

# RIVER MURRAY FLOW REPORT and WATER RESOURCES UPDATE

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Report #07/2018

Issued 10:00 am 16 February 2018

This supersedes the previous flow report issued by the Department of Environment, Water and Natural Resources (DEWNR) on 9 February 2018. The next report will be provided on Friday 23 February 2018.

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 AND CARRYOVER

South Australian River Murray water access entitlement holders (Class 3a, 3b, 4, 7 and 8) have been granted a 100% water allocation in 2017-18. Private carryover will not be made available in 2017-18 due to the positive water resource availability outlook and the risk of spill from the Murray-Darling Basin controlled storages.

## MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

The Murray-Darling Basin Authority confirmed that on 1 February 2018 South Australia had 216.1 GL of deferred water held in storage. The table below identifies the storage in which it is held and the purpose.

At 1 February 2018				
Purpose	Lake Victoria (GL)	Hume (GL)	Dartmouth (GL)	Total (GL)
*CHWN	11.1	33.4	81.6	126.1
Private Carryover	4.5	26.1	59.4	90.0
<b>Total</b>	15.6	59.5	141.0	216.1

\*Critical Human Water Needs (CHWN)

Volumes stored are adjusted for net evaporation losses and spills until delivered to South Australia.

South Australia is seeking opportunities to defer and store water during 2017-18.

## WATER RESOURCES UPDATE

During January 2018 the total River Murray System inflow was approximately 153 GL, which is approximately 59% of the January long-term average of 258 GL. There was no inflow to Menindee Lakes (from the Darling System) during January 2018, compared to the January long-term average of 124 GL.

The flow to South Australia during January 2018 was approximately 243 GL, which is about 56% of the January long-term average of approximately 434 GL. The flow comprised:

- 217 GL of Entitlement Flow (includes environmental water on SA licence); less
- 15.8 GL of deferred water; less
- 4.3 GL trade out of SA; plus
- 46.6 GL of environmental water.

## RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for February to April 2018 indicates average rainfall with cooler than average temperatures across the Murray-Darling Basin. Weak La Niña conditions are present in the Pacific Ocean (likely to have already peaked).



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## STORAGE VOLUMES

### Murray-Darling Basin Storage Volumes

Storage	Full Supply Volume (GL)	14/2/2018 (GL)	14/2/2017 (GL)	Long-term average (end of February) (GL)
Dartmouth	3 856	3 432 (89%)	3 004 (78%)	
Hume	3 003	1 737 (58%)	2 446 (81%)	
Lake Victoria	677	434 (64%)	468 (69%)	
Menindee Lakes	*1 731	342 (20%)	1 187 (69%)	
<b>TOTAL</b>	<b>9 267</b>	<b>5 945 (64%)</b>	<b>7 105 (77%)</b>	<b>5 922 (64%)</b>

