OCT 0 1 2007

REQUEST FOR RECORDS DISPOSITION AUTHORITY	LEAVE BLANK (NARA use only)
	JOB NUMBER N1-057-08-4
To: NATIONAL ARCHIVES & RECORDS ADMINISTRATION 8601 ADELPHI ROAD, COLLEGE PARK, MD 20740-6001	Date Received 10/01/07
1. FROM (Agency or establishment) Department of the Interior	NOTIFICATION TO AGENCY
2. MAJOR SUB DIVISION U.S. Geological Survey	In accordance with the provisions of 44 U.S.C 3303a, the disposition request, including amendments is approved except for items that may be marked "disposition not approved" or "withdrawn" in column 10.
3. MINOR SUBDIVISION Geospatial Information Office	
4. NAME OF PERSON WITH WHOM TO CONFER Carol Wippich/Lloyd Woosley	5. TELEPHONE 703-648-7109/ 703-648-5028
DATE 4/17/08	ARCHIVIST OF THE UNITED STATES Allen Weinstein

6. AGENCY CERTIFICATION

I hereby certify that I am authorized to act for this agency in matters pertaining to the disposition of its records and that the records proposed for disposal on the attached 10 page(s) are not needed now for the business of this agency or will not be needed after the retention periods specified; and that written concurrence from the General Accounting Office, under the provisions of Title 8 of the GAO Manual for Guidance of Federal Agencies,

[XX] is not required [ ] is attached; or [ ] has been requested.

DATE	SIGNATURE OF AGENCY REPRESENTATIVE	TITLE
9/20/07	Carol Wippich for JOHN FAUNDEEN	USGS Records Officer (Acting)

7. ITEM NO.	8. DESCRIPTION OF ITEM AND PROPOSED DISPOSITION	9. GRS OR SUPERSEDED JOB CITATION	10. ACTION TAKEN (NARA USE ONLY)
	See attached sheets Additional record items for the Water Resources Discipline's Scientific Records Disposition Schedule - Schedule 1400 * Laboratory Information Management System (LIMS) * National Water Information System (NWIS)		

Le 5/2/08 copies sent to agency, NR, & NWME

115-109 PREVIOUS EDITION NOT USABLE

STANDARD FORM 115 (REV. 3-91)
PRESCRIBED BY NARA 36 CFR 1228

September 26, 2007

USGS Water Resources Discipline Scientific Records Disposition Schedule 1400

1400-01 National Water Information System (NWIS)

As part of the its program of disseminating water data to the public, the U.S. Geological Survey (USGS) maintains a distributed network of computers and fileservers for the acquisition, processing, review, storage, and dissemination of water data collected by its water resources programs and projects. The USGS's National Water Information System (NWIS) contains water data collected at approximately 1.5 million sites from all 50 States, as well as Puerto Rico, Guam, and many other countries. Data date back to the formation of the USGS in 1799 and includes hydrologic data collected by the Army Corps of Engineers prior to the creation of the agency.

~~1400-01a Inputs~~

Inputs to NWIS include a wide range of electronic data and other records that describe the condition of the nation's water resources over time:

- Site and owner information, including well and spring schedules.
- Hydrologic project information.
- Hydrologic monitoring networks.
- Time-series measurements of water-level, discharge, water-quality, sediment, meteorological conditions and other types of data.
- Instantaneous measurements of water-level, discharge, water-quality, sediment concentration and chemistry, biological characteristics (taxonomy, tissue analysis, microbiology) and other types of data.
- Metadata describing the environmental data, including methods, precision, collecting agency, analyzing entity, data qualifiers, laboratory and field comment, hydrologic conditions, field observation data and notes.
- Acoustic and other types of velocity measurement data.
- Tracer-dilution discharge-measurement data.
- Historical records used in correcting or adjusting raw data for computing final values.
- Well log, geophysical, aquifer test, and physical core analysis data.
- Field and laboratory quality assurance/quality control data.
- Site, owner, and contact information, site identification, type of site, and geographic location of site.
- Permit information associated with a site including permit numbers, permit assigners, and pumping limits.
- Water conveyances, point-to-point locations and direction of flow, the conveyance type, and capacity.

- Water use data for public supply, domestic, industrial, commercial, mining, livestock, aquaculture, irrigation, hydroelectric, and thermoelectric uses.
- Annual and monthly, water-quantity information, amount of water flowing along a conveyance, such as a pipe.
- Annual and monthly, quantity of water withdrawn from a hydrologic source.
- Annual and monthly, quantity of water returned to a hydrologic source.
- Ancillary data associated with a site, such as power generation, count of livestock, acres irrigated, number of employees, or production data.
- Consumptive use, instream use, or quantity-of-water recycled at a site.
- Count of population that receives water from its own source, such as number of domestic users on private wells or number of domestic users on septic systems.
- Count of population that was served by a public-supply system.
- Annual summary of water-use data aggregated by use-of-water, county, hydrologic unit code, and national aquifer code.
- Wastewater discharge records.

