



RIVER MURRAY WEEKLY REPORT

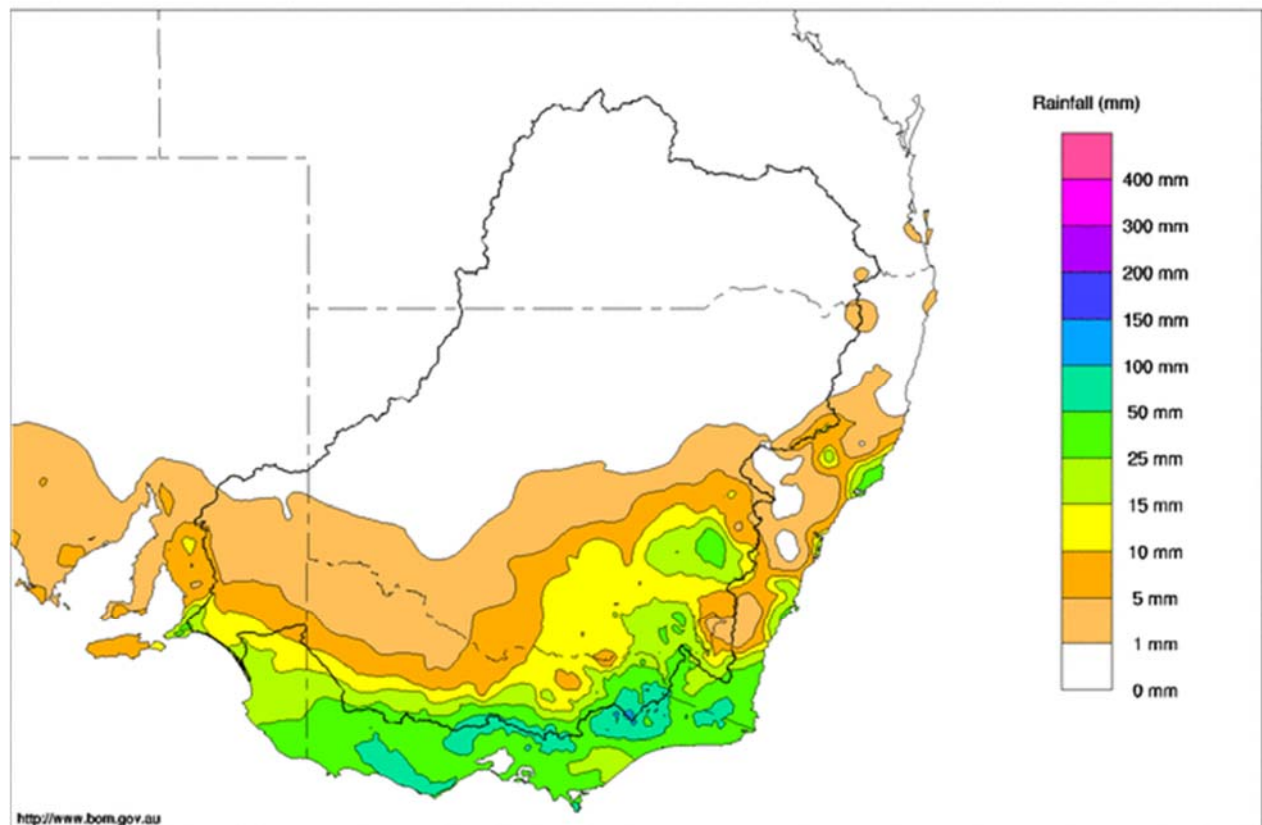
FOR THE WEEK ENDING WEDNESDAY, 16 MAY 2018

Trim Ref: D18/25197

Rainfall and inflows

Rainfall was widespread over the southern Basin this week with the majority falling over southern Victoria and the southeast ranges (Map 1). The highest totals included 30 mm at Grenfell on the southwestern slopes of New South Wales (NSW) and 78 mm at Joker Creek in Victoria, upstream of Dartmouth Dam. At the Lower Lakes in South Australia, Goolwa received 12 mm and 13 mm fell at Hindmarsh Island. Almost no rainfall was recorded over Queensland and north-western NSW. The highest areas in the southern Basin received snow (Photo 1).

