



# River Murray Weekly Report

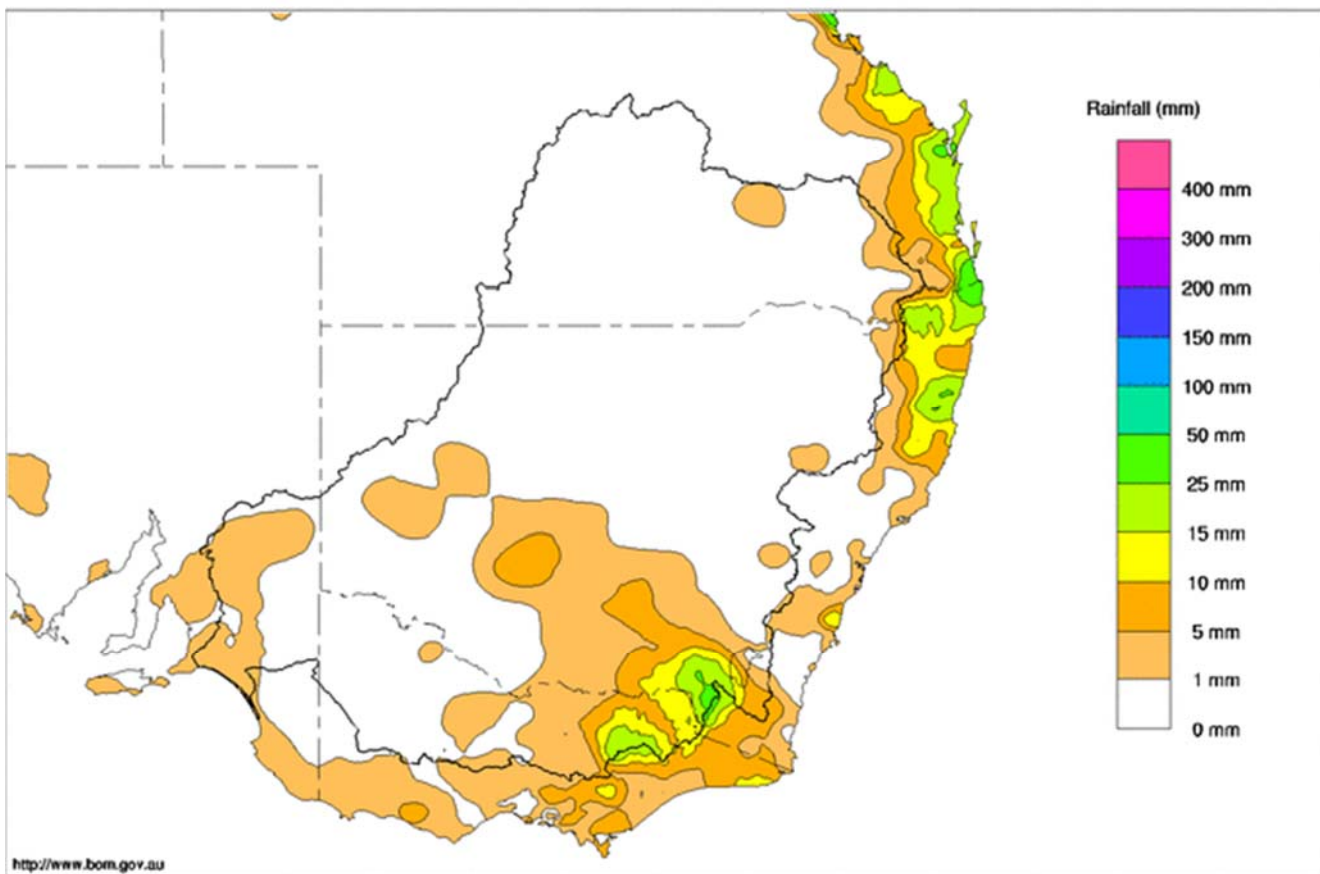
For the week ending Wednesday, 6 March 2019

Trim Ref: D19/10913

## Rainfall and inflows

Dry conditions continued this week, with only light patchy rainfall recorded in south eastern areas of the Murray-Darling Basin (Map 1). The [Bureau of Meteorology](#) is forecasting dry conditions to continue over the coming week.

