



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 26TH AUGUST 2015

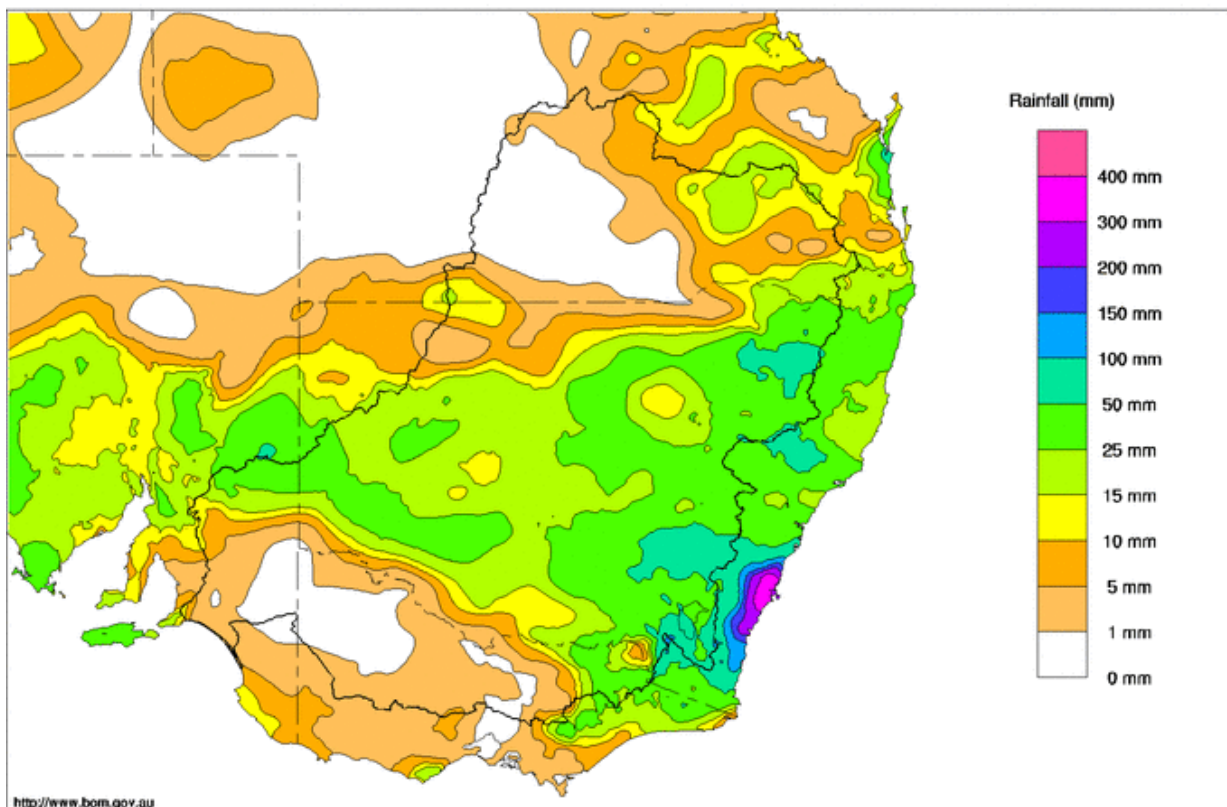
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Rainfall and inflows

Mild temperatures associated with a northerly airflow provided the first taste of the approaching spring for many parts of the Murray–Darling Basin this week. However, the relative warmth was soon followed by a sizeable rain event in many areas as a complex series of trough systems moved into the region from the north-west. Rain fell initially in a band across central and northern NSW before drifting south-east and intensifying. The result was moderate to heavy rain over the south-eastern Basin including for much of the Murrumbidgee and upper Lachlan River catchments; while flooding rains affected parts of the NSW south coast. In contrast, much of the northern Basin and most of northern Victoria stayed fairly dry (Map 1).

