



RIVER MURRAY WEEKLY REPORT

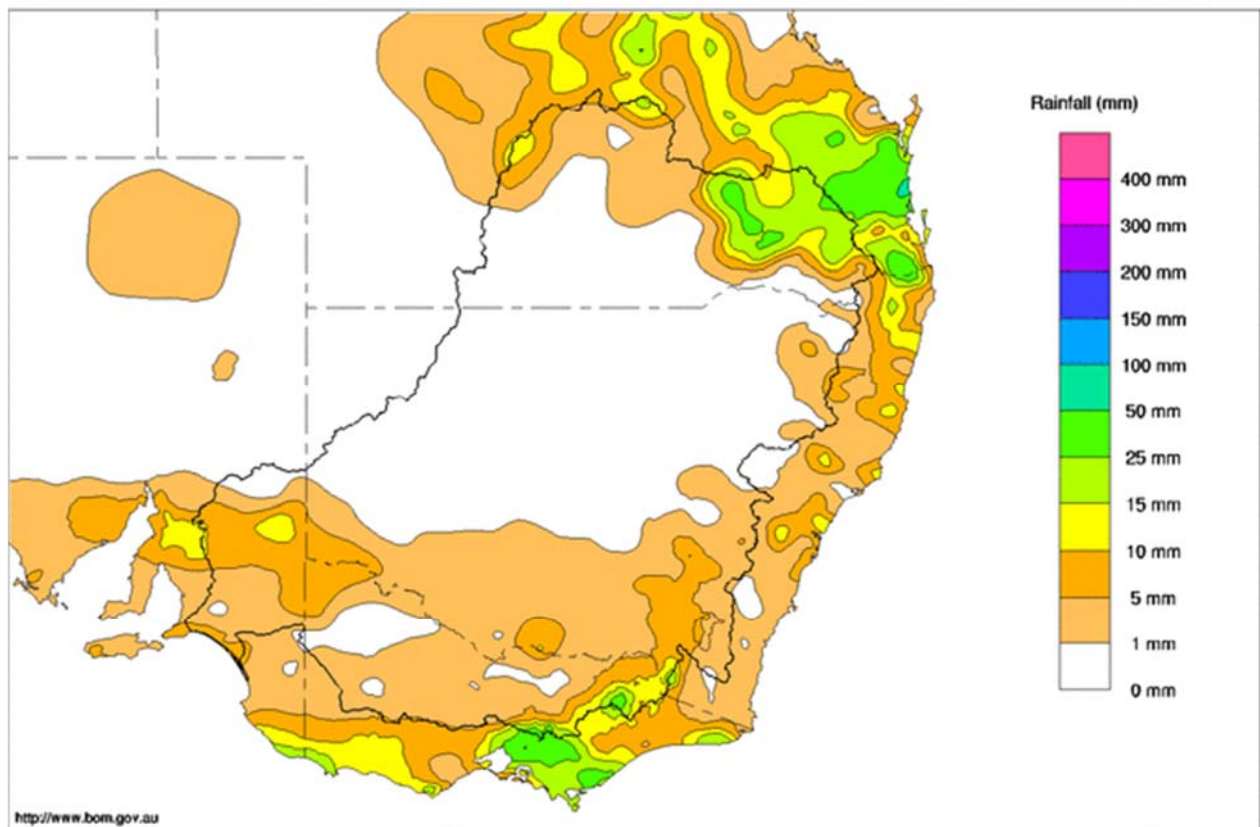
FOR THE WEEK ENDING WEDNESDAY, 13 DECEMBER 2017

Trim Ref: D17/57738

Rainfall and inflows

Only relatively small amounts of rain fell in the Murray-Darling Basin this week, with most of the activity limited to southeast Queensland and the southern Basin (Map 1). Highest totals in Queensland included 31 mm at Southwood in the Darling Downs and 30 mm at Yuleba in the Maranoa catchment. Tocumwal in the Riverina of New South Wales recorded 30 mm. In Victoria, the highest totals were recorded in the northeast and included 39 mm at Rocky Valley, 25mm at Joker Creek and 19mm at Mount Buller AWS. In South Australia, totals around 10 mm were recorded at Renmark in the Murray Valley and Goolwa at the lower lakes.

