



RIVER MURRAY WEEKLY REPORT

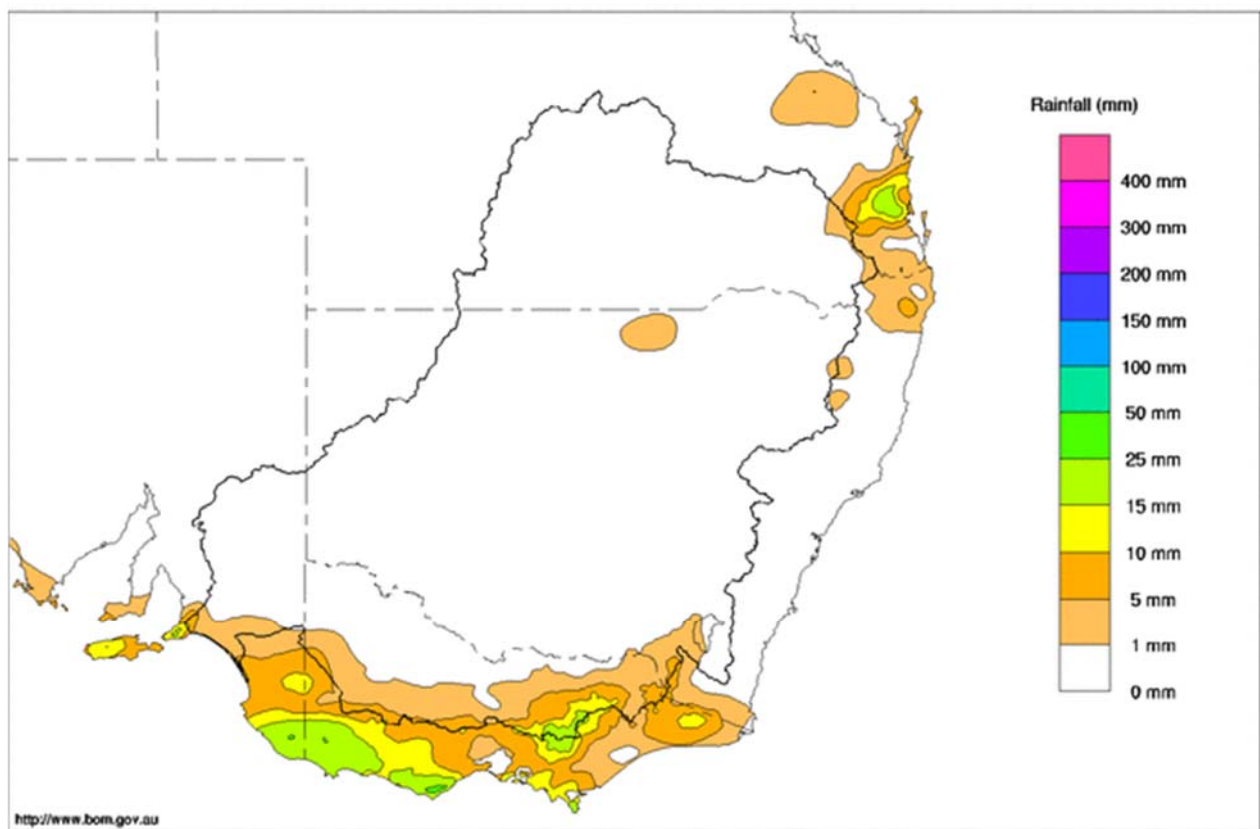
FOR THE WEEK ENDING WEDNESDAY, 27 SEPTEMBER 2017

Trim Ref: D17/33609

Rainfall and inflows

Most of the Murray–Darling Basin remained dry during the last week (see Map 1). The highest weekly rainfalls were recorded at Mount Buller (24 mm) and Falls Creek (21 mm) in Victoria. In NSW, there was 11 mm recorded at Perisher Valley (just outside the basin), while there was less than 2 mm at Goolwa near the Murray mouth in South Australia.

