



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 16TH MARCH 2016

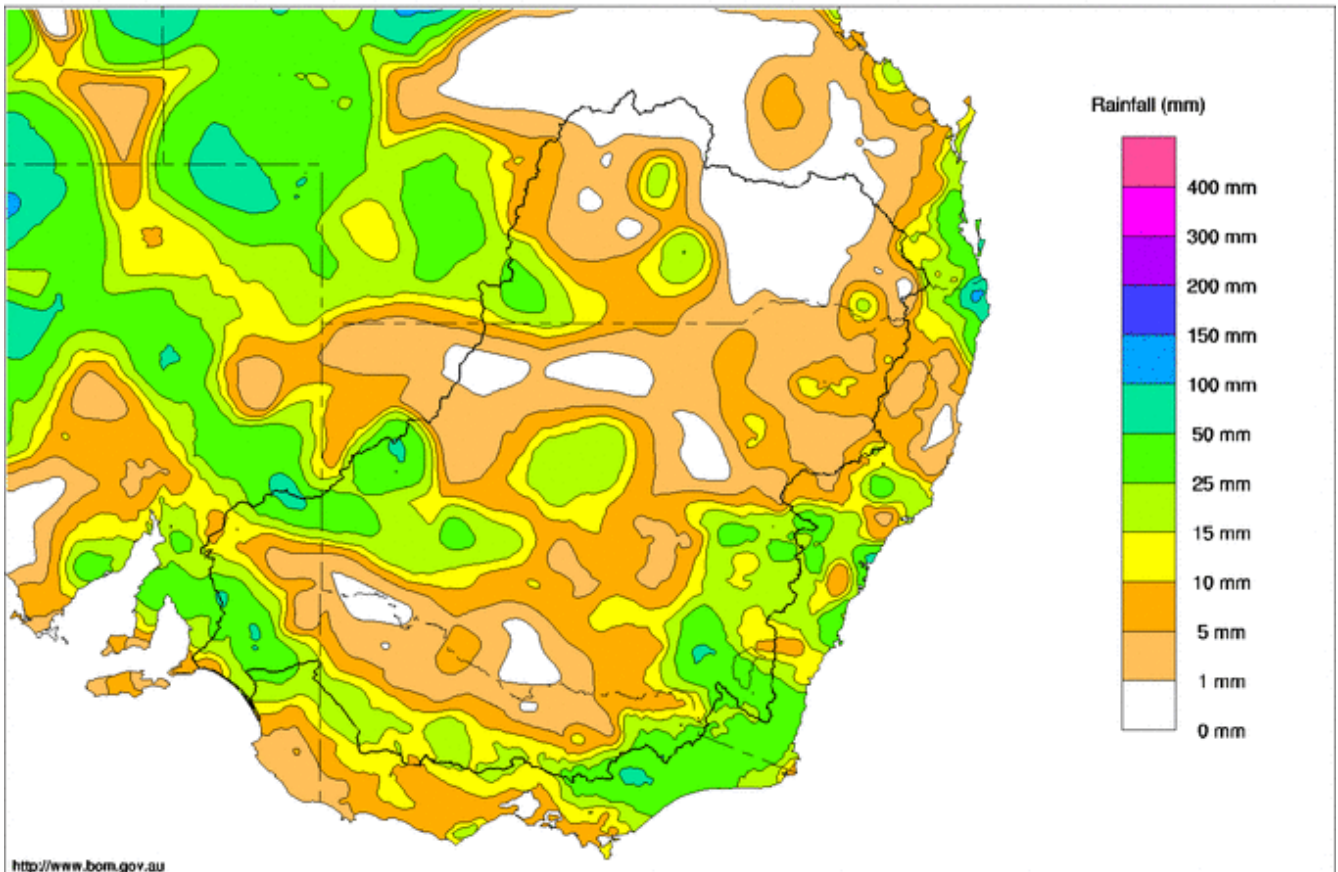
Trim Ref: D16/11631

Rainfall and inflows

Patchy showers and storms developed across parts of the Murray-Darling Basin as hot and humid air persisted over the region until late in the week. The rain was associated with a near-stationary trough that brought moderate falls across south-eastern NSW, south-western Queensland and the far western Basin, including parts of South Australia's lower Murray valley. Weekly totals above 25 mm were recorded over Victoria's north-eastern ranges and the NSW central tablelands (Map 1).

