# RIVER MURRAY UPDATE

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DEPARTMENT FOR WATER

Government of South Australia
Department for Water

## Rainfall and inflow summary

River Murray system inflow for October 2010 is expected to be at least 1,350 GL and this may increase as a result of recent rainfall. The long-term average inflow for October is about 1,400 GL. Catchments remain wet and continue to respond well to each rainfall event.

Over 30-31 October 2010 heavy rainfall was observed at a number of locations, including Dartmouth Reservoir (75mm), Hunters Hill (68mm), Mount Buller (82mm), Wangaratta (34mm), Mount Hotham (150mm) and Albury (52mm).

The Bureau of Meteorology has issued a minor flood alert for the Kiewa River at Bandiana and a moderate flood alert for the King River. Across the Murrumbidgee Catchment rainfalls of 30mm to 50mm were recorded. Lighter falls of up to 25mm were received at locations along Lower Murray, such as Mildura.

Higher flow along the Murrumbidgee River will reach the River Murray and flow is expected to exceed 10,000 ML/day at Balranald by early November 2010.

The Murray-Darling Basin Authority (MDBA) has commenced releases from Menindee Lakes and currently 16,500 ML/day is being released. Good flow is being recorded above Menindee Lakes on the Darling River, and flow at Bourke should peak at about 24,000 ML/day by early November 2010.

Releases from Menindee Lakes, together with the Murrumbidgee River outflow and higher flow along the River Murray, are likely to increase the duration of unregulated flow to South Australia. The total volume of unregulated flow to be received by South Australia will be about 1,200 GL and 900 GL has already flowed across the border. This will be the highest volume of unregulated flow since 2000-01 and salinity benefits are being observed in Lakes Alexandrina and Albert and also the Coorong.

The water level in Lake Victoria is gradually decreasing and the storage volume is currently 610 GL (90% capacity). A minor lowering of Lake Victoria's water level will continue despite the higher flow upstream. The Lake Victoria operating strategy aims to minimise the time the lake is at high levels in order to protect native vegetation and cultural heritage sites located around the foreshore. The lake will be refilled towards the end of the period of unregulated flow.

The operation of Lake Victoria, combined with the higher flow, may result in increased flow at the South Australian border above the 30,000 ML/day to 32,000 ML/day peak recorded in October 2010. Further information will be provided on potential flow rates once the impact of recent rainfall has been assessed.

While the River Murray system inflow has significantly improved, even greater inflow is required for full recovery from the drought conditions of recent years. A few months of above average inflow is not sufficient for the riverine environment to recover. Many of the floodplains along the lower River Murray and in South Australia have not received water since 2000-01 and would require significant volumes of water over a number of years to recover.

**The following table shows Murray-Darling Basin storages at 1 November 2010.**

| Storage @ 1 November | Full Supply Volume | Current volume and % (GL) | Volume and % at this time last year (GL) | Change in volume from this time last year (GL) |
|---|---|---|---|---|
| Hume Dam | 3,003 | 2,965 (99%) | 1,225 (40%) | (+ 1,740) |
| Dartmouth Dam | 3,856 | 1,935 (50%) | 1,188 (31%) | (+ 747) |
| Lake Victoria | 677 | 610 (90%) | 375 (55%) | (+ 235) |
| Menindee Lakes | 1,731 | 1,898 (106%) | 192 (11%) | (+ 1,706) |
| **Total volume** | **9,267** | **7,408 GL (80%)** | **2,980 (32%)** | **(+ 4,428)** |

The water currently held in storage includes water held in reserve for 2011-12.

