
Delivery form (public supply)

DELIVERY

SSWUDS Description/Forms

INDUSTRIAL (continued)

Release form

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE

Complete this page for each release.

Record code*

1 2

|B|1|

Action code*

11 12

|R|L|

DUPLICATE 3-10*

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

15 Ground Water (GWSI)

29

|G|W|

|N|/|A| | | | | | | | | | |

SKIP 30-38

13 14

15 Surface Water

29

|S|W|

|N|/|A| | | | | | | | | | |

SKIP 30-38

13 14

15 Water User 21

Reclaimed Waste Water

|T|W|

|9| | | | | | | | | | |

SKIP 22-37

38

|Y|

|N|

Permit Number

Agency

Code

Water-Quality

Organization

41

49

50

54

55

59

SKIP 39-40

| | | | | | | | | | |

|A|L|0|0|7|

| | | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | |

Additional Data

45

74

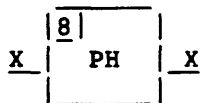
| | | | | | | | | | | | | | | | | | | | |

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3.1.3.4.7 Hydroelectric Power Production

This power facility is an instream use of water, but for the purpose of entering data into the SSWUDS, it is treated as a withdrawal and return of water.

Instream Hydroelectric Plant



The following input forms are needed to represent these data:

- 1 - Water User form
- 1 - Withdrawal/Delivery form
- 1 - Release/Return form

HYDROELECTRIC POWER (continued)

Water User form

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add M Modify D Delete	8
	11	Water User Name or Description
		35
		C O F F E E C O . P O W E R & L I G H T

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
P H	4 9 1 1 0 1			

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10* 3 1 1 3 4 5	0 8 6 0 3 1 5	0 3 1 4 0 2 0 1

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
---	---------------------------------------

32 51	52 66
S R 3 5 8	K I N G S T O N

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
	0 3 1	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4	DUPLICATE 3-10* R O U T E 2

City	State	Zip Code
36 50	51 52	53 61
K I N G S T O N	A L	3 6 4 5 3

*Item must be specified to permit computer processing.

HYDROELECTRIC POWER (continued)

Withdrawal/Delivery form

WITHDRAWAL/DELIVERY

SSWUDS Description/Forms

HYDROELECTRIC POWER (continued)

Release/Return form

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE/RETURN

Complete this page for each release/return.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|E|

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

|G|W|

15

Ground water (GWSI)

29

30

Aquifer

37

SKIP 38

13 14

|S|W|

15

Surface water

29

|0|1|5|9|0|5|0|0|

SKIP 30-37

Destination

Subtype

39 40

| | |

Permit Number

41

49

| | | | | | | |

Agency

Code

50

54

|A|L|0|0|7|

Water-Quality

Organization

55 59

| | | | |

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30

44

| | | | | | | | | | | | | | |

Additional Data

45

74

| | | | | | | | | | | | | | | | | | | | |

RETURN LOCATION

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30

35

|3|1|1|3|4|5|

Longitude

36

42

|0|8|6|0|3|1|5|

Hydrologic Unit

43

50

|0|3|1|4|0|2|0|1|

State

51

52

|0|1|

County

53

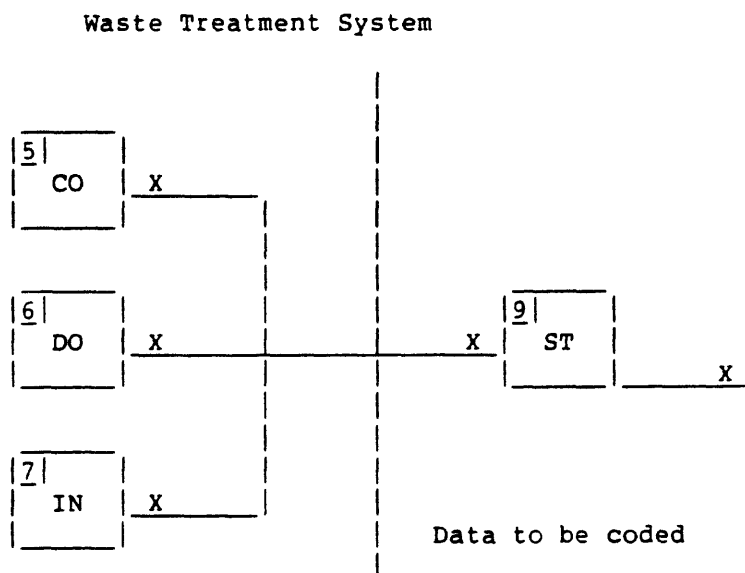
55

|0|3|1|

*Item must be specified to permit computer processing.

3.1.3.4.8 Waste Treatment Plant

The waste treatment plant in the following example is receiving waste water from three water users, processing it, and returning it to a body of surface water.



The following forms are required to represent these data:

- 1 - Water User form
- 3 - Delivery forms
- 1 - Release/Return form

Note that three measurement points are not coded as "withdrawals" by user 9 because they will be entered at another time as releases by users 5, 6, and 7.

WASTE TREATMENT (continued)

Water User form

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*	
1 2	3	4 10	
A 1	A Add	9	
	M Modify	Water User Name or Description	
	D Delete	11	35
		T R I - C O U N T Y W A S T E F A C I L I T Y	

WUSE Use Code	Primary SIC Code	Secondary SIC Codes	Permit Number	Agency Code
36 37 38	43 44	49 50	55 56	64 65 69
S T	4 9 5 2		0 3 7 4 4 3 6 1 5	U S E P A

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2 DUPLICATE 3-10*	

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3 DUPLICATE 3-10*	3 1 2 0 4 5	0 8 6 0 9 1 5	0 3 1 4 0 2 0 2

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
---	---------------------------------------

32 51	52 66
S R 1 2 & 3 7	E L B A

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
	0 3 1	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4 DUPLICATE 3-10*	R O U T E 2 B O X 3 0 0

City	State	Zip Code
36 50	51 52	53 61
E L B A	A L	3 6 3 2 3

*Item must be specified to permit computer processing.

WASTE TREATMENT (continued)

Delivery forms

WASTE TREATMENT (continued)

Delivery forms (continued)

SITE-SPECIFIC WATER-USE DATA SYSTEM

DELIVERY

Complete this page for each delivery.

Record code*

Action code*

1 2

11 12

|B|1|

DUPLICATE 3-10*

|D|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14

15 Ground Water (GWSI) 29

30 Aquifer 37

|G|W|

|N|/|A| | | | | | | | | |

| | | | | | | |

SKIP 38

13 14

15 Surface Water 29

|S|W|

|N|/|A| | | | | | | | | |

SKIP 30-37

13 14

15 Supplier id 21

Reclaimed Waste Water

|T|W|

|6| | | | | | |

SKIP 22-37

38

|Y|

|N|

Permit Number

Agency

Code

Water-Quality

Organization

41 49

50 54

55 59

SKIP 39-40

| | | | | | | |

|A|L|0|0|7|

| | | | |

Record Code*

Description

1 2

30 44

|B|2|

DUPLICATE 3-29*

| | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

WASTE TREATMENT (continued)

Delivery forms (continued)

WASTE TREATMENT (continued)

Release/Return form

SITE-SPECIFIC WATER-USE DATA SYSTEM

RELEASE/RETURN

Complete this page for each release/return.

Record code*

1 2

|B|1|

DUPLICATE 3-10*

Action code*

11 12

|R|E|

Destination

Type*

Destination id*

(NWIS id, if available)

13 14

|G|W|

15 Ground water (GWSI) 29

|N|/|A| | | | | | | | | | | | | | | |

30 Aquifer 37

| | | | | | | | | | | | | | | | SKIP 38

13 14

|S|W|

15 Surface water 29

|0|1|6|6|3|7|5|0| | | | | | | | | |

SKIP 30-38

Destination

Subtype

39 40

| | |

Permit Number

41 49

|0|3|7|4|4|3|6|1|5|

Agency

Code

50 54

|A|L|0|0|7|

Water-Quality

Organization

55 59

|A|L|0|1|7|

Record Code*

1 2

|B|2|

DUPLICATE 3-29*

Description

30 44

| | | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

RETURN LOCATION

Record Code*

1 2

|B|3|

DUPLICATE 3-29*

Latitude

30 35

|3|1|2|4|0|0|

Longitude

36 42

|0|8|6|1|1|4|5|

Hydrologic Unit

43 50

|0|3|1|4|0|2|0|2|

State

51 52

|0|1|

County

53 55

|0|3|1|

*Item must be specified to permit computer processing.

-

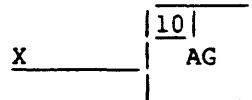
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3.1.3.4.9 Nonirrigating Agricultural

The water user in this example is withdrawing water from a single site for the purpose of watering stock.

Sample Agricultural

Supply System



The following are needed to describe this water-user:

- 1 - Water-User form
- 1 - Withdrawal/Delivery form

AGRICULTURE (continued)

Water-User

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

SITE-SPECIFIC WATER-USE DATA SYSTEM

WATER USER GENERAL

Complete this form for each facility.

WATER USER DESCRIPTION

Record Code*	Transaction Code*	Water User Identifier*
1 2	3	4 10
A 1	A Add	1 0
	M Modify	Water User Name or Description
	D Delete 11	35
		S T U A R T K R A M E R F A R M

WUSE	Primary	Secondary	Permit	Agency
Use Code	SIC Code	SIC Codes	Number	Code
36 37 38	43 44	49 50	55 56	64 65 69
A G	0 2 1 1			

Record Code*	Other Water User Descriptive Information
1 2	11 40
A 2	DUPLICATE 3-10*

PHYSICAL LOCATION OF WATER USER

Record Code*	Latitude	Longitude	Hydrologic Unit Code
1 2	11 16	17 23	24 31
A 3	DUPLICATE 3-10* 3 1 0 1 3 0	0 8 5 1 1 3 0	0 3 1 3 0 0 0 4

Location of Water User (Route #, Highway, Street, etc., if applicable)	Rural Community, Town or City Name
---	---------------------------------------

32 51	52 66
H O U S T O N C O 7 5	G O R D O N

FIPS City Code	FIPS County Code	FIPS State Code
----------------	------------------	-----------------

67 71	72 74	75 76
1 4 1 0	0 6 9	0 1

WATER USER MAILING ADDRESS

Record Code*	Street (if applicable)
1 2	11 35
A 4	DUPLICATE 3-10* R O U T E 3 B O X 4 7

City	State	Zip Code
36 50	51 52	53 61
A S H F O R D	A L	3 6 3 1 2

*Item must be specified to permit computer processing.

AGRICULTURE (continued)

Withdrawal/Delivery

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/DELIVERY

Complete this page for each withdrawal/delivery.

Record code*

1 2
|B|1|

DUPLICATE 3-10*

Action code*

11 12
|W|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14
|G|W|

15 Ground water (GWSI) 29
|N|/|A|

30 Aquifer 37
|

SKIP 38

13 14
|S|W|

15 Surface water 29
|0|1|6|1|9|5|0|0|

SKIP 30-37

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40
|

41 49
|

50 54
|A|L|0|0|7|

55 59
|

Record Code*

1 2
|B|2|

DUPLICATE 3-29*

Description

30 44
|

Additional Data

45 74
|W|L| |F|R|O|M| |C|E|D|A|R| |C|R|E|E|K| |

WITHDRAWAL LOCATION

Record Code*

1 2
|B|3|

DUPLICATE 3-29*

Latitude

30 35
|3|1|1|1|3|0|

Longitude

36 42
|0|8|5|1|1|3|0|

Hydrologic Unit

43 50
|0|3|1|3|0|0|0|4|

State

51 52
|0|1|

County

53 55
|0|6|9|

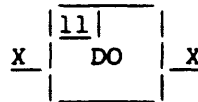
*Item must be specified to permit computer processing.

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3.1.3.4.10 Self-Supplied Domestic Aggregate

This water-user entry in the data base represents a group of self-supplied domestic users in the same county and hydrologic unit. These users withdraw water from private wells and return water to private septic systems. These users could be entered as many individual users; however, the labor involved is probably greater than the potential benefit can justify, because the amounts of water being used are so small.

Domestic Supply System



The following forms are needed to represent these data:

- 1 - Water-User form
- 1 - Withdrawal/Delivery (B0) form
- 1 - Withdrawal/Delivery form
- 1 - Release/Return form

DOMESTIC SELF-SUPPLIED (continued)

Water User form

DOMESTIC SELF-SUPPLIED (continued)

Withdrawal/Delivery (B0) form

The aggregate flag would be coded as "A" to indicate that this is an aggregate withdrawal that should bypass the site-validation process.

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/
DELIVERY

Complete this page for each withdrawal.

Record code*

1 2

|B|0|

DUPLICATE 3-10*

Action code*

11 12

|W|L|

Destination

Destination id*

Type*

(NWIS site id or aggregate id)

13 14

|G|W|

15

Ground water (GWSI)

29

|3|1|1|6|4|5|0|8|5|5|6|1|5|0|0|

13 14

|S|W|

15

Surface water

29

| | | | | | | | | | | | | | | |

Aggregate Flag

Alias Identifier

30

|A|

aggregate site

31

45

| | | | | | | | 0 3 2 5 6 6 6 6 |

| |

site-specific

* Item must be specified to permit computer processing.

B0 records are only to be used when designating a measurement point as an aggregate site and/or supplying an alias identifier. B0 records are not allowed for transferred water records.

DOMESTIC SELF-SUPPLIED (continued)

Withdrawal/Delivery form

SITE-SPECIFIC WATER-USE DATA SYSTEM

WITHDRAWAL/DELIVERY

Complete this page for each withdrawal/delivery.

Record code*

Action code*

1 2

DUPLICATE 3-10*

11 12

|B|1|

|W|L|

Source

Source id*

Type*

(NWIS id, if available)

13 14

15 Ground water (GWSI) 29

30 Aquifer 37

|G|W|

|3|1|1|6|4|5|0|8|5|5|6|1|5|0|0|

|1|2|4|O|C|A|L|

SKIP 38

13 14

15 Surface water 29

|S|W|

|N|/|A| | | | | | | | | | | |

SKIP 30-37

Source
subtype

Permit Number

Agency
Code

Water-Quality
Organization

39 40

41 49

50 54

55 59

|W|E|

|N|/|A| | | | | | |

|A|L|0|0|7|

|N|/|A| | |

Record Code*

Description

1 2

30 44

|B|2|

DUPLICATE 3-29*

| | | | | | | | | | | | | | | |

Additional Data

45 74

| | | | | | | | | | | | | | | | | | | | | |

WITHDRAWAL LOCATION

Record Code*

Latitude

Longitude

1 2

30 35

36 42

|B|3|

DUPLICATE 3-29*

| | | | | |

| | | | | |

Hydrologic Unit

State

County

43 50

51 52

53 55

|0|3|1|4|0|2|0|1|

|0|1|

|0|3|1|

*Item must be specified to permit computer processing.

DOMESTIC SELF-SUPPLIED (continued)

Release/Return form

RELEASE/RETURN

SSWUDS Description/Forms

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3.1.3.5 Common Coding Problems

The following list of common problems is intended to save the SSWUDS user time in troubleshooting errors. It is not a complete list of problems a SSWUDS user encounters; therefore, the Data-Base Administrator (DBA) may want to make additions, as appropriate.

Nonnumerics entered into numeric fields seems to be the most common of all problems. The two most common occurrences of this problem are entering the letter O instead of a zero (0), and entering the lowercase letter L (l) instead of a one (1).

Not coding a mandatory data item causes an abnormal end to processing. Mandatory items are necessary for aggregation of data for eventual entry into AWUDS. If a mandatory item is omitted, the entry abnormally ends.

Latitude/longitude points out of range is also a common problem, which usually occurs when a latitude or longitude value is mistyped but can occur because of improper coding. The latitude and longitude data items are very important, and should be verified prior to entry.

A mistyped or improperly coded water-user ID can cause serious problems. If, for example, the water-user ID is coded improperly for the water-user information, but properly for the measurement-point and annual-measurement data, the properly coded information is not accepted by the SSWUDS because the water-user ID cannot be found. Problems involving water-user ID's also can be difficult to locate; the ID should be thoroughly checked during both the coding and the entry processes.

3.1.3.6 Strategies for Determining Water-User Numbers

Each water user has a unique water-user number. The water-user ID is a 7-digit number, which may range from 2 to 9999999. Deciding how to assign water-user ID's to various water users is a very important task for the SSWUDS DBA. The water-user ID is the basic link to the various types of data in the SSWUDS, so this identifier must be easily understood by the user. Since water-user ID's cannot be changed, the decision is even more important.

The simplest method for assigning numbers is to give each water user a number from 2 to 9999999 as they are coded. The WRD water-use personnel in Virginia use this strategy and also keep a log book to record which numbers are assigned to specific users. When a new user is entered, the next available number is assigned and recorded in the log book.

Some States are fortunate to have 7-digit permit numbers. In these cases, it is easiest to use the permit number as the water-user ID. Iowa is one such State.

In the case of Maryland, the State permit number is 9 digits, but 2 of the digits are a code to denote either surface- or ground-water withdrawals and 3 of the digits are the FIPS county code. The SSWUDS DBA defined the water-user ID as the permit number with the withdrawal source abbreviated to a "0" for surface water or a "1" for ground water, and the FIPS county code is reduced to 2 digits by removing the leading zero. (Since Maryland has only 23 counties, all FIPS county codes have leading zeros.) These reductions resulted in an understandable 7-digit water-user ID.

3.1.3.7 Suggestions for Coding Description and Comment Fields

Description and comment fields are provided to allow more flexibility for SSWUDS users. They can be used to input data items not provided for by the SSWUDS, and since they are defined as alphanumeric fields by the SSWUDS Data Elements Dictionary, data entered in these fields can be anything that fits within the length of the field.

Perhaps the most frequent use of the description and comment fields is entering a local well number or river name to aid in the identification of a source or destination of water. These fields may also be used for inputting such items as the name of the person who collected the data or the date the data were coded or collected.

The SSWUDS DBA must decide what to code in each of these fields, and write a guide for those who code the data. Since this local guide will be fairly static, it should be included as a part of this manual.

It is important to note that data entered into the description and comment fields cannot be used as keys for specialized retrievals.

3.2 Fundamentals of Operation

This section provides the SSWUDS user with a basic understanding of the functionality of SSWUDS and the interrelationships of its many files and programs. Although the primary purpose for this section is that of an introduction, parts of it can be used as a reference.

This section is divided into four subsections: SSWUDS Data files (section 3.2.1), which explains the data base and reference file structures; SSWUDS Data Entry (section 3.2.2), which is an overview of the options for entering data; SSWUDS System Output (section 3.2.3), which is an overview of the retrieval options and related applications programs; and Resolving SSWUDS Errors (section 3.2.4), which describes in general terms what should be done to diagnose and correct abnormal termination of SSWUDS operations or other problems.

3.2.1 Data Files

In section 3.1.1, the concepts of the data file structure, as related to the SSWUDS design, were discussed in very general terms. In this section, more detailed descriptions of the actual data base and reference files are provided, as they relate to SSWUDS operations.

3.2.1.1 Data-Base Files

SSWUDS supports multiple data bases and movable data files. Pathnames to the data files are all defined by data-base number in the NWIS GPATH file, MASTER.FILE.MIDAS. The data-base files may be located anywhere on the computer and can be found by all of the software and utilities.

The data files are keyed files, i.e., Multiple Index Data Access System (MIDAS) files, and the keys provide a link from one file to another. The following diagram indicates that the extended data file (WUED01) is linked only to the water-user file (WUWU01). The conveyance file (WUCN01) defines the type of water conveyance. The conveyance file is also used to link water-user data in the water-user file (WUWU01) to associated measurement-point data and annual-measurement data in the measurement-points file (WUMP01) and the annual-measurements file (WUAMxx, xx = year), respectively.

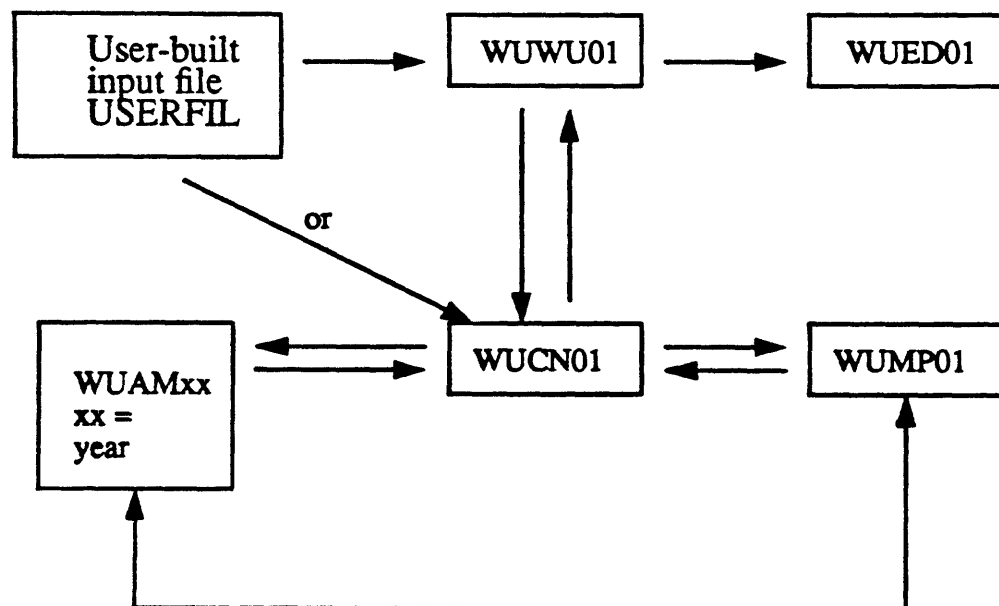


Figure 3.-Links between data files

There are two additional system files: USERFIL and DBIDX. USERFIL, the SSWUDS user file, is accessed by the software at every session to determine input and output locations for the user. This is a convenience in SSWUDS so that the user is not repeatedly queried for pathnames. The user file is a keyed MIDAS file like the other data files. DBIDX is the SSWUDS multiple data-base index file, and is used to manage multiple data bases. DBIDX is a Fortran direct-access file. It is an index to multiple SSWUDS data bases on any given computer.

Below is a brief description of the data-base files. The names given for these files are the generic names. Names of the files depend on the DBA and how they are defined in MASTER.FILE.MIDAS.

- USERFIL -- Contains the default pathname to place retrieval output and the default pathname to read input files for edit/update for an individual user.
- WUWU01 -- Basic information about individual water users and water-using facilities. This information would include location and address of the water user, as well as other descriptive data.
- WUED01 -- Contains additional data (extended data) for the water user. Example data are acres irrigated, number of public supply connections, and quantity of product produced. The extended-data file is linked to the water-user file by the water-user ID.

- WUCN01 -- Contains information that links water-user records with measurement-point records and connects the source measurement point to the destination measurement point for each conveyance defined in the system.
- WUMP01 -- Contains descriptive and locational information about the points along the water-conveyance system at which annual measurements are made. Linked through the conveyance file by the source/destination measurement-point key fields.
- WUAMxx -- (xx = year) Contains water withdrawal, return, and transfer measurements taken annually at the corresponding measurement points. Linked through the source/destination measurement-point key fields of the conveyance file.
- WUDD01 -- Contains information about each data element on the edit/update and report-specification records, which allows the item to be located, edited, stored, and in the case of edit/update items, positioned in the appropriate data-base record.
- WUEC01 -- Contains the look-up table of all data-processing error codes generated by SSWUDS. Used by the ERRMOD subroutine to output error messages to the error list file (WUER01 -batch).

3.2.1.2 Reference files

Reference files used by SSWUDS include those files specific only to SSWUDS and also common area files accessed by all NWIS software.

The files located in WATSTORE>WATER_USE>SWUDS>DATA that are specific only to SSWUDS include the following:

- DATADICT -- A flat file used to build the SSWUDS data dictionary file WUDD01.
- ERRCODES -- A flat file used to build the SSWUDS error code file WUEC01.

BAS.FILE -- A look-up table for hydrologic unit codes (flat file). This file is used to display valid 8-digit hydrologic unit codes in the SSWUDS selection criteria for retrievals, and to verify hydrologic unit codes in the application routine to aggregate annual amounts by hydrologic unit.

MAJBAS.FILE -- A major river basin look-up table (flat file). This file is used to display valid 6-digit hydrologic unit codes in the SSWUDS selection criteria for retrievals and to verify hydrologic unit codes in the application routine to aggregate annual amounts by major basin.

COUNTY.CODE -- A county code look-up table (flat file). This file is used to display valid county codes in the SSWUDS selection criteria for retrievals and to verify county codes in the application routine to aggregate annual amounts by county.

DBIDX -- SSWUDS multiple data-base index file (Fortran direct-access). The file contains a list of available SSWUDS data bases.

BATCH_CODES -- A list of batch codes that were automatically assigned to transaction files during processing of the Site File Edit/Update system. For each batch code, there is the user ID for the user to whose files the code and date were assigned.

EDU_DBA -- The file contains the userid of the DBA responsible for updating the Site File. When transaction files are transferred to an update directory during processing of the Site File Edit/Update System, the DBA is informed by using the electronic mail system (EDOC).

The common area files used by SSWUDS include the following:

MASTER.FILE.MIDAS -- NWIS master file of pathnames by data-base numbers (MIDAS file). The file is located in WATSTORE>SUPPORT.

HELP.MIDAS -- NWIS master file of query level helps, messages, and menus (MIDAS file). The file is located in WATSTORE>INFODESK>HELP*.

USER_TERMINALS -- Definition of terminal types in use for a given District (Fortran direct-access file). The file is accessed directly by DISCUR and located in the directory named DISCUR.

AAHUC.ALL.STATES -- A flat file used to build look-up table hydrologic unit codes and major river basins, BAS.FILE and MAJBAS.FILE. The file is located in WATSTORE>SUPPORT.

FIPFILE -- A MIDAS file used to build look-up table file for county codes and names, COUNTY.CODE.

AQFILE -- A MIDAS file used to display valid aquifer codes for SSWUDS selection criteria for retrievals and verify aquifer codes in the application routine to aggregate annual amounts by aquifer.

SAGNCY.EDI -- A table of valid Federal and State agency codes for a District. The file is located in WATSTORE>SUPPORT>EDIT.TABLES.

SITEFILE -- A MIDAS file that contains header information for all NWIS. This file is movable and may be defined as a part of multiple data bases.

3.2.2 Data Entry

To input data into a SSWUDS data base, you must create input files using the nationally supported KEYDISK program or another data-entry program. These data must then be entered into the SSWUDS Edit/Update subsystem. The coded data are then validated before being accepted by SSWUDS for storage in the data files. For new measurement-point entries, the Site File Edit/Update subsystem is available for building corresponding site records.

The following subsections give a brief overview of the subsystems involved in the data-entry process. The overview defines the execution of the subsystems and the files used for data entry or storing error messages. Section 3.2.2.1 discusses the data processing of SSWUDS input and the building of site records. Section 3.2.2.2 briefly discusses the KEYDISK program.

3.2.2.1 Edit/Update System

The Edit/Update system has two components. The first component is an interface, which allows updating the SSWUDS data files. The second component allows the building of site records (to be stored in the appropriate NWIS SITEFILE) that correspond to SSWUDS measurement points. Valid site records are required for all new measurement points defined in SSWUDS.

3.2.2.1.1 SSWUDS Edit/Update System

The SSWUDS Edit/Update system is controlled through interactive prompts and queries. However, the actual data-processing and data-base updating is done by a batch job. Using the batch process allows multiple user-access without conflict, and also releases the user's terminal for other uses once the batch job is started.

3.2.2.1.1.1 Edit/Update Process

When you enter the SSWUDS Edit/Update system, you are first prompted for the pathname to the directory in which your input files reside. If a first-time user of SSWUDS, you are also prompted for a default pathname to a directory in which your retrievals/applications output will be written. After entering a pathname, or carriage return to accept the default, you are prompted for the number of input files to process. Enter a number (or carriage return) to process all input files in your edit/update directory. The purpose of entering a subset of files is for controlling the length of time the batch job will run.

After entering the number of input files to process, the input files are run through SSWUDS in a batch job. A message is displayed, which informs you that your job has been submitted and to which batch queue the job was sent. Carriage return to return to the Edit/Update menu.

3.2.2.1.1.2 Input, Error, and Como File

All input files to SSWUDS must be tagged with .HOLD. otherwise, the file will not be recognized as a input file. Any other files with the tag .HOLD that are not SSWUDS input files should be moved before the Edit/Update process begins. These files could be processed by accident and unnecessary error messages written to an error file. For example contents of an input file see section 3.2.2.1.1.3.

When SSWUDS accesses a valid input file, the file name is changed temporarily to WUUI01 for processing. If a file with the name WUUI01 already exists in the edit/update directory (which should not happen), the file is date-time tagged (WUUI01.date.time) before the new WUUI01 is created. If any errors occur when a transaction record is being processed, the record and an error description are written to the error file. If no errors occur, a message indicating that SSWUDS terminated normally is written to the error file. An example of an error transaction is given below:

CARD IMAGE

```

      1      2      3      4      5      6      7
123456789012345678901234567890123456789012345678901234567890

```

```

A4A  1900RTE 1          CACHE          AR72000

```

ERROR	ITEM	COL	SEVERITY	EXPLANATION
1 0095	MAILING STREET	11	4	DATA ALREADY EXIST
2 0095	MAILING CITY	36	4	DATA ALREADY EXIST
3 0095	MAILING STATE	51	4	DATA ALREADY EXIST

A COMO file, SWMASS.date.time.COMO, is also created during processing. The date.time tag indicates the date and time the job was started. The COMO file contains the names of the input files in the order processed, plus any system or program errors. An example of the contents of the SWMASS file is given below:

```

*****
BATCH EDIT/UPDATE initiated by user JTSMITH on January 8, 1990 at 13:36:16.
Time used: 00h 00m connect, 00m 02s CPU, 00m 05s I/O.
*****

```

SSWUDS "BATCH EDIT/UPDATE"

```

***** PROCESSING DATA FOR SSWUDS DATA BASE 4
***** PROCESSING INPUT FILES IN JTSMITH>SWUDSTESTING>EDUP
***** YOU HAVE REQUESTED THAT 0 FILES BE PROCESSED ( 0 INDICATES "ALL" ).

```

RUNNING SS2.HOLD

ALL .HOLD FILES HAVE BEEN PROCESSED.
PROGRAM STOPPING.

```
*****
Time used: 00h 00m connect, 00m 07s CPU, 00m 13s I/O.
BATCH EDIT/UPDATE   finished on January 8, 1990 at 13:36:40.
```

```
*****

BATCH EDIT/UPDATE FINISHED AT 13:36:40
```

After completing the processing, the temporary input filename WUUI01 is changed back to the original file name with an additional tag of .DONE (e.g., input.HOLD.DONE). The temporary error file name (WUER01) is also changed (e.g., input.HOLD.WUER01).

3.2.2.1.1.3 Transaction Records

There are four types of input records used by the SSWUDS Edit/Update System: Water User, Measurement Point, Annual Measurement, and Extended Data. Each of these four types are composed of a certain number of input records used to input or modify their respective data elements.

<u>Data Type</u>	<u>Transaction Records</u>
Water User	A1, A2, A3, A4
Measurement Point	B0, B1, B2, B3
Annual Measurements	C1, C2, C3, C4, C5, C6
Extended Data	D1, D2, D3 (Irrigation) E1 (Public Supply/Waste Treatment) F1, F2, F3 (Power) G1, G2, G3 (Production)

The transactions records within an input file may be in any order except for those records creating new entries. For new entries, A (water user) records must be first, B (measurement point) are next, and then C (annual measurement) records. Extended data records (D, E, F, or G) can be placed anywhere after its respective A record. Following is an example of the contents of an input file:


```

A1A  1900DAVID MCGUIRE          IR0116          098766543ASWCC
A2A  1900477-8000FREDERICK MCGUIRE
A3A  1900342423091242408020203RTE 1          CACHE
A4A  1900RTE 1                  CACHE          AR72000
B1A  1900WDGW342525091232301124SPRT    4001000001AR008001
B2A  1900WDGW34252509123230125 DSLSTP5 50
B3A  1900WDGW34252509123230134252509123230802020305031
C1A  1900WDGW34252509123230185          120E      FNF
C2A  1900WDGW34252509123230185OT
C3A  1900WDGW34252509123230185          10          10          10
C4A  1900WDGW34252509123230185          10          10          10
C4A  1900WDGW34252509123230185          10          10          10
C5A  1900WDGW34252509123230185          10          10          10
C6A  1900WDGW34252509123230185          10          10          10
D1A  1900850112    134

```

The transaction record is 80 characters long. The first two characters on the record, beginning in column one, indicate the record type and a sequence number. For example, an A2 in columns one and two denotes the second A record type in a possible series of four. The third character indicates the transaction type: A for add, M for modify, and D for delete. The next seven characters are the 7-digit water-user identifier. All data after column 10 on a transaction record depends on the record type. See the listing below for the mandatory elements required on a data-entry record.

A record

- water-user ID
- subcategory code (A1 record on new entries only)
- latitude (A3 record on new entries only)
- longitude (A3 record on new entries only)
- hydrologic unit code (A3 record on new entries only)
- state FIPS code (A3 record on new entries only)
- county FIPS code (A3 record on new entries only)

B record

- water-user ID
- action code
- water type
- measurement-point identifier (or other water-user ID for transferred water records).
- agency code (B1 record on new entries only)
- latitude (B3 record on new entries only)
- longitude (B3 record on new entries only)
- hydrologic unit code (B3 record on new entries only)
- state FIPS code (B3 record on new entries only)
- county FIPS code (B3 record on new entries only)
- B1 record mandatory for all new measurement-point record entries.

C record

- water-user ID
- action code
- water type
- measurement-point identifier (or other water-user ID for transferred water records).
- annual measurement year

Extended data record (D,E,F,G)

- water-user ID
- Standard Industrial Classification (SIC) code
- extended data year

See the Data Dictionary (section 6) for placement and size of the remaining data elements on the transaction records.

Beginning with the 90.2 release of SSWUDS, the Edit/Update system can recognize a measurement point as either site-specific or aggregate. All site-specific measurement points must have a valid entry in the NWIS Site File. Aggregate measurement points other than well fields do not require a site record; a measurement point defining a well field does require a site record. The SSWUDS Edit/Update System recognizes a measurement point as site-specific or aggregate on the basis of a flag that is supplied initially on a B0 transaction record and is stored in the conveyance file. The flag is set to "A" for aggregate and is left blank for site-specific. When data for a new measurement point are being entered, the B0 record must immediately precede the B1 record. If it does not, or if the B0 record cannot be processed for any reason, the rest of the measurement point and related records will be processed as site-specific and a valid NWIS site record will be required.

The SSWUDS Edit/Update System can also process measurement point and related transaction records that are identified by an alias identifier instead of the standard measurement-point identifier. The measurement-point alias identifier is initially entered on a B0 record and is stored in the conveyance file. If the alias identifier is supplied on a B0 record that immediately precedes the B1 record for new entries or if an alias identifier is already stored for a measurement point, all following B and C transaction records can be identified by the alias identifier and the Edit/Update system will process the data accordingly. An alias identifier can be used for both site-specific and aggregate measurement points.

When the Edit/Update system is validating a site record for a site-specific measurement point, the standard measurement-point identifier is concatenated with the measurement-point agency code to be used in interrogating the NWIS Site File. The source type (GW - ground water, SW - surface water) must also be compatible. If no initial match is made using the measurement-point agency code, other valid agency codes found in the file WATSTORE>SUPPORT>EDIT.TABLES>SAGNCY.EDI are concatenated and NWIS site

matches are attempted until a match is made or all agency codes are exhausted. If no site ID match is made, the measurement-point data are NOT added to the SSWUDS data base. It is appropriate to use agency codes other than the measurement-point agency code to interrogate the Site File because multiple agencies may collect data at the same site. If no match is made, the measurement-point identifier and the source type should be checked for validity. Correct these data elements, if necessary, and resubmit the input file. If the data elements are correct and no site record can be validated, then a site record must be created. See section 3.2.2.1.2 for additional information on the Site File Edit/Update System.

The following table shows what is required for a successful site match. The measurement-point identifier, an agency code, and the source type have to be the same as corresponding fields in a site record.