Murray-Darling Rainfall Totals (mm) Week Ending 16th May 2018
Australian Bureau of Meteorology



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

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Map 1 - Murray-Darling Basin rainfall map week ending 16 May 2018 (Source: Bureau of Meteorology).

Streamflow responses were observed in the tributaries upstream of Hume Dam as a result of the rain. Flow in the upper Mitta Mitta River at Hinnomunjie Bridge peaked at close to 2,600 ML/day before receding to the current flow of 580 ML/day. On the upper Murray, the flow at Biggara reached 940 ML/day on Sunday and has been receding since. Downstream of Hume Dam, inflows from the Kiewa River, measured at Bandiana, rose from 420 ML/day to the current flow of 720 ML/day. Similarly inflows from the Ovens River, measured at Wangaratta, increased from 370 ML/day to a peak of 580 ML/day. The flow is currently 490 ML/day and will continue to recede in the coming week.



Photo 1 – Kiewa valley, looking towards a snow-capped Mt Bogong (Photo courtesy Tom Zouch, MDBA)

River operations

- MDBA active storage increasing
- Lake Mulwala being lowered to help manage invasive aquatic weed *Egeria densa*
- Torrumbarry and Euston weir pool levels to be lowered over the coming weeks
- Current outlooks for NSW Murray and Lower Darling and Northern Victoria released

Allocation outlooks for 2018/19 were released this week for [Northern Victoria](#) and [NSW Murray and Lower Darling](#).

MDBA active storage increased by 72 GL this week to 4,452 (53% capacity).

The storage volume at **Dartmouth Reservoir** increased by 8 GL to 3,423 GL (89% capacity). The release, measured at the Colemans gauge, is currently targeting 300 ML/day. A flow pulse on the Mitta Mitta River is planned to commence this Saturday. The pulse will peak briefly around 4,600 ML/day and gently ease before peaking a second time on Monday at approximately 3,400 ML/day. By mid-week, flows will gradually return to minimum flows of 500 ML/day. The pulse will benefit the water quality in the Mitta Mitta River downstream of Dartmouth Dam. The design of the pulse was based on the recent pattern of streamflow observed in the catchment upstream of Dartmouth Dam. For more information on the flow pulse visit <https://www.mdba.gov.au/river-murray-system/flow-advice>.



At **Hume Reservoir**, the storage volume increased by 41 GL to 982 GL (33% capacity). The release from Hume is currently targeting 1,100 ML/day. Hume releases combined with inflow from the Kiewa River (Photo 2) are contributing to an average flow of 1,690 ML/day at Doctors Point downstream of the Murray and Kiewa confluence.



Photo 2 – Kiewa River looking upstream from Mongan's Bridge (Photo courtesy Tom Zouch, MDBA)

Downstream at **Lake Mulwala**, diversions to Yarrowonga Main Channel (YMC) finished this week. The lake level is currently 123.95 m AHD (75 cm below the normal operating level of 124.7 m AHD). [Lowering of the lake level](#) will continue aiming to reach 121.2 m AHD by the start of June where it will be held at that 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 draw down also provides an opportunity to undertake works on the lake foreshore.

The release from **Yarrowonga Weir** increased this week to 7,500 ML/day. Further increases to 8,000 ML/day are planned in the coming week as part of the Lake Mulwala draw down.

Flow rates through the Edward and Gulpa Creek offtakes continue to vary as required to maintain river levels below 2.6 m at Picnic Point. Flows are currently 1,200 ML/day and 220 ML/day (respectively). In the coming weeks, the offtake gates are expected to be raised clear of the water. Without regulation, the inflows to the Edward-Wakool system can be expected to fluctuate over winter in response to the changes in river levels downstream of Yarrowonga Weir.

With water delivery finished for the season, [WaterNSW](#) are drawing down Stevens Weir pool to allow maintenance works on the weir and at the off-take regulators. The release downstream of Steven's Weir averaged 1,500 ML/day for the week.



