



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 23RD SEPTEMBER 2015

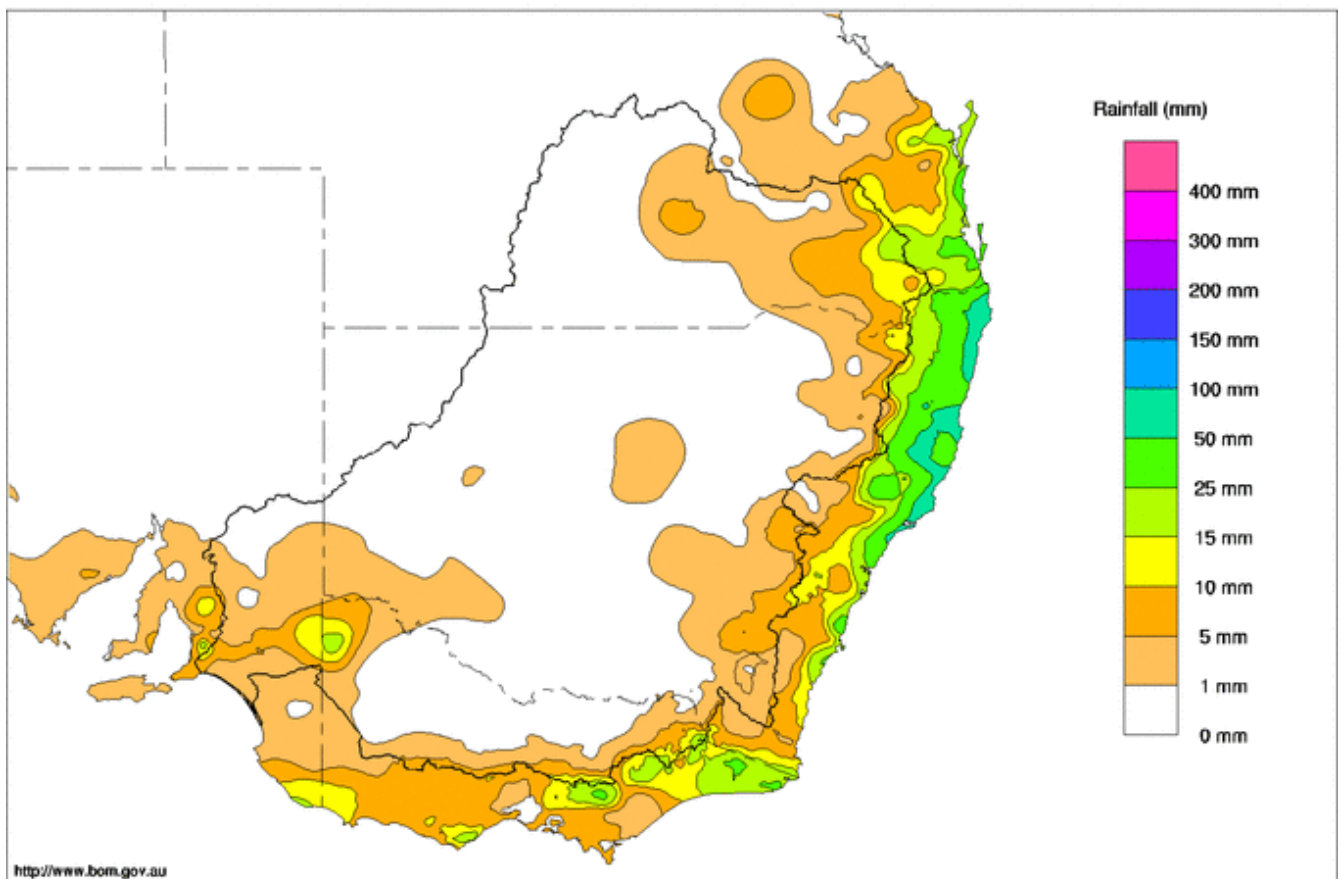
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Rainfall and inflows

It was another relatively dry week across the Murray–Darling Basin with rainfall mostly confined to areas along the Basin’s eastern and southern fringe. Very few sites recorded more than 10 mm and most of the interior remained dry (Map 1).

