

River Murray Flow Report and Water Resources Update



Report #8/2020

Issued 10:00 am 21 February 2020

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 14 February 2020. The next flow report will be provided on Friday 28 February 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.

WATER ALLOCATIONS

Water allocations for South Australian River Murray Class 3 water access entitlement holders are 100%.

For more information on South Australia's water allocations visit the [DEW website](#) or email DEWRiverMurrayOps@sa.gov.au

For information on Victoria's water allocations visit [Victorian Water Allocations](#)

For information on NSW water allocations visit [NSW Water Allocation Statements](#).

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 31 March 2020. For more information, please see the [DEW website](#).

RAINFALL EVENTS

Northern Basin (Barwon-Darling River System including Menindee Lakes)

Recently, some parts of the Northern Basin have received high rainfall generating inflows in some river systems across the Northern Basin, in particular the Barwon, Namoi and Gwydir Rivers. Flow moving its way down the Barwon-Darling to the Menindee Lakes will experience significant losses due to high evaporation, re-wetting a dry riverbed, refilling of weir pools and long travel times. As a result, it is difficult to accurately forecast the flow into the Menindee Lakes. On 17 February 2020, Water NSW advised that the total forecast volume expected to reach Menindee Lakes (Lake Wetherell) is likely to be between 15 GL and 35 GL. The flow is expected to arrive around mid to late March 2020 and the projected volume will be updated as changes are observed. For the latest information on inflows please visit <https://www.watarnsw.com.au/about/newsroom>

The Northern Basin has been experiencing significant drought for the last three years. Inflows will be critically important to provide additional water security for regional towns, provide partial replenishment flows and a welcome boost for native plants and animals (including native fish).

Southern Basin (River Murray System)

Most of the recent high rainfall activity has occurred on the eastern side of the Great Dividing Range however some rainfall activity has also occurred across the Southern Basin (west of the Great Dividing Range). As a result, the recent rainfall activity has generated very small inflows into Hume and Dartmouth Reservoirs.

RIVER MURRAY WATER AVAILABILITY EARLY ADVICE

River Murray Water Availability Early Advice has been developed to provide information on the current conditions across the Murray-Darling Basin leading into the 2020-21 water year. The early advice includes: Key facts; River Murray System Storages; River Murray System Inflows; Recent Rainfall Impacts; Climate Outlook; Climate Influences; and Next Steps.

The *River Murray Water Availability Early Advice* can be found here <https://www.environment.sa.gov.au/topics/river-murray>

WATER RESOURCES UPDATE

During January 2020, the total River Murray System inflow was approximately 69 GL, which is approximately 27% of the January long-term average of 258 GL. There was no inflow to Menindee Lakes (from the Darling System) during January 2020, compared to the January long-term average of 124 GL.

The flow to South Australia during January 2020 was approximately 251 GL, which is about 58% of the January long-term average of approximately 434 GL. The flow comprised of Entitlement Flow (including environmental water on SA licence), environmental water and trades.

MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

The Murray-Darling Basin Authority confirmed that on 1 February 2020 South Australia had 339.7 GL of deferred water held in storage in the Murray-Darling Basin. The table below 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.

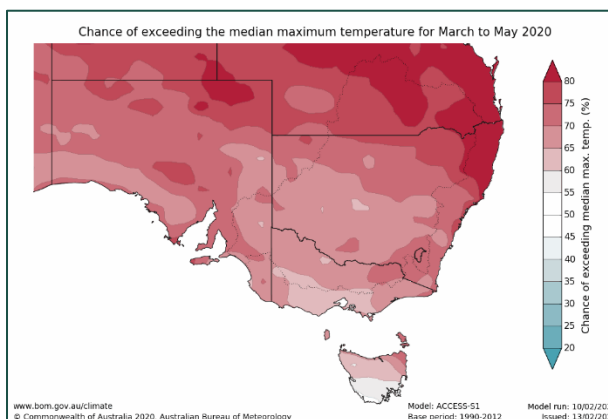
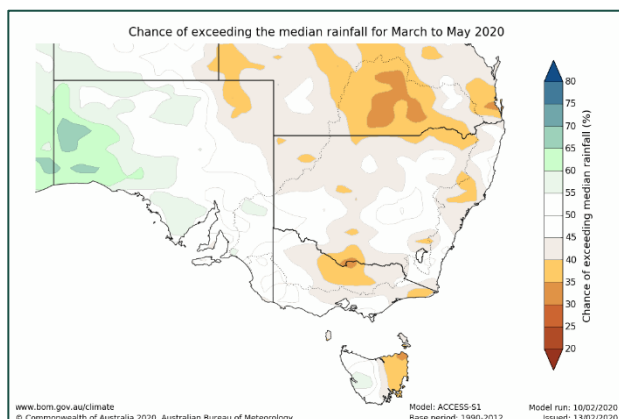
At 1 February 2020				
Purpose	Lake Victoria (GL)	Hume (GL)	Dartmouth (GL)	Total (GL)
*CHWN	0.0	0.0	238.1	238.1
Private Carryover	0.0	0.0	101.6	101.6
Total	0.0	0.0	339.7	339.7

