



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 10 SEPTEMBER 2014

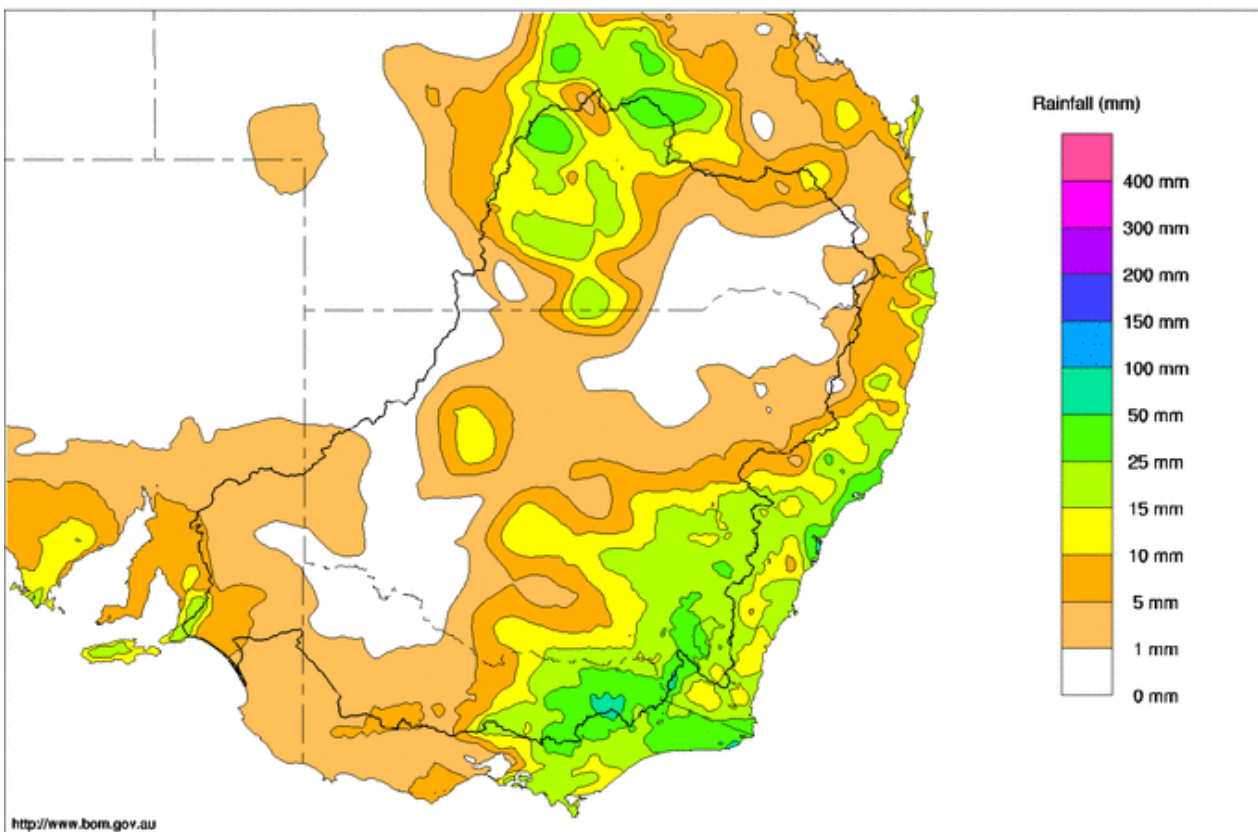
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Rainfall and Inflows

Rainfall in the Murray-Darling Basin was largely due to a frontal system that crossed the region late in the week. The system brought strong winds and scattered thunderstorms to many areas of the southern Basin. In the far north of the Basin, the rain occurred earlier in the week and was related to a separate trough system (Map 1).

The highest weekly rain totals fell over the peaks of the Victorian Alps with 87 mm at Mt Hotham and 75 mm at Mt Buffalo. There were totals in excess of 50 mm in the NSW Snowy Mountains and between 30 and 60 mm across the broader south-east ranges including 58 mm at Harrietville, 56 mm at Harris Lane, 40 mm at Granite Flat and 37 mm at Strathbogie North. Notable totals elsewhere included 26 mm at Queanbeyan and 24 mm at both Rutherglen and Lake Mulwala. The highest totals in the northern Basin fell over the upper Warrego River catchment including 52 mm at Balmacarra and 30 mm at Wansey Downs.

