



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 30TH AUGUST 2017

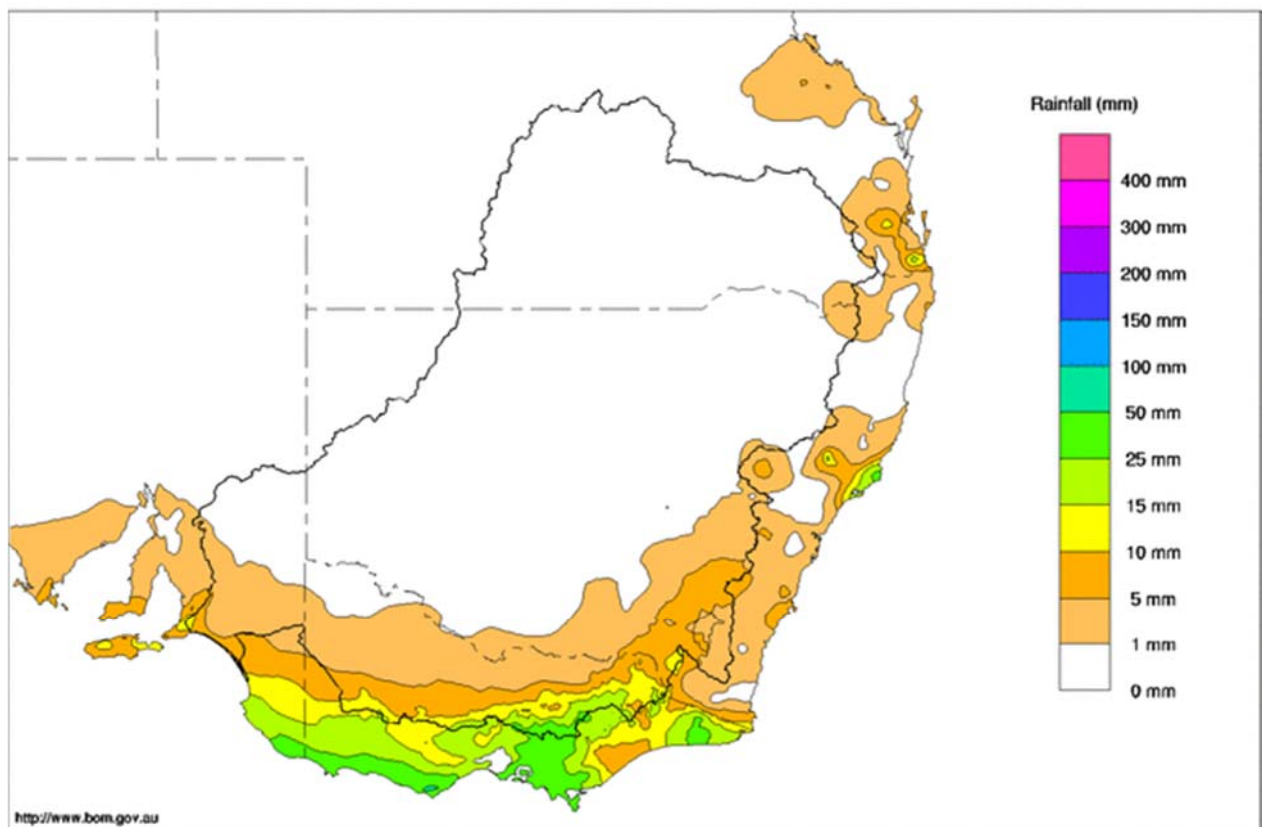
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Rainfall and inflows

Rainfall this week was once again focused over southern parts of the Murray-Darling Basin, while central and northern areas remained mostly dry. The rain fell with a series of cold fronts that maintained brisk temperatures in the south and brought light snow to the south-eastern Alps where snow depths have built up during recent weeks (Photo 1).

Heaviest rainfall occurred in the Victorian Alps with notable totals of 41 mm at Mt Buller, 17 mm at Kilmore Gap and 16 mm at Lake William Hovell. Falls were more modest over south-eastern NSW and the lower Murray Valley in South Australia and were around 10 mm or less (Map 1).

