



RIVER MURRAY WEEKLY REPORT

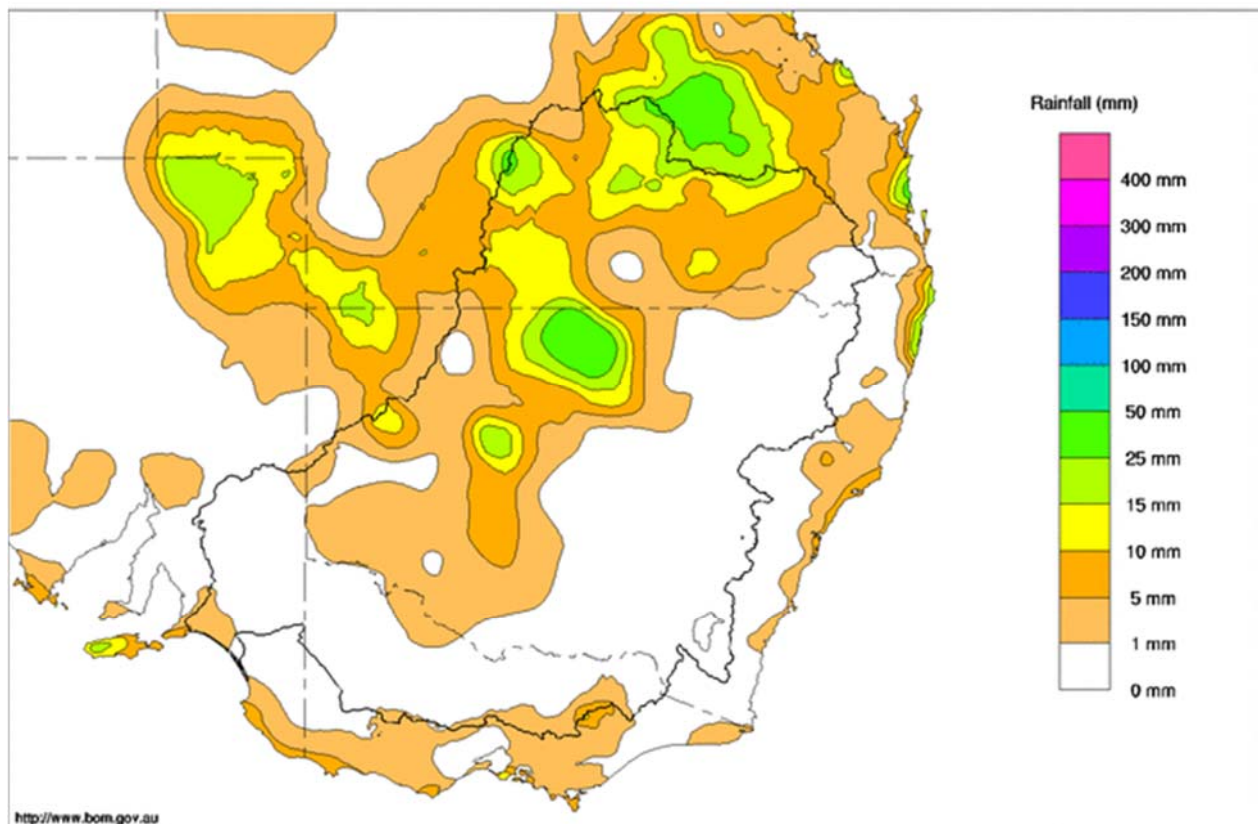
FOR THE WEEK ENDING WEDNESDAY, 27 JUNE 2018

Trim Ref: D18/32037

Rainfall and inflows

For week ending 27th June little to no rain fell in the southern Murray-Darling Basin whilst small to modest volumes of rain fell in the northern Basin (Map 1). The heaviest falls were observed in the northwest of New South Wales and included 37mm at Brewarrina and 50mm at Gumbooka.

Murray-Darling Rainfall Totals (mm) Week Ending 27th June 2018
Australian Bureau of Meteorology



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Issued: 27/06/2018

Map 1 - Murray-Darling Basin rainfall map week ending 27 June 2018 (Source: Bureau of Meteorology).