Murray-Darling Rainfall Totals (mm) Week Ending 6th March 2019  
Australian Bureau of Meteorology



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Issued: 06/03/2019

Map 1 - Murray-Darling Basin rainfall map week ending 6 March 2019 (Source: Bureau of Meteorology).

Given the consistently dry conditions over the last fortnight low flows in the upper Murray tributaries have continued. Flow in the upper Mitta Mitta River at Hinnomunjie remained near 110 ML/day throughout the week. Similarly, flow in the upper Murray at Biggara remained steady at 120 ML/day.

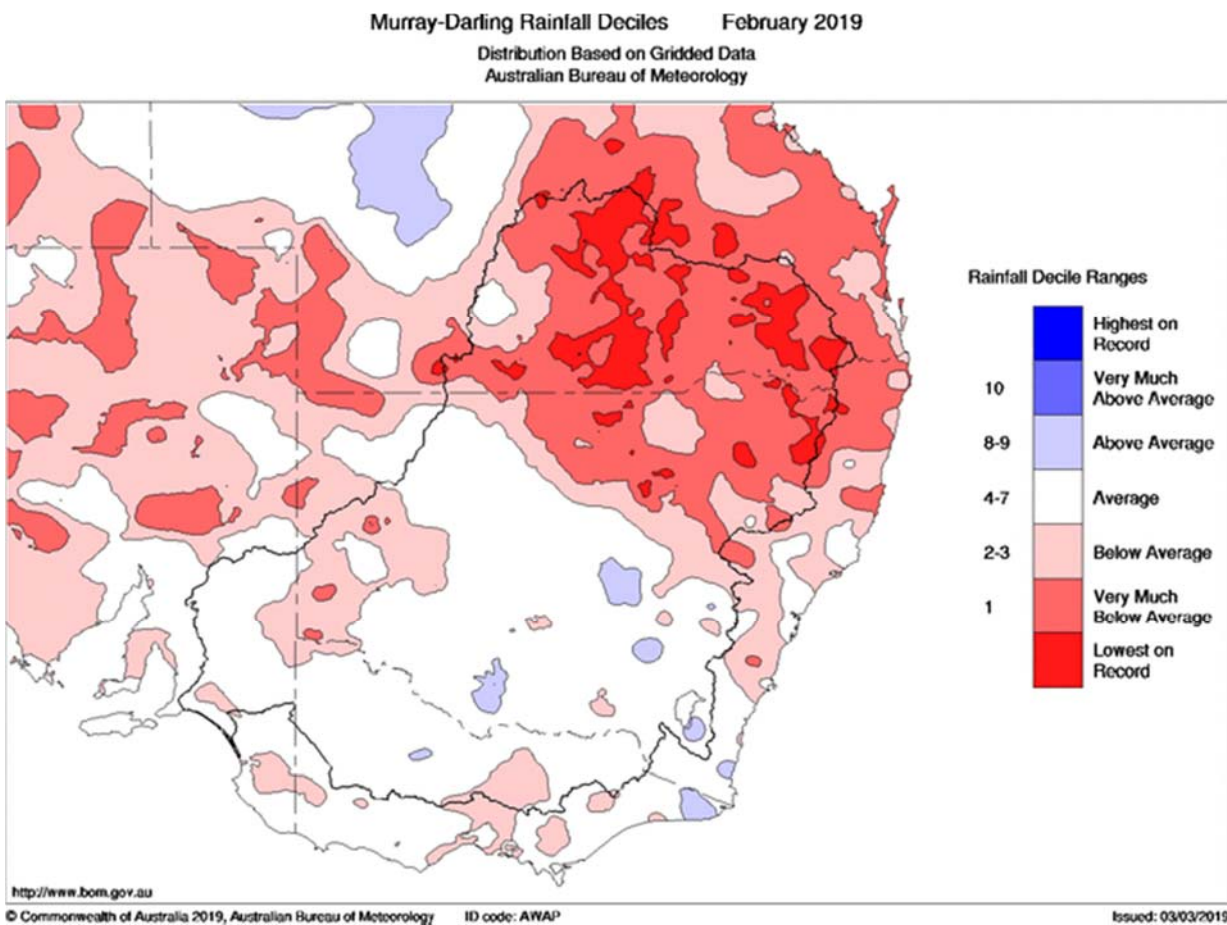
Downstream from Hume reservoir inflows from the Kiewa River, measured at Bandiana, have averaged 210 ML/day, while inflows from the Ovens River, measured at Wangaratta, have continued at a low summer base flow of 210 ML/day.

