

RIVER MURRAY FLOW REPORT

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Report #29/2015

Issued 10:00 am 24 July 2015

This supersedes the previous flow report issued by the Department of Environment, Water and Natural Resources (DEWNR) on 17 July 2015. The next flow report will be provided on Friday, 31 July 2015.

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 1000 ML.

FLOW OUTLOOK

The flow at the South Australian border is approximately 6.0 GL/day and will remain around this rate during the coming week. It comprises the normal July Entitlement Flow of 3.5 GL/day plus environmental water.

The flow over Lock 1 is approximately 7.0 GL/day and will decrease to around 5.3 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. They may change as new gauging information becomes available, or due to rainfall events or changed operations upstream. Flow forecasts are dependent on predictions made by the Bureau of Meteorology, Murray-Darling Basin Authority and water management agencies in upstream jurisdictions. The forecasts will be revised as new information becomes available.

ENVIRONMENTAL WATER

During July 2015, the Commonwealth Environmental Water Holder (CEWH) is providing environmental water to South Australia, including return flows from a winter environmental watering event in the Goulburn system. The environmental water will provide in-channel, Lower Lakes, and Coorong environmental and water quantity and quality benefits. South Australia and the CEWH have agreed on an environmental watering schedule to deliver environmental water to the Lower Lakes, Coorong and Murray Mouth in 2015-16. The bulk of the environmental water will be delivered between July 2015 and January 2016.

MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

The Murray-Darling Basin Authority confirmed that on 1 July 2015, South Australia had 53.6 GL of deferred water in storage. Of this total, 35.5 GL is stored for critical human water needs and 18.1 GL for private carryover use in future dry years. Volumes stored are adjusted for net evaporation losses until delivered to South Australia.

DEWNR will continue to pursue opportunities to defer additional Entitlement Flow during 2015-16. Opportunities to defer and store water are considered on the basis of how Entitlement Flow is managed, operational flow objectives for water quality and weather conditions.

MURRAY MOUTH

Dredging operations at the Murray Mouth commenced on 9 January 2015 to maintain connectivity (exchange of water) between the river and the Southern Ocean. Dredges are currently operating in the Tauwitchere and Goolwa Channels. At 19 July 2015, a total of approximately 639 100 cubic metres of sand had been removed. Routine monitoring confirms an improvement in the condition of both channels as a result of dredging.

Mariners are reminded that navigation through the Murray Mouth is only permitted during daylight hours and that Exclusion Zones established around the dredging operations remain in place to ensure public safety. For more information refer to the Notice to Mariners at:

http://webapps.transportsa.com.au/news/templates/dtei_template2010.aspx?articleid=2865&zoneid=15

There is also a partial park closure in place for the northern tip of the Coorong National Park. For more information refer to the following:

http://www.environment.sa.gov.au/parks/Safety/Park_closures/141219-coorong-national-park



Signage has been installed at appropriate locations and flyers distributed advising of Exclusion Zones.

Any boats navigating through the Murray Mouth area should proceed with caution due to sandbars being present at shallow depth. Boats equipped with 'echo sounders' are strongly encouraged to regularly check depths and avoid travelling at low tide.

BARRAGE OPERATIONS AND WATER LEVELS IN THE LOWER LAKES

The water level in Lake Alexandrina is approximately 0.74 m AHD and Lake Albert is approximately 0.83 AHD. The higher water level in Lake Albert is due to wind effects. Barrage releases are being prioritised through Tauwichee and Goolwa, adjacent to the fishways. During the week 15 to 21 July 2015, total barrage releases were approximately 48.9 GL. SA Water will continue to operate the barrages to minimise any negative salinity impacts from reverse flow events. All fishways are operating.

To see live salinity and water level data at various locations on the River Murray and in the Lower Lakes, please refer to the following website: <http://www.waterconnect.sa.gov.au/Systems/RTWD/SitePages/Home.aspx>

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

WEIR POOL OPERATIONS (*potential*)

DEWNR is currently considering raising Locks 2 and 5 weir pools during spring to slightly above their normal operating range. It is anticipated that the weir pools may be raised by up to 0.5 m above full supply level, or 0.2 m (at Lock 2) and 0.37 m (at Lock 5) above the maximum normal operating range. The aim is to mimic historic natural water level variability, which has been largely lost through river regulation. The objective is to promote a range of ecological benefits. For further information please refer to the following website:

www.naturalresources.sa.gov.au/weirpools

WEIR POOL OPERATIONS (*current*)

The Lock 1 weir pool is approximately 0.1 m below the normal pool level of 3.2 m AHD to enable engineering investigations 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 watercraft users should be aware of the risk of submerged navigation hazards, and should regularly check river depth.