In the absence of any significant rainfall across the Victorian and Australian Alps, upper Murray tributaries receded this week. The upper Mitta-Mitta River at Hinnomunjie, decreased from 800 ML/day to the current flow of 560 ML/day. Biggara, on the upper Murray, decreased from 630 ML/day to the current flow of 400 ML/day.

Similarly, downstream from Hume, inflows from the Kiewa River measured at Bandiana, decreased from around 1,500 ML/day to the current flow of 1,020 ML/day. The flow in the Ovens River at Wangaratta decreased from 2,100 ML/day to 1,260 ML/day.



River operations

- Goulburn flow pulse continues, the flow at McCoys Bridge is expected to peak in early July
- Releases from Yarrowonga weir to continue to target a minimum of 4,000 ML/day for native fish

MDBA active storage increased by 60 GL this week to 4,867 GL (58% capacity)

The storage volume at **Dartmouth Reservoir** increased by 5 GL to 3,423 GL (89% capacity). The release, measured at the Colemans gauge, is currently 300 ML/day and is expected to increase to 500 ML/day this weekend.

At **Hume Reservoir**, the storage volume increased by 53 GL to 1,275 GL (42% capacity). The release from Hume is currently 2,000 ML/day and is forecast to remain steady over the coming week.

Downstream at **Lake Mulwala**, the lake level is currently targeting 120.2 m AHD (4.5 metres below the normal operating level of 124.7 m AHD). The lake is expected to remain around this level until mid-July to manage the invasive water weed *Egeria densa*. Lowering the water level and subjecting the exposed weed to drying and frost has proven to be an effective method for controlling its abundance within the weir pool. The drawdown also provides an opportunity to undertake works on the lake foreshore. From mid-July the lake will commence refilling and reach the normal operating level of around 124.7 m AHD in early August ready for the irrigation season.

During June, the release from **Yarrowonga Weir** is targeting a minimum flow rate of around 4,000 ML/day to benefit native fish in the River Murray. When required, additional water is being released from Hume, on behalf of environmental water holders, to maintain this flow when inflows from the Kiewa and Ovens Rivers are low. The release downstream of Yarrowonga Weir is currently 4,000 ML/day. Over the coming week the Yarrowonga release will reduce to around 3,000 ML/day.

The **Edward River** and **Gulpa Creek** offtakes are currently passing 900 ML/day and 220 ML/day respectively with all gates raised clear of the water. 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.

Trading water from above the Barmah Choke to below the choke will continue to be restricted in the 2018-19 water year. Water market participants should be

Downstream on the Edward River, [WaterNSW](#) has drawn down **Stevens Weir** pool and raised the gates clear of the water to allow maintenance works on the weir and at the offtake regulators. The flow at Stevens Weir averaged near 1,050 ML/day this week.

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, increased to 3,550 ML/day this week and is expected to continue to rise in the coming days to peak in early July at around 9,000 ML/day as a winter pulse arrives from Goulburn Weir. This winter fresh aims to improve water quality and improve environmental outcomes for aquatic biota and vegetation along the Goulburn River and further downstream all the way to the Murray Mouth. This pulse has been 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](#).

River users in the **Echuca** district and downstream should be aware that water levels will rise and then fall noticeably, as this pulse from the Goulburn River enters and passes down the River Murray.

At **Torrumbarry Weir**, the pool level is currently 85.81 m AHD, 24 cm below the full supply level (FSL). The weir pool will fluctuate around this current level over coming weeks before being raised back to FSL ahead of the start of the irrigation season. This action is aimed at helping to improve river bank stability and environmental outcomes within the influence of the weir pool. More information is available at the [MDBA website](#). The downstream release from Torrumbarry Weir increased from 3,350 ML/day to the current flow of 4,140 ML/day. In the coming week the flow will continue to rise as the Goulburn flow pulse arrives.



The diversion into National Channel averaged 980 ML/day this week. This water is being used to deliver environmental water to the Gunbower Forest. More information on the Gunbower Forest watering can be found on the [North Central Catchment Management Authority \(NCCMA\) website](#).