Murray-Darling Rainfall Totals (mm) Week Ending 30th August 2017
Australian Bureau of Meteorology



Map 1 - Murray-Darling Basin rainfall map week ending 30 August 2017. Source: Bureau of Meteorology

Following last week's peak flows, receding flows have been observed in all upper Murray tributaries. On the upper Murray at Biggara, the flow decreased from 1,950 to 1,200 ML/day. On the Mitta Mitta River at Hinnomunjie Bridge, the flow reduced from 1,750 to 1,000 ML/day. Downstream on the Ovens River at Wangaratta, the flow receded from 13,200 to 5,700 ML/day.

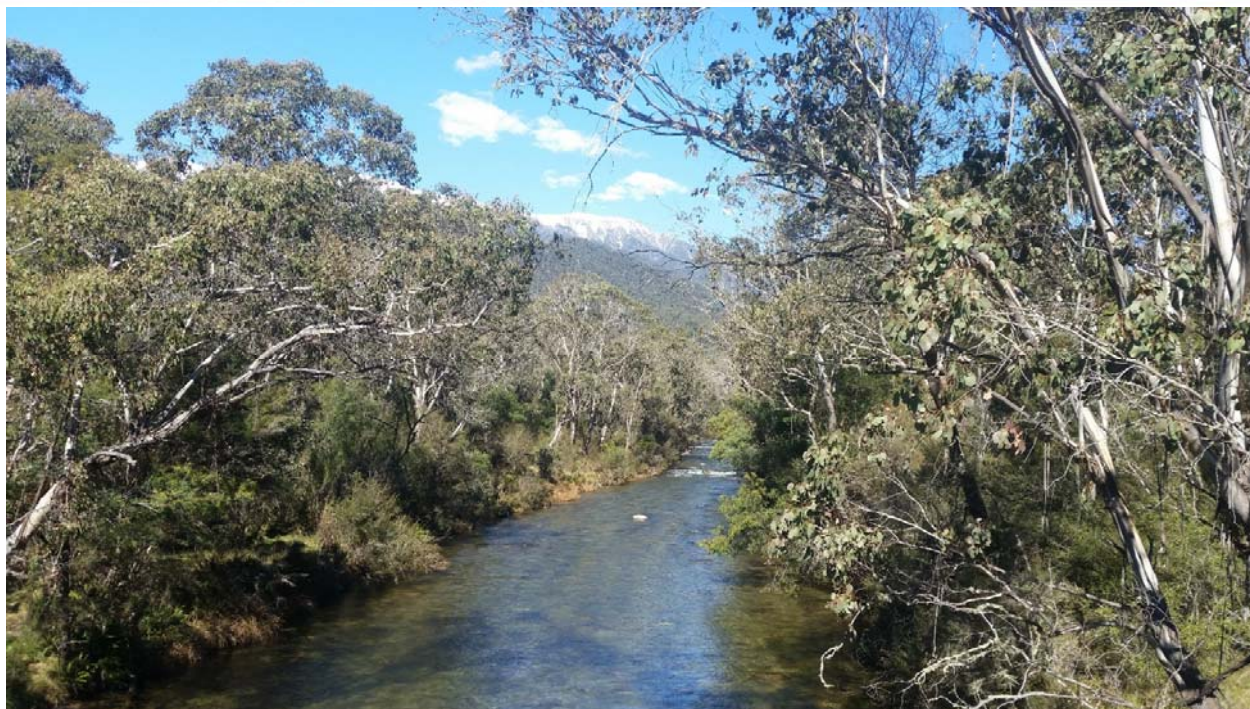


Photo 1 - Swampy Plains River at Geehi, upstream of Khancoban Pondage, with the Snowy Mountains in the background.
Photo courtesy: Hugo Bowman, MDBA.

River operations

- Improvements to the Early Warning Network for Hume Dam
- Yarrowonga releases reducing below channel capacity
- Environmental inflows from the Murrumbidgee River contribute to e-flows at South Australia

MDBA total storage increased this week by 109 GL. The **MDBA total active storage** volume is now 6,393 GL, which is 74% of capacity.

The stored volume in **Dartmouth Reservoir** increased by 13 GL this week to 3,154 GL (82% capacity). The flow at Colemans gauge has returned to the minimum of 200 ML/day after rising to 600 ML/day for a few days in the last week for electricity generation. Whilst releases are low, recent rainfall and suppressed demands mean that local inflows have been sufficient to maintain the flow in the Mitta Mitta River at Tallandoon above 1,500 ML/day (Photo 2).

At **Hume Reservoir**, the storage increased by 63 GL to 2,661 GL (89% capacity). Releases increased to around 4,500 ML/day to deliver environmental water downstream of Yarrowonga. A return to minimum releases of 600ML/day is forecast in the coming week if downstream demands can be met by tributary flows.

