



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 11 DECEMBER 2013

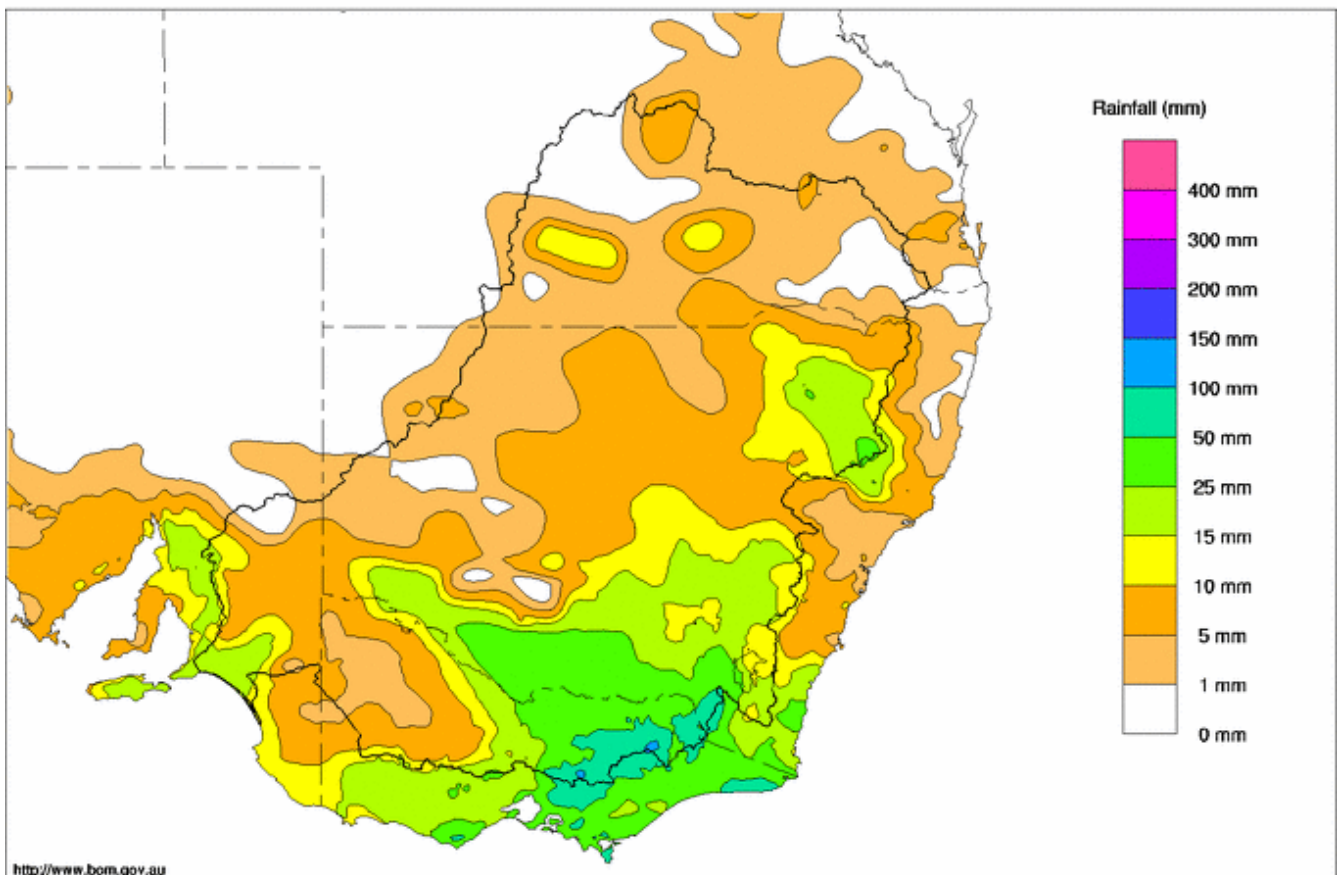
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Rainfall and Inflows

A strong frontal system and associated rain band crossed the southern Murray-Darling Basin at the beginning of this week bringing good falls of rain along much of the Murray Valley and heavy rain and unseasonal snowfalls to the south-east ranges. A second weaker cold front crossed late in the week bringing light rain that was mainly restricted to the far south (Map 1).