\*Menindee Lakes can be surcharged to 2 015 GL

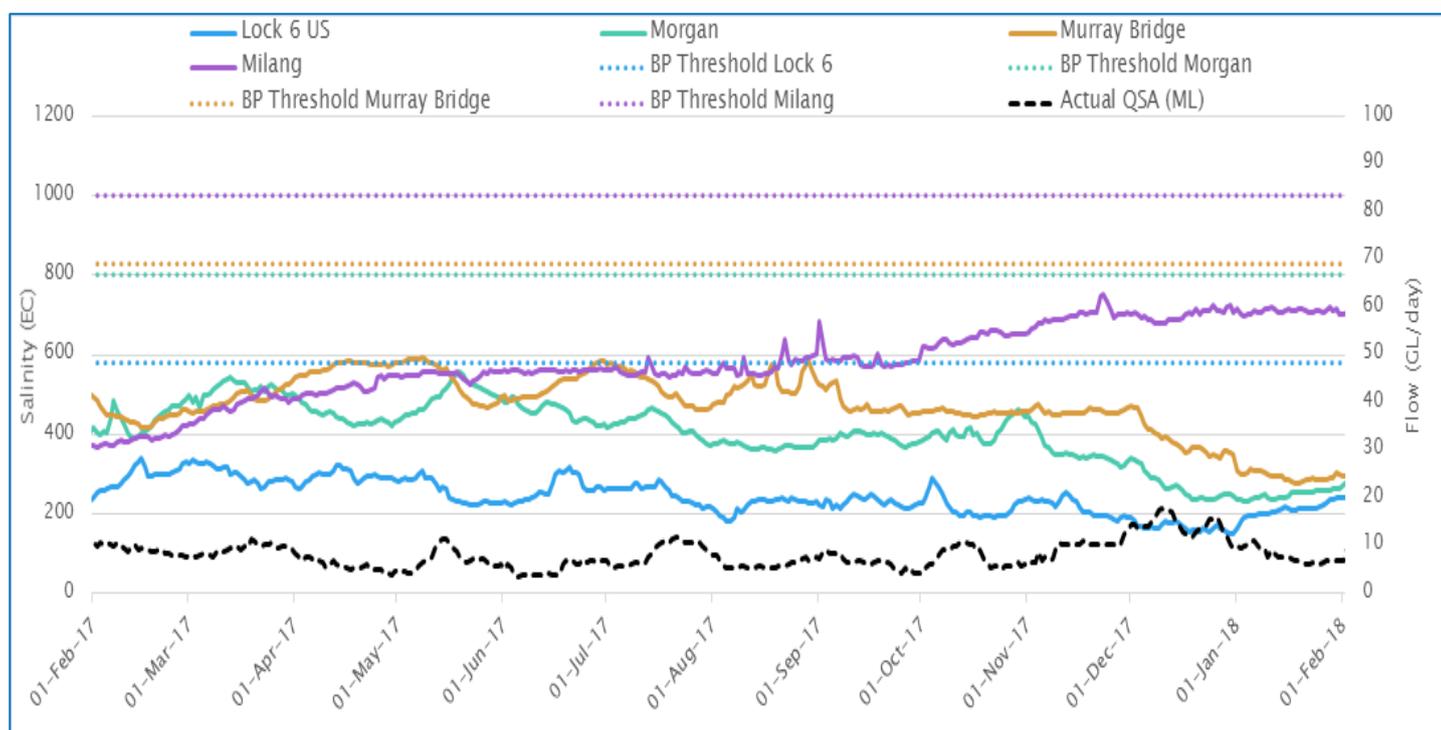
## WATER QUALITY - Salinity

A number of targets are identified under the Basin Plan, which all Basin States must have regard to in managing River Murray flows. The targets for real-time salinity are identified below. Salinity must not exceed these values for 95 per cent 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 2017 to February 2018. 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 8 GL/day and will decrease to around 6.5 GL/day during the coming week. It comprises:

- normal February Entitlement Flow of 6.9 GL/day;
- less deferred water;
- plus environmental water; and
- interstate trade adjustments.

The flow over Lock 1 is approximately 6 GL/day and will decrease to around 4 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. The forecasts will be revised as new information becomes available.

## ENVIRONMENTAL WATER

During February approximately 50 GL of environmental water is expected to be delivered to South Australia. This volume may vary depending on rainfall and weather conditions. Environmental water is being ordered directly for South Australia by the Commonwealth Environmental Water Holder to achieve a range of environmental and water quality benefits in the River Murray channel, Lower Lakes and Coorong, particularly to protect water quality (salinity) in the Coorong.

DEWNR is continuing discussions regarding environmental water to be delivered during 2018.

## 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.

Two dredges are operating 24/7 in the Goolwa and Tauwichee channels. At 11 February 2018, a total of approximately 2 643 873 cubic metres of sand had been removed by dredging operations.

There are a number of shallow zones in and adjacent to the Murray Mouth, in particular on the Goolwa side of the mouth. Mariners should use caution when traversing the mouth area, follow all directions, reduce speed and avoid travelling at low tide. Boats equipped with echo sounders should check depths regularly. Mariners are reminded that navigation through the Murray Mouth is only permitted during daylight hours and that 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 0.63 m AHD and Lake Albert is approximately 0.64 m AHD. The difference in water levels is due to wind effects. When possible, water levels are being managed to achieve a target water level of between 0.6 m AHD and 0.7 m AHD during February 2018.

During the week ending 13 February 2018 total barrage releases were approximately 6 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.

All fishways are operational and providing fish passage between Lake Alexandrina and the Coorong.

Water levels and barrage operations are monitored closely by the South Australian Government, the Murray-Darling Basin Authority and the Commonwealth Environmental Water Office.

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## **WEIR POOL OPERATIONS**

The Lock 1 weir pool is approximately 0.1 m below the normal pool level of 3.2 m AHD to enable engineering works to be undertaken at the weir.

## **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.



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## RIVER MURRAY WATER LEVELS

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

**River Murray Water Levels**

Location	River km	Normal Pool Level (m AHD)	Current Level 14/02/2018 (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.87	33.81	33.32	32.72
Lock 9 Kulnine	764.8	27.40	27.40	30.03	29.44	28.85
Lock 8 Wangumma	725.7	24.60	24.58	27.60	27.19	26.85
Lock 7 Rufus River	696.6	22.10	22.20	25.70	25.24	24.97
Lock 6 Murtho	619.8	19.25	19.26	21.03	20.50	20.19
Renmark	567.4	-	16.34	18.54	18.04	17.44
Lock 5	562.4	16.30	16.34	18.07	17.50	17.05
Lyrup	537.8	-	13.29	16.85	16.26	15.80
Berri	525.9	-	13.25	15.81	15.74	15.21
Lock 4	516.2	13.20	13.25	15.65	15.08	14.73
Loxton	489.9	-	10.14	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	-	6.28	12.73	11.58	10.41
Waikerie	383.6	-	6.26	11.26	10.24	9.20
Lock 2	362.1	6.10	6.11	10.28	9.30	8.32
Cadell	332.6	-	3.23	9.17	8.08	7.01
Morgan	321.7	-	3.19	8.85	7.65	6.38
Lock 1 Blanchetown	274.2	3.20	3.12	6.81	5.38	4.46
Swan Reach	245.0	0.75	0.62	6.06	4.51	3.11
Mannum PS	149.8	0.75	0.69	3.15	1.90	1.33
Murray Bridge	115.3	0.75	0.73	2.06	1.26	1.04

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



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## FURTHER INFORMATION

The WaterConnect website is South Australia's comprehensive water information portal and can be accessed at [Home page](#)

Up-to-date River Murray salinity, flow and water level information can be accessed at the Department of Environment, Water and Natural Resources, 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 of Environment, Water and Natural Resources 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 of Environment, Water and Natural Resources [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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