Murray-Darling Rainfall Totals (mm) Week Ending 10th September 2014
Product of the National Climate Centre



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Map 1- Murray-Darling Basin rainfall for the week ending 10th September 2014 (Source: Bureau of Meteorology)

Streams were responsive to the rain along upper Murray tributaries, with many gauges recording their highest flow rates since early August. However, it is expected that unless there is further rain in the coming days that flows will recede quickly. The most notable response was on the upper Mitta Mitta River where Hinnomunjie Bridge rose above the minor flood level with the flow increasing from around 1,000 to 8,800 ML/day. There were also significant stream flow rises on the Ovens River, where the flow at Rocky Point increased from around 1,600 ML/day to a peak close to 5,000 ML/day late in the week.



River Operations

- Environmental flows to Koondrook-Perricoota Forest increase;
- Flows in the Lower Darling will be reduced to protect Broken Hills water supply;
- Testing of new environmental works on the Chowilla Floodplain begins

Dartmouth Reservoir reached 95% storage capacity (3,667 GL) this week. Releases, measured at Colemans, continued at the minimum flow rate of 500 ML/day but are likely to increase in the coming weeks as transfers from Dartmouth to Hume Reservoir begin. At **Hume Reservoir** storage capacity is currently 74% (2,223 GL) and releases have been reduced from over 8,000 to below 3,000 ML/day this week in response to rainfall and lower irrigation demand.

The **Lake Mulwala** pool level rose above Full Supply Level (FSL) this week when irrigation demand reduced in response to the promising rain forecast. To reduce the pool level, the MDBA placed orders at the Edward escape to increase the diversion through Mulwala Canal. The MDBA orders have now ceased and the diversions for the major irrigation offtakes Mulwala Canal and Yarrawonga Main Channel are currently low at 1,400 and 65 ML/day respectively.

The pool level at Lake Mulwala today is 124.760 AHD. The sharp rise in river levels on the Ovens and Kiewa Rivers are expected to raise the pool level again this week but this water is likely to be used for irrigation diversions from the pool or downstream demand over the coming week. Releases downstream of **Yarrawonga Weir** have been reduced from 10,300 (channel capacity) to 6,500 ML/day this week due to reduced demand.

On the **Edward/Wakool** system the flow through the Edward and Gulpa offtakes is currently 1,560 and 350 ML/day respectively. The flow downstream of Stevens Weir reached 2,300 ML/day this week due to the water diverted through the Edward escape.

Flow in the **Goulburn** at McCoys Bridge remained steady this week at approximately 1,300 ML/day. Around 500 ML/day of this flow is environmental water destined for South Australia.

Downstream on the Murray, the diversion to **National Channel** reduced from over 3,000 ML/day to 2,500 ML/day. Environmental diversions to the **Koondrook-Perricoota Forest** increased from 500 to 1,000 ML/day on Monday.

Flow at **Torrumbarry Weir** is under 6,000 ML/day and likely to decrease over the coming week. Flow returning from **Gunbower** forest continues at Chinamans Bend, adding to the flow at **Swan Hill** which is currently 6,500 ML/day. The flow at **Euston Weir** is 7,000 ML/day and forecast to rise this week.

The rate environmental water is being pumped into **Hattah Lakes** has been stepped down from 1,000 ML/day this week and will fall to 135 ML/day in the next few days as the lakes have reached target levels (see figure 1). Return flows from Oateys regulator began at 10ML/day this week. This small volume is not expected to reach the Murray but will wet the return channel before larger volumes are released.

Releases from **Menindee** lakes have been reduced this week by the NSW Office of Water to below the minimum of 200 ML/day at Weir 32 to protect Broken Hill's water supply. Flows will be progressively reduced, however they will be modified to ensure there is visible flow at Burtundy. Salinity is expected to increase under low flow conditions as temperatures increase and the flows reduce. For more information please visit the NSW Office of Water website (www.water.nsw.gov.au).