CONSTRUCTION WORKS

Lock 11

Remedial works at Lock 11 (Mildura) commenced on 20 May 2015. The weir pool was lowered by about 3.2 metres below full supply level to enable repairs to the concrete structure on the riverbed and installation of new mechanised trestles. The weir pool was being slowly reinstated. However, a vibration in one of the existing trestles was observed on 18 July 2015. The weir pool is being lowered again to replace the suspected damaged trestle. It is expected that the works will be completed and the weir pool reinstated in early August 2015.

Remedial works on the lock chamber also commenced on 20 May 2015. These works are expected to be completed around mid-September 2015. Lock 11 will be closed to navigation during this period.

Katarapko Floodplain, Murray River National Park

Construction works are continuing on the Katarapko Floodplain. Road and waterway access restrictions are in place at Eckert Creek Log Crossing. The construction works will improve water flow and movement of native fish through Eckert Creek. Works are due for completion by end of July 2015. For further information on the Katfish Reach Project please refer to the following website: <http://katfish.org.au/>

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 on 22 July 2015

Location	River km	Normal Pool Level	Current Level (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)	2011 High Water Level (m AHD)
Lock 10	825.0	30.80	30.76	33.81	33.32	32.28
Lock 9 Kulnine	764.8	27.40	27.43	30.03	29.44	28.80
Lock 8 Wangumma	725.7	24.60	24.60	27.60	27.19	26.79
Lock 7 Rufus River	696.6	22.10	22.13	25.70	25.24	24.92
Lock 6 Murtho	619.8	19.25	19.27	21.03	20.50	20.11
Renmark	567.4	-	-	18.54	18.04	17.38
Lock 5	562.4	16.30	16.31	18.07	17.50	17.05
Lyrup	537.8	-	13.28	16.85	16.26	15.68
Berri	525.9	-	13.26	15.81	15.74	15.16
Lock 4	516.2	13.20	13.24	15.65	15.08	14.75
Loxton	489.9	-	10.13	15.05	14.12	13.42
Cobdogla	446.9	-	9.85	13.44	12.38	11.52
Lock 3	431.4	9.80	9.80	13.16	12.02	10.93
Overland Corner	425.9	-	6.28	12.73	11.58	10.27
Waikerie	383.6	-	6.25	11.26	10.24	9.06
Lock 2	362.1	6.10	6.10	10.28	9.30	8.25
Cadell	332.6	-	3.25	9.17	8.08	6.82
Morgan	321.7	-	3.15	8.85	7.65	6.20
Lock 1 Blanchetown	274.2	3.20	3.11	6.81	5.38	4.42
Swan Reach	245.0	0.75	0.71	6.06	4.51	3.09
Mannum PS	149.8	0.75	0.71	3.15	1.90	1.46
Murray Bridge	115.3	0.75	0.68	2.06	1.26	1.21

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: <http://www.waterconnect.sa.gov.au>

Up-to-date River Murray 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:

<http://www.waterconnect.sa.gov.au/Systems/RTWD/SitePages/Home.aspx>

<http://www.sawater.com.au/SAWater/Environment/WaterProofingAdelaide/TheRiverMurray/RMOU/Dailyflow.htm>

<http://www.mdba.gov.au/river-data/live-river-data>

The Department of Environment, Water and Natural Resources has published a series of inundation maps for the River Murray. They are available at: <http://www.waterconnect.sa.gov.au/Systems/RMIM/Pages/default.aspx>

Information on the management of acid drainage water in the Lower River Murray can be accessed online at:

http://www.epa.sa.gov.au/environmental_info/water_quality/acid_sulfate_soils_ass/lower_river_murray_reclaimed_irrigation_area_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: <http://www.bom.gov.au/vic/flood>

Information provided by the Commonwealth Environmental Water Office can be accessed at:

www.environment.gov.au/ewater/southern/murray/lower-murray.html

Information on The Living Murray can be accessed at:

<http://www.mdba.gov.au/about-basin/environmental-sites>

Department of Environment, Water and Natural Resources

<http://www.environment.sa.gov.au/Home>

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