



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 8 FEBRUARY 2017

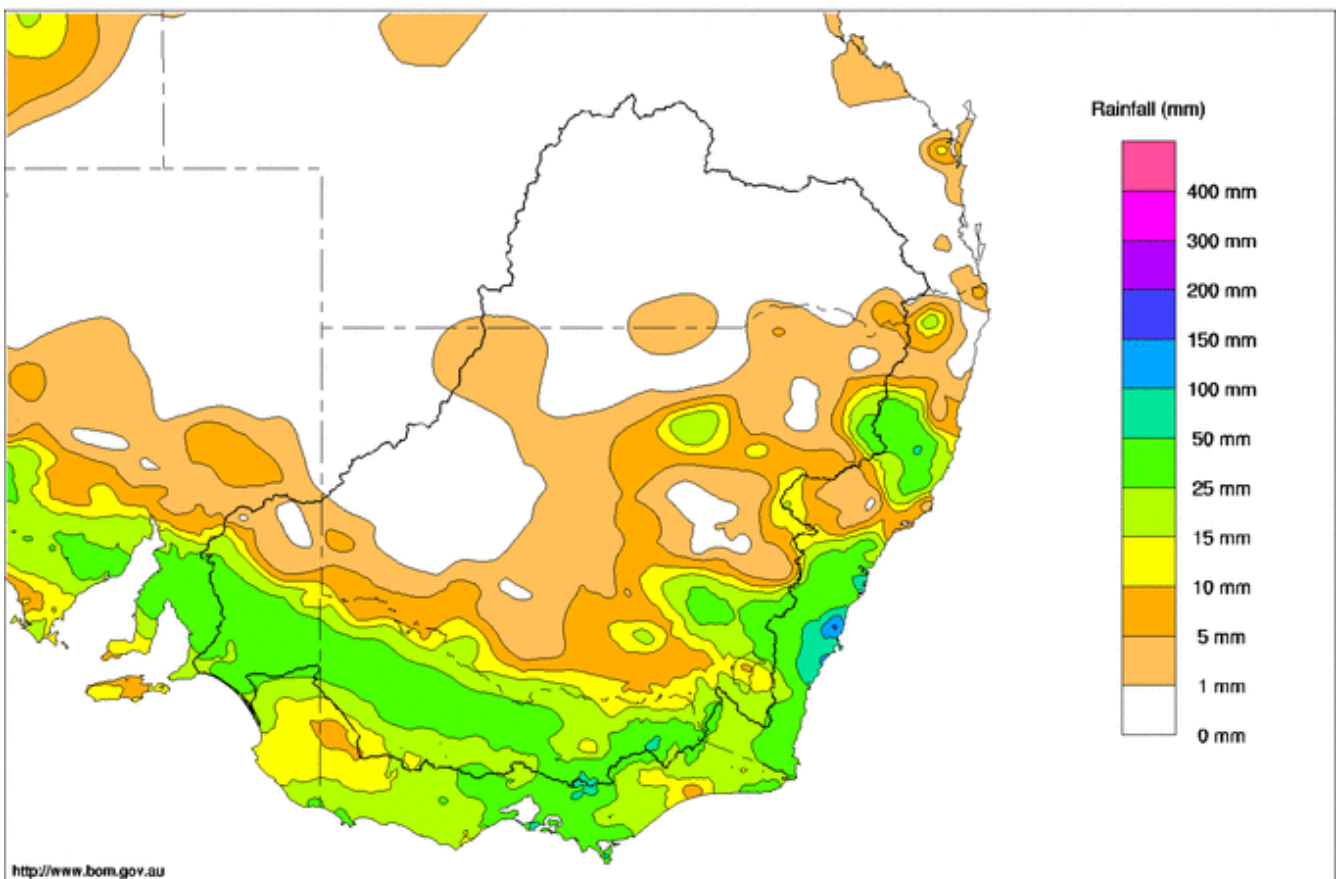
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Rainfall and inflows

Rainfall in the Murray-Darling Basin this week mostly fell across South Australia, Victoria and the southern and eastern parts of New South Wales (Map 1). Little or no rain was recorded in southern Queensland and western New South Wales.