At **Wentworth** on the Murray, Lock 10 will be raised 5cm above FSL this week. This is aimed at assisting irrigators to divert water within the lock influence while there are low flows in the Lower Darling.

Lake Victoria is effectively full and will remain close to full until the end of September if conditions remain dry.



The flow to **South Australia** is now regulated at 5,500 ML/day to meet South Australia's entitlement, pass environmental return flows from the Goulburn and to provide flows to test the new environmental works on the Chowilla Floodplain.

At the **Lower Lakes**, the five-day average lake level is steady at 0.74 m AHD and the total barrage release is currently around 2,000 ML/day.



Figure 1 - View from Cantala regulator, Hattah Lakes, looking upstream. (Source Trevor Kolpin, Goulburn Murray Water).

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



Water in Storage

Week ending Wednesday 10 Sep 2014

MDBA Storages	Full Supply Level	Full Supply Volume (GL)	Current Storage Level	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)	
	(m AHD)		(m AHD)	(GL)	%				
Dartmouth Reservoir	486.00	3 856	483.07	3 667	95%	71	3 596	+11	
Hume Reservoir	192.00	3 005	187.76	2 223	74%	23	2 200	+18	
Lake Victoria	27.00	677	26.95	671	99%	100	571	-1	
Menindee Lakes		1 731*		343	20%	(- -) #	0	-8	
Total		9 269		6 904	74%	- -	6 367	+20	
Total Active MDBA Storage							75% ^		

Major State Storages

Burrinjuck Reservoir	1 026	852	83%	3	849	+18
Blowering Reservoir	1 631	1 180	72%	24	1 156	+9
Eildon Reservoir	3 334	2 903	87%	100	2 803	+9

* Menindee surcharge capacity – 2050 GL

** All Data is rounded to nearest GL **

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

^ % of total active MDBA storage

Snowy Mountains Scheme

Snowy diversions for week ending 09 Sep 2014

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2014
Lake Eucumbene - Total	1 932	n/a	Snowy-Murray	+7	201
Snowy-Murray Component	861	n/a	Tooma-Tumut	+8	141
Target Storage	1 240		Net Diversion	-2	60
			Murray 1 Release	+23	331

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2014	Victoria	This Week	From 1 July 2014
Murray Irrig. Ltd (Net)	11.7	124	Yarrowonga Main Channel (net)	1.7	29
Wakool Sys Allowance	0.6	3	Torrumbarry System + Nyah (net)	14.7	138
Western Murray Irrigation	0.2	1	Sunraysia Pumped Districts	0.7	6
Licensed Pumps	4.9	33	Licensed pumps - GMW (Nyah+u/s)	1.1	4
Lower Darling	2.7	8	Licensed pumps - LMW	5	18
TOTAL	20.1	169	TOTAL	23.2	195

* Figures derived from estimates and monthly data. Please note that not all data may have been available at the time of creating this report.

** All data above is rounded to nearest 100 ML for weekly data and nearest GL for cumulative data**

Flow to South Australia (GL)

* Flow to SA will be greater than normal entitlement for this month due to the delivery of additional environmental water.

Entitlement this month	135.0 *	
Flow this week	40.0	(5 700 ML/day)
Flow so far this month	58.4	
Flow last month	439.4	

Salinity (EC) (microSiemens/cm at 25° C)

	Current	Average over the last week	Average since 1 August 2014
Swan Hill	110	110	100
Euston	120	110	110
Red Cliffs	140	130	120
Merbein	150	140	120
Burtundy (Darling)	760	810	890
Lock 9	140	140	130
Lake Victoria	200	170	200
Berri	180	170	200
Waikerie	260	260	310
Morgan	240	240	290
Mannum	290	290	370
Murray Bridge	390	390	440
Milang (Lake Alex.)	740	740	740
Poltalloch (Lake Alex.)	440	470	590
Meningie (Lake Alb.)	2 260	2 280	2 240
Goolwa Barrages	750	720	1 440