MDBA are closely monitoring rainfall forecasts from the Bureau of Meteorology and forecast downstream demands to determine whether higher releases for 'airspace management' at Hume Reservoir are possible. Airspace management releases can be made to provide flood protection if filling of the reservoir is assured. For further information on [airspace management](#) at Hume Reservoir, visit MDBA's website.

WaterNSW and MDBA have been working together, following community feedback, to improve Hume Dam's Early Warning Network (EWN). Subscribers to [WaterNSW's EWN](#) will receive a notification of any changes to the release from Hume Dam when the flow at Doctors Point is greater than 25,000 ML/day. For more information, see the attached media release.



Photo 2 – View of Mount Bogong from the Mitta Mitta valley. Photo courtesy: Peter Liepkalns, Goulburn-Murray Water

At **Yarrowonga Weir**, the release has been reduced from 29,000 ML/day to 12,000 ML/day as inflows from the tributaries recede. Current releases are being supplemented by small volumes of environmental water aimed at slowing the recession of recent flood waters through the Barmah-Millewa Forest. If conditions stay dry, releases over the next week are forecasted to be in the range 5,000–7,000 ML/day. Irrigation demand has remained low in the past week, with diversions through Mulwala Canal totalling about 3.5 GL and less than 1 GL into Yarrowonga Main Channel.

With all the regulators open in **Barmah-Millewa Forest**, the local gauge height at Picnic Point peaked at 2.42 m during the week, and flows at Barmah township are expecting to reach around 10,000 ML/day in the coming days. Most of the regulators in the forest have been open since early July as part of the in-channel watering of the forest. A short [YouTube clip](#), produced by Goulburn Broken CMA, provides more information on this watering event. The high flows through the forest are in addition to the planned environmental watering action.

In the **Edward River system**, approximately 2,800 ML/day is following through the Edward River and Gulpa Creek offtakes. The gates at these offtakes remain clear of the water and further downstream, the flow on the Edward at Toonalook is 5,600 ML/day, and the flow at Stevens Weir has increased above channel capacity to 4,200 ML/day. These high flows are expected to deliver water into Werai Forest.

The **Goulburn River** has receded to 1,900 ML/day at McCoys Bridge and is expected to continue receding in the coming week, depending on rainfall and runoff in the Goulburn system. In the Campaspe River at Rochester, the flow has remained above 200 ML/day throughout the week.

At **Torrumbarry Weir**, the release has remained fairly steady with the flow currently 10,800 ML/day. The flow in the coming week is expected to remain in the range 10,000–12,000 ML/day. Diversions into National Channel have been steady over the past week at around 970 ML/day. These diversions are helping to maintain winter base flows along Gunbower Creek.

The flow in the **Murrumbidgee River** at Balranald has receded from a peak of 7,100 ML/day to 4,500 ML/day. Environmental water released from Burrinjuck Reservoir has been used to reconnect wetlands along the Murrumbidgee as well as for in-stream benefits. [Further information on the environmental flow pulse in the Murrumbidgee](#) is available from the NSW Office of Environment and Heritage website. Some of these flows will enter the Murray system contributing to environmental outcomes in South Australia.



At **Euston**, the current flow is 16,100 ML/day, and is expected to reach 16,500 ML/day over the coming week. The weir pool has been raised to full supply level (47.6 m AHD), with further raising to 47.9 m AHD planned to coincide with the peak flow. For further information on weir pool raising, please see the attached media release.

Upstream of **Mildura**, environmental water is continuing to be pumped into Hattah Lakes. This environmental water has been supplied from a number of sources including from Hume Reservoir, Goulburn River and Campaspe River. This watering action is primarily targeting black box woodland. [More information](#) is available on the Mallee CMA website.

The total storage volume in the Menindee Lakes has decreased this week by 10 GL to 729 GL (42% capacity). Releases, measured at Weir 32, are around 350 ML/day. Additional releases, above the normal minimum target of 200 ML/day, are on behalf of environmental water holders to benefit native fish in the lower Darling.

Lock 8 is being raised to Full Supply Level (FSL). In the coming weeks, Locks 7, 8 and 9 are expected to be raised above Full Supply Level by 20 cm, 30 cm and 50 cm respectively. The weir pools are now generally raised above FSL at times when the natural river flow would have been high. Further information is provided in the attached media release.

