



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 25TH MAY 2016

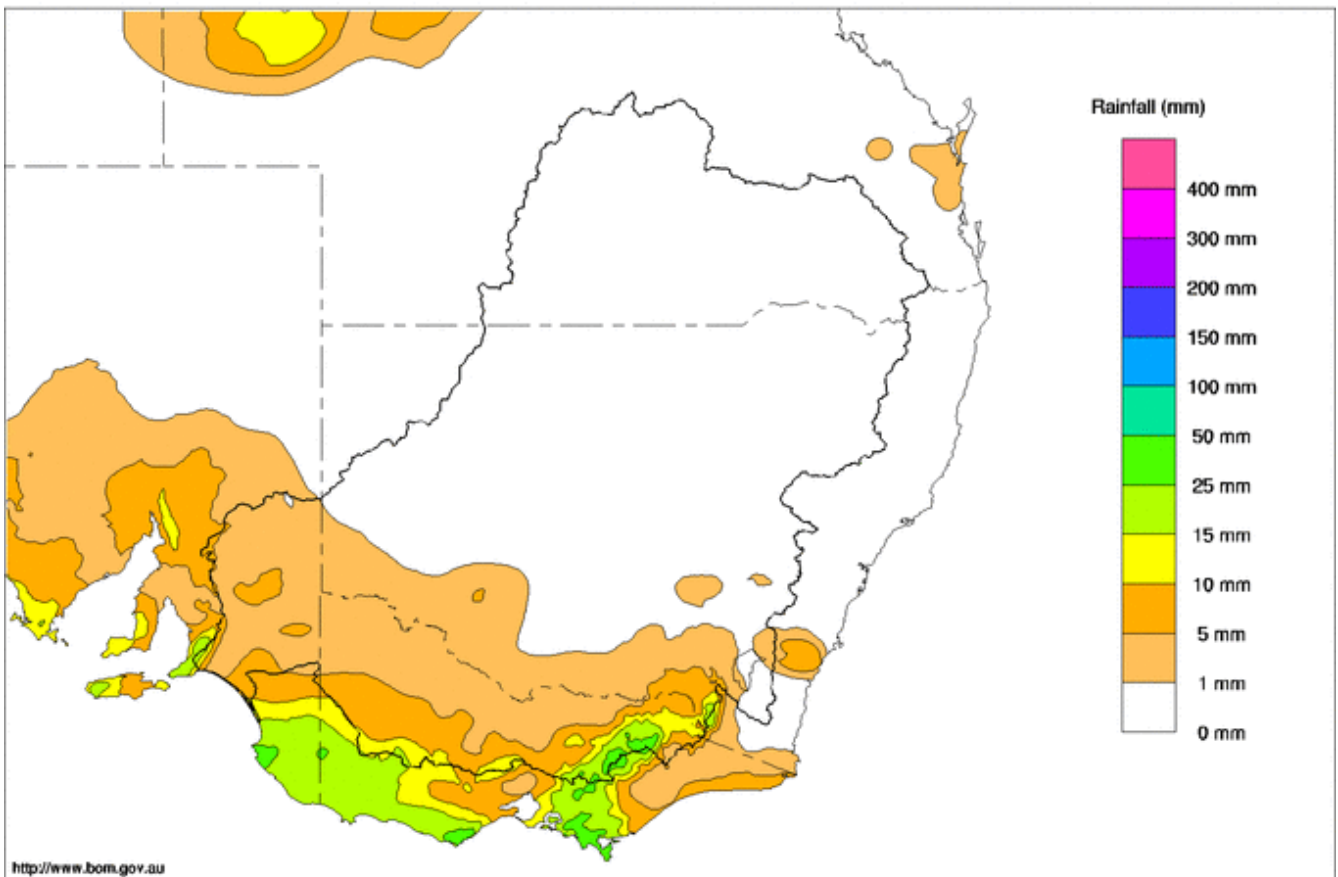
Trim Ref: D16/18385

Rainfall and inflows

Cold fronts and a westerly air stream continued to provide the main influence on weather in the southern Murray-Darling Basin this week, while stable high pressure and dry conditions persisted in the north. Rainfall was mostly light across Victoria, southern South Australia and the far south of NSW, although higher totals were once again recorded over the Victorian divide and the NSW Snowy Mountains (Map 1).