The highest rain totals were recorded in central and north-eastern Victoria with 104 mm at Mt Buffalo, 89 mm at Mt Hotham, 76 mm at Mt Wombat, 74 mm at Falls Creek, 68 mm at Lake William Hovell and Taggerty and 59 mm at Lake Eildon. In NSW, there were totals between 50 and 100 mm over the Snowy Mountains. There were also decent totals recorded over northern Victoria and in the NSW Riverina including 47 mm at Moulamein, 46 mm at Deniliquin and Finley, 43 mm at Wanganella, 34 mm at Yarrawonga Weir and 33 mm at Albury.

Murray-Darling Rainfall Totals (mm) Week Ending 11th December 2013
Product of the National Climate Centre



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Map 1 - Murray-Darling Basin rainfall for the week ending 11 December 2013 (Source: Bureau of Meteorology).

Streamflows in the upper Murray System tributaries peaked early in the week and have since receded. On the Mitta Mitta River, the flow at Hinnomunjie Bridge receded from a peak of 3,200 ML/day to the current flow of 720 ML/day. On the upper Murray, the flow at Jingellic reached a peak of just under 10,000 ML/day and is now flowing at 6,300 ML/day. On the Ovens River, the flow at Wangaratta increased from 900 to 2,700 ML/day and is now flowing at 1,500 ML/day.



River Operations

MDBA active storage decreased by 46 GL this week and is currently 6,893 GL, or 80% capacity.

At Dartmouth Reservoir, the storage volume has decreased by 17 GL to 3,758 GL (97% capacity). The release (measured at Colemans), currently 5,000 ML/day due to 'harmony transfers' from Dartmouth to Hume Reservoirs, will reduce to 4,000 ML/day from Wednesday 18 December. At Hume Reservoir, the storage volume increased by 7 GL to 2,352 GL (78% capacity) due to increased inflows and reduced demand following rain earlier in the week, however the storage level is now falling again. Inflows peaked around 15,000 ML/day. The release is 12,000 ML/day and increasing in response to rising downstream demand.

At Yarrowonga Weir, the widespread rain reduced the total daily diversion through Mulwala Canal and Yarrowonga Main Channel to around 700 ML/day during the week. However, diversions are now increasing again (currently 3,300 ML/day) and forecast warm and dry conditions are likely to see diversions increase to around 5,000 ML/day in the coming week. The level in Lake Mulwala is currently 124.80 m AHD (10 cm below FSL). Prior to the rain flows downstream of Yarrowonga Weir were gradually reducing toward channel capacity as delivery of environmental water for the benefit of the Barmah-Millewa Forest concluded. However, rainfall and the reduction in demand caused flows to briefly return to 15,000 ML/day. The flow is now 10,500 ML/day (about channel capacity).

On the Edward River system, the combined inflow through the Edward and Gulpa offtakes increased during the week to around 2,900 ML/day due to higher flows in the River Murray. Diversions to the Wakool Main Canal reduced to around 160 ML/day during the week, increasing to 400 ML/day by the end of the week. The flow downstream of Stevens Weir averaged close to 1,900 ML/day.

On the Goulburn River, the flow at McCoys Bridge increased to 7,000 ML/day. The flow is expected to peak around 7,400 ML/day in the coming week as further environmental water is delivered. At Torrumbarry Weir, diversion to National Channel continued at 2,000 ML/day. The flow downstream in the Murray has increased to 15,400 ML/day. On the lower Murrumbidgee River, flow at Balranald averaged around 700 ML/day.

