

REPORT FOR THE **TWO WEEKS** ENDING

Wednesday, 31 December 2003

Our Ref : RMW305/01/01/:bwh:ng

29 April, 2004



Rainfall

Good falls of rain were received across the southern half of the Murray-Darling Basin in the week ending 24 December. Falls of up to 120 mm were recorded in the Kiewa and Ovens River catchments resulting in significant rises in streamflows in these tributaries which peaked at about 4 000 and 9 000 ML/day respectively. Hot and dry conditions have persisted since Christmas resulting in the rapid recession of these tributary inflows.

Headwater Storages

Inflow to Dartmouth Reservoir increased from about 1 000 to a peak of about 10 000 ML/day by 22 December, and produced a significant rise in storage of 44 GL over the last two weeks. Release from Dartmouth Reservoir was increased commencing on 24 December to transfer water resource to Hume Reservoir for subsequent supply to the River Murray system later this season (*see Media Release attached*). Release is currently being varied between 2 000 and 800 ML/day in a weekly pattern simulating the response to a small rainfall event. It is likely, if conditions remain dry, that release will increase to higher rates by mid January 2004.

Inflow to Hume Reservoir increased from about 4 000 to a peak of 15 000 ML/day by 25 December. This increase in inflow, together with a temporary reduction in release in response to improved tributary inflows and reduced irrigation demand downstream, was sufficient to temporarily halt the fall of storage in Hume over Christmas. The subsequent hot and dry conditions have required release from Hume Reservoir to again be increased.

Mid Murray Operation

The rain event before Christmas resulted in significant reductions in irrigation demand in addition to the rises in tributary inflows. As a result, release from Yarrawonga Weir was increased to a peak of 16 500 ML/day by 25 December and has since been reduced to regulated channel capacity. Lake Mulwala was temporarily surcharged to reduce the required release rate and minimise impacts in the Barmah-Millewa Forest. The Lake is now being lowered to normal operating levels.

The reduction in diversions and losses brought about by the rain event resulted in release from Torrumbarry Weir peaking at about 8 500 ML/day on 26 December. The release rate from Euston Weir is close to peaking at about 10 000 ML/day. The arrival of higher flows from the Murrumbidgee River early next week may result in release from Euston reaching 11 000 ML/day early in January.

