

River Murray Flow Report and Water Resources Update



Report #25/2020

Issued 10:00 am 19 June 2020

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 12 June 2020. The next flow report will be provided on Friday 26 June 2020.

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.

2020-21 WATER ALLOCATIONS

South Australian River Murray water allocations will open at 40% for the 2020-21 water year and are likely to reach 100% before the start of next summer. This [short video](#) explains more about the latest advice.

The continued improvement to water allocations is based on the recently improved rainfall and storage levels. Since last month's update on 15 May 2020, there have been significant inflows across the southern Murray-Darling Basin.

Furthermore, the Bureau of Meteorology's three month outlook indicates further rainfall is likely over the coming months. Most inflows to the River Murray system historically occur between July and November, so the main inflow season is yet to arrive.

To support irrigators with forward planning, the latest projections for water availability are available and indicate that further improvements across the water year are likely. There is currently:

- around a 99% likelihood that allocations will increase to 80%; and
- just over a 95% likelihood that allocations will increase to 100%.

The projected minimum volume of water that will be delivered to South Australia as part of the state's entitlement in the 2020-21 water year has risen to 1 105 GL.

Further details about water allocations and projections are available in the [River Murray Water Allocation Statement](#) and the Private Carryover policy is outlined in the [Water Allocation Plan for the South Australian River Murray](#).

To stay up to date with all the latest information, please visit our [website](#).

The next water allocation update will be on 1 July 2020.

QUARTERLY METER REPORTING

All River Murray water users must ensure that they have not used more water than is available on their account by the end of each quarter. This is to help ensure that water can be reliably delivered to all River Murray water users in South Australia. A penalty for excess water use will apply if you have used more water than the volume of water available on your account at close of business on 30 June 2020.

In order to remain within your available water allocation, you can:

- Stop taking water when you reach your allocation limit;
- Before you reach your allocation limit, trade water allocation onto your water account to cover your additional water needs. To comply with the *Natural Resources Management Act 2004*, to ensure that you do not exceed your available allocation and to avoid receiving a penalty charge, you need to trade water allocation onto your account before you take water above your current allocation limit; or
- Investigate whether water efficiency measures could be implemented for your property to decrease your demand for water.

Water users are encouraged to closely monitor their water use throughout the year and remain within their water allocations. You can submit an online meter reading at any time and elect to receive a water usage advice statement (similar to a bank statement) by email or SMS. This helps ensure you are monitoring water use and remaining within your available water allocation.

For more information, please see the [DEW website](#) or contact the Berri water licencing office via telephone: (08) 8595 2053 or email: DEW.waterlicensingberri@sa.gov.au

2019-20 END OF YEAR WATER TRADING ADVICE

To **guarantee** that a water application is determined in the 2019-20 water year, you must lodge your water trade application with DEW by **2 pm today**.

Water trade applications can be lodged up to 5pm on 30 June 2020, however, there is no guarantee that it will be determined in the 2019-20 water year. Interstate water trade applications must be lodged with DEW by 11am (SA Time) on 30 June 2020.

More information about water trade applications can be found here

<https://www.environment.sa.gov.au/licences-and-permits/water-licence-and-permit-forms>

COORONG INFRASTRUCTURE OPTIONS

DEW recently sought community input on criteria that should be used to evaluate future infrastructure options to support the recovery of South Australia's iconic Coorong. This feedback has now been discussed with the Coorong Partnership representative group and with a group of community members who volunteered to attend online workshops over two evenings.

The outcomes from these workshops will be published in the next couple of weeks. The community will then be invited to evaluate potential infrastructure options against the agreed criteria. Visit the [Project Coorong](#) website for more information on these next steps.

WATER RESOURCES UPDATE

During May 2020, the total River Murray System inflow was approximately 810 GL, which is about 183% of the May long-term average of 443 GL. During May 2020, the total Menindee Lakes inflow was approximately 171 GL, which is about 85% of the May long-term average of 201 GL.

The flow to South Australia during May 2020 was approximately 123 GL, which is about 35% of the May long-term average of 351 GL. The flow comprised of Entitlement Flow (including environmental water on SA licence), environmental water, under delivery of environmental water from previous month and trades.

MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

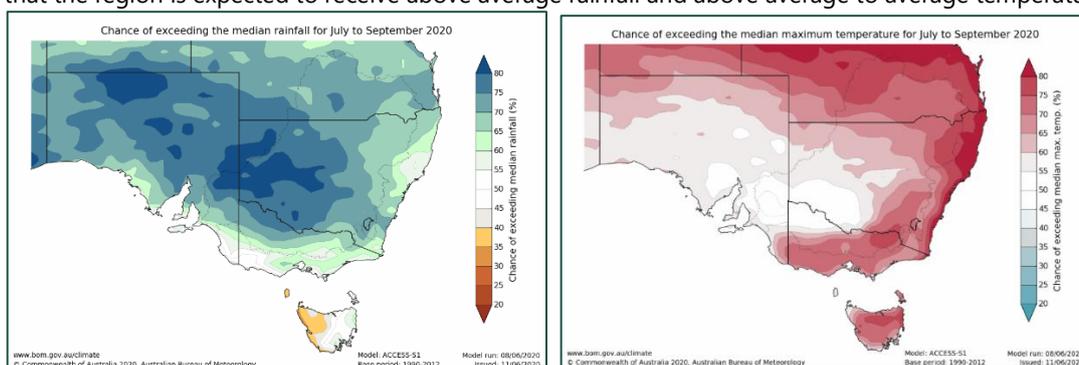
The Murray-Darling Basin Authority confirmed that on 1 June 2020 South Australia had 356.3 GL of deferred water held in storage in the Murray-Darling Basin. The following table identifies the storage in which it is held and the purpose. Volumes stored are adjusted for net evaporation losses and spills until delivered to South Australia.

At 1 June 2020				
Purpose	Lake Victoria (GL)	Hume (GL)	Dartmouth (GL)	Total (GL)
*CHWN	17.0	0.0	237.9	254.9
Private Carryover	0.0	0.0	101.4	101.4
Total	17.0	0.0	339.3	356.3

*Critical Human Water Needs (CHWN)

RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for the Murray-Darling Basin from July to September 2020 indicates that the region is expected to receive above average rainfall and above average to average temperatures.



The Pacific Ocean is likely to cool over the winter months, which is likely to establish a La Niña-like pattern. The July to September outlook reflects this influence. The Bureau of Meteorology's El Niño–Southern Oscillation (ENSO) outlook remains at INACTIVE, but if more cooling occurs it may be lifted to La Niña WATCH. La Niña is typically associated with an increased likelihood of above average winter-spring rainfall across southern and eastern Australia.

The influence of the Indian Ocean on the July to September outlook has eased, reducing the chance of a negative Indian Ocean Dipole (IOD) forming during winter.

The latest Bureau of Meteorology outlook information can be accessed [here](#).

