

REPORT FOR THE WEEK ENDING

Wednesday, 5 March 2008

Our Ref : M2008/00001/prs, ms
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7 March, 2008



Rainfall and Inflows

There was little or no rain across the southern half of the Murray-Darling Basin this week. The northern half received some good falls of between 25 and 50 mm with Coonabarabran in the central west slopes of NSW receiving 74 mm (*see Map 1*). The lack of rain over the Murray catchments has resulted in a continuing decline in Murray River inflows (*see plot on the last page*).

February 2008 Summary

Whilst above average rainfall has been observed in eastern NSW and Queensland during February, parts of the Basin in the southwest received their lowest rainfall on record (*see map 2*). Most areas experienced temperatures in the mid - high 30's over February. Maximum daytime temperatures along the length of the Murray River during February were 1 to 4 °C below the long term average (*see map 3*).

Murray System Inflows (excluding inflow to Menindee Lakes) totalled around 100 GL over February compared with the long term average of 170 GL. Inflow to Menindee Lakes for February was about 200 GL. Total MDBC storage including Menindee Lakes increased by 80 GL during February to around 1 900 GL (20 % capacity). Widespread heavy rain is needed over the coming months to significantly improve the outlook for next season (*see drought update and media release attached*).

River Operations

Storage in Dartmouth Reservoir remained steady this week at about 682 GL with release being maintained at about 450 ML/day. Release from Hume Reservoir continues to be minimised whilst meeting downstream requirements and maintaining Lake Mulwala in the target range of 124.2 to 124.5 m AHD. Release from Yarrowonga Weir was maintained near 5 000 ML/day over the past week and if there are no increases in demand over the coming weeks, it may be reduced slightly to assist with conserving water resources in Hume and Dartmouth Reservoirs.

River flow between Yarrowonga and Wentworth Weirs will be gradually reduced as we transition from summer to autumn. Weir pools, in particular Torrumbarry Weir and Euston Weir (both of which are currently at full supply level), will be used if necessary to sustain flows along the river and meet diversion and minimum flow requirements. These pools may need to be partially drawn down over the coming weeks if demands rise significantly.

Flow in the Darling River at Bourke has receded from 10 500 to 8 000 ML/day over the past few days and is likely to continue falling unless there is further significant rain. Despite inflows into Menindee Lakes decreasing, there is still sufficient flow in transit in the Darling River to raise storage in these lakes to about 550 GL (32 % capacity). Storage in Menindee Lakes increased this week by 70 GL to 470 GL (27 % capacity).

Storage in Lake Victoria fell this week from 371 to 363 GL (54 % capacity). Flow to South Australia was reduced from 3 500 to 3 100 ML/day over the past week and similar reductions in flow are now being observed further downstream in South Australia.

DAVID DREVERMAN
General Manager



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**).

