



Transforming Australia's water resources information

As the scarcity of water increases so does its value and the need to accurately monitor, assess and forecast water availability, condition and use.

Water scarcity in Australia is driven by eight major factors:

- a drying and warming climate
- increasing groundwater extraction
- expanding farm dams
- urban growth and the consequent increase in water demand
- the need to increase environmental flows
- meeting irrigation supply demands
- expanding plantations
- bushfire recovery impacts on runoff.

To address the threat of future water scarcity, the Australian Government is investing \$12.9 billion in *Water for Future* – a 10-year plan to secure long-term water supply to all Australians. The plan will help secure water supplies for Australian households, businesses and farmers, and provide water to restore the health of Australia's stressed river systems. It will also accelerate implementation of national water reform objectives set out under the National Water Initiative.

Through the Commonwealth *Water Act 2007*, the Australian Government has given the Bureau of Meteorology responsibility for compiling and delivering comprehensive water information across the water sector. As part of *Water for the Future*, the Bureau has been allocated \$450 million to administer the *Improving Water Information Program*. To achieve this, the Bureau is working with water managers across Australia to deliver high quality, national water information to government, industry and the community.

Over the next 10 years, the Bureau will develop and maintain an integrated, national water information system, freely accessible by the public.

Improving water information

Water information is currently collected and reported by more than 200 organisations across Australia, using a variety of methods. The range of collection and reporting methods and arrangements for accessing water data has made it difficult to monitor the status and use of Australia's water resources and reliably forecast water availability. This has compromised the effectiveness of water resources management and planning.

The Australian Government's new investments in improving water information will enable us to answer vital questions such as:

- How much water is in storage, aquifers and flowing in rivers?
- How much might there be in the coming days, months and years?
- Who has the rights to use water and how much?
- What is the pattern of water use and how is this changing?
- How much water is being traded and to where?
- How much water is the environment getting?
- How is water quality in our rivers and aquifers changing?

A major investment in water information across four areas

The Bureau is implementing its water information functions, along with its existing flood warning and forecasting services, through a new division focusing on water. The Water Division has four major areas of activity:

- Water Data Management
- Water Data Analysis and Reporting
- Water Forecasting
- Water IT Planning and Development

We have employed 120 additional people around Australia to deliver our water information services, with many based in Melbourne and Canberra. We are making substantial investments in the creation of new data sets and information systems. We are also investing with CSIRO in a significant program of water information research and development.

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Modernisation and Extension Funding program

In 2008, we began a five-year, \$80 million program to help water data collection agencies upgrade and expand their streamflow, groundwater monitoring and water storage measurement networks. Investment priorities in the Modernisation and Extension Funding program include improving data quality and currency, developing software to simplify data transmission to the Bureau and filling critical gaps in monitoring networks.

A major outcome of our work will be increased transparency, quality and understanding of water information.

A national collaboration

The development of a national system for water information storage, analysis and reporting requires a high level of collaboration between stakeholders. The Bureau is working closely with water data owners to coordinate and implement these arrangements.

The Bureau has established formal advisory, reference and expert panels to ensure a broad range of industry and government experience is utilised to help develop and expand our national water information capacity. These groups include a high-level Australian Water Information Advisory Council (AWIAC), a Jurisdictional Reference Group on Water Information (JRGWI) and a series of Expert Panels.

An external Steering Committee has been formed to oversee the development of the Australian Water Resources Information System (AWRIS) – details of AWRIS are available at: www.bom.gov.au/water/awris.shtml or on our AWRIS fact sheet.

Water information products

The Bureau will deliver a range of products designed to meet the needs of users engaged in emergency services, water policy development, planning, operations, public enquiry, education and research including:

- flood warnings and forecasts
- annual national water resources assessments
- an annual National Water Account
- real-time water reporting services
- real-time water availability forecasts
- online, single-point, access to water data collected across Australia.

Improved accessibility, integration and use of national water resources information will yield huge benefits. The integration of data sets, their improved quality and currency, and the introduction of new reporting, analysis and forecasting products and services will lead to more informed policy and infrastructure decisions. They will also enable evaluation of water sector reforms, leading to greater confidence in Australia's water management.

For more information

For more information about the Bureau of Meteorology's water information role please visit our website at:

www.bom.gov.au/water

Visitors can also subscribe to receive regular email updates.

Other fact sheets in this series include:

- The Australian Water Resources Information System (AWRIS)
- The *Water Act 2007* and Water Regulations 2008
- The Water Information Research and Development Alliance (WIRADA)