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



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

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

Streamflows in the upper Murray catchments continued to recede however rainfall along the ranges did result in small streamflow rises at some locations. On the Mitta Mitta River, the flow at Hinnomunjie Bridge increased briefly to 2,500 ML/day before receding back to 1,100 ML/day. The upper Murray at Biggara receded from 1,600 ML/day to 1,000 ML/day. Downstream of Hume, the flow in the Kiewa River at Bandiana fell from 3,400 ML/day to 1,600 ML/day and the Ovens River at Wangaratta reduced from 7,100 ML/day to 3,400 ML/day.



River operations

- Irrigation demands increase as conditions turn warm and dry
- Higher flows downstream of Torrumbarry deliver water to Gunbower and Koondrook-Perricoota forests
- Weir pool level at Euston to rise 20cm above FSL

MDBA active storage decreased by 12 GL to 6,211 GL (72% active storage).

The storage volume at **Dartmouth Reservoir** increased by 18 GL to 3,422 GL (89% capacity). The release from Dartmouth Reservoir, measured at Colemans, remained at the minimum flow rate of 200 ML/day however will be increased to 300 ML/day on Thursday 14 December to help meet demand during the warm and dry conditions over summer. A brief increase in the release to around 3,000 ML/day is planned for early January for the benefit of water quality in the Mitta Mitta River downstream of Dartmouth Dam. The timing of this release has been planned to coincide with the Australian Wildwater selection races, organised by Canoeing Victoria. More information about this flow pulse is available in the attached flow advice.

At **Hume Reservoir**, the storage volume decreased by 8 GL to 2,322 GL (77% capacity) following an increase in the storage of 90 GL resulting from rainfall in the first week of December. In anticipation of increasing irrigation demand due to forecast hot and dry conditions, the release from Hume was steadily increased throughout the week from 1,500 ML/day to the current release of 13,500 ML/day.



Photo 1. The River Murray near Albury with Hume release at 10,000 ML/day (Photo courtesy: Hugo Bowman MDBA)



Downstream at **Lake Mulwala**, irrigation diversions have increased considerably this week. Diversions to Mulwala Canal increased from 500 ML/day to 2,800 ML/day and are forecast to reach around 4,000 ML/day over the coming weekend. Likewise, Yarrowonga Main Channel diversion increased from 300 ML/day to 1,800 ML/day and is forecast to remain around this rate over the coming days.

Releases from **Yarrowonga Weir** were reduced from 15,000 ML/day to 12,000 ML/day following the recession of tributary inflows. The release will be gradually lowered to 11,000 ML/day over the coming week and back within the channel capacity of the Barmah choke by 25 December (assuming conditions remain dry). The regulators to the Barmah-Millewa forest will be gradually closed over the next two weeks as the releases from Yarrowonga Weir are reduced.

Maintenance works at Yarrowonga Weir are due to be completed by Friday 15 December. As a result Weir Road – also known as the Yarrowonga Weir Stock Crossing Road – which is currently closed, will be open from early Friday afternoon.

A combined total of around 1,900 ML/day continues to enter the Edward-Wakool system from the Edward and Gulpa Creek offtakes. Return flows from the Millewa forest are receding and in response the flow at Toonalook on the **Edward River** has reduced from 4,500 ML/day to 4,100 ML/day. Reduced return flows from the forest, combined with increasing demand at Wakool Main Canal has decreased the downstream release from Steven's Weir to below the channel capacity (approx. 2,700 ML/day). In response, the regulators to the Werai forest will be closed in the coming week.

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, peaked at the start of the week at around 17,500 ML/day following widespread rainfall in the Goulburn catchment in the previous week. The flow continues to recede and is currently around 3,500 ML/day. Later in the week, additional water was released from Goulburn Weir to slow the rate of recession in the lower Goulburn. This precautionary action was undertaken in order to provide a dilution flow in case water returning from the lower Goulburn floodplain was hypoxic (very low dissolved oxygen). Inflows from the **Campaspe River** have also receded and are currently around 100 ML/day.

