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NATIONAL WATER DATA EXCHANGE

GUIDELINES FOR THE USE OF NAWDEX DATA SYSTEMS

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

GUIDELINES FOR THE USE OF NAWDEX DATA SYSTEMS

Reston, Virginia
April 1978

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I. Introduction

This report has been prepared in order to identify the NAWDEX Data Systems and their respective documentation. It discusses the operation of the systems as well as tools that have been developed to enhance or facilitate their use.

II. The NAWDEX Operating Environment

A. Retrievals from the Master Water Data Index (MWDI)

There are now two methods for retrieving data from the MWDI: System 2000 Natural Language Commands and the MWDI Retrieval System. The first is a method by which the user constructs the System 2000 commands necessary to retrieve the desired data. A tutorial discussion of the construction of these commands is found in the National Water Data Exchange System 2000 Data Retrieval Manual. The Job Control Language (JCL) necessary to access the MWDI can be found in Appendix A of this report. In the second method of data retrieval, the MWDI Retrieval System, the user specifies commands to a PL/1 retrieval program (RETRIEVE) which in turn retrieves the data via System 2000. The retrieved data can then be passed to the Report Program, the Plot Interface Program, a user- developed application program, or the data can be saved for subsequent use.

The MWDI Retrieval System commands are similar to the System 2000 Natural Language commands, but the system does not have the capability to make as complex queries as System 2000 Natural Language. Retrieval commands generally will be easier to construct using the MWDI Retrieval System instead of the System 2000 Natural Language, but the retrieval cost will be higher. Which method to use will thus be determined by cost restraints, developmental time available, and the type of retrieval. The original MWDI Generalized Retrieval System has now been enhanced to include "EXIST" and "FAILS" conditions in the WHERE clause. Documentation on the use of the MWDI Retrieval System as well as the necessary JCL are found in the MWDI Retrieval System User's Manual.

B. Retrievals from the Water Data Sources Directory (WDSD)

The WDSD currently can be accessed by System 2000 Natural Language or by a PL/1 program which lists the entire data base in a tabular format. Work is underway to develop a WDSD Retrieval System to report parts of the data base according to selection criteria specified by the user. This program is expected to be available in September 1978.

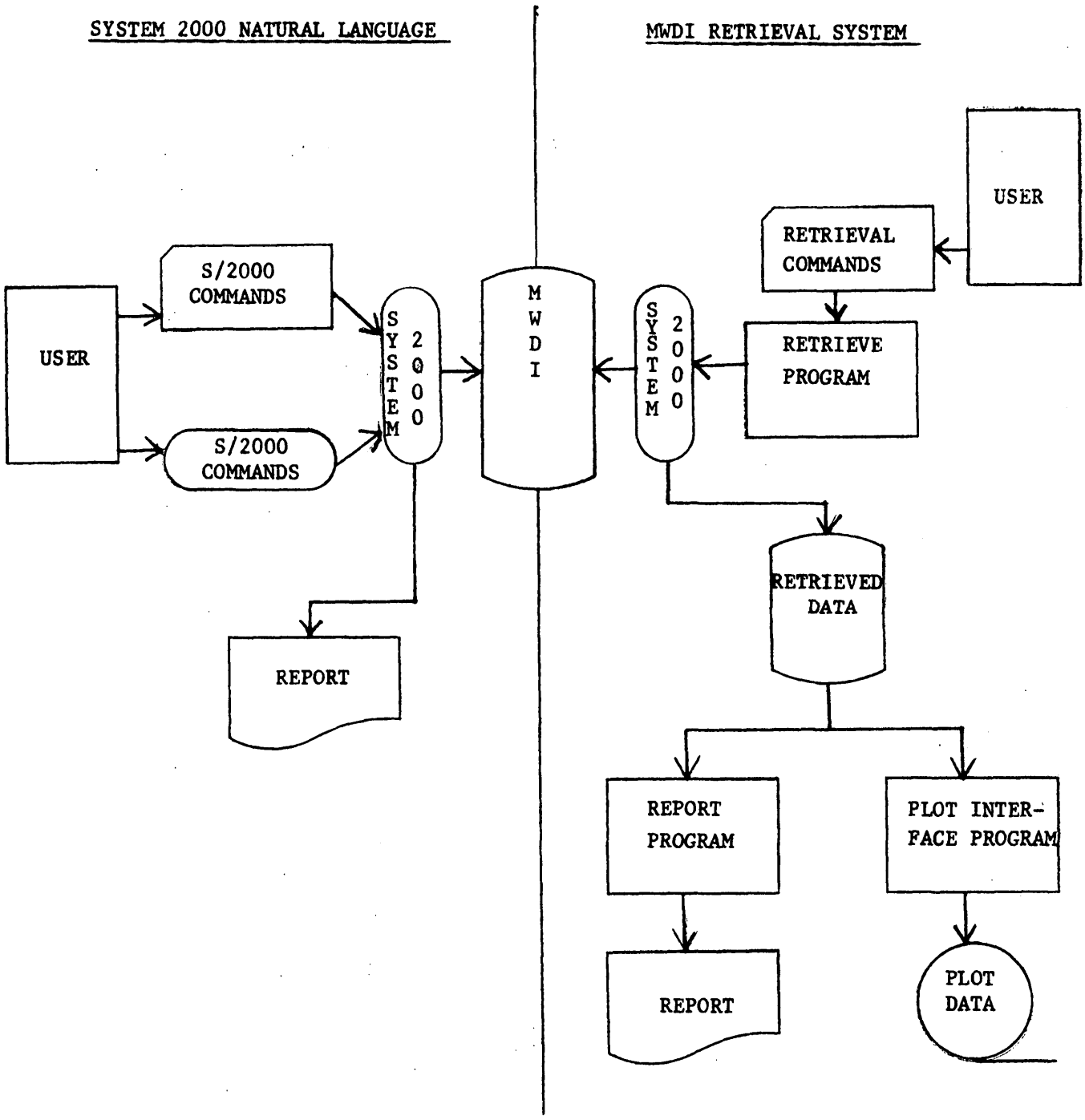

Figure 1. Tools for accessing the MWDI

C. The MWDI Update Cycle

The original sources of data for the MWDI were the MIS Hydrologic Station File, the WATSTORE Station Header File, and the OWDC Catalog of Information on Water Data. The original data base was updated in the spring of 1977 with any data that had been added or modified in the OWDC and MIS files since the original data base load in April, 1976. During the summer of 1977, the EPA STORET data was indexed in the MWDI.

NAWDEX is in the process of updating the MWDI with data from the WATSTORE Daily Values File (March 1978) and the Peak Flow File (March 1978). Any non-USGS stations that are retrieval password protected in WATSTORE will not be updated however. The MWDI will be updated by the WATSTORE data immediately preceeding a merge to the backfile, and by the EPA STORET data beginning in March of each year. Data from the EPA STORET archived files, including the USGS quality of ground water, will be indexed as funds become available to NAWDEX. The USGS ground water quantity data will not be indexed in the MWDI; rather, the Ground Water Site Inventory File (GWSI) is used for this purpose.

There are a number of components which can only be updated by the WRD districts. Instructions for the encoding of these updates can be found in Instructions for the Preparation of Data for the Master Water Data Index, and instructions and JCL for submitting the data for updating can be found in Instructions for the Submission of Data to the Master Water Data Index. The current plan is to enter the submitted updates into the data base each weekend. Appendix B presents all the components in the MWDI and identifies the source of updating. If an updating schedule is not timely enough for certain requirements--for example, the EPA quality of water parameters require an entire year's data for frequency calculation--then it will be the responsibility of the WRD districts to make appropriate updates. If a component is updated by the WATSTORE data, it will not be updated by the STORET data.

III. Strings

A string is a command or part of a command that is stored in the data base definition because of its expected frequency of use. By means of this feature, commands can be efficiently developed, tested, and made available to all users. A string is given a unique component number and name just as are all of the other components in the data base definition. A user can describe all of the string in the data base, individual strings, or a range of strings:

DESCRIBE STRINGS:
DESCRIBE C_____:
DESCRIBE C_____ THRU C_____: where _____ is replaced with the string component number.

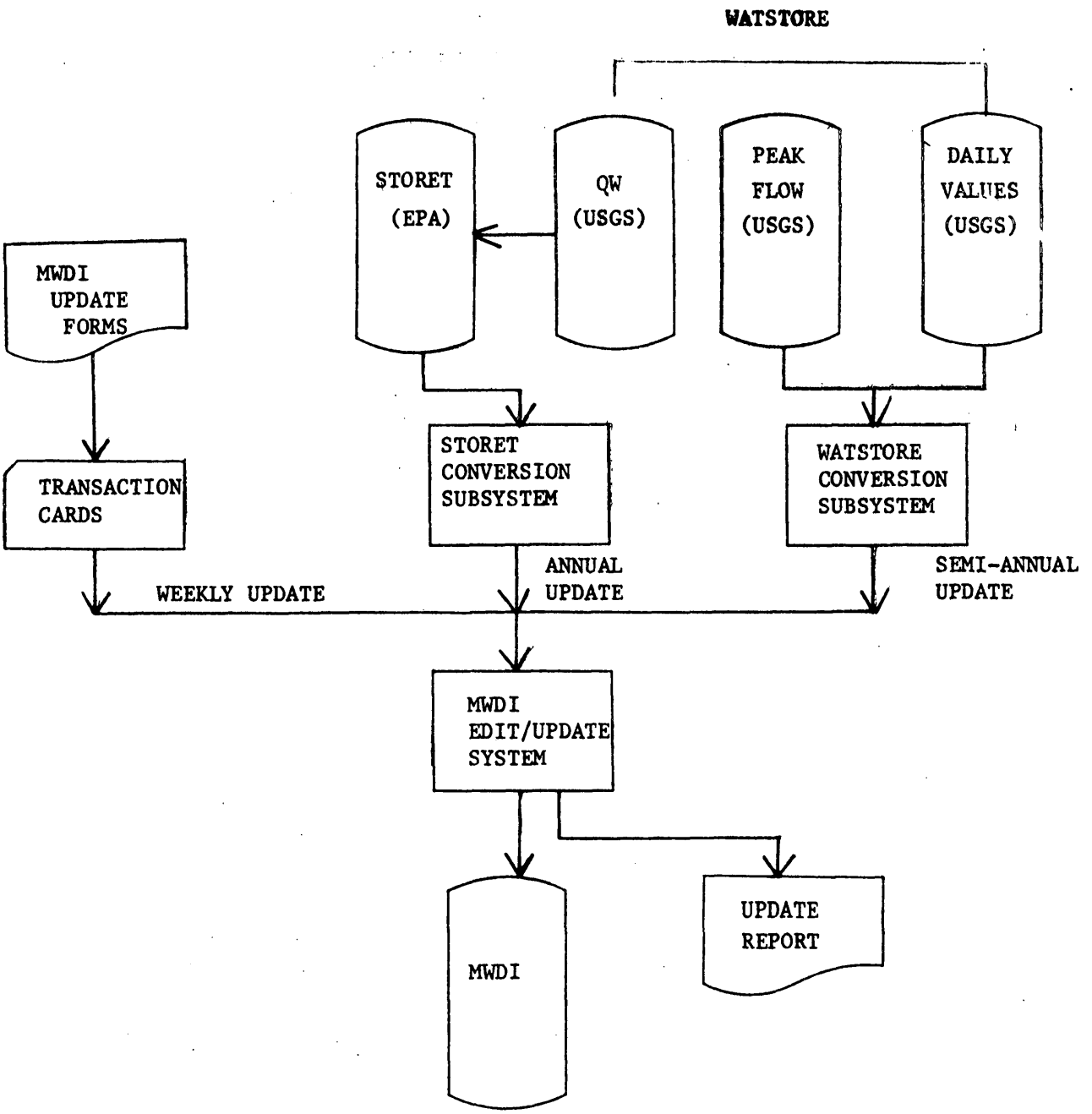

Figure 2. MWDI update cycle

There are two types of strings, simple and extended. A simple string is a command that always performs the same activity. No variables exist within the simple string definition. The extended string contains variables through which the user supplies values to be used in the execution of the command.

An example of a hypothetical simple string is:

2000*LAC_REPORT (STRING? LIST C1,C110,C113,C114,C126 WHERE C124 EQ 1:?).

The user may invoke or execute the string by entering the command:

C2000: or *LAC_REPORT*:

An example of a hypothetical extended string is:

2001*LAC_REPORT_BY_STATE (STRING? LIST C1,C110,C113,C114,C126 WHERE NON_ KEY C124 EQ 1 AND C202 EQ *1*:?)

