



RIVER MURRAY WEEKLY REPORT

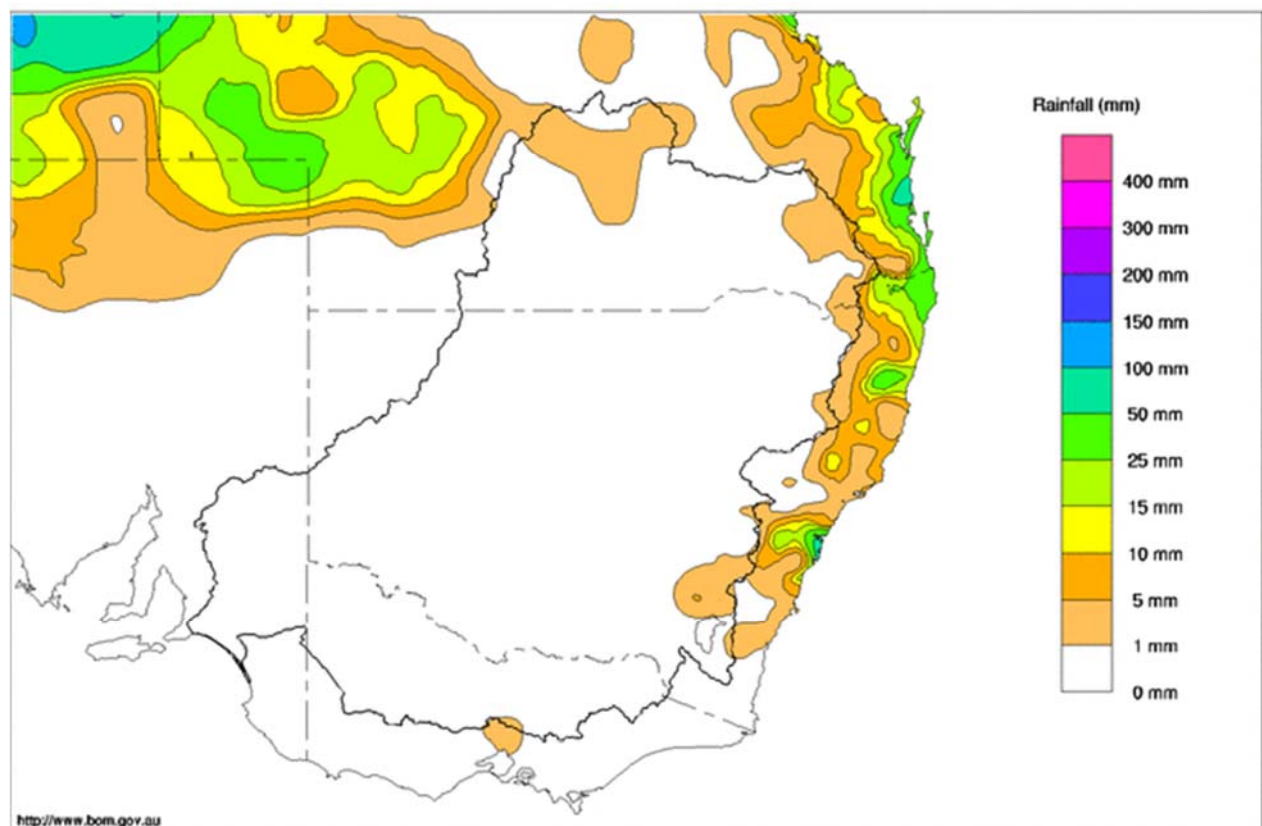
FOR THE WEEK ENDING WEDNESDAY, 14TH MARCH 2018

Trim Ref:

Rainfall and inflows

Dry conditions have continued in the Murray-Darling Basin for the week ending 14th March. No rainfall was recorded over the majority of the Basin. Scattered showers totalling less than 5mm occurred in southern Queensland and south east New South Wales (Map1).

Murray-Darling Rainfall Totals (mm) Week Ending 14th March 2018
Australian Bureau of Meteorology



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

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Map 1 - Murray-Darling Basin rainfall map week ending 14 March 2018 (Source: Bureau of Meteorology).

