



February 18, 2010

## **Office of Water Quality Water-Quality Information Note 2010.04**

### **Subject: National Water Information System—Guidance for batch loading of water-quality data between multiple NWIS hosts**

The purpose of this Water-Quality Information Note (WaQI note) is to provide guidance for batch loading of water-quality data that reside on multiple National Water Information System (NWIS) hosts. Water-quality data should be copied between QWDATA subsystems using the user-specified modes that are described in this WaQI note to prevent data that may have failed quality-assurance checks or are proprietary in nature from being inadvertently released to the public through the National Water Information System: Web Interface (NWISWeb) or published in the Annual Water-Data Report (ADR).

### **Background**

Water Science Centers (WSC) should not routinely make duplicate copies of data; however, current limitations in NWIS, NWISWeb, and the ADR result in the need to occasionally copy data between QWDATA subsystems. When data for a site have historically been collected by more than one WSC, it may be necessary to copy water-quality data from a WSC that is not the host for NWISWeb to the WSC that is the NWISWeb host, in order to create a complete set of water-quality data. In the case of the ADR, only one WSC can publish a Site Data Sheet for a site; however, the streamflow-gaging station may be operated by one WSC and water-quality samples may be collected or a water-quality monitor may be operated by a different WSC. Some sites may have more than one WSC collecting water-quality samples during a water year. In these situations, water-quality data typically are copied to one of the NWIS hosts (usually where the streamflow data reside) in order that all data are served on NWISWeb. In some cases, working data on a remote NWIS host may alleviate the need to copy data.

In QWDATA, the data-quality indicator (DQI) code indicates the review status of a result and affects whether the result will be included in retrievals, including NWISWeb and ADR retrievals. The DQI code is also used to identify proprietary data. Please refer to the QWDATA User's Manual for additional explanation of all the DQI codes (<http://nwis.usgs.gov/currentdocs/qw/QW.user.book.html>).

Generally, the WSC that collects the data is responsible for determining the review status and setting of DQI codes for results, in part based on quality-assurance checks. When water-quality data are copied between QWDATA subsystems on different NWIS hosts, the DQI codes established by the originating WSC that reviewed the data should be retained during the batch loading of data.

### Guidance for batch loading of water-quality data between QWDATA subsystems:

The database administrator should select only those samples that were originally collected by another WSC to copy. Situations where more than one WSC collect data require record selection to avoid potentially overwriting a locally stored and up-to-date record with a stale copy from another WSC. (For this reason, the use of WAT\_MOVE to copy water-quality data is discouraged.) To batch load water-quality data copied from another QWDATA subsystem, users should first go to through Batch Processing menu (option 8) and select option (5) "Enter batch-file data with user-specified behavior (user-specified modes)". The recommended settings for the user-specified modes follow:

- Data that can be updated: select "Lab+Field".
- The "transactions allowed" generally should include "Any transaction (QWENTER)" (unless samples have previously been logged into the duplicate host for some reason, then the QWCARDSIN option may be used).
- Results protected by DQI: select "yes".
- The remaining user-specified modes can be set based on user preference.

```
xterm
Processing batch updates into environmental database 01, QC database 03
Optional Batch-behavior Modes

1. Filename:                qwsample
2. Transactions allowed:    _ Only updates to samples (QWCARDSIN)
                           _ Only additions of new samples
                           X Any transaction (QWENTER)
                           _ Verification Only, no transactions stored
3. Results protected by DQI: X Yes
                           _ No
4. Data that can be updated: _ Lab only
                           X Lab+Field
5. Prepare ionic balance:   _ Yes
                           X No
6. Include user-specified   _ Yes
   alert limits:            X No

Select mode to change or <CR> to continue, or 'Q' to quit: █
```

If these options are not selected for batch loading data, DQI codes can default to "S" (presumed satisfactory) during data processing, resulting in the inadvertent release of rejected or proprietary values to NWISWeb or publication in the ADR.

Questions on this guidance can be sent to GS-W Help QWDATA. WaQI Notes are archived on the Office of Water Quality Web site, <http://water.usgs.gov/usgs/owq/WaQI/index.html>.

Signed,

The Office of Water Quality  
02/18/2010

Distribution: All WRD Employees