



River Murray System

Operational Update

December 2006
Issue 1

Welcome to the Murray-Darling Basin Commission's (MDBC) first edition of the River Murray System Operational update. It aims to fill the gap between our Drought Updates and Weekly Reports by providing more detailed information on River Murray System operations and outlooks.

Operational Updates will communicate critical aspects of river operations including projected storage levels and specific operations including potential drawdowns of weirs.

River Murray Water (RMW) is the operational division of MDBC responsible for sharing the waters of the River Murray System between NSW, Victoria and South Australia. It assesses water availability for a range of potential future inflow conditions using over 100 years of historical inflow data. RMW plans seasonal river operations required to deliver water to the States and manages the river on a day to day basis to meet each State's water requirements.

Operations over December-January

Despite low storage levels and limited water availability, river operations are expected to remain relatively 'normal' over the coming December-January period. This means that weir pools should remain at normal operational levels, however flows will be slightly lower than usual across much of the system.

Operations will be governed by the release of water from Dartmouth and Hume to meet downstream requirements. The operation of the system will be very sensitive to weather events: a front of rain or cooling conditions which reduce diversions and losses may permit the reduction of transfers from Hume to Lake Victoria. Also, the high transfer rate from Dartmouth to Hume will be eased at the earliest opportunity to reduce erosion of river banks.

If extremely hot weather periods are observed, there may be a need for temporary minor weir drawdowns and possibly even temporary restrictions to irrigation diversions upstream of South Australia.

Normal summer recreational access to the river can be expected over December and January.

Outlook for February-March

Hume storage may approach its minimum operating level (1% of capacity) in late February under continuing extreme dry conditions. Consequently there is an increased chance of temporary supply restrictions over this period.

Weir pools may be temporarily lowered to assist with maintaining river flows. It is too early to know exactly if, when and the extent of any such lowering of weir pools. Lake Mulwala could be a crucial storage in this regard given its size and

location. It is unlikely to be drawn down below 124.2 m AHD over the February/March period (i.e. 0.7m below full supply level) to ensure continued supply to the major irrigation off-takes. The potential for weir pool lowerings will greatly depend on weather conditions and irrigation diversion patterns. Updates will be provided early in the New Year and thereafter to provide as much notice as is possible.

Lake Mulwala could be a crucial storage later this season if the drought continues given its upriver location and its capacity (over 100 GL)

Outlook for April-May

Over this period and in the event of continuing extreme dry conditions it is expected that all major reservoirs and the lower lakes in South Australia could be at very low levels. There is an increased potential for significant drawdowns of weirs in order to "bank" as much water as possible for 2007/08. Such an operation would aim to minimise the draw on Hume and Dartmouth Reservoirs by meeting downstream flow requirements using water held in weir pools. It is expected that winter tributary inflows could then be used to refill weir pools.

Consideration will also be given to reducing minimum flow targets across the system to assist in maximising water availability for 2007/08.

RMW and the State agencies understand that the extent and timing of any weir drawdowns and reductions to minimum flow targets will be particularly important to local communities. Weir pools located in the more intensely developed areas of the river would only be lowered as a last resort and as much notice as possible would be provided before proceeding.

Due to the effects of record low inflow and storage level conditions, current river operations are in new territory. Accordingly river operations will continue to be kept under constant review. It is possible that previously unseen measures will be required to cope with developing outcomes.

Storage Behaviour

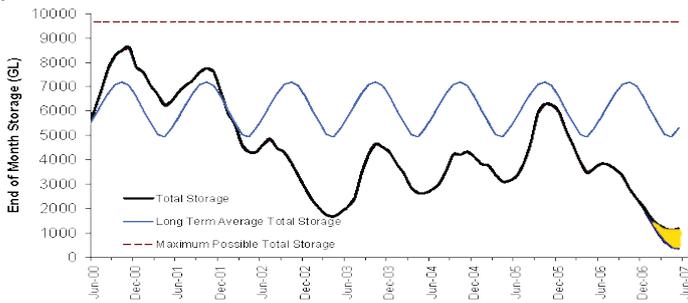
Early June 2006 saw higher water storage levels than one year earlier, but the failure of winter/spring rains and record low inflows have brought rapidly falling storage levels. The rate of fall in storage experienced over the 2006 winter/spring period was similar to that experienced in the 2002/03 drought.

RMW has adopted a new "worst case scenario" for future inflows to the River Murray System for planning purposes. The assumed worst case has been altered downwards in light of the recent very dry conditions where inflows were significantly lower than the previous observed minimum. Projected total and individual storage levels are shown overleaf.