National Channel diversions from **Torrumbarry Weir** pool increased from 500 ML/day to 2,200 ML/day and are expected to rise further in the coming week. In response to the higher inflows from the Goulburn River, the flow downstream of Torrumbarry Weir peaked around 24,000 ML/day. At flow rates downstream of Torrumbarry Weir greater than around 15,000 ML/day, water flows into Gunbower (photo 2) and Koondrook–Perricoota forests. The flow at Torrumbarry is currently 19,100 ML/day.

Inflows from the **Murrumbidgee River**, measured at Balranald, increased from 400 ML/day to 2,100 ML/day. Higher inflows from the Murrumbidgee are expected to continue around this rate over the coming week.

At **Euston**, the weir pool level is currently around the full supply level (FSL). In the coming week the pool level will be increased to 20 cm above the FSL to capture additional flow in the river and maximise water availability. The release downstream averaged around 15,500 ML/day, but is expected to increase to around 20,000 ML/day next week. Downstream, return flows from **Hattah Lakes** continue to enter the Murray via the Messengers and Oateys regulators to Chalka Creek (south and north respectively). These flows provide connectivity between the lakes and the River Murray, and also provide valuable food and nutrients to the Murray. Total return flows have averaged around 900 ML/day this week.

At **Menindee Lakes**, the storage volume reduced by 15 GL this week to 484 GL (28% capacity). The combined volume of the Menindee Lakes will fall below 480 GL in coming days (see attached media release for more details). At volumes below 480 GL the MDBA's access to water stored in the lakes ceases until the combined volume again exceeds 640 GL. A red level warning (high alert) for blue-green algae is current for Lake Wetherell and Lake Menindee. More information is available at the [WaterNSW website](#). The release of small volumes of water to support the Murray cod nesting season ceased this week. The flow at Weir 32 is now back to the normal summer minimum of 300 ML/day.



Photo 2. Water entering Gunbower forest from the River Murray via a flood runner at 84 Bend (Photo courtesy: Will Honybun, NCCMA)

Operations at **Lock 9** continue to target Full Supply Level (FSL). Lock 9 is now open to river traffic following the completion of essential maintenance work.

The **Lake Victoria** storage volume decreased by 8 GL to 657 GL (97% capacity). Higher river flows in transit following rainfall two weeks ago mean Lake Victoria is likely to reach 100% capacity late in December. Flow to South Australia averaged 17,000 ML/day this week as environmental water released from Hume and Eildon reservoirs passed across the South Australia border. The flow is expected to recede to around 12,000 ML/day early next week before increasing again as the flows from the recent rain event move downstream.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina has increased to 0.85 m AHD. The release through the barrages increased over the week from around 5,700 ML/day to around 12,000 ML/day. All fishways at the barrages 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 13 Dec 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	479.14	3 422	89%	71	3 351	+18
Hume Reservoir	192.00	3 005	188.34	2 322	77%	23	2 299	-8
Lake Victoria	27.00	677	26.84	657	97%	100	557	-8
Menindee Lakes		1 731*		484	28%	(480 #)	4	-15
Total		9 269		6 885	74%	--	6 211	-12
Total Active MDBA Storage							72% ^	

Major State Storages

Burrinjuck Reservoir	1 026	722	70%	3	719	+23
Blowering Reservoir	1 631	930	57%	24	906	-4
Eildon Reservoir	3 334	2 526	76%	100	2 426	+21

* 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 Dec 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2017
Lake Eucumbene – Total	1 783	+22	Snowy-Murray	+0	534
Snowy-Murray Component	778	+13	Tooma-Tumut	+2	173
Target Storage	1 510		Net Diversion	-2	361
			Murray 1 Release	+2	740

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)	13.8	358	Yarrowonga Main Channel (net)	5.1	119
Wakool Sys Allowance	0.0	16	Torrumbarry System + Nyah (net)	5.9	191
Western Murray Irrigation	0.7	8	Sunraysia Pumped Districts	3.6	42
Licensed Pumps	3.0	89	Licensed pumps - GMW (Nyah+u/s)	1	16
Lower Darling	1.5	35	Licensed pumps - LMW	4.6	127
TOTAL	19.0	506	TOTAL	20.2	495