The highest totals fell in Victoria's north-east ranges and included 50 mm at Mt Buller, 39 mm at Mt Buffalo and 36 mm at Mt Hotham. In western Victoria, there was 25 mm at Mt William. In NSW, totals over the Snowy Mountains were generally less than 25 mm.

Murray-Darling Rainfall Totals (mm) Week Ending 25th May 2016
Australian Bureau of Meteorology



© Commonwealth of Australia 2016, Australian Bureau of Meteorology

Issued: 25/05/2016

Map 1 - Murray-Darling Basin rainfall week ending 25th May 2016 (Source: Bureau of Meteorology)

Flows have receded only slightly along the upper system tributaries helped by the rain falling across the catchments. On the upper Murray, the flow at Biggara is currently 450 ML/day and has averaged around 500 ML/day. On the Mitta Mitta River, the flow at Hinnomunjie bridge is currently around 800 ML/day and has averaged 800 ML/day over the past week. On the Ovens River, the flow at Wangaratta receded from 1,800 to 1,400 ML/day during the week, but has since increased to 1,500 ML/day.



River operations

- Red alerts continuing for blue-green algae between Yarrowonga and the SA border
- Water NSW currently lowering Stevens Weir pool level

Red alerts for blue-green algae remain in place along the Murray from Yarrowonga Weir downstream to Lock 9. The alerts apply to the main channel of the river as well as many anabranches and connected lakes and wetlands. Non-toxic blue-green algae has also been detected in South Australian reaches of the Murray. More information is available from [NSW DPI](#), [Goulburn Murray Water](#), [SA DEWNR](#) and the [MDBA website](#).

Total MDBA storage increased by 54 GL this week, with the active storage now 2,476 GL (29% capacity). With the irrigation season finished, releases from the upper Murray storages have been wound back to minimums and operations are moving into what has traditionally been called storing mode.

At **Dartmouth Reservoir**, the storage volume increased 8 GL to 1,707 GL (44% capacity) and at **Hume Reservoir**, the storage volume increased 28 GL to 690 GL (23% capacity).

At **Lake Mulwala** the pool level is currently at 124.77 m AHD, which is within the normal operating range. Releases downstream of Yarrowonga reduced from 5,400 ML/day to 3,900 ML/day over the week as inflows from the Ovens and Kiewa Rivers receded.

In the **Edward-Wakool** system, the gates at both Edward River and Gulpa Creek offtakes remain clear of the water allowing unimpeded fish passage. In response to the falling River Murray level at Picnic Point this week, flow into the Edward River decreased from 1,300 to 700 ML/day and flow into Gulpa Creek decreased from 300 to 200 ML/day. Flows through both offtakes are expected to reduce further during the coming week. At **Stevens Weir**, Water NSW is continuing to lower the weir pool. The level has so far reduced by around 1 metre to the current level of 3.51 m on the local gauge (Figure 1). The gates are expected to be lifted clear of the water during the coming week.



Figure 1 –Stevens weir pool on the Edward River (viewed from the Deniliquin town bridge) undergoes its winter draw down exposing the river banks. A green tinge is visible in the water due to the continuing presence of blue green algae, however it is hoped that recent rain and cooler weather will help clear blue-green algae. Photo: Adam McLean, MDBA.



On the **Goulburn River**, the flow at McCoys Bridge eased slightly to around 800 ML/day as flow in the unregulated creeks in the lower Goulburn catchment receded. This flow is also being boosted by the release of small volumes of environmental water downstream of Goulburn Weir. This release aims to maintain a base flow in the lower Goulburn River and is expected to continue into June if conditions remain dry.

At **Torrumbarry Weir**, the pool level continues to be reduced and is now at 85.81 m AHD or 24 cm below the full supply level (FSL). The pool level will continue to be gradually lowered until it reaches around 40 cm below FSL at the end of May. Diversions to National Channel recommenced late in the week. Around 300 ML/day of environmental water is being diverted to provide [base flows in Gunbower Creek](#). This flow will maintain connectivity and flowing habitat in the creek during the non-irrigation season to benefit native fish populations. The flow downstream of Torrumbarry Weir reached a peak of around 6,300 ML/day over the weekend and is currently 5,100 ML/day.

