

RIVER MURRAY FLOW ADVICE- UPDATE

Increased Flows to South Australia

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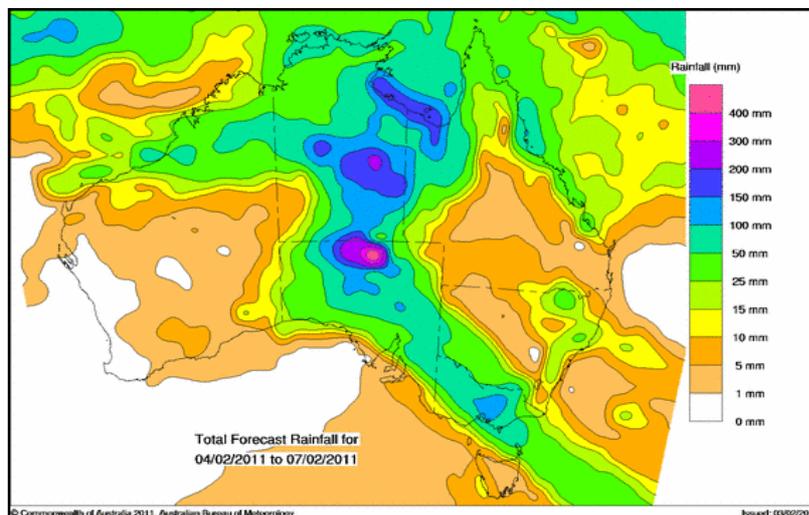
This supersedes the previous flow advice issued by the Department for Water (DFW) at 17:00, 28 January 2011. **This is NOT a Flood Warning.** A further update will be provided on Friday 11 February 2011.

SUMMARY: Flows to South Australia have now reached their projected peak range. Recreational boat users are warned that some structures on the floodplain, wetlands and creeks – including fences, bridges, earthen walls and other man-made structures - are now under water due to high flows and could present a risk to their safety.

FLOW OUTLOOK - FEBRUARY to MARCH 2011

Flow to South Australia has increased over the past week due to higher flow arriving from Victoria and New South Wales from recent rainfall events. The flow at the South Australian border is currently at its projected peak range and is expected to remain below 85,000 ML/day. A flow of around 80,000 ML/day could be expected for the next one to two weeks. Flow is expected to remain high during February 2011 - in the range of 65,000 ML/day to 85,000 ML/day.

The latest four-day rainfall outlook by the Bureau of Meteorology (map below) forecasts the potential for 50-100mm across much of the River Murray. Due to lengthy travel times, rainfall further upstream, particularly across north-east Victoria, will not add to the current peak flow across the South Australian border, but may result in high flow being maintained into March 2011. Rainfall immediately upstream of the border may result in some short-term minor increases in flow at the border, which is reflected in the table on page 4.



Government of South Australia
Department for Water

WATER IS GOOD

Flow over Lock 1 at Blanchetown will increase over the coming week to a range of 60,000 ML/day to 65,000 ML/day with further rises dependent on attenuation of the higher flows on the floodplain.

A flow of 85,000 ML/day does not represent a significant threat to towns and levee banks; however, some shack sites, roads, campsites and causeways located on floodplains may be inundated. This flow is well within the normal historical flow range (i.e. many similar events of flows within this range have been experienced in previous years) for the River Murray in South Australia. No populated areas will be at risk of flooding from the predicted flow but the extent of inundation of low-lying areas of the floodplain, creeks and flood runners will increase.

Based on the current forecast, flow to South Australia is expected to be within the range of 65,000 ML/day to no more than 85,000 ML/day during February 2011.

The water level in Lake Victoria remains drawn down (currently 472 GL or 70% capacity); however, operations have now changed and a small flow is currently entering Lake Victoria to assist in managing low dissolved oxygen levels in water flowing over the border.

While this is a great time to visit the river and its environs, all people travelling along the River Murray are reminded to exercise caution at all times and to be mindful of partially submerged infrastructure such as jetties, floating debris and when navigating through the navigable passes at the lock and weirs. The higher flow may present a hazard to watercraft with low-horsepower engines.

People need to be aware of the predicted levels and the rate of rise, and should take any necessary actions to modify irrigation infrastructure, pontoons and moorings.