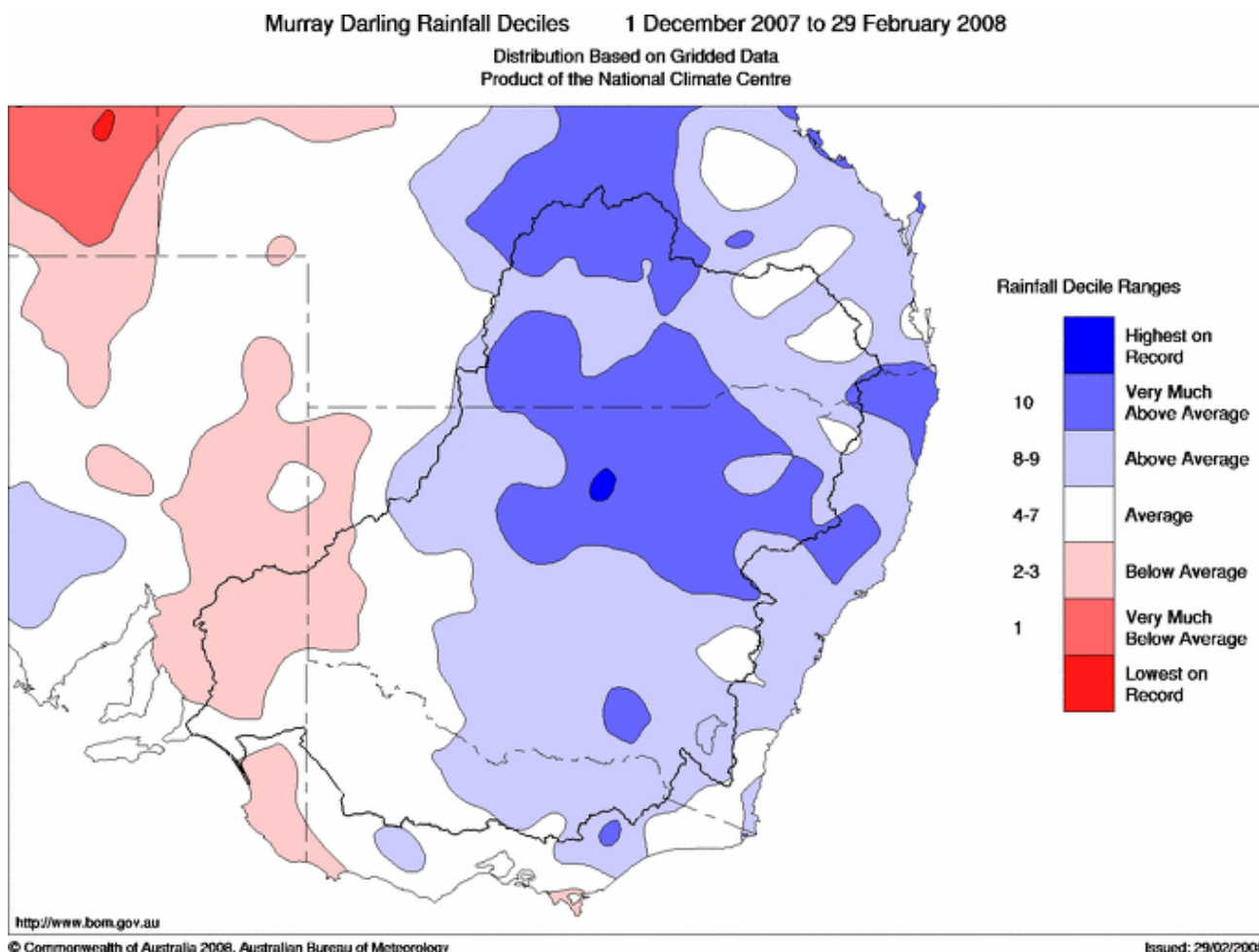


Figure 1 Murray-Darling Basin Rainfall Deciles
December 2007 – February 2008
(Bureau of Meteorology)

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)

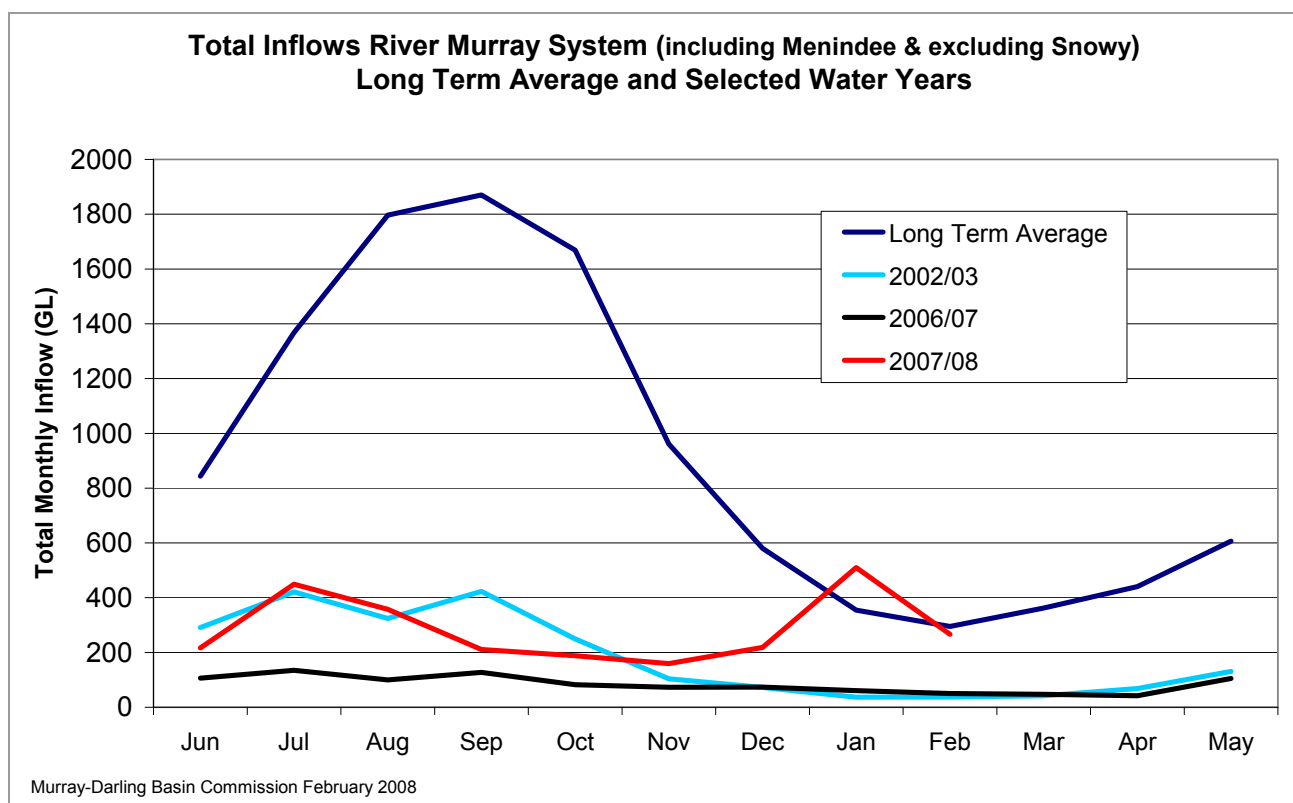


Figure 2 – Total River Murray System Inflows (Murray-Darling Basin Commission)

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.