Disposition. Apply disposition instructions for each type of input data or record as specified in USGS Water Resources Discipline's (WRD) Scientific Records Disposition Schedule 1400.

1400-01b Master Data File

NWIS consists of two major subsystems: the distributed core-NWIS databases, which are restricted to internal USGS use only and are not web-based, and the NWISWeb system. The distributed core-NWIS databases constitute the master data file for NWIS serving as agency's permanent repository for all input data and records that have been reviewed and approved for public distribution. The raw uncorrected data also are preserved in the database. NWISWeb provides the public web-based Internet access to an aggregated database created from the master database. All data and information temporarily served to the public by NWISWeb is obtained from the core-NWIS databases; therefore, data in NWISWeb are duplicate records. The NWIS master file contains more than 850,000 station years of time-series data; monthly, annual, and period-of-record statistics based on these time-series data; more than 3.5 million physical, chemical, biological, and radiological field and laboratory analyses; and other data and records. Also included are summary data on water use throughout the Nation and includes both site-specific and aggregated water-use data.

Summary of data types in master data file:

- Site information - inventory and location information about sites at stream reaches, lakes, reservoirs, ponds, wells, springs, test holes, tunnels, drains, and excavations. Also includes information for water-use sites. Site information is common to all other categories of data stored within NWIS.
- Site owner - information about site owners and water users.
- Time-series data – continuous water level, streamflow (discharge), water quality, and rainfall data.
- Peak flow data - instantaneous maximum (peak) stream discharge and associated water level data at stream sites.
- Ground-water data – includes well construction, non-continuous water level, well or spring discharge, hydrogeologic and aquifer hydraulic, geophysical, and site-visit data.
- Water-quality data – results from field and laboratory physical, chemical, biological, and radiochemical analysis of water and other samples.
- Sediment data – results from physical and chemical analysis of sediment samples.
- Water use data - measurements and estimates of water use at a site or location.

Disposition: Core-NWIS: **PERMANENT.** The data stored in the distributed core-NWIS databases are permanent records. Transfer to NARA after the NWIS database is discontinued and active reference ceases.

~~**1100-01c Outputs**~~

Outputs range from pre-defined to user-specified. Both pre-defined and user-specified outputs retrieve data from the distributed core-NWIS databases in a format that can be used to generate pre-defined reports or as inputs to other software packages. Tabular outputs include:

- Daily Values Tables (time-series data)
- Unit Values Tables (time-series data)
- Expanded Rating Tables
- Expanded Shift Tables
- Time-series RDB output
- Data Quality Assurance Report
- Ground Water Retrieval Report
- Hydrologic Networks Report
- Hydrologic Project Report
- Water Quality Tables (instantaneous data)
- Water Quality Summary Statistics Table
- Water Quality Summary Statistics Table

- Water Quality Detection Limits Table
- Water Quality files (RDB, fixed-column)
- Water Quality metadata (parameter and method information)
- Inventories of sampling events, ionic-balance report, water-quality standard exceedances
- Site-specific Water-Use Data System (SWUDS) Retrieval System Tables
    - Site, owner, and contact information, site identification, type of site, and geographic location of site.
    - Permit information associated with a site including permit numbers, permit assigners, and pumping limits.
    - Water conveyances, point-to-point locations and direction of flow, the conveyance type, and capacity.
    - Water use data for public supply, domestic, industrial, commercial, mining, livestock, aquaculture, irrigation, hydroelectric, and thermoelectric uses.
    - Annual and monthly, water-quantity information, amount of water flowing along a conveyance, such as a pipe.
    - Annual and monthly, quantity of water withdrawn from a hydrologic source.
    - Annual and monthly, quantity of water returned to a hydrologic source.
    - Ancillary data associated with a site, such as power generation, count of livestock, acres irrigated, number of employees, or production data.
    - Consumptive use, instream use, or quantity-of-water recycled at a site.
    - Count of population that receives water from its own source, such as number of domestic users on private wells or number of domestic users on septic systems.
    - Count of population that was served by a public-supply system.
    - Annual summary of water-use data aggregated by use-of-water, county, hydrologic unit code, and national aquifer code.
    - Quality assurance reports used to verify aggregate water-use data.
    - Site and ground-water data in Ground-water Site Inventory (GWSI) transaction record format.

