RIVER MURRAY FLOW REPORT AND WATER RESOURCE UPDATE

Flow to South Australia

Report #23/2012
Issued 10:00 am 15 June 2012

This supersedes the previous flow report issued by the Department for Water on 8 June 2012. A further flow report will be provided on Friday 22 June 2012.

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.

WATER RESOURCES UPDATE

During May 2012 the River Murray system inflow was approximately 880 GL, despite rainfall being below or around average across the southern Murray-Darling Basin. The inflow remained high due to continuing inflows from rainfall in March 2012. This inflow was above the long-term average of approximately 380 GL, but well below the record inflow of about 4000 GL in May 1956.

Inflows to Menindee Lakes during May 2012 were about 560 GL and more than double the long-term average for May of 200 GL. Due to the continued inflows, South Australia is likely to receive Additional Dilution Flows (ADF) into October 2012.

The Murray-Darling Basin Authority water year ended on 31 May 2012 and inflows to the River Murray (excluding Snowy Hydro releases and Darling River inflows) were around 11,600 GL. Inflows to the River Murray including the Darling River totalled about 16,400 GL.

South Australia continues to receive unregulated flow, which is expected to last until around the end of June 2012.

South Australia has received more than 9600 GL since 1 July 2011, which includes a large volume of unregulated flow and environmental water from the Commonwealth Environmental Water Holder. The extended duration of higher flow has allowed for continued discharge over the barrages and some inundation of low-lying floodplain and wetlands.

Most of the major storages are relatively full. This has enabled a large volume of water to be made available to each state at the start of 2012–13. South Australia is guaranteed its full Entitlement Flow of 1850 GL in 2012–13 and 835 GL has been directed towards the Minimum Reserve (to assist in securing Entitlement Flow) for 2013–14, in accordance with the Murray-Darling Basin Agreement (clause 103). This improves South Australia's water resources position for the 2012–13 water year.

STORAGE VOLUMES

Murray-Darling Basin Authority storage volumes at 13 June 2012 and 13 June 2011

Storage	Full Supply Volume (GL)	13/6/2012 (GL)	13/6/2011 (GL)	Long-term average (end of June)
Dartmouth	3,856	3,304 (86%)	2,456 (64%)	
Hume	3,003	2,826 (94%)	2,797 (93%)	
Lake Victoria	677	406 (60%)	374 (55%)	
Menindee Lakes	1,731*	1,866 (107%)	1,956 (113 %)	
TOTAL	9,267 (100%)	8,402 (80%)	7,583 (82%)	6,174 (66%)

*Menindee Lakes can be surcharged to 2015 GL

RAINFALL OUTLOOK

The latest Bureau of Meteorology (BoM) rainfall outlook for winter 2012 indicates that a drier than normal season across much of the southern Murray-Darling Basin is expected.

In addition, the Bureau also advises that climate models show that the tropical Pacific Ocean is likely to warm further over the coming months. All seven models surveyed indicate conditions are likely to approach, or possibly exceed, El Niño thresholds during the late winter to early spring period. Large parts of eastern Australia are typically drier and warmer than normal in winter/spring as El Niño events develop. No climate models favour a return to La Niña.

WATER ALLOCATION OUTLOOK FOR 2012–13

South Australian irrigators will receive 100 per cent water allocation in 2012–13. As South Australia is continuing to receive unregulated flow, it is prevented from deferring and storing Entitlement Flow for carryover under the Murray-Darling Basin Agreement. There will be no ability to carry over water into the 2012–13 water year. However, irrigators will have 100 per cent water allocation so they will have enough water to meet their normal production requirements without the need to use carryover.

FLOW OUTLOOK

The flow at the South Australian border is approximately 16,000 ML/day and is expected to reduce to around 12,000 ML/day over the coming week. The flow is reducing due to lower inflows from major River Murray tributaries upstream of South Australia. Subject to further rainfall upstream, by late June 2012 the flow to South Australia is expected to be around 10,000 ML/day. As flow reduces and river levels continue to decrease, water users need to be aware of the relatively rapid recession. Irrigators should modify pump and other infrastructure and houseboat operators should adjust moorings accordingly.

South Australia is continuing to receive unregulated flow; however, it is likely to return to normal Entitlement Flow conditions in July or August 2012. ADF of 3000 ML/day is expected to be received until around October 2012, however changed water storage and delivery rates may affect the duration.