River Levels and Flows

Week ending Wednesday 10 Sep 2014

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	-	-	-	1 370	F	3 000	3 280
Jingellic	4.0	1.59	208.11	3 680	S	5 870	5 500
Tallandoon (Mitta Mitta River)	4.2	1.87	218.76	1 780	R	1 160	1 430
Heywoods	5.5	1.75	155.38	2 790	F	5 330	11 580
Doctors Point	5.5	2.04	150.51	4 550	F	6 680	12 700
Albury	4.3	1.07	148.51	-	-	-	-
Corowa	3.8	1.79	127.81	6 750	R	8 570	13 930
Yarrowonga Weir (d/s)	6.4	1.34	116.38	7 510	F	9 800	10 380
Tocumwal	6.4	2.27	106.11	9 480	F	9 790	9 640
Torrumbarry Weir (d/s)	7.3	2.08	80.63	5 910	F	5 850	3 760
Swan Hill	4.5	1.30	64.22	6 480	R	5 590	3 720
Wakool Junction	8.8	2.85	51.97	7 190	R	6 440	6 540
Euston Weir (d/s)	8.8	1.49	43.33	7 060	R	6 670	7 880
Mildura Weir (d/s)	-	-	-	-	-	-	-
Wentworth Weir (d/s)	7.3	2.98	27.74	6 210	S	6 780	9 740
Rufus Junction	-	3.22	20.15	4 880	R	4 970	7 270
Blanchetown (Lock 1 d/s)	-	0.78	-	4 880	F	4 810	7 720
Tributaries							
Kiewa at Bandiana	2.7	1.95	155.18	1 980	R	1 340	1 630
Ovens at Wangaratta	11.9	8.76	146.44	2 550	R	2 450	2 550
Goulburn at McCoys Bridge	9.0	1.75	93.17	1 400	R	1 360	1 330
Edward at Stevens Weir (d/s)	-	2.02	81.79	2 030	F	1 580	790
Edward at Liewah	-	1.41	56.79	780	R	660	1 320
Wakool at Stoney Crossing	-	1.59	55.08	820	S	850	930
Murrumbidgee at Balranald	5.0	1.81	57.77	1 360	R	1 320	1 210
Barwon at Mungindi	-	3.10	-	0	F	0	0
Darling at Bourke	-	4.00	-	70	F	110	150
Darling at Burtundy Rocks	-	-	-	110	R	120	140

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	8 680	9 230
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Weirs and Locks Pool levels above or below Full Supply Level (FSL)

Murray	FSL (m AHD)	u/s	d/s		FSL (m AHD)	u/s	d/s
Yarrowonga	124.90	-0.14	-	No. 7 Rufus River	22.10	-0.00	+0.90
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.02	+0.06
No. 15 Euston	47.60	+0.24	-	No. 5 Renmark	16.30	+0.07	+0.16
No. 11 Mildura	34.40	+0.00	+0.06	No. 4 Bookpurnong	13.20	+0.04	+0.56
No. 10 Wentworth	30.80	-0.02	+0.34	No. 3 Overland Corner	9.80	+0.03	+0.49
No. 9 Kulnine	27.40	+0.14	+0.62	No. 2 Waikerie	6.10	+0.31	+0.46
No. 8 Wangumma	24.60	+0.61	+0.10	No. 1 Blanchetown	3.20	+0.30	+0.03

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.75
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Barrages