Upper Murray tributaries continued receding this week given the dry conditions. Flow in the upper Mitta Mitta River at Hinnomunjie fell from 140 ML/day to 120 ML/day. Increased releases for power generation boosted inflows from the Kiewa River at Bandiana to 700 ML/day compared to an average of 340 ML/day last week. The Ovens River at Wangaratta fell from 320 ML/day to 260 ML/day.



River operations

- Delivery of IVT from Goulburn River continues
- Irrigation diversions remain high for autumn crop and pasture watering
- Environmental water deliveries to South Australia continue to support Lower Lakes variation and barrage releases
- Red alerts for blue-green algae issued for the Edward River lifted however a red alert remains in place for Gulpa Creek, Lake Victoria outlet and the lower Darling River.

MDBA active storage decreased by 156 GL this week to 4,967 GL (59% capacity)

The storage volume at **Dartmouth** Reservoir decreased by 2 GL to 3,424 GL (89% capacity). The release, measured at the Colemans gauge, remained at the minimum flow target of 300 ML/day. A flow pulse on the Mitta-Mitta River is planned to commence on 24 March and last two days, before reducing back to minimum flow target of 300 ML/day. The pulse will benefit water quality in the Mitta Mitta River downstream of Dartmouth Dam. For more information on this flow pulse visit <https://www.mdba.gov.au/river-murray-system/flow-advice>.

At **Hume Reservoir**, the storage volume fell by 109 GL to 1,401 GL (47% capacity). The release from Hume averaged 16,000 ML/day over the week and is currently 17,000 ML/day.

Downstream at **Lake Mulwala**, the pool level has remained within the normal operating range of 124.7 to 124.9 m AHD. Diversions at the major irrigation offtakes have remained high. Diversion at Mulwala Canal rose from around 4,400 ML/day to 5,200 ML/day while the diversion to Yarrawonga Main Channel decreased from 1,700 ML/day to around 1,500 ML/day. To meet demands further down the system, the release from **Yarrawonga Weir** increased to 8,800 ML/day.



Photo 1 River Murray at Noreuil Park, Albury (Photo Courtesy, MDBA)



Flow through the Edward and Gulpa Creek offtakes is currently near maximum regulated flow rates of 1,600 ML/day and 350 ML/day, respectively. Downstream, the flow in the **Edward River** at Toonlook is steady around 1,740 ML/day. Diversions into Wakool Main Canal averaged 880 ML/day over the week and are currently 970 ML/day. The release from Stevens Weir remained steady with an average flow of 650 ML/day. The flow downstream of Stevens Weir is expected to increase to around 1,100 ML/day over coming days as the Edward Escape is used to supply the Wakool Main Canal demand boosting flows in the Edward River. The [red alert](#) warning for blue-green algae for the Edward River at Deniliquin has been lifted following consecutive results below red alert levels over the last two weeks. The red alert remains in place for Gulpa Creek. Information on current blue-green algae alerts is available at [WaterNSW website](#).

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, increased from 2,400 ML/day to the current rate of 2,800 ML/day to facilitate the delivery of inter-valley trade (IVT) water to help meet system demands downstream of the Barmah choke. The flow at McCoys is expected to recede to around 2,300 ML/day over coming days. Information regarding current opportunities for allocation trade between the Goulburn and Murray valleys is available at the [Victorian water register website](#).

The **Campaspe River** has continued to slowly recede. The flow, measured at Rochester syphon, is currently 300 ML/day and will gradually increase again to 400 ML/day over the coming week contributing to the delivery of Goulburn Valley IVT water.

The diversion into National Channel, from **Torrumbarry Weir** pool, rose to 3,500 ML/day at the end of the week. The diversion is expected to increase further in the coming week as autumn crop demands continue to rise. The release downstream of Torrumbarry Weir increased from 5,900 ML/day to 6,100 ML/day.