SSWUDS Measurement-Point Identifier	SSWUDS Source Type	SSWUDS* Agency Code	NWIS Agency Code	NWIS Site Identifier	NWIS Site Station Type
343030091232301	GW (ground-water)	AR008	AR008	343030091232301	Spring or ground-water
789567301	SW (surface-water)			789567301	Stream, Lake, Estuary, etc.

- * If no site ID match is made using the agency code from the B1 record, other agency codes valid for the District and located in the file WATSTORE>SUPPORT>EDIT.TABLES>SAGNCY.EDI will be concatenated to the measurement-point identifier and tested for a site ID match. If a match is made using another agency code, a message will be printed to the error file indicating the agency code used for the validation. The measurement-point data will then be added to the SSWUDS data base.

3.2.2.1.1.4 Adding and Modifying Data

To add data to the SSWUDS data base, the transaction record must have transaction code A. For the ADD transaction to be successful, the field in the data base must be blank. That is, you can add only data that are nonexistent in the data base.

To modify existing data, the transaction record must have transaction code M. For the MODIFY transaction to be successful, the field in the data base must be nonblank. That is, you can modify only that data existing in the data base. Blank fields on a MODIFY transaction record will not blank out the data element in the data base.

You can perform only one type of transaction within a data entry record. Add transactions can only add nonexistent data to the data base. Modify transactions can only overwrite existing data in the data base.

3.2.2.1.1.5 Deleting Data from the Data Base

The following are examples of transactions that will delete a water user and all associated data, a measurement point and all associated data, an annual-measurement record, extended-data record, or selected data elements.

By A1 record:

- Deletes water-user record
- Deletes all measurement-point records for water user
- Deletes all annual-measurement records for water user
- Deletes all extended-data records for water user

Format:

A1D 7889

By B1 record:

- Deletes the entire measurement-point record.
- Deletes corresponding annual-measurement records.

Format:

B1D 7889WDGW34232301091242601

By C1 record:

- Deletes annual-measurement record

Format:

C1D 7889WDGW3423230109124260185

By extended-data record (D1,E1,F1,G1):

- Delete the extended-data record

Format:

D1D 7889850116

Deleting selected elements of a record:

A dollar sign (\$) is placed in the first character position of a transaction record's data element that you wish to blank out. A MODIFY transaction is used. If any characters follow the \$ in the data element field to be blanked, they will be ignored.

The transaction record below indicates that the permit number of the water-user record is to be blanked:

AlM	7889	IR	\$
-----	------	----	----

3.2.2.1.2 Site File Edit/Update System

The Site File Edit/Update system is a series of routines that allow the user to do the following: create entry files, validate and format transaction files, and transfer transaction files to an update directory in which a data base administrator may run these transaction files through a program to update the Site File. The purpose of the Site File Edit/Update system is to create site records corresponding to a SSWUDS measurement-point record. The entry routine used is the Ground-Water Site Inventory (GWSI) HDRINP program, a screen entry program. Other routines are available through GWSI to create entry files.

See the file <NWIS>WATSTORE>GW>DOC>ASCII>GWSCREEN-ENTRY.INPUT.USER for further documentation on the HDRINP routine and entry file format.

The entry file created by the user in the Site File Edit/Update system will contain records similar to the old GWSI card-image format. An example is shown below:

```
XXXXX
USGS 345555091242401 R=0* T=A*
USGS 345555091242401 12=RED SWAMP
USGS 345555091242401 9= 345555* 10= 0912424* 815=01* 6=05* 7=05* 8=147*
USGS 345555091242401 16=      200* 20=08020304* 803=I*
      802=NNNNNNYNNNNNNNNNNNNNNNN*
USGS 345555091242401 3=M* 2=W* 23=U* 24=U* 714=124SPRT* 27=      100*
USGS 345555091242401 28=      95* 29=Z* 30=      60* 31=19880505* 34=B*
      37=Z*
USGS 345555091242401 33=Z*
```

The default entry file name is in the form "D.userid.nnn", where nnn is a sequence number tag (e.g., D.JTSMITH.005). You have the option of changing the default entry file name.

The minimum amount of data required to create a general site entry record is the following: station name, latitude, longitude, sequence number, District code, State FIPS code, county FIPS code, agency use, and station type. If the record created is for a ground-water site, the following additional data are required: data reliability code, site type, and use of site. No additional data are required for a surface-water site.

After the entry file is created, it should be run through the edit procedure available through the Site File Edit/Update system. The edit procedure validates the entry data and creates transaction files used to update the Site File and/or related ground-water data files. The files created will be named in the format:

```
filetype.TRAN.- databasenum.batchcode
(e.g., SITE.TRAN.DB01.A, GW.LEV.TRAN.A).
```

The file type is the type of file, such as SITE for site file or GW.LEV for ground-water level file. If that District has multiple data bases, the data-base number indicates which site file and/or ground-water data files to access. The batch code (A-Z,0-9) is an identifier used to distinguish between transaction files. An error file `ERRFILE.databasesnumber.batchcode` is also created, which lists fatal and warning messages indicated by the edit program (e.g., `ERRFILE.DB02.B`)

For additional information in the Site File Edit/Update System, see section 4.6.2.

3.2.2.2 KEYDISK Program

KEYDISK is a general-purpose, interactive data-entry program that builds entry records that are acceptable to SSWUDS and saves them in a file specified. The records are built from your responses to KEYDISK queries. KEYDISK asks all the necessary questions according to the action specified. Data items are referenced by KEYDISK according to specific Data Element names from the SSWUDS Data Dictionary. Data entered to KEYDISK do not go directly into the SSWUDS data bases; KEYDISK only prepares a file that is acceptable to the SSWUDS EDIT/UPDATE system. The names of files prepared by KEYDISK should all have the .HOLD postfix. The entry files created by KEYDISK should be written in the directory from which you instruct the SSWUDS batch EDIT/UPDATE system to get your entry files. If not, they must be either moved to that directory before you invoke the EDIT/UPDATE system, or you must change your EDIT/UPDATE path in the SSWUDS Userfile when queried for that information by the EDIT/UPDATE system.

For further information on the KEYDISK program, see section 5.

3.2.3 System Output

The SSWUDS user has two general output options available. The first option includes four types of data retrievals: SA File, SE File, Detailed Water-User Report, and the Special-Purpose ASCII File. The second option includes aggregation of annual data in five different ways: by water user, by hydrologic unit, by major basin, by county, and by aquifer.

3.2.3.1 Retrievals

SSWUDS has three retrieval options available. The first two retrievals, SA (annual measurements) and SE (extended data) files, contain complete records about each site retrieved. SA and SE files are the oldest output types in the system. The SE file is the only way to output extended data in a sequential ASCII file at this time.

The third retrieval option produces either a detailed water-user report or a special-purpose ASCII file of qualified data.

To qualify data for retrieval from the water-user file, the conveyance file, the measurement-point file, and the annual-measurement files respond to a selection criteria menu. The SE file data are only qualified by the water-user file and extended-data file.

3.2.3.1.1 Annual Measurements (SA) File

An SA file (retrieval) is a sequential file of water-user information and associated annual measurements. The purpose of the SA file is intended to serve as an input file for further postprocessing programs. Because of the SA File's tax on system resources, time required for file generation, and the size of the generated file, consider generating a Special-Purpose ASCII File, described in section 3.2.3.1.4.

Table 1 shows the breakdown of the SA file record into its separate data elements. Listed for each data element are the following: descriptive name, data dictionary name, starting position in the output record, and the character length.

Table 1.--SA file data elements

File name: Statistical File #1 - Annual Measurements

Generic name: SA file

Description: Basic information about individual water-using facilities, related measurement points and annual measurements by single years.

Record length in characters: 505

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
Water-user identifier	WU0001	1	7
Water-user name	WU0002	8	25
Subcategory code	WU0003	33	2
Latitude	WU0004	35	6
Longitude	WU0005	41	7
Hydrologic unit code	WU0006	48	8
Street address	WU0007	56	20
City name	WU0008	76	15
City code	WU0009	91	5
State FIPS code	WU0010	96	2
County FIPS code	WU0011	98	3
Mailing street address	WU0012	101	25
Mailing city	WU0013	126	15
Mailing State (postal)	WU0014	141	2
Mailing zip	WU0015	143	9
SIC 1	WU0016	152	6
SIC 2	WU0017	158	6
SIC 3	WU0018	164	6
Permit number	WU0019	170	9
Permit agency	WU0020	179	5
Other data	WU0021	184	30
Measurement-point type	CD0003	214	2
Measurement-point identifier	CD0004	216	15
Description	MP0002	231	15
State FIPS code	MP0003	246	2
County FIPS code	MP0004	248	3
Latitude	MP0005	251	6
Longitude	MP0006	257	7
Hydrologic unit code	MP0007	264	8
Principal aquifer	MP0008	272	8
Type	MP0009	280	2
Subtype	MP0010	282	2
Reclaimed waste water	MP0011	284	1
Water-quality organization	MP0012	285	5
Permit number	MP0013	290	9
Permit agency	MP0014	299	5
Other data	MP0015	304	30
Annual-measurement year	CD0007	334	2
Annual amount	AM0002	336	10

Table 1. SA file data elements -- Continued

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
January amount	AM0003	346	10
February amount	AM0004	356	10
March amount	AM0005	366	10
April amount	AM0006	376	10
May amount	AM0007	386	10
June amount	AM0008	396	10
July amount	AM0009	406	10
August amount	AM0010	416	10
September amount	AM0011	426	10
October amount	AM0012	436	10
November amount	AM0013	446	10
December amount	AM0014	456	10
Measuring method	AM0015	466	1
Measuring entity	AM0016	467	5
Accuracy	AM0017	472	1
Restrictions	AM0018	473	1
Salinity code	AM0019	474	1
Treatment type	AM0020	475	1
Other data	AM0021	476	30

3.2.3.1.2 Extended Data (SE) File

An SE file (retrieval) is a sequential file of water-user information and associated extended data. The SE file is intended to serve as an input file for further postprocessing programs.

The tables below break the SE file record into its separate data elements. Listed for each data element are the following: descriptive name, data dictionary name, starting position in the output record, and the character length.

Table 2. SE file data elements

File name: Statistical File #2 - Extended Data

Generic name: SE file

Description: Basic information about individual water-using facilities and extended data by single years.

Variable Record length in characters: Maximum - 339

Minimum - 277

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
Water-user identifier	WU0001	1	7
Water-user name	WU0002	8	25
Subcategory code	WU0003	33	2
Latitude	WU0004	35	6
Longitude	WU0005	41	7
Hydrologic unit code	WU0006	48	8
Street address	WU0007	56	20
City name	WU0008	76	15
City code	WU0009	91	5
State FIPS code	WU0010	96	2
County FIPS code	WU0011	98	3
Mailing street address	WU0012	101	25
Mailing city	WU0013	126	15
Mailing state (postal)	WU0014	141	2
Mailing zip	WU0015	143	9
SIC 1	WU0016	152	6
SIC 2	WU0017	158	6
SIC 3	WU0018	164	6
Permit number	WU0019	170	9
Permit agency	WU0020	179	5
Other data	WU0021	184	30
Year	ED0002	214	2
SIC code	ED0003	216	6

Note: The remainder of this record depends on the type of extended data stored in the record (i.e., irrigation, public supply/waste treatment, power, or commercial and industrial). Following is a description of the remainder of this record for each of the different types of extended data that can be stored in the record.

Table 3.--SE file extended data--irrigation overlay

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
Acres irrigated	EDIR01	222	6
Annual amount applied	EDIR02	228	8
January amount applied	EDIR03	236	8
February amount applied	EDIR04	244	8
March amount applied	EDIR05	252	8
April amount applied	EDIR06	260	8
May amount applied	EDIR07	268	8
June amount applied	EDIR08	276	8
July amount applied	EDIR09	284	8
August amount applied	EDIR10	292	8
September amount applied	EDIR11	300	8
October amount applied	EDIR12	308	8
November amount applied	EDIR13	316	8
December amount applied	EDIR14	324	8
Production amount	EDIR15	332	8

Table 4.--SE file extended data--production overlay

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
Annual production amount	EDIN01	222	8
January production amount	EDIN02	230	8
February production amount	EDIN03	238	8
March production amount	EDIN04	246	8
April production amount	EDIN05	254	8
May production amount	EDIN06	262	8
June production amount	EDIN07	270	8
July production amount	EDIN08	278	8
August production amount	EDIN09	286	8
September production amount	EDIN10	294	8
October production amount	EDIN11	302	8
November production amount	EDIN12	310	8
December production amount	EDIN13	318	8

Table 5.--SE file extended data--power overlay

Descriptive Name	Data Dictionary Name	Starting Position	Character Length
Generating capacity	EDPW01	222	8
Annual power produced	EDPW02	230	8
January power produced	EDPW03	238	8
February power produced	EDPW04	246	8
March power produced	EDPW05	254	8
April power produced	EDPW06	262	8
May power produced	EDPW07	270	8
June power produced	EDPW08	278	8
July power produced	EDPW09	286	8
August power produced	EDPW10	294	8
September power produced	EDPW11	302	8
October power produced	EDPW12	310	8
November power produced	EDPW13	318	8
December power produced	EDPW14	326	8

Table 6.--SE file extended data--public supply/waste treatment overlay

Descriptive Name	Data Dictionary Name	Starting Position	Character length
Domestic population served	EDPS01	222	7
AG connections served	EDPS02	229	7
CO connections served	EDPS03	236	7
Domestic connections served	EDPS04	243	7
IN connections served	EDPS05	250	7
IR connections served	EDPS06	257	7
Power connections served	EDPS07	264	7
Mining connections served	EDPS08	271	7

3.2.3.1.3 Detailed Water-User Report

The detailed water-user report is a tabular output file of the data qualified by the SSWUDS system user. The report may be generated in either an 80-column or a 132-column format. The information contained within the detailed water-user report consists of all the information stored in the SSWUDS data base associated with the records that have been qualified, and the appropriate messages for any data fields that are missing from the data base.

Following is an example of an 80-column detailed water-user report for water-user number 13105 in the Arkansas SSWUDS data base. Because of margin requirements for this document, the spacing is slightly different than the actual report.

 ***** DETAILED REPORT FOR WATER USER: 13105 *****

 NAME: MARTEL TATE LAT: LONG: SUBCATEGORY: IR
 ADDRESS-STREET: RTE 4 BOX 279 CITY: SEARCY CITY CODE:
 ADDRESS-STATE : 05 COUNTY: 145 HYDROLOGIC UNIT: 08020301 PERMIT
 AGENCY: ASWCC
 MAILING-STREET: RTE 4 BOX 279 PERMIT NUMBER: 037367
 MAILING-CITY : SEARCY STATE: AR ZIP: 72143
 SIC1: 01011 SIC2: SIC3: OTHER: 742-3593 ONR-C.E. TATE

EXTENDED DATA FOR WATER USER: 13105

YEAR: 86 SIC CODE: 011 ACRES IRRIGATED: 20
 ANNUAL AMOUNT APPLIED: 20 PRODUCTION AMOUNT:
 JAN: FEB: MAR: APR: MAY: JUN:
 JUL: 10 AUG: 10 SEP: OCT: NOV: DEC:

YEAR: 86 SIC CODE: 105 ACRES IRRIGATED: 20
 ANNUAL AMOUNT APPLIED: 20 PRODUCTION AMOUNT:
 JAN: 0 FEB: 0 MAR: 0 APR: 0 MAY: 0 JUN:
 JUL: 10 AUG: 10 SEP: 0 OCT: 0 NOV: 0 DEC:

MEASUREMENT POINT DATA FOR WATER USER: 13105

WITHDRAWAL (WD): 037367 DESCRIPTION: 7.5HP ELC STP
 ST: CO: LAT: LONG: HYDRO#: 08020301 AQUIFER:
 TYPE: GW SUBTYPE: RECLAIMED: WATER QUALITY ORG:
 PERMIT #: PERMIT AGEN: OTHER: SENW02,06N07W U4854 "

1988 ANNUAL MEASUREMENTS

WITHDRAWAL (WD): 037367 ANNUAL: 165
 METHOD: ENTITY: ACCURACY: RES:
 SALINITY: F TREATMENT:
 OTHER:
 JAN: FEB: MAR: APR: 20
 MAY: 25 JUN: 25 JUL: 30 AUG: 50
 SEP: 15 OCT: NOV: DEC:

3.2.3.1.4 Special-Purpose ASCII File

The Special-Purpose ASCII File (SPAF) is a sequential file that can be easily read; however, its primary purpose is for input to postprocessing programs. SSWUDS generates the SPAF that allows a great deal of power and flexibility in customizing the output.

The SPAF generator allows selecting the data elements to be included in the output file in the order you specify. All water-user elements selected are printed first, measurement-point elements are printed next, and annual-measurement elements are printed last. At this time, any record that fails the output criteria (e.g., returns no measurement-point data elements selected for given water user), as well as the selection criteria, are not outputted. The length of the SPAF record is dependent on the size of the data elements chosen for output. To determine the size of the data elements, see Data Elements Dictionary, section 6, for the information.

Following is an example of a Special-Purpose ASCII File (SPAF) with selected water users 87, 90, and 100 for all the annual measurement years in the Arkansas SSWUDS data base using these selected fields: water-user identifier (WU0001), water-user description/name (WU0002), water-user hydrologic unit code (WU0006), action code (CD0003), measurement-point identifier (CD0004), source type (MP0009), annual-measurement year (CD0007), and annual amount (AM0002).

87C. CLYDE BERRY, JR.	08020402WD	040150SW	85201
87C. CLYDE BERRY, JR.	08020402WD	040150SW	86
87C. CLYDE BERRY, JR.	08020402WD	040150SW	87
90KAY L. ELDRIDGE	08020402WD	040153SW	85185
90KAY L. ELDRIDGE	08020402WD	040153SW	86
90KAY L. ELDRIDGE	08020402WD	040153SW	87
100LOUIS NEUKAM	08020303WD	030101GW	85102
100LOUIS NEUKAM	08020303WD	030101GW	86
100LOUIS NEUKAM	08020303WD	030101GW	87

3.2.3.2 Applications

Nationally supported SSWUDS Applications Programs produce County Aggregate reports, Hydrologic Unit Aggregate reports, Major Basin Aggregate reports, Water-User Identifier Aggregate reports, and Aquifer Aggregate reports.

Data to be aggregated may be qualified through the selection criteria menu. Data may be qualified for the water-user file, the measurement-point file, the annual-measurements file, and the conveyance file.

The format of all these output files is similar. All files have a banner message at the top of the file with a descriptive message chosen by the user. A maximum of six tables of aggregated data are printed with withdrawals, deliveries, and withdrawal/deliveries printed first and returns, releases, and returns/releases printed next. Each table is then divided into ground-water totals, surface-water totals, and the totals of both water types. The aquifer aggregation has only ground-water totals and both the county and aquifer have totals for transferred water, if any are retrieved. At the end of the report (or table) is a summary of various items such as number of records read, number of invalid records, and total annual amount of invalid ground-water records.

Following is an example of a table of aggregations by hydrologic unit. Since aggregation reports are 132 columns wide, the example has been edited for this document.

HYDROLOGIC UNIT REPORT

WATER WITHDRAWALS BY HYDROLOGIC UNIT
FOR THE YEAR 1985

HYDROLOGIC UNIT NUMBER	NAME	SURFACE WATER 1985	GROUND WATER 1985	TOTAL WITHDRAWAL 1985
08020203	Lower St. Francis	50.00	80.00	130.00
08020205	L'Anguille	240.00	0.00	240.00
08020302	Cache	0.00	232.00	232.00
08040102	Upper Ouachita	0.00	176.00	176.00
08040103	Little Missouri	0.00	101.00	101.00
08040203	Upper Saline	0.00	112.00	112.00
11010004	Middle White	0.00	108.00	108.00
11010006	North Fork White	0.00	100.00	100.00
11010010	Spring	0.00	78.00	78.00

TOTAL WITHDRAWALS		290.00
7.00	1277.00	

NUMBER OF MEASUREMENT POINTS WITH HUC CODES	25
NUMBER OF MEASUREMENT POINTS WITH NO HUC CODES	7
NUMBER OF MEASUREMENT POINTS WITH INVALID HUC CODES	5
SURFACE WATER AMOUNT FOR MEASUREMENT POINTS WITH NO HUC CODES	308.00
GROUND WATER AMOUNT FOR MEASUREMENT POINTS WITH NO HUC CODES	649.30

3.2.4 Resolving Errors

A SSWUDS user may encounter several different types of errors, which include user-response errors, system errors, and data-processing errors.

3.2.4.1 User-Response Errors

Errors that may occur during an interactive session at a particular menu or query are trapped by SSWUDS immediately and a message is displayed indicating what corrective action should be taken. For example:

SELECTION CRITERIA

If a selection is not made a report will be generated
using all data in the SSWUDS data base

SELECT CRITERIA FOR DATA ITEMS:

- 1 - FROM THE WATER-USER FILE (WU)
- 2 - FROM THE MEASUREMENT-POINT FILE (MP)
- 3 - FROM THE ANNUAL-MEASUREMENT FILE (AM)
- 4 - FROM THE CONVEYANCE FILE (CN)
- [CR] TO GENERATE REPORT

SELECT FROM THE ABOVE LIST OR

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return
to PRIMOS)X

INVALID ANSWER, PLEASE RE-ANSWER !

Error reading or decoding your reply.

These kinds of errors usually reflect improper user responses and
are easily corrected by the user.

3.2.4.2 System Errors

Some errors related to the interaction of the PRIME operating system and SSWUDS may occur. Possible causes of these errors include:

- improperly set read/write locks,
- improperly set access rights,
- damaged MIDAS files,
- improperly formatted MIDAS files,
- missing MIDAS files, and
- improper definition of pathnames to MIDAS files in the NWIS master file.

These kinds of errors cannot be corrected by the user and should be referred to the local WUSE or SSWUDS Data Base Administrator. Following is an example of the type of message displayed should such an error occur:

MIDAS ERROR #23 DETECTED
IN SUBROUTINE GPATH.F77 OF PROGRAM UNNAMED

The unit is not open as a segment directory.

SITEFILE
PLEASE LEAVE THIS MESSAGE ON THE SCREEN
AND
CONSULT YOUR WATER-USE ADMINISTRATOR

KEY RETURN TO CONTINUE

3.2.4.3 Data-Processing Errors

Errors that occur during SSWUDS data processing (Edit/Update) are trapped by the system and placed in an error file. The transaction record and the error are both written to the error file. Below is an example of a C record error.

CARD IMAGE

```

-----
      1           2           3           4           5           6
123456789012345678901234567890123456789012345678901234567890

```

```

C1A 17022WDGW34323209123230185      100E      FYF

```

ERROR	ITEM	COL	SEVERITY	EXPLANATION
----	----	---	-----	-----
0106			8	MEASUREMENT POINT DOES NOT EXIST FOR ANNUAL MEASUREMENT DATA

The error message is divided into five parts: error code, data element item, column position, severity level, and explanation. The error code is the number by which SSWUDS accesses the message from the error file. The item is the data element that may have caused the error. The column is the position of the data element in error on the transaction record. The severity level indicates the seriousness of the error. A level-4 error is a warning, a level-8 error usually can be corrected by the user, and a level-12 error is a system error. If you have a level-12 or an unresolvable level-8 error, contact the WUSE or SSWUDS DBA. The last part of the error message is the explanation that briefly describes the error.

Other errors that may occur during an edit/update session may be captured in the SWMASS.date.time.COMO file. This file contains the names of the input files in the order processed. If a batch job submitted by EDIT/UPDATE should suddenly cease running without displaying a message indicating that the job is completed, the como file captures a program failure. There may be subroutines in the EDIT/UPDATE system that do not properly handle errors in input, in which case the program will fail. Any error found in the SWMASS como file should be referred to the WUSE or SSWUDS DBA. No further edit/update processing should be done until notified by the DBA.

Various data-processing errors are produced regularly. Two of the most common data processing errors are:

DATA ALREADY EXISTS

DATA NOT FOUND

The message DATA ALREADY EXISTS occurs on add transactions when attempting to add a data element to a field that already contains data.

The message DATA NOT FOUND occurs on modify transactions when attempting to modify a data element that does not exist.

The following example briefly tells when these two errors occur and how they are resolved.

A user added some water-user information using the following transaction record:

A4A 1900RTE 1 CASH AR

The A4 record contains the mailing address for the water-user 1900. However, the user failed to add the zip code, which should be placed after the State postal abbreviation AR. Also, the town name was misspelled. The user decided to resolve the error as follows:

A4A 1900RTE 1 CACHE AR72000

After reprocessing the transaction, the user checked his error report and discovered the following errors:

CARD IMAGE

```

-----
1           2           3           4           5           6           7           8
123456789012345678901234567890123456789012345678901234567890

```

A4A 1900RTE 1 CACHE AR72000

	ERROR	ITEM	COL	SEVERITY	EXPLANATION
	----	----	---	-----	-----
1	0095	MAILING STREET	11	4	DATA ALREADY EXISTS
2	0095	MAILING CITY	36	4	DATA ALREADY EXISTS
3	0095	MAILING STATE	51	4	DATA ALREADY EXISTS

Because the street, city, and State already existed, the zip code was not added. In addition, the transaction needs to be a modify for the name of the city to be modified.

The user then changed the transaction record to a modify and reprocessed the record:

A4M 1900RTE 1 CACHE AR72000

Following is the error report the user received for that transaction:

CARD IMAGE

1	2	3	4	5	6	7	8
1234567890123456789012345678901234567890123456789012345678901234567890							

A4M 1900RTE 1 CACHE AR72000

ERROR	ITEM	COL	SEVERITY	EXPLANATION
-----	----	---	-----	-----
1 0096	MAILING ZIP	53	4	DATA NOT FOUND

Because the zip code was nonexistent, nothing was added or modified for the water user. The following transaction needs to be created to modify the city name and add the zip code.

A4A 1900 72000
A4M 1900 CACHE

Therefore, if you receive a DATA ALREADY EXISTS error, remove all data elements from the transaction record causing the error and repeat the record process. If you receive a DATA NOT FOUND error, remove the data elements causing the error and place them on an add transaction. The remaining data elements on the modify transaction modify the existing data. These two errors, as well as other types of data-processing errors, can prevent data from being added to the data base; therefore, always check error reports to ensure that transactions are processed correctly.

3.2.4.4 File Damage and Indicative Errors

As with any computerized data file, the SSWUDS data files are susceptible to damage from hardware failures, power outages, and program failures. Such damage occurs infrequently, but be aware that such problems can occur. If they do, notify the SSWUDS DBA, who knows the recommended "plan of action" to repair the damage and continue with normal operations.

Damage to a SSWUDS data file may occur during the edit/update process. Therefore, be constantly alert for certain messages in the error report and the SWMASS file after the completion of an edit/update process.

Before the SSWUDS 88.2 revision, edit/update and retrieval processes could not be executed at the same time. If they were, the data base files were damaged. Therefore, new data appeared to have been successfully entered, but later edit/update processes indicated that the data did not exist. Some retrievals might indicate that several water users were linked to the same measurement-point record and its respective annual measurement(s), or that B-card data were missing.

The error messages received in the error-report file after an edit/update process may indicate whether certain data files have been damaged. The error messages:

WATER USER RECORD DOES NOT EXIST

MEASUREMENT POINT RECORD DOES NOT EXIST

ANNUAL MEASUREMENT RECORD DOES NOT EXIST

MEASUREMENT POINT TO BE DELETED NOT FOUND IN DATA BASE

MEASUREMENT POINT DOES NOT EXIST FOR ANNUAL MEASUREMENT DATA

SOURCE/DEST. DATA DOES NOT EXIST IN DATA BASE FOR DELETION

generally indicate there is only a format discrepancy in the input transaction that can be resolved by the user. However, if the data are in the data base, there is a record-access problem due to possible damage to a data file or files.

The following error message indicates damage to data files. Although the message implies that only the conveyance file is damaged, the measurement-point file and the annual-measurement file or files being modified may also have encountered record problems.

ERROR WRITING CONVEYANCES RECORD

The SWMASS como file produced after an input file is put into the EDIT/UPDATE system may also indicate whether an error has occurred. If a batch job submitted by EDIT/UPDATE should suddenly cease running without displaying a message indicating that the job completed, the como file captures the premature system termination. Always check both the error report and the SWMASS como file for indication of errors that could cause data file damage.

NWIS 90.2

VOLUME 2, USER'S MANUAL

CHAPTER 5. WATER-USE DATA SYSTEM

Part 1. Site-Specific Water-Use Data System (SSWUDS)

Section 4. Site-Specific Water-Use Data System (SSWUDS) Menus

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4 SITE-SPECIFIC WATER-USE DATA SYSTEM (SSWUDS) MENUS

This section describes the Site-Specific Water-Use Data System (SSWUDS) menus.

4.1 Introduction

The Site-Specific Water-Use Data System (SSWUDS) is one of two systems comprising the Water-Use Data System (WUDS). The other system is the Aggregate Water-Use Data System (AWUDS). SSWUDS and AWUDS can be accessed through the WUDS menu. Type "WUDS" at the command level and choose the system you wish to run. To bypass the WUDS menu, type "WUDS 1" to invoke the SSWUDS main menu or "WUDS 2" to invoke AWUDS.

The SSWUDS program incorporates a completely menu-driven control scheme. The menus within SSWUDS permit you to easily retrieve data from the data base and allow the water-use data base administrator to easily maintain the system. Updating of the water-use data base is accomplished through the interaction of four user queries that collect the necessary information required by the SSWUDS edit/update system which runs in a batch queue. The Site File Edit/Update System permits creating entry and transaction files to be used for adding site records to the Site File. These site records will correspond to respective measurement-point records in the water-use data base.

The SSWUDS applications subsystem currently contains a set of aggregation programs that require user interaction through menus followed by a job submission to a batch queue. The incorporation of batch programs for data aggregation and edit/update reduces the load the SSWUDS system places on your local computer.

SSWUDS also supports a local applications system that allows locally developed applications software to be added to the system. Provided with the SSWUDS software are two templates which are used in a "fill in the blanks" fashion. The templates (LOCAL.ENV.F77 and LOAD_LOCAL.TEMPLATE.CPL) provide easy addition of new functionality to the system. Four local applications, in use at the Arkansas District Office, are provided as examples to demonstrate the procedure for installing and using locally developed software.

As a part of the maintenance subsystem, SSWUDS supports multiple data-base management. Up to 99 separate data bases can be supported at a single SSWUDS installation. An index file is maintained to keep track of the available data bases and also for display purposes.

In most places throughout SSWUDS, screen helps are available at menu or query levels. You also have the ability to EXIT to PRIMOS, QUIT back to the last principal menu or query level, or to OOPS back to the preceding menu or query to reenter selections or data. These utility functions are provided as a result of specific programming in SSWUDS and by making use of NWIS common software.

4.2 Selecting Data Bases

SSWUDS is a multiple data-base system and supports from 1 to 99 data bases. The number of SSWUDS data bases required within a particular District and the locations of the MIDAS files for each data base are decided by the local PRIME System Administrator and the SSWUDS Data-Base Administrator (DBA).

Before entering the SSWUDS main menu, you are queried to select which SSWUDS data base you wish to access. The prompt for entering the data base index is as follows:

```
ENTER THE NUMBER OF THE DATA BASE YOU WISH TO ACCESS.  
ENTER A [CR] IF YOU WISH TO SEE A LIST.
```

If you do not know what data bases are available, a carriage return <CR> displays a list of the data base indexes currently available with their respective descriptive names. Enter the desired data-base index or enter "EXIT" to leave SSWUDS. An example list and prompt are shown below:

```
THE NAME OF DATA-BASE NUMBER 1 IS DISTRICT DATA BASE
```

```
THE NAME OF DATA-BASE NUMBER 4 IS TEST DATA BASE
```

```
ENTER THE NUMBER OF THE DATA BASE YOU WISH TO ACCESS.  
ENTER A [CR] IF YOU WISH TO SEE A LIST.
```

If a District has only one data base, a message with the data base's descriptive name is displayed indicating that only one data base is available.

```
THERE IS ONLY ONE SSWUDS DATA BASE AVAILABLE.
```

```
DISTRICT DATA BASE
```

The message remains on the screen for a few seconds before continuing to the SSWUDS main menu.

4.3 Main Menu

Each option of the main menu invokes a specific task or another subsystem. This separation of tasks or subsystems allows you to concentrate on the specific task and maintain a proper order of execution when necessary.

The SSWUDS main menu is shown below. After each menu option is a section number to simplify locating the menu option descriptions in this text.

```

WRD SITE-SPECIFIC WATER-USE DATA
SYSTEM (SSWUDS) REV90.2
*****
SSWUDS MAIN SYSTEM SELECTION MENU
*****
CODE                SELECTIONS

1      ACCESS INTERACTIVE DOCUMENTATION      4.4
2      CREATE RECORD-FORMATTED INPUT FILES    4.5
3      ACCESS THE EDIT/UPDATE SYSTEM          4.6
4      CREATE AN SA FILE                      4.8
5      CREATE AN SE FILE                      4.9
6      ACCESS THE RETRIEVAL SYSTEM            4.10
7      ACCESS THE APPLICATIONS SYSTEM        4.11
8      ACCESS THE LOCAL APPLICATIONS SYSTEM  4.12
9      CHANGE DATA BASES                    4.13

```

Select from the above list or enter HELP code (for menu selection help), QUIT, or EXIT (to return to PRIMOS)

In succeeding sections of this documentation you will find subsections that provide a "walkthrough" of the SSWUDS menu structure.

4.4 Access Interactive Documentation

Main menu option 1 is ACCESS INTERACTIVE DOCUMENTATION. This menu option accesses a subset of the system documentation without leaving SSWUDS. When option 1 is selected from the main menu, a submenu that contains eight submenu options is displayed. The interactive documentation submenu is as follows:

WRD SITE-SPECIFIC WATER-USE DATA
SYSTEM (SSWUDS) REV90.2

SSWUDS INTERACTIVE DOCUMENTATION MENU

CODE	SELECTIONS	
1	CREATE RECORD-FORMATTED INPUT FILES	4.4.1
2	EDIT/UPDATE	4.4.2
3	SA FILE	4.4.3
4	SE FILE	4.4.4
5	RETRIEVAL	4.4.5
6	SSWUDS APPLICATIONS	4.4.6
7	LOCAL APPLICATIONS	4.4.7
8	SSWUDS MAINTENANCE	4.4.8

Select from the above list or enter OOPS or QUIT (to return to the MAIN MENU), or EXIT (to return to PRIMOS)

The following subsections (4.4.1 through 4.4.8) contain the actual text that exists in version 90.2 of the SSWUDS Interactive Documentation system. Note that the interactive documentation for the SSWUDS MAINTENANCE subsystem only appears to those users who are data-base administrators.

4.4.1 Interactive Documentation for Record-Formatted Input File Creation

Selection 2 from the main menu invokes a menu for the KEYDISK data-entry system and the data-conversion program.

The KEYDISK data-entry system is a general-purpose, interactive data-entry program that builds entry records that are acceptable to SSWUDS and saves them in a file specified by the user. The records are built from responses to KEYDISK queries. KEYDISK asks all the necessary questions according to the action wanted by the user. Data elements, referenced by KEYDISK, are defined in the SSWUDS Data Dictionary.

The data-conversion program is a general-purpose program that builds entry records that are acceptable to SSWUDS from an existing data file. The data-conversion program takes as input any fixed-formatted ASCII file and converts it to A, B, C, D, E, F, or G SSWUDS input records. By selecting through a menu, the user instructs the program which record types to produce and which transaction type to produce (add, modify or delete). Format information required to process the input file is obtained from a data-definition file. The user must create a data-definition file prior to running the data-conversion program. The program supports the use of constant values and lookup tables.

The data-conversion program supports QUIT, EXIT, OOPS, and HELP in the same way as the rest of SSWUDS. KEYDISK does not support QUIT, EXIT, OOPS, and HELP.

Data entered to KEYDISK, or data converted using the data-conversion program, do not go directly into SSWUDS. These programs produce transaction files that are input to the SSWUDS Edit/Update system. Transaction file names must end with the postfix ".hold". These files should reside in the directory from which the SSWUDS batch Edit/Update system will be executed. If not, they must be either moved to that directory before invoking the Edit/Update system, or the Edit/Update path in the SSWUDS Userfile must be changed.