The user many invoke or execute the string by entering the command:

*C2001 (-----): or
*LAC_REPORT_BY_STATE (-----):

where ----- is replaced by a state code:
*C2001(80):

The extended string may contain a number of variables which should be entered in sequence according to their variable numbers. A string may also contain another string. The other string is identified as *C-----* where ----- is equal to the string's component number. This method is used in many WDSD and MWDI strings. For example, the headings of a report are stored in a string, and then this string is referenced in subsequent strings. For a more detailed discussion and further illustrations, see pages D-31 through D-34 in the National Water Data Exchange System 2000 Data Retrievel Manual.

It is the responsibility of the Program Office to incorporate strings in the data base. We have tried to anticipate some which will be of value to users, but we need to have further suggestions as well as feedback on the ones already created. Please send suggestions and comments to Gayle Gillingham in the NAWDEX Program Office.

MWDI

Six basic series of strings have been included in the MWDI. Each series represents a type of report in which the data are either displayed in a similar fashion or for a similar purpose.

3100 Series -- MWDI Site Report
3200 Series -- Water Parameter List Report
3300 Series -- Site Count Report
3400 Series -- QW Summary Report
3500 Series -- WRD Management Report
3600 Series -- Station Repeating Group List Report

In series 3100, 3200, 3300, and 3400 the strings within a series vary by qualifying arguments which are supplied by the user and/or stored within the string. For example, series 3300 produces a report which is a count of sites. In string *C3301 in the series, the user specifies the state(s) and county(s) in which the count should be made. In string *C3303 of the same series, the user specifies not only the state(s) and county(s), but also the type of sites to count.

Series 3500 is for strings producing reports specifically oriented toward WRD management. It currently includes a string to produce a station funding report for active USGS stations in a specified geographic area.

Series 3600 is comprised of strings which will produce a report of all the station data stored in the MWDI for a specified geographic area.

The following identifies the series, the strings, the basic type of data retrieved, and the type of qualifying information.

Series 3100--MWDI Site Report

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3101* SITE_REPORT_ BY_STATE/CNTY	NAWDEX Agency Code (C4)[1] (site operating agency), Agency Station Number (C5), Station Name (7), Site Type (C12), WDSD Office Code (17)	[2]--Range of State/County codes (C22)
	[1]Cn = component in MWDI data base definition	[2]--signifies qualifying information specified by user, and blanks signify that the qualifying information is within the string

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3102* SITE_REPORT_ BY_LAT/LONG	Same as C3101*	--Range of latitudes (C2) and longitudes (C3)
C3103* SITE_REPORT_ BY_STATE/CNTY_AND_ TYPE	Same as C3101*	--Range of State/County codes (C22) --Site type (C12)
C3104* QW_SITE_REPORT_ BY_STATE/CNTY_SITE_ TYPE	Same as C3101*	--Range of State/County codes (C22) --Site type
C3105* SURFACE_WATER_ SITE_REPORT_BY_STATE/ CNTY	Same as C3101*	--Range of State/County codes (C22 SW site (C12)
C3106* GW_SITE_REPORT_ BY_STATE/CNTY	Same as C3101*	--Range of State/County codes (C22) GW site (12)
C3107* GW/QW_SITE_ REPORT_BY_STATE/ CNTY	Same as C3101*	--Range of State/County codes (C22) GW site (C12) QW activity exists or existed (C301 exists)
C3108*SURFACE_WATER/ QW REPORT_BY_STATE/ CNTY	Same as C3101*	--Range of State/County codes (C22) QW activity exists or existed (C301 exists)
C3115* SURFACE_WATER_ SITE_REPORT_STATE/ CNTY/YEAR	Same as C3101*	--Begin year (C101) - all stations with a begin year since this will qualify --Range of State/County codes (C22) Surface Water Repeating Group exists
C3125* ACTIVE_SURFACE_ WATER_SITE_REPORT_ STATE/COUNTY_YEAR	Same as C3101*	--Begin year (C101) - all stations with a begin year since this will qualify --Range of State/County codes (C22) Surface Water Program is active

Series 3200--Water Parameter List Report

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3201* SURFACE_WATER_ PARM_LIST_BY_STATE/ CNTY	NAWDEX Agency Code (C4), Agency Station Number (C5), Station Name (C7), Site Type (C12), WDSD Office Code (C17) - - - - - - Surface water parameters (C101 through C150)	--Range of State/County codes (C22) Surface water activity exists or existed (C101 exists)
C3202* SURFACE_WATER_ PARM_LIST_BY_LAT/ LONG	Same as C3201*	--Range of latitudes (C2) and longitudes Surface water activity exists or existed (C101 exists)
C3203* GW_PARM_LIST_ BY_STATE/CNTY	NAWDEX Agency Code (C4), Agency Station Number (C5), Station Name (C7), Site Type (C12), WDSD Office Code (C17) - - - - - - Ground water parameters (C201 through C250)	--Range of State/County codes (C22)
C3204* GW_PARM_LIST_ BY_LAT/LONG	Same as C3203*	--Range of latitudes (C2) and longitudes (C3)
C3205* QW_PARM_LIST_ BY_STATE/CNTY	NAWDEX Agency Code (C4), Agency Station Number (C5), Station Name (C7), Site Type (C12), WDSD Office Code (C17) - - - - - - Quality Water Parameters (C301 through C750)	--Range of State/County codes (C22)
C3206* QW_PARM_LIST_ BY_LAT/LONG	Same as C3205*	--Range of latitudes (C2) and longitudes (C3)

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3211* SURFACE_WATER_ PARM_LIST_STATE/ COUNTY/YEAR	Same as C3201*	--Begin year (C101) - all stations with a begin year since this will qualify --Range of state/county codes (C22) Surface water program active
Series 3300--Site Count Report		
C3301* SITE_COUNT_BY_ STATE/CNTY	Count of sites	--Range of State/County codes (C22)
C3302* SITE_COUNT_BY- LAT/LONG	Count of sites	--Range of latitudes (C2) and longitudes (C3)
C3303* SITE_COUNT_BY SITE_TYPE/STATE/CNTY	Count of sites	--Site type (C12) --Range of State/County codes (C22)
C3304* QW_SITE_COUNT_ BY_SITE_TYPE/STATE/ CNTY	Count of sites	--Site type (C12) --Range of State/County codes (C22) QW activity exists or existed (C301 exists)
Series 3400--QW Report		
C3401* QW_REPORT_BY_ STATE/CNTY	NAWDEX Agency Code (C4), Agency Station Number (C5), Station Name (C7), WDSD Office Code (C12), Phys. QW Status (C550), Chem. QW Status (C750), Sediment QW Status (650), Biol. QW Status (C450)	--Range of State/County codes (C22) QW activity exists or existed (C301 exists)
C3402* QW_REPORT_ BY_LAT/LONG	Same as C3401*	--Range of latitudes (C2) and longitudes (C3) QW activity exists or existed (C301 exists)

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3403* QW_REPORT_ BY_SITE_TYPE_ STATE/CNTY	Same as C3401*	--Site type (C12) --Range of State/County codes (C22) QW activity exists or existed (C301 exists)
C3404* QW_REPORT_ STATE/CNTY_80_ COLUMNS	Same as C3401*	Same as C3401*
C3405* SURFACE_WATER/ QW_REPORT_STATE/CNTY	Same as C3401*	--Range of State/County codes (C22) QW activity exists or existed (C350 exists) Station is a surface water station
C3406* GROUND_WATER/ QW_REPORT_STATE/ CNTY	Same as C3401*	--Range of State/County codes (C22) QW activity exists or existed (C301 exists) Station is a ground water station
Series 3500--WRD Management Report		
C3501* FUNDING_ REPORT_STATE/ CNTY	Agency Station Number (C5), Agency Station Name (C7), State (C8), Funding Customer (C1001), Funding Percentage (C1000), Funding Disciline (C1003	--Range of State/County codes (C22) USGS Stations Surface Water program active (C150 EQ Y) or QW program active (350 EQ Y)
Series 3600--Station Repeating Group List Report		
C3601* SITE_IDENT	Station Identification Repeating Group (C0) Data	--State/County Code (C22) or range of State/ County codes
C3611* SW	Surface Water Repeating Group (C100) data	--State/County code (C22) or range of State/ County codes
C3614* GW	Ground Water Repeating Group (C200) data	--State/County code (C22) or range of State/ County codes

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3617* QW	Water Quality Repeating Group (C300) data	--State/County code (C22) or range of State/ County codes
C3619* BIO	Biological QW Repeating Groups (C400 and C454) data	--State/County (C22) or range of State/County codes
C3626* PHY	Physical QW Repeating Group (C500) data	--State/County code (C22) or range of State/ County codes
C3628* SED	Sediment QW Repeating Group (C600) data	--State/County code (C22) or range of State/ County codes
C3630* CHM	Chemical QW Repeating Group (C700) data	--State/County code (C22) or range of State/ County codes
C3633* OTHER_RGS	Projects Repeating Group (C800) data, Networks Repeating Group (C900) data, Funding Repeating Group (C1000) data, Other Source Repeating Group (C1100) data, and Source Information Repeating Group (C1200) data	--State/County code (C22) or range of State/ County codes

WDSD

The WDSD has two retrieval strings stored in its data base definition. Their purpose is to provide information useful in contacting an organization as a source of water data. The organization is contacted based upon an Agency Code (C1) and a code to indicate a state for which the agency has data (C202). String 3506 retrieves information about the office as well as whether or not another source of data exists (C502). If there is another source of data, string 3507 should be invoked to obtain its office information.

STRING ID	INFORMATION RETRIEVED	QUALIFYING INFORMATION
C3506* OFFICE_ RETRIEVAL_BY	Agency Code (C1), Organization Name (C2), State (C202), Office Information (C100), Office Comments (C150), LAC Information (C125), Other Source Agency (C502)	--Agency (C1) State of activity (C202)
C3507* OTH_SOURCE_ RETRIEVAL_BY_ AGENCY/STATE	State (C202) Other Source Information (C500) Other Source Comments (C550)	--Other Source Agency (C502) --State of activity (C202)

Appendix C presents a detailed description of each new string, instructions on how to invoke the string, and all illustrations. Appendix D contains listings of actual runs of some of the new strings (the command as well as the output). For a listing of the actual stored strings, issue the command DESCRIBE STRINGS:

IV. Tools Available for Review of Station Data in the MWDI

To facilitate review of data stored in the MWDI, the NAWDEX Program Office has developed two procedures: (1) Natural Language Strings to generate either a table of a selected repeating group or a series of tables for all repeating groups, and (2) MWDI Retrieval System commands to produce a series of tables of all data for selected stations. The String option will be useful if only part of the station data is to be reviewed.

A. Natural Language Strings

Strings have been discussed in the previous section. A more complete documentation of these station review strings is found in Appendix C, and Appendix D contains sample runs. The following illustrates how the strings can be used to list all data for all stations in state 38, county 067 (C22 = 38067). The following System 2000 Natural Language commands should be issued:

```
*C3601(38067):  or *SITE_IDENT(38067):
*C3611(38067):  or *SW(38067):
*C3614(38067):  or *GW(38067):
*C3617(38067):  or *QW(38067):
*C3619(38067):  or *BIO(38067):
*C3626(38067):  or *PHY(38067):
*C3628(38067):  or *SED(38067):
```

```
*C3630(38067):  or *CHM(38067):
*C3633(38067):  or *OTHR_RGS(38067):
```

To list the Projects Repeating Group data, Networks Repeating Group data, Funding Repeating Group data, Other Source Repeating Group data, and Source Information Repeating data for all GS stations in State 38, issue the following command,

```
*C3633(38000*38999 AND NON-KEY C4 EQ USGS):
```

or

```
*OTHR_RGS(38000*38999 AND NON-KEY C4 EQ USGS):
```

To list active GS Surface Water station data in state 38, issue the following command,

```
*3611(38000*38999 AND NON-KEY C4 EQ USGS AND NON-KEY C150 EQ Y):
```

or

```
*SW(38000*38999 AND NON-KEY C4 EQ USGS AND NON-KEY C150 EQ Y):
```

B. MWDI Retrieval System Commands

Commands to print all the data in the Station Identification (General Information), Surface Water, QW, Biological QW, Chemical QW, Sediment QW, and Physical QW Repeating Groups have been stored in the cataloged data set NWDX.STATION.REPORT1. Commands to print all the data in the Projects, Networks, Funding, Other Source, and Source Information Repeating Groups have been stored in the cataloged data set NWDX.STATION.REPORT2. To report all data for all stations in state 38, the following commands should be submitted:

```
/*PROCLIB  NWDX.PROCLIB
// EXEC RETRIEVE
//SYSIN DD *
FIND C0 C100 C300 C400 C454 C500 C600 C700 C800 C900 C1000 C1100
  C1200 WHERE C22 SPANS 38000*38999
// EXEC REPORT
//SYSIN DD DSN=NWDX.STATION.REPORT1,DISP=SHR
//  EXEC REPORT
//SYSIN DD DSN=NWDX.STATION.REPORT2,DISP=SHR
/*
```

V. NAWDEX Publications, References, and Instruction Manuals

The NAWDEX Program Office has produced a number of publications, references, and instruction manuals. Appendix E is a list of these, and those which are especially pertinent for performing LAC duties have been starred (*). Copies may be obtained by contacting Beverly Myers of the NAWDEX Program Office.