Inflow to the Murray from the **Goulburn River** continued to reduce this week. The flow, measured at McCoys Bridge, fell from 1,630 ML/day to the current flow of 1,140 ML/day. Further recession to around 940 ML/day is expected in the coming week.

At **Torrumbarry Weir**, the pool commenced its planned draw down this week. The pool is currently 86.02 m (3 cm below full supply level (FSL)) and will continue to gradually lower to around 30cm below FSL. This action is aimed at helping improve river bank stability and environmental outcomes within the influence of the weir pool. More information is available at the [MDBA website](#).

Diversion into National Channel will cease early in the coming week signalling the close of the Victorian irrigation season. Diversions will recommence later in May to deliver water to Gunbower Creek, on behalf of environmental water holders, to maintain winter base flows for the benefit of native fish. The downstream release from Torrumbarry Weir averaged 6,110 ML/day this week and is expected rise to around 7,500 ML/day over the coming week.

Inflow from the **Murrumbidgee River**, measured at Balranald, averaged 350 ML/day. The [Murrumbidgee IVT balance](#) is currently 0 GL. Interstate trading from the Murrumbidgee Valley has closed and intra-valley trade will close at the end of this month. More information on Murrumbidgee trade can be found in the [WaterNSW media release](#).

At **Euston**, the weir pool is currently around 11 cm below FSL. The pool level is being gradually lowered to around 40 cm below FSL as 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 peaked at 8,750 ML/day and is currently around 8,540 ML/day. Flows are expected to slowly recede over the coming week.

This week **Menindee Lakes** storage volume decreased by 7 GL to 221 GL (13% capacity) (Photo 3). 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 160 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.



Photo 3 – View of Lake Pamamaroo, a part of the Menindee Lake Scheme (Photo courtesy Marg Peachey)

The reduction in pumping from the **Wentworth** weir pool has allowed the pool level to return to FSL. The release downstream, of Wentworth rose this week to 7,800 ML/day and is expected to peak early next the week around 8,100 ML/day.



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 23 GL to 241 GL (36% capacity). The storage is expected to continue to increase over the coming weeks, supplemented by water released from the drawdown of Lake Mulwala during May.

The flow to **South Australia** is currently around 3,000 ML/day and expected to remain around this rate for the coming week. Downstream at Lock 6, the planned lowering of the pool by 20 cm is due to commence later in May. At locks 5 and 2 weir pool lowering trials are being considered for the coming winter. More information is available in South Australia's [River Murray flow report](#).

At the **Lower Lakes**, the 5-day average water level is 0.53 m AHD. Releases from the barrages averaged 130 ML/day and were prioritised through Tauwitchere, Goolwa and Mundoo barrages.

For media inquiries contact the Media Officer on 02 6279 0141

ANDREW REYNOLDS
Executive Director, River Management



Water in Storage

Week ending Wednesday 16 May 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	+8
Hume Reservoir	192.00	3 005	178.66	982	33%	23	959	+41
Lake Victoria	27.00	677	22.94	241	36%	100	141	+23
Menindee Lakes		1 731*		221	13%	(- -) #	0	-7
Total		9 269		4 867	53%	--	4 452	+65
Total Active MDBA Storage							53% ^	

Major State Storages

Burrinjuck Reservoir	1 026	411	40%	3	408	+0
Blowering Reservoir	1 631	797	49%	24	773	+13
Eildon Reservoir	3 334	1 826	55%	100	1 726	+0

* 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 15 May 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	1 180	n/a	Snowy-Murray	+39	59
Snowy-Murray Component	502	n/a	Tooma-Tumut	+2	6
Target Storage	1 290		Net Diversion	37	53
			Murray 1 Release	+44	66

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)	2.9	297
Wakool Sys Allowance	1.6	74	Torrumbarry System + Nyah (net)	2.5	484
Western Murray Irrigation	0.1	24	Sunraysia Pumped Districts	0.5	113
Licensed Pumps	1.8	247	Licensed pumps - GMW (Nyah+u/s)	1	48
Lower Darling	0.2	91	Licensed pumps - LMW	4.6	373
TOTAL	3.7	1399	TOTAL	11.5	1315

