

RIVER MURRAY FLOW REPORT and WATER RESOURCES UPDATE

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Report #10/2019

Issued 10:00 am 15 March 2019

This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 8 March 2019. The next report will be provided on Friday 22 March 2019.

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.

ADOPTION OF THE RIVER MURRAY WATER ALLOCATION PLAN

The Minister for Environment and Water adopted an updated Water Allocation Plan for the River Murray Prescribed Watercourse on 28 February 2019. The adoption of the water allocation plan means that some policies have changed and it is important that all water users are aware of these changes. Changes to the plan will be discussed at the River Murray Information Sessions, scheduled for March 2019 (see information below). To find out more please visit the [Natural Resources website](#).

RIVER MURRAY INFORMATION SESSIONS

A series of public information sessions are taking place in March 2019 to provide water users with the latest information on River Murray water availability and outlook, changes to the private carryover policy, improvements to the water allocation announcement process, and the latest information from AITHER Water Markets about managing risk through the water market to help prepare for the 2019-20 water use year.

The meetings at Renmark, Barmera, Waikerie and Loxton have already taken place. Meetings will be held this week at Murray Bridge, Langhorne Creek and Goolwa. The meeting at Goolwa will be more focussed on water levels, flows and outlook and will not include a discussion from AITHER Water Markets.

Session details

Location	Host/Chair	Day and Time
Murray Bridge Murray Bridge Golf Course, Ritter St	South Australian Dairyfarmers' Association	Monday 18 March at 10.30 am
Langhorne Creek The Langhorne Creek Hub, 79 Bridge Rd	Langhorne Creek Grape and Wine	Monday 18 March at 2 pm
Goolwa Yacht Club	Hon Dean Brown AO	Tuesday 19 March at 6.30 pm

If you would like to attend the **Murray Bridge or Langhorne Creek sessions**, please RSVP to your local host or to Ms Peta Brettig, Senior Project Officer River Murray WAP on 8463 6877 or rmwap.feedback@sa.gov.au

If you would like to attend the **Goolwa session** please RSVP to Mr Stephen Madigan, Environmental Project Coordinator on 8204 8508 or Stephen.Madigan@sa.gov.au

MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

The Murray-Darling Basin Authority confirmed that on 1 March 2019 South Australia had 335.7 GL of deferred water held in storage. The table below identifies the storage in which it is held and the purpose.

At 1 March 2019				
Purpose	Lake Victoria (GL)	Hume (GL)	Dartmouth (GL)	Total (GL)
*CHWN	13.7	0.0	219.7	233.4
Private Carryover	0.0	0.0	102.3	102.3
Total	13.7	0.0	322.0	335.7

*Critical Human Water Needs (CHWN)



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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 2018-19.

WATER RESOURCES UPDATE

During February 2019, the total River Murray System inflow was approximately 80 GL, which is approximately 42% of the February long-term average of 190 GL. There was no inflow to Menindee Lakes (from the Darling System) during February 2019, compared to the February long-term average of 124 GL.

The flow to South Australia during February 2019 was approximately 227 GL, which is about 78% of the February long-term average of approximately 291 GL. The flow comprised:

- 194 GL of Entitlement Flow (includes environmental water on SA licence);
- plus 29 GL of environmental water;
- plus 17.5 GL of trade into South Australia (mostly environmental water);
- less 13.9 GL of deferred water.

RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for March to May 2019 indicates drier than average rainfall with warmer than average temperatures across most of the Murray-Darling Basin. The outlook is influenced by an El Niño Watch. El Niño conditions usually bring drier than normal conditions across the Murray-Darling Basin.

STORAGE VOLUMES

Murray-Darling Basin Storage Volumes

Storage	Full Supply Volume (GL)	13/3/2019 (GL)	13/3/2018 (GL)	Long-term average (end of March) (GL)
Dartmouth	3 856	2 446 (63%)	3 424 (89%)	
Hume	3 003	744 (25%)	1 400 (47%)	
Lake Victoria	677	292 (43%)	345 (51%)	
Menindee Lakes	*1 731	25 (1%)	294 (17%)	
TOTAL	9 267	3 507 (38%)	5 463 (59%)	5 504 (59%)

*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 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 2018 to March 2019. The dashed-lines identify the Basin Plan (BP) thresholds for the corresponding colour coded location.

SA River Murray Daily Average Salinity



Note: Missing Milang salinity readings periodically during March, April and July are due to biofouling at the EC sensor..

WATER QUALITY – Blue-green algae

It is reasonably common for algal blooms to be reported at this time of the year.

There are red alerts for blue-green algae in the lower Darling River and Murrumbidgee River. This is a result of dry conditions, low flows and high temperatures. There is no evidence of elevated blue-green algae in the South Australian section of the River Murray. If the situation changes, advice will be provided.

The relevant South Australian Government agencies are regularly monitoring the situation.

FLOW OUTLOOK

The flow at the South Australian border is approximately 7.8 GL/day and will remain around this rate during the coming week. It comprises:

- normal March Entitlement Flow of 6 GL/day;
- less deferred water;
- plus environmental water; and
- interstate trade adjustments.

