

# River Murray Flow Report



## Report #30/2019

Issued 10:00 am 9 August 2019

**This supersedes the previous flow report issued by the Department for Environment and Water (DEW) on 2 August July 2019. The next report will be provided on Friday 16 August 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.

## WATER ALLOCATIONS AND PRIVATE CARRYOVER

Water allocations for South Australian River Murray Class 3 water access entitlement holders are 50%.

The next water allocation announcement will be issued on Thursday 15 August 2019. Water availability updates will be provided twice a month during 2019-20 while water allocations are less than 100%.

Further information is included in [SA's River Murray Water Allocation Statement](#) (PDF).

Private carryover will also be made available in 2019-20 for eligible Class 3 entitlement holders.

To make it easy to understand how private carryover works, please view the [carryover video](#).

## FLOW OUTLOOK

The flow at the South Australian border is approximately 7 GL/day and will reduce to around 4.5 GL/day during the coming week. It comprises:

- reduced August Entitlement Flow of 2.5 GL/day;
- environmental water; and
- interstate trade adjustments.

The flow over Lock 1 is approximately 5 GL/day and will reduce 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.

## ENVIRONMENTAL WATER

A pulse of environmental water is currently moving through the system with return flows from an environmental watering event in the Goulburn River. After supporting river bank vegetation, water bugs and improving water quality in the Goulburn River, the environmental water will deliver a range of outcomes in South Australia. This water will:

- provide for weir pool raising events at Locks 6 and 2;
- provide for increased barrage releases for Coorong outcomes (now and during spring);
- assist in exporting salt from the Basin; and
- improve water quality (including salinity) in the Coorong for estuarine species.

Environmental water is supporting the temporary raising of weir pools 6 and 2 to help restore a more natural wetting cycle. These events will re-connect the main river channel with the floodplain and wetlands in the area and provide a much needed watering. This will promote vegetation growth and breeding of local wildlife. Weir pool raising improves vegetation and macroinvertebrate communities by spreading plant seedlings and supporting the creation of algae, which is a much needed food source for bugs and fish.

Winter barrage releases provide cues and connection to support the movement of several migratory fish species. Monitoring is underway to investigate the upstream migration and spawning of pouched and short-headed lamprey travelling from the Southern Ocean via the Coorong estuary to spawning grounds in upstream areas of the River Murray system. A total of 31 lamprey (includes both species) have been found moving through the fishways (see photo) at the barrages and have been tagged so their passage along the River Murray system can be traced. This will assist to understand their movements and lifecycle.



Pouched Lamprey in the Goolwa vertical slot fishway  
Photo courtesy of SARDI Aquatic Sciences

## 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.

Both dredges are operating 24/7 in the Goolwa and Tauwitche channels. At 4 August 2019, a total of approximately 4 748 699 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 0.76 m AHD and Lake Albert is approximately 0.79 m AHD. The difference in water level is due to wind effects.

During the week ending 6 August 2019 total barrage releases were approximately 41 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.

## WEIR POOL MANIPULATIONS

The Normal Pool Level (NPL) and Normal Operating Range (NOR) for the South Australian locks and weirs are identified in the table below.

| Weir                     | Normal Pool Level (NPL)<br>m AHD | Normal Operating Range (NOR)<br>m AHD |
|--------------------------|----------------------------------|---------------------------------------|
| Lock 6 - Murtho          | 19.25                            | 19.17 - 19.50                         |
| Lock 5 - Renmark         | 16.30                            | 16.13 - 16.43                         |
| Lock 4 - Bookpurnong     | 13.20                            | 13.16 - 13.50                         |
| Lock 3 - Overland Corner | 9.80                             | 9.77 - 10.02                          |
| Lock 2 - Waikerie        | 6.10                             | 5.90 - 6.40                           |
| Lock 1 - Blanchetown     | 3.20                             | 3.10 - 3.40                           |

### **Weir and Lock 6**

Raising the water level in the Lock 6 weir pool has commenced. The raising event will increase the Lock 6 water level by a maximum of 0.42 m above NPL to 19.67 m AHD. Water level changes are being undertaken at a rate of approximately 0.05 m/day.

