

# REPORT FOR THE WEEK ENDING

Wednesday, 27 September 2006



Our Ref : M2006/00012/prs, dwg, jw  
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29 September, 2006

## ***Inflows and outlook***

Conditions were generally dry across the Basin this week (*see attached map*) and inflows to the River Murray System remain at extremely low levels. Latest seasonal forecasts from the Bureau of Meteorology (BOM) indicate a moderate shift in the probability towards drier and warmer than average conditions in south-eastern Australia from October to December. Below average rainfall since late autumn is consistent with the development of an El Niño event.

A drought update prepared by the MDBC Office will be released over the coming week to provide detailed information on current conditions in the Basin.

## ***River Operations***

River Murray Water is continuing to transfer water from Dartmouth Reservoir to Hume Reservoir at channel capacity in the Mitta Mitta River ( $\approx 10\,000$  ML/day). Storage in Dartmouth Reservoir reduced during the week by 60 GL to 2 090 GL (54% capacity). Despite the high release from Dartmouth Reservoir, storage in Hume Reservoir reduced this week by 30 GL to 508 GL (16.5% capacity). Unregulated inflow from the Hume catchment remains extremely low due to the continuing dry conditions. The dry conditions have also brought an increase in irrigation demand over the past week.

The transfer of water from Hume Reservoir to Lake Victoria is continuing as part of River Murray Water's management of the river system under the current drought conditions. To meet the requirements of all three States over the remainder of the season, the transfer rate will increase over the coming week by passing additional flow along the Mulwala Canal into Colligen Creek, which is part of the Edward-Wakool River system. This action will augment flow in the mid section of the River Murray System by adding to the existing flows of 2 700 ML/day downstream of Steven's Weir on the Edward River and the 7 600 ML/day passing through the Barmah Choke.

Flow downstream of Torrumbarry Weir fell slightly this week from 5 000 ML/day to 4 400 ML/day in response to increased diversions to the National Channel. The river level at Swan Hill has reduced to 0.97 m from 1.19 m a week ago.

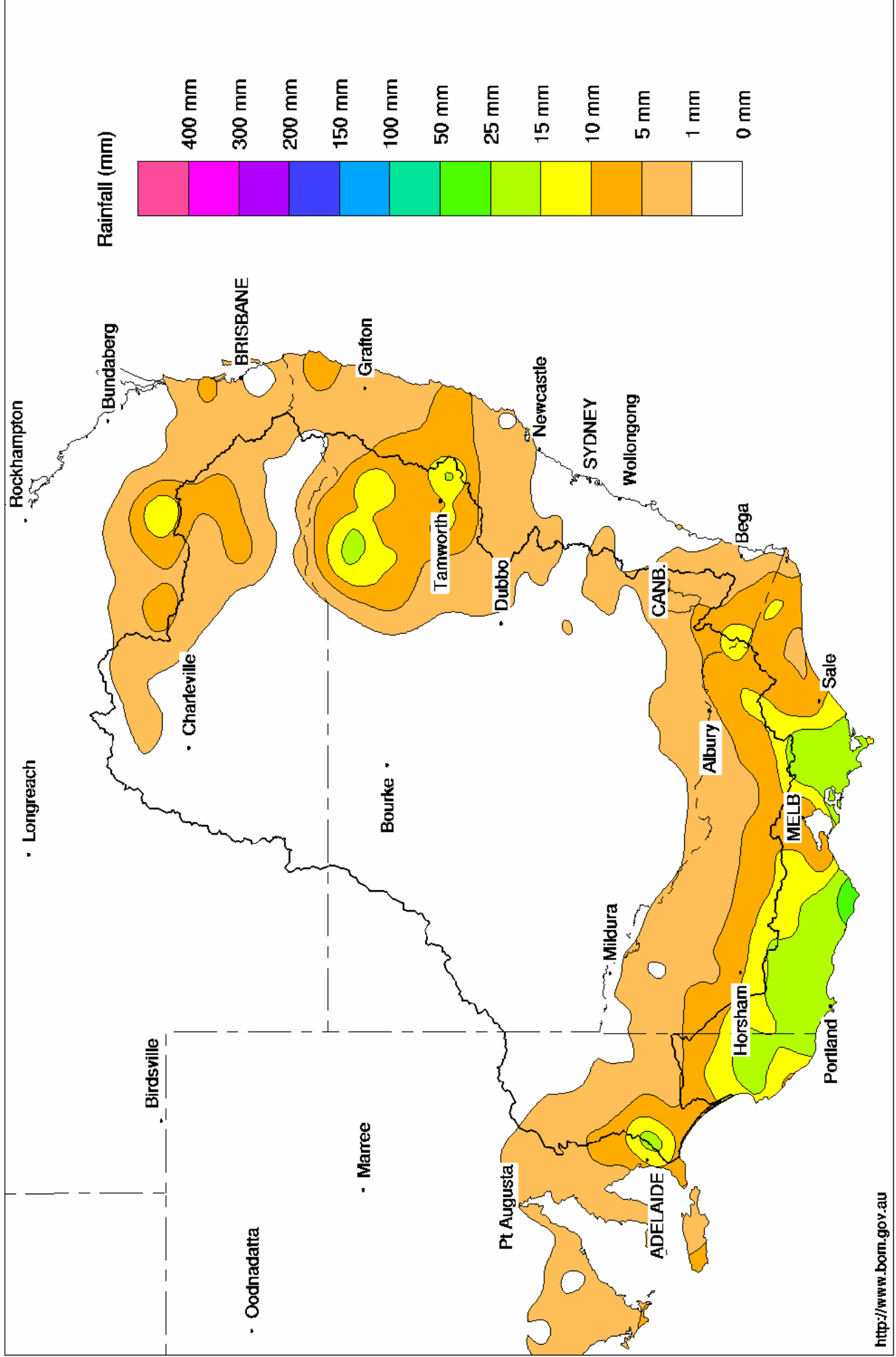
Lake Victoria is currently 554 GL (82% capacity), an increase of 10 GL from last week. If conditions remain dry over the coming week it is likely that the water level in this storage will now begin to gradually reduce. Flow to South Australia has been maintained at 4 000 ML/day, 500 ML/day below the normal entitlement flow for September. A greater proportion of the South Australian flow is now being supplied with slightly more turbid water from Lake Victoria which will help reduce the chance of algal blooms developing in the Lower Murray.