The highest rain totals were recorded over the NSW Snowy Mountains where up to 100 mm fell over the alpine peaks. Other totals in NSW included 75 mm at Tingha, 70 mm at Stockinbingal, 69 mm at Crookwell, 67 mm at Trunkey Creek, 64 mm at Granite Heights and 63 mm at Cooma. Totals in Victoria included 43 mm at Jokers Creek, 35 mm at Falls Creek and 33 mm at Wodonga.

Murray-Darling Rainfall Totals (mm) Week Ending 26th August 2015
Australian Bureau of Meteorology



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Map 1 - Murray-Darling Basin rainfall week ending 26th August 2015 (Source: Bureau of Meteorology)

Stream flow responses in the upper Murray tributaries were variable and relatively modest. The largest increases were observed on the upper Mitta Mitta River where the flow at Hinnomunjie bridge increased from 800 to 2,200 ML/day. On the Kiewa River, rain in the lower catchment helped increase flows at Bandiana from 1,500 to 2,800 ML/day. On the Ovens River, flows mostly receded, with the flow at Wangaratta decreasing to below 3,000 ML/day for the first time since late July.



River Operations

- Overbank flows continue through the Barmah-Millewa Forest;
- Rainfall boosts expected inflows from the Murrumbidgee River over the coming weeks.

MDBA total storage increased by 43 GL this week. Active storage is now 4,315 GL (51% capacity).

The storage volume in **Dartmouth** Reservoir decreased by 36 GL to 2,671GL (69% capacity) and the release, measured at Colemans, averaged 7,400 ML/day. A reduction in the release is planned to begin during the coming week, with a flow rate of 5,000 ML/day anticipated by early September.

Hume Reservoir storage increased by 53 GL this week and is now 1,370 GL (46% capacity). Inflows have averaged around 16,000 ML/day. Releases from Hume Dam have been targeting a flow rate at Doctors Point between 9,000 and 10,000 ML/day in recent days. Higher releases are expected during the coming week.

The level in **Lake Mulwala** varied only a small amount this week and remained just over 124.7 m AHD. Diversions at the major irrigation off-takes have also remained fairly steady, with just a small increase toward week's end. The current total diversion is about 1,200 ML/day. The flow downstream of **Yarrowonga Weir** was reduced from 12,500 to 12,000 ML/day. Higher releases are expected in the coming days with a release above 14,000 ML/day likely by the end of August.

Downstream in the **Barmah-Millewa Forest**, some forest flow regulators have been re-closed by forest managers during the last few days as flows from upstream eased. The forest regulators will continue to be adjusted as flow rates vary over the coming week to manage river levels through the Barmah Choke and continue passing overbank flows through the forest wetlands (Figure 1). The current flow rate at the Barmah gauge is fairly steady at just under 10,000 ML/day.



Figure 1 - Overbank flows through the Barmah-Millewa Forest in recent weeks have led to water flowing into several forest wetlands including Moira Lake. Photo, Rick Webster, NSW National Parks & Wildlife Service.



On the **Edward-Wakool** system, the combined flow through the Edward River and Gulpa Creek offtakes is steady at around 2,400 ML/day. Flows through the Edward River offtake continue to be controlled at rates below 1,600 ML/day, however higher rates are currently planned for early September. At Stevens Weir, the pool has remained steady and is currently at 4.47 m on the local gauge. Small replenishing flows are continuing through the Wakool River, Yallakool Creek and Colligen Creek regulators, while downstream of Stevens Weir the flow is currently 1,800 ML/day and beginning to recede slightly. Downstream on the Wakool River, flow rates are rising at most gauges.

On the **Goulburn** River, a flow of just over 1,000 ML/day is continuing at McCoys. At **Torrumbarry** Weir, the diversion at National Channel has increased a little and is now at around 1,400 ML/day. Flows downstream of Torrumbarry Weir remained at just under 10,000 ML/day for most of the week.