This week, the storage at Lake Victoria has increased by 42 GL to 523 GL (77% capacity). MDBA will manage the filling of Lake Victoria over the coming months in accordance with the Lake Victoria Operating Strategy. In winter and spring, the strategy aims to delay the filling of Lake Victoria if sufficient flows are in transit to fill the storage at a later date.

The flow to South Australia is currently 7,500 ML/day and is expected to increase to around 8,500 ML/day for the first few days of September. The weir pools at Locks 2 and 5 are being gradually raised by up to 0.45 m and 0.5 m above FSL respectively. Further information is available in South Australia's [River Murray Flow Reports](#).

At the Lower Lakes, the 5-day average water level is 0.78 m AHD, with barrage releases of up to 6,000 ML/day when conditions allow. The salinity in Lake Albert, near Meningie, averaged less than 1600 EC during the week, while in Lake Alexandrina near Milang, the salinity has been less than 600 EC.

Farewell from David Dreverman

After 14 years as Executive Director responsible for the management of the River Murray system, I am retiring from MDBA today. I wish to thank all the readers of our Weekly Report for their ongoing support through droughts, floods and all seasons in between.

I encourage all who rely on the precious, bountiful yet finite waters of the River Murray to continue to work together with governments to sustain the river for generations to come.

I thank the staff of the MDBA, particularly the River Management team, who have strived to not waste a drop of water on which communities throughout the Murray and beyond are so reliant.

Finally, I congratulate Andrew Reynolds who is the new Executive Director, River Management at MDBA. I wish Andrew every success in the future and trust that communities throughout the Murray will support him as much as you have supported me and my predecessors.

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



David Dreverman, retiring Executive Director, River Management

Thank you, David

The River Operations team at the MDBA wishes David Dreverman all the best for the future and thanks him for his leadership and guidance over the last 14 years.



Water in Storage

Week ending Wednesday 30 Aug 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	474.63	3 154	82%	71	3 083	+13
Hume Reservoir	192.00	3 005	190.23	2 661	89%	23	2 638	+63
Lake Victoria	27.00	677	25.69	523	77%	100	423	+42
Menindee Lakes		1 731*		729	42%	(480 #)	249	-10
Total		9 269		7 067	76%	--	6 393	+109
Total Active MDBA Storage							74% ^	

Major State Storages

Burrinjuck Reservoir	1 026	602	59%	3	599	+11
Blowering Reservoir	1 631	1 358	83%	24	1 334	+26
Eildon Reservoir	3 334	2 289	69%	100	2 189	+37

* 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 29 Aug 2017

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2017
Lake Eucumbene - Total	1 293	n/a	Snowy-Murray	+20	502
Snowy-Murray Component	541	n/a	Tooma-Tumut	+10	71
Target Storage	1 190		Net Diversion	11	431
			Murray 1 Release	+27	576

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)	3.9	30	Yarrowonga Main Channel (net)	0.9	6
Wakool Sys Allowance	0.1	5	Torrumbarry System + Nyah (net)	0	10
Western Murray Irrigation	0.2	1	Sunraysia Pumped Districts	0.7	4
Licensed Pumps	0.4	6	Licensed pumps - GMW (Nyah+u/s)	1	1
Lower Darling	2.5	5	Licensed pumps - LMW	4.6	11
TOTAL	7.1	47	TOTAL	7.2	32

* 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	124.0 *	
Flow this week	50.3	(7 200 ML/day)
Flow so far this month	182.7	
Flow last month	271.3	

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

	Current	Average over the last week	Average since 1 August 2017
Swan Hill	110	110	140
Euston	-	-	-
Red Cliffs	160	200	210
Merbein	170	200	180
Burtundy (Darling)	710	700	670
Lock 9	230	200	190
Lake Victoria	250	260	260
Berri	330	340	320
Waikerie	370	360	350
Morgan	370	370	370
Mannum	430	440	450
Murray Bridge	550	550	530
Milang (Lake Alex.)	590	580	570
Poltalloch (Lake Alex.)	580	570	560
Meningie (Lake Alb.)	1 600	1 590	1 530
Goolwa Barrages	690	890	1 900