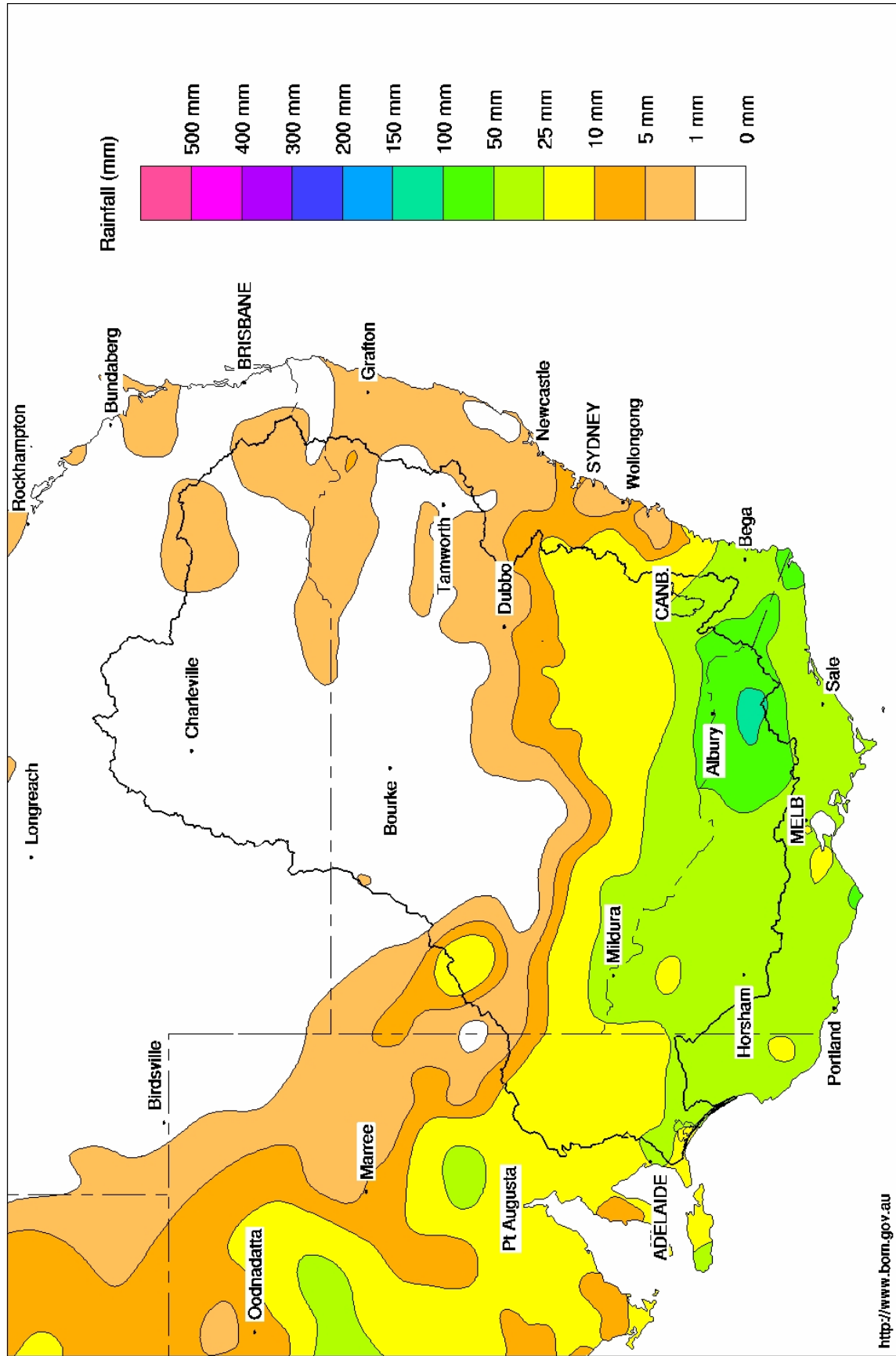
Darling River

Release from Menindee Lakes to the lower Darling River has been effectively ceased by the NSW Department of Infrastructure, Planning and Natural Resources (*see Media Release attached*) to help secure town water supply for Broken Hill and Menindee. Flow in the lower Darling River can be expected to become highly saline and will cease to flow until such time that significant streamflows are generated in the upper Darling catchment. The minor rise in flow currently passing Bourke will result in only a small volume reaching Menindee Lakes and this will be stored for town water supply.

