RIVER MURRAY UPDATE

Issue 5

3 September 2010

DEPARTMENT FOR WATER

Government of South Australia
Department for Water

Rainfall and inflow summary

Average rainfall over the past three months has been sufficient to wet up key areas of the River Murray catchment over north-eastern Victoria. This average rainfall, combined with several good rainfall events in August 2010, has helped to significantly improve River Murray system inflows.

August 2010 inflow was 1,580 GL, just above the long-term average of 1,550 GL. This was the highest flow since 1996. A large proportion of the inflows originated from the Goulburn and Ovens Rivers in Victoria and remains a Victorian resource.

These higher inflows have created a small unregulated flow event on the River Murray for the first time since late 2005. An unregulated flow event occurs when water cannot be captured and re-regulated in Lake Victoria. In keeping with adopted protocol, the Murray-Darling Basin Authority has advised that irrigators from Barmah to the South Australian border have access to a portion of this unregulated flow before it reaches South Australia.

Although this unregulated flow event is small, heavy rainfall (50-100mm) is forecast for the next six days across most of the key catchment areas and, if this eventuates, further unregulated flows may be provided to South Australia.

While inflow conditions have improved, it is important to note that recovery from the current drought may take several years. Recovery will involve refilling the main operational storages, increasing water levels in Lakes Alexandrina and Albert, and the resumption of freshwater releases into the Coorong through the barrages to discharge the saline water.

Often several years of above average rainfall is required to replenish groundwater systems in catchments and to recover water levels in large water storages, such as Hume and Dartmouth Reservoirs. Average rainfall over a three or six month period is not enough for the River Murray system to recover, particularly if the main inflows are downstream of the major storages.

The following table shows Murray-Darling Basin storages at 3 September 2010.

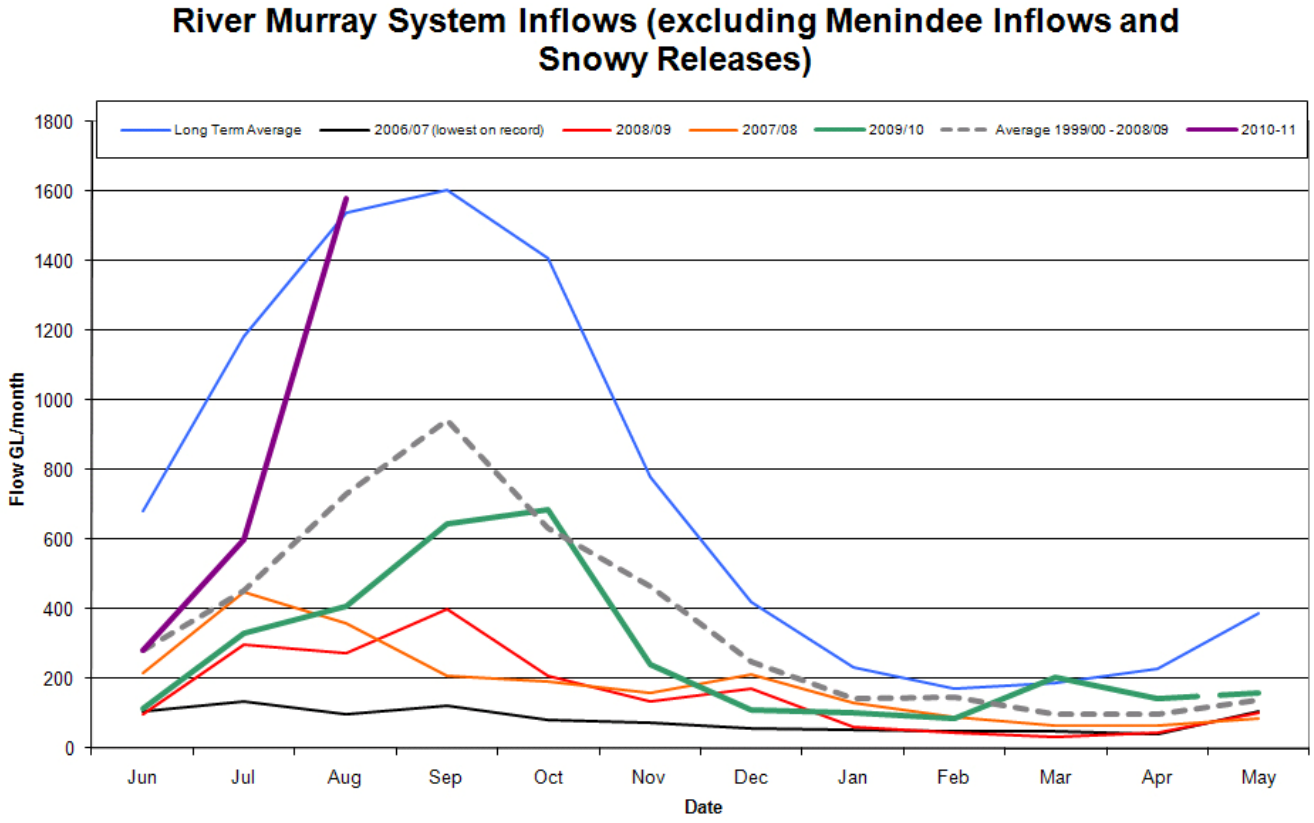
Storage @ 3 September 2010	Volume (GL)	% of Capacity	Approximate volume at this time last year (GL)	Change in volume from this time last year (GL)
Hume Dam	1,662	55	741	(+)921
Dartmouth Dam	1,514	39	967	(+)547
Menindee Lakes	1,600	92	237	(+)1,363
Lake Victoria	450	66	279	(+)171
Total volume	5,226	56	2,224	(+)3,002

