

National Groundwater Monitoring Network

Information for Prospective Providers

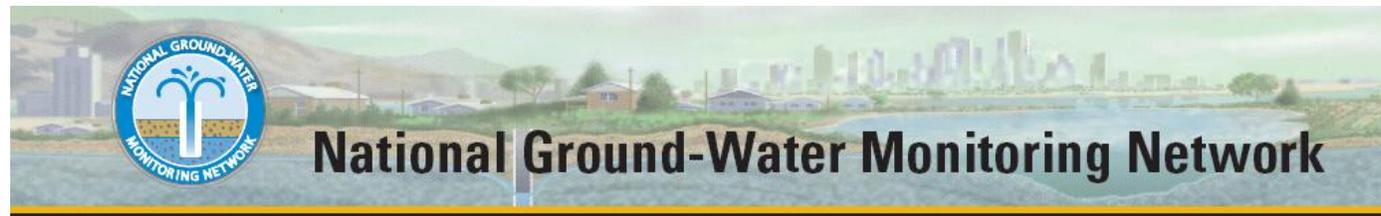
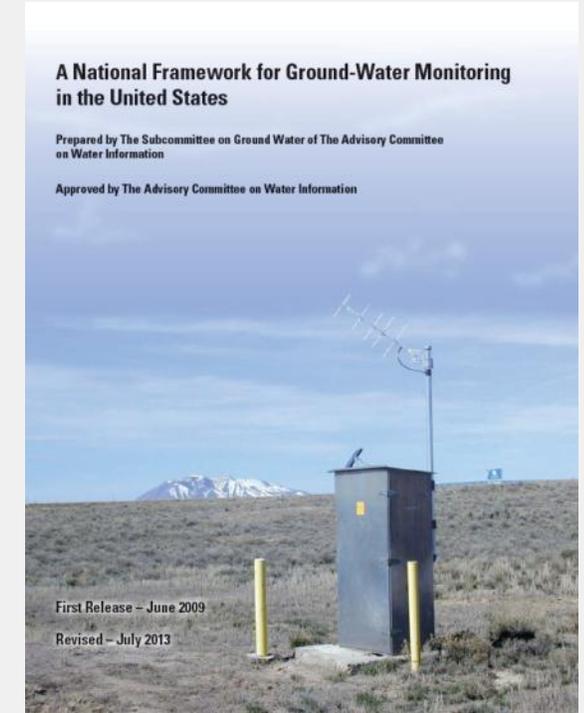
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Purpose of NGWMN

- Provide national-scale groundwater availability data in a consistent format – free to all
- Driven by need for data to assess groundwater conditions nationally and regionally
- Approach
 - Created the '[Framework Document](#)' with network design
 - Began implementation in 2015
 - Established management structure that includes the USGS and the NGWMN Program Board



