

# SA River Murray Flow Report

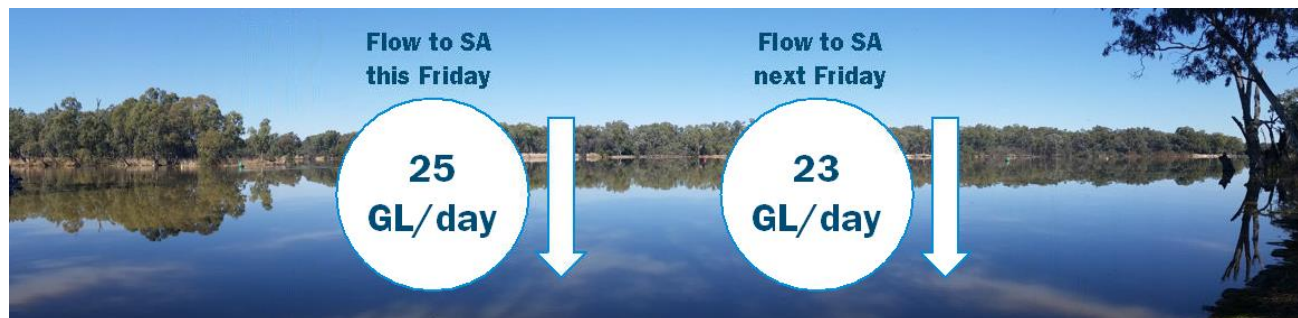


Report #13/2023

Issued 10:00 am 31 March 2023

This supersedes the previous Flow Report issued by the Department for Environment and Water (DEW) on 24 March 2023. The next Flow Report will be provided on Friday 7 April 2023.

## Flow outlook



The flow at the South Australian border is approximately 25 GL/day and is forecast to decrease to around 23 GL/day over the coming week. The current flow at the border comprises:

- full March Entitlement Flow (6 GL/day);
- water for the environment (see below *Environmental News*);
- interstate trade adjustments;
- Additional Dilution Flow (ADF); and
- Unregulated flow.

The flow over Lock 1 is approximately 23 GL/day and will increase to around 24 GL/day over the coming week.

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.

## Current water levels

Current water levels are updated daily and can be found at the following link: <https://www.waterconnect.sa.gov.au/River-Murray/SitePages/Daily.aspx>

## Salinity

Increased salinity levels are common during flood recessions. The Department is closely monitoring elevated salinity levels throughout the River Murray in South Australia. In general, salinity levels across the River Murray in SA are approximately 400-500 EC which is still within acceptable limits. It is understood that some irrigators have recorded 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.

PIRSA has provided salinity management advice for irrigators on its website:

[https://www.pir.sa.gov.au/emergencies\\_and\\_recovery/storms\\_and\\_floods/river\\_murray\\_flood\\_2022](https://www.pir.sa.gov.au/emergencies_and_recovery/storms_and_floods/river_murray_flood_2022)

## Upstream flows

More information on upstream conditions and forecasts can be found in the Murray-Darling Basin Authority's *Weekly Flow Report* here: <https://www.mdba.gov.au/water-management/regular-reports-murray-data-storages/weekly-reports>

## Murray Mouth

Dredging at the Murray Mouth continues to be suspended due to high flows scouring sand out of the mouth. A wider and deeper Murray Mouth will have positive environmental benefits following the flood through enabling better exchange of water between the ocean and the Murray estuary and Coorong.

## Barrage operations and water levels in the Lower Lakes

The water level in Lake Alexandrina is approximately 0.56 m AHD and Lake Albert is approximately 0.54 m AHD.

River users may have noticed over the last week that water levels around the Lower Lakes are lower than usual. DEW and SA Water are working to target an average water level of 0.6 m AHD across Lake Alexandrina and Lake Albert. Although water levels are currently lower than the intended target, barrage gate closures should bring the water level up to the target level.