* 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	217.0 *
Flow this week	117.9
Flow so far this month	203.8
Flow last month	294.3

(17 000 ML/day)

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	140	160	110
Euston	90	110	-
Red Cliffs	130	120	160
Merbein	120	110	150
Burtundy (Darling)	580	570	690
Lock 9	140	140	180
Lake Victoria	220	230	230
Berri	200	210	290
Waikerie	260	270	360
Morgan	270	280	370
Mannum	370	370	420
Murray Bridge	380	400	470
Milang (Lake Alex.)	690	690	630
Poltalloch (Lake Alex.)	660	650	590
Meningie (Lake Alb.)	1 490	1 510	1 530
Goolwa Barrages	850	870	1 260



River Levels and Flows

Week ending Wednesday 13 Dec 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)				
River Murray	(m)						
Khancoban	-	-	-	2 130	F	700	4 920
Jingellic	4.0	1.67	208.19	4 230	R	4 320	9 810
Tallandoon (Mitta Mitta River)	4.2	1.61	218.50	1 050	F	1 270	2 100
Heywoods	5.5	2.80	156.43	12 630	R	6 660	4 840
Doctors Point	5.5	2.98	151.45	14 800	R	9 920	8 730
Albury	4.3	1.96	149.40	-	-	-	-
Corowa	4.6	2.44	128.46	10 520	R	8 330	10 740
Yarrowonga Weir (d/s)	6.4	1.96	117.00	12 020	R	13 060	15 760
Tocumwal	6.4	2.62	106.46	12 060	F	13 460	15 350
Torrumbarry Weir (d/s)	7.3	5.18	83.72	19 110	F	21 520	12 890
Swan Hill	4.5	3.18	66.10	19 230	R	16 670	13 520
Wakool Junction	8.8	5.28	54.40	18 940	R	17 140	15 770
Euston Weir (d/s)	9.1	2.84	44.68	15 960	R	15 470	14 950
Mildura Weir (d/s)	-	-	-	15 620	F	16 020	14 420
Wentworth Weir (d/s)	7.3	3.45	28.21	16 140	F	17 390	15 800
Rufus Junction	-	4.57	21.50	14 030	F	16 140	13 290
Blanchetown (Lock 1 d/s)	-	1.20	-	15 270	F	14 930	11 680
Tributaries							
Kiewa at Bandiana	2.8	1.77	155.00	1 610	F	2 180	3 390
Ovens at Wangaratta	11.9	9.07	146.75	3 380	F	5 020	8 000
Goulburn at McCoys Bridge	9.0	2.80	94.22	3 450	F	9 850	4 450
Edward at Stevens Weir (d/s)	5.5	2.37	82.14	2 570	F	2 980	3 070
Edward at Liewah	-	2.63	58.01	2 020	F	2 140	2 410
Wakool at Stoney Crossing	-	1.91	55.40	1 980	R	1 760	1 530
Murrumbidgee at Balranald	5.0	2.43	58.39	2 140	R	1 150	470
Barwon at Mungindi	6.1	3.20	-	110	F	110	100
Darling at Bourke	9.0	4.10	-	330	S	360	280
Darling at Burtundy Rocks	-	0.86	-	530	S	550	550

Natural Inflow to Hume	1 860	16 810
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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	-0.11	-	No. 7 Rufus River	22.10	-0.11	+2.25
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.04	+0.68
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.07	+0.66
No. 11 Mildura	34.40	+0.02	+0.62	No. 4 Bookpurnong	13.20	+0.09	+1.46
No. 10 Wentworth	30.80	-0.03	+0.81	No. 3 Overland Corner	9.80	+0.01	+0.83
No. 9 Kulnine	27.40	-0.01	+0.32	No. 2 Waikerie	6.10	+0.00	+0.79
No. 8 Wangumma	24.60	+0.01	+0.57	No. 1 Blanchetown	3.20	-0.10	+0.45

