



Hydrologic Reference Stations

Australia's long-term streamflow data service

Hydrologic reference stations are streamflow monitoring stations that are used to identify long-term trends in streamflow across Australia.

What is the Hydrologic Reference Stations service?

The Hydrologic Reference Stations service is a dataset used to monitor long-term streamflow trends. It uses observations from a network of over 450 streamflow monitoring stations in rivers or streams located across all Australian hydro-climatic regions.

We publish the data in the Hydrologic Reference Stations [online tool](#) on the Bureau's website.

We update the dataset and review the network of stations generally every 2 years.

Station sites are selected against criteria to ensure quality and consistency of data. Each site is unaffected by water-related development such as dams and irrigation, and has at least 30 years of high-quality streamflow measurements.

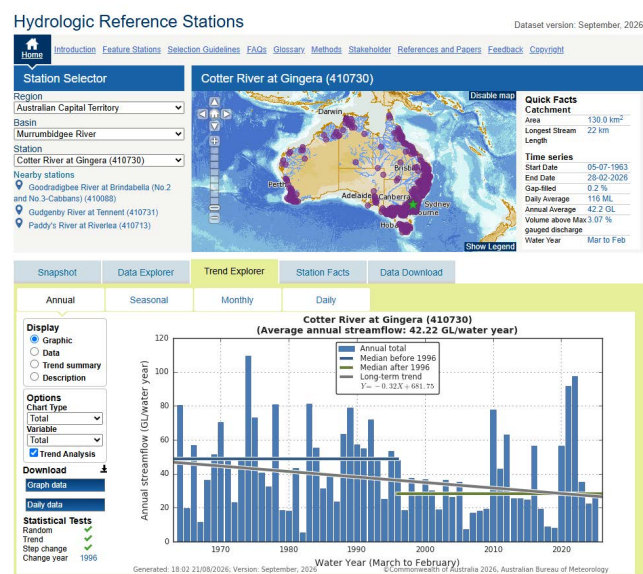
How does the service work?

We gather the streamflow data from the state and territory water agencies who manage the stations.

We quality check the data and apply a set of statistical tests to show variability and trends in a time-series analysis of data from each station. This shows general long-term trends in streamflow and changes in high- and low-flow patterns.

Using the online tool, you can view graphs and statistical summary tables, and search and download the data. You can:

- select a station and display streamflow data as an annual, seasonal, monthly or daily time series
- explore and analyse trends in streamflow using the trend explorer
- download streamflow information for each station across the different time frames.



The Hydrologic Reference Stations online tool allows you to browse and download data for sites of interest.

What are the benefits?

The information provides insight into long-term trends in water availability across Australia.

It can be used to inform research into the impacts of climate stressors on water resources, and to predict water availability and inform better use of this limited resource.

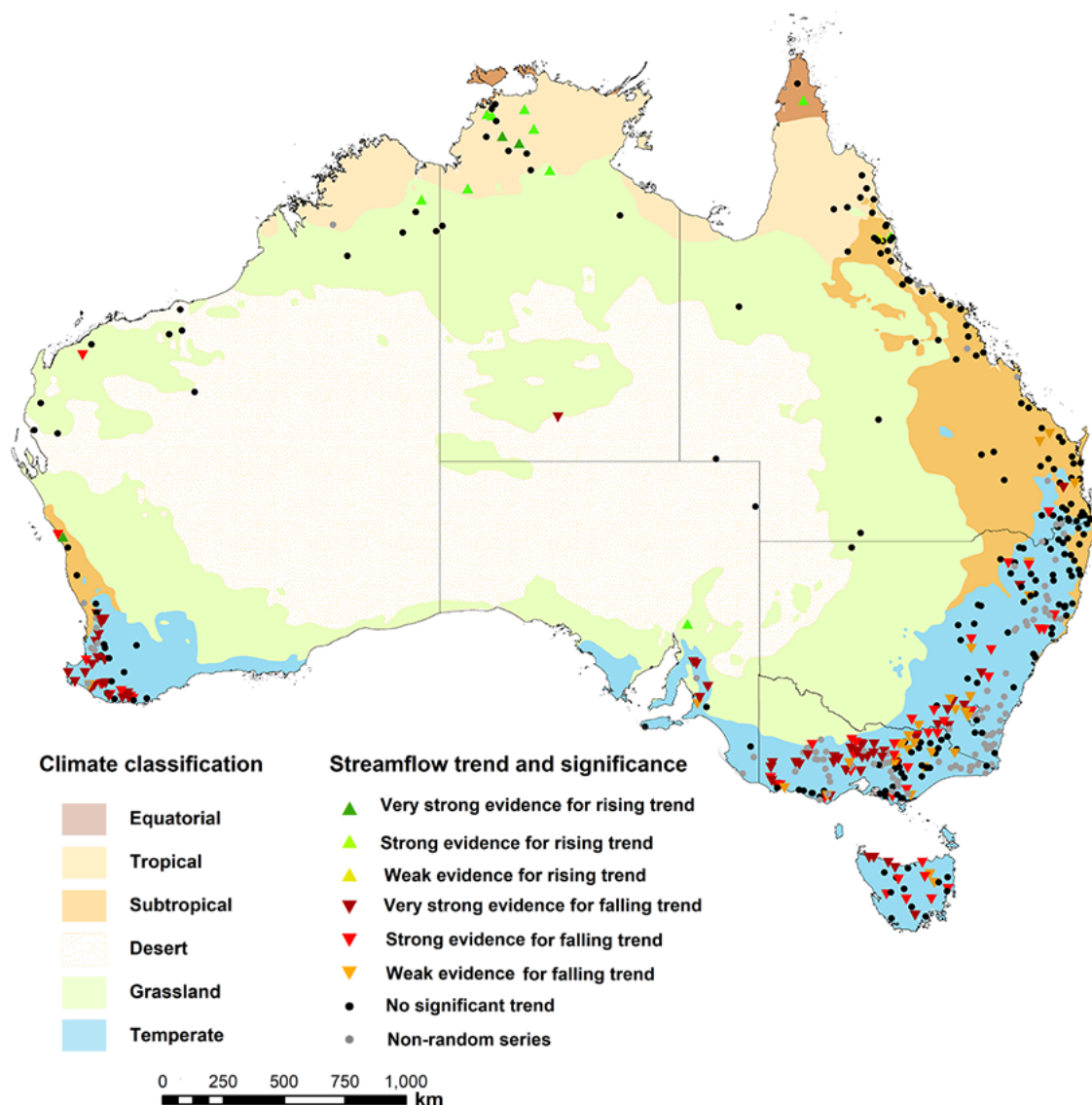
For example, Australian and international researchers, hydrologists, engineers and environmental and water resource managers use this data for:

- identifying, planning and managing water resource requirements
 - managing environmental water allocations
 - managing infrastructure development
 - planning the location of new water storages
- developing irrigation areas
 - sharing water between basins
 - developing new hydrologic tools and models
 - the Global Runoff Data Centre database, which operates under the auspices of the World Meteorological Organization.

What is the Bureau's role?

The Bureau provides nationally consistent information about Australia's water resources, including information that is published as part of the Bureau's responsibilities under the *Water Act 2007*. This information supports research, policy, planning and operations.

The Bureau has been publishing the Hydrologic Reference Stations data since 2013.



Location of Hydrologic reference station sites across Australia showing long-term streamflow trends.