SA River Murray Flow Report

Report #22/2024

Issued 12.00pm 31 May 2024

This supersedes the previous Flow Report issued by the Department for Environment and Water (DEW) on 24 May 2024. The next Flow Report will be provided on Friday 7 June 2024.

Flow outlook

The flow at the South Australian border is approximately 8 GL/day and will decrease to around 5 GL/day over the coming week **depending on river operations**.

The current flow at the border comprises the full May Entitlement Flow (3 GL/day), water for the environment and interstate trade adjustments.

The flow over Lock 1 is approximately 7 GL/day and the flow over the coming week will decrease to around 6 GL/day.

It is important to note that flow forecasts in this advice are based on the information available at the time of preparation. Advice may change as new gauging information becomes available or due to rainfall events or changed operations upstream.

Water levels

Current water levels are updated daily and can be found on WaterConnect.

Upstream flows

An environmental water release from Menindee Lakes commenced this week as part of a trial to improve environmental flow connectivity between the northern and southern parts of the Murray-Darling Basin.

The pulse of water through the lower Darling River may affect the water quality in the River Murray in SA from mid-June. High levels of blue-green algae (predominantly non-toxic) currently in the lower Darling River may be flushed into the Murray. WaterNSW has advised that the high turbidity of the environmental water pulse is expected to cause a reduction in algae numbers due to lower penetration of sunlight into the water column. River operators have planned several mitigating actions for managing any impacts (e.g. from algae, elevated salinity turbidity), including mixing and dilution with water released from other storages, varying weir pool levels, and diverting a portion to Lake Victoria.

River users may notice a change in appearance and odour of the Murray in SA. Flows at the SA border from this event are not expected to significantly affect water levels in South Australia. Further information will be provided in next weeks flow report.

More information on upstream conditions and forecasts can be found in the Murray-Darling Basin Authority's *Weekly Flow Report*.

Murray Mouth

Dredging operations at the Murray Mouth continue. Dredging is undertaken to maintain connectivity (exchange of water) between the Coorong and the Southern Ocean. Dredging is currently being undertaken with a single large dredge which is operating 12 hours a day for 5 days a week.

Barrage releases, combined with dredging, help to maintain flow connectivity of the River Murray Channel to the Murray Mouth and assist in exporting salt from the river system.

Exclusion Zones established around the dredging operations are in place to ensure public safety. Refer to Notice to Mariners No 61 of 2023.

Barrage operations and water levels in the Lower Lakes

The water level in Lake Alexandrina is approximately 0.69 m AHD and Lake Albert is approximately 0.73 m AHD.

The Lower Lakes are being managed to target a daily average lake level between 0.6 m AHD to 0.7 m AHD during May 2024.

During adverse weather conditions, SA Water will operate the barrages to minimise the risk of seawater entering Lake Alexandrina, therefore minimising any negative salinity impacts from reverse flow events.

Gate openings at the barrages can now be viewed on Water Data SA – Barrage dashboard.

Total daily flow releases from the barrages can also be found on Water Data SA – Flows dashboard

River Murray Flood Mapping

The changes in the SA River Murray Chanel and floodplains since the 1956 flood and subsequent events have led to a shifting relationship between flow and water level, making accurate forecasting challenging. These changes include new infrastructure and development, shifts in floodplain vegetation and land use, movement of the river channel and changes in river bathymetry.

The effects of these changes were observed during the 2022-23 River Murray flood event. Following the event, the State Government committed funding for the purpose of updating DEW's River Murray flood models, tools and datasets with current conditions, and the latest observations of water levels and flood behaviour during the 2022-23 flood.

DEW is currently working to ensure that the River Murray hydrodynamic models, tools and data sets are updated with best available data so that river managers, emergency services and the community can be provided with up-to-date information for assessing potential flood impacts to inform their preparations prior to future events. The bathymetric surveys outlined below are an example of the new data being captured that will be used to inform these updates.

For more information contact Casey Henderson, Senior Project Officer on casey.henderson@sa.gov.au.

Bathymetric surveys – Lock 3 and Lock 6 reaches

DEW is progressing investigations into weir pool raising and lowering to achieve environmental objectives in the lock 3 and 6 reaches and has engaged contractors to undertake bathymetric surveys of the region.

A bathymetric survey is a water-based study that uses sensor technology (sonar), attached to watercraft, to map the depths and shapes of underwater terrain.

The surveys are being undertaken until July 2024 and will include the main River Murray channel and connected anabranches and wetlands in the Lock 3 reach (from Lock 3 to Lock 4) and Lock 6 reach (from Lock 6 to Lock 7).

Survey data will be used to create updated bathymetric digital elevation models (DEM) that will improve the accuracy of hydrodynamic models of the locks' weir pools under both regulated and flood flow conditions, and assist in the detection of potential submerged navigational hazards (e.g. sandbars). The data will also enable the detection of any changes to the river that may have occurred as a result of the 2022-23 River Murray flood event.

If you have any questions, please contact DEW.SREProgram@sa.gov.au.

Water quality

Algal blooms within SA

A **Water Quality Alert for Lake Alexandrina** issued by SA Health remains current due to elevated levels of potentially harmful blue green algae present in the lake. This alert and other information can be found on the SA Health website – Water Quality Alerts page.

Water samples taken at several locations in Lake Alexandrina have detected high levels of *Cylindrospermopsis,* a type of blue-green algae (cyanobacteria) which is potentially harmful to humans and animals.

