



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 6 NOVEMBER 2013

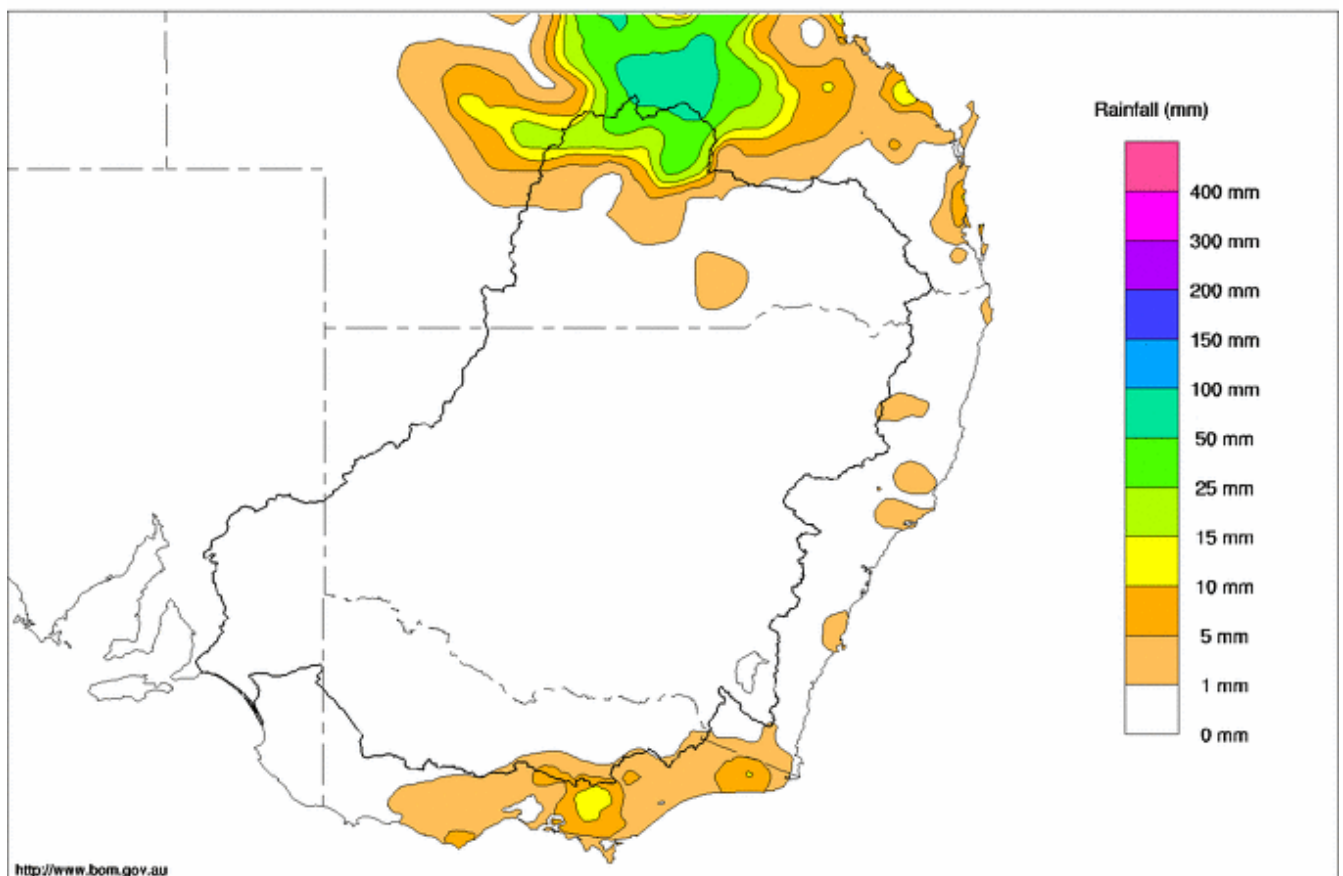
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Rainfall and Inflows

The mostly dry spring of 2013 continued for the Murray-Darling Basin this week, with high pressure remaining the dominant atmospheric feature and a passing low pressure trough failing to provide any rainfall of note. In southern parts of the Basin, there were more relatively cold mornings, with late-season frosts reported in several northern Victorian centres and along the tablelands and western slopes of the Great Divide.

The only significant rainfall recorded in the Basin was over the upper Maranoa River catchment in the far north. There were rain totals above 25 mm in this region including an isolated total of 46 mm at Munnaweena, however most reported totals were less than 15 mm. Elsewhere across the Basin, there was practically no significant rain recorded (Map 1).

