



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 08 MARCH 2017

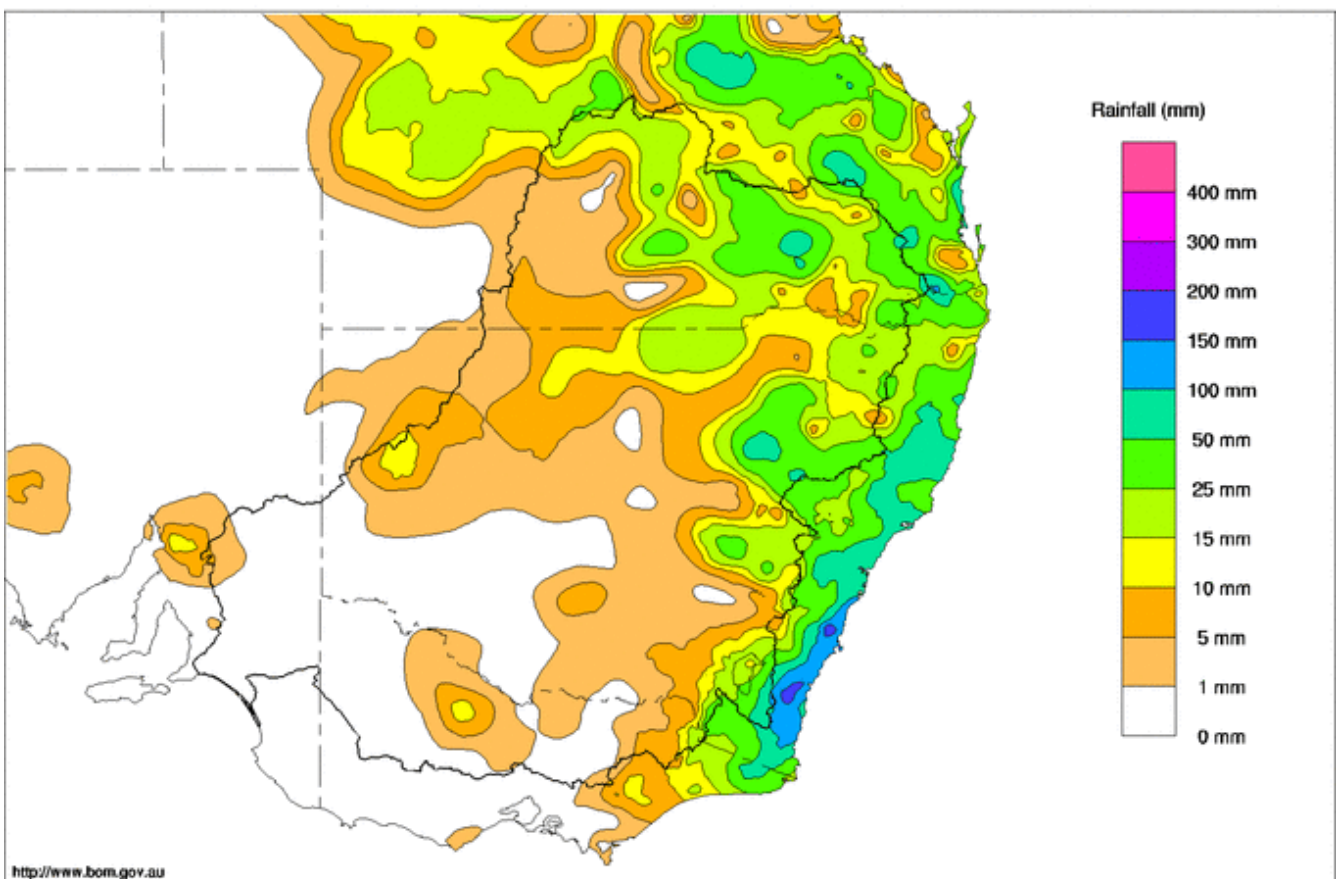
Trim Ref: D17/12529

Rainfall and inflows

Persistent easterly winds across the Murray-Darling Basin during the last week resulted in heavy showers and storms over eastern areas, trending to mostly dry and quite hot weather in the west (Map 1). Rain totals were fairly patchy and were generally highest along the eastern divide.