### **Weir and Lock 2**

Raising the water level in the Lock 2 weir pool has commenced. The raising event will increase the Lock 2 water level by a maximum of 0.52 m above NPL to 6.62 m AHD. Water level changes are being undertaken at a rate of approximately 0.05 m/day.

## **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.

## **RIVERINE RECOVERY CONSTRUCTION WORKS**

The Riverine Recovery Project is constructing environmental regulators to manage a number of wetlands between Mannum and Murtho. Construction has finished at a number of these sites with the remaining wetlands due for completion by the end of September 2019. Work is currently underway at Teal Flat, Putjeda Creek and Bollenhagen Road in Gurra Gurra.

## **SA RIVERLAND FLOODPLAINS INTEGRATED INFRASTRUCTURE PROGRAM CONSTRUCTION WORKS**

### **Katarapko**

Construction works on the Katarapko Floodplain are expected to be completed by mid-2020. As a result, some parts of the Murray River National Park will be temporarily closed for camping and other recreational activities. See the link for temporary park closure map [Caring for Katarapko](#)

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

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*).

The construction works will enable over 1120 hectares of floodplain to be inundated more regularly to improve ecological health and resilience. 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.eleftheriadis2@sa.gov.au](mailto:ellee.eleftheriadis2@sa.gov.au)

### **Pike**

Regulating structures and a blocking bank on the Pike Floodplain are expected to be completed by December 2019. During the construction period, 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. 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.

## 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 7/8/2019 (m AHD) | 1974 Flood Level (m AHD) | 1993 Flood Level (m AHD) | 2016 High Water Level (m AHD) |
|--------------------|----------|---------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------|
| Lock 10            | 825.0    | 30.80                     | 30.90                          | 33.81                    | 33.32                    | 32.72                         |
| Lock 9 Kulnine     | 764.8    | 27.40                     | 27.48                          | 30.03                    | 29.44                    | 28.85                         |
| Lock 8 Wangumma    | 725.7    | 24.60                     | 24.32                          | 27.60                    | 27.19                    | 26.85                         |
| Lock 7 Rufus River | 696.6    | 22.10                     | 22.18                          | 25.70                    | 25.24                    | 24.97                         |
| Lock 6 Murtho      | 619.8    | 19.25                     | 19.33                          | 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    | -                         | 13.28                          | 16.85                    | 16.26                    | 15.80                         |
| Berri              | 525.9    | -                         | 13.25                          | 15.81                    | 15.74                    | 15.21                         |
| Lock 4             | 516.2    | 13.20                     | 13.23                          | 15.65                    | 15.08                    | 14.73                         |
| Loxton             | 489.9    | -                         | 10.15                          | 15.05                    | 14.12                    | 13.54                         |
| Cobdogla           | 446.9    | -                         | -                              | 13.44                    | 12.38                    | 11.59                         |
| Lock 3             | 431.4    | 9.80                      | 9.83                           | 13.16                    | 12.02                    | 10.98                         |
| Overland Corner    | 425.9    | -                         | 6.38                           | 12.73                    | 11.58                    | 10.41                         |
| Waikerie           | 383.6    | -                         | 6.30                           | 11.26                    | 10.24                    | 9.20                          |
| Lock 2             | 362.1    | 6.10                      | 6.22                           | 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                      | 3.25                           | 6.81                     | 5.38                     | 4.46                          |
| Swan Reach         | 245.0    | 0.75                      | 0.75                           | 6.06                     | 4.51                     | 3.11                          |
| Mannum PS          | 149.8    | 0.75                      | 0.76                           | 3.15                     | 1.90                     | 1.33                          |
| Murray Bridge      | 115.3    | 0.75                      | 0.72                           | 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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