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.85
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Barrages

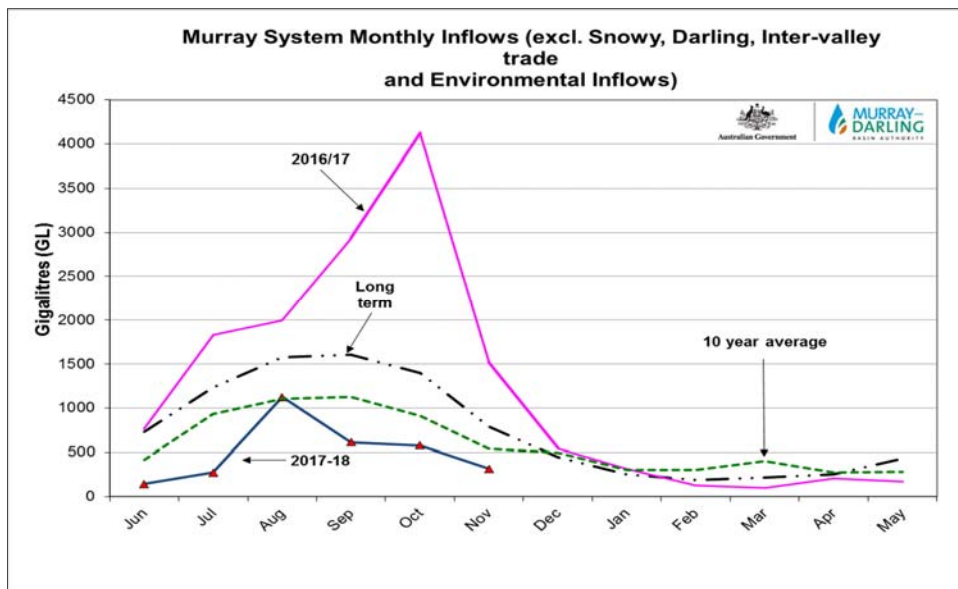
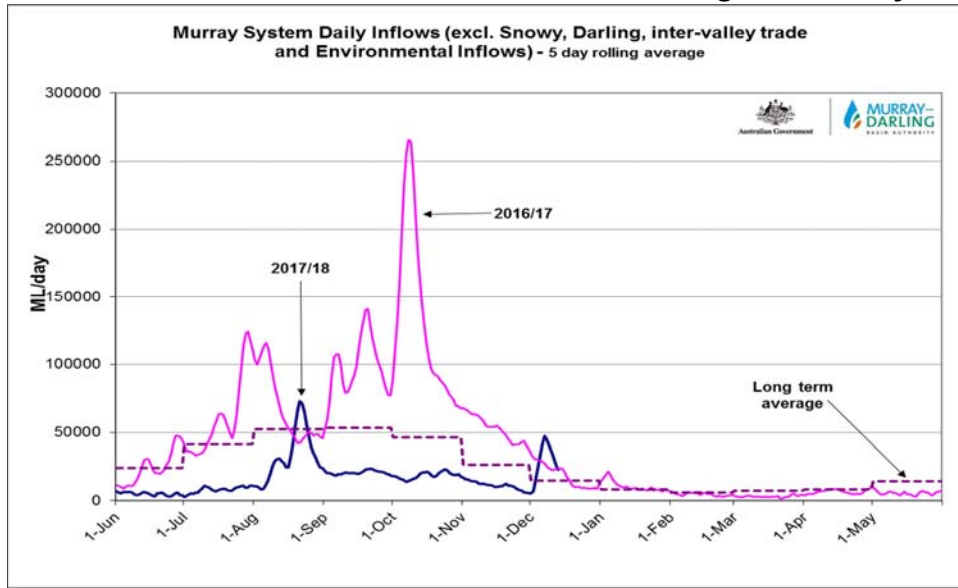
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.92	9	-	Open	Open	-
Mundoo	26 openings	0.88	1	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	5	-	-	-	Open
Tauwichee	322 gates	0.94	14	Open	Open	Open	-

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



Week ending Wednesday 13 Dec 2017



State Allocations (as at 15 Dec 2017)

NSW - Murray Valley

High security	97%
General security	46%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	33%

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>

Mitta Mitta Flow Advice



13 December 2017

Landholders and river users, including pumpers, on the Mitta Mitta River are advised to take into account the forecast releases of water from Dartmouth Dam and make any necessary adjustment to their river activities.