* 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	93.0 *
Flow this week	21.5
Flow so far this month	51.4
Flow last month	172.4

(3 100 ML/day)

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	80	80	100
Euston	-	-	-
Red Cliffs	110	120	160
Merbein	110	120	160
Burtundy (Darling)	730	730	670
Lock 9	140	140	170
Lake Victoria	230	240	240
Berri	310	310	280
Waikerie	360	360	330
Morgan	370	360	340
Mannum	390	390	370
Murray Bridge	410	420	400
Milang (Lake Alex.)	820	810	710
Poltalloch (Lake Alex.)	720	730	640
Meningie (Lake Alb.)	1 650	1 640	1 590
Goolwa Barrages	6 570	9 270	2 210



River Levels and Flows

Week ending Wednesday 16 May 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	-	-	-	8 350	F	7 050	3 170
Jingellic	4.0	2.18	208.70	8 710	R	7 100	3 740
Tallandoon (Mitta Mitta River)	4.2	1.44	218.33	630	F	700	630
Heywoods	5.5	1.57	155.20	1 100	S	1 110	2 540
Doctors Point	5.5	1.59	150.06	1 710	F	1 690	2 870
Albury	4.3	0.83	148.27	-	-	-	-
Corowa	4.6	0.76	126.78	2 050	R	2 170	4 570
Yarrowonga Weir (d/s)	6.4	1.36	116.40	7 530	R	5 810	6 500
Tocumwal	6.4	1.76	105.60	6 350	R	5 600	7 170
Torrumbarry Weir (d/s)	7.3	2.05	80.60	5 720	R	6 110	7 150
Swan Hill	4.5	1.25	64.17	6 320	F	6 830	6 970
Wakool Junction	8.8	3.11	52.23	8 120	F	8 290	7 840
Euston Weir (d/s)	9.1	1.68	43.52	8 540	F	8 260	7 350
Mildura Weir (d/s)	-	-	-	8 480	F	7 810	6 820
Wentworth Weir (d/s)	7.3	2.91	27.67	7 800	R	7 350	6 490
Rufus Junction	-	2.82	19.75	2 650	F	2 680	2 840
Blanchetown (Lock 1 d/s)	-	0.53	-	2 420	F	1 980	2 360
Tributaries							
Kiewa at Bandiana	2.8	1.18	154.41	720	R	540	350
Ovens at Wangaratta	11.9	7.96	145.64	490	F	460	370
Goulburn at McCoys Bridge	9.0	1.60	93.02	1 140	F	1 390	1 890
Edward at Stevens Weir (d/s)	5.5	1.58	81.35	1 340	F	1 500	1 280
Edward at Liewah	-	1.97	57.35	1 260	R	1 210	950
Wakool at Stoney Crossing	-	1.53	55.02	680	F	670	660
Murrumbidgee at Balranald	5.0	0.62	56.58	290	S	350	390
Barwon at Mungindi	6.1	3.24	-	140	F	290	260
Darling at Bourke	9.0	3.96	-	20	S	20	40
Darling at Burtundy Rocks	-	0.69	-	60	S	60	70

Natural Inflow to Hume	2 830	2 440
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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	-0.95	-	No. 7 Rufus River	22.10	-0.06	+0.50
No. 26 Torrumbarry	86.05	-0.03	-	No. 6 Murtho	19.25	-0.03	+0.00
No. 15 Euston	47.60	-0.11	-	No. 5 Renmark	16.30	+0.03	+0.10
No. 11 Mildura	34.40	+0.00	+0.19	No. 4 Bookpurnong	13.20	+0.05	+0.32
No. 10 Wentworth	30.80	+0.01	+0.27	No. 3 Overland Corner	9.80	+0.04	+0.15
No. 9 Kulnine	27.40	-0.07	-0.28	No. 2 Waikerie	6.10	+0.05	+0.27
No. 8 Wangumma	24.60	-0.28	-0.02	No. 1 Blanchetown	3.20	+0.22	-0.22

