

River Murray Flow Report

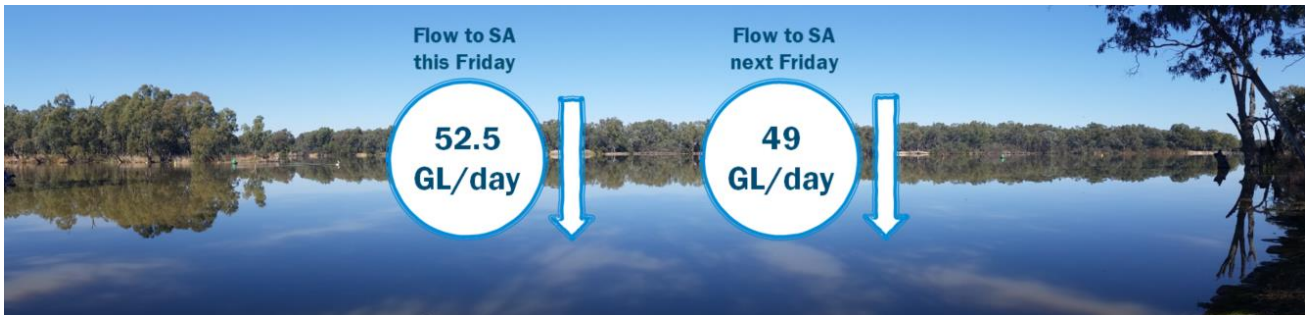


Report #32/2022

Issued 10:00 am 19 August 2022

This supersedes the previous Flow Report issued by the Department for Environment and Water (DEW) on 12 August 2022. The next Flow Report will be provided on Friday 26 August 2022.

Flow outlook



The flow at the South Australian border is approximately 52.5 GL/day and is forecast to decrease to around 49 GL/day over the coming week. The current flow at the border comprises:

- full August Entitlement Flow (4 GL/day);
- plus 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 45.5 GL/day and will decrease to around 45 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.

What is considered a flood in South Australia?

With the flow at the South Australian border increasing it's a timely reminder to remain aware of what is considered a flood in South Australia, even if flood levels are not reached at this point in time.

When the flow at the South Australian border is forecast to exceed 40 GL/day, the Department for Environment and Water will issue a *High Flow Advice*. This is not an emergency warning. A High Flow Advice is intended to inform the community of higher than normal river flow, velocity and water levels, as well as raise awareness and monitoring regarding potential hazards and to prompt the community to consider preventative actions to minimise any potential impacts.

If the flow at the South Australian border is forecast to exceed 60 GL/day, a *Flood Advice – River Murray Shack Areas* is issued by the South Australian State Emergency Service (SA SES) as an official emergency warning product, consistent with the Australian Warning System. The River Murray Shack Areas comprises the shack communities between Cadell and Mannum, excluding the towns. Above 60 GL/day, low lying areas and floodplains become inundated and ground level flooding of the shack areas commences. For the remainder of the River Murray in South Australia, a High Flow Advice remains in place.

When the flow at the border is forecast to exceed 100 GL/day, a *Flood Advice – River Murray* is issued by the SA SES for the River Murray between the SA border and Wellington. Further advice will be issued by the SA SES when the flow reaches 130 GL/day at the border (*Flood Watch and Act – River Murray*) and 200 GL/day at the border (*Flood Emergency Warning – River Murray*).

The most up to date information will continue to be provided in the SA River Murray Flow Report and readers can subscribe [here](#).

High Flow Advice

With flow at the South Australian border above 40 GL/day, the Department for Environment and Water has issued a *High Flow Advice* with this River Murray Flow Report and Water Resources Update. The *High Flow Advice* is also available on the DEW website at the following location: <https://www.waterconnect.sa.gov.au/River-Murray/SitePages/River%20Murray%20Flow%20Reports.aspx>



Figure 1: Higher water levels at Paringa Bridge (Photo: R. Brown, DEW)

Environmental news

Unregulated flows have been continuous to SA since July 2021 due to wetter than average conditions across much of the Murray-Darling Basin. Water for the environment, including return flows from actions in upstream catchments and releases from Lake Victoria, is currently supplementing the unregulated flows and providing a range of benefits for the environment in SA, including:

- connecting the river with floodplains and wetlands, providing water to areas that have been dry for more than five years;
- allowing fish dispersal and movement into new habitats;
- providing 'flowing water habitat' to benefit native fish, animals and plants in the River Murray channel that have adapted to a riverine environment;
- providing for barrage releases to the Coorong to support a productive, food-rich environment for fish and birds and provide salinities and water levels that support healthy populations of keystone native plant *Ruppia tuberosa*;
- providing habitat for birds, frogs and threatened small-bodied native fish species in the Lower Lakes;
- maintaining healthy water quality, salinity and water levels in the River Murray Channel and the Lower Lakes and Coorong;
- removing excess salt from the River Murray; and
- delivering a range of outcomes to wetlands in the Riverland via arrangements with Renmark Irrigation Trust.