Highest weekly rainfall totals in South Australia included 65 mm at Sutherlands, 57 mm at Truro, 48 mm at Claypans and 25 mm on the Murray at Blanchetown. Totals in NSW included 62 mm at Cootamundra, 59 mm at Tumut and 50 mm at Gundagai. In Victoria there was 45 mm recorded at Omeo, 44 mm at Hinnomunjie and 32 mm at Gibbo Park; while in Queensland, an isolated storm late in the week dumped 72 mm at Cunnamulla.

Murray-Darling Rainfall Totals (mm) Week Ending 16th March 2016
Australian Bureau of Meteorology



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Map 1 - Murray-Darling Basin rainfall week ending 16th March 2016 (Source: Bureau of Meteorology)

Stream flow responses along the upper Murray tributaries were once again very limited due to the current dry catchments and recent hot weather. The best responses were along the upper Murray and Mitta Mitta Rivers. On the upper Murray at Biggara, the flow increased from 180 to 260 ML/day. On the Mitta Mitta River at Hinnomunjie bridge, the flow increased from around 100 ML/day to a peak just over 200 ML/day.



River operations

- Blue-green algae alerts continue at several locations;
- Environmental release on the Goulburn River reaches the Murray;
- Weir pool level reduction planned in April at Euston Weir.

Red alerts for blue-green algae continue along reaches from Hume Reservoir downstream to Murrabit and for the entire Edward Wakool system. The alerts apply to the main channel of the river as well as many anabranches and connected lakes and wetlands. More information is available from the [MDBA website](#) as well as [Goulburn Murray Water](#) and [NSW DPI](#).

MDBA continues to do what it can to reduce the impact of this event. Whilst water temperatures have begun to decline in recent days, it is possible that a significant break down in the algae will not occur until a change to weather conditions over the Murray valley brings increased wind, cloud and rainfall.

MDBA total storage decreased by 81 GL this week, with the active storage now 2,684 GL (32% capacity).

At **Dartmouth Reservoir**, the storage volume decreased by only 1 GL to 1,702 GL (44% capacity). The release from Dartmouth, measured at Colemans, remains at 600 ML/day. A similar release rate is planned for the coming week.

At **Hume Reservoir**, the storage volume decreased by 53 GL to 876 GL (29% capacity). The storage is currently forecast to continue decreasing during the coming weeks and may be below 600 GL by the end of the irrigation season in May. The release from Hume Reservoir was increased slightly towards the end of the week in accordance with downstream demand requirements and is currently targeting a flow at Doctors Point of 14,500 ML/day.

Diversions from **Lake Mulwala** increased this week, with the diversion to the Yarrawonga Main Channel now at 2,100 ML/day. Diversions through Mulwala Canal have increased to 2,700 ML/day. Small volumes continue to be diverted through the Mulwala Canal and escaped into the Edward River to meet flow targets in the Edward-Wakool system. The downstream release from **Yarrawonga Weir** is currently 8,100 ML/day, however a slightly higher release rate is possible during the coming week and over the Easter period.

On the **Edward-Wakool** system, inflows from the Murray via the Edward River offtake have remained steady at around 1,550 ML/day; while at the Gulpa Creek offtake the inflow has decreased slightly as flows along the Murray fall away upstream. The current inflow to Gulpa Creek is 300 ML/day. Downstream at **Stevens Weir** the release is being decreased to a target of around 1,000 ML/day in accordance with downstream demand requirements. Diversions through the Wakool Main Canal have increased from around 300 to 600 ML/day.

On the **Goulburn River**, the flow at McCoys Bridge is currently increasing as a pulse of environmental water begins to arrive. This water will be delivered into the Murray during March with the maximum flow rate at McCoys Bridge expected to reach around 4,500 ML/day during the coming week.

On the **Campaspe River** at Rochester, the flow rate has increased from 30 to 110 ML/day. This increase is the result of a small pulse released from upstream. Peak flows from the release are expected to reach around 120 ML/day during the coming days.

At **Torrumbarry Weir**, the downstream flow dipped to around 4,500 ML/day during the week but is now starting to increase with the arrival of higher flows from upstream on the Goulburn River. The current flow is 5,000 ML/day, with flows close to 7,000 ML/day expected during the coming week. Diversions into National Channel decreased to around 2,300 ML/day during the week but have since increased again and are expected to be around 2,800 ML/day during the coming days.



Further downstream, inflows into the Murray from the lower **Murrumbidgee River** at Balranald have increased to around 1,200 ML/day. This flow is being boosted above the usual end of system target by the delivery of inter-valley trade (IVT) water to the Murray.