On the Darling River, storage in Menindee Lakes fell by 50 GL to 859 GL (50% capacity). Release (at Weir 32) is currently 2,000 ML/day and will peak around 3,400 ML/day next week. The release has been increased to transfer water from the Menindee Lakes to the River Murray to meet demands over the coming months. Menindee Lakes are operated in conjunction with Lake Victoria to increase overall water security for NSW, Victoria and South Australia whilst also considering the security of water supply in the Lower Darling and for Broken Hill should there be a return to extreme dry conditions.

The release of environmental water from Lake Cawndilla into the Great Darling Anabranch ceased this week. In the lower reaches of the Anabranch, the red alert warning for toxic blue-green algae at Tara Downs is still in place. More information can be viewed at <http://www.water.nsw.gov.au/About-us/Media-Releases/default.aspx#racc>.

Storage in Lake Victoria increased by 13 GL to 598 GL (88% capacity). Increased flow in the Murray following this week's rain means the Lake is likely to remain around this level during December. Flow to South Australia averaged around 13,100 ML/day and is expected to reduce to 9,500 ML/day in the coming week before rising to 14,000 ML/day in another pulse in late December. The flow remains above the normal entitlement due to the delivery of additional traded environmental water.

At the Lower Lakes, the 5-day average level for Lake Alexandrina is 0.72 m AHD. Flow into the Coorong through the Barrages is currently around 2,000 ML/day. Releases will be managed over the coming weeks to gradually raise the level in the Lower Lakes to 0.8 m AHD by early January.

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
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Water in Storage

Week ending Wednesday 11 Dec 2013

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	484.50	3 758	97%	71	3 687	-17
Hume Reservoir	192.00	3 005	188.52	2 352	78%	23	2 329	+7
Lake Victoria	27.00	677	26.34	598	88%	100	498	+13
Menindee Lakes		1 731*		859	50%	(480 #)	379	-50
Total		9 269		7 567	82%	--	6 893	-46
Total Active MDBA Storage							80% ^	

Major State Storages

Burrinjuck Reservoir	1 026	660	64%	3	657	+1
Blowering Reservoir	1 631	1 453	89%	24	1 429	+6
Eildon Reservoir	3 334	2 990	90%	100	2 890	-26

* Menindee surcharge capacity – 2050 GL

** All Data is rounded to nearest GL **

NSW takes control of Menindee Lakes when storage falls below 480 GL, and control reverts to MDBA when storage next reaches 640 GL

^ % of total active MDBA storage

Snowy Mountains Scheme

Snowy diversions for week ending 10 Dec 2013

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2013
Lake Eucumbene - Total	1 730	n/a	Snowy-Murray	+18	550
Snowy-Murray Component	797	n/a	Tooma-Tumut	+4	222
Target Storage	1 510		Net Diversion	14	328
			Murray 1 Release	+18	817

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2013	Victoria	This Week	From 1 July 2013
Murray Irrig. Ltd (Net)	7.7	472	Yarrowonga Main Channel (net)	1.7	142
Wakool Sys Allowance	0.7	8	Torrumbarry System + Nyah (net)	9.7	212
Western Murray Irrigation	0.3	10	Sunraysia Pumped Districts	1.3	46
Licensed Pumps	3.2	95	Licensed pumps - GMW (Nyah+u/s)	0.3	11
Lower Darling	4.7	130	Licensed pumps - LMW	7.5	107
TOTAL	16.6	715	TOTAL	20.5	518

* Figures derived from estimates and monthly data. 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	217.0 *
Flow this week	91.7
Flow so far this month	139.9
Flow last month	388.8

(13 100 ML/day)

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

	Current	Average over the last week	Average since 1 August 2013
Swan Hill	70	80	90
Euston	80	90	100
Red Cliffs	110	110	110
Merbein	110	110	120
Burtundy (Darling)	560	570	510
Lock 9	160	160	140
Lake Victoria	220	210	270
Berri	220	220	260
Waikerie	320	300	320
Morgan	230	230	310
Mannum	240	240	360
Murray Bridge	260	250	380
Milang (Lake Alex.)	650	630	640
Poltalloch (Lake Alex.)	450	410	550
Meningie (Lake Alb.)	2 660	2 690	2 590
Goolwa Barrages	770	880	1 550