Water levels and barrage operations are monitored closely by the South Australian Government, Murray-Darling Basin Authority and Commonwealth Environmental Water Office.

The barrage calculator has been updated and estimated release volumes from the barrages during the recent flood have now been calculated. The graph below shows the total daily barrage release during the 2022 flood event. From 1 November 2022 to 28 February 2023 a total of **9 835 GL of water was released from the barrages. This is enough water to fill Sydney Harbour 19 times.** The largest volume released on a single day during the flood was on 29 January 2023 and was just under 120 GL.

When compared to the total daily release during a more 'standard' water year of 2020-21, shown by the dark blue line, it is evident that the volumes released during the most recent summer were considerably more than usual.

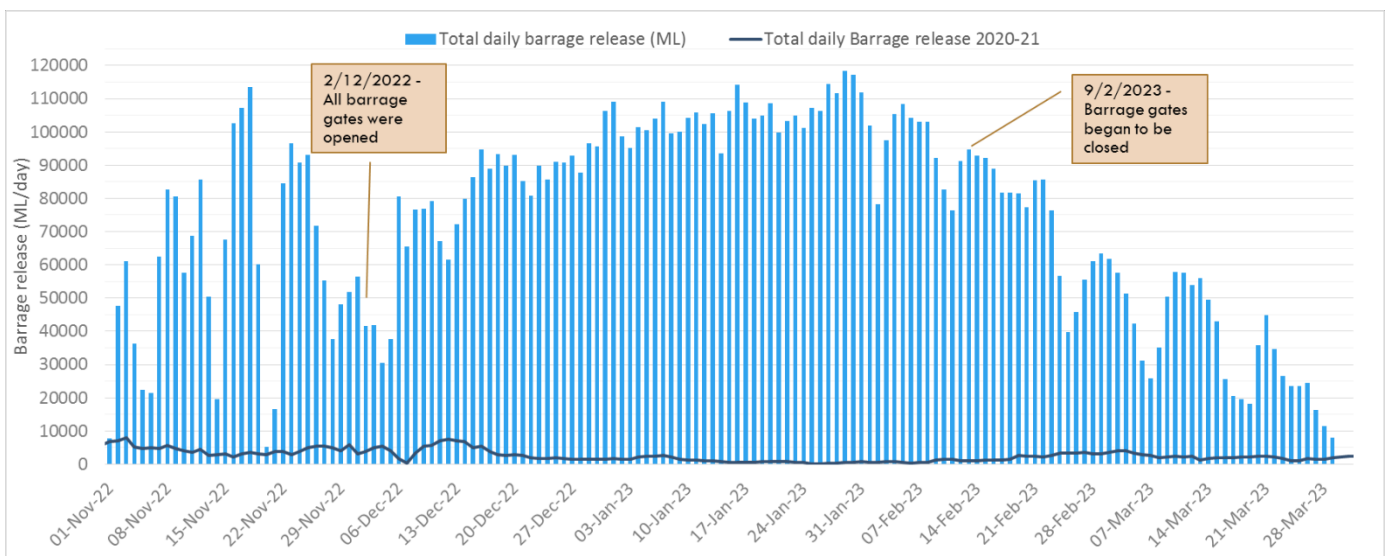


Figure 1: Total daily barrage releases from 1 November 2022

## River Murray River Vessel Waste Disposal Stations

As water levels recede, DEW is recommissioning each disposal station when it is deemed safe and possible to do so. The process to recommission includes regaining safe access to the site, inspecting the infrastructure for any damage, repairing any damaged infrastructure, reinstating equipment, and the reconnection and testing of services.