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## February 2019 Summary

The Bureau of Meteorology (BoM) reports that for February 2019 rainfall was below average across much of the northern Basin, with lowest on record rainfall recorded across areas of northern New South Wales and southern Queensland (Map 2). Rainfall was closer to average throughout much of southern New South Wales, Victoria and South Australia. Across the Basin as a whole the BoM reported an area-average rainfall for the Murray-Darling Basin in February of 13.1 mm. This is 68% below the long-term average for the Basin.

River Murray system inflows for the month of February totalled approximately 77 GL which is well below the long-term median inflow for February of 138 GL.

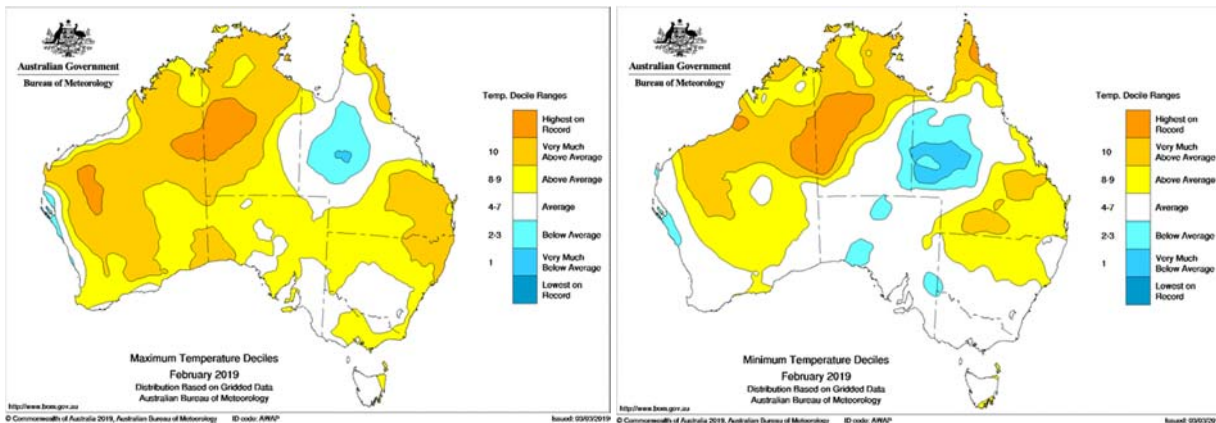


Map 2 – Murray-Darling Basin rainfall deciles for February 2019 (Source: Bureau of Meteorology)

The BoM reports that February 2019 was the fourth warmest February on record for Australia as a whole. The maximum, minimum and mean temperatures for Australia nationally were all above average. Notably, cooler than average mean minimum temperatures were observed in the Riverland area of South Australia. Several record low minimum temperatures were observed in parts of South Australia on the 14<sup>th</sup> of the month.