Downstream of Torrumbarry Weir, the flow at **Swan Hill** is being supplemented with additional water delivered from the Torrumbarry Irrigation Network. This includes approximately 100 ML/day being released from the 6/7 Channel to the Murray. Return flows from Gunbower Creek averaged around 25 ML/day for the week. This return flow is maintaining the water level through Gunbower Creek for the benefit of native fish before returning to the River Murray via Koondrook spillway near Barham.

Inflow from the **Murrumbidgee River**, measured at Balranald, averaged 250 ML/day and is expected to remain relatively steady over the coming week. The [Murrumbidgee IVT balance](#) is currently 6.8 GL, restricting the MDBA from calling on water from this valley to help meet Murray system demands.

At **Euston**, the weir pool level is 10 cm above the full supply level (FSL). The pool level will gradually lowered over the coming days to between FSL and 10cm below FSL to assist in meeting consumptive demands. The release downstream has reduced to 4,500 ML/day and will continue to gradually fall over the coming days before steadying at around 4,000 ML/day.

At **Menindee Lakes**, the storage volume reduced by 11 GL to 293 GL (17% capacity). A [red alert](#) warning (high alert) for blue-green algae remains current for Lake Wetherell, while Lake Menindee and Lake Tandure have been downgraded to an amber alert. Releases from the Menindee Lakes are currently being managed by WaterNSW in accordance with the [Lower Darling Annual Operations Plan](#). The [release from Weir 32](#) is targeting 200 ML/day and is being managed to maintain a minimum flow in the lower Darling at Burtundy, where the flow is currently 25 ML/day. A [red alert](#) warning (high alert) for blue-green algae has also been issued for the lower Darling River between Pooncarie and Burtundy.

The flow at **Wentworth** fell this week from 3,500 ML/day and is currently around 2,700 ML/day. The weir pool level remains 10 cm above FSL to assist pumpers on the lower Darling River in the upper reaches of the Wentworth weir pool whilst flows downstream of Burtundy are low.



Further downstream, **Lock 11** at Mildura Weir has been closed for urgent repairs. The Lock is closed to all houseboats as the repairs will involve the complete removal of the gates. Goulburn-Murray Water will endeavour to have the repairs completed prior to Easter. More information can be found on the [GMW website](#).



Photo 2 Snowy Creek at Mitta-Mitta (Photo courtesy Andrew Bishop, MDBA)

On the Murray at **Locks 7 and 9** the weir pools are currently targeting 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. The fluctuation of weir pool levels 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.

At **Lake Victoria**, the storage volume decreased by 34 GL and is currently 336 GL (50% capacity). The lake level is expected to continue falling away as stored water is used to help deliver South Australia's flow requirements. The flow to South Australia has increased to 7,200 ML/day as additional water is delivered on behalf of the Commonwealth Environmental Water Holder (CEWH) to support ongoing barrage releases into the Coorong.

At the **Lower Lakes**, the 5-day average water level reduced by 3 cm to around 0.54m AHD and is expected to reduce further over coming days. Releases through the barrages over the last week averaged around 1,500 ML/day and were prioritised at Tauwitchere and Goolwa to improve salinity outcomes in the Coorong and provide attractant flows at the fishways. All barrage 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 14 Mar 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	479.17	3 424	89%	71	3 353	-2
Hume Reservoir	192.00	3 005	182.20	1 401	47%	23	1 378	-109
Lake Victoria	27.00	677	23.91	336	50%	100	236	-34
Menindee Lakes		1 731*		293	17%	(- -)#	0	-11
Total		9 269		5 454	59%	--	4 967	-156
Total Active MDBA Storage							59% ^	

Major State Storages

Burrinjuck Reservoir	1 026	446	43%	3	443	-21
Blowering Reservoir	1 631	651	40%	24	627	+6
Eildon Reservoir	3 334	2 167	65%	100	2 067	-56

* 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 13 Mar 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2017
Lake Eucumbene - Total	1 528	n/a	Snowy-Murray	+4	696
Snowy-Murray Component	626	n/a	Tooma-Tumut	+0	195
Target Storage	1 410		Net Diversion	4	501
			Murray 1 Release	+7	933