VI. Structuring Natural Language Retrieval Commands

A. Rules for Structuring the Conditional (WHERE) Clause

The following rules are to be used as guidelines. They are in order according to their priority, and if there is a conflict in implementing them, the highest priority rule should be applied.

1. If a condition will qualify none or a few data sets, it should be located at the right of the clause. Conditions should be sorted, or ordered from right to left according to the increasing number of data sets that probably will qualify.

2. Order the key conditions from left to right by ascending level numbers of the components or repeating groups.

3. Order the non-key conditions from left to right according to the ascending level numbers of the components or repeating groups.

4. Keyed elements should be the rightmost components in the clause and non-key elements should be to their left. For example, LIST C1 WH C102 LT 1975 AND C22 SPANS 06000*06999:

B. Rules for Structuring Retrieval Commands from the MWDI

1. There should be only one keyed element from level 0 in the conditional clause, and it should be the element that qualifies the fewest data sets. Other keyed elements should be temporarily declared non-key in the clause. For virtually all retrievals made by a LAC, the one keyed element should be C22, either a state/county code or a range of state/county codes. For example, LIST C4,C5 WHERE NON-KEY C12 EQ SW AND C22 SPANS 06000*06999.

2. If a keyed element in a conditional clause is from level 0, elements from lower level repeating groups should always be declared non-key. For example, LIST C4,C5 WH NON-KEY 350 EQ Y AND NON-KEY C12 EQ SW AND C22 SPANS 06000*06999:

NOTE: These rules can only be applied to the MWDI since each repeating group will occur only one (with the exception of the WRD 800 PROJECTS Repeating Group, the 900 NETWORKS Repeating Group, the 1000 FUNDING Repeating Group, the 1100 OTHR_SRC Repeating Group, and the 1200 SOURCE_INFO Repeating Group).

VII. NAWDEX News File and MWDI-WDSD String Information Files

The Program Office has established a number of files to improve communications with the Local Assistance Centers and to facilitate the use of the strings that are being created in the MWDI and WDSD.

The NAWDEX News File (NWDX.News) currently has four classes of information:

STRING - the identification of the MWDI and WDSD String Information Files and identification of new strings.

UPDATE - news of planned, current, and past update activities of the two data bases.

COMPUTER - the date and news of the computer system, SYSTEM 2000 changes/problems, and disk information.

DATA BASE - the date and news of MWDI and WDSD data base activities such as data base definition changes and volume statistics.

The format and information on using the file is given in Appendix F.

The MWDI and WDSD String Information Files [NWDX.STRINGS (MWDI) NWDX.STRINGS (WDSD)] are similar in format to the information in Appendix C and also include the strings themselves. These files will serve to document any new strings until our next memo to the Local Assistance Centers. Information concerning their use is also found in Appendix F. Since we are continuing to test and refine the strings, this documentation will be more current than Appendix C.

Appendix A

JOB Control Language for Accessing the MWDI

I. Submitting a Job in Batch Processing

A. MWDI

```
/*RELAY  PUNCH RE2
//          job card
/*PROCLIB  NWDX.PROCLIB
//   EXEC MWDINL
//SYSIN DD *
USER,NWDX:
DBN IS MWDI:
      ::
      ::              SYSTEM 2000 COMMANDS
      ::
EXIT:
/*
//
$$$
```

B. WDSD

```
/*RELAY  PUNCH RE2
//          job card
/*PROCLIB  NWDX.PROCLIB
//   EXEC WDSDNL
//SYSIN DD *
USER,NWDX:
DBN IS WDSD:
      ::
      ::              SYSTEM 2000 COMMANDS
      ::
EXIT:
/*
//
$$$
```

II. Submitting jobs under TSO

```
LOGON user id/password  PROC(WRDPROC)
EX 'VG4A44E.NWDX.CLIST(NWDXS2K)'
EX 'VG4A44E.NWDX.CLIST(TSOMWDI)'
                    or (TSOWDSD)'
USER,NWDX:
DBN IS MWDI:
    or WDSD:
     ::
     ::          SYSTEM 2000 COMMANDS
     ::
EXIT:
```

NOTE: The MWDITEST and WDSDTEST CLIST has been changed from 'VG41EOE.S2KTEST.CLIST' to 'VG4A44E.S2KTEST.CLIST'.

Appendix B

Identification of MWDI Components and Source of Update Responsibility

RG	COMPONENT	UPDATE RESPONSIBILITY				
			WATSTORE			
		WRD District	Daily Values	Peak Flow	EPA STORET	NAWDEX System
0	Site Identification Data					
	1 NAWDEX ID					X
	2 LATITUDE		X	X	X	
	3 LONGITUDE		X	X	X	
	4 NAWDEX AGENCY CODE		X	X	X	
	5 STATION NUMBER		X	X	X	
	6 OWDC AGENCY CODE					X
	7 STATION NAME		X	X	X	
	71 NON-US COUNTRY		X	X	X	X
	8 STATE		X	X	X	
	9 COUNTY		X	X	X	
	10 HYDROLOGIC UNIT	X				X
	11 CONGRESSIONAL DISTRICT	X				
	12 SITE TYPE		X	X	X	
	13 BASIN DESCRIPTION	X				
	17 WDSD OFFICE CODE	X	X	X	X	
	18 CITY CODE	X				
	19 DRAINAGE AREA		X	X	X	
	20 NON-CONTRIBUTING DRAINAGE AREA FLAG		X	X	X	
	21 LAST UPDATE					X
	22 STATE/COUNTY CODE					X
	40 OTHER DATA	X	X	X	X	

RG	COMPONENT	UPDATE RESPONSIBILITY				
			WATSTORE			
		WRD District	Daily Values	Peak Flow	EPA STORET	NAWDEX System
100	Surface Water Data					
	101 SW BEGIN YEAR		X	X		
	102 SW END YEAR		X	X		
	103 SW INTERRUPT FLAG		X	X		
	104 SW OWDC NUMBER					X
	107 SW OWDC SEQUENCE NUMBER					X
	110 COMPLETE STAGE		X			
	111 PEAK STAGE			X		
	112 LOW STAGE	X				
	113 MEDIA AVAILABILITY OF STAGE DATA	X		X		
	115 COMPLETE FLOW		X			
	116 PEAK FLOW			X		
	117 LOW FLOW	X				
	119 MISCELLANEOUS FLOW MEASUREMENTS	X				
	121 MEDIA AVAILABILITY OF FLOW DATA	X	X	X		
	124 VOLUME		X			
	125 VOLUME CHANGE	X				
	126 MEDIA AVAILABILITY OF VOLUME DATA	X	X			
	140 OTHER SURFACE WATER AVAILABLE	X	X			
	143 SW TELEMETRY EQUIPMENT USED	X				
	145 PURPOSE FOR WHICH THIS SITE IS OPERATED	X				
	149 SW PLANNED OR NEEDED CODE	X				
	150 SITE STATUS CODE FOR SW ACTIVITY		X	X		

RG	COMPONENT	UPDATE RESPONSIBILITY				
			WATSTORE			
		WRD District	Daily Values	Peak Flow	EPA STORET	NAWDEX System
200	Ground Water Data					
	201 GW BEGIN YEAR	X	X			
	202 GW END YEAR	X	X			
	203 GW INTERRUPT FLAG	X	X			
	204 GW OWDC NUMBER					X
	208 PRINCIPLE AQUIFER GEOLOGIC UNIT CODE	X				
	209 AQUIFER TYPE CODE	X				
	210 LEVEL FREQUENCY CODE	X	X			
	211 MEDIA AVAILABILITY OF LEVEL DATA	X	X			
	212 DISCHARGE FREQUENCY CODE	X				
	213 MEDIA AVAILABILITY OF DISCHARGE DATA	X				
	214 SUBSIDENCE FREQUENCY CODE	X				
	215 MEDIA AVAILABILITY OF SUBSIDENCE DATA	X				
	221 WELL DEPTH	X				
	240 OTHER GROUND WATER DATA AVAILABLE	X				
	242 MAJOR VARIANCES IN OBSERVED DATA	X				
	243 GW TELEMETRY SYSTEM USED	X				
	245 PURPOSE FOR WHICH THIS SITE IS OPERATED	X				
	249 GW PLANNED OR NEEDED CODE	X				
	250 SITE STATUS CODE FOR GW ACTIVITY	X	X			

RG	COMPONENT	UPDATE RESPONSIBILITY				
			WATSTORE			
		WRD District	Daily Values	Peak Flow	EPA STORET	NAWDEX System
300	Quality of Water Data					
	301 QW BEGIN YEAR		X		X	
	302 QW END YEAR		X		X	
	303 INTERRUPT FLAG		X		X	
	304 QW OWDC NUMBER					X
	307 QW OWDC SEQUENCE NUMBER					X
	343 QW TELEMETRY EQUIPMENT USED	X				
	345 PURPOSE FOR WHICH THIS SITE IS OPERATED	X				
	349 QW PLANNED OR NEEDED CODE	X				
	350 SITE STATUS CODE FOR QW ACTIVITY	X	X		X	
400	Biologic QW					
	401 - 411 BIOLOGIC QW PARAMETERS				X	
	446 MEDIA AVAILABILITY OF BIOLOGIC QW DATA	X			X	
	450 BIOLOGIC QW STATUS				X	
454	Biologic QW2					
	455 - 464 BIOLOGIC PARAMETERS				X	
500	Physical QW					
	501 TEMPERATURE		X		X	
	502 SPECIFIC CONDUCTIVITY		X		X	
	503 TURBIDITY		X		X	
	504 COLOR		X		X	
	505 ODOR				X	

RG	COMPONENT	UPDATE RESPONSIBILITY: WRD District	WATSTORE: Daily Values	WATSTORE: Peak Flow	EPA STORET	NAWDEX System
	506 pH		X		X	
	507 SUSPENDED SOLIDS				X	
	546 MEDIA AVAILABILITY OF PHYSICAL QW DATA	X	X		X	
	550 PHYSICAL QW STATUS		X		X	
600	Sediment QW					
	601 BED LOAD MEASUREMENTS				X	
	602 CONCENTRATION, SUSPENDED		X		X	
	603 CONCENTRATION, TOTAL		X		X	
	604 PARTICLE SIZE, SUSPENDED		X		X	
	605 PARTICLE SIZE, BED MATERIAL				X	
	606 SEDIMENT DISCHARGE, SUSPENDED		X		X	
	607 SEDIMENT DISCHARGE, TOTAL		X		X	
	646 MEDIA AVAILABILITY OF SEDIMENT QW DATA		X		X	
	650 SEDIMENT QW STATUS	X	X		X	
700	Chemical QW					
	701 DISSOLVED SOLIDS		X		X	
	702 MAJOR IONS		X		X	
	703 HARDNESS				X	
	705 SILICA		X		X	
	706 PHOSPHORUS		X		X	
	707 PHOSPHORUS SPECIES				X	
	708 - 719 OTHER CHEMICAL PARAMETERS				X	

RG	COMPONENT	UPDATE RESPONSIBILITY				
			WATSTORE			
		WRD District	Daily Values	Peak Flow	EPA STORET	NAWDEX System
	720 DISSOLVED OXYGEN		X		X	
	721 OTHER DISSOLVED GASES				X	
	746 MEDIA AVAILABILITY OF CHEMICAL QW DATA	X	X		X	
	750 CHEMICAL QW STATUS	X	X		X	
800	Projects					
	801 WRD PROJECT NUMBER	X				
900	Networks					
	901 NETWORK CODE	X				
1000	Funding					
	1001 CUSTOMER NUMBER	X				
	1002 PERCENTAGE	X				
	1003 DISCIPLINE	X				
1100	Other Source					
	1101 AGENCY CODE FOR ANOTHER SOURCE OF DATA	X	X	X	X	
1200	Source File					
	1201 SOURCE FILE ID		X	X	X	
	1202 SOURCE FILE AGENCY		X	X	X	

Appendix C

Documentation of NAWDEX Strings

3100 SERIES - MWDI SITE REPORT

STRING ID: 3101*
3101*SITE_REPORT_BY_STATE/CNTY

FUNCTION:

THIS STRING PRODUCES A REPORT OF SITES WITHIN A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUNTIES. INFORMATION IS RETRIEVED FOR MWDI COMPONENTS C4,C5,C7,C12,C17, ORDERED BY C4,C5.

