



MURRAY SYSTEM

Drought Update

ISSUE 12: MARCH 2008

IN BRIEF

The La Niña weather pattern has delivered above average rainfall across much of the Murray-Darling Basin, providing welcome relief for many graziers and dryland farmers and causing flooding in southern Queensland and the Border rivers.

However, across much of the Murray-Darling Basin, the water available for irrigators and the environment remains at record low levels. Despite good summer rainfall, inflows in the central and southern parts of the Basin remain low and headwater storage levels remain well below average.

In view of this, the Murray-Darling Basin Commission (MDBC) is managing the Murray System to conserve as much water as possible in major storages to maximise water availability to the states in 2008/09.

Whilst critical urban, stock and domestic requirements for 2008/09 are reasonably assured, opening water allocations for Murray water users in 2008/09 are again expected to be very low or zero – but with some carryover water available. Allocation improvements during the season will be highly dependent on rainfall and inflows over winter/spring 2008.

The prolonged and severe drought has magnified the environmental impacts of water extraction and river regulation and accelerated the decline of floodplain ecosystems. In particular, the condition of the Coorong and Lower Lakes in South Australia is grave and deteriorating. Salinity in the Lower Lakes continues to rise and acidification presents a significant threat.

The partner governments of the Murray-Darling Basin continue to work cooperatively to best manage the available water to meet human requirements and mitigate environmental decline wherever possible.

THE CURRENT SITUATION

The Bureau of Meteorology reports that the La Niña event is mature and continues to influence the climate of eastern Australia with above average rainfall seen across much of the Murray-Darling Basin in recent months (see **Figure 1**).

