



# River Murray Water Resources Report

Issue 45: 4 September 2009

## Observations at a glance

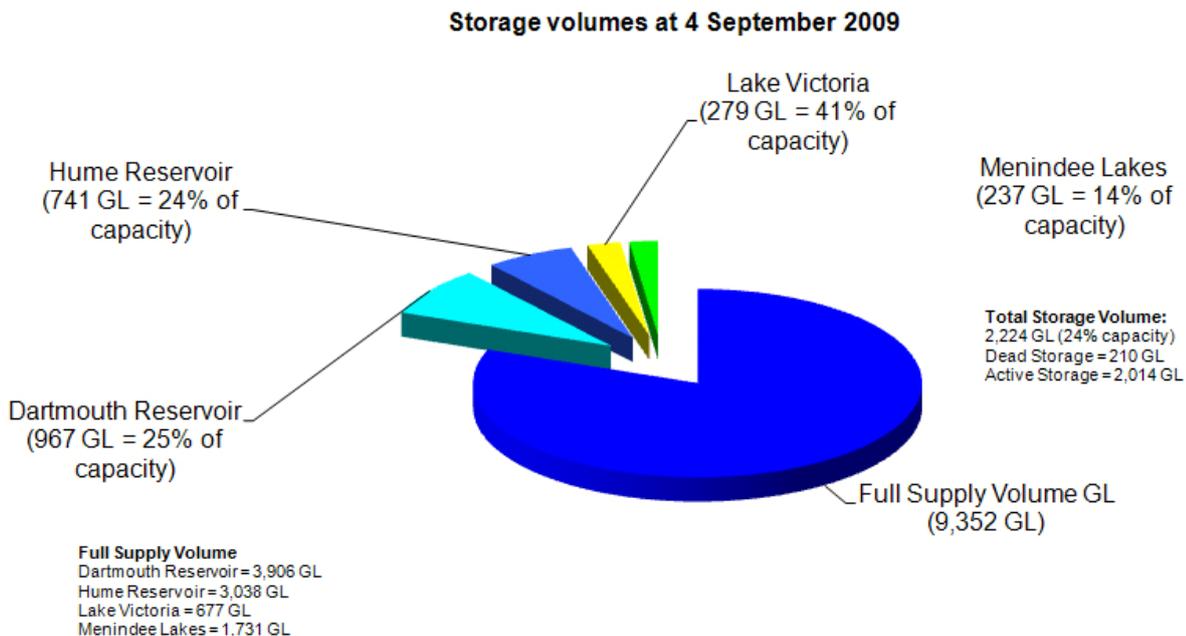
- Irrigators are currently able to access 10% of their allocation and 100% of their approved carry-over water volume.
- The volume of water in upstream storages is currently 2,224 GL (24% capacity), compared to about 2,411 GL (25% capacity) at the same time last year.
- The inflow for August 2009 is now expected to exceed 400 GL and over the first three days of September 2009 about 90 GL was received.
- Below Lock 1 water levels remain low and salinity levels remain high due to reduced flows into South Australia.

## Murray-Darling Basin storages

The volume of water in storage in Hume and Dartmouth Reservoirs, Lake Victoria and Menindee Lakes is currently 2,224 GL (24% capacity), compared to about 2,411 GL (24% capacity) at the same time last year.

Current storage levels are shown in **Figure 1**.

