

River Murray Flow Report and Water Resources Update



Report #12/2020

Issued 10:00 am 20 March 2020

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 13 March 2020. The next flow report will be provided on Friday 27 March 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](#).

EARLY INFORMATION FOR 2020-21 WATER USE YEAR

In preparation for the 2020-21 water use year, regular updates with early information will continue to be provided ahead of the projected opening minimum water allocation announcement on 15 April 2020.

In response to the Department of Health's recommended limits on organised gatherings, the Department for Environment and Water (DEW) is not proposing to conduct a round of public information sessions on this year's water allocation announcement and processes. However, DEW is considering other options to provide information to affected stakeholders. Keep an eye on the [Department for Environment and Water website](#) for the latest information.

RM WATER USERS REMINDED OF REQUIREMENT TO REMAIN WITHIN ALLOCATIONS

Water users along South Australia's River Murray are reminded of the requirement to ensure that they have not used more water than their available water allocation and to submit meter readings to the Department for Environment and Water (DEW) at the end of each quarter.

Since 2019, penalties apply if water users exceed the volume of water available on their account (their water allocation) at 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 and to protect the passage of environmental water through the river system.

Water users are encouraged to closely monitor their water use throughout the year and remain within their water allocations. Water users 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 they are monitoring water use and remaining within their available water allocation.

The majority of South Australia's River Murray water users do the right thing and remain within their available allocation. This change does not affect those water users who operate within the terms of their water account and ensure a credit balance at the end of each quarter.

The end of Quarter 3 of the 2019-20 water use year is 31 March 2020. A penalty will be applied in all instances where the volume of water taken for Quarter 3 is in excess of the available allocation on a water account after **5:00 pm on 31 March 2020**.

It is important to note that in order for a water trade to be considered for Quarter 3 of the 2019-20 water use year, the application must be submitted to DEW before 5:00 pm on 31 March 2020.

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

RAINFALL EVENTS

Recent heavy rainfall events have generated inflows in most river systems across the Northern Basin (Barwon-Darling system). On 10 March 2020, the Darling River started to flow into Menindee Lakes (Lake Wetherell). On 18 March 2020, Water NSW advised that the total forecast volume expected to reach Menindee Lakes has increased to around 275 to 340 GL. The projected volume will be updated as changes are observed. For the latest information on inflows please visit <https://www.watersw.com.au/about/newsroom>

WATER RESOURCES UPDATE

During February 2020, the total River Murray System inflow was approximately 67 GL, which is approximately 35% of the February long-term average of 189 GL. There was no inflow to Menindee Lakes (from the Darling System) during February 2020, compared to the February long-term average of 124 GL.

The flow to South Australia during February 2020 was approximately 218 GL, which is about 75% of the February long-term average of approximately 291 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 March 2020 South Australia had 339.3 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.

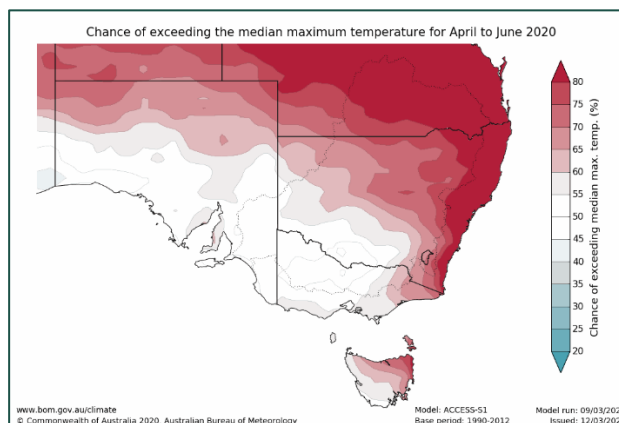
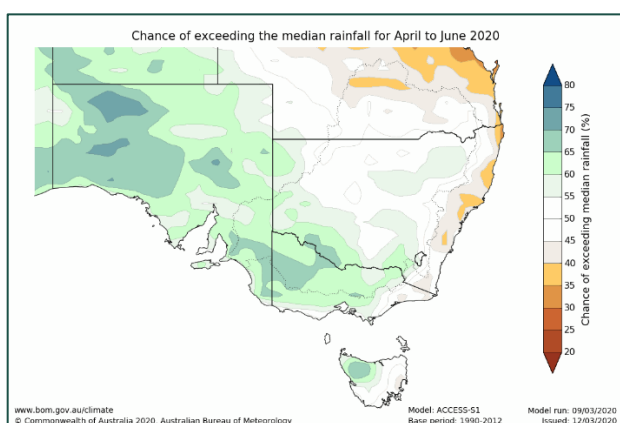
At 1 March 2020				
Purpose	Lake Victoria (GL)	Hume (GL)	Dartmouth (GL)	Total (GL)
*CHWN	0.0	0.0	237.9	237.9
Private Carryover	0.0	0.0	101.4	101.4
Total	0.0	0.0	339.3	339.3

*Critical Human Water Needs (CHWN)

RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for the Murray-Darling Basin from April to June 2020 indicates that the region is expected to receive:

- above average to average, rainfall; and
- above average to average temperatures.