TO INVOKE:

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).
*C3101(-----):

EXAMPLE:
*C3101(38067*38069):

STRING ID: 3102*
3102*SITE_REPORT_BY_LAT/LONG

FUNCTION:

THIS STRING PRODUCES A REPORT OF SITES WITHIN A SPECIFIED LATITUDE/LONGITUDE POLYGON. INFORMATION IS RETRIEVED FOR MWDI COMPONENTS C4,C5,C7,C12,C17 ORDERED BY C4,C5.

TO INVOKE:

REPLACE --1-- WITH A RANGE OF LATITUDES (C2) AND --2-- WITH A RANGE OF LONGITUDES (C3).
*C3102(--1--,--2--):

EXAMPLE:
*C3102(484500*486000,0970000*0975000):

```
STRING ID:                                                        3103*
     3103*SITE_REPORT_BY_STATE/CNTY_SITE_TYPE                        *

FUNCTION:                                                           *

THIS STRING PRODUCES A REPORT OF A SPECIFIED TYPE OF SITES          *
WITHIN A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUN-        *
TIES.  INFORMATION IS RETRIEVED FOR MWDI COMPONENTS C4,C5,C7,       *
C12,C17 ORDERED BY C4,C5.                                           *

TO INVOKE:                                                          *

REPLACE --1-- WITH A SITE TYPE (C12) AND --2-- WITH A RANGE OF      *
STATE/COUNTY CODES (C22).                                           *
          *C3103(--1--,--2--):                                      *

EXAMPLE:                                                            *
          *C3103(SW,38067*38069):                                   *
                                                                    *

--------------------------------------------------------------------

STRING ID:                                                        3104*
     3104*QW_SITE_REPORT_BY_STATE/CNTY_SITE_TYPE                    *

FUNCTION:                                                           *

THIS STRING PRODUCES A REPORT OF A SPECIFIED TYPE OF SITES          *
WHICH HAD OR HAVE QW ACTIVITY WITHIN A SPECIFIED STATE/COUNTY       *
OR RANGE OF STATES AND COUNTIES.  INFORMATION IS RETRIEVED FOR      *
COMPONENTS C4,C5,C7,C12,C17 ORDERED BY C4,C5.                       *

TO INVOKE:                                                          *

REPLACE --1-- WITH A SITE TYPE (C12) AND --2-- WITH A RANGE OF      *
STATE/COUNTY CODES (C22).                                           *
          *C3104(--1--,--2--):                                      *

EXAMPLE:                                                            *
          *C3104(SW,38067*38069):                                   *
                                                                    *

--------------------------------------------------------------------
```

```
STRING ID:                                                          3105*
     3105*SURFACE_WATER_SITE_REPORT_BY_STATE/CNTY                      *

FUNCTION:                                                             *

THIS STRING PRODUCES A REPORT OF SURFACE WATER SITES WITHIN A          *
SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUNTIES.                *
INFORMATION IS RETRIEVED FOR COMPONENTS C4,C5,C7,C12,C17               *
ORDERED BY C4,C5.                                                     *

TO INVOKE:                                                            *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).                *
          *C3105(-----):                                              *

EXAMPLE:                                                              *
          *C3105(38067*38069):                                        *
                                                                      *

----------------------------------------------------------------------

STRING ID:                                                          3106*
     3106*GW_SITE_REPORT_BY_STATE/CNTY                                *

FUNCTION:                                                             *

THIS STRING PRODUCES A REPORT OF GW SITES WITHIN A SPECIFIED           *
STATE/COUNTY OR RANGE OF STATES AND COUNTIES.  INFORMATION IS          *
RETRIEVED FOR COMPONENTS C4,C5,C7,C12,C17 ORDERED BY C4,C5.           *

TO INVOKE:                                                            *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).                *
          *C3106(-----):                                              *

EXAMPLE:                                                              *
          *C3106(38000*38999):                                        *
                                                                      *

----------------------------------------------------------------------
```

```
STRING ID:                                                        3107*
     3107*GW/QW_SITE_REPORT_BY_STATE/CNTY                           *

FUNCTION:                                                          *

THIS STRING PRODUCES A REPORT OF GW SITES (WELLS) HAVING OR        *
HAVING HAD QW ACTIVITY WITHIN A SPECIFIED STATE/COUNTY OR          *
RANGE OF STATES AND COUNTIES.  INFORMATION IS RETRIEVED FOR        *
COMPONENTS C4,C5,C7,C12,C17 ORDERED BY C4,C5.                      *

TO INVOKE:                                                         *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).            *
          *C3107(-----):                                           *

EXAMPLE:                                                           *
          *C3107(38000*38999):                                     *
                                                                   *

-------------------------------------------------------------------

STRING ID:                                                        3108*
     3108*SURFACE_WATER/QW_SITE_REPORT_BY_STATE/CNTY                *

FUNCTION:                                                          *

THIS STRING PRODUCES A REPORT OF SURFACE WATER SITES HAVING OR     *
HAVING HAD QW ACTIVITY WITHIN A SPECIFIED STATE/COUNTY OR          *
RANGE OF STATES AND COUNTIES.  INFORMATION IS RETRIEVED FOR        *
COMPONENTS C4,C5,C7,C12,C17 ORDERED BY C4,C5.                      *

TO INVOKE:                                                         *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).            *
          *C3108(-----):                                           *

EXAMPLE:                                                           *
          *C3108(38067*38069):                                     *
                                                                   *

-------------------------------------------------------------------
```

3200 SERIES - WATER PARAMETER LIST REPORT

STRING ID: 3201*
3201*SURFACE_WATER_PARM_LIST_BY_STATE/CNTY *

FUNCTION: *

THIS STRING PRODUCES A LISTING OF SW PARAMETERS FOR SITES *
WITHIN A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND *
COUNTIES. INFORMATION IS ALSO REPORTED FOR COMPONENTS C4, *
C5,C7,C12,C17, AND THE REPORT IS ORDERED BY C4,C5. *

TO INVOKE: *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22). *
*C3201(-----): *

EXAMPLE: *
*C3201(38067*38069): *
*

STRING ID: 3202*
3202*SW_PARM_LIST_BY_LAT/LONG *

FUNCTION: *

THIS STRING PRODUCES A LISTING OF SW PARAMETERS FOR SITES *
WITHIN A SPECIFIED LATITUDE/LONGITUDE POLYGON. INFORMATION *
IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,C12,C17, AND THE *
REPORT IN ORDERED BY C4,C5. *

TO INVOKE: *

REPLACE --1-- WITH A RANGE OF LATITUDES (C2) AND --2-- WITH A *
RANGE OF LONGITUDES (C3). *
*C3202(--1--,--2--): *

EXAMPLE: *
*C3102(484500*486000,0970000*0975000): *
*

```
STRING ID:                                                        3203*
     3203*GW_PARM_LIST_BY_STATE/CNTY                                *

FUNCTION:                                                          *

THIS STRING PRODUCES A LISTING OF GW PARAMETERS FOR SITES          *
WITHIN A SPECIFIED STATE/CNTY OR RANGE OF STATES AND COUNTIES.     *
INFORMATION IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,C12,C17,      *
AND THE REPORT IS ORDERED BY C4,C5.                                *

TO INVOKE:                                                         *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).           *
          *C3203(-----):                                           *

EXAMPLE:                                                           *
          *C3203(38000*38999):                                     *
                                                                   *

-------------------------------------------------------------------

STRING ID:                                                        3204*
     3204*GW_PARM_LIST_BY_LAT/LONG                                 *

FUNCTION:                                                          *

THIS STRING PRODUCES A LISTING OF GW PARAMETERS FOR SITES          *
WITHIN A SPECIFIED LATITUDE/LONGITUDE POLYGON.  INFORMATION        *
IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,C12,C17, AND THE          *
REPORT IS ORDERED BY C4,C5.                                        *

TO INVOKE:                                                         *

REPLACE --1-- WITH A RANGE OF LATITUDES (C2) AND --2-- WITH        *
A RANGE OF LONGITUDES (C3).                                        *
          *C3204(--1--,--2--):                                     *

EXAMPLE:                                                           *
          *3204(484500*486000,0970000*0975000):                    *
                                                                   *

-------------------------------------------------------------------
```

```
STRING ID:                                                          3205*
     3205*QW_PARM_LIST_BY_STATE/CNTY                                  *

FUNCTION:                                                             *

THIS STRING PRODUCES A LISTING OF PARAMETERS FOR SITES HAVING         *
OR HAVING HAD QW ACTIVITY WITHIN A SPECIFIED STATE/COUNTY OR          *
RANGE OF STATES AND COUNTIES.  INFORMATION IS ALSO REPORTED FOR       *
COMPONENT C4,C5,C7,C12,C17, AND THE REPORT IS ORDERED BY C4,C5.       *

TO INVOKE:                                                            *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).               *
          *C3205(-----):                                              *

EXAMPLE:                                                              *
          *C3205(38067*38069):                                        *
                                                                      *

-----------------------------------------------------------------------

STRING ID:                                                          3206*
     3206*QW_PARM_LIST_BY_LAT/LONG                                    *

FUNCTION:                                                             *

THIS STRING PRODUCES A LISTING OF PARAMETERS FOR SITES HAVING         *
OR HAVING HAD QW ACTIVITY WITHIN A SPECIFIED LATITUDE/LONGITUDE       *
POLYGON.  INFORMATION IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,       *
C12,C17, AND THE REPORT IS ORDERED BY C4,C5.                          *

TO INVOKE:                                                            *

REPLACE --1-- WITH A RANGE OF LATITUDES (C2) AND --2-- WITH A         *
RANGE OF LONGITUDES (C3).                                             *
          *C3206(--1--,--2--):                                        *

EXAMPLE:                                                              *
          *C3206(4845000*486000,0970000*0975000):                     *
                                                                      *

-----------------------------------------------------------------------
```

3300 SERIES - SITE COUNT REPORT

```
STRING ID:                                                        3301*
     3301*SITE_COUNT_BY_STATE/CNTY                                  *

FUNCTION:                                                           *

THIS STRING PRODUCES A COUNT OF SITES WITHIN A SPECIFIED            *
STATE/COUNTY OR RANGE OF STATES AND COUNTIES.                       *

TO INVOKE:                                                          *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).             *
          *C3301(-----):                                            *

EXAMPLE:                                                            *
          *C3301(38067*38069):                                      *
                                                                    *
```

```
STRING ID:                                                        3302*
     3302*SITE_COUNT_BY_LAT/LONG                                    *

FUNCTION:                                                           *

THIS STRING PRODUCES A COUNT OF SITES WITHIN A SPECIFIED LATI-      *
TUDE/LONGITUDE POLYGON.                                             *

TO INVOKE:                                                          *

REPLACE --1-- WITH A RANGE OF LATITUDES (C2) AND --2-- WITH         *
A RANGE OF LONGITUDES (C3):                                         *
          *C3302(--1--,--2--):                                      *

EXAMPLE:                                                            *
          *C3302(484500*486000,0970000*0975000):                    *
                                                                    *
```

```
STRING ID:                                                        3303*
     3303*SITE_COUNT_BY_SITE_TYPE/STATE/CNTY                        *

FUNCTION:                                                          *

THIS STRING PRODUCES A COUNT OF A SPECIFIED TYPE OF SITES          *
WITHIN A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUNTIES.   *

TO INVOKE:                                                         *

REPLACE --1-- WITH A SITE TYPE (C12) AND --2-- WITH A RANGE OF     *
STATE/COUNTY CODES (C22).                                          *
          *C3303(--1--,--2--):                                     *

EXAMPLE:                                                           *
          *C3303(SW,38000*38999):                                  *
                                                                   *

-------------------------------------------------------------------

STRING ID:                                                        3304*
     3304*QW_SITE_COUNT_BY_SITE_TYPE/STATE/CNTY                     *

FUNCTION:                                                          *

THIS STRING PRODUCES A COUNT OF A SPECIFIED TYPE OF SITE WITH      *
QW ACTIVITY (PRESENT OR PAST) WITHIN A SPECIFIED STATE/COUNTY      *
OR RANGE OF STATES AND COUNTIES.                                   *

TO INVOKE:                                                         *

REPLACE --1-- WITH A SITE TYPE (C12) AND --2-- WITH A RANGE        *
OF STATE/COUNTY CODES (C22).                                       *
          *C3304(--1--,--2--):                                     *

EXAMPLE:                                                           *
          *C3304(SW,38067*38069):                                  *
                                                                   *

-------------------------------------------------------------------
```

