REPORT FOR THE WEEK ENDING

Wednesday, 13 April 2005

Our Ref : M2005/00066/ng **15 April, 2005**
Trim Ref : *05/3251*

Rainfall and inflows

Mainly dry and unseasonally warm conditions persisted throughout the Basin this week (*see attached rain map*), however light rain started falling in the southern parts of the Basin on 14 April. Inflow to the River Murray System from the major tributaries has remained at low levels.

River Murray System Operation

Irrigation demand has gradually reduced over the past week. In response, the release from Hume Dam was reduced from 13 000 to 9 000 ML/day and the release from Yarrawonga Weir was reduced marginally to 7 000 ML/day. Further reductions in the release from Hume Dam and Yarrawonga Weir are planned for the coming weeks as the irrigation season comes to a close.

Release from Torrumbarry Weir has been maintained near 3 500 ML/day, and unless there is significant rainfall or reductions in irrigation diversions, it will remain near this rate over the coming week. Release from Euston Weir has been reduced to 3 000 ML/day in line with reduced requirements downstream, and if warm weather persists the Euston Weir pool may have to be temporarily lowered by up to 10-15 cm to ensure supply to downstream water users. However, forecast rainfall may reduce demands and losses and therefore reduce the likelihood of a significant drawdown of Euston.

Further downstream, Lake Victoria storage continues to be drawn down and is currently at 460 GL (25.1 m or 68% of capacity). Flow to South Australia is being maintained near the April entitlement average rate of 4 500 ML/day.

Salinities

With the drop in entitlement flows this month - compared to the March average of 6 000 ML/day - salinities in the River Murray in South Australia are beginning to rise slightly due to reduced dilution. Much of the River Murray, excluding the lower lakes in South Australia, continues to experience low salinities due to the drought conditions as the amount of salt entering the Murray from tributaries and floodplains has diminished considerably. Should significant rain and increased streamflows be observed this coming winter/spring, river salinities - whilst remaining low during any potential flood - could rise considerably thereafter. RMW will provide outlooks from time to time over the coming months.

Drought Update

River Murray Water has prepared another update on the current drought and its impacts on communities and the environment. A copy of the update is enclosed with this report, and is also available on the MDBC website at www.mdbc.gov.au

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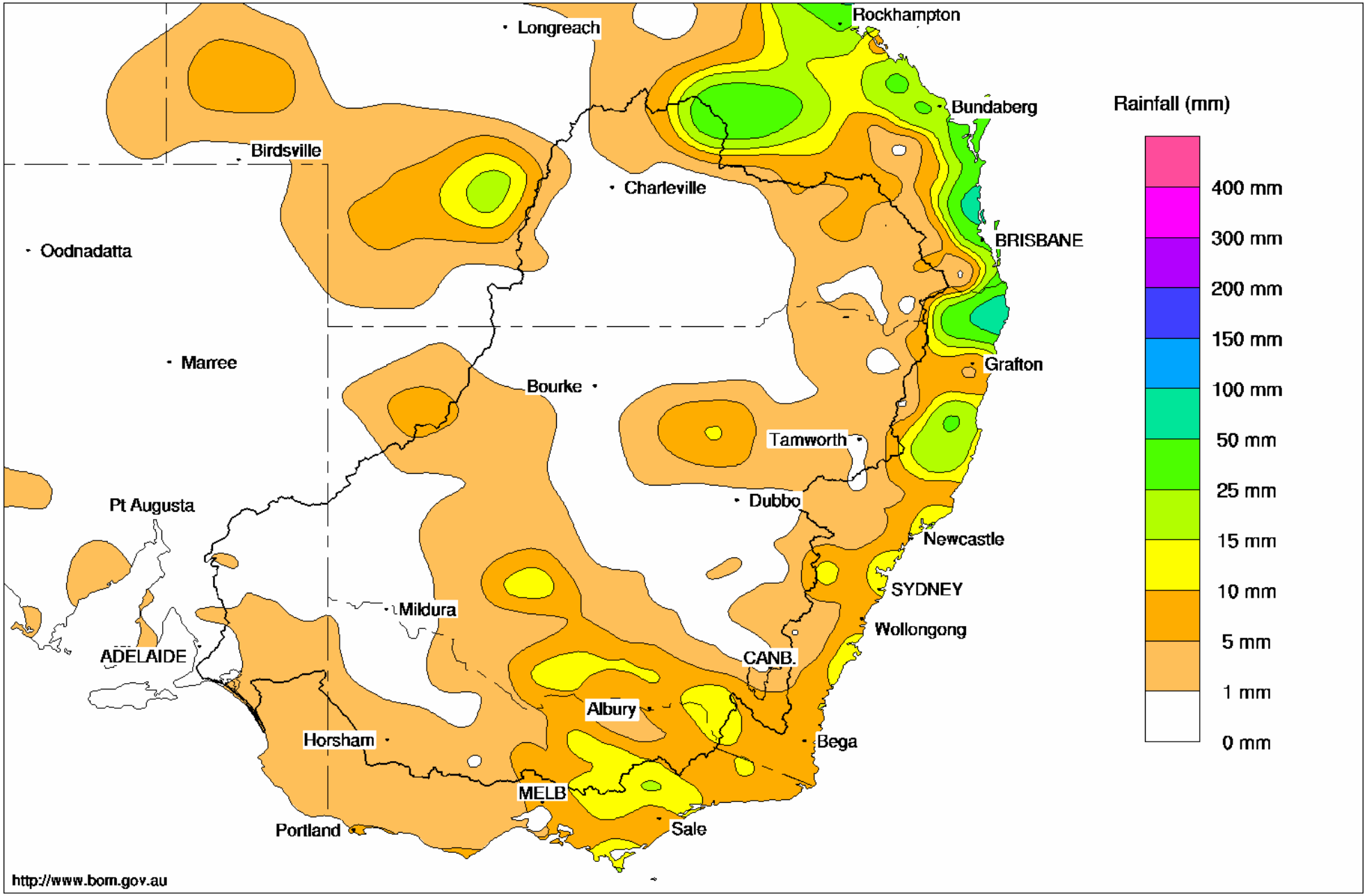
Murray Darling Rainfall Analysis (mm) Week Ending 13th April 2005