River Levels and Flows

Week ending Wednesday 30 Aug 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	-	-	-	7 070	F	4 690	5 180
Jingellic	4.0	2.37	208.89	10 440	R	8 730	16 290
Tallandoon (Mitta Mitta River)	4.2	1.82	218.71	1 690	F	1 880	3 280
Heywoods	5.5	1.73	155.36	2 530	F	2 600	600
Doctors Point	5.5	2.15	150.62	5 430	F	6 200	7 480
Albury	4.3	1.17	148.61	-	-	-	-
Corowa	4.6	1.97	127.99	7 780	F	6 290	7 140
Yarrawonga Weir (d/s)	6.4	2.08	117.12	12 060	F	16 910	20 270
Tocumwal	6.4	2.95	106.79	13 270	F	19 610	14 050
Torrumbarry Weir (d/s)	7.3	3.38	81.92	10 810	R	10 900	8 700
Swan Hill	4.5	1.92	64.84	10 430	F	9 710	7 640
Wakool Junction	8.8	4.24	53.36	12 960	R	11 670	9 460
Euston Weir (d/s)	9.1	2.86	44.70	16 120	F	15 660	13 070
Mildura Weir (d/s)	-	-	-	16 160	F	14 940	11 800
Wentworth Weir (d/s)	7.3	3.50	28.26	16 330	S	15 280	11 690
Rufus Junction	-	3.57	20.50	6 960	R	6 720	5 540
Blanchetown (Lock 1 d/s)	-	0.80	-	5 920	R	5 070	3 970
Tributaries							
Kiewa at Bandiana	2.8	2.45	155.68	2 820	F	3 480	5 690
Ovens at Wangaratta	11.9	9.74	147.42	5 710	F	7 650	20 490
Goulburn at McCoys Bridge	9.0	2.03	93.45	1 890	F	2 680	4 000
Edward at Stevens Weir (d/s)	5.5	3.14	82.91	4 160	F	2 880	2 020
Edward at Liewah	-	2.66	58.04	2 050	R	1 840	1 480
Wakool at Stoney Crossing	-	1.55	55.04	730	R	650	690
Murrumbidgee at Balranald	5.0	4.00	59.96	4 480	F	6 190	7 030
Barwon at Mungindi	6.1	3.25	-	190	S	140	110
Darling at Bourke	9.0	4.09	-	330	S	370	470
Darling at Burtundy Rocks	-	0.77	-	220	F	240	270

Natural Inflow to Hume	11 530	35 980
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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
Yarrawonga	124.90	-0.15	-	No. 7 Rufus River	22.10	+0.03	+1.26
No. 26 Torrumbarry	86.05	-0.05	-	No. 6 Murtho	19.25	+0.01	+0.45
No. 15 Euston	47.60	+0.06	-	No. 5 Renmark	16.30	+0.40	+0.21
No. 11 Mildura	34.40	+0.00	+0.64	No. 4 Bookpurnong	13.20	+0.04	+0.79
No. 10 Wentworth	30.80	+0.00	+0.86	No. 3 Overland Corner	9.80	+0.04	+0.64
No. 9 Kulnine	27.40	+0.12	-0.38	No. 2 Waikerie	6.10	+0.44	+0.17
No. 8 Wangumma	24.60	-0.59	+0.27	No. 1 Blanchetown	3.20	-0.09	+0.05

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.78
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Barrages

