



We're undertaking a survey of Weekly Report readers. Through this survey the MDBA is seeking your feedback regarding the content and layout of the River Murray Weekly Report including any improvements you might like to see. Participation in this research is voluntary. You can decide to stop at any time. Your answers will only be used for the purposes of the research and you can remain anonymous.

The survey should only take about 5 minutes to complete. The survey closes on Sunday 5 August 2018. To participate please click here <https://www.surveymonkey.com/r/RMWSURVEY>

If you have any questions or require further information about the survey, please contact the MDBA Engagement Team on P: 1800 230 067 or E: Engagement@mdba.gov.au

RIVER MURRAY WEEKLY REPORT

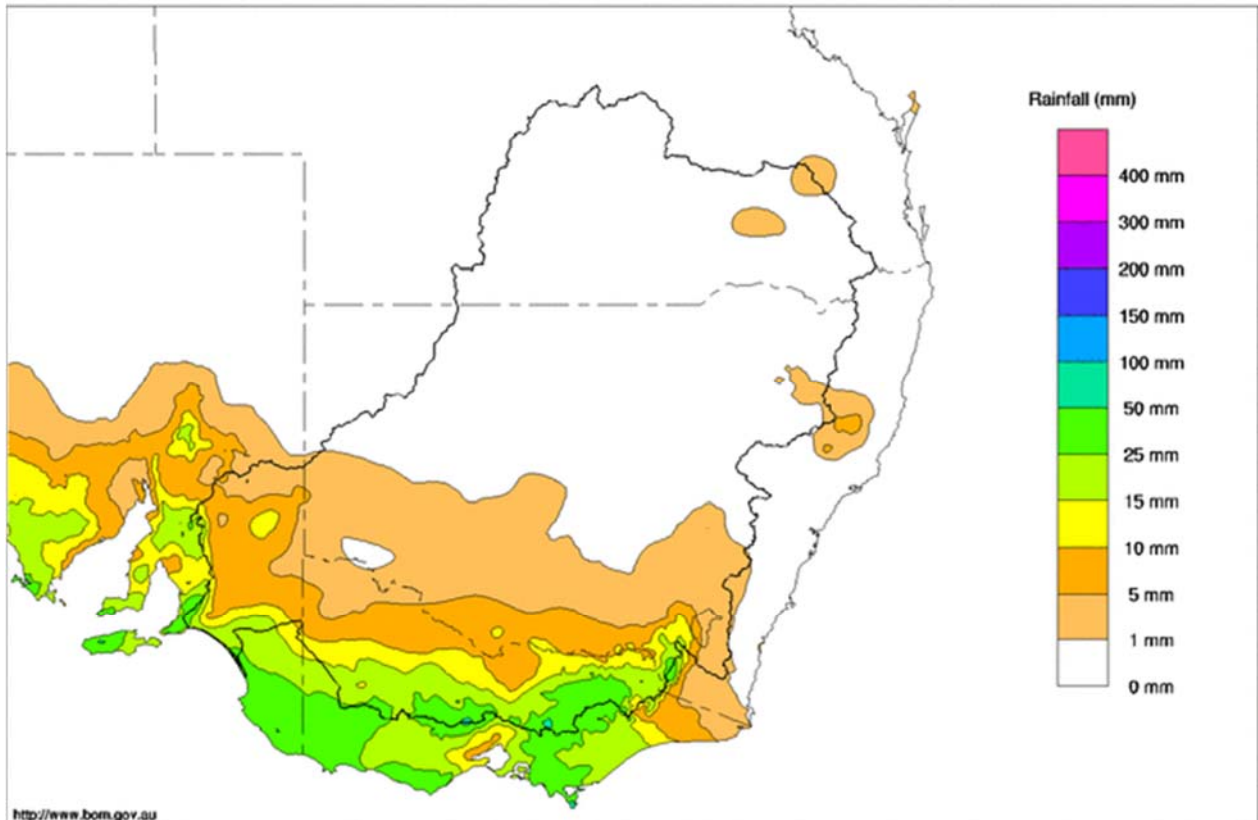
FOR THE WEEK ENDING WEDNESDAY, 25 JULY 2018

Trim Ref: D18/36496

Rainfall and inflows

For the week ending 25 July 2018 moderate rainfall was recorded in north-east and central Victoria. Widespread light rainfall was recorded in the South Australian, Victorian and southern New South Wales parts of the Murray-Darling Basin (Map 1). Notable totals were 53mm at Cheshunt in the King River valley (photo 1), 80mm at Rocky Valley, 52mm at Perisher Valley and 14mm at Swan Hill.

