RIVER MURRAY UPDATE

Issue 4

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DEPARTMENT FOR WATER

Government of South Australia
Department for Water

Rainfall and inflow summary

River Murray system inflows improved during July 2010 as a result of further rainfall over wet catchments. The Bureau of Meteorology stated that the Murray-Darling Basin had experienced its wettest July since 1986. Southern parts of the Murray-Darling Basin received average rainfall, which helped to improve River Murray system inflows.

About 600 GL of inflow was received during July 2010, which is more than the average of the past 10 years (465 GL). However, this inflow was still below the long-term July average of 1,180 GL.

While inflow conditions have improved, it is important to note that recovery from the current drought may take several years. The current drought is worse than any other drought sequence in 119 years of record. The average annual River Murray system inflow during the current drought (2002-2010) has been 3,500 GL. This is low compared to other main drought periods such as 1897-1903 (average inflow of 4,840 GL) and 1938-1946 (average of 5,600 GL). There was also a lower dependence on the Basin's water resources during these previous drought periods.

While recent rainfall conditions have improved dryland environments, catchments take longer to recover. Often several years of above average rainfall is required to replenish groundwater systems and to recover water levels in large water storages. Average rainfall over a three or six month period is not sufficient to recover the River Murray system, particularly if the main inflows are downstream of the major storages.

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.

The following table shows Murray-Darling Basin storages at 16 August 2010.

Storage @ 16 August 2010	Volume (GL)	% of Capacity	Approximate volume at this time last year	Change in volume from this time last year (GL)
Hume Dam	1,277	42	598	(+)679
Dartmouth Dam	1,409	36	904	(+)505
Menindee Lakes	1,573	91	286	(+)1,329
Lake Victoria	380	56	244	(+)94
Total volume	4,639	50	2,032	(+)2,607

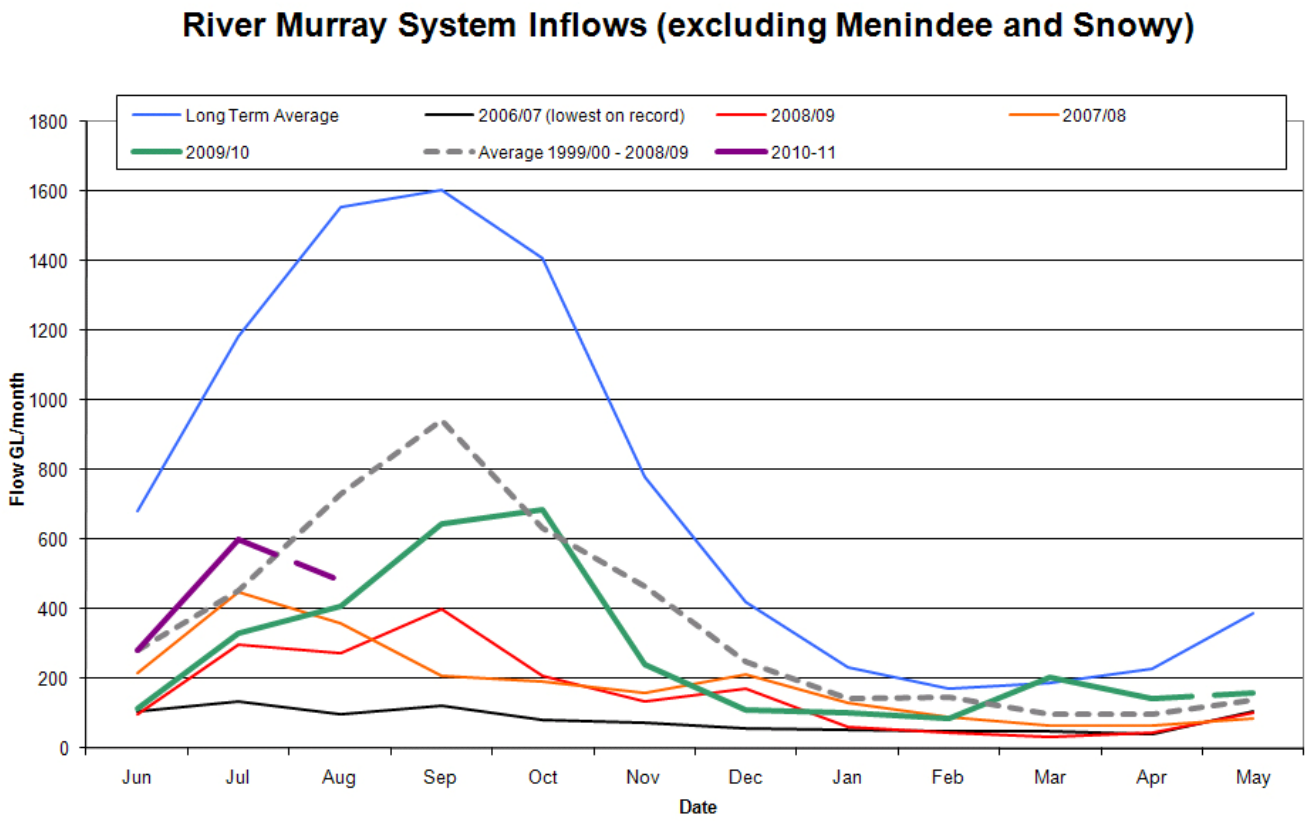
The following table shows River Murray system inflows (excluding Menindee) from June to August in various years.

