



MURRAY SYSTEM

Drought Update

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IN BRIEF

- The drought in the Murray-Darling Basin is getting worse. Murray system inflows in autumn approached the record lows seen in 2007. June inflows were the lowest on record. The chance that upper Murray inflows will be above average for the remainder of winter and spring is very low. Until there is significant rain and run-off, the prospects for irrigation and the environment in 2008-09 are grim.
- The most recent seasonal climate outlook issued by the Bureau of Meteorology shows a shift in the odds towards drier than average conditions in across the Murray-Darling Basin from July to September, including the high yielding catchments of the upper Murray and its tributaries.
- Critical water for human needs (including stock and domestic) for 2008-09 is reasonably assured for those who draw their water from the main stem of the Murray. Further inflows in excess of the minimum used for planning are needed to assure water is available to those who take water from anabranches or major channel systems.
- Headwater storage levels are slightly higher than the record low levels of this time last year (due to higher levels of carryover) but are still well below average.
- The water level in the Lower Lakes has temporarily stabilized, but unless there is a significant improvement in water availability for South Australia, the outlook for the next 12 months is extremely poor.
- 2008-09 is shaping up to be a very tough year in terms of consumptive water availability and there is likely to be continuing pressure on the riverine environment. The new water year is also likely to pose operational challenges with low river flows and varying weir pool levels.

2007-08 SUMMARY

For the year ending June 2008, total inflow to the Murray River System, (excluding Darling inflows and Snowy Scheme releases) was 2,220 GL which was the 6th lowest in 117 years of records (see Figure 1) and only 25 % of the long term average of 8,900 GL. The 2007-08 year was preceded by record low inflows in the previous year of 970 GL, and the combined two year total of 3,190 GL was the lowest on record (and only 53 % of the previous minimum in 1914-1916). Figure 2 compares the monthly inflows for 2007-08 with the record lows of 2006-07 and the long term averages.

Figure 1. Murray system annual inflows (excluding Darling inflows and Snowy releases)