4.4.2 Interactive Documentation for EDIT/UPDATE

Selection 3 from the MAIN MENU invokes another menu for the batch SSWUDS EDIT/UPDATE system and the Site File Edit/Update system.

The batch SSWUDS EDIT/UPDATE system is all menu-driven and supports QUIT, EXIT, OOPS, and HELP. Data-entry files that have names ending in ".HOLD" must be created before invoking the batch EDIT/UPDATE system. These files may be prepared manually (using the line or screen editors), by the KEYDISK program, by the data-conversion program, or by unique data-entry programs (which should be available through the LOCAL APPLICATIONS menu) written in each District.

After invoking the system, you are asked to either verify an EDIT/UPDATE pathname stored in the USERFIL or change it appropriately. Also, you are asked to indicate how many of the entry files (each having the .HOLD postfix) you wish to process in this job. If you wish to process all .HOLD files, enter a <CR>. A job is then submitted to a batch queue and you are returned to the MAIN MENU. The contents of each entry file processed are saved in a file by the same name with a .DONE appended to the name. An error file is also generated for each entry file, and has the same name as the entry file with .WUER01 appended to the name. A date-time-tagged como file for the batch job is also left in the directory. The form of the name is SWMASS.date-time.COMO. The como file contains a record of all activity of the batch job.

Review the como file and all error files after the batch job is finished.

Selection of the Site File Edit/Update invokes another menu to allow creating entry files for input into the NWIS Site File, formatting and validating data for transaction files, and transferring the transaction file(s) to the NWIS directory WATIN or another update directory. In the update directory, the data-base administrator updates the Site File with the transaction files.

4.4.3 Interactive Documentation for SA File Retrieval

Selection 4 from the MAIN MENU allows obtaining a Sequential Data File Retrieval that includes annual-measurement data. The SA FILE program produces an ASCII file that can be used as input to other programs for further postprocessing. Such output has been available in the past from SWUDS and various postprocessing programs have been written to run against SA FILES. For this reason, the ability to do SA FILES has been made a part of SSWUDS.

Note that for new applications requiring machine-readable files for input, the new Special-Purpose ASCII output available from the SSWUDS Retrieval system is a more controlled and easier to read type of file.

4.4.4 Interactive Documentation for SE File Retrieval

Selection 5 from the MAIN MENU allows obtaining a Sequential Data File Retrieval that includes water-user and extended data. The SE FILE program produces an ASCII file that can be used as input to other programs for further postprocessing. Such output has been available in the past from SWUDS and various postprocessing programs have been written to run against SE FILES. For this reason, the ability to do SE FILES has been made a part of SSWUDS.

4.4.5 Interactive Documentation for RETRIEVAL

Selection 6 from the MAIN MENU invokes the retrieval system. The retrieval system is all menu-driven and supports QUIT, EXIT, OOPS, and HELP throughout. You may "key" on various data elements in the data base by processing through a series of Selection Criteria menus. Control may be rather loose if you wish, and often a very large amount of data is retrieved. However, you can establish a tight set of selection criteria and significantly reduce the amount of data retrieved. Output may be in the form of a Detailed Water User Report or a Special-Purpose ASCII File (SPAF).

The Detailed Water User Report is tabular output containing detailed information about a water user. The Special-Purpose ASCII File is an easily read sequential file that can be used for any purpose the analyst chooses. The SPAF is a particularly powerful type of output because you can control the selection criteria and also the specific data elements that you wish the SPAF to contain. The SPAF can be especially useful as an input file for further postprocessing by unique applications programs.

4.4.6 Interactive Documentation for SSWUDS APPLICATIONS

Selection 7 from the MAIN MENU invokes the SSWUDS Applications System. The Applications System provides some general applications programs that can be supported nationally. Each State may have some unique applications needs that need to be met by local programs. We are providing the capability to incorporate such programs into SSWUDS in the Local Applications Menu structure.

Nationally supported SSWUDS Applications Programs produce County Aggregate reports, Hydrologic Unit Aggregate reports, Major Basin Aggregate reports, Water-User Identifier Aggregate reports, and Aquifer Aggregate reports. The Applications System supports QUIT, EXIT, OOPS, and HELP throughout.

Selection criteria for each of the SSWUDS applications is established exactly as in the Retrieval System.

4.4.7 Interactive Documentation for LOCAL APPLICATIONS

Selection 8 from the MAIN MENU displays a list of applications programs that are available locally. These programs will be included in SSWUDS by the local SSWUDS Data Base Administrator. Programs available through the Local Applications Menu should use data in the old SA or SE format or, more preferably, the new Special Purpose ASCII File (SPAF) format as input. We are not, at the present time, providing an interface directly into the MIDASPLUS data bases. If you have programs that you wish to make available through the Local Applications Menu, contact your local SSWUDS DBA who has instructions on loading such programs into place.

There will always be a need for unique water-use applications programs in each State. The Local Applications System in SSWUDS provides the mechanism for making them centrally accessible to all users in each State.

4.4.8 Interactive Documentation for SSWUDS MAINTENANCE

Selection 8 from the MAIN MENU displays a list of maintenance and utility programs that are only available to the SSWUDS Data Base Administrator (DBA). To access the Maintenance System, you must be given DBA access rights. The following instructions, therefore, are only of interest to the local SSWUDS DBA.

The programs available from the Maintenance Menu allow such tasks as: keeping the SSWUDS data bases clean and compressed, dumping them if and when that may be necessary, or building or rebuilding particular files, if necessary.

4.5 Create Record-Formatted Input Files

Option 2 on the main menu is CREATE RECORD-FORMATTED INPUT FILES. Selection of this option invokes a menu to access the following: KEYDISK data-entry system and the data-conversion program. KEYDISK is a general-purpose, interactive data entry program that prompts for the information required to create transaction records that are input to SSWUDS. The data-conversion program is a general-purpose program that builds transaction records from a fixed formatted ASCII file.

Neither of these programs update the SSWUDS data base directly. The programs produce transaction records, output in an ASCII file. In order to update the data base the transaction files must be submitted to the SSWUDS EDIT/UPDATE system (see section 4.6.1).

Record-formatted input files may be generated using either the KEYDISK data-entry program or the DATA CONVERSION PROGRAM.

The menu for creating record-formatted input files follows:

CODE	SELECTIONS	
=====	=====	
1	KEYDISK DATA ENTRY SYSTEM	4.5.1
2	DATA CONVERSION PROGRAM	4.5.2

SELECT FROM THE ABOVE LIST OR

Enter HELP code (for menu selection help), QUIT, or EXIT (to return to PRIMOS)

:

4.5.1 Format Data - Using KEYDISK

Option 1 on the CREATE RECORD-FORMATTED FILE INPUT FILES menu invokes the KEYDISK data-entry system. KEYDISK is an interactive program that simplifies data entry to SSWUDS. KEYDISK's function is to create formatted input files to be submitted to the SSWUDS edit/update system. The KEYDISK software allows key-to-disk entry of "A" (water user), "B" (measurement point), "C" (annual measurement), "D" (irrigation extended data), "E" (power extended data), and "G" (production extended data) SSWUDS input records through the use of menus and prompts. (For details on the use of KEYDISK see section 5.)

4.5.2 Format Data - Using Data-Conversion Program

Option 2 on the CREATE RECORD-FORMATTED FILE INPUT FILES menu invokes the data-conversion program, which is a general-purpose program that builds transaction records that are input to the SSWUDS batch edit/update system. The data-conversion program can take as input any fixed-formatted ASCII file and convert it to A, B, C, D, E, F, or G SSWUDS transaction records.

The data-conversion program processes data based on information that describes general processing tasks and information that describes the format of the input file.

General processing information includes identifying which record types to produce and which transaction code (add, modify or delete) to automatically enter on each generated SSWUDS input record. Prompts for general processing information are displayed when the data-conversion program is executed.

Information describing the format of the input file is stored in a file called the data definition file (DDF). Information stored in a data definition file is also used to identify the following processing options: constant value substitution, lookup table processing, blank handling, and subposition handling. Every input file requires a data definition file. A detailed description of the data definition file can be found in Section 4.5.2.1.1.

To convert data using the data-conversion program the following processing steps should be followed:

1. Before making a data definition file, obtain the values for beginning column number and length of each data element in the input file.
2. Before making a data definition file, determine the mandatory SSWUDS data elements required for the desired SSWUDS input transaction types to be created. For example, the SSWUDS data element 'action code' is required on a B1 transaction record, therefore, 'action code' must be in the input data file or be defined as a constant value.
3. Before making a data definition file, determine which data elements will be defined as constant values. For example, if the SSWUDS data element 'action code' did not occur in the input file, it may be supplied to the data-conversion program as a constant value.

4. Before making a data definition file, determine if lookup tables are needed in the conversion process. The lookup tables should be established, at least to the point of deciding which columns will contain the lookup code and which will contain the corresponding SSWUDS codes. The pathname of lookup tables also need to be selected prior to creating a data definition file.
5. After all reference information is obtained (as outlined in steps 1 through 4), execute the data-conversion program to generate a data definition file. The data definition file is used to describe the format of the input data file.
6. Create the lookup tables. Also move the input data set to the directory to be used in converting the data file.
7. Execute the data-conversion program to convert the input data file.

The data conversion subsystem contains options for creating a data definition file and for converting the input data file. When the data-conversion subsystem is invoked, the following message is displayed:

INITIALIZING THE SSWUDS DATA BASE

DATA CONVERSION PROGRAM

This message indicates that the program is initializing. After a few seconds the first query (shown below) is displayed. This query prompts for the path to the directory where the transaction files reside. The path displayed is the one currently stored in the SSWUDS user file of default pathnames. The data-conversion program uses the same default pathname as the edit/update system. Transaction files generated by the data-conversion program will be placed in the directory identified by the default pathname. Other files required by the data-conversion program (ASCII files to be converted and data definition files) should also reside in this directory, although lookup files may reside anywhere on the system.

To change the pathname, enter a new pathname followed by a <CR>. The pathname will be stored in the user file. To keep the default pathname, enter a <CR>.

THE DEFAULT PATH TO THE DIRECTORY

WHERE YOUR EDIT/UPDATE

INPUT FILES RESIDE AT IS

UFD>YOUR.NAME>INPUT.FILE.DIRECTORY

ENTER A NEW PATH OR <CR>
TO ACCEPT THE DEFAULT

After the prompt for the pathname, the data-conversion menu is displayed as follows:

SSWUDS DATA CONVERSION PROGRAM

Use the line editor ED or screen editor EMACS to edit a data definition file. To get the format of the DDF file, enter HELP.

CODE	SELECTION
1	CREATE DATA DEFINITION FILE 4.5.2.1
2	CONVERT DATA TO RECORD-FORMATTED INPUT FILES 4.5.2.2

Select by NUMBER, or
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)

Selection 1 of the data conversion menu invokes an interactive data-entry program used to create a new data definition file (DDF), which is an ASCII file. A DDF contains information that describes the format of the input data file. A DDF must exist for each input data file. A system editor can be used to modify the contents of a DDF.

Selection 2 of the data-conversion menu invokes the data-conversion program. The data-conversion program prompts for the name of the input data file to be converted and the name of the corresponding DDF file. The input and DDF files should reside in the default edit/update directory. This program should not be run until a DDF file is created for the data input file.

4.5.2.1 Create Data Definition File

Selection 1 of the data-conversion menu invokes an interactive data-entry program used to create a new data definition file. The data-entry program prompts for information that describes the format of the input data file.

After selecting option 1, the first query is for the name of a new data definition file. To enter the name, type the file name followed by a <CR>. To identify that this file is a data definition file, add the suffix ".DDF" to the end of the file name. The program automatically adds the suffix if not entered.

If the file exists, another query is displayed asking if the existing DDF file should be overwritten. If the file is to be overwritten, answer Y, for YES.

The format of the input data file is described by identifying the location of each data element in the input data file. The location is identified by the column number and length. The starting column number is the first column in which the data element contains data when counting the columns from left to right. The length of the data element is the total number of columns (characters) in the input file that may contain data.

To convert data to SSWUDS, data elements in the input data file must have corresponding data elements in SSWUDS.

Information for each data element is entered to a data definition file one at a time. Before information can be entered, the data elements to be converted are selected. The selection is done through a series of menus. The following menu is the main menu used to select data elements.

SELECT DATA ELEMENT NAMES

CODE	SELECTION	
=====	=====	
1	WATER USER FILE	4.5.2.1.2
2	MEASUREMENT POINT FILE	4.5.2.1.3
3	ANNUAL MEASUREMENT FILES	4.5.2.1.4
4	EXTENDED DATA FILE (IRRIGATION)	4.5.2.1.5
5	EXTENDED DATA FILE (PUB SUPPLIER/WASTE TREAT)	4.5.2.1.6
6	EXTENDED DATA FILE (POWER)	4.5.2.1.7
7	EXTENDED DATA FILE (PRODUCTION)	4.5.2.1.8
[CR]	TO GENERATE OUTPUT FILE	4.5.2.1.9

Select from the above list or

Enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)

To select data elements, enter the number corresponding to the SSWUDS file in which the desired data element occurs. After a number is entered a submenu is displayed. The submenu displays a list of all the available data elements in the given SSWUDS file. Select the desired data elements from the submenu. When entering a <CR> at the submenu prompt, the main menu (shown above) is redisplayed. Data elements from multiple SSWUDS files can be selected by following this procedure. Sections 4.5.2.1.2 through 4.5.2.1.8 describe the submenus for selecting data elements.

4.5.2.1.1 Description of a Data Definition File

A data definition file (DDF) is an ASCII file containing a description of the input data file to be converted. The data-conversion program uses information in the DDF to convert each record in the input data file to one or more SSWUDS transaction records. A DDF must exist for each data file to be converted.

The DDF is a sequential access file and can be edited using a system editor. Each record in the DDF describes a single data element. The data-conversion program expects records in the DDF to be in a specific order; therefore, do not reorder records in the DDF using a system editor. The following table lists the record structure (format) of a DDF record.

Table 7. Record Structure of the Data Definition File

Record length (bytes/words): 218/109

Primary key length: 6 bytes (data element 'DDFNAME')

Descriptive Name	System Name	Starting Position	Length in Bytes
Short Name	DDFNAME	1	6
Record (card) Type	DDFCARD	7	2
Starting Column on Input Record	DDFCARDPOS	9	2
Maximum Length	DDFMAX	11	2
Data Element Name	DDFLONGNAME	13	15
Starting Column in MIDAS File	DDFMIDASPOS	28	2
Starting Column in User File	DDFFILEPOS	31	2
Length (not > than Max Len)	DDFITEMLEN	34	2
Process Blank Data Fields	DDFBLANK	36	1
Starting Column on Input Record	DDFSUBPOS	37	2
Constant Value	DDFCONSTANT	39	40
Starting Column of User Code	DDFLOOKUPOS	79	2
Length of User Code	DDFLOOKULEN	82	2
Starting Column of SSWUDS Code	DDFLOOKSPOS	85	2
Length of SSWUDS Code	DDFLOOKSLEN	88	2
Pathname of Lookup Table	DDFLOOKUPNAME	91	128

Values for the following DDF data elements are supplied by the DDF data-entry program (the data-entry program obtains values from the SSWUDS Data Elements Dictionary, MIDAS file, WUDD01); the values are displayed by the data-entry program, but cannot be modified using the program:

DDFNAME, short name, is the SSWUDS abbreviated data element name (e.g., WU0019 for permit number). The value is obtained from the SSWUDS Data Elements Dictionary (section 6).

DDFCARD, record (card) type, is the first SSWUDS input record in which the value of the data element is entered. Assignment follows this order: A1, A2, A3, A4, B0, B1, B2, B3, C1, C2, C3, C4, C5, C6, D1, D2, D3, E1, F1, F2, F3, G1, G2, G3. For example, the value for data element permit number (SSWUDS short name WU0019) is first entered on the A1 input record. The value is obtained from the SSWUDS Data Elements Dictionary (section 6).

DDFCARDPOS, starting column on input record, is the starting column position on the first SSWUDS input record in which the value of the data element is entered. For example, for WU0019 the starting column position on

the A1 input record is 56. The value is obtained from the SSWUDS Data Elements Dictionary (section 6).

DDFMAX, maximum length, is the maximum allowable length in bytes that a value for a data item can have. For example, for WU0019 the maximum length is 9. The value is obtained from the SSWUDS Data Elements Dictionary (Section 6).

DDFLONGNAME, data element name, is the long name associated with a data element. For example, for WU0019 the long name is "permit number". The value is obtained from the SSWUDS Data Elements Dictionary (Section 6).

DDFMIDASPOS, starting column in MIDAS file, is the starting column position in the associated SSWUDS MIDAS data file in which the value of the data element is entered. For example, for WU0019 the starting column position in the water user file (MIDAS file WUWU01) is 170. The value is obtained from the SSWUDS Data Elements Dictionary (Section 6). The value can be referenced in the Water-Use Data System Administrator's Manual, an online document.

Values for the following DDF data elements are supplied by the user and can be entered using the DDF data-entry program:

DDFFILEPOS, starting column in the data file, is the starting column position on the input record in which the value of the data element exists. For example, if the value for permit number (SSWUDS data element WU0019) begins in column 13 of the data file, the value 13 is entered for starting column.

DDFITEMLEN, length (cannot be greater than the maximum length "DDFMAX") is the maximum length in bytes that a value for a data element can have in the input data file. Enter the maximum length in the input file, not the SSWUDS input record maximum length. For example, if the maximum length of the value for WU0019 in the input data file is 5, the value 5 is entered for maximum length, not 9. The maximum length for WU0019 in the SSWUDS input record is 9.

DDFBLANK, process blanks data fields, is a flag that determines whether blank handling should be performed. Blank handling means that a dollar sign (\$) is entered in place of a blank value found in the input file. To turn on blank handling, enter a Y (for yes) as the value for this data element. Blank handling is valid only when input records with modify transactions are being generated. Blank handling will be bypassed when input records with add or delete transactions are generated, even if specified as being 'on' in the DDF.

DDFSUBPOS, starting column on input record, is the starting column position on the SWUDS input record in which the value of the data element is entered. Multiple data elements from the input file can be converted to a single data element on the SWUDS input transaction. DDFSUBPOS is used to define the position on the input transaction in which the various data elements will be transferred. The data elements in SSWUDS that allow multiple data elements to be defined are:

SSWUDS Short Name	Description	Transaction Record Type
WU0021	Other data	A4
MP0002	Description	B2
MP0015	Other data	B3
AM0021	Other data	C1

When any of the above data elements are selected for including in a DDF, the user is prompted for the number of sub-fields to be entered. The program then prompts for the subfield positions for each element to be converted.

The following is an example of how to use DDFSUBPOS. Suppose the SSWUDS data element OTHER DATA includes the following two data elements in the input data file: LOCAL USE and LOCAL IDENTIFIER. You wish to have LOCAL USE converted, starting in column 11 (first column position on the A2 SSWUDS input record containing the item OTHER DATA), and LOCAL IDENTIFIER converted, starting in column 16 (sixth column position on the A2 input record containing the item OTHER DATA). To identify that the elements LOCAL USE and LOCAL IDENTIFIER are subelements of OTHER DATA, two DDF records are created for the SSWUDS data element OTHER DATA. One DDF record describes the subposition and length of LOCAL USE, and the second DDF record describes LOCAL IDENTIFIER.

DDFCONSTANT, constant value, is a constant value for a data element used in place of a data value from the input data file. The data element does not need to exist in the input file. To make a data element a constant, a DDF record is created for a SSWUDS data element and the value of the constant is entered on the DDF record. When using constant values, the value of DDFFILEPOS is the starting position in the input field in which the constant value is entered (usually 1). In addition, the value of DDFITEMLEN is the length of the constant value entered.

DDFLOOKUPNAME, pathname of lookup table, is the full pathname of a lookup table. Values for a data element in the input file are replaced by values obtained in the lookup table. The lookup table contains the value of the data element in the input file and the corresponding value of a SSWUDS data element (the value that will be substituted).

DDFLOOKUPOS, starting column of user code, is the starting column position in the lookup table in which the local value of the data element begins.

DDFLOOKULEN, length of user code, is the maximum length in characters that the value of the user's local data element in the lookup table may have.

DDFLOOKSPOS, starting column of SSWUDS code, is the starting column position in the lookup table in which the value of the valid SSWUDS data element begins.

DDFLOOKSLEN, length of SSWUDS code, is the maximum length in characters that the value of the SSWUDS data element in the lookup table may have.

4.5.2.1.2 Selecting Data Elements from the Water-User File

Select data elements by entering the desired numbers as listed on the menu. All data elements or any subset thereof, may be selected. To select a single data element, enter the corresponding number followed by a <CR>. For example, 3 followed by a <CR> selects the third data element on the list. To select a group of data elements, either enter the numbers one at a time or enter a list of numbers separated by commas, e.g., 3,10,1,5. To select a range of data elements, enter the lower number followed by a hyphen, followed by the higher number, e.g., 5-8. To select all data elements, enter A or ALL.

Ranges can be included when identifying a group. For example, 1-3,5,10-14,6 is a valid way to identify a group of elements to be selected. After a group has been entered, it can be added to by entering more selections. Data elements can also be repeated (if it makes sense for your application). The order in which elements are selected is the order in which they will be processed. After a selection is made, the currently selected data elements are displayed.

If OOPS is entered, or if this menu is exited by entering a <CR> and then reentered from the preceding menu, all previous selections will be removed, and all selections need to be reentered. The menu for selecting from the water-user file is as follows:

SELECT DATA ITEM NAMES FROM THE WATER USER FILE

- | | |
|-------------------------------|--------------------------------|
| 1. WU0001 - WATER USER NUMBER | 11. WU0011 - COUNTY |
| 2. WU0002 - WATER USER NAME | 12. WU0012 - MAILING STREET |
| 3. WU0003 - NWUDS USE CODE | 13. WU0013 - MAILING CITY |
| 4. WU0004 - LATITUDE | 14. WU0014 - MAILING STATE |
| 5. WU0005 - LONGITUDE | 15. WU0015 - MAILING ZIP |
| 6. WU0006 - HYDROLOGIC UNIT | 16. WU0016 - SIC 1 |
| 7. WU0007 - STREET ADDRESS | 17. WU0017 - SIC 2 |
| 8. WU0008 - CITY NAME | 18. WU0018 - SIC 3 |
| 9. WU0009 - CITY CODE | 19. WU0019 - PERMIT NUMBER |
| 10. WU0010 - STATE | 20. WU0020 - PERMITTING AGENCY |
| | 21. WU0021 - OTHER DATA |

Examples:

- 1 -- selects WU0001
4-6 -- selects WU0004, WU0005, and WU0006
16,10,2 -- selects WU0016, WU0010, and WU0002

Select by number, range, list, or ALL (selects all elements) or
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
:

4.5.2.1.3 Selecting Data Elements from the Measurement-Point File

Selecting data elements from the measurement-point file is exactly the same as for the other data-item-selection procedures (see section 4.5.2.1.2.). The menu for selecting the measurement-point data elements is as follows:

SELECT DATA ITEM NAMES FROM THE MEASUREMENT-POINT FILE

- | | |
|-------------------------------|---|
| 1. CD0003 - ACTION CODE | 10. MP0009 - TYPE |
| 2. CD0004 - MP IDENTIFIER | 11. MP0010 - SUBTYPE |
| 3. MP0002 - DESCRIPTION | 12. MP0011 - RECLAIMED WASTE WATER |
| 4. MP0003 - STATE | 13. MP0012 - WATER QUALITY ORGANIZATION |
| 5. MP0004 - COUNTY | 14. MP0013 - PERMIT NUMBER |
| 6. MP0005 - LATITUDE | 15. MP0014 - AGENCY CODE |
| 7. MP0006 - LONGITUDE | 16. MP0015 - OTHER DATA |
| 8. MP0007 - HYDROLOGIC UNIT | 17. CD0012 - AGGREGATE FLAG |
| 9. MP0008 - PRINCIPAL AQUIFER | 18. CD0013 - ALIAS IDENTIFIER |

Examples:

- 1 -- selects CD0001
- 4-6 -- selects MP0003, MP0004, and MP0005
- 8,10,2 -- selects MP0007, MP0009, and CD0004

Select by number, range, list, or ALL (selects all elements) or
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
:

4.5.2.1.4 Selecting Data Elements from the Annual-Measurement Files

Selecting data elements from the annual-measurement files is exactly the same as the other data item selection procedures (see section 4.5.2.1.2.). The menu for selecting the annual-measurement data elements is as follows:

SELECT DATA ITEM NAMES FROM THE ANNUAL MEASUREMENTS FILE

- | | |
|-----------------------------|-------------------------------|
| 1. CD0007 - YEAR | 11. AM0011 - SEPTEMBER AMOUNT |
| 2. AM0002 - ANNUAL AMOUNT | 12. AM0012 - OCTOBER AMOUNT |
| 3. AM0003 - JANUARY AMOUNT | 13. AM0013 - NOVEMBER AMOUNT |
| 4. AM0004 - FEBRUARY AMOUNT | 14. AM0014 - DECEMBER AMOUNT |
| 5. AM0005 - MARCH AMOUNT | 15. AM0015 - MEASURING METHOD |
| 6. AM0006 - APRIL AMOUNT | 16. AM0016 - ENTITY |
| 7. AM0007 - MAY AMOUNT | 17. AM0017 - ACCURACY |
| 8. AM0008 - JUNE AMOUNT | 18. AM0018 - RESTRICTIONS |
| 9. AM0009 - JULY AMOUNT | 19. AM0019 - SALINITY CODE |
| 10. AM0010 - AUGUST AMOUNT | 20. AM0020 - TREATMENT TYPE |
| | 21. AM0021 - OTHER DATA |

Examples:

- 1 -- selects CD0007
 4-6 -- selects AM0004, AM0005, and AM0006
 1,10,2 -- selects CD0007, AM0010, and AM0002

Select by number, range, list, or ALL (selects all elements) or
 ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to
 PRIMOS)
 :

4.5.2.1.5 Selecting Data Elements from the Extended Data File (Irrigation)

Selecting data elements from the extended data file (irrigation) is exactly the same as the other data-item-selection procedures (see section 4.5.2.1.2.). The menu for selecting extended-data file (irrigation) elements is as follows:

SELECT DATA ITEM NAMES FROM THE EXTENDED DATA FILE (IRRIGATION)

- | | |
|-----------------------------------|---------------------------------|
| 1. ED0002 - YEAR | 9. EDIR07 - MAY AMOUNT APPLIED |
| 2. ED0003 - CROP TYPE (SIC CODE) | 10. EDIR08 - JUN AMOUNT APPLIED |
| 3. EDIR01 - ACRES IRRIGATED | 11. EDIR09 - JUL AMOUNT APPLIED |
| 4. EDIR02 - ANNUAL AMOUNT APPLIED | 12. EDIR10 - AUG AMOUNT APPLIED |
| 5. EDIR03 - JAN AMOUNT APPLIED | 13. EDIR11 - SEP AMOUNT APPLIED |
| 6. EDIR04 - FEB AMOUNT APPLIED | 14. EDIR12 - OCT AMOUNT APPLIED |
| 7. EDIR05 - MAR AMOUNT APPLIED | 15. EDIR13 - NOV AMOUNT APPLIED |
| 8. EDIR06 - APR AMOUNT APPLIED | 16. EDIR14 - DEC AMOUNT APPLIED |
| | 17. EDIR15 - PRODUCTION AMOUNT |

Examples:

- 1 -- selects ED0002
- 3-5 -- selects EDIR01, EDIR02, and EDIR03
- 8,10,2 -- selects EDIR06, EDIR08, and ED0003

Select by NUMBER, RANGE, LIST, or ALL (selects all elements) or enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
:

4.5.2.1.6 Selecting Data Elements from the Extended Data File (Public Supplier/Waste Treatment)

Selecting data elements from the extended data file (public supplier/waste treatment) is exactly the same as other data-item selection procedures (see Section 4.5.2.1.2.). The menu for selecting the extended-data file (Public Supplier/Waste Treatment) elements is as follows:

SELECT DATA ITEM NAMES FROM THE EXTENDED DATA FILE (PUB SUPPLIER/WASTE TREAT)

- | | |
|---------------------------------|------------------------------|
| 1. ED0002 - YEAR | 6. EDPS04 - DOMESTIC CONN. |
| 2. ED0003 - SIC CODE | 7. EDPS05 - INDUSTRIAL CONN. |
| 3. EDPS01 - DOMESTIC POP SERVED | 8. EDPS06 - IRRIGATION CONN. |
| 4. EDPS02 - AGRICULTURAL CONN. | 9. EDPS07 - POWER CONN. |
| 5. EDPS03 - COMMERCIAL CONN. | 10. EDPS08 - MINING CONN. |

Examples:

1 -- selects ED0002
4-6 -- selects EDPS02, EDPS03, and EDPS04
8,10,2 -- selects EDPS06, EDPS08, and ED0003

Select by NUMBER, RANGE, LIST, or ALL (selects all elements) or enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
:

4.5.2.1.7 Selecting Data Elements from the Extended Data File (Power)

Selecting data elements from the extended data file (power) is exactly the same as the other data-item-selection procedures (see section 4.5.2.1.2.). The menu for selecting the extended data file (power) elements is as follows:

SELECT DATA ITEM NAMES FROM THE EXTENDED DATA FILE (POWER)

- | | |
|-----------------------------------|---------------------------------|
| 1. ED0002 - YEAR | 9. EDPW07 - MAY POWER PRODUCED |
| 2. ED0003 - SIC CODE | 10. EDPW08 - JUN POWER PRODUCED |
| 3. EDPW01 - GENERATING CAPACITY | 11. EDPW09 - JUL POWER PRODUCED |
| 4. EDPW02 - ANNUAL POWER PRODUCED | 12. EDPW10 - AUG POWER PRODUCED |
| 5. EDPW03 - JAN POWER PRODUCED | 13. EDPW11 - SEP POWER PRODUCED |
| 6. EDPW04 - FEB POWER PRODUCED | 14. EDPW12 - OCT POWER PRODUCED |
| 7. EDPW05 - MAR POWER PRODUCED | 15. EDPW13 - NOV POWER PRODUCED |
| 8. EDPW06 - APR POWER PRODUCED | 16. EDPW14 - DEC POWER PRODUCED |

Examples:

- 1 -- selects ED0002
- 4-6 -- selects EDPW02, EDPW03, and EDPW04
- 8,10,2 -- selects EDPW06, EDPW08, and ED0003

Select by NUMBER, RANGE, LIST, or ALL (selects all elements) or enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS):

4.5.2.1.8 Selecting Data Elements from the Extended Data File (Production)

Selecting data elements from the extended data file (production) is exactly the same as the other data-item-selection procedures (see Section 4.5.2.1.2.). The menu for selecting the extended data file (production) elements is as follows:

SELECT DATA ITEM NAMES FROM THE EXTENDED DATA FILE (PRODUCTION)

- | | |
|-------------------------------|-----------------------------|
| 1. ED0002 - YEAR | 9. EDIN07 - JUN PRODUCTION |
| 2. ED0003 - SIC CODE | 10. EDIN08 - JUL PRODUCTION |
| 3. EDIN01 - ANNUAL PRODUCTION | 11. EDIN09 - AUG PRODUCTION |
| 4. EDIN02 - JAN PRODUCTION | 12. EDIN10 - SEP PRODUCTION |
| 5. EDIN03 - FEB PRODUCTION | 13. EDIN11 - OCT PRODUCTION |
| 6. EDIN04 - MAR PRODUCTION | 14. EDIN12 - NOV PRODUCTION |
| 7. EDIN05 - APR PRODUCTION | 15. EDIN13 - DEC PRODUCTION |
| 8. EDIN06 - MAY PRODUCTION | |

Examples:

- 1 -- selects ED0002
- 4-6 -- selects EDIN02, EDIN03, and EDIN04
- 8,10,2 -- selects EDIN06, EDIN08, and ED0003

Select by NUMBER, RANGE, LIST, or ALL (selects all elements) or enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
:

4.5.2.1.9 Data Definition File Data Entry Program

An interactive data-entry program is used to enter information into a data definition file (DDF). The data elements to be described in the DDF are first identified by making selections from the menus described in sections 4.5.2.1.2 through 4.5.2.1.8. The data-entry program prompts for all required information for each selected data element. After the data elements have been identified, enter a <CR>. The main selection menu is as follows:

SELECT DATA ELEMENT NAMES

CODE	SELECTION
=====	=====
1	WATER USER FILE
2	MEASUREMENT POINT FILE
3	ANNUAL MEASUREMENT FILES
4	EXTENDED DATA FILE (IRRIGATION)
5	EXTENDED DATA FILE (PUB SUPPLIER/WASTE TREAT)
6	EXTENDED DATA FILE (POWER)
7	EXTENDED DATA FILE (PRODUCTION)
[CR]	TO GENERATE OUTPUT FILE

Select from the above list or

Enter OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)

After entering a <CR>, a list of the selected data elements is displayed. An example list containing two data elements follows:

The following elements will be in your DDF file:
WU0001,WU0002

Do you want to change your selection (Y/N) ? N

At the end of the list, you are asked whether there are any changes. Entering N (for NO) to this prompt invokes the data-entry program. Entering Y (for YES) returns you to the main data-element selection menu.

When the data-entry program is invoked, the online SSWUDS data dictionary is read. Then the first data-entry screen is displayed; one data-entry screen is displayed for each selected data element. An example data-entry screen for the data element USER ID, SSWUDS short name WU0001, follows:

***** Data Definition Data *****

Data Item Name: USER ID	====> Short Name: WU0001
First Input Record: A1	Starting Column on Input Record: 1
Maximum Length Allowed: 7	Start Position in SSWUDS Data File: 1

Starting column in users file: 1= Length in users file: 2=
 Blank Processing: 3=
 Constant Value: 5=

Pathname of Lookup Table: 6=
 Start Position of Lookup Value 7=
 Length of Lookup Value 8=
 Start Position of SSWUDS Value 9=
 Length of SSWUDS Value 10=

Optns	S.Fld	N.Fld	L.Fld	Repnt	In:Ed	Abort	End	Blank	Ins.C	Del.C	No.Ctrl	Ys.Ctrl
?	\$	>	<	%	&	!	*	#	_	\	'	^

Values obtained from the online data dictionary are displayed on the top part of the data-entry screen for reference purposes, and cannot be modified. The following information is displayed: data element name, SSWUDS short name, first input record type in the order of A1 through G3, (e.g., the first input record type containing the water-user identifier, SSWUDS short name WU0001 is A1), starting column position on the input record, maximum length of the data-element value, and starting column position in the SSWUDS MIDAS data file in which the data element is stored.

Input fields follow the reference information. Input fields are identified by a prompt followed by "x=" where x is a number. When a data-entry screen is displayed, the cursor is placed automatically at the first data input field. To enter a value, enter the desired value followed by a <CR>. The cursor moves to the next input field automatically. Values may be entered for the following input fields:

- 1= Starting column position of the data element in the input file. Mandatory even if the data element does not exist in the input file. If this data element is not in the input file, however; the data value is supplied as a constant value, then the value to be entered should be the starting column position in the input field of the constant value (usually the value '1' is entered).
- 2= Maximum length of the data element value in the input file. Mandatory even if the data element does not exist in the input file. If this data element is not in the input file, however; the data value is supplied as a constant value, then the value to be entered should be the maximum length of the constant value.
- 3= Blank processing. Possible entries are Y (for YES) and N (for NO). If Y is entered, a \$ will be placed in the first column position of the data-element field if the data element has no value in the input file. The default value is N. Blank processing is done only when tranaction records are generated that have modify (M) transaction codes.
- 4= Starting column position on the SSWUDS input record in which the value of the data element is entered. Multiple data elements from the input file can be converted to a single data element on the SSWUDS input transaction. This field is used to define the position on the input transaction in which the various data elements will be transferred. This option is available for a few SSWUDS data elements. The prompt "4=" will only appear on the data-entry display for the data elements in which subfield processing is allowed. When a data element is selected in which subfield processing is allowed, the user is prompted for the number of subfields to be entered. The program then displays one data-entry screen for each subfield.
- 5= Constant value to be entered in place of a value from the input file. When a constant value is entered, the values for starting column position and maximum length of data element (answers for prompts 1= and 2=) apply to the value of the constant in the DDF.
- 6= Pathname of a lookup table. This is the complete pathname of a fixed-formatted ASCII file. If this item is left blank (there is no lookup table), do not answer prompts 7=, 8=, 9= and 10=.
- 7= Starting column of the value of the user's element in the lookup table. Mandatory if a pathname of a lookup table was entered.
- 8= Length of the value of the user's element in the lookup table. Mandatory if a pathname of a lookup table was entered.

