

**Murray-Darling Basin
Dry Inflow Contingency Planning
Overview Report to First Ministers
September 2007**

Overview Report

This is the third Murray-Darling Basin (MDB) Dry Inflow Overview Report to the Prime Minister, the Premiers of New South Wales (NSW), Victoria and South Australia, and the Chief Minister of the Australian Capital Territory (ACT). The first and second Overview Reports and the June 2007 update on MDB inflows are available on the Department of the Environment and Water Resources' web site (www.environment.gov.au).

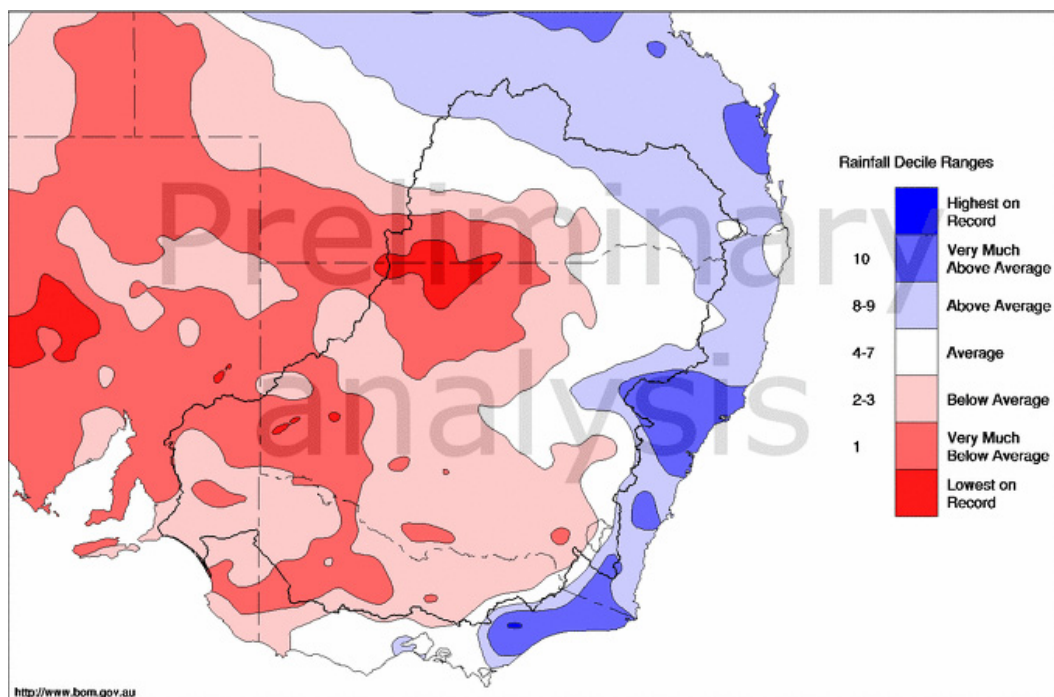
This report presents an update of the situation in the MDB and outlines the recommendations agreed by First Ministers to ensure that the southern Basin system continues to be managed as efficiently as possible through the course of 2007-08. Recommended measures to be taken in 2007-08 to meet critical water requirements in 2008-09 are also agreed by First Ministers and outlined in this report.

Water availability outlook

The 2007-08 water availability outlook for the southern Basin system is serious and has deteriorated through August.