Murray-Darling Rainfall Totals (mm) Week Ending 25th July 2018
Australian Bureau of Meteorology



<http://www.bom.gov.au>

© Commonwealth of Australia 2018, Australian Bureau of Meteorology

Issued: 25/07/2018

Map 1 - Murray-Darling Basin rainfall map week ending 25 July 2018 (Source: Bureau of Meteorology).



The rainfall increased flows in the upper Murray tributaries earlier in the week before receding towards the end of the week. The Mitta Mitta River at Hinnomunjie peaked at 910 ML/day before receding to the current flow of 760 ML/day. At Biggara, flow increased to 670 ML/day reducing to the current flow of 540 ML/day.

Downstream of Hume reservoir, inflows from the Kiewa River measured at Bandiana, averaged 1,300 ML/day, while the Ovens River at Wangaratta increased from 1,600 ML/day to the current flow of around 2,400 ML/day.

River operations

- Flow to South Australia to continue to recede
- Refilling of Lake Mulwala, Torrumbarry Weir and Stevens weir pool continuing

MDBA active storage decreased by 14 GL this week to 4,978 GL (59% capacity).

The storage volume at **Dartmouth Reservoir** decreased by 1 GL to 3,435 GL (89% capacity). The current release near 1,000 ML/day is for hydroelectricity generation. A flow pulse released from Dartmouth Dam to benefit water quality in the lower Mitta Mitta River is planned to commence on the 4th of August with a peak of approximately 3,000 ML/day. To subscribe to future information on Mitta Mitta flow pulses, visit <https://www.mdba.gov.au/river-murray-system/flow-advice>.

The storage volume at **Hume Reservoir** decreased by 15 GL this week to 1,369 GL (46% capacity). The release from Hume has increased to 8,500 ML/day and may increase further over the coming week. The increase is partly to provide for demands downstream of Yarrawonga Weir, but also to continue the refill of Lake Mulwala after this year's winter drawdown to control the invasive waterweed *Egeria densa*.

At **Lake Mulwala** the level has risen by about 1.6 metres and is to rise by a further 1.6 metres to 124.7 m AHD by early August, in time for the upcoming irrigation season.



Photo 1 the King river near Cheshunt (photo courtesy Tim Rossi MDBA).



This week the release from **Yarrowonga Weir** was reduced from around 7,000 ML/day to 5,000 ML/day as part of an environmental water order that seeks to mimic in-channel natural flow variability downstream of Yarrowonga. Over the next few days the release is expected to gradually increase. MDBA operational planning suggests that in the coming weeks, if conditions remain dry, transfers from Hume Reservoir to Lake Victoria may need to begin in readiness for higher system demands later in the season. This would result in higher flows downstream of Yarrowonga Weir from later in July, although increased flows wouldn't be seen along most of the Murray until August.

Regulators in the Barmah-Millewa forest remain open to provide connectivity between the river and the forest floodplain in winter and into spring when river flows are below channel capacity. This action will benefit native fish and improve the transfer of valuable nutrients from the floodplain to the river to increase ecosystem productivity. The small additional water loss associated with this action is being debited from environmental water accounts.

The **Edward River** and **Gulpa Creek** offtakes are currently passing 1,010 ML/day and 300 ML/day respectively with all gates raised clear of the water to improve fish passage. Inflows to the Edward-Wakool system through the Edward and Gulpa offtakes can be expected to fluctuate over winter in response to flow changes in the River Murray downstream of Yarrowonga Weir.

Downstream on the Edward River, WaterNSW has [commenced refilling Stevens Weir](#) pool following the completion of maintenance works on the weir and at the offtake regulators. The flow downstream of Stevens Weir has increased to around 1,060 ML/day.

Inflow to the Murray from the **Goulburn River** steadily declined this week as the delivery of the Goulburn winter pulse nears an end. Flow at McCoys Bridge has fallen from about 3,500 ML/day to the current flow near 1,800 ML/day, and will continue to recede over the coming week. This winter fresh aims to improve water quality and benefit aquatic animals and vegetation along the Goulburn River and further downstream along the Murray. The pulse was planned by the Goulburn Broken Catchment Management Authority (CMA) in consultation with the Commonwealth Environmental Water Office and the Victorian Environmental Water Holder. For more information visit the [Goulburn Broken CMA website](#). Given the continuing dry conditions, transfers of Inter-Valley Trade water from the Goulburn system to the Murray system are being considered by the MDBA and could commence as early as August 2018.