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.53
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Barrages

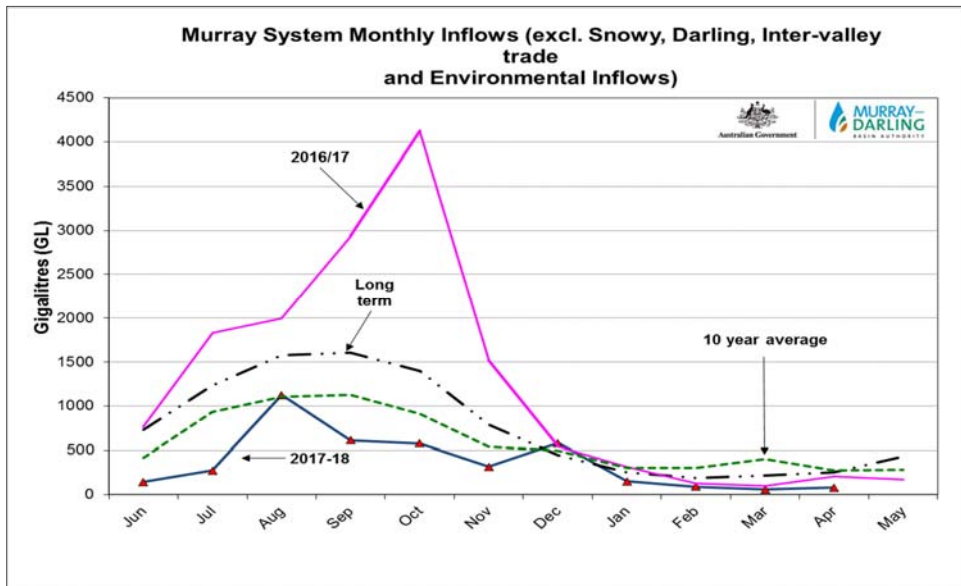
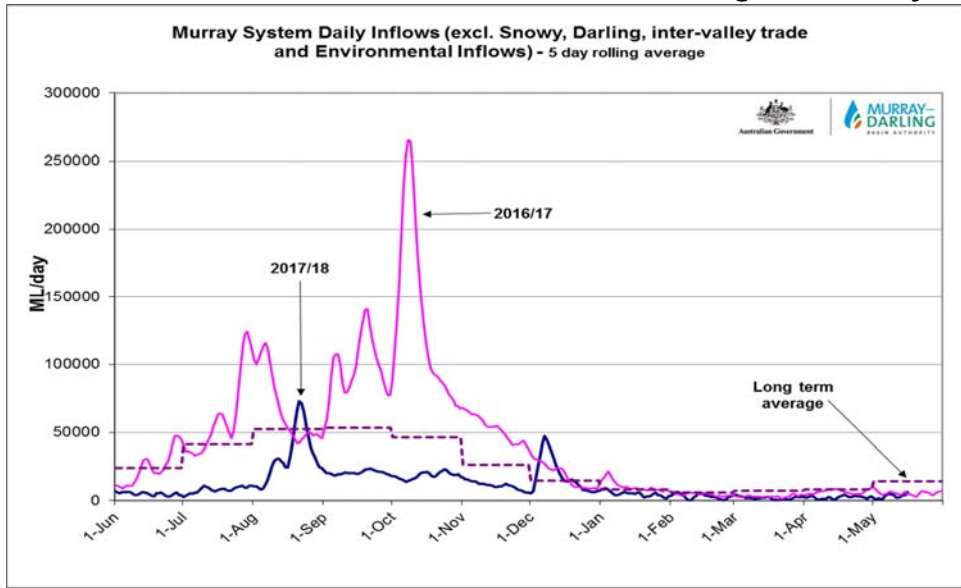
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.55	1	-	Open	Open	-
Mundoo	26 openings	0.54	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.56	1	Open	Open	Open	-

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



Week ending Wednesday 16 May 2018



State Allocations (as at 16 May 2018)

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>