9= Starting column of the value of the SSWUDS element in the lookup table. Mandatory if a pathname of a lookup table was entered.

10= Length of the value of the SSWUDS element in the lookup table. Mandatory if a pathname of a lookup table was entered.

A variety of commands can be executed at each input field. Two lines containing a selected list of some of the more commonly used commands are displayed at the bottom of the data-entry screen as follows:

Optns	S.Fld	N.Fld	L.Fld	Repnt	In:Ed	Abort	End	Blank	Ins.C	Del.C	No.Ctrl	Ys.Ctrl
?	\$	>	<	%	&	!	*	#	_	\	'	^

These are the same editing commands used in the Ground-Water Site Inventory System's (GWSI) screen entry input and update program (HDRINP). A description of these (and other) data field-editing codes can be found in the GWSI User's Manual (Atwood, 1990, p. 5-4).

4.5.2.2 Convert Data to Record-Formatted Input Files

Selection 2 of the data-conversion menu invokes the data-conversion program. This program requires both an input file (the data file to be converted) and a data definition file (a file containing information that describes the format of the input file). Before running the program, create a data definition file for the input file (selection 1 of the data-conversion menu).

After selecting option 2, there are a series of queries for name of the input file (file to be converted), whether multiple output files are to be generated, number of records in each output file, name of the output file, and name of the data definition file. The queries are displayed as follows:

ENTER THE NAME OF THE DATA FILE TO BE CONVERTED:

DO YOU WANT TO HAVE MULTIPLE OUTPUT FILES (Y/N) ?

(If the answer to the previous prompt is Y, then the following two prompts are displayed; otherwise, a prompt for the output file is displayed.)

HOW MANY RECORDS DO YOU WANT IN EACH OUTPUT FILE ?

ENTER BASE NAME TO USE FOR YOUR OUTPUT FILES:

ENTER THE NAME OF YOUR DATA DEFINITION FILE:

If multiple output files are to be generated, output file names will be generated from a base name. For example, a base name called MYFILE was entered, and 50 was entered for the number of records to be output in each file. The first output file will be named MYFILE.1.HOLD. The program will then output 50 transaction records to MYFILE.1.HOLD. More than 50 transaction records may be output because the program will not split a logical group of transaction records for a water user. All possible transactions for a water user are output to the current output file. This assures that data for a water user are not split between output files. If more than one output file is needed, the naming conversion continues as follows:

BASE-NAME.X.HOLD

where: BASE-NAME is a user-supplied name,
X is a number that starts at 1 and is incremented by
1 for each output file to be created, and
.HOLD is appended to the end of the name.

The output files cannot exist prior to running the program. If any of the output files exist, an error message appears and the program terminates.

If the data definition file or input file does not exist, the program continues to prompt for a file name.

After the file names have been entered, the program asks for the record types to be processed. Any combination of record types may be selected, A1 through G3.

The program outputs only transaction records that contain data. For example, if the data elements OTHER DATA, SSWUDS short name MP0015, and DESCRIPTION, SSWUDS short name MP0002 (the only two data elements contained on the B2 record) did not exist for one measurement point in the input file, then the B2 transaction record would not be created as output for that measurement point.

Transaction records types are selected from the following menu:

SELECT RECORD TYPES TO BE PROCESSED

WU	MP	AM	EXTENDED DATA (ED)			
=====	=====	=====	=====	=====	=====	=====
1. A1	5. B0	9. C1	15. D1	18. E1	19. F1	22. G1
2. A2	6. B1	10. C2	16. D2		20. F2	23. G2
3. A3	7. B2	11. C3	17. D3		21. F3	24. G3
4. A4	8. B3	12. C4				
		13. C5				
		14. C6				

Examples:

1 -- selects A1
 5-8 -- selects B0, B1, B2, and B3
 1,5,9 -- selects A1, B0, and C1

Select by number, range, list, or all (selects all elements) or enter oops (to go back one menu), help, quit, or exit (to return to primos)

Select record types by entering the numbers as listed on the menu. All record types or any subset thereof, may be selected. To select a single record type, enter the corresponding number followed by a <CR>. For example, a 3 followed by a <CR> selects the third record type on the list. To select a group of record types, either enter the numbers one at a time or enter a list of numbers separated by commas, e.g., 3,10,1,5. To select a range of record types, enter the lower number followed by a hyphen, followed by the higher number, e.g., 5-8. To select all record types, enter A or ALL.

Ranges can be included when identifying a group. For example, 1-3,5,10-14,6 is a valid way to identify a group. After a group is entered, additions to the group can be selected. Record types cannot be repeated; the selected record types will be displayed.

If 'OOPS' is entered, or if you exit this menu by entering a <CR> and then reenter from the preceding menu, all previous selections will be deleted and all selections will need to be reentered.

After the selections, enter a <CR>. The program will then prompt for the transaction code. All transaction records generated by the program contain the same transaction code. Valid transaction codes are as follows:

Transaction Code	Description
A	Adds new data to the data base, the data cannot previously exist.
M	Modifies existing data in the data base.
D	Deletes existing data in the data base.

Rules for adding, modifying, and deleting data can be found in sections 3.2.2.1.1.4 and 3.2.2.1.1.5.

Following is the menu query for the transaction code:

SELECT TRANSACTION CODE TO BE ENTERED ON YOUR INPUT RECORDS

CODE	SELECTION
1	ADD -- Create add transactions.
2	MODIFY -- Create modify transactions.
3	DELETE -- Create delete transactions.

Example: 1 -- selects transaction code ADD (A) for all input records to be generated.

Select by number or
enter oops (to go back one menu), help, quit, or exit (to return to primos)
:

Select the number for the desired transaction code. The program then displays the selection. For example, if a 1 is entered, the ADD transaction code will be displayed. Only one transaction code can be selected.

After selecting a transaction code, enter a <CR>. The program then begins converting the data. The number of input (transaction) records generated are displayed in increments of 50 as follows:

please wait processing

have generated this many input records: 50

When the conversion is complete, the main data-conversion menu will be redisplayed.

Before the EDIT/UPDATE system is run to input the transactions to the data base, check the output files for errors. Errors may be caused from incorrect entries in the data definition file, using the wrong data definition file, missing lookup tables, and data incorrectly referenced or formatted in a lookup table.

If a large amount of data are converted and many output files are generated, load one data file into SSWUDS before submitting all output files. Errors that are not obvious may be identified by the editor in the EDIT/UDPATE system.

4.6 Access Edit/Update System

Option 3 on the main menu is ACCESS THE EDIT/UPDATE SYSTEM. Selection of this option invokes another menu to access two different systems: SSWUDS Edit/Update and the Site File Edit/ Update. The addition of the Site File Edit/Update system was to provide a link between the SSWUDS data base and the NWIS Site File. As of Revision 90.1, new measurement-point records cannot be added to a SSWUDS data base unless a corresponding site record exists in the NWIS Site File. The menu for the Edit/Update System is shown below:

WRD SITE-SPECIFIC WATER-USE DATA
SYSTEM (SSWUDS) REV90.2

SSWUDS EDIT/UPDATE SYSTEM MENU

CODE	SELECTIONS
------	------------

1	ACCESS SSWUDS EDIT/UPDATE SYSTEM	4.6.1
2	ACCESS SITEFILE EDIT/UPDATE SYSTEM	4.6.2

SELECT FROM THE ABOVE LIST OR

ENTER HELP code (for menu selection help), QUIT, or EXIT (to return to PRIMOS)

;

4.6.1 Access SSWUDS Edit/Update System

Selection 2 of the Edit/Update Menu invokes the SSWUDS Edit/Update system. This system makes use of the original SWUDS edit/update system with some enhancements. The most noticeable difference between the two systems is that the SSWUDS edit/ update runs as a batch job. The decision to convert to a batch- oriented system was due to process conflicts which may occur when multiple users are updating the SSWUDS data base and to keep the user's terminal available during the time the data base is being updated.

When entering the SSWUDS edit/update system you are presented two menu queries. The first query (shown below) prompts for the correct path to the directory where the input files are presently residing. The path that you see is the one currently stored in the SSWUDS user file of default pathnames. If you wish to change this path, just enter a new path and it will be stored away in the user file as the new default pathname. Note: The pathname presented or the path entered should only be the path to the directory level where the edit/update input files reside. (Single file names may not be entered at this query.)

```
THE DEFAULT PATH TO THE DIRECTORY

WHERE YOUR EDIT/UPDATE

INPUT FILES RESIDE AT IS

UFD>YOUR.NAME>INPUT.FILE.DIRECTORY

ENTER A NEW PATH OR <CR>
TO ACCEPT THE DEFAULT
```

After the prompt for the path to the input file directory, you are prompted for the number of files to be processed by the SSWUDS edit/update system. If you want all input files to be processed, then enter only a <CR> in response to this prompt. However, if you want to enter only a subset of all the input files to the SSWUDS data base, then enter an integer number in response to this prompt. Note: The actual files the system processes are selected by the SSWUDS edit/update software and you have no control over which files are processed. That is, you may only select the directory from which the input files are pulled and the total number of files that SSWUDS will process. The query that accepts the number of files to be processed is as follows:

```
ENTER THE NUMBER OF FILES TO PROCESS
[CR] TO PROCESS ALL FILES
```

After entering the response to the above query, a batch job is submitted to process the data entry files in SSWUUDS. The following message is displayed before you exit the SSWUUDS Edit/Update system:

```
[JOB Rev. 20.0 Copyright (c) Prime Computer, Inc. 1985]
Your job, #00964, was submitted to queue QUEUENAME.
Home=<mfd>ufd>userorigin
Batch Job Submitted!
Key carriage return to continue:
```

Entering a <CR> returns you to the Edit/Update menu.

4.6.2 Access Site File Edit/Update System

Selection 2 of the Edit/Update system menu invokes another menu to execute routines that create entry files, and format and copy transaction files to a given directory, which will be used as a depository of files to update the NWIS Site File. Three selections invoke routines used by Ground-Water Site Inventory (GWSI) software. Before all of the routines are initialized, you are prompted for the pathname of the directory where the files are to be accessed or outputted. This is the same query and pathname default used by the SSWUUDS Edit/Update System. (See section 4.6.1).

```
WRD SITE-SPECIFIC WATER-USE DATA
SYSTEM (SSWUUDS) REV90.2
*****
SITEFILE EDIT/UPDATE SYSTEM MENU
*****
CODE          SELECTIONS

1    CREATE ENTRY FILE (HDRINP)          4.6.2.1
2    EDIT ENTRY FILE (EDITGW)            4.6.2.2
3    TRANSFER TRANSACTION FILE TO UPDATE DIRECTORY 4.6.2.3
4    CHANGE DATA BASES (GWSI ONLY)      4.6.2.4

      SELECT FROM THE ABOVE LIST OR
ENTER HELP code (for menu selection help), QUIT, or EXIT (to
return to PRIMOS)
:
```

4.6.2.1 Create Entry File (HDRINP)

Selection 1 of the Site File Edit/Update system menu runs the GWSI HDRINP program, which is a screen data-entry procedure to create or modify site records for the Site File. If the record is for ground water, there are options to create records for other ground-water data files.

The program does not directly modify the Site File and related ground-water data files but creates an entry file with records similar to the old GWSI card-image format. For a site record modification, data-element fields on the screen will be filled with the current contents of an existing site record. Note that you must be in the appropriate GWSI data base at this time for accessing the correct site file if more than one site file is available for your District. (See section 4.6.2.4.) Before these files are used for updates, the files must be run into the Ground-Water Edit Program (EDITGW) for data and edit validation. See the file

<NWIS>WATSTORE>GW>DOC>ASCII>GWSCREEN-ENTRY.INPUT.USER

for further documentation on this program.

4.6.2.2 Edit Entry File (EDITGW)

Selection 2 of the Site File Edit/Update system menu runs the GWSI Ground-Water Edit Program (EDITGW) that performs edit and data validation on the entry file created by the GWSI HDRINP program. (See section 4.6.2.1.) After processing, the appropriate update records are written to the site transaction file and/or ground-water transaction files.

Before the program is initialized, you are prompted whether you wish to run the program interactively or through batch. Large amounts of data are best processed through batch while small amounts can be processed interactively. Next, a prompt asks if you wish to select a batch code for the transaction files or have a batch code assigned automatically. If you choose to have a code assigned automatically, a search is made in the file WATSTORE>WATER_USE>SWUDS>DATA>BATCH_CODES for the next available code. If you choose to select a batch code, you are queried later for the code. Valid batch codes are A through Z and 0 through 9. The transaction file will be tagged with the code and your current default GWSI data-base number (e.g., SITE.TRAN.DB01.B). The code is simply for identification and the data-base number indicates which data base is to be updated with the transaction files. Next, you are prompted for the name of the batch queue if the data are to be processed through batch.

After the entry file is processed, transaction files with the respective error file are outputted to your default edit/update directory. See the file

<NWIS>WATSTORE>GW>DOC>ASCII>GWEDIT.USER

for further documentation on this program.

4.6.2.3 Transfer Transaction File to Update Directory

Selection 3 of the Site File Edit/Update system menu invokes a Command Procedural Language (CPL) program. This program copies to the <NWIS>WATIN directory, or another update directory, transaction files created by GWSI EDITGW (section 4.6.2.2) after data and edit validation of entry files created by GWSI HDRINP (section 4.6.2.1). The directory WATIN (or another specified update directory) will be used as a depository of entry files to be run into the NWIS Site File and ground-water data files by the GWSI Database Administrator.

The program queries for the batch code of the entry file and then prompts for file deletion in your current directory. Electronic mail (EDOC) will then be sent to the DBA in charge of updating the Site File to state that transaction files with a given batch code have been copied to the update directory.

An example of a session is shown below:

INITIALIZING TRANSACTION FILE TRANSFER

Enter your batch code (cr to Quit): A

ENTER THE DATA BASE NUMBER OF YOUR FILES OR
<CR> FOR ALL: 1

Enter the pathname of the directory to which the
transaction files for updating the Site File and/or
ground-water data files are to be transferred
<CR>=WATIN:

Ok to copy ">SITE.TRAN.DB01.A" to "WATIN>SITE.TRAN.DB01.A"? Y
Ok to delete "SITE.TRAN.DB01.A"? N

- - - sending EDOC to DBA - - -

4.6.2.4 Change Data Bases (Ground-Water Site Inventory Only)

The Ground-Water Site Inventory (GWSI) software invoked in selections 1 and 2 accesses the site file and related ground-water data files referenced by your current GWSI data-base number. Note that all NWIS software use common data files. For example, data base 2 for GWSI, ADAPS, QW, and SSWUDS will use the same site file. Therefore, when selection 1 or 2 of the Site File Edit/Update System is invoked, the GWSI data-base number should be the same as the SSWUDS data-base number that will reference the site file used by SSWUDS for validating the measurement-point identifiers of the corresponding water-use data base.

Selection 4 of the Site File Edit/Update System executes the GWSI program MOD.USER_DBN_DEF, which allows listing and modifying your default GWSI and/or QW data-base number. Because the QW data-base number is not needed by the SSWUDS program, only the GWSI data-base number needs to be modified, if necessary.

4.7 Substitute the Alias Identifier

After selecting either 4 (SA File) or 6 (Retrievals) from the main menu, the following query is displayed:

DO YOU WISH TO SUBSTITUTE THE STANDARD MEASUREMENT-POINT ID
WITH THE ALIAS ID?

Enter Y or N or HELP,QUIT,OR EXIT:

If you enter Y, the alias identifier is displayed instead of the standard measurement-point identifier in all retrieval output. If an alias identifier does not exist for a given measurement point, the data field in the output record is blank.

Sections 3.1.1.3 and 3.2.2.1.1 contain information on the alias identifier.

4.8 Create an SA File

Option 4 on the main menu is CREATE AN SA FILE. An SA file (retrieval) is a sequential file of water-user measurement point and associated annual measurement data. The purpose of the SA file is to serve as an input file for further postprocessing programs. The process of generating an SA file requires you to respond to a selection menu to qualify data from the water-user file, the conveyance file, the measurement-point file, and the annual-measurement files. Details on the selection menu and its submenus are covered in sections 4.10.1 through 4.10.5.3. Because of the SA file's tax on system resources, time required for file generation, and the size of the generated file, you should first consider generating a Special-Purpose ASCII File, which is described in section 4.10.

After qualifying the data, you are given the default path to the directory where your retrieval/application output files will reside. The format of the query is similar to the edit/update input pathname query in section 4.6. When selecting the default or entering a new path, you are then prompted for a file name or accept the default filename WUUI02. If you enter a file name of a file that exists, you may write over the existing file or reenter a different file name.

4.9 Create an SE File

Option 5 on the main menu is CREATE AN SE FILE. An SE file (retrieval) is a sequential file of water-user information and associated extended data. The purpose of the SE file is to serve as an input file for further postprocessing programs. A detailed discussion of file structure and record formats are included in the programmer's manual (Vol. 3, Chapter 5, in preparation). Generating an SE file allows qualifying data records from the water-user file and the extended-data files. A <CR> at the main selection menu retrieves all extended data records for every year with the water-user information. Explanation for qualifying water-user information is detailed in section 4.9.1 and its subsections.

After qualifying the data, you are given the default path to the directory where your retrieval/application output files will reside. The format of the query is similar to the edit/update input pathname query in section 4.6. When selecting the default or entering a new path, you are then prompted for a file name or whether to accept the default file name WUUI02. If you enter a file name of a file that exists, you may write over the existing file or reenter a different file name. Following is an example of the selection menu for the SE FILE.

SELECTION CRITERIA

If a selection is not made a report will be generated
using all data in the SSWUDS data base

SELECT CRITERIA FOR DATA ITEMS:

- 1 - FROM THE WATER USER FILE (WU) 4.10.2
- 2 - FROM THE EXTENDED DATA FILE (ED) 4.9.1
- [CR] TO GENERATE REPORT

4.9.1 Qualifying Data from Extended Data File

Records for the SE file may be qualified by a year or range of
extended-data years and by Standard Information Classification (SIC) code.
The menu for extended data is shown below:

SELECTION CRITERIA FOR EXTENDED DATA

If a selection is not made a report will be generated for
all data in the SSWUDS data base

SELECT CRITERIA FOR DATA ITEMS:

- 1 - YEAR RANGE 4.9.1.1
- 2 - SIC CODE 4.9.1.2

4.9.1.1 Qualifying Data by Extended Data Year

Records from the SE file may be qualified by the range of years which exist in the extended-data file. If you are choosing data by year, simply enter the beginning year of the range of years desired and the ending year in response to the following menu. Note that both the beginning and ending year may be the same and that all years entered in response to the menus must be in the form of a 4-digit integer, e.g., 1985.

SELECTION CRITERIA FOR EXTENDED DATA YEAR

If a selection is not made a report will be generated for all data in the SSWUDS data base

(When entering beginning and ending year use 4 digits to represent year -- for example: '1986')

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or enter the beginning year.1985

4.9.1.2 Qualifying Extended Data by Standard Industrial Classification (SIC) Code

Records for the SE file may be qualified by the extended data SIC code. Enter up to 100 SIC codes for qualification. The query for the SIC code is shown below:

SELECTION CRITERIA FOR EXTENDED DATA SIC CODES

ENTER SIC CODES ONE AT A TIME
(Maximum of 100 SIC codes can be specified)

EXAMPLE FORMAT: 0116

If a selection is not made a report will be generated using all SIC codes in the SSWUDS data base

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) [CR] to return to previous menu or select a SIC code.

4.10 Access the Retrieval System

Option 6 on the main menu is ACCESS THE RETRIEVAL SYSTEM. The SSWUDS retrieval system is totally menu-driven, and has a hierarchical architecture which permits you to concentrate only on those tasks which are relevant at the moment. You are presented with a series of menus which allow you to choose certain selection criteria that will be used to qualify data to be retrieved. The following description is a walkthrough of the entire retrieval system.

4.10.1 Retrieval System Main Menu

The retrieval system main menu (shown below) contains four options which allow you to qualify data records from the water-user file, the conveyance file, the measurement-point file, and the annual-measurements files. The main menu and associated submenus are arranged to facilitate a hierarchical order of execution which permits you to 'key on' selected fields from the data files.

SELECTION CRITERIA

If a selection is not made a report will be generated using all data in the SSWUDS data base.

SELECT CRITERIA FOR DATA ITEMS:

- | | |
|---|--------|
| 1 - FROM THE WATER-USER FILE (WU) | 4.10.2 |
| 2 - FROM THE MEASUREMENT-POINT FILE (MP) | 4.10.3 |
| 3 - FROM THE ANNUAL-MEASUREMENT FILE (AM) | 4.10.4 |
| 4 - FROM THE CONVEYANCE FILE (CN) | 4.10.5 |
| [CR] TO GENERATE REPORT | 4.10.6 |

At the present time, the SSWUDS systems allows retrieval information to be qualified by selecting values which are stored in four of the SSWUDS file types: water-user file (WUWU01), conveyance file (WUCN01), measurement-point file (WUMP01), and any available annual-measurements files (WUAMxx). To begin making data qualifications, simply select the file you wish to qualify data from and enter its shopping list identification (1, 2, 3 or 4).

4.10.2 Qualifying Data from the Water-User File

Data elements from the water-user file may be qualified in five different ways; by water-user ID, by water-use category, by geographical location using Federal Information Processing Standards (FIPS) codes, by user-defined region, and by hydrologic unit. The menu displayed when you wish to qualify data from the water-user file is as follows:

SELECTION CRITERIA FOR WU DATA

If a selection is not made a report will be generated using all data in the SSWUDS data base

- | | | |
|-----|----------------------------|----------|
| 1 - | WATER-USER IDENTIFIER | 4.10.2.1 |
| 2 - | WATER-USE CATEGORY | 4.10.2.2 |
| 3 - | STATE AND COUNTY FIPS CODE | 4.10.2.3 |
| 4 - | HYDROLOGIC UNIT | 4.10.2.5 |

[CR] RETURN TO PREVIOUS MENU

SELECT FROM THE ABOVE LIST OR ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS).

4.10.2.1 Qualifying Data by Water-User Identifier

The qualification of retrieval records by water-user identifier results in SSWUDS returning only those measurement points and respective annual measurements associated with a 7-digit water-user identifier or with those water-user identifiers falling within a given range. To qualify a single water user, you only need to enter the 7-digit number identifying that particular water user. To qualify a range of water users, you must enter the beginning and ending water-user identifiers separated by a hyphen (e.g., 4500-5000). You may specify up to 100 water-user identification numbers by simply entering them one at a time, following each with a <CR>.

SELECTION CRITERIA FOR WATER-USER IDENTIFIERS AND RANGES

ENTER WATER-USER IDENTIFIERS OR RANGES ONE AT A TIME
(Maximum of 100 individual water-user IDs and/or ranges can be specified.)

Example format: 4500 -- water-user identifier
 2500-3500 -- water-user range

If a selection is not made a report will be generated
using all water users in the SSWUDS data base.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS), [CR] to return to previous menu, or select a water-user identifier or range.

4.10.2.2 Qualifying Data by Water-User Category

This option allows you to retrieve data based upon a water user's use-category classification. To qualify records for retrieval, select any two-character category designator or any combination (any or all categories may be qualified); enter them one at a time followed by a <CR>.

SELECTION CRITERIA FOR WATER-USE CATEGORIES

ENTER FOLLOWING WATER-USER CATEGORIES ONE AT A TIME:

AG - Agricultural	IR - Irrigation	PH - Hydroelectric
CO - Commercial	MI - Mining	PN - Nuclear Energy
DO - Domestic	PF - Fossil-Fuel	ST - Sewage Treatment
IN - Industrial	PG - Geothermal	WS - Water Supplier
		LV - Livestock

If a selection is not made a report will be generated using
all water user categories.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu.

4.10.2.3 Qualifying Data by State and County Federal
Information Processing Standards (FIPS) Code

Retrieval records can be qualified by State and county FIPS codes from the water-user file. You may either select by individual codes or enter a file containing a user-defined region name and a list of FIPS for that region. You may also display the valid codes available for qualification. The menu selection for the various FIPS options is as follows:

SELECTION CRITERIA FOR FIPS DATA

If a selection is not made a report will be generated
using all data in the SSWUDS data base

- | | | |
|-----|---------------------------------|------------|
| 1 - | DISPLAY STATE AND COUNTY CODES | 4.10.2.3.1 |
| 2 - | SELECT BY STATE AND COUNTY CODE | 4.10.2.3.2 |
| 3 - | USER-DEFINED REGION | 4.10.2.3.3 |

SELECT FROM THE ABOVE LIST OR
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) [CR] to return to previous menu

4.10.2.3.1 Displaying State and County Codes

Selection 1 of the State and county selection criteria displays the valid State and county codes and their corresponding names for that District's data base. Following is an example of a display list:

05001	ARKANSAS	05047	FRANKLIN
05003	ASHLEY	05049	FULTON
05005	BAXTER	05051	GARLAND
05007	BENTON	05053	GRANT
05009	BOONE	05055	GREENE
05011	BRADLEY	05057	HEMPSTEAD
05013	CALHOUN	05059	HOT SPRING
05015	CARROLL	05061	HOWARD
05017	CHICOT	05063	INDEPENDENCE
05019	CLARK	05065	IZARD
05021	CLAY	05067	JACKSON
05023	CLEBURNE	05069	JEFFERSON
05025	CLEVELAND	05071	JOHNSON
05027	COLUMBIA	05073	LAFAYETTE
05029	CONWAY	05075	LAWRENCE
05031	CRAIGHEAD	05077	LEE
05033	CRAWFORD	05079	LINCOLN
05035	CRITTENDEN	05081	LITTLE RIVER
05037	CROSS	05083	LOGAN
05039	DALLAS	05085	LONOKE
05041	DESHA	05087	MADISON
05043	DREW	05089	MARION
05045	FAULKNER	05091	MILLER

MORE? n

RETURN TO MENU <CR>

4.10.2.3.2 Selecting State and County Codes

The records to be written to your report file may be qualified by geographical location by entering the 5-digit State and county FIPS code(s) associated with your area of interest. In response to the following menu, you may enter up to 100 State and county FIPS codes; follow each with a <CR>. No validation of codes is being made at this time.

SELECTION CRITERIA FOR WATER-USER STATE AND COUNTY FIPS CODES

ENTER STATE AND COUNTY FIPS CODES ONE AT A TIME
(Maximum of 100 State and county FIPS codes can be entered.)

EXAMPLE FORMAT: 51035

If a selection is not made a report will be generated using
all State and county FIPS codes.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) or [CR] to return to previous menu or
State/county FIPS code.

4.10.2.3.3 Qualifying Data by User-Defined Region

Qualifying data by user-defined regions allows you to retrieve all
water-user data for a predefined region containing up to 400 FIPS codes.
The individual region files must be created prior to the invocation of
SSWUDS in the following format:

*** EXAMPLE REGION FILE ***

Col.	Col.	Col.
1	5	50
"Region Name"	{ANY CHARACTER STRING OF LENGTH LESS THAN 50}	
51 21	{UP TO 400 STATE AND COUNTY FIPS CODES}	
51 27		
51 35		
51 51		
51 77		
51105		

The first record in this file is used by the SSWUDS system for labeling
the region being selected. This label appears at the top of your report
file and does not need to specifically name the region being pulled. That
is, the label record you enter into your region file may be any message that
you would like at the top of your report. Note: SSWUDS will only accept up
to 400 FIPS codes in a file. If you submit a region file with more than 400
FIPS codes, an error message will not be displayed, but the additional FIPS
codes will be ignored. The query for the user-defined region is as follows:

RETRIEVAL BY USER-DEFINED REGION

ENTER THE PATHNAME TO YOUR FILE OF STATE AND COUNTY FIPS CODES
WHICH DEFINE THE REGION OF INTEREST.

REGIONS MAY BE AS LARGE AS 400 COUNTIES.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS)
or pathname of the file consisting of the FIPS codes for the desired region.

4.10.2.4 Qualifying Data by Hydrologic Unit

Retrieval records may be qualified by the hydrologic units within the
water-user file. You may also display valid hydrologic unit codes (6- and
8-digit) that can be used for qualification. The menu for the hydrologic
unit code options is shown below:

SELECTION CRITERIA FOR HYDROLOGIC UNITS

If a selection is not made a report will be generated
using all data in the SSWUDS data base

- 1 - DISPLAY HYDROLOGIC UNITS (8-DIGIT) 4.10.2.4.1
- 2 - DISPLAY MAJOR BASIN UNITS (6-DIGIT) 4.10.2.4.2
- 3 - SELECT BY HYDROLOGIC UNIT 4.10.2.4.3

SELECT FROM THE ABOVE LIST OR

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) [CR] to return to previous menu

4.10.2.4.1 Displaying Hydrologic Unit Codes

Selection 1 of the hydrologic unit selection criteria displays the valid 8-digit hydrologic unit codes and their corresponding descriptive name for that district's data base. Following is an example of a display list:

08010100	Lower Mississippi-Memphis	08050002	Bayou Macon
08020100	Lower Mississippi-Helena	11010001	Beaver Reservoir
08020203	Lower St. Francis	11010003	Bull Shoals Lake
08020204	Little River Ditches	11010004	Middle White
08020205	L'Anguille	11010005	Buffalo
08020301	Lower White-Bayou Des Arc	11010006	North Fork White
08020302	Cache	11010007	Upper Black
08020303	Lower White	11010008	Current
08020304	Big	11010009	Lower Black
08020401	Lower Arkansas	11010010	Spring
08020402	Bayou Meto	11010011	Eleven Point
08030100	Lower Mississippi-Greenville	11010012	Strawberry
08040101	Ouachita Headwaters	11010013	Upper White-Village
08040102	Upper Ouachita	11010014	Little Red
08040103	Little Missouri	11070206	Lake O' The Cherokees
08040201	Lower Ouachita-Smackover	11070208	Elk
08040202	Lower Ouachita-Bayou De Loutrel	11070209	Lower Neosho
08040203	Upper Saline	11110103	Illinois
08040204	Lower Saline	11110104	Robert S. Kerr Rese
08040205	Bayou Bartholomew	11110105	Poteau
08040206	Bayou D'Arbonne	11110201	Frog-Mulberry
08040207	Lower Ouachita	11110202	Dardanelle Reservoir
08050001	Boeuf	11110203	Lake Conway-Point Re

MORE? n
RETURN TO MENU <CR>

4.10.2.4.2 Displaying Major Basin Codes

Selection 2 of the hydrologic unit selection criteria displays the valid 6-digit hydrologic unit codes (major basin) and their corresponding descriptive names for that District's data base. Following is an example of a display list:

```
080101 Lower Mississippi-Me
080201 Lower Mississippi-He
080202 The St. Francis Rive
080203 The White River Basi
080204 The Arkansas River B
080301 Lower Mississippi-Gr
080401 Upper Ouachita
080402 Lower Ouachita
080500 Boeuf-Tensas
110100 Upper White
110702 The Neosho River Bas
111101 Robert S. Kerr Reser
111102 Lower Arkansas-Fourc
111401 Red-Little
111402 Red-Saline
111403 Big Cypress-Sulphur
RETURN TO MENU <CR>
```

4.10.2.4.3 Selecting Hydrologic Unit Codes

The qualification of data based on the water-user hydrologic unit code results in SSWUDS returning only those water-user records with their associated measurement points and annual measurements for the given hydrologic unit code. You may enter 2-, 4-, 6-, and 8-digit hydrologic unit codes. For example, if you enter a 2-digit hydrologic unit code, the program retrieves all water-user records with hydrologic unit codes beginning with the 2-digit code entered. If you enter a 4-digit and an 8-digit hydrologic unit code, the program retrieves all water-user records beginning with the 4-digit code and all records matching the 8-digit code. You may enter more than one combination of codes at a time with the maximum entry of 100 codes. No verification of codes is being made at this time. Following is the selection criteria for water-user hydrologic unit codes:

SELECTION CRITERIA FOR WATER-USER HYDROLOGIC UNIT CODES

ENTER HYDROLOGIC UNIT CODES ONE AT A TIME

(Maximum of 100 hydrologic unit codes can be entered. The entry of 2-, 4-, 6-, and 8-digit codes can be mixed.)

Example formats: For 8-digit : 03024001
6-digit : 030240
4-digit : 0302
2-digit : 03

If a selection is not made a report will be generated using all hydrologic unit codes.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or enter a hydrologic unit code.

4.10.3 Qualifying Data from the Measurement-Point File

Qualification of data from values stored in the measurement-point file (WUMP01) may be by either geographical location (State and county FIPS code), as in section 4.10.2.3, by source/destination type, hydrologic unit code, or aquifer code.

To qualify data records based on values stored in the measurement-point file (WUMP01), begin by making a selection from the following menu. (The numbers on the right indicate the sections where descriptive information is found within this document.)

SELECTION CRITERIA FOR MP DATA

If a selection is not made a report will be generated using all data in the SSWUDS data base

- | | | |
|-----|----------------------------|----------|
| 1 - | STATE AND COUNTY FIPS CODE | 4.10.3.1 |
| 2 - | SOURCE/DESTINATION TYPE | 4.10.3.2 |
| 3 - | HYDROLOGIC UNIT | 4.10.3.3 |
| 4 - | AQUIFER CODE | 4.10.3.4 |

4.10.3.1 Qualifying Data by State and County Code

Retrieval records can be qualified by State and county codes from the measurement-point file. You can either select by individual codes or enter a file containing a user-defined region name and a list of codes for that region. You may also display the valid codes available for qualification. The menu selection for the various options is shown below:

SELECTION CRITERIA FOR FIPS DATA

If a selection is not made a report will be generated using all data in the SSWUDS data base

- | | | |
|-----|---------------------------------|------------|
| 1 - | DISPLAY STATE AND COUNTY CODES | 4.10.3.1.1 |
| 2 - | SELECT BY STATE AND COUNTY CODE | 4.10.3.1.2 |
| 3 - | USER-DEFINED REGION | 4.10.3.1.3 |

SELECT FROM THE ABOVE LIST OR
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) [CR] to return to previous menu

4.10.3.1.1 Displaying State and County FIPS Codes

Selection 1 of the State and county selection criteria displays the valid State and county codes and their corresponding names for that District's data base. An example of a display list is given in section 4.10.2.3.1.

4.10.3.1.2 Selecting State and County Codes

The records to be written to your report file may be qualified by geographical location by entering the 5-digit State and county code(s) associated with your area of interest. In response to the following menu, you may enter up to 100 State and county codes; follow each with a <CR>. No verification of codes is being made at this time.

ELECTION CRITERIA FOR MEASUREMENT-POINT STATE AND COUNTY FIPS CODES

ENTER STATE AND COUNTY FIPS CODES ONE AT A TIME
(Maximum of 100 State and county FIPS codes can be entered.)

EXAMPLE FORMAT: 51035

If a selection is not made a report will be generated using
all State and county FIPS codes.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) or [CR] to return to previous menu or
State/county FIPS code.

4.10.3.1.3 Qualifying Data by User-Defined Region

Qualifying data by user-defined regions allows you to retrieve all water-user data for a predefined region that may contain up to 400 FIPS codes. The individual region files must be created prior to the invocation of SSWUDS and must be in the following format:

*** EXAMPLE REGION FILE ***

Col.	Col.	Col.
1	5	50
"Region Name" {ANY CHARACTER STRING OF LENGTH LESS THAN 50}		
51	21	{UP TO 400 STATE AND COUNTY FIPS CODES}
51	27	
51	35	
51	51	
51	77	
51	105	

The first record in this file is used by SSWUDS for labeling the region being selected. This label appears at the top of your report file and does not need to specifically name the region being pulled. That is, the label record you enter into your region file may be any message that you want at the top of your report. Note: SSWUDS accepts only up to 400 FIPS codes in a file. If you submit a region file with more than 400 codes, an error message will not be displayed, but the additional codes will be ignored. The query for the user-defined region is identical to the query in Section 4.10.2.3.3.