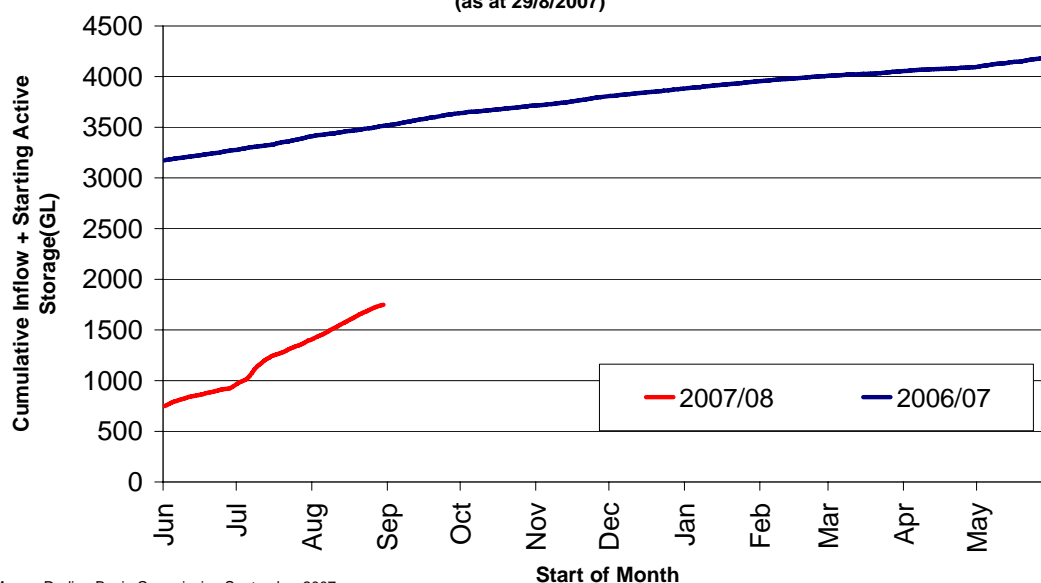
During the three month period from 1 June to 28 August 2007 rainfall was below average across much of the MDB (Figure 1). In August, the effects of low rainfall were exacerbated by very high temperatures, particularly during the second half of the month, with associated strong and dry winds. Inflows received so far in 2007-08 are still well below average and are among the lowest on record.

Figure 1: Preliminary MDB Rainfall Deciles 1 June – 28 August 2007



Due to severely depleted storages at the beginning of the 2007-08 water year there is significantly less water in Murray System storages now than there was at this time in 2006 (Figure 2). If inflows continue to be below average the reserves held in Murray System storages at the beginning of 2008-09 will be much the same as the low levels at the beginning of 2007-08, and possibly less. The likelihood that sufficient rain will fall over spring to relieve significant rainfall deficiencies is low. The modelled outlook to November 2007 does not show a strong trend to either above average or below average rainfall across the southern Basin system.

Figure 2: Murray System Inflows plus 1 June Active Storage
(as at 29/8/2007)



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At 27 August 2007 water availability was at 1500 GL (about 1250 GL above critical demand). This water is being shared under the water sharing arrangements agreed by First Ministers on 20 June 2007. Under the water sharing arrangements (at 27 August 2007) NSW is entitled to 195 GL and Victoria is entitled to 490 GL for consumptive use. The 13 GL of water available for environmental use is held equally by NSW and Victoria. South Australia is entitled to 262 GL for consumptive use plus 225 GL for dilution flow and 333 GL to cover losses.

Under the water sharing arrangements, once water availability reaches around 2200 GL, a transition back to water sharing arrangements under the Murray-Darling Basin Agreement will commence, although special accounting water provisions of the Agreement are likely to still be in operation. Water sharing arrangements as set out in the Murray-Darling Basin Agreement will fully resume when total water availability reaches around 3000 GL.

Projected salinity levels in the Lower Murray (i.e. below Wentworth, NSW) indicate very sharp increases commencing at Morgan through to Murray Bridge from September 2007.

Salinity in Lake Alexandrina is projected to reach 2500 EC early in the 2008. Water levels below Lock 1 are projected to fall from their current level of 0.25m Australian Height Datum (AHD), to negative 0.6m AHD in April 2008. Under these projected conditions, massive fish death in the Lower Lakes is more likely. For the worst case scenario, water levels will continue to fall, reaching negative 1.5m AHD in the latter half of 2008.

Allocations to entitlement holders

On 28 August 2007 the NSW Government announced that whilst 2007-08 allocations remain at zero, 25 percent of the water suspended in 2006-07 and 25 percent of water carried over from 2006-07 by Murray Valley water users will be immediately re-credited to accounts and available for use. Further, in NSW water is being allocated on a month-by-month basis to provide water for non-deciduous tree crops, such as citrus, and is also being provided to other high security entitlement holders who have successfully applied to the NSW Government for water to meet critical needs. On 15 August 2007 Goulburn-Murray Water announced a 5 percent bridging allocation to Victorian Murray Valley high reliability entitlement holders to enable

irrigators to plan early season water use, but advised that immediate access to water from channels would be delayed until there was a widespread demand. Water carried over from 2006-07 is available to entitlement holders in Victoria, but in some cases cannot be delivered until the delivery channels are filled and operated.

On 2 August 2007 South Australian River Murray irrigation allocations were increased from 4 percent to 13 percent and the 30 GL of water carried over by irrigators from 2006-07 was made available, 18 GL remains unallocated. There was no change to these allocations when an update was announced on 23 August 2007.