DAVID DREVERMAN
General Manager

Murray Darling Rainfall Analysis (mm) Week Ending 24th December 2003

Product of the National Climate Centre



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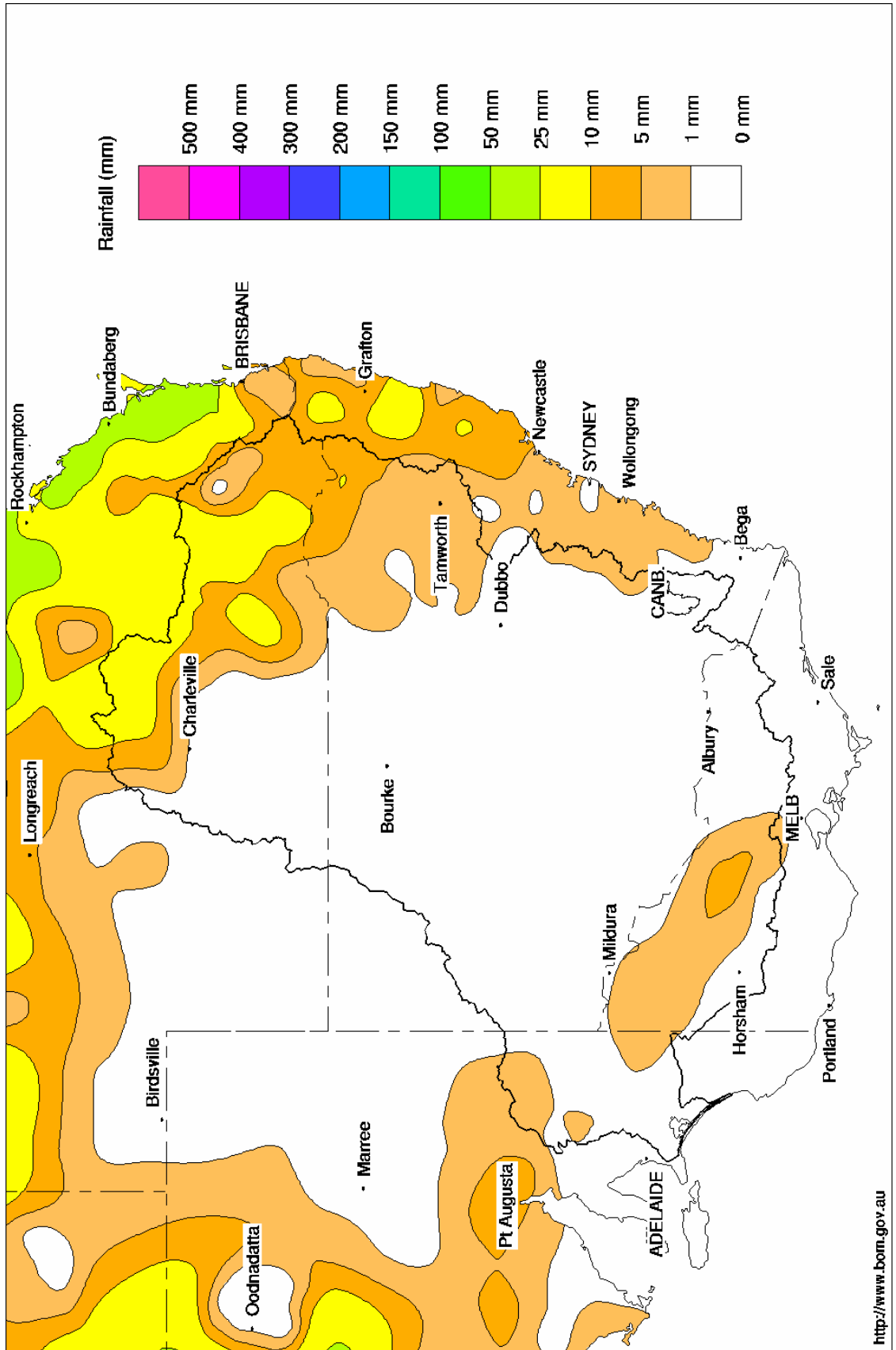
Issued: 24/12/2003

River Murray Water

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Murray Darling Rainfall Analysis (mm) Week Ending 31st December 2003

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Week ending Wednesday 24 Dec 2003

Water in Storage

MDBC Storages	Full Supply Level (m AHD)	Full Supply Volume (GL)	Current Storage Level (m AHD)	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Storage for the week (GL)
				(GL)	%			
Dartmouth Reservoir	486.00	3 906	447.67	1 847	47%	80	1 767	+28
Hume Reservoir	192.00	3 038	185.52	1 897	62%	30	1 867	-56
Lake Victoria	27.00	680	25.64	531	78%	100	431	-13
Menindee Lakes		1 603 *		34	2%	640 #	0	-13
Total		9 227		4 309	47%	850	4 065	-55

* Menindee surcharge capacity 1916 GL

% of Total Active MDBC Storage = **49%**

NSW Menindee Lakes Reserve

Major State Storages

Burrinjuck Reservoir	1 026	514	50%	3	511	+2
Blowering Reservoir	1 631	905	55%	24	881	-56
Eildon Reservoir	3 390	1 396	41%	100	1 296	-8

Snowy Mountains Scheme

Snowy diversions for week ending 23-Dec-2003

Storage	Active storage (GL)	Weekly change (GL)	Diversion (GL)	This week	From 1 May 2003
Lake Eucumbene - Total	1 825	+18	Snowy-Murray	+10	542
Snowy-Murray Component	1 085	+25	Tooma-Tumut	+8	236
Target Storage	1 510		Nett Diversion	2.0	306
			Murray 1 Release	+15	834