4.10.3.2 Qualifying Data by Source/Destination Type

The data that appear in the output file when this selection is made is restricted to one or a combination of the following water-type descriptions:

GW -- ground water
 SW -- surface water
 TW -- transferred water.

Select the water type or types wanted by entering the appropriate two-character water-type designators shown in the following menu:

SELECTION CRITERIA FOR MEASUREMENT POINT SOURCE/DESTINATION TYPE

ENTER SOURCE/DESTINATION TYPE ONE AT A TIME

Valid types are:

GW -- ground water
SW -- surface water
TW -- transferred water

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu.

4.10.3.3 Qualifying Data by Hydrologic Unit

Retrieval records may be qualified by the hydrologic units within the measurement point file. The user may also display valid hydrologic unit codes (6- and 8-digit) that can be used for qualification. The menu for the hydrologic unit code options is shown below:

SELECTION CRITERIA FOR HYDROLOGIC UNITS

If a selection is not made a report will be generated
using all data in the SSWUDS data base

- 1 - DISPLAY HYDROLOGIC UNITS (8-DIGIT) 4.10.3.3.1
- 2 - DISPLAY MAJOR BASIN UNITS (6-DIGIT) 4.10.3.3.2
- 3 - SELECT BY HYDROLOGIC UNIT 4.10.3.3.3

SELECT FROM THE ABOVE LIST OR

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) [CR] to return to previous menu

4.10.3.3.1 Displaying Hydrologic Unit Codes

Selection 1 of the hydrologic unit selection criteria displays the valid 8-digit hydrologic unit codes and their corresponding descriptive names for that District's data base. An example of a display list is given in section 4.10.2.4.1.

4.10.3.3.2 Displaying Major Basin Codes

Selection 2 of the hydrologic unit selection criteria displays the valid 6-digit hydrologic unit codes (major basin) and their corresponding descriptive names for that District's data base. An example of a display list is given in section 4.10.2.4.2.

4.10.3.3.3 Selecting Hydrologic Unit Codes

The qualification of data based on the measurement-point hydrologic unit code results in SSWUDS returning only those measurement points and associated annual measurements for the given hydrologic unit code. You may enter 2-, 4-, 6-, and 8- digit hydrologic unit codes. For example, if you enter a 2-digit hydrologic unit code, the program retrieves all measurement-point records with hydrologic unit codes beginning with the 2-digit code entered. If you enter a 4-digit and an 8-digit hydrologic unit code, the program retrieves all measurement-point records beginning with the 4-digit code and all records matching the 8-digit code. You may enter more than one combination of codes at a time with the maximum entry of 100 codes. No verification of codes is being made at this time. The following is the selection criteria for measurement-point hydrologic unit codes:

SELECTION CRITERIA FOR MEASUREMENT-POINT HYDROLOGIC UNIT CODES

ENTER HYDROLOGIC UNIT CODES ONE AT A TIME

(Maximum of 100 hydrologic unit codes can be entered. The entry of 2-, 4-, 6-, and 8-digit codes can be mixed.)

Example formats: For 8-digit : 03024001
6-digit : 030240
4-digit : 0302
2-digit : 03

If a selection is not made a report will be generated using all hydrologic unit codes.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or enter a hydrologic unit code.

4.10.3.4 Qualifying Data by Aquifer Code

Retrieval records may be qualified by measurement-point aquifer code. You may also display the valid aquifer codes for qualification. Following is the aquifer code menu:

SELECTION CRITERIA FOR AQUIFER CODES

If a selection is not made a report will be generated using all data in the SSWUDS data base

- 1 - DISPLAY AQUIFER CODES 4.10.3.4.1
- 2 - SELECT BY AQUIFER CODE 4.10.3.4.2

SELECT FROM THE ABOVE LIST OR
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS) [CR] to return to previous menu

4.10.3.4.1 Displaying Aquifer Codes

Selection 1 of the aquifer-code selection criteria displays the valid aquifer codes and their corresponding descriptive names for that district's data base. Following is an example of a display list:

100CNZC	CENOZOIC ERATHEM	124WBLF	WHITE BLUFF FORMATION
110ALVM	QUATERNARY ALLUVIUM	124WLCX	WILCOX GROUP
110QRNR	QUATERNARY SYSTEM	125CLTN	CLAYTON FORMATION
110TRRC	TERRACE DEPOSITS	125MDWY	MIDWAY GROUP
111ALVM	HOLOCENE ALLUVIUM	125PLCN	PALEOCENE SERIES
111HLCN	HOLOCENE SERIES	125PRCK	PORTERS CREEK CLAY
111TRRC	TERRACE DEPOSITS	200MSZC	MESOZOIC ERATHEM
112ALVM	ALLUVIUM	210CRCS	CRETACEOUS SYSTEM
112PLSC	PLEISTOCENE SERIES	211AKDP	ARKADELPHIA MARL
112TRRC	TERRACE DEPOSITS	211ANNN	ANNONA CHALK
120TRTR	TERTIARY SYSTEM	211CRCSU	UPPER CRETACEOUS SERIES
121PLCN	PLIOCENE SERIES	211MLBK	MARLBROOK MARL
12405MP	500-FOOT SAND (MEMPHIS AQ	211NCTC	NACATOC SAND
12414WX	1400-FOOT SAND (LOWER WIL	211NPLS	NEPHELINE SYENITE
124CCKF	COCKFIELD FORMATION	211SRTG	SARATOGA CHALK
124CKMN	COOK MOUNTAIN FORMATION	212BRNS	BROWNSTOWN MARL
124CLBR	CLAIBORNE GROUP	212OZAN	OZAN FORMATION
124CRRZ	CARRIZO SAND	212TOKO	TOKIO FORMATION
124CRVR	CANE RIVER FORMATION	212WDBN	WOODBINE FORMATION
124EOCN	EOCENE SERIES	217CRCSL	LOWER CRETACEOUS SERIES
124JCKS	JACKSON GROUP	217DLGT	DELIGHT SAND
124RDFD	REDFIELD FORMATION	217DQUN	DE QUEEN LIMESTONE
124SPRT	SPARTA SAND	217DRKS	DIERKS LIMESTONE

MORE? n
RETURN TO MENU <CR>

4.10.3.4.2 Select Aquifer Codes

The qualification of data by measurement-point aquifer code results in SSWUDS returning only those measurement points and associated annual measurements for a given aquifer code. The maximum number of codes requested is 100. No verification of codes is being made at this time. Following is the selection criteria for measurement-point aquifer codes:

SELECTION CRITERIA FOR MP AQUIFER CODES

ENTER AQUIFER CODES ONE AT A TIME

(Maximum of 100 aquifer codes can be specified.)

Example format: 124SPRT

If a selection is not made a report will be generated using all aquifer codes in the SSWUDS data base.

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu or select an aquifer code.

4.10.4 Qualifying Data from the Annual-Measurements Files

Data records in the SSWUDS may be qualified by the range of years which exist in the SSWUDS annual-measurements files. If you are qualifying data by year, simply enter the beginning year of the range of years desired and the ending year in response to the queries shown below. It should be understood that both the beginning annual-measurements year and the ending annual-measurements year may be the same and that all years entered in response to these queries must be in the form of a 4-digit integer, e.g., 1985.

SELECTION CRITERIA FOR ANNUAL MEASUREMENT YEAR

If a selection is not made a report will be generated for all years.

(When entering beginning and ending year use 4 digits to represent year -- for example: '1986')

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or enter the beginning year.

SELECTION CRITERIA FOR ANNUAL MEASUREMENT YEAR

If a selection is not made a report will be generated for all years.

(When entering beginning and ending year use 4 digits to represent year -- for example: '1986')

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or enter the ending year.

4.10.5 Qualifying Data from the Conveyance File

Data records in the SSWUDS data base may be qualified by values stored within the conveyance file. The possible conveyance types are organized into three subsections to facilitate the selection process as shown in the following conveyance selection menu:

If a selection is not made a report will be generated
using all data in the SSWUDS data base

SELECT ACTION CODES FOR CONVEYANCE DATA

1 - WITHDRAWALS	4.10.5.1
2 - RETURNS	4.10.5.2
3 - TRANSFERS BETWEEN WATER USERS	4.10.5.3

ENTER OOPS (to go back one menu), HELP, QUIT, OR EXIT (to
return to PRIMOS) or [CR] to quit conveyance selection.

After you have made your choice (1, 2 or 3), a submenu will be displayed where you simply select by number the conveyance action to be qualified. If you exit any or all of the submenus without making a selection of any action type, all actions are qualified.

4.10.5.1 Qualifying Water Withdrawals

The following menu lists the possible withdrawal actions which may be selected. To select a withdrawal action, simply choose either 1, 2 and/or 3 from the menu. A <CR> without selecting an action qualifies all conveyance data unless individual actions have been qualified in the other submenus. (See sections 4.10.5.2 and 4.10.5.3).

SELECTION CRITERIA FOR CONVEYANCE DATA

Possible action codes for withdrawals:

Case one: Source ----- X ----- WATER USER
 W L

Case two: Source -- X ----- X -- WATER USER
 W D D L

SELECT ACTION CODES TO BE PROCESSED

1. WL -- Withdrawal/Delivery
2. WD -- Withdrawal
3. DL -- Delivery

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu.

4.10.5.2 Qualifying Water Returns

Water-return data may be qualified the same as water-withdrawal data. A <CR> without selecting an action qualifies all conveyance data unless individual actions have been selected in the other submenus (See sections 4.10.5.1 and 4.10.5.3).

SELECTION CRITERIA FOR CONVEYANCE DATA

Possible action codes for return:

Case one:	WATER USER	----- X -----	Destination
		R E	
Case two:	WATER USER	-- X ----- X --	Destination
		R L R T	

SELECT ACTION CODES TO BE PROCESSED

1. RE -- Release/Return
2. RT -- Return
3. RL -- Release

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu.

4.10.5.3 Qualifying Transferred Water

The qualification of transferred water is the same as in the preceding sections (4.10.5.1 and 4.10.5.2). The only difference is that there are only two selections and those two selections also appear in the previous menus. To qualify transferred water simply choose either 1 and/or 2. A <CR> qualifies all conveyance data unless individual actions have been qualified in the other submenus (sections 4.10.5.1 and 4.10.5.2). The menu for transferred water is as follows:

Possible action codes for transfer of water between two water users:

WATER USER ONE	-- X ----- X --	WATER USER TWO
R L	D L	

SELECT ACTION CODES TO BE PROCESSED

1. RL -- Release
2. DL -- Delivery

ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS) or [CR] to return to previous menu.

4.10.6 Generating Reports

The SSWUDS data-base system has the capability of generating a number of different reports. The two reports associated with the retrieval system are the detailed water-user report and the Special-Purpose ASCII File (SPAF). After you have made the desired data qualifications, you will be prompted for a report type from the following menu.

1 -- A DETAILED REPORT OF QUALIFIED SSWUDS DATA

2 -- A SPECIAL-PURPOSE ASCII FILE (SPAF)

Enter OOPS, HELP, QUIT, EXIT, or your selection.

4.10.6.1 Detailed Water-User Report

The detailed water-user report is a tabular output file of the data qualified by the SSWUDS system user. The report may be generated in either an 80-column or a 132-column format. The information contained within the detailed water-user report consists of all the information stored in the SSWUDS data base associated with the records which have been qualified, and the appropriate messages for any data fields that are missing from the data base.

After report selection, you are given the default path to the directory where your retrieval/application output files will reside. The format of the query is similar to the edit/update input pathname query described in section 4.6. When you select the default or enter a new path, you are then prompted for a file name or whether to accept the default file name WUUI02. If you enter a file name of a file that exists, you may write over the existing file or reenter a different file name. Following are the prompts for the retrieval pathname and the output file name:

THE DEFAULT PATH TO THE DIRECTORY
WHERE YOUR RETRIEVAL/APPLICATIONS
REPORTS WILL BE WRITTEN IS

CRBAXTER>SWUDSTESTING>RETR/APPL

ENTER A NEW PATH OR <CR> TO ACCEPT THE DEFAULT

PLEASE ENTER THE NAME

FOR YOUR REPORT FILE

<CR> = WUUI02

Following is an example of an 80-column detailed water-user report for water-user number 13105 in the Arkansas SSWUDS data base. Because of margin requirements for this document, the spacing is slightly different than the actual report.

***** DETAILED REPORT FOR WATER USER: 13105 *****

NAME: MARTEL TATE LAT: LONG: SUBCATEGORY: IR
ADDRESS-STREET: RTE 4 BOX 279 CITY: SEARCY CITY CODE:
ADDRESS-STATE : 05 COUNTY: 145 HYDROLOGIC UNIT: 08020301 PERMIT
AGENCY: ASWCC
MAILING-STREET: RTE 4 BOX 279 PERMIT NUMBER: 037367
MAILING-CITY : SEARCY STATE: AR ZIP: 72143
SIC1: 01011 SIC2: SIC3: OTHER: 742-3593 ONR-C.E. TATE

EXTENDED DATA FOR WATER USER: 13105

YEAR: 86	SIC CODE: 011	ACRES IRRIGATED:	20		
ANNUAL AMOUNT APPLIED:	20	PRODUCTION AMOUNT:			
JAN:	FEB:	MAR:	APR:	MAY:	JUN:
JUL:	10 AUG:	10 SEP:	OCT:	NOV:	DEC:

YEAR: 86	SIC CODE: 105	ACRES IRRIGATED:	20		
ANNUAL AMOUNT APPLIED:	20	PRODUCTION AMOUNT:			
JAN:	0 FEB:	0 MAR:	0 APR:	0 MAY:	0 JUN:
JUL:	10 AUG:	10 SEP:	0 OCT:	0 NOV:	0 DEC:

MEASUREMENT POINT DATA FOR WATER USER: 13105

WITHDRAWAL (WD):	037367	DESCRIPTION:	7.5HP ELC STP				
ST:	CO:	LAT:	LONG:	HYDRO#:	08020301	AQUIFER:	
TYPE:	GW	SUBTYPE:	RECLAIMED:	WATER QUALITY	ORG:		
PERMIT #:		PERMIT AGEN:	OTHER:	SENW02,06N07W	U4854	"	

4.10.6.2 Special-Purpose ASCII File (SPAF)

The Special-Purpose ASCII File generator is used for creating input files for postprocessor applications programs. Of all the software within the SSWUDS system, the SPAF generator is the most flexible and powerful.

The SPAF generator allows you to select the data elements to be included in the output file in the order you wish them to appear; furthermore, all water-user elements selected are printed first, measurement-point elements are printed next, and annual-measurement elements are printed last. At this time, any record that fails the output criteria (e.g. returns no measurement-point data elements selected for given water user), as well as the selection criteria, will not be outputted. The length of the SPAF record is dependent on the size of the data elements chosen for output. Each of the data elements to be included in the output file is selected from a series of three different menus.

Select data elements to be included in the SPAF from menus that reflect one data file at a time. After the appropriate data file menu is selected, choose the desired data elements and end the selection process with a <CR>. The numbers to the right of the menu entries indicate the sections within this document where the descriptive information is located.

SELECT ELEMENT NAMES OF DATA
TO BE INCLUDED IN THE OUTPUT FILE FROM:

- | | |
|------------------------------|------------|
| 1. WATER-USER FILE | 4.10.6.2.1 |
| 2. MEASUREMENT-POINT FILE | 4.10.6.2.2 |
| 3. ANNUAL-MEASUREMENT FILES | 4.10.6.2.3 |
| [CR] TO GENERATE OUTPUT FILE | 4.10.6.2.4 |

SELECT FROM THE ABOVE LIST OR ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return to PRIMOS).

4.10.6.2.1 Field Selection from the Water-User File (WUWU01)

Data element selections are made by entering the desired numbers listed on the menu. All or a subset of data elements may be selected. To select a single data element, enter its corresponding number followed by a <CR> (e.g., enter "3" followed by a <CR> to select the third data element on the list). To select a group of data elements, enter the numbers one at a time or enter a list of numbers separated by commas (e.g., 3,10,1,5). To select a range of data elements, enter the low number followed by a hyphen followed by the high number (e.g., 5-8). To select all data elements, enter "A" or "ALL".

You can include ranges when identifying a group. For example, entering "1-3,5,10-14,6" is a valid way to identify a group of elements you want selected. Also, you can add to a group by entering more selections. Data elements can also be repeated (if it applies to the application). The order in which items are selected is the order in which they are outputted.

After a selection has been made, the currently selected data items will be listed on the terminal display.

If you enter an "OOPS" or if you exit this menu by entering a <CR> and then reenter from the preceding menu, then all previous selections are removed. All selections for this menu must be reentered.

The menu for selecting from the water-user file is as follows:

SELECT DATA ITEM NAMES FROM THE WATER-USER FILE

- | | |
|-------------------------------|--------------------------------|
| 1. WU0001 - WATER-USER NUMBER | 11. WU0011 - COUNTY |
| 2. WU0002 - WATER-USER NAME | 12. WU0012 - MAILING STREET |
| 3. WU0003 - NWUDS USE CODE | 13. WU0013 - MAILING CITY |
| 4. WU0004 - LATITUDE | 14. WU0014 - MAILING STATE |
| 5. WU0005 - LONGITUDE | 15. WU0015 - MAILING ZIP |
| 6. WU0006 - HYDROLOGIC UNIT | 16. WU0016 - SIC 1 |
| 7. WU0007 - STREET ADDRESS | 17. WU0017 - SIC 2 |
| 8. WU0008 - CITY NAME | 18. WU0018 - SIC 3 |
| 9. WU0009 - CITY CODE | 19. WU0019 - PERMIT NUMBER |
| 10. WU0010 - STATE | 20. WU0020 - PERMITTING AGENCY |
| | 21. WU0021 - OTHER DATA |

Example formats: 1 -- selects WU0001
 4-6 -- selects WU0004, WU0005, and WU0006
 16,10,2 -- selects WU0016, WU0010, and WU0002

Select by number, range, list, or ALL (selects all items) or
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to return
to PRIMOS)
:

4.10.6.2.2 Field Selection from the Measurement-Point File (WUMP01)

Field selection from the measurement-point file is exactly the same as that for the other SPAF field-selection procedures. (See section 4.10.6.2.1.) The menu for the measurement-point field selection is as follows:

SELECT DATA ITEM NAMES FROM THE MEASUREMENT-POINT FILE

- | | |
|-----------------------------|------------------------------------|
| 1. CD0003 - ACTION CODE | 9. MP0008 - PRINCIPAL AQUIFER |
| 2. CD0004 - MP IDENTIFIER | 10. MP0009 - TYPE |
| 3. MP0002 - DESCRIPTION | 11. MP0010 - SUBTYPE |
| 4. MP0003 - STATE | 12. MP0011 - RECLAIMED WASTE WATER |
| 5. MP0004 - COUNTY | 13. MP0012 - WATER QUALITY ORG. |
| 6. MP0005 - LATITUDE | 14. MP0013 - PERMIT NUMBER |
| 7. MP0006 - LONGITUDE | 15. MP0014 - AGENCY CODE |
| 8. MP0007 - HYDROLOGIC UNIT | 16. MP0015 - OTHER DATA |

Example formats: 1 -- selects CD0001
 4-6 -- selects MP0003, MP0004, and MP0005
 8,10,2 -- selects MP0007, MP0009, and CD0004

Select by number, range, list, or ALL (selects all items) or
ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
return to PRIMOS)
:

4.10.6.2.3 Field Selection from the Annual-Measurements Files

Field selections from the annual-measurements files are exactly the same as that for the other two field selection procedures. (See section 4.10.6.2.1.)

SELECT DATA ITEM NAMES FROM THE ANNUAL MEASUREMENTS FILE

- | | |
|-----------------------------|-------------------------------|
| 1. CD0007 - YEAR | 11. AM0011 - SEPTEMBER AMOUNT |
| 2. AM0002 - ANNUAL AMOUNT | 12. AM0012 - OCTOBER AMOUNT |
| 3. AM0003 - JANUARY AMOUNT | 13. AM0013 - NOVEMBER AMOUNT |
| 4. AM0004 - FEBRUARY AMOUNT | 14. AM0014 - DECEMBER AMOUNT |
| 5. AM0005 - MARCH AMOUNT | 15. AM0015 - MEASURING METHOD |
| 6. AM0006 - APRIL AMOUNT | 16. AM0016 - ENTITY |
| 7. AM0007 - MAY AMOUNT | 17. AM0017 - ACCURACY |
| 8. AM0008 - JUNE AMOUNT | 18. AM0018 - RESTRICTIONS |
| 9. AM0009 - JULY AMOUNT | 19. AM0019 - SALINITY CODE |
| 10. AM0010 - AUGUST AMOUNT | 20. AM0020 - TREATMENT TYPE |
| | 21. AM0021 - OTHER DATA |

Example formats: 1 -- selects CD0007
 4-6 -- selects AM0004, AM0005, and AM0006
 1,10,2 -- selects CD0007, AM0010, and AM0002

Select by number, range, list, or ALL (selects all items) or
 ENTER OOPS (to go back one menu), HELP, QUIT, or EXIT (to
 return to PRIMOS)
 :

4.10.6.2.4 Generating the Special-Purpose ASCII File (SPAF)

After field selection, you are given the default path to the directory where your retrieval/application output files will reside. The format of the query is similar to the edit/update input pathname query in section 4.6. When you select the default or enter a new path, you are then prompted for a file name or whether to accept the default filename WUUI02. If you enter a file name that exists, you may enter a new file name or delete the old file, reopening a new file with the old name.

Following is an example of a Special-Purpose ASCII File (SPAF) with selected water users 87, 90, and 100 for all annual- measurement years in the Arkansas SSWUDS data base using the following selected fields: WU0001, WU0002, WU0006, CD0003, CD0004, MP0009, CD0007, and AM0002.

87C. CLYDE BERRY, JR.	08020402WD	040150SW	85201
87C. CLYDE BERRY, JR.	08020402WD	040150SW	86
87C. CLYDE BERRY, JR.	08020402WD	040150SW	87
90KAY L. ELDRIDGE	08020402WD	040153SW	85185
90KAY L. ELDRIDGE	08020402WD	040153SW	86
90KAY L. ELDRIDGE	08020402WD	040153SW	87
100LOUIS NEUKAM	08020303WD	030101GW	85102
100LOUIS NEUKAM	08020303WD	030101GW	86
100LOUIS NEUKAM	08020303WD	030101GW	87

4.11 Access the Applications System

Option 7 on the main menu is ACCESS THE APPLICATIONS SYSTEM. The SSWUDS applications system at the present time allows reports of annual amount aggregations to be generated by hydrologic unit code (HUC), major river basin, county, water-user identifier, and aquifer code. Data record qualifications are exactly the same as those used by the SSWUDS retrieval software (section 4.10.1.) The numbers to the right of each menu entry represent the section within this document where descriptive text is located.

After qualifying the data, you are given the default path to the directory where your retrieval/application output files will reside. The format of the query is similar to the edit/update input pathname query in section 4.6. When you select the default or enter a new path, you are then prompted for a file name or whether to accept the default filename WUUI02. If entering a file name of a file that exists, you may write over the existing file or reenter a different file name. Select the aggregation type from the following menu:

SSWUDS DATA BASE APPLICATIONS SYSTEM

AGGREGATION OF ANNUAL MEASUREMENTS

- | | | |
|-----|--------------------------|--------|
| 1 - | BY HYDROLOGIC UNIT CODE | 4.11.1 |
| 2 - | BY WATER-USER IDENTIFIER | 4.11.2 |
| 3 - | BY MAJOR RIVER BASIN | 4.11.3 |
| 4 - | BY COUNTY | 4.11.4 |
| 5 - | BY AQUIFER | 4.11.5 |

Select from the above list or ENTER OOPS (to go back one menu),
HELP, QUIT, or EXIT (to return to PRIMOS.)

4.11.1 Aggregation of Annual Amounts by Hydrologic Unit Code (HUC)

The aggregation of annual amounts by hydrologic unit code (HUC) provides a report of annual amounts aggregated by HUC codes. Also provided is the functionality to establish data selections exactly the same as those in the SSWUDS retrieval system. (See sections 4.10.1 through 4.10.5.3.)

Each of the SSWUDS applications programs allows entering up to 80 characters to be used as a banner for each of the aggregation reports generated. The query for the banner is as follows:

SSWUDS DATA BASE APPLICATIONS SYSTEM
AGGREGATION OF ANNUAL MEASUREMENTS

ENTER A MESSAGE TO BE PRINTED ON THE BANNER PAGE OF YOUR
OUTPUT REPORT. THE MESSAGE YOU ENTER MAY BE UP TO 80
CHARACTERS IN LENGTH.

4.11.2 Aggregation of Annual Amounts by Water-User Identifier

The aggregation of annual amounts by water-user identifier generates a report of aggregated annual amounts of qualified SSWUDS data-base records by water-user identifier. As in the other aggregation-applications programs, the aggregation of annual amounts by water-user identifier allows accessing the selection criterion software (section 4.10.1) for selecting records to be aggregated; a query for a banner message to be printed at the top of the report is displayed. (See section 4.11.1.)

4.11.3 Aggregation of Annual Amounts by Major River Basin

The aggregation of annual amounts by major river basin generates reports from qualified SSWUDS data-base records of annual amounts aggregated by major river basin. This SSWUDS applications program allows the same data qualification and banner message entry as the other applications in the SSWUDS APPLICATIONS SYSTEM. (See section 4.11.1.)

4.11.4 Aggregation of Annual Amounts by County

This application generates a report of aggregated annual amounts based on county codes. The county codes used can be from the water-user file or the measurement-point file. This SSWUDS applications program allows the same data qualification and banner message entry as the other applications in the SSWUDS APPLICATIONS SYSTEM. (See section 4.11.1.) The program optionally generates an INFO file containing aggregated data. The following queries are displayed for selecting (a) county codes to be aggregated, and (b) the option for generating an INFO file and creating an INFO data base:

DO YOU WANT YOUR REPORT BASED ON COUNTY CODES FROM THE WATER-USER
FILE OR MEASUREMENT-POINT FILE?

(Answer WU or MP -- default is MP)

IN ADDITION TO YOUR AGGREGATE REPORT, WOULD YOU LIKE
AN INFO FILE CREATED CONTAINING THE AGGREGATE VALUES?

(Enter Y for yes, N for no -- default is N)

If the answer is Y to the INFO file query, the following queries are displayed:

IF INFO DATA BASE IS IN A DIRECTORY OTHER THAN THE ONE YOU ARE
CURRENTLY ATTACHED TO, ENTER THE PATHNAME CONTAINING YOUR INFO DATA
BASE:

(e.g., SWUDS>REPORTS)

ENTER THREE-CHARACTER INFO DATA BASE NAME:

(e.g., SUD)

ENTER NAME OF NEW INFO FILE TO BE GENERATED:
(This program will not delete and write over
existing INFO files.)

4.11.5 Aggregation of Annual Amounts by Aquifer

The aggregation of annual amounts by aquifer code generates reports from qualified SSWUDS data-base records of annual amounts. This SSWUDS applications program allows the same data qualification and banner message entry as the other applications in the SSWUDS APPLICATION SYSTEM. (See section 4.11.1.1.)

4.12 Access the Local Applications System

Option 8 on the main menu is ACCESS THE LOCAL APPLICATIONS SYSTEM. This system permits the SSWUDS data base administrator to install locally relevant applications programs into the SSWUDS system. The applications programs available to you are in the menu, shown subsequently. The menu entries labeled "STUBB" are place holders for applications programs and selecting these entries redisplay the menu. The applications programs that exist in your local implementation of the SSWUDS system will not be nationally supported. Note: The menu entries shown in the menu are local applications programs currently in use at the Arkansas District office. The menu entries shown are provided with SSWUDS as examples of the installation and use of local applications programs.

WRD SITE-SPECIFIC WATER-USE DATA SYSTEM (SSWUDS) REV90.2

SSWUDS LOCAL APPLICATIONS MENU

CODE	SELECTIONS
1	ASWCC ENTRY ROUTINE
2	ASWCC FORMS ROUTINE
3	ASWCC CERTIFICATE ROUTINE
4	ASWCC MAIL LABELS ROUTINE
5	STUBB 5
6	STUBB 6
7	STUBB 7
8	STUBB 8

SELECT FROM THE ABOVE LIST OR ENTER HELP CODE (for menu selection help), QUIT, OR EXIT (to return to PRIMOS).

4.13 Change Data Bases

Option 9 on the main menu is CHANGE DATA BASES. This option allows you to change to a different data base if more than one data base is available. If only one data base exists at a site, then there will not be an option 9 on the main menu. To change data bases, enter the desired data base number at the menu query. To view a list of available SSWUDS data bases, enter a <CR> in response to the query. Following is the menu query that is displayed:

WRD SITE-SPECIFIC WATER-USE DATA
SYSTEM (SSWUDS) REV90.2

ENTER THE NUMBER OF THE DATA BASE YOU WISH TO ACCESS.
ENTER A [CR] IF YOU WISH TO SEE A LIST.

NWIS 90.2

VOLUME 2, USER'S MANUAL

CHAPTER 5. WATER-USE DATA SYSTEM

Section 5. Site-Specific Water-Use Data System (SSWUDS)
Key-to-Disk (KEYDISK) Data Entry Program

Written by
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July 1990

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5 SITE-SPECIFIC WATER-USE DATA SYSTEM (SSWUDS) KEY-TO-DISK (KEYDISK) DATA ENTRY PROGRAM

This section presents procedures for data entry to the Site-Specific Water-Use Data System (SSWUDS) using the KEYDISK program.

5.1 Introduction

The KEYDISK program is used to produce record-formatted files, which will be used as input to the batch edit-update facility supplied by SSWUDS. This section explains initiation and termination of KEYDISK, data entry using prompt-mode, data modification, KEYDISK commands, and advanced data entry using line-mode.

5.2 Background

The State Water-Use Data System (SWUDS), the predecessor to SSWUDS, was developed by the U.S. Geological Survey (USGS). SWUDS consists of computer software which provides a means of storing and retrieving site specific water-use information.

In Virginia, SWUDS was originally installed on an Amdahl V7 computer system at the Virginia Commonwealth University (VCU). The original version of SWUDS had both interactive and batch edit-update capabilities. In the early stages of SWUDS, as implemented in Virginia, only the batch edit-update facility was operational.

The batch edit-update facility uses record-formatted input files that contain a logical grouping of the various 24 possible predefined data input records. SWUDS did not provide a utility for assisting in creating the necessary batch input files. Therefore, the creation of batch input files was limited to direct key punching of input records or the creation of files on disk (key-to-disk operations). Direct data entry by either of these procedures has a high potential for data entry errors.

In 1983, the interactive edit-update facility supplied with SWUUDS for data entry became operational. However, it quickly became apparent that the interactive edit-update facility was time consuming and more costly than the batch edit-update facility. Therefore, it was recommended that users should use only the batch edit-update facility.

Additional computer software was developed in order to facilitate the generation of the input files required for the SWUUDS batch edit-update facility. The data entry software was developed by the Commonwealth Data Base (CDB) of Virginia, and was named KEYDISK. Specifications for KEYDISK were developed jointly between the U.S. Geological Survey and CDB. KEYDISK is an interactive data entry program which provides a user friendly way of generating the record-formatted files required by the batch edit-update system.

The KEYDISK program was written in Fortran 77, and was developed on the IBM System 370/3033 computer. It was later converted to run on both the PRIME 50 series and IBM PC/XT/AT computers. On the PRIME 50 series, KEYDISK was incorporated into the NWIS 89.1 release of SSWUUDS.

5.3 KEYDISK Description

KEYDISK is a general-purpose, interactive data entry program that builds entry records that are acceptable to SSWUDS and saves them in a file specified by the user. The records are built from the users' responses to queries. KEYDISK asks all the necessary questions according to the action that the user wishes to make. Data items are referenced by KEYDISK according to specific Data Element names from the SSWUDS Data Dictionary. Remember that data entered to KEYDISK do not go directly into the SSWUDS data bases. KEYDISK only prepares a file that is acceptable to the SSWUDS Edit/Update system.

5.4 KEYDISK Initiation and Termination

KEYDISK may be accessed through the SSWUDS menus. Selecting option 2, CREATE RECORD-FORMATTED INPUT FILES, from the main SSWUDS menu causes a submenu with two options to be displayed. To invoke KEYDISK, select option 1 from this submenu. KEYDISK's header information is displayed after invoking KEYDISK. (See fig. 4, line 1.) The header information includes the name of the person to contact for help in using KEYDISK and a list of valid KEYDISK commands. Following the KEYDISK header information is a prompt for an output file name. (See fig. 4, line 2.)

The output file contains the data entered during the current KEYDISK session. The output file should not exist before invoking KEYDISK. If the output file exists, KEYDISK asks if additional information is to be appended to the end of the existing file. (See fig. 5).

The output file name may be as long as 60 characters. The file names prepared by KEYDISK should all have the .HOLD postfix. These files should reside in the directory from which you invoke the SSWUDS batch Edit/Update system to get your entry files. If not, they must be either moved to that directory before you invoke the Edit/Update system, or you must change your Edit/Update path in the SSWUDS Userfile when queried for that information by the Edit/Update system.

The next KEYDISK prompt is a prompt for data. (See fig. 4, line 3.) Data may be entered in one of two modes, prompt-mode or line-mode. In prompt-mode each data item is entered separately. In line-mode all data items for a given input record are entered at the same time, separated by commas.

```

1 *****
* -----WELCOME TO KEYDISK----- *
* *
* WRITTEN BY: TODD W. AUGENSTEIN *
* *
*****
*
* COMMANDS
*
* BLANK -- SKIP CURRENT          @ -- GO BACK TO LAST
* ENTRY                               ENTRY
*
* &    -- SKIP REMAINING        = -- DUPLICATE PREVIOUS
* ENTIRES                               ENTRY
*
* #    -- ERASE INPUT           =A -- DUPLICATE ALL
* START OVER                           POSSIBLE ENTRIES
*
*****

2 Enter file name into which you want these data stored:
(Maximum of 60 characters.)
(FILE or PATHNAME)

3 PROMPT MODE:      ENTER VALID INPUT CODE
LINE MODE:         ENTER DATA ITEMS SEPARATED BY COMMAS
OTHERWISE:         <CR> (CARRIAGE RETURN) ENDS PROCESSING
XX

4 (A1, A2, A3, A4, B0, B1, B2, B3, C1, C2, C3, C4, C5, C6, D1,
D2, D3, E1, F1, F2, F3, G1, G2, or G3), (ALL DATA ITEMS FOR
A GIVEN INPUT TYPE SEPARATED BY COMMAS), or <CR>

5 [prompts for all additional information (prompt-mode only)]

6 [display of data entered (prompt-mode and line-mode)]

7 PROMPT MODE:      ENTER VALID INPUT CODE
LINE MODE:         ENTER DATA ITEMS SEPARATED BY COMMAS
OTHERWISE:         <CR> (CARRIAGE RETURN) ENDS PROCESSING
XX

```

Figure 4.-Initiation and termination of KEYDISK
in prompt-mode and line-mode.

- 1 Enter file name into which you want this data stored:
(Maximum of 60 characters.)
(EXISTING FILE NAME ENTERED)
- 2 File already exists =
(name of existing file entered)
- 3 Would you like to add information to the file?
(answer Y - yes or N - no.)
(Y)
- 4 PROMPT MODE: ENTER VALID INPUT CODE
LINE MODE: ENTER DATA ITEMS SEPARATED BY COMMAS
OTHERWISE: <CR> (CARRIAGE RETURN) ENDS PROCESSING
XX

Figure 5.-Example KEYDISK prompt when appending input records to a previously existing file.

To enter data using prompt-mode, enter any one of the valid SSWUDS input codes listed in figure 4, line 4. KEYDISK then prompts for each data item associated with the previously entered input code. After all data are entered, KEYDISK displays the current data entered. When processing for the present input type is complete, KEYDISK again prompts for a valid input code, as shown in figure 4, line 7.

To enter data in line-mode, enter all data items for a given input type separated by commas. KEYDISK then displays the current data entered. After processing is complete, the next prompt is for another input code.