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Map 3 – Maximum and minimum temperature deciles for February 2019 (Source: Bureau of Meteorology)

## River operations

- Transfers from Dartmouth to Hume reservoir continue to ease
- Transfers around the Barmah choke via Murray Irrigation Limited (MIL) channel escapes have ceased
- All consumptive demands continue to be met and the risk of a delivery shortfall this season remains low
- Inflow from the Goulburn at McCoy's to gradually increase to meet increased autumn irrigation demand in the Murray

## River operations

The MDBA active storage volume decreased by 61 GL this week to 3,376 GL (40% capacity). This is approximately 1,925 GL below the long term average for this time of year (Figure 1).

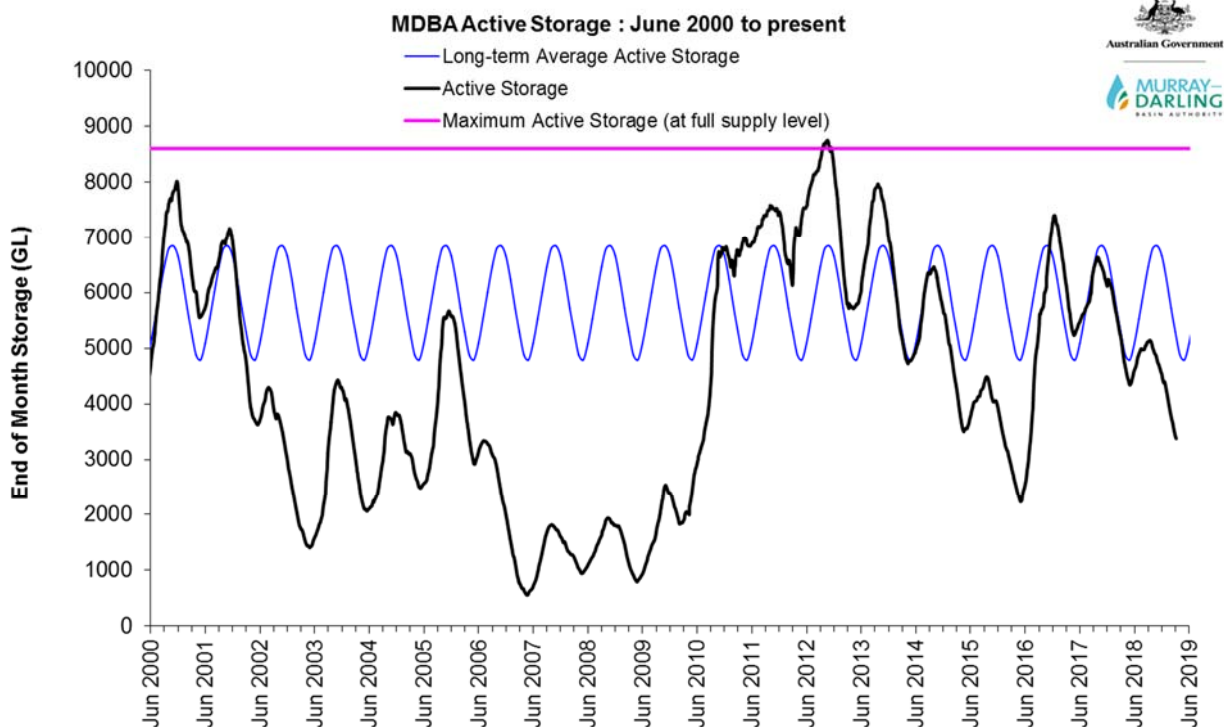


Figure 1 – MDBA active storage for the period June 2000 to present

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The **Dartmouth Reservoir** storage volume decreased by 18 GL to 2,452 GL (64% capacity). Transfers from Dartmouth to Hume continue to be slowly reduced this week as climatic conditions and system demands have recently eased. The current release from Dartmouth, measured at Colemans, is 1,550 ML/day and will ease to around 600 ML/day over the coming week.

At **Hume Reservoir**, the storage volume continued to decline, reducing by 24 GL to 805 GL (27% capacity). The release from Hume has averaged around 10,350 ML/day this week.