The highest weekly totals in Queensland fell over the Maranoa catchment and Darling Downs and included 86 mm at Cooby Creek Dam, 83 mm at Yuleba, 78 mm at Southwood and 73 mm at Surat. Totals in NSW included 105 mm at Coonabarabran, 80 mm at Narrabri and 52 mm at Mullaley. Rain was also quite heavy over the far south-east with totals up to 75 mm across the Snowy Mountains and 48 mm recorded at Cooma.

Murray-Darling Rainfall Totals (mm) Week Ending 8th March 2017
Australian Bureau of Meteorology



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

© Commonwealth of Australia 2017, Australian Bureau of Meteorology

Issued: 08/03/2017

Map 1 - Murray-Darling Basin rainfall week ending 8 March 2017 (Source: Bureau of Meteorology)

Stream flows along upper catchment tributaries have mostly continued to recede. On the Mitta Mitta River, the flow at Hinnomunjie bridge has decreased below 200 ML/day for the first time this year. On the upper Murray, the flow at Biggara averaged around 180 ML/day. On the Ovens River at Rocky Point, the flow is currently fairly steady at just over 400 ML/day. This flow is being boosted by releases from Lake Buffalo, which is currently being slowly drawn down to facilitate planned maintenance works in a few weeks' time.



River operations

- Pulsed release planned for Mitta Mitta River
- Euston Weir pool temporarily returning to FSL
- Higher flows into South Australia during the coming weeks

Total MDBA storage decreased 149 GL this week, with the active storage now 6,002 GL (70% capacity).

At **Dartmouth Reservoir**, the storage volume remained steady at 3,000 GL (78% capacity). The release from Dartmouth, measured at Colemans, was held at 300 ML/day throughout the week. However, starting this Friday, releases will be increased and held at a rate close to 2,000 ML/day to provide a pulse of water into the lower Mitta Mitta River over several days. This action is being undertaken in accordance with agreed arrangements, when storage levels are relatively high, that permit greater flexibility and slightly higher release rates from Dartmouth Dam to help manage lower Mitta Mitta River water quality and ecosystem function.

The **Hume Reservoir** storage volume decreased 90 GL this week and is currently 2,206 GL (73% capacity). Releases were a little higher compared to last week, with an average of 14,500 ML/day.

At **Lake Mulwala** diversions into the Mulwala Canal and Yarrawonga Main Channel increased through the week. They are both now close to their highest rates for the season with a combined diversion of about 7,500 ML/day. Warm and dry conditions are expected to further push up demand during the coming week. The rate of increase in diversions earlier in the week above forecasts meant that the pool level temporarily decreased to a level just below 124.7 m AHD. The current pool level is 124.79 m AHD and is expected to remain around this mark over the coming days.

The release downstream of Yarrawonga Weir started the week at 9,500 ML/day but has now been steadily wound back to 8,000 ML/day. A similar rate is expected over the coming week. This reduction signifies the completion of delivery of an additional pulse of environmental water undertaken to help further boost flows along the length of the River Murray as well as stimulate native fish movement upstream. The current release of 8,000 ML/day continues to include a component of baseline environmental water and, at this stage, is expected to be maintained throughout March.

Inflows to the **Edward-Wakool** system have been fairly steady through the week, with around 1,550 ML/day flowing through the Edward River Offtake and just under 350 ML/day through the Gulpa Creek Offtake. At **Stevens Weir**, diversions to the Wakool Main Canal have averaged just over 1,000 ML/day, while the downstream flow target continues at the normal summer minimum of 600 ML/day. Downstream on the Wakool River, Stoney Crossing is steady at around 650 ML/day.

On the **Goulburn River**, the flow at McCoys Bridge is currently 4,300 ML/day and rising towards a peak expected over the coming weekend at around 4,500 ML/day. This flow is composed of an environmental pulse as well as IVT water that continues to be delivered to the Murray. Flow rates are expected to recede during the second half of March.

At **Torrumbarry Weir**, the downstream flow rate peaked at 7,100 ML/day on 6 March as environmental flows from both the Murray and Goulburn Rivers arrived. The flow is expected to remain above 6,000 ML/day for a few more days before receding. The pool level remains at the full supply level of 86.05 m AHD, while diversions to National Channel have increased to about 3,400 ML/day. Relatively high diversions (in excess of 3,000 ML/day) are expected to continue at National Channel during the next few weeks if the weather remains dry.

