



Hydrologic Reference Stations

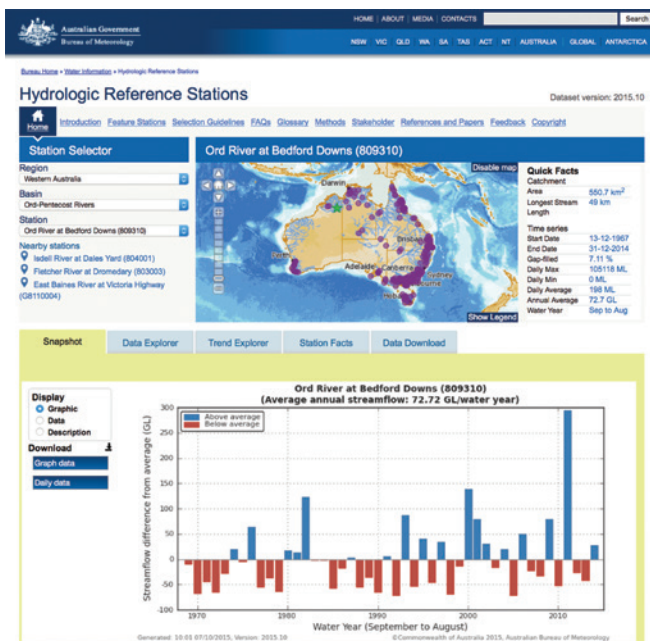
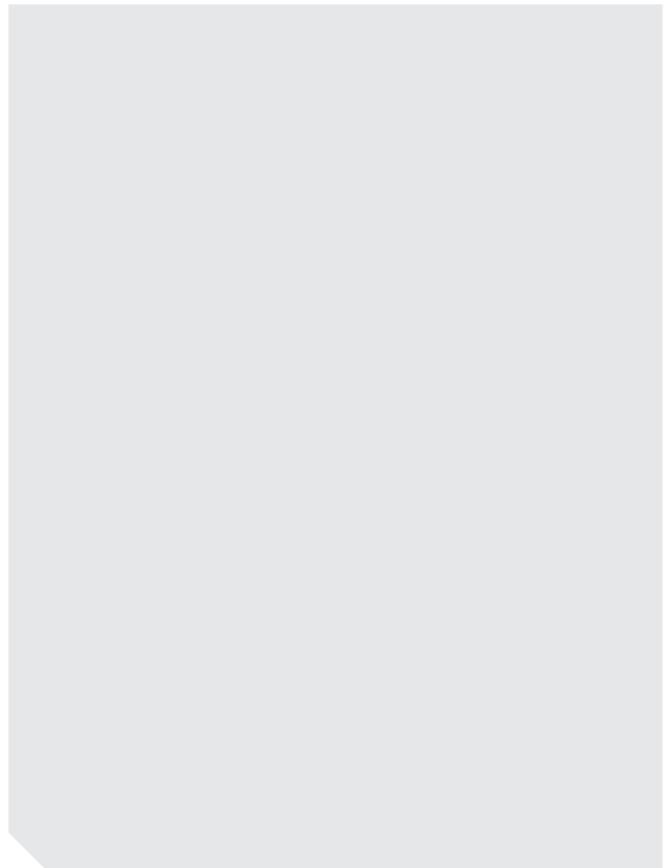


What is the HRS service?

Hydrologic Reference Stations (HRS) are high quality monitoring sites used for identifying long-term trends in streamflow variability, and predicting the effects of climate variability on long term changes in water availability across all Australian hydro-climatic regions.

The HRS network includes 222 sites that meet strict selection criteria. Specifically, each site is unaffected by water-related development such as dams and irrigation, has at least 30 years of high quality streamflow records, and collectively the stations represent all hydro-climatic regions across Australia.

Streamflow variability and trends are determined from the statistical analysis of data collected from each of the 222 sites.



The web portal through which users browse and download data for sites of interest.

Developing the service

Through consultation with approximately 70 stakeholders and a thorough data quality assurance process, 222 Hydrologic Reference Stations were identified around Australia.

We have developed an HRS Toolkit to detect general long-term trends in streamflow (changes occurring over many years), and changes in high and low flow patterns. It also generates the graphical products, data and statistical summary tables for the web portal.

What are the benefits?