River Levels and Flows

Week ending Wednesday 11 Dec 2013

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	-	-	-	4 650	F	5 550	2 700
Jingellic	4.0	1.96	208.48	6 260	F	6 550	4 660
Tallandoon (Mitta Mitta River)	4.2	2.66	219.55	5 230	F	5 260	2 670
Heywoods	5.5	2.77	156.40	11 700	R	10 420	15 740
Doctors Point	5.5	2.80	151.27	12 420	R	11 270	16 270
Albury	4.3	1.79	149.23	-	-	-	-
Corowa	3.8	2.47	128.49	10 580	R	12 840	17 550
Yarrowonga Weir (d/s)	6.4	1.79	116.83	11 050	F	13 320	14 290
Tocumwal	6.4	2.70	106.54	12 540	F	13 350	14 450
Torrumbarry Weir (d/s)	7.3	4.51	83.06	15 230	R	12 930	11 330
Swan Hill	4.5	2.23	65.15	12 180	R	10 820	12 680
Wakool Junction	8.8	4.11	53.23	12 640	R	12 910	14 930
Euston Weir (d/s)	8.8	2.19	44.03	11 660	F	13 720	14 480
Mildura Weir (d/s)	-	-	-	-	-	-	-
Wentworth Weir (d/s)	7.3	3.30	28.06	12 470	F	14 480	11 410
Rufus Junction	-	4.35	21.28	12 350	F	12 550	11 340
Blanchetown (Lock 1 d/s)	-	0.99	-	10 470	S	10 250	9 300
Tributaries							
Kiewa at Bandiana	2.7	1.16	154.39	710	F	970	790
Ovens at Wangaratta	11.9	8.38	146.06	1 520	R	1 810	1 090
Goulburn at McCoys Bridge	9.0	4.38	95.80	6 960	R	6 030	1 320
Edward at Stevens Weir (d/s)	-	1.76	81.53	1 660	F	1 880	1 240
Edward at Liewah	-	2.00	57.38	1 330	S	1 320	1 300
Wakool at Stoney Crossing	-	1.69	55.18	1 160	S	1 200	1 200
Murrumbidgee at Balranald	5.0	1.24	57.20	850	R	710	850
Barwon at Mungindi	-	3.13	-	10	F	90	60
Darling at Bourke	-	4.02	-	110	S	140	150
Darling at Burtundy Rocks	-	0.81	-	300	S	370	200

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	6 580	3 960
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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	-0.07	-	No. 7 Rufus River	22.10	-0.02	+2.01
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.02	+0.59
No. 15 Euston	47.60	+0.03	-	No. 5 Renmark	16.30	+0.04	+0.55
No. 11 Mildura	34.40	+0.03	+0.44	No. 4 Bookpurnong	13.20	+0.09	+1.34
No. 10 Wentworth	30.80	+0.03	+0.66	No. 3 Overland Corner	9.80	+0.04	+0.57
No. 9 Kulnine	27.40	+0.00	+0.17	No. 2 Waikerie	6.10	-0.05	+0.55
No. 8 Wangumma	24.60	-0.01	+0.17	No. 1 Blanchetown	3.20	+0.02	+0.24

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.72
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Barrages