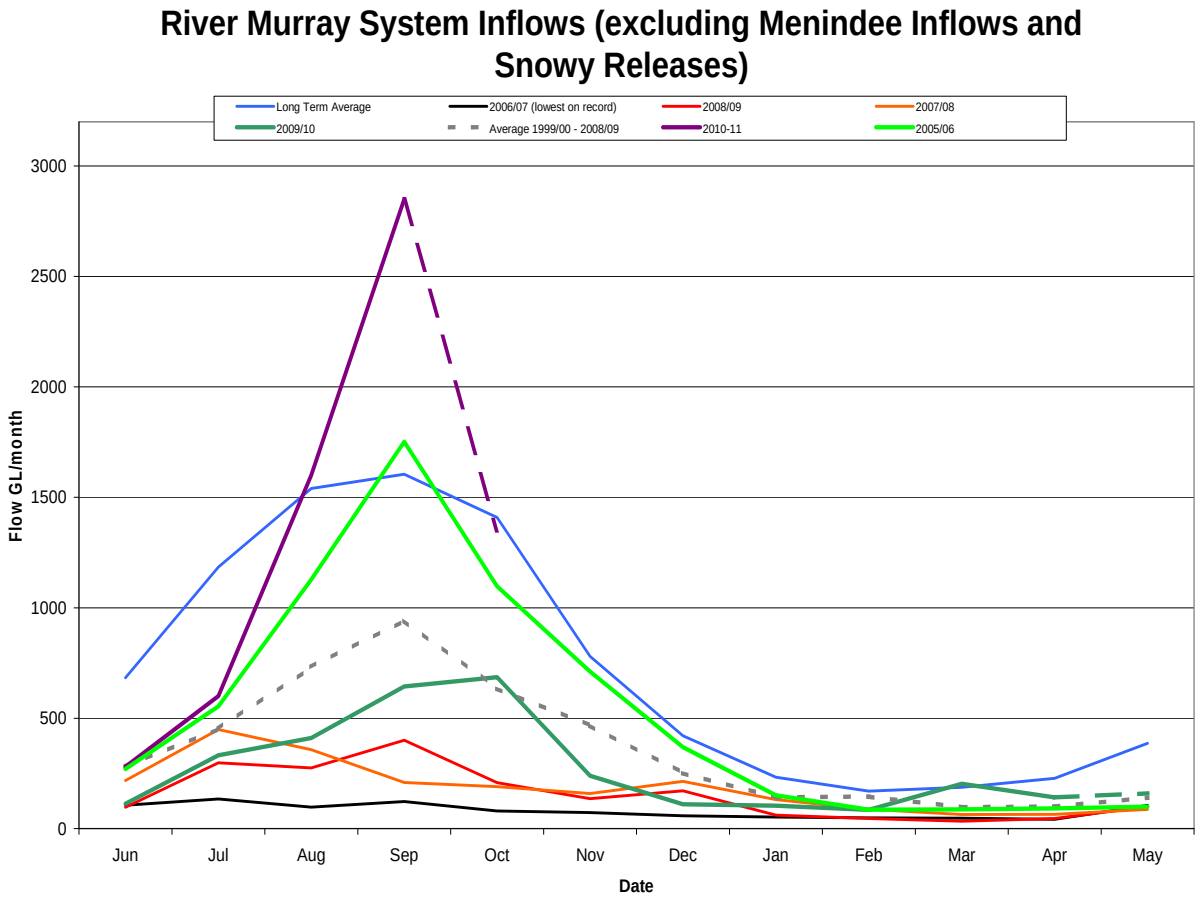
With high volumes of water in storage, the outlook for South Australia for 2011-12 has improved. The MDBA will be undertaking a preliminary water availability outlook for 2011-12 during November 2010. The information from this assessment will be critical for this Government and River Murray water users to commence planning for 2011-12.

**The following table shows River Murray system inflows (excluding Menindee) from June to September in various years.**

| MDBA Water Year (June to May) | June-October River Murray system inflows (GL - rounded totals) |
|---|---|
| 2005-06 | 4,800 |
| 2006-07 | 540 |
| 2007-08 | 1,420 |
| 2008-09 | 1,280 |
| 2009-10 | 2,185 |
| **2010-11** | **6,680** |
| Past 10 years | 3,040 |
| Long-term average | 6,420 |

## Inflow graph

**The following graph shows River Murray system inflows (excluding Menindee and Snowy inflows) in various years.**



## River operations in South Australia

South Australia has received more than 900 GL of unregulated flow since 1 September 2010. The normal entitlement flow of 6,000 ML/day is being provided during November 2010, along with additional dilution flow of 3,000 ML/day. The MDBA has advised South Australia that additional dilution flow will be supplied until the end of January 2011. Based on this advice, about 550 GL of additional dilution flow will be received in addition to any unregulated flows. The volume of additional dilution flow may increase and the period of supply may be extended if the volume of water stored in Menindee Lakes remains above 1,300 GL beyond January 2011.

The flow to South Australia is currently 30,000 ML/day and flow could increase depending on the operation of Lake Victoria, releases from Menindee Lakes and inflow from the Murrumbidgee River. Further advice will be provided as the flow situation upstream becomes clearer.

As the majority of weir pools are being maintained at their normal full supply level, extra flow will cause a noticeable rise in water level immediately downstream of each Lock, including Lock 1. In addition towards the lower end of each weir pool above Lock 1, water level will also be above normal level. This may lead to some local salinity impacts as backwaters are flushed and as the height within weir pool varies. To check local water level and salinity conditions visit the SA Water website at www.sawater.com.au.

The water level immediately downstream of Lock 1 continues to remain high and is currently 1.84m AHD, which is 109cm above the normal 'full supply level' of 0.75m AHD. This increased water level is likely to be noticeable under higher flow conditions to Swan Reach, after which point the water level will flatten out.

