

River Murray System - Drought Update No. 6 February 2007

LITTLE RELIEF FROM JANUARY RAIN

Rainfall in the Murray Valley throughout December and January was concentrated mainly in the lower reaches in the Sunraysia region and in South Australia, rather than in the upper Murray.

The rain resulted in temporary reductions in river losses, evaporation and consumptive use; and it was very welcome for the irrigators and farmers and those with rain water tanks who received it. The rain also assisted in temporarily increasing the flow over Lock 1 at Blanchetown and temporarily increasing water levels in the Lower Lakes.

Rainfall levels for January 2007 are shown below (Fig. 1).

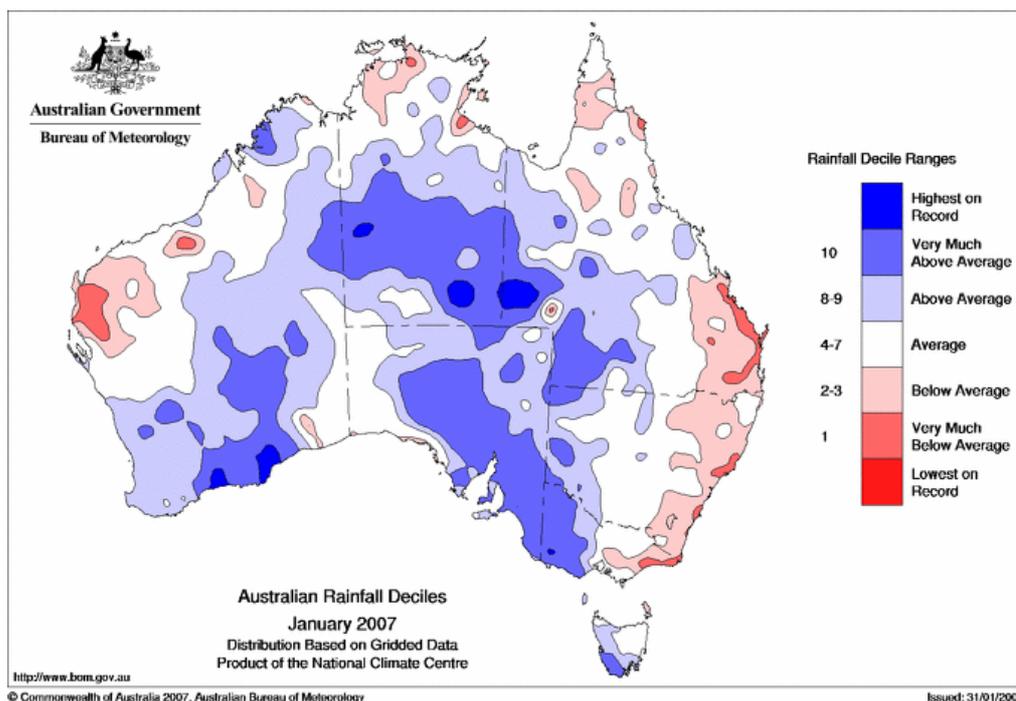


Figure 1. Murray-Darling Basin Rainfall Deciles January 2007

(Australian Bureau of Meteorology)

In the upper and normally higher yielding parts of the catchment, groundwater inflows to creeks and rivers have virtually dried up.

Inflows to the River Murray for December 2006 (excluding Snowy Scheme releases and inflows to Menindee Lakes) were at an historic record low (for any month). That record was broken in January 2007 when total inflow was about 30 GL (see Fig. 2). This January inflow compares with the previous January minimum of 52 GL in 1983.

