Australian Government

MURRAY–DARLING BASIN AUTHORITY

Summary:
River Murray Annual Operating Outlook for 2020–21

Each year the Murray–Darling Basin Authority (MDBA) releases an annual operating outlook for the River Murray. It explains how the MDBA may operate the River Murray system across a range of possible climatic and rainfall scenarios.

River operators respond to different conditions on a daily basis. Competing needs are balanced to ensure the efficient delivery of water for state water entitlements and the environment. The Annual Operating Outlook forms part of the MDBA's river operations planning. It is one of the tools used to help identify situations and system pressures that may occur. The outlook helps identify timing for bulk water transfers or using water from the inter valley trade accounts.

Key highlights as at July 2020

Climate and water in storages

- Last water year (June 2019–May 2020) was dry. Inflows were well below the long-term median for most of the year, but a late shift to wetter conditions resulted in **above average inflows in autumn.**
- Catchments that received rainfall during autumn 2020 have responded well to further rainfall in winter and are **likely to continue to respond to rain events** over the remainder of winter and into spring.
- The Bureau of Meteorology is forecasting conditions in spring are likely to be wetter than average. The **chance of La Niña forming** in spring 2020 is around double the average likelihood. La Niña events typically bring above average spring rainfall in eastern Australia.
- The outlook also suggests that **temperatures are likely to be warmer than average** over this period.
- Storage levels at Lake Hume and Lake Victoria are **higher than this time last year**. For current storage levels check the MDBA's water in storages webpage.
- Bulk transfers from **Dartmouth to Hume and Hume to Lake Victoria** are likely to be delayed into spring or early summer.
- The water level in **Menindee Lakes is significantly higher than this time last year** but still below the trigger level for water to be available to the Murray. Under 'near average' and wetter scenarios in 2020–21, **water may be available** to meet Murray system demands.
- Climate change is adding another layer of complexity to operations.

Delivering water at the right place and right time

- There is an increasing **variation in when and where water is needed** for both environmental outcomes and irrigation needs.
- Significant volumes of **water for the environment** are likely to be delivered through the system including to the Barmah–Millewa Forest.

Inter-Valley Trade

- The MDBA may have access to water from **Murrumbidgee inter-valley trade** (IVT), but this will depend on the water market.
- For the **Goulburn** IVT account, the MDBA has assumed volumes available will be similar to last year and that the MDBA will call on this water. The Annual Operating Outlook assumes delivery for December to April is limited to 40 GL per month to protect the ecology of the lower Goulburn River.

Capacity risks

- A water delivery shortfall occurs when water is not able to be delivered to users when they need it. This could be because demand exceeds physical capacity, or when water demand spikes and there's not enough time to release extra water from dams to meet the demand.
- There is **no indication at this stage that a shortfall will occur** in the coming year, however, the risk remains real, particularly under the higher demand 'moderate' and 'near average' conditions. The MDBA regularly reviews risks and updates operating plans.

Conveyance and system losses

- River operators plan and account for system losses through conveyance water. Conveyance water is the volume of water needed to move or carry water orders to customers.
- **Conveyance losses will vary from year to year and are inherently difficult to forecast** due to the significant influence of weather and flow conditions, which vary considerably over time.

Consultation and updates

Operational strategies are constantly adapted based on emerging conditions and issues. This outlook was prepared working with the Australian Government and the New South Wales, South Australian and Victorian governments. It will be updated in October 2020 to reflect new information, seasonal conditions, and changes to the system conditions and assumptions–this is a consultative process.

Scenarios and assumptions for the 2020–21 outlook

Each year the MDBA look at six scenarios. In 2020–21 these range from **extreme dry** (based on River Murray system inflows of 1,500 GL) to **very wet** (inflows of about 20,700 GL).

Operational strategies are then developed based on the scenarios and a number of assumptions covering inflows, losses and demands.

It should be noted that no one specific scenario will apply given the **range of varying factors**, a complex operating environment and potential changes to assumptions.

Management and operating strategies include:

- management of water in storages and water transfers
- manipulation of weir levels
- using water from tributaries and from inter-valley trade and Menindee Lakes (if available)
- monitoring demand and weather forecasts to continually adjust operations.

The River Murray system is complex with many variables:

It is one of the most variable climates in the world with **severe droughts**, summer **floods** and **extreme** temperatures.

Inflows can **range between 1,000GL to 40,000 GL** with dependence on releases from the Snowy Mountains scheme and regulated and unregulated tributaries.

Delivering water takes time, from days to weeks – E.g. it can take 22 days for water from Hume Dam to reach Lake Victoria

There are **changing patterns of demand** for all types of water use (water for consumption, irrigation and the environment).

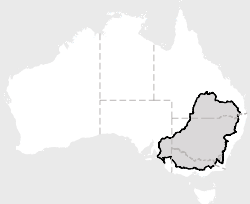
Water trade drives water to the highest value and the **timing and location of demand is variable.**

There are **no controlled storages downstream of Lake Victoria.**

Management of the River Murray System

The Murray–Darling Basin Authority operates the River Murray on behalf of the New South Wales, Victorian and South Australian governments, under the Murray–Darling Basin Agreement. State governments are responsible for entitlement frameworks and making allocations.

The Murray–Darling Basin



For more information visit
mdba.gov.au/river-murray-system/river-murray-operations

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