Design Elements

Of the Network and the Data Portal

Network

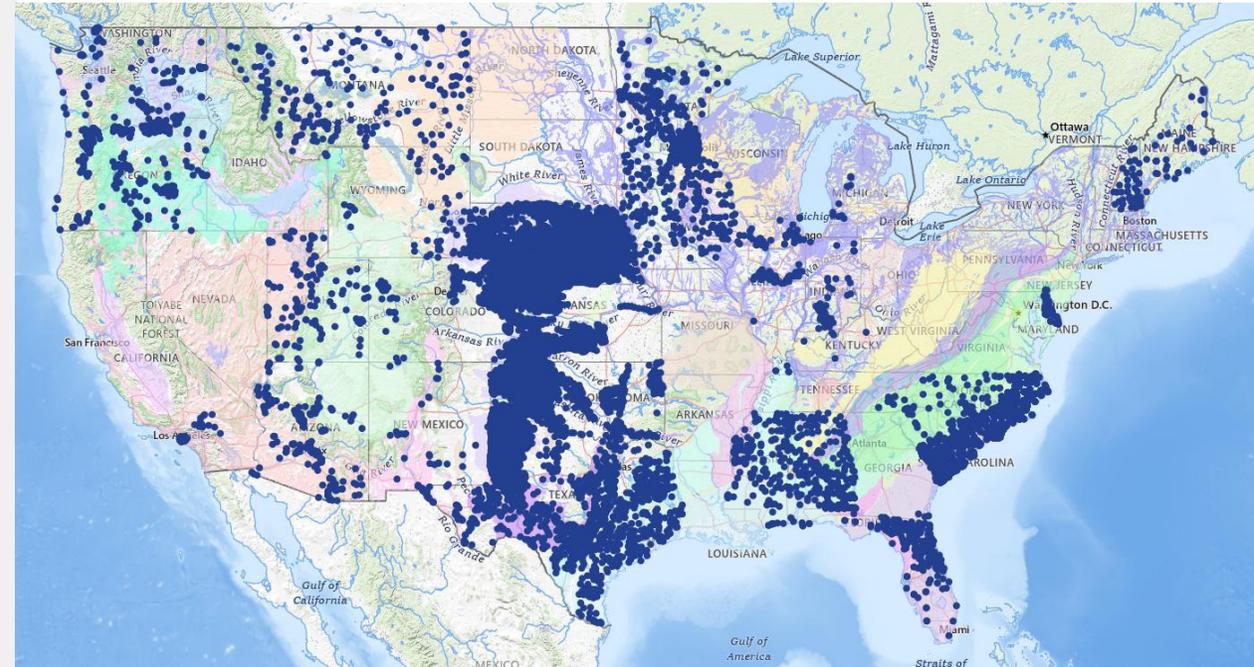
- Principal and major aquifers
- Groundwater levels and water quality, focus on availability
- Priority on sites with long-term data
- Willing data providers: state, local, Federal, other
- Sites selected and classified by local experts (data providers)

Data Portal

- Curated network, not a data warehouse
- Data provider is the authoritative source of data
- Data available to all without restriction or cost
- Added translation and statistics to data

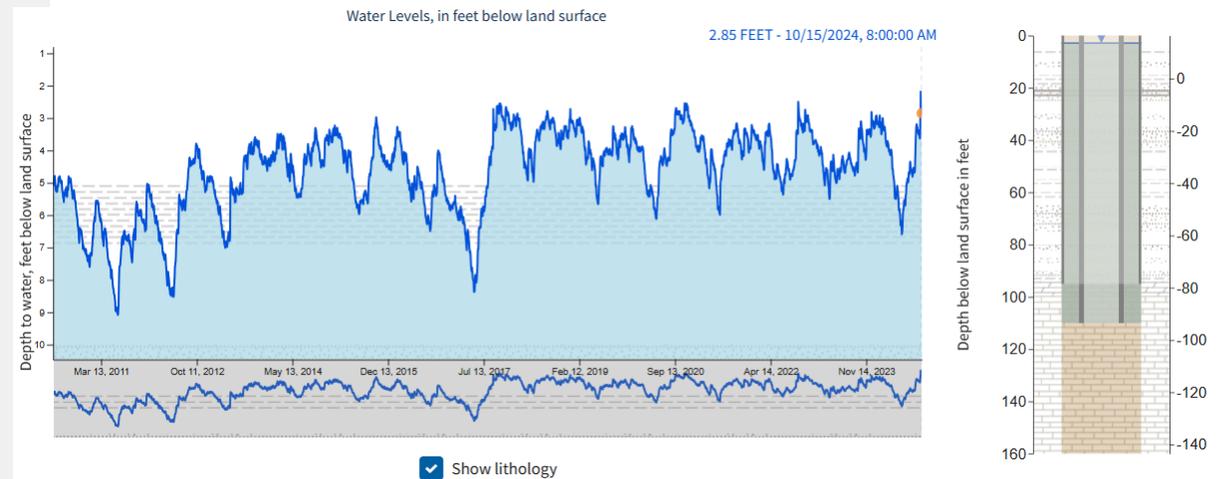
Overview of Tasks for New Providers

- Select sites for water-level and/or water-quality networks
- Classify sites into subnetworks and monitoring categories
- Enter sites into NGWMN Well Registry
- Set up web services to serve data to the NGWMN data portal
- Prepare final report for project



