



# RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 13 SEPTEMBER 2017

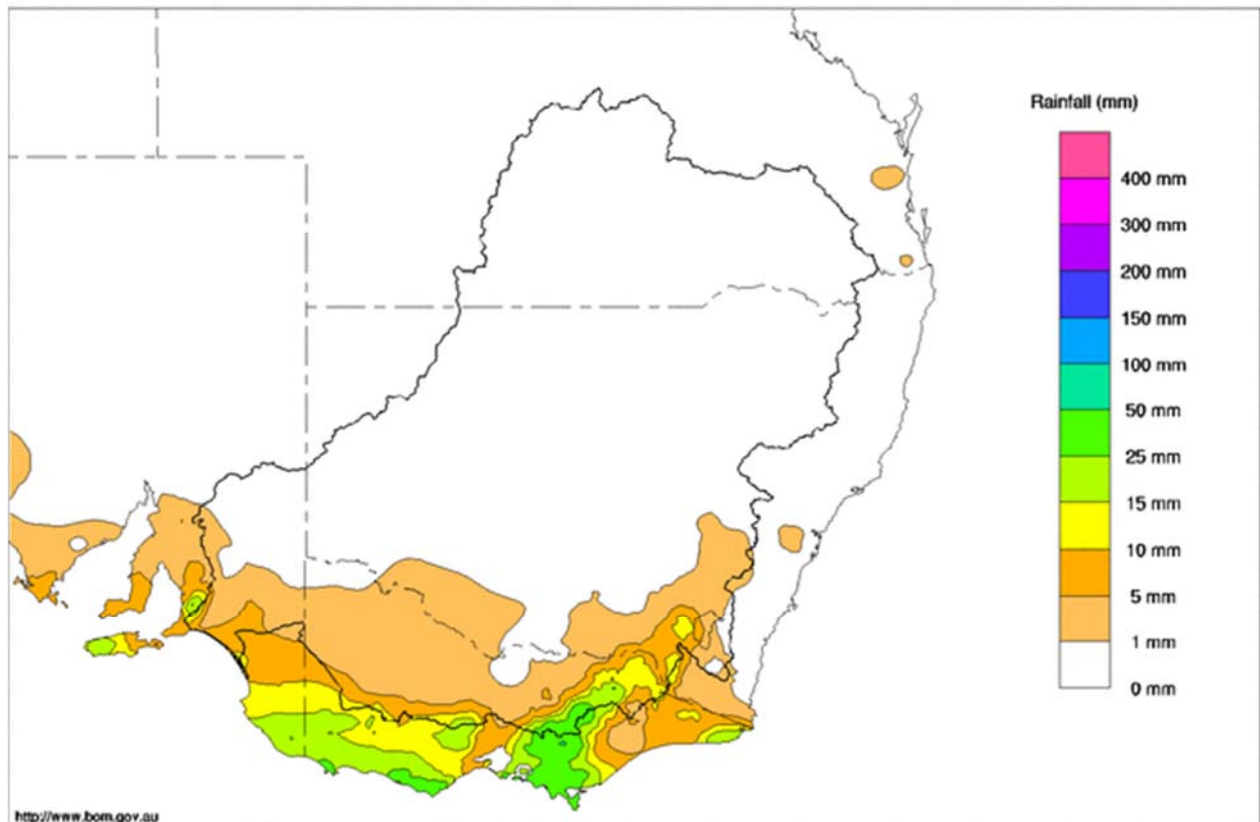
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## Rainfall and inflows

Rainfall was once again confined mostly to southern parts of the Murray-Darling Basin while northern areas remained dry (Map 1). The majority of the rain fell early in the week as the final cold front in a series of fronts delivered light rain across the southern plains and heavier showers and snow to the ranges. Conditions subsequently warmed up as the week progressed with maximum temperatures at a number of inland locations such as Mildura, Menindee and Bourke exceeding 30 degrees Celsius, which is well above their September average (Map 2).

Weekly rainfall totals were highest in the Victorian Alps and included 57 mm at Mt Buller, 44 mm at Rocky Valley and 40 mm at Mt Buffalo. Elsewhere, there were totals up to around 25 mm in the NSW Snowy Mountains; while in South Australia 14 mm was recorded at Meningie.