On the **Murrumbidgee** River, flows at Balranald have been steadily building during August and have averaged 2,800 ML/day during the last week. Rainfall in the last few days has resulted in a further boost to Murrumbidgee tributary inflows both upstream and downstream of Burrinjuck Dam, while keeping irrigation demands subdued. Relatively high flows are now expected to continue at Balranald for at least the next three weeks and provide a useful addition to overall Murray system inflows.

At **Euston** Weir, the flow has continued to rise and is now at 13,500 ML/day. Flow rates around 15,000 ML/day are now expected in the coming week. The pool level at Euston remains above FSL with the current level at 47.90 m AHD (30 cm above FSL) as part of the current weir pool variability program that aims to achieve a more natural wetting and drying cycle for the riverine environment.

Rainfall over northern NSW this week has generated flow responses along some of the Darling River tributaries — most notably the Gwydir River. These flows are expected to result in only small inflows to the Darling, but will help maintain the current base flows and connectivity along the Barwon-Darling system. At the **Menindee Lakes**, storage has risen by 3 GL to 101 GL (6%). The release of a small replenishing flow into the lower Darling River continued, with the current flow at Weir 32 at about 100 ML/day. Releases are now planned to continue until the end of September.

Storage at **Lake Victoria** increased by 23 GL to 468 GL (69 % capacity) and the level is expected to keep rising in the week ahead. The flow into **South Australia** averaged 6,000 ML/day. However, higher flow rates are now being planned for early September with the continuing delivery of additional environmental water into South Australia from releases upstream.

At the **Lower Lakes**, the five-day average level at Lake Alexandrina has crept back up to 0.79 m AHD (4 cm above FSL). Releases through the barrages have been maintained throughout the week and are currently estimated to be around 1,400 ML/day. Northerly winds have increased the water level at the southern end of Lake Alexandrina at times, and resulted in additional freshening flows into the Coorong over the spillways. Higher barrage release rates are likely in the coming weeks that will help manage the Lower Lakes level, provide additional environmental benefits to the Coorong and maintain flows through Murray Mouth.

For media inquiries contact the Media Officer on 02 6279 0141

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Water in Storage

Week ending Wednesday 26 Aug 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	465.87	2 671	69%	71	2 600	-36
Hume Reservoir	192.00	3 005	181.96	1 370	46%	23	1 347	+53
Lake Victoria	27.00	677	25.19	468	69%	100	368	+23
Menindee Lakes		1 731*		101	6%	(- -) #	0	+3
Total		9 269		4 610	50%	- -	4 315	+43
Total Active MDBA Storage							51% ^	

Major State Storages

Burrinjuck Reservoir	1 026	662	64%	3	659	+28
Blowering Reservoir	1 631	733	45%	24	709	+28
Eildon Reservoir	3 334	2 047	61%	100	1 947	+17

* 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 25 Aug 2015

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2015
Lake Eucumbene - Total	2 171	n/a	Snowy-Murray	+14	159
Snowy-Murray Component	1 057	n/a	Tooma-Tumut	+10	86
Target Storage	1 190		Net Diversion	4	73
			Murray 1 Release	+22	236

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)	6.0	27	Yarrowonga Main Channel (net)	0.7	1
Wakool Sys Allowance	3.0	4	Torrumbarry System + Nyah (net)	0	6
Western Murray Irrigation	0.1	-1	Sunraysia Pumped Districts	0.4	2
Licensed Pumps	0.6	4	Licensed pumps - GMW (Nyah+u/s)	0.3	0
Lower Darling	0.1	1	Licensed pumps - LMW	1.2	9
TOTAL	9.8	35	TOTAL	2.6	18

* 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	124.0 *
Flow this week	41.7
Flow so far this month	178.3
Flow last month	233.0

(6 000 ML/day)

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

	Current	Average over the last week	Average since 1 August 2015
Swan Hill	70	70	80
Euston	-	-	-
Red Cliffs	130	130	130
Merbein	130	130	150
Burtundy (Darling)	890	860	890
Lock 9	130	130	170
Lake Victoria	210	190	200
Berri	230	230	250
Waikerie	330	330	340
Morgan	320	320	320
Mannum	320	320	330
Murray Bridge	380	360	360
Milang (Lake Alex.)	720	730	720
Poltalloch (Lake Alex.)	660	560	590
Meningie (Lake Alb.)	2 060	2 050	2 040
Goolwa Barrages	940	970	1 070



