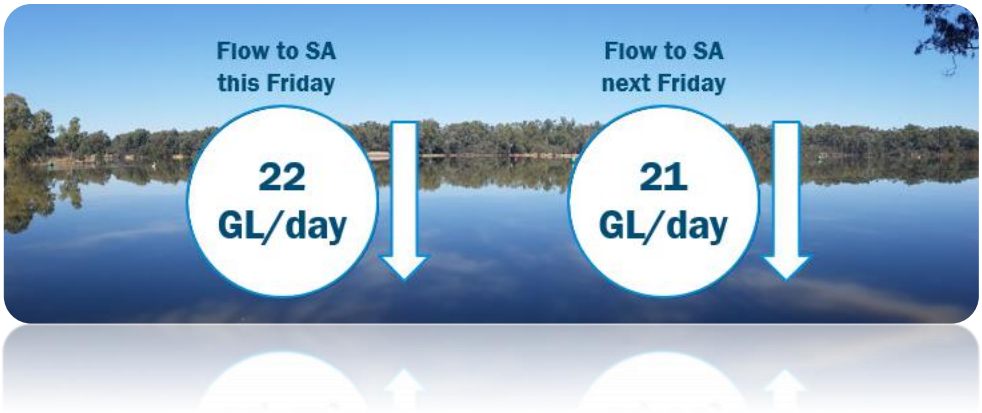
SA River Murray Flow Report

Report #38/2023

Issued 12:00 pm 22 September 2023

This supersedes the previous Flow Report issued by the Department for Environment and Water (DEW) on 15 September 2023. The next Flow Report will be provided on Friday 29 September 2023.

Flow outlook



The flow at the South Australian border is approximately 22 GL/day and is forecast to decrease to approximately 21 GL/day over the coming week **depending on river operations**.

The current flow at the border comprises the full September Entitlement Flow (4.5 GL/day) plus, water for the environment and interstate trade adjustments while the majority of the flow is Unregulated Flow.

The flow over Lock 1 is approximately 36 GL/day and will decrease to around 25 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.

Water levels

River users located immediately downstream of Locks 1, 2 and 3 should monitor moorings and pumps regularly over the coming days as natural flows reduce and water levels fall rapidly.

Users on the upstream side of the locks should also remain vigilant of possible water level changes while SA Water reinstates weir stop logs.

As natural flows recede, weirs are being reinstated to maintain the normal pool level at each of the locks. Reinstatement works at Lock 4 earlier this week saw the water level fall by 25 cm below normal pool level for one day.

For more information about locks and weirs, visit Weirs and locks | Murray–Darling Basin Authority (mdba.gov.au)

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

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. Conditions are continuing to be monitored and fortnightly surveys performed in order to provide accurate information to assist in determining when dredging may recommence.

A wider and deeper Murray Mouth will have positive environmental benefits following the flood through enabling better exchange of water between the ocean, Lake Alexandrina and the Coorong.

Barrage operations and water levels in the Lower Lakes

The water level in Lake Alexandrina is approximately 0.80 m AHD and Lake Albert is approximately 0.88 m AHD. The difference is due to wind effects.

The Lower Lakes are being managed to target a daily average lake level between 0.7 m AHD to 0.8 m AHD during September 2023.

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 here:
https://water.data.sa.gov.au/Data/Dashboard/75

Total daily flow releases from the barrages can also be found on Water Data SA here:
https://water.data.sa.gov.au/Data/Dashboard/1

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

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 Murray Reclaimed Irrigation Area Levee embankments

Overtopped levees – 22 September 2023 update

On the 7th and 8th of September, 7 levees in the Lower Murray Reclaimed Irrigation Area (LMRIA) were impacted by wind seiche caused by strong southerly winds of up to 72 km/h. The wind seiche raised water levels by 400mm to 500mm in under 24 hours.

Two government-owned levees at Pompoota and Long Flat, and 4 privately-owned levees at Kilsby, Westbrook, Toora and Glen Lossie, overtopped, while a privately-owned levee at Placid was breached following overtopping.

Emergency stabilisation works to stop overtopping as well as further reinforcement works were undertaken where required at Kilsby, Westbrook, Toora, Glen Lossie, Pompoota and Long Flat. Repair works to disconnect the Placid levee from the river are being scoped with works scheduled to commence over the coming week.

