

Department of the Interior
Privacy Impact Assessment

Name of Project: National Water Information System (NWIS)

Bureau: U.S. Geological Survey

Project's Unique ID: 010-000001049 00-12-01-02-01-00

Once the PIA is completed and the signature approval page is signed, please provide copies of the PIA to the following:

- Bureau/office IT Security Manager
- Bureau/office Privacy Act Officer
- DOI OCIO IT Portfolio Division
- DOI Privacy Act Officer

Do not email the approved PIA directly to the Office of Management and Budget email address identified on the Exhibit 300 form. One transmission will be sent by the OCIO Portfolio Management Division.

Also refer to the signature approval page at the end of this document.

A. CONTACT INFORMATION:

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B. SYSTEM APPLICATION/GENERAL INFORMATION:

1) Does this system contain any information about individuals?

Yes - Site owner's name, address, and phone numbers may be entered in the National Water Information System (NWIS). None of these entries are mandatory fields and they may not be populated.

- a. Is this information identifiable to the individual¹?** (If there is **NO** information collected, maintained, or used that is identifiable to the individual in the system, the remainder of the Privacy Impact Assessment does not have to be completed).

Yes

b. Is the information about individual members of the public?

(If YES, a PIA must be submitted with the OMB Exhibit 300, and with the IT Security C&A documentation).

Yes

c. Is the information about employees? (If yes and there is no information about members of the public, the PIA is required for the DOI IT Security C&A process, but is not required to be submitted with the OMB Exhibit 300 documentation).

No

2) What is the purpose of the system/application?

NWIS is the repository of hydrologic data collected as part of cooperative hydrologic studies nationwide for the Water Resources Discipline of the USGS. NWIS maintains the database for national records of ground-water quantity and quality and levels, and surface-water quality, flow, stage and discharge. The NWIS also includes work-flow applications for the tracking of USGS tasks associated with elements of the water system. USGS personnel use NWIS for the collection, acquisition, processing, review, storage, and dissemination of water quantity and quality data. This system enables rapid retrieval of detailed water quantity and water quality information, making possible the implementation and successful completion of a broad range of interpretive studies addressing ground-water, surface-water, water-quality, and water-use issues. Such studies meet USGS statutory requirements and fulfill obligations to partners and stakeholders in local, state, tribal, and Federal government.

3) What legal authority authorizes the purchase or development of this system/application?

43 U.S.C. 31 et seq. The Organic Act of March 3, 1879, that established the Geological Survey, as amended (1962); and restated in annual appropriation acts. This section provides, among others, that the Geological Survey is directed to classify the public lands and examine the geological structure, mineral resources, and products within and outside the national domain.

C. DATA in the SYSTEM:

1) What categories of individuals are covered in the system?

NWIS contains information about individuals or groups that own or have control of physical access to ground water or surface water sites in the United States. These sites can be wells, streams, lakes, reservoirs, facilities or locations where water is used. This system contains records relating to corporations and other business entities.

2) What are the sources of the information in the system?

a. Is the source of the information from the individual or is it taken from another source? If not directly from the individual, then what other source?

Some information is from the individual directly, other information is provided by sources such as well drillers or local, State, or federal cooperating agencies.

b. What Federal agencies are providing data for use in the system?

Cooperating Federal agencies vary by Water Science Center but may include agencies such as the U.S. Army Corps of Engineers, Environmental Protection Agency, and the Department of Commerce, National Oceanic and Atmospheric Administration's National Weather Service.

c. What Tribal, State and local agencies are providing data for use in the system?

Cooperating agencies vary by Water Science Center but may include water regulatory agencies such as State environmental protection offices, and water management districts.

d. From what other third party sources will data be collected?

Third Party sources for information vary by Water Science Center but may include businesses involved in the construction of water infrastructure.

e. What information will be collected from the employee and the public?

The site owner or contacts name, the postal address and phone numbers where they can be reached is the type of information stored in NWIS. USGS field personnel typically use this information to obtain advanced approval to visit a site on private lands, or to request additional

information about the site or activities, such as water withdrawal, conducted there.

3) Accuracy, Timeliness, and Reliability

a. How will data collected from sources other than DOI records be verified for accuracy?

Owner name, contact name, and address information obtained from other agencies, businesses, or water-related interest groups may be verified by contacting the individual, or queries may be passed back to the individual by the source agency.

b. How will data be checked for completeness?