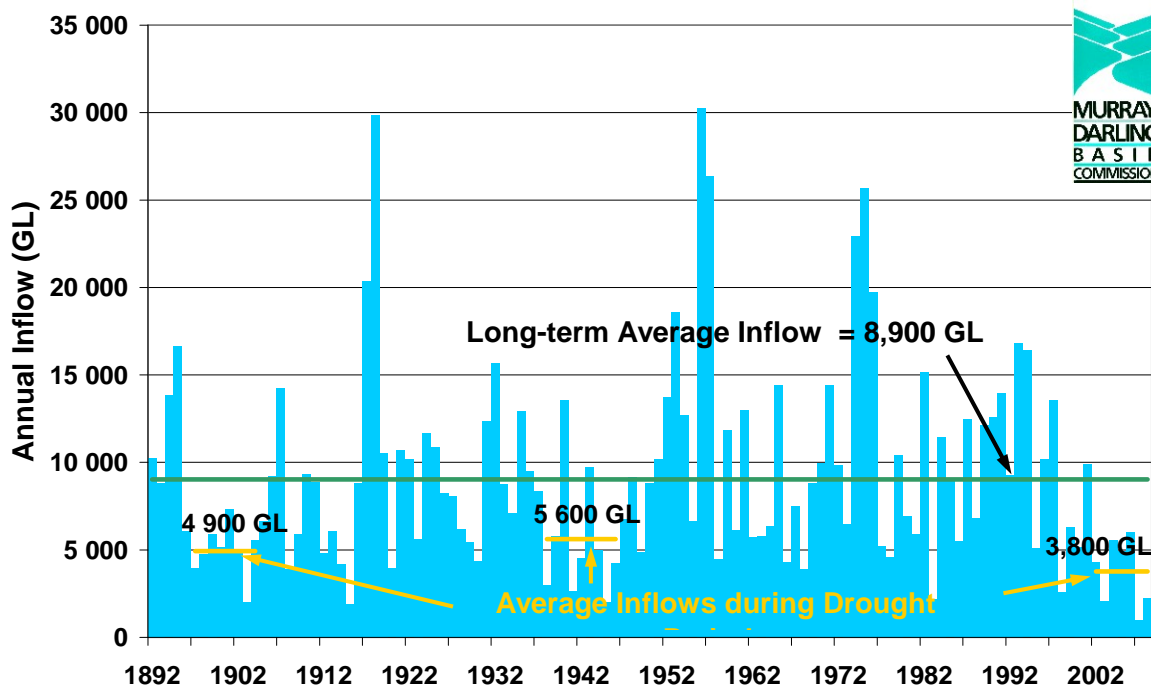
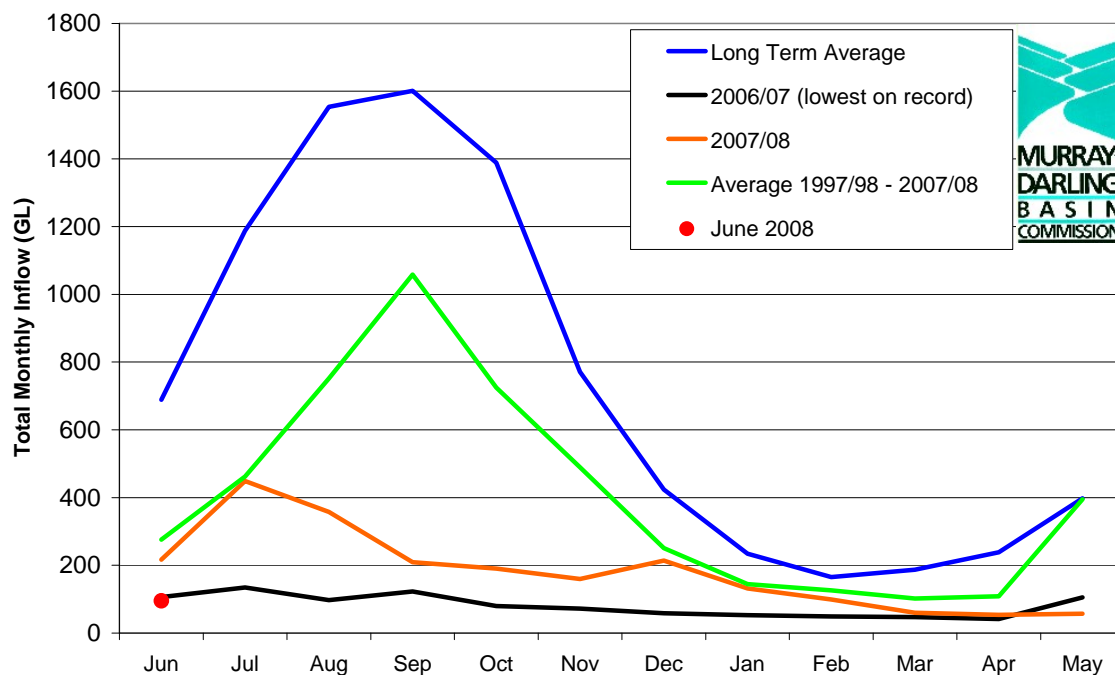
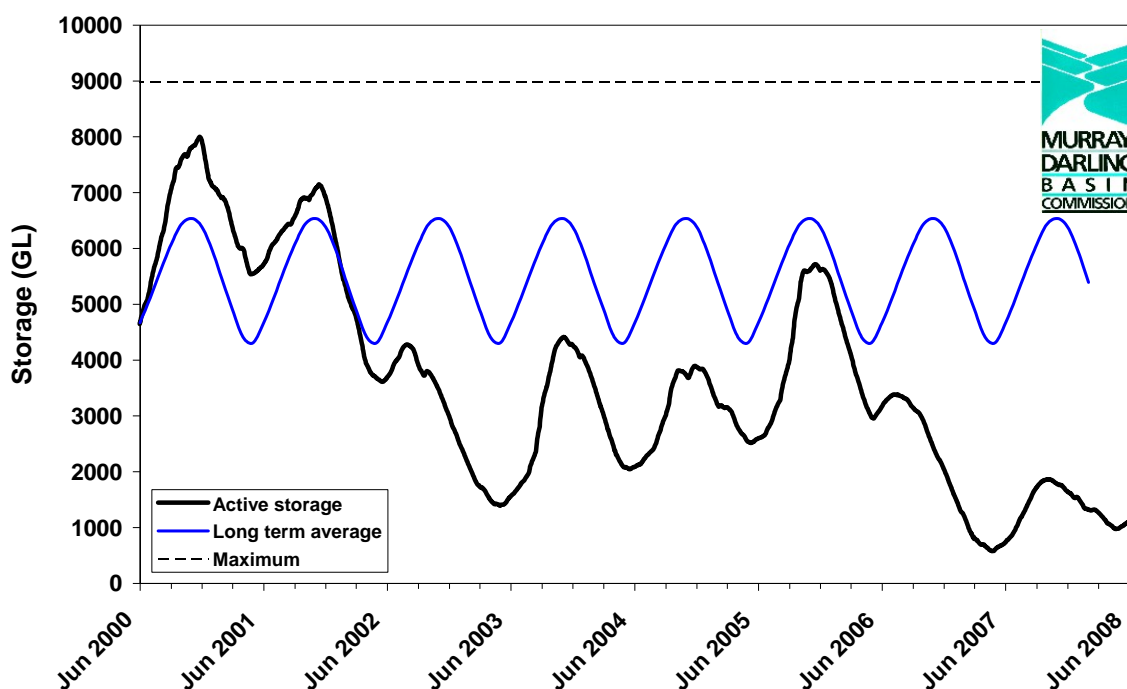