Product of the National Climate Centre



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River Murray System - Drought Update
March, 2005

DROUGHT CONTINUES DESPITE RECENT RAIN

Although the last four months have seen some good localised inflows to the Murray and Darling Rivers, the extended period of low inflows continues at the Basin scale and the River Murray remains in the midst of a serious drought.

Storage levels and irrigation allocations remain low and the outlook is grim. Figure 1 shows that it will take a significant change to very wet conditions for the current trend to be broken and the pressure on communities and the environment to be eased. (Figure 1 shows the outlook for 2005-06 under dry and average conditions).

THE RECENT RAIN

Lower Darling River

In December 2004, heavy rain across the Barwon, Gwydir and Namoi River catchments produced flooding in the Upper Darling, but only yielded minor inflows to Menindee Lakes. The volume in storage peaked at 440 GL, 27% of capacity, and the Lakes remain in NSW control, and not available to help meet the demands of the River Murray System. Commission control of Menindee Lakes will resume when significant inflows next push the volume in storage above 640 GL.

The storage level in the lakes is again falling and the northern monsoon season has not produced much in the way of flow in the Darling since December 2004.

Upper Murray

In February 2005, an unusual weather pattern brought a cold snap and widespread rain across Victoria. The rainfall produced record February inflows to the Murray from several tributaries. There was also a small boost to storages along the Murray, at a time of year when storage levels would normally fall. Despite this welcome but temporary relief, volumes in storage remain low.

Importantly, water availability is driven by long-term weather patterns and inflows to the River Murray over the last four years remained the lowest on record at the end of February 2004.

IMPACTS OF THE DROUGHT

Low Storage Levels

At the end of February, total system storage was 3 800 GL. This is a small improvement over the same time last year, but still 1 800 GL below average for this time of year. Based on historical records, there is only a 30% chance that winter/spring inflows will be sufficient for Hume Reservoir to fill and spill during 2005. Such low storage levels have implications for irrigators and the environment alike.

Environment Suffers from Combined Impacts

The peak February flows provided natural flooding to some low lying areas of the Barmah-Millewa and Gunbower-Perricoota Forests. However, there are still large areas of the floodplain, particularly along the River Murray below Swan Hill, that have not been flooded for long periods.

In effect, the environment is suffering from a double blow in that for the first time it is subject to the full impact of *both* a highly regulated and utilised river system and an extended period of drought. These impacts have been experienced separately in the past – i.e., river regulation and increasing diversions since the 1970's; and long drought periods in the 1890's and 1940's – but now they are occurring together.