Inflows to the River Murray Long Term Average and Selected Years

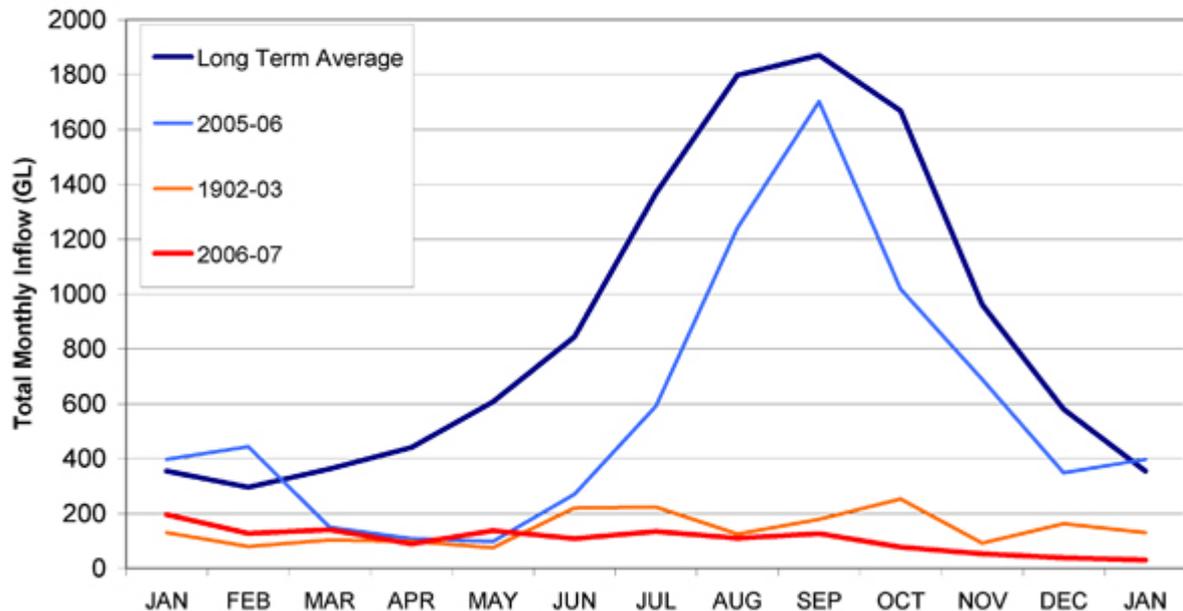


Figure 2. River Murray Inflows -- Long-term Average and Selected Years (excluding Snowy Scheme releases, and excluding Menindee Lakes inflows)

Inflows for the season to date (eight months June to January) have been only 660 GL which is 60% of the previous recorded minimum of 1 170 GL observed in 1983, and only 9% of the long-term average of 8 000 GL for the same period.

CURRENT CONDITIONS

The temporary reduction in both irrigation demand and river losses in mid January and an increase in release from the Snowy Mountains Scheme to meet electricity market demand led to minor improvements in levels of upper Murray storages. As a result, there has also been a minor improvement in the projected storage levels in all Commission storages into February 2007.

This relief has reduced the chance of temporary rationing of irrigation diversions being required before the end of the current irrigation season. It has also allowed the flow in the Mitta Mitta River between Dartmouth and Hume Dams to be reduced from 10 600 to 10 000 ML/day, which is the normal river channel capacity for regulated flow. The co-operation of Mitta Mitta landholders to support running this reach at above channel capacity rates has been instrumental in maintaining sufficient storage in Hume Reservoir and avoiding restrictions for downstream irrigators to date in 2006/07, and this co-operation is very much appreciated.

Flows in the River Murray are being maintained to meet diversion requirements, as well as requirements for transfer of water to Lake Victoria.

Under continuing extreme dry conditions, it remains likely that the Commission's three major storages Dartmouth Reservoir, Hume Reservoir and Lake Victoria will be drawn down to very low levels by the end of May 2007, and Menindee Lakes would remain in NSW control (Fig. 4).

MDBC Total Storage: June 2000 to January 2007 with outlook to end May 2007

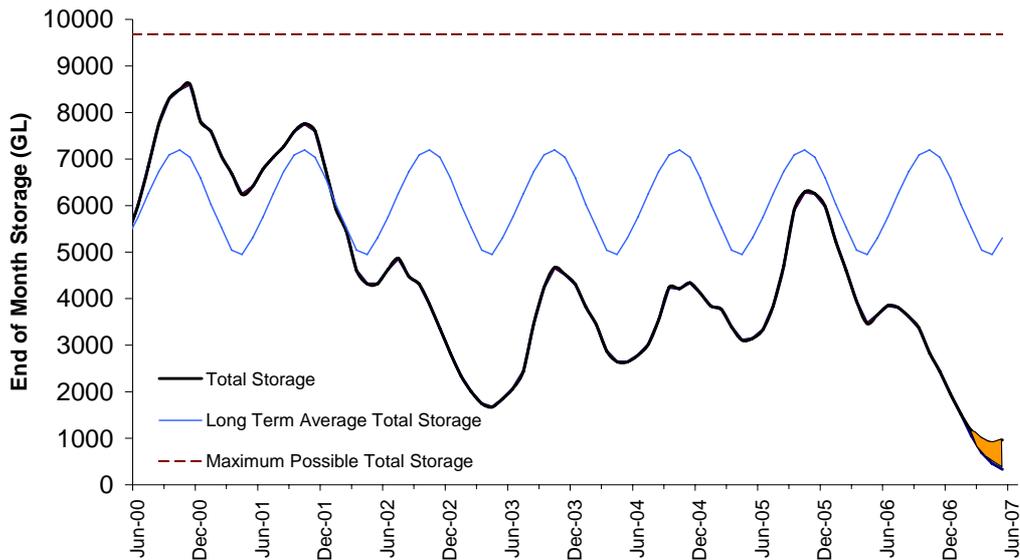


Figure 4. MDBC Total Storage -

Actual flows to end January 2007 - most likely range forecast shown in colour tan.