The Department of Environment and Natural Resources (DENR) has recently announced the closure of some campgrounds at parks and reserves in the Riverland due to the current and predicted flows. Please visit the DENR website for further information <http://www.environment.sa.gov.au/parks/resources/media.html>

COMPARISON WITH PREVIOUS FLOW EVENTS

Recently there has been speculation within the media and community about the potential for this high flow to develop into a flood event similar to the 1956 flood. The peak flow to South Australia in 1956 was around 350,000 ML/day, which is more than four times higher than the current forecast peak flow of 85,000 ML/day. Given the forecast weather and river conditions, a repeat of the 1956 flood event will not occur.

There has also been speculation of a repeat of the 1974 flood peak, which was 180,000 ML/day, also well above current and projected levels. There is not sufficient water in transit upstream of South Australia to produce an event of this magnitude at the South Australian border.

The last time that flow to South Australia was equivalent to the now-predicted peak for February 2011 (85,000 ML/day) was mid-December 1993.



UPSTREAM CONDITIONS

High flows from the widespread rains across northern NSW and Queensland are making their way along the Barwon-Darling River and into Menindee Lakes. The NSW Office of Water and State Water have been managing releases from Menindee Lakes in anticipation of higher flows arriving in the near future. This will result in high release rates into the Lower Darling River (and into the River Murray) for a number of months.

The River Murray is also receiving substantial flow from a number of other sources including the Murrumbidgee River, Loddon River and Campaspe River. Widespread flooding has recently been recorded across these catchments and this will not result in South Australia receiving flows sufficient to inundate townships due to the significant attenuation of flows through numerous wetlands and floodplains upstream.

WATER QUALITY

Due to high flows in the Murray-Darling System, substantial forest and floodplain environments are being inundated for the first time in many years, resulting in a lot of organic matter entering the river. Water of very low dissolved oxygen continues to impact on the main channel of the River Murray downstream of the Barmah-Millewa and Koondrook-Perricoota forests. Currently more than 1,300 km of the River Murray is affected by this event. Water with very low dissolved oxygen, generally less than 1mg/L, is being received from numerous creeks and floodplains, leading to fish deaths. Over the past few weeks there have been a number of reports of cod deaths around the Mildura area and some of these fish may float downstream. Some fish deaths in South Australia have already been reported to SA Water and PIRSA.

SA Water and interstate water authorities are regularly monitoring water quality and this issue does not pose an immediate threat to the River Murray in South Australia. Inflows from the Lower Darling River into the River Murray upstream of South Australia contain higher levels of dissolved oxygen and therefore partially mitigate this risk.

WATER LEVELS

SA Water and the Department for Water have developed a River Murray Water Level chart to provide projected water levels at a number of locations from Lock 10 (near Wentworth) to Murray Bridge. The table below outlines the projected water levels for a flow of 85,000 ML/day based on previous flow events.

Regularly updated daily water level information can be found at the following websites. Note that projected water levels do not take into account local wind conditions.

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



Projected Water Levels for a Flow of 85,000 ML/day between Lock 10 and Murray Bridge

Location	River Km	Current Level (m AHD)	Predicted Peak level (m AHD)	Approx. Date of Peak	Further Rise (m)	1974 Flood Level	1993 Flood Level
Lock 10	825.0	32.07	32.10	6 Feb	0.03	33.81	33.32
Lock 9 Kulnine	764.8	28.66	28.76	7 Feb	0.10	30.03	29.44
Lock 8 Wangumma	725.7	26.66	26.77	7 Feb	0.11		
Lock 7 Rufus River	696.6	24.75	24.85	8 Feb	0.10	25.70	25.24
Lock 6 Murtho	619.8	19.87	19.93	9 Feb	0.06		
Renmark	567.4	16.89	17.03	10 Feb	0.14	18.54	18.04
Lock 5	562.4	16.64	16.75	10 Feb	0.11	18.07	17.50
Lyrup	537.8	15.12	15.41	11 Feb	0.29		
Berri	525.9	14.71	14.88	12 Feb	0.17	15.81	15.74
Lock 4	516.2	14.33	14.50	12 Feb	0.17	15.65	15.08
Loxton	489.9	12.89	13.19	13 Feb	0.30	15.05	14.12
Cobdogla	446.9	10.80	11.15	13 Feb	0.35	13.44	12.38
Lock 3	431.4	10.07	10.40	14 Feb	0.33	13.16	12.02
O/L Corner	425.9	9.36	10.20	15 Feb	0.84	12.73	11.58
Waikerie	383.6	8.17	8.77	15 Feb	0.60	11.26	10.24
Lock 2	362.1	7.37	7.92	16 Feb	0.55	10.28	9.30
Cadell	332.6	5.85	6.63	16 Feb	0.78		
Morgan	321.7	5.27	6.12	16 Feb	0.85	8.85	7.65
Blanchetown	274.2	3.65	4.17	17 Feb	0.52	6.81	5.38
Swan Reach	245.0	2.21	3.40	19 Feb	1.19	6.06	4.51
Mannum PS	149.8	0.75	1.30	20 Feb	0.55		
Murray Bridge	115.3	0.80	1.20	21 Feb	0.40	2.06	1.26