Figure 2: The River Murray at Big Bend (below Lock 1) in South Australia (Photo: R. Brown, DEW)

Floodplain operations and weir pool raising/lowering in 2022-23

Delivery of water for the environment this winter-spring is tracking along well with operations providing much needed water to floodplains, wetlands and river banks.

Water is extending out onto many areas of the Pike floodplain providing much needed water to the vegetation and trees. The regulator operation is facilitating much of the inundation in the upper Pike floodplain, while elevated River flow is bringing much needed water to parts of the lower Pike floodplain and some of the upper floodplain.

The high flows provided a head start for the Chowilla floodplain operation with water levels 2 meters above the normal level in Chowilla Creek. The majority of Chowilla's wetlands and lakes are filling or full and water is extending across the floodplain giving a much needed drink the vegetation. The early calling frog species can be heard at several sites and the productive wetlands are providing good food resources for waterbirds and bush land birds alike.

At Katarapko the current good River Murray flows are already providing watering across significant areas of the floodplain. We are currently operating the minor Carpark regulator to inundate lignum and young black box and red gum that occur along the eastern edge of the Carpark lagoons and its adjacent floodplain. Operation of the Splash regulator is set to commence as well targeting a further 30 cm raise in water levels to expand the area of inundation. Please visit the National Parks website for information on park and access track closures due to high flows:

<https://www.parks.sa.gov.au/parks/murray-river-national-park>

Weir pool raising at Lock 2 has commenced with water levels at the Lock to be raised by up to 55 cm. Please note that while the impact of the weir raising reduces as you move upstream towards Lock 3 the levels downstream of Lock 3 may be higher than normal due to the ongoing natural high flows in the River. The weir raising will enable inundation of some additional floodplain vegetation and provide additional valuable habitat for wildlife. Higher flows and weir pool raising are currently 'working together' to further enhance the areas receiving water for the environment.

Below you will find a table with detailed information on the levels at the regulators and Locks:

Structure	Normal pool level (m AHD)	Water level as at 15/8/2022 (m AHD)	Status as at 15/8/2022	Maximum target of event* (m AHD)
Chowilla regulator	16.40	19.03	↑ Rising	19.85
Lock 6	19.25	19.55	↑ Rising	19.87
Pike regulator	14.55	15.54	↑ Rising	15.90
Lock 5	16.30	16.78	↑ Rising	16.80
The Splash regulator (Katarapko)	10.00	13.08	↑ Rising	13.3
Lock 4	13.20	13.58	Higher water levels due to the elevated River Murray flows	-
Lock 3	9.80	10.07	↑ Rising within normal operating range	-
Lock 2	6.10	6.69	Holding around maximum target	6.65
Lock 1	3.20	3.32		3.30

*Final operations will depend on actual flow conditions as the event progresses.

Murray mouth

Dredging operations at the Murray Mouth commenced on 9 January 2015 to maintain connectivity (exchange of water) between the Coorong and the Southern Ocean. At 14 August 2022, a total of approximately 8 543 881 m³ of sand has been removed from the Murray Mouth. Over the past week only one dredge has been operating due to mechanical issues however both dredges will be fully operational in the following days, working 24 hours a day, 7 days a week.

Barrage releases combined with dredging have helped to maintain flow connectivity of the River Murray Channel to the Murray Mouth and have assisted in exporting salt from the river system.

There are a number of shallow zones in and adjacent to the Murray Mouth. Mariners should use caution when traversing the mouth area, follow all directions, reduce speed and avoid travelling at low tide. Mariners equipped with echo sounders should check depths regularly. Navigation through the Murray Mouth is only permitted during daylight hours. Exclusion Zones established around the dredging operations are in place to ensure public safety. Refer to Notice to Mariners No 42 of 2016 [Notice 42](#).

There is a partial park closure in place for the northern tip of the Coorong National Park. For more information visit [Coorong partial park closure notice](#).

Barrage operations and water levels in the Lower Lakes

The water level in Lake Alexandrina is approximately 0.90 m AHD and Lake Albert is approximately 0.82 m AHD. The difference is due to wind effects.

As of Tuesday 16 August 2022, the weekly releases were approximately 244 GL. Total daily release volumes from the barrages can now be accessed via [Water Data SA](#) by searching for the gauge [A4261002](#). Gate openings at the barrages during the week can be seen in Table 3.