SERIES 3400 - QW REPORT

```
STRING ID:                                                        3401*
     3401*QW_REPORT_BY_STATE/CNTY                                   *

FUNCTION:                                                          *

THIS STRING PRODUCES A REPORT OF QW SITES (ACTIVE OR INACTIVE)     *
WITHIN A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUNTIES.   *
IT REPORTS WHETHER OR NOT BIOLOGIC, PHYSICAL, SEDIMENT, AND        *
CHEMICAL QW PROGRAMS ARE ACTIVE OR INACTIVE FOR THE SITES.  IT     *
ALSO RETRIEVES INFORMATION FOR MWDI COMPONENTS C4,C5,C7,C12,       *
C17, ORDERED BY C4,C5.                                             *

TO INVOKE:                                                         *

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).           *
          *C3401(-----):                                           *

EXAMPLE:                                                           *
          *C3401(38067*38069):                                     *
                                                                   *
```

```
STRING ID:                                                        3402*
     3402*QW_REPORT_BY_LAT/LONG                                     *

FUNCTION:                                                          *

THIS STRING PRODUCES A REPORT OF QW SITES (ACTIVE OR INACTIVE)     *
WITHIN A SPECIFIED LATITUDE/LONGITUDE POLYGON.  IT REPORTS         *
WHETHER BIOLOGIC, PHYSICAL, SEDIMENT, AND CHEMICAL QW              *
PROGRAMS ARE ACTIVE OR INACTIVE FOR THE SITES.  IT ALSO RE-        *
TRIEVES INFORMATION FOR MWDI COMPONENTS C4,C5,C7,C12,C17,          *
ORDERED BY C4,C5.                                                  *

TO INVOKE:                                                         *

REPLACE --1-- WITH A RANGE OF LATITUDE (C2) AND --2-- WITH A       *
RANGE OF LONGITUDES (C3).                                          *
          *C3402(--1--,--2--):                                     *

EXAMPLE:                                                           *
          *C3402(484500*486000,0970000*0975000):                   *
                                                                   *
```

```
STRING ID:                                                          3403*
     3403*QW_REPORT_BY_SITE_TYPE/STATE/CNTY                           *

FUNCTION:                                                            *

THIS STRING PRODUCES A REPORT OF A SPECIFIED TYPE OF QW SITES        *
(ACTIVE OR INACTIVE) WITHIN A SPECIFIED STATE/COUNTY OR RANGE        *
OF STATES AND COUNTIES.  IT REPORTS WHETHER OR NOT BIOLOGIC,         *
PHYSICAL, SEDIMENT, AND CHEMICAL QW PROGRAMS ARE ACTIVE OR IN-       *
ACTIVE FOR THE SITES.  IT ALSO RETRIEVES INFORMATION FOR MWDI        *
COMPONENTS C4,C5,C7,C12,C17, ORDERED BY C4,C5.                       *

TO INVOKE:                                                           *

REPLACE --1-- WITH A SITE TYPE (C12) AND --2-- WITH A RANGE OF       *
STATE/COUNTY CODES (C22).                                            *
          *C3403(--1--,--2--):                                       *

EXAMPLE:                                                             *
          *C3403(SW,38067*38069):                                    *
                                                                     *

-----------------------------------------------------------------------
```

STRING ID: 3115*

3115*SURFACE_WATER_SITE_REPORT_STATE/COUNTY/YEAR

FUNCTION:

THIS STRING PRODUCES A REPORT OF SITES FOR A SPECIFIED SITE BEGIN YEAR AND STATE/COUNTY OR YEAR AND A RANGE OF STATES AND COUNTIES. INFORMATION IS ALSO RETRIEVED FOR MWDI COMPONENTS C4,C5,C7,C12,C17, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE --1-- WITH A YEAR (C101) AND --2-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3115(--1--,--2--):

EXAMPLE:

*C3115(1939,38067*38069):

STRING ID: 3211*

3211*SURFACE_WATER_PARM_LIST_STATE/COUNTY/YEAR

FUNCTION:

THIS STRING PRODUCES A LISTING OF SW PARAMETERS FOR SITES FOR A SPECIFIED SITE BEGIN YEAR AND STATE/COUNTY OR YEAR AND A RANGE OF STATES AND COUNTIES. INFORMATION IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,C12,C17, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE --1-- WITH A YEAR (C101) AND --2-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3211(--1--,--2--):

EXAMPLE:

*C3211(1939,38067*38069):

STRING ID: 3221*

3221*ACTIVE_SURFACE_WATER_PARM_LIST_STATE/COUNTY/YEAR

FUNCTION:

THIS STRING PRODUCES A LISTING OF ACTIVE SURFACE WATER PARAMETERS FOR SITES FOR A SPECIFIED SITE BEGIN YEAR AND STATE/COUNTY OR YEAR AND RANGE OF STATES AND COUNTIES. INFORMATION IS ALSO REPORTED FOR COMPONENTS C4,C5,C7,C12,C22, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE --1-- WITH A YEAR (C101) AND --2-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3221(--1--,--2--):

EXAMPLE:

*C3221(1940,38067*38069):

STRING ID: 3125*

3125*ACTIVE_SURFACE_WATER_SITE_REPORT_STATE/COUNTY/YEAR

FUNCTION:

THIS STRING PRODUCES A REPORT OF ACTIVE SITES FOR A SPECIFIED SITE BEGIN YEAR AND STATE/CNTY OR A YEAR AND RANGE OF STATES AND COUNTIES. INFORMATION IS RETRIEVED FOR COMPONENTS C4,C5, C12,C17, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE --1-- WITH A YEAR (C101) AND --2-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3125(--1--,--2--):

EXAMPLE:

*C3125(1940,38067*38069):

STRING ID: 3404*

3404*QW_REPORT_STATE/COUNTY_80_COLUMNS

THIS STRING PRODUCES A REPORT OF QW SITES FOR A SPECIFIED STATE/ COUNTY OR RANGE OF STATES AND COUNTIES. IT REPORTS WHETHER PHYSICAL, CHEMICAL, SEDIMENT, AND BIOLOGICAL QW ARE ACTIVE OR INACTIVE FOR THE SITES. IT ALSO RETRIEVES COMPONENTS C4,C5,C7, C12,C17, AND THE REPORT IS ORDERED BY C4,C5. (THIS REPORT IS SIMILAR TO C3401, EXCEPT THAT THE REPORT IS 80 COLUMNS WIDE RATHER THAN 132).

TO INVOKE:

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES (C22).
*C3404(-----):

EXAMPLE:
*C3404(38067*38069)

STRING ID: 3405*

3405*SURFACE_WATER/QW_REPORT_STATE/COUNTY

FUNCTION:

THIS STRING PRODUCES A REPORT OF SURFACE WATER QW SITES FOR A SPECIFIED STATE/COUNTY OR RANGE OF STATES AND COUNTIES. IT REPORTS WHETHER PHYSICAL, CHEMICAL, SEDIMENT, AND BIOLOGICAL QW ARE ACTIVE OR INACTIVE FOR THE SITES. IT ALSO RETRIEVES COMPONENTS C4,C5,C7,C17, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE ---- WITH A RANGE OF STATE/COUNTY CODES (C22).
*3405(-----):

EXAMPLE:
*C3405(38067*38069):

STRING ID: 3406*

3406*GROUND_WATER/QW_REPORT_STATE/COUNTY

FUNCTION:

THIS STRING PRODUCES A REPORT OF GW QW SITES WITHIN A SPECIFIED STATE/COUNTY OR A RANGE OF STATES AND COUNTIES. IT REPORTS WHETHER PHYSICAL, CHEMICAL, SEDIMENT, AND BIOLOGICAL QW ARE ACTIVE OR INACTIVE FOR THE SITES. IT ALSO RETRIEVES COMPONENTS C4,C5,C7,C12,C17, AND THE REPORT IS ORDERED BY C4,C5.

TO INVOKE:

REPLACE ----- WITH A RANGE OF STATE/COUNTY CODES.

*C3406(-----):

EXAMPLE:

*C3406(38067*38069):

STRING ID: 3501*

3501*FUNDING_REPORT_STATE/COUNTY

FUNCTION:

THIS STRING PRODUCES A REPORT OF FUNDING INFORMATION FOR ACTIVE USGS SITES WITHIN A SPECIFIED STATE/COUNTY OR A RANGE OF STATES AND COUNTIES. IT ALSO RETRIEVE INFORMATION FOR COMPONENTS C7,C5, C8, AND THE REPORT IS ORDERED BY C8,C5.

TO INVOKE:

REPLACE --1-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3501(-----):

EXAMPLE:

*C3501(38067*38069):

STRING ID: 3097*

3097*TEXT_SEARCH_REPORT

FUNCTION:

THIS STRING PRODUCES A REPORT OF STATION PARAMETERS FOR STATIONS CONTAINING A SPECIFIED SERIES OF CHARACTERS WITHIN THE STATION NAME FOR ALL SURFACE WATER (C150 EXISTS) STATIONS IN A STATE/COUNTY OR RANGE OF STATES AND COUNTIES. IT REPORTS THE ORGANIZATIONS, THE STATION NUMBER, THE STATION NAME, THE STATE, THE COUNTY, THE PERIOD OF RECORD FOR SURFACE WATER QUANTITY ACTIVITIES, THE SITE TYPE, THE COMPLETE FLOW FREQUENCY CODE, THE LATITUDE, THE LONGITUDE, AND THE QW STATUS INDICATOR.

TO INVOKE:

REPLACE --1-- WITH A DESIRED SUBTITLE, --2-- WITH THE SERIES OF CHARACTERS ON WHICH THE SEARCH IS TO BE BASED, AND --3-- WITH A RANGE OF STATE/COUNTY CODES (C22).

*C3097(--1--,--2--,--3--):

EXAMPLE:

*C3097(TENNESSEE RIVER,TENN,01000*01999):

THIS EXAMPLE RETRIEVES ALL ALABAMA STATIONS THAT HAVE TENN ANYWHERE IN THE STATION NAME AND THAT HAVE SURFACE WATER QUANTITY ACTIVITIES (C150 EXISTS.) THE REPORT HAS A SUBTITLE OF TENNESSEE RIVER.

STRING ID: 3601*

3601*SITE_IDENT

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE SITE INFORMATION REPEATING GROUP (C0) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3601(--1--):

EXAMPLE:

*C3601(38067*38069):

STRING ID: 3611*

3611*SW

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE SURFACE WATER REPEATING GROUP (C100) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3611(--1--):

EXAMPLE:

*C3611(38067*38069):

STRING ID: 3614*

3614*GW

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE GROUND WATER REPEATING GROUP (C200) FOR A SPECIFIED STATE AND COUNTY OR RANGE OR STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:
REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3614(--1--):

EXAMPLE:

*C3614(38067*38069):

STRING ID: 3617*

3617*QW

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE WATER QUALITY REPEATING GROUP (C300) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3617(--1--):

EXAMPLE:

*C3617(38067*38069):

STRING ID: 3619#

3619#BIO

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE BIOLOGICAL QW REPEATING GROUPS (C450 AND C454) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

```
*C3619(--1--):
```

EXAMPLE:

```
*C3619(38067*38069):
```

STRING ID: 3626#

3626#PHY

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE PHYSICAL QW REPEATING GROUP (C500) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

```
*C3626(--1--):
```

EXAMPLE:

```
*C3626(38067*38069):
```

STRING ID: 3628*

3628*SED

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE SEDIMENT QW REPEATING GROUP (C600) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3628(--1--):

EXAMPLE:

*C3628(38067*38069):

STRING ID: 3630*

3630*CHM

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE CHEMICAL QW REPEATING GROUP (C700) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3630(--1--):

EXAMPLE:

*C3630(38067*38069):

STRING ID: 3633*

3633*OTHR_RGS

FUNCTION:

THIS STRING PRODUCES A TABULATION OF STATION DATA FROM THE PROJECTS REPEATING GROUP (C800), THE NETWORKS REPEATING GROUP (C900), THE FUNDING REPEATING GROUP (C1000), THE OTHER SOURCE REPEATING GROUP (C1100), AND THE SOURCE INFORMATION REPEATING GROUP (C1200) FOR A SPECIFIED STATE AND COUNTY OR RANGE OF STATES AND COUNTIES. THE TABULATION IS IN SEQUENCE BY NAWDEX_ ID (C1).

TO INVOKE:

REPLACE --1-- WITH A STATE/COUNTY CODE (C22) OR A RANGE OF CODES.

