



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 22 AUGUST 2018

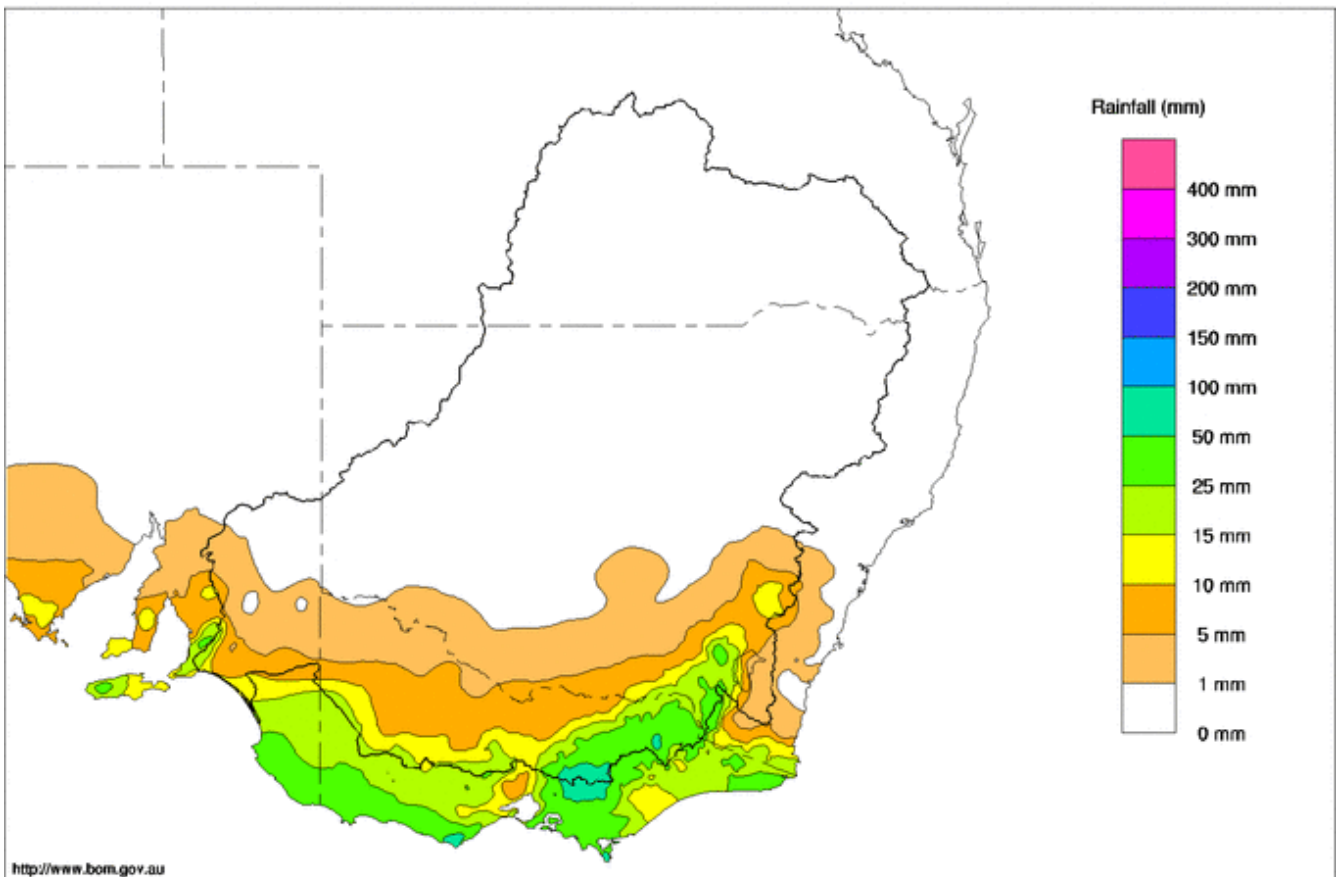
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Rainfall and inflows

Similar to last week, this week a series of cold fronts delivered rainfall to the southern Murray-Darling Basin and snow to alpine areas. The highest totals were again in the Victorian ranges with 137 mm at Rocky Valley and 70 mm recorded at Mt Buller. In New South Wales, Burrinjuck Dam received 40 mm.

The northern Murray-Darling Basin remained dry this past week, although the Bureau of Meteorology has [forecast](#) rain in the coming week for parts of the central and eastern parts of the northern Basin with lighter falls forecast for areas of the southern Basin.

Murray-Darling Rainfall Totