



# RIVER MURRAY WEEKLY REPORT

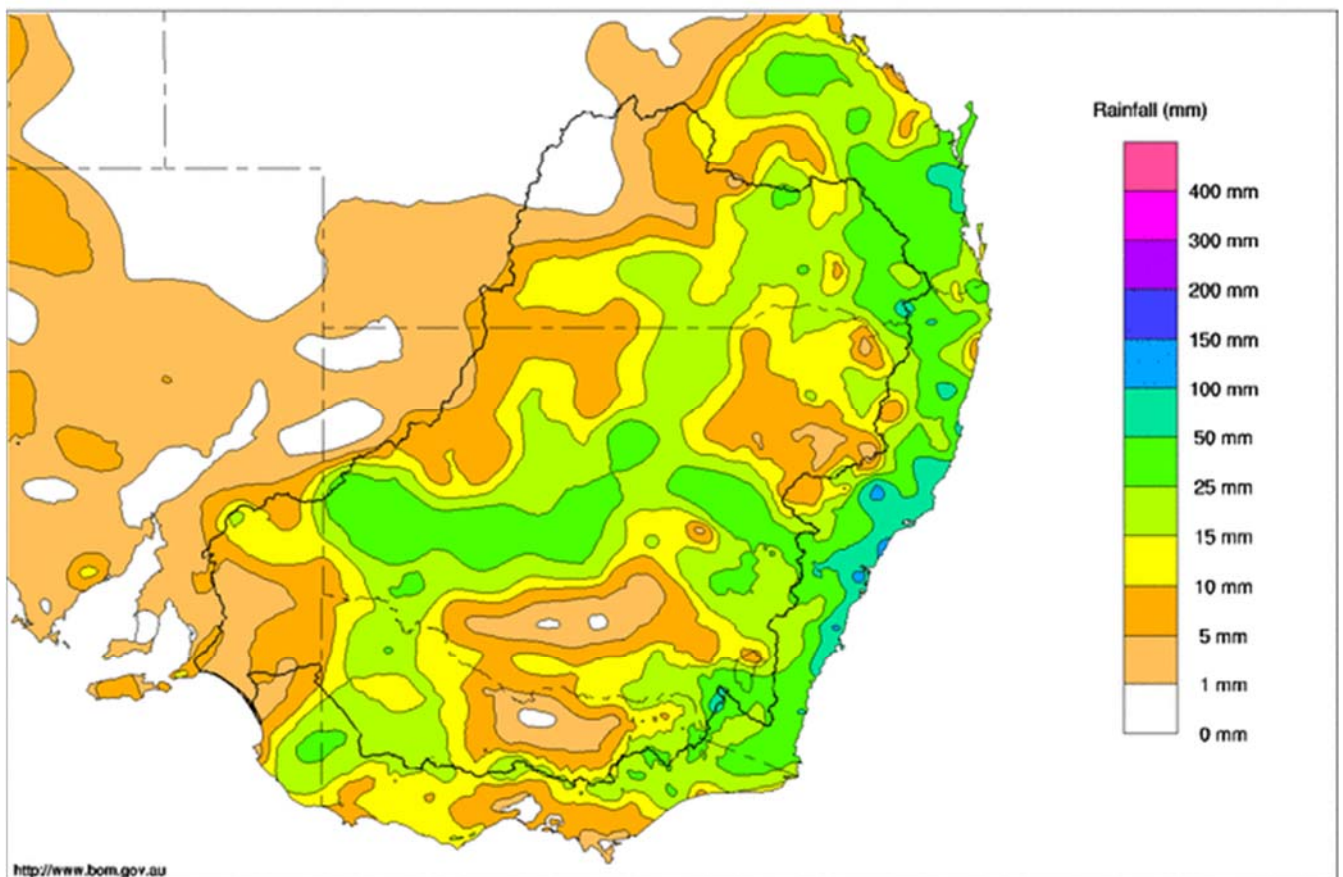
FOR THE WEEK ENDING WEDNESDAY, 10 OCTOBER 2018

Trim Ref: D18/47935

## Rainfall and inflows

Rainfall for the week ending 10th October was widespread across the Murray-Darling Basin (map 1). A slow moving low pressure system brought isolated thunderstorms and widespread rainfall to almost all of New South Wales (NSW) and into southeast Queensland. Some of the highest rainfall totals for the week were recorded in the southwest of NSW with 53mm observed at Harcourt and 51mm at Menindee. In southeast NSW 27mm was recorded at Cooma and 28mm at Khancoban. In Queensland, highest totals were recorded in the Darling Downs and included 80 mm Stanthorpe, 66mm at Darby and 55mm at Dalveen. The highest Victorian rainfall totals included 29mm at Mount Hotham and 27mm at Ouyen.

Murray-Darling Rainfall Totals (mm) Week Ending 10th October 2018  
Australian Bureau of Meteorology



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

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Map 1 - Murray-Darling Basin rainfall map week ending 10 October 2018 (Source: Bureau of Meteorology).

Despite the widespread rainfall, upper Murray tributaries continued to gradually recede. The Mitta Mitta River at Hinnomunjie eased from 2,000 ML/day to the current flow of 1,860 ML/day. The upper Murray at Biggara reduced from 1,000 ML/day to the current flow of around 900 ML/day.

Downstream of Hume Reservoir, inflow from the Kiewa River averaged 1,900 ML/day and the Ovens River at Wangaratta eased from 1,600 ML/day to 1,400 ML/day.



## River operations

- Transfers from Dartmouth Reservoir to Hume Reservoir expected to continue at high rates
- Inflow to the Murray from the Goulburn spring pulse peaks
- Pool level at Lock 8 to be lowered to 50 cm below full supply level
- Pool levels at Lock 5 and Lock 2 to return to normal operating level

MDBA active storage decreased by 54 GL this week to 4,943 GL (59% capacity).

Ongoing transfers from **Dartmouth Reservoir** to Hume Reservoir decreased the Dartmouth storage volume by 43 GL to 3,242 GL (84% 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 dry conditions and low stream flows, substantial calls on water from Dartmouth are expected to continue this year.

This week the release from Dartmouth, measured at Colemans gauge, decreased from 9,100 ML/day to the current flow of 7,000 ML/day and will increase again to around 9,000 ML/day in the coming days. The release is currently being varied while releases are high in an effort to try to limit the impact of high flows on river bank erosion.

At **Hume Reservoir** the storage decreased by 25 GL to 1,521 GL (51% capacity). The release remained steady this week at around 15,500 ML/day (photo 1).



Photo 1 - A view of the River Murray downstream of Hume reservoir (photo courtesy Andy Lowes MDBA)



At **Lake Mulwala** the level is currently 124.75 m AHD, which is within the normal operating range. This week diversions reduced to 1,100 ML/day at Yarrowonga Main Channel and eased to around 2,300 ML/day at Mulwala Canal. The Mulwala Canal and Murray Irrigation Limited (MIL) escapes are being used to transfer water around the Barmah Choke. This water returns to the River Murray near Torrumbarry via the Perricoota Escape, the Edward River via the Edward Escape and into the Billabong Creek via the Finley Escape.

The release from **Yarrowonga Weir** increased this week from 14,200 ML/day to 14,600 ML/day and may increase up to 15,000 ML/day over the coming week. 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. These higher releases are being undertaken to boost transfers to Lake Victoria. This action is also continuing to provide connectivity between the river and forest channels benefiting native fish.

Flow at the **Edward River** offtake is currently 1,580 ML/day and will fluctuate around this rate over the coming week. At the **Gulpa Creek** offtake, the flow is targeting the maximum regulated rate of 350 ML/day. Downstream, return flows from the Millewa Forest were steady, with the flow at Toonalook averaging 3,100 ML/day. Diversion into Wakool Main Canal reduced to 100 ML/day, while the Wakool River and Yallakool and Colligen Creek offtakes are currently passing around 70 ML/day, 430 ML/day 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**. At this flow rate, Tumudgery and Niemur regulators (downstream of Stevens Weir) need to be partially opened and are delivering water via anabranch channels in Werai Forest to the Niemur River. These higher flows are being targeted to further boost transfers to Lake Victoria.

On the Murray, the flow at **Barmah** continues to gradually rise. This week the flow rate increased to 9,150 ML/day, and will continue to increase over the coming weeks as more water returns to the River Murray from transfer via the Barmah Forest.

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, peaked around 7,000 ML/day before receding to the current flow of 6,450 ML/day. Flow at McCoys Bridge will continue to recede in the coming week as part of the planned recession of a [spring pulse](#) delivered for the benefit of riparian vegetation in the lower Goulburn River. Water released for this flow pulse is a combination of environmental water and [Inter Valley Trade \(IVT\)](#) delivery that will help meet downstream Murray demands. River users in the Echuca district and downstream should be aware that water levels will fall noticeably over the coming weeks as the Goulburn flow pulse moves through the system.

On the **Campaspe River**, flows have remained steady to promote Murray Cod nesting, with around 200 ML/day reaching the Murray. These higher flows are being delivered on behalf of environmental water holders.

The flow downstream of **Torrumbarry Weir** increased to around 13,400 ML/day and is expected to peak around 14,000 ML/day in the coming week. Diversion from Torrumbarry into National Channel remained steady throughout most of the week before reducing by 500 ML/day to the current rate of 2,000 ML/day.

Water continues to be delivered to Gunbower Creek and Gunbower Forest on behalf of environmental water holders. 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, increased from 1,150 ML/day to the current flow rate around 1,850 ML/day.

At **Euston**, the weir pool is targeting a level around full supply level (FSL) to 10 cm below FSL. The downstream flow is gradually rising and is currently near 10,500 ML/day.



Photo 2 - The River Murray just south of Kenley, a few kilometres from the Wakool River junction (photo courtesy of Margaret and Joe Storer)

The **Menindee Lakes** storage volume remained steady at 150 GL (9% 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 230 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 averaged 8,500 ML/day and is expected to rise over the coming week.

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

At **Lake Victoria**, the storage volume increased by 14 GL to 374 GL (55% capacity). Significant transfers from Hume Reservoir and likely further deliveries of Goulburn Valley IVT are expected to result in the volume in storage at Lake Victoria continuing to rise over October, November and into December.



Photo 3 - A paddle steamer on the River Murray just north of Tooleybuc (photo courtesy of Margaret and Joe Storer)

Flow to **South Australia** is currently targeting 6,000 ML/day to support the operation of the Chowilla environmental regulator. The **Lock 6** water level remained at the target level of 20 cm above FSL this week to assist the Chowilla watering action.

At **Lock 5** the weir pool is currently targeting around 35 cm above the normal pool level. The weir pool will commence to be lowered at a rate of 0.02 to 0.05 m/day from 17 October 2018 until it reaches the normal pool level, which is anticipated to be reached by around mid-November. At **Lock 2** the weir pool level has commenced being lowered at a rate of 0.02 to 0.05 m/day and is also expected 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](#).

The 5-day average water level in the **Lower Lakes** is currently 0.75 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 and Goolwa and all 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 10 Oct 2018**

MDBA Storages	Full Supply Level	Full Supply Volume (GL)	Current Storage Level	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)
	(m AHD)		(m AHD)	(GL)	%			
Dartmouth Reservoir	486.00	3 856	476.14	3 242	84%	71	3 171	-43
Hume Reservoir	192.00	3 005	183.11	1 521	51%	23	1 498	-25
Lake Victoria	27.00	677	24.29	374	55%	100	274	+14
Menindee Lakes		1 731*		150	9%	(- -) #	0	-0
<b>Total</b>		<b>9 269</b>		<b>5 287</b>	<b>57%</b>	<b>--</b>	<b>4 943</b>	<b>-54</b>
Total Active MDBA Storage							59% ^	

**Major State Storages**

Burrinjuck Reservoir	1 026	433	42%	3	430	+0
Blowering Reservoir	1 631	1 030	63%	24	1 006	-50
Eildon Reservoir	3 334	2 086	63%	100	1 986	-42

\* 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 09 Oct 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	637	+35	Snowy-Murray	+0	492
Snowy-Murray Component	324	+34	Tooma-Tumut	+6	118
Target Storage	1 400		Net Diversion	-6	374
			Murray 1 Release	+1	599

**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)	10.4	178	Yarrowonga Main Channel (net)	6.9	75
Wakool Sys Allowance	0.0	25	Torrumbarry System + Nyah (net)	16.3	172
Western Murray Irrigation	0.4	3	Sunraysia Pumped Districts	2	18
Licensed Pumps	n/a	39	Licensed pumps - GMW (Nyah+u/s)	1	9
Lower Darling	0.1	3	Licensed pumps - LMW	4.6	54
<b>TOTAL</b>	<b>10.9</b>	<b>248</b>	<b>TOTAL</b>	<b>30.8</b>	<b>328</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	170.5 *
Flow this week	41.7
Flow so far this month	59.9
Flow last month	167.0

(6 000 ML/day)

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

	Current	Average over the last week	Average since 1 August 2018
Swan Hill	80	90	80
Euston	100	90	110
Red Cliffs	100	100	140
Merbein	90	100	140
Burtundy (Darling)	720	730	750
Lock 9	120	150	140
Lake Victoria	160	160	180
Berri	250	250	210
Waikerie	360	320	260
Morgan	310	310	270
Mannum	280	280	310
Murray Bridge	300	300	380
Milang (Lake Alex.)	880	860	830
Poltalloch (Lake Alex.)	750	760	750
Meningie (Lake Alb.)	1 540	1 530	1 510
Goolwa Barrages	1 960	1 970	3 680



**River Levels and Flows**

**Week ending Wednesday 10 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	-	-	-	1 260	R	1 580	1 430
Jingellic	4.0	1.43	207.95	2 630	S	3 210	3 020
Tallandoon ( Mitta Mitta River )	4.2	3.04	219.93	7 450	F	8 520	8 910
Heywoods	5.5	3.05	156.68	15 500	S	15 260	15 940
Doctors Point	5.5	3.17	151.64	17 250	R	16 980	17 130
Albury	4.3	2.21	149.65	-	-	-	-
Corowa	4.6	3.33	129.35	16 680	F	15 970	16 900
Yarrowonga Weir (d/s)	6.4	2.22	117.26	14 600	S	14 370	13 790
Tocumwal	6.4	2.84	106.68	13 790	R	13 480	12 840
Torrumbarry Weir (d/s)	7.3	3.99	82.53	13 370	R	10 920	7 310
Swan Hill	4.5	1.91	64.83	10 780	R	8 800	7 210
Wakool Junction	8.8	3.69	52.81	10 730	R	9 740	9 160
Euston Weir (d/s)	9.1	1.96	43.80	10 520	R	9 810	9 410
Mildura Weir (d/s)	-	-	-	8 960	F	9 020	8 290
Wentworth Weir (d/s)	7.3	2.97	27.73	8 400	R	8 460	7 730
Rufus Junction	-	3.38	20.31	5 810	R	5 530	5 410
Blanchetown (Lock 1 d/s)	-	0.88	-	3 540	F	3 790	3 680
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	2.04	155.27	2 090	R	1 930	1 580
Ovens at Wangaratta	11.9	8.36	146.04	1 390	S	1 490	1 740
Goulburn at McCoys Bridge	9.0	4.17	95.59	6 460	F	6 160	1 850
Edward at Stevens Weir (d/s)	5.5	2.61	82.38	3 020	F	3 060	2 880
Edward at Liewah	-	2.78	58.16	2 210	R	2 170	2 180
Wakool at Stoney Crossing	-	1.65	55.14	740	R	690	660
Murrumbidgee at Balranald	5.0	2.21	58.17	1 840	R	1 390	1 240
Barwon at Mungindi	6.1	2.78	-	0	F	0	0
Darling at Bourke	9.0	3.65	-	0	F	0	0
Darling at Burtundy Rocks	-	0.63	-	10	R	10	10

Natural Inflow to Hume	6 290	6 230
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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	-0.15	-	No. 7 Rufus River	22.10	+0.11	+1.07
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.21	+0.40
No. 15 Euston	47.60	-0.02	-	No. 5 Renmark	16.30	+0.37	+0.15
No. 11 Mildura	34.40	+0.04	+0.31	No. 4 Bookpurnong	13.20	+0.01	+0.52
No. 10 Wentworth	30.80	+0.08	+0.33	No. 3 Overland Corner	9.80	+0.03	+0.51
No. 9 Kulnine	27.40	-0.07	-0.27	No. 2 Waikerie	6.10	+0.37	+0.13
No. 8 Wangumma	24.60	-0.31	+0.21	No. 1 Blanchetown	3.20	-0.02	+0.13

**Lower Lakes FSL = 0.75 m AHD**

Lake Alexandrina average level for the past 5 days (m AHD)	0.75
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**Barrages**