*C3633(--1--):

EXAMPLE:

*C3633(38067*38069):

STRING ID: 3506*
3506*OFFICE_RETRIEVAL_BY_AGENCY/STATE *

FUNCTION: *

THIS STRING RETRIEVES INFORMATION USEFUL IN CONTACTING AN * ORGANIZATION AS A SOURCE OF WATER DATA. THE ARGUMENTS THE * USER PROVIDES ARE THE AGENCY CODE (C1) AND THE STATE CODE * (C202). THE AVAILABLE INFORMATION THAT IS RETRIEVED IS THE * AGENCY CODE (C1), THE ORGANIZATION NAME (C2), THE OFFICE * INFORMATION (C110 THROUGH C123), THE LAC INFORMATION (REPEAT- * ING GROUP 125), OFFICE COMMENTS (REPEATING GROUP 150), AND * ANOTHER SOURCE AGENCY (C502). IF THERE IS ANOTHER SOURCE OF * INFORMATION (C502), THEN STRING C3507 SHOULD BE INVOKED. *

TO INVOKE: *

REPLACE --1-- WITH AN AGENCY CODE (C1) AND --2-- WITH * A STATE CODE (C202). *
*C3506(--1--,--2--): *

EXAMPLE: *
*C3506(GA003,13): *
*

STRING ID: 3507*
3507*OTH_SOURCE_RETRIEVAL_BY_AGENCY/STATE *

FUNCTION: *

THIS STRING RETRIEVES INFORMATION ON ANOTHER SOURCE OF WATER * DATA BASED ON AN AGENCY CODE (C502) AND A STATE CODE (C202). * THE INFORMATION RETRIEVED IS THE OTHER SOURCE OFFICE INFORMA- * TION REPEATING GROUPS C500 AND C550, AND THE STATE (C202). *

TO INVOKE: *

REPLACE --1--, WITH AN AGENCY CODE (C502) AND --2-- WITH A * STATE CODE (C202). *
*C3507(--1--,--2--): *

EXAMPLE: *
*C3507(GA003,13): *
*

Appendix D

Sample Execution of Various Strings

MWDI QUALITY WATER REPORT 1
11/30/77

NAWDEX AGENCY CODE	AGENCY STATION NUMBER	STATION NAME	WDSD OFC. CODE	SITE TYPE	PHYS. QW	CHEM. QW	SEDIMENT QW	BIOL. QW
USEPA	JAMESRIVER30	BR VA STATE HWY CARTERSVILLE		SW				N
					N			
						N		
USEPA	JAMESRIVER31	UPSTRM FM BR US RT 522 MAIDENS		SW				N
					N			
						N		
USGS	02035000	JAMES RIVER AT CARTERSVILLE, VA	51	SW	Y			
							N	
						Y		
								Y
VA001	2-JMS140.00	JAMES RIVER		SW				
								Y
					Y			
						Y		

___Y=ACTIVE QW N=INACTIVE QW___

*C3404(31075*51075):

STRING ID:
3404*QW_REPORT_STATE/
COUNTY 80 COLUMNS

STATION NAME	STATION NUMBER	STATE CODE	CUSTOMER NUM.	PERCENT	DISCIPLINE
HORSEPEN RN NR HERNDON VA	01644270	51	002A	50	SW
			VA09	50	SW
STAVE RUN NEAR RESTON VA	01644291	51	001A	45	SW
			001A	10	QW
			001A	40	SD
			001A	5	PR
SMILAX BRANCH AT RESTON VA	01644295	51	001A	45	SW
			001A	10	QW
			001A	40	SD
			001A	5	PR
FOLLY LICK B AT HERNDON VA	01644330	51	002A	50	SW
			VA09	50	SW
SUGARLAND RUN NEAR DRANESVILLE, VA.	01644370	51	002A	50	SW
			VA09	50	SW
DIFFICULT RUN NEAR FAIRFAX, VA.	01645700	51	002A	50	SW
			VA09	50	SW
DIFFICULT RN AT VALE ROAD NR VIENNA VA	01645725	51	002A	50	SW
			VA09	50	SW
L DIFFICULT RN NR VIENNA VA	01645775	51	002A	50	SW
			VA09	50	SW
SNAKEDEN BR AT RESTON, VA.	01645784	51	VA09	25	SW
			002A	25	SW
			VA09	5	QW
			002A	5	QW
			VA09	15	SD
			002A	15	SD
			VA09	5	PR
			002A	5	PR
WOLFTRAP C NR VIENNA VA	01645850	51	002A	50	SW
			VA09	50	SW
CAPTAIN HICKORY RN NR GREAT FALLS VA	01645940	51	002A	50	SW
			VA09	50	SW
ROCKY RUN NEAR GREATFALLS, VA.	01645975	51	002A	50	SW
			VA09	50	SW
SCOTT RUN NEAR MCLEAN VA	01646200	51	002A	50	SW
			VA09	50	SW
DEAD RN AT CHURCHILL ROAD AT MCLEAN VA	01646230	51	002A	50	SW
			VA09	50	SW
DEAD RN AT OLD GEORGETOWN PIKE NR MCLEAN VA	01646270	51	002A	50	SW
			VA09	50	SW
PIMMIT RN AT OLD DOMINION DRIVE AT MCLEAN VA	01646650	51	002A	50	SW
			VA09	50	SW
HOLMES RN AT ANNANDALE RD NR ANNANDALE VA	01652606	51	002A	50	SW
			VA09	50	SW

STRING 3501

*C3501(51059*51059):

STRING ID:
3501*FUNDING_REPORT_STATE/
COUNTY

MASTER WATER DATA INDEX RETRIEVAL
11/30/77

TENNESSEE RIVER

ORGANIZATION	AGCY. STA. NO.	STATION NAME	STATE	COUNTY	REGIN YEAR	END YEAR	SITE TYPE	COMPLETE FLOW	LAT.	LONG.	QW
USGS	03591500	TENNESSEE R AT RIVERTON AL	1	33	1903	1938	SW				
USGS	03572000	TENNESSEE R AT WIDOWS BAR NR BRIDGE PORT AL	1	71	1919		SW		345302	854506	
USTVA	03572500	TENNESSEE R NR SCOTTSBORO AL	1	71	1948		LK		343820	855830	
USTVA		TENN R AT BOSHART CREEK AL	1	95	1939	1968	LK		343119	861035	
USTVA		TENNESSEE R AT GUNTERSVILLE ALA	1	95	1939		LK		342212	861721	
USGS	03573500	TENNESSEE R AT GUNTERSVILLE ALA	1	95	1904	1938	SW	E	342223	861722	
USTVA		TENN R AT GUNTERSVILLE DAM HW ALA	1	95	1939		LK	1	342519	862334	
USTVA		TENN R AT GUNTERSVILLE DAM TW ALA	1	95	1939		LK	1	342520	862337	
USTVA		TENN R AT GUNTERSVILLE DAM LL ALA	1	95	1937		LK	1	342533	862338	
USGS	03575480	TENN. R AT HUNTSVILLE PUMP STATION NR HUNTSVILLE	1	89	1924		SW	1	343406	863316	
											Y
USGS	03575500	TENNESSEE RIVER AT WHITESBURG, ALA.	1	89	1924		SW	1	343418	863329	
											N
USGS	03577150	TENNESSEE RIVER AT DECATUR, ALA.	1	103	1924		SW		343647	865826	
											Y
USTVA		TENNESSEE R AT BROWNS FERRY ALA	1	83	1966		LK		344228	870727	
USTVA		TENNESSEE R AT GOLDFIELD BRANCH ALA	1	79	1966	1968	LK		344415	871443	
USTVA		TENN RIVER AT WHEELER DAM HW ALA	1	79	1936		LK	1	344748	872252	
USTVA		TENN RIVER AT WHEELER DAM TW ALA	1	79	1936		LK	1	344749	872252	
USTVA		TENN RIVER AT WILSON DAM HW AL	1	33	1933		LK	1	344739	873727	
USTVA		TENN RIVER AT WILSON DAM HW AL	1	33	1933		LK	1	344740	873729	
USGS	03589500	TENNESSEE RIVER AT FLORENCE, ALA.	1	77	1871		SW	1	344713	874012	
											Y
USGS	03590680	TENNESSEE RIVER AT SMITHSONIA, ALA.	1	77	1938		SW		344720	875810	
											N
USTVA		TENNESSEE R AT WATERLOO AL	1	77	1938	1966	LK		345453	880326	

*C3097(TENNESSEE RIVER,TENN,01000*01999):

STRING ID:
3097*TEXT_SEARCH_
REPORT

ELEMENTS 1-71 OF SITE REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	LATITUDE	LONGITUDE	NAWDX AGCY CODE	ORGANIZATION STATION NUMBER	OWDC AGCY CODE	STATION NAME	COUNTRY CODE
USGS01644270	385631	772527	USGS	01644270	GS	HORSEPEN RN NR HERNDON VA	
USGS01644290	385657	772218	USGS	01644290	GS	STAVE RUN AT RESTON VA	
USGS01644291	385656	772216	USGS	01644291	GS	STAVE RUN NEAR RESTON VA	
USGS01644295	385710	772204	USGS	01644295	GS	SMILAX BRANCH AT RESTON VA	
USGS01644300	385800	772217	USGS	01644300	GS	SUGARLAND RUN AT HERNDON VA	
USGS01644330	385845	772317	USGS	01644330	GS	FOLLY LICK B AT HERNDON VA	
USGS01644370	390047	772212	USGS	01644370	GS	SUGARLAND RUN NEAR DRANESVILLE, VA.	
USGS01645160	390216	771847	USGS	01645160		NICHOLS RUN NEAR DRANESVILLE VA	
USGS01645700	385229	772018	USGS	01645700	GS	DIFFICULT RUN NEAR FAIRFAX VA	
USGS01645725	385411	771908	USGS	01645725	GS	DIFFICULT RN AT VALE ROAD NR VIENNA VA	
USGS01645750	385352	772112	USGS	01645750	GS	SF LITTLE DIFFICULT RUN NEAR FAIRFAX VA	
USGS01645775	385505	771932	USGS	01645775	GS	L DIFFICULT RN NR VIENNA VA	
USGS01645784	385548	772043	USGS	01645784	GS	SNAKEDEN BR AT RESTON, VA.	
USGS01645800	385406	771557	USGS	01645800	GS	PINEY BRANCH AT VIENNA VA	
USGS01645850	385702	771706	USGS	01645850	GS	WOLFTRAP C NR VIENNA VA	
USGS01645870	385752	771956	USGS	01645870	GS	COLVIN RN TR AT RESTON VA	
USGS01645900	385756	771836	USGS	01645900	GS	COLVIN RUN AT RESTON, VA.	
USGS01645940	385901	771713	USGS	01645940	GS	CAPTAIN HICKORY RN NR GREAT FALLS VA	
USGS01645950	385649	771909	USGS	01645950	GS	PINEY RUN AT RESTON, VA.	
USGS01645975	385616	771449	USGS	01645975	GS	ROCKY RUN NEAR GREATFALLS, VA.	
USGS01646000	385833	771446	USGS	01646000	GS	DIFFICULT RUN NEAR GREAT FALLS VA	
USGS01646200	385732	771221	USGS	01646200	GS	SCOTT RUN NEAR MCLEAN VA	
USGS01646230	385641	771101	USGS	01646230	GS	DEAD RN AT CHURCHILL ROAD AT MCLEAN VA	
USGS01646270	385709	771059	USGS	01646270	GS	DEAD RN AT OLD GEORGETOWN PIKE NR MCLEAN VA	
USGS01646300	385119	771051	USGS	01646300	GS	DEAD RUN NEAR MCLEAN VA	
USGS01646600	385441	771105	USGS	01646600	GS	PIMMIT RUN NEAR FALLS CHURCH VA	
USGS01646620	385455	771041	USGS	01646620	GS	PIMMIT RN AT WESTMORELAND RD NR MCLEAN VA	
USGS01646650	385545	771012	USGS	01646650	GS	PIMMIT RN AT OLD DOMINION DRIVE AT MCLEAN VA	
USGS01646700	385605	770826	USGS	01646700	GS	PIMMIT RUN AT ARLINGTON, VA.	
USGS01646750	385418	770817	USGS	01646750	GS	LITTLE PIMMIT RUN TRIBUTARY AT ARLINGTON VA	