Downstream at **Lake Mulwala** the level is currently 124.72 m AHD, which is within the normal operating range (124.6 to 124.9 m AHD). Diversion to Yarrowonga Main Channel averaged near 750 ML/day, while on the New South Wales side Mulwala Canal diversion has reduced from 2,300 ML/day to near 950 ML/day as operational transfers through the Edward-Wakool (via Murray Irrigation Limited infrastructure) have ceased. The release from **Yarrowonga Weir** is currently targeting 8,400 ML/day and will target between 8,000 ML/day and 8,500 ML/day over the coming week.

Flows at the **Edward River** and **Gulpa Creek** offtakes remain around their normal summer regulated flow rates near 1,600 ML/day and 350 ML/day. Given the reduced need to transfer water from Hume to Lake Victoria, flows into the Colligen and Yallakool offtakes have continued to reduce and are passing 250 ML/day and 175 ML/day respectively. The Wakool offtake regulator is passing around 30 ML/day. The flow downstream of **Stevens Weir** has decreased from 1,900 ML/day to near 1,000 ML/day. The flow is forecast to fluctuate around the current rate throughout the week. The flow in the **Billabong Creek** at Darlot has continued to decrease to around 160 ML/day as inflow from Finley escape has now ceased.

Inflow to the Murray from the **Goulburn River** (Photo 1), measured at McCoys Bridge, has fallen slowly from 1,800 ML/day to the current flow of around 1,000 ML/day. The flow at McCoys Bridge is expected to increase to around 2,000 ML/day over the coming week. The majority of this flow is Goulburn Valley Inter Valley Trade (IVT) water that is being delivered to help meet demands on the River Murray as a result of trade from the Goulburn to the Murray valley. 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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**Photo 1 The Goulburn River at Shepparton where flow is forecast to gradually increase over the coming week**

National Channel diversions remained around 1,750 ML/day this week and are forecast to increase to 2,500 ML/day over the coming week to meet increased autumn irrigation demands. The release downstream of **Torrumbarry Weir** has fallen to 5,600 ML/day and will fall towards 5,000 ML/day over the coming fortnight. Lock 26 at Torrumbarry remains closed to undertake urgent repairs. This temporary closure of the lock will not affect the normal operation of Torrumbarry Weir in terms of river flow and water supply. More information can be found on the Goulburn-Murray Water [website](#).

This week inflows from the **Murrumbidgee River**, measured at Balranald, averaged 370 ML/day. This is above the normal end of system target flow and includes the delivery of environmental water to help improve water quality in the lower reaches of the Murrumbidgee River. More information regarding this water for the environment can be found on the MDBA [website](#). The [Murrumbidgee IVT balance](#) is currently only 2.2 GL, preventing the MDBA from calling water from the Murrumbidgee to help meet Murray system demands.

At **Euston**, the weir pool has returned to FSL. The downstream release has decreased to 8,500 ML/day and is expected to continue to recede over the coming week.

Downstream at **Mildura**, the weir pool is currently near FSL. The release has decreased to 8,500 ML/day and is expected to continue to ease over the coming week as upstream flows decline.

A red level warning (high alert) for blue-green algae is current at a number of sites along the Darling River including Menindee Lakes. A summary of alert levels in New South Wales is available on the [WaterNSW](#) website. Current environmental conditions are well suited to algal growth due to prevailing hot weather and warm water temperatures and low or no flow conditions. The poor water quality conditions in the river has led to [fish deaths](#) in the lower Darling

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River. More information regarding the water quality conditions of the lakes and the lower Darling is available at the WaterNSW [website](#). Information on factors that affect fish is available from NSW Department of Primary Industries [website](#). Information on drought impacts across the Murray-Darling Basin including on fish and operations is available on the [MDBA website](#).

The **Menindee Lakes** storage volume decreased by 2 GL to 26 GL (2% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). As part of drought contingency measures within this plan, WaterNSW has installed four temporary block banks across the lower Darling below Pooncarie near Jamesville, below Burtundy near Ashvale, and upstream of Pooncarie at Court Nareen and Karoola. Water held in these pools will assist in maintaining supply to domestic, stock and permanent plantings along the lower Darling. The release from **Weir 32** ceased on 12<sup>th</sup> of February. WaterNSW has advised that releases at Weir 32 are only planned to recommence when significant inflows are received into the Menindee lakes (inflows are currently zero). [Water restrictions](#) remain in place across much of New South Wales as a result of the extensive and on-going drought conditions.