On the **Murrumbidgee River** at Balranald, flows have receded due to increasing demands upstream. The current flow is 800 ML/day with rates above the normal end of system target set to continue through March as traded water is delivered to the Murray.



Downstream at **Euston Weir**, the pool level has recently been held around 20 cm below the normal FSL as part of the weir pool variability program. However, the level is now being temporarily re-raised towards FSL in preparation for the Robinvale Euston 80 Ski Race, scheduled for the coming weekend. The level will be returned to the lower target (20cm below FSL) during the coming week. The flow rate downstream of Euston has decreased to around 5,000 ML/day and is expected to remain fairly steady for a few days before rates slowly increase as higher flows arrive from upstream (Figure 1).



Figure 1 – A boat heads off downstream from Lock 15 at Euston. Photo courtesy Phil Cocks, WaterNSW.

On the **Darling River** system, total storage in the **Menindee Lakes** fell by 48 GL, to the current volume of 1,029 GL (59% capacity). The release from Menindee Lakes into the lower Darling River has been decreased to a target at Weir 32 of 2,250 ML/day. At the **Lake Cawndilla** outlet, releases of environmental water continue, with around 1,300 ML/day flowing into the Great Darling Anabranch.

At the confluence of the Darling and Murray Rivers at **Wentworth**, the flow is steadily receding, with the current flow at 6,600 ML/day. Flows less than 6,000 ML/day are expected later in the coming week. Downstream at Lock 7, the weir pool level has returned to its weir pool variability program target of around 45 cm below the normal FSL (22.10 m AHD). This reduction follows a short period during late February when the level was increased to FSL.

At **Lake Victoria**, the storage volume decreased by 11 GL to 441 GL (65% capacity) and will continue to decrease over the coming week. The flow into **South Australia** was maintained around a target of 8,000 ML/day for most of the week. However flow rates are now set to rise to undertake delivery of traded environmental water previously released from both Hume and Eildon Reservoirs. Over the next 7-10 days, releases from Lake Victoria will be managed to progressively increase flows across the border with a flow above 11,000 ML/day currently expected by the middle of March. Downstream at Lock 1, the flow is currently 4,600 ML/day and is expected to rise steadily during the next few weeks.



At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina fell 7 cm to 0.66 m AHD. This drop occurred as a result of increased barrage releases, which have averaged around 7,500 ML/day over the last few days. With higher flows now in transit to the Lower Lakes and a relatively high level in Lake Alexandrina for this time of the year, operations have taken advantage of relatively calm conditions by boosting freshening flows into the Coorong. By targeting a higher proportion of this flow through the Goolwa Barrage, the release is also aiming to assist the on-going dredging effort by helping to scour deposited sand along the Goolwa Channel and around the Murray Mouth.

Please note: MDBA is undertaking website maintenance work from 5.00 pm Thursday 9 March until 9.00 am Wednesday 15 March. During this period, website access may not be reliable and Live River Data may not be up to date.

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



Water in Storage

Week ending Wednesday 08 Mar 2017

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	471.93	3 000	78%	71	2 929	+0
Hume Reservoir	192.00	3 005	187.66	2 206	73%	23	2 183	-90
Lake Victoria	27.00	677	24.93	441	65%	100	341	-11
Menindee Lakes		1 731*		1 029	59%	(480 #)	549	-48
Total		9 269		6 676	72%	- -	6 002	-149
Total Active MDBA Storage							70% ^	

Major State Storages

Burrinjuck Reservoir	1 026	735	72%	3	732	-19
Blowering Reservoir	1 631	1 177	72%	24	1 153	-48
Eildon Reservoir	3 334	2 355	71%	100	2 255	-52

* 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 07 Mar 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2016
Lake Eucumbene - Total	1 818	n/a	Snowy-Murray	+14	972
Snowy-Murray Component	812	n/a	Tooma-Tumut	+0	335
Target Storage	1 410		Net Diversion	14	637
			Murray 1 Release	+12	1 376

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2016	Victoria	This Week	From 1 July 2016
Murray Irrig. Ltd (Net)	38.7	693	Yarrowonga Main Channel (net)	12.9	162
Wakool Sys Allowance	1.7	18	Torrumbarry System + Nyah (net)	18.8	301
Western Murray Irrigation	1.0	19	Sunraysia Pumped Districts	3.5	80
Licensed Pumps	9.9	169	Licensed pumps - GMW (Nyah+u/s)	3.5	20
Lower Darling	9.4	32	Licensed pumps - LMW	3.4	258
TOTAL	60.7	931	TOTAL	42.1	821

* 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 delivery of environmental water.