IMPACT OF ELEVATED WATER LEVELS

As shown in the table above, water levels in the River Murray between the border and Wellington will rise in response to the current flow arriving at the border. The risk of harmful inundation under current flow projections is very low; however, some low-lying shacks and other infrastructure may be affected. Water levels will rise along all sections of the river.



HIGH FLOWS AND RECREATION

To ensure you stay safe and enjoy the river please practice the following advice from the SES:

- Don't drive, ride or walk through floodwaters, flood-affected causeways or roads.
- Be aware that significant debris is being carried downstream and may pose a hazard to water-based activities.
- When operating a boat on the floodplain, in particular wetlands and creeks or near inundated river banks, be aware of submerged obstacles such as earthen embankments, flow regulators, trees and fence lines.
- Landholders, especially those with shacks or other structures in low-lying areas, should consider securing their property from likely rising water levels.
- The hazards associated with riverbank collapse still exist in many areas so be aware of the signs - such as cracked riverbanks and leaning trees - and keep away from fenced or sign-posted affected areas.
- Regularly monitor river levels in your local area, and take care not to become isolated by rising water.
- Always wear a personal floatation device when on the river.
- Do not jump or dive into the river when you do not know what is below the surface.
- Camp on higher ground away from the river bank.
- Supervise children at all times and do not allow them to play in or near floodwater or fast-flowing river water.
- If in doubt, stay out.
- Listen and take action on any instructions from the emergency services - the SES, SA Police and the CFS.

People planning to visit low-lying floodplain areas are advised to monitor water levels and road access conditions and take reasonable precautions.

The Lower Lakes are currently 10cm below their normal full supply level of 0.75m AHD and water is being released from the barrages to pass the higher flow and to lower the water level in the Lower Lakes for improved salinity outcomes, particularly in Lake Albert.

People are advised to monitor the latest weather and flow forecasts and obey any signage along the River Murray or instructions from the emergency services.

For flood-related assistance, call the State Emergency Service on 132 500.

For life-threatening emergencies, call 000.

LEEVE BANKS BELOW LOCK 1

Areas along the River Murray between Lock 1 and the Lower Lakes that are protected by levee banks are advised that due to prolonged drought conditions and low river levels:

- levee banks may have deteriorated and could be at risk of failure; and
- floodplain areas including levee banks may have subsided due to soil drying and consolidation, increasing the risk of overtopping on some privately owned levee banks.

There have been isolated cases of levee bank leakage. This Department is monitoring the situation and working with the SES to ensure public safety.



Projected flow in February and March 2011 may continue to affect levee banks downstream of Lock 1. People in the vicinity are advised to regularly monitor levee bank condition.

If significant structural cracking or leakage of levee banks is evident, people are advised to avoid the area, relocate to higher ground and call the Riverbank Collapse Hotline (**1800 751 970**) to report any observations.

RIVERBANK COLLAPSE

There is an increased risk of riverbank collapse during the current high flow period, particularly in those areas below Lock 1 which are known to be at risk.

People living, working or playing along the River Murray, particularly below Lock 1, are advised to continue to look out for the signs of potential riverbank collapse. These include cracking in the river bank, leaning trees or bubbles in the river.

Further information is available at the Riverbank Collapse section of <http://www.sa.gov.au>.

To report the signs of riverbank collapse or to obtain further information call the free 24 hour Riverbank Collapse Hotline (**1800 751 970**). For life-threatening emergencies, call 000.

MURRAY MOUTH

When boating in the vicinity of the Murray Mouth, people are urged to take extra caution during the high flow period due to the possibility of dangerous conditions.

For more information see the following media release from the Department of Environment and Natural Resources <http://www.environment.sa.gov.au/data/press/110114-boat-safety.pdf>

FURTHER INFORMATION

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>

UPDATES

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