A brief increase in release is planned for early January to benefit water quality in the Mitta Mitta River downstream of Dartmouth Dam. The timing of this release has been planned to coincide with the Australian Wildwater selection races, organised by Canoeing Victoria. This major recreational event, and other recreational activities assisted by the higher flow, will also have benefits for the local community and economy.

The information in the table below assumes dry conditions, with little or no rainfall for the period.

Forecast Mitta Mitta flows 1–6 January 2018

Date	Releases from Dartmouth Dam	Colemans Gauge		Tallandoon Gauge	
		Flow (ML/day)	Height (m)	Flow (ML/day)	Height (m)
Monday 1 January, 0800 hrs	start rising	200	0.90	500	1.34
Monday 1 January, 1500 hrs	peak	3,000	1.90	2,100	1.93
Wednesday 3 January, 1400 hrs	start falling slowly	3,000	1.90	3,500	2.28
Saturday 6 January, 0000 hrs	return to minimum flow	200	0.90	1,300	1.68

Another flow pulse to benefit water quality in the Mitta Mitta River is likely in late January or early February depending on conditions.

The releases from Dartmouth Dam may vary from those forecast and flows on the Mitta Mitta may increase at any time if there's rainfall in the catchment downstream of the dam.

A further flow advice will be issued when there is a significant change to releases.

Landholders and river users on the Mitta Mitta are advised to regularly check the current flows and forecasts on the MDBA website for more information on releases from Dartmouth Dam:
<https://www.mdba.gov.au/river-information/river-flows-salinity-reports>

River data for Dartmouth Dam, the Mitta Mitta and other sites on the Murray system can be seen at <https://riverdata.mdba.gov.au/system-view>

Summary information about the River Murray system is available in the River Murray weekly report at <https://www.mdba.gov.au/river-information/weekly-reports>

ENDS

For more information, contact the MDBA Media office at media@mdba.gov.au or 02 6279 0141

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JOINT MEDIA RELEASE

15 December 2017

Menindee Lakes to reach 480 GL late this week

The total water resource in the Menindee Lakes system is about to drop below 480 gigalitres (GL) which means no further water will be called by the Murray–Darling Basin Authority (MDBA) for use in the River Murray system.

MDBA head of River Management, Andrew Reynolds said in line with the longstanding Murray–Darling Basin Agreement, the MDBA accesses water from Menindee Lakes until the volume falls below 480 GL.

“The MDBA and WaterNSW took on community views as much as we could under the rules and we have worked to preserve water in Lake Wetherell and Pamamaroo,” Mr Reynolds said.

“Reduced operational releases for the Murray System have been supplemented with small volumes of environmental water to provide a riverine environment beneficial for native fish breeding.”

WaterNSW Executive Manager System Operations, Adrian Langdon, said below 480 GL, WaterNSW would continue to manage the lakes and flows as described in WaterNSW’s Lower Darling Annual Operations Plan.

“Having more water in the upper lakes provides greater security to local water users,” Mr Langdon said.

“WaterNSW will be varying releases to meet a flow target of 20 ML/day at Burtundy Weir.

“We are confident we can manage the system to meet local water needs until the resource position of the lakes next improves.”

More information on the WaterNSW Lower Darling Operations Plan is available at <http://www.waternsw.com.au/about/newsroom/2017/water-plan-prepared-as-drought-saps-darling-flows>

The MDBA will resume access to water in the Menindee Lakes for the River Murray system when the volume exceeds 640 GL.

Current dam storage information is available on the WaterNSW [website](#).

ENDS

For more information, contact the MDBA Media office at media@mdba.gov.au or 02 6279 0141 or the

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