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	**1,350***
Past 10 years	1,465
Long-term average	3,420

***Assumes a minimum of 480 GL in August 2010**

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 (4,000 ML/day) during August 2010. This flow will be further enhanced by an extra 3,000 ML/day of Additional Dilution Flows.

Additional Dilution Flows are provided to South Australia to mitigate salinity and are provided when storage levels in upstream storages surpass certain levels. The 'trigger' levels for the next two months are:

- August – Menindee Lakes 1,500 GL and Hume and Dartmouth (combined) 2,000 GL; and
- September - Menindee Lakes 1,300 GL and Hume and Dartmouth (combined) 2,000 GL.

The Murray-Darling Basin Authority has advised South Australia that a total of 177 GL will be delivered as Additional Dilution Flows.

Flow into South Australia is managed on a weekly basis during cooler months when demand is lower, and on a daily basis during warmer months when demand is higher. The increased flow to South Australia is currently providing an average flow over Lock 1 of 4,900 ML/day.

The Government of South Australia has committed a minimum of 520 GL towards Lake Alexandrina for 2010-11. This includes 350 GL of base flow past Wellington and 170 GL already secured for the 2010-11 Lower Lakes Environmental Reserve. During 2010-11, water will be pumped from Lake Alexandrina into Lake Albert to maintain water levels in Lake Albert above the critical acidification trigger.

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 have improved over the past few months and are currently averaging 3,500 EC. However, salinity in Lake Albert remains high at about 13,600 EC.

The average water level in Lake Alexandrina is currently about plus 0.04m AHD, and in Lake Albert the average water level is about minus 0.38m AHD. Pumping from Lake Alexandrina to Lake Albert has temporarily ceased and, depending on water level, it is anticipated that pumping may recommence in September 2010.

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

	Actual Water Levels at 13/08/10		**Full Supply Level**	**Current**
	U/S m AHD	**D/S m AHD**	**U/S of Weir m AHD**	**EC level**
Lock 6	19.30	16.49	19.25	153
Lock 5	16.37	13.48	16.30	156
Lock 4	13.23	10.73	13.20	214
Lock 3	9.81	6.47	9.80	296
Lock 2	6.14	3.48	6.10	288
Lock 1	3.23	0.27	3.20	314
Lake Alexandrina (average)	+0.10			3,500
Lake Albert (average)	-0.35			13,800
Goolwa	+0.30			18,500
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 have increased from 31% to 34% from 16 August 2010 following an improvement in the volume of water available to South Australia. The increased allocation is based on South Australia receiving a minimum of 1,679 GL during 2010-11 under a "worst case" scenario.

A copy of the Minister's full 16 August 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 July 2010	15 July 2010	2 August 2010	16 August July 2010
South Australia High Security	21%	24%	31%	34%
NSW Murray High Security	0%	10%[#]	40%	70%
NSW Murray General Security	0%	0%	0%	0%
Murrumbidgee High Security	30%	30%	80%	95%
Murrumbidgee General Security	0%	0%	0%	0%
Lower Darling High Security	100%	100%	100%	100%
Lower Darling General Security	100%	100%	100%	100%
Victoria Murray High Reliability Water Share	0%	0%	2%	23%
Goulburn High Reliability Water Share	0%	0%	5%	26%

[#]**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 the period August to October 2010 there is a 50% chance of exceeding median rainfall across the Murray-Darling Basin, and a 55%-65% chance of exceeding median maximum temperatures.

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