Further downstream, inflows to the Murray from the **Murrumbidgee River** at Balranald are above the normal end-of-system target as Water NSW lowers Hay and Redbank Weirs to undertake [essential maintenance works](#). The flow is currently around 1,300 ML/day, but is expected to increase to around 2,300 ML/day over the coming week as the flow is boosted by a small volume of rainfall generated tributary inflows (following rain two weeks ago in the upper Murrumbidgee catchment).

Downstream at **Euston Weir**, the flow is rising and is expected to peak at about 9,500 ML/day at the start of June. The pool level continues to be maintained around 30 cm below FSL as part of the ongoing [weir pool level variability trial](#).

On the Darling River system, heavy local rainfall two weeks ago generated a temporary pulse of around 1,000 ML/day at Louth. This pulse flowed past Wilcannia this week, peaking around 200 ML/day over the weekend. Only a very small volume of this water is expected to flow into the **Menindee Lakes**, where the storage volume decreased to 48 GL (3% capacity), [see latest NSW DPI management update](#).

At the confluence of the Darling and Murray Rivers at **Wentworth**, the flow receded over the week to around 6,300 ML/day. Flows are expected to rise during the coming week to around 8,000 ML/day. The weir pool is currently around the full supply level of 30.80 m AHD.

At **Lake Victoria**, the storage volume increased by 20 GL to 273 GL (40% capacity) and will continue to rise over the coming weeks.

The flow into **South Australia** remains at around 3,000 ML/day with a similar flow expected for the remainder of May. Downstream at Lock 1, the flow has averaged around 2,100 ML/day during the past week.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina has remained steady at around 0.57 m AHD. Bursts of strong winds and very large swells continue to affect operations at the **Barrages**. The barrage gates have mostly remained closed in recent weeks to prevent the reverse flow of seawater into the Lower Lakes. However, on a few occasions when conditions have allowed, a number of gates have been opened at Mundoo, Ewe Island and Tauwitthere barrages during the period around low tide to provide a short-lived flushing flow into the Coorong.

More information regarding flows and system operations in South Australia is available in the [River Murray Flow Report](#) published each week by South Australia's Department of Environment, Water and Natural Resources (DEWNR).

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



Water in Storage

Week ending Wednesday 25 May 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	445.00	1 707	44%	71	1 636	+8
Hume Reservoir	192.00	3 005	175.71	690	23%	23	667	+28
Lake Victoria	27.00	677	23.28	273	40%	100	173	+20
Menindee Lakes		1 731*		48	3%	(- -) #	0	-1
Total		9 269		2 718	29%	--	2 476	+54
Total Active MDBA Storage							29% ^	

Major State Storages

Burrinjuck Reservoir	1 026	342	33%	3	339	+1
Blowering Reservoir	1 631	850	52%	24	826	+32
Eildon Reservoir	3 334	1 050	31%	100	950	+5

* 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 24 May 2016

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2016
Lake Eucumbene - Total	1 375	n/a	Snowy-Murray	+11	41
Snowy-Murray Component	855	n/a	Tooma-Tumut	+3	15
Target Storage	1 290		Net Diversion	8	26
			Murray 1 Release	+14	58

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)	-1.1	443	Yarrowonga Main Channel (net)	0	247
Wakool Sys Allowance	1.5	88	Torrumbarry System + Nyah (net)	0	499
Western Murray Irrigation	0.0	20	Sunraysia Pumped Districts	0.4	105
Licensed Pumps	0.6	201	Licensed pumps - GMW (Nyah+u/s)	2.2	46
Lower Darling	0.1	10	Licensed pumps - LMW	5.4	296
TOTAL	1.1	762	TOTAL	8	1193

* 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 Lower than normal for this month due to SA entitlement deferral.