Murray-Darling Rainfall Totals (mm) Week Ending 13th September 2017  
Australian Bureau of Meteorology



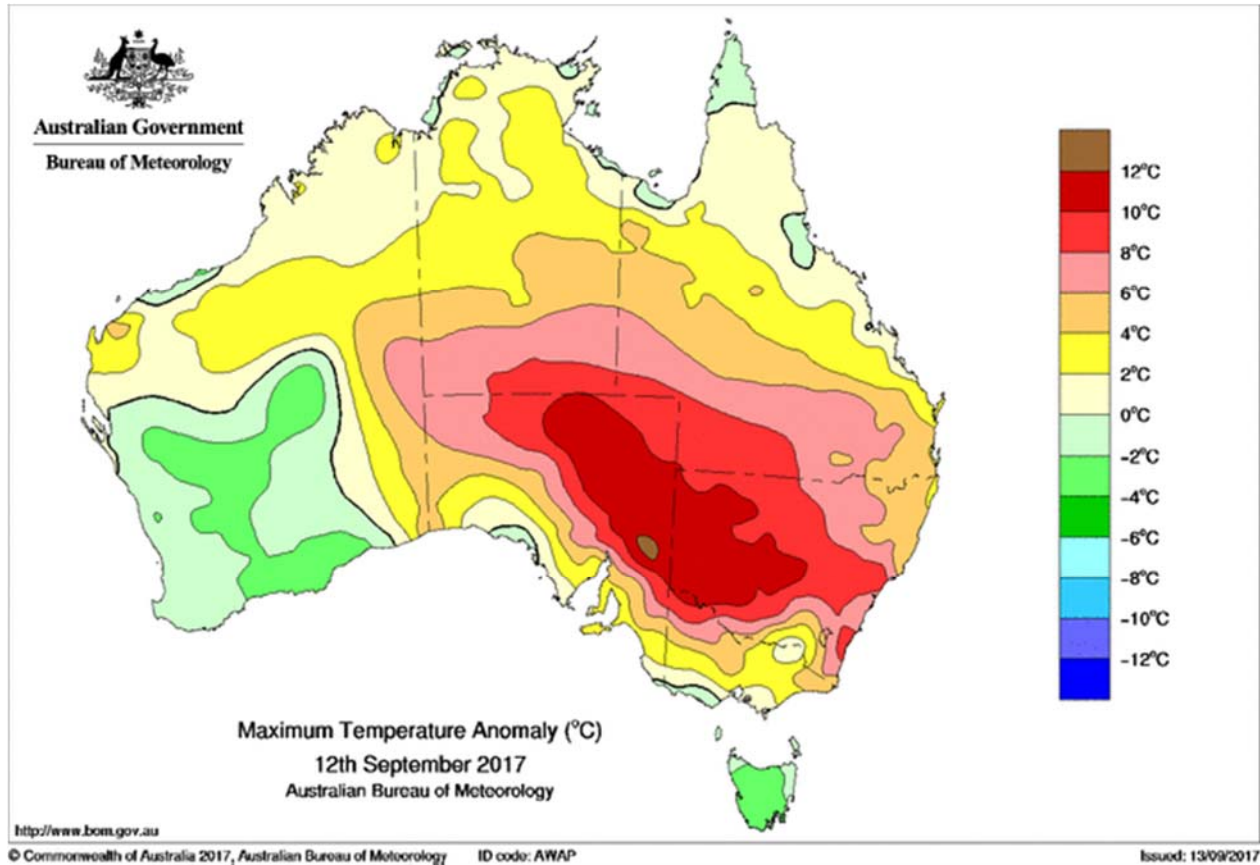
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Issued: 13/09/2017

Map 1 - Murray-Darling Basin rainfall map week ending 13 September 2017 (Source: Bureau of Meteorology).

Flows along upper Murray tributaries remained fairly steady this week due to modest rainfall helping to slow recessions at most gauges. On the upper Murray at Biggara, the flow started the week at 1,500 ML/day and is currently flowing at 1,500 ML/day. Downstream at Jingellic, flows have averaged around 6,400 ML/day. On the Ovens River, flows at Rocky Point are currently steady and have averaged around 4,400 ML/day.



Map 2 – Map of maximum temperature anomaly for 12 September 2017 (Source: Bureau of Meteorology).