Major climate drivers including the Indian Ocean Dipole and El Niño-Southern Oscillation are currently neutral and expected to remain neutral until mid-year. When these drivers are neutral, other influences can affect the Australian climate. Warmer waters surrounding northern Australia are likely, which would typically increase the chance of wetter conditions in southern Australia. All climate drivers will be tracked closely over the coming season.

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

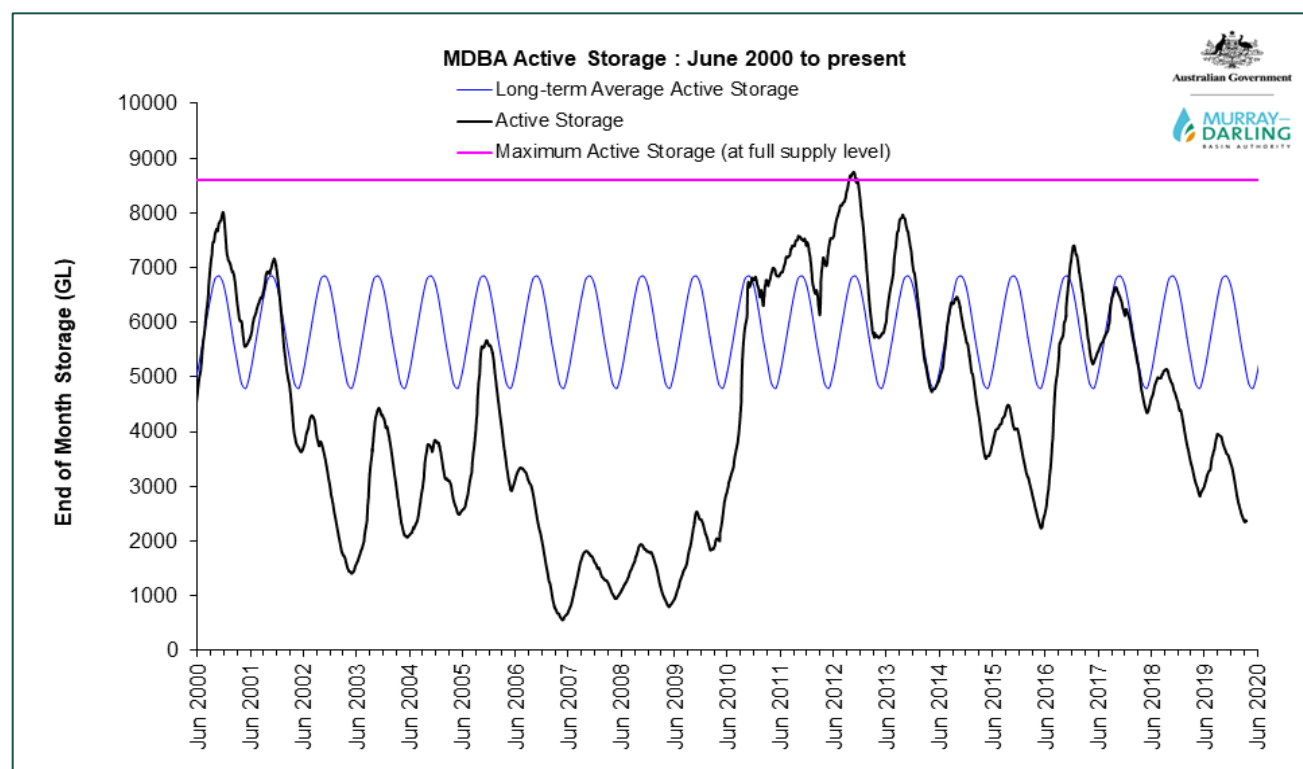
STORAGE VOLUMES

Murray-Darling Basin Storage Volumes

Storage	Full Supply Volume (GL)	18/3/2020 (GL)	18/3/2019 (GL)	Long-term average (end of March) (GL)
Dartmouth	3 856	1 803 (47%)	2 441 (63%)	
Hume	3 003	481 (16%)	691 (23%)	
Lake Victoria	677	256 (38%)	278 (41%)	
Menindee Lakes	*1 731	85 (5%)	24 (1%)	
TOTAL	9 267	2 625 (28%)	3 434 (37%)	

*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.