Figure 2 shows the difference in the peak flows past Euston during the early 1900's, 1940's and since the late 1990's. The absence of small floods under the combined effect of regulation and drought over

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the past eight years is sobering. Such floods are critical to the health of the river's wetland, lake, floodplain and estuarine ecosystems.

This is reflected by the number of stressed or dying River Red Gum and Black Box trees across the lower Murray floodplain. The proportion of trees surveyed that were considered stressed, has risen from an already high level of 50% to 75% over the last two years.

Irrigation Allocations Stay Low

Figures 3 and 4 illustrate the low level of irrigation allocations in NSW and Victoria over recent years. There have been some small improvements in allocations over the last few months, however these may be too late to be useful this season and may need to be carried forward to 2005/06. If storage levels remain low, irrigators will face continuing low allocations well into the next irrigation season.

Whilst South Australia has received its Entitlement Flow this year, salinity levels in the Lower Lakes continue to rise because only about 100 GL has flowed over the barrages to the sea compared with the average flow of 5000 GL per year.

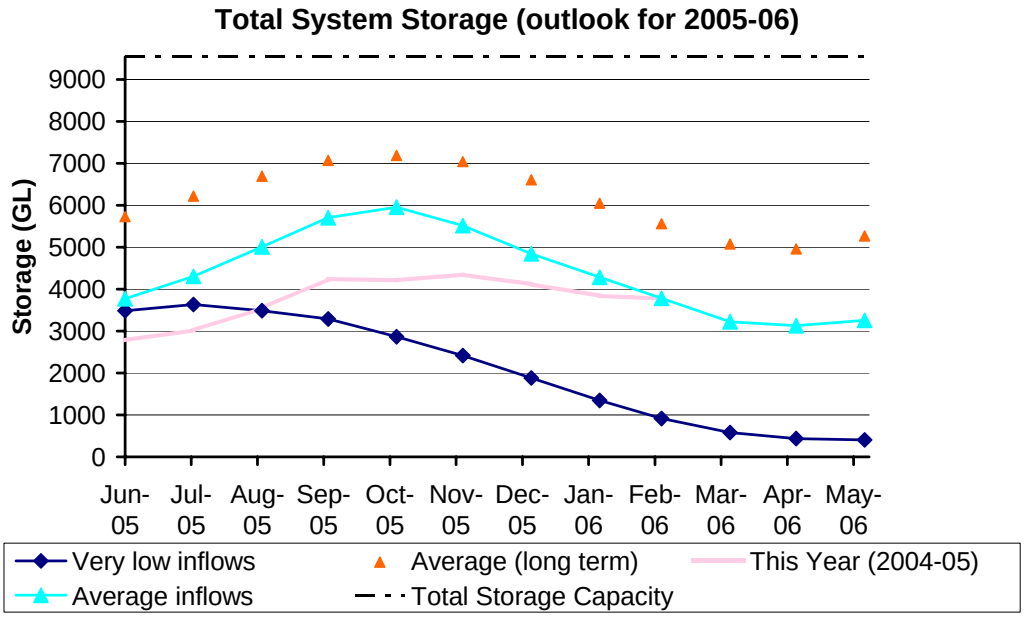
OUTLOOK

The outlook for total system storage for 2005-06 is shown in Figure 1 and indicates that even under average conditions, the volumes in storage will remain well below average levels.

With headwater storages in the River Murray and its tributaries at low levels, the prospects of a flood that will replenish the storages and the environment this year are reduced. A substantial improvement in inflows, sustained over many months, is required before the drought will be broken.

Past river flow records reveal that streamflows over March, April and May tend to be well correlated with the subsequent winter/spring inflows. Actual flows received in these three months in 2005 will therefore be critical in influencing the outlook for the 2005/06 season. That is, if March, April and May are dry, then it is possible that we will receive low inflows for the remainder of the 2005/06 season.

Figure 1



Refer www.mdbc.gov.au for Figures 2 to 5.