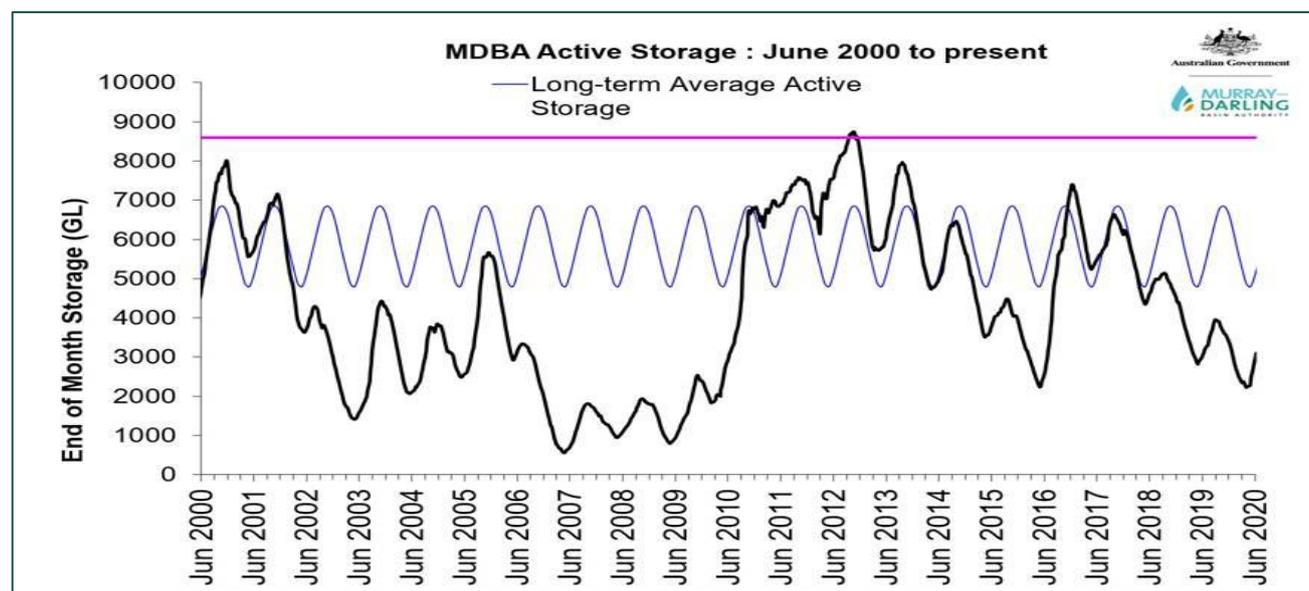
STORAGE VOLUMES

Murray-Darling Basin Storage Volumes

Storage	Full Supply Volume (GL)	17/6/2020 (GL)	17/6/2019 (GL)	Long-term average (end of June) (GL)
Dartmouth	3 856	1 964 (51%)	2 491 (65%)	
Hume	3 007	961 (32%)	613 (20%)	
Lake Victoria	677	516 (76%)	268 (40%)	
Menindee Lakes	*1 731	480 (28%)	16 (1%)	
TOTAL	9 271	3 921 (42%)	3 388 (37%)	

*Menindee Lakes can be surcharged to 2 015 GL

The following graph has been provided by the Murray-Darling Basin Authority. The graph shows the volume of water held in the Murray-Darling Basin storages from June 2000 to now and the long-term average storage for the same period.



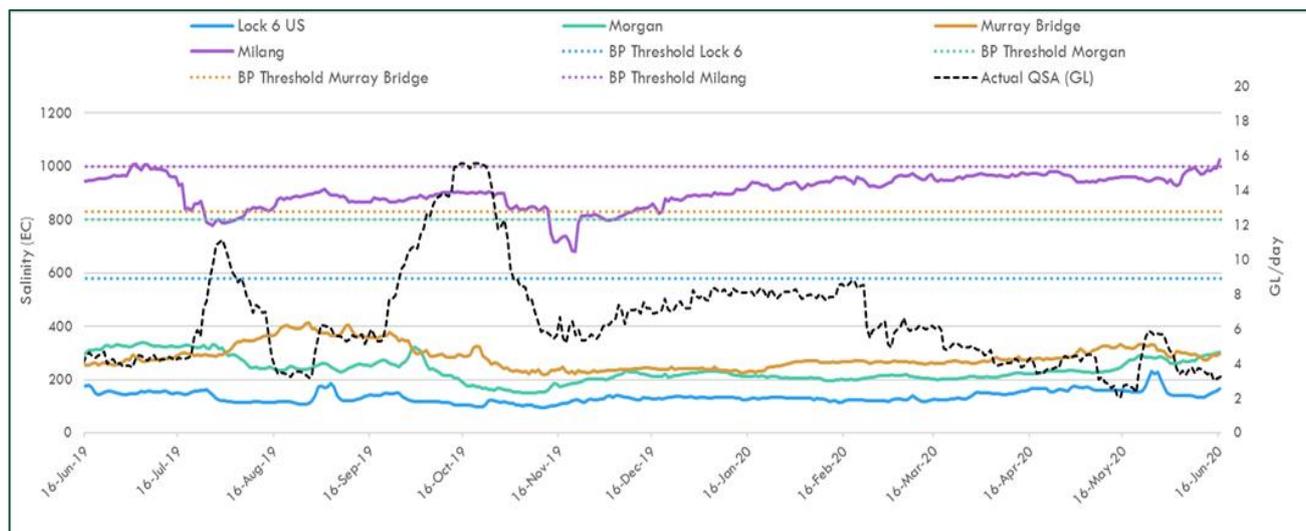
WATER QUALITY - Salinity

A number of targets are identified under the Murray-Darling Basin Plan, which all Basin jurisdictions must have regard to in managing River Murray flows. The targets for real-time salinity are identified below. Salinity should not exceed these values for 95% of the time:

- 580 EC at Lock 6
- 800 EC at Morgan
- 830 EC at Murray Bridge
- 1 000 EC at Milang.

The following graph shows the salinity at these locations and the flow to South Australia (QSA) from June 2019 to June 2020. The dashed-lines identify the Basin Plan (BP) thresholds for the corresponding colour coded location.

SA River Murray Daily Average Salinity



FLOW OUTLOOK

The flow at the South Australian border is approximately 3.3 GL/day and will remain around this rate during the coming week. It comprises:

- full June Entitlement Flow (3.0 GL/day);
- plus water for the environment (see below *Water for the Environment*); and
- interstate trade adjustments.

The flow over Lock 1 is approximately 2.7 GL/day and will remain around this rate during the coming week, depending on weather conditions and extractions.