At **Swan Hill**, the flow receded slightly from around 4,200 ML/day to the current flow of 3,850 ML/day. Over the next week flows are expected to begin to increase as the Goulburn pulse continues to move downstream.

Inflow from the **Murrumbidgee River**, measured at Balranald, is currently 440 ML/day and is expected to remain steady 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 is currently 5,900 ML/day and is expected to remain steady this coming week before increasing the following week as the Goulburn pulse arrives.

On the **Darling River** upstream of the Menindee Lakes, an environmental release made by WaterNSW on behalf of state and Commonwealth governments back in mid-April has begun to recede at Wilcannia. The flow at Wilcannia has reduced to around 200 ML/day, down from around 330 ML/day earlier in the week.

The **Menindee Lakes** storage volume remained steady at 206 GL (12% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). The [release from Weir 32](#) is targeting minimum flow rates of around 130 ML/day with the aim to maintain flow in the lower Darling at Burtundy, where the flow is currently around 60 ML/day. A [red alert](#) warning (high alert) for blue-green algae continues for Lake Tandure and the lower Darling River between Pooncarie and Burtundy. [WaterNSW](#) has advised that, in the past, a drought contingency measure of installing two temporary block banks across the Lower Darling is being planned to ensure supply to domestic and stock and permanent plantings.

On the Murray at **Wentworth Weir**, the release decreased this week from around 6,670 ML/day to the current flow 5,550 ML/day and is expected to continue slowly reduce over the coming week.

The **Locks 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 3 GL to 363 GL (54% capacity). The storage is expected to remain steady over the coming week.

The flow to **South Australia** averaged 5,300 ML/day and will decrease to 4,800 ML/day in the coming days. During July the flow to South Australia is expected to increase as environmental water from the Goulburn River is delivered to South Australia.

Downstream at Lock 6, the pool is 3 cm below FSL. The pool is expected to return to the normal operating level in coming days. At Locks 5 and 2, proposed weir pool lowering trials are now unlikely to proceed this year unless flow conditions change substantially. More information is available in South Australia's [River Murray flow report](#). Lock 3 remains [temporarily closed for a major refurbishment](#) which is expected to take up to 14 weeks to complete.

Local rainfall and the continued delivery of environmental water has helped increase the 5-day average water level in the **Lower Lakes** by 1cm to 0.63 m AHD. When conditions allow, small barrage releases have been prioritised through Tauwitchere and Goolwa barrages. Barrages releases averaged 495 ML/day and 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 27 Jun 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)	(GL)	(GL)
Dartmouth Reservoir	486.00	3 856	479.15	3 423	89%	71	3 352	+5
Hume Reservoir	192.00	3 005	181.19	1 275	42%	23	1 252	+53
Lake Victoria	27.00	677	24.19	363	54%	100	263	+3
Menindee Lakes		1 731*		206	12%	(- -) #	0	+0
Total		9 269		5 267	57%	--	4 867	+60
Total Active MDBA Storage							58% ^	

Major State Storages

Burrinjuck Reservoir	1 026	413	40%	3	410	+0
Blowering Reservoir	1 631	1 081	66%	24	1 057	+33
Eildon Reservoir	3 334	1 850	55%	100	1 750	-19

* 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 26 Jun 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	819	n/a	Snowy-Murray	+37	270
Snowy-Murray Component	367	n/a	Tooma-Tumut	+4	34
Target Storage	1 240		Net Diversion	33	236
			Murray 1 Release	+39	302

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2017	Victoria	This Week	From 1 July 2017
Murray Irrig. Ltd (Net)	0.0	963	Yarrowonga Main Channel (net)	0	297
Wakool Sys Allowance	-0.3	74	Torrumbarry System + Nyah (net)	4.4	518
Western Murray Irrigation	0.2	25	Sunraysia Pumped Districts	0.4	116
Licensed Pumps	1.0	259	Licensed pumps - GMW (Nyah+u/s)	1	67
Lower Darling	0.2	92	Licensed pumps - LMW	4.6	380
TOTAL	1.1	1413	TOTAL	10.4	1378

* 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	90.0 *
Flow this week	37.2
Flow so far this month	117.7
Flow last month	102.0

(5 300 ML/day)