Major Diversions from Murray and Lower Darling (GL)

New South Wales	This week	From 1 July 2003
Murray Irrig. Ltd (Net)	16.2	315.3
Wakool System loss	0.2	14.5
Western Murray Irrig.	0.6	10.1
Licensed Pumps	6.8	93.3
Lower Darling	0.5	4.5
TOTAL	24.3	437.8

Victoria	This week	From 1 July 2003
Yarrowonga Main Channel (net)	5.6	125
Torrumbarry System + Nyah (net)	10.7	255
Sunraysia Pumped Districts	3.8	59
Licensed pumps - GMW (Nyah+u/s)	2.5	12
Licensed pumps - SRW	6.5	100
TOTAL	29.1	550

Flow to South Australia (GL)

Entitlement this month	217	(7 800 ML/day)
Flow this week	54.4	
Flow so far this month	173	
Flow last month	179	

Salinity (EC)

(microsiemens/cm @ 25° C)

	Current	Average over the last week	Average since 1 August 2003
Swan Hill	90	110	110
Euston	130	120	120
Red Cliffs	130	130	130
Merbein	150	140	140
Burtundy (Darling)	2 580	2 640	1 860
Lock 9	170	180	170
Lake Victoria	230	230	230
Berri	270	260	280
Waikerie	350	350	410
Morgan	400	400	430
Mannum	430	430	450
Murray Bridge	430	420	490
Milang (Lake Alex.)	1 110	1 210	1 080
Poltalloch (Lake Alex.)	1 110	1 220	1 110
Meningie (Lake Alb.)	1 690	1 800	1 540
Goolwa Barrages	1 990	2 230	2 250



Week ending Wednesday 24 Dec 2003

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	-	-	-	4 950	F	3 650	1 170
Jingellic	4.0	2.63	209.15	13 740	R	6 470	3 730
Tallandoon (Mitta Mitta River)	4.2	1.71	218.60	1 630	F	1 950	1 180
Heywoods	5.5	2.50	156.13	10 410	F	15 900	16 700
Doctors Point	5.5	2.94	151.41	13 100	F	17 070	17 400
Albury	4.3	1.91	149.35	-	-	-	-
Corowa	7.0	3.33	129.35	17 900	F	19 070	17 370
Yarrowonga Weir (d/s)	6.4	2.49	117.53	16 000	R	11 860	10 370
Tocumwal	6.4	2.64	106.48	13 340	R	11 620	11 040
Torrumbarry Weir (d/s)	7.3	2.60	81.15	7 930	R	6 430	5 740
Swan Hill	4.5	1.31	64.23	6 320	R	5 420	5 650
Wakool Junction	8.8	3.30	52.42	9 430	R	8 950	9 140
Euston Weir (d/s)	8.8	1.80	43.64	8 820	R	8 360	8 290
Mildura Weir (d/s)	-	-	31.06	8 580	F	7 520	6 740
Wentworth Weir (d/s)	7.3	3.08	27.84	8 250	R	6 360	5 790
Rufus Junction	-	3.52	20.45	6 870	F	7 350	6 670
Blanchetown (Lock 1 d/s)	-	-	-	5 460	R	4 830	5 010
Tributaries							
Kiewa at Bandiana	2.7	2.35	155.58	3 340	R	1 710	1 150
Ovens at Wangaratta	11.9	10.24	147.92	8 198	F	3 910	1 500
Goulburn at McCoys Bridge	9.0	1.64	93.06	1 137	F	820	520
Edward at Stevens Weir (d/s)	-	-	-	3 290	F	3 170	2 920
Edward at Liewah	-	3.08	58.46	2 850	R	2 780	2 750
Wakool at Stoney Crossing	-	0.85	55.34	1 490	S	1 450	1 010
Murrumbidgee at Balranald	5.0	0.59	56.55	250	S	230	190
Barwon at Mungindi	-	3.44	-	580	F	2 540	1 200
Darling at Bourke	-	4.09	-	364	R	170	90
Darling at Burtundy Rocks	-	0.67	-	36	F	50	50