At **Wentworth Weir**, operations continue to target a pool level of around 10 cm above the full supply level to assist pumpers in the upper reaches of the Darling River arm of the weir pool. The downstream release is near 7,400 ML/day and is expected to continue to ease over the coming week.

The **Lock 9** weir pool is currently around 4 cm below FSL. At **Lock 8**, the weir pool is targeting 60 cm below FSL and the **Lock 7** weir pool is targeting 50 cm below FSL. The Lock 7 and 8 weir pools may be lowered a further 40 cm from mid-March.

At **Lake Victoria** the storage reduced by 19 GL to 313 GL (46% capacity). The flow to **South Australia** decreased this week to target around 8,600 ML/day and is likely to reduce further over the coming week. The current flow consists of entitlement flow, traded water and environmental water. Deliveries of environmental water to the Lower Lakes and Coorong are expected to continue through March.

The 5-day average water level in the **Lower Lakes** remained stable around 0.54 m AHD this week, despite the hot and dry conditions. The slowed rate of fall in the lower lakes has allowed an additional bay to be opened at both Tauwitchere and Goolwa barrages to support mudflat habitat for migratory birds in the Coorong. All fishways remain open. For more information see the South Australian Department for Environment and Water's latest [River Murray flow report](#).

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

ANDREW REYNOLDS  
Executive Director, River Management



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## Water in Storage

Week ending Wednesday 06 Mar 2019

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	461.58	2 452	64%	71	2 381	-18
Hume Reservoir	192.00	3 005	176.93	805	27%	23	782	-24
Lake Victoria	27.00	677	23.69	313	46%	100	213	-19
Menindee Lakes		1 731*		26	2%	(- -) #	0	-2
<b>Total</b>		<b>9 269</b>		<b>3 596</b>	<b>39%</b>	<b>- -</b>	<b>3 376</b>	<b>-63</b>
Total Active MDBA Storage							40% ^	

### Major State Storages

Burrinjuck Reservoir	1 026	328	32%	3	325	-4
Blowering Reservoir	1 631	457	28%	24	433	-12
Eildon Reservoir	3 334	1 453	44%	100	1 353	-29

\* 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 05 Mar 2019

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	789	-21	Snowy-Murray	+31	655
Snowy-Murray Component	380	-31	Tooma-Tumut	+0	187
Target Storage	1 410		Net Diversion	31	467
			Murray 1 Release	+35	813

### 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)	5.5	302	Yarrowonga Main Channel (net)	4.1	167
Wakool Sys Allowance	2.9	31	Torrumbarry System + Nyah (net)	0.2	401
Western Murray Irrigation	1.0	21	Sunraysia Pumped Districts	3.7	103
Licensed Pumps	3.9	152	Licensed pumps - GMW (Nyah+u/s)	1	27
Lower Darling	0.1	6	Licensed pumps - LMW	4.6	332
<b>TOTAL</b>	<b>13.4</b>	<b>512</b>	<b>TOTAL</b>	<b>13.6</b>	<b>1030</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	186.0 *	
Flow this week	63.2	(9 000 ML/day)
Flow so far this month	53.6	
Flow last month	226.9	

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

	Current	Average over the last week	Average since 1 August 2018
Swan Hill	90	80	70
Euston	70	70	-
Red Cliffs	90	90	110
Merbein	90	90	100
Burtundy (Darling)	1 050	1 030	850
Lock 9	90	90	110
Lake Victoria	180	170	160
Berri	150	160	190
Waikerie	200	210	250
Morgan	220	220	260
Mannum	250	250	310
Murray Bridge	260	260	350
Milang (Lake Alex.)	1 010	1 010	900
Poltalloch (Lake Alex.)	720	770	780
Meningie (Lake Alb.)	1 800	1 780	1 500
Goolwa Barrages	3 220	3 270	2 670