River Levels and Flows

Week ending Wednesday 26 Aug 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	-	-	-	3 890	F	4 340	2 880
Jingellic	4.0	2.09	208.61	7 330	R	6 910	5 900
Tallandoon (Mitta Mitta River)	4.2	3.16	220.05	8 210	R	7 930	7 910
Heywoods	5.5	2.58	156.21	8 950	S	8 670	7 570
Doctors Point	5.5	2.73	151.20	11 580	R	10 090	9 320
Albury	4.3	1.73	149.17	-	-	-	-
Corowa	4.6	2.42	128.44	10 320	R	9 890	9 300
Yarrowonga Weir (d/s)	6.4	1.88	116.92	12 030	S	12 280	13 900
Tocumwal	6.4	2.52	106.36	12 080	F	12 540	14 500
Torrumbarry Weir (d/s)	7.3	3.11	81.66	9 950	R	9 880	9 120
Swan Hill	4.5	1.76	64.68	9 710	S	9 520	7 530
Wakool Junction	8.8	3.82	52.94	11 600	R	10 640	8 120
Euston Weir (d/s)	9.1	2.35	44.19	13 540	R	12 710	10 160
Mildura Weir (d/s)	-	-	-	12 500	F	11 320	9 640
Wentworth Weir (d/s)	7.3	3.38	28.14	12 420	R	11 240	10 160
Rufus Junction	-	3.37	20.30	5 750	R	5 650	6 820
Blanchetown (Lock 1 d/s)	-	0.85	-	4 980	F	5 710	6 930
Tributaries							
Kiewa at Bandiana	2.8	2.37	155.60	2 780	R	1 740	1 870
Ovens at Wangaratta	11.9	8.84	146.52	2 830	R	3 010	4 200
Goulburn at McCoys Bridge	9.0	1.55	92.97	1 050	S	1 070	1 010
Edward at Stevens Weir (d/s)	5.5	1.84	81.61	1 760	S	1 900	1 670
Edward at Liewah	-	2.55	57.93	1 960	R	1 570	960
Wakool at Stoney Crossing	-	1.53	55.03	680	R	480	160
Murrumbidgee at Balranald	5.0	2.85	58.81	2 520	S	2 800	2 690
Barwon at Mungindi	6.1	3.34	-	390	F	370	430
Darling at Bourke	9.0	4.14	-	540	S	510	430
Darling at Burtundy Rocks	-	0.78	-	0	F	0	0

Natural Inflow to Hume	9 250	9 470
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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	-0.18	-	No. 7 Rufus River	22.10	+0.29	+1.05
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.02	+0.04
No. 15 Euston	47.60	+0.30	-	No. 5 Renmark	16.30	-0.01	+0.17
No. 11 Mildura	34.40	+0.04	+0.39	No. 4 Bookpurnong	13.20	-0.02	+0.60
No. 10 Wentworth	30.80	+0.01	+0.74	No. 3 Overland Corner	9.80	+0.00	+0.15
No. 9 Kulnine	27.40	+0.31	+0.64	No. 2 Waikerie	6.10	-0.02	+0.12
No. 8 Wangumma	24.60	+0.62	+0.40	No. 1 Blanchetown	3.20	-0.08	+0.10