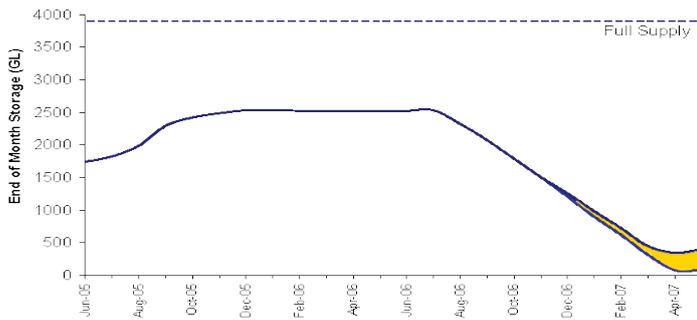
Operational Update

The yellow part of the graph shows a range of outlooks from 'worst case' inflows up to about average inflows. Wetter conditions might mean higher storage levels.

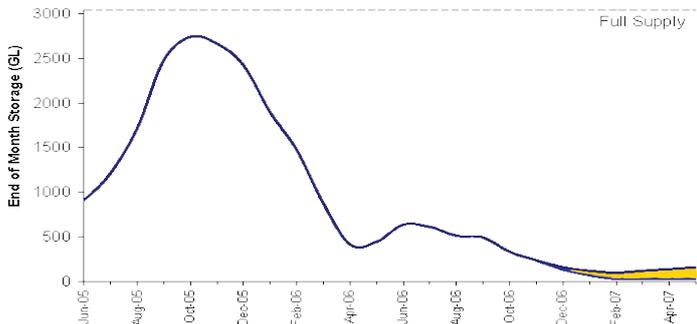
Total Storage - June 2000 to May 2007



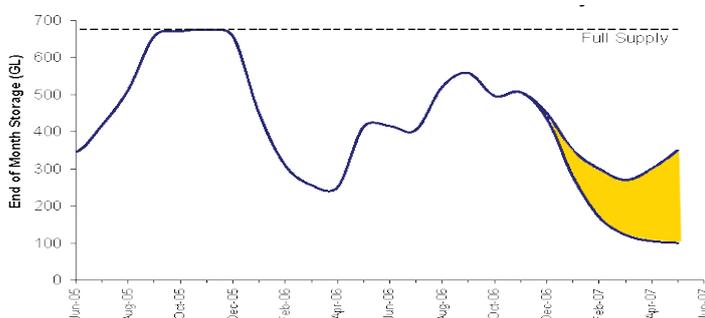
Dartmouth Dam - June 2005 to May 2007



Hume Dam - June 2005 to May 2007

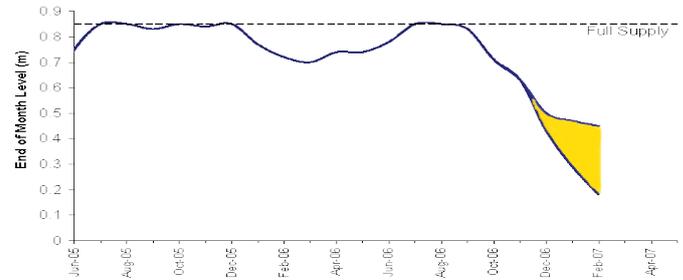


Lake Victoria - June 2005 to May 2007



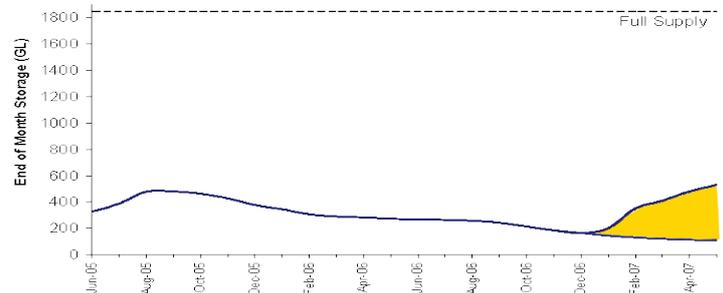
Lower Lakes - June 2005 to Feb 2007

Outlooks for the lower lakes will be highly sensitive to local weather conditions and water saving measures in South Australia so a shorter range outlook is provided.



Menindee Lakes is a special case for MDBC as control of these waters reverts to New South Wales when storage falls below 480 GL and returns to MDBC control when storage next exceeds 640 GL. Menindee Lakes has been under NSW control since March 2002.

Menindee Lakes - June 2005 to May 2007



"Dead storage" is the volume of water held in storage below a dam's minimum operating level. It cannot be released under gravity through the dam's outlets. In some cases it may be accessed by pumping or syphoning. River Murray System storage dead storage volumes are:

- Dartmouth Reservoir 80 GL
- Hume Reservoir 30 GL
- Lake Victoria 100 GL

Further Operational Updates will provide up-to-date information on reservoir operations, releases and emerging problems. They will also feature any improvements to conditions and outlooks.

For further information

Please see the MDBC website at: www.mdbc.gov.au
 The following information reports and updates can be found at these web addresses on the MDBC website:
 MDBC Drought updates:
http://www.mdbc.gov.au/rmw/drought_updates
 RMW Weekly reports:
http://www.mdbc.gov.au/rmw/river_information_centre
 or contact Sam Leone, Communications Unit for further information:
 0407 006 332