The Bookpurnong Salt Interception Scheme in South Australia was officially opened on 14 September 2006 (*see attached pamphlet*) and the continuing dry and windy conditions have contributed to a reduction in the level of the Lower Lakes to 0.83m AHD.

DAVID DREVERMAN  
General Manager

# Murray Darling Rainfall Analysis (mm) Week Ending 27th September 2006

Product of the National Climate Centre





# Bookpurnong Salt Interception Scheme

Local community groups join forces with the MDBC, State and Federal governments to help save the Murray from salinity.

A new \$11 million salt interception scheme has been recently completed at Bookpurnong, on the eastern side of the River Murray in South Australia's Riverland Region, downstream of Berri near Lock 4. The Scheme will prevent on average around 40,000 tonnes of salt from entering the River Murray annually.

In 1997, based on in-river salinity surveys which identified significant salt loads entering the river, the local community groups, Loxton to Bookpurnong Local Action Planning Group and the Bookpurnong-Lock 4 Environmental Association, developed a plan that included the proposal to intercept saline groundwater.

The Bookpurnong Salt Interception Scheme was subsequently identified as a high priority action under both the Murray-Darling Basin Salinity Management Strategy and the SA River Murray Salinity Strategy. The scheme operates by pumping saline groundwater from 23 bores which is then transferred through a pipeline to Noora Disposal Basin, located 20km east of Loxton.

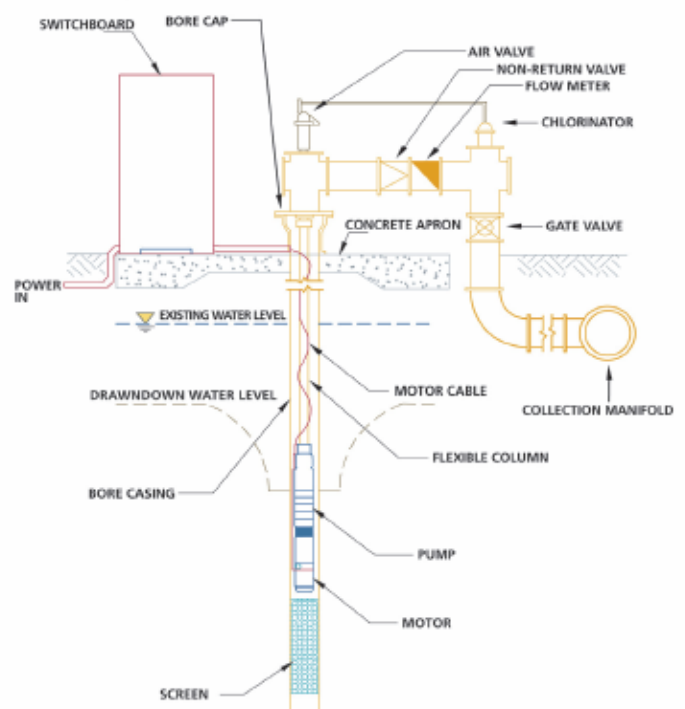
The Noora Disposal Basin was commissioned in 1982 to dispose of saline water derived from Riverland irrigation. The basin has capacity to accommodate the Bookpurnong saline groundwater since more efficient irrigation practices have been applied in surrounding areas, and have reduced the amount of drainage needed.