## River operations

- NSW and Victoria announce increases in water availability
- Red alert for blue-green algae continues at Menindee Lakes
- Weir pools at Locks 15, 9, 8, 7, 5 and 2 are currently surcharged above the FSL

On 15 September, NSW's Department of Primary Industries and Victoria's Northern Victorian Resource Manager announced increases to water allocations for 2017-18. In [NSW](#), the allocations for general security increased to 28% of entitlement for Murray Valley water users and 33% of entitlement for Murrumbidgee Valley water users. In [Victoria](#), water availability increased to 98% and 71% for high reliability shares in the Murray and Goulburn systems (respectively). For further information on current state water allocations see the table on [page 7](#).

MDBA total active storage rose by 64 GL this week with the active storage now 6,544 GL or 76%.

At **Dartmouth Reservoir**, the storage volume increased by 20 GL and is currently 3,191 GL (83% capacity). The release from Dartmouth, measured at Coleman's gauge, is continuing at the minimum rate of 200 ML/day.

At **Hume Reservoir** the storage increased by 19 GL to 2,722 GL (91% capacity). The release from Hume has increased to 8,000 ML/day to meet increasing downstream demands.

MDBA are continuing to closely monitor rainfall forecasts from the Bureau of Meteorology (BoM) and forecast downstream demands to determine if and when higher releases for 'airspace management' at Hume Reservoir are required. Airspace management releases can be made to provide flood protection



if filling of the reservoir is assured when demand exceeds inflows. For further information on [airspace management](#) at Hume Reservoir, visit MDBA's website. Subscribers to [WaterNSW's EWN](#) will receive a notification of any changes to the release from Hume Dam when the flow at Doctors Point is greater than 25,000 ML/day.

Whilst the BoM's 3 month outlook suggests there is a roughly equal chance of a wetter or drier spring, the [BoM 8-day rainfall outlook](#) as at 15 September is not forecasting any significant rainfall, and demands downstream are increasing.

Hume Reservoir is slowly rising (Figure 1) as inflows are stored to maximise water availability. However, the storage level may start falling away in coming weeks if conditions remain relatively dry and downstream demands continue to climb.

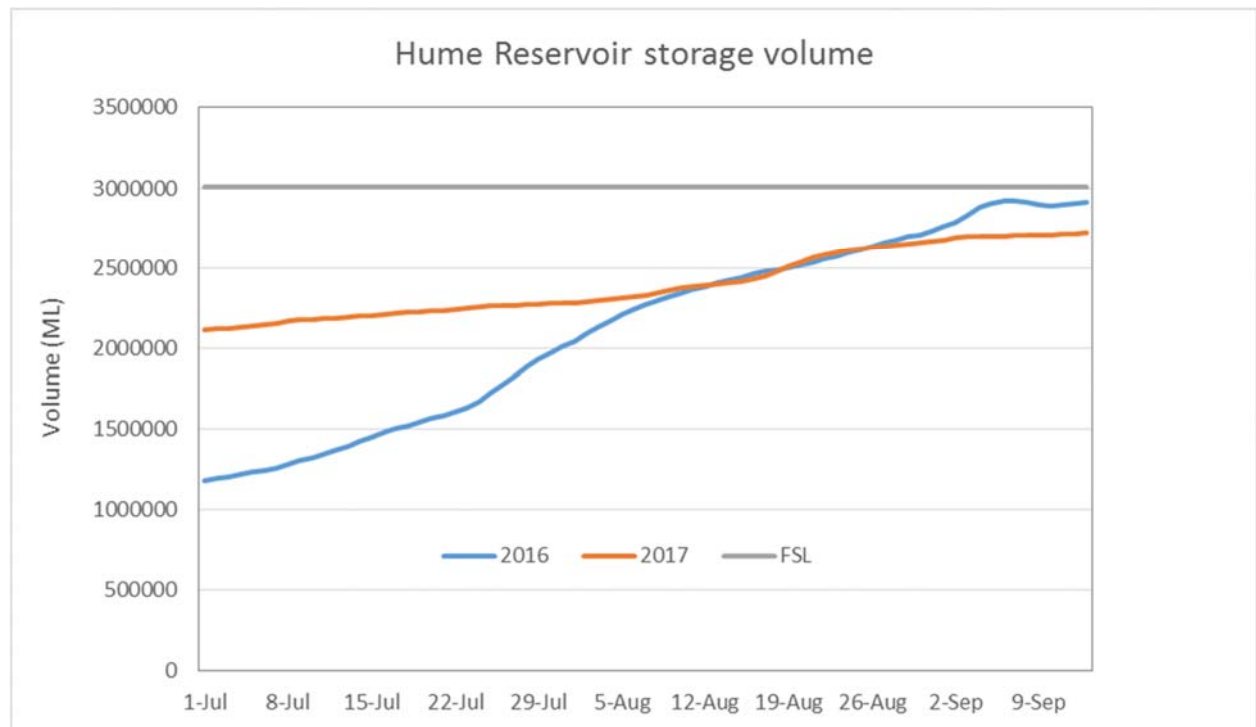


Figure 1 – Water in storage at Hume reservoir during July to September in 2016 and 2017