**As at 30 March 2023 the following River Vessel Waste Disposal Stations are online and operational:**

- **Loxton**
- **Berri**
- **Waikerie**
- **Goolwa**

The other stations have been assessed for damage and repair works are underway. Based on assessments and works completed to date, indicative timeframes for recommissioning of the remaining stations are as follows:

- |  |                         |
|--|-------------------------|
| • Swan Reach                           | Late March 2023*        |
| • Renmark, Morgan, Blanchetown, Mannum | Early April 2023*       |
| • Lock 6, Walker Flat                  | Mid to late April 2023* |
| • Murray Bridge                        | TBC                     |

*\*Note – these times may be subject to change dependent on further damage being identified, reconnection to services etc. Updates will be provided as further information becomes available.*

Final commissioning of the River Vessel Waste Disposal Stations is dependent on a number of factors outside the control of the Department including SA Power Networks, removal of adjacent temporary levee banks (where applicable) and safe road access. Until the river vessel waste disposal stations can be recommissioned, commercial options remain available for businesses to utilise temporarily at houseboat owners and operators' expense while the disposal stations are closed.

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 waste (domestic or galley waste) can still be deposited at the Lock 3 facility at the present time.

If you have any questions, please contact the DEW Engagement Team on [DEW.WIOCommunications@sa.gov.au](mailto:DEW.WIOCommunications@sa.gov.au)

## Levee embankments

Engaged levee banks along the Lower Murray from Mannum to Wellington currently remain closed. More information on current restrictions around the Lower Murray Reclaimed Irrigation Area can be found here:

<https://www.recovery.sa.gov.au/active-recoveries/river-murray-flood/restrictions>.

With the River Murray flood situation now in the recovery phase, the stabilisation of the levee network and dewatering process is the highest priority for producers in the Lower Murray region. The Department is working with impacted landholders and trusts to determine which feasible short-term works may be required to stabilise the levee embankments and/or allow dewatering to occur. Further information on the stabilisation of the levee banks in the LMRIA area can be found on the [DEW Website](#).

PIRSA is leading the process of recovery planning for the LMRIA as part of the State Recovery Plan. Should you have any questions in relation to dewatering and recovery of the agricultural areas post-flood, please contact PIRSA on the Recovery Hotline on 1800 931 314.

DEW is unable to guarantee the integrity of levees following the flood event. Any Local Irrigation Trust members and contractors accessing the levees for works are encouraged to take all necessary precautions when working on the levees, particularly during or following wet weather.

If you have any questions, contact the DEW Engagement Team on [DEW.WIOCommunications@sa.gov.au](mailto:DEW.WIOCommunications@sa.gov.au)

## Environmental news – Kaltuwari (yabbie) monitoring with Ngarrindjeri in the Lower Murray

A collaborative Kaltuwari (yabbie) monitoring project between The University of Adelaide, Ngarrindjeri Aboriginal Corporation and the Department for Environment and Water commenced its second year of monitoring in January and February 2023. Kaltuwari is a Ngatji (totemic species) for the Ngarrindjeri and an important cultural food. Monitoring took place in the Lower Murray to understand their distribution and abundance.



Figure 2: Kaltuwari (yabbie) found during monitoring in the Lower Murray (K. Wedge, DEW)

## Water quality

### Blackwater & Menindee Lakes fish deaths

Blackwater occurs naturally when floods wash leaves, grass and cropping material off riverbanks and floodplains into waterways. High levels of organic matter in waterways, combined with warm weather, can cause oxygen levels in the water to drop. This is known as hypoxic (low oxygen) blackwater, which can have a blackish colour and a strong, unpleasant smell. In addition, when dissolved oxygen levels in water drop below critical levels, it can cause fish and crustaceans to die.

Fish deaths have been observed in the lower Darling between Menindee main weir and Weir 32. Species that have been recorded have been mainly Bony Bream and Carp with smaller numbers of Golden Perch and Murray Cod.

Information on fish deaths in NSW can be found on the NSW Department of Primary Industries website here: <https://www.dpi.nsw.gov.au/fishing/habitat/threats/fish-kills>

In South Australia, mainly Carp and Bony Bream deaths are continuing in the Coorong from being flushed out to sea during ongoing barrage discharges. **There is currently no hypoxic blackwater present in the South Australian section of the River Murray.**

In response to these recent events PIRSA, with support from DEW, SA Water and the Murray-Darling Basin Authority and other relevant government agencies, continue to closely monitor blackwater, dissolved oxygen levels and fish death events upstream and plan mitigation measures should it reach South Australia.