Graphic outputs present the data in formats easier to understand and interpret. An X, Y hydrograph plot, for example, depicts related sets of hydrologic data on the Y-axis and the date/time on the X-axis. This allows the user to visualize trends and anomalies in the data.

A variety of graphs can be output from core-NWIS. Some graphs are specifically designed for the data types being examined, while other graphics

are user-selectable. The graphing routines automate unit conversions and rounding routines to present the data in a common frame of reference. Graphic outputs include:

- Hydrographs of time-series data
- Rating Graphs
- Ground Water hydrograph
- Water Quality X, Y Plot
- Water Quality Boxplot
- Water Quality Stiff Diagram
- Water Quality Piper Diagram
- Water Quality Regression Plot

Another important NWIS output is NWISWeb, the public interface to the distributed core-NWIS databases. NWISWeb provides copies of data in NWIS to the public in a variety of formats. All data in NWISWeb comes from the distributed core-NWIS databases. Outputs from NWISWeb are tabular (ASCII-delimited files), HTML, and graphic representations of the data. The tabular outputs are designed for use in applications that support data in row and column format.

Disposition: Outputs are not stored within NWIS. However, outputs that support scientific interpretations may be retained as specified in the Water Resources Discipline's Scientific Records Disposition Schedule 1400. For example, time series data output could be maintained with a project case file (Item 1400-02).

1400-01d Documentation

Technical documentation adequate to identify, service, and interpret electronic records, such as data modeling documentation, data system specifications, data element descriptions, data dictionaries, code books, record layouts, user guides, output specifications, and similar documentation necessary for servicing and interpreting the system-generated records.

Disposition: Core-NWIS: **PERMANENT.** Transfer to NARA with 1400-01b, the master data file, after NWIS is discontinued and active reference ceases.

GRS 20, 1 1a(2)

1400-01e System Backup

Duplicate copies of the core-NWIS master data file created on a recurring basis to ensure the continued operation of NWIS in case the system is damaged or data inadvertently deleted.

Disposition: Destroy when the identical record has been deleted from the 1400-01b master data file or when replaced by a subsequent backup master data file. (GRS 20, 8a.)

1400-01f Vital Records Backup

Vital records backed up from core-NWIS are kept for disaster recovery purposes only. Inventory of vital records are kept in accordance with the USGS General Records Disposition Schedule (GRDS).

Disposition: Destroy and replace when superseded by a newer copy. (GRS 24, 4a(1))

September 26, 2007

USGS Water Resources Discipline Scientific Records Disposition Schedule 1400

1400-31b Laboratory Information Management System (LIMS). Used to store, track, and release analytical test results requested by the National Water Quality Laboratory (NWQL) customers through USGS National Program Offices and Science Centers. The database includes statistical process control information, data capture utility files, instrumentation results, Federal Financial System (FFS) information and account numbers, change sheets, Analytical Services Request (ASR) information, manual data entry forms, prep logbook information, analyst's quality control (QC) information, and daily e-mail reports to customers with sample login information. Tables in the LIMS are separated into three main categories - reference tables, working tables, and LIMS processing tables. LIMS database contains approximately 340 tables/4000 fields out of which 208 tables/2620 fields are scientific, 49 tables/532 columns are administrative (non-scientific), and 83 tables/832 columns are LIMS processing tables.

~~**1400-31b(1) Inputs.** Comes from two sources: electronic and manual input.~~ Electronic input consists of reference data that comes from legacy information transferred from previous LIMS installations, reference data from the USGS National Water Information System (NWIS), user information from the Lotus Notes national server, and laboratory results transferred from analytical instrumentation; however, only records of scientific nature are transferred from LIMS into NWIS. Other electronic information comes from users within the NWQL in the form of word processing, spreadsheet, comma separated, and tab separated files generated from personal computers and containing setup and reference information for the LIMS. Manual input is generally entered directly into the LIMS database, but in the case of customer requested reruns, the manual data entry is directed at an intermediate database and then transferred electronically to the primary LIMS database. Manual input consists of data entered from ASR forms, which is the method used to initiate analytical requests from the NWQL; data from instrumentation that cannot be transferred electronically; requests for authorization to update results; and other various manual types of LIMS reference data and setup information using LIMS applications. ASR mandatory fields consist of: station ID, start date, start time, medium code, sample type, user code and district contact.

Disposition. Apply disposition instructions for each type of input data or record as specified in USGS Water Resources Discipline's (WRD) Scientific Records Disposition Schedule 1400.