At **Yarrowonga Weir**, diversions at the major irrigation offtakes have increased in recent days in response to rising irrigation demand. At Yarrowonga Main Channel, diversions increased from 600 ML/day to 1,900 ML/day and are forecast to reach around 2,200 ML/day over the next few days. At Mulwala Canal, diversions increased from 2,500 ML/day to 3,800 ML/day and are forecast to reach around 4,200 ML/day next week. The pool level in **Lake Mulwala** returned above the normal operating target of 124.7 m AHD on Sunday. The pool level is expected to vary between around 124.7 m AHD and the full supply level (FSL) of 124.9 m AHD over the coming weeks as both airspace and water stored in the weir pool are used to help buffer the uncertainty in irrigation demand at this highly variable time of the year. The downstream release is currently targeting around 8,500 ML/day. A portion of this flow is being used to improve connectivity between the River Murray and flood runners in the **Barmah-Millewa** forest for the benefit of native fish and vegetation.

On the **Edward River**, the gates at Edward offtake remain clear of the water. With the level on the Murray at Picnic Point relatively steady, the flow through the Edward River offtake has remained around 1,450 ML/day. During the week, the gates at Gulpa offtake were lowered to regulate the flow into Gulpa Creek to around 350 ML/day.

Return flows to the Edward River from the flooding of Millewa forest, following overbank flows in the Murray in mid-August, are continuing to reduce. Return flows are estimated by measuring the flow entering from the Bullatale Creek and the gain in water at the Toonlook gauge (on the Edward River



downstream of the Edward and Gulpa offtakes). Return flows from the forest are estimated to have reached above 3,500 ML/day at the end of August and have now receded below 1,000 ML/day.

Small flows are also entering the Edward River from the Tuppal Creek. Murray Irrigation Limited (MIL) are currently delivering water using their irrigation infrastructure to the upper reach of the Tuppal Creek. This water is being delivered on behalf of NSW Office of Environment and Heritage to improve fish habitat along the creek.



Photo 1 – Water entering the Tuppal Creek (left and centre) from MIL supply point (at right, out of picture) (Photo courtesy Adam McLean, MDBA).

At **Stevens Weir**, irrigation demand at Wakool Main Canal has averaged around 300 ML/day, but is expected to increase over the coming week. The release downstream of the weir has receded to 1,650 ML/day and is likely to continue to recede over the coming days.

On the **Goulburn River** the flow at McCoy's bridge has averaged 1,400 ML/day. In the coming weeks the [flow is expected to increase](#) as a pulse of water is delivered on behalf of environmental water holders to benefit bank-stabilising vegetation in the lower Goulburn River. A flow rate peaking around



8,500 ML/day downstream of Goulburn Weir is expected later in September. In response to this flow pulse from the Goulburn River, river levels on the Murray in the Echuca district and downstream are expected to vary from mid-September. For more details, see the attached media release.

The **Torrumbarry** weir pool level is 86.0 m AHD (0.05 cm below FSL). The release is currently 7,100 ML/day, and is expected to reduce below 5,000 ML/day over the coming week. Diversions at National Channel were around 1,500 ML/day for most of the week before increasing to 3,000 ML/day by the end of the week.

Downstream of Swan Hill, inflows from the Wakool River peaked during the week resulting in the flow in the Murray at Wakool junction exceeding 14,000 ML/day. Further downstream, inflow from the **Murrumbidgee River** (measured at Balranald) averaged 1,250 ML/day.

At **Euston** weir, the pool level is 47.88 m AHD (28 cm above FSL). The pool level is expected to remain around this level in the coming days. The pool level is being varied above the FSL as part of the [weir pool variability program](#). The downstream release is currently 14,400 ML/day and is expected to reduce over the coming week.