The saline water is concentrated in the basin through solar evaporation with some seepage of the concentrated saline water back into the groundwater. Although the seepage will eventually flow back to the river, this is a very slow process, and can take in excess of 200-300 years.



*Murray Crayfish*

## Typical Submersible Configuration



This is a pump diagram, similar to the pumps used in the process of transferring saline groundwater in the Bookpurnong Salt Interception Scheme.





SA Minister for the River Murray  
Karlene Maywald, SA premier Mike  
Rann and Bookpurnong Irrigator  
David Ingerson at the opening of  
the Bookpurnong Salt Interception  
Scheme, 14 September, 2006.

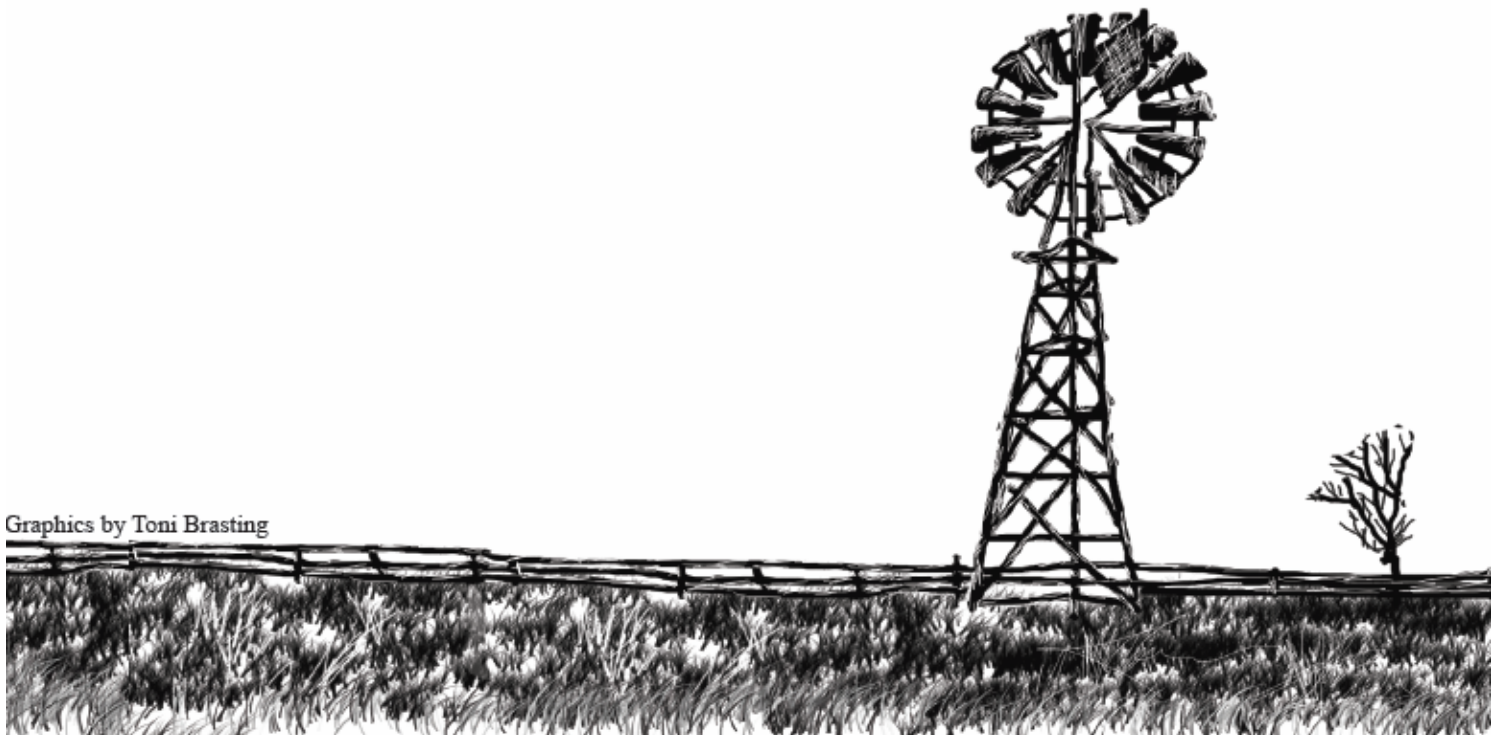


As well as intercepting historical saline inflows to the River Murray, this scheme is capable of providing protection to the River from the impact of recent and future irrigation development inland of this scheme. As such the project is funded in two parts. The local/State component (resulting from recent or future irrigation development) is funded by the Australian and South Australian Governments through the National Action Plan for Salinity and Water Quality. The joint works component (historical salt inflows) is funded equally by the Australian, New South Wales, Victorian and South Australian Governments through the MDBC.

If you would like to know more, please visit our website:

[http://www.mdbc.gov.au/salinity/basin\\_salinity\\_management\\_strategy\\_20012015/salt\\_interception\\_scheme](http://www.mdbc.gov.au/salinity/basin_salinity_management_strategy_20012015/salt_interception_scheme)

Graphics by Toni Brasting



**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	453.44	2 100	54%	80	2 020	-59
Hume Reservoir	192.00	3 038	173.38	508	17%	30	478	-27
Lake Victoria	27.00	677	25.96	554	82%	100	454	+9