Murray-Darling Rainfall Totals (mm) Week Ending 27th September 2017
Australian Bureau of Meteorology



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

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Map 1 - Murray-Darling Basin rainfall map week ending 27 September 2017 (Source: Bureau of Meteorology).

Flows upstream of Hume Dam have remained fairly steady this week, averaging 2,400 ML/day at Hinnomunjie Bridge on the Mitta Mitta River and 1,700 ML/day at Biggara on the upper Murray. As conditions warm, snowmelt is contributing to these sustained elevated base-flows.

River operations

- Hume storage volume is starting to decline
- Pulse from the Goulburn River reaches Torrumbarry Weir
- Lake Victoria is effectively full

MDBA active storage increased by 31 GL this week to a total of 6,638 GL.



At **Dartmouth Reservoir**, the storage volume increased by 22 GL to 3,239 GL (84% capacity, see Photo 1). The release from the reservoir remains at the minimum of 200 ML/day.

The **Hume Reservoir** storage level peaked at 2,744 GL on Sunday before starting a downward trend. The current volume is 2,740 GL (91% capacity). Releases from Hume have risen over the last week from 5,000 to 10,500 ML/day to meet increased demands. Without further rain, the storage level is expected to continue gradually falling.

At **Yarrowonga Weir**, the flow downstream has been increased to 9,050 ML/day with a further increase up to 10,000 ML/day (channel capacity) expected in the next day or so. Without further rain, flows of at least 9,500 ML/day are expected to be maintained for the next couple of months. Diversions into Mulwala Canal have averaged around 4,000 ML/day during the week, while Yarrowonga Main Channel has been taking close to 1,850 ML/day. The level of Lake Mulwala has remained within its normal operating range, and is currently at 124.74 m AHD.

Most of the regulators in the Barmah-Millewa Forest remain open allowing water to flow into the local flood runners as would naturally happen at this time of year. The additional water required for this watering action is being supplied by environmental water holders.

Flow into the **Edward River system** via the Edward River offtake is around 1,550 ML/day with 340 ML/day passing through Gulpa Creek offtake. Flows through Millewa Forest are contributing to the flow at Toonalook, which is currently 2,400 ML/day. At Stevens Weir, the flow has increased briefly to 1,300 ML/day but is expected to fall below 1,000 ML/day in the coming days.



Photo 1 – Dartmouth Reservoir in the early morning (Photo courtesy: Peter Liepkalns, Goulburn–Murray Water).

The flow at McCoys Bridge on the **Goulburn River** is currently 6,950 ML/day and is expected to peak in the next couple of days at around 7,300 ML/day. This pulse of water is to benefit vegetation on banks of the lower Goulburn River, and has been delivered on behalf of environmental water holders. As this pulse passes, [river levels](#) on the Murray in the Echuca district and downstream are expected vary in the coming weeks.

The **Torrumbarry Weir** pool is now back to Full Supply Level (FSL). Flows have been steadily increasing from a low of 3,300 ML/day up to 7,950 ML/day currently. The flow is expected to reach about 9,500 ML/day in the coming week, before receding again. The diversion into National Channel reached 3,400 ML/day during the week but is now back to around 3,000 ML/day.



At **Swan Hill**, the flow in the River Murray reached a low of 2,900 ML/day during the week but is now rising as the pulse from the Goulburn River arrives. The flow is expected to increase to more than 7,500 ML/day in the coming week then start receding in early-mid October.

At Stoney Crossing on the **Wakool River**, the flow is still receding following the high flows downstream of Yarrawonga in early August. The flow is currently around 900 ML/day and, if conditions remain dry, it is expected to remain in the range 500–900 ML/day for at least the next few weeks.

Flow in the **Murrumbidgee River** at Balranald is about 1,400 ML/day and steady. The flow is expected to remain above 1,000 ML/day into October.