Water users within this area below Lock 1 are encouraged to make any necessary temporary changes to pumping infrastructure to allow for higher flow over Lock 1 and any further rise in water level.

Based on the current outlook, the extra flow in South Australia will remain within channel capacity and no flooding is expected. Weir pools will be adjusted to reduce the impact of higher flow at a number of construction sites, including Chowilla, Lock 4 and Lock 2.

The average water level in Lake Alexandrina, Lake Albert and the Goolwa Channel is currently about plus 0.75m AHD.

Water continues to be released from the barrages at a rate of 31,400 ML/day. The releases are being managed to minimise the impacts of increased water levels on native vegetation around both lakes, to provide maximum benefits to the Coorong and also to ensure that the Murray Mouth is not adversely impacted.

Information about river operations upstream of the South Australian border is available online at http://data.rivermurray.sa.gov.au/Telemetry/Default.aspx?App=RMW

## Water allocations in South Australia and interstate

General allocations in South Australia remain at 67 percent. Access to 100 percent (228 GL) of carryover has been in place from 1 July 2010. With general allocations (422 GL) and carryover (228 GL) the full 650 GL allocation cap has been reached.

The latest information about allocations in New South Wales is available at http://www.water.nsw.gov.au/

The latest information about allocations in Victoria is available at http://www.g-mwater.com.au/news/media-releases

**The following table outlines the current water allocations in South Australia, New South Wales and Victoria.**

| System | 1 Jul 2010 | 15 Jul 2010 | 2 Aug 2010 | 16 Aug 2010 | 1 Sep 2010 | 15 Sep 2010 | 1 Oct 2010 | 15 Oct 2010 | 1 Nov 2010 |
|---|---|---|---|---|---|---|---|---|---|
| South Australia High Security | 21% | 24% | 31% | 34% | 41% | 63% | 67% | 67% | 67% |
| NSW Murray High Security | 0% | 10%[#] | 40% | 70% | 97% | 97% | 97% | 97% | 97% |
| NSW Murray General Security | 0% | 0% | 0% | 0% | 8% | 36% | 36% | 42% | 60% |
| Murrumbidgee High Security | 30% | 30% | 80% | 95% | 95% | 95% | 95% | 95% | 95% |
| Murrumbidgee General Security | 0% | 0% | 0% | 0% | 9% | 45% | 47% | 51% | 56% |
| Lower Darling High Security | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Lower Darling General Security | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Victoria Murray High Reliability Water Share | 0% | 0% | 2% | 23% | 57% | 94% | 97% | 100% | 100% |
| Goulburn High Reliability Water Share | 0% | 0% | 5% | 26% | 41% | 67% | 70% | 80% | 85% |

**[#]NSW announced a 10% allocation on 20 July 2010**

The combined High and General Security water entitlements of about 90 GL in the Lower Darling are very small compared to the other areas listed above. For example, in South Australia 90 GL equates to around 14% general allocation.

## Salinity and water levels

Salinity levels in Lake Alexandrina are currently averaging 2,050 EC. Salinity in Lake Albert remains high at about 7,500 EC but is reducing steadily with the mixing of water from Lake Alexandrina.

The average water level in Lake Alexandrina, Lake Albert and the Goolwa Channel is currently about plus 0.76m AHD.

**The following table shows the current water levels and salinity at selected locations.**

| | Actual Water Levels at 15/10/10 | | Full Supply Level | Current |
|---|---|---|---|---|
| | U/S m AHD | D/S m AHD | U/S of Weir m AHD | EC level |
| Lock 6 | 19.09 | 18.13 | 19.25 | 219 |
| Lock 5 | 16.17 | 14.72 | 16.30 | 185 |
| Lock 4 | 13.21 | 12.20 | 13.20 | 165 |
| Lock 3 | 9.80 | 7.90 | 9.80 | 175 |
| Lock 2 | 6.06 | 4.91 | 6.10 | 213 |
| Lock 1 | 3.20 | 1.85 | 3.20 | 198 |
| Lake Alexandrina (average) | +0.76 | | | 1,600 |
| Lake Albert (average) | +0.76 | | | 7,050 |
| Goolwa | +0.76 | | | 2,000 |
| Water levels below Lock 1 are affected by wind and will vary throughout the day<br>EC Readings below Lock 1 are averages and will vary throughout the day | | | | |

## Climate outlook

According to the Bureau of Meteorology, during October to December 2010 there is a 50%-60% chance of exceeding median rainfall across the Murray-Darling Basin, and a 40-75% chance of exceeding median maximum temperatures.

Information on the seasonal outlook can be accessed online at www.bom.gov.au