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)	35.7	777	Yarrowonga Main Channel (net)	10.9	220
Wakool Sys Allowance	2.3	49	Torrumbarry System + Nyah (net)	20.3	353
Western Murray Irrigation	0.8	21	Sunraysia Pumped Districts	3	98
Licensed Pumps	n/a	186	Licensed pumps - GMW (Nyah+u/s)	1	28
Lower Darling	2.2	86	Licensed pumps - LMW	4.6	312
TOTAL	41.0	1119	TOTAL	39.8	1011

* 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	186.0 *
Flow this week	47.4
Flow so far this month	84.2
Flow last month	219.6

(6 800 ML/day)

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	120	120	110
Euston	-	-	-
Red Cliffs	180	180	160
Merbein	180	170	160
Burtundy (Darling)	710	700	660
Lock 9	190	200	170
Lake Victoria	260	260	230
Berri	300	290	260
Waikerie	330	320	330
Morgan	330	350	340
Mannum	330	320	370
Murray Bridge	320	310	410
Milang (Lake Alex.)	770	900	680
Poltalloch (Lake Alex.)	710	700	620
Meningie (Lake Alb.)	1 610	1 600	1 570
Goolwa Barrages	1 000	1 000	1 150



River Levels and Flows

Week ending Wednesday 14 Mar 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	-	-	-	790	F	1 380	700
Jingellic	4.0	1.21	207.73	1 490	F	1 480	1 310
Tallandoon (Mitta Mitta River)	4.2	1.37	218.26	530	F	530	610
Heywoods	5.5	3.32	156.95	16 710	R	15 990	14 070
Doctors Point	5.5	3.23	151.70	18 000	R	17 350	14 990
Albury	4.3	2.29	149.73	-	-	-	-
Corowa	4.6	3.14	129.16	15 150	S	16 000	13 190
Yarrowonga Weir (d/s)	6.4	1.54	116.58	8 820	S	8 720	8 170
Tocumwal	6.4	2.14	105.98	8 770	R	8 550	8 030
Torrumbarry Weir (d/s)	7.3	2.17	80.71	6 120	R	5 890	5 940
Swan Hill	4.5	1.05	63.97	4 980	S	5 150	5 740
Wakool Junction	8.8	2.41	51.53	5 330	S	5 560	6 120
Euston Weir (d/s)	9.1	1.01	42.85	4 490	F	4 630	5 180
Mildura Weir (d/s)	-	-	-	3 710	F	3 820	4 750
Wentworth Weir (d/s)	7.3	2.68	27.44	2 730	R	3 160	4 070
Rufus Junction	-	3.55	20.48	6 830	F	6 440	5 040
Blanchetown (Lock 1 d/s)	-	0.66	-	4 090	F	3 630	2 610
Tributaries							
Kiewa at Bandiana	2.8	0.92	154.15	390	F	700	360
Ovens at Wangaratta	11.9	7.81	145.49	260	F	300	410
Goulburn at McCoys Bridge	9.0	2.48	93.90	2 830	F	2 760	2 210
Edward at Stevens Weir (d/s)	5.5	1.15	80.92	820	S	720	650
Edward at Liewah	-	0.94	56.32	450	F	560	610
Wakool at Stoney Crossing	-	1.35	54.85	310	F	340	370
Murrumbidgee at Balranald	5.0	0.60	56.56	270	R	250	230
Barwon at Mungindi	6.1	3.25	-	170	F	160	100
Darling at Bourke	9.0	3.29	-	0	F	0	0
Darling at Burtundy Rocks	-	0.65	-	30	S	20	20

Natural Inflow to Hume	740	1 320
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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	-0.10	-	No. 7 Rufus River	22.10	-0.08	+1.22
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.00	+0.11
No. 15 Euston	47.60	+0.10	-	No. 5 Renmark	16.30	+0.02	+0.22
No. 11 Mildura	34.40	+0.05	+0.11	No. 4 Bookpurnong	13.20	+0.06	+0.70
No. 10 Wentworth	30.80	+0.10	+0.04	No. 3 Overland Corner	9.80	+0.05	+0.17
No. 9 Kulnine	27.40	-0.08	-0.29	No. 2 Waikerie	6.10	-0.00	+0.06
No. 8 Wangumma	24.60	-0.27	-0.07	No. 1 Blanchetown	3.20	-0.10	-0.09