The weir pool at **Euston** is about 30 cm above FSL. This higher level is part of the [weir pool variability program](#). The downstream release is now 6,100 ML/day and may reduce further in the next couple of days before rising in early October as the Goulburn pulse moves through the system. A peak flow of at least 8,000 ML/day is expected in early-mid October.

The storage volume in the **Menindee Lakes** reduced by 21 GL this week to 663 GL (38% capacity). The release, measured at Weir 32, continues to target 400 ML/day, which is above the normal minimum for September of 200 ML/day. The additional flow is being released by WaterNSW on behalf of environmental water holders to benefit native fish in the lower Darling River. The [algal alert status](#) for Menindee has now been downgraded from red to amber.

The flow continues to recede at **Wentworth Weir**, at the junction of the Murray and Darling Rivers. The flow is currently 6,800 ML/day and is forecast to decline to around 4,000 ML/day in the coming week. The peak of the pulse from the Goulburn River is expected to pass Wentworth in mid-October, with flows potentially exceeding 7,000 ML/day.

The weir pool level at **Lock 9** is currently about 20 cm above FSL, **Lock 8** is 35 cm above FSL and **Lock 7** is nearly 60 cm above FSL. These high pool levels are part of the weir pool variability program, which aims to help restore a more natural wetting and drying regime for river banks and adjacent wetlands.

At **Lake Victoria**, the storage volume increased by 25 GL during the week to 670 GL (99% capacity). The storage is expected to remain effectively full for the remainder of September, before being drawn down to assist in meeting South Australia's entitlement flow in the coming months.

Flow into **South Australia** this week averaged 4,900 ML/day. The flow is expected to remain above 4,000 ML/day for the remainder of the month before increasing in early October to deliver the pulse of environmental water originating from the Goulburn River. The flow to South Australia is expected to reach 10,000 ML/day by mid-October.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina is 0.80 m AHD. Releases through the barrages are currently targeting around 2,400 ML/day when conditions allow but are expected to increase in the coming weeks as higher flows from upstream arrive.

For media inquiries contact the Media Officer on 02 6279 0141

JOSEPH DAVIS
Senior Director, River Operations



Water in Storage

Week ending Wednesday 27 Sep 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	476.09	3 239	84%	71	3 168	+22
Hume Reservoir	192.00	3 005	190.65	2 740	91%	23	2 717	+5
Lake Victoria	27.00	677	26.94	670	99%	100	570	+25
Menindee Lakes		1 731*		663	38%	(480 #)	183	-21
Total		9 269		7 312	79%	--	6 638	+31
Total Active MDBA Storage							77% ^	

Major State Storages

Burrinjuck Reservoir	1 026	637	62%	3	634	+8
Blowering Reservoir	1 631	1 285	79%	24	1 261	-36
Eildon Reservoir	3 334	2 424	73%	100	2 324	+2

* 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 Sep 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2017
Lake Eucumbene - Total	1 421	n/a	Snowy-Murray	+0	505
Snowy-Murray Component	589	n/a	Tooma-Tumut	+10	104
Target Storage	1 240		Net Diversion	-10	402
			Murray 1 Release	+11	612

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)	31.7	128	Yarrowonga Main Channel (net)	12.2	41
Wakool Sys Allowance	0.8	7	Torrumbarry System + Nyah (net)	0.1	14
Western Murray Irrigation	0.4	2	Sunraysia Pumped Districts	2.2	10
Licensed Pumps	7.3	28	Licensed pumps - GMW (Nyah+u/s)	1	5
Lower Darling	3.4	19	Licensed pumps - LMW	4.6	28
TOTAL	43.6	184	TOTAL	20.1	98

* 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	135.0 *	
Flow this week	34.5	(4 900 ML/day)
Flow so far this month	178.4	
Flow last month	190.0	