**Figure 1: Murray-Darling Basin storages**



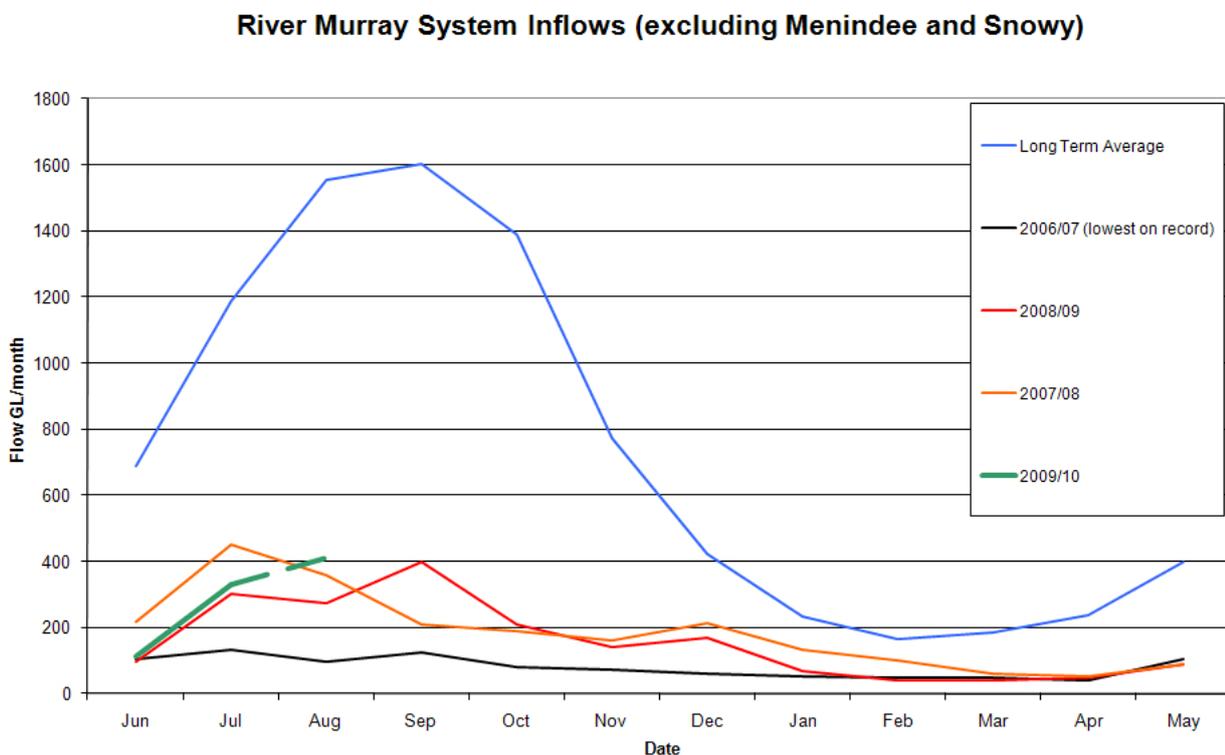
## Rainfall and River Murray inflows

Recent rainfall across the upper Murray catchment has improved River Murray system inflows. The inflow for August 2009 is now expected to exceed 400 GL and over the first three days of September 2009 about 90 GL was received. In late August 2009, the forecast minimum inflow for September was 200 GL. Given current inflow patterns and expected rain this minimum inflow is highly likely to be exceeded.

River Murray system inflows in August 2008 were 275 GL, and in September 2008 were about 400 GL. The long-term average inflow for September is about 1,600 GL.

Figure 2 shows the monthly River Murray inflows.

Figure 2: River Murray inflows



## River operations

The flow to South Australia is currently being maintained at 1,800 ML/day. This compares to the normal minimum entitlement flow of 4,500 ML/day, and an average flow of 2,660 ML/day at the same time last year. An average of 1,000 ML/day is flowing over Lock 1.

Information about river operations upstream of the South Australian border is available from the Murray-Darling Basin Authority website [www.mdba.gov.au](http://www.mdba.gov.au)

## Salinity and water levels

Salinity levels above Lock 1 remain fairly low. However, downstream of Lock 1 salinity levels remain high due to low water levels. Average salinity in Lake Alexandrina is currently 5,400 EC. Average salinity in Lake Albert is currently 8,875 EC.

The average water level in Lake Alexandrina is currently about minus 0.78m AHD, and in Lake Albert the average water level is about minus 0.16m AHD.

**Table 1** shows the current water levels and salinity at selected locations.

**Table 1: Water and salinity levels**

	Actual Water Levels at 4/09/09		Full Supply Level Level	Variation from Pool Level	Current EC Level
	U/S mAHD	D/S m AHD	U/S of Weir m AHD	U/S of Weir m AHD	
Lock 6	19.17	16.28	19.25	-0.09	228
Lock 5	16.35	13.30	16.30	0.05	351
Lock 4	13.28	9.99	13.20	0.08	445
Lock 3	9.84	6.21	9.80	0.03	529
Lock 2	6.12	3.30	6.10	0.02	480
Lock 1	3.30	-0.71	3.20	0.10	458
Lake Alexandrina (average)	-0.78				5,400
Lake Albert (average)	-0.16				8,875
Goolwa	-0.29				18,640
Water levels below Lock 1 are affected by wind and will vary throughout the day					
EC Readings below Lock 1 are daily averages and will vary throughout the day					

## How River Murray water is made available to NSW, Victoria and South Australia during 2009-10

Water resources of the River Murray system are shared in accordance with the Special Water Sharing Arrangements for 2009-10. Water in tributary systems such as the Murrumbidgee in NSW and the Ovens and Goulburn Rivers in Victoria are not part of the shared water resources. The relevant state authorities determine how water is allocated in these systems using their own water sharing plans or allocation frameworks.