The Department of Primary Industries and Regions SA (PIRSA) is committed to completing the dewatering process at all sites impacted by the 2022-2023 River Murray flood and this latest event. Further dewatering requirements are being assessed by PIRSA and additional pumps deployed where necessary.

Levee access

All government-owned levee banks along the Lower Murray from Mannum to Wellington remain closed to public access until further notice. While flood recovery works are being undertaken and until full condition assessments have been completed, 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
- Jervois

Photo: Restricted access to levee banks.

Privately-owned levees along the Lower Murray are managed and maintained by private landowners and access to their levee banks is at their discretion. However, access to private levee banks where the department is undertaking flood recovery work is not permitted.

If you have queries about levee stabilisation works or would like to discuss your particular circumstances, please contact DEW through the following channels:

Brendan Cowie, Program Leader, Levee Recovery on 0457 291 874 or Brendan.Cowie@sa.gov.au

Lisa van der Linde, Communications and Engagement Officer on 0437 313 087 or Lisa.vanderlinde@sa.gov.au

Questions related to dewatering and recovery of agricultural areas can be directed to the PIRSA Recovery Hotline on 1800 931 314.

More information on the LMRIA levee stabilisation works can be found on the DEW website at https://www.environment.sa.gov.au/topics/river-murray-floods/lower-murray-levee-banks.

Potential weir pool lowering in 2023-24

Planning is underway for potential small-scale weir pool manipulations at Locks 1 to 6 to commence in late September/early October 2023, to achieve a range of benefits for floodplain and wetland vegetation and wildlife. Planning and exact timing is dependent on river conditions (flow and water quality), availability of water for the environment and approvals.

The operation will involve minor weir pool lowering, within the normal operating range, at Locks 1 to 5, and a weir pool lowering of up to 16 cm below normal pool level at Lock 6.

The weirs will be lowered by 2-3 cm per day over 1-8 days dependent on their target height which will limit any erosion risks and means any water level increases in the downstream weir pools will be minimal.

Lowering the weir pools will assist with reducing elevated floodplain groundwater levels, flushing salt to the sea and supporting drying out of floodplains which have been inundated for an extended period of time. In stream salinity will be closely monitored ahead of, during and after any lowering event.

As planning continues, further details on these operations will be provided in future Flow Reports.

If you would like to receive email updates with further information please send your request to DEW.WIOcommunications@sa.gov.au

Environmental news – Rakali at Pike Floodplain

Usually a rare encounter, Rakali (*Hydromys chrysogaster*), Australia's native water rat has recently been spotted at many locations in the Pike Floodplain anabranch. Individuals and playful pairs have been observed swimming in shallow areas along the vegetated edges of creeks, moving among mats of reeds and sedges, which provide ideal habitat for this seldom seen species.

Well adapted to water with its waterproof coat and webbed hind feet, this species preys on fish, frogs and shrimp. Most active at sunset, Rakali is also an excellent hunter at night. Using its highly sensitive whiskers, it can navigate and seek out its prey with ease.

Photos: Rakali at Pike Floodplain. Photo credit: Sam Walters, DEW.

Water quality

Algal blooms

A number of alerts for blue-green algae have been issued by upstream authorities in recent weeks. They include:

- River Murray at Fort Courage (**Amber alert**)
- Darling River at Tapio (**Red alert**)
- Darling River at Ellersie (**Red alert**)
- Darling River at Burtundy (**Red alert**)
- Darling River at Pooncarie (**Red alert**)
- Darling River at Tolarno (**Red alert**)
- Talyawalka at Menindee – Pooncarie Road (**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

Salinity

Salinity levels throughout the River Murray in South Australia have returned to their typical range following elevated levels experienced during the flood recession.

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.

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

Murray-Darling Basin Royal Commission

On 15 September 2023, the South Australian Government published its *Response to the Murray-Darling Basin Royal Commission Report*.

The renewed response was prepared in consultation with the Commissioner for the River Murray in South Australia, Mr Richard Beasley SC.

In the Royal Commission response, the South Australian Government has outlined its expectations and requirements for full delivery of the Basin Plan.

Further information

River Murray high flows	https://www.environment.sa.gov.au/topics/river-murray-flows
2022-23 **River Murray Flood event**	https://www.environment.sa.gov.au/topics/river-murray-floods
2022-23 River Murray Flood **recovery**	https://www.recovery.sa.gov.au/active-recoveries/river-murray-flood https://pir.sa.gov.au/emergencies_and_recovery/storms_and_floods/river_murray_flood_2022
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/

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