Although every effort is made to obtain complete information, these personal identifier fields are not mandatory and therefore are not checked for completeness.

c. Is the data current? What steps or procedures are taken to ensure the data is current and not out-of-date? Name the document (e.g., data models).

Records of an individual's ownership of a site include the beginning date of the ownership and may include an ending date. Data are also tagged with the date of entry into the USGS database. Information such as address and contact phone number are represented only as being current as of the time the information was obtained by USGS.

d. Are the data elements described in detail and documented? If yes, what is the name of the document?

Yes. Data elements are described in the NWIS database design document and system design document. Data entry is described in the NWIS Documentation Version 4.8, GWSI's User Manual and Version 4.8 Site-Specific Water Use Data System (SWUDS) user documentation.

D. ATTRIBUTES OF THE DATA:

1) Is the use of the data both relevant and necessary to the purpose for which the system is being designed?

Yes

- 2) **Will the system derive new data or create previously unavailable data about an individual through aggregation from the information collected, and how will this be maintained and filed?**

No

- 3) **Will the new data be placed in the individual's record?**

Not applicable.

- 4) **Can the system make determinations about employees/public that would not be possible without the new data?**

Not applicable.

- 5) **How will the new data be verified for relevance and accuracy?**

Not applicable.

- 6) **If the data is being consolidated, what controls are in place to protect the data from unauthorized access or use?**

Not applicable.

- 7) **If processes are being consolidated, are the proper controls remaining in place to protect the data and prevent unauthorized access? Explain.**

Not applicable.

- 8) **How will the data be retrieved?** Does a personal identifier retrieve the data? If yes, explain and list the identifiers that will be used to retrieve information on the individual.

The NWIS system does not identify individuals or groups by social security number or taxpayer id. The name of a site-owner may be stored in the database. Records are retrieved by site-location number only. There is no direct retrieval method by site-owner name through the NWIS interface.

- 9) **What kinds of reports can be produced on individuals? What will be the use of these reports? Who will have access to them?**

Information on wells or facilities owned by an individual or organization may be retrieved, along with the individual's address and telephone number, and any hydrologic data collected at these sites such as well construction, water levels, and water usage amounts. Information on the individual is used to contact the owner for additional information on the sites, or to request

permission to visit the sites. Access to this information is limited to USGS personnel with proper access to the database, as identified in the [NWIS Security System](#), or the personnel of cooperating agencies who have been granted database access through a Memorandum of Understanding (MOU).

10) What opportunities do individuals have to decline to provide information (i.e., where providing information is voluntary) or to consent to particular uses of the information (other than required or authorized uses), and how individuals can grant consent.)

When the information is obtained directly by USGS, individuals are free to decline to give information, in which case the information is not collected and the database record is either discarded or is entered without the information on the individual. Within the NWIS, there is no mechanism for individuals to consent to particular uses of the information--if individuals agree to provide information, then that information is used within the stated guidelines for the database. When information about individuals is provided to the USGS from another source, such as a State agency, then the source is responsible for obtaining the consent of the individuals prior to providing the information to USGS.

E. MAINTENANCE AND ADMINISTRATIVE CONTROLS:

1) If the system is operated in more than one site, how will consistent use of the system and data be maintained in all sites?

Records are stored on magnetic hard disk media in identical relational databases structures and application software at 45 USGS Water Science Centers. NWIS controls access using three layers of security: system user authentication, database access (table and row level) via grants, and roles and groups on the NWIS application. Database procedures are developed by national user groups and by database administrators and are reviewed periodically.

2) What are the retention periods of data in this system?

The data stored in the NWIS databases are permanent records; therefore, the retention period is indefinite. This is in accordance with NARA Item Number 1400-01 dated April 14, 2008, for the National Water Information System (NWIS), and is part of the overall Water Resource Discipline Scientific Records Disposition Schedule

3) What are the procedures for disposition of the data at the end of the retention period? How long will the reports produced be kept? Where are the procedures documented?

The data stored in the 45 USGS Water Science Centers NWIS databases are permanent records. When the data are no longer required for research or if the NWIS program is discontinued, records will be transferred to NARA for permanent retention pursuant to Records Schedules for similar records. This is in accordance with NARA Item Number 1400-01 dated April 14, 2008, and is part of the overall Water Resource Discipline Scientific Records Disposition Schedule.