Photo 2 The River Murray downstream of Albury (Photo courtesy Hugo Bowman MDBA)



River users in the **Echuca** district and downstream should be aware that water levels are expected to continue to decrease over the coming week as the inflows from the Goulburn recede. Part of the fall in river height may be partially offset by the gradual re-raising of **Torrumbarry Weir** pool. The pool level is currently 85.89 m AHD (16 cm below Full Supply Level) and will continue to be slowly raised towards FSL over the next fortnight ahead of the upcoming irrigation season. More information is available on the [MDBA website](#). This week the flow downstream of Torrumbarry Weir receded from 6,800 ML/day to 5,300 ML/day and will fall further over the coming week as the Goulburn pulse progresses downstream.

The diversion to National Channel averaged 1,250 ML/day this week. This water is being delivered to the Gunbower Creek and Forest and to begin to fill storages ahead of the start of the irrigation season. More information on the Gunbower Forest watering can be found on the [North Central Catchment Management Authority \(NCCMA\) website](#).

Inflow from the **Murrumbidgee River**, measured at Balranald, increased this week to 1,030 ML/day and is expected to gradually ease over the coming week.

At **Euston**, the weir pool is being varied to target between 30 and 40 cm below FSL. Lowering Euston weir is part of the [weir pool variability program](#) which aims to help restore a more natural wetting and drying regime for river banks and wetlands. The downstream release decreased from 10,700 ML/day at the start of the week to a current flow near 9,200 ML/day and is expected to continue to gradually decline over the coming weeks.

The **Menindee Lakes** storage volume was unchanged this week and remains at 199 GL (11% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). As part of drought contingency measures, WaterNSW has commenced installation of two temporary block banks across the lower Darling to assist in maintaining supply to domestic, stock and permanent plantings along the lower Darling. The release from Weir 32 averaged 230 ML/day in order to fill these block banks.

On the Murray at **Wentworth Weir**, the release decreased to 10,560 ML/day and is expected to continue to ease over the coming week.

The **Lock 7** and **9** weir pools continue to target a water level 10 cm below FSL and will vary between FSL and 10 cm below FSL over the coming weeks. The **Lock 8** weir pool is targeting 30 cm below FSL.

At **Lake Victoria**, the storage volume increased by 2 GL to 368 GL (54% capacity) and is expected to rise slightly over the coming week. Flow to **South Australia** averaged 9,700 ML/day and is expected to gradually decrease over the coming week.

Downstream at **Lock 3 (Overland Corner)**, the lock remains [temporarily closed for a major refurbishment](#) which commenced in mid-June. These works are expected to take up to 14 weeks to complete.

The 5-day average water level in the **Lower Lakes** has risen to 0.76 m AHD, and lake levels are expected to continue to gradually rise over the coming weeks. When conditions allow, environmental water is to be released from the barrages into the Coorong and Murray mouth in planned 'pulses'. These pulsed releases of water will provide a freshening flow into the Coorong and also aim to enhance the upstream migration and spawning of pouched lamprey, a primitive eel-like fish. All fishways remain open.

For media inquiries contact the Media Officer on 02 6279 0141

ANDREW REYNOLDS
Executive Director, River Management



Water in Storage

Week ending Wednesday 25 Jul 2018

MDBA Storages	Full Supply Level	Full Supply Volume	Current Storage Level	Current Storage		Dead Storage	Active Storage	Change in Total Storage for the Week	
	(m AHD)	(GL)	(m AHD)	(GL)	%				(GL)
Dartmouth Reservoir	486.00	3 856	479.35	3 435	89%	71	3 364	-1	
Hume Reservoir	192.00	3 005	181.94	1 369	46%	23	1 346	-15	
Lake Victoria	27.00	677	24.24	368	54%	100	268	+2	
Menindee Lakes		1 731*		199	11%	(- -) #	0	-0	
Total		9 269		5 371	58%	--	4 978	-14	
Total Active MDBA Storage							59% ^		

Major State Storages

Burrinjuck Reservoir	1 026	415	40%	3	412	+0
Blowering Reservoir	1 631	1 176	72%	24	1 152	+31
Eildon Reservoir	3 334	1 812	54%	100	1 712	+6

* Menindee surcharge capacity – 2050 GL

** All Data is rounded to nearest GL **

NSW has sole access to water when the storage falls below 480 GL. MDBA regains access to water when the storage next reaches 640 GL.