The highest totals fell in south-east Queensland and included 23 mm at Pittsworth and 20 mm at Killarney. Totals elsewhere included 17 mm at Mt William in western Victoria and 12 mm at Omeo in north-eastern Victoria.

Murray-Darling Rainfall Totals (mm) Week Ending 23rd September 2015
Australian Bureau of Meteorology



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Map 1 - Murray-Darling Basin rainfall week ending 23rd September 2015 (Source: Bureau of Meteorology)

Flows along the upper Murray tributaries remain quite low for this time of year, with relatively little rain falling in recent weeks. On the Mitta Mitta River, the flow at Hinnomunjie bridge has been fairly steady over the last few days at around 1,300 ML/day. On the upper Murray, the flow at Biggara has averaged 1,400 ML/day. On the Ovens River, flows have receded. For example, at Rocky Point, the flow decreased from 1,500 to only 900 ML/day, which is quite low for September.



River Operations

- Storage in Hume Reservoir begins decreasing as irrigation demands rise;
- Lake Victoria storage rises above 90% capacity.

MDBA total storage decreased by 17 GL this week. Active storage is now 4,482 GL (53% capacity).

At **Dartmouth** Reservoir, the storage volume decreased by 34 GL to 2,560 GL (66% capacity) this week. Bulk transfers to Hume Reservoir are continuing. The release, measured at Colemans, is currently 7,000 ML/day.

Hume Reservoir storage decreased by 18 GL and is now 1,500 GL (50% capacity). Releases this week averaged more than 16,200 ML/day, while inflows averaged about 14,000 ML/day. Without renewed rainfall and an associated reduction in water demands, the Hume storage level may continue to decline slowly during the coming weeks.

At **Lake Mulwala**, total diversions from the major irrigation offtakes continued to increase. Diversions at Mulwala Canal jumped from 1,850 to 4,300 ML/day, whilst at Yarrowonga Main Channel they increased slightly from 2,200 to 2,250 ML/day. The release from **Yarrowonga** Weir was decreased over the weekend from 12,500 to 12,000 ML/day. Similar release rates are expected during the coming week. The Lake Mulwala pool level is currently 124.78 m AHD, with similar levels expected during the days ahead.

In the **Edward-Wakool** system, the flow through the Edward and Gulpa offtakes is 1,600 and 750 ML/day respectively. Delivery of environmental water to Wakool River, Yallakool and Colligen Creeks continues. On the Edward River, the flow downstream of **Stevens** Weir averaged 1,300 ML/day. Downstream on the Wakool River, the flow at Kyalite is steady and is currently estimated at about 2,800 ML/day.

On the **Goulburn** River, the flow at McCoys Bridge is 800 ML/day, but may increase a small amount during the coming week. Higher flow rates are still expected along the Goulburn River during October with the planned release of additional water from Eildon Reservoir for environmental purposes.

At **Torrumbarry** Weir, diversions of around 3,500 ML/day continued throughout the week. However, a reduction in this diversion to about 2,800 ML/day is expected during the coming week. This will result in a boost to flows along the River Murray downstream of Torrumbarry Weir, where the flow has been receding slowly to the current rate of 5,600 ML/day.

Further downstream, inflow to the Murray from the **Murrumbidgee** River at Balranald started receding this week following the recent peak. The current flow is 3,500 ML/day and flows below 1,000 ML/day are expected in about one week's time.

At **Euston** Weir, the pool level is currently at 48.18 m AHD (58 cm above FSL), which is just below the current weir pool raising target level of 48.20 m AHD. The flow downstream of Euston receded from 17,300 to 15,000 ML/day. A flow rate less than 10,000 ML/day is now expected in about one week's time.