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	110	100	100
Euston	-	-	-
Red Cliffs	120	110	150
Merbein	110	110	150
Burtundy (Darling)	720	720	680
Lock 9	110	110	160
Lake Victoria	150	170	230
Berri	290	300	290
Waikerie	440	430	330
Morgan	440	430	350
Mannum	390	390	370
Murray Bridge	410	400	400
Milang (Lake Alex.)	820	820	720
Poltalloch (Lake Alex.)	690	710	650
Meningie (Lake Alb.)	1 650	1 650	1 580
Goolwa Barrages	4 390	7 110	2 830



River Levels and Flows

Week ending Wednesday 27 Jun 2018

	Minor Flood Stage	Gauge Height		Flow (ML/day)	Trend	Average Flow this Week (ML/day)	Average Flow last Week (ML/day)
		local (m)	(m AHD)				
River Murray	(m)						
Khancoban	-	-	-	7 540	F	6 090	7 400
Jingellic	4.0	2.16	208.68	8 410	R	7 380	8 570
Tallandoon (Mitta Mitta River)	4.2	1.48	218.37	690	S	750	1 090
Heywoods	5.5	1.67	155.30	1 920	R	1 030	750
Doctors Point	5.5	1.82	150.29	2 790	R	2 240	2 220
Albury	4.3	0.96	148.40	-	-	-	-
Corowa	4.6	0.89	126.91	2 540	R	2 130	2 590
Yarrowonga Weir (d/s)	6.4	0.74	115.78	4 050	R	4 710	4 380
Tocumwal	6.4	1.35	105.19	4 340	F	5 070	4 590
Torrumbarry Weir (d/s)	7.3	1.61	80.15	4 140	F	3 760	3 570
Swan Hill	4.5	0.89	63.81	3 850	R	3 860	4 220
Wakool Junction	8.8	2.34	51.46	5 120	F	5 480	6 270
Euston Weir (d/s)	9.1	1.24	43.08	5 900	F	6 100	7 250
Mildura Weir (d/s)	-	-	-	6 180	F	6 490	7 680
Wentworth Weir (d/s)	7.3	2.83	27.59	5 550	S	6 050	7 390
Rufus Junction	-	3.19	20.12	4 710	F	4 870	3 560
Blanchetown (Lock 1 d/s)	-	0.64	-	5 310	R	4 170	4 330
Tributaries							
Kiewa at Bandiana	2.8	1.39	154.62	1 020	F	1 350	1 610
Ovens at Wangaratta	11.9	8.30	145.98	1 260	F	1 610	2 560
Goulburn at McCoys Bridge	9.0	2.86	94.28	3 550	R	1 570	1 010
Edward at Stevens Weir (d/s)	5.5	1.48	81.26	1 220	F	1 050	1 030
Edward at Liewah	-	1.91	57.29	1 190	F	1 210	1 320
Wakool at Stoney Crossing	-	1.31	54.80	270	F	270	330
Murrumbidgee at Balranald	5.0	0.85	56.81	440	F	450	440
Barwon at Mungindi	6.1	3.11	-	0	F	0	0
Darling at Bourke	9.0	4.01	-	70	R	60	120
Darling at Burtundy Rocks	-	0.69	-	60	S	50	60

Natural Inflow to Hume	3 330	7 810
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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	-4.76	-	No. 7 Rufus River	22.10	-0.07	+0.86
No. 26 Torrumbarry	86.05	-0.24	-	No. 6 Murtho	19.25	-0.03	+0.12
No. 15 Euston	47.60	-0.40	-	No. 5 Renmark	16.30	+0.09	+0.19
No. 11 Mildura	34.40	+0.04	+0.11	No. 4 Bookpurnong	13.20	+0.07	+0.58
No. 10 Wentworth	30.80	+0.00	+0.19	No. 3 Overland Corner	9.80	+0.00	+0.21
No. 9 Kulnine	27.40	-0.04	-0.24	No. 2 Waikerie	6.10	-0.01	+0.20
No. 8 Wangumma	24.60	-0.25	+0.00	No. 1 Blanchetown	3.20	+0.03	-0.11

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.63
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Barrages