Note: A gigalitre (GL) is one thousand megalitres (ML)

Can existing allocations be delivered?

With storages falling to very low levels, and associated limitations in outlet capacities, operation of the River Murray remains challenging. There remains a small risk that temporary rationing of irrigation diversions in New South Wales and Victoria, and temporary reduction in flow to South Australia, could be required - particularly if severe hot weather conditions occur.

With Hume Reservoir at very low levels, the power station at Hume Dam is currently unable to operate, and the outlet capacity through the irrigation valves reduces as water levels fall. Should there be a prolonged period of hot weather, it would be difficult to replace high levels of evaporation in the river using releases from Hume. Accordingly, weir pools further downstream between Hume and Lake Victoria are currently being held near full supply level to provide additional river storage to help mitigate the risk of restrictions to irrigators. Weir pools upstream of Lake Victoria could also be temporarily lowered, possibly even below normal operating ranges, should special measures be needed to avoid restrictions to irrigators. The importance of Lake Mulwala in assisting with river regulation has increased, as from January there has been more water in Lake Mulwala than there has been in Hume Reservoir.

OUTLOOK FOR THIS SEASON

Rainfall Outlook : February to April

In its latest rainfall outlook for February to April inclusive, the Bureau of Meteorology has indicated that for the upper Murray catchment areas, there is about a 55% to 60% chance that rainfall would be above the median (see Fig. 3 below).

The Bureau has advised that there are indications that the current *El Niño* event is beginning to weaken, and this is reflected in the improved chance of achieving median rainfall in the 3 month outlook.

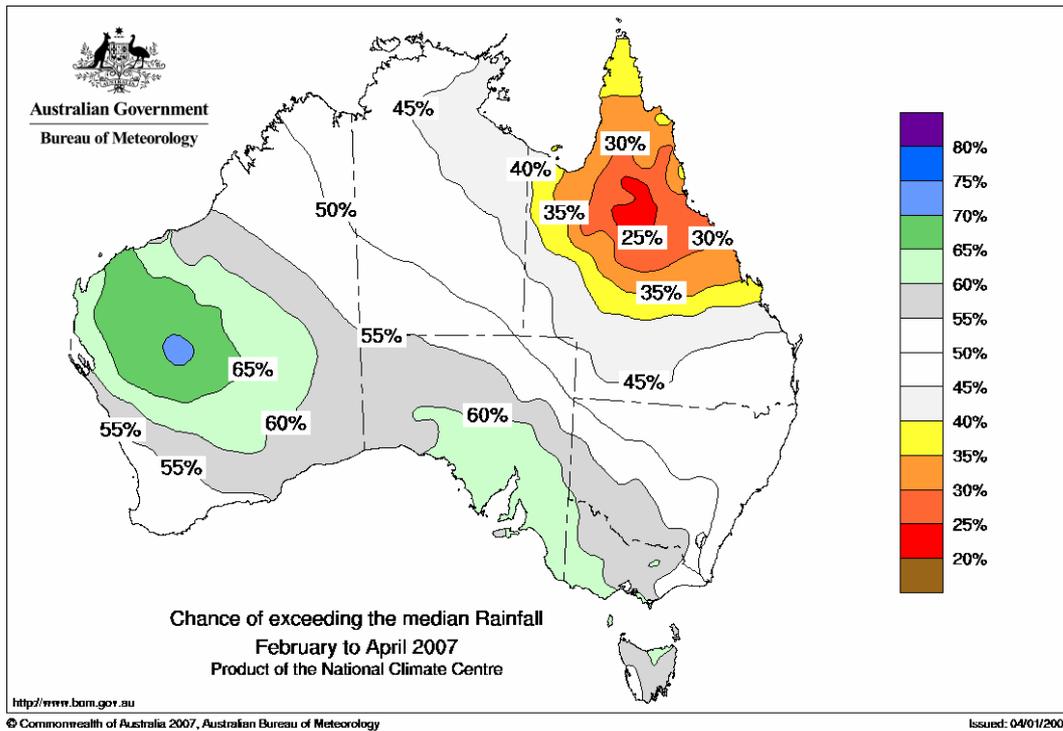


Figure 3. Chance of exceeding the median rainfall February to April 2007 (Australian Bureau of Meteorology)

Whilst system inflows remain at record low levels, the outlook for 2007-08 will remain grim. Forecasts by the Bureau of Meteorology are now more promising, with a bias towards higher than median rainfall for the period February to April.