Natural Inflow to Hume (ie pre Dartmouth & Snowy Mountains scheme)	9 900	6 880
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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	+0.15	-	No. 7 Rufus River	22.10	+0.09	+1.23
No. 26 Torrumbarry	86.05	-0.01	-	No. 6 Murtho	19.25	+0.04	+0.21
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.06	+0.30
No. 11 Mildura	34.40	+0.01	+0.26	No. 4 Bookpurnong	13.20	+0.08	+0.89
No. 10 Wentworth	30.80	+0.04	+0.44	No.3 Overland Corner	9.80	+0.03	+0.27
No. 9 Kulnine	27.40	+0.06	+0.10	No. 2 Waikerie	6.10	+0.06	+0.20
No. 8 Wangumma	24.60	+0.07	+0.19	No 1. Blanchetown	3.20	+0.05	+0.05

Murrumbidgee	FSL (m AHD)	relation to FSL	d/s gauge ht.		Flow (ML/day)
			local (m)	(m AHD)	
No. 7 Maude	75.40	-0.11	0.86	70.21	601
No. 5 Redbank	66.90	-0.29	0.15	61.45	269

Barrages

FSL = 0.75 m AHD

	Openings	Level	Status
Goolwa	128 openings	0.80	All closed
Mundoo	26 openings	-	All closed
Boundary Creek	6 openings	-	All closed
Ewe Island	111 gates	-	All closed
Tauwichee	322 gates	0.81	All closed

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



Week ending Wednesday 31 Dec 2003

Water in Storage

MDBC Storages	Full Supply Level (m AHD)	Full Supply Volume (GL)	Current Storage Level (m AHD)	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Storage for the week (GL)
				(GL)	%			
Dartmouth Reservoir	486.00	3 906	448.04	1 863	48%	80	1 783	+16
Hume Reservoir	192.00	3 038	185.38	1 875	62%	30	1 845	-22
Lake Victoria	27.00	680	25.56	522	77%	100	422	-9
Menindee Lakes		1 603 *		33	2%	640 #	0	-1
Total		9 227		4 293	47%	850	4 050	-16

* Menindee surcharge capacity 1916 GL

% of Total Active MDBC Storage = **48%**

NSW Menindee Lakes Reserve

Major State Storages

Burrinjuck Reservoir	1 026	515	50%	3	512	+2
Blowering Reservoir	1 631	843	52%	24	819	-61
Eildon Reservoir	3 390	1 378	41%	100	1 278	-18

Snowy Mountains Scheme

Snowy diversions for week ending 30-Dec-2003

Storage	Active storage (GL)	Weekly change (GL)	Diversion (GL)	This week	From 1 May 2003
Lake Eucumbene - Total	1 837	n/a	Snowy-Murray	+0	544
Snowy-Murray Component	1 090	-	Tooma-Tumut	+0	237
Target Storage	1 510		Nett Diversion	0.0	307
			Murray 1 Release	+5	839

Major Diversions from Murray and Lower Darling (GL)

New South Wales	This week	From 1 July 2003
Murray Irrig. Ltd (Net)	17.3	332.6
Wakool System loss	0.2	14.7
Western Murray Irrig.	1.3	11.5
Licensed Pumps	4.2	97.4
Lower Darling	0.5	4.9
TOTAL	23.5	461.1

Victoria	This week	From 1 July 2003
Yarrowonga Main Channel (net)	11.9	136
Torrumbarry System + Nyah (net)	11.0	266
Sunraysia Pumped Districts	5.8	65
Licensed pumps - GMW (Nyah+u/s)	0.7	13
Licensed pumps - SRW	6.8	107
TOTAL	36.2	586

Flow to South Australia (GL)

Entitlement this month	217	
Flow this week	51.1	(7 300 ML/day)
Flow so far this month	224	
Flow last month	179	

Salinity (EC)

(microsiemens/cm @ 25° C)