At **Euston Weir**, flows have remained fairly steady at around 5,700 ML/day. The weir pool level is currently at 47.63 m AHD, which is 3 cm above full supply and is expected to remain close to this level during the coming week. However, a reduction to the pool level is now being planned for a few weeks' time. During the first week of April, the level will be gradually reduced towards a target 20 cm below full supply (47.40 m AHD) as part of the on-going weir pool level variability trial. See the attached media release for more information.

On the Darling River system, flows resulting from rainfall in the northern Basin during January have started arriving at Wilcannia with the flow there increasing from 0 to 500 ML/day. These relatively modest flows have been moving down the Darling River at an even slower pace than usual due to the channel's dry condition following protracted low rainfall over much of the northern Basin during recent years. Only a small volume of water is expected to reach the **Menindee Lakes** from these flows, where the storage volume decreased this week by 1 GL to 51 GL (3% capacity).

At the confluence of the Darling and Murray Rivers at **Wentworth**, the flow is steady at around 4,000 ML/day but is expected to recede slightly during the next week or two before higher flows from the Goulburn River arrive towards the end of the month. The weir pool remains around 10 cm above full supply level to assist water users on the Lower Darling arm of the weir pool.

At **Lake Victoria**, the storage volume decreased by 27 GL to 300 GL (44% capacity). The flow into **South Australia** averaged 6,500 ML/day with similar flow rates expected during the coming week. Higher flow rates are anticipated towards the end of the month when the Goulburn environmental pulse arrives.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina remained steady at 0.58 m AHD. Releases through the barrages continue to be made mainly through the Tauwitchere barrage to maximise flow into the Coorong's North Lagoon. The current total barrage release is estimated at around 2,700 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 16 Mar 2016

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	444.88	1 702	44%	71	1 631	-1
Hume Reservoir	192.00	3 005	177.65	876	29%	23	853	-53
Lake Victoria	27.00	677	23.56	300	44%	100	200	-27
Menindee Lakes		1 731*		51	3%	(- -) #	0	-1
Total		9 269		2 929	32%	--	2 684	-81
Total Active MDBA Storage							32% ^	

Major State Storages

Burrinjuck Reservoir	1 026	404	39%	3	401	-25
Blowering Reservoir	1 631	583	36%	24	559	+44
Eildon Reservoir	3 334	1 243	37%	100	1 143	-48

* 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 15 Mar 2016

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2015
Lake Eucumbene - Total	1 714	n/a	Snowy-Murray	+30	588
Snowy-Murray Component	876	n/a	Tooma-Tumut	+7	164
Target Storage	1 410		Net Diversion	23	424
			Murray 1 Release	+27	781

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2015	Victoria	This Week	From 1 July 2015
Murray Irrig. Ltd (Net)	15.4	326	Yarrowonga Main Channel (net)	10.9	193
Wakool Sys Allowance	2.4	58	Torrumbarry System + Nyah (net)	16.4	393
Western Murray Irrigation	0.6	18	Sunraysia Pumped Districts	2.2	95
Licensed Pumps	6.9	158	Licensed pumps - GMW (Nyah+u/s)	1.2	35
Lower Darling	0.2	9	Licensed pumps - LMW	3.1	259
TOTAL	25.5	569	TOTAL	33.8	975

* 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 the delivery of additional environmental water.

Entitlement this month	186.0 *
Flow this week	45.5
Flow so far this month	114.3
Flow last month	266.4

(6 500 ML/day)

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

	Current	Average over the last week	Average since 1 August 2015
Swan Hill	70	70	70
Euston	-	-	-
Red Cliffs	110	120	120
Merbein	110	110	120
Burtundy (Darling)	1 790	1 760	1 190
Lock 9	110	100	130
Lake Victoria	200	200	210
Berri	190	190	210
Waikerie	210	210	280
Morgan	240	230	280
Mannum	290	300	320
Murray Bridge	320	320	340
Milang (Lake Alex.)	890	900	790
Poltalloch (Lake Alex.)	770	750	660
Meningie (Lake Alb.)	2 170	2 090	2 090
Goolwa Barrages	1 450	1 450	1 190