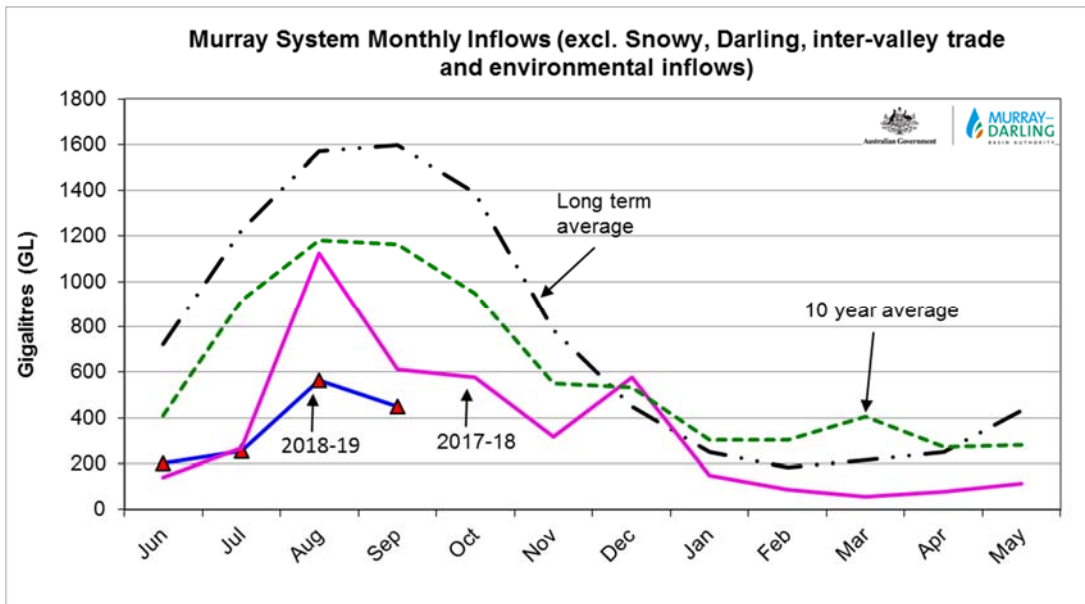
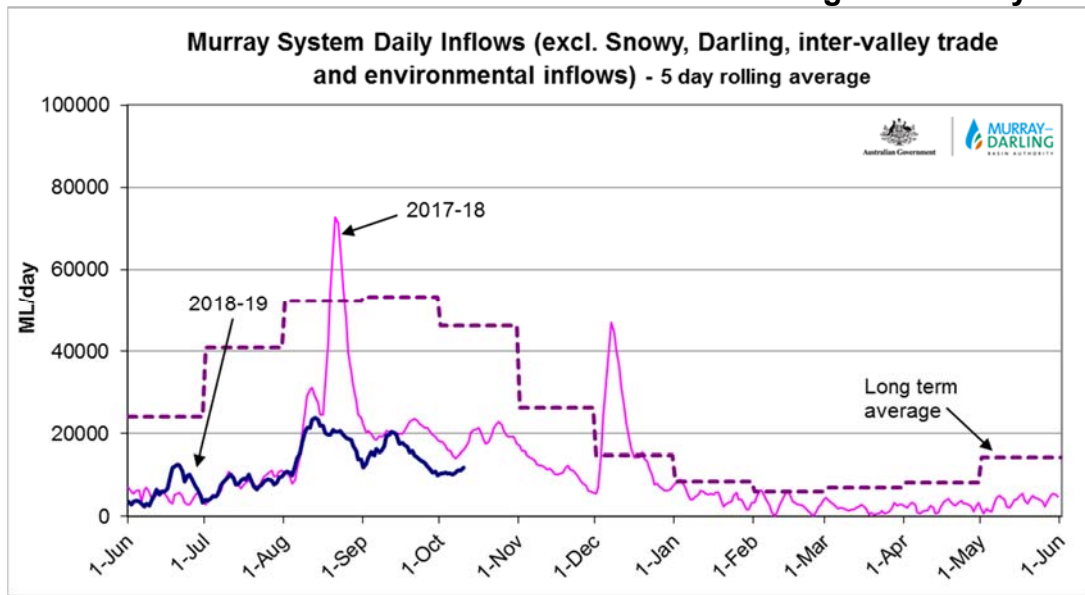
**Fishways at Barrages**

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.86	1	-	Open	Open	-
Mundoo	26 openings	0.80	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.75	2	Open	Open	Open	-

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



Week ending Wednesday 10 Oct 2018



State Allocations (as at 10 Oct 2018)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	82%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	7%

Victorian - Goulburn Valley

High reliability	74%
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>