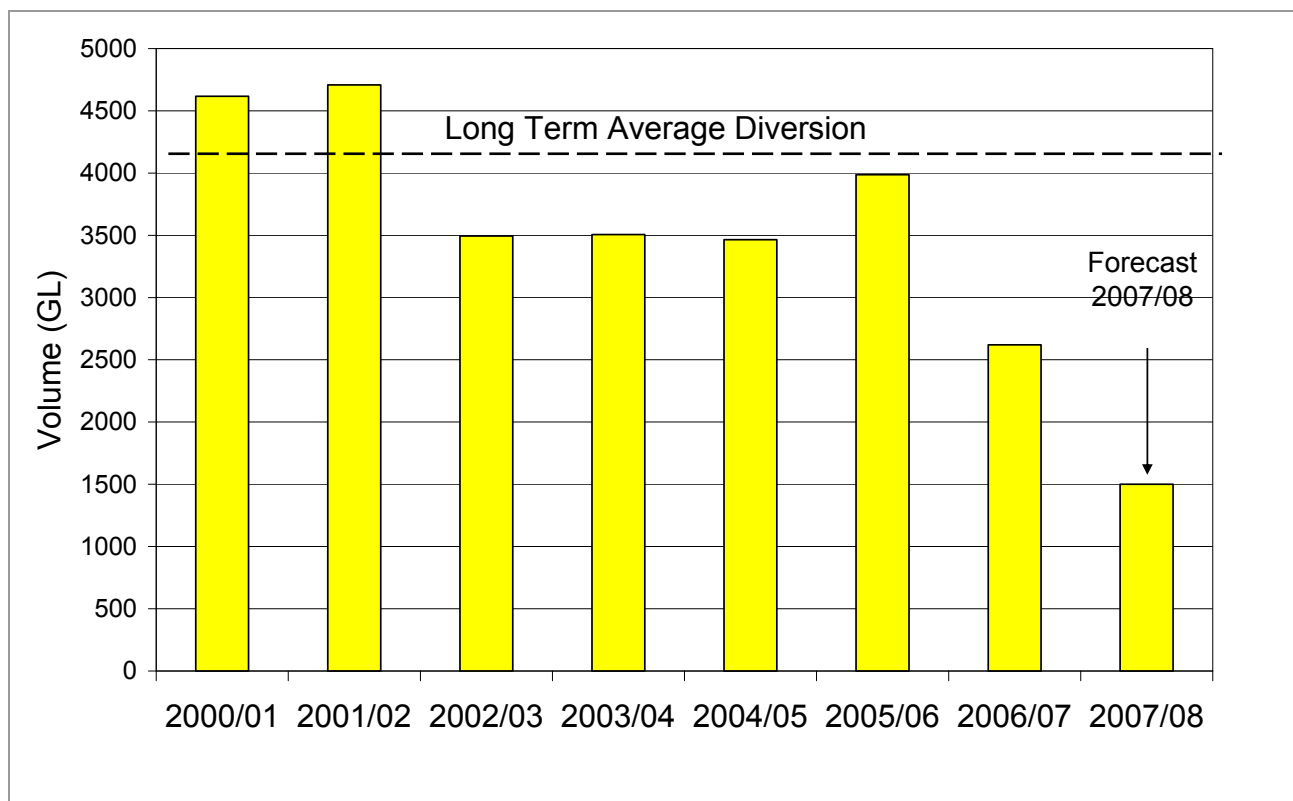


Figure 3 Total Murray System Diversions
2000/01 to 2007/08
(Murray-Darling Basin Commission)

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



MEDIA RELEASE

Date: 3 March, 2008

Murray system still suffering record drought

Despite flooding rains in Queensland and parts of New South Wales, much of the Murray-Darling Basin is still suffering low water availability and the Murray system is still in drought.

In its latest Drought Update, the Murray-Darling Basin Commission says the drought is having a devastating effect on irrigators and the environment.

Chief Executive Dr Wendy Craik AM said the prolonged and severe drought had magnified the environmental impacts of water extraction and river regulation.

