

Understanding River Murray water delivery shortfall risks

The River Murray flows for 2,508 km from the Australian Alps through New South Wales along the Victorian border and into South Australia before reaching the Murray Mouth and the sea. It's the major river in the Murray-Darling Basin, Australia's foodbowl which grows about \$22 billion worth of food and fibre annually and houses about 40% of all Australian farms.

A delivery shortfall occurs when available water cannot be delivered to users when they want it. For example, it could happen because demand exceeds the physical capacity of rivers and channels to carry the water, or when demands for water unexpectedly spike and there's not enough time to release additional water from dams to meet the demand.

There's a range of factors that together could increase the risk of shortfall along the River Murray. These include:

- changes in land use, including growth in the irrigated agriculture sector
- changes in climate or extremes such as heatwaves
- changes in use of water
- channel capacity limiting the amount of water the river can carry, including through the Barmah Choke and Goulburn and Murrumbidgee rivers.

Irrigators along the River Murray, especially downstream of the Barmah Choke, need to understand the risk of water delivery shortfall and take it into account in their business planning and investment decisions.

What do I need to know?

Irrigators and communities along the River Murray should be aware that there is an increasing risk that water cannot be delivered to users when they want it. These risks are not new and change over time.



The risk of water delivery shortfall is **influenced by a range of factors** including water use patterns, river capacity to carry the water and climate variability.



The risk of shortfall is **not new** and should be factored into business decisions.



Shortfall risks are greatest for River Murray water users downstream of the **Barmah Choke**.



The risk of a shortfall in 2018/19 is **relatively low** but cannot be managed to zero.



The **Murray-Darling Basin Authority, New South Wales, Victoria and South Australia** work together to manage delivery shortfall risks.

How is the risk of a water delivery shortfall managed?

The MDBA and state governments are working to proactively manage water delivery shortfall risks now and into the future. Together, we're maximising our ability to meet demand, and minimising shortfall risks in the River Murray System—including through:

- operations planning for a range of scenarios ranging from wet to very dry
- monitoring demand and weather forecasts so operations can be adjusted
- using water from tributaries including arranging delivery of inter-valley water transferred from tributaries downstream of the Barmah Choke
- using the storage availability and water at Lake Victoria
- using water from the Menindee Lakes System (when available to the MDBA)
- manipulating weir levels
- managing and restricting water trade through the Barmah Choke.

What happens if a shortfall does occur?

If a shortfall happens and water delivery is affected, temporary water restrictions may need to be placed on water users.

Actual restrictions are very rare. To date, shortfall risks have been managed well enough to avoid restrictions since March 2002. However, changes in climate, timing and location of demand and land use, combined with the river system's capacity to carry volumes of water, mean these events are increasing in probability.

Who does what to manage shortfall risks?

The MDBA, state partners and their agencies have different roles and responsibilities in managing delivery shortfalls.

The MDBA operates the River Murray system on behalf of a "joint venture" made up of the New South Wales, Victorian, South Australian governments and the Australian Government. The MDBA is responsible for ensuring available water is shared between the states, managing the system's assets and directing operations to meet the state's needs.

The state agencies are responsible for distributing their share of available water between individual water entitlements holders and enforcing any water restrictions.

What should I do to prepare?

Water users need to recognise that shortfall risks exist and there may be times when water can't be supplied to water users when, where and at the rate it's required along the River Murray. Being aware of shortfall risks and understanding what the driving forces are for water demand is important. This knowledge will better prepare water users to understand the risk of water delivery shortfall and to take these risks into account when planning and making investment decisions.

The risk of water delivery shortfall this season is low but can't be managed to zero.

For more information

The MDBA will make information about impending shortfall risks available through the weekly river operations update report – subscribe via our website: www.mdba.gov.au/river-information/weekly-reports



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of South Australia