HRS information assists in detecting long-term variability in streamflow and can be used in:

- planning the location of new storages;
- researching the impact of different climate stressors on water resources;
- developing new hydrologic tools and models;
- developing irrigation areas;
- sharing water between basins; and,
- identifying the need for new sources of water.

Who can use it?

HRS is available via a public web portal. Typical users include national and international research communities, government agencies, water managers and utilities.

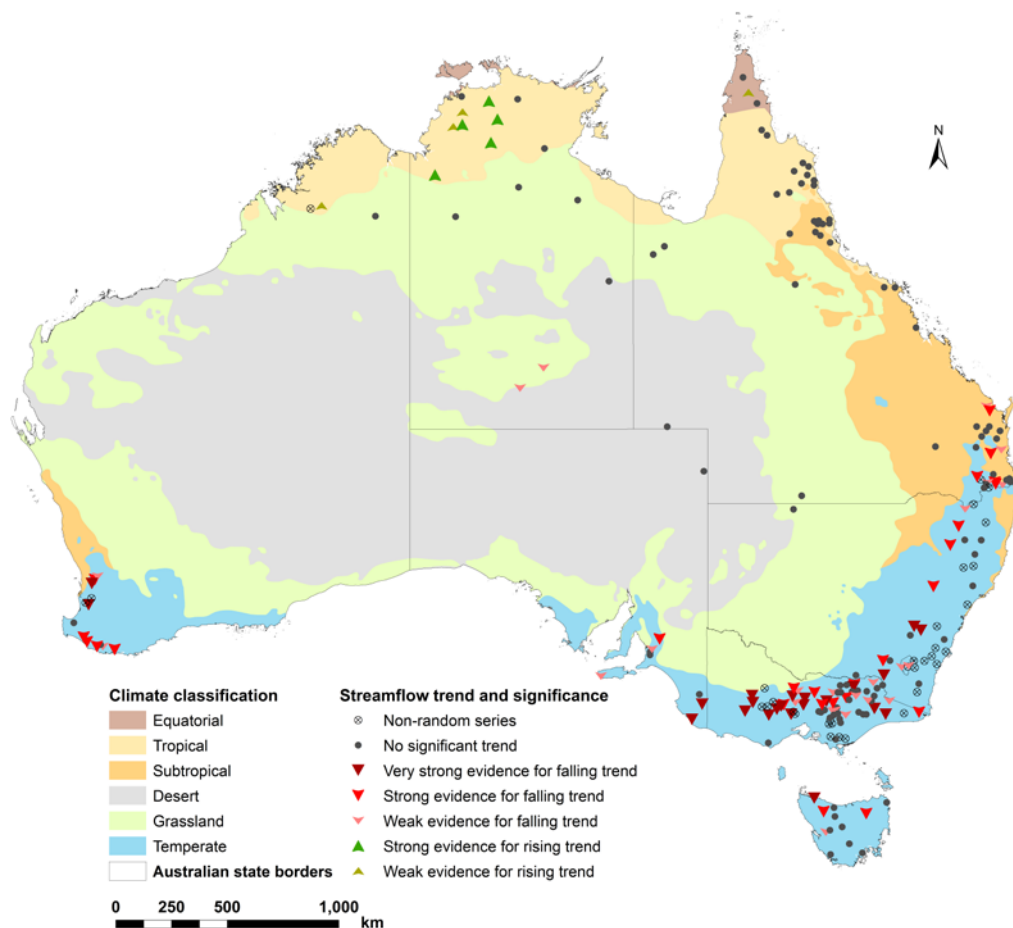
Next steps

HRS data was updated in October 2015, with plans for expansion and data updates every two years. More stations may meet the selection criteria and be included in future updates.

HRS data will be valuable for long-term water and food security planning. Researchers are using it to develop theories on hydrologic impacts and water availability from long-term variability in rainfall and evaporative demand. Some stations are also used for 7-day and seasonal streamflow forecasting.

What is the Bureau's role?

Our Improving Water Information Programme is building a comprehensive and reliable picture of Australia's water resources to support research, policy, planning and operations. Delivering the HRS is part of our water information role and responsibilities under the ***Water Act 2007***.



Location of HRS sites across Australia showing long-term streamflow trends.

FIND OUT MORE

For more information about the HRS visit <http://www.bom.gov.au/water/hrs/> or contact water_hrs@bom.gov.au

Subscribe to our newsletters and product notices to receive regular updates at www.bom.is/enviro-news



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