On the **Darling River**, the total storage volume in the **Menindee Lakes** decreased by 16 GL to 700 GL (40% capacity). Releases from Menindee Lakes to the Lower Darling River at Weir 32 continue to target 400 ML/day. This is above the normal minimum of 200 ML/day at this time of year. The additional water is being released on behalf of environmental water holders to the benefit native fish in the lower Darling River. A blue-green algae red alert is current for Lake Menindee, Weir 32 and the Lower Darling River immediately downstream. See the [WaterNSW website](#) for more details.

At the junction of the Darling and the Murray, the release from **Wentworth** Weir is currently 14,500 ML/day and is expected to recede slowly over the coming week.

**Lock 9** is currently around 20 cm above the FSL of 27.4 m AHD. The pool level has been raised to maximise the volume of water diverted via Frenchmans Creek to Lake Victoria. Tributary inflows from upstream, following rainfall in mid-August, are currently being stored in Lake Victoria for later release to help supply downstream demands over summer and autumn.

**Lock 7** and **8** are currently 25 cm and 46 cm above FSL (respectively). The pool levels are expected to be around 30 cm and 50 cm above FSL over the coming week. The pool levels at these weirs are being varied as part of the weir pool variability program. Varying pool levels helps restore a more natural wetting and drying cycle to riverbanks and adjacent wetlands within the influence of the weir pool.

At **Lake Victoria**, the storage volume increased by 41 GL to 605 GL (89% capacity). Over the next two weeks, if conditions remain dry, the capture of operational water will be maximised to support demands later in the season.

The flow to **South Australia** is currently around 6,500 ML/day and is expected to remain around this rate for the coming week.

Downstream in South Australia at **Locks 5** and **2**, the [weir pools are currently surcharged](#) and targeting 45 cm and 50cm (respectively) above FSL. Depending on flow conditions, it is anticipated that these pools will remain around these levels until mid-October, before being gradually lowered to their normal operating levels.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina increased to 0.8 m AHD. Releases through the barrages are continuing when conditions in the Coorong allow, with releases being prioritised at Tauwitchere and Goolwa.

**For media inquiries contact the Media Officer on 02 6279 0141**

ANDREW REYNOLDS  
Executive Director, River Management



**Water in Storage**

**Week ending Wednesday 13 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	475.26	3 191	83%	71	3 120	+20
Hume Reservoir	192.00	3 005	190.55	2 722	91%	23	2 699	+19
Lake Victoria	27.00	677	26.40	605	89%	100	505	+41
Menindee Lakes		1 731*		700	40%	(480 #)	220	-16
<b>Total</b>		<b>9 269</b>		<b>7 218</b>	<b>78%</b>	<b>--</b>	<b>6 544</b>	<b>+64</b>
Total Active MDBA Storage							76% ^	

**Major State Storages**

Burrinjuck Reservoir	1 026	620	60%	3	617	+10
Blowering Reservoir	1 631	1 352	83%	24	1 328	+2
Eildon Reservoir	3 334	2 365	71%	100	2 265	+55

\* 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 12 Sep 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2017
Lake Eucumbene - Total	1 327	+34	Snowy-Murray	+0	505
Snowy-Murray Component	552	+11	Tooma-Tumut	+11	82
Target Storage	1 240		Net Diversion	-11	424
			Murray 1 Release	+8	593

**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)	23.4	65	Yarrowonga Main Channel (net)	6.6	16
Wakool Sys Allowance	0.0	5	Torrumbarry System + Nyah (net)	0	12
Western Murray Irrigation	0.3	1	Sunraysia Pumped Districts	1.4	6
Licensed Pumps	3.4	11	Licensed pumps - GMW (Nyah+u/s)	1	3
Lower Darling	3.9	12	Licensed pumps - LMW	4.6	17
<b>TOTAL</b>	<b>31.0</b>	<b>94</b>	<b>TOTAL</b>	<b>13.6</b>	<b>54</b>

\* 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	46.9	(6 700 ML/day)
Flow so far this month	97.8	
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	100	110	140
Euston	130	140	160
Red Cliffs	150	150	190
Merbein	150	160	180
Burtundy (Darling)	680	710	680
Lock 9	160	170	190
Lake Victoria	240	240	250
Berri	300	290	320
Waikerie	380	390	360
Morgan	410	400	380
Mannum	390	390	440
Murray Bridge	460	470	520
Milang (Lake Alex.)	570	580	570
Poltalloch (Lake Alex.)	600	590	560
Meningie (Lake Alb.)	1 530	1 560	1 540
Goolwa Barrages	1 300	1 990	1 820