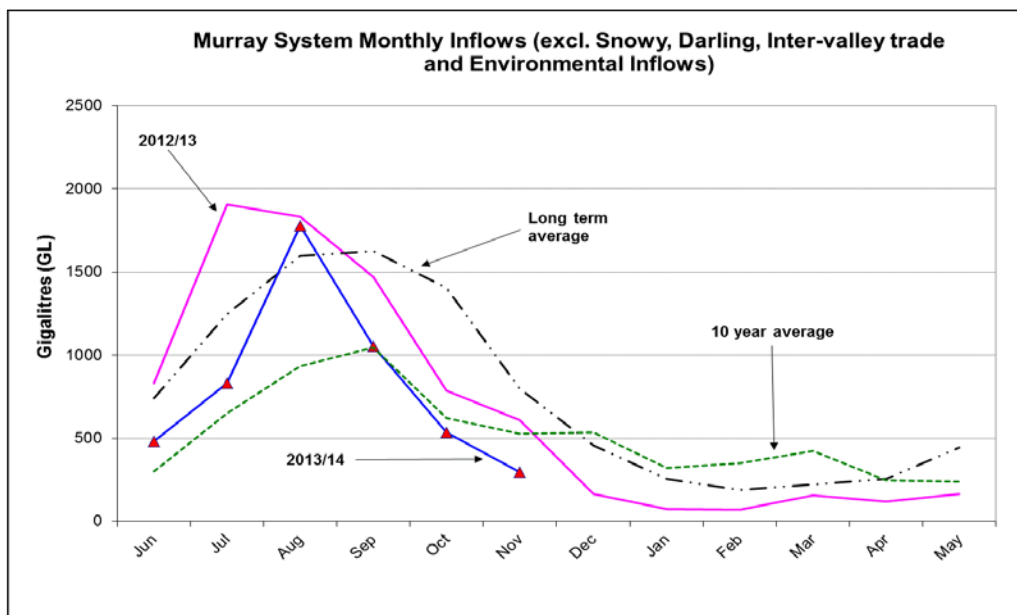
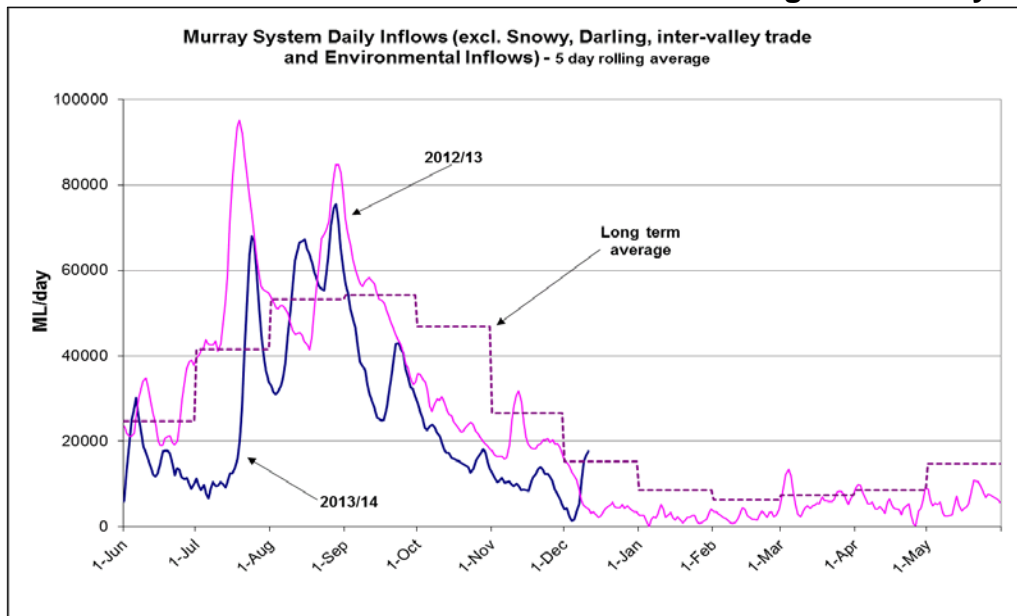
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.63	3	-	Open
Mundoo	26 openings	0.66	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	0.67	9	Open	Open

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



Week ending Wednesday 11 Dec 2013



State Allocations (as at 11 Dec 2013)

NSW - Murray Valley

High security	100%
General security	100%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	47%

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/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>

VIC : <http://www.g-mwater.com.au/water-resources/allocations/current.asp>

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