1400-31b(2) Master Data Files. LIMS data are stored and accessed on several databases. Data are physically located on a production server, and a replicated database is available for web displays and reports with access by both internal and external sources. There is a production database which consists of a working database and an archive database. The working database contains historical LIMS data dating back to 1998; the archive database contains data generated between 1992 and 1997.

Several other databases are used for development, maintenance, and testing of LIMS projects. Reference tables, which are fairly static, contain either information used for LIMS configuration and maintenance, or contain supporting reference information for the data contained in the working tables. The working tables are dynamic tables that contain information pertaining to the analytical requests of the laboratory and are used to store, monitor, and report information about those requests. Reference data includes information about analytical methods and analytes available, calculations, reporting data, rounding and censoring rules, prices, quality-control setup, instrument configuration, special projects, and laboratory structure. Out of these, 80% of the fields are scientific and 20% are non-scientific fields. Working data includes information about the samples, customers, requested analyses, status of requests, billing, analytical results, quality-control results, analytical batches, preparation results, sample containers, container condition, field test data, data release, laboratory reruns, and custom requested reruns. Working data contains 83% scientific fields, and 17% non-scientific fields. The primary key for the sample is a logical key defined by the combination of the station identification number, sample start date, sample start time, sample medium, user code, sample end date, and sample end time. This information is then used to create a unique folder identification, which is then used as the initial linking field for information tied to that logical key.

Disposition. Scientific data files are **PERMANENT** records. Transfer to NARA after LIMS database is discontinued and active reference ceases. For administrative information, delete 6 years after active reference ceases.

~~**1400-31b(3) Outputs.** Outputs for the LIMS can consist of a variety of formats and~~ media including database export files, backup files, tape backup, e-mail, fixed format files, custom crystal reports, web pages, web reports, ad-hoc reports, LIMS screen displays, instrument control files, and printed reports. Output of completed analytical results can occur through LIMS displays, e-mail, and electronic file transfer to NWIS, or downloads from the User Sample Status web page. Billing information is sent monthly via a fixed format file to the FFS and billing summary information is posted weekly and monthly on the USGS visible NWQL web system. Reports can be generated in a variety of manners either by sending reports directly to a printer or by viewing the report using a crystal reports interface that allows users to either view, print, or export reports in variety of formats including spreadsheets, word processing files, csv, html, and straight text. The mandatory fields transferred from LIMS to NWIS include: sample integer, user code, agency code, station ID number, sample start date, sample end date, medium code, lab ID number, project code, aquifer code, sample type, analysis status, analysis source, hydrologic condition, hydrologic event, tissue sample ID, body part code, lab sample comment, field sample comment, sample time datum, time datum reliability code, parameter code, result value, quality assurance code, method code, rounding code, value qualifiers, report level, report level type, data quality indicator, null value qualifier, preparation set number, analytical set number, analysis date, preparation date, lab result comment, field result comment, and lab standard deviation. These transfers take place on a daily basis. Outputs of information to instruments

consist of files that contain sample sequence information, instrument settings, sample information, preparation information, and field information.

Disposition. Outputs are not stored within LIMS. However, outputs that support scientific interpretations should be retained as specified in the Water Resources Discipline's Scientific Records Disposition Schedule 1400.

1400-31b(4) Documentation. This consists of information relating to the data and the development and functionality of the data systems. This includes any testing procedures, quality checking guidelines, government or contractor created manuals and handbooks, records layouts, data elements definitions, code translation tables (codebooks) for coded data, and other related materials needed to interpret the system.

Disposition. PERMANENT. Transfer to NARA with 1400-31b(2), the master data file, after LIMS is discontinued and active reference ceases. GRS 20, 11a(2)

1400-31b(5) System Backup. Backup is accomplished by loading on the test server first; then, compatibility is verified with the operating system. A thorough testing is then done against the supported applications using test data to verify that functionality is consistent. Backup is done nightly on all servers. Nightly system back-up dumps are done by a system administrator Monday through Thursday. Nightly hot back-ups are done for each data base; cold back-ups are done every Friday. These backup tapes are stored offsite.

Disposition. Destroy when the identical record has been deleted from the 1400-31b(2) master data file or when replaced by a subsequent backup master data file. GRS 20, 8a

1400-31b(6) Vital Records Backup. Vital records backed up from LIMS are kept for disaster recovery purposes only. Inventories of vital records are kept in accordance with USGS General Records Disposition Schedule (GRDS), dated April 2003, Item 205-10.

Disposition. Destroy and replace when superseded by a newer copy. GRS 24, 4a(1)