Entitlement this month	93.0 *
Flow this week	21.1
Flow so far this month	73.7
Flow last month	159.5

(3 000 ML/day)

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

	Current	Average over the last week	Average since 1 August 2015
Swan Hill	80	80	70
Euston	90	90	-
Red Cliffs	100	100	120
Merbein	100	100	120
Burtundy (Darling)	1 730	1 730	1 320
Lock 9	110	110	120
Lake Victoria	210	210	210
Berri	270	260	210
Waikerie	270	270	270
Morgan	250	240	260
Mannum	290	290	310
Murray Bridge	290	290	330
Milang (Lake Alex.)	790	820	800
Poltalloch (Lake Alex.)	720	810	670
Meningie (Lake Alb.)	2 100	2 090	2 110
Goolwa Barrages	5 330	6 130	1 670



River Levels and Flows

Week ending Wednesday 25 May 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	-	-	-	2 790	F	3 070	4 820
Jingellic	4.0	1.61	208.13	3 470	F	4 070	7 960
Tallandoon (Mitta Mitta River)	4.2	1.43	218.32	620	F	660	1 140
Heywoods	5.5	1.50	155.13	600	S	600	600
Doctors Point	5.5	1.68	150.15	2 150	R	2 320	3 330
Albury	4.3	0.82	148.26	-	-	-	-
Corowa	4.6	0.75	126.77	2 040	F	2 370	3 590
Yarrowonga Weir (d/s)	6.4	0.75	115.79	3 890	F	4 340	5 690
Tocumwal	6.4	1.31	105.15	4 080	F	4 850	5 280
Torrumbarry Weir (d/s)	7.3	1.76	80.31	5 110	F	5 720	4 510
Swan Hill	4.5	1.24	64.16	6 240	R	5 740	5 280
Wakool Junction	8.8	2.95	52.07	7 900	R	7 170	7 120
Euston Weir (d/s)	9.1	1.58	43.43	7 920	R	7 190	7 710
Mildura Weir (d/s)	-	-	-	6 910	F	6 990	7 520
Wentworth Weir (d/s)	7.3	2.93	27.69	6 280	S	6 550	7 180
Rufus Junction	-	2.86	19.79	2 870	R	2 670	2 620
Blanchetown (Lock 1 d/s)	-	0.44	-	2 230	R	2 120	2 330
Tributaries							
Kiewa at Bandiana	2.8	1.64	154.87	1 460	R	1 660	2 740
Ovens at Wangaratta	11.9	8.37	146.05	1 480	R	1 470	3 000
Goulburn at McCoys Bridge	9.0	1.42	92.84	820	F	910	850
Edward at Stevens Weir (d/s)	5.5	1.38	81.16	1 220	F	1 150	1 270
Edward at Liewah	-	2.21	57.59	1 510	R	1 190	770
Wakool at Stoney Crossing	-	1.56	55.05	740	R	660	590
Murrumbidgee at Balranald	5.0	1.69	57.65	1 290	R	1 080	640
Barwon at Mungindi	6.1	3.08	-	0	F	0	10
Darling at Bourke	9.0	3.73	-	0	F	0	0
Darling at Burtundy Rocks	-	0.59	-	0	F	0	0

Natural Inflow to Hume	4 360	10 730
------------------------	-------	--------

(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	-0.13	-	No. 7 Rufus River	22.10	+0.04	+0.55
No. 26 Torrumbarry	86.05	-0.24	-	No. 6 Murtho	19.25	-0.05	-0.03
No. 15 Euston	47.60	-0.27	-	No. 5 Renmark	16.30	+0.04	+0.12
No. 11 Mildura	34.40	+0.02	+0.14	No. 4 Bookpurnong	13.20	+0.05	+0.31
No. 10 Wentworth	30.80	+0.02	+0.29	No. 3 Overland Corner	9.80	+0.01	+0.12
No. 9 Kulnine	27.40	+0.03	-0.01	No. 2 Waikerie	6.10	+0.06	-0.02
No. 8 Wangumma	24.60	+0.00	+0.06	No. 1 Blanchetown	3.20	-0.08	-0.31