In Victoria, the highest weekly totals included 83 mm at Mount Hotham AWS and 44 mm at upper Buckland in the upper northeast. In the Mallee, 46 mm was recorded at Berrivillock and 43 mm at Murrayville. Notable totals in NSW included 59 mm at Crookwell in the southern tablelands and 49 mm at Woolbrook in the northwest slopes. In South Australia the highest totals included 51 mm at Claypans, 49 mm at Mindarie, 44 mm at Swan Reach and 45 mm at Nildottie.

Murray-Darling Rainfall Totals (mm) Week Ending 8th February 2017
Australian Bureau of Meteorology



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

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Issued: 08/02/2017

Map 1 - Murray-Darling Basin rainfall week ending 8th February 2017 (Source: Bureau of Meteorology)

Rain this week prompted modest stream flow rises along the upper Murray tributaries. On the Mitta Mitta River, the flow at Hinnomunjie Bridge peaked at 750 ML/day. On the upper Murray at Biggara, the flow peaked at 700 ML/day. Flow along the Ovens River at Rocky Point peaked at around 1,300 ML/day.



River operations

- Heatwave conditions expected over coming days
- Flows in the Mitta Mitta River increase in response to releases for power generation
- Environmental releases to the Great Darling Anabranch commence

System Operations

In January, demands and losses along the Murray system were lower than planned for, meaning that more water has been arriving at Lake Victoria than expected. This allows for deliveries in February, including from tributary inter valley trade (IVT) and from Menindee lakes to be reduced. Recent rain has continued this trend, however [heatwave conditions](#) in the coming days are expected to increase demands and losses. Updates will be provided in coming weeks as flow rates across the system are adjusted in response to the observed and forecast weather and demands.

River Operations

MDBA total storage decreased by 117 GL, with the active storage currently 6,570 GL (76% capacity). This is around 1,000 GL above the long-term average and more than double the volume at the same time last year when the active storage was 3,098 GL (36% capacity) (see Figure 1).