At **Menindee Lakes**, the storage volume decreased by 1 GL to 102 GL (6% capacity). The release from the Lakes, measured at Weir 32, is currently 70 ML/day. There remains no flow downstream of Burtundy Weir.

At **Wentworth** Weir on the Murray, the flow peaked on 17 September at 16,200 ML/day and has now receded to 15,000 ML/day. Downstream at **Locks 9, 8 and 7**, the weir pool variability trial continues. All three weir pools are currently raised above their normal operating target levels. This is helping to deliver beneficial flows into anabranches and key wetlands along this part of the Murray (Figure 1).

At **Lake Victoria**, the storage volume increased by 35 GL as peak inflows from the Murrumbidgee continue to be captured for re-regulation. The storage volume is now at 616 GL (91% capacity). Flows to **South Australia** have been above 10,000 ML/day for much of the past week and will continue around this rate for the remainder of September. Further above entitlement flows are currently being planned for October with the on-going delivery of additional environmental water released from Hume Reservoir and Victorian tributaries.



Figure 1 – The weir pool at Lock 8 is currently raised 80 cm above the normal operating level. This is enabling beneficial flows into a number of key wetlands and small anabranches, including the upper Potterwalkagee Creek. Image courtesy SA Water.

At the **Lower Lakes**, the five-day average water level in Lake Alexandrina is 0.79 m AHD, which is 4 cm above FSL. Some barrage gates were closed at times during the week to manage the risk of reverse flows of seawater. Barrage releases into the Coorong are planned to continue at rates in excess of 2,000 ML/day during the coming weeks when tidal and swell conditions are favourable.

For media inquiries contact the Media Officer on 02 6279 0141

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Water in Storage

Week ending Wednesday 23 Sep 2015

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	463.74	2 560	66%	71	2 489	-34
Hume Reservoir	192.00	3 005	182.95	1 500	50%	23	1 477	-18
Lake Victoria	27.00	677	26.49	616	91%	100	516	+35
Menindee Lakes		1 731*		102	6%	(- -) #	0	-1
Total		9 269		4 778	52%	- -	4 482	-17
Total Active MDBA Storage							53% ^	

Major State Storages

Burrinjuck Reservoir	1 026	779	76%	3	776	+14
Blowering Reservoir	1 631	810	50%	24	786	-5
Eildon Reservoir	3 334	2 035	61%	100	1 935	-43

* 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 22 Sep 2015

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2015
Lake Eucumbene - Total	2 301	n/a	Snowy-Murray	+9	205
Snowy-Murray Component	1 077	n/a	Tooma-Tumut	+6	115
Target Storage	1 240		Net Diversion	3	89
			Murray 1 Release	+22	321

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2015	Victoria	This Week	From 1 July 2015
Murray Irrig. Ltd (Net)	28.0	74	Yarrowonga Main Channel (net)	15.5	33
Wakool Sys Allowance	1.6	10	Torrumbarry System + Nyah (net)	0.1	41
Western Murray Irrigation	0.3	-4	Sunraysia Pumped Districts	1.6	7
Licensed Pumps	5.5	18	Licensed pumps - GMW (Nyah+u/s)	0.8	4
Lower Darling	0.2	2	Licensed pumps - LMW	4	25
TOTAL	35.6	100	TOTAL	22	110

* 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	70.8	(10 100 ML/day)
Flow so far this month	190.8	
Flow last month	210.4	

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

	Current	Average over the last week	Average since 1 August 2015
Swan Hill	70	90	80
Euston	-	-	-
Red Cliffs	150	130	130
Merbein	140	120	140
Burtundy (Darling)	930	920	900
Lock 9	120	120	150
Lake Victoria	260	250	210
Berri	200	200	240
Waikerie	290	300	320
Morgan	300	310	310
Mannum	340	340	330
Murray Bridge	380	370	360
Milang (Lake Alex.)	730	720	720
Poltalloch (Lake Alex.)	630	580	580
Meningie (Lake Alb.)	2 080	2 060	2 030
Goolwa Barrages	940	930	1 000