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

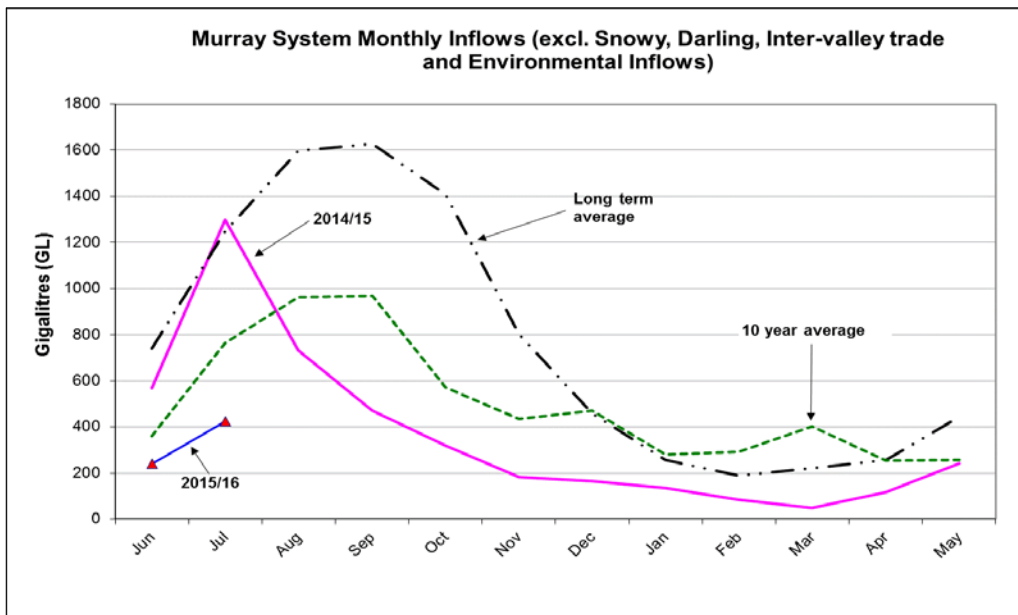
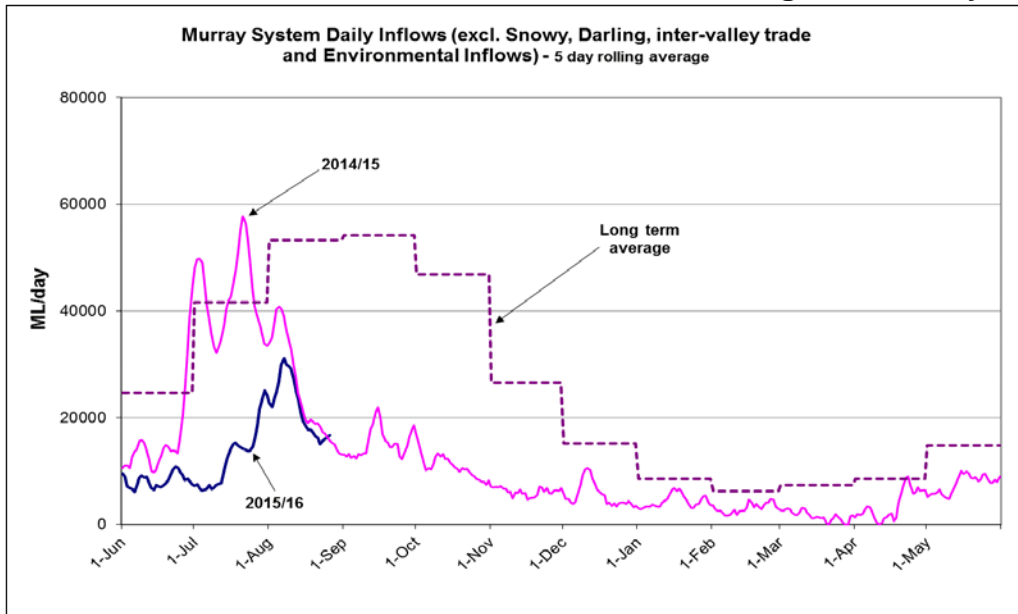
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.79	2	-	Open
Mundoo	26 openings	0.78	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwitchere	322 gates	0.80	3	Open	Open

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



Week ending Wednesday 26 Aug 2015



State Allocations (as at 26 Aug 2015)

NSW - Murray Valley

High security	95%
General security	0%

Victorian - Murray Valley

High reliability	50%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	17%

Victorian - Goulburn Valley

High reliability	58%
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>