## River Levels and Flows

Week ending Wednesday 06 Mar 2019

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	-	-	-	3 950	F	4 950	2 250
Jingellic	4.0	1.77	208.29	4 990	R	4 970	1 440
Tallandoon ( Mitta Mitta River )	4.2	1.92	218.81	1 920	F	2 590	3 960
Heywoods	5.5	2.74	156.37	9 490	F	10 350	10 570
Doctors Point	5.5	2.57	151.04	10 260	R	11 010	11 230
Albury	4.3	1.58	149.02	-	-	-	-
Corowa	4.6	2.40	128.42	10 320	F	10 620	10 860
Yarrowonga Weir (d/s)	6.4	1.44	116.48	8 400	R	7 930	8 200
Tocumwal	6.4	1.95	105.79	8 040	R	7 950	7 990
Torrumbarry Weir (d/s)	7.3	2.03	80.57	5 640	F	6 240	7 350
Swan Hill	4.5	1.30	64.22	6 680	F	7 110	7 890
Wakool Junction	8.8	3.28	52.40	8 900	F	9 570	10 090
Euston Weir (d/s)	9.1	1.65	43.49	8 540	F	9 350	10 100
Mildura Weir (d/s)	-	-	-	8 500	F	8 850	8 830
Wentworth Weir (d/s)	7.3	2.92	27.68	7 360	R	7 580	7 670
Rufus Junction	-	3.74	20.67	8 050	F	8 600	8 490
Blanchetown (Lock 1 d/s)	-	0.81	-	6 070	S	6 080	5 780
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	0.77	154.00	220	F	210	260
Ovens at Wangaratta	11.9	7.77	145.45	210	R	210	220
Goulburn at McCoys Bridge	9.0	1.54	92.96	1 040	F	1 340	2 180
Edward at Stevens Weir (d/s)	5.5	1.26	81.03	990	F	1 740	2 130
Edward at Liewah	-	2.81	58.19	2 260	F	2 440	2 590
Wakool at Stoney Crossing	-	1.55	55.04	770	F	790	780
Murrumbidgee at Balranald	5.0	0.60	56.56	290	F	370	1 290
Barwon at Mungindi	6.1	3.10	-	0	F	10	40
Darling at Bourke	9.0	2.02	-	0	F	0	0
Darling at Burtundy Rocks	-	0.61	-	0	F	0	0

Natural Inflow to Hume	450	690
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(i.e. Pre Dartmouth &amp; 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	-0.18	-	No. 7 Rufus River	22.10	-0.51	+1.42
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	-0.01	+0.23
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.02	+0.29
No. 11 Mildura	34.40	+0.03	+0.27	No. 4 Bookpurnong	13.20	+0.04	+0.92
No. 10 Wentworth	30.80	+0.12	+0.28	No. 3 Overland Corner	9.80	+0.00	+0.28
No. 9 Kulnine	27.40	-0.04	-0.48	No. 2 Waikerie	6.10	+0.01	+0.25
No. 8 Wangumma	24.60	-0.61	-0.21	No. 1 Blanchetown	3.20	+0.02	+0.06

## Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.54
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## Barrages