River Levels and Flows

Week ending Wednesday 23 Sep 2015

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	-	-	-	4 540	F	3 720	3 980
Jingellic	4.0	1.99	208.51	6 730	R	6 260	6 760
Tallandoon (Mitta Mitta River)	4.2	2.99	219.88	7 130	R	7 120	5 890
Heywoods	5.5	3.28	156.91	16 630	R	16 210	11 700
Doctors Point	5.5	3.24	151.71	17 930	R	17 300	12 710
Albury	4.3	2.29	149.73	-	-	-	-
Corowa	4.6	3.26	129.28	16 030	F	16 300	11 730
Yarrowonga Weir (d/s)	6.4	1.86	116.90	11 880	F	12 090	12 040
Tocumwal	6.4	2.48	106.32	11 910	F	12 250	12 080
Torrumbarry Weir (d/s)	7.3	1.90	80.45	5 600	F	6 350	8 820
Swan Hill	4.5	1.16	64.08	5 710	F	6 780	9 480
Wakool Junction	8.8	3.39	52.51	9 560	F	10 960	13 370
Euston Weir (d/s)	9.1	2.57	44.41	15 180	F	16 540	17 740
Mildura Weir (d/s)	-	-	-	15 830	F	16 540	15 880
Wentworth Weir (d/s)	7.3	3.57	28.33	15 000	S	15 410	14 430
Rufus Junction	-	3.98	20.91	9 690	R	9 680	6 920
Blanchetown (Lock 1 d/s)	-	0.97	-	8 720	R	7 130	5 500
Tributaries							
Kiewa at Bandiana	2.8	1.56	154.79	1 370	R	1 560	1 440
Ovens at Wangaratta	11.9	8.21	145.89	1 150	S	1 330	1 790
Goulburn at McCoys Bridge	9.0	1.42	92.84	820	R	860	930
Edward at Stevens Weir (d/s)	5.5	1.53	81.30	1 350	F	1 310	1 510
Edward at Liewah	-	2.60	57.98	2 030	S	2 030	2 200
Wakool at Stoney Crossing	-	1.54	55.04	710	S	650	540
Murrumbidgee at Balranald	5.0	3.56	59.52	3 490	F	5 380	6 110
Barwon at Mungindi	6.1	3.34	-	390	F	470	720
Darling at Bourke	9.0	4.10	-	370	R	350	480
Darling at Burtundy Rocks	-	1.08	-	0	F	0	0

Natural Inflow to Hume	8 630	10 950
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(i.e. Pre Dartmouth & Snowy Mountains scheme)

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	-0.12	-	No. 7 Rufus River	22.10	+0.50	+1.67
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.04	+0.47
No. 15 Euston	47.60	+0.58	-	No. 5 Renmark	16.30	+0.25	+0.35
No. 11 Mildura	34.40	+0.00	+0.61	No. 4 Bookpurnong	13.20	+0.01	+1.21
No. 10 Wentworth	30.80	+0.00	+0.93	No. 3 Overland Corner	9.80	+0.01	+0.62
No. 9 Kulnine	27.40	+0.27	+0.90	No. 2 Waikerie	6.10	+0.33	+0.34
No. 8 Wangumma	24.60	+0.81	+0.72	No. 1 Blanchetown	3.20	-0.04	+0.22

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.79
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Barrages