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

MDBA Water Year (June to May)	June-August River Murray inflow (GL - rounded totals)
2005-06	1,950
2006-07	340
2007-08	1,025
2008-09	670
2009-10	855
2010-11	**2,460**
Past 10 years	1,465
Long-term average	3,420

Inflow graph

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



River operations in South Australia

Flows to South Australia will be maintained at the normal monthly entitlement flow of 4,500 ML/day during September 2010. This flow will be enhanced by an extra 3,000 ML/day of Additional Dilution Flows, which cannot be allocated for consumptive use and will flow to Lake Alexandrina. Any additional water above 7,500 ML/day is deemed to be "unregulated" because it cannot be captured and re-regulated in Lake Victoria.

Additional Dilution Flows are provided to South Australia to mitigate salinity and are only provided when storage levels in upstream storages surpass certain trigger levels. The trigger level for September and October 2010 is Menindee Lakes 1,300 GL, and Hume and Dartmouth (combined) 2,000 GL.

The Murray-Darling Basin Authority has estimated that Additional Dilution Flows will last until the end of October 2010. However, if wet conditions persist this may be extended.

Flow into South Australia is currently being managed on a daily basis due to Additional Dilution Flows and South Australia receiving unregulated flow for the first time since early September to mid December 2005.

Over the past three days, the flow to South Australia averaged 9,500 ML/day. Further rises in flow are expected over the next two weeks as a result of higher flows currently in transit upstream. Flows may increase further if the forecast heavy rainfall for the next six days across most of the key catchment areas eventuates.

The inlet gates at Lake Victoria are fully opened, allowing up to 8,000 ML/day to enter Lake Victoria. Any water that cannot be captured in Lake Victoria will flow across the border to South Australia. As the water level in Lake Victoria increases, the inlet capacity will be reduced and less water can be captured and regulated.

In response to the potential for higher flows into South Australia, the weir pools upstream of Lock 1 (Blanchetown) will be lowered by 5-10cm. This action is necessary to create space in the weir pools to capture future peak flows and to minimise spill over coffer dams at a number of construction sites along the River Murray. Further manipulation of weir pool levels may occur over the coming weeks and months, particularly if flows to South Australia exceed 12,000 ML/day. The lowering of weir pools will be short events as water levels will be replenished by subsequent flows.

The flow at Lock 1 has increased to an average of 9,700 ML/day as a result of this temporary lowering and will contribute to rising water levels in Lake Alexandrina.

Information about river operations upstream of the South Australian border is available from the Murray-Darling Basin Authority website www.mdba.gov.au

Salinity and water levels

Salinity levels in Lake Alexandrina are currently averaging 3,150 EC. Salinity in Lake Albert remains high at about 12,100 EC.

