

River Murray Flow Report



Report #29/2021

Issued 10:00 am 30 July 2021

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 23 July 2021. The next flow report will be provided on Friday 6 August 2021.

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.

QUARTER 4 METER READINGS DUE BY 31 JULY 2021

If you hold a water resource works approval that includes a condition that requires you to provide quarterly meter readings to the Department for Environment and Water, please be reminded that meter readings for the Quarter 4 accounting period for 2020-21 (which ended on 30 June 2021) should have been recorded within the first fourteen days of July 2021 and must be submitted to the department by 31 July 2021.

Your meter reading can be submitted via one of the following options:

- The online Meter Reading Form at <https://forms.business.gov.au/smartforms/sa-dfw/meter-reading-form/>;
- By telephone on (08) 8595 2053; or
- By emailing the Department for Environment and Water at DEW.waterlicensingberri@sa.gov.au.

Should you require any assistance in supplying your meter reading, including how to complete the online Meter Reading Form, please call the telephone number directly above and an officer of the department will be happy to assist you.

The department's preferred approach is to encourage and facilitate voluntary compliance. However, failure to voluntarily comply with the conditions of a water resource works approval may result in an expiation notice being issued.

FLOW OUTLOOK

The flow at the South Australian border is approximately 7.8 GL/day and will increase to around 12 GL/day over the coming week. It comprises:

- full July Entitlement Flow (3.5 GL/day);
- plus water for the environment (see below *Environmental News*);
- interstate trade adjustments; and
- unregulated flow.

The flow over Lock 1 is approximately 5.9 GL/day and will increase to around 7 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.

ENVIRONMENTAL NEWS

In South Australia, water for the environment is currently helping to:

- undertake floodplain operations at Chowilla, Pike and Katarpako as well as raising the water levels in weir pools 2, 4, 5 and 6 (see more details below in *Environmental Water Operations*);
- provide for barrage releases to the Coorong to support a productive, food-rich environment for fish and birds;
- provide habitat for threatened small-bodied native fish species in the Lower Lakes;
- maintain good connections from the Coorong to the upstream areas of the River Murray, and its tributaries, to enable fish movement and migration including for Lamprey which will be migrating into the river from the Southern Ocean for spawning over the next few months;

- maintain healthy water quality, salinity and water levels in the River Murray Channel and the Lower Lakes and Coorong, including through targeted releases at the barrages when weather conditions are best suited to push water down the Coorong;
- remove excess salt from the River Murray; and
- deliver a range of outcomes to wetlands in the Riverland via arrangements with Renmark Irrigation Trust.



Figure 1: Rainbow over the River Murray near Katarapko Creek in the Lock 4 reach (Ellee Eleftheriadis, DEW)

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 25 July 2021, a total of approximately 7 402 787 cubic metres of sand had been removed by dredging operations.

Both dredges are currently operating between the Goolwa and Tauwitschere channels 24 hours a day, seven 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 0.79 m AHD and Lake Albert is approximately 0.96 m AHD. The difference is due to wind effects.

As of Tuesday 27 July 2021, the weekly releases were approximately 42 GL. 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 27 July 2021

Barrage (total number of gates)	21 July 2021	22 July 2021	23 July 2021	24 July 2021	25 July 2021	26 July 2021	27 July 2021	Objective of releases
Goolwa (120)	5	5	5→1*	1*	1*	1*→0	0→1*	Maintain connectivity between the River Murray channel through to the Murray Mouth to support fish migration.
Mundoo (25)	2*	2*	2*→0	0	0	0→2*→0	0→6*	Provide some localised freshening conditions in the Mundoo channel
Boundary Creek (5)	1*	1*	1*	1*	1*	1*	1*	Provide attractant flow adjacent the fishway to support fish passage.
Ewe Island (110)	0	0	0	0	0	0	0→12*	Releases will help push fresher water down the Coorong to assist lowering salinity levels and provide habitat diversity.
Tauwitchere (319)	14*	14*	14*	14*→0	0	0→21*	21*	
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.

RIVER VESSEL WASTE DISPOSAL STATIONS

Lock 3

The Lock 3 River Vessel Waste Disposal Station is currently out of commission due to an infrastructure failure. This means that boat operators who need to empty sewage tanks will need to use the nearest alternative waste facility located at Waikerie. Alternatively boat operators who require an urgent pump-out in the Kingston-on-Murray area can contact Mr Hayden Smith on 0457 820 553 for help or advice. 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.

