

RIVER MURRAY FLOW REPORT

Public I2 A2

Report #50/2014

Issued 10:00 am 12 December 2014

This supersedes the previous flow report issued by the Department of Environment, Water and Natural Resources (DEWNR) on 5 December 2014. The next flow report, including the Water Resources Update, will be provided on Friday, 19 December 2014.

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.

FLOW OUTLOOK

The flow at the South Australian border is approximately 8.0 GL/day and will decrease to around 7.5 GL/day during the coming week, depending on upstream river and storage operations, extractions, and rainfall events. The flow comprises the normal December Entitlement Flow of 7 GL/day plus environmental water from the Murray-Darling Basin Authority's *The Living Murray* and Commonwealth Environmental Water Holder. The environmental water is being delivered to provide in-channel and Lower Lakes environmental benefits and assist in maintaining an open Murray Mouth. South Australia is working with the Commonwealth Environmental Water Holder to seek further opportunities to deliver environmental water during summer.

The flow over Lock 1 is approximately 6.7 GL/day and will reduce to around 5.9 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. They will be revised as new information becomes available.

MANAGEMENT OF SOUTH AUSTRALIA'S DEFERRED WATER

The Murray-Darling Basin Authority advised that on 1 December 2014, South Australia had 42.8 GL of water deferred and stored in Dartmouth (29.5 GL for critical human water needs and 13.3 GL for private carryover use in future dry years). Volumes stored are adjusted for net evaporation losses until delivered to South Australia.

DEWNR is investigating opportunities to defer additional Entitlement Flow during 2014-15 given the latest dry climate outlook provided by the Bureau of Meteorology.

MURRAY MOUTH

Recent monitoring of Murray Mouth sand volume and bathymetry (a measurement of depth) confirms that the condition of the Mouth is approaching that experienced in 2002 when dredging was commenced.

On 5 December 2014, the Minister for Water and the River Murray, Ian Hunter, and Commonwealth Parliamentary Secretary, Senator Simon Birmingham, advised that a decision has been made to commence dredging the Murray Mouth in the near future to remove sand build-up. DEWNR, SA Water and the Murray-Darling Basin Authority are undertaking planning and confirming approvals to commence dredging.

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



WEIR POOL OPERATIONS

The water levels at Lock 1 and 2 have been returned to normal pool level.

On 3 November 2014, water levels in the Lock 1 and 2 weir pools reached the target water level of 0.2 m above the normal operating range (0.5 m above full supply level). The water levels were raised to mimic historic natural water level variability to promote a range of ecological benefits. Environmental water was used for the operation. The outcomes of the weir pool raising are being monitored and will be assessed.

BARRAGE OPERATIONS AND WATER LEVELS IN THE LOWER LAKES

The water level in Lake Alexandrina is approximately 0.67 m AHD and approximately 0.68 m AHD in Lake Albert. When conditions are favourable, barrage releases will be prioritised through Tauwichee and Goolwa (approximately 70:30 ratio), adjacent to the fishways, targeting a volume of approximately 2 GL/day. 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 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.

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 Lock 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.

WATER TRADE

On 28 October 2014, the Murray-Darling Basin Authority announced that trade from above the Barmah Choke to below the Barmah Choke (downstream trades) will be restricted immediately. A downstream trade can only occur if an upstream trade of the same or greater volume has already occurred. Entitlement holders can still trade upstream.

CONSTRUCTION WORKS

Yatco Lagoon

Work is underway to relocate pump offtakes from Yatco Lagoon and install new pump offtakes on the River Murray. The construction work is expected to be completed by early 2015.

Deep Creek (Pike Floodplain)

Work to replace the Deep Creek inlet structure and construct a vertical slot fishway is now complete.

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 10 December 2014

Location	River km	Normal Pool Level	Current Level (m AHD)	1974 Flood Level (m AHD)	1993 Flood Level (m AHD)
Lock 10	825.0	30.80	30.86	33.81	33.32
Lock 9 Kulnine	764.8	27.40	27.43	30.03	29.44
Lock 8 Wangumma	725.7	24.60	24.66	27.60	27.19
Lock 7 Rufus River	696.6	22.10	22.14	25.70	25.24
Lock 6 Murtho	619.8	19.25	19.23	21.03	20.50
Renmark	567.4	-	-	18.54	18.04
Lock 5	562.4	16.30	16.33	18.07	17.50
Lyrup	537.8	-	13.30	16.85	16.26
Berri	525.9	-	13.25	15.81	15.74
Lock 4	516.2	13.20	13.25	15.65	15.08
Loxton	489.9	-	10.15	15.05	14.12
Cobdogla	446.9	-	9.89	13.44	12.38
Lock 3	431.4	9.80	9.82	13.16	12.02
Overland Corner	425.9	-	6.31	12.73	11.58
Waikerie	383.6	-	6.27	11.26	10.24
Lock 2	362.1	6.10	6.15	10.28	9.30
Cadell	332.6	-	3.30	9.17	8.08
Morgan	321.7	-	3.21	8.85	7.65
Lock 1 Blanchetown	274.2	3.20	3.19	6.81	5.38
Swan Reach	245.0	0.75	0.82	6.06	4.51
Mannum PS	149.8	0.75	0.75	3.15	1.90
Murray Bridge	115.3	0.75	0.71	2.06	1.26

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>
www.sawater.com.au/SAWater/Environment/TheRiverMurray/River+Murray+Levels.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>

ID	RM-Flow-Report 20141212
Classification	Public I2 A2
Issued	12 December 2014
Authority	DEWNR
Master Document Location	Q:\OMP\RM REM\02 RM Ops\04 Communications\Flow Advices\2014-15
Managed and Maintained by	River Murray Operations
Author	River Murray Operations
Reviewer	Director River Murray Operations and Major Projects