River Levels and Flows

Week ending Wednesday 16 Mar 2016

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	-	-	-	2 430	F	3 820	5 570
Jingellic	4.0	1.27	207.79	1 560	F	4 510	5 610
Tallandoon (Mitta Mitta River)	4.2	1.45	218.34	650	S	680	660
Heywoods	5.5	3.26	156.89	13 830	R	12 900	12 190
Doctors Point	5.5	2.96	151.43	14 340	F	13 570	12 680
Albury	4.3	1.99	149.43	-	-	-	-
Corowa	4.6	2.78	128.80	12 650	R	12 530	12 300
Yarrowonga Weir (d/s)	6.4	1.40	116.44	8 040	F	8 060	8 670
Tocumwal	6.4	1.97	105.81	8 130	F	8 310	9 130
Torrumbarry Weir (d/s)	7.3	1.74	80.29	5 040	R	4 910	4 710
Swan Hill	4.5	0.97	63.89	4 520	F	4 610	4 670
Wakool Junction	8.8	2.55	51.67	6 060	S	6 040	6 810
Euston Weir (d/s)	9.1	1.27	43.11	5 890	R	5 720	6 410
Mildura Weir (d/s)	-	-	-	5 110	F	5 140	5 930
Wentworth Weir (d/s)	7.3	2.87	27.63	4 080	R	4 010	4 770
Rufus Junction	-	3.47	20.40	6 340	R	6 140	7 010
Blanchetown (Lock 1 d/s)	-	0.61	-	4 510	R	4 530	5 150
Tributaries							
Kiewa at Bandiana	2.8	0.82	154.05	300	F	400	340
Ovens at Wangaratta	11.9	7.79	145.47	240	S	220	150
Goulburn at McCoys Bridge	9.0	2.37	93.79	2 590	R	1 300	690
Edward at Stevens Weir (d/s)	5.5	1.28	81.06	1 110	F	1 400	1 500
Edward at Liewah	-	2.12	57.50	1 400	F	1 460	1 900
Wakool at Stoney Crossing	-	1.38	54.87	350	S	340	340
Murrumbidgee at Balranald	5.0	1.58	57.54	1 170	F	1 140	630
Barwon at Mungindi	6.1	3.17	-	40	R	20	30
Darling at Bourke	9.0	4.03	-	110	F	190	630
Darling at Burtundy Rocks	-	0.53	-	0	F	0	0

Natural Inflow to Hume	830	490
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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	-0.21	+1.18
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.00	+0.00
No. 15 Euston	47.60	+0.03	-	No. 5 Renmark	16.30	+0.02	+0.18
No. 11 Mildura	34.40	+0.04	+0.16	No. 4 Bookpurnong	13.20	+0.01	+0.66
No. 10 Wentworth	30.80	+0.12	+0.23	No. 3 Overland Corner	9.80	+0.01	+0.18
No. 9 Kulnine	27.40	+0.08	-0.56	No. 2 Waikerie	6.10	+0.03	+0.07
No. 8 Wangumma	24.60	-0.57	-0.15	No. 1 Blanchetown	3.20	-0.07	-0.14

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.58
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Barrages