Overview of Tasks for New Providers

- USGS will help new providers to gain access to the registry
- Staff at USGS can answer questions about web services configuration
- New providers work with the USGS Product Owner to ensure data are mapped correctly and appear as expected



Involvement after the First Year

- Continue providing data to the NGWMN Data Portal
- Monitor NGWMN Data Portal – ensure data are transmitting and accurate
- Participate in NGWMN community conversations and meetings
- Can apply for additional funding

There are 4 data fetch errors.

71% of 14 data fetches were successful.

[Download CSV](#)

Site ID ↓	Data Type	Recent fetch status	Date of last fetch ↓	Error
	ALL	ALL		
IMW-WPS-110	WATERLEVEL	!	1/21/2026, 10:28 PM	500 - Internal Server Error
IMW-PMEC-6	WATERLEVEL	!	1/21/2026, 10:27 PM	500 - Internal Server Error
IMW-WPS-4	WATERLEVEL	!	1/21/2026, 10:27 PM	500 - Internal Server Error
IMW-WPS-114	WATERLEVEL	!	1/21/2026, 10:26 PM	500 - Internal Server Error
IMW-PMEC-6	LOG	✓	1/21/2026, 10:28 PM	
IMW-SAN-116	LOG	✓	1/21/2026, 10:28 PM	
IMW-SAN-116	WATERLEVEL	✓	1/21/2026, 10:28 PM	
IMW-SAN-1	LOG	✓	1/21/2026, 10:27 PM	
IMW-WPS-110	LOG	✓	1/21/2026, 10:27 PM	
IMW-WPS-114	LOG	✓	1/21/2026, 10:27 PM	

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Benefits of participation

as shared by existing data providers

- Consistent data for shared interstate GW resources
- Identification of ‘gaps’
- Opportunity for review of field and data management procedures
- “Community of Practice”
- Data Portal provides tools to access data
- Increased visibility of our work and data
- Funding available to improve networks
- Improved data management
- Caused us to evaluate our field practices

- Analyze big picture data
- Transboundary issues identified
- Help to prioritize high-quality wells
- Upgrade internal metadata
- Data collection field app
- Creating consistency among field crews
- Developing web services that can be repurposed
- Funding to centralize data
- Incentivized us to also share our data with the Water Quality Exchange

Benefits of participation

as shared by existing data providers

“New Hampshire has recently been declared in drought status. The National Groundwater Monitoring Program has allowed NH Geological Survey to better assist New Hampshire’s Drought Management team by leveraging statistical capabilities of our database system to provide timely, authoritative information concerning groundwater levels. This information in turn provides the Drought Management Team better support for decision making.”

“The UGS has benefited from participating in the NGWMN in many ways. Primarily, participation has allowed us to expand our monitoring network from 2 dedicated areas in the state (Snake Valley to the west and Castle Valley in the southeast) to include the entire state, providing springs and wells in sites covering most all counties in Utah. In addition, the U.S. EPA has been providing lab analysis for chemical constituents since 2014 and may continue to provide this service in the future. This program has motivated the UGS to improve its data preservation practices and streamline our results-to-database workflow. It also has made and Exchange Network grant goal possible.”



Benefits of participation

as shared by existing data providers

“The Kansas Geological Survey’s participation with the NGWMN has greatly expanded our data sharing capabilities by giving users an option for real-time, direct access to our online data repositories using the NGWMN developed web services. In addition, the NGWMN will facilitate the development and maintenance of our numerical groundwater models by providing standardized water level and lithology data across multiple states.”

Participation in NGWMN has had clear benefits to the DGS in these ways:

- The portal provides DGS-collected data more visibility on the Internet than it would have on our own web pages and data services.
- We have added components that make our water data and metadata more compatible with national standards and, started us on the process of incorporating GWML-compliant metadata.
- Interactions with other data providers and NGWMN program staff has helped us improve the efficiency and effectiveness of our water data collection, management, and distribution systems.”