To report sightings of large numbers of dead or distressed fish, please contact the 24-hour Fishwatch hotline on 1800 065 522.

## Algal blooms

It is reasonably common for algal blooms to be reported at this time of year in the Murray-Darling Basin and a number of red and amber alerts for blue-green algae have been issued by upstream authorities in recent weeks. They include:

- River Murray at Fort Courage (**Red alert**)
- River Murray at Curlwaa (**Amber alert**)
- River Murray at Merbein (**Amber alert**)
- River Murray at Buronga (**Amber alert**)
- Darling River at Tapio (**Amber alert**)
- Great Darling Anabranch at Silver City Highway (**Red alert**)

While no algal-blooms are currently present within South Australia, people are advised to avoid contact with any obviously green water or scums if they are encountered as they may cause skin irritations in some people.

South Australian authorities closely monitor the situation upstream and SA Water increases sampling whenever a water quality event is detected to allow for timely action. SA Water, SA Health and DEW monitor the occurrence of blue-green algal blooms in South Australia. SA Water uses the water quality data to continually adjust operations to minimise impacts to water treatment plants and other users located along the River Murray.

Water quality alerts in South Australia can be found on the SA Health website:

<https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/public+health/water+quality/water+quality+alerts>

More information on current alerts upstream can be found on the WaterNSW website here:

<https://www.waternsw.com.au/water-services/water-quality/algae-alerts>

## Further information

2022-23 **River Murray Flood event**

<http://www.sa.gov.au/topics/emergencies-and-safety/river-murray-flood>.

2022-23 Flood **recovery**

<https://www.sa.gov.au/topics/emergencies-and-safety/river-murray-flood/recovery>

**Water quality alerts** in SA

<https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/public+health/water+quality/water+quality+alerts>

NSW **fish deaths**

<https://www.dpi.nsw.gov.au/fishing/habitat/threats/fish-kills>

NSW algal alerts

<https://www.waternsw.com.au/water-services/water-quality/algae-alerts>

**Real-time water data** at sites in SA

<https://water.data.sa.gov.au/>

**Current daily water levels**

<https://www.waterconnect.sa.gov.au/River-Murray/SitePages/Daily.aspx>

**Daily flow and level information** at key SA Water sites on the River Murray

<https://www.sawater.com.au/water-and-the-environment/south-australias-water-sources/river-sources/river-reports-daily-flow>

Daily **salinity** information in SA

<https://www.sawater.com.au/water-and-the-environment/south-australias-water-sources/river-sources/river-reports-daily-salinity>

**Real time information** throughout the **River Murray system**

<https://riverdata.mdba.gov.au/system-view>

**Whole River Murray System** updates

<https://www.mdba.gov.au/water-management/regular-reports-murray-data-storages/weekly-reports>

**Marine safety** in SA

<https://marinesafety.sa.gov.au/>

**Victorian** rainfall and river conditions

<http://www.bom.gov.au/vic/flood/index.shtml>

**NSW** rainfall and river conditions

<http://www.bom.gov.au/nsw/flood/>

**Climate outlooks**

<http://www.bom.gov.au/climate/ahead/outlooks/>

**Climate drivers**

<http://www.bom.gov.au/climate/enso/>

ID	RM-Flow-Report-2023 03 31
Classification	Public I2 A2
Issued	31 March 2023
Authority	DEW
Master Document Location	R:\Water Group\RMO\WRO\04 Communications\Flow Advices\2022-23
Managed and Maintained by	Water Infrastructure and Operations Branch
Author	Water Infrastructure and Operations Branch
Reviewer	Director, Water Infrastructure and Operations