“This has accelerated the decline of floodplain ecosystems,” she said. “The condition of the Coorong and Lower Lakes in South Australia is grave and deteriorating. Salinity in the Lower Lakes continues to rise and as water levels fall, acidification presents a significant threat.

“We are working with our partner governments to best manage the available water to meet human requirements, irrigation and to mitigate environmental decline wherever possible,” Dr Craik said.

“We are managing the Murray System to conserve as much water as possible in major storages to maximise water availability to the states in 2008/09.

“While 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.”

Dr Craik said allocation improvements during the season would depend strongly on rainfall and inflows – particularly over winter/spring 2008.

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

Despite good summer rainfall, inflows in the central and southern parts of the Basin remain low and headwater storage levels remain well below average.

“Total inflows to the Murray System in 2007-08 were more than double those of 2006-07 but still only about 25% of the long term average,” Dr Craik said.

“The drought has not loosened its grip on irrigators and the environment for much of the Murray-Darling Basin.”

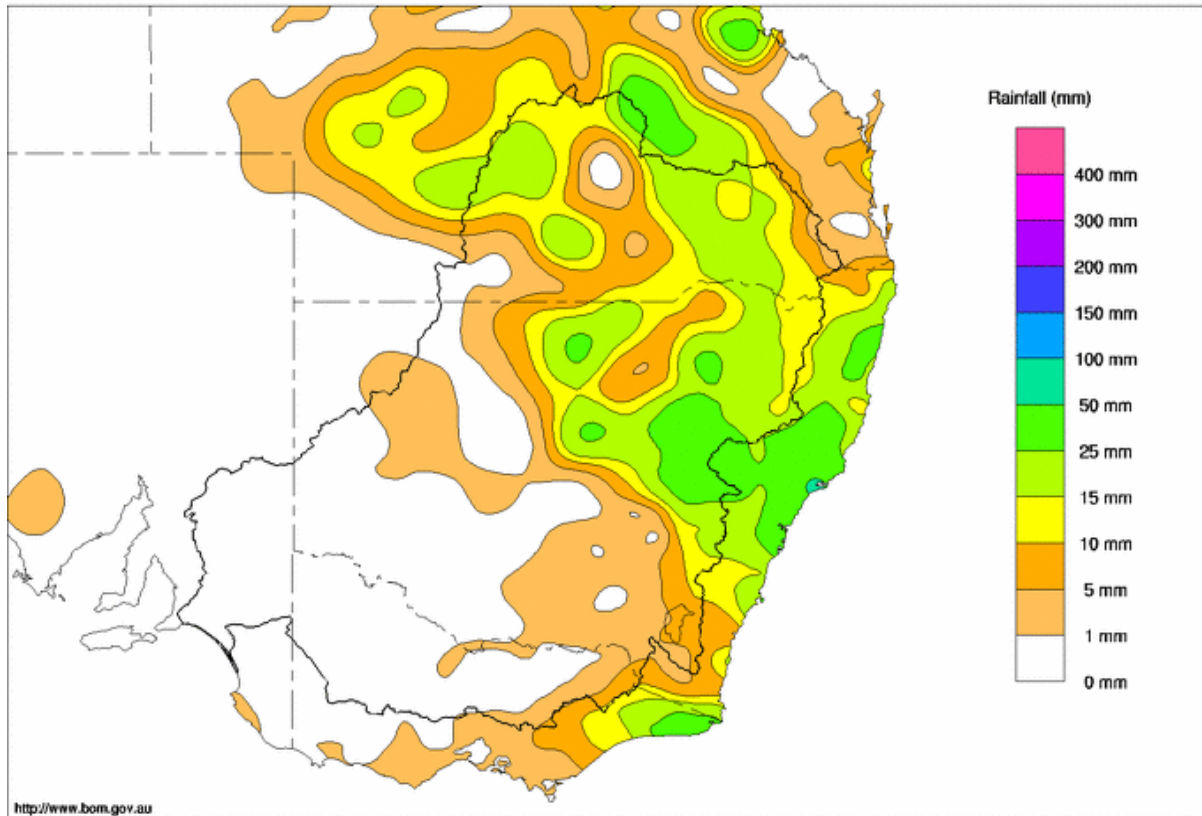
A copy of the MDBC Drought Update is available for free download off the MDBC website at www.mdbc.gov.au