Murray-Darling Rainfall Totals (mm) Week Ending 6th November 2013
Product of the National Climate Centre



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Issued: 06/11/2013

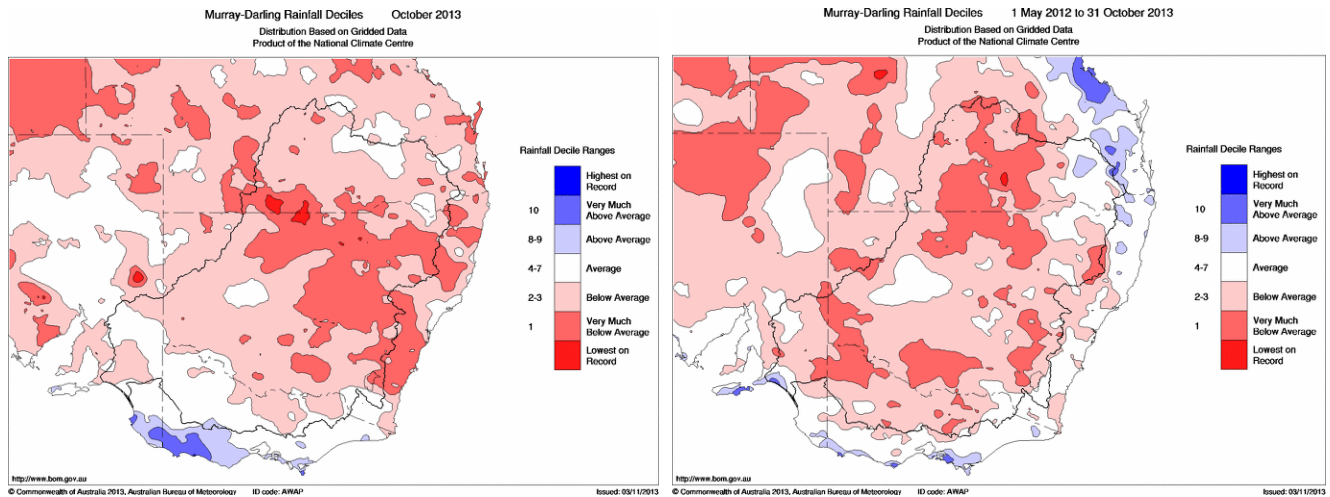
Map 1 - Murray-Darling Basin rainfall for the week ending 6 November 2013 (Source: Bureau of Meteorology).

The generally fine and dry weather has helped maintain the recession in flows along the upper Murray tributaries throughout the week. On the Mitta Mitta River, the flow at Hinnomunjie Bridge decreased from 900 to 700 ML/day. On the upper Murray, the flow at Biggara receded from 1,000 to 850 ML/day. On the Ovens River, the flow at Wangaratta decreased from 2,700 to 1,850 ML/day.



October 2013 Summary

It was very dry across the Murray-Darling Basin during October 2013. The Bureau of Meteorology has reported that overall rainfall for the Basin was 64% below the long-term mean, with an area-averaged total of just 14.6 mm - the 10th lowest October rainfall on record. Central and northern areas of NSW and southern Queensland were particularly dry. However, parts of central and northern Victoria and the upper Murray and Murrumbidgee catchments in NSW recorded near-average rainfall (Map 2).



Map 2 and Map 3 - Murray-Darling Basin rainfall deciles for October 2013 and for the 18 month period from 1 May 2012 to 31 October 2013 (Source: Bureau of Meteorology).

Looking at the longer term, the recent dry conditions have maintained a persistent trend that now extends back around 18 months. The worst affected areas are in the northern Basin, although dry conditions are also being felt across the south. Despite the occasional wetter spell, total accumulated rain for the 18 months since 1 May 2012 has been below average to 'very much below average' for most parts of the Basin (Map 3).

Catchment and environmental conditions continued to be affected by extremes of temperature during October, with the generally dry weather and clear skies leading to both high daytime temperatures and some unusually cold nights for this time of year. Unseasonal heat was reported in many parts of the Basin, with record maximum temperatures above 40 degrees Celsius in western NSW. In southern and eastern districts, cold nights and late-season frosts have damaged crops and impacts have been exacerbated by enhanced early plant growth due to the warm conditions in September. Overall, however, the month was yet another relatively warm one, resulting in higher than average evaporation and a further drying of soil and catchments.