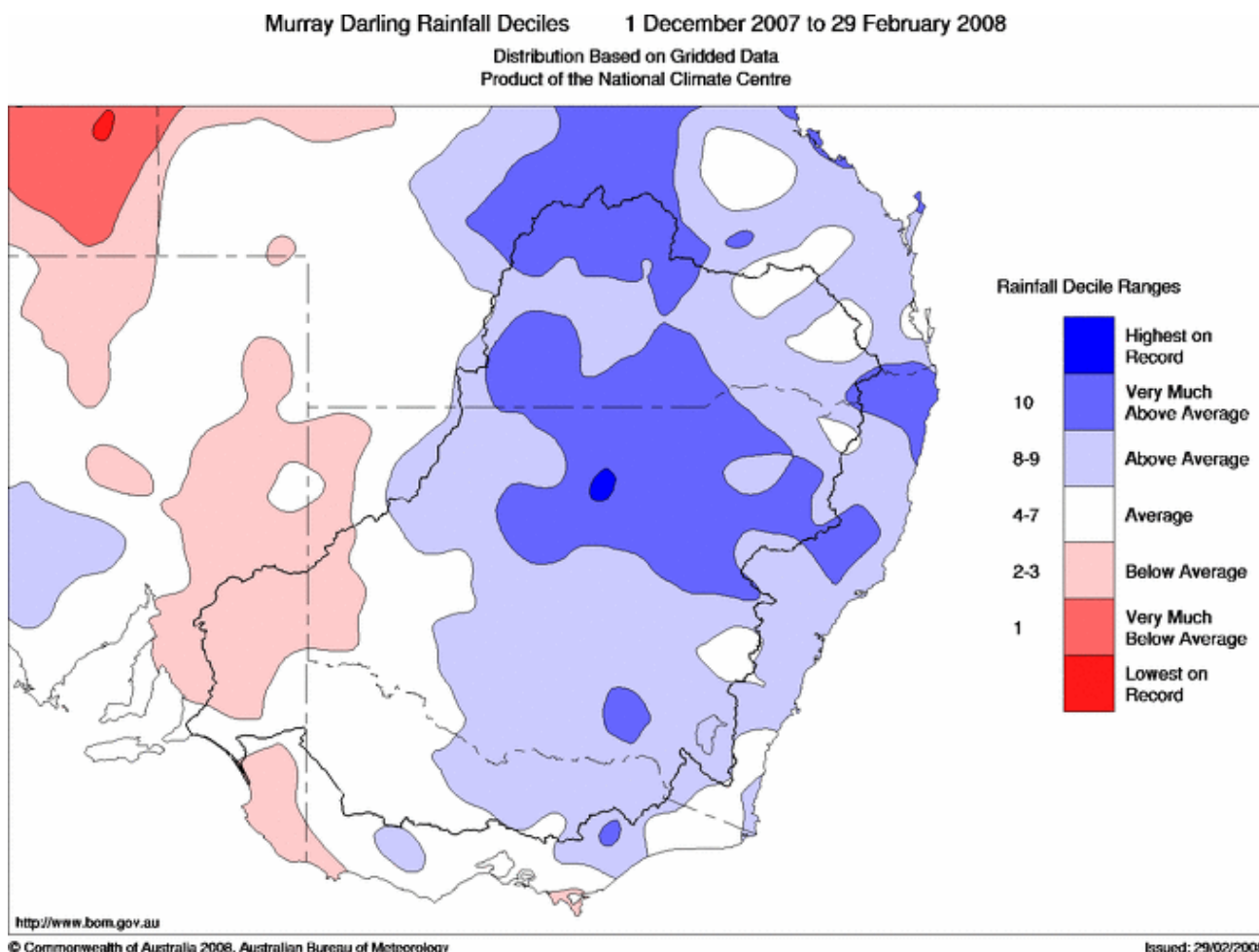


Figure 1 Murray-Darling Basin Rainfall Deciles
 December 2007 – February 2008
 (Bureau of Meteorology)

During December, heavy rainfall in the north of the Basin resulted in moderate inflows to the Darling River from tributaries such as the Castlereagh, Moonie and Culgoa Rivers.

Follow-up rain has resulted in flows in all, and flooding in some, of the Darling tributaries upstream of Bourke.

The combination of these inflows is expected to increase storage in Menindee Lakes to about 550 GL (32% of capacity). This has allowed NSW to make a small release to the lower Darling River from Menindee Lakes and about 100 GL has flowed to date into the Murray at Wentworth.

Flooding in the northern Basin, has triggered significant bird breeding events in several areas including the Narran Lakes and Macquarie Marshes near Walgett, and the Currawinya Lakes on the Cuttaburra Channel between the Warrego and Paroo Rivers.

In the southern Basin, despite average to above-average rainfall over summer, the streamflow response has been quite low due to the previous extreme dry conditions and hot weather between rain events. Even so the situation is certainly better than last season - Murray System inflows (excluding Darling) this summer have totalled about 450 GL which is about 300 GL higher than last summer. Including inflow to Menindee Lakes, the total inflow to the system rises to about 1 000 GL, however the bulk of this extra water is not available to Murray System water users as Menindee Lakes remains New South Wales control. Figure 2 shows how total system inflows have been tracking this season to date (see **Figure 2**)

The volume of water in MDBC storages continues to be very low with the total available to the Murray, or 'active water', currently only 15% of capacity. It is likely that storage will take multiple years to recover, even under average rainfall and inflow conditions.

Whilst the situation has improved compared to 2006, the calendar year of 2007 was extremely dry in its own right. Total system inflow, including Menindee, was about 2 100 GL – the third lowest inflow year out of 116 years of records. Coming immediately after the lowest inflow year on record is unprecedented in the historic record. The two year total inflow ending December 2007 was about 3 350 GL - about half of the previous two year minimum of 6 500 GL (1937-1938) and only 15% of the long term average for a two year period.

CURRENT RIVER OPERATIONS

Murray operations are currently focussed on conserving as much water as possible in Hume and Dartmouth Reservoirs over the coming months to maximise water availability for the three States in 2008/09.

Release from Hume and Dartmouth is being kept to the minimum required to meet demand upstream of Wentworth Weir. South Australia's requirements will be met by drawing upon Lake Victoria, providing extra airspace in the Lake, which can then be used to store winter and spring inflows received from the tributaries downstream of Hume Dam.

The effect of these operations is reduced flows and less "water in transit" in the Murray compared with previous years. This means that there is less water in the system to meet sudden increases in losses or irrigation demand. In the event of any hot spells or periods of high demand it may therefore be necessary to temporarily draw on water stored in weir pools to meet downstream flow and diversion requirements. For example, it may become necessary to temporarily draw down the weir pools at Torrumbarry and Euston Weirs for periods of up to three weeks whilst shortfalls in river flows are replaced by higher releases from the headwater storages.

The MDBC will review on an ongoing basis its river operational plans taking into account emerging conditions. We will provide details of any significant changes via media releases, operational updates and weekly reports.

Water allocations continue to remain at record low levels and are summarised in **Table 1**.