Figure 2

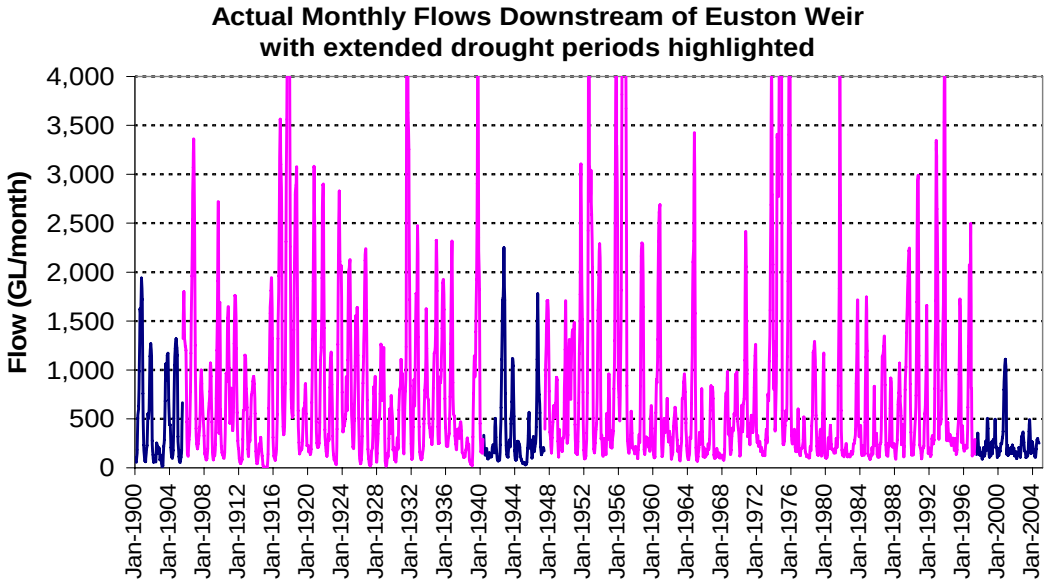


Figure 3

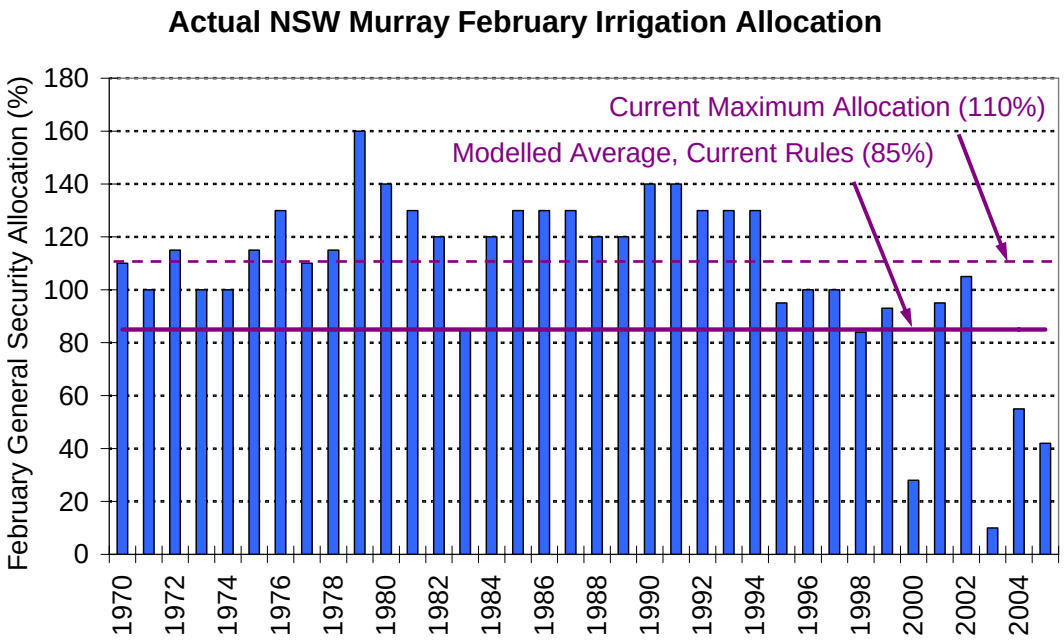
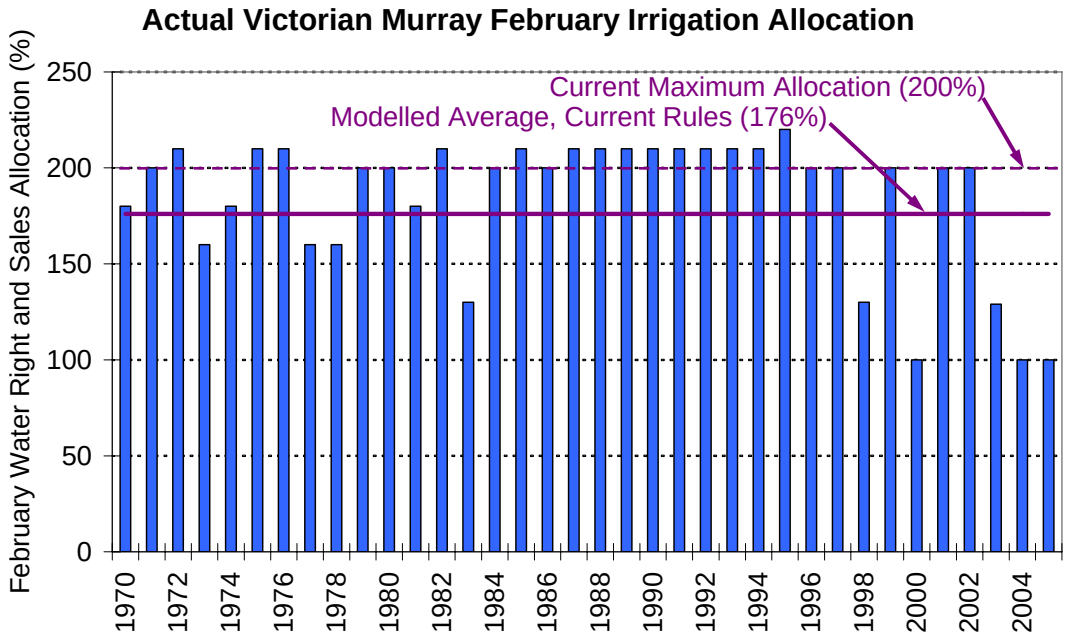