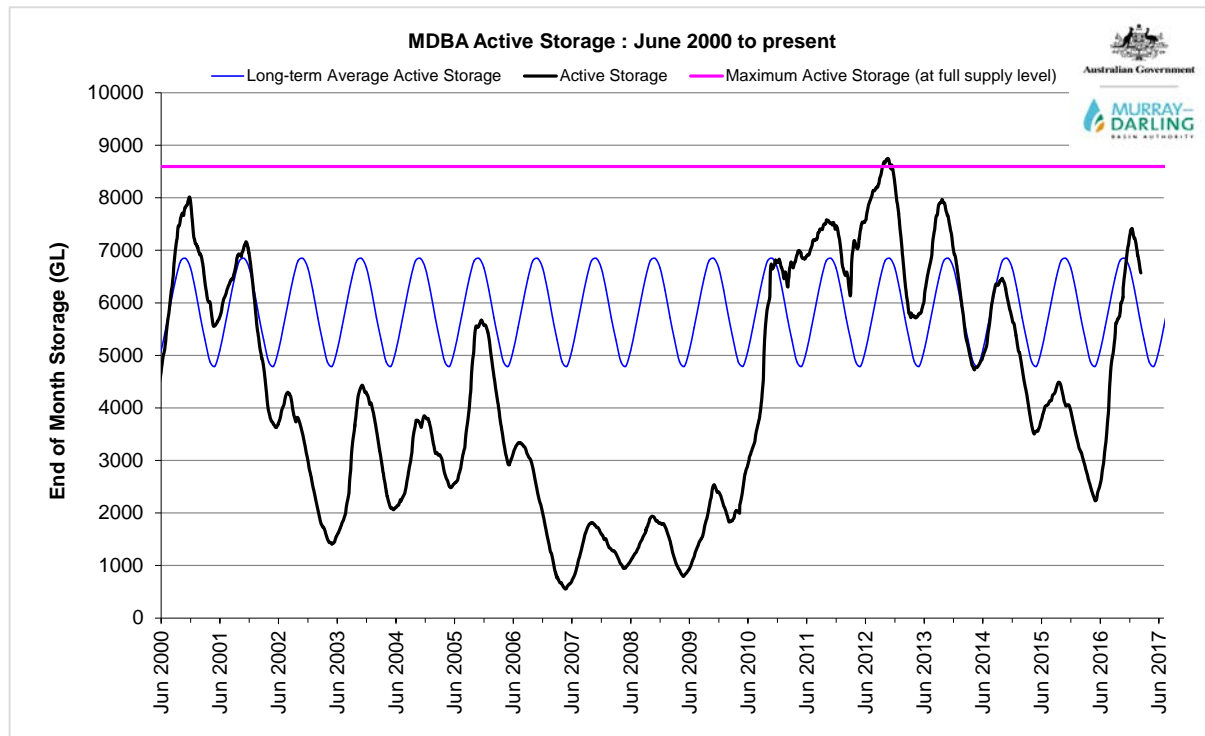


Figure 1 – MDBA active storage: June 2000 to present

Dartmouth Reservoir’s storage volume increased 2 GL this week to 3,026 GL (78% capacity). The release, measured at Colemans gauge, increased from 300 ML/day to 5,000 ML/day on 8 February for the [purpose of electricity generation](#). The duration of the increased releases is unknown and will be dependent upon electricity demand in the near future.

The **Hume Reservoir** storage volume fell by 53 GL this week to 2,487 GL (83% capacity). This compares with 1,109GL (37% capacity) at the same time last year (see Figure 2). Based on current forecasts and estimated demands and losses along the Murray system, it is unlikely that Hume Reservoir volume will fall much below 50% capacity this water year. The release this week averaged around 10,000 ML/day. Downstream of Hume, the **Kiewa River** has provided an average of around 900 ML/day to the Murray.