Media contact: Sam Leone 0407 006 332

Trim ref: 08/2367

Murray Darling Rainfall Analysis (mm) Week Ending 5th March 2008

Product of the National Climate Centre



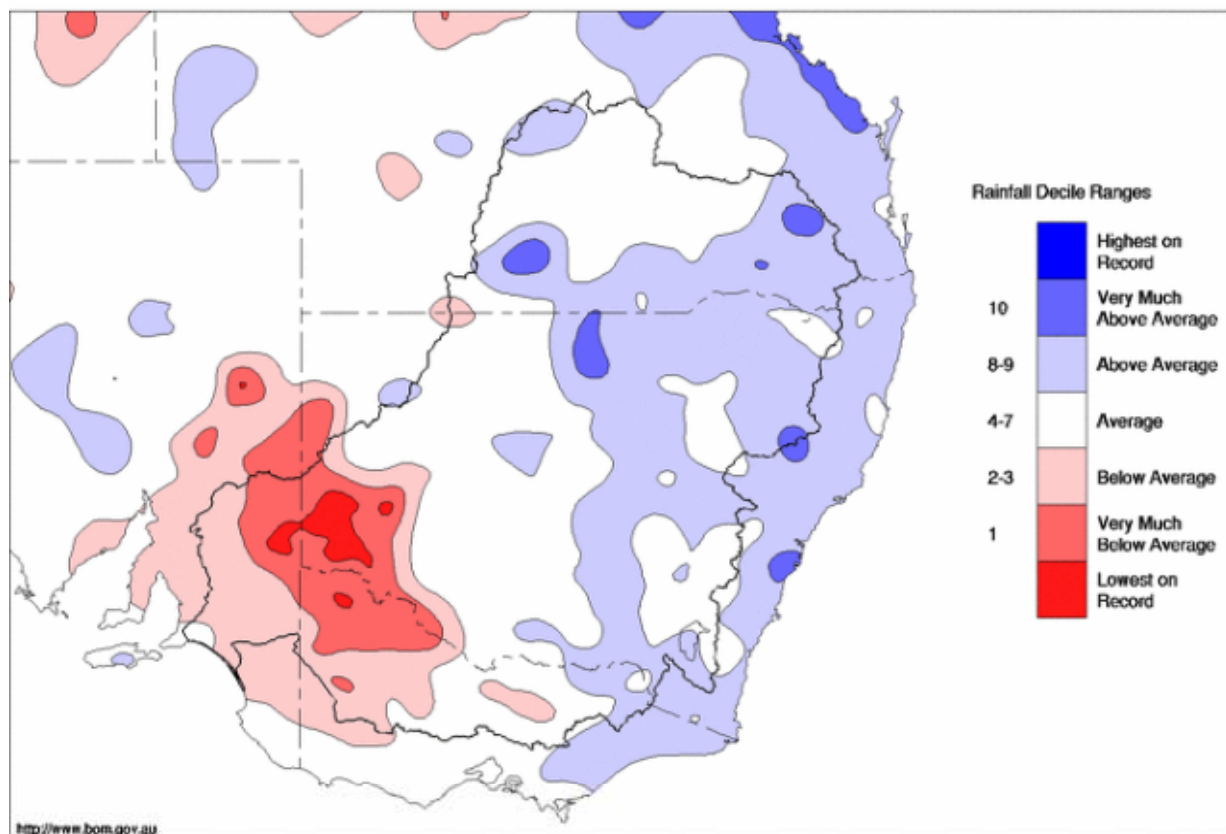
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Issued: 05/03/2008