The Water Quality Alert for Lake Alexandrina advises the public to avoid ingestion or contact with water in the lake, including the avoidance of recreational activities. The Water Quality Alert advises that Lake Albert does not currently pose a health risk.

DEW and SA Water will continue to monitor the location and movement of the algae. Barrage operations are being modified to encourage the discharge of algae through the mouth and away from populated areas.

Some level of blue-green algae on a large open water body like the River Murray is normal for this time of year when weather conditions are favourable for growth. Blooms can be transient, and their location and severity can be affected by a range of factors including wind direction, air and water temperatures and degree of water movement. SA Health encourages people to avoid contact with obvious green discoloured water as it may have health impacts.

SA Health and DEW will continue to monitor the situation and provide further advice and information to the public as conditions evolve.

Algal blooms upstream of SA

A number of current alerts for blue-green algae have been issued by upstream authorities for the River Murray upstream of the SA border and the Lower Darling River. Details of the current alert locations can be found on the WaterNSW website – Algae Alerts page.

River Murray River Vessel Waste Disposal Stations

The Lock 3 River Vessel Waste Disposal Station has been out of commission since January 2020 due to a significant infrastructure failure. The nearest alternative waste facility is located at Waikerie. Normal boat hard waste (domestic or galley waste) can still be deposited at the Lock 3 facility at the present time.

Goolwa RVWDS Portaloo unit has been removed and undergoing refurbishment. To prevent future issues and ensure correct operation, we kindly ask users to refrain from flushing foreign objects such as sanitary products, wipes, paper towels and cooking oil or fat. Flushing these items can cause serious damage to the equipment, including blockages and pump failures. Please only flush toilet paper to help maintain the equipment operational. Thank you for your cooperation.

The closest Portaloo disposal facilities are available at no charge at Coorong Quays, Hindmarsh Island by contacting them on 8555 7300. The remainder of the station is operating as normal. Updates will be provided as further information becomes available.

You can report any River Vessel Waste Disposal Station issues on 1800 799 065.

If you have any questions, please contact the DEW Engagement Team on DEW.WIOCommunications@sa.gov.au

Lower River Murray levees intermediate remediation funding

The Federal and State Governments have announced $17.1 million in funding to undertake intermediate remediation works for government-owned levees in the Lower Murray Reclaimed Irrigation Area (LMRIA) that were damaged in the 2022-23 River Murray flood event.

The intermediate remediation works will bolster the stabilisation works, which began in March 2023 to enable dewatering of inundated agricultural areas and will support the protection of the region's economically significant agricultural land and floodplain infrastructure in the event of future high flows.

In addition to the $17.1 million jointly-funded Disaster Recovery Funding Arrangement funding, the South Australian Government has allocated $14.2 million in state funds for intermediate remediation works to privately-owned LMRIA levees.

Condition assessments of the levees will inform the development of a longer-term resilience strategy for government and privately-owned levees within the LMRIA. This strategy will also be underpinned by consultation and engagement with the region's relevant stakeholders.

The Department for Environment and Water will continue to work closely with the LMRIA landholders, irrigation trusts and community members in progressing the intermediate remediation works.

Public access to Lower Murray Reclaimed Irrigation Area Levees

All government-owned levee banks along the Lower Murray from Mannum to Wellington continue to remain closed to public access until full condition assessments of the levees are undertaken and levees are deemed safe for public access. Recreational activities along the levee banks, such as walking, cycling and fishing are not allowed.

The government-owned levee banks are Cowirra, Neeta, Wall Flat, Pompoota, Mypolonga, Mobilong, Burdett, Long Flat, Monteith and Jervois.

Privately-owned levees along the Lower Murray are managed and maintained by private landowners and access to their levee banks is at the landholder's discretion. In addition, access to private levee banks where the department is undertaking reinforcement of levee stabilisation work is not permitted.

If you have any questions, please contact Lisa van der Linde, Communications and Engagement Officer on 0437 313 087 or Lisa.vanderlinde@sa.gov.au

Environmental water delivery

Planning for the delivery of water for the environment in 2024-25 is in progress. This includes consideration of operations of the Chowilla, Pike and Katarapko floodplain environmental regulators with associated raising of Locks 6, 5 and 4. The decision to proceed with these operations will depend on River Murray flows and environmental water availability through the latter half of 2024 and will be informed by the outcomes of environmental monitoring and consultation. Weir pool manipulation within normal operating ranges is under consideration and planning is also underway, in conjunction with the MDBA, NSW and Victoria, for the delivery of enhanced flows to South Australia during spring.

Salinity

Salinity levels throughout the River Murray in South Australia are within their typical range. Nonetheless, it is possible that some irrigators may record higher salinity readings at isolated locations. These higher readings are more likely to be observed at the bottom of the water column.

Irrigators are encouraged to monitor the daily salinity levels provided by SA Water as part of their business operations.

Further information

- SA River Murray Flows page - Department for Environment and Water
- 2022-23 River Murray Flood event
- Government of South Australia - State Disaster Recovery
- SA Water quality alerts - SA Health
- Real-time SA water data
- Current SA daily water levels
- Daily flow and water level information at key SA Water sites on the River Murray
- SA daily salinity information
- SA Marine safety
- Real time information - whole of River Murray system
- Whole River Murray System weekly reports
- Flows in the River Murray System including water for the environment
- Water for the environment actions in the Murray-Darling basin catchments
- NSW fish kills
- NSW algal alerts

Bureau of Meteorology

- SA rainfall and river conditions
- Victorian rainfall and river conditions
- NSW rainfall and river conditions
- Climate outlooks
- Climate drivers

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