

River Murray Flow Report



Report #23/2022

Issued 10:00 am 17 June 2022

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 10 June 2022. The next flow report will be provided on Friday 24 June 2022.

In this report, for ease of representation, large volumes of water are expressed in gigalitres (GL), while smaller volumes are expressed in megalitres (ML). One GL is equal to 1 000 ML.

Flow outlook



The flow at the South Australian border is approximately 36 GL/day and is forecast to remain around 36 GL/day over the coming week. The current flow at the border comprises:

- full June Entitlement Flow (3 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 32 GL/day and will increase to around 36 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: <https://confirmsubscription.com/h/r/8D42C972B80E0D172540EF23F30FEDED>

Environmental news

Water for the environment and unregulated flows have provided and continue to provide a range of benefits for the environment in SA, including:

- providing 'flowing water habitat' to benefit native fish, animals and plants in the River Murray channel that have adapted to a riverine environment. For example, recent monitoring indicates that flowing conditions in the river since spring may have supported the first major spawning and recruitment event for golden perch in the Lower Murray in a decade;
- allowing fish dispersal and movement into new habitats, including for young golden perch which may have travelled down the Great Darling Anabranch into the Murray in recent months;
- 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*. For example, recent monitoring indicates that extended freshwater flows to the Coorong through spring to autumn have supported a major recruitment event for the Coorong black bream population. Hundreds of baby black bream have been recorded by scientists in autumn 2022;
- 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 the Murraylands and Riverland Landscape Board.

How many bird nests did you spot?

Last week we showed you a photo of a colonial nesting site (a site where colonies of birds nest in one place) of cormorants and darters at Markaranka Wetland Complex as a result of recent environmental watering. After much discussion our staff spotted at least five nests (potentially six). Did you spot any we didn't?



Figure 1: Colonial nesting (where colonies of birds nest in one place) of cormorants and darters at Markaranka Wetland Complex as a result of environmental watering (Photo: Murraylands & Riverland Landscape Board)

Planning for floodplain operations and weir pool raising/lowering in 2022-23

Water for the environment plays a vital role in supporting the health and resilience of the River, floodplains and wetlands and is critical for plant and animal life. Each year, planning is undertaken to determine the best use of water for the environment. See here: <https://youtu.be/f6QLLNsc3nk> to view a video made by the Victorian Environmental Water Holder explaining why water for the environment is so important.

Planning is progressing for delivery of water for the environment in 2022-23 for the River Murray Channel and the floodplains and wetlands. This includes planning for operation of environmental regulators at Chowilla, Pike and Katarapko floodplains along with weir raising at Locks 6, 5 and 4 and also at Lock 2. These operations are being planned to occur during the coming winter-spring in order to achieve a range of benefits for floodplain and wetland vegetation and wildlife. The final decision to operate and the scale of operation at the three floodplains and weirs will be made in the coming weeks and will depend on river conditions (flow and water quality), availability of water for the environment and approvals. The scale of any operations to be undertaken is also dependant on the flow conditions.

At this stage Operations at Pike are expected to commence in late June – early July with the associated raising of Lock 5 to commence in early July.

At Chowilla, a large scale operation of the environmental regulator along with Lock 6 weir raising to is expected commence in early July.

At Katarapko – given the lower lying nature of this floodplain the higher water levels associated with the current good River flows are providing watering across areas of the floodplain so the timing and scale of operations to increase the watering across the Katarapko floodplain will depend on the continuing flow conditions.

Smaller scale weir pool raising and lowering within normal operating range is also planned at Locks 1 and 3.

To ensure you receive updates with further information please email Engagement Officer Ellee Eleftheriadis (ellee.eleftheriadis2@sa.gov.au) with your contact details.

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 12 June 2022, a total of approximately 8,309,235 m³ of sand has been removed from the Murray Mouth. Both dredges are fully operational working 12 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 0.74 m AHD and Lake Albert is approximately 0.83 m AHD. The difference is due to wind effects.

As of Tuesday 14 June 2022, the weekly releases were approximately 231 GL. Total daily release volumes from the barrage 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 1.

Table 1: Number of barrage gates open each day for the week ending Tuesday 14 June 2022

Barrage (total number of gates)	8 June 2022	9 June 2022	10 June 2022	11 June 2022	12 June 2022	13 June 2022	14 June 2022	Objective of releases
Goolwa (120)	5→6→7→12→13	13	13	13	13	13	13→7	Maintain connectivity between the River Murray channel through to the Murray Mouth to support fish migration.
Mundoo (25)	6*	6*	6*	6*	6*	6*	6*	Provide some localised freshening conditions in the Mundoo channel and support fish passage.
Boundary Creek (5)	1*	1*	1*	1*	1*	1*	1*	Provide attractant flow adjacent the fish way to support fish passage.
Ewe Island (110)	12*→32	32	32	32	32	32	32→44	Releases will help push fresher water down the Coorong to assist lowering salinity levels and provide habitat diversity.
Tauwitchere (319)	65	65	65	65	65	65	65	
Fishways	Fishways at all barrages and at Hunters Creek (11 in total) were open during the entire week							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

Below is a table of 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 15/6/2022 (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.81	32.72
Lock 9 Kulnine	764.8	27.40	27.42	28.85
Lock 8 Wangumma	725.7	24.60	24.70	26.85
Lock 7 Rufus River	696.6	22.10	23.29	24.97
Lock 6 Murtho	619.8	19.25	19.28	20.19
Renmark	567.4	-	16.42	17.44
Lock 5	562.4	16.30	16.36	17.05
Lyrup	537.8	-	13.66	15.80
Berri	525.9	-	13.46	15.21
Lock 4	516.2	13.20	13.28	14.73
Loxton	489.9	-	11.33	13.54
Cobdogla	446.9	-	-	11.59
Lock 3	431.4	9.80	9.84	10.98
Overland Corner	425.9	-	7.54	10.41
Waikerie	383.6	-	6.69	9.20
Lock 2	362.1	6.10	6.19	8.32
Cadell	332.6	-	4.28	7.01
Morgan	321.7	-	3.92	6.38
Lock 1 Blanchetown	274.2	3.20	3.23	4.46
Swan Reach	245.0	0.75	1.14	3.11
Mannum PS	149.8	0.75	0.79	1.33
Murray Bridge	115.3	0.75	0.71	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-and-WR-Update-20220610
Classification	Public I2 A2
Issued	17 June 2022
Authority	DEW
Master Document Location	R:\Water Group\RMO\WRO\04 Communications\Flow Advices\2021-22
Managed and Maintained by	Water Infrastructure and Operations Branch
Author	Water Infrastructure and Operations Branch
Reviewer	Director, Water Infrastructure and Operations