Inflows to the River Murray System have continued to steadily recede. Monthly inflows (excluding Snowy and Darling inflows) decreased from around 1,050 GL in September to around 500 GL during October (see the graph on page 6). However, releases of environmental water from tributary storages provided an additional 50 GL to this total. System inflows for October were well below the long-term average of around 1,400 GL, less than last year's total of around 800 GL and the lowest since 2008.



River Operations

MDBA active storage decreased by 121 GL this week and is currently 7,488 GL, or 87% capacity.

At Dartmouth Reservoir, the current storage volume is 3,812 GL (99% capacity) which is a reduction of 7 GL over the week. The release continues to be managed to match inflows. This week the release (measured at Colemans) was reduced to 1,500 ML/day as inflows eased, however rain forecast in the coming week is likely to see releases increase again to around 2,500 ML/day.

At Hume Reservoir, the storage volume decreased by 90 GL to 2,641 GL (88% capacity). Inflows averaged around 5,700 ML/day and the release was reduced over the week from around 20,000 ML/day to 16,000 ML/day.

At Yarrawonga Weir, the total daily diversion through Mulwala Canal and Yarrawonga Main Channel was relatively steady averaging 5,400 ML/day during the week. The current level in Lake Mulwala is 124.85 m AHD (5 cm below FSL) and is expected to remain between 124.7 and 124.9 m AHD over the coming week. The release remains at 15,000 ML/day and includes environmental water for the benefit of the Barmah-Millewa Forest and the river downstream all the way to the Murray Mouth.

On the Edward River system, the combined inflow through the Edward and Gulpa offtakes remains at 2,800 ML/day. Diversions into the Wakool Main Canal averaged about 1,000 ML/day while the flow downstream of Stevens Weir averaged around 1,200 ML/day.

On the Goulburn River, the flow at McCoys Bridge reduced from 3,100 ML/day to 1,700 ML/day. Another larger environmental pulse is expected in the second half of November with a peak at McCoys Bridge of around 7,500 ML/day. At Torrumbarry Weir, diversions through the National Channel reduced at the end of the week from 2,500 ML/day to 2,000 ML/day. The flow downstream in the River Murray is 11,600 ML/day.

On the lower Murrumbidgee River, the flow at Balranald reduced from 1,700 ML/day to 1,200 ML/day. Inflows from the Murrumbidgee River will be above the normal end of system target during the remainder of November and December due to the delivery of around 500 ML/day of traded environmental water. Downstream at Euston Weir, the flow along the Murray has receded slowly from 14,600 ML/day to 14,200 ML/day, and will continue to ease over the coming week.

Downstream at Mildura and Wentworth, the current recession should continue until late in November. On the Darling River, total storage in Menindee Lakes has decreased by 17 GL to the current volume of 1,048 GL. The release, measured at Weir 32, has increased to about 300 ML/day to ensure downstream riparian needs can be met.

At Lake Victoria, the storage volume reduced by 7 GL to 661 GL (98% capacity). The lake is expected to continue falling away over the coming weeks. The flow to South Australia is currently targeting 14,000 ML/day. This flow is above the normal South Australian entitlement due to the delivery of additional traded environmental water.

At the Lower Lakes, the 5-day average level for Lake Alexandrina has increased 2 cm to 0.77 m AHD. Flows into the Coorong through the Barrages are currently estimated at around 2,000 to 3,000 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 06 Nov 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	485.33	3 812	99%	71	3 741	-7
Hume Reservoir	192.00	3 005	190.12	2 641	88%	23	2 618	-90
Lake Victoria	27.00	677	26.87	661	98%	100	561	-7
Menindee Lakes		1 731*		1 048	61%	(480 #)	568	-17
Total		9 269		8 162	88%	--	7 488	-121
Total Active MDBA Storage							87% ^	

Major State Storages

Burrinjuck Reservoir	1 026	667	65%	3	664	-3
Blowering Reservoir	1 631	1 448	89%	24	1 424	-13
Eildon Reservoir	3 334	3 143	94%	100	3 043	-11

* 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 05 Nov 2013

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2013
Lake Eucumbene - Total	1 864	n/a	Snowy-Murray	+0	500
Snowy-Murray Component	778	n/a	Tooma-Tumut	+4	205
Target Storage	1 450		Net Diversion	-4	296
			Murray 1 Release	+4	746