- 4) **Is the system using technologies in ways that the DOI has not previously employed (e.g., monitoring software, Smart Cards, Caller-ID)?**

No

- 5) **How does the use of this technology affect public/employee privacy?**

Not applicable.

- 6) **Will this system provide the capability to identify, locate, and monitor individuals? If yes, explain.**

No

- 7) **What kinds of information are collected as a function of the monitoring of individuals?**

Not applicable.

- 8) **What controls will be used to prevent unauthorized monitoring?**

Not applicable.

- 9) **Under which Privacy Act systems of records notice does the system operate? Provide number and name.**

SORN USGS--01, "National Water Information System: NWIS"

- 10) **If the system is being modified, will the Privacy Act system of records notice require amendment or revision? Explain.**

There is no modification to SORN USGS--01

F. ACCESS TO DATA:

- 1) **Who will have access to the data in the system?** (E.g., contractors, users, managers, system administrators, developers, tribes, other)

Access granted to USGS employees or contractor employees needing to work with this database is password protected and is strictly limited to individual USGS data users and strategic cooperators that are authorized personnel whose official duties require such access.

- 2) **How is access to the data by a user determined?** Are criteria, procedures, controls, and responsibilities regarding access documented?

NWIS has security measures established to control different degrees of access for different types of users. NWIS controls access using three layers of security: system user authentication via username and password, database access (table and row level) via grants, and roles and groups on the NWIS application. Group access and NWIS file permissions are documented in the [NWIS Security System](#).

- 3) **Will users have access to all data on the system or will the user's access be restricted? Explain.**

No, USGS user's access and rights to execute certain applications are restricted based upon the user's job function in the USGS Science Center.

- 4) **What controls are in place to prevent the misuse (e.g., unauthorized browsing) of data by those having access?** (Please list processes and training materials)

[NWIS security](#) is fully documented. Access is strictly limited to USGS personnel and strategic cooperators requiring access to perform a function. An audit trail shows the user-id of the person revising the data and the date of update. USGS computer users sign security forms stating they will not misuse government computers nor the information contained therein. NWIS controls access using three "layers" of security: system user authentication; database access (table and row level) via the Ingres RDBMS grants, roles and groups on the database tables; and the NWIS application. Access is strictly limited to USGS personnel and strategic cooperators. Within several of the database tables, record-level security is also provided via row level attributes, which further restrict who and how the information can be displayed or updated. Applications employ additional security to control when and to whom the information can be displayed.

- 5) **Are contractors involved with the design and development of the system and will they be involved with the maintenance of the system?** If yes, were Privacy Act contract clauses inserted in their contracts and other regulatory measures addressed?

Yes, contractors are involved with the design and development of NWIS. There is a Privacy Act contract clause inserted in their GSA contracts.

6) Do other systems share data or have access to the data in the system? If yes, explain.

No

7) Who will be responsible for protecting the privacy rights of the public and employees affected by the interface?

In addition to the responsibilities of the NWIS Program Office in development and maintenance, Water Science Center Directors provide oversight and Site Administrators (SA) and Database Administrators (DBA) share in the responsibility for protecting the privacy rights. All users sign security forms stating they will neither misuse government computers nor the information contained therein.

8) Will other agencies share data or have access to the data in this system (Federal, State, Local, Other (e.g., Tribal))?

Yes, agencies involved in cooperative programs with the USGS are granted access to NWIS data through MOUs when necessary to facilitate the joint program activities.

9) How will the data be used by the other agency?

Data are used for analysis of water-resources problems, for monitoring water-resources trends, or for support of water-resources management decisions. Only USGS personnel query for site-owner data to obtain advanced approval to visit a site on private lands, or to request additional information about the site or activities.

10) Who is responsible for assuring proper use of the data?

Each USGS Science Center NWIS installation has a DBA who is responsible for their NWIS installation. Each USGS Science Center also has a SA assigned to their NWIS server. The DBA and SA normally report to the Data Section and Water Science Center Directors. All Departmental and contractor employees with access to NWIS are required to complete Privacy Act, Federal Records Act, and Information Technology Security Awareness training prior to being given access to the system, and on an annual basis, thereafter. All users sign security forms stating they will neither misuse government computers nor the information contained therein.