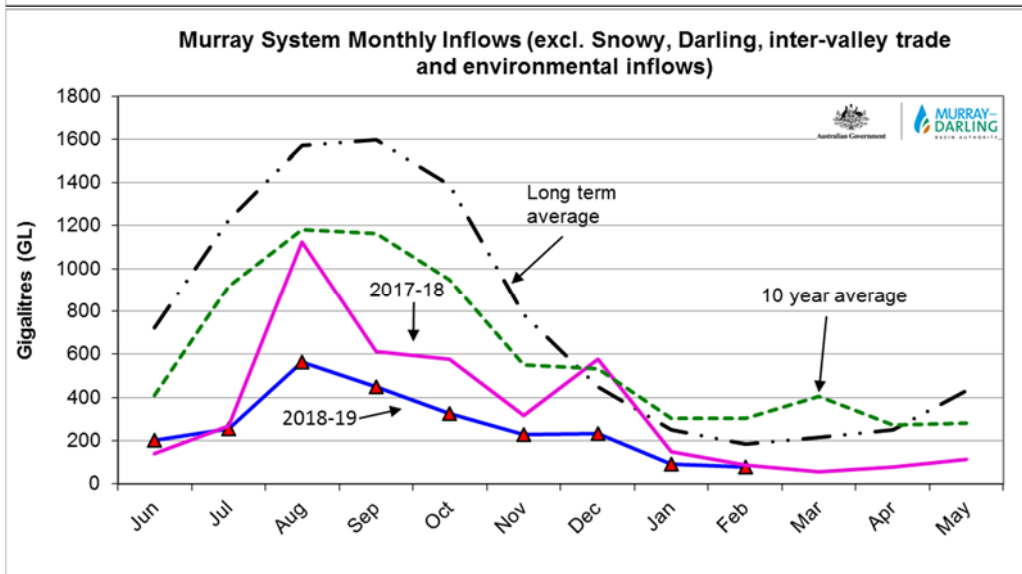
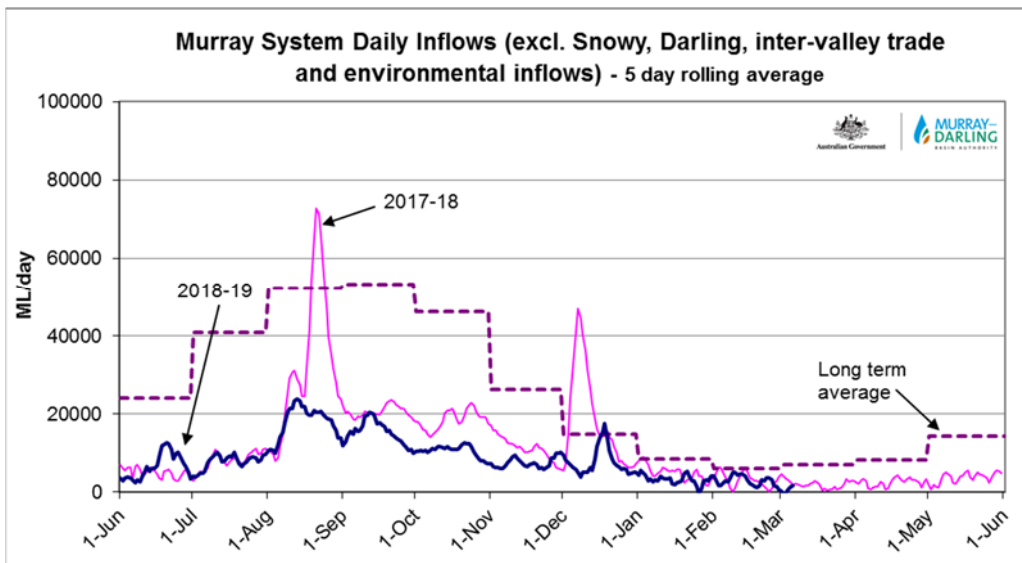
## Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.36	1	-	Open	Open	-
Mundoo	26 openings	0.33	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.35	2	Open	Open	Open	-

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







**State Allocations (as at 06 Mar 2019)**

**NSW - Murray Valley**

High security	97%
General security	0%

**Victorian - Murray Valley**

High reliability	100%
Low reliability	0%

**NSW - Murrumbidgee Valley**

High security	95%
General security	7%

**Victorian - Goulburn Valley**

High reliability	96%
Low reliability	0%

**NSW - Lower Darling**

High security	100%
General security	0%

**South Australia - Murray Valley**

High security	100%
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NSW : <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/summary>

VIC : <http://nvrn.net.au/seasonal-determinations/current>

SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>