Map 1

Murray Darling Rainfall Deciles February 2008

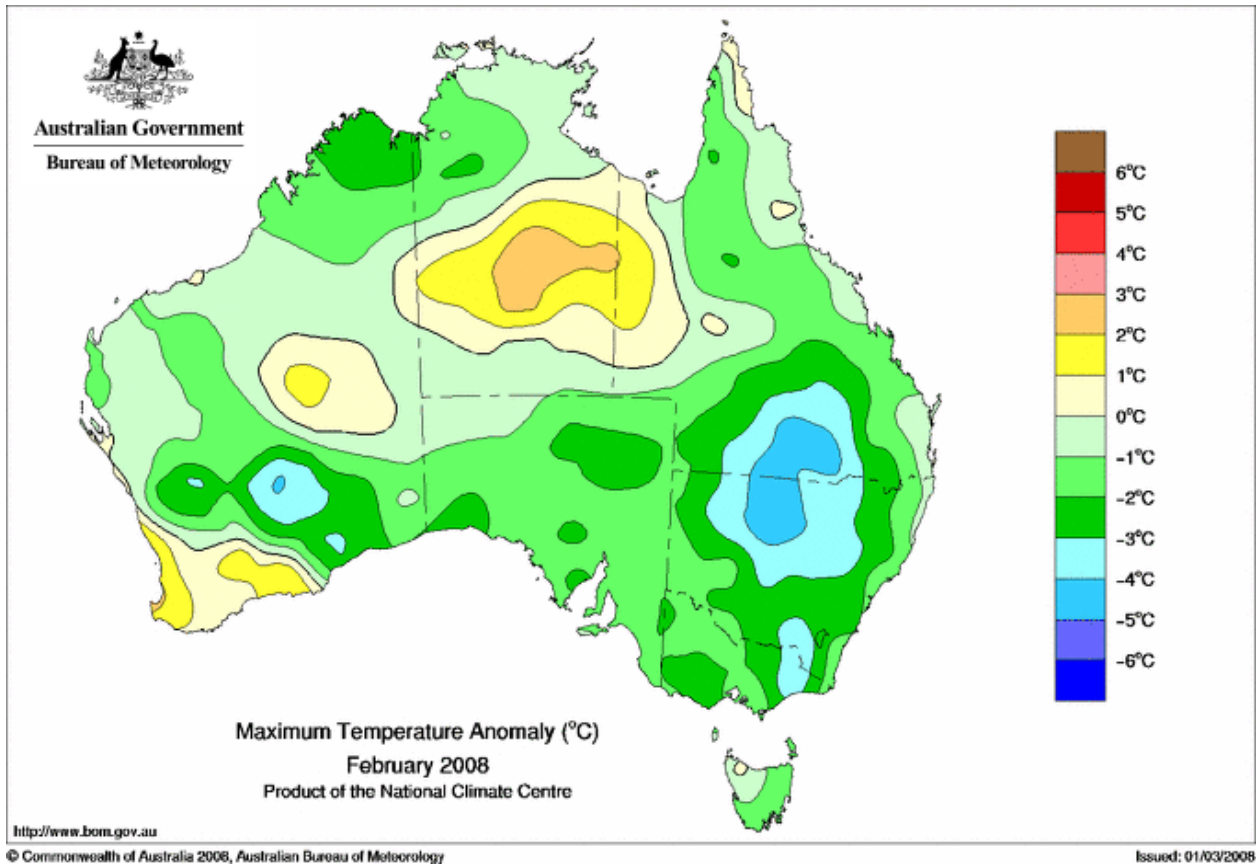
Distribution Based on Gridded Data
Product of the National Climate Centre



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Issued: 02/03/2008

Map 2



Map 3

Week ending Wednesday 05 Mar 2008

Water in Storage

MDBC Storages	Full Supply Level (m AHD)	Full Supply Volume (GL)	Current Storage Level (m AHD)	Current Storage		Dead Storage (GL)	MDBC Active Storage (GL)	Change in Storage for the week (GL)
				(GL)	%			
Dartmouth Reservoir	486.00	3 906	410.98	682	17%	80	602	-2
Hume Reservoir	192.00	3 038	172.05	406	13%	30	376	-32
Lake Victoria	27.00	677	24.18	363	54%	100	263	-8
Menindee Lakes		1 731 *		471	27%	(- -) #	0	+58
Total		9 352		1 922	21%	--	1 241	+16

* Menindee surcharge capacity 2050 GL

% of Total Active MDBC Storage = **15%**

NSW takes control of Menindee Lakes when storage falls below 480 GL, and control reverts to MDBC when storage next reaches 640 GL

Major State Storages

Burrinjuck Reservoir	1 026	430	42%	3	427	-1
Blowering Reservoir	1 631	433	27%	24	409	+14
Eildon Reservoir	3 390	611	18%	100	511	-29

Snowy Mountains Scheme

Snowy diversions for week ending 04-Mar-2008

Storage	Active storage (GL)	Weekly change (GL)	Diversion (GL)	This week	From 1 May 2007
Lake Eucumbene - Total	574	-13	Snowy-Murray	+10	326
Snowy-Murray Component	443	-13	Tooma-Tumut	+1	149
Target Storage	1 410		Nett Diversion	9.0	177
			Murray 1 Release	+9	548

Major Diversions from Murray and Lower Darling (GL)

New South Wales	This week	From 1 July 2007
Murray Irrig. Ltd (Net)	2.8	65.5
Wakool System loss	0.6	37.0
Western Murray Irrig.	0.7	17.6
Licensed Pumps	1.9	63.1
Lower Darling	0.2	8.6
TOTAL	6.2	191.8

Victoria	This week	From 1 July 2007
Yarrawonga Main Channel (net)	3.9	61
Torrumbarry System + Nyah (net)	8.6	126
Sunraysia Pumped Districts	2.6	76 *
Licensed pumps - GMW (Nyah+u/s)	0.0	9
Licensed pumps - LMW	0.0	135
TOTAL	15.1	408 *

* please note that these values do not include Millewa pumping figures.