All states have different rules for sharing their portion of water and different processes for making seasonal allocation announcements.

The Murray-Darling Basin Authority (MDBA) is responsible for undertaking water availability assessments for the Murray system, and provides each state with the volume of water available to it under the adopted water sharing arrangements. Each water availability assessment takes into account a range of factors, including inflows (both tributary and shared inflows), minimum water requirements for operational purposes (running the River Murray and storages), releases from the Snowy Hydro Scheme, water use in each state, and state obligations to provide water to South Australia.

The water availability assessment is essentially a summary of what has occurred during a specific period of time. Once the minimum commitments are met, then the remaining volume of water is available for sharing in accordance with the water sharing rules.

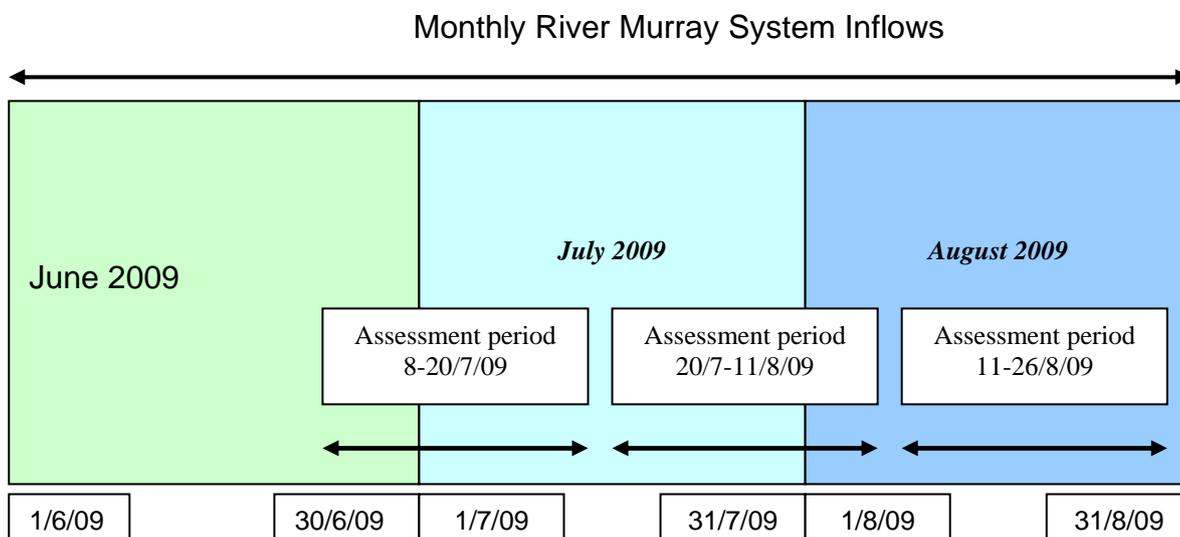
In the latest water availability assessment (based on the period 11-26 August 2009) there was an overall improvement of about 270 GL, with the shared improvement being about 180 GL. A range of factors contributed to this improvement including:

- Improved minimum inflow for August and September 2009;
- Increased Snowy Hydro releases to the Murray System; and
- A slight decrease in water availability due to increased forecast storage losses (due to more water being held in storage increasing losses for the year).

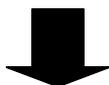
The water availability assessments also provide the states with an update of any advances. An advance is calculated as the state water shares under special water sharing arrangements minus the state water share under normal sharing arrangements.

The water availability assessment process is outlined in **Figure 3**.

**Figure 3: Water Availability Assessment Process**



**Step 1:** MDBA collects all relevant inflow, use and commitment information.



**Step 2:** MDBA analyse information and determine state water shares in accordance with the rules, including a determination of advances between the states.



**Step 3:** MBDA provide formal Water Availability Assessment to states, outlining state shares and status of advances.



**Step 4:** States assess water availability and make allocation announcements on the 1<sup>st</sup> and 15<sup>th</sup> each month (or next business day)

### **Murray-Darling Basin allocation announcements**

Recent rainfall across the southern Murray-Darling Basin has provided additional water resources to each state, enabling allocations to be increased on 1 September 2009. A summary of the current state allocations is provided below.

#### **South Australia allocation announcement at 1 September 2009**

South Australia increased from 5% to 10% of water available for high security allocations. High security allocations for irrigation and other uses are equivalent to about 570 GL and the volume of water currently allocated is 57 GL. Irrigators can access 100% of approved carry-over.