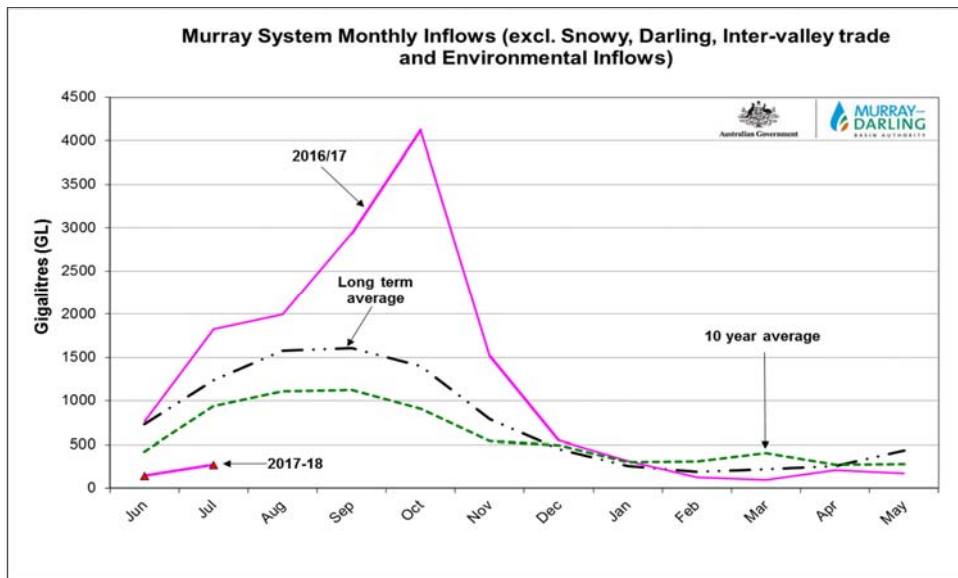
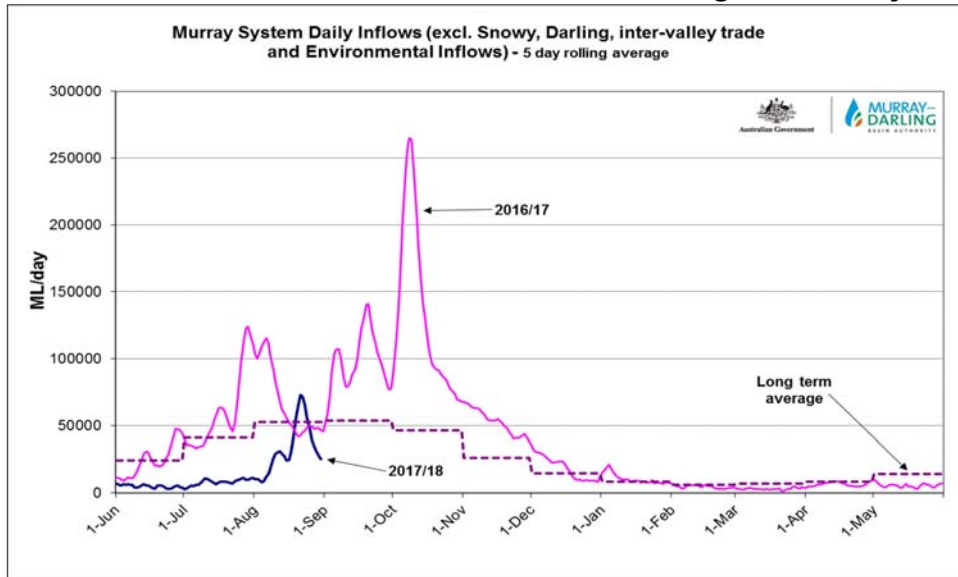
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.77	4	-	Open	Open	-
Mundoo	26 openings	0.75	1	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	4	-	-	-	Open
Tauwitchere	322 gates	0.76	4	Open	Open	Open	-

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



Week ending Wednesday 30 Aug 2017



State Allocations (as at 1 September 2017)

NSW - Murray Valley

High security	97%
General security	20%

Victorian - Murray Valley

High reliability	90%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	29%

Victorian - Goulburn Valley

High reliability	60%
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>

MEDIA RELEASE

28 August 2017

WaterNSW and the MDBA acting on floods feedback:

Early Warning Network service improvements at Hume Dam

Since the 2016 floods that affected the River Murray, the Murray–Darling Basin Authority (MDBA) and WaterNSW have been working together to improve communications for landholders and the community immediately downstream of Hume Dam.

MDBA River Management Executive Director, David Dreverman, said that a particular focus has been on improving Hume Dam’s Early Warning Network (EWN) service in response to community feedback.

“Today WaterNSW is going live with an update of its EWN as it applies to Hume Dam. This update will give people notifications about any releases that occur whenever flows at Albury are overbank as well as any dam safety concerns that may arise,” Mr Dreverman said.

“We listened to feedback from the Murray River Action Group, caravan park owners, business people and farmers and the overwhelming concern was that there were insufficient updates on actual releases from Hume Dam during the last flood event.

“EWN notifications will start whenever releases from Hume, combined with Kiewa River flows exceed the channel capacity at the Doctors Point river level gauge. This corresponds to a total flow of about 25,000 ML/day. The EWN will then issue an updated notification advising the new Hume Dam release each time it is changed. Notifications will cease only when the flow at Doctors Point drops back below channel capacity.

“The new EWN service will result in more regular updates for EWN registered users on the specific flood-related releases that are taking place from the dam. Notifications triggered by particular flood levels at other downstream gauges will no longer be provided.