*Critical Human Water Needs (CHWN)

RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for the Murray-Darling Basin from March to May 2020 indicates:

- most of the area is expected to receive average rainfall, with small areas of below average rainfall and small areas of above average rainfall; and
- warmer than average temperatures.



Major climate drivers including the Indian Ocean Dipole and El Niño-Southern Oscillation are currently neutral and expected to remain neutral through to Autumn. When these drivers are neutral, it is unlikely that Australia will experience widespread above, or below, average seasonal rainfall.

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

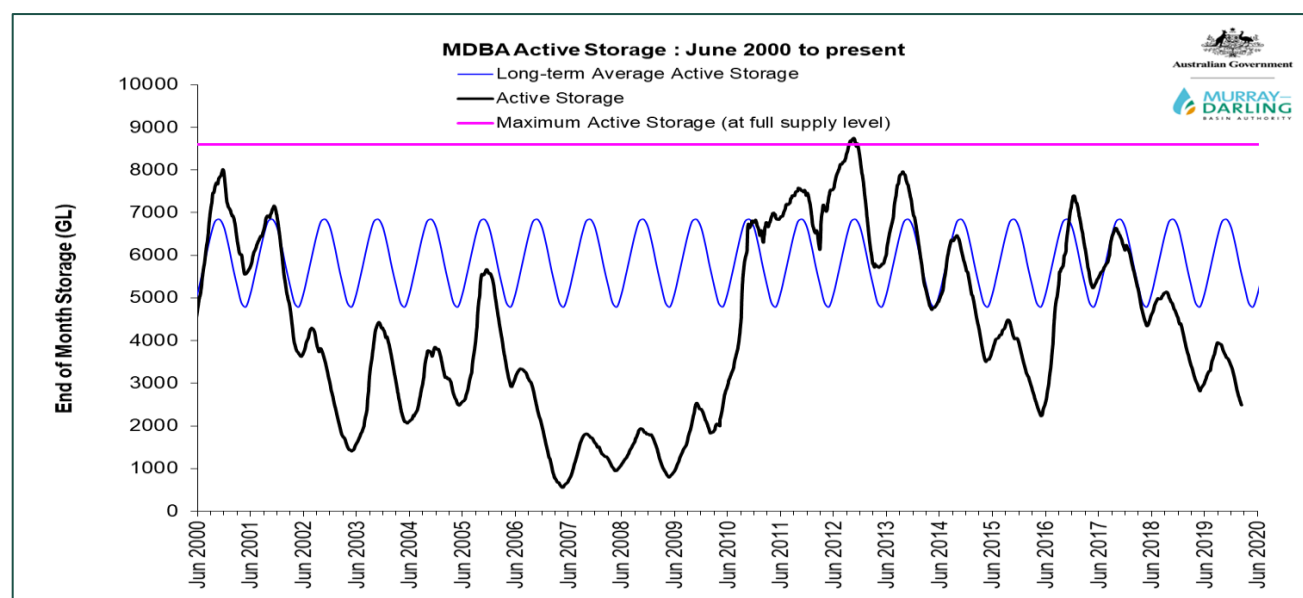
STORAGE VOLUMES

Murray-Darling Basin Storage Volumes

Storage	Full Supply Volume (GL)	19/2/2020 (GL)	19/2/2019 (GL)	Long-term average (end of February) (GL)
Dartmouth	3 856	1 816 (47%)	2 495 (65%)	
Hume	3 003	534 (18%)	868 (29%)	
Lake Victoria	677	275 (41%)	355 (52%)	
Menindee Lakes	*1 731	6 (0%)	31 (2%)	
TOTAL	9 267	2 631 (28%)	3 749 (40%)	

*Menindee Lakes can be surcharged to 2 015 GL

The below 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.



