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# United States Department of the Interior

U.S. GEOLOGICAL SURVEY

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## **NATIONAL WATER QUALITY LABORATORY TECHNICAL MEMORANDUM 1997.08**

April 1, 1997

To: Assistant Chief Hydrologist for Technical Support  
Regional Hydrologists  
Chief, Office of Water Quality  
Assistant Chief, Office of Water Quality  
Chief, NAWQA  
Chief, National Water Information System  
Chief, Office of Hydrologic Research  
Chiefs, Branches of Regional Research  
Area Hydrologists  
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Chief, Ocala Project Office  
Chief, Yucca Mountain HIP  
QA Manager, Yucca Mountain Project  
Chief, Branch of Quality Assurance  
Chief, Branch of Technical Development & Quality Systems  
Employees, National Water Quality Laboratory

From: Peter F. Rogerson, Chief  
National Water Quality Laboratory  
Branch of Analytical Services

Subject: Changes to the NWQL's Data Formatting and Transmittal Software

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Revision: None

## SCOPE

This memorandum addresses the National Water Quality Laboratory's (NWQL) plan to discontinue rounding in the software (send\_res) used for transmitting analytical data from the NWQL to the Districts.

## BACKGROUND

Send\_res currently FORMATS AND releases analytical results to the Districts and also rounds values based on the magnitude of the result and the number of significant figures assigned to that magnitude. Because send\_res needed to be ported for the move from the PRIME to the DG, NWQL took the opportunity to make software changes in order to:

1. Eliminate the rounding of data.
2. Automatically deliver the data files to a special directory on the Districts' DG servers ("push" software).

## DISCUSSION

Result values will no longer be rounded by the NWQL. The current version of send\_res has a rounding algorithm that produces a rounded value based on the number of significant figures for the magnitude of the result.

The new send\_res program will not round any results sent to District users. All uncensored results transmitted by the NWQL are a true reflection of what is actually stored in the NWQL data base. This will help avoid some confusion in actually verifying results transmitted to the District. It also means that Districts will have to use the "USER-DEFINED ROUNDING" tabling option in the NWIS QWDATA SYSTEM to get the NWQL-specified rounding in the water-quality tables.

The new program does determine and send the NWIS precision code with the data. The NWIS software will use the precision code to round the data in the water-quality tables. The NWQL, however, will no longer be rounding data upon release to the Districts.

Following is an example of the change in the 1&\* format for a single result:

CURRENT Send\_res program output:            P00608= 0.36 ( :H:F: )

NEW Send\_res program output:                P00608= 0.355 ( :H:F:2)

The "push" software automatically delivers the data files to a specific directory on the Districts' DG servers (Districts will be provided with instructions for setting up this directory as part of the NWIS installation on the DG). The software has built-in checks to assure that all files are successfully delivered.

In addition, the NWIS GETLAB program has been rewritten so that, instead of fetching data files from the DCOLKA PRIME, data files are located in the directory on the District DG and then copied into a file named QWCARDS for processing into the NWIS data base. Districts will continue to retrieve data from DCOLKA (Colorado District PRIME) until they convert to the DG version of NWIS.

If you have questions about the information contained in this memo, please contact the following people:

NWQL Data Release Software (send\_res) program: Richard Husband (303) 467-8026 (rhusband)

NWIS Software: John Briggs (703) 648-5624 (jbriggs)

Data Delivery Software (push): Scott Davidson (501) 228-3636 (davidson)

Impact on Data Base: NWIS IMPACTS ARE SIGNIFICANT

Supplementary Info: None

Supersedes: None

Key words: GETLAB, NWIS, NWQL, rounding, send\_res

Distribution: See above plus the Netnews usgs.labnews & .water.quality, WRD Secretaries; Field and Project Offices; Hydrologic Technicians; and <http://wwwnwql.cr.usgs.gov/>