Flow to South Australia (GL)

Entitlement this month	186 *	(3 300 ML/day)
Flow this week	22.9	
Flow so far this month	16	
Flow last month	113	

* Reduced to approx. 96 GL during March drought contingency operations

Salinity (EC)

(microsiemens/cm @ 25° C)

	Current	Average over the last week	Average since 1 August 2007
Swan Hill	70	70	90
Euston	110	110	110
Red Cliffs	-	-	130
Merbein	120	120	140
Burtundy (Darling)	290	290	1 040
Lock 9	130	140	150
Lake Victoria	200	210	180
Berri	250	250	360
Waikerie	-	-	560
Morgan	430	430	620
Mannum	900	900	630
Murray Bridge	970	960	630
Milang (Lake Alex.)	3 430	3 490	2 730
Poltalloch (Lake Alex.)	3 450	3 120	2 360
Meningie (Lake Alb.)	-	5 110	3 150
Goolwa Barrages	27 440	24 190	18 010



River Levels and Flows

River Murray	Minor Flood stage (m)	Gauge height		Flow (ML/day)	Trend	Average flow this week (ML/day)	Average flow last week (ML/day)
		local (m)	(m AHD)				
Khancoban	-	-	-	850	R	1 610	2 550
Jingellic	4.0	1.15	207.67	980	R	2 230	2 170
Tallandoon (Mitta Mitta River)	4.2	1.42	218.31	650	R	640	640
Heywoods	5.5	2.23	155.86	6 730	S	6 900	6 760
Doctors Point	5.5	2.36	150.83	7 430	R	7 220	7 000
Albury	4.3	1.36	148.80	-	-	-	-
Corowa	7.0	1.72	127.74	6 330	F	6 440	5 920
Yarrowonga Weir (d/s)	6.4	0.96	116.00	4 980	S	5 020	5 000
Tocumwal	6.4	1.42	105.26	4 890	R	4 990	5 130
Torrumbarry Weir (d/s)	7.3	1.20	79.75	2 910	F	3 230	3 330
Swan Hill	4.5	0.79	63.71	3 260	S	3 280	3 500
Wakool Junction	8.8	1.85	50.97	3 660	R	3 630	4 090
Euston Weir (d/s)	8.8	0.73	42.57	3 270	R	3 660	4 840
Mildura Weir (d/s)	-	-	-	3 150	F	3 540	4 640
Wentworth Weir (d/s)	7.3	2.82	27.58	2 520	S	2 960	4 320
Rufus Junction	-	2.74	19.67	2 450	F	2 760	3 040
Blanchetown (Lock 1 d/s)	-	-0.37	-	1 350	R	1 270	1 280
Tributaries							
Kiewa at Bandiana	2.7	0.97	154.20	582	R	310	480
Ovens at Wangaratta	11.9	7.62	145.30	173	S	210	290
Goulburn at McCoys Bridge	9.0	1.14	92.56	353	S	360	360
Edward at Stevens Weir (d/s)	-	0.81	80.58	540	S	480	520
Edward at Liewah	-	1.10	56.48	548	F	570	540
Wakool at Stoney Crossing	-	1.24	54.73	138	S	140	120
Murrumbidgee at Balranald	5.0	0.59	56.55	312	R	370	880
Barwon at Mungindi	-	3.51	-	739	F	900	1 110
Darling at Bourke	-	5.16	-	9 400	F	9 970	8 080
Darling at Burtundy Rocks	-	0.85	-	467	S	460	740

Natural Inflow to Hume (ie pre Dartmouth & Snowy Mountains scheme)	970	810
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Weirs and Locks

Pool levels above or below design level

Murray	FSL (m AHD)	u/s	d/s		FSL (m AHD)	u/s	d/s
Yarrowonga	124.90	-0.57	-	No. 7 Rufus River	22.10	+0.06	+0.44
No 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.00	-0.05
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	-0.02	+0.07
No. 11 Mildura	34.40	+0.04	+0.00	No. 4 Bookpurnong	13.20	+0.01	+0.20
No. 10 Wentworth	30.80	+0.00	+0.18	No.3 Overland Corner	9.80	+0.01	+0.15
No. 9 Kulnine	27.40	+0.00	-0.22	No. 2 Waikerie	6.10	+0.04	+0.12
No. 8 Wangumma	24.60	-0.22	+0.28	No 1. Blanchetown	3.20	+0.07	-1.12

Murrumbidgee	FSL (m AHD)	relation to FSL	d/s gauge ht.		Flow (ML/day)
			local (m)	(m AHD)	
No. 7 Maude	75.40	-1.46	0.76	70.11	397
No. 5 Redbank	66.90	-0.20	0.13	61.43	252