Figure 4



Week ending Wednesday 13 Apr 2005

Water in Storage

MDBC Storages	Full Supply Level	Full Supply Volume	Current Storage Level	Current Storage		Dead Storage	MDBC Active Storage	Change in Storage for the week
	(m AHD)	(GL)	(m AHD)	(GL)	%	(GL)	(GL)	(GL)
Dartmouth Reservoir	486.00	3 906	444.54	1 719	44%	80	1 639	-3
Hume Reservoir	192.00	3 038	175.65	703	23%	30	673	-34
Lake Victoria	27.00	677	25.14	463	68%	100	363	-23
Menindee Lakes		1 731 *		372	21%	(- -) #	0	-5
Total		**9 352**		**3 256**	**35%**	**- -**	**2 674**	**-64**

* Menindee surcharge capacity 2050 GL % of Total Active MDBC Storage = **31%**

\# 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		245	24%	3	242	-1
Blowering Reservoir	1 631		216	13%	24	192	+39
Eildon Reservoir	3 390		1 008	30%	100	908	-45

Snowy Mountains Scheme

Snowy diversions for week ending 12-Apr-2005

Storage	Active storage (GL)	Weekly change (GL)	Diversion (GL)	This week	From 1 May 2004
Lake Eucumbene - Total	2 242	-57	Snowy-Murray	+40	669
Snowy-Murray Component	1 015	-36	Tooma-Tumut	+1	283
Target Storage	1 340		Nett Diversion	38.1	386
			Murray 1 Release	+40	1 034

Major Diversions from Murray and Lower Darling (GL)

New South Wales	This week	From 1 July 2004
Murray Irrig. Ltd (Net)	31.9	771.3
Wakool System loss	1.1	19.2
Western Murray Irrig.	0.8	29.8
Licensed Pumps	12.5	267.1
Lower Darling	0.4	26.8
TOTAL	**46.6**	**1 114.2**

Victoria	This week	From 1 July 2004
Yarrawonga Main Channel (net)	13.9	344
Torrumbarry System + Nyah (net)	18.4	569
Sunraysia Pumped Districts	3.9	148
Licensed pumps - GMW (Nyah+u/s)	1.2	37
Licensed pumps - SRW	3.9	233
TOTAL	**41.3**	**1 331**

Flow to South Australia (GL)

Entitlement this month	135	
Flow this week	31.7	(4 500 ML/day)
Flow so far this month	59	
Flow last month	188	

Salinity (EC)

(microsiemens/cm @ 25° C)

	Current	Average over the last week	Average since 1 August 2004
Swan Hill	100	100	110
Euston	130	130	120
Red Cliffs	190	190	130
Merbein	160	160	130
Burtundy (Darling)	540	540	530
Lock 9	150	150	140
Lake Victoria	200	190	180
Berri	250	230	230
Waikerie	-	-	360
Morgan	340	340	380
Mannum	410	400	470
Murray Bridge	350	370	490
Milang (Lake Alex.)	1 460	1 470	1 330
Poltalloch (Lake Alex.)	1 080	1 070	1 090
Meningie (Lake Alb.)	2 310	2 300	2 140
Goolwa Barrages	2 130	2 120	1 970