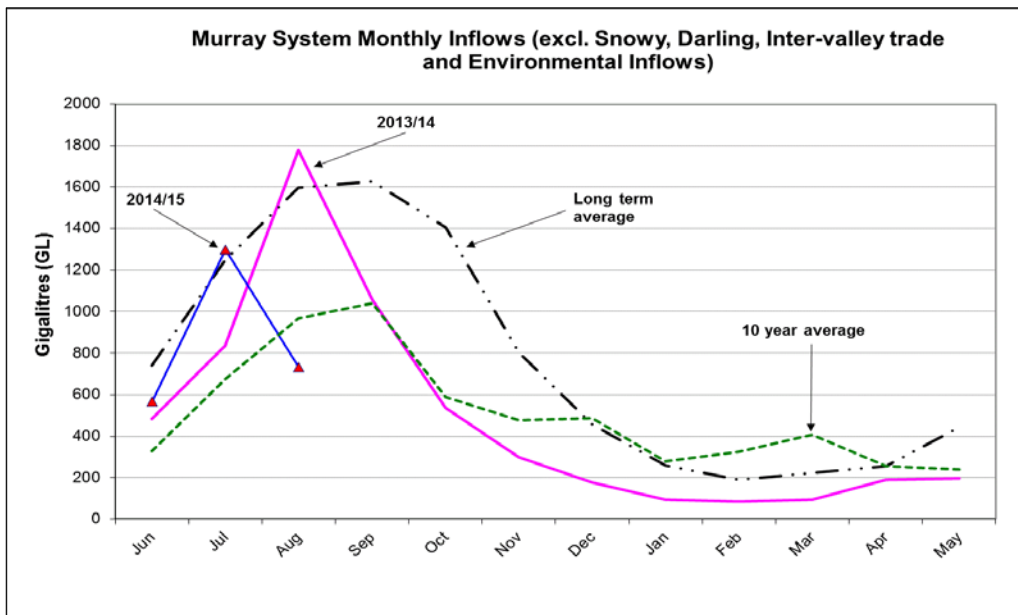
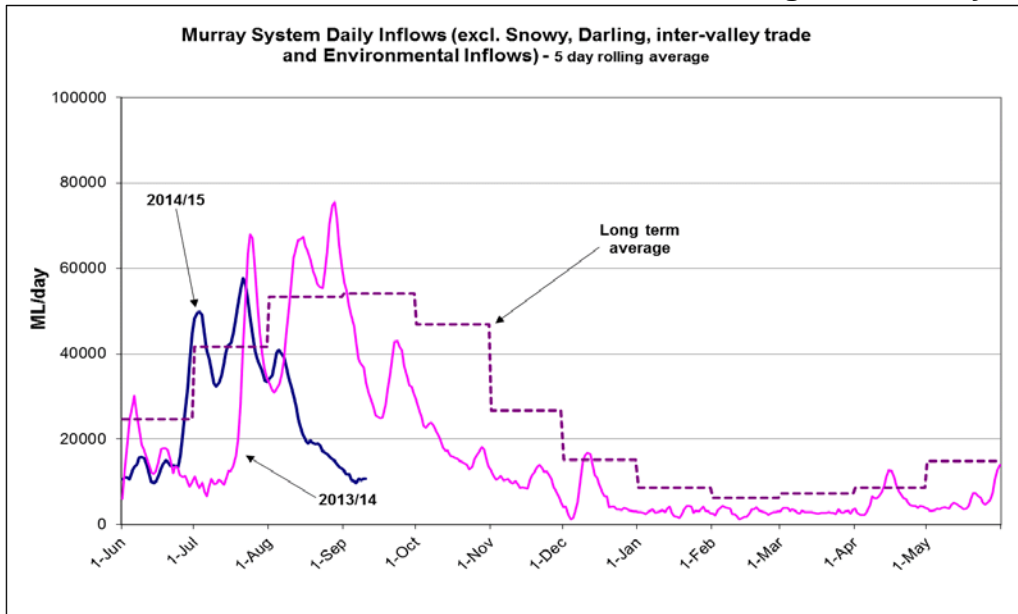
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.67	5	-	Open
Mundoo	26 openings	0.68	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwitchere	322 gates	0.73	4	Open	Open

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



Week ending Wednesday 10 Sep 2014



State Allocations (as at 10 Sep 2014)

NSW - Murray Valley

High security	97%
General security	20%

Victorian - Murray Valley

High reliability	96%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	30%

Victorian - Goulburn Valley

High reliability	100%
Low reliability	0%

NSW - Lower Darling

High security	100%
General security	100%

South Australia - Murray Valley

High security	100%
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NSW : <http://www.water.nsw.gov.au/Water-management/Water-availability/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>
 VIC : <http://www.g-mwater.com.au/water-resources/allocations/current.asp>
 SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>