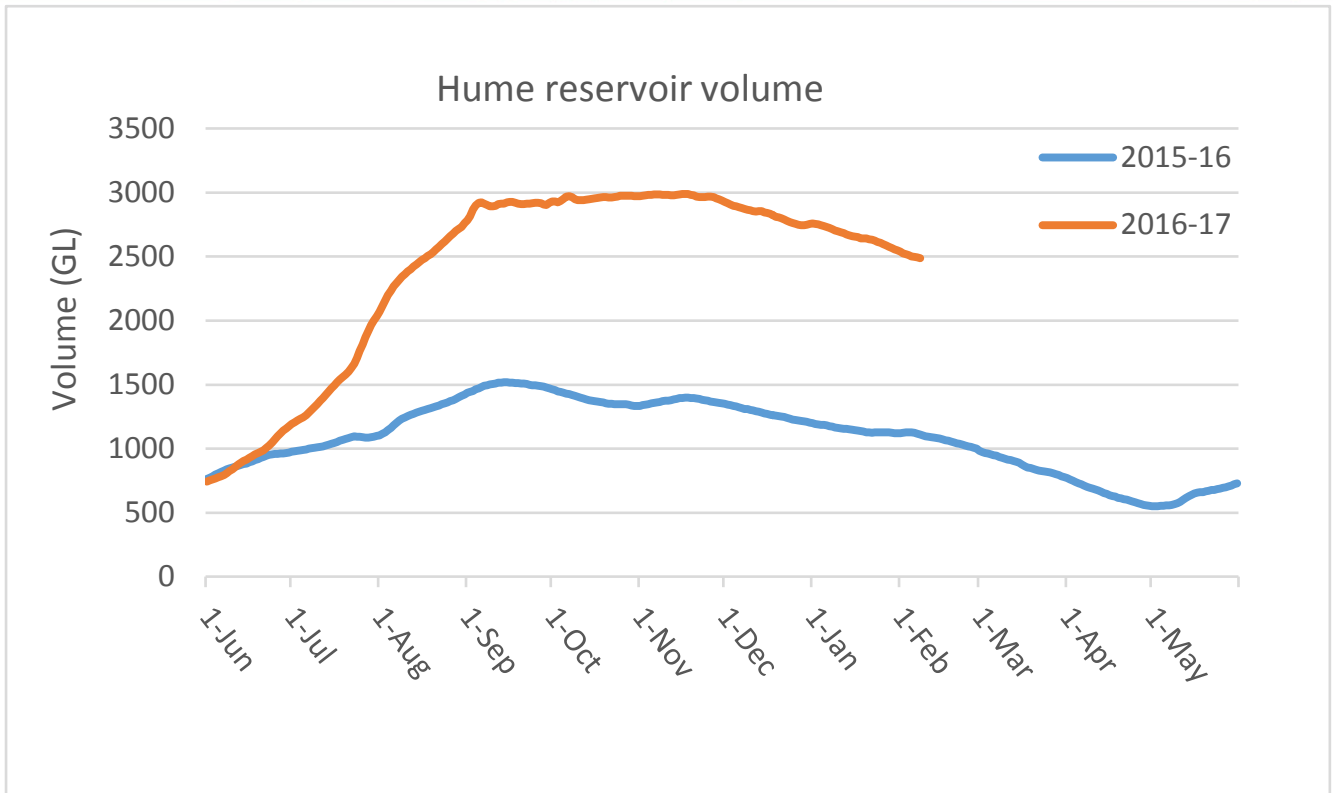


Figure 2 – Hume reservoir volume: June 2015 to current



Photo 1 – Tourists enjoying a visit to Hume reservoir on 4 February with storage at 84% capacity (Photo: Tom Zouch MDBA)

The pool level at **Lake Mulwala** is currently around the full supply level (FSL) of 124.9 m AHD. Diversions to the major irrigation off-takes reduced this week in response to the rain. Mulwala Canal reduced from 5,300 to 3,400 ML/day and Yarrowonga Main Canal reduced from 1,500 ML/day to a low of 450 ML/day. Diversions are expected to increase over the coming week due to the forecast hot and dry conditions. The release from **Yarrowonga Weir** has remained steady near 8,000 ML/day and would be lower without deliveries of environmental water. Currently, 1,500 ML/day of environmental water is being released for large bodied native fish and other environmental benefits along the River Murray. The target flow is expected to gradually increase over the coming week to around 9,500 ML/day where it will remain for around two weeks before being gradually reduced during March.

Releases downstream at Yarrowonga Weir in autumn are likely to be lower than experienced over the last few years at this time of year due to downstream demands being supplemented by water from the Goulburn, Campaspe and Murrumbidgee Rivers, Menindee Lakes and Lake Victoria. This allows more water to be conserved in the major storages of Hume and Dartmouth than would otherwise have been the case.

On the **Edward River** system, the flow through the Edward offtake has continued to average close to 1,600 ML/day. The Gulpa Creek offtake has been reduced to 420 ML/day and is expected to lower to around 350 ML/day later in the coming week. Flow in the Edward system is being supplemented by



inflows from the Edward Escape which has reduced from around 950 to 350 ML/day in response to reduced demand at Wakool Canal. Downstream at Stevens Weir the flow has fluctuated around an average of 860 ML/day and is expected to continue to target around 600 ML/day over the coming weeks.

The **Goulburn River** at McCoys Bridge has averaged around 1,300 ML/day. The flow is expected to remain around 1,200 ML/day during February – well above the minimum flow target of 350 ML/day, as inter valley trade (IVT) water is delivered to the Murray. If conditions remain dry, IVT deliveries can be expected to persist over the next few months to continue to help meet downstream demands. Planning is underway to combine environmental water with IVT deliveries to deliver a flow pulse in early March aimed at providing outcomes for both native fish and for water supply to the Murray. Further information will be available in coming weeks.

At **Torrumbarry** Weir, diversions to National Channel have been steady at 2,200 ML/day with a portion of this water provided to support Murray Cod in Gunbower Creek. Downstream of Torrumbarry Weir the flow is 4,900 ML/day and is expected to remain around this rate over the coming week.

On the lower **Murrumbidgee** River, deliveries of IVT to the Murray are continuing. The flow at Balranald averaged 2,000 ML/day this week, well above the February end of system target of 180 ML/day. IVT deliveries will continue at around this rate during February and are expected to continue into March, although at lower rates. Further information on IVT in the Murrumbidgee system is available from [WaterNSW](#).