^ % of total active MDBA storage

Snowy Mountains Scheme

Snowy diversions for week ending 24 Jul 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	610	n/a	Snowy-Murray	+23	374
Snowy-Murray Component	277	n/a	Tooma-Tumut	+4	39
Target Storage	1 170		Net Diversion	20	336
			Murray 1 Release	+23	430

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2018	Victoria	This Week	From 1 July 2018
Murray Irrig. Ltd (Net)	0.2	0	Yarrowonga Main Channel (net)	0	0
Wakool Sys Allowance	0.6	1	Torrumbarry System + Nyah (net)	0	24
Western Murray Irrigation	0.1	0	Sunraysia Pumped Districts	0.5	2
Licensed Pumps	n/a	3	Licensed pumps - GMW (Nyah+u/s)	1	0
Lower Darling	0.2	1	Licensed pumps - LMW	4.6	4
TOTAL	1.1	5	TOTAL	6.1	30

* Figures are derived from actual and estimates where data is unavailable. 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 environmental flows.

Entitlement this month	108.5 *
Flow this week	67.6
Flow so far this month	192.3
Flow last month	132.5

(9 700 ML/day)

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	80	100	100
Euston	-	-	-
Red Cliffs	120	120	150
Merbein	-	120	150
Burtundy (Darling)	710	710	680
Lock 9	130	130	160
Lake Victoria	200	190	230
Berri	160	170	280
Waikerie	260	280	340
Morgan	270	300	350
Mannum	460	440	370
Murray Bridge	420	420	400
Milang (Lake Alex.)	840	760	720
Poltalloch (Lake Alex.)	700	710	650
Meningie (Lake Alb.)	1 370	1 460	1 580
Goolwa Barrages	8 240	9 170	3 220



River Levels and Flows

Week ending Wednesday 25 Jul 2018

	Minor Flood Stage	Gauge Height		Flow	Trend	Average Flow this Week	Average Flow last Week
		local (m)	(m AHD)				
River Murray	(m)			(ML/day)		(ML/day)	(ML/day)
Khancoban	-	-	-	4 280	F	4 140	5 040
Jingellic	4.0	1.84	208.36	5 580	R	5 170	6 780
Tallandoon (Mitta Mitta River)	4.2	1.80	218.69	1 540	R	1 770	1 130
Heywoods	5.5	2.52	156.15	8 500	S	8 300	4 860
Doctors Point	5.5	2.60	151.07	10 600	F	10 550	7 220
Albury	4.3	1.61	149.05	-	-	-	-
Corowa	4.6	2.36	128.38	10 070	S	9 490	4 730
Yarrowonga Weir (d/s)	6.4	0.98	116.02	5 360	F	6 150	4 830
Tocumwal	6.4	1.62	105.46	5 780	R	6 110	4 050
Torrumbarry Weir (d/s)	7.3	1.93	80.47	5 280	F	5 540	8 350
Swan Hill	4.5	1.15	64.07	5 630	F	6 890	9 450
Wakool Junction	8.8	2.93	52.05	7 400	F	8 830	10 370
Euston Weir (d/s)	9.1	1.76	43.60	9 230	F	10 300	11 200
Mildura Weir (d/s)	-	-	-	10 530	F	10 850	10 790
Wentworth Weir (d/s)	7.3	3.07	27.83	10 560	S	10 640	10 800
Rufus Junction	-	3.76	20.69	8 180	F	9 250	9 070
Blanchetown (Lock 1 d/s)	-	0.91	-	9 290	F	9 470	7 940
Tributaries							
Kiewa at Bandiana	2.8	1.49	154.72	1 170	F	1 310	1 480
Ovens at Wangaratta	11.9	8.75	146.43	2 430	S	2 120	2 050
Goulburn at McCoys Bridge	9.0	1.99	93.41	1 830	F	2 460	5 310
Edward at Stevens Weir (d/s)	5.5	1.32	81.09	1 060	F	810	600
Edward at Liewah	-	1.45	56.83	820	F	910	1 080
Wakool at Stoney Crossing	-	1.30	54.79	240	F	240	210
Murrumbidgee at Balranald	5.0	1.52	57.48	1 030	F	940	740
Barwon at Mungindi	6.1	3.01	-	0	F	0	0
Darling at Bourke	9.0	3.99	-	50	F	60	100
Darling at Burtundy Rocks	-	0.63	-	10	F	10	20

Natural Inflow to Hume	3 060	3 680
------------------------	-------	-------

(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	-1.86	-	No. 7 Rufus River	22.10	-0.07	+1.45
No. 26 Torrumbarry	86.05	-0.16	-	No. 6 Murtho	19.25	+0.03	+0.26
No. 15 Euston	47.60	-0.40	-	No. 5 Renmark	16.30	+0.09	+0.27
No. 11 Mildura	34.40	+0.00	+0.34	No. 4 Bookpurnong	13.20	+0.02	+0.99
No. 10 Wentworth	30.80	+0.02	+0.43	No. 3 Overland Corner	9.80	-0.01	+0.44
No. 9 Kulnine	27.40	-0.07	-0.13	No. 2 Waikerie	6.10	+0.02	+0.45
No. 8 Wangumma	24.60	-0.26	+0.20	No. 1 Blanchetown	3.20	+0.02	+0.16

