

3.7 Option 7 -- Utilities

The Utilities menu is used to complete several tasks that are not generally part of the common uses of QWDATA.

QWDATA PROCESSING ROUTINE REV NWIS_4_0+20010525
YOU ARE USING WATER-QUALITY DATABASE NUMBER 01
Utilities
1 -- Change Database Number
2 -- Add new site or modify site information
3 -- Station Change: Inventory, Change, or Delete
4 -- Count Water Quality Records
5 -- Set District Processing Status Flag
6 -- Set Data Quality Indicator (DQI) Code
7 -- Inventory DQI Codes
8 -- Produce Drinking-Water Alert Limit Table
98 -- Exit menu
99 -- Exit system
Please enter a number from the above list or a Unix command:

Utilities Menu Options

3.7.1 Option 1 – Change Database Number

The details of this option are described in the GWSI Database Administrator's Manual – Chapter 11.

3.7.2 Option 2 -- Add New Site or Modify Site Information

Option 2 is used to add a new site to the GWSI database or to modify the site header information for an existing site. When option 2 is selected, the user is prompted by software described at:

http://www.nwis.er.usgs.gov/nwisdocs4_4/gw/gwscreen-entry.input_Sect5.pdf

Any information entered by the user is entered into the GWSI database. The output from this entry is collected in a file named 'HDRsIN' and is available in the working directory of the user. This input file is described at:

http://www.nwis.er.usgs.gov/nwisdocs4_4/gw/gwscreen-entry.input_Sect5.pdf

3.7.3 Option 3 -- Station Change: Inventory, Change, or Delete

Program stnchange was written and is maintained by the GWSI work group. Instructions for using this program are located at the following URL:

http://www.nwis.er.usgs.gov/nwisdocs4_4/gw/gwinvt_Sect12.pdf

The station change program allows a user with proper access to inventory, delete, or change a station number. The agency code and station number are the primary keys used to identify locations approved for WRD data collection. An entry in the Sitefile is required for data stored in the NWIS databases. Updates that affect a station number are to be applied not only to the Sitefile, but also to associated databases (QW, GW, ADAPS, and/or Water Use) where data for the site exist. If program stnchange is used to delete a station number in the Sitefile, the NWIS databases are searched and data located in the NWIS that are identified as collected at that site will be deleted. The delete transaction in the NWIS is an immediate, physical delete. The only way to recover deleted records is by reentering them. An update to a station number is also performed in the Sitefile and the associated databases. Because the updates performed by stnchange have the possibility of affecting data in the NWIS and the national databases, this function should be closely coordinated and monitored within your WSC.

3.7.4 Option 4 -- Count Water Quality Records

Option 4 is used to count the number of records in the Water-Quality File for selected stations and optionally displays a list of the parameters present in all the analyses. When option 4 is selected, the following prompts are displayed:

```
THIS PROGRAM LISTS THE COUNT OF QWDATA RECORDS FOR A STATION  
DO YOU WANT A LIST OF PARAMETERS (USING ADDPC) ?  
DO YOU WANT TO ENTER SITE ID'S FROM THE TERMINAL (YES OR NO) ?  
DO YOU WANT THE OUTPUT  
TO YOUR TERMINAL(T) OR TO A FILE(F)?  
PLEASE ENTER  T -- FOR TERMINAL  
OR  F -- FOR FILE.
```

Program to count water quality records

A list of parameters can be included in the output if desired. If the station numbers are entered from the terminal, the agency code and station number must be entered for each

site of interest. If the station numbers are entered from a file, the file format needed is described in [Appendix G](#). If the output is directed to a file, a filename must be provided.

3.7.5 Option 5 -- Set District Processing Status Flag

Option 5 is used by the person(s) responsible for water-quality data management to set District Processing Status for samples. Valid district processing status codes are shown in [Appendix A; table 9](#). When selecting option 5, the following submenu is displayed:

```
THIS PROGRAM SETS THE RECORD STATUS FLAG

DO YOU WANT TO FLAG RECORDS AS:

  1 -- (R) READY TO TRANSMIT
  2 -- (Z) COMPLETE, BUT DO NOT TRANSMIT
  3 -- (N) NEW RECORD
  4 -- (F) FIELD DATA
  5 -- (L) LABORATORY DATA
  6 -- (P) PENDING APPROVAL

PLEASE ENTER 1-6 :
```