At **Euston**, the flow has averaged around 6,800 ML/day and is expected to ease to around 6,500 ML/day over the coming week. The [lock at Euston remains closed](#) due to repair works being undertaken on one of the upstream lock gates. In the coming weeks the Euston weir pool may be lowered below the FSL as part of weir pool variability but will be returned to near FSL during important recreational times.

On the **Darling River**, total storage at **Menindee Lakes** fell by 50 GL to a storage volume of 1,251 GL (72% capacity). The release at Weir 32 was gradually reduced to 4,000 ML/day this week and is expected to remain around this rate in coming weeks. The majority of this release is being sourced from Lake Menindee. Release of environmental water to the Great Darling Anabranch commenced late this week with around 1,100 ML/day being released via the Lake Cawndilla outlet. The release of environmental water, directed by NSW in association with the Commonwealth Environmental Water Holder, is expected to continue over the coming months with the aim of creating connectivity with the River Murray.

At **Wentworth**, the flow increased to 9,400 ML/day in response to recent rain, but will fall away over the coming week. The weir pool at **Lock 9** is currently targeting 10 cm below FSL. **Lock 8** weir pool continues to be lowered to target 50 cm below FSL, and is currently 38 cm below FSL. The weir pool at **Lock 7** is currently 39 cm below FSL, but for operational reasons will be temporarily increased back to FSL over the coming week. Weir pool variability helps to restore a more natural wetting and drying cycle to riverbanks within the weir pool. More information on possible weir pool levels in the coming weeks is available on the [MDBA website](#).

The storage volume at **Lake Victoria** fell 16 GL to 480 GL (71% capacity). The flow to **South Australia** averaged 10,200 ML/day this week and is expected to be gradually reduced throughout the remainder of February. This flow is above the normal entitlement flow due to delivery of environmental water to South Australia. Additional Dilution Flows to South Australia ceased on 2 February when the total volume in Menindee Lakes reduced below 1,300 GL.

At the lower lakes, the 5-day average level in Lake Alexandrina is 0.77 m AHD. Barrage releases have averaged around 7,000 ML/day.

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



Water in Storage

Week ending Wednesday 08 Feb 2017

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	472.40	3 026	78%	71	2 955	+2
Hume Reservoir	192.00	3 005	189.28	2 487	83%	23	2 464	-53
Lake Victoria	27.00	677	25.30	480	71%	100	380	-16
Menindee Lakes		1 731*		1 251	72%	(480 #)	771	-50
Total		9 269		7 244	78%	--	6 570	-117
Total Active MDBA Storage							76% ^	

Major State Storages

Burrinjuck Reservoir	1 026	793	77%	3	790	-28
Blowering Reservoir	1 631	1 360	83%	24	1 336	-3
Eildon Reservoir	3 334	2 507	75%	100	2 407	-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 07 Feb 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2016
Lake Eucumbene - Total	1 899	-16	Snowy-Murray	+5	921
Snowy-Murray Component	858	-9	Tooma-Tumut	+2	322
Target Storage	1 460		Net Diversion	3	598
			Murray 1 Release	+12	1 325

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2016	Victoria	This Week	From 1 July 2016
Murray Irrig. Ltd (Net)	30.3	563	Yarrowonga Main Channel (net)	5.7	120
Wakool Sys Allowance	2.4	9	Torrumbarry System + Nyah (net)	11.1	243
Western Murray Irrigation	0.9	15	Sunraysia Pumped Districts	3.5	65
Licensed Pumps	8.0	133	Licensed pumps - GMW (Nyah+u/s)	1	15
Lower Darling	0.6	4	Licensed pumps - LMW	11.3	229
TOTAL	42.2	724	TOTAL	32.6	672

* 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 delivery of environmental water.