The NSW Government announced on 8 August 2007 that inflows into the Murrumbidgee Valley during July 2007 would allow the repayment of the 5 percent of water suspended in general and high security licensees' accounts in 2006-07 as well as water carried over from 2006-07. On 28 August 2007 allocations for Murrumbidgee high security licence holders were increased to 60 percent. In Victoria, on 3 September 2007 Goulburn-Murray Water announced an increase in allocation of high-reliability water shares from 15 percent to 17 percent for the Goulburn system and access to 10 percent high-reliability water shares in the Broken system for a period of two months ending 31 October 2007. Continuing low inflows have prevented any allocations in the Victorian tributary systems of Campaspe, Loddon and Bullarook Creek.

Impacts of continuing low water availability

The death of some permanent plantings has already occurred in the southern MDB. There is a significant risk that allocations will be insufficient to avoid further widespread permanent plant losses across the Murray System. Grape growing is the most prevalent horticulture in the Murray, followed by citrus, stone fruit and other fruit and tree nut growing.

Productivity of some crops such as citrus could also be significantly impacted by salinity in 2008.

Horticulturalists will take production decisions, such as crop thinning, pruning or prioritising water use, in early spring to either optimise the productive capacity for available water or ensure that water demand is reduced. These production decisions could significantly reduce the loss of permanent plantings, although there could be productivity impacts in subsequent years.

The impact of critically low water availability is also being experienced by other water dependent agricultural sectors, including the dairy industry, vegetable growers and annual grain and fodder cropping including the rice industry.

Water users will need to receive timely and accurate forecasts of water allocations from water authorities over coming months so that they can make key management decisions. To ensure that information is available for this purpose, governments will continue to work closely with industry associations and stakeholder groups.

Sharing of unregulated flows in the Murray System

Unregulated flows are normally declared by the Murray-Darling Basin Commission when high flows are forecast to occur that cannot be used to meet South Australia's entitlement flow or captured and re-regulated in Murray System storages. This declaration triggers processes to permit use of the unregulated flows for purposes and under rules that vary between jurisdictions. The location, timing and volumes of these unregulated flows are unpredictable and highly variable. However, even small volumes of unregulated flow may be very significant in the current context of low water availability.

Modified arrangements to cater for the use of unregulated flows for the current period of record low water availability have been put in place. Special arrangements for the sharing of unregulated flows (as described in Recommendation 6) will be implemented by the Murray-Darling Basin Commission while the States are in the period of special water sharing arrangements agreed by First Ministers on 20 June 2007. When normal State water sharing arrangements under the Murray-Darling Basin Agreement resumes the normal management of unregulated flows will also resume. The transition back to normal water sharing arrangements under the Murray-Darling Basin Agreement will not commence until total water availability reaches around 2200 GL.

Disconnection of regulated wetlands in the Murray System

Disconnection of regulated wetlands to save water in the system continues in each State.

The NSW Government temporarily disconnected one regulated wetland (Tareena Billabong) in June 2007. At Euston Lakes evaporation savings will be achieved via lowering of the weir pool. This will have the same effect as disconnecting these wetlands.

In South Australia, twenty-seven wetlands were closed in January 2007 and two additional wetlands (Ross and Jaeschke Lagoons) were disconnected in June 2007. The Minister for the Environment and Water Resources determined on 24 August 2007 that the temporary disconnection of a further seven wetlands in South Australia does not need approval under the *Environment Protection and Biodiversity Conservation Act (1999)* (EPBC Act). The Murray-Darling Basin Commission has agreed to funding disconnection of six of these wetlands, including the provision of alternative water supplies for existing users.

The Victorian Government has completed a preliminary assessment of potential wetlands for temporary disconnection.

Senior officials will continue to review the extent to which further wetland disconnection for the purposes of contingency planning is recommended in the Murray System in 2007-08.

Temporary weir near Wellington

After a referral by South Australia, the Australian Government Minister for the Environment and Water Resources has determined that the construction of a temporary weir near Wellington is a controlled action for the purposes of the EPBC Act. The temporary weir is to be assessed at the level of an Environmental Impact Statement.

The South Australian Government will make an announcement regarding the weir during September 2007.

Contingency Planning in 2008-09

Senior officials recommend that contingency measures, initially agreed by First Ministers in response to the December 2006 Contingency Planning Report and implemented during 2007, should if necessary be implemented in a low water availability situation 2008-09. Further water sharing principles may be necessary to deliver critical water to each state in a low inflow situation. The implementation of these measures in 2008-09 would be subject to confirmation of the efficacy of these measures. Further, any decision on water sharing arrangements will need to be taken in light of the nature of the collective reserve for 2008-09 and will require a determination by the Murray-Darling Basin Ministerial Council.