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)	30.8	360	Yarrowonga Main Channel (net)	12.2	105
Wakool Sys Allowance	0.5	0	Torrumbarry System + Nyah (net)	14.2	156
Western Murray Irrigation	0.9	6	Sunraysia Pumped Districts	3.7	27
Licensed Pumps	5.0	68	Licensed pumps - GMW (Nyah+u/s)	0.8	7
Lower Darling	10.2	94	Licensed pumps - LMW	10.5	64
TOTAL	47.4	528	TOTAL	41.4	359

* 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	180.0 *
Flow this week	91.5
Flow so far this month	78.8
Flow last month	622.8

(13 100 ML/day)

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

	Current	Average over the last week	Average since 1 August 2013
Swan Hill	90	80	100
Euston	80	80	110
Red Cliffs	90	90	120
Merbein	100	100	120
Burtundy (Darling)	540	530	490
Lock 9	120	120	140
Lake Victoria	230	260	290
Berri	190	200	280
Waikerie	270	290	340
Morgan	250	250	340
Mannum	240	220	400
Murray Bridge	220	210	430
Milang (Lake Alex.)	620	630	640
Poltalloch (Lake Alex.)	390	400	580
Meningie (Lake Alb.)	2 560	2 560	2 580
Goolwa Barrages	820	810	1 810



River Levels and Flows

Week ending Wednesday 06 Nov 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	-	-	-	1 600	F	870	2 250
Jingellic	4.0	1.53	208.05	3 030	R	3 130	6 610
Tallandoon (Mitta Mitta River)	4.2	1.93	218.82	1 950	F	2 450	3 000
Heywoods	5.5	3.06	156.69	15 920	F	17 710	15 160
Doctors Point	5.5	3.18	151.65	16 960	F	18 650	16 770
Albury	4.3	2.15	149.59	-	-	-	-
Corowa	3.8	3.55	129.57	17 880	F	19 030	17 360
Yarrowonga Weir (d/s)	6.4	2.28	117.32	14 970	F	14 990	15 120
Tocumwal	6.4	2.98	106.82	14 960	S	14 840	15 060
Torrumbarry Weir (d/s)	7.3	3.61	82.16	11 640	F	12 020	11 770
Swan Hill	4.5	2.07	64.99	11 150	F	11 270	10 690
Wakool Junction	8.8	4.29	53.41	13 550	F	13 810	14 760
Euston Weir (d/s)	8.8	2.50	44.34	14 150	F	14 350	16 440
Mildura Weir (d/s)	-	-	-	-	-	-	-
Wentworth Weir (d/s)	7.3	3.38	28.14	13 080	R	13 450	17 370
Rufus Junction	-	4.52	21.45	13 650	R	12 300	13 260
Blanchetown (Lock 1 d/s)	-	0.88	-	8 790	F	11 200	10 560
Tributaries							
Kiewa at Bandiana	2.7	1.24	154.47	830	F	960	1 640
Ovens at Wangaratta	11.9	8.51	146.19	1 850	R	2 040	2 970
Goulburn at McCoys Bridge	9.0	1.91	93.33	1 680	F	2 500	2 570
Edward at Stevens Weir (d/s)	-	1.41	81.18	1 200	F	1 210	1 390
Edward at Liewah	-	2.13	57.51	1 480	F	1 610	2 110
Wakool at Stoney Crossing	-	1.68	55.17	1 120	S	1 200	1 820
Murrumbidgee at Balranald	5.0	1.60	57.56	1 170	F	1 470	1 140
Barwon at Mungindi	-	-	-	-	-	-	-
Darling at Bourke	-	4.00	-	70	S	80	100
Darling at Burtundy Rocks	-	0.74	-	140	S	140	160

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	5 270	10 230
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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	-0.05	-	No. 7 Rufus River	22.10	+0.01	+2.19
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.04	+0.57
No. 15 Euston	47.60	-0.03	-	No. 5 Renmark	16.30	+0.03	+0.50
No. 11 Mildura	34.40	+0.04	+0.48	No. 4 Bookpurnong	13.20	+0.03	+1.31
No. 10 Wentworth	30.80	+0.00	+0.74	No. 3 Overland Corner	9.80	+0.04	+0.56
No. 9 Kulnine	27.40	+0.13	+0.50	No. 2 Waikerie	6.10	+0.06	+0.44
No. 8 Wangumma	24.60	+0.39	+0.28	No. 1 Blanchetown	3.20	-0.02	+0.13

