

RIVER MURRAY FLOW ADVICE

Flow to South Australia

Report #6/2012

Issued 10:00am 10 February 2012

This supersedes the previous flow advice issued by the Department for Water on 3 February 2012. Further flow advice and a water resource update will be provided on Friday 17 February 2012.

FLOW OUTLOOK

In late January and February 2012 a number of catchments across southern Queensland (Warrego, Balonne, Maranoa and Paroo Rivers) and New South Wales (Narran, Culgoa, Namoi, Gwydir and Mehi Rivers) received significant rainfall from a low-pressure system, which produced falls of up to 400mm at some locations. This event is in addition to the flow event generated from rainfall in November and December 2011, which is currently at Wilcannia (upstream of Menindee Lakes). Menindee Lakes operations are currently in 'flood mode' and water is being released to make additional airspace to accommodate future inflows from these recent inflow events along the Barwon-Darling River System. The NSW Office of Water is managing the release strategy.

The Bureau of Meteorology has provided major flood warnings for a number of locations and recently revised the forecast peak river height for Bourke at 13.8m, which is equivalent to a flow of 242,000 ML/day. The forecast height for Wilcannia is 11.0m, which is equivalent to a flow of 46,000 ML/day. Water is also flowing down the Talyawalka Creek, which flows for 485km before returning to the Lower Darling River. A summary of selected years and peak flows at Bourke and Wilcannia is provided below.

Table 1 Comparison of years and flows

Month/year	Bourke Flow (ML/day)	Wilcannia Flow (ML/day)
March 1956	280,000	57,000 (peak early May 1956)
January 1974	444,000	51,500 (peak late February 1974)
March 1976	501,000	68,500 (peak early April 1976)
September 1998	228,000	43,000 (peak mid October 1998)
January 2012	73,000	34,000 (peaking early February 2012)
March 2012 (preliminary estimate for early March 2012)	242,000	46,000 (peaking late March 2012)

Information on floods in NSW and Queensland can be accessed from the following websites:

<http://www.nsw.gov.au/floods>

<http://www.qld.gov.au/emergency/news/features/seflood.html>



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Information on Bureau of Meteorology's Flood Warnings can be accessed at <http://www.bom.gov.au/australia/warnings/index.shtml>

FLOW TO SOUTH AUSTRALIA

The increased flow interstate does not present a risk of flooding in South Australia based on current estimates and upstream operations. The flow to South Australia will increase progressively over the next week to up to 25,000 ML/day and could potentially increase to 30,000 ML/day if releases from Menindee Lakes are increased. This is a forecast only and remains subject to weather conditions and flows upstream. Further information will be provided in future weekly River Murray Flow Advisories on the duration of releases and higher flows.

Overbank flows begin when the flow to South Australia increases above 40,000 ML/day. As a comparison, in February 2011 the flow to South Australia peaked at 94,000 ML/day. A flow of 60,000-100,000 ML/day is required to begin flooding of shack areas and the floodplain in South Australia. This would result in a high flow warning to be issued for the river and a minor flood warning to be issued for shack areas downstream of Cadell.

There has been some recent speculation about the potential for flows to develop into a flood similar to the 1956 flood. The peak flow in 1956 was approximately 350,000 ML/day when all major river systems (including across the southern Murray-Darling Basin) were in flood simultaneously. Given the current weather forecast and existing run-off and river conditions, it is highly unlikely that a flood event similar to the 1956 flood will occur.

South Australia's Entitlement Flow during February is 6,929 ML/day and Additional Dilution Flow (ADF) of 3,000 ML/day is still being received. Unregulated flow conditions are currently being experienced and are likely to persist for a number of months as South Australia is now likely to receive flows in the range of 15,000-30,000 ML/day until May 2012 and possibly further depending upon inflows and releases from Menindee Lakes.

The flow over Lock 1 is currently 14,000 ML/day and will increase over the coming week to approximately 15-16,000 ML/day.

The unregulated flow will pass through South Australia to the Lower Lakes and Coorong. This will assist in the maintenance of barrage releases over the remainder of summer, autumn and winter, to improve and maintain salinity levels in Lakes Alexandrina and Albert and maintain connectivity to the Coorong. In addition, environmental water from *The Living Murray* is being delivered to wetlands on the Chowilla Floodplain to enhance floodplain vegetation and wildlife habitat; building on the benefits from the 2011 high flow events.

SALINITY OUTLOOK

Due to the releases from Menindee Lakes, the turbidity levels along the River Murray in South Australia will increase.

The continuation of Additional Dilution Flow will help mitigate some of the impact of localised salinity increases. The Department for Water continues to undertake detailed modelling of the salt loads.

Irrigators are reminded to check the salinity levels regularly at their pump sites and also to access the Department for Water's River Murray Water Data website to obtain real-time salinity data from locations where monitoring sites are established.



The data may be accessed via the following link:

<http://data.rivermurray.sa.gov.au/Telemetry/Default.aspx?App=RMW>

BARRAGE OPERATIONS AND WATER LEVELS IN THE LOWER LAKES

The water level in Lake Alexandrina is approximately 0.65m AHD and the water level in Lake Albert is approximately 0.59m AHD. Barrage gates are currently being operated to provide a release in the order of 5,500 ML/day. This rate is expected to be maintained over the coming week. Water levels and barrage operations are continually monitored by the Department for Water, SA Water and the Department of Environment and Natural Resources.

It is important to note that water levels in the Lower Lakes may vary considerably with wind speed and direction. This, when combined with the high water level or high tides, could result in seawater backflow events and/or some inundation of low-lying areas around the edges of Lake Alexandrina, Lake Albert or the Goolwa Channel. Barrage operations are being monitored by SA Water to minimise the impacts of any forecast backflow events.

The Department for Water is responsible for monitoring salinity in the Lower Lakes and maintains a network of salinity recording devices at a number of locations. Data collected from this monitoring network assists the Murray-Darling Basin Authority and the Government of South Australia in determining barrage operations, conducting scientific analysis and formulating policy positions.

RIVER MURRAY WATER LEVELS

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

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 provided by the Commonwealth Environmental Water Holder can be accessed online at:

<http://www.environment.gov.au/ewater/southern/murray/lower-murray.html>

Information on the discharge of acid drainage water into the Lower River Murray can be accessed online at

www.waterforgood.sa.gov.au



River Murray Water Levels as at 8 February 2012

Location	River Km	Normal Pool Level	Current Level (m AHD)
Lock 10	825.0	30.80	30.84
Lock 9 Kulnine	764.8	27.40	27.40
Lock 8 Wangumma	725.7	24.60	24.65
Lock 7 Rufus River	696.6	22.10	22.19
Lock 6 Murtho	619.8	19.25	19.28
Renmark	567.4	-	16.30
Lock 5	562.4	16.30	16.29
Lyrup	537.8	-	13.28
Berri	525.9	-	13.20
Lock 4	516.2	13.20	13.17
Loxton	489.9	-	10.43
Cobdogla	446.9	-	9.75
Lock 3	431.4	9.80	9.73
Overland Corner	425.9	-	6.62
Waikerie	383.6	-	6.32
Lock 2	362.1	6.10	6.10
Cadell	332.6	-	-
Morgan	321.7	-	3.38
Lock 1 Blanchetown	274.2	3.20	3.21
Swan Reach	245.0	0.75	0.77
Mannum PS	149.8	0.75	0.66
Murray Bridge	115.3	0.75	0.59

Note that water levels do not take into account local wind conditions.

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.



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