River Murray Water
A Business Unit of MDBC

Week ending Wednesday 13 Apr 2005

River Levels and Flows

River Murray	Minor Flood stage (m)	Gauge height local (m)	Gauge height (m AHD)	Flow (ML/day)	Trend	Average flow this week (ML/day)	Average flow last week (ML/day)
Khancoban	-	-	-	5 130	F	5 950	6 510
Jingellic	4.0	1.96	208.48	6 810	S	7 170	6 610
Tallandoon (Mitta Mitta River)	4.2	1.39	218.28	640	F	650	680
Heywoods	5.5	2.49	156.12	8 950	F	11 930	12 950
Doctors Point	5.5	2.66	151.13	10 200	F	12 800	13 270
Albury	4.3	1.70	149.14	-	-	-	-
Corowa	7.0	2.74	128.76	13 100	F	13 960	13 840
Yarrawonga Weir (d/s)	6.4	1.40	116.44	7 490	S	7 500	7 480
Tocumwal	6.4	1.88	105.72	7 420	S	7 430	7 490
Torrumbarry Weir (d/s)	7.3	1.39	79.94	3 590	S	3 420	4 070
Swan Hill	4.5	0.76	63.68	2 990	R	3 060	3 830
Wakool Junction	8.8	1.82	50.94	3 360	F	3 810	3 940
Euston Weir (d/s)	8.8	0.75	42.59	3 190	F	3 480	3 360
Mildura Weir (d/s)		-	30.85	2 590	F	2 500	2 330
Wentworth Weir (d/s)	7.3	2.82	27.58	2 450	R	2 190	2 030
Rufus Junction	-	3.03	19.96	3 960	S	4 020	4 380
Blanchetown (Lock 1 d/s)	-	-	-	2 540	R	2 480	3 140
Tributaries							
Kiewa at Bandiana	2.7	1.53	154.76	1 450	R	990	640
Ovens at Wangaratta	11.9	7.99	145.67	767	R	730	640
Goulburn at McCoys Bridge	9.0	1.31	92.73	625	R	540	1 080
Edward at Stevens Weir (d/s)	-	-	-	300	F	300	550
Edward at Liewah	-	1.16	56.54	600	F	690	400
Wakool at Stoney Crossing	-	0.44	54.93	357	S	340	330
Murrumbidgee at Balranald	5.0	0.49	56.45	209	S	220	220
Barwon at Mungindi	-	3.16	-	20	S	20	30
Darling at Bourke	-	3.98	-	72	S	90	70
Darling at Burtundy Rocks	-	0.82	-	367	F	410	380

Natural Inflow to Hume (ie pre Dartmouth & Snowy Mountains scheme)	1 280	630

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
Yarrawonga	124.90	-0.10	-	No. 7 Rufus River	22.10	+0.13	+0.72
No 26 Torrumbarry	86.05	-0.01	-	No. 6 Murtho	19.25	+0.14	+0.06
No. 15 Euston	47.60	-0.02	-	No. 5 Renmark	16.30	+0.07	+0.10
No. 11 Mildura	34.40	+0.06	+0.05	No. 4 Bookpurnong	13.20	+0.00	+0.34
No. 10 Wentworth	30.80	+0.06	+0.18	No.3 Overland Corner	9.80	-0.01	+0.11
No. 9 Kulnine	27.40	+0.05	-0.01	No. 2 Waikerie	6.10	+0.01	+0.04
No. 8 Wangumma	24.60	+0.00	+0.13	No 1. Blanchetown	3.20	+0.01	-0.21

Murrumbidgee	FSL (m AHD)	relation to FSL	d/s gauge ht. local (m)	d/s gauge ht. (m AHD)	Flow (ML/day)
No. 7 Maude	75.40	-0.92	0.56	69.91	260
No. 5 Redbank	66.90	-14.60	-	-	-9

Lower Lakes

FSL = 0.75 m AHD

	(m AHD)
Lake Alexandrina average level for the past 5 days	0.59

Barrages

	Openings	Level (m AHD)	Status
Goolwa	128 openings	0.67	All closed
Mundoo	26 openings	0.68	All closed
Boundary Creek	6 openings	-	All closed
Ewe Island	111 gates	-	All closed
Tauwitchere	322 gates	0.65	All closed

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

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