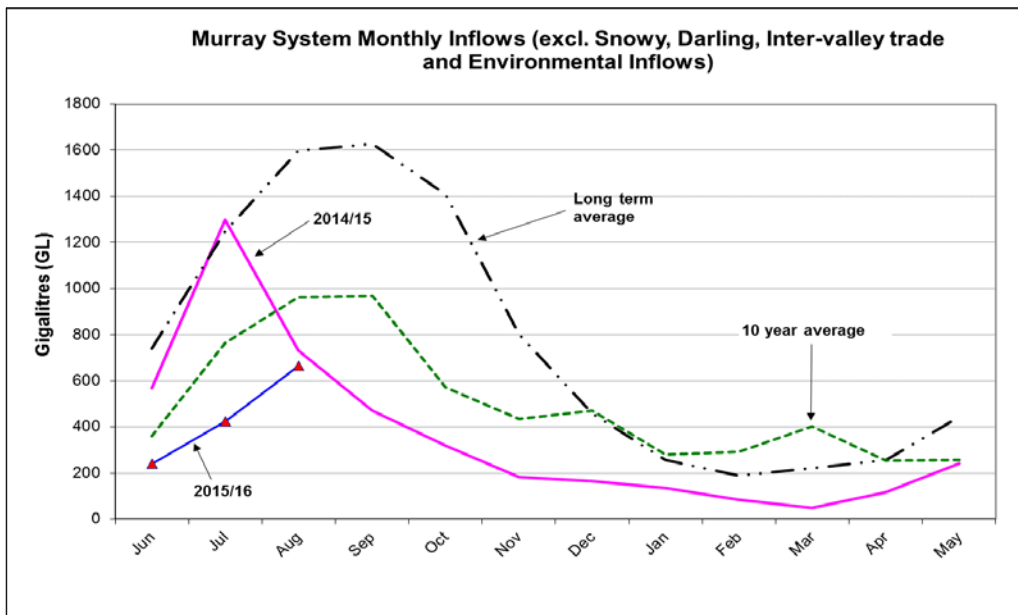
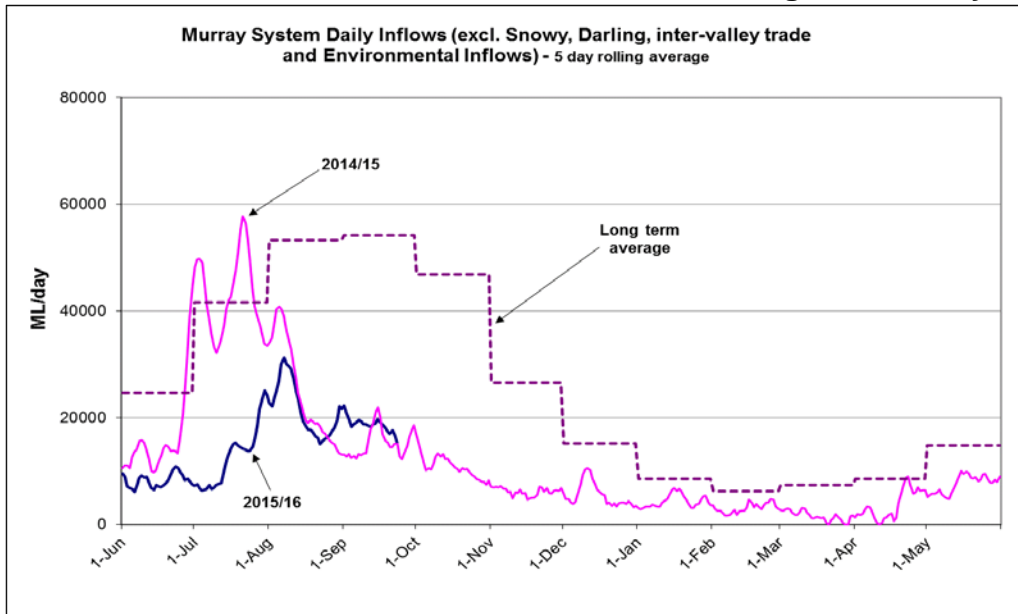
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.85	3	-	Open
Mundoo	26 openings	0.83	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	0.83	7	Open	Open

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



Week ending Wednesday 23 Sep 2015



State Allocations (as at 23 Sep 2015)

NSW - Murray Valley

High security	97%
General security	4%

Victorian - Murray Valley

High reliability	68%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	27%

Victorian - Goulburn Valley

High reliability	66%
Low reliability	0%

NSW - Lower Darling

High security	20%
General security	0%

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.nvrm.net.au/allocations/current.aspx>

SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>