**River Levels and Flows**

**Week ending Wednesday 13 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)				
<b>River Murray</b>	(m)						
Khancoban	-	-	-	2 590	F	2 430	1 980
Jingellic	4.0	1.90	208.42	6 160	F	6 370	5 960
Tallandoon ( Mitta Mitta River )	4.2	1.69	218.58	1 280	R	1 340	1 250
Heywoods	5.5	2.06	155.69	4 590	R	5 500	2 410
Doctors Point	5.5	2.31	150.78	6 970	R	7 920	4 550
Albury	4.3	1.30	148.74	-	-	-	-
Corowa	4.6	1.74	127.76	6 480	F	8 240	4 420
Yarrowonga Weir (d/s)	6.4	1.50	116.54	8 530	F	8 410	9 080
Tocumwal	6.4	2.14	105.98	7 960	R	7 680	9 820
Torrumbarry Weir (d/s)	7.3	2.44	80.98	7 080	F	9 270	11 450
Swan Hill	4.5	1.72	64.64	9 070	F	10 240	10 520
Wakool Junction	8.8	4.42	53.54	13 840	F	13 880	13 110
Euston Weir (d/s)	9.1	2.65	44.49	14 400	S	14 240	15 170
Mildura Weir (d/s)	-	-	-	14 610	F	14 170	16 080
Wentworth Weir (d/s)	7.3	3.48	28.24	14 520	S	14 440	16 260
Rufus Junction	-	3.39	20.32	5 870	F	6 160	7 700
Blanchetown (Lock 1 d/s)	-	0.84	-	5 260	F	5 930	6 370
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	1.88	155.11	1 800	F	2 070	1 970
Ovens at Wangaratta	11.9	9.73	147.41	5 630	F	5 820	4 530
Goulburn at McCoys Bridge	9.0	1.80	93.22	1 470	F	1 430	1 610
Edward at Stevens Weir (d/s)	5.5	1.78	81.55	1 650	F	2 310	4 510
Edward at Liewah	-	2.89	58.27	2 360	F	2 440	2 230
Wakool at Stoney Crossing	-	1.92	55.41	2 030	F	1 840	1 070
Murrumbidgee at Balranald	5.0	1.76	57.72	1 270	F	1 250	2 040
Barwon at Mungindi	6.1	3.28	-	230	F	340	340
Darling at Bourke	9.0	4.04	-	160	S	180	250
Darling at Burtundy Rocks	-	0.78	-	270	R	230	210

Natural Inflow to Hume	11 310	9 650
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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	+0.46	+1.09
No. 26 Torrumbarry	86.05	-0.05	-	No. 6 Murtho	19.25	+0.01	+0.45
No. 15 Euston	47.60	+0.28	-	No. 5 Renmark	16.30	+0.44	+0.14
No. 11 Mildura	34.40	+0.05	+0.57	No. 4 Bookpurnong	13.20	+0.00	+0.59
No. 10 Wentworth	30.80	+0.04	+0.84	No. 3 Overland Corner	9.80	-0.01	+0.66
No. 9 Kulnine	27.40	+0.19	+0.31	No. 2 Waikerie	6.10	+0.48	+0.13
No. 8 Wangumma	24.60	+0.25	+0.76	No. 1 Blanchetown	3.20	-0.09	+0.09