Table 3: Number of barrage gates open each day for the week ending Tuesday 16 August 2022

Barrage (total number of gates)	Goolwa (120)	Mundoo (25)	Boundary Creek (5)	Ewe Island (110)	Tauwitchere (319)	Fishways
10 Aug 2022	26	6*	1	58	178	Fishways at all barrages and at Hunters Creek (11 in total) were open during the entire week
11 Aug 2022	26→0	6*→0	1→0	58→0	178→0	
12 Aug 2022	0→1*→0	0→6*→0→6*	0	0→12*→0→12*	0→21*→0→21*	
13 Aug 2022	0→1*	6*→0→6*	0	12*	21*	
14 Aug 2022	1*	6*→0→6*	0	12*	21*	
15 Aug 2022	1*→26	6*	0→1	12*→58	21*→178	
16 Aug 2022	26	6*	1	58	178	
Objective of releases	Maintain connectivity between the River Murray channel through to the Murray Mouth to support fish migration.	Provide localised freshening conditions in the Mundoo channel & support fish passage.	Provide attractant flow adjacent the fish way to support fish passage.	Releases will help push fresher water down the Coorong to assist lowering salinity levels and provide habitat diversity.	Provide for fish passage between the Coorong and Lower Lakes.	

*Automated gate utilised to maximise delivery to Coorong and avoid reverse flows.

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.

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

Lock 3 River Vessel Waste Disposal Station

The Lock 3 River Vessel Waste Disposal Station is currently out of commission due to an infrastructure failure. Investigations are currently underway to replace the station. In the interim, river vessel users can contact Riverland Tank and Drain directly on 0412 839 392 for emptying of black and grey water in the Lock 3 area. Alternatively, they can utilise the nearest alternative waste facility located at Waikerie. Normal boat waste (domestic or galley waste) can still be deposited at the Lock 3 facility at the present time.

Navigation issues

Sandbars in the vicinity of the Murray Mouth may cause navigation hazards. Mariners are advised to navigate with caution when operating in the area. Sandbars are also present along sections of the River Murray downstream of Locks 7 and 8 and in South Australia. All Mariners should be aware of the risk of submerged navigation hazards and should regularly check river depth.

River Murray water levels

Table 4. River Murray water levels at a number of locations from Lock 10 to Murray Bridge.

Location	River km	Normal Pool Level (m AHD)	Current Level 17/8/2022 (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.70	32.72
Lock 9 Kulnine	764.8	27.40	27.43	28.85
Lock 8 Wangumma	725.7	24.60	25.62	26.85
Lock 7 Rufus River	696.6	22.10	24.05	24.97
Lock 6 Murtho	619.8	19.25	19.55	20.19
Renmark	567.4	-	16.96	17.44
Lock 5	562.4	16.30	16.79	17.05
Lyrup	537.8	-	14.35	15.80
Berri	525.9	-	13.98	15.21
Lock 4	516.2	13.20	13.62	14.73
Loxton	489.9	-	12.33	13.54
Cobdogla	446.9	-	-	11.59
Lock 3	431.4	9.80	10.07	10.98
Overland Corner	425.9	-	8.59	10.41
Waikerie	383.6	-	7.43	9.20
Lock 2	362.1	6.10	6.70	8.32
Cadell	332.6	-	5.15	7.01
Morgan	321.7	-	4.77	6.38
Lock 1 Blanchetown	274.2	3.20	3.31	4.46
Swan Reach	245.0	0.75	1.87	3.11
Mannum PS	149.8	0.75	1.02	1.33
Murray Bridge	115.3	0.75	0.85	1.04

Note that the above water levels may be affected by local wind conditions

Further information

The Water Data SA website is South Australia's comprehensive water information portal. For real-time data (like salinity, water levels) go to the following page: [Water Data SA](#).

Up-to-date River Murray salinity, flow and water level information can also be accessed at the SA Water and Murray-Darling Basin Authority websites:

- [Water allocation and carryover announcements](#)
- [River Murray real-time water data](#)
- [SA Water River Murray info - levels, flows etc.](#)
- [Murray-Darling Basin real-time water data](#)

The latest news, information and announcements about the River Murray and Basin Plan are available at [River Murray Update](#).

The Department for Environment and Water has published a series of inundation maps for the River Murray. They are available at [River Murray Inundation Maps](#).

Information on the management of acid drainage water in the Lower River Murray can be accessed at: [Managing Acid Sulfate Soils Research Project](#)

Details of river height and rainfall information in the River Murray within Victoria and New South Wales are available at the Bureau of Meteorology website:

- [Victoria rainfall and river conditions](#)
- [NSW rainfall and river conditions](#)

Information provided by the Commonwealth Environmental Water Office can be accessed at [CEWH Environmental Watering](#).

Information on The Living Murray can be accessed at [MDBA TLM](#).

Chowilla Floodplain Icon Site management [Chowilla-floodplain](#).

[Katarapko Floodplain](#) site management

[Pike Floodplain](#) site management

Department for Environment and Water [Home page](#).

Information provided by the Department of Planning, Transport and Infrastructure on boat licences, registering motor boats, owning and operating water craft, and boat and marine safety can be accessed at [Boating and marine](#).

ID	RM-Flow-Report- 20220819
Classification	Public I2 A2
Issued	19 August 2022
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