If no more data are to be entered, enter <CR> instead of entering a valid input type. A <CR> at the initial prompt (fig. 4, line 7) causes KEYDISK to terminate. KEYDISK will return to PRIMOS when <CR> is entered at the initial prompt.

5.5 Data Entry (prompt-mode)

KEYDISK sequentially prompts for data items in the order in which they appear on the U.S. Geological Survey's Site-Specific Water-Use Data System coding forms. An example of a coding form for general water user information, input codes A1, A2, A3 and A4, is given in section 3, page 3-17, of this manual.

Figure 6 illustrates how data items for the A1 input records are individually entered through sequential KEYDISK prompts. Each prompt consists of a narrative description and a field length identifier. Maximum field lengths are identified with the character "X". In many cases it is valid to have data items shorter than the maximum allowable field length; however, data items cannot be longer than the maximum field length. Data items should be entered below the field length identifier as shown in figure 6.

Data items are entered through KEYDISK one item at a time. The beginning prompt is always for a valid input code, as shown in figure 6, line 1. After a valid input code is entered, KEYDISK prompts for all additional information associated with the input code previously entered.

If a given data item is excluded, such as the secondary Standard Industrial Classification (SIC) codes and permitting agency (fig. 6, lines 7, 8, and 10, respectively), then leave the data entry field blank. If you <CR> for any data item, it's the same as entering a blank for that data item.

All data items may be entered left-justified. KEYDISK will automatically left- or right-justify the data item, in accordance with the requirements of SSWUDS.

The KEYDISK prompt shown in figure 6, line 11, is displayed after all data items for the current input type are entered. To review the current input record output, enter an R in response to the prompt in figure 6, line 11. After entering "R", KEYDISK displays the current data. (See fig. 6, line 12.) This display may be reviewed for data entry errors. Procedures for data modification are presented in the next section.

Reviewing the current data may be bypassed by entering a <CR> in response to the prompt shown in figure 6, line 11. After entering a <CR>, KEYDISK writes the current data to the output file and then prompts for another input code. (See fig. 6, line 1.)

KEYDISK edits each data item entered in an attempt to reduce data entry errors. Data items are checked for the following conditions depending on the criteria set for each data item.

1. Field length
2. Mandatory--not mandatory
3. Validity of entry
4. Type (character, numeric, alphanumeric)

If a data entry error is made, KEYDISK flags the error, displays an error message, then reprompts for the data item. This procedure is continued until a valid entry is made.

Figure 7 presents three examples of typical errors which may occur when entering a water-user identifier. In example 1, the water-user identifier was not entered; however, the water-user identifier is a mandatory item. KEYDISK flags this error, displays an error message, and then prompts for the water-user identifier.

In examples 2 and 3, the water-user identifier is too long. Since KEYDISK accepts leading blanks as valid characters, the length of the data item in both examples is 8. Lengths ranging from 1 to 7 numerics are valid lengths for a water-user identifier. Therefore, KEYDISK flags the error, displays an error message, and then prompts for the water-user identifier.

```
1  PROMPT MODE:  ENTER VALID INPUT CODE
   LINE MODE:    ENTER DATA ITEMS SEPARATED BY COMMAS
   OTHERWISE:    <CR> (CARRIAGE RETURN) ENDS PROCESSING
   XX
   A1

2  ENTER TRANSACTION CODE AND ADD-A, MODIFY-M, OR DELETE-D:
   X
   A

3  ENTER WATER USER IDENTIFIER:
   XXXXXX
   110

4  ENTER WATER USER NAME OR DESCRIPTION:
   XXXXXXXXXXXXXXXXXXXXXXXXXX
   BUMPY ROAD FIL PLT

5  ENTER USE CODE:
   XX
   WS

6  ENTER PRIMARY SIC CODE:
   XXXXXX
   4941

7  ENTER SECONDARY SIC CODE:
   XXXXXX
   _____

8  ENTER SECONDARY SIC CODE:
   XXXXXX
   _____

9  ENTER PERMIT NUMBER
   XXXXXXXXX
   1870010

10 ENTER PERMITTING AGENCY:
   XXXXX
   _____

11 ENTER <CR> (CARRIAGE RETURN) TO KEEP OR R TO REVIEW THE
    CURRENT DATA ENTERED:
    R

12 INFORMATION OBTAINED FOR PRESENT INPUT RECORD

    A1A  110BUMPY ROAD FLT PLT          WS4941          1870010
```

Figure 6.-Sequential KEYDISK prompts initiated for
data entry of an A1 input record.

Example 1: ENTER WATER USER IDENTIFIER:
XXXXXX

====ERROR====

BLANK INPUT (ENTRY MUST BE MADE)

ENTER WATER USER IDENTIFIER:
XXXXXX

Example 2: ENTER WATER USER IDENTIFIER:
XXXXXX

12345678

====ERROR====

ENTRY TOO LONG (CHECK LENGTH OF ENTRY)

ENTER WATER USER IDENTIFIER:
XXXXXX

Example 3: ENTER WATER USER IDENTIFIER:
XXXXXX

111

====ERROR====

ENTRY TOO LONG (CHECK LENGTH OF ENTRY)

ENTER WATER USER IDENTIFIER:
XXXXXX

Figure 7.-Examples of three errors which may occur
when entering a water-user identifier.

5.6 Data Modification

Figure 8 presents an example of a display for the A1 input record entered in Figure 6. Figure 8, line 1, shows the last data prompt for an A1 input record. KEYDISK asks if you wish to review the current data after each line of data has been entered. (See fig. 8, line 2.) To review the current data enter an R; otherwise enter a <CR>. A <CR> signals KEYDISK to store the current data in the output file and then prompt for additional information, i.e., continue processing by asking for another input code.

If you enter an R, KEYDISK displays the current data entered. (See fig. 8, line 3.) KEYDISK then lists each data item. (See fig. 8, line 4.) At this point one of three options may be selected regarding the status of the current data entered. The current data may be either kept, deleted, or modified. (See fig. 8, line 5.)

Figure 9 is an example of how the present input record may be either kept or deleted. To keep data for the present input record, enter a <CR>; the data are written to the output file. The next prompt is for a valid input code. (See fig. 9, lines 2 and 3, respectively). KEYDISK cannot perform any additional modifications or deletions to data once they have been kept. Therefore, be sure the current data are correct before entering a <CR>.

To delete, enter DEL instead of a <CR>. Entering DEL causes the complete data line to be deleted. No data will be written to the output file. The next prompt is for a valid input code. (See fig. 9, line 3.)

To modify single data items, enter the letter associated with a given data item. (See fig. 8, line 4.) Figure 10 is an example of modifying the use code previously entered in figure 6. Since the use code is data item E on the A1 input record (fig. 8, line 4), enter an E after the prompt for data status. (See fig. 10, line 1). This causes the prompt for the use code to reappear, as shown in fig. 10, line 2. After you enter a new use code, the display of the current data returns to the screen.

Individual data items may be deleted by entering a blank for the data item to be deleted. For example, to delete the use code, enter the letter associated with the use code (E) in figure 8. When prompted for a use code enter a <CR>. A <CR> is the same as entering blanks for the data item. The data item for the

current input record will once again be displayed with the use code blank.

Data items modified through the modification routine are edited similar to data items entered through the data-entry routine.

1. ENTER PERMITTING AGENCY:
XXXXX

2. ENTER <CR> (CARRIAGE RETURN) TO KEEP OR R TO REVIEW THE
CURRENT DATA ENTERED:
R
3. INFORMATION OBTAINED FOR PRESENT INPUT RECORD
AlA 110BUMPY ROAD FIL PLT WS4941 1870010
4. YOU MAY MODIFY ALL ENTRIES EXCEPT A:
A. INPUT CODE Al
B. TRANSACTION CODE A
C. WATER USER IDENTIFIER 110
D. WATER USER NAME OR DESCRIPTION BUMPY ROAD FIL PLT
E. USE CODE WS
F. PRIMARY SIC CODE 4941
G. SECONDARY SIC CODE
H. SECONDARY SIC CODE
I. PERMIT NUMBER 1870010
J. PERMITTING AGENCY
5. ENTER (RETURN) FOR KEEP, DEL FOR DELETE, OR APPROPRIATE
LETTER FOR ENTRY TO BE MODIFIED.

Figure 8.-Example of a display for an A1 input record.

1. ENTER (RETURN) FOR KEEP, DEL FOR DELETE, OR APPROPRIATE LETTER FOR ENTRY TO BE MODIFIED.
2. <CR> OR (DEL)
3. PROMPT MODE: ENTER VALID INPUT CODE
 LINE MODE: ENTER DATA ITEMS SEPARATED BY COMMAS
 OTHERWISE: <CR> (CARRIAGE RETURN) ENDS PROCESSING
 XX
(VALID INPUT CODE), (ALL DATA ITEMS FOR A GIVEN INPUT TYPE SEPARATED BY COMMAS, or <CR>)

Figure 9.-Procedure for deleting or keeping present input record.

- 1 ENTER (RETURN FOR KEEP, DEL FOR DELETE, OR APPROPRIATE LETTER FOR ENTRY TO BE MODIFIED
E
- 2 ENTER USE CODE:
 XX
AG
- 3 INFORMATION OBTAINED FOR PRESENT INPUT RECORD

 A1A 110BUMPY ROAD FIL PLT AG4941 1870010

 YOU MAY MODIFY ALL ENTRIES EXCEPT A:

A. INPUT CODE	A1
B. TRANSACTION CODE	A
C. WATER USER IDENTIFIER	110
D. WATER USER NAME OR DESCRIPTION	BUMPY ROAD FIL PLT
E. USE CODE	AG
F. PRIMARY SIC CODE	4941
G. SECONDARY SIC CODE	
H. SECONDARY SIC CODE	
I. PERMIT NUMBER	1870010
J. PERMITTING AGENCY	
- 4 ENTER (RETURN) FOR KEEP, DEL FOR DELETE, OR APROPRIATE LETTER FOR ENTRY TO BE MODIFIED

Figure 10.-Modifying a use code after entering all data for an A1 input record.

5.7 KEYDISK Commands

KEYDISK commands allow data to be:

- (a) copied from the last input record entered,
- (b) copied from the previous data item entered,
- (c) skipped,
- (d) deleted, and
- (e) changed.

Figure 11 lists the valid KEYDISK commands used in the data-entry routine, along with their general definitions. KEYDISK commands were designed to be used in the data-entry routine. However, two of the KEYDISK commands may also be used within the data modification routine. (See fig. 12.)

To use a KEYDISK command, enter the KEYDISK command in place of the desired input requested by the prompt. The KEYDISK command can appear anywhere within the field length identified for the prompted data item. Entry of a command outside the field length causes an input error. The only exception is the duplicate-all-possible-entries command (=A). For entries with a maximum field length of 1, the duplicate-all-possible-entries command (=A) will be accepted as a valid command as long as the (=) is in the first field position. The skip-current-entry command can be executed with a <CR>.

Commands cannot be used on every data item. If an invalid command is used on a data item KEYDISK flags the error, writes an error message to the screen, and then reprompts for the data item. There is no need to memorize the validity of KEYDISK commands, since KEYDISK flags any errors.

Blank	--SKIP CURRENT ENTRY Current data item is skipped without changing the original contents of the data item. Each data item initially contains blanks.
&	--SKIP REMAINING ENTRIES The current data item and all data items that follow for a given input record are skipped without changing the original contents of the skipped data items. Each data item initially contains blanks.
#	--ERASE INPUT START OVER All information entered for the current input record is deleted including input code. The next prompt is for a valid input code.
@	--GO BACK TO LAST ENTRY Causes the previous data item to be reprompted. The contents of the current data item is not changed. Prompting will continue sequentially starting with the previous data item.
=	--DUPLICATE PREVIOUS ENTRY Data will be copied from the previous data item entered to the present data item. Sequential prompting continues starting with the next data item.
=A	--DUPLICATE ALL POSSIBLE ENTRIES Data will be copied from the last input record entered to the present input record for all possible entries starting with the current entry. Sequential prompting for all other information continues starting with the first data item that cannot be copied.

Figure 11.-General definitions of KEYDISK commands used in the data-entry routine.

BLANK **--SKIP CURRENT ENTRY**
The original contents of the data item are replaced with blanks when the data item is skipped. The blank command in the modification routine differs from the blank command of the data-entry routine in that the blank command in the modification routine actually blanks out the contents of the current data item. In the data-entry routine the blank command does not blank out the contents of the current data item.

& **--SKIP REMAINING ENTRIES**
Causes the current data item to be skipped without changing the original contents of the data item. Only one data item can be modified at a time in the modification routine. Therefore, only the current data item being modified is skipped.

Erase input start over (#), go back to last entry (@), duplicate previous entry (=), and duplicate all possible entries (=A) cannot be used in the modification routine.

Figure 12.-General definitions of KEYDISK commands used in the modification routine.

5.8 Advanced Data Entry (line-mode)

Data may be entered in line-mode only at the initial prompt for data. (See fig. 13, line 1.) To enter data in line-mode at the initial prompt, enter a complete line of data instead of a single valid input code. Individual data items must be separated by commas.

Data items within a line of data must also be entered in the order in which the data items appear on the U.S. Geological Survey's Site-Specific Water-Use Data System coding forms. An example of a coding form for general water-user information, input codes A1, A2, A3 and A4, is given in section 3, page 3-17, of this manual.

The position of each data item must be retained in the order which they occur on the SSWUDS coding forms, including data items entered with no value. Data items having no value (blank) may be skipped by the use of additional commas. If the blank data items are the last data items on an input record, additional commas for blank data items are not necessary.

KEYDISK commands can still be used in line-mode. The only exception is the backspace command. A backspace command will not be recognized as a valid command in any line-mode entry.

An example of data entry for an A1 input record using line-mode is shown in figure 13. Line 1 gives the initial prompt for data. Line 2 shows how data for the A1 input record are entered using line-mode.

In the example, two secondary SIC codes and the permitting agency were not entered. Two additional commas were placed between the primary SIC code and the permitting agency when entering the A1 input record. The two commas represent the two missing secondary SIC code fields. No additional comma was placed after the permit number to represent the missing permitting agency, since the permitting agency is the last data item on an A1 input record.

After entering a line of data, KEYDISK asks if you would like to review the current data entered. (See fig. 13, line 3.) It is always wise to review each line of data entered.


```

1  PROMPT MODE:      ENTER VALID INPUT CODE
   LINE MODE:      ENTER DATA ITEMS SEPARATED BY COMMAS
   OTHERWISE:      <CR> (CARRIAGE RETURN) ENDS PROCESSING
   XX

2  A1, A, 110, BUMPY ROAD FIL PLT, WS,4941,,,1870010

3  ENTER <CR> (CARRIAGE RETURN) TO KEEP OR R TO REVIEW THE
   CURRENT DATA ENTERED;
   R

4  INFORMATION OBTAINED FOR PRESENT INPUT RECORD

   A1A      110BUMPY ROAD FIL PLT      WS4941      1870010

5  YOU MAY MODIFIY ALL ENTRIES EXCEPT A:
   A. INPUT CODE      A1
   B. TRANSACTION CODE      A
   C. WATER-USER IDENTIFIER      110
   D. WATER-USER NAME OR DESCRIPTION      BUMPY ROAD FIL PLT
   E. USE CODE      WS
   F. PRIMARY SIC CODE      4941
   G. SECONDARY SIC CODE
   H. SECONDARY SIC CODE
   I. PERMIT NUMBER      1870010
   J. PERMITTING AGENCY

6  ENTER (RETURN) FOR KEEP, DEL FOR DELETE, OR APPROPRIATE
   LETTER FOR ENTRY TO BE MODIFIED

7  PROMPT MODE:      ENTER VALID INPUT CODE
   LINE MODE:      ENTER DATA ITEMS SEPARATED BY COMMAS
   OTHERWISE:      <CR> (CARRIAGE RETURN) ENDS PROCESSING
   XX

```

Figure 13.-Data entry for an A1 input record using line-mode.

See section 5.6, Data Modification, for more information on modifying currently entered data. After processing through the modification feature, KEYDISK prompts for initial data. (See fig. 13, line 7.)

Figure 14 is an example of partial data entry of a single water user using A, B, and C input records. The time savings of the duplicate command are illustrated in figure 14, lines 2 through 6.

It is possible to duplicate more than the transaction code and water user ID from the B input records to the C input records in both line-mode and prompt-mode. KEYDISK duplicates from the B input records to the C input records up to, but not including, the year. (See fig. 14, lines 4 and 5.) This possible duplication is not directly shown on the coding forms for C input records.

All data entered through line-mode are edited exactly as if the data were entered through prompt-mode.

If a data item is improperly entered through line-mode, KEYDISK flags the error and automatically switches from line-mode to prompt-mode. KEYDISK then writes an error message and prompt for the first entry that is in error. All additional information for the present input record following the error must then be reentered using prompt-mode.

Figure 15 is an example of how data entry errors are handled in line-mode. In this example, a water-user identifier was not entered in line-mode. Since a water-user identifier is mandatory, KEYDISK flags the error and then reprompts for a water-user identifier. (See fig. 15, line 3.) Enter either a valid water-user identifier (prompt-mode will continue), or an erase-input-start-over (#) command (fig. 15, line 4). If an erase-input-start-over command is entered, the initial prompt for data reappears. (See fig. 15, line 6.) Data entry in line-mode may then be retyped with an included water-user identifier.

- 1 line mode entry:
A1, A, 111, BUMPY ROAD TN OF, DO, 4941,,,1870011

data entered:
A1A 111BUMPY ROAD TN OF DO4941 1870010
- 2 line mode entry:
A3,=A,385035,0781800,02070005,313 SPRUCE ST, BUMPY RD

data entered:
A3A 111385035078180002070005313 SPRUCE ST BUMPY ROAD
- 3 line mode entry:
A4,=A,313 SPRUCE ST, BUMPY ROAD,VA,06040

data entered:
A4A 111313 SPRUCE ST BUMPY ROAD VA06040
- 4 line mode entry:
B1,=A,DL,TW,110,N,1870011

data entered:
B1A 111DLTW 110 N 1870011
- 5 line mode entry:
C1,=A,82,1,651,M,OWNER,,N,F

data entered:
C1A 111DLTW 110 82 1.651MOWNER NF
- 6 line mode entry:
C3,=A,1.500,1.550,1.600

data entered:
C3A 111DLTW 110 82 1.500 1.550 1.600

Figure 14.-Example of valid line-mode entries for partial data entry of a single water user.

```
1  PROMPT MODE:    ENTER VALID INPUT CODE
   LINE MODE:      ENTER DATA ITEMS SEPARATED BY COMMAS
   OTHERWISE;      <CR> (CARRIAGE RETURN) ENDS PROCESSING
   XX

2  A1,A,,BUMPY ROAD TN OF, DO,4941,,,1870011

3  ===ERROR===

   -----
   BLANK INPUT (ENTRY MUST BE MADE)
   -----
   ENTER WATER-USER IDENTIFIER
   XXXXXX

4  (WATER-USER IDENTIFIER) OR (#)

5  [PROMPTS FOR ALL ADDITIONAL INFORMATION IF WATER-USER
   IDENTIFIER WAS ENTERED].

6  PROMPT MODE:    ENTER VALID INPUT CODE
   LINE MODE:      ENTER DATA ITEMS SEPARATED BY COMMAS
   OTHERWISE:      <CR> (CARRIAGE RETURN) ENDS PROCESSING
```

Figure 15.-Handling data entry errors while in line-mode.

NWIS 90.2

VOLUME 2, USER'S MANUAL

CHAPTER 5. WATER-USE DATA SYSTEM

Section 6. Site-Specific Water-Use Data System (SSWUDS)
Data Elements Dictionary

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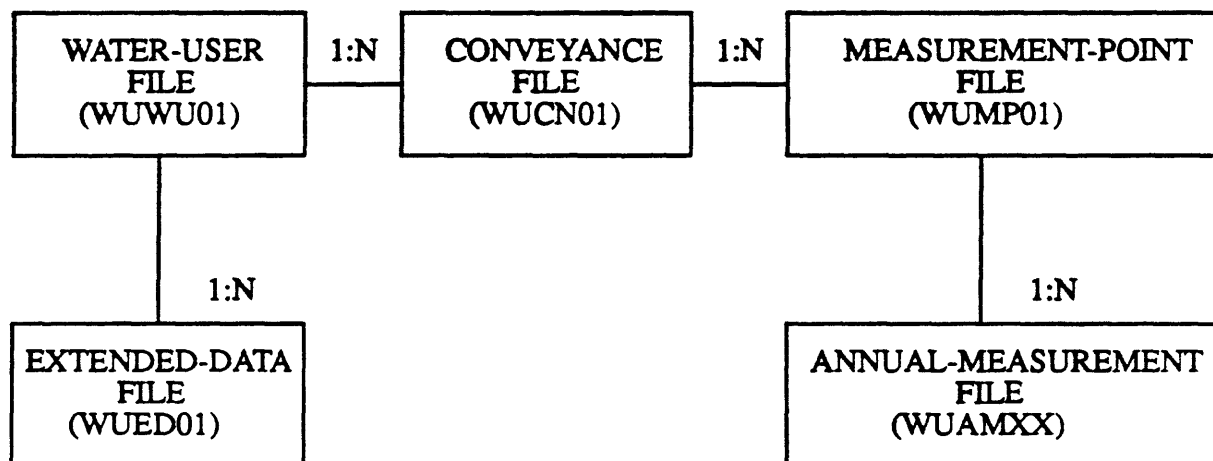
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6.1 DATA BASE STRUCTURE CHART AND SUMMARY

Data Base Structure Chart



NOTE: The names such as WUWU01 and WUCN01 are the generic names for the data files. The "xx" in the annual-measurement file generic name WUAMxx represents the 2-digit year. The notation "1:N" represents 1 to many.

"A" INPUT RECORDS - WATER USER DATA

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-12
TRANSACTION CODE	CD0002	6-13
IDENTIFIER	WU0001	6-14
NAME	WU0002	6-15
USE CODE	WU0003	6-16
SIC 1	WU0016	6-17
SIC 2	WU0017	6-18
SIC 3	WU0018	6-19
PERMIT NUMBER	WU0019	6-20
AGENCY CODE	WU0020	6-21
OTHER DATA	WU0021	6-22
LATITUDE	WU0004	6-21
LONGITUDE	WU0005	6-24
HYDROLOGIC UNIT	WU0006	6-25
STREET ADDRESS	WU0007	6-26
CITY NAME	WU0008	6-27
CITY CODE	WU0009	6-28
STATE	WU0010	6-29
COUNTY	WU0011	6-30
MAILING STREET	WU0012	6-31
MAILING CITY	WU0013	6-32
MAILING STATE	WU0014	6-33
MAILING ZIP	WU0015	6-34

"B" INPUT RECORDS - MEASUREMENT POINTS

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-36
TRANSACTION CODE	CD0002	6-37
IDENTIFIER	WU0001	6-38
ACTION CODE	CD0003	6-39
SOURCE/DESTINATION TYPE	MP0009	6-40
SOURCE/DESTINATION IDENTIFIER	CD0004	6-41
PRINCIPAL AQUIFER	MP0008	6-42
RECLAIMED WASTE WATER	MP0011	6-43
SUBTYPE	MP0010	6-44
PERMIT NUMBER	MP0013	6-45
PERMITTING AGENCY	MP0014	6-46
WATER QUALITY ORGANIZATION	MP0012	6-47
DESCRIPTION	MP0002	6-48
OTHER DATA	MP0015	6-49
LATITUDE	MP0005	6-50
LONGITUDE	MP0006	6-51
HYDROLOGIC UNIT	MP0007	6-52
STATE	MP0003	6-53
COUNTY	MP0004	6-54
AGGREGATE FLAG	CD0012	6-55
ALIAS IDENTIFIER	CD0013	6-56

"C" INPUT RECORDS - ANNUAL MEASUREMENTS

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-58
TRANSACTION CODE	CD0002	6-59
IDENTIFIER	WU0001	6-60
ACTION CODE	CD0003	6-61
SOURCE/DESTINATION TYPE	MP0009	6-62
SOURCE/DESTINATION IDENTIFIER	CD0004	6-63
YEAR	CD0007	6-64
ANNUAL AMOUNT	AM0002	6-65
MEASURING METHOD	AM0015	6-66
MEASURING ENTITY	AM0016	6-67
ACCURACY	AM0017	6-68
RESTRICTIONS	AM0018	6-69
SALINITY	AM0019	6-70
TREATMENT TYPE	AM0020	6-71
OTHER DATA	AM0021	6-72
JANUARY AMOUNT	AM0003	6-73
FEBRUARY AMOUNT	AM0004	6-74
MARCH AMOUNT	AM0005	6-75
APRIL AMOUNT	AM0006	6-76
MAY AMOUNT	AM0007	6-77
JUNE AMOUNT	AM0008	6-78
JULY AMOUNT	AM0009	6-79
AUGUST AMOUNT	AM0010	6-80
SEPTEMBER AMOUNT	AM0011	6-81
OCTOBER AMOUNT	AM0012	6-82
NOVEMBER AMOUNT	AM0013	6-83
DECEMBER AMOUNT	AM0014	6-84

"D" INPUT RECORDS - IRRIGATION

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-85
TRANSACTION CODE	CD0002	6-86
IRRIGATION IDENTIFIER	ED0001	6-87
YEAR	ED0002	6-88
CROP TYPE	ED0003	6-89
ACRES IRRIGATED	EDIR01	6-90
ANNUAL PRODUCTION	EDIN01	6-91
ANNUAL AMOUNT APPLIED	EDIR02	6-92
JANUARY AMOUNT APPLIED	EDIR03	6-93
FEBRUARY AMOUNT APPLIED	EDIR04	6-94
MARCH AMOUNT APPLIED	EDIR05	6-95
APRIL AMOUNT APPLIED	EDIR06	6-96
MAY AMOUNT APPLIED	EDIR07	6-97
JUNE AMOUNT APPLIED	EDIR08	6-98
JULY AMOUNT APPLIED	EDIR09	6-99
AUGUST AMOUNT APPLIED	EDIR10	6-100
SEPTEMBER AMOUNT APPLIED	EDIR11	6-101
OCTOBER AMOUNT APPLIED	EDIR12	6-102
NOVEMBER AMOUNT APPLIED	EDIR13	6-103
DECEMBER AMOUNT APPLIED	EDIR14	6-104

"E" INPUT RECORDS - PUBLIC SUPPLIER/WASTE TREATMENT

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-105
TRANSACTION CODE	CD0002	6-106
IDENTIFIER	ED0001	6-107
YEAR	ED0002	6-108
SIC CODE	ED0003	6-109
DOMESTIC POPULATION SERVED	EDPS01	6-110
AGRICULTURAL CONNECTIONS SERVED	EDPS02	6-111
COMMERCIAL CONNECTIONS SERVED	EDPS03	6-112
DOMESTIC CONNECTIONS SERVED	EDPS04	6-113
INDUSTRIAL CONNECTIONS SERVED	EDPS05	6-114
IRRIGATION CONNECTIONS SERVED	EDPS06	6-115
POWER CONNECTIONS SERVED	EDPS07	6-116
MINING CONNECTIONS SERVED	EDPS08	6-117

"F" INPUT RECORDS- POWER

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-118
TRANSACTION CODE	CD0002	6-119
IDENTIFIER	ED0001	6-120
YEAR	ED0002	6-121
SIC CODE	ED0003	6-122
GENERATING CAPACITY	EDPW01	6-123
ANNUAL POWER PRODUCED	EDPW02	6-124
JANUARY POWER PRODUCED	EDPW03	6-125
FEBRUARY POWER PRODUCED	EDPW04	6-126
MARCH POWER PRODUCED	EDPW05	6-127
APRIL POWER PRODUCED	EDPW06	6-128
MAY POWER PRODUCED	EDPW07	6-129
JUNE POWER PRODUCED	EDPW08	6-130
JULY POWER PRODUCED	EDPW09	6-131
AUGUST POWER PRODUCED	EDPW10	6-132
SEPTEMBER POWER PRODUCED	EDPW11	6-133
OCTOBER POWER PRODUCED	EDPW12	6-134
NOVEMBER POWER PRODUCED	EDPW13	6-135
DECEMBER POWER PRODUCED	EDPW14	6-136

"G" INPUT RECORDS - PRODUCTION

DATA ELEMENT NAME	SHORT NAME	PAGE
INPUT CODE	CD0001	6-137
TRANSACTION CODE	CD0002	6-138
IDENTIFIER	ED0001	6-139
YEAR	ED0002	6-140
SIC CODE	ED0003	6-141
ANNUAL PRODUCTION	EDIN01	6-142
JANUARY PRODUCTION	EDIN02	6-143
FEBRUARY PRODUCTION	EDIN03	6-144
MARCH PRODUCTION	EDIN04	6-145
APRIL PRODUCTION	EDIN05	6-146
MAY PRODUCTION	EDIN06	6-147
JUNE PRODUCTION	EDIN07	6-148
JULY PRODUCTION	EDIN08	6-149
AUGUST PRODUCTION	EDIN09	6-150
SEPTEMBER PRODUCTION	EDIN10	6-151
OCTOBER PRODUCTION	EDIN11	6-152
NOVEMBER PRODUCTION	EDIN12	6-153
DECEMBER PRODUCTION	EDIN13	6-154

6.2 "A" RECORD INPUT -- WATER-USER DATA

"A" records are used to input information about a water user into the data base. This information includes user name, address, location, and information about permits and type of use for which water is withdrawn. The first 10 record input positions are similar from one type record input to another and provide the system with information about where the data contained on the record should be located in the data base and if the information is being added, changed, or deleted. Record input positions 4 through 10 contain an integer which uniquely identifies a particular user identifying its source of withdrawals and releases and flow rates which are coded on "B" and "C" records. Information contained on "A" records is of a permanent nature and is not reentered each year. Changes are made whenever there is a particular need to update information which has changed since it was entered into the data base.

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Water User
Input type : A1, A2, A3, A4
Input position: 01
Length : 2 characters
Prompt : INPUT CODE

Editing Criteria

Values - A1, A2, A3, A4
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given record. These preassigned codes are printed on each coding form.

CODES

A1 - Water-user data A1 input record
A2 - Water-user data A2 input record
A3 - Water-user data A3 input record
A4 - Water-user data A4 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Water User
Input type : A1, A2, A3, A4
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory - This element must be specified to permit
computer processing.
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the record contains input values.

Data Element Name : IDENTIFIER

Coding Reference

Short name : WU0001
Category : Water User
Input type : A1, A2, A3, A4
Input position: 04
Length : 7 digits
Prompt : WATER USER ID

Editing Criteria

Integer
Mandatory - This element must be specified to permit
computer processing.
Automatic right justification

Definition

SSWUDS identifier uniquely identifies every water-using installation in the data base. The existence of this identifier allows the SSWUDS data base user to locate any individual installation.

The value for this data element will be permanently assigned by the data-base administrator when the water user is first entered in the data base.

The data-base administrator must determine how to assign these numbers.

Data Element Name : NAME

Coding Reference

Short name : WU0002
Category : Water User
Input type : A1
Input position: 11
Length : 25 characters
Prompt : NAME

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

NAME contains the name of the water-using facility or installation that is withdrawing and/or returning water. If the facility is unnamed, either the owner's name or a local designator may be substituted. If the water-use entry represents an aggregate total for an area, the name of the area should be substituted.

Data Element Name : USE CODE

Coding Reference

Short name : WU0003
Category : Water User
Input type : A1
Input position: 36
Length : 2 characters
Prompt : USE CODE

Editing Criteria

Values - AG, CO, DO, IN, IR, MI, PF, PG, PH, PN, ST, WS, LV
Mandatory - This element must be specified to permit
aggregation into the WUDS system.
No automatic justification

Definition

SUBCATEGORY contains a 2-character code to indicate the functional use subcategory in which the facility is classified.

CODES

AG - Agricultural (non-irrigation)	PF - Fossil-Fueled Power
CO - Commercial	PG - Geothermal Power
DO - Domestic	PH - Hydroelectric Power
IN - Industrial	PN - Nuclear Energy Power
IR - Irrigation	ST - Sewage Treatment
MI - Mining	WS - Water Supplier
LV - Livestock	

Data Element Name : SIC 1

Coding Reference

Short name : WU0016
Category : Water User
Input type : A1
Input position: 38
Length : 6 digits
Prompt : PRIMARY SIC

Editing Criteria

Integer
Non mandatory
Automatic left justification

Definition

SIC 1 contains the standard industrial classification of the primary activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987). The final two positions may be used as required on a State by State basis to provide a more detailed breakdown of SIC codes.

Data Element Name : SIC 2

Coding Reference

Short name : WU0017
Category : Water User
Input type : A1
Input position: 44
Length : 6 digits
Prompt : SECONDARY SIC 1

Editing Criteria

Integer
Non mandatory
Automatic left justification

Definition

SIC 2 contains the standard industrial classification of the secondary activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987). The final two positions may be used as required on a State by State basis to provide a more detailed breakdown of SIC codes.

Data Element Name : SIC 3

Coding Reference

Short name : WU0018
Category : Water User
Input type : A1
Input position: 55
Length : 6 digits
Prompt : SECONDARY SIC 2

Editing Criteria

Integer
Non mandatory
Automatic left justification

Definition

SIC 3 contains the standard industrial classification of the tertiary activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987). The final two positions may be used as required on a State by State basis to provide a more detailed breakdown of SIC codes.

Data Element Name : PERMIT NUMBER

Coding Reference

Short name : WU0019
Category : Water User
Input type : A1
Input position: 56
Length : 9 characters
Prompt : PERMIT NUMBER

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

PERMIT NUMBER contains any permit number which was assigned to the water user by any agency. The specific usage of this data element may be determined at the State level. The purpose of this element is to provide a cross-reference capability to other State or Federal information files. For permits which apply to individual withdrawals or returns, see PERMIT NUMBER in the MEASUREMENT POINT file.

Data Element Name : PERMITTING AGENCY

Coding Reference

Short name : WU0020
Category : Water User
Input type : A1
Input position: 65
Length : 5 characters
Prompt : PERMIT AGENCY

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

PERMITTING AGENCY contains the 5-character National Water Data Exchange (NAWDEX) code, which identifies the agency which issued the permit identified by the data element PERMIT NUMBER. Valid State and Federal agency codes are located in the file WATSTORE>SUPPORT>EDIT.TABLES>SAGCNY.EDI.

Data Element Name : OTHER DATA

Coding Reference

Short name : WU0021
Category : Water User
Input type : A2
Input position: 11
Length : 30 characters
Prompt : OTHER DATA

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

OTHER DATA provides a free-form comment area for data about a particular water user. This data item may be optionally used to contain data needed by an individual State, for example section-township-range or planning district number. Alternatively, OTHER DATA can be used to provide a cross-reference capability to other State or Federal information files.

Data Element Name : LATITUDE

Coding Reference

Short name : WU0004
Category : Water User
Input type : A3
Input position: 11
Length : 6 digits
Prompt : LATITUDE

Editing Criteria

Range - 000000 - 900000
Non mandatory
Automatic right justification

Definition

LATITUDE contains the latitudinal location of the facility expressed in degrees, minutes, and seconds.

Data Element Name : LONGITUDE

Coding Reference

Short name : WU0005
Category : Water User
Input type : A3
Input position: 17
Length : 7 digits
Prompt : LONGITUDE

Editing Criteria

Range - 0000000 - 1800000
Non mandatory
Automatic right justification

Definition

LONGITUDE contains the longitudinal location of the facility expressed in degrees, minutes, and seconds.

Data Element Name : HYDROLOGIC UNIT

Coding Reference

Short name : WU0006
Category : Water User
Input type : A3
Input position: 24
Length : 8 digits
Prompt : HYDROLOGIC UNIT

Editing Criteria

Numeric

Mandatory - This item must be specified to permit aggregation into the AWUDS system.

No automatic justification

Definition

HYDROLOGIC UNIT contains an 8-digit code identifying the facility's location with reference to the areal breakdowns shown on State hydrologic unit maps. The format is (RRSSAACC) where:

RR is the 2-digit code for the Water Resources Council (WRC) Region.

SS is the 2-digit code for the WRC subregion.

AA is the 2-digit code for the National Water Data Network Accounting Unit.

