



National Groundwater Information System

Access to groundwater information, including the location of bores and bore logs, is essential to support informed decision-making about vital groundwater resources. The National Groundwater Information System is a spatial database which provides this information to water stakeholders.

What is the system?

The National Groundwater Information System is a spatial database from which a range of groundwater information will be able to be accessed and visualised.

How does it work?

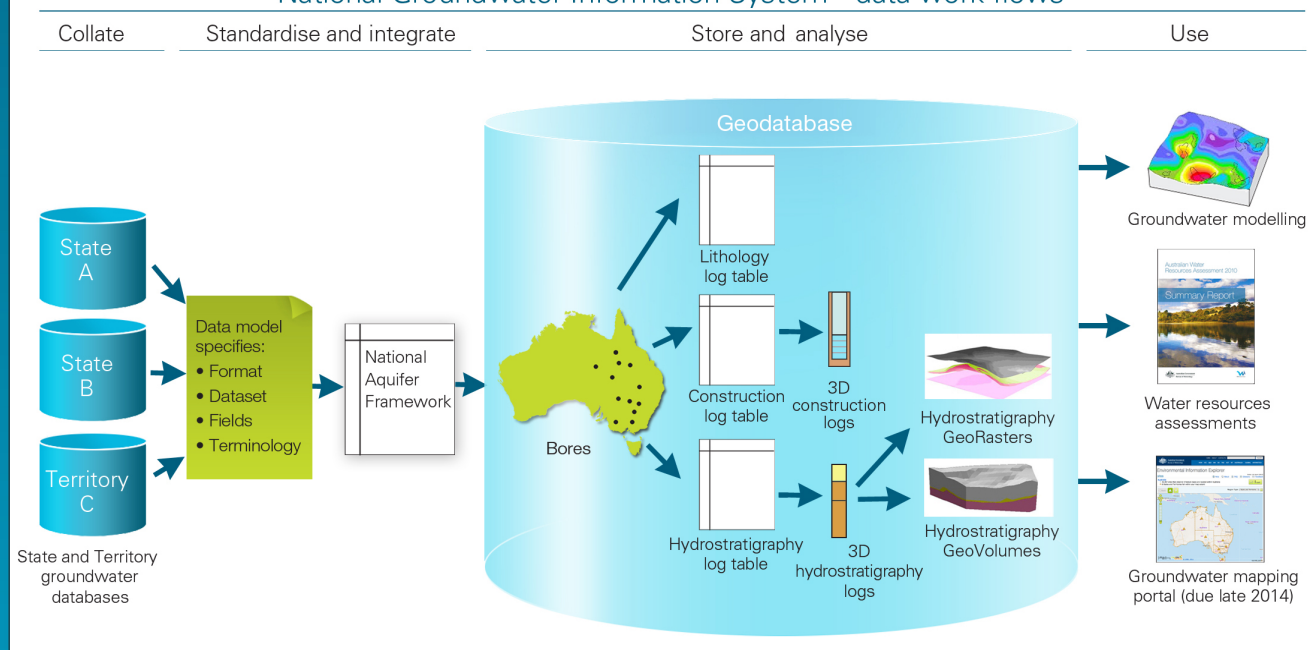
The system collates groundwater information from States and Territories and makes it nationally consistent. It will be available through a central, web mapping portal in late 2014.

Why is the system important?

Policy makers need access to information that is nationally consistent as groundwater systems often span jurisdictional boundaries.

The system will ensure that nationally consistent data is freely available online so that better informed decisions can be made around how we manage vital groundwater resources. In many parts of Australia there is increasing pressure on groundwater resources from activities including agriculture, mining, urban and commercial developments.

National Groundwater Information System – data work flows



What information is housed in the system?

The system contains the location of more than 800 000 bore sites around the country.

It also houses detailed information about each bore, such as its purpose (i.e.: monitoring, irrigation and commercial water use) as well as lithology, construction and hydrostratigraphy logs. 2D and 3D aquifer geometry is also available for some areas.

Why is the Bureau involved?

Under the *Water Act 2007*, the Bureau of Meteorology is responsible for compiling and delivering comprehensive water information across Australia. The system builds on the Bureau's commitment to increasing access to groundwater information to inform our understanding of how important groundwater resources should be managed.





Who can use the system?

The system is designed for use by a wide variety of water stakeholders including lead water agencies, catchment management authorities, consultants, academics, educational institutions, farmers and private industry.

It has already been widely used by State and federal governments for a range of purposes, including:

- interjurisdictional groundwater resource assessments;
- water accounting;
- water balance assessments;
- the creation of 3D geovolumes for analysing a range of information including groundwater availability, modelling and annual extraction volumes;
- the analysis of fresh water lenses and changes in aquifer thickness;
- the creation of datasets for groundwater resource appraisals; and
- conceptual and 3D groundwater models for a range of purposes including the analysis of groundwater and surface water interaction and groundwater resource assessments.

How does the system ensure that groundwater information is nationally consistent?

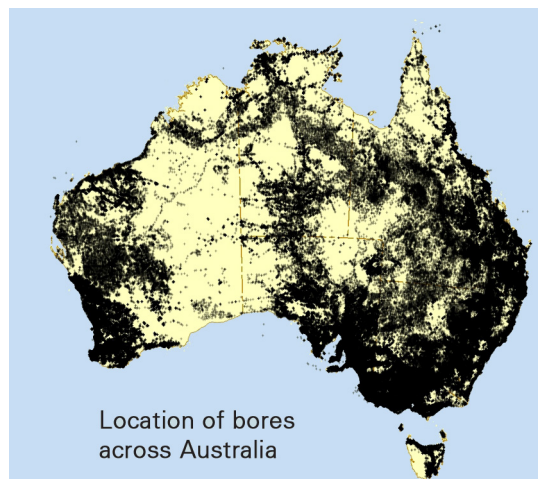
Each State and Territory uses their own terminology to describe sediments and rocks with similar hydraulic characteristics (hydrogeologic units) and these differences cause many difficulties, especially for groundwater basins that span multiple jurisdictions.

The Bureau ensures that information submitted by State and Territory lead water agencies is nationally consistent by standardising terminology using the National Aquifer Framework before uploading it into the system.

What is the National Aquifer Framework?

The National Aquifer Framework is the first nationally agreed system for naming and grouping hydrogeological units in Australia.

The framework aggregates State-level information to ensure that the hydrogeological unit information is nationally consistent. This allows groundwater information to be consistently analysed at all levels.



Who provides the information?

Information contained in the system is provided by the lead water agency in each State and Territory. Water Corporation also provides information for Western Australia.

A collaborative approach

The system is jointly funded by the Bureau and the National Water Commission.

The system's data model was developed with input and direction from a technical reference group and steering committee.

Contributing partners included the lead water agencies of each State and Territory, the Australian National University, Geoscience Australia, the Murray-Darling Basin Authority and the National Water Commission.

When will the system be updated?

New information will be uploaded into the system on an annual basis each December following the delivery of updated data by lead water agencies.

When will the system become available?

The system is available in ESRI File Geodatabase format by emailing groundwater@bom.gov.au

The web mapping portal is scheduled for release in late 2014.

For more information

For more information please visit our website at www.bom.gov.au/water/groundwater/ngis or contact: groundwater@bom.gov.au Subscribe to our newsletters and product alerts to receive regular climate and water updates.

