

# River Murray Weekly Report

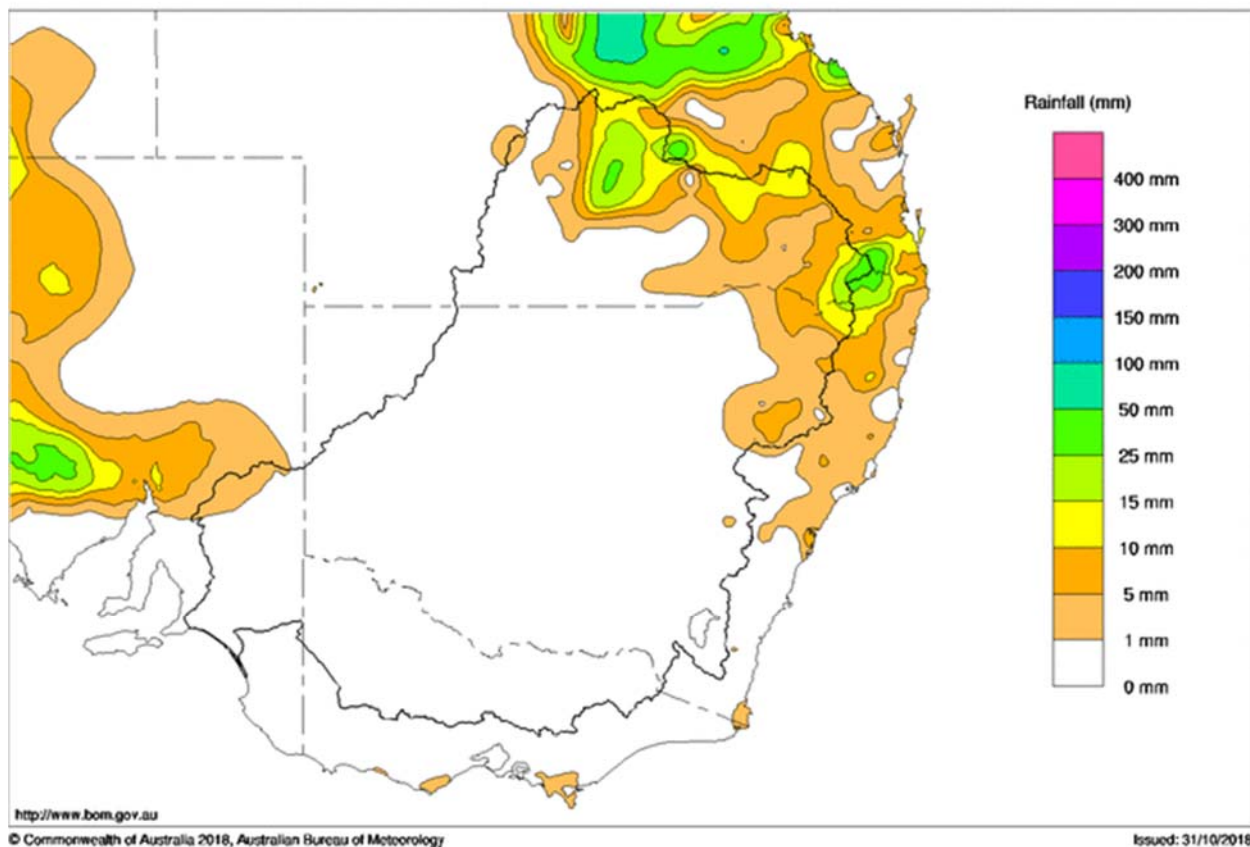
For the week ending Wednesday, 31 October 2018

Trim Ref: D18/50253

## Rainfall and inflows

Little to no rainfall was recorded in the southern and central Murray-Darling Basin (Map 1). In Queensland, the highest rainfall totals included 37 mm at Derbyshire Downs in the Warrego and 35 mm at Oakey in East Darling Downs.

Murray-Darling Rainfall Totals (mm) Week Ending 31st October 2018  
Australian Bureau of Meteorology



Map 1 - Murray-Darling Basin rainfall map week ending 31 October 2018 (Source: Bureau of Meteorology).

In the absence of rainfall, the upper Murray tributaries continued to recede this week. The Mitta Mitta River at Hinnomunjie fell from 1,100 ML/day to the current flow of 730 ML/day. The upper Murray at Biggara reduced from 600 ML/day and is currently around 470 ML/day. Downstream of Hume Reservoir, inflow from the Kiewa River averaged 1,300 ML/day and the Ovens River at Wangaratta eased from 920 ML/day to the current flow around 770 ML/day.

Despite patches of decent rainfall in recent weeks, and further rain [forecast](#) by the Bureau of Meteorology for the coming 8 days, very dry conditions over most of the last 12-24 months continue to impact on much of the Basin, including western areas of NSW (Photo 1).

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Photo 1 – Open plains near Wilcannia (photo, MDBA).

## River operations

- Transfers from Dartmouth Reservoir to Hume Reservoir expected to continue at high rates
- Transfers from Hume to Lake Victoria also expected to continue at rates above channel capacity
- Significant volumes of IVT water likely to continue to be delivered from the Goulburn Valley account in coming months

### River operations

MDBA active storage decreased by 84 GL this week to 4,787 GL (57% capacity).

Ongoing transfers from **Dartmouth Reservoir** to Hume Reservoir decreased the Dartmouth storage volume by 44 GL to 3,104 GL (80% capacity). Water stored in Dartmouth Reservoir is generally maintained as the system's drought reserve and is called upon in dry seasons when the downstream storages have insufficient water to meet demands. Given the continuing warm and dry conditions and low tributary stream flows, substantial calls on water from Dartmouth are expected to continue this year.

This week the release from Dartmouth, measured at Colemans gauge, reduced from around 8,300 ML/day to 7,000 ML/day before increasing again to the current flow rate around 9,300 ML/day. Releases from Dartmouth are expected to be maintained near 9,300 ML/day for most of the upcoming week. Where possible these releases are being varied in an effort to try to limit the impact of high flows on river bank erosion.



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Despite ongoing transfers from Dartmouth, the **Hume Reservoir** volume decreased by 65 GL this week to 1,427 GL (47% capacity). During the week the release increased to 19,500 ML/day in response to higher irrigation demands. The release has since reduced to 18,000 ML/day and is expected to remain high into the coming week.

At **Lake Mulwala** the level is currently 124.74 m AHD, which is within the normal operating range (124.6 to 124.9 m AHD). Diversions to Yarrawonga Main Channel (Photo 2) averaged around 1,300 ML/day, while the diversion to Mulwala Canal continued increasing from 2,200 ML/day to around 2,600 ML/day. Around 1,000 ML/day of the current Mulwala Canal diversion is supplying releases into the Edward River (~400 ML/day via Edward Escape), Wakool River (~100 ML/day via Wakool Escape), Billabong Creek (~250 ML/day via Finley Escape) or back to the Murray (~100 ML/day via Pericoota Escape) through the use of Murray Irrigation Limited (MIL) infrastructure in order to transfer water around the Barmah Choke to meet downstream requirements.



Photo 2 – Yarrawonga Main Channel (Photo courtesy of Ross and Ruth Rofe).

The release from **Yarrawonga Weir** is currently targeting 14,900 ML/day (Photo 3). This week, the flow reduced for four days to around 14,600 ML/day to introduce some downstream variability before returning to around 15,000 ML/day. At these flow rates, a component of the flow is being transferred around the Barmah Choke via pre-wetted anabranch channels and the lower flood plain mainly within the Barmah Forest. The majority of Barmah forest regulators have been opened to maximise transfers through the forest whilst maintaining the River Murray level at Picnic Point below 2.6 m on the local gauge. While these higher releases are being undertaken to boost transfers to Lake Victoria, this action provides a complimentary benefit in improving connectivity between the river and forest channels which benefits native fish and birds.





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Flows at the **Edward River** offtake and **Gulpa Creek** offtake are currently near 1,580 ML/day and 330 ML/day, respectively, and are expected to remain around these rates over the coming weeks. These flows are combining with return flows from the Millewa forest to produce a flow of 3,200 ML/day at Toonalook. Diversion into Wakool Main Canal continued to increase and is currently 130 ML/day, while the Wakool, Yallakool and Colligen offtakes continue to pass around 65, 400 and 400 ML/day respectively to boost transfers downstream to Lake Victoria. Flow in the Edward River is being supplemented by releases from Edward Escape, to target a flow of 3,000 ML/day downstream of **Stevens Weir**. As the flow downstream of Steven's Weir is above 2,700 ML/day, Tumudgery and Niemur regulators (downstream of Stevens Weir) have been partially opened. This allows water to reach the Niemur River via anabranch channels in Werai Forest. These higher flows are being targeted to further boost transfers to Lake Victoria.



Photo 3 – Bridge over the River Murray at Cobram, downstream of Yarrawonga (Photo courtesy of Ross and Ruth Rofe).

On the Murray, the flow at **Barmah** remains around 10,200 ML/day, which includes water returning to the River Murray from Barmah Forest channels and wetlands. Flows around this rate are expected over the coming weeks.

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, has continued to slowly recede as delivery of the [spring fresh](#) concludes and is currently 2,050 ML/day. This flow pulse was a combination of water for the environment and water delivered from the Inter Valley Trade (IVT) account. Over coming months, significant volumes of IVT water are [likely to continue](#) to be delivered. Information regarding current opportunities for allocation trade between the Goulburn and Murray valleys is available at the [Victorian water register website](#).



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River users in the Echuca district and downstream of Torrumbarry Weir should be aware that water levels will continue to fall over the coming week as the Goulburn flow pulse recedes.

On the **Campaspe River**, flows have held steady at around 100 ML/day and will continue around this rate over coming weeks to promote Murray Cod nesting. These higher flows are currently being delivered on behalf of environmental water holders.

National Channel diversions remained around 2,100 ML/day and are likely to continue at this rate. At **Torrumbarry Weir** the release continued to reduce from 12,500 ML/day to the current rate of 10,810 ML/day. Over the coming week the flow is expected to continue to reduce to around 9,000 ML/day as inflows from the Goulburn recede.

Small volumes of water continue to be delivered to Gunbower Creek and Gunbower forest on behalf of environmental water holders. Delivery of water to Gunbower forest is expected to cease early November. Small return flows from the watering of Gunbower forest continue to re-enter the Murray near Barham. More information on the Gunbower Forest watering can be found on the North Central Catchment Management Authority (NCCMA) [website](#).

Inflow from the **Murrumbidgee River**, measured at Balranald, averaged around 980 ML/day this week.

At **Euston**, the weir pool is targeting full supply level (FSL) to 10 cm below FSL. The downstream flow peaked this week around 16,700 ML/day and is currently around 16,000 ML/day. Flow will continue to recede over the coming weeks.

The **Menindee Lakes** storage volume decreased 4 GL to 128 GL (7% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). As part of drought contingency measures, WaterNSW has installed two temporary block banks across the lower Darling below Pooncarie near Jamesville and below Burtundy near Ashvale to assist in maintaining supply to domestic, stock and permanent plantings along the lower Darling. The release from Weir 32 remains near 200 ML/day.

At **Wentworth Weir**, operations continue to target a pool level of around 10 cm above FSL to assist pumpers in the upper reaches of the Darling arm of the weir pool. This week the downstream release peaked and remained around 15,500 ML/day. Flow will start to recede this week as the recession of the high Goulburn flows move downstream.

The **Lock 9** weir pool is currently targeting around 10 cm below FSL. The **Lock 8** weir pool is currently around 50 cm below FSL as part of the weir pool variability program. The **Lock 7** weir pool is currently targeting around 30 cm above FSL in order to target a flow rate of around 40 ML/day in the upper Lindsay River for the benefit of native fish.

Ongoing transfers from Hume and IVT deliveries from the Goulburn system have helped increase the **Lake Victoria** storage volume by 29 GL to 450 GL (66% capacity). The storage volume is expected to increase further in the coming month as upstream transfers continue from Hume and more Goulburn IVT water is released.

Flow to **South Australia** is currently targeting 10,000 ML/day as the peak of the additional environmental water arrives from the Goulburn system. Flow will then gradually recede over the coming weeks. The **Lock 6** water level remained at the target level of 20 cm above FSL this week to assist the [Chowilla watering](#). It is anticipated that the pool level will be slowly lowered from next week to the normal pool level by the end of November.

At **Lock 5** the weir pool is currently 9 cm above the normal pool level. The weir pool is being gradually lowered at a rate of 2 to 5 cm/day until it reaches the normal pool level, which is anticipated to be reached by around mid-November. At **Lock 2** the weir pool level is currently 7 cm above the normal pool level and is also being gradually lowered to reach the normal pool level by around mid-November. For more information see the South Australian Department for Environment and Water's latest [River Murray flow report](#).



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The 5-day average water level in the **Lower Lakes** is currently 0.74 m AHD. When conditions allow, environmental water is being released through the barrages to maintain connectivity between Lake Alexandrina and the Coorong estuary. Barrage releases have prioritised Tauwitchere, Boundary Creek and Goolwa and all fishways remain open.

The MDBA has improved the method for publishing storage, flow and salinity forecast information. The previous storage, flow and salinity reports have been discontinued and replaced by new forecasts that are now available on the [River Murray Data](#) page on the [MDBA website](#). Look for the green binocular icon on the River Murray Data [list view](#) for River Murray locations with forecasts available. Forecasts are updated weekly, usually on Wednesdays. More information [about the data](#) is also available.

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

ANDREW REYNOLDS  
Executive Director, River Management



# River Murray Weekly Report

## Water in Storage

Week ending Wednesday 31 Oct 2018

MDBA Storages	Full Supply Level (m AHD)	Full Supply Volume (GL)	Current Storage Level (m AHD)	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)
				(GL)	%			
Dartmouth Reservoir	486.00	3 856	473.76	3 104	80%	71	3 033	-44
Hume Reservoir	192.00	3 005	182.40	1 427	47%	23	1 404	-65
Lake Victoria	27.00	677	25.02	450	66%	100	350	+29
Menindee Lakes		1 731*		128	7%	(- -) #	0	-4
<b>Total</b>		<b>9 269</b>		<b>5 109</b>	<b>55%</b>	<b>--</b>	<b>4 787</b>	<b>-84</b>
Total Active MDBA Storage							57% ^	

### Major State Storages

Burrinjuck Reservoir	1 026	433	42%	3	430	-1
Blowering Reservoir	1 631	918	56%	24	894	-49
Eildon Reservoir	3 334	2 015	60%	100	1 915	-18

\* 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 30 Oct 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	729	n/a	Snowy-Murray	n/a	n/a
Snowy-Murray Component	410	n/a	Tooma-Tumut	n/a	n/a
Target Storage	1 400		Net Diversion	n/a	n/a
			Murray 1 Release	n/a	n/a

### Major Diversions from Murray and Lower Darling (GL) \*

New South Wales	This Week	From 1 July 2018	Victoria	This Week	From 1 July 2018
Murray Irrig. Ltd (Net)	7.8	179	Yarrowonga Main Channel (net)	8.7	88
Wakool Sys Allowance	0.0	26	Torrumbarry System + Nyah (net)	9.9	200
Western Murray Irrigation	0.7	5	Sunraysia Pumped Districts	3.3	26
Licensed Pumps	3.6	57	Licensed pumps - GMW (Nyah+u/s)	1	11
Lower Darling	0.2	3	Licensed pumps - LMW	4.6	81
<b>TOTAL</b>	<b>12.3</b>	<b>269</b>	<b>TOTAL</b>	<b>27.5</b>	<b>406</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	170.0 *	
Flow this week	67.1	(9 600 ML/day)
Flow so far this month	227.0	
Flow last month	167.0	

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

	Current	Average over the last week	Average since 1 August 2018
Swan Hill	60	60	70
Euston	-	-	-
Red Cliffs	70	80	130
Merbein	70	80	130
Burtundy (Darling)	750	740	740
Lock 9	90	100	130
Lake Victoria	130	140	170
Berri	210	230	220
Waikerie	310	330	280
Morgan	350	350	290
Mannum	320	320	310
Murray Bridge	340	320	360
Milang (Lake Alex.)	920	910	840
Poltalloch (Lake Alex.)	730	710	740
Meningie (Lake Alb.)	1 510	1 510	1 510
Goolwa Barrages	1 490	1 540	3 230



### River Levels and Flows

Week ending Wednesday 31 Oct 2018

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	-	-	-	1 090	F	900	1 710
Jingellic	4.0	1.43	207.95	2 600	R	2 000	3 720
Tallandoon ( Mitta Mitta River )	4.2	3.34	220.23	9 430	S	8 350	9 490
Heywoods	5.5	3.25	156.88	18 000	S	18 420	14 390
Doctors Point	5.5	3.31	151.78	19 060	R	19 400	16 240
Albury	4.3	2.37	149.81	-	-	-	-
Corowa	4.6	3.58	129.60	18 630	F	18 360	15 020
Yarrawonga Weir (d/s)	6.4	2.26	117.30	14 910	S	14 750	14 830
Tocumwal	6.4	2.89	106.73	14 180	R	13 990	14 070
Torrumbarry Weir (d/s)	7.3	3.38	81.92	10 810	F	11 430	14 430
Swan Hill	4.5	2.09	65.01	11 910	F	13 550	15 440
Wakool Junction	8.8	4.62	53.74	15 360	F	16 300	16 570
Euston Weir (d/s)	9.1	2.74	44.58	16 020	F	16 530	15 870
Mildura Weir (d/s)	-	-	-	16 540	F	16 170	14 440
Wentworth Weir (d/s)	7.3	3.42	28.18	15 530	S	15 420	13 590
Rufus Junction	-	4.01	20.94	9 900	R	9 220	7 820
Blanchetown (Lock 1 d/s)	-	0.88	-	8 050	R	6 830	5 580
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	1.67	154.90	1 450	R	1 290	1 900
Ovens at Wangaratta	11.9	8.09	145.77	770	F	860	1 280
Goulburn at McCoys Bridge	9.0	2.10	93.52	2 050	F	2 700	4 570
Edward at Stevens Weir (d/s)	5.5	2.61	82.38	3 020	F	3 000	3 030
Edward at Liewah	-	3.05	58.43	2 600	R	2 540	2 440
Wakool at Stoney Crossing	-	1.73	55.23	940	S	970	980
Murrumbidgee at Balranald	5.0	1.40	57.36	920	F	980	1 060
Barwon at Mungindi	6.1	3.18	-	70	F	180	200
Darling at Bourke	9.0	3.52	-	0	F	0	0
Darling at Burtundy Rocks	-	0.61	-	0	R	0	0

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	4 200	6 060
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### 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
Yarrawonga	124.90	-0.16	-	No. 7 Rufus River	22.10	+0.31	+1.70
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.21	+0.32
No. 15 Euston	47.60	-0.05	-	No. 5 Renmark	16.30	+0.09	+0.35
No. 11 Mildura	34.40	+0.01	+0.70	No. 4 Bookpurnong	13.20	+0.00	+1.06
No. 10 Wentworth	30.80	+0.10	+0.78	No. 3 Overland Corner	9.80	+0.02	+0.46
No. 9 Kulnine	27.40	-0.04	-0.22	No. 2 Waikerie	6.10	+0.07	+0.37
No. 8 Wangumma	24.60	-0.47	+0.59	No. 1 Blanchetown	3.20	+0.01	+0.13

### Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.74
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### Barrages

#### Fishways at Barrages

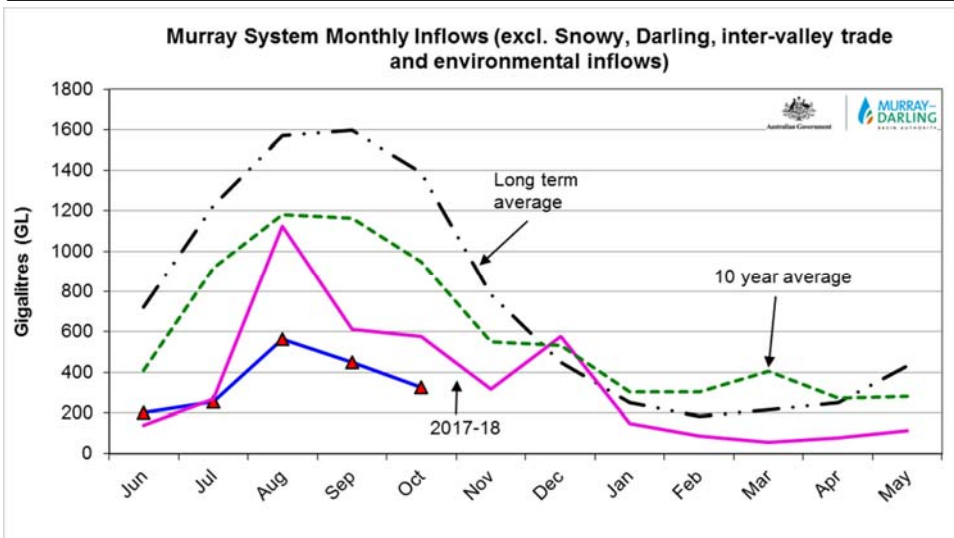
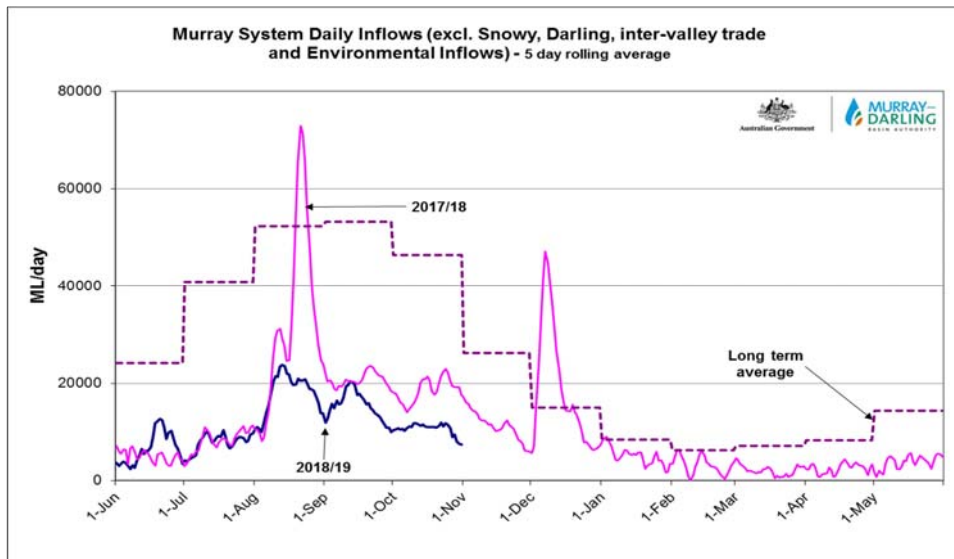
	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.77	1	-	Open	Open	-
Mundoo	26 openings	0.77	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.76	1	Open	Open	Open	-

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





Week ending Wednesday 31 Oct 2018



**State Allocations (as at 31 Oct 2018)**

**NSW - Murray Valley**

High security	97%
General security	0%

**Victorian - Murray Valley**

High reliability	89%
Low reliability	0%

**NSW - Murrumbidgee Valley**

High security	95%
General security	7%

**Victorian - Goulburn Valley**

High reliability	82%
Low reliability	0%

**NSW - Lower Darling**

High security	100%
General security	0%

**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>