Menindee Lakes		1 731 *		242	14%	(- -) #	0	-4
<b>Total</b>		<b>9 352</b>		<b>3 404</b>	<b>36%</b>	<b>--</b>	<b>2 951</b>	<b>-80</b>

\* Menindee surcharge capacity 2050 GL

% of Total Active MDBC Storage = **35%**

# 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	317	31%	3	314	+0
Blowering Reservoir	1 631	820	50%	24	796	-42
Eildon Reservoir	3 390	694	20%	100	594	-32

**Snowy Mountains Scheme**

Snowy diversions for week ending 26-Sep-2006

Storage	Active storage (GL)	Weekly change (GL)	Diversion (GL)	This week	From 1 May 2006
Lake Eucumbene - Total	723	-7	Snowy-Murray	+20	560
Snowy-Murray Component	472	-3	Tooma-Tumut	+0	34
Target Storage	1 240		Nett Diversion	19.6	526
			Murray 1 Release	+21	636

**Major Diversions from Murray and Lower Darling (GL)**

New South Wales	This week	From 1 July 2006
Murray Irrig. Ltd (Net)	23.1	152.6
Wakool System loss	1.5	9.3
Western Murray Irrig.	0.5	2.7
Licensed Pumps	6.7	43.6
Lower Darling	0.4	6.9
<b>TOTAL</b>	<b>32.2</b>	<b>215.2</b>

Victoria	This week	From 1 July 2006
Yarrawonga Main Channel (net)	15.8	69
Torrumbarry System + Nyah (net)	22.3	158
Sunraysia Pumped Districts	3.6	15
Licensed pumps - GMW (Nyah+u/s)	2.5	8
Licensed pumps - LMW	0.0	2
<b>TOTAL</b>	<b>44.3</b>	<b>252</b>

**Flow to South Australia (GL)**

Entitlement this month	135	(4 000 ML/day)
Flow this week	28.0	
Flow so far this month	108	
Flow last month	124	

**Salinity (EC)**

(microsiemens/cm @ 25° C)

	Current	Average over the last week	Average since 1 August 2006
Swan Hill	90	80	80
Euston	80	90	110
Red Cliffs	120	130	130
Merbein	120	130	110
Burtundy (Darling)	650	640	620
Lock 9	150	120	130
Lake Victoria	150	150	150
Berri	250	250	240
Waikerie	400	380	380
Morgan	400	390	400
Mannum	420	420	440
Murray Bridge	370	390	390
Milang (Lake Alex.)	1 110	1 100	1 140
Poltalloch (Lake Alex.)	880	810	780
Meningie (Lake Alb.)	2 170	2 170	2 210
Goolwa Barrages	1 620	1 690	1 540