State	Valley	Allocation Summary
NSW	Murray	100% suspended water paid back Critical water requirements for permanent plantings 0% high and general security allocations
	Murrumbidgee	90% high security, 13% general security
Victoria	Murray	42% high reliability water share
	Goulburn	53% high reliability water share
South Australia	Murray	32% Allocation

Table 1 – State Allocations as at 29 February 2008 (Murray-Darling Basin Commission)

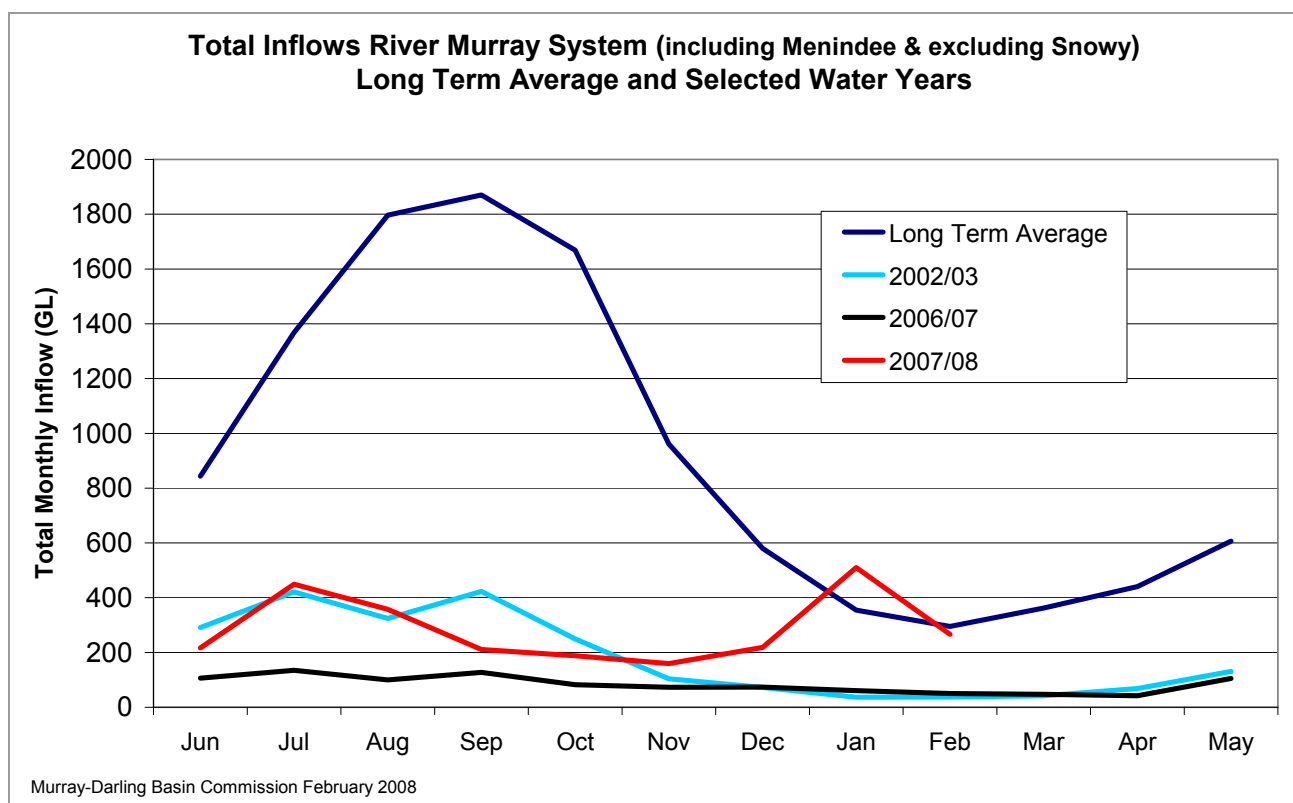


Figure 2 – Total River Murray System Inflows (Murray-Darling Basin Commission)

Total Murray valley water diversion in 2007/08 is expected to be about 1 500 GL compared to 2 800 GL in 2006/07. **Figure 3** shows diversions since 2000/01 and how they compare with the long-term average of about 4 200 GL/year.