Entitlement this month	194.0 *
Flow this week	71.7
Flow so far this month	81.7
Flow last month	458.7

(10 200 ML/day)

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

	Current	Average over the last week	Average since 1 August 2016
Swan Hill	100	90	130
Euston	170	160	-
Red Cliffs	180	190	170
Merbein	190	180	170
Burtundy (Darling)	440	430	620
Lock 9	330	320	180
Lake Victoria	270	220	190
Berri	390	370	220
Waikerie	390	430	290
Morgan	440	430	280
Mannum	420	420	290
Murray Bridge	330	340	280
Milang (Lake Alex.)	380	370	520
Poltalloch (Lake Alex.)	480	460	340
Meningie (Lake Alb.)	1 670	1 720	1 760
Goolwa Barrages	480	460	1 110



River Levels and Flows

Week ending Wednesday 08 Feb 2017

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	-	-	-	2 360	F	1 910	2 250
Jingellic	4.0	1.60	208.12	3 440	R	2 550	3 260
Tallandoon (Mitta Mitta River)	4.2	1.49	218.38	790	F	740	710
Heywoods	5.5	2.60	156.23	8 580	R	9 960	12 850
Doctors Point	5.5	2.66	151.13	10 960	R	11 480	14 420
Albury	4.3	1.65	149.09	-	-	-	-
Corowa	4.6	2.33	128.35	9 870	F	12 290	13 900
Yarrowonga Weir (d/s)	6.4	1.36	116.40	7 990	S	7 980	7 970
Tocumwal	6.4	2.16	106.00	7 750	R	7 450	8 540
Torrumbarry Weir (d/s)	7.3	1.71	80.26	4 930	R	4 720	4 940
Swan Hill	4.5	1.07	63.99	5 180	R	4 890	5 110
Wakool Junction	8.8	2.63	51.75	6 490	R	6 170	6 450
Euston Weir (d/s)	9.1	1.40	43.24	7 000	R	6 790	6 050
Mildura Weir (d/s)	-	-	-	6 790	F	6 130	5 770
Wentworth Weir (d/s)	7.3	3.05	27.81	9 420	R	8 330	7 910
Rufus Junction	-	3.95	20.88	9 470	F	9 770	9 980
Blanchetown (Lock 1 d/s)	-	0.89	-	8 170	R	7 190	9 250
Tributaries							
Kiewa at Bandiana	2.8	1.58	154.81	1 350	R	900	880
Ovens at Wangaratta	11.9	8.36	146.04	1 480	R	1 010	970
Goulburn at McCoys Bridge	9.0	1.77	93.19	1 410	R	1 290	1 480
Edward at Stevens Weir (d/s)	5.5	0.91	80.69	700	F	860	700
Edward at Liewah	-	1.39	56.77	760	R	800	890
Wakool at Stoney Crossing	-	1.56	55.05	750	F	700	670
Murrumbidgee at Balranald	5.0	2.29	58.25	2 000	F	2 040	1 710
Barwon at Mungindi	6.1	3.27	-	190	F	260	370
Darling at Bourke	9.0	4.06	-	220	F	230	240
Darling at Burtundy Rocks	-	2.66	-	4 050	F	4 120	4 220

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	2 570	3 290
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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
Yarrowonga	124.90	-0.01	-	No. 7 Rufus River	22.10	-0.39	+1.63
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	-0.02	+0.29
No. 15 Euston	47.60	+0.06	-	No. 5 Renmark	16.30	+0.04	+0.36
No. 11 Mildura	34.40	+0.01	+0.12	No. 4 Bookpurnong	13.20	+0.06	+1.11
No. 10 Wentworth	30.80	+0.05	+0.41	No. 3 Overland Corner	9.80	+0.09	+0.45
No. 9 Kulnine	27.40	-0.09	-0.17	No. 2 Waikerie	6.10	+0.07	+0.35
No. 8 Wangumma	24.60	-0.38	+0.15	No. 1 Blanchetown	3.20	-0.05	+0.14

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.77
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Barrages