**River Levels and Flows**

	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)				
<b>River Murray</b>							
Khancoban	-	-	-	2 760	R	3 010	4 500
Jingellic	4.0	1.55	208.07	3 550	R	4 220	5 170
Tallandoon ( Mitta Mitta River )	4.2	3.29	220.18	10 000	S	9 960	9 850
Heywoods	5.5	3.19	156.82	17 410	R	17 170	14 230
Doctors Point	5.5	3.32	151.79	18 100	R	17 440	14 410
Albury	4.3	2.30	149.74	-	-	-	-
Corowa	7.0	3.30	129.32	17 900	F	18 060	13 940
Yarrowonga Weir (d/s)	6.4	1.73	116.77	9 790	S	9 790	9 790
Tocumwal	6.4	2.26	106.10	10 400	R	10 350	10 410
Torrumbarry Weir (d/s)	7.3	1.61	80.16	4 410	F	4 740	5 880
Swan Hill	4.5	0.97	63.89	4 190	F	4 700	6 130
Wakool Junction	8.8	2.79	51.91	7 140	F	7 760	8 900
Euston Weir (d/s)	8.8	1.47	43.31	7 180	F	7 960	8 280
Mildura Weir (d/s)	-	-	-	6 430	F	7 090	6 380
Wentworth Weir (d/s)	7.3	3.04	27.80	6 870	F	6 930	6 710
Rufus Junction	-	2.90	19.83	3 240	F	3 460	3 390
Blanchetown (Lock 1 d/s)	-	0.76	-	2 540	F	2 630	3 110
<b>Tributaries</b>							
Kiewa at Bandiana	2.7	0.88	154.11	430	R	510	400
Ovens at Wangaratta	11.9	7.73	145.41	328	R	310	380
Goulburn at McCoys Bridge	9.0	1.14	92.56	349	S	360	380
Edward at Stevens Weir (d/s)	-	2.43	-	2 690	F	2 700	2 790
Edward at Liewah	-	3.00	58.38	2 580	S	2 630	2 710
Wakool at Stoney Crossing	-	0.46	54.95	452	F	430	340
Murrumbidgee at Balranald	5.0	0.63	56.59	280	F	250	200
Barwon at Mungindi	-	3.22	-	70	S	80	30
Darling at Bourke	-	3.85	-	-	F	-	10
Darling at Burtundy Rocks	-	0.62	-	6	S	0	10

<b>Natural Inflow to Hume</b> (ie pre Dartmouth & Snowy Mountains scheme)	3 260	3 290
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**Weirs and Locks**

**Pool levels above or below design level**

<b>Murray</b>	FSL (m AHD)	u/s	d/s		FSL (m AHD)	u/s	d/s
Yarrowonga	124.90	-0.16	-	No. 7 Rufus River	22.10	+0.14	+0.60
No 26 Torrumbarry	86.05	-0.19	-	No. 6 Murtho	19.25	-0.06	-0.01
No. 15 Euston	47.60	-0.09	-	No. 5 Renmark	16.30	-0.01	+0.09
No. 11 Mildura	34.40	+0.04	+0.23	No. 4 Bookpurnong	13.20	+0.00	+0.37
No. 10 Wentworth	30.80	+0.05	+0.40	No.3 Overland Corner	9.80	-0.02	+0.13
No. 9 Kulnine	27.40	+0.07	+0.03	No. 2 Waikerie	6.10	+0.02	+0.06
No. 8 Wangumma	24.60	+0.04	+0.15	No 1. Blanchetown	3.20	+0.00	+0.01

<b>Murrumbidgee</b>	FSL (m AHD)	relation to FSL	d/s gauge ht.		Flow (ML/day)
			local (m)	(m AHD)	
No. 7 Maude	75.40	-0.18	1.19	70.54	1170
No. 5 Redbank	66.90	-0.07	0.62	61.92	769



**Lower Lakes**

FSL = 0.75 m AHD

	(m AHD)
Lake Alexandrina average level for the past 5 days	0.83

**Barrages**

**Fishways @ Barrages**

	Openings	Level (m AHD)	Status	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.80	All closed	-	Open
Mundoo	26 openings	0.80	All closed	-	-
Boundary Creek	6 openings	-	1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwitchere	322 gates	0.81	All closed	Open	Open

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