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	110	110	130
Euston	-	-	-
Red Cliffs	170	180	190
Merbein	140	150	170
Burtundy (Darling)	710	700	690
Lock 9	160	160	180
Lake Victoria	250	230	250
Berri	320	310	310
Waikerie	370	360	360
Morgan	370	380	380
Mannum	400	400	430
Murray Bridge	450	460	500
Milang (Lake Alex.)	580	580	570
Poltalloch (Lake Alex.)	610	620	580
Meningie (Lake Alb.)	1 520	1 520	1 540
Goolwa Barrages	1 350	1 030	1 630



River Levels and Flows

Week ending Wednesday 27 Sep 2017

	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	-	-	-	3 640	F	3 270	2 490
Jingellic	4.0	2.02	208.54	7 150	F	6 780	6 610
Tallandoon (Mitta Mitta River)	4.2	1.67	218.56	1 220	F	1 300	1 440
Heywoods	5.5	2.59	156.22	10 500	R	7 870	5 820
Doctors Point	5.5	2.85	151.32	12 960	F	10 410	8 730
Albury	4.3	1.79	149.23	-	-	-	-
Corowa	4.6	2.55	128.57	11 250	R	9 060	8 460
Yarrowonga Weir (d/s)	6.4	1.56	116.60	9 050	R	8 800	8 620
Tocumwal	6.4	2.18	106.02	8 400	R	8 150	7 980
Torrumbarry Weir (d/s)	7.3	2.67	81.21	7 950	R	5 350	4 350
Swan Hill	4.5	0.96	63.88	4 050	R	3 360	6 220
Wakool Junction	8.8	2.44	51.56	5 450	F	6 670	11 350
Euston Weir (d/s)	9.1	1.40	43.24	6 130	F	7 830	12 820
Mildura Weir (d/s)	-	-	-	7 220	F	9 630	13 890
Wentworth Weir (d/s)	7.3	3.06	27.82	6 780	F	9 520	14 040
Rufus Junction	-	3.08	20.01	4 070	R	4 410	6 080
Blanchetown (Lock 1 d/s)	-	0.72	-	3 230	F	4 480	4 440
Tributaries							
Kiewa at Bandiana	2.8	2.55	155.78	3 030	R	2 650	2 490
Ovens at Wangaratta	11.9	9.46	147.14	4 620	S	5 090	6 280
Goulburn at McCoys Bridge	9.0	4.37	95.79	6 940	R	5 260	1 360
Edward at Stevens Weir (d/s)	5.5	1.52	81.29	1 260	F	1 140	1 410
Edward at Liewah	-	2.13	57.51	1 410	F	1 510	1 990
Wakool at Stoney Crossing	-	1.62	55.11	920	F	1 140	1 810
Murrumbidgee at Balranald	5.0	1.86	57.82	1 370	F	1 360	1 330
Barwon at Mungindi	6.1	3.07	-	0	F	50	140
Darling at Bourke	9.0	4.12	-	410	R	220	110
Darling at Burtundy Rocks	-	0.77	-	240	S	240	260

Natural Inflow to Hume	13 800	13 790
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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	-0.16	-	No. 7 Rufus River	22.10	+0.58	+0.76
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.01	+0.39
No. 15 Euston	47.60	+0.29	-	No. 5 Renmark	16.30	+0.43	+0.07
No. 11 Mildura	34.40	-0.01	+0.12	No. 4 Bookpurnong	13.20	-0.01	+0.34
No. 10 Wentworth	30.80	+0.00	+0.42	No. 3 Overland Corner	9.80	+0.00	+0.61
No. 9 Kulnine	27.40	+0.18	+0.35	No. 2 Waikerie	6.10	+0.51	+0.00
No. 8 Wangumma	24.60	+0.35	+0.62	No. 1 Blanchetown	3.20	-0.10	-0.03

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.80
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Barrages