**Lower Lakes FSL = 0.75 m AHD**

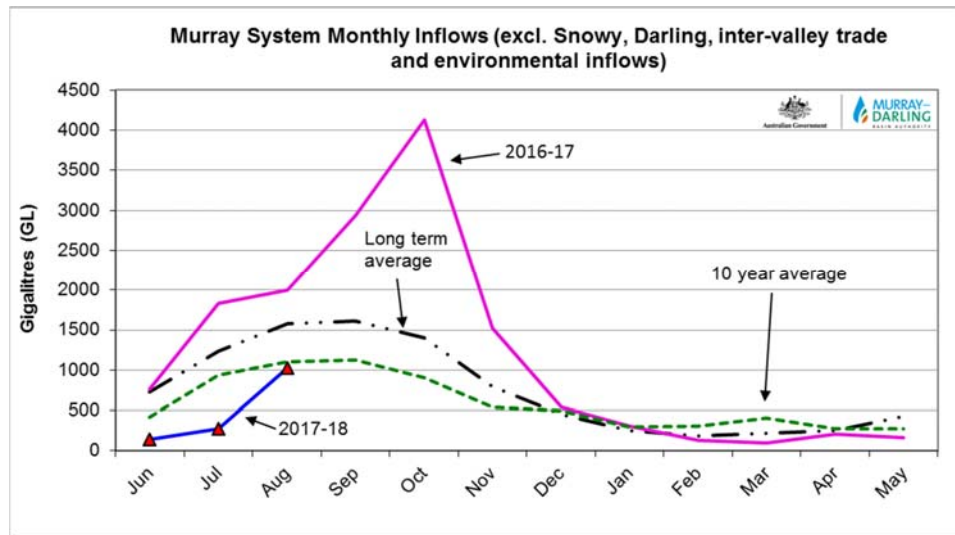
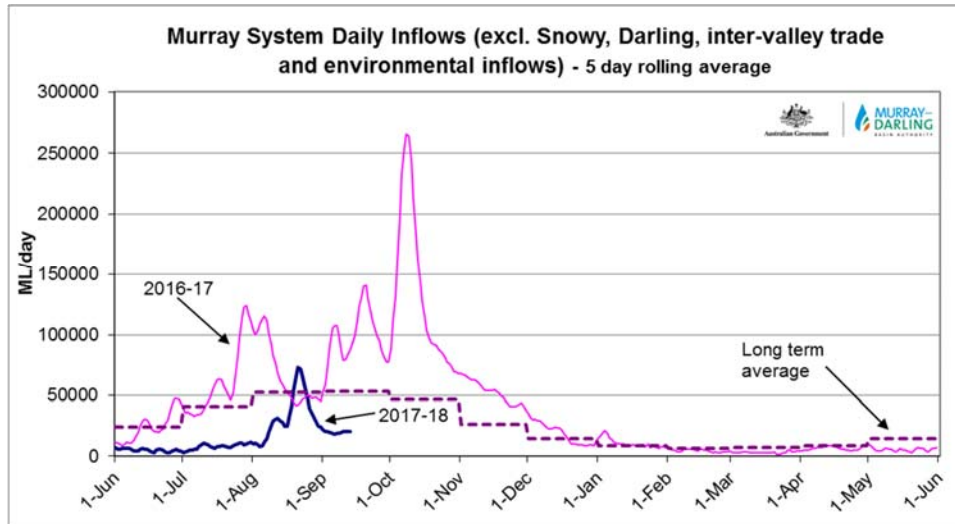
Lake Alexandrina average level for the past 5 days (m AHD)	0.80
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**Barrages**

**Fishways at Barrages**

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.58	All closed	-	Open	Open	-
Mundoo	26 openings	0.59	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.63	All closed	Open	Open	Open	-

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



**State Allocations (as at 13 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>



12 September 2017

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## River Murray water levels to vary in spring

Communities along the River Murray in New South Wales and Victoria are advised to expect variable flows during spring and to consider adjusting their activities, pumps and moorings accordingly.

Head of River Management at the Murray–Darling Basin Authority (MDBA), Andrew Reynolds, said water levels downstream of Hume Dam would fluctuate as water was released from Hume and the Goulburn system for the environment.

“Planned water releases will remain within channel capacity and are likely to rise and fall depending on inflows and downstream demand,” Mr Reynolds said.

“Starting in mid-September, river users in the Echuca district and downstream should be aware that water levels will rise noticeably, as environmental water enters the River Murray as a pulse from the Goulburn River.

“By late September, the flow downstream of Torrumbarry Weir is expected to exceed 10,000 megalitres per day (gauge height of 3.1 metres) for about one week before receding to pre-pulse levels within a fortnight.

“Water levels might be higher if there is significant rain, or lower if diversions are higher than forecast.”

The flow from the Goulburn has been planned by Goulburn Broken CMA and will be managed by Goulburn-Murray Water. Communities can find more information about Goulburn flows at [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au) and [www.gmwater.com.au](http://www.gmwater.com.au).

“As these environmental flows pass downstream they will support multiple sites including the Edward-Wakool River system, Barmah-Millewa Forest, Gunbower Forest, Hattah Lakes and the Coorong and Lower Lakes,” Mr Reynolds said.

People can subscribe to the River Murray [Weekly Report](#) and also check-in with their local water authority for up-to-date information about the flows.

River data for sites on the River Murray system can be seen at <https://riverdata.mdba.gov.au>.

ENDS

For more information, contact the MDBA Media office at [media@mdba.gov.au](mailto:media@mdba.gov.au) or 02 6279 0141

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