The flow over Lock 1 is approximately 5.8 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.

ENVIRONMENTAL WATER

Currently, environmental water is being provided at a rate of around 2 GL/day to South Australia for:

- a range of outcomes at wetlands in the Riverland via arrangements with the Nature Foundation SA, SA Murray-Darling Basin Natural Resources Management Board and at Banrock Station; and
- the Lower Lakes and Coorong to:
 - improve salinity and water quality;
 - manage lake water levels while providing for ongoing releases to the Coorong;
 - maintain a connection between the Lower Lakes and Coorong to allow for fish movement (for further details see *Barrage Operations and Water Levels in the Lower Lakes* section).

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 Tauwitchere channels. At 10 March 2019, a total of approximately 4 121 031 cubic metres of sand had been removed by dredging operations. 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 0.54 m AHD. The difference in water level is due to wind effects. Where possible, water levels are being managed to maintain a water level of above 0.5 m AHD by the end of March 2019.

During the week ending 13 March 2019 total barrage releases were approximately 3 GL. All fishways remain open. 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.

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.

WALKER FLAT RIVER VESSEL WASTE DISPOSAL STATION

The Walker Flat River Vessel Waste Disposal Station will be undergoing maintenance works from 1 to 8 April 2019. During this period, the waste disposal station will be closed. By appointment, a temporary pump-out service will be made available 400 metres downstream. Please call *Mannum and Bridge Septic* on 0427 227 740 to make an appointment. The next closest facilities are at Swan Reach (37 kilometres upstream) and Mannum (59 kilometres downstream). For any issues and general enquires please phone Ms Terri Minge on 0428 114 297.

RIVERINE RECOVERY CONSTRUCTION WORKS

The Riverine Recovery Project is constructing environmental regulators to manage a number of wetlands between Mannum and Murtho. Construction is expected to be completed around June 2019.

SOUTH AUSTRALIAN RIVERLAND FLOODPLAINS INTEGRATED INFRASTRUCTURE PROGRAM (SARFIIP) CONSTRUCTION WORKS

Katarapko

Construction works have commenced on the Katarapko Floodplain, Murray River National Park, and are expected to be completed by mid-2020. The construction works will enable over 1120 hectares of floodplain to be inundated more regularly to improve ecological health and resilience. As a result, some parts of the Murray River National Park will be closed during the next 12 months for camping and other recreational activities. A temporary park closures map has been placed at the three entrances to the park and is available on the website: www.naturalresources.sa.gov.au/samurraydarlingbasin/projects/all-projects-map/caring-for-katarapko

For safety reasons, the following water access restrictions apply to river vessels and people (other than authorised personnel) between 18 February to 27 March 2019:

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

For more information or to receive regular updates about the Katarapko Floodplain Project please contact the Department for Environment and Water's Engagement Officer, Ms Ellee Eleftheriadis on 8595 2148 or email ellee.elftheriadis2@sa.gov.au

Pike

Local community members are invited to join a twilight tour of the Pike Floodplain, which will be held on **Monday 1 April commencing at 5pm, leaving from Bert Dix Park**. This will provide the community with an opportunity to see the great work that is happening at Pike. If you are interested in joining the tour, please phone Ellee Eleftheriadis on 8595 2148 to book your place.

The construction of regulating structures and a blocking bank on the Pike Floodplain has commenced. The works are expected to be completed by December 2019. The works will enable:

- a portion of the floodplain to be inundated more regularly to improve ecological health; and
- fish to move freely between the River Murray and the floodplain.

During the construction period, for safety reasons, vessels and persons other than those participating in the works are prohibited from entering the Pike River near the Rumpagunyah Creek and Tanyaca Creek junction, downstream of the Mundic Creek junction.

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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 to Murray Bridge.

River Murray Water Levels

Location	River km	Normal Pool Level (m AHD)	Current Level 13/03/2019 (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)	2016 High Water Level (m AHD)
Lock 10	825.0	30.80	30.88	33.81	33.32	32.72
Lock 9 Kulnine	764.8	27.40	27.36	30.03	29.44	28.85
Lock 8 Wangumma	725.7	24.60	23.98	27.60	27.19	26.85
Lock 7 Rufus River	696.6	22.10	21.60	25.70	25.24	24.97
Lock 6 Murtho	619.8	19.25	19.24	21.03	20.50	20.19
Renmark	567.4	-	16.32	18.54	18.04	17.44
Lock 5	562.4	16.30	16.32	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	-	10.13	15.05	14.12	13.54
Cobdogla	446.9	-	9.89	13.44	12.38	11.59
Lock 3	431.4	9.80	9.85	13.16	12.02	10.98
Overland Corner	425.9	-	6.29	12.73	11.58	10.41
Waikerie	383.6	-	6.24	11.26	10.24	9.20
Lock 2	362.1	6.10	6.15	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	3.25	6.81	5.38	4.46
Swan Reach	245.0	0.75	0.57	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	0.45	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 and can be accessed at [Home page](#)

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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