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.77
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Barrages

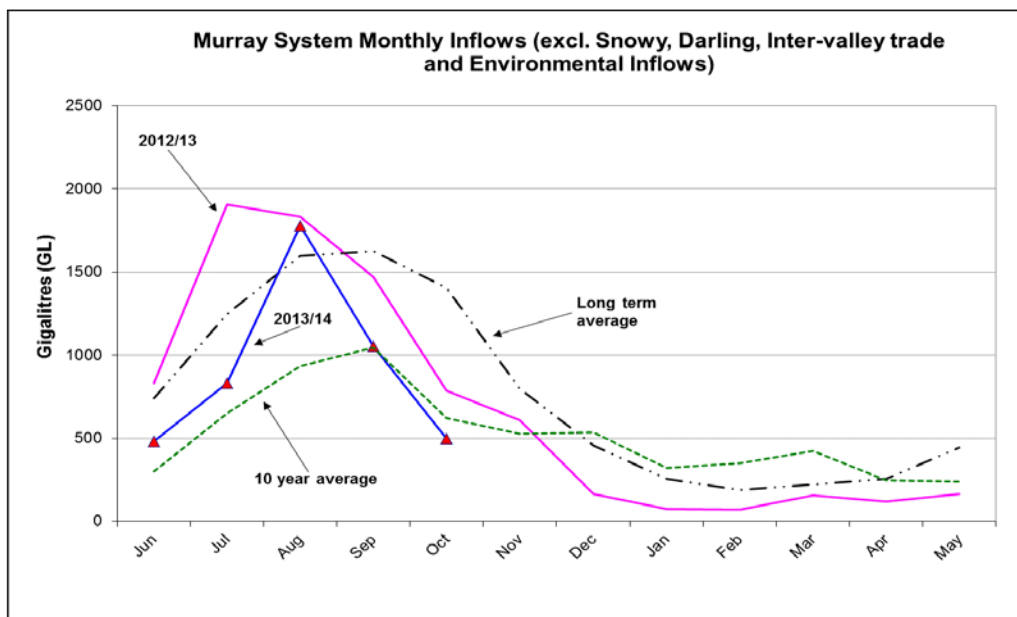
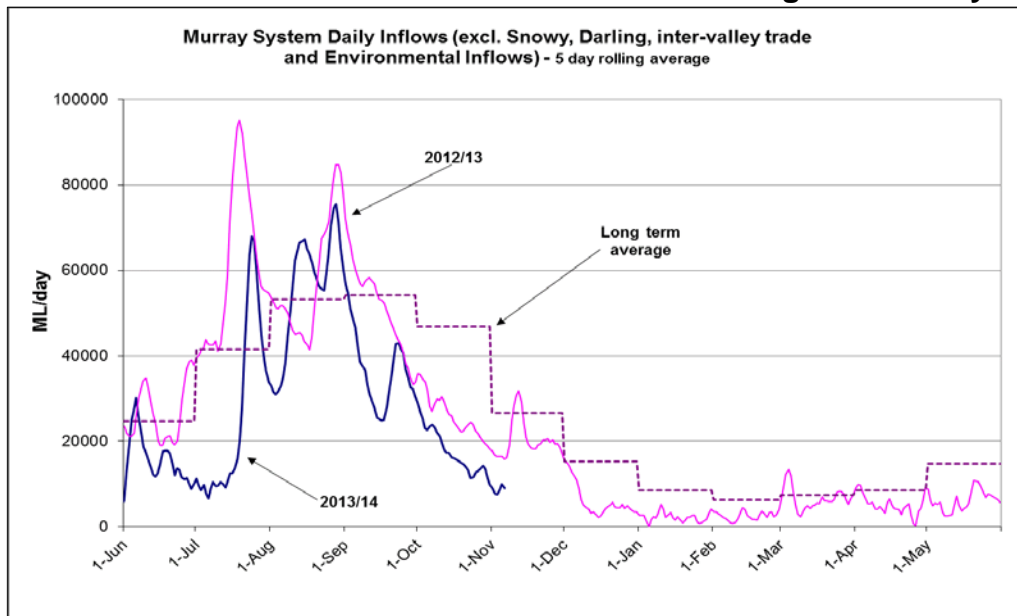
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.82	3	-	Open
Mundoo	26 openings	0.80	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	0.83	7	Open	Open

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



Week ending Wednesday 06 Nov 2013



State Allocations (as at 06 Nov 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	43%

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>