Lock 3

Minor issues have been encountered with the downstream gates at Lock 3. Mariners are advised that lockage times may be longer than normal.

ENVIRONMENTAL WATER OPERATIONS

Chowilla Floodplain and Weir and Lock 6

A low to mid-level operation of the Chowilla environmental regulator along with raising Weir and Lock 6 is planned from early August, subject to appropriate flow conditions and approvals. The operation plans to raise water levels in Chowilla Creek and through the Anabranche by between approximately 18.9 and 19.6 m AHD though the higher level is dependent on having flows in the River Murray of over 30 000 ML/day.

The water level in Weir and Lock 6 will also be raised in conjunction with the Chowilla Regulator up to a height of 19.67 m AHD depending on flow conditions at the time.

Pike Floodplain and Weir and Lock 5

Operations on the Pike Floodplain along with raising Weir and Lock 5 commenced 26 July 2021. The operation will raise water levels on the Pike Floodplain between 15 m AHD to 15.4 m AHD.

The water level in Weir and Lock 5 will also be raised in conjunction with the Pike Regulator to a height of 16.8 m AHD (+0.5 m AHD) depending on flow conditions.

Should the flow to South Australia increase significantly the Pike Regulator may be operated to raise the water level further to between 15.4 m AHD to 15.8 m AHD. The exact height will depend on the flow and conditions within the river and the Pike anabranche.

Katarapko Floodplain and Weir and Lock 4

Operations on the Katarapko Floodplain along with raising Weir and Lock 4 commenced on 26 July 2021. The operation plans to raise the water levels on the Katarapko Floodplain initially up to 13 m AHD to 13.2 m AHD, depending on the actual flow conditions.

The water level in Weir and Lock 4 will also be raised in conjunction with water levels on the Katarapko Floodplain to a maximum height of 13.5 m AHD (+ 0.3 m AHD).

Weir and Lock 2

The water level raising in Weir and Lock 2 has begun and as at 27 July 2012 the water level was 6.32 m AHD (0.28 m AHD above NPL) and will continue up to a maximum height of 6.65 m AHD. This would increase the water level by up to a maximum of 0.55 m AHD above NPL at a rate of 3 cm / day.

These floodplain operations and associated weir raising will generate floodplain inundation which freshens soils to support the growth and regeneration of floodplain vegetation and provides valuable habitat for a range of wildlife. The operations connect up wetlands and support the movement of carbon and nutrients to the river providing resources to the river foodwebs.

RIVER MURRAY WATER LEVELS

Below is a table of River Murray water levels at a number of locations from Lock 10 to Murray Bridge.

River Murray Water Levels

Location	River km	Normal Pool Level (m AHD)	Current Level 28/07/2021 (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.83	32.72
Lock 9 Kulnine	764.8	27.40	27.54	28.85
Lock 8 Wangumma	725.7	24.60	24.58	26.85
Lock 7 Rufus River	696.6	22.10	22.70	24.97
Lock 6 Murtho	619.8	19.25	19.30	20.19
Renmark	567.4	-	16.38	17.44
Lock 5	562.4	16.30	16.38	17.05
Lyrup	537.8	-	13.35	15.80
Berri	525.9	-	13.31	15.21
Lock 4	516.2	13.20	13.31	14.73
Loxton	489.9	-	10.15	13.54
Cobdogla	446.9	-	-	11.59
Lock 3	431.4	9.80	9.87	10.98
Overland Corner	425.9	-	6.52	10.41
Waikerie	383.6	-	6.43	9.20
Lock 2	362.1	6.10	6.35	8.32
Cadell	332.6	-	3.33	7.01
Morgan	321.7	-	3.27	6.38
Lock 1 Blanchetown	274.2	3.20	3.24	4.46
Swan Reach	245.0	0.75	0.74	3.11
Mannum PS	149.8	0.75	0.91	1.33
Murray Bridge	115.3	0.75	0.83	1.04

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

FURTHER INFORMATION

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

Up-to-date River Murray salinity, flow and water level information can be accessed at the Department for Environment and Water, 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 20210730
Classification	Public I2 A2
Issued	30 July 2021
Authority	DEW
Master Document Location	R:\Water Group\RMO\WRO\04 Communications\Flow Advices\2020-21
Managed and Maintained by	Water Infrastructure and Operations Branch
Author	Water Infrastructure and Operations Branch
Reviewer	Director, Water Infrastructure and Operations