	Current	Average over the last week	Average since 1 August 2003
Swan Hill	100	90	110
Euston	120	130	120
Red Cliffs	150	140	140
Merbein	160	150	140
Burtundy (Darling)	2 580	2 680	1 890
Lock 9	150	160	170
Lake Victoria	220	220	230
Berri	270	270	280
Waikerie	370	360	410
Morgan	390	390	420
Mannum	440	440	440
Murray Bridge	460	450	490
Milang (Lake Alex.)	1 110	1 110	1 080
Poltalloch (Lake Alex.)	1 110	1 110	1 110
Meningie (Lake Alex.)	1 690	1 690	1 690
Swansea Barrage	627	627	627



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Week ending Wednesday 31 Dec 2003

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)				
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Jingellic	4.0	1.57	208.09	3 880	F	5 690	6 470
Tallandoon (Mitta Mitta River)	4.2	1.95	218.84	2 540	F	2 440	1 950
Heywoods	5.5	2.94	156.57	14 770	R	11 050	15 900
Doctors Point	5.5	3.15	151.62	15 700	R	12 160	17 070
Albury	4.3	2.14	149.58	-	-	-	-
Corowa	7.0	2.96	128.98	15 100	R	13 290	19 070
Yarrowonga Weir (d/s)	6.4	1.82	116.86	10 500	F	13 390	11 860
Tocumwal	6.4	2.41	106.25	11 570	F	14 730	11 620
Torrumbarry Weir (d/s)	7.3	2.21	80.76	6 480	F	7 410	6 430
Swan Hill	4.5	1.41	64.33	7 000	F	7 340	5 420
Wakool Junction	8.8	3.64	52.76	11 130	S	10 620	8 950
Euston Weir (d/s)	8.8	1.95	43.79	9 780	R	9 390	8 360
Mildura Weir (d/s)	-	-	31.00	8 260	F	8 150	7 520
Wentworth Weir (d/s)	7.3	2.94	27.70	6 660	R	6 850	6 360
Rufus Junction	-	3.52	20.45	6 870	F	6 950	7 350
Blanchetown (Lock 1 d/s)	-	-	-	5 040	F	5 380	4 830
Tributaries							
Kiewa at Bandiana	2.7	1.37	154.60	1 170	F	1 630	1 710
Ovens at Wangaratta	11.9	8.67	146.35	2 608	F	3 940	3 910
Goulburn at McCoys Bridge	9.0	1.26	92.68	518	F	790	820
Edward at Stevens Weir (d/s)	-	-	-	2 900	F	2 910	3 170
Edward at Liewah	-	3.06	58.44	2 820	S	2 840	2 780
Wakool at Stoney Crossing	-	0.83	55.32	1 410	R	1 360	1 450
Murrumbidgee at Balranald	5.0	0.66	56.62	290	R	220	230
Barwon at Mungindi	-	3.48	-	710	F	900	2 540
Darling at Bourke	-	4.33	-	1 839	R	810	170
Darling at Burtundy Rocks	-	0.67	-	36	R	30	50

Natural Inflow to Hume (ie pre Dartmouth & Snowy Mountains scheme)	13 500	9 900
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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	+0.01	-	No. 7 Rufus River	22.10	+0.06	+1.21
No 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.00	+0.16
No. 15 Euston	47.60	-0.02	-	No. 5 Renmark	16.30	+0.03	+0.22
No. 11 Mildura	34.40	+0.00	+0.20	No. 4 Bookpurnong	13.20	+0.03	+0.72
No. 10 Wentworth	30.80	+0.00	+0.30	No.3 Overland Corner	9.80	+0.01	+0.19
No. 9 Kulnine	27.40	+0.00	+0.03	No. 2 Waikerie	6.10	+0.00	+0.16
No. 8 Wangumma	24.60	+0.02	+0.13	No 1. Blanchetown	3.20	+0.02	+0.09

Murrumbidgee	FSL (m AHD)	relation to FSL	d/s gauge ht.		Flow (ML/day)
			local (m)	(m AHD)	
No. 7 Maude	75.40	-0.10	2.3	71.65	3480
No. 5 Redbank	66.90	+0.04	2.17	63.47	2920

Barrages

FSL = 0.75 m AHD

	Openings	Level	Status
Goolwa	128 openings	0.76	All closed
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Boundary Creek	6 openings	-	All closed
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