CC is the 2-digit code for the cataloging unit of the catalog of information on water data maintained by the Office of Water Data Coordination (OWDC).

Hydrologic unit codes are given in the U.S. Geological Survey Map Series "State Basic Hydrologic Unit Maps." The series provides a uniform, nationally consistent set of maps showing drainage, culture, hydrographs, and hydrologic boundaries.

Data Element Name : STREET ADDRESS

Coding Reference

Short name : WU0007
Category : Water User
Input type : A3
Input position: 32
Length : 20 characters
Prompt : LOCATION

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

STREET ADDRESS contains the street address of the physical location of the water-using facility. This is the address to which a visitor to the facility would go. It may or may not be the same as the mailing address. If there is no street address, this data element would contain the name of the nearest access highway.

Data Element Name : CITY NAME

Coding Reference

Short name : WU0008
Category : Water User
Input type : A3
Input position: 52
Length : 15 characters
Prompt : CITY NAME

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

CITY NAME is the name of the city in which the water-using facility is physically located. If it is not located in a city, this data element is not used.

Data Element Name : CITY CODE

Coding Reference

Short name : WU0009
Category : Water User
Input type : A3
Input position: 67
Length : 5 digits
Prompt : CITY CODE

Editing Criteria

Integer
Non mandatory
No automatic justification

Definition

CITY CODE contains a 5-digit numeric code of the city in which the facility is physically located. This is the same city named in the data element CITY NAME. City codes are listed in FIPS publication 55, "Codes for named populated places and related entities of the States of the United States," dated June 1978 and published by the U.S. Department of Commerce.

Data Element Name : COUNTY

Coding Reference

Short name : WU0011
Category : Water User
Input type : A3
Input position: 72
Length : 3 digits
Prompt : COUNTY

Editing Criteria

Numeric

Mandatory - This item must be specified to permit aggregation into the AWUDS system.

No automatic justification

Definition

COUNTY contains the 3-digit FIPS numeric code of the county in which the water-using facility is physically located. In the case of Virginia, this field identifies counties and independent cities. This data element is not valid if the facility is located outside the United States.

Data Element Name : STATE

Coding Reference

Short name : WU0010
Category : Water User
Input type : A3
Input position: 75
Length : 2 digits
Prompt : STATE

Editing Criteria

Numeric
Mandatory - This item must be specified to permit aggregation into the AWUDS system.
No automatic justification

Definition

STATE contains the 2-digit FIPS numeric code of the State in which the facility is physically located. It is not valid if the facility is outside the United States.

Data Element Name : MAILING STREET

Coding Reference

Short name : WU0012
Category : Water User
Input type : A4
Input position: 11
Length : 25 characters
Prompt : MAILING STREET

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

MAILING STREET contains the street address or post office box number of the water-using facility. This is the address that should be used on correspondence mailed to the facility.

Data Element Name : MAILING CITY

Coding Reference

Short name : WU0013
Category : Water User
Input type : A4
Input position: 36
Length : 15 characters
Prompt : MAILING CITY

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

MAILING CITY contains the name of the city that accompanies the address in data element mailing address on correspondence mailed to the facility.

Data Element Name : MAILING STATE

Coding Reference

Short name : WU0014
Category : Water User
Input type : A4
Input position: 51
Length : 2 characters
Prompt : MAILING STATE

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

MAILING STATE contains a 2-character postal code indicating the State in which the city in data element MAILING CITY is located. It is not valid if the facility's mailing address is outside the United States.

Data Element Name : MAILING ZIP

Coding Reference

Short name : WU0015
Category : Water User
Input type : A4
Input position: 53
Length : 9 digits
Prompt : MAILING ZIP

Editing Criteria

Integer
Non mandatory
Automatic left justification

Definition

MAILING ZIP contains a 9-digit postal zip code appropriate for the mailing address of the facility. It is not valid if the facility is located outside the United States.

6.3 "B" RECORD INPUT -- MEASUREMENT POINTS

"B" records are used to input information about a user's sources/destination of withdrawal/releases, called measuring points, into the data base. Input positions 1-10 are similar to other input record types. "B" records contain information to link the measuring point to the proper user. Information coded on "B" records include location of the measuring point, aquifer, hydrologic unit and action code. The action code permits the system to properly account for flows indicated for the particular nature and do not need re-entering except when changes are to be made to information already existing in the file or a user establishes additional measuring points.

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Measurement Point
Input type : B0, B1, B2, B3
Input position: 01
Length : 2 characters
Prompt : INPUT CODE

Editing Criteria

Values - B1, B2, B3
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given record input. These preassigned codes are printed on each coding form.

CODES

B0 - Measurement-point data B0 input record
B1 - Measurement-point data B1 input record
B2 - Measurement-point data B2 input record
B3 - Measurement-point data B3 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : N/A
Input type : B0, B1, B2, B3
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the input record contains input values.

Data Element Name : IDENTIFIER

Coding Reference

Short name : WU0001
Category : Measurement Point
Input type : B0, B1, B2, B3
Input position: 04
Length : 7 digits
Prompt : WATER USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

SSWUDS identifier uniquely identifies every water-using installation in the data base. The existence of this identifier allows the SSWUDS data base user to locate any individual installation.

The value for this data element will be permanently assigned by the data-base administrator when the water user is first entered in the data base.

The data-base administrator must determine how to assign these numbers.

Data Element Name : ACTION CODE

Coding Reference

Short name : CD0003
Category : Measurement Point
Input type : B0, B1, B2, B3
Input position: 11
Length : 2 characters
Prompt : ACTION

Editing Criteria

Values - WD, RT, DL, RL, WL, RE
Mandatory
No automatic justification

Definition

ACTION CODE indicates the type of action being conducted at the indicated measurement point.

CODES

WD - Withdrawal
RT - Return
DL - Delivery
RL - Release
WL - Withdrawal/Delivery
RE - Release/Return

Data Element Name : SOURCE/DESTINATION TYPE

Coding Reference

Short name : MP0009
Category : Measurement Point
Input type : B0, B1, B2, B3
Input position: 13
Length : 2 characters
Prompt : TYPE

Editing Criteria

Values - GW, SW, TW
Mandatory
No automatic justification

Definition

TYPE contains a 2-character alphabetic code indicating the type of water body from which water is withdrawn or to which water is returned by the facility at the measurement point.

CODES

GW - Ground water
SW - Surface water
TW - Transferred water

Data Element Name : SOURCE/DESTINATION IDENTIFIER

Coding Reference

Short name : CD0004
Category : Measurement Point
Input type : B0, B1, B2, B3
Input position: 15
Length : 15 characters
Prompt : S/D ID

Editing Criteria

Alphanumeric
Mandatory
Automatic right justification

Definition

SOURCE/DESTINATION IDENTIFIER denotes a site from which water was withdrawn or returned--a measurement point. A water user may own multiple measurement points and have many source/destination identifiers associated with it. The source/destination identifier should correspond to a valid NWIS site, as defined in the NWIS Site File, if it represents a well or a point on a stream. For transferred water, this element contains the water-user identifier of the facility from which water was released or to which it was delivered when water was transferred between two water-user facilities.

Data Element Name : PRINCIPAL AQUIFER

Coding Reference

Short name : MP0008
Category : Measurement Point
Input type : B1
Input position: 30
Length : 8 characters
Prompt : AQUIFER

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

PRINCIPAL AQUIFER contains the geologic unit code for the principal aquifer from which water is withdrawn or into which water is returned. An aquifer is a formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs. For withdrawals, if a well taps more than one aquifer, the principal aquifer is the one that yields the greatest percentage of water. For returns, the principal aquifer is the one that receives the greatest percentage of water. If the withdrawal/return is a surface-water body, this data element is null. Geologic unit codes can be found in the "Catalog of Aquifer Names and Geologic Unit Codes Used by the Water Resources Division", a publication of the U.S. Geological Survey.

Data Element Name : RECLAIMED WASTE WATER

Coding Reference

Short name : MP0011
Category : Measurement Point
Input type : B1
Input position: 38
Length : 1 character
Prompt : RECLAIMED WASTE

Editing Criteria

Values - Y, N
Non mandatory
No automatic justification

Definition

RECLAIMED WASTE WATER indicates whether or not the water at this measurement point is classified as reclaimed waste water.

CODES

Y - The water is classified as reclaimed waste water.
N - The water is not classified as reclaimed waste water.

Data Element Name : SUBTYPE

Coding Reference

Short name : MP0010
Category : Measurement Point
Input type : B1
Input position: 39
Length : 2 characters
Prompt : SUBTYPE

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

SUBTYPE contains a State-assigned code indicating the type of water body from which water is withdrawn or to which water is returned. The codes should be more specific than MEASUREMENT POINT TYPE, for example:

CODES

LK - Lake
SP - Spring
PD - Pond

Data Element Name : PERMIT NUMBER

Coding Reference

Short name : MP0013
Category : Measurement Point
Input type : B1
Input position: 41
Length : 9 characters
Prompt : PERMIT NO.

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

PERMIT NUMBER contains any permit number which was assigned to the withdrawal or return point by any agency. The specific usage of this data element may be determined at the State level. The purpose of this element is to provide a cross-reference capability to other State or Federal information files. For permits which apply to the entire facility, see PERMIT NUMBER in the facility file.

Data Element Name : AGENCY CODE

Coding Reference

Short name : MP0014
Category : Measurement Point
Input type : B1
Input position: 50
Length : 5 characters
Prompt : AGENCY CODE

Editing Criteria

Alphanumeric
Mandatory
Automatic left justification

Definition

AGENCY CODE contains the 5-character NAWDEX code, which identifies the agency that supplied the measurement-point information and is used with the source/destination identifier for NWIS site-identifier validation. Valid State and Federal agency codes are located in the file WATSTORE>SUPPORT>EDIT.TABLES>SAGCNY.EDI.

Data Element Name : WATER QUALITY ORGANIZATION

Coding Reference

Short name : MP0012
Category : Measurement Point
Input type : B1
Input position: 55
Length : 5 characters
Prompt : QUALITY ORG.

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

WATER QUALITY ORGANIZATION contains a 5-character NAWDEX code representing the organization that will make available data on water quality at or near a point of withdrawal. A list of valid agency codes is published and maintained by the National Water Data Exchange (NAWDEX).

Data Element Name : DESCRIPTION

Coding Reference

Short name : MP0002
Category : Measurement Point
Input type : B2
Input position: 30
Length : 15 characters
Prompt : DESCRIPTION

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

DESCRIPTION contains a free-form description of the location of the measurement point. It need not contain the facility name, since that datum is available elsewhere. If the measurement point is associated with the natural source, that name can be included.

Example: outfall pipe #2
 settling pond

Data Element Name : OTHER DATA

Coding Reference

Short name : MP0015
Category : Measurement Point
Input type : B2
Input position: 45
Length : 30 characters
Prompt : OTHER DATA

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

OTHER DATA provides a free-form comment area for data about a particular measurement point. This data item may be optionally used to contain data needed by an individual State, for example, section-township-range or planning district number. Alternatively, OTHER DATA can be used to provide a cross-reference capability to other State or Federal information files.

Data Element Name : LATITUDE

Coding Reference

Short name : MP0005
Category : Measurement Point
Input type : B3
Input position: 30
Length : 6 digits
Prompt : LATITUDE

Editing Criteria

Range - 000000 - 900000
Non mandatory
Automatic right justification

Definition

LATITUDE contains the latitudinal location of the measurement point expressed in degrees, minutes, and seconds.

Data Element Name : LONGITUDE

Coding Reference

Short name : MP0006
Category : Measurement Point
Input type : B3
Input position: 36
Length : 7 digits
Prompt : LONGITUDE

Editing Criteria

Range - 0000000 - 1800000
Non mandatory
Automatic right justification

Definition

LONGITUDE contains the longitudinal location of the point of water withdrawal or return expressed in degrees, minutes, and seconds.

Data Element Name : HYDROLOGIC UNIT

Coding Reference

Short name : MP0007
Category : Measurement Point
Input type : B3
Input position: 43
Length : 8 digits
Prompt : HYDROLOGIC UNIT

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

HYDROLOGIC UNIT contains an 8-digit code identifying the location of the measurement point with reference to the areal breakdowns shown on State hydrologic unit maps. The format is (RRSSAACC) where:

RR is the 2-digit code for the Water Resources Council (WRC) Region.
SS is the 2-digit code for the WRC subregion.
AA is the 2-digit code for the National Water Data Network Accounting Unit.
CC is the 2-digit code for the cataloging unit of the catalog of information on water data maintained by the Office of Water Data Coordination (OWDC).

Hydrologic unit codes are given in the U.S. Geological Survey Map Series "State Basic Hydrologic Unit Maps." The series provides a uniform, nationally consistent set of maps showing drainage, culture, hydrographs, and hydrologic boundaries.

Data Element Name : STATE

Coding Reference

Short name : MP0003
Category : Measurement Point
Input type : B3
Input position: 51
Length : 2 digits
Prompt : STATE

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

STATE contains the 2-digit FIPS numeric code of the State in which the measurement point is physically located. It is not valid if the point of withdrawal or return is located outside the United States.

Data Element Name : COUNTY

Coding Reference

Short name : MP0004
Category : Measurement Point
Input type : B3
Input position: 53
Length : 3 digits
Prompt : COUNTY

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

COUNTY contains the 3-digit FIPS numeric code of the county in which the measurement is physically located. In the case of Virginia, this field identifies counties and independent cities. This data element is not valid if the measurement point is located outside the United States.

Data Element Name : AGGREGATE FLAG

Coding Reference

Short name : CD0012
Category : Measurement Point
Input type : B0
Input position: 30
Length : 1 character
Prompt : AGGREGATE FLAG

Editing Criteria

Values - A or blank
Nonmandatory
No automatic justification

Definition

The AGGREGATE FLAG indicates whether or not the measurement-point is site-specific or aggregate.

CODES

A - The measurement point is aggregate.
Blank field - The measurement point is site-specific.

Data Element Name : ALIAS IDENTIFIER

Coding Reference

Short name : CD0013
Category : Measurement Point
Input type : B0
Input position: 31
Length : 15 characters
Prompt : ALIAS ID

Editing Criteria

Alphanumeric
Nonmandatory
No automatic justification

Definition

The ALIAS IDENTIFIER denotes an alternate to the standard source/destination identifier. The only difference between the two identifiers is that the source/destination identifier must correspond to a valid NWIS site, as defined in the NWIS Site File. The alias identifier does not have to be standard NWIS site-identifier format. For example, the alias identifier may be an identifier designated by a cooperating agency. Once an alias identifier exists for a standard measurement point, the user can access the data using either the source/destination identifier or the alias identifier.

6.4 "C" RECORD INPUT -- ANNUAL MEASUREMENTS

"C" records are used to input annual and/or monthly flow data for measuring points into the data base. The measuring points have been identified to the system information coded on "B" records. Input positions 1-10 are typical of other type records. (See "A" record, Section 6.2.) "C" records contain information about the measured values such as measuring method, accuracy, salinity, etc. The annual amount is contained on records C3-C6. Measurement data input on "C" records must be entered into the data base as it becomes available, possibly on a yearly basis. Details about coding are contained in the following pages of this section.

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 01
Length : 2 characters
Prompt : INPUT CODE

Editing Criteria

Values - C1, C2, C3, C4, C5, C6
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given input record. These preassigned codes are printed on each coding form.

CODES

C1 - Annual-measurement data C1 input record
C2 - Annual-measurement data C2 input record
C3 - Annual-measurement data C3 input record
C4 - Annual-measurement data C4 input record
C5 - Annual-measurement data C5 input record
C6 - Annual-measurement data C5 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the input record contains input values.

Data Element Name : IDENTIFIER

Coding Reference

Short name : WU0001
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 04
Length : 7 digits
Prompt : WATER USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

SSWUDS identifier uniquely identifies every water-using installation in the data base. The existence of this identifier allows the SSWUDS data base user to locate any individual installation.

The value for this data element will be permanently assigned by the data-base administrator when the water user is first entered in the data base.

The data-base administrator must determine how to assign these numbers.

Data Element Name : ACTION CODE

Coding Reference

Short name : CD0003
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 11
Length : 2 characters
Prompt : ACTION

Editing Criteria

Values - WD, RT, DL, RL, WL, RE
Mandatory
No automatic justification

Definition

ACTION CODE indicates the type of action being conducted at the indicated measurement point.

CODES

WD - Withdrawal
RT - Return
DL - Delivery
RL - Release
WL - Withdrawal/Delivery
RE - Release/Return

Data Element Name : SOURCE/DESTINATION TYPE

Coding Reference

Short name : MP0009
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 13
Length : 2 characters
Prompt : TYPE

Editing Criteria

Values - GW, SW, TW
Mandatory
No automatic justification

Definition

TYPE contains a 2-character alphabetic code indicating the type of water body from which water is withdrawn or to which water is returned by the facility at the measurement point.

CODES

GW - Ground water
SW - Surface water
TW - Transferred water

Data Element Name : SOURCE/DESTINATION IDENTIFIER

Coding Reference

Short name : CD0004
Category : Annual Measurement
Input type : C1, C2, C3, C4, C5, C6
Input position: 15
Length : 15 characters
Prompt : S/D ID

Editing Criteria

Alphanumeric
Mandatory
Automatic right justification

Definition

SOURCE/DESTINATION IDENTIFIER identifies the location from which water was withdrawn or returned. It is also used to associate specific users with measurement points. For streams, wells, etc., this data element will contain the GWSI identifier or other identifier, as appropriate. For transferred water, this element contains the water-user identifier of facility from which water was released or from which water was delivered when water was transferred between two water-user facilities.

Data Element Name : YEAR

Coding Reference

Short name : CD0007
Category : Annual Measurements
Input type : C1, C2, C3, C4, C5, C6
Input position: 30
Length : 2 characters
Prompt : YEAR

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

YEAR contains the last 2 digits of the calendar year for which the annual measurements are being reported. SSWUDS allows any group of continuous or discontinuous 50 years to be identified.

Data Element Name : ANNUAL AMOUNT

Coding Reference

Short name : AM0002
Category : Annual Measurements
Input type : C1
Input position: 32
Length : 10 digits
Prompt : ANNUAL AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

ANNUAL AMOUNT is the average annual rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : MEASURING METHOD

Coding Reference

Short name : AM0015
Category : Annual Measurements
Input type : C1
Input position: 42
Length : 1 character
Prompt : MEASURING METHOD

Editing Criteria

Values - C, M, E
Non mandatory
No automatic justification

Definition

MEASURING METHOD contains a 1-character alphabetic code indicating the method used by the facility to measure the total quantity of water reported for the year.

CODES

- C (Calculated) - The total was not measured directly but was computed using other factors related to water usage.
- E (Estimated) - The total was neither measured directly nor computed. It was derived through judgment based on prior patterns of water use or other related factors.
- M (Metered) - The total was measured using an electronic or mechanical device designed expressly for such a purpose.

Data Element Name : MEASURING ENTITY

Coding Reference

Short name : AM0016
Category : Annual Measurements
Input type : C1
Input position: 43
Length : 5 characters
Prompt : MEASURING ENT.

Editing Criteria

Alphanumeric
Non mandatory
Automatic left justification

Definition

ENTITY contains a State-assigned code which identifies the person or organization who measured the facility's water usage estimates.

Data Element Name : ACCURACY

Coding Reference

Short name : AM0017
Category : Annual Measurements
Input type : C1
Input position: 48
Length : 1 character
Prompt : ACCURACY

Editing Criteria

Values - E, G, F, P
Non mandatory
No automatic justification

Definition

ACCURACY contains a 1-character alphabetic code indicating the accuracy of the method used by the facility to measure the total amount of water.

CODES

E (Excellent) - The figure is accurate to within 5% of the actual value.
G (Good) - The figure is accurate to within 10% of the actual value.
F (Fair) - The figure is accurate within a range of 10% to 20% of the actual value.
P (Poor) - The figure contains more than a 25% error.

Data Element Name : RESTRICTIONS

Coding Reference

Short name : AM0018
Category : Annual Measurements
Input type : C1
Input position: 49
Length : 1 character
Prompt : RESTRICTIONS

Editing Criteria

Values - Y, N
Non mandatory
No automatic justification

Definition

RESTRICTIONS indicate whether restrictions, due to exceptional conditions, were placed on the amount of water that could be delivered or released by the water-using facility at any time during the calendar year. This includes restrictions placed on the use of water in a political subdivision during periods of drought or water shortage (i.e., lawn watering, etc.).

CODES

N - No restrictions were in effect at the time during the year.
Y - Restrictions were in effect at some time during the year.

Data Element Name : SALINITY

Coding Reference

Short name : AM0019
Category : Annual Measurements
Input type : C1
Input position: 50
Length : 1 character
Prompt : SALINITY

Editing Criteria

Values - F, S, U
Non mandatory
No automatic justification

Definition

SALINITY contains a 1-character code describing the salinity of the water at the measurement point on a yearly basis.

CODES

F (Fresh) - Water with 1,000 milligrams or less of dissolved solids per liter.
S (Saline) - Water with more than 1,000 milligrams of dissolved solids per liter, irrespective of the nature of the minerals present.
U (Unknown Quality) - Water in which it is not known whether the number of milligrams of dissolved solids are greater than or less than 1,000.

Data Element Name : TREATMENT TYPE

Coding Reference

Short name : AM0020
Category : Annual Measurements
Input type : C1
Input position: 51
Length : 1 character
Prompt : TREATMENT TYPE

Editing Criteria

Alphabetic
Non mandatory
No automatic justification

Definition

TREATMENT TYPE contains a 1-character code describing the type of treatment that is applied to water prior to its withdrawal or return in order to improve the quality of the water.

CODES

1. Waste Water

- P (Primary) - The removal of settleable solids, a physical procedure which can be done with screens and gravitational settling.
- S (Secondary) - The reduction of biochemical oxygen demand through biological digestion (including dissolved organic substances) to yield stabilized sewage (effluent).
- T (Tertiary) - The removal of organic and inorganic compounds not removed in primary or secondary treatment by a number of different processes.
- N (None) - No treatment was applied.

2. Fresh and Saline

The fresh and saline water treatment codes will be determined on a State by State basis.

Data Element Name : OTHER DATA

Coding Reference

Short name : AM0021
Category : Annual Measurements
Input type : C2
Input position: 32
Length : 30 characters
Prompt : OTHER DATA

Editing Criteria

Alphanumeric
Non mandatory
No automatic justification

Definition

OTHER DATA provides a free-form comment area for data about a particular annual measurement. This data item may be optionally used to contain data needed by an individual State on a yearly basis, for example, measurement of chemical constituents. Alternatively, OTHER DATA can be used to provide a cross-reference capability to other State or Federal information files.

Data Element Name : JANUARY AMOUNT

Coding Reference

Short name : AM0003
Category : Annual Measurements
Input type : C3
Input position: 32
Length : 10 digits
Prompt : JANUARY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JANUARY AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for January of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : FEBRUARY AMOUNT

Coding Reference

Short name : AM0004
Category : Annual Measurements
Input type : C3
Input position: 42
Length : 10 digits
Prompt : FEBRUARY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

FEBRUARY AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for February of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : MARCH AMOUNT

Coding Reference

Short name : AM0005
Category : Annual Measurements
Input type : C3
Input position: 52
Length : 10 digits
Prompt : MARCH AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MARCH AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for March of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : APRIL AMOUNT

Coding Reference

Short name : AM0006
Category : Annual Measurements
Input type : C4
Input position: 32
Length : 10 digits
Prompt : APRIL AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

APRIL AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for April of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : MAY AMOUNT

Coding Reference

Short name : AM0007
Category : Annual Measurements
Input type : C4
Input position: 42
Length : 10 digits
Prompt : MAY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MAY AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for May of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : JUNE AMOUNT

Coding Reference

Short name : AM0008
Category : Annual Measurements
Input type : C4
Input positions : 52
Length : 10 digits
Prompt : JUNE AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JUNE AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for June of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : JULY AMOUNT

Coding Reference

Short name : AM0009
Category : Annual Measurements
Input type : C5
Input position: 32
Length : 10 digits
Prompt : JULY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JULY AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for July of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : AUGUST AMOUNT

Coding Reference

Short name : AM0010
Category : Annual Measurements
Input type : C5
Input position: 45
Length : 10 digits
Prompt : AUGUST AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

AUGUST AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for August of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : SEPTEMBER AMOUNT

Coding Reference

Short name : AM0011
Category : Annual Measurements
Input type : C5
Input position: 52
Length : 10 digits
Prompt : SEPT. AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

SEPTEMBER AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for September of the year indicated in input positions 30-31. For withdrawal measurement points, the item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : OCTOBER AMOUNT

Coding Reference

Short name : AM0012
Category : Annual Measurements
Input type : C6
Input position: 32
Length : 10 digits
Prompt : OCTOBER AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

OCTOBER AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for October of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : NOVEMBER AMOUNT

Coding Reference

Short name : AM0013
Category : Annual Measurements
Input type : C6
Input position: 42
Length : 10 digits
Prompt : NOV. AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

NOVEMBER AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for November of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

Data Element Name : DECEMBER AMOUNT

Coding Reference

Short name : AM0014
Category : Annual Measurements
Input type : C6
Input position: 52
Length : 10 digits
Prompt : DEC. AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

DECEMBER AMOUNT is the average monthly rate of water flowing past the point identified by the corresponding entry in the MEASUREMENT POINT file for December of the year indicated in input positions 30-31. For withdrawal measurement points, this item contains the average rate of withdrawal. For return measurement points, it contains the average rate of return. The units of measurement for this data element are determined at the State level.

6.5 "D" RECORD INPUT -- IRRIGATION

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Extended Data
Input type : D1, D2, D3
Input position: 01
Length : 02
Prompt : INPUT CODE

Editing Criteria

Values - D1, D2, D3
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given record input. These preassigned codes are printed on each coding form.

CODES

D1 - Extended data, irrigation overlay, D1 input record
D2 - Extended data, irrigation overlay, D2 input record
D3 - Extended data, irrigation overlay, D3 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Extended Data
Input type : D1, D2, D3
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the record contains input values.

Data Element Name : IRRIGATION IDENTIFIER

Coding Reference

Short name : ED0001
Category : Extended Data
Input type : D1, D2, D3
Input position: 04
Length : 7 digits
Prompt : USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

The irrigation identifier is synonymous to the water-user identifier. Refer to Water User Identifier (WU0001), p. 6-14.

The data-base administrator must determine how to assign these numbers based upon the computer being used.

Data Element Name : YEAR

Coding Reference

Short name : ED0002
Category : Extended Data
Input type : D1, D2, D3
Input position: 11
Length : 2 digits
Prompt : YEAR

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

YEAR contains the last 2 digits of the calendar year in which the irrigation data were collected.

Data Element Name : CROP TYPE

Coding Reference

Short name : ED0003
Category : Extended Data
Input type : D1, D2, D3
Input position: 13
Length : 6 digits
Prompt : SIC CODE

Editing Criteria

Integer
Mandatory
Automatic left justification

Definition

CROP TYPE contains the standard industrial classification of the land use type reported by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987).

Data Element Name : ACRES IRRIGATED

Coding Reference

Short name : EDIR01
Category : Extended Data
Input type : D1
Input position: 19
Length : 6 digits
Prompt : ACRES

Editing Criteria

Real number
Non mandatory
Automatic right justification

Definition

ACRES IRRIGATED is the total number of acres of the crop indicated in the data element CROP TYPE that were irrigated during the year.

Data Element Name : ANNUAL PRODUCTION

Coding Reference

Short name : EDIN01
Category : Extended Data
Input type : D1
Input position: 25
Length : 8 digits
Prompt : ANNUAL PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

ANNUAL PRODUCTION AMOUNT contains the amount of the crop (identified by the element CROP TYPE) that was produced by facility during the indicated year.

Data Element Name : ANNUAL AMOUNT APPLIED

Coding Reference

Short name : EDIR02
Category : Extended Data
Input type : D1
Input position: 33
Length : 8 digits
Prompt : ANNUAL AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

ANNUAL AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the calendar year. The units of measurement for this data element will be determined at the State level.

Data Element Name : JANUARY AMOUNT APPLIED

Coding Reference

Short name : EDIR03
Category : Extended Data
Input type : D2
Input position: 19
Length : 8 digits
Prompt : JANUARY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JANUARY AMOUNT APPLIED is the average monthly rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of January. The units of measurement for this data element will be determined at the State level.

Data Element Name : FEBRUARY AMOUNT APPLIED

Coding Reference

Short name : EDIR04
Category : Extended Data
Input type : D2
Input position: 27
Length : 8 digits
Prompt : FEBRUARY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

FEBRUARY AMOUNT APPLIED is the average monthly rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of February. The units of measurement for this data element will be determined at the State level.

Data Element Name : MARCH AMOUNT APPLIED

Coding Reference

Short name : EDIR05
Category : Extended Data
Input type : D2
Input position: 35
Length : 8 digits
Prompt : MARCH AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MARCH AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of March. The units of measurement for this data element will be determined at the State level.

Data Element Name : APRIL AMOUNT APPLIED

Coding Reference

Short name : EDIR06
Category : Extended Data
Input type : D2
Input position: 43
Length : 8 digits
Prompt : APRIL AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

APRIL AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of April. The units of measurement for this data element will be determined at the State level.

Data Element Name : MAY AMOUNT APPLIED

Coding Reference

Short name : EDIR07
Category : Extended Data
Input type : D2
Input position: 51
Length : 8 digits
Prompt : MAY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MAY AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of May. The units of measurement for this data element will be determined at the State level.

Data Element Name : JUNE AMOUNT APPLIED

Coding Reference

Short name : EDIR08
Category : Extended Data
Input type : D2
Input position: 59
Length : 8 digits
Prompt : JUNE AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JUNE AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of June. The units of measurement for this data element will be determined at the State level.

Data Element Name : JULY AMOUNT APPLIED

Coding Reference

Short name : EDIR09
Category : Extended Data
Input type : D3
Input position: 19
Length : 8 digits
Prompt : JULY AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JULY AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of July. The units of measurement for this data element will be determined at the State level.

Data Element Name : AUGUST AMOUNT APPLIED

Coding Reference

Short name : EDIR10
Category : Extended Data
Input type : D3
Input position: 27
Length : 8 digits
Prompt : AUGUST AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

AUGUST AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of August. The units of measurement for this data element will be determined at the State level.

Data Element Name : SEPTEMBER AMOUNT APPLIED

Coding Reference

Short name : EDIR11
Category : Extended Data
Input type : D3
Input position: 35
Length : 8 digits
Prompt : SEPT. AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

SEPTEMBER AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of September. The units of measurement for this data element will be determined at the State level.

Data Element Name : OCTOBER AMOUNT APPLIED

Coding Reference

Short name : EDIR12
Category : Extended Data
Input type : D3
Input position: 43
Length : 8 digits
Prompt : OCTOBER AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

OCTOBER AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of October. The units of measurement for this data element will be determined at the State level.

Data Element Name : NOVEMBER AMOUNT APPLIED

Coding Reference

Short name : EDIR13
Category : Extended Data
Input type : D3
Input position: 51
Length : 8 digits
Prompt : NOVEMBER AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

NOVEMBER AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of November. The units of measurement for this data element will be determined at the State level.

Data Element Name : DECEMBER AMOUNT APPLIED

Coding Reference

Short name : EDIR14
Category : Extended Data
Input type : D3
Input position: 59
Length : 8 digits
Prompt : DECEMBER AMOUNT

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

DECEMBER AMOUNT APPLIED is the average rate of water applied to the crop identified in the data element CROP TYPE irrigated during the month of December. The units of measurement for this data element will be determined at the State level.

6.6 "E" RECORD INPUT -- PUBLIC SUPPLIER/WASTE TREATMENT

Data Element Name : RECORD INPUT CODE

Coding Reference

Short name : CD0001
Category : Extended Data
Input type : E1
Input position: 01
Length : 02
Prompt : INPUT CODE

Editing Criteria

Values - E1
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given input record. These preassigned codes are printed on each coding form.

CODE

E1 - Extended data, public supplier/waste treatment
overlay, E1 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Extended Data
Input type : E1
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the input record contains input values.

Data Element Name : WATER USER IDENTIFIER

Coding Reference

Short name : ED0001
Category : Extended Data
Input type : E1
Input position: 04
Length : 7 digits
Prompt : USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

Refer to Water User Identifier (WU0001), p. 6-14. The database administrator must determine how to assign these numbers based upon the computer being used.

Data Element Name : YEAR

Coding Reference

Short name : ED0002
Category : Extended Data
Input type : E1
Input position: 11
Length : 2 digits
Prompt : YEAR

Editing Criteria

Numeric
Mandatory
No automatic justification

Definition

YEAR contains the last 2 digits of the calendar year in which the public supplier/waste treatment data were collected.

Data Element Name : SIC CODE

Coding Reference

Short name : ED0003
Category : Extended Data
Input type : E1
Input position: 13
Length : 6 digits
Prompt : SIC CODE

Editing Criteria

Integer
Mandatory
Automatic left justification

Definition

SIC CODE contains the standard industrial classification of the activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987).

Data Element Name : DOMESTIC POPULATION SERVED

Coding Reference

Short name : EDPS01
Category : Extended Data
Input type : E1
Input position: 19
Length : 7 digits
Prompt : DO. POPULATION

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

DOMESTIC POPULATION SERVED is the total number of people served by the public supplier during the calendar year.

Data Element Name : AGRICULTURAL CONNECTIONS SERVED

Coding Reference

Short name : EDPS02
Category : Extended Data
Input type : E1
Input position: 26
Length : 7 digits
Prompt : AG. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

AGRICULTURAL CONNECTIONS SERVED is the total number of agricultural metered connections served by the public supplier during the calendar year.

Data Element Name : COMMERCIAL CONNECTIONS SERVED

Coding Reference

Short name : EDPS03
Category : Extended Data
Input type : E1
Input position: 33
Length : 7 digits
Prompt : CO. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

COMMERCIAL CONNECTIONS SERVED is the total number of commercial metered connections served by the public supplier during the calendar year.

Data Element Name : DOMESTIC CONNECTIONS SERVED

Coding Reference

Short name : EDPS04
Category : Extended Data
Input type : E1
Input position: 40
Length : 7 digits
Prompt : DO. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

DOMESTIC CONNECTIONS SERVED is the total number of domestic metered connections served by the public supplier during the calendar year.

Data Element Name : INDUSTRIAL CONNECTIONS SERVED

Coding Reference

Short name : EDPS05
Category : Extended Data
Input type : E1
Input position: 47
Length : 7 digits
Prompt : IN. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

INDUSTRIAL CONNECTIONS SERVED is the total number of industrial metered connections served by the public supplier during the calendar year.

Data Element Name : IRRIGATION CONNECTIONS SERVED

Coding Reference

Short name : EDPS06
Category : Extended Data
Input type : E1
Input position: 54
Length : 7 digits
Prompt : IR. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

IRRIGATION CONNECTIONS SERVED is the total number of irrigation metered connections served by the public supplier during the calendar year.

Data Element Name : POWER CONNECTIONS SERVED

Coding Reference

Short name : EDPS07
Category : Extended Data
Input type : E1
Input position: 61
Length : 7 digits
Prompt : PO. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

POWER CONNECTIONS SERVED is the total number of power metered connections served by the public supplier during the calendar year.

Data Element Name : MINING CONNECTIONS SERVED

Coding Reference

Short name : EDPS08
Category : Extended Data
Input type : E1
Input position: 68
Length : 7 digits
Prompt : MI. CONNECTIONS

Editing Criteria

Integer
Non mandatory
Automatic right justification

Definition

MINING CONNECTIONS SERVED is the total number of mining metered connections served by the public supplier during the calendar year.

6.7 "F" RECORD INPUT -- POWER

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Extended Data
Input type : F1, F2, F3
Input position: 01
Length : 02
Prompt : INPUT CODE

Editing Criteria

Values - F1, F2, F3
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given input record. These preassigned codes are printed on each coding form.

CODES

F1 - Extended data, power overlay, F1 input record
F2 - Extended data, power overlay, F2 input record
F3 - Extended data, power overlay, F3 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Extended Data
Input type : F1, F2, F3
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the input record contains input values.