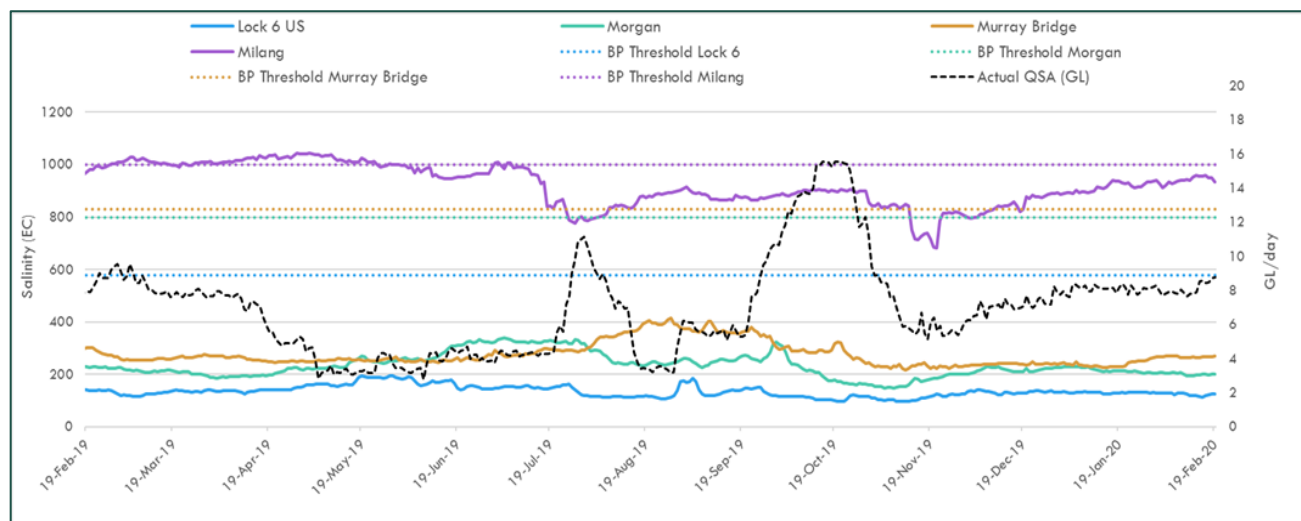
WATER QUALITY - Salinity

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 March 2019 to March 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 5 GL/day and will remain around this rate during the coming week. It comprises:

- reduced March Entitlement Flow (5.1 GL/day);
- 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 decrease to around 2.6 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:

- provide for barrage releases to the Coorong to support a productive, food-rich environment for fish and birds;
- maintain good connections 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;
- 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 15 March 2020, a total of approximately 5 499 129 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 0.53 m AHD and Lake Albert is approximately 0.57 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 summer and into autumn. During the past week, fishways at all the barrages have provided connectivity between the Coorong and the Lower Lakes. In addition, Tauwitchere Barrage (1-2 gates plus fishway) has provided targeted releases when the wind, swell and tide conditions align to push fresher water down the Coorong. As of Tuesday 17 March 2020, the weekly releases were approximately 2.1 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 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 facilities located at Waikerie and Loxton. 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

Construction works on the Katarapko Floodplain are progressing well and are expected to be completed by mid-2020. Some parts of the Murray River National Park currently remain closed for camping and other recreational activities during this period.

Campsites within the Lock 4, Eckerts Creek and Katarapko Creek sections of the Murray River National Park at Katarapko are planned to be re-opened in time for Easter. Campsites are available to book now, for bookings commencing on Wednesday 8 April 2020 on the following website https://www.parks.sa.gov.au/find-a-park/Browse_by_region/Murray_River/murray-river-national-park. Please be aware there have been a number of changes to roads within the Park. A map is currently being produced to assist campers navigate to their site for Easter. This will be communicated on the Parks SA website. There will be parts of the Murray River National Park that remain closed due to construction works that are still in progress. Please be aware of these sites and follow the appropriate signage warnings.

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*).

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 18/3/2020 (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	27.33	30.03	29.44	28.85
Lock 8 Wangumma	725.7	24.60	23.61	27.60	27.19	26.85
Lock 7 Rufus River	696.6	22.10	21.52	25.70	25.24	24.97
Lock 6 Murtho	619.8	19.25	19.29	21.03	20.50	20.19
Renmark	567.4	-	16.34	18.54	18.04	17.44
Lock 5	562.4	16.30	16.34	18.07	17.50	17.05
Lyrup	537.8	-	13.22	16.85	16.26	15.80
Berri	525.9	-	13.29	15.81	15.74	15.21
Lock 4	516.2	13.20	13.29	15.65	15.08	14.73
Loxton	489.9	-	10.02	15.05	14.12	13.54
Cobdogla	446.9	-	9.88	13.44	12.38	11.59
Lock 3	431.4	9.80	9.85	13.16	12.02	10.98
Overland Corner	425.9	-	6.28	12.73	11.58	10.41
Waikerie	383.6	-	6.29	11.26	10.24	9.20
Lock 2	362.1	6.10	6.18	10.28	9.30	8.32
Cadell	332.6	-	3.38	9.17	8.08	7.01
Morgan	321.7	-	3.33	8.85	7.65	6.38
Lock 1 Blanchetown	274.2	3.20	3.28	6.81	5.38	4.46
Swan Reach	245.0	0.75	0.50	6.06	4.51	3.11
Mannum PS	149.8	0.75	0.54	3.15	1.90	1.33
Murray Bridge	115.3	0.75	0.50	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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