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.76
------------------------------------------------------------	------

Barrages

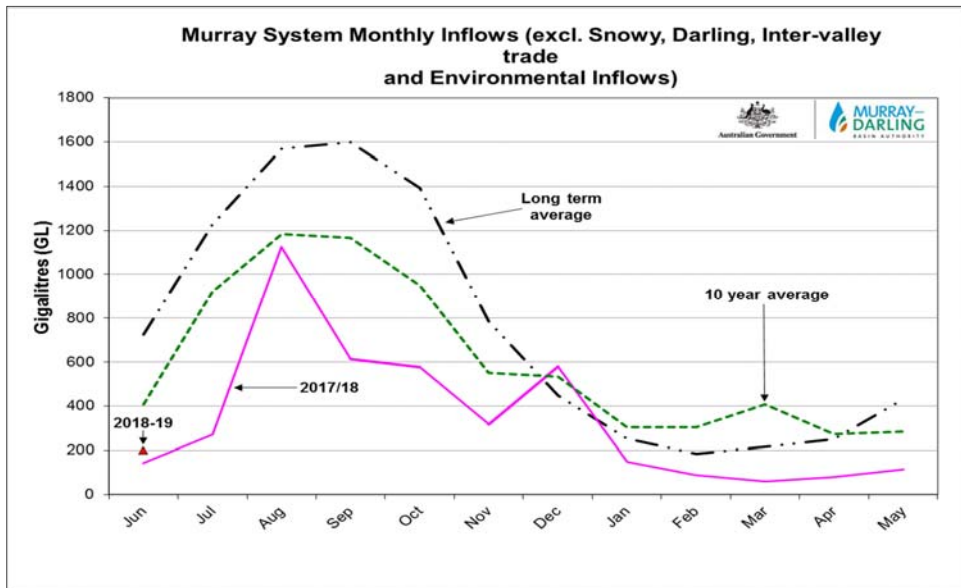
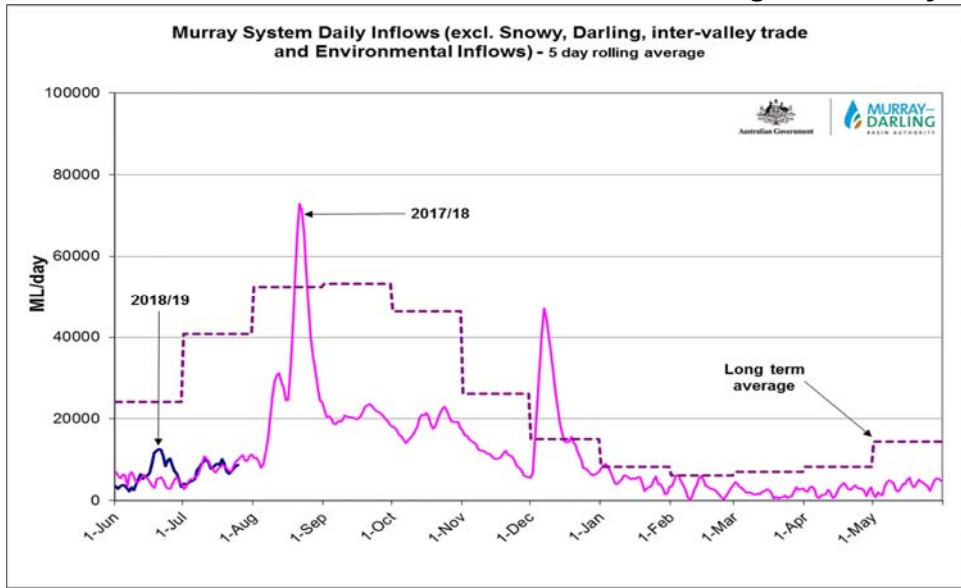
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.77	All closed	-	Open	Open	-
Mundoo	26 openings	0.76	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.76	All closed	Open	Open	Open	-

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



Week ending Wednesday 25 Jul 2018



State Allocations (as at 25 Jul 2018)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	47%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	5%

Victorian - Goulburn Valley

High reliability	34%
Low reliability	0%

NSW - Lower Darling

High security	100%
General security	0%

South Australia - Murray Valley

High security	100%
---------------	------

NSW : <http://www.water.nsw.gov.au/water-management/water-availability>
 VIC : <http://nvrn.net.au/seasonal-determinations/current>
 SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>