Program to set district processing status flag

Upon data input, the flag is automatically set to **`R** to indicate that the sample is ready to transmit. Analyses of local interest that are limited to internal uses may have the flag set to **`Z** to indicate that the sample is complete, but not to be transmitted. After a selection is made from the submenu above, the program requires entry of record numbers either from the terminal or a file. The records can be identified by record number, or by station number, date, time, medium code, and agency code. If a file is used, the format should be the same as shown in [Appendix G](#). If the selected record has the flag set to **`Z** and a request is made to change the flag, the following message is displayed giving you the option of changing the flag or not:

**Record 97905711 is currently flagged "local file only (Z)"
Do you want to set it to "transmit" (R) (Yes or No)?**

Currently (2001), one program is being used to retrieve samples for a national aggregation of USGS water-quality data (NWISWeb). This program sets the flag to **`T** to indicate that the sample has been selected. Information about the use of this flag for the national aggregation of water-quality data is available at:

<http://water.usgs.gov/admin/memo/QW/qw00.10.html>

3.7.6 Option 6 -- Set Data Quality Indicator (DQI) Code

Option 6 is used by the person(s) responsible for water-quality data management to set the DQI code. Valid DQI codes are listed in [Appendix A; table 14](#). The DQI code of S is the default setting. When option 6 is selected the following submenu is displayed:

```

This program will set the DQI code for a given set of:
station selection
date selection
measurement selection
DQI remapping scenarios

Do you want to enter station numbers at the terminal (Y/N,<CR>=Y)?

```

Program for water-quality data management to set the DQI code

Station numbers can be entered on the screen or from a file. After all the desired station numbers have been entered, the user is queried for a range of dates. The date prompts are:

```

Enter begin sample date/time (time is optional): (yyyymmddhhmm) 20000101
Enter end sample date/time (time is optional): (yyyymmddhhmm) 200101011200

```

Time is **optional** when providing the date range; if no time is entered, the software will include all results for the dates entered. If a begin date is entered with no end date, no records will be located. After the sample date range is entered, a measurement selection is entered from the following list:

```

qwdqiflag -- enter measurement selection

You have 3 options:
1 -- accept all parameters and method codes
2 -- enter parameters, optionally with method at terminal
3 -- load parameters, optionally with method from a file

Enter option desired (1-3,<CR>=1):

```

Program to enter measurement selection

If **option 1--accept all parameters and method codes--** is selected as the measurement method, the user enters a selection from the eight options listed above. After the selection is entered, the user must enter a file name for the report that contains the listing of the DQI remappings that will occur. In addition to this output file, a short report of the changes to be made to DQI codes is printed to the terminal. Before any changes are made to any DQI codes, the user must verify that the changes listed in the output file. A user should review the report that describes the changes to be made before verifying the remappings.

If **option 2--enter parameters, optionally with method codes--** is selected as the measurement method, the program queries for individual parameter codes and associated method codes. The entry of a specific method code is optional. If no method code is entered, all method codes will be included for that parameter. After the parameter and method codes have been entered, a selection from the eight options listed above is required. The report that contains the listing of the DQI remappings and updating of DQI codes is the same as described for option 1.

If **option 3--load parameters, optionally with method from a file--** is selected from the menu above, the program queries for an input file that uses a format described in *Appendix G*. After the file name is entered, a selection from the eight options listed above is required. The report that contains the listing of the DQI remappings and updating of DQI codes is the same as described for option 1.

For each of these three options, eight options for DQI remapping scenarios are available as displayed on the following screen:

```

qwdqiflag -- select from DQI remap scenarios

You have 8 options:
  1 -- Typical records approval:      OLD=[A/S] => NEW=R
  2 -- In-review records approval:    OLD=I      => NEW=R
  3 -- In-review records rejection:    OLD=I      => NEW=Q
  4 -- Proprietary record identification: OLD=[A,S]  => NEW=P
  5 -- Proprietary record approval:   OLD=P      => NEW=O
  6 -- Proprietary record rejection:   OLD=P      => NEW=X
  7 -- Systematic rejection:          OLD=[A,R,S] => NEW=Q
  8 -- User-specified:                OLD set    => NEW x

Enter option (1-8, <CR>=1):

```

DQI remapping scenarios

A report containing the selections for changing the DQI codes is prepared for the user to review prior to applying the changes. An example of this report is included in [Appendix C](#). It is recommended that the user review this report before applying the changes to the DQI values. The report can be reviewed by printing the file or viewing it in a separate window.

qwdqiflag specifications are complete.