Benefits of participation

as shared by existing data providers

“Participation in the National Groundwater Monitoring Network has provided an opportunity to see data sets from other providers and get a perspective of how data is managed and where data is being collected. This provides different perspectives and ways to look at the data. The NGWMN platform provides a nice location to consolidate groundwater data in a single, uniform platform that presents the data in a consistent format for all of the states. ”

“By development of a ‘community of practice’ for data collection techniques and methods, fostering data exchange, and ensuring NGWMN criteria is met with all data providers through consistent management practices and data collection protocols, standards, and techniques, the NGWMN is providing a unique service that has benefited ADWR just by virtue of its actuality.”

USGS National Ground-Water Monitoring Network Cooperative Funding Opportunity

The opportunity for 2026 will be available from January 30 to March 26, 2026.

- The NGWMN Cooperative Funding Opportunity provides funding to **support connecting new data providers to the Network** and to support existing data providers to maintain persistent data service and to enhance the NGWMN
- **Eligibility:** State, Native American tribal governments (Federally recognized), or local water-resource agencies that collect groundwater data
- Federal agencies, institutions, and companies may contribute data, but are not eligible for funding
- Applications need to be submitted electronically on Grants.gov under funding opportunity number G26AS00002

- Need to be registered with Grants.gov (do as soon as possible)
- **Note that registration of new users can take up to three weeks. Suggest starting this process as soon as possible**
- The NGWMN provides financial support for six objectives.
- New data providers are eligible for objectives 1, 2, and 3. *Described next*

National Ground-Water Monitoring Network

The National Ground-Water Monitoring Network (NGWMN) is a compilation of selected wells monitoring groundwater aquifers all around the nation. The NGWMN Data Portal brings groundwater data together in one place to provide users with current and reliable information for the planning, management, and development of groundwater resources.

ABOUT THE NETWORK	THE DATA PORTAL	DATA PROVIDERS	
GET INVOLVED	RESOURCES	PROGRAM ANNOUNCEMENT	
STATE WATERLEVEL DOWNLOAD			

NGWMN Grant opportunity - Objective 1: Support to become a new data provider

Objective 1 is limited to new Data Providers that have not been part of the network before

Objective 1 must be completed before work can begin on any other objectives

Federal funding generally ranges from \$30,000 to \$60,000, but could be more

Specific workplan elements:

- Select and classify sites for the NGWMN
- Provide required data elements for selected sites
- Populate the NGWMN Well Registry with site Network information
- Identify gaps in required data elements for selected sites
- Connect databases to portal using web services
 - Water Level, Water Quality, Lithology, Well Construction
- Document field and data management practices
- Prepare a brief report documenting the project

USGS NGWMN team will be available to assist throughout the process.



NGWMN Grant opportunity: Examples of Funded Objective 1 work

- Setting up new web services
 - Can include software or licenses to help facilitate serving data
 - Note: Software purchases or license fees related to storage of agency data, routine processing, and/or quality assurance of data **are not supported**
- Selecting sites for network
- Classifying sites for network
- Entering sites into the NGWMN Registry
- Documenting field and data management practices
- Documenting work in project final report (Due 120-days after each project)

Ideally, work to become a new data provider would be completed in year one of a two-year project but may continue into a second year if necessary.

Note that no other objectives may be initiated on the project until the ‘Support to become a new data provider’ objective is complete.

NGWMN Grant opportunity - Objectives 2 and 3:

2 - Support persistent data service from existing data providers and 3 - Filling gaps in information

Can apply for objectives 2 and 3 in year 2 of a 2-year project after completing objective 1

Objective 2: Perform activities necessary to maintain persistent data services from agency databases to the NGWMN Portal.

Objective 3: Perform work necessary to fill metadata gaps in the required data elements listed in the NGWMN Framework Document.

Further details available in the NGWMN informational presentation intended for all potential data providers (available on NGWMN web page).