ELEMENTS 8-40 OF SITE REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	STATE	COUNTY	HYDRO-LOGIC UNIT	CONG DIST	TYPE OF SITE	BA-SIN	WDSD OFF. CODE	CITY CODE	DRAINAGE AREA	NC AREA	DATE OF LAST UPDATE	OTHER DATA
•••												
• USGS01644270	51	59	020705 K	10	SW	4	51	0440	13.40		06/12/1976	6
• USGS01644290	51	59	020705 K	10	SW	3	51	0440	.05		03/16/1978	6
• USGS01644291	51	59	020705 K	10	SW	3	51	0440	.08		03/16/1978	6
• USGS01644295	51	59	020705 K	10	SW	4	51	0440	.32		03/16/1978	6
• USGS01644300	51	59	020705 K	10	SW	4	51	0440	3.36		04/04/1977	16
• USGS01644330	51	59	020705 K	10	SW	4	51	0440	.64		06/12/1976	6
• USGS01644370	51	59	020705 K	10	SW	4	51	0440	13.40		06/12/1976	6
• USGS01645150	51	59			SW						04/04/1977	
• USGS01645700	51	59	020705 K	10	SW	4	51	0440	4.29		03/25/1978	6
• USGS01645725	51	59	020705 K	10	SW	4	51	0440	10.40		06/12/1976	6
• USGS01645750	51	59	020705 K	10	SW	4	51	0440	1.59		04/04/1977	16
• USGS01645775	51	59	020705 K	10	SW	4	51	0440	6.40		06/12/1976	6
• USGS01645784	51	59	020705 K	10	SW	3	51	0440	.79		03/16/1978	1
• USGS01645800	51	59	020705 K	10	SW	3	51	0440	.51		04/04/1977	16
• USGS01645850	51	59	020705 K	10	SW	4	51	0440	6.75		06/12/1976	6
• USGS01645870	51	59	020705 K	10	SW	13	51	0440	1.06		06/12/1976	1
• USGS01645900	51	59	020705 K	10	SW	13	51	0440	5.09		06/12/1976	16
• USGS01645940	51	59	020705 K	10	SW	4	51	0440	1.47		06/12/1976	
• USGS01645950	51	59	020705 K	10	SW	4	51	0440	2.06		06/12/1976	16
• USGS01645975	51	59	020705 K	10	SW	4	51	0440	3.22		06/12/1976	6
• USGS01646000	51	59	020005 K		SW		51	0440	57.90		03/16/1978	6
• USGS01646200	51	59	02070010	10	SW	3	51	0440	4.69		03/25/1978	6
• USGS01646230	51	59	020705 K	10	SW	3	51	0440	1.07		06/12/1976	6
• USGS01646270	51	59	020705 K	10	SW	3	51	0440	1.83		06/12/1976	6
• USGS01646300	51	59	020705 K	10	SW	3	51		1.94		04/04/1977	1
• USGS01646600	51	59	020705 K	10	SW	4	51	0440	2.87		04/04/1977	16
• USGS01646620	51	59	020705 K	10	SW	3	51		3.44		06/12/1976	
• USGS01646650	51	59	020005 K	10	SW	3	51	0440	5.00		06/12/1976	6
• USGS01646700	51	59	020705 K	10	SW	3	51	0440	8.12		06/12/1976	16
• USGS01646750	51	59	020705 K	10	SW	3	51	0440	.41		04/04/1977	16

*C3601(51059 AND NON-KEY C4 EQ USGS):

STRING ID:
3601*SITE_IDENT

ELEMENTS OF SURFACE WATER REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	SW BEGN YEAR	SW END YEAR	I N T	SW OWDC NO	SW OWDC SEQUENCE NUMBER	COM STAGE	PK STAGE	LOW STAGE	STAGE MED	COM FLW	PK FLW	LOW FLW	MIS FLW	FLW MED	VOL UME	CHG VOL UME	VOL UME MED	OTHER SW DATA AVAILABLE	TEL EME TRY	SW PUR POSE	PLAN NEED CODE	ST ACT IVI
USGS01644270	1960			12119	248690000000		1				9							A58		AFR		Y
USGS01644290	1965	1973	N	20923	248720000000	E			D	3	9			D				14		R		N
USGS01644291	1970		N	32373	248735000000	2			D	1				D				14		R		Y
USGS01644295	1967		N	20924	248750000000	2			D	1				D				14		R		Y
USGS01644300	1964	1972		12153	248780000000	E			D		9	9		D				A3578				N
USGS01644330	1960			12120	248810000000		1				9									AFR		Y
USGS01644370	1960			12121	248840000000		1				9							A58		FHR		Y
USGS01645160																						
USGS01645700	1949	1970		12024	248990000000		E		C		E	9		C				58		AFR		N
USGS01645725	1960			12122	249020000000		1				9							A58		AFR		Y
USGS01645750	1966	1972		12152	249050000000	E			D		9	9		D				A3578				N
USGS01645775	1960			12123	249080000000		1				9							A58		AFR		Y
USGS01645784	1972		N	36896	249095000000	2			C	1				D				14		R		Y
USGS01645800	1962	1971		12172	249110000000	E			D		9	9		D				3578				N
USGS01645850	1960			12124	249140000000		1				9							A58		AFR		Y
USGS01645870	1962	1973		36897	249155000000	E					9	9						3				N
USGS01645900	1960	1972		12155	249170000000	E			D		9	9		D				A3578				N
USGS01645940	1960			32328	249185000000		1				9									AFR		Y
USGS01645950	1964	1967		12170	249200000000	E			D		9	9		D				A3578				N
USGS01645975	1960			12125	249230000000		1				9							A58		AFR		Y
USGS01646000	1934		N				1		C	1	1			C								Y
USGS01646200	1960	1973		12177	249260000000		E		C		E	9		C				A3578		AFR		N
USGS01646230	1960			12126	249320000000		1				9							A58		AFR		Y
USGS01646270	1960			12127	249350000000		1				9							A58		AFR		Y
USGS01646300	1960	1962				E												3				N
USGS01646600	1960	1972		12169	249440000000	E			D		9	9		D				A3578				N
USGS01646620	1960	1962				E																N
USGS01646650	1960			12128	249470000000		1				9							A58		AFR		Y
USGS01646700	1960	1972		12168	249500000000	E					9	9						A3578				N
USGS01646750	1962	1972		12187	249530000000	E			D		9	9		D				3578				N

STRING ID:
3611*SW

*C3611(51059 AND NON-KEY C4 EQ USGS):

ELEMENTS OF GROUND WATER REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	GW BEGN YEAR	GW END YEAR	I N T	GW OWDC NO	PRINCI- PAL AQUIFER	AQUI FER TYPE	GW LE- VEL MED	LE- VEL RGE	DIS CHA MED	DIS CHG NCE	SUB SID MED	SUB SID MED	WELL DEPTH	OTHER GW DATA	MAJOR VARIA- TIONS	TEL EME TRY	GW PUR POSE	PLAN NEED CODE	GW ACT- IVE
***																			
• USGS01644270																			
• USGS01644290																			
• USGS01644291																			
• USGS01644295																			
• USGS01644300																			
• USGS01644330																			
• USGS01644370																			
• USGS01645160																			
• USGS01645700																			
• USGS01645725																			
• USGS01645750																			
• USGS01645775																			
• USGS01645784																			
• USGS01645800																			
• USGS01645850																			
• USGS01645870																			
• USGS01645900																			
• USGS01645940																			
• USGS01645950																			
• USGS01645975																			
• USGS01646000																			
• USGS01646200																			
• USGS01646230																			
• USGS01646270																			
• USGS01646300																			
• USGS01646600																			
• USGS01646620																			
• USGS01646650																			
• USGS01646700																			
• USGS01646750																			

STRING ID:
3614*GW

*C3614(51059 AND NON-KEY C4 EQ USGS):

ELEMENTS OF WATER QUALITY REPEATING GROUP 1
04/04/78

NAWDEX SITE IDENTIFIER	QW BEGIN YEAR	QW END YEAR	QW INTER-RUPTED	QW OWDC NUMBER	GW OWDC SEQUENCE NUMBER	QW TELEMETRY	QW PURPOSE	PLANNED NEEDED CODE	QW ACTIVE
***									
* USGS01644270									
* USGS01644290	1968	1971		73004	228275000000		R		N
* USGS01644291	1970			82841	228277500000		R		Y
* USGS01644295	1968			73005	228280000000		R		Y
* USGS01644300	1969	1969							N
* USGS01644330									
* USGS01644370									
* USGS01645160	1968	1968							N
* USGS01645700									
* USGS01645725									
* USGS01645750	1969	1969							N
* USGS01645775									
* USGS01645784	1972			82233	228515000000		R		Y
* USGS01645800	1969	1969							N
* USGS01645850									
* USGS01645870									
* USGS01645900									
* USGS01645940									
* USGS01645950									
* USGS01645975									
* USGS01646000	1945	1969	N	84058	228520000000				N
* USGS01646200	1969	1969							N
* USGS01646230									
* USGS01646270									
* USGS01646300	1969	1969							N
* USGS01646600	1969	1969							N
* USGS01646620									
* USGS01646650									
* USGS01646700									
* USGS01646750	1969	1969							N

STRING ID: 3617*QW

*C3617(51059 AND NON-KEY C4 EQ USGS):

ELEMENTS OF BIOLOGICAL REPEATING GROUP C400
04/04/78

NAWDEX SITE IDENTIFIER	ENTERIC BACTERIA	NATIVE BACTERIA	PHYTO-PLANKTON	ZOO-PLANKTON	PERI-PHYTON	MACRO PHYTON	MICRO INVERT-EBRATES	MACRO INVERT-EBRATES	VERTE-BRATES	FUNGI	VIRUSES	BIO-LOGICAL MEDIA	BIO-LOGICAL ACTIVE
•••													
• USGS01644270													
• USGS01644290													
• USGS01644291													
• USGS01644295													
• USGS01644300													
• USGS01644330													
• USGS01644370													
• USGS01645160													
• USGS01645700													
• USGS01645725													
• USGS01645750													
• USGS01645775													
• USGS01645784													
• USGS01645800													
• USGS01645850													
• USGS01645870													
• USGS01645900													
• USGS01645940													
• USGS01645950													
• USGS01645975													
• USGS01646000													
• USGS01646200													
• USGS01646230													
• USGS01646270													
• USGS01646300													
• USGS01646600													
• USGS01646620													
• USGS01646650													
• USGS01646700													
• USGS01646750													

NAWDEX SITE IDENTIFIER	PRIMARY PRODUC- TIVITY	SECONDARY PRODUC TIVITY	CHEMOSYN THETIC ACTIVITY	BIOSTIM ULATORY TEST	TOXI CITY TEST	OTHER BIOASSAY TEST	CHEMICAL TISSUE ANALYSIS	HISTO- PATH ANALYSIS	OTHER TISSUE ANALYSIS
***									
* USGS01644270									
* USGS01644290									
* USGS01644291									
* USGS01644295									
* USGS01644300									
* USGS01644330									
* USGS01644370									
* USGS01645160									
* USGS01645700									
* USGS01645725									
* USGS01645750									
* USGS01645775									
* USGS01645784									
* USGS01645800									
* USGS01645850									
* USGS01645870									
* USGS01645900									
* USGS01645940									
* USGS01645950									
* USGS01645975									
* USGS01646000									
* USGS01646200									
* USGS01646230									
* USGS01646270									
* USGS01646300									
* USGS01646600									
* USGS01646620									
* USGS01646650									
* USGS01646700									
* USGS01646750									

*C3619(51059 AND NON-KEY C4 EQ USGS):

STRING ID: 3619*BIO

ELEMENTS OF PHYSICAL REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	TEMPERATURE	SPECIFIC CONDUCTANCE	TURBIDITY	COLOR	ODOR	PH	SUSPENDED SOLIDS	PHYSICAL MEDIA	PHYSICAL ACTIVE
***									
* USGS01644270									
* USGS01644290	A	R		R		R		D	N
* USGS01644291	H	H		H		E		D	Y
* USGS01644295	R	Q		Q		E		D	Y
* USGS01644300	A	A		A		A		D	N
* USGS01644330									
* USGS01644370									
* USGS01645160		A		A		A		D	N
* USGS01645700									
* USGS01645725									
* USGS01645750	A	A		A		A		D	N
* USGS01645775									
* USGS01645784	R	R		R		E		D	Y
* USGS01645800	A	A		A		A		D	N
* USGS01645850									
* USGS01645870									
* USGS01645900									
* USGS01645940									
* USGS01645950									
* USGS01645975									
* USGS01646000	S	S		S		S		D	N
* USGS01646200	A	A		A		A		D	N
* USGS01646230									
* USGS01646270									
* USGS01646300	A	A		A		A		D	N
* USGS01646600	A	A		A		A		D	N
* USGS01646620									
* USGS01646650									
* USGS01646700									
* USGS01646750	A	A		A		A		D	N

*C3626(51059 AND NON-KEY C4 EQ USGS):

STRING ID:
3626*PHY

ELEMENTS OF SEDIMENT REPEATING GROUP 1
04/04/78

NAWDEX SITE IDENTIFIER	BED LOAD	SUSPENDED CONCEN-TRATION	TOTAL CONCEN-TRATION	SUSPENDED PARTICLE SIZE	BED PARTICLE SIZE	SUSPEN-DED DIS CHARGE	TOTAL DIS-CHARGE	SEDI-MENT MEDIA	SEDI-MENT ACTIVE
***									
* USGS01644270									
* USGS01644290		D						C	N
* USGS01644291		2		E		2		D	N
* USGS01644295		2		E		2		D	N
* USGS01644300									
* USGS01644330									
* USGS01644370									
* USGS01645160									
* USGS01645700									
* USGS01645725									
* USGS01645750									
* USGS01645775									
* USGS01645784		0		E		0		D	Y
* USGS01645800									
* USGS01645850									
* USGS01645870									
* USGS01645900									
* USGS01645940									
* USGS01645950									
* USGS01645975									
* USGS01646000									
* USGS01646200									
* USGS01646230									
* USGS01646270									
* USGS01646300									
* USGS01646600									
* USGS01646620									
* USGS01646650									
* USGS01646700									
* USGS01646750									