Fishways at Barrages

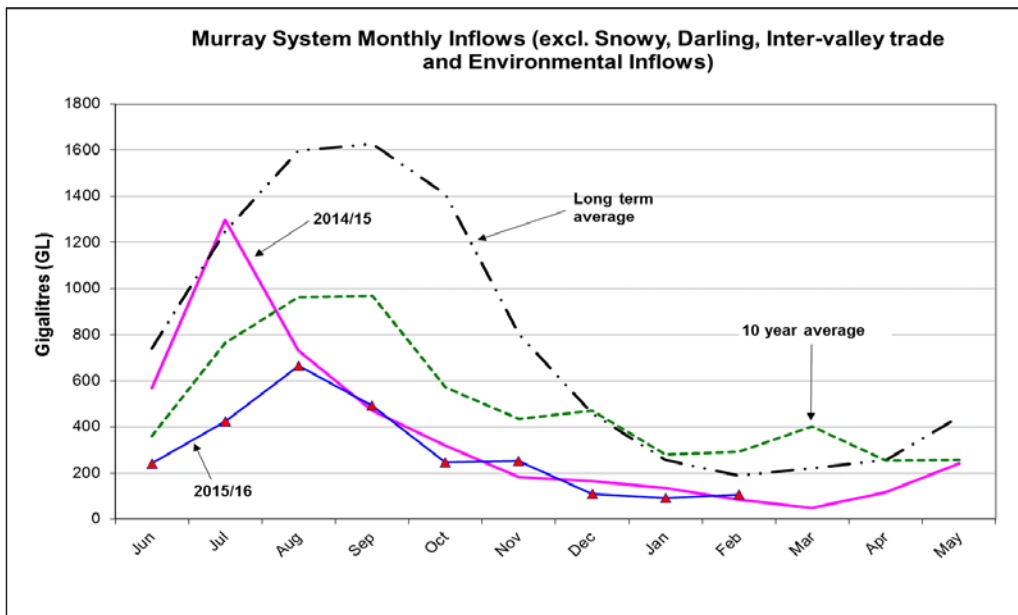
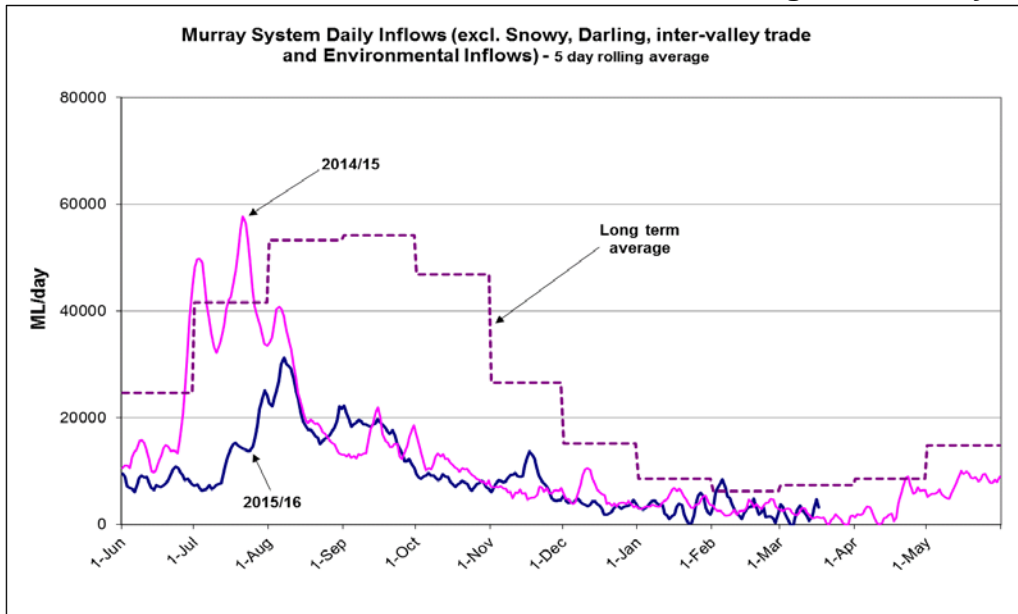
	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.57	All closed	-	Open	Open	-
Mundoo	26 openings	0.56	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.58	10	Open	Open	Open	-

* Mundoo Barrage Dual vertical slots are currently under construction.

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



Week ending Wednesday 16 Mar 2016



State Allocations (as at 16 Mar 2016)

NSW - Murray Valley

High security	97%
General security	23%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	37%

Victorian - Goulburn Valley

High reliability	90%
Low reliability	0%

NSW - Lower Darling

High security	75%
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/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>

VIC : <http://www.nvrm.net.au/allocations/current.aspx>

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

17 March 2016

Upcoming changes in mid-Murray weir pools

Landholders and river users on the River Murray are reminded to take into account changes to weir pool levels over the coming months at lock 15 at Robinvale and at locks 7, 8 and 9 between Wentworth and the South Australian border.

Weir pool levels historically have been kept at a reasonably constant height, however since August 2015 the MDBA has been varying these pool levels in a trial to restore a more natural wetting and drying cycle.

In April the Lock 15 weir pool will be gradually lowered to 20cm below full supply level (FSL). It will be lowered a further 10 cm to 30cm below FSL in May.

At locks 7, 8 and 9 the weir pools are currently below FSL. These pools will be gradually raised back to FSL during autumn.

The table below outlines the plan on a month-by-month basis. These are indicative water levels only; actual river operations may differ.

Weir pool level relative to full supply level (metres)

Month	Lock 7	Lock 8	Lock 9	Lock 15
March	-0.25	-0.60	-0.10	0
April	-0.25	-0.25	-0.10	-0.20
May	0	0	0	-0.30
June	0	0	0	-0.30

The trial to restore a more natural wetting and drying cycle is being conducted by the MDBA in cooperation with NSW, Victorian and South Australian state agencies and environmental water holders.

The MDBA will issue further advice if there are any significant changes to the plan, which will also be available on the MDBA website <http://www.mdba.gov.au/media/media-releases>

River users wanting more information on river heights can contact the MDBA on (02) 6279 0100 or receive updates at the River Murray weekly report <http://www.mdba.gov.au/river-information/weekly-reports>

Live river data for the River Murray system can be seen at: <http://livedata.mdba.gov.au>

ENDS

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

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