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.54
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Barrages

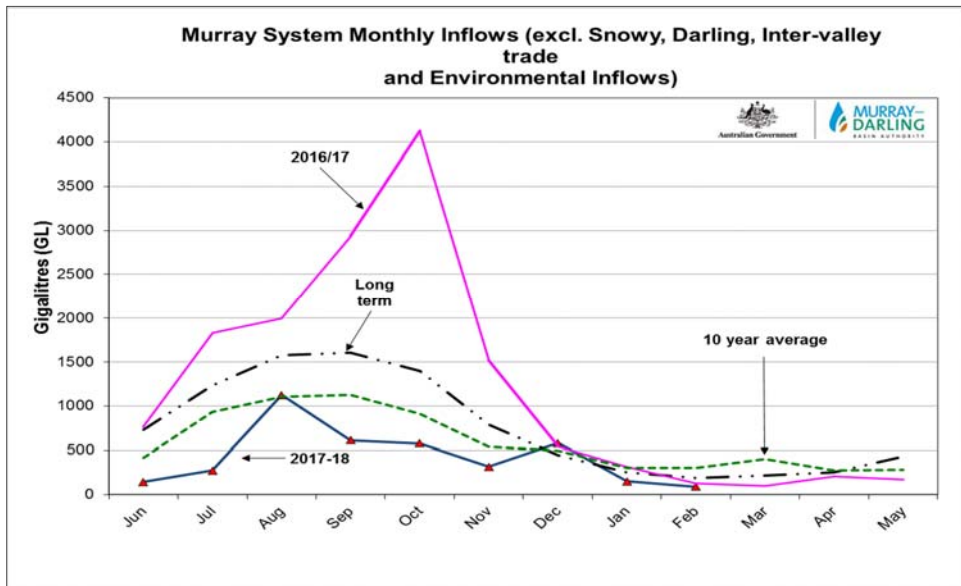
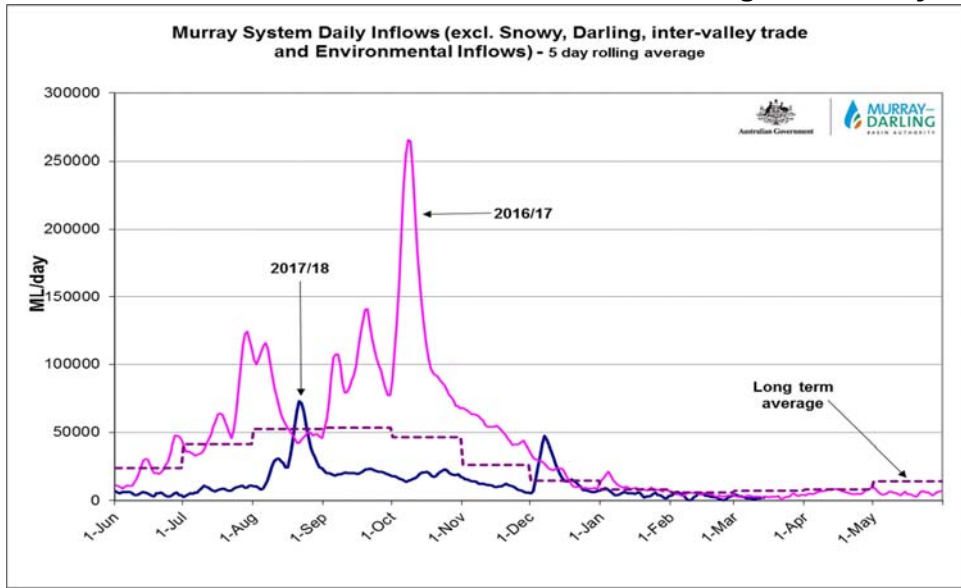
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.58	1	-	Open	Open	-
Mundoo	26 openings	-	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.52	3	Open	Open	Open	-

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



Week ending Wednesday 14 Mar 2018



State Allocations (as at 14 Mar 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	38%

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>