*C3628(51059 AND NON-KEY C4 EQ USGS):

STRING ID:
3628*SED

ELEMENTS OF CHEMICAL REPEATING GROUP
04/04/78

NAWDEX SITE IDENTIFIER	DIS SOL IDS	MA- JOR IONS	HARD NESS	SIL ICA	PHOS PHOR OUS	PHOS SPE- CIES	NIT RO GEN	NIT. SPE- CIES	DET- ERG- ENTS	MINOR CNSTI TUENT	OTHER MINOR CONST	RADIO ACTI- VITY	RADIO CHEM. SPEC.	CAR CON	PESTI CIDE SPEC.	OTHR ORG. SPEC	BOD	COD	DO	OTHR DIS. GAS	CHEM- ICAL MEDIA	CHEM CAL ACTI
***																						
* USGS01644270																						
* USGS01644290	R	R	R	R		R		R		R											D	N
* USGS01644291	H	H	H	H	E	H		H		H										E	D	Y
* USGS01644295	Q	Q	Q	Q	E	Q		Q		Q										E	D	Y
* USGS01644300	A	A	A	A		A		A		A											D	N
* USGS01644330																						
* USGS01644370																						
* USGS01645160	A	A	A	A				A												A	D	N
* USGS01645700																						
* USGS01645725																						
* USGS01645750	A	A	A	A		A		A		A											D	N
* USGS01645775																						
* USGS01645784	R	R	R	R	E	R		R		R										E	D	Y
* USGS01645800	A	A	A	A		A		A		A											D	N
* USGS01645850																						
* USGS01645870																						
* USGS01645900																						
* USGS01645940																						
* USGS01645950																						
* USGS01645975																						
* USGS01646000	S	S	S	S		A		S		A										E	D	N
* USGS01646200	A	A	A	A		A		A		A											D	N
* USGS01646230																						
* USGS01646270																						
* USGS01646300	A	A	A	A		A		A		A											D	N
* USGS01646600	A	A	A	A		A		A		A											D	N
* USGS01646620																						
* USGS01646650																						
* USGS01646700																						
* USGS01646750	A	A	A	A		A		A		A											D	N

*C3630(51059 AND NON-KEY C4 EQ USGS):

STRING ID:
3630*CHM

NAWDEX SITE IDENTIFIER	WRD PROJECT NUMBER	NETWORK CODE	WRD CUSTOMER NUMBER	PERCENT OF FUNDS	DISCIPLINE	OTHER SOURCE ORG.	SOURCE FILE ID	SOURCE FILE AGENCY
USGS01644270								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01644290								
	VA001							
	VA004							
			001A	45	SW			
			001A	10	QW			
			001A	40	SD			
			001A	5	PR			
						USEPA		
							STOR	112WRD
							WATS	USGS
USGS01644291								
	VA001							
	VA004							
	VA003							
			001A	45	SW			
			001A	10	QW			
			001A	40	SD			
			001A	5	PR			
						USEPA		
							STOR	112WRD
							WATS	USGS
USGS01644295								
	VA001							
	VA004							
			001A	45	SW			
			001A	10	QW			
			001A	40	SD			
			001A	5	PR			
						USEPA		
							STOR	112WRD
							WATS	USGS
USGS01644300								
						USEPA		
							STOR	112WRD
USGS01644330								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01644370								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01645160								
						USEPA		
							STOR	112WRD
USGS01645700								
	VA020							

STRING ID:
3633*OTHR RGS

NAWDEX SITE IDENTIFIER	WRD PROJECT NUMBER	NETWORK CODE	WRD CUSTOMER NUMBER	PERCENT OF FUNDS	DISCIPLINE	OTHER SOURCE ORG.	SOURCE FILE ID	SOURCE FILE AGENCY
			002A	50	SW			
			VA09	50	SW			
							WATS	USGS
USGS01645725								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01645750								
						USEPA		
							STOR	112WRD
USGS01645775								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01645784								
	VA001							
	VA003							
	VA004							
			VA09	25	SW			
			002A	25	SW			
			VA09	5	QW			
			002A	5	QW			
			VA09	15	SD			
			002A	15	SD			
			VA09	5	PR			
			002A	5	PR			
						USEPA		
							STOR	112WRD
							WATS	USGS
USGS01645800								
						USEPA		
							STOR	112WRD
USGS01645850								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01645870								
USGS01645900								
USGS01645940								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01645950								
USGS01645975								
	VA020							
			002A	50	SW			
			VA09	50	SW			
USGS01646000								
						USEPA		
							STOR	112WRD
							WATS	USGS

NAWDEX SITE IDENTIFIER	RG 800 WRD PROJECT NUMBER	RG 900 NETWORK CODE	RG 1000 04/04/78 WRD CUSTOMER NUMBER	RG 1000 PERCENT OF FUNDS	RG 1000 DISCIPLINE	RG 1100 OTHER SOURCE ORG.	RG 1200 SOURCE FILE ID	RG 1200 SOURCE FILE AGENCY
USGS01646200	VA020		002A	50	SW	USEPA	STOR	112WRD
			VA09	50	SW		WATS	USGS
USGS01646230	VA020		002A	50	SW			
			VA09	50	SW			
USGS01646270	VA020		002A	50	SW			
			VA09	50	SW			
USGS01646300						USEPA	STOR	112WRD
USGS01646600						USEPA	STOR	112WRD
USGS01646620								
USGS01646650	VA020		002A	50	SW			
			VA09	50	SW			
USGS01646700								
USGS01646750						USEPA	STOR	112WRD

*C3633(51059 AND NON-KEY C4 EQ USGS):

EXIT:
04/04/78 11:50:59 END SYSTEM 2000 - VERSION 2.80

Appendix E

NAWDEX Publications, References, and Instruction Manuals

General Information Publications

1. The National Water Data Exchange (NAWDEX), by Melvin D. Edwards, U.S. Geological Survey, Open-File Report 77-259, 1977, 5 p.

2. Status of the National Water Data Exchange (NAWDEX)--September 1976, by Melvin D. Edwards, U.S. Geological Survey Open-File Report 76-719, 1976, 23 p. (Out of Stock)

3. Directory of Local Assistance Centers of the National Water Data Exchange (NAWDEX), by Melvin D. Edwards, U.S. Geological Survey, Open-File Report 76-880, 1976, 11 p. (This report is being revised and is now in preparation)

*4. Idenfification codes for organizations listed in computerized data systems of the U.S. Geological Survey, by Melvin D. Edwards and Margery O. Drilleau, U.S. Geological Survey Open-File Report 76-855, 1976, 58 p. (This publication is in process of revision)

5. Program of Operation for the National Water Data Exchange (NAWDEX), by Melvin D. Edwards, U.S. Geological Survey Open-File Report 77-708, 1977, 7 p.

6. Program Objectives for the National Water Data Exchange (NAWDEX) Fiscal Year 1978, by Melvin D. Edwards, U.S. Geological Survey Open-File Report. 77-791, 1977, 7 p.

7. Directory of Member Organizations of the National Water Data Exchange (NAWDEX), U.S. Geological Survey, National Water Data Exchange Report. September 1977, 21 p.

8. NAWDEX Newsletter (Issue No. 3, November 1977), Beverly M. Myers, editor, 16 p.

9. Status of the National Water Data Exchange (NAWDEX)--September 1977 by Melvin D. Edwards, U.S. Geological Survey Open-File Report. 78-154, 1977, 25 p.

Training Manuals

*10. Instructions for the Preparation of Data for the Master Water Data Index, by William A. Knecht and Melvin D. Edwards, U.S. Geological Survey, National Water Data Exchange Report, July 1977.

*11. Instructions for the Submission of Data to the Master Water Data Index, U.S. Geological Survey, National Water Data Exchange Report, September 1977, 28 p.

*12. MWDI Retrieval System User's Manual, National Water Data Exchange, by William A. Knecht and John Harding, September 30, 1977, 58 p.

*13. National Water Data Exchange (NAWDEX) System 2000 Data Retrieval Manual, by William A. Knecht, U.S. Geological Survey, National Water Data Exchange Report, September 1977, 281 p.

*14. NAWDEX Policies and Procedures Manual, by Melvin D. Edwards and Gerald L. Thompson, U.S. Geological Survey, National Water Data Exchange Report, November 1977, 64 p.

Appendix F

Accessing the NAWDEX News and String Files

I. Listing the NAWDEX files in Batch Processing

A. NWDX.NEWS

```
/*RELAY  PUNCH RE2
//                job card
//NEWS EXEC DKPRSEQ,DATA='NWDX.NEWS',DU=3330,DK=
/*
//
$$$
```

B. NWDX.STRINGS

```
/*RELAY  PUNCH RE2
//                job card
//STRINGS EXEC DKPRPDS,LIB='NWDX.STRING',MEM=MWDI,DU=3330,DK=
/*                                                  or WDSD
//
$$$
```

II. Accessing the NAWDEX Files under TSO

A. To list an entire file:

```
LOGON user id/password   PROC(WRDPROC)
EDIT 'NWDX.NEWS' CNTL
  or 'NWDX.STRINGS(MWDI)' CNTL
  or 'NWDX.STRINGS(WDSD)' CNTL
LIST
END
```

B. To list specific items:

```
LOGON user id/password   PROC(WRDPROC)
EDIT 'NWDX.NEWS' CNTL
TOP
FIND '*UPDATE' ALL

      all *UPDATE lines will be listed

TOP
FIND '*DATABASE' ALL

      all *DATABASE lines will be listed

END
EDIT 'NWDX.STRINGS(MWDI)' CNTL
TOP
FIND '3301*' ALL

      string *3301 documentation will be listed
```

```
TOP
FIND '3104*' ALL
END
LOGOFF
```

```
AS OF 01/03/77  THE FOLLOWING KEYS ARE AVAILABLE IN THE    *KEYS
NANCEX NEWS FILE:  STRINGS,UPDATE,COMPUTER, AND DATABASE.  *KEYS

STRINGS:                                                   *STRINGS
          NWDX.STRINGS(MWDI)    (CATALOGED)                *STRINGS
          NWDX.STRINGS(WDSD)    (CATALOGED)                *STRINGS

UPDATE:                                                    *UPDATE
          WDSD-THE PROGRAM OFFICE IS CURRENTLY UPDATING    *UPDATE
               THE WDSD.  THIS PROBABLY WILL CONTINUE      *UPDATE
               INDEFINITELY.                               *UPDATE
          MWDI-THE WATSTORE PEAK FLOW DATA AND DAILY       *UPDATE
               VALUES DATA HAVE NOW BEEN INDEXED IN THE    *UPDATE
               MWDI.                                       *UPDATE


COMPUTER:                                                  *COMPUTER


DATABASE:                                                  *DATABASE

          WDSD                                             *DATABASE
            .ELEMENT C102*OFC_CODE WAS MADE A KEY ELEMENT  *DATABASE
            .3 NEW ELEMENTS WERE ADDED: C152*OFC_CMNT_SEQ  *DATABASE
             IN THE C150 REPEATING GROUP, C555*OT_SRC_CMNT*DATABASE
             _SEQ IN THE C550 REPEATING GROUP, AND C1052* *DATABASE
             NONSRC_CMNT_SEQ IN THE C1050 REPEATING GROUP.*DATABASE
             A COMMENT SEQUENCE NUMBER IS TWO DIGITS LONG.*DATABASE
             THE FIRST DIGIT IS THE NUMBER OF THE COMMENT  *DATABASE
             AND THE SECOND DIGIT IS THE LINE NUMBER WITH-*DATABASE
             IN THE COMMENT.  DESCRIBE THE COMPONENTS TO   *DATABASE
             OBTAIN THEIR CHARACTERISTICS.                 *DATABASE

           MWDI                                            *DATABASE
            .A NEW LEVEL 1 RG (1200*) HAS BEEN ADDED TO    *DATABASE
             THE MWDI DATA BASE DEFINITION TO PERMIT THE   *DATABASE
             STORAGE OF AGENCY CODES USED BY EPA. THESE    *DATABASE
             CODES ARE NECESSARY TO EXTRACT DATA FROM      *DATABASE
             THE STORET SYSTEM AND THEREFORE MUST BE       *DATABASE
             RETRIEVABLE FROM THE MWDI VIA S/SK NATURAL    *DATABASE
             LANGUAGE.  ELEMENT 1201 WILL CONTAIN THE      *DATABASE
             VALUE 'STOR' FOR ALL STORET AGENCY CODES.     *DATABASE
             ELEMENT 1202 WILL CONTAIN THE AGENCY CODE     *DATABASE
             ITSELF.  DESCRIBE THE COMPONENTS TO OBTAIN    *DATABASE
             THEIR CHARACTERISTICS.                        *DATABASE
```