Figure 2. Murray system monthly inflows (excluding Darling inflows and Snowy releases)



The volume of active storage under control of the Commission at the end of June 2008 was 1,270 GL or 15 % capacity (but about 400 GL is carried over from 2007-08 by individual license holders). The end of year active storage was 280 GL more than the record low of 990 GL in June 2007, but only 27 % of the June long term average of 4,700 GL. Storage levels have now been below average since early 2002 (Figure 3). A further 540 GL was stored in Menindee Lakes (which remains under NSW control), and up to 170 GL is committed to underwrite Murray system contingencies for 2008-09. Menindee Lakes also supplies Broken Hill with drinking water.

Figure 3. MDBC active storage; June 2000 to June 2008.



The combined effect of low storage levels and low inflows, resulted in record low State irrigation allocations across the Murray River system for 2007-08. In Victoria, the high reliability allocation for the Murray reached 43 %. In NSW the high security allocation for the Murray reached 25 % and the general security remained at zero. In South Australia the Murray allocation reached 32 %.

The actual amount of water diverted was 1,480 GL which is about half that of 2006-07 and one third of a 'non drought' water year (see Table 1 and Figure 4). Additionally, about 400 GL of water allocated in 2007-08 was carried over by individual water license holders in preparation for the 2008-09 water year.