The flow over Lock 1 is approximately 26,000 ML/day and is likely to reduce to approximately 22,000 ML/day by the end of the coming week, depending upon upstream operations

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 further rainfall events or changing 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. Forecasts will be revised as new information becomes available.

BARRAGE OPERATIONS AND WATER LEVELS IN THE LOWER LAKES

The water level in Lake Alexandrina is approximately 0.49m AHD and the level in Lake Albert is approximately 0.58m AHD.

Over the last week and a half, low tide and low swell conditions in the Southern Ocean adjacent to the Murray Mouth have allowed for maximum barrage outflows, resulting in a reduction in lake levels. Barrage operators have taken advantage of a period of equipment maintenance to undertake this lowering event, as part of a longer-term lake fluctuation trial designed to flush salt from Lake Albert. Lake levels will be raised to 0.75 m AHD in the following weeks.

Barrage operations are continuing to maximise the opportunities to release water from the Lower Lakes, taking into account high swells, tides and winds. Although reverse head conditions are experienced at times, there are negligible impacts on Lake Alexandrina salinity. Releases are monitored carefully and managed to minimise seawater ingress during reverse head conditions, and also to release enough water to prevent high lake levels.

Occasionally, residents and landholders located near the barrages may observe increased salinity in the area's waterways due to reverse head conditions. With large volumes of fresh River Murray water still flowing into Lake Alexandrina, any salinity spikes will be short-lived.

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

CONSTRUCTION WORKS

Construction of the Chowilla Creek Environmental Regulator will be ongoing for the next 18 months. Boat operators need to be aware that there is no boat passage at Chowilla Creek adjacent to the construction site.

Other construction works at locations such as Pipeclay and Slaney Creeks are likely to recommence when flows are below 17-18,000 ML/day and only if the flow is forecast to remain below this flow rate for an extended period.

RIVER MURRAY WATER LEVELS

SA Water and the Department for Water have developed a River Murray Water Level chart (below) to provide water levels at a number of locations from Lock 10 (near Wentworth) to Murray Bridge.

River Murray Water Levels as at 13 June 2012

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	30.76	33.81	33.32
Lock 9 Kulnine	764.8	27.40	27.34	30.03	29.44
Lock 8 Wangumma	725.7	24.60	24.59	27.6	27.19
Lock 7 Rufus River	696.6	22.10	22.37	25.70	25.24
Lock 6 Murtho	619.8	19.25	19.27	21.03	20.50
Renmark	567.4	-	-	18.54	18.04
Lock 5	562.4	16.30	16.31	18.07	17.50
Lyrup	537.8	-	-	16.85	16.26
Berri	525.9	-	13.32	15.81	15.74
Lock 4	516.2	13.20	13.11	15.65	15.08
Loxton	489.9	-	10.89	15.05	14.12
Cobdogla	446.9	-	-	13.44	12.38
Lock 3	431.4	9.80	9.87	13.16	12.02
Overland Corner	425.9	-	7.52	12.73	11.58
Waikerie	383.6	-	6.83	11.26	10.24
Lock 2	362.1	6.10	6.34	10.28	9.30
Cadell	332.6	-	-	9.17	8.08
Morgan	321.7	-	3.91	8.85	7.65
Lock 1 Blanchetown	274.2	3.20	3.17	6.81	5.38
Swan Reach	245.0	0.75	1.21	6.06	4.51
Mannum PS	149.8	0.75	0.57	3.15	1.90
Murray Bridge	115.3	0.75	0.48	2.06	1.26

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

FURTHER INFORMATION

The Department for Water has published a series of inundation maps for the River Murray. They are available at: **www.waterconnect.sa.gov.au**

Up-to-date River Murray flow and water level information can be accessed at the Department for Water, SA Water and Murray-Darling Basin Authority websites:

http://data.rivermurray.sa.gov.au
www.sawater.com.au/SAWater/Environment/TheRiverMurray/River+Murray+Levels.htm
http://www.mdba.gov.au/water/live-river-data

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 on the discharge of acid drainage water into the Lower River Murray can be accessed online at **www.waterforgood.sa.gov.au**

Information provided by the Commonwealth Environmental Water Holder can be accessed at **http://www.environment.gov.au/ewater/southern/murray/lower-murray.html**

Regularly updated daily water level information can be found at the following websites:

SA Water
www.sawater.com.au/SAWater/Environment/TheRiverMurray/River+Murray+Levels.htm

Department for Water
http://www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx

Information is also available from the SA Water Hotline on **08 8595 2299**

UPDATES- This advice remains current until the Department for Water notifies otherwise.