RIVER MURRAY FLOW ADVICE-UPDATE

Increased Flows to South Australia

Issued 17:00 14 January 2011

This supersedes the previous flow advice issued by the Department for Water (DFW) at 17:00, 7 January 2011. **This is NOT a Flood Warning.** A further update will be provided on Friday 21 January 2011.

JANUARY 2011 to FEBRUARY 2011 FLOW OUTLOOK

Flow to South Australia has averaged 59,600 ML/day over the past week after flows had reduced to 56,000 ML/day in early January 2010. Flow is expected to remain within the range of 65,000 ML/day to 75,000 ML/day over the next week as the higher flows start arriving at the South Australian border. As flow conditions upstream change, further flow updates will be provided.

Flow over Lock 1 at Blanchetown has averaged 49,700 ML/day and is expected to remain around 50,000 ML/day to 52,000 ML/day over the next week.

A peak flow of around 80,000 ML/day is expected around late January or early February 2011. Recent rainfall may cause temporary rises in flow and changed river operations upstream of South Australia can also affect forecasts.

A flow of 80,000 ML/day is not a 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 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.

The Lake Victoria Operations Strategy is currently affecting the flow to South Australia. This strategy aims to protect the Aboriginal cultural heritage at Lake Victoria by manipulating water levels to promote re-vegetation. Healthy vegetation stabilises the lakebed, minimising the chance of additional cultural material being exposed by erosion. The water level in Lake Victoria remains drawn down (currently 442 GL or 65% capacity); however, the lake may be partially refilled in the coming months.

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 trying to navigate 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 has recently announced the closure of some campgrounds at parks and reserves in the Riverland due to the current and predicted flows.

COMPARISON WITH PREVIOUS FLOW EVENTS IN SOUTH AUSTRALIA

Recently there has been speculation 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 80,000 ML/day. Given the forecast weather and river conditions, a repeat of the 1956 flood event is highly unlikely.

There has also been speculation of a repeat of the 1974 flood peak, which was 180,000 ML/day, still well above current and projected levels. This flow is also highly unlikely based on current forecasts.

In 2000-01, flow peaked in mid-December 2000 at 64,000 ML/day and in mid-December 1992 flows peaked at 93,000 ML/day.

RAINFALL AND FLOWS UPSTREAM OF SOUTH AUSTRALIA

Widespread rainfall occurred across the north central catchment area in Victoria on 13 January 2011, including the Goulburn, Campaspe, Loddon, Avoca and Wimmera catchments. Some locations along the River Murray upstream of South Australia have received more than 100mm of rainfall over the past few days.

Although the Bureau of Meteorology has issued flood warnings in some of these catchments there will be relatively minor inflows into the River Murray system and these inflows will not result in another flood in the River Murray system. Inflows from these rivers will not create a higher peak flow to South Australia but will extend the duration of higher flow along the River Murray.

Flood flows from the widespread rains across much of northern New South Wales in November and December 2010 are making their way along the Barwon-Darling River system and into Menindee Lakes, with the peak expected to arrive in Menindee Lakes in late January or early February 2011.

The flooding occurring now in Queensland will not add to the predicted peak for the River Murray for late January to early February 2011 as this water will take a number of months to travel to Menindee Lakes.

The flow on the Darling River at Bourke recently peaked at around 88,000 ML/day and will result in a flow of at least 30,000 ML/day at Wilcannia. Some of this flow will bypass Menindee Lakes through the Talyawalka Creek system and reconnect with the Lower Darling River.

The current management strategy from Menindee Lakes will be revised by New South Wales and it is likely that releases into the Lower Darling River will need to be increased to manage future inflows and to minimise the risk of

cutting access to roads and houses. The releases at Menindee Lakes in the coming week will be increased to around 26,000 ML/day. Further increases in releases are likely, which may inundate some dwellings and further reduce access to some areas along the Lower Darling River.

Flow in the Balonne River at St George recently peaked at 290,000 ML/day. This was slightly lower than the peak observed in March 2010. During the March 2010 event, around 90 per cent of the flow that passed St George was consumed before the water arrived at Menindee Lakes. Significant flooding across south-central Queensland since 10 January 2011 will result in a second peak at St George that will contribute further to inflows into the Barwon-Darling River system.