“The Hume Dam EWN’s sole purpose is to issue notifications about release rates from Hume Dam when total flow rates downstream are high. This could even be the case if dam releases are quite low but there are unusually high inflows from the Kiewa River.”

Mr Dreverman reminded the community that although the service will provide more frequent information on Hume Dam high releases, it is not a forecasting service.

“It is important to remember, the EWN does not include forecasting information. Actual river levels and impacts experienced downstream are highly dependent on additional factors, including someone’s particular location along the river and the amount of inflow from other rivers – particularly the Kiewa.

“We encourage floodplain landholders to have a plan for possible floods and include how they will access information to ensure they are prepared for flooding when it occurs. For example, the best way to receive rain forecasts and flood warnings is via the Bureau of Meteorology (BoM). The BoM website provides current readings of river levels at a range of sites downstream. Local SES websites are another way to receive more localised information and warnings as well,” Mr Dreverman said.

WaterNSW Executive Manager System Operations, Adrian Langdon said that the Hume Dam EWN was an opt-in service and everyone interested in dam releases is encouraged to register.

“To receive notifications for Hume Dam releases, people need to register. Existing members of the Hume Dam Early Warning Network service will be transferred to the updated Early Warning Network notifications. The existing Flood Advisory Service phone in message will be discontinued. We recommend registering with the updated Hume Dam Early Warning Network if not already registered.” Mr Langdon said.

The EWN is an automated notification system. When registering to receive notifications you select ‘Hume Dam’ and then select from the three different methods to receive notifications including SMS text, phone service – automated voice mails, and email alerts.

For more details about the EWN and how to register for Hume Dam notifications visit: <http://www.watarnsw.com.au/about/ewn>

ENDS

For more information, contact the MDBA Media office at media@mdba.gov.au or 02 6279 0141 or the WaterNSW Media contact: tony.webber@watarnsw.com.au or 0428 613 478

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31 August 2017

Managing Murray weir pool levels 2017-18

Weir pool levels will vary over the coming year. Landholders and river users along the River Murray are reminded to take into account changes to weir pool levels, and to adjust their activities, pumps and moorings accordingly. Boat owners should also note they are responsible for the safety of their vessels.

Managed variations to weir pools at locks 2, 5, 7, 8 and 9 are expected this year along with Lock 15 at Euston and at Lock 26 at Torrumbarry. Weir pool levels are generally more likely to be higher during winter and spring and lower during summer and autumn. However, levels could vary at any weir along the river and at various times during the year.

Changes to weir pool levels occur for numerous reasons including: periods of high water levels due to natural high flow events, periods of low water levels to allow for scheduled maintenance, and managed variations to water levels to restore a more natural wetting and drying cycle to the system.

The ranges within which weir pool levels are planned to vary are detailed in the table below.

Maximum expected range in pool levels

	Upper level	Lower level
Lock 2 (FSL=6.1m)	FSL +0.5m	To be determined
Lock 5 (FSL=16.3m)	FSL +0.45m	To be determined
Lock 6 (FSL=19.25m)	FSL +0.25	To be determined
Lock 7 (FSL=22.1m)	FSL +0.5m	FSL -0.9m
Lock 8 (FSL=24.6m)	FSL +0.8m	FSL -1m
Lock 9 (FSL=27.4m)	FSL +0.24m	FSL -0.1m
Lock 15 (FSL=47.6m)	FSL +0.6m	FSL -0.2m September–April, FSL -0.4m May–August
Lock 26 (FSL=86.05m)	FSL	FSL -0.1m September–April, FSL -0.5m May–August

The weir pool levels will continue to be managed for key needs including irrigation diversions, infrastructure maintenance, navigation and recreation. The Murray–Darling Basin Authority (MDBA) will support, whenever possible, major recreational events such as the Robinvale Ski Classic and Southern 80 ski race.

River users can keep up to date with current weir pool levels by viewing River Murray data at <https://riverdata.mdba.gov.au> and can keep in touch with upcoming changes by registering to receive the free River Murray [weekly report](#).

The MDBA will issue further advice if there are any significant changes to the above.

River users wanting more information can contact the MDBA on (02) 6279 0100.

ENDS

MDBA Media office: media@mdba.gov.au or 02 6279 0141

Twitter: twitter.com/MD_Basin_Auth Facebook: facebook.com/MDBAuth

For further information on South Australian weir pool manipulations, please email samdbenquiries@sa.gov.au. For weekly updates download the [River Murray Flow Report](#).