However, catchments are extremely dry and with no significant rainfall in the higher yielding upper catchment areas for more than a year, flows from groundwater systems into streams have virtually dried up. Rainfall would need to be well in excess of average in order to produce average inflows to upper Murray storages.

State Allocations

With little change to inflows to the River Murray in recent weeks, water allocations for irrigators along the River Murray have not been changed since November 2006.

The NSW Department of Natural Resources (NSW) announced on 17 October 2006 that access to 20% of the water in high and general security allocation accounts was suspended; and on 10 November, access to a further 32% of the existing account was also suspended. The general security allocation for NSW Murray has remained at 0% all season.

Goulburn-Murray Water's announced allocation for the Victorian Murray has remained at 95% Water Right and 0% Sales since 16 October 2006.

The South Australian Minister for the River Murray announced that allocation for the River Murray has remained at 60% of licensed entitlement since 2 November 2006.

The record low inflows experienced in December and January have been offset to some extent by losses and evaporation being less than experienced in some other seasons. There has been no significant increase in water available to the States for 2006/07 from the volume available when the existing allocations were made.

How is navigation affected in the Lower Murray?

River levels at Yarrowonga, Torrumbarry, Euston, and from Mildura to Blanchetown are maintained by a series of weirs. Even though we are experiencing record low inflows to the River Murray system and flow rates in the river may be less than usual, the weir pools are to be maintained at or close to their normal full supply levels unless it is necessary to draw on the weir pools to assist in meeting water supply requirements. It is normal during winter when flow rates are low for there to be some shallow sections in the upper reaches of weir pools, which may impact on deeper draught vessels. Lock staff will be pleased to advise skippers of local conditions.

If extreme dry conditions persist into April and beyond, there may possibly be some increases in local impacts due to very low flows in the River.

OUTLOOK FOR 2007/08

Inflow conditions throughout 2007/08 would have to be at a level experienced in only about one year in ten (over the long term) in order to raise storage levels to near average levels.

Modelling of river system behaviour (with the current level of development) indicates that recovery from extreme drought events typically takes a number of years. This is because storages only rise significantly in very wet periods, particularly winter/spring when there is enough water to meet full irrigation requirements and also to store additional water for future years.

With very low storage reserves currently forecast for the end of May 2007, irrigation in 2007/08 is much more dependent on rain and run-off, than in any previous year since Dartmouth Dam was completed in 1979.

This does *not* mean there will be no water available in 2007/08. Murray catchment inflows, together with any future contributions from the Snowy Mountains Scheme, would still be available, albeit at very low levels if dry conditions continue.

Contingency Plans for 2007/08

The 12 month period ending January 2007 is the driest 12 month period in 115 years of historical inflow record. A repeat of the same rainfall pattern for another 12 months would result in even lower inflows due to drier catchments and reduced baseflows from groundwater systems. If the Snowy Mountains Scheme continues to experience record low inflows in 2007/08, then releases from the Scheme to the Murray would also be less than the record low releases in 2006/07. Under this scenario, it is likely that there would be just enough water in the Murray to meet evaporative losses and critical water needs of all the towns and cities that rely on the Murray from Albury to Adelaide and beyond, provided a number of special measures is implemented.

Whilst the probability of this extreme scenario eventuating is very low, and never experienced in our records, it is nevertheless prudent that contingency planning and implementation continue until such time as there is sufficient rain and inflow to give sufficient confidence that the water crisis has passed.

Following the Water Summit of 7 November 2006, a group of high-level officials drawn from the partner Governments, and the office of the Murray-Darling Basin Commission, met in late 2006 to develop contingency plans to secure urban and town water supplies for 2007-08 in the event of continuing extreme drought conditions.

A joint statement issued on 12 January 2007 announced the following measures to be implemented immediately:

- a low end-of-season target reserve for Lake Victoria;
- reduced minimum flow targets;
- early pumping from the River Murray to build reserves in Mt. Lofty storages in South Australia; and
- disconnecting selected permanent wetlands which are artificially inundated. A fact sheet on "Drying of Wetlands - Getting the Balance Right" is available for download at http://thelivingmurray.mdbc.gov.au/whats_new

Further measures would be progressively implemented if extreme dry conditions persist into the 2007/08 water year.

The media statement on the Contingency Plan is available on the following Web Site:

www.markvaile.com.au/news

ADDITIONAL INFORMATION

How do I get more information?

MDBC will provide further drought updates in coming months, and will release periodic operational outlooks over the remainder of this season and next. Additional information is available at 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, phone: 0407 006 332