It is too early to predict with any confidence how much water will make it to the Barwon-Darling River system and past Wilcannia. Some preliminary estimates from New South Wales are that 30,000 ML/day to 40,000 ML/day may reach Menindee Lakes. Given the long distances and travel times a large proportion of this water will be consumed by the environment, filling numerous floodplains, wetlands and billabongs.

WATER QUALITY

Due to high flows in the Murray-Darling System, substantial areas of forest and floodplain is being inundated for first time in many years, resulting in a lot of organic matter entering the river. Water of very poor quality continues to impact on the main channel of the River Murray downstream of the Barmah-Millewa and Koondrook-Perricoota forests. Water containing low dissolved oxygen, generally less than 1mg/L, is being received from numerous creeks and floodplains leading to fish deaths.

SA Water, along with interstate water authorities, is regularly monitoring water quality and this issue does not pose an immediate threat to South Australia due to the dilution effect of the Lower Darling River providing water with a higher dissolved oxygen concentration.

WATER LEVEL INFORMATION

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 9 to Murray Bridge. The table below outlines the projected water levels for a flow of 80,000 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 SA Water Hotline on 08 8595 2299

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	31.58	31.92	24 Jan	0.34	33.81	33.32
Lock 9 Kulnine	764.8	28.20	28.77	27 Jan	0.57	30.03	29.44
Lock 8 Wangumma	725.7	26.26	26.69	28 Jan	0.43		
Lock 7 Rufus River	696.6	24.43	24.78	29 Jan	0.35	25.7	25.24
Lock 6 Murtho	619.8	19.59	19.77	30 Jan	0.18		
Renmark	567.4	16.49	16.90	2 Feb	0.41	18.54	18.04
Lock 5	562.4	16.28	16.60	2 Feb	0.32	18.07	17.5
Lyrup	537.8	14.70	15.41	3 Feb	0.71		
Berri	525.9	14.34	14.80	4 Feb	0.46	15.81	15.74
Lock 4	516.2	14.00	14.30	5 Feb	0.30	15.65	15.08
Loxton	489.9	12.49	13.30	6 Feb	0.81	15.05	14.12
Cobdogla	446.9	10.50	10.88	9 Feb	0.38	13.44	12.38
Lock 3	431.4	9.75	10.30	10 Feb	0.55	13.16	12.02
O/L Corner	425.9	9.02	10.10	11 Feb	1.08	12.73	11.58
Waikerie	383.6	7.85	8.53	12 Feb	0.68	11.26	10.24
Lock 2	362.1	7.04	7.61	13 Feb	0.57	10.28	9.3
Cadell	332.6	5.60	6.41	14 Feb	0.81		
Morgan	321.7	5.04	5.89	15 Feb	0.85	8.85	7.65
Blanchetown	274.2	3.45	3.96	16 Feb	0.51	6.81	5.38
Swan Reach	245.0	2.11	3.32	17 Feb	1.21	6.06	4.51
Mannum PS	149.8	0.90	1.10	18 Feb	0.20		
Murray Bridge	115.3	0.78	1.15	19 Feb	0.37	2.06	1.26

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 or near inundated river banks, be aware of submerged obstacles such as 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.

IMPACT OF ELEVATED WATER LEVELS
Water levels in the River Murray between the Border and Wellington will continue to rise in response to the higher flow conditions predicted. 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, with the most noticeable increases immediately downstream of the locks and weirs. At most locks and weirs there will be very little difference between the upstream and downstream water levels.

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 just above their normal full supply level of 0.75m AHD; however, water is being released from the barrages to pass the higher flows 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.

LEVEE BANKS BELOW LOCK 1
Areas along the River Murray between Lock 1 and 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.

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 January and February 2011 may continue to affect levee banks downstream of Lock 1. People in the vicinity of levee banks 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 as flows and water levels increase, particularly in those areas below Lock 1 that 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

People are urged to take extra caution as good rains upstream of South Australia have raised water levels and increased flow in the River Murray, creating potentially dangerous conditions at the Murray Mouth. 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.