In December 2019, the Murray-Darling Basin Authority updated its River Murray System Annual Operating Outlook, which provides comprehensive information on the system status and storage outlooks. The document can be accessed at <https://www.mdba.gov.au/publications/mdba-reports/river-murray-system-annual-operating-plan>.

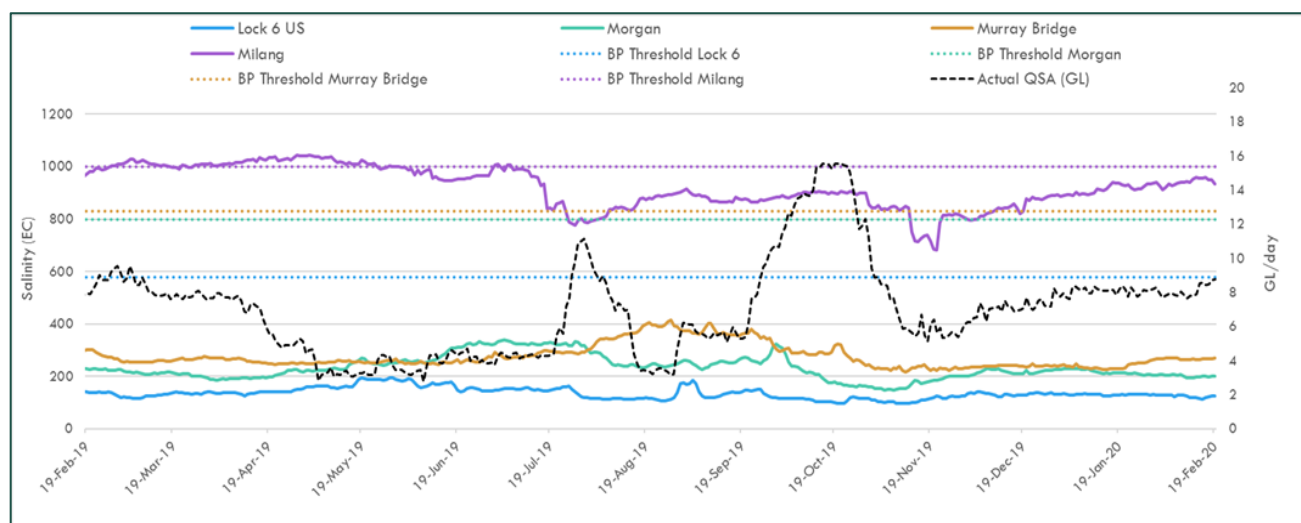
WATER QUALITY - Salinity

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 February 2019 to February 2020. The dashed-lines identify the Basin Plan (BP) thresholds for the corresponding colour coded location.

SA River Murray Daily Average Salinity



FLOW OUTLOOK

It is likely that reduced Entitlement Flow will continue during the 2019-20 water year. In addition to reduced Entitlement Flow, South Australia will receive water for the environment.

The flow at the South Australian border is approximately 8.5 GL/day and will remain around this rate during the coming week. It comprises:

- reduced February Entitlement Flow of 6.3 GL/day;
- water for the environment (see below *Water for the Environment*); and
- interstate trade adjustments.

The flow over Lock 1 is approximately 5.1 GL/day and will decrease to around 5 GL/day 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 is currently being used to:

- maintain connections through open fishways (at a minimum) between the Coorong, Lower Lakes and the River Murray to enable fish movement;
- maintain water quality, salinity and water levels below critical thresholds in the River Murray channel, Lower Lakes and Coorong;
- deliver a range of outcomes to wetlands in the Riverland via arrangements with the South Australian Murray-Darling Basin Natural Resources Management Board, Renmark Irrigation Trust, Banrock Station and the Nature Foundation South Australia ; 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 16 February 2020, a total of approximately 5 775 743 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 0.58 m AHD and Lake Albert is approximately 0.51 m AHD. The difference in water level is due to wind effects. Recent rainfall over the Lower Lakes has contributed to the improved water level position.