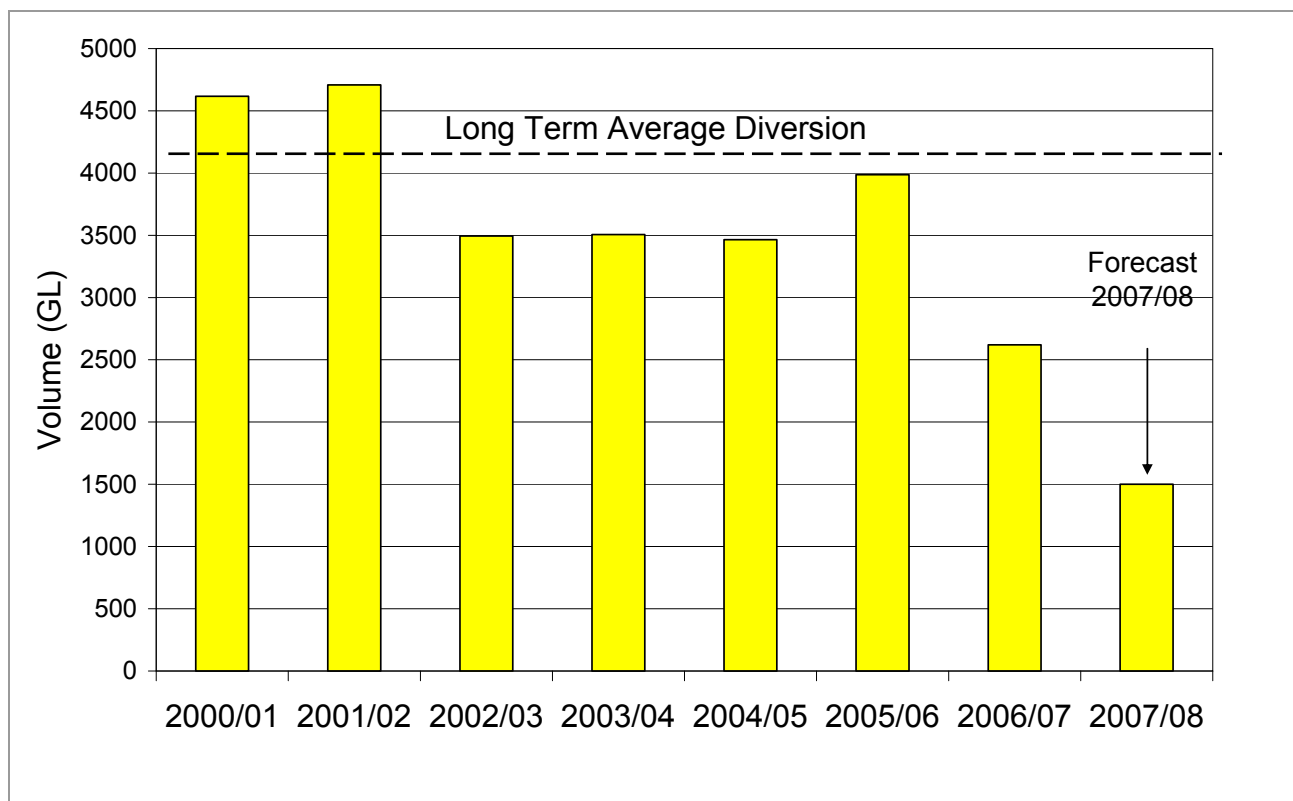


Figure 3 Total Murray System Diversions
2000/01 to 2007/08
(Murray-Darling Basin Commission)

CONTINGENCY PLANNING

On 5 February 2008, the Prime Minister and the Premiers of New South Wales, Victoria, and South Australia announced the application of revised interim water sharing arrangements between the three States. The arrangements provide the ability for all States to carry water over from this season to the next and will ensure all States are allocated sufficient water early in the 2008/09 water year to provide for critical human and stock needs. The arrangements allow for a transition back to the normal sharing provisions of the Murray-Darling Basin Agreement should inflows improve in 2008/09.

Contingency arrangements are in place for the balance of this year and for next year to reasonably assure critical urban water in 2008/09 should inflows return to the extraordinary low levels seen in 2006/07.

ENVIRONMENT

The prolonged and severe drought has magnified the environmental impacts of water extraction and river regulation and accelerated the decline of floodplain ecosystems.

Whilst portions of the Barmah-Millewa Forest have received limited flooding as recently as 2005, the last significant flooding of the mid and lower floodplains of the Murray, such as Chowilla, has been as long ago as 12-15 years.

The condition of the Coorong and Lower Lakes in South Australia is grave and deteriorating. There has been no flow over the Barrages since October 2006. The Lower Lakes are now at least 0.3 m below sea level and well below the previous minimum of 0.1 m above sea level recorded in March 1968. Salinity in the Lower Lakes continues to rise and acidification presents a significant threat.

OUTLOOK

A well developed La Niña is now established in the Pacific Ocean and is expected to continue into autumn 2008. This is a welcome change to the situation at this time last year. However, the prospects for irrigation in 2008/09 are substantially dependent rainfall and streamflows over the winter and spring, which is the critical period of runoff in the high yielding upper Murray catchment. Updates on the outlook for winter and spring rainfall and inflows will be provided in coming months.

It is highly likely that storage levels at the beginning of 2008/09 will again be very low. Whilst the overall volume in storage may be higher than at the same time last year, a large proportion of this water will be earmarked for meeting system losses, critical human needs and individual carryover.

Apart from individual carryover, opening irrigation allocations for 2008/09 are likely to be very low, or zero. Improvements to allocation levels will therefore be almost entirely dependent on rainfalls and streamflows throughout the course of 2008/09.

ADDITIONAL INFORMATION

MDBC will provide further drought updates in coming months. Additional information is available at <http://www.mdbc.gov.au> and 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