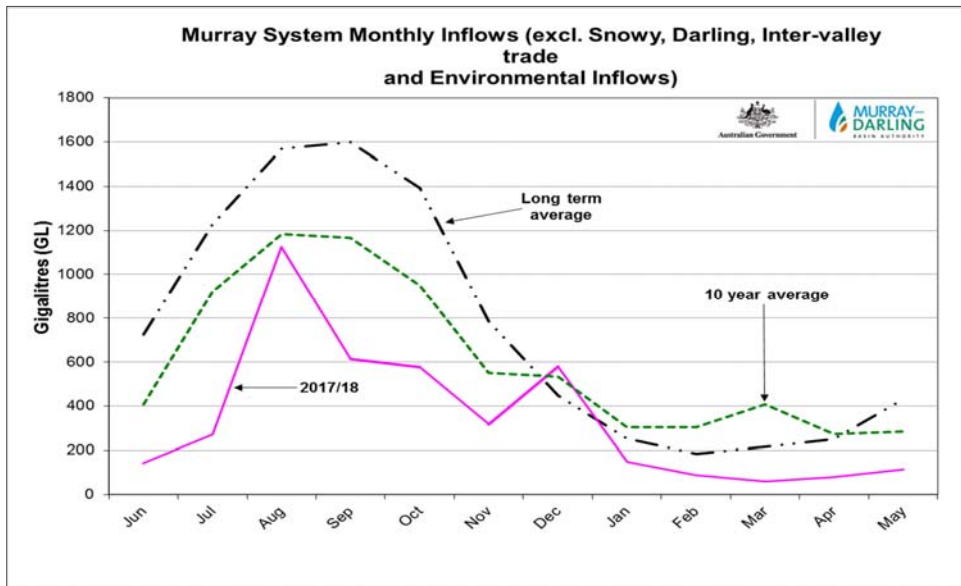
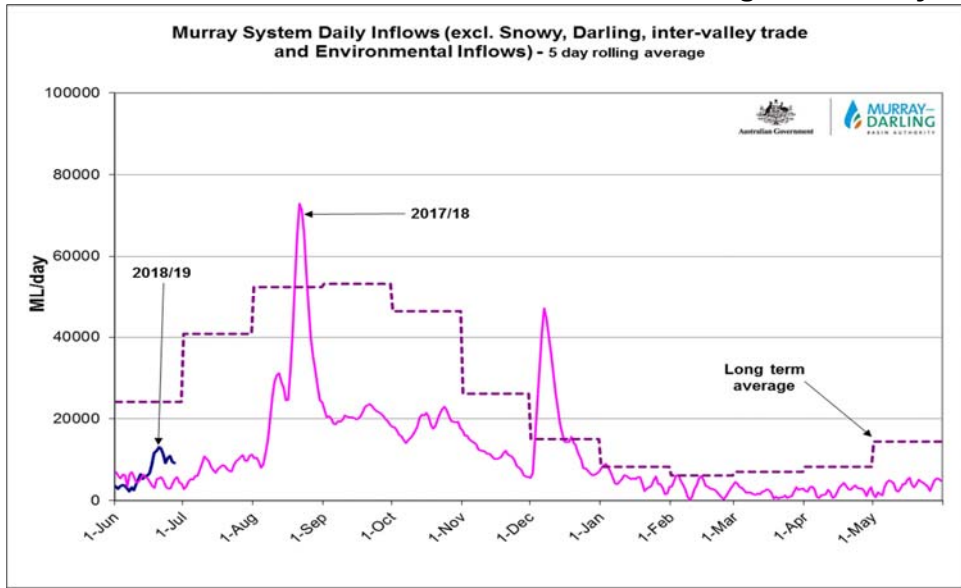
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.65	1	-	Open	Open	-
Mundoo	26 openings	0.65	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.62	1	Open	Open	Open	-

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



Week ending Wednesday 27 Jun 2018



State Allocations (as at 27 Jun 2018) State allocations for the 2018-19 water year will be announced on Monday 1st July for New South Wales and Monday 2nd July for Victoria

NSW - Murray Valley

High security	97%
General security	51%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	45%

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