Due to the potential for extremely low water availability continuing through to 2008-09 senior officials are now focusing on ensuring that critical supply for 2008-09 is able to be secured through the course of 2007-08. The Senior Officials' Group considers that five principles (outlined under Recommendation 7) could underpin measures (including the possibility of a reserve) to ensure there is enough water available to run the river and for critical needs in 2008-09.

Next report

The next report will be provided in October 2007 and will be focused on the volume of a reserve for 2008-09, as well as the source of water and timing of a reserve for 2008-09.

Recommendations

The Senior Officials' Group (SOG) recommends that First Ministers:

1. **NOTE** that the water supply situation in the southern Basin system is critical.
2. **AGREE** that contingency planning should continue.
3. **NOTE** that, given the current water situation, there is a growing likelihood that allocations will be insufficient to avoid significant production losses across most of the Murray System in horticulture and other water dependant agricultural sectors.
4. **AGREE** that governments will continue to work with industry associations and stakeholder groups to ensure information is available to help producers make business decisions.
5. **AGREE** that water authorities continue to provide realistic assessments to water users regarding forecast allocations and salinity levels in the system over the coming months, so that irrigators and other industries can make key management decisions.
6. **NOTE** that unregulated flows which occur in the southern Basin system while operating under the special water sharing arrangements agreed by First Ministers on 20 June 2007, will be managed as follows:
 - I. Each State may use up to one third of forecast unregulated flows (as declared by the Murray-Darling Basin Commission in a 'unregulated flow forecast determination') to address its priority needs, including facilitation of water delivery for those purposes.
 - II. To the extent it is practicable, flows unable to be captured for these purposes will be directed to highest priority river recovery and environmental watering needs.

7. **AGREE** measures be taken in 2007-08 to ensure there is enough water available to run the river and for critical needs in 2008-09, as follows:
- I. In managing issues around dry inflow planning, markets should be used to the maximum extent possible.
 - II. Arrangements (including the possibility of establishing a 'collective' reserve) should be established by the Murray-Darling Basin Commission in 2007-08 to ensure there is sufficient water in 2008-09 to enable operation of the river and delivery of agreed flows (including 696 GL dilution flow to South Australia), as well as provisions to manage projected poor water quality (particularly salinity and algal blooms).
 - III. To assist South Australia to store additional reserves, South Australia should be permitted to store reserves in NSW and Victorian airspace in Murray System storages. (It is noted that South Australia is able to access some or all of the volume needed to meet critical requirements from volumes provided for dilution and loss purposes.) To assist the ACT, storage arrangements may need to be negotiated with NSW and Snowy Hydro Ltd.
 - IV. Operational decisions on the measures to be adopted, including the source, volume and timing of establishing a collective reserve should be made by the Murray-Darling Basin Commission in September 2007, taking into account SOG recommendations.
 - V. Jurisdictions are encouraged to allow water to be carried over from 2007-08 to 2008-09, which would be available in storages from the beginning of the 2008-09 water year. South Australian carryover held in NSW and Victorian airspace in Murray System storages should have the same priority for delivery as NSW and Victorian carryover. Delivery of any carry-over will depend on having sufficient water available to meet transmission losses.
8. **AGREE** that contingency measures, initially agreed by First Ministers in response to the December 2006 Contingency Planning Report and implemented during 2007, should if necessary be implemented in a low water availability situation 2008-09. Further water sharing principles may be necessary to ensure critical water needs in each state in 2008-09, and will be proposed as required.

Notes:

The 'Murray System' means the water resources of the southern Murray-Darling Basin which are allocated to States under the terms of the Murray-Darling Basin Agreement, and subject to the management decisions of the Murray-Darling Basin Commission. Broadly this includes the main channel of the River Murray, its anabranches and effluents, the Lower Darling River downstream of Menindee Lakes (when volume in the Menindee Lakes exceeds certain triggers), tributaries of the River Murray upstream of Albury, and the four MDBC managed storages (Dartmouth and Hume Reservoirs, Lake Victoria and the Menindee Lakes).

The 'southern Basin system' means the Murray System as well as tributary systems such as the Murrumbidgee, the Goulburn, Ovens, Loddon and Campaspe, and their upstream storages.