Entitlement this month	186.0 *
Flow this week	56.8
Flow so far this month	64.7
Flow last month	258.1

(8 100 ML/day)

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

	Current	Average over the last week	Average since 1 August 2016
Swan Hill	70	80	120
Euston	-	-	-
Red Cliffs	200	190	170
Merbein	190	190	170
Burtundy (Darling)	490	490	600
Lock 9	310	310	200
Lake Victoria	240	230	190
Berri	450	440	250
Waikerie	530	510	310
Morgan	520	500	300
Mannum	510	480	310
Murray Bridge	330	330	290
Milang (Lake Alex.)	460	450	500
Poltalloch (Lake Alex.)	550	550	360
Meningie (Lake Alb.)	1 760	1 730	1 750
Goolwa Barrages	510	490	1 040



River Levels and Flows

Week ending Wednesday 08 Mar 2017

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	-	-	-	1 320	F	1 670	3 200
Jingellic	4.0	1.33	207.85	1 890	F	2 710	3 280
Tallandoon (Mitta Mitta River)	4.2	1.38	218.27	560	S	570	610
Heywoods	5.5	3.14	156.77	14 700	S	14 940	13 000
Doctors Point	5.5	3.06	151.53	16 130	R	16 580	14 330
Albury	4.3	2.04	149.48	-	-	-	-
Corowa	4.6	3.13	129.15	15 080	F	14 930	13 620
Yarrowonga Weir (d/s)	6.4	1.37	116.41	8 060	R	8 390	9 420
Tocumwal	6.4	2.08	105.92	7 200	S	7 630	8 680
Torrumbarry Weir (d/s)	7.3	2.22	80.77	6 720	R	6 530	6 080
Swan Hill	4.5	1.09	64.01	5 310	R	5 080	5 770
Wakool Junction	8.8	2.48	51.60	5 800	R	6 200	6 730
Euston Weir (d/s)	9.1	1.09	42.93	5 020	F	6 250	6 960
Mildura Weir (d/s)	-	-	-	5 790	F	5 990	6 690
Wentworth Weir (d/s)	7.3	2.91	27.67	6 560	F	7 370	8 670
Rufus Junction	-	3.80	20.73	8 450	R	7 660	7 380
Blanchetown (Lock 1 d/s)	-	0.72	-	4 590	R	4 790	5 290
Tributaries							
Kiewa at Bandiana	2.8	0.85	154.08	330	R	470	460
Ovens at Wangaratta	11.9	7.95	145.63	480	F	520	700
Goulburn at McCoys Bridge	9.0	3.23	94.65	4 310	R	3 550	1 290
Edward at Stevens Weir (d/s)	5.5	0.94	80.71	600	F	620	630
Edward at Liewah	-	1.14	56.52	580	F	590	660
Wakool at Stoney Crossing	-	1.52	55.01	650	S	660	670
Murrumbidgee at Balranald	5.0	1.20	57.16	780	F	1 160	1 430
Barwon at Mungindi	6.1	3.14	-	10	F	180	260
Darling at Bourke	9.0	4.01	-	70	S	70	130
Darling at Burtundy Rocks	-	1.84	-	2 780	F	3 050	3 420

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	1 310	1 810
---	-------	-------

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	-0.11	-	No. 7 Rufus River	22.10	-0.49	+1.46
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.02	+0.17
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.03	+0.24
No. 11 Mildura	34.40	+0.05	+0.08	No. 4 Bookpurnong	13.20	+0.03	+0.84
No. 10 Wentworth	30.80	+0.04	+0.27	No. 3 Overland Corner	9.80	+0.01	+0.23
No. 9 Kulnine	27.40	-0.02	-0.32	No. 2 Waikerie	6.10	+0.02	+0.10
No. 8 Wangumma	24.60	-0.40	-0.20	No. 1 Blanchetown	3.20	-0.08	-0.03