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 FOR THE ENVIRONMENT

Water for the environment, including small return flows from upstream catchments, is currently being used in South Australia to:

- provide for barrage releases to the Coorong to support a productive, food-rich environment for fish and birds;
- maintain good connection from the Coorong to the upstream areas of the River Murray, and its tributaries, to enable fish movement and migration;
- maintain water quality, salinity and water levels below critical thresholds in the River Murray channel, Lower Lakes and Coorong, including through targeted releases at the barrages when weather conditions are best suited to push water down the Coorong;
- deliver a range of outcomes to wetlands in the Riverland via arrangements with the South Australian Murray-Darling Basin Natural Resources Management Board; and
- deliver a range of outcomes to wetlands on the Chowilla floodplain via The Living Murray.

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 June 2020, a total of approximately 5 916 037 cubic metres of sand had been removed by dredging operations.

Two dredges are operating between the Goolwa and Tauwitchere channels 24 hours a day, 7 days a week.

Barrage releases combined with dredging have helped to maintain connectivity of the Murray Mouth.

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 0.64 m AHD and Lake Albert is approximately 0.67 m AHD. The difference in water level is due to wind effects.

Water for the environment has enabled continuous fishway releases and small barrage releases to be undertaken during winter. During the past week, fishways at all the barrages have provided connectivity between the Coorong and the Lower Lakes. In addition, Tauwitchere Barrage had numerous gates open at various times plus the fishways. This provided targeted releases when the wind, swell and tide conditions aligned to push fresher water down the Coorong. As of Tuesday 16 June 2020, the weekly releases were approximately 13 GL.

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

Loxton

The Loxton River Vessel Waste Disposal Station is currently being upgraded and will be closed until 30 October 2020. A temporary pump-out service is available for river vessel users in this area. To use this service, please call Mr David Thiselton on 0412 839 392 to arrange a suitable time to pump-out waste. This service is available from Monday to Saturday, 8am to 5pm (please note: 4 hours notice is required for this service).

If you need any other help or advice with regard to this station, please call Mr Hayden Smith on 0457 820 553.

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.

SOUTH AUSTRALIAN RIVERLAND FLOODPLAINS INTEGRATED INFRASTRUCTURE PROGRAM CONSTRUCTION WORKS

Katarapko

All major construction works on the Katarapko Floodplain are now complete, however there are some minor rehabilitation works and other smaller activities still being undertaken. All parts of the Murray River National Park are open for camping and other activities. Visitors are encouraged to continue to practice social distancing and comply with relevant limits on gatherings. Bookings can be made online by visiting the following website <https://www.parks.sa.gov.au/booking#Murray%20River%20National%20Park>

Pike

Although work on the regulating structures and blocking bank on the Pike Floodplain is now complete, other works continue in this area. Access to the floodplain is still restricted to construction personnel and authorised visitors. Access to the Pike River anabranch complex is possible.

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 17/6/2020 (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.80	33.81	33.32	32.72
Lock 9 Kulnine	764.8	27.40	27.51	30.03	29.44	28.85
Lock 8 Wangumma	725.7	24.60	23.70	27.60	27.19	26.85
Lock 7 Rufus River	696.6	22.10	21.73	25.70	25.24	24.97
Lock 6 Murtho	619.8	19.25	19.26	21.03	20.50	20.19
Renmark	567.4	-	16.37	18.54	18.04	17.44
Lock 5	562.4	16.30	16.36	18.07	17.50	17.05
Lyrup	537.8	-	13.39	16.85	16.26	15.80
Berri	525.9	-	13.35	15.81	15.74	15.21
Lock 4	516.2	13.20	13.35	15.65	15.08	14.73
Loxton	489.9	-	10.11	15.05	14.12	13.54
Cobdogla	446.9	-	10.00	13.44	12.38	11.59
Lock 3	431.4	9.80	9.97	13.16	12.02	10.98
Overland Corner	425.9	-	6.35	12.73	11.58	10.41
Waikerie	383.6	-	6.34	11.26	10.24	9.20
Lock 2	362.1	6.10	6.26	10.28	9.30	8.32
Cadell	332.6	-	3.44	9.17	8.08	7.01
Morgan	321.7	-	3.39	8.85	7.65	6.38
Lock 1 Blanchetown	274.2	3.20	3.34	6.81	5.38	4.46
Swan Reach	245.0	0.75	0.59	6.06	4.51	3.11
Mannum PS	149.8	0.75	0.63	3.15	1.90	1.33
Murray Bridge	115.3	0.75	0.60	2.06	1.26	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: [Acid drainage water LMRIA](#)

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](#).

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](#).

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