South Australia has additional water available to meet critical human water needs and the dilution and loss commitments.

South Australia does not have any general security entitlements.

For further information view the Minister's latest River Murray announcement at [www.dwlbc.sa.gov.au/media.html](http://www.dwlbc.sa.gov.au/media.html)

#### **NSW Allocation Announcements at 1 September 2009**

NSW announced an increase to allocations on the Murray System from 8% to 20%. NSW Murray high security entitlements are equivalent to about 185 GL and the volume of water allocated is only 37 GL.

In the Murrumbidgee System, allocations increased from 20% to 45%. Murrumbidgee high security entitlements are equivalent to about 360 GL and the volume of water allocated is only 162 GL.

In the Lower Darling, high security allocations remain at 100%. High security entitlements are equivalent to about 10 GL.

100% of carry-over is available in all valleys.

NSW has additional water available to provide for critical human water needs, stock and domestic allocations, and providing for conveyance losses in channel systems. Additional water is also set aside to run creek and effluent systems.

No water is available for general security allocations. In the Murrumbidgee system general security allocations at 100% are equivalent to about 1,890 GL. In the Murray system general security allocations at 100% are about 1,670 GL. The Lower Darling has a much smaller volume of general security allocation and at 100% is equivalent to about 78 GL.

The latest information about allocations in New South Wales is available at [www.naturalresources.nsw.gov.au/mediarelnr/mr\\_toc\\_currnr.html](http://www.naturalresources.nsw.gov.au/mediarelnr/mr_toc_currnr.html) or [http://www.dwe.nsw.gov.au/water/avail\\_alloc.shtml](http://www.dwe.nsw.gov.au/water/avail_alloc.shtml)

#### **Victorian Allocation Announcements at 1 September 2009**

Victoria has announced a 2% allocation for High Reliability Water Shares (HRWS) for the Murray system only. HRWS in the Murray system are equivalent to about 1,170 GL and the volume of water allocated at 2% is about 23 GL.

The Goulburn, Broken, Campaspe and Loddon systems all remain on 0% of entitlement.

Victoria has additional water available, which is used to provide for critical human water needs, filling channel systems, conveyance losses, stock and domestic requirements.

Victoria also has Low Reliability Water Shares (LRWS) in each of the systems listed above. Currently the LRWS is 0% for all systems. In the Murray Valley the LRWS is 300 GL, Goulburn Valley 437 GL, Broken 5 GL, Campaspe 19 GL and Loddon 8 GL.

The latest information about allocations in Victoria is available at [http://www.g-mwater.com.au/news/media-releases/2009\\_media\\_releases](http://www.g-mwater.com.au/news/media-releases/2009_media_releases)

## Projected allocation levels in 2009-10

The Department of Water, Land and Biodiversity Conservation regularly updates its projections of possible allocation improvements. These projections outline possible allocations under different scenarios, in selected months. The latest projections for 2009-10 were issued earlier this week, and are available at <http://www.dwlbc.sa.gov.au/murray/drought/index.html#Projectedflowsandwaterallocationsin200910>

## Carry-over

Irrigators can now access 100% of their approved carry-over volume. The carry-over policy and further information is available at [www.dwlbc.sa.gov.au/murray/drought/index.html#Carryoverwater](http://www.dwlbc.sa.gov.au/murray/drought/index.html#Carryoverwater)

## Weather outlook

The Bureau of Meteorology's national outlook for total rainfall over the period September to November shows a 30-40% chance of exceeding the median rainfall across most of the Murray-Darling Basin. There is a 65% chance of exceeding the median maximum temperature during the same period.

### Further information on River Murray conditions and rainfall forecasts can be obtained from the following websites:

Department of Water, Land and Biodiversity Conservation [www.dwlbc.sa.gov.au](http://www.dwlbc.sa.gov.au)

SA Murray-Darling Basin NRM Board [www.samdbnrm.sa.gov.au](http://www.samdbnrm.sa.gov.au)

Murray-Darling Basin Commission [www.mdbc.gov.au](http://www.mdbc.gov.au)

SA Water Daily Reports [www.riverland.net.au/%7Eheinze/ex-flow-frame.htm](http://www.riverland.net.au/%7Eheinze/ex-flow-frame.htm)

Bureau of Meteorology [www.bom.gov.au](http://www.bom.gov.au)

Queensland Department of Primary Industry [www.longpaddock.qld.gov.au](http://www.longpaddock.qld.gov.au)

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