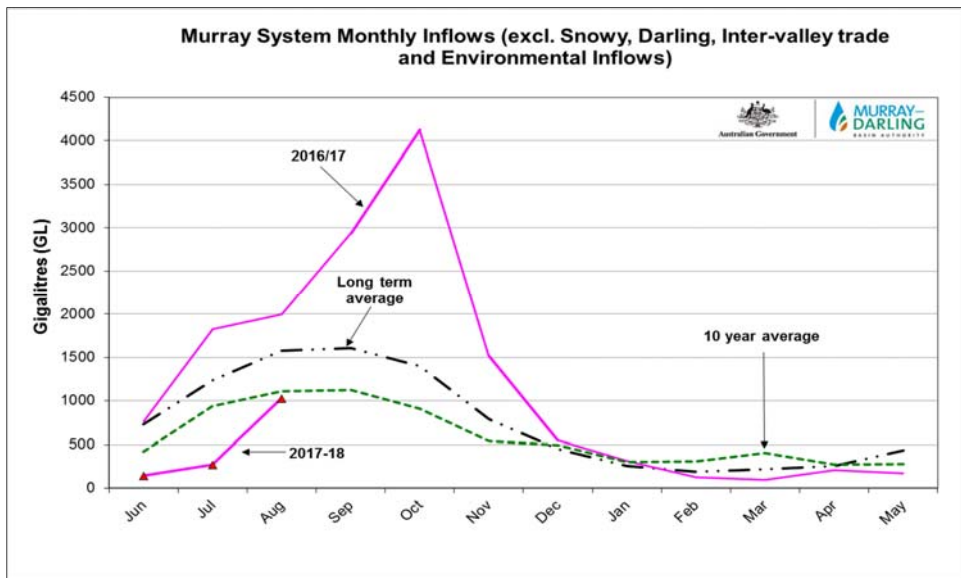
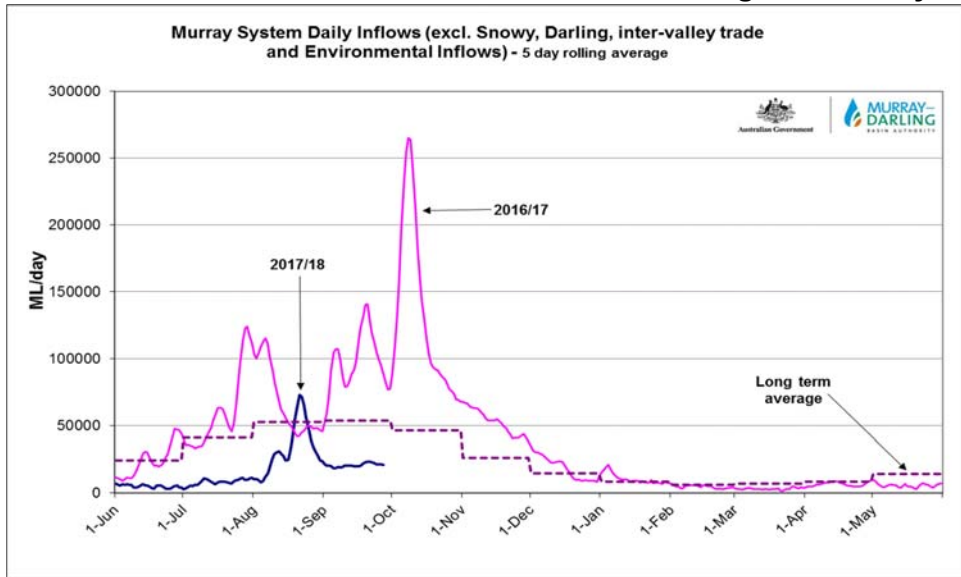
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.79	2	-	Open	Open	-
Mundoo	26 openings	0.79	1	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.80	3	Open	Open	Open	-

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



Week ending Wednesday 27 Sep 2017



State Allocations (as at 27 Sep 2017)

NSW - Murray Valley

High security	97%
General security	28%

Victorian - Murray Valley

High reliability	98%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	33%

Victorian - Goulburn Valley

High reliability	71%
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>