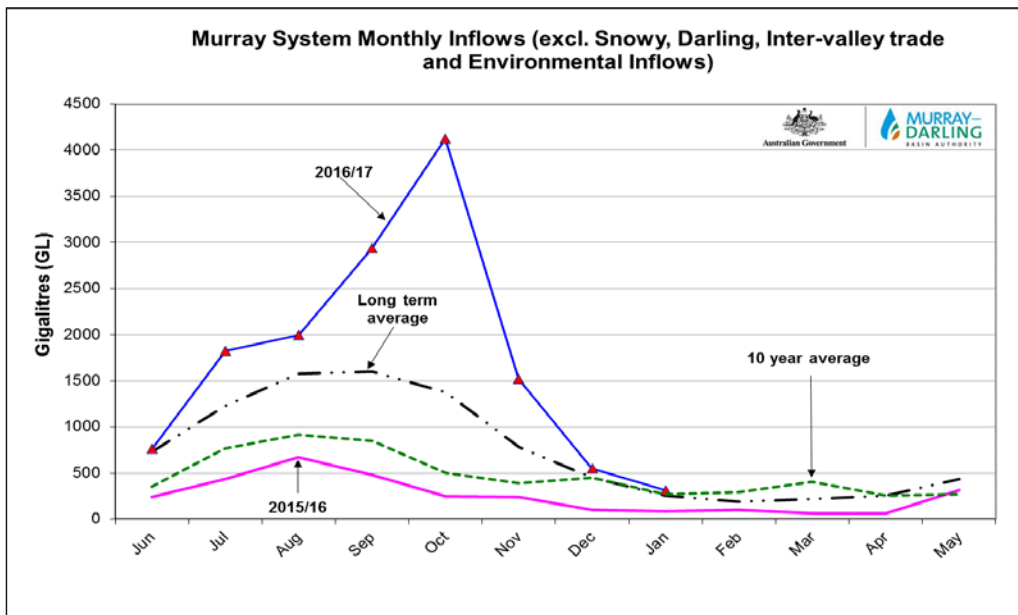
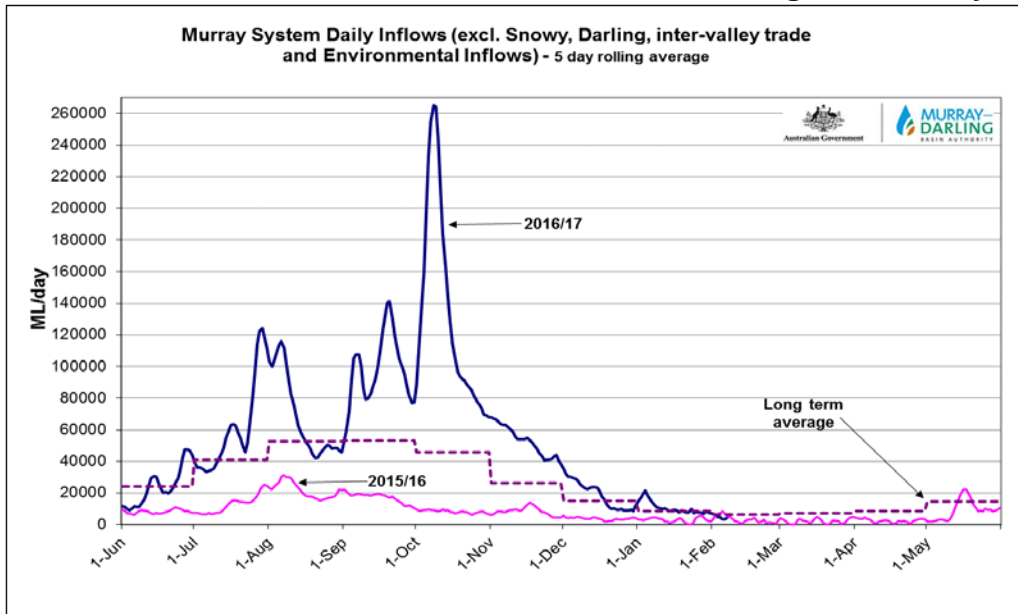
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.80	3	-	Open	Open	-
Mundoo	26 openings	0.73	1	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwitchere	322 gates	0.79	7	Open	Open	Open	-

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



Week ending Wednesday 08 Feb 2017



State Allocations (as at 08 Feb 2017)

NSW - Murray Valley

High security	100%
General security	100%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	100%
General security	100%

Victorian - Goulburn Valley

High reliability	100%
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>