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.66
--	------

Barrages

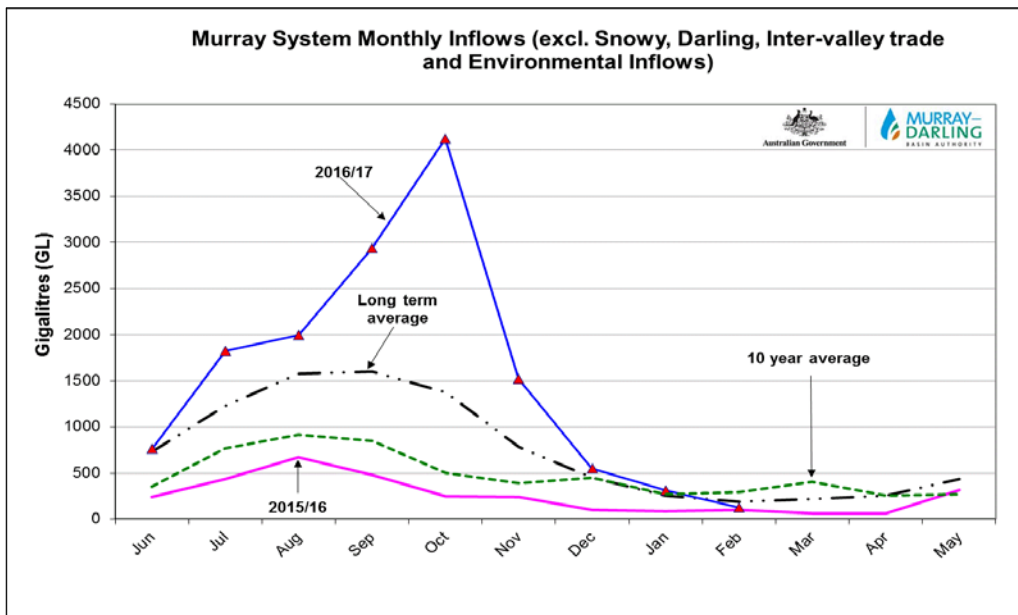
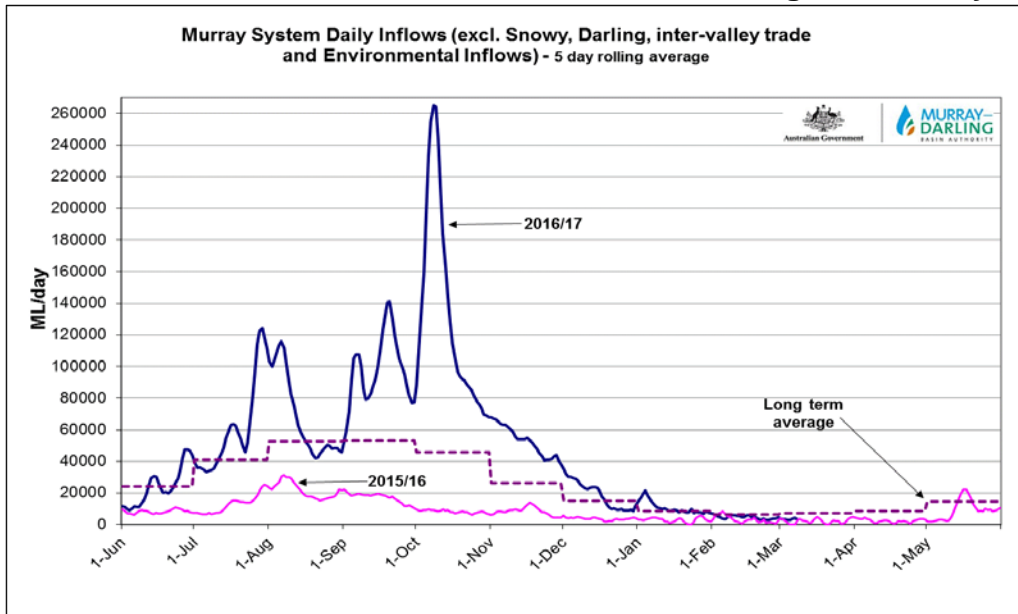
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.60	8	-	Open	Open	-
Mundoo	26 openings	0.49	1	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.63	12	Open	Open	Open	-

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



Week ending Wednesday 08 Mar 2017



State Allocations (as at 08 Mar 2017)

NSW - Murray Valley

High security	100%
General security	100%

Victorian - Murray Valley

High reliability	100%
Low reliability	5%

NSW - Murrumbidgee Valley

High security	100%
General security	100%

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%
---------------	------

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>