**A report will be generated listing the remappings that will occur.
You will be given an opportunity to review that report before the changes are made.**

**Enter name of file to hold report --
: dqi_report**

**The QW tables have been scanned.
Number of DQI codes to be changed: 341
Number of QW records: 50**

**A detailed report of DQI changes is available in the file--
dqi_report**

Do you want the file spooled (Y/N,<CR>=N)?

NOTE! Please review the report before responding to the next query...

Do you want to update (Y) or cancel (N) (Y/N,<CR>=N)?

3.7.7 Option 7 -- Inventory DQI Codes

Option 7 is used by the person(s) responsible for water-quality data management to check or inventory DQI codes. Valid DQI codes are included in [Appendix A; table 14](#). When this option is selected, the user is asked if the output is to be to the terminal or to a file. The program checks each database, counts the number of DQI codes, and writes the output to either the terminal or a file. The program provides specific occurrences for DQI codes of **I** (awaiting review) and **Q** (reviewed and rejected). These two codes are displayed with the count, parameter code and name, and the begin and end dates. The output should look like this:

DQI Distribution for QWDATA Database: 01

```

-----
DQI  Count
-----
A  1801599
S   302
I    7
Q    8
X    1
-----
    
```

Distribution for DQI code: I

Count	Parameter	Begin	End
1	(00452) CARBONATE,DIS,IT,F	1999-12-25	1999-12-25
1	(00453) BICARBONATE,DIS,IT,F	1999-12-25	1999-12-25
1	(00925) MAGNESIUM DISSOLVED	1956-11-05	1956-11-05
1	(31625) COLIFORM FECAL 0.7	1999-12-25	1999-12-25
1	(31673) FECAL STRPT KF AGAR	1999-12-25	1999-12-25
1	(39086) ALKALINITY,DIS,IT,F	1999-12-25	1999-12-25
1	(84164) SAMPLER TYPE CODE	1999-12-25	1999-12-25

Distribution for DQI code: Q

Count	Parameter	Begin	End
1	(00400) PH, WH, FIELD	1956-11-05	1956-11-05
7	(31673) FECAL STRPT KF AGAR	1990-07-18	1998-05-05

DQI Distribution for QWDATA Database: 02

DQI Count

A 42125

DQI Distribution for QWDATA Database: 10

DQI Count

A 887096

DQI Distribution for QWDATA Database: 11

DQI Count

A 28703

```

DQI Distribution for QWDATA Database: 50

-----
DQI  Count
-----

A   199056
1=====
DQI Distribution for QWDATA Database: 51

-----
DQI  Count
-----

A    61
1=====
DQI Distribution for QWDATA Database: 54

-----
DQI  Count
-----

A   2868
S     3

Processing complete.
    
```

3.7.8 Option 8 -- Produce Drinking-Water Alert Limit Table

Option 8 is used to generate a table of constituents that exceed the USEPA Drinking Water Maximum Contaminant Levels and secondary maximum contaminant levels ([Appendix E](#)). As input, the program uses a Watlist report created during batch processing of samples ([see Section 3.8](#)). An output file is created with a name selected by the user. If no constituents exceed the maximum levels, the following message is displayed: No ALERTS found in the file: <Watlist filename>. An example of output from the qwalert program is shown below:

STATION NAME= SAND COULEE AT SAND COULEE MT
DATE= 10-10-1995 16:50
SITE ID= 06078270 RECORD NUMBER= 99600004
HYD. CONDITION= Stable, Normal stage HYD. EVENT= Routine sample
MEDIUM= Surface water

PARAMETER 01025 VALUE 17 EXCEEDS DW ALERT LIMIT OF 10.000
[CADMIUM DISSOLVED (UG/L AS CD)]

1

STATION NAME= MINE DRAIN TO SAND COULEE NEAR SAND COULEE MT
DATE= 10-11-1995 16:15
SITE ID= 472313111104901 RECORD NUMBER= 99600016
HYD. CONDITION= Stable, Normal stage HYD. EVENT= Routine sample
MEDIUM= Surface water

PARAMETER 01030 VALUE 87 EXCEEDS DW ALERT LIMIT OF 50.000
[CHROMIUM DISSOLVED (UG/L AS CR)]

PARAMETER 01090 VALUE 11000 EXCEEDS DW ALERT LIMIT OF 5000.000
[ZINC DISSOLVED (UG/L AS ZN)]

1