The average water level in Lake Alexandrina is currently about plus 0.3m AHD, and in Lake Albert the average water level is about minus 0.35m AHD. Pumping from Lake Alexandrina to Lake Albert has temporarily ceased.

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

	Actual Water Levels at 3/09/10		**Full Supply Level**	**Current**
	U/S m AHD	**D/S m AHD**	**U/S of Weir m AHD**	**EC level**
Lock 6	19.20	16.64	19.25	128
Lock 5	16.23	13.60	16.30	191
Lock 4	13.18	10.96	13.20	223
Lock 3	9.78	6.55	9.80	208
Lock 2	6.02	3.54	6.10	224
Lock 1	3.15	0.51	3.20	248
Lake Alexandrina (average)	+0.3			3,150
Lake Albert (average)	-0.35			12,100
Goolwa	+0.7			15,900
Water levels below Lock 1 are affected by wind and will vary throughout the day EC Readings below Lock 1 are averages and will vary throughout the day				

Water allocations in South Australia and interstate

South Australian River Murray irrigation allocations increased to 41% on 1 September 2010 following an improvement in the volume of water available to South Australia from inflows to the River Murray System and the Mount Lofty Ranges Reservoirs. This allocation is considerably higher than at this time last year, when irrigation allocations were only at 10%. Access to 100% of carryover has been available since 1 July 2010.

A copy of the Minister's full 1 September 2010 announcement can be viewed at the Water for Good website (under the "Latest News" heading) at www.waterforgood.sa.gov.au/

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
South Australia High Security	21%	24%	31%	34%	41%
NSW Murray High Security	0%	10%[#]	40%	70%	97%
NSW Murray General Security	0%	0%	0%	0%	8%
Murrumbidgee High Security	30%	30%	80%	95%	95%
Murrumbidgee General Security	0%	0%	0%	0%	9%
Lower Darling High Security	100%	100%	100%	100%	100%
Lower Darling General Security	100%	100%	100%	100%	100%
Victoria Murray High Reliability Water Share	0%	0%	2%	23%	57%
Goulburn High Reliability Water Share	0%	0%	5%	26%	41%

***At 1 July 2009 there was a shortfall in the volume of water required to operate the River Murray system and special water sharing arrangements were implemented**
[#]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.

New water sharing framework – User's Guide available

Any improvement in the amount of water available to South Australia during 2010-11 will be shared between all water uses in accordance with the 2010-11 River Murray Drought Water Allocation Decision Framework.

This Framework optimises the way that the limited amount of River Murray water available to South Australia is shared between different uses, including irrigation, critical human needs and the environment. Under the Framework, improvements in allocations will be provided as early as possible in 2010-11 to provide surety for licensed water users.

A 'User's Guide' to the framework has been produced by the Department for Water. To access a copy of this guide visit the Water for Good website at www.waterforgood.sa.gov.au/ or contact the Department for Water on **(08) 8463 6871**.

Climate outlook

According to the Bureau of Meteorology, during September to November 2010 there is a 50% chance of exceeding median rainfall across the Murray-Darling Basin, and a 55-60% chance of exceeding median maximum temperatures.

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

Water resource outlook

Water resource availability across the Murray-Darling Basin continues to improve as a result of recent rainfall across north-eastern Victoria and the upper Murray catchment.