Lower Lakes

FSL = 0.75 m AHD

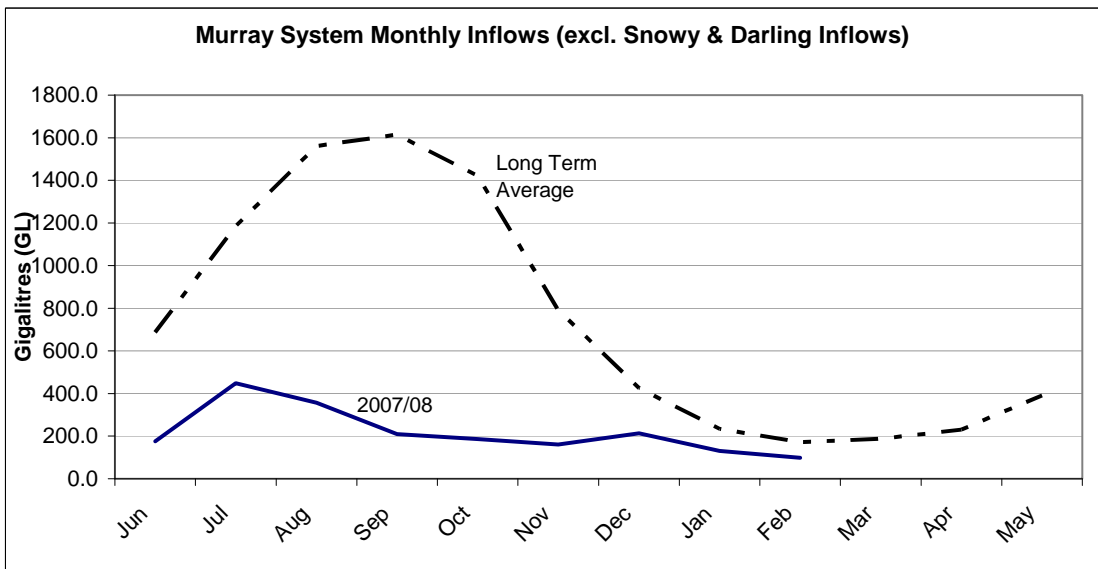
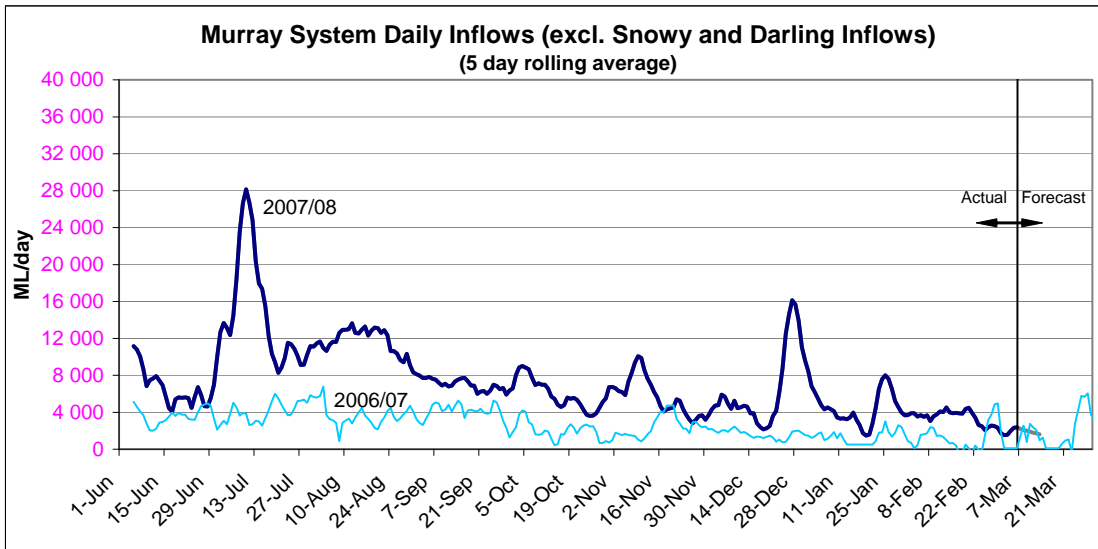
Lake Alexandrina average level for the past 5 days	(m AHD)
	-0.39

Barrages

Fishways @ Barrages

	Openings	Level (m AHD)	Status	Rock Ramp	Vertical Slot
Goolwa	128 openings	-0.36	All closed	-	Closed
Mundoo	26 openings	-0.40	All closed	-	-
Boundary Creek	6 openings	-	All closed	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	-	All closed	Closed	Closed

AHD = Level relative to Australian Height Datum, i.e. height above sea level



State Allocations (as at 5th Mar 2008)

NSW - Murray Valley

Suspended water re-credit	100%
High security	0%
General security	0%

NSW - Murrumbidgee Valley

High security	90%
General security	13%

NSW - Lower Darling

High security	100%
General security	50%

Victoria - Murray Valley

high reliability	43%
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Victoria - Goulburn Valley

high reliability	54%
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South Australia - Murray Valley

irrigation allocation	32%
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NSW : http://www.naturalresources.nsw.gov.au/water/state_mm_murr_water_quality.shtml#alloc

VIC : <http://www.g-mwater.com.au/water-resources/allocations/current.asp>

SA : <http://www.dwlbc.sa.gov.au/media.html>