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.57
--	------

Barrages

Fishways at Barrages

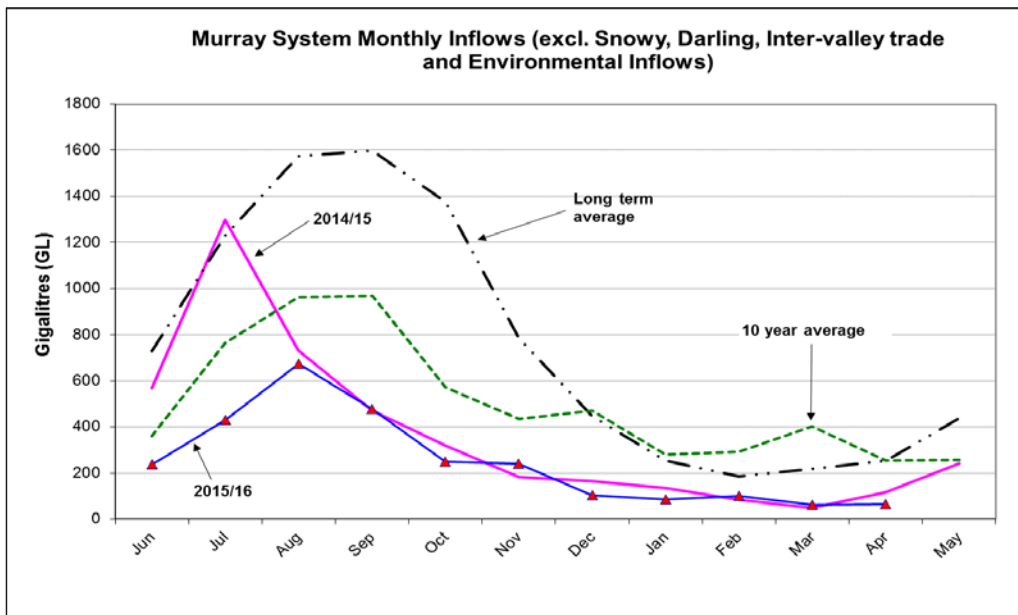
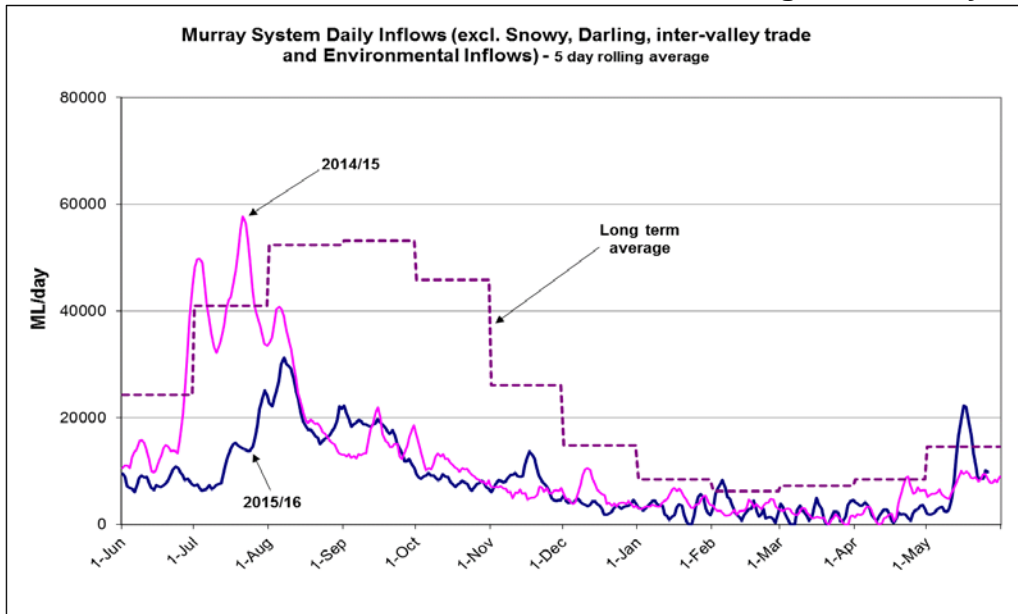
	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.54	All closed	-	Open	Open	-
Mundoo	26 openings	0.52	All closed	-	-	-	Closed
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.62	All closed	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 25 May 2016



State Allocations (as at 25 May 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	80%
General security	0%

South Australia - Murray Valley

High security	100%
---------------	------

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>