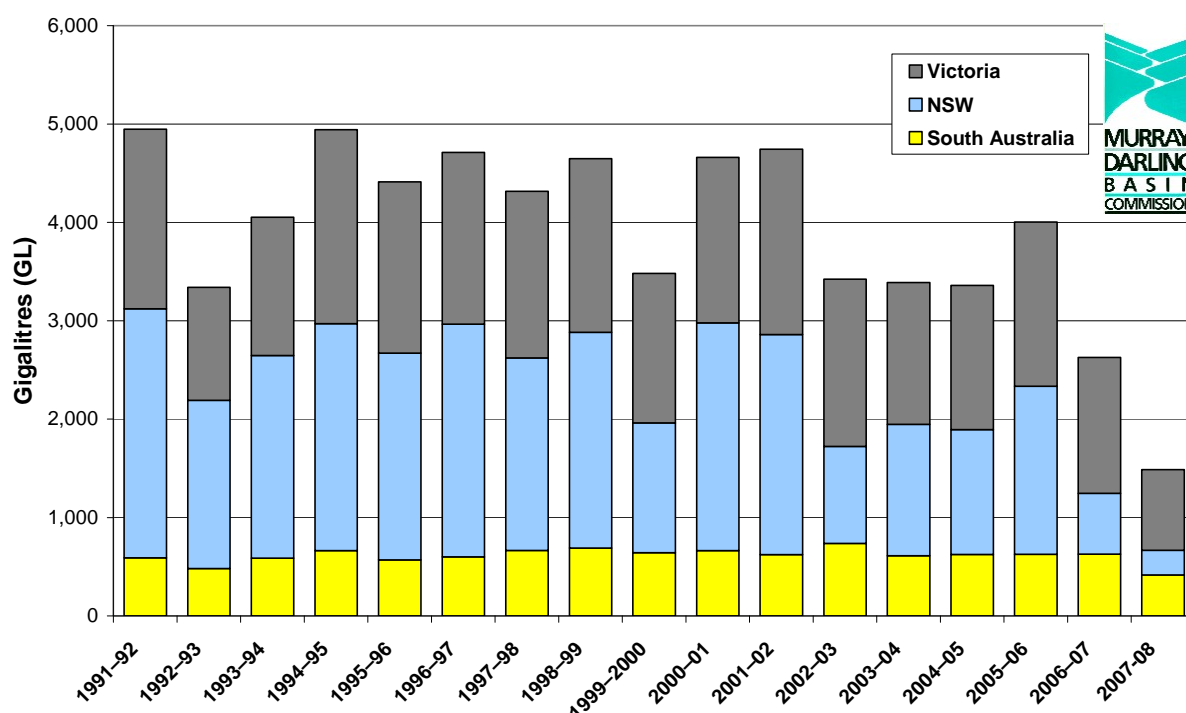
In 2007-08, small volumes of environmental water were delivered to high priority sites along the Murray, in particular to replenish critical drought refuges and protect threatened species. The total volume of Living Murray Environmental water used in 2007-08 was about 17 GL or about 1 % of the total water consumed.

Table 1. State diversions for the Murray system (including lower Darling, and not adjusted for trade)

	Diversions 2006-07 (GL)	Diversions 2007-08 (GL)	Average Diversion 1997- 2008 (GL)
NSW	615	250	1470
VIC	1380	820	1550
SA	625	415	630

Note; 2007-08 data are preliminary estimates only.

Figure 4. State diversions for the Murray system (including lower Darling, and not adjusted for trade)



THE CURRENT SITUATION

This year, the Basin has experienced its 4th driest autumn on record. As a result, Murray system inflows in autumn approached the record low levels experienced in the previous year. The dry weather has continued in the southern half of the Basin and the monthly inflows for June 2008 set a new record low of only 95 GL, compared with 220 GL in June 2007 and a long term average of 680 GL. Similarly, inflows into Snowy Hydro's storages in the Snowy Mountains remain extremely low and their storage levels are similar to the record lows observed at this time last year.

OUTLOOK FOR 2008-09

Figure 5 illustrates the total commitments and current water available at the start of 2008-09. Approximately 2,380 GL is required to meet critical needs, individual carryover, and the river and storage losses that would occur while supplying this water. Just over half of this volume is currently in storage. An additional 900 GL is virtually assured from system inflows during the year, even under a 'worst case' dry scenario. Under this dry scenario, the remaining 190 GL would have to be supplied from contingency measures which include water stored in Menindee Lakes, wetland savings and the drawdown of weir pools at the end of the season.

The prospects for irrigation allocations in 2008-09 are entirely dependent on an improvement in system inflows during winter and spring, which is the critical period for runoff in the upper Murray and its tributaries. The current situation is reflected in the opening State irrigation allocations for 2008-09 which are between 0 and 2 %. Further details about allocations and access to carryover are available on the following State water authority websites:

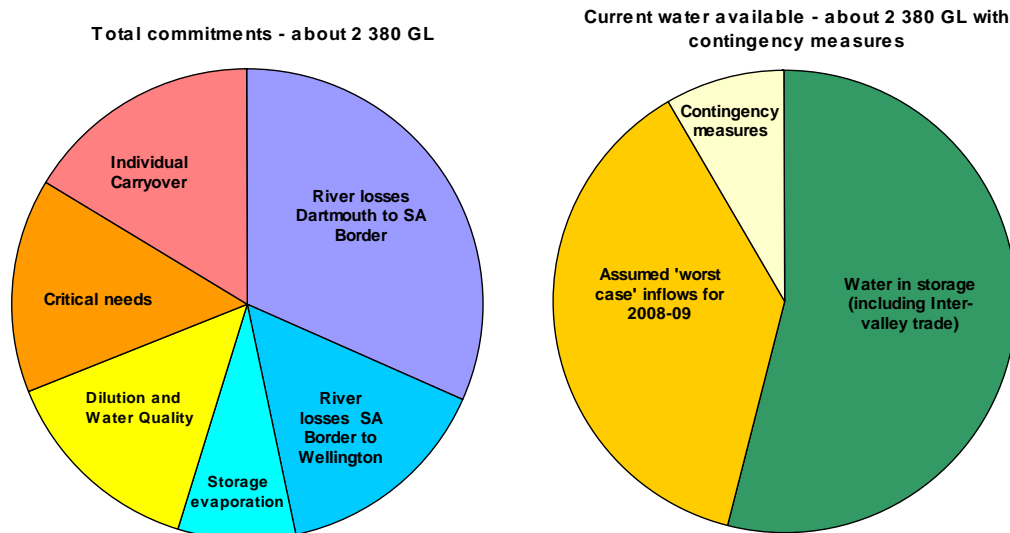
NSW; www.naturalresources.nsw.gov.au/water/state_mm_murr_water_quality.shtml#alloc

VIC; www.g-mwater.com.au/water-resources/allocations/current.asp

SA; www.dwlbc.sa.gov.au/media.html

The most recent seasonal climate outlook issued by the Bureau of Meteorology shows a shift in the odds favouring drier than average conditions across the Murray-Darling Basin from July to September. The chances of exceeding median rainfall are only about 40 % for the high yielding catchments in the Victorian Alps and Snowy Mountains, and only 30 to 40 % over South Australia, western Victoria and south-western New South Wales. Further information is available at, http://www.bom.gov.au/climate/ahead/rain_ahead.shtml

Figure 5. Murray system commitments and current water available



Overall, the drought in the Murray-Darling Basin is getting worse. The chance that upper Murray inflows will be above average for the remainder of winter and spring, is very low.

The outlook for 2008-09 also presents very serious challenges for the environment. Some wetlands along the Murray remain disconnected, and large areas of floodplain have not been flooded since 1993. This current period without significant flooding is considerably longer than any other dry period experienced in the last 117 years for which records exist.

Lower Lakes

The condition of the Coorong and Lower Lakes in South Australia remains very serious. Large areas of mudflats have been exposed in Lake Albert and there is a significant risk of acidification. Pumping of water from Lake Alexandrina commenced in early May 2008 to maintain Lake Albert at its current level and prevent further exposure of sulphidic sediments. The cooler winter weather has reduced evaporative losses and led to a temporary stabilization of water levels. However, if the weather remains dry and Murray inflows remain low, the water level is expected to continue falling during spring and summer. Further management options for the Lower Lakes are being carefully considered for the 2008-09 season and beyond, and will respond to actual lake levels and system inflows.

SYSTEM-WIDE STRATEGY FOR 2008-09

Due to the protracted water scarcity in the southern half of the Basin, Murray operations over the last two seasons have concentrated on maximizing water availability, and reducing evaporation and transmission losses along the river system. This strategy is likely to continue in 2008-09 and will include:

- reduced minimum flow targets,
- the use of weir pools to capture and re-regulate tributary inflows, and
- continuation of wetland disconnections to reduce evaporative losses.

On a more positive note, the MDBC has recently announced that trade across the Barmah Choke will be permitted until the end of October 2008. This will enable water entitlement holders above the Choke to sell their allocations to downstream users, which will assist them in managing their irrigation businesses.

Finally, the Murray-Darling Basin Commission continues to undertake contingency planning and implement appropriate measures in consultation with relevant State and Australian government agencies.

ADDITIONAL INFORMATION

MDBC will provide further drought updates in the coming months. Additional information is available at www.mdbc.gov.au also from the relevant Australian and State Government Agencies. For media interviews with MDBC personnel, please contact Sam Leone, MDBC Media Liaison, telephone 0407 006 332.