Data Element Name : WATER USER IDENTIFIER

Coding Reference

Short name : ED0001
Category : Extended Data
Input type : F1, F2, F3
Input position: 04
Length : 7 digits
Prompt : WATER USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

Refer to Water User Identifier (WU0001), p. 6-14. The database administrator must determine how to assign these numbers based upon the computer being used.

Data Element Name : YEAR

Coding Reference

Short name : ED0002
Category : Extended Data
Input type : F1, F2, F3
Input position: 11
Length : 2 digits
Prompt : YEAR

Editing Criteria

Numeric
Mandatory
No justification

Definition

YEAR contains the calendar year in which the power data were collected.

Data Element Name : SIC CODE

Coding Reference

Short name : ED0003
Category : Extended Data
Input type : F1, F2, F3
Input position: 13
Length : 6 digits
Prompt : SIC CODE

Editing Criteria

Integer
Non mandatory
Automatic left justification

Definition

SIC CODE contains the standard industrial classification of the activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987).

Data Element Name : GENERATING CAPACITY

Coding Reference

Short name : EDPW01
Category : Extended Data
Input type : F1
Input position: 19
Length : 8 digits
Prompt : GENERATING CAP.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

GENERATING CAPACITY is the maximum rate of power that the facility is capable of producing. The units of measure for this data element are determined at the State level.

Data Element Name : ANNUAL POWER PRODUCED

Coding Reference

Short name : EDPW02
Category : Extended Data
Input type : F1
Input position: 27
Length : 8 digits
Prompt : ANNUAL POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

ANNUAL POWER PRODUCED is the total power that the facility generated during the calendar year. The units of measure for this data element are determined at the State level.

Data Element Name : JANUARY POWER PRODUCED

Coding Reference

Short name : EDPW03
Category : Extended Data
Input type : F2
Input position: 19
Length : 8 digits
Prompt : JANUARY POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JANUARY POWER PRODUCED is the total power that the facility generated during January. The units of measure for this data are determined at the State level.

Data Element Name : FEBRUARY POWER PRODUCED

Coding Reference

Short name : EDPW04
Category : Extended Data
Input type : F2
Input position: 27
Length : 8 digits
Prompt : FEBRUARY POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

FEBRUARY POWER PRODUCED is the total power that the facility generated during February. The units of measure for this data are determined at the State level.

Data Element Name : MARCH POWER PRODUCED

Coding Reference

Short name : EDPW05
Category : Extended Data
Input type : F2
Input position: 35
Length : 8 digits
Prompt : MARCH POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MARCH POWER PRODUCED is the total power that the facility generated during March. The units of measure for this data are determined at the State level.

Data Element Name : APRIL POWER PRODUCED

Coding Reference

Short name : EDPW06
Category : Extended Data
Input type : F2
Input position: 43
Length : 8 digits
Prompt : APRIL POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

APRIL POWER PRODUCED is the total power that the facility generated during April. The units of measure for this data are determined at the State level.

Data Element Name : MAY POWER PRODUCED

Coding Reference

Short name : EDPW07
Category : Extended Data
Input type : F2
Input position: 51
Length : 8 digits
Prompt : MAY POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MAY POWER PRODUCED is the total power that the facility generated during May. The units of measure for this data are determined at the State level.

Data Element Name : JUNE POWER PRODUCED

Coding Reference

Short name : EDPW08
Category : Extended Data
Input type : F2
Input position: 59
Length : 8 digits
Prompt : JUNE POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JUNE POWER PRODUCED is the total power that the facility generated during June. The units of measure for this data are determined at the State level.

Data Element Name : JULY POWER PRODUCED

Coding Reference

Short name : EDPW09
Category : Extended Data
Input type : F3
Input position: 19
Length : 8 digits
Prompt : JULY POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JULY POWER PRODUCED is the total power that the facility generated during July. The units of measure for this data are determined at the State level.

Data Element Name : AUGUST POWER PRODUCED

Coding Reference

Short name : EDPW10
Category : Extended Data
Input type : F3
Input position: 27
Length : 8 digits
Prompt : AUGUST POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

AUGUST POWER PRODUCED is the total power that the facility generated during August. The units of measure for this data are determined at the State level.

Data Element Name : SEPTEMBER POWER PRODUCED

Coding Reference

Short name : EDPW11
Category : Extended Data
Input type : F3
Input position: 35
Length : 8 digits
Prompt : SEPTEMBER POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

SEPTEMBER POWER PRODUCED is the total power that the facility generated during September. The units of measure for this data element are determined at the State level.

Data Element Name : OCTOBER POWER PRODUCED

Coding Reference

Short name : EDPW12
Category : Extended Data
Input type : F3
Input position: 43
Length : 8 digits
Prompt : OCTOBER POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

OCTOBER POWER PRODUCED is the total power that the facility generated during October. The units of measure for this data are determined at the State level.

Data Element Name : NOVEMBER POWER PRODUCED

Coding Reference

Short name : EDPW13
Category : Extended Data
Input type : F3
Input position: 51
Length : 8 digits
Prompt : NOVEMBER POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

NOVEMBER POWER PRODUCED is the total power that the facility generated during November. The units of measure for this data are determined at the State level.

Data Element Name : DECEMBER POWER PRODUCED

Coding Reference

Short name : EDPW14
Category : Extended Data
Input type : F3
Input position: 59
Length : 8 digits
Prompt : DECEMBER POWER

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

DECEMBER POWER PRODUCED is the total power that the facility generated during December. The units of measure for this data are determined at the State level.

6.8 "G" RECORD INPUT -- PRODUCTION

Data Element Name : INPUT CODE

Coding Reference

Short name : CD0001
Category : Extended Data
Input type : G1, G2, G3
Input position: 01
Length : 02
Prompt : INPUT CODE

Editing Criteria

Values - G1, G2, G3
Mandatory
No automatic justification

Definition

INPUT CODE identifies the type of data being input to the system on a given input record. These preassigned codes are printed on each coding form.

CODES

G1 - Extended data, production overlay, G1 input record
G2 - Extended data, production overlay, G2 input record
G3 - Extended data, production overlay, G3 input record

Data Element Name : TRANSACTION CODE

Coding Reference

Short name : CD0002
Category : Extended Data
Input type : G1, G2, G3
Input position: 03
Length : 1 character
Prompt : TRANSACTION CODE

Editing Criteria

Values - A, M, D
Mandatory
No automatic justification

Definition

TRANSACTION CODE indicates what action should be taken with the values contained on the input record.

CODES

- A - The input values are to be added to the data base.
- M - The input values should be used to modify the data base. The value will replace an existing value.
- D - The entire data record will be deleted. This code is invalid if the input record contains input values.

Data Element Name : WATER-USER IDENTIFIER

Coding Reference

Short name : ED0001
Category : Extended Data
Input type : G1, G2, G3
Input position: 04
Length : 7 digits
Prompt : USER ID

Editing Criteria

Integer
Mandatory
Automatic right justification

Definition

Refer to Water User Identifier (WU0001), p. 6-14. The database administrator must determine how to assign these numbers based upon the computer being used.

Data Element Name : YEAR

Coding Reference

Short name : ED0002
Category : Extended Data
Input type : G1, G2, G3
Input position: 11
Length : 2 digits
Prompt : YEAR

Editing Criteria

Numeric
Mandatory
No justification

Definition

YEAR contains the last 2 digits of the calendar year in which the production data were collected.

Data Element Name : SIC CODE

Coding Reference

Short name : ED0003
Category : Extended Data
Input type : G1, G2, G3
Input position: 13
Length : 6 digits
Prompt : SIC CODE

Editing Criteria

Integer
Mandatory
Automatic left justification

Definition

SIC CODE contains the standard industrial classification of the activity engaged in by the facility. SIC codes can be found in the Standard Industrial Classification Manual, (Office of Management and Budget, 1987).

Data Element Name : ANNUAL PRODUCTION

Coding Reference

Short name : EDIN01
Category : Extended Data
Input type : G1
Input position: 19
Length : 8 digits
Prompt : ANNUAL PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

ANNUAL PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during the indicated year.

Data Element Name : JANUARY PRODUCTION

Coding Reference

Short name : EDIN02
Category : Extended Data
Input type : G2
Input position: 19
Length : 8 digits
Prompt : JANUARY PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JANUARY PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during January of the indicated year.

Data Element Name : FEBRUARY PRODUCTION

Coding Reference

Short name : EDIN03
Category : Extended Data
Input type : G2
Input position: 27
Length : 8 digits
Prompt : FEBRUARY PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

FEBRUARY PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during February of the indicated year.

Data Element Name : MARCH PRODUCTION

Coding Reference

Short name : EDIN04
Category : Extended Data
Input type : G2
Input position: 35
Length : 8 digits
Prompt : MARCH PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MARCH PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during March of the indicated year.

Data Element Name : APRIL PRODUCTION

Coding Reference

Short name : EDIN05
Category : Extended Data
Input type : G2
Input position: 43
Length : 8 digits
Prompt : APRIL PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

APRIL PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during April of the indicated year.

Data Element Name : MAY PRODUCTION

Coding Reference

Short name : EDIN06
Category : Extended Data
Input type : G2
Input position: 51
Length : 8 digits
Prompt : MAY PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

MAY PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during May of the indicated year.

Data Element Name : JUNE PRODUCTION

Coding Reference

Short name : EDIN07
Category : Extended Data
Input type : G2
Input position: 59
Length : 8 digits
Prompt : JUNE PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JUNE PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during June of the indicated year.

Data Element Name : JULY PRODUCTION

Coding Reference

Short name : EDIN08
Category : Extended Data
Input type : G3
Input position: 19
Length : 8 digits
Prompt : JULY PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

JULY PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during July of the indicated year.

Data Element Name : AUGUST PRODUCTION

Coding Reference

Short name : EDIN09
Category : Extended Data
Input type : G3
Input position: 27
Length : 8 digits
Prompt : AUGUST PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

AUGUST PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during August of the indicated year.

Data Element Name : SEPTEMBER PRODUCTION

Coding Reference

Short name : EDIN10
Category : Extended Data
Input type : G3
Input position: 35
Length : 8 digits
Prompt : SEPT. PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

SEPTEMBER PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during September of the indicated year.

Data Element Name : OCTOBER PRODUCTION

Coding Reference

Short name : EDIN11
Category : Extended Data
Input type : G3
Input position: 43
Length : 8 digits
Prompt : OCTOBER PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

OCTOBER PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during October of the indicated year.

Data Element Name : NOVEMBER PRODUCTION

Coding Reference

Short name : EDIN12
Category : Extended Data
Input type : G3
Input position: 51
Length : 8 digits
Prompt : NOVEMBER PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

NOVEMBER PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during November of the indicated year.

Data Element Name : DECEMBER PRODUCTION

Coding Reference

Short name : EDIN13
Category : Extended Data
Input type : G3
Input position: 59
Length : 8 digits
Prompt : DECEMBER PROD.

Editing Criteria

Real number
Non mandatory
No automatic justification

Definition

DECEMBER PRODUCTION contains the amount of goods (identified by the element SIC CODE) that were produced by the facility during December of the indicated year.

APPENDIX OF ERROR CODES

The following is a list of error codes with respective messages, severity levels, explanations, and resolutions. These errors are currently located in the error codes file (WUEC01) accessed by SSWUDS. Some of these errors have been carried over from the old SWUDS system and are now obsolete. A list of obsolete error codes has been given just before the main error code listing.

Obsolete Error Codes

0001	0040	0079
0002	0050	0082
0003	0060	0083
0006	0074	0084
0007	0075	0085
0008	0076	0087
0029	0077	0093
0030	0078	0098
0037	0100	

LIST OF SSWUDS ERROR CODES AND MESSAGES

0001 DATA DICTIONARY FILE OPEN FAILURE

Severity 12

Explanation - The program is unable to access the file which contain the data dictionary lookup table. The program will terminate.

Action - Determine the reason that the file was unavailable and correct. Potential reasons include missing or incorrect job control statements, or damaged file contents.

0002 RUN PARAMETERS FILE OPEN FAILURE

Severity 12

Explanation - The program is unable to access the file which contain the programmer-set run parameters. The program will terminate.

Action - Determine the reason that the file was unavailable and correct. Potential reasons include missing or incorrect job control statements, or damaged file contents.

0003 INVALID RUN PARAMETERS

Severity 4

Explanation - The programmer-set run parameter file contains an invalid data item. A default has been used in order to continue execution.

Action - Locate the invalid parameter and correct.

0004 EXTRANEIOUS DATA ON INPUT TRANSACTION

Severity 8

Explanation - An input transaction was received that contained data in fields not processed for a particular card type.

Action - Locate the invalid or extra data fields, correct, and resubmit.

0005 UNKNOWN INPUT/OUTPUT ERROR

Severity 12

Explanation - An undefined I/O error occurred while reading the batch input transaction file.

Action - Resubmit the job. If the problem persists, contact WUDS or SSWUDS Data Base Administrator.

0006 UNKNOWN INPUT/OUTPUT ERROR

Severity 8

Explanation - An undefined I/O error occurred while reading the interactive input Transaction File.

Action - Re-enter the transaction being processed. If the error persists, contact WUDS or SSWUDS Data Base Administrator.

0007 INVALID INTERACTIVE INPUT TRANSACTION

Severity 8

Explanation - An input transaction was received that contained data in fields not processed for a particular card type.

Action - Locate invalid or extra data fields and re-enter the transaction.

0008 UNKNOWN INPUT/OUTPUT ERROR

Severity 12

Explanation - An undefined I/O error occurred while reading the interactive input transaction file.

Action - Re-enter the transaction being processed. If the error persists, contact local programming support.

0009 INVALID CHARACTER(S) IN ALPHABETIC FIELD

Severity 8

Explanation - Character(s) other than A through Z or blank were placed in an input field identified by the Data Dictionary as ALPHABETIC only.

Action - Locate invalid data, correct, and resubmit.

0010 INVALID CHARACTER(S) IN NUMERIC FIELD

Severity 8

Explanation - Character(s) other than zero through nine were placed in an input field identified by the Data Dictionary as NUMERIC only.

Action - Locate invalid data, correct, and resubmit.

0011 INVALID CHARACTER(S) IN ALPHANUMERIC FIELD

Severity 8

Explanation - Character(s) other than A through Z, blank or zero through nine were placed in an input field identified by the Data Dictionary as ALPHANUMERIC only.

Action - Locate invalid data, correct, and resubmit.

0012 INVALID VALUE

Severity 8

Explanation - A data value was entered that did not equal a valid value for a given element in the data dictionary.

Action - Locate invalid data, correct, and resubmit.

0013 INVALID VALUE - OUT OF RANGE

Severity 8

Explanation - A data value was entered that was not within a valid range for a given element in the data dictionary.

Action - Locate invalid data, correct, and resubmit.

0014 INVALID DATA - ITEM IS MANDATORY

Severity 8

Explanation - For mandatory item, either no data value was entered for an ADD, or a delete (\$) was specified with a MODIFY.

Action - Locate invalid data, correct and resubmit.

0015 INVALID REAL NUMBER

Severity 8

Explanation - A non-real value was entered as input to a real number element.

Action - Locate invalid data, correct, and resubmit.

0016 INVALID INTEGER NUMBER

Severity 8

Explanation - A non-integer was entered as input to an integer element.

Action - Locate invalid data, correct, and resubmit.

0017 VALID CODE MUST BE ENTERED TO CONTINUE

Severity 4

Explanation - An invalid card code was entered. Processing of the record cannot continue unless a valid code is entered.

Action - Batch users - correct and resubmit data input.
Interactive - re-enter valid card code to continue; or
enter a null line to terminate processing.

0018 DATA DICTIONARY RECORD NOT FOUND

Severity 12

Explanation - The calling program has requested a data element for which there is no Definition record on the Data Dictionary file. Either the calling program or the Data Dictionary is in error. This is a maintenance error, not a user error.

Action - Contact the WUDS or SSWUDS Data Base Administrator to correct the code in the calling program and recompile or add a definition to the Data Dictionary corresponding to the characteristics of the new data elements.

0019 INPUT FIELD TOO LARGE

Severity 8

Explanation - The input field entered by the interactive user exceeds the length specified by the Data Dictionary.

Action - Re-enter field with correct length.

0020 INVALID OPERATION FOR INPUT FIELD

Severity 8

Explanation - An invalid operation has been requested for an input field. If the operation is an add transaction, then this means that the corresponding field in the Data Base Record is non-blank. If the operation requested is a modify, this message means that no data existed in the corresponding field on the Data Base record to modify.

Action - Resubmit transaction, changing either the transaction code or the contents of the field in question. An alternate solution might be to submit a separate transaction for the field in question.

0021 ERROR OPENING WATER USER FILE

Severity 12

Explanation - An undetermined error has occurred while opening the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0022 ERROR CLOSING WATER USER FILE

Severity 12

Explanation - An undetermined error has occurred while closing the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0023 WATER USER RECORD DOES NOT EXIST

Severity 8

Explanation - A read request was received for a record that has not been written to the Water User File.

Action - Check water-user identifier for validity and resubmit. If believed water user does exist then, contact the WUDS or SSWUDS Data Base Administrator.

0024 WATER USER RECORD IS BLANK

Severity 4

Explanation - A read request was received for a record that had previously been deleted from the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator,

0025 ERROR READING WATER USER RECORD

Severity 12

Explanation - An undetermined error has occurred while reading the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0026 ERROR WRITING WATER USER RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0027 REWRITE INVALID FOR WATER USER FILE

Severity 12

Explanation - A Rewrite request was received for the Water User File. The Rewrite action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0028 ERROR DELETING WATER USER RECORD

Severity 12

Explanation - An undetermined error has occurred while deleting a record from the Water User File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0029 CALCULATE KEY INVALID FOR WATER USER FILE

Severity 12

Explanation - A Calculate Key request was received for the Water User File. The Calculate Key action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0030 REWIND INVALID FOR WATER USER FILE

Severity 12

Explanation - A Rewind request was submitted for the Water User File. The Rewind action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator. .

0031 ERROR OPENING MEASUREMENT-POINT FILE

Severity 12

Explanation - An undetermined error has occurred while opening the Measurement-Point File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0032 ERROR CLOSING MEASUREMENT POINT FILE

Severity 12

Explanation - An undetermined error has occurred while closing the Measurement Point File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0033 MEASUREMENT POINT RECORD DOES NOT EXIST

Severity 8

Explanation - A Read request was received for a record that has not been written to the Measurement Point File.

Action - Check correctness of measurement-point identifier, action code, water-user identifier, and water type on transaction record and resubmit. If problem persists, contact WUDS or SSWUDS Data Base Administrator.

0034 MEASUREMENT POINT RECORD IS BLANK

Severity 4

Explanation - A Read request was received for a record that had previously been deleted from the Measurement Point File.

Action - None

0035 ERROR READING MEASUREMENT POINT RECORD

Severity 12

Explanation - An undetermined error has occurred while reading the Measurement Point File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0036 ERROR WRITING MEASUREMENT-POINT RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Measurement-Point File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0037 REWRITE INVALID FOR MEASUREMENT POINT FILE

Severity 12

Explanation - A Rewrite request was received for the Measurement Point File. The Rewrite action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0038 ERROR DELETING MEASUREMENT-POINT RECORD

Severity 12

Explanation - An undetermined error has occurred while deleting a record from the Measurement-Point File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0039 ANNUAL MEASUREMENT YEAR INVALID

Severity 8

Explanation - A year has been encountered that is less than 1950 or greater than the correct year.

Action - Correctly specify the year and resubmit.

0040 REWIND INVALID FOR MEASUREMENT POINT FILE

Severity 12

Explanation - A Rewind request was submitted for the Measurement-Point File. The Rewind action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0041 ERROR OPENING CONVEYANCES FILE

Severity 12

Explanation - An undetermined error has occurred while opening the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0042 ERROR CLOSING CONVEYANCES FILE

Severity 12

Explanation - An undetermined error has occurred while closing the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0043 END OF CONVEYANCES FILE

Severity 4

Explanation - An attempt was made to read past the end of the Conveyance File.

Action - None

0044 CONVEYANCES RECORD IS BLANK

Severity 4

Explanation - The Conveyances record just read contains no data.

Action - None

0045 ERROR READING CONVEYANCES RECORD

Severity 12

Explanation - An undetermined error has occurred while reading the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0046 ERROR WRITING CONVEYANCES RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0047 ERROR WRITING CONVEYANCES RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0048 ERROR REWRITING CONVEYANCES RECORD

Severity 12

Explanation - An undetermined error has occurred while rewriting a record on the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0049 ERROR DELETING CONVEYANCES RECORD

Severity 12

Explanation - An undetermined error has occurred while deleting a record from the Conveyances File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0050 CALCULATE KEY INVALID FOR CONVEYANCES FILE

Severity 12

Explanation - A Calculate Key request was received for the Conveyances File. The Calculate Key action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0051 ERROR OPENING EXTENDED-DATA FILE

Severity 12

Explanation - An undetermined error has occurred while opening the Extended-Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0052 ERROR CLOSING EXTENDED-DATA FILE

Severity 12

Explanation - An undetermined error has occurred while closing the Extended-Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0053 END OF EXTENDED DATA FILE

Severity 4

Explanation - An attempt was made to read past the end of the Extended Data File.

Action - None

0054 EXTENDED DATA RECORD IS BLANK

Severity 4

Explanation - The Extended Data record just read contains no data.

Action - None

0055 ERROR READING EXTENDED DATA RECORD

Severity 12

Explanation - An undetermined error has occurred while reading the Extended Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0056 ERROR WRITING EXTENDED-DATA RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Extended-Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0057 ERROR WRITING EXTENDED DATA RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Extended Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0058 ERROR REWRITING EXTENDED-DATA RECORD

Severity 12

Explanation - An undetermined error has occurred while rewriting a record on the Extended-Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0059 ERROR DELETING EXTENDED DATA RECORD

Severity 12

Explanation - An undetermined error has occurred while deleting a record from the Extended Data File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0060 CALCULATE KEY INVALID FOR EXTENDED DATA FILE

Severity 12

Explanation - A Calculate Key request was received for the Extended Data File. The Calculate Key action is not allowed for this file.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0061 ERROR OPENING ANNUAL MEASUREMENT FILE

Severity 12

Explanation - An undetermined error has occurred while opening an Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0062 ANNUAL MEASUREMENT FILE NOT OPEN

Severity 8

Explanation - An attempt was made to close an Annual Measurement File which was not previously opened.

Action - Verify that the Annual Measurement Year is correct.

0063 ERROR CLOSING ANNUAL MEASUREMENT FILE

Severity 12

Explanation - An undetermined error has occurred while closing an Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0064 ANNUAL MEASUREMENT RECORD DOES NOT EXIST

Severity 4

Explanation - A Read request was received for a record that had not been written to the Annual Measurement File.

Action - None

0065 ANNUAL MEASUREMENT RECORD IS BLANK

Severity 4

Explanation - A Read request was received for a record that had previously been deleted from the Annual Measurement File.

Action - None

0066 ANNUAL MEASUREMENT FILE NOT OPEN

Severity 8

Explanation - An attempt was made to read a record from an Annual Measurement File which was not previously opened.

Action - Verify that the Annual Measurement Year is correct.

0067 ERROR READING ANNUAL MEASUREMENT RECORD

Severity 12

Explanation - An undetermined error has occurred while reading a record from the Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0068 ANNUAL MEASUREMENT FILE NOT OPEN

Severity 8

Explanation - An attempt was made to write a record to an Annual Measurement File which was not previously opened.

Action - Verify that the Annual Measurement Year is correct.

0069 ERROR WRITING ANNUAL MEASUREMENT RECORD

Severity 12

Explanation - An undetermined error has occurred while writing a record to the Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0070 ANNUAL MEASUREMENT FILE NOT OPEN

Severity 8

Explanation - An attempt was made to rewrite a record on an Annual Measurement File which was not previously opened.

Action - Verify that the Annual Measurement Year is correct.

0071 ERROR REWRITING ANNUAL MEASUREMENT RECORD

Severity 12

Explanation - An undetermined error has occurred while rewriting a record on the Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0072 ANNUAL MEASUREMENT FILE NOT OPEN

Severity 8

Explanation - An attempt was made to delete a record from an Annual Measurement File which was not previously opened.

Action - Verify that the Annual Measurement Year is correct.

0073 ERROR DELETING ANNUAL MEASUREMENT RECORD

Severity 12

Explanation - An undetermined error has occurred while deleting a record from the Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0074 CALCULATE KEY INVALID FOR ANNUAL MEASUREMENT FILE

Severity 12

Explanation - A Calculate Key request was received for an Annual Measurement File. The Calculate Key action is not allowed for the Annual Measurement File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0075 REWIND INVALID FOR ANNUAL MEASUREMENT FILE

Severity 12

Explanation - A Rewind request was received for an Annual Measurement File. The Rewind action is not allowed for Annual Measurement Files.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0076 REPORT OUTPUT FILE OPEN FAILURE

Severity 12

Explanation - The program was unable to open a new Report Output File. The program will terminate.

Action - Determine the reason that the file was unable to be opened and correct.

0077 REPORT SPECIFICATION FILE OPEN FILE

Severity 12

Explanation - The program was unable to access the file which contains the user's report specifications. The program will terminate.

Action - Determine the reason that the file was unavailable and correct. Potential reasons include missing or incorrect job control statements, or damaged file contents.

0078 UNKNOWN INPUT/OUTPUT ERROR

Severity 8

Explanation - An undefined I/O error occurred while reading the Report Specification File.

Action - Check the User Report Specification File, correct, and resubmit.

0079 UNEXPECTED END-OF-FILE REACHED

Severity 12

Explanation - Unexpected end-of-file reached while reading the first input card from the Report Specification File. Processing terminated.

Action - Check the User Report Specification File, correct, and resubmit.

0080 INVALID CARD TYPE CODE

Severity 8

Explanation - An invalid value was entered as the card type code on the first report specification input card. Processing terminated.

Action - Locate invalid data, correct, and resubmit.

0081 INVALID CARD SEQUENCE NUMBER ENCOUNTERED

Severity 8

Explanation - An invalid card sequence number was entered. The Processing will continue, but no report will be generated.

Action - Locate invalid data, correct, and resubmit.

0082 INVALID END OF YEAR

Severity 8

Explanation - An invalid end year was entered as selection criteria for sequential ED or sequential AM report; end year should be greater than or equal to begin year.

Action - Locate invalid data, correct, and resubmit.

0083 INVALID SELECTION CRITERIA

Severity 8

Explanation - An invalid selection criteria, which contains no value information, was encountered.

Action - Locate invalid data, correct, and resubmit.

0084 INVALID RETRIEVAL SEQUENCE

Severity 8

Explanation - The valid combination of file types for report request involving ED (Extended Data) file type is 'ED,WU' or 'WU,ED'.

Action - Locate invalid data, correct, and resubmit.

0085 INVALID RETRIEVAL SEQUENCE

Severity 8

Explanation - The valid combination of file types for each report request contains at most one CN (conveyance) file type.

Action - Locate invalid data, correct, and resubmit.

0086 OUT OF BOUNDS

Severity 12

Explanation - The number of unique work keys assigned exceeds the limit of the key array. No report will be generated.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0087 TOO MANY REPORT SPECIFICATION CARDS

Severity 8

Explanation - The maximum number of report specification cards the user can specify is 5.

Action - Check the User Specification File, decrease the number of cards, and resubmit.

0088 INVALID ACTION CODE

Severity 8

Explanation - An attempt was made to add a new measurement-point record with the same measurement-point identifier and water type but with a similar but different action code. One cannot add information to a withdrawal/delivery (WL) record using the action code for withdrawal (WD) or a delivery (DL) record using the action code for withdrawal/delivery (WL). The same holds true for releases (RL), returns (RT), and release/returns (RE). This error occurs only on ground-water and surface water transactions.

Action - Change the action code to the valid code and resubmit the transaction to the SSWUDS edit/update system.

0089 DATA TO BE DELETED NOT ON FILE

Severity 8

Explanation - A delete request was received for a water-user, measurement-point, annual-measurement, or extended-data record; but the record could not be located.

Action - Correct the 'key' information in the beginning card columns to refer to an existing record and resubmit the card.

0090 SOURCE/DESTINATION DATA DOES NOT EXIST ON DATA BASE FOR DELETION

Severity 8

Explanation - A problem exists in deleting measurement-point data.

Action - Resubmit the B1 delete transaction and if problem persists, contact WUDS or SSWUDS Data Base Administrator.

0091 MEASUREMENT POINT TO BE DELETED NOT FOUND IN DATA BASE

Severity 8

Explanation - A request for deletion of measurement-point data cannot be processed due to the fact that the data do not exist in the data base at the present time.

Action - Check data input for errors in the first 29 positions, correct, and resubmit, if appropriate.

0092 SUBCATEGORY DOES NOT MATCH EXTENDED DATA

Severity 4

Explanation - The user has attempted to add an extended-data record that does not correspond to the subcategory data originally specified for the Water User. The type of extended-data record is indicated by the card code to the system which checks it against the subcategory data for the Water User in question.

Action - Verify the card type to be used (consult original forms), and if different, respecify data and resubmit with proper card code. Alternatively, if the card type is correct for extended data, a modify transaction must be submitted for the Water User in order to change the subcategory.

0093 'MODIFY' NOT VALID FOR B4 CARD (OBSOLETE)

Severity 8

Explanation - A B4 input transaction was entered with a transaction code of 'M' (modify) in column 3. Because of the dependence of this card type on key information, only transaction codes of 'A' (add) or 'D' (delete) are valid for B4 data.

Action - Correct transaction code and resubmit; or, if it is necessary to change the B4 information, submit a delete transaction followed by an add containing the new information.

0094 INVALID USER ID

Severity 4

Explanation - The Data Base Management software detected an error while attempting to add a new measurement point. This error is probably caused by insufficient space allocation in the measurement point file.

Action - Refer to documentation for associated error messages.

0095 DATA ALREADY EXISTS

Severity 4

Explanation - An attempt has been made to add data to a data base field which has already been filled.

Action - Remove data from add transaction or change transaction code to 'modify'. It may be necessary to create a new 'modify' transaction for the field in question, rerunning the original add transaction with that field changed to blanks.

0096 DATA NOT FOUND

Severity 4

Explanation - An attempt has been made to modify a data base field which contains no data.

Action - Remove data from modify transaction or change transaction code to 'add'. It may be necessary to create a new 'add' transaction for the field in question, rerunning the original 'modify' transaction with that field changed to blanks.

0097 NO INPUT TRANSACTIONS SUBMITTED

Severity 0

Explanation - No input data was found by the program; end of file was reached instead. Program will terminate normally.

Action - Check contents of batch input file and verify allocations made via Job Control statements. Correct Job Control, if appropriate, and rerun job.

0098 DELIVERY OR RELEASE POINT DOES NOT EXIST

Severity 8

Explanation - An attempt has been made to add or delete an additional or destination ('B4' card) for a delivery or release point that does not exist on the data base.

Action - Verify information in card columns 1-29 and if an error exists, correct and resubmit. If card is correct and is an 'add' transaction, however, a delivery or release measurement point must be added (use B1, B2, and/or B3 cards where appropriate) prior to submitting the B4 information. No action need be taken for the case where the information is correct and the transaction code is 'delete'. In such a case the information does not exist on the data base to be deleted.

0099 TOO MANY ATTEMPTS, PROCESSING TERMINATED

Severity 12

Explanation - The user has made too many attempts to get the mini-report printed on the terminal. Only 'ENTER', 'RETURN', or 'LINE FEED' keys are allowed to be used.

Action - Press correct key ('ENTER', 'RETURN', or 'LINE FEED').

0100 UNKNOWN ERROR OCCURRED WITH WRITE

Severity 12

Explanation - Error occurred while writing the requested report. The program will terminate.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0101 INVALID MEASUREMENT POINT DELETE REQUEST

Severity 8

Explanation - A transaction code of D (delete) may not be specified for card codes of B2 and B3.

Action - Verify that the intended action is to delete an entire measurement point record, and change the card code to B1.

0102 INVALID ANNUAL MEASUREMENTS DELETE REQUEST

Severity 8

Explanation - A transaction code of D (delete) may not be specified for card codes C2, C3, C4, C5, or C6.

Action - Verify that the intended action is to delete an entire annual measurement record, and change the card to 'C1'.

0103 INVALID EXTENDED DATA DELETE REQUEST

Severity 8

Explanation - A transaction code of D (delete) may not be specified for card codes D2, D3, F2, F3, G2, or G3.

Action - Verify that the intended action is to delete an entire extended data record and change the card code to D1, E1, F1, or G1.

0104 INVALID WATER USER DELETE REQUEST

Severity 8

Explanation - A transaction code of D (delete) may not be specified for card codes A2, A3, or A4.

Action - Verify that the intended action is to delete an entire water user with all its associated records (i.e., related measurement points, extended data, and annual measurements) and change the card code to 'A1'.

0105 'B3' CARD NOT VALID FOR DELIVERY OR RELEASE

Severity 8

Explanation - A 'B3' card was received that specified an action of Delivery or Release.

Action - Correct the action field and resubmit.

0106 MEASUREMENT POINT DOES NOT EXIST FOR ANNUAL-MEASUREMENT DATA

Severity 8

Explanation - A measurement-point read could not be found which corresponded to an Annual-Measurement record.

Action - If the annual-measurement data is correct, submit a corresponding measurement point Add transaction using 'B' cards. Otherwise, correct the annual-measurement data to match our existing measurement-point entry.

0107 RECORD NOT FOUND ON EXTENDED-DATA FILE

Severity 8

Explanation - The input card requested deletion for an extended-data record, which could not be found.

Action - Correct the delete transaction and resubmit.

0108 WATER USER RECORD NOT FOUND

Severity 8

Explanation - An extended-data input card was submitted for a water user who does not currently exist on the water-user file.

Action - Submit an A1 card for the indicated water-user ID.

0109 INVALID SELECTION DATA TYPE

Severity 8

Explanation - The data element name specified in the selection criteria of the report request is not allowed for the file type specified.

0110 NO SITE ID MATCH

Severity 8

Explanation - A matching site id could not be found for a new measurement-point identifier.

Action - The user will have to create a new site record and have the NWIS Site File updated with the new record before SSWUDS will allow the new measurement-point record to be added to the SSWUDS data base. After the Site File has been updated, the new measurement-point record (B record) can be resubmitted to the SSWUDS edit/update system.

0111 ERROR CLOSE SITE FILE

Severity 12

Explanation - An undetermined error has occurred while closing the NWIS Site File.

Action - Contact WUDS or SSWUDS Data Base Administrator

0112 ERROR OPENING SITE FILE

Severity 12

Explanation - An undetermined error had occurred while opening the NWIS Site File.

Action - Contact WUDS or SSWUDS Data Base Administrator.

0113 VALID AGENCY CODE MANDATORY FOR NEW MEASUREMENT POINTS

Severity 8

Explanation - A valid agency code is mandatory for B1 records with new measurement points. An agency code is required to find a matching site id from the NWIS Site File.

Action - Add the valid agency code to the B1 record and resubmit to the SSWUDS edit/update system.

0114 B1 RECORD MANDATORY FOR NEW MEASUREMENT POINTS

Severity 8

Explanation - A B1 transaction record is required for all new measurement-point records. B2 and B3 records will not be processed if a B1 record is not processed first. The B1 record contains the agency code that is required for matching new measurement-point identifiers with NWIS site identifiers.

Action - Create a B1 record with a valid agency code and resubmit this record and its other respective B records (B2,B3) to the SSWUDS edit/update system.

0115 ALIAS ID EXISTS FOR WATER USER FOR DIFFERENT MEAS. PT. ID

Severity 8

Explanation - An attempt was made to add an alias identifier to an existing measurement point; however, another measurement point for the same water user already had the same alias identifier.

Action - Change the alias identifier to a unique identifier for that water user and resubmit.

0116 NWIS SITE ID MATCH FOUND WITH THE ID aaaaaxxxxxxxxxxxxxxxxxx

Severity 4

Explanation - A warning to inform the user that an NWIS Site ID was found for the new measurement-point entry, but another agency code was used in addition to the one entered on the B1 record. The field "aaaaa" on the error message above would contain the valid agency code that was used for the successful NWIS site identifier match. The field "xxxxxxxxxxxxxxxx" contains the standard measurement-point ID. If the B1 record had an alias ID, the standard measurement-point ID would have been retrieved from the B0 record.

Action - None