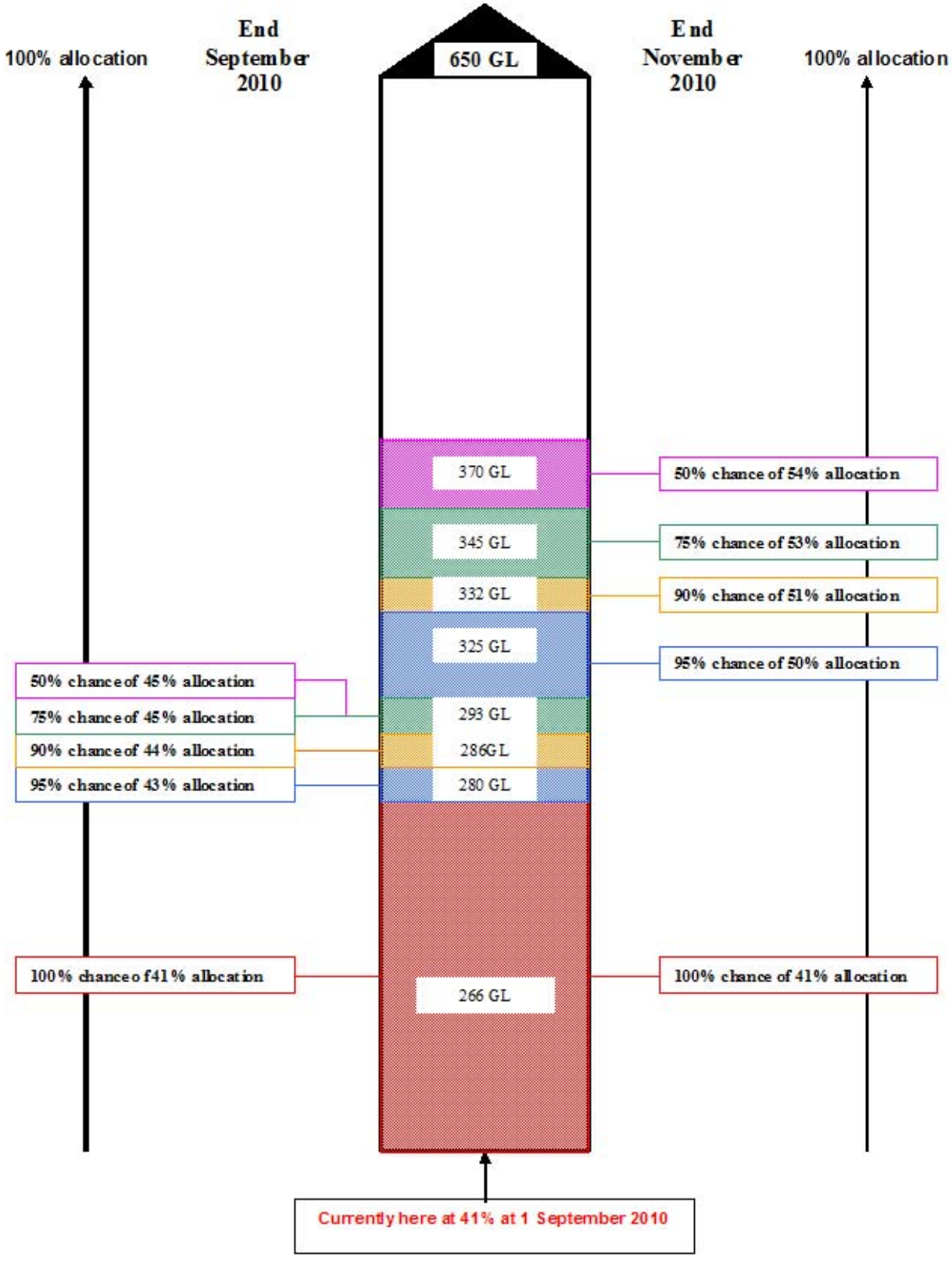
South Australia started 2010-11 in a better position than in the previous three years and special water sharing arrangements were not required as there was sufficient water available to all states. This means that South Australia is receiving 100% of improvements, unlike the past three years where water advanced to South Australia by New South Wales and Victoria to run the river had to be repaid and only 50% of improvements were available for allocation.

The diagram on the following page shows the probability of receiving different irrigation allocations in 2010-11, to the end of November 2010.

The allocation outlook is based on information provided by the Murray-Darling Basin Authority. The 2010-11 River Murray Drought Water Allocation Decision Framework has been applied to the data to generate the outlook for general allocations.

In addition to allocating water for general allocations, the 2010-11 River Murray Drought Water Allocation Decision Framework allocates water for 2011-12 critical human water needs and additional water for the Lower Lakes during 2010-11, which is not included in the diagram.

The allocation outlook is extremely conservative for general allocations given the current rainfall and inflow outlook and the framework will be reviewed by the end of November 2010.



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