Water for the environment is enabling barrage releases (currently fishways only) to be undertaken for a longer period during summer. As of Tuesday 18 February 2020, the weekly releases were approximately 0.5 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.

LOCK 3 RIVER VESSEL WASTE DISPOSAL STATION

The Lock 3 River Vessel Waste Disposal Station is temporarily closed due to an infrastructure failure. Investigations are underway to determine the cause of the failure and a method to rectify the issue. The nearest alternative waste facilities are located at Waikerie and Loxton. Boat operators who require an urgent pump-out, or to discuss any other concerns, should contact Mr Hayden Smith on 0457 820 553.

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

Construction works on the Katarapko Floodplain are progressing well and are expected to be completed by mid-2020. Smaller structures at Piggy and Sawmill Creek are likely to be completed in the coming months. The blocking bank track is near completion. Works on the park track rehabilitation, connections to campsites and roadways over structures are underway. The primary regulator at the Splash is taking shape with final works near completion. Other works that are key to the delivery of the project will be completed during the next few months.

Some parts of the Murray River National Park are closed for camping and other recreational activities until approximately mid-2020. See the link for temporary park closure map [Caring for Katarapko](#).

Information relating to the opening of the Murray River National Park will be available on the following website https://www.parks.sa.gov.au/find-a-park/Browse_by_region/Murray_River/murray-river-national-park

For safety reasons, the following water access restrictions apply to river vessels and people (other than authorised personnel) until late March 2020:

- Sawmill Creek, the entire length between Katarapko Creek and Eckert's Creek; and
- Eckert's Creek, for 1.3 kilometres upstream of the confluence point with Katarapko Creek (ie *The Splash*).

The Department for Environment and Water is taking expressions of interest for anyone who would like to participate in a tour of the Katarapko works. Please register your interest to the Department for Environment and Water's Engagement Officer, Ms Ellee Eleftheriadis on telephone: 8463 3740 or email: ellee.eleftheriadis2@sa.gov.au.

Pike

Although work on the regulating structures and blocking bank on the Pike Floodplain is now complete, other works continue in this area. Vessels and persons other than those participating in the works are still prohibited from entering the Pike River near the Rumpagunyah Creek and Tanyaca Creek junction, downstream of the Mundic Creek junction.

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 19/2/2020 (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.90	33.81	33.32	32.72
Lock 9 Kulnine	764.8	27.40	27.31	30.03	29.44	28.85
Lock 8 Wangumma	725.7	24.60	23.60	27.60	27.19	26.85
Lock 7 Rufus River	696.6	22.10	21.54	25.70	25.24	24.97
Lock 6 Murtho	619.8	19.25	19.28	21.03	20.50	20.19
Renmark	567.4	-	16.37	18.54	18.04	17.44
Lock 5	562.4	16.30	16.37	18.07	17.50	17.05
Lyrup	537.8	-	13.34	16.85	16.26	15.80
Berri	525.9	-	13.30	15.81	15.74	15.21
Lock 4	516.2	13.20	13.28	15.65	15.08	14.73
Loxton	489.9	-	10.12	15.05	14.12	13.54
Cobdogla	446.9	-	9.89	13.44	12.38	11.59
Lock 3	431.4	9.80	9.84	13.16	12.02	10.98
Overland Corner	425.9	-	6.29	12.73	11.58	10.41
Waikerie	383.6	-	6.24	11.26	10.24	9.20
Lock 2	362.1	6.10	6.16	10.28	9.30	8.32
Cadell	332.6	-	3.40	9.17	8.08	7.01
Morgan	321.7	-	3.34	8.85	7.65	6.38
Lock 1 Blanchetown	274.2	3.20	3.27	6.81	5.38	4.46
Swan Reach	245.0	0.75	0.81	6.06	4.51	3.11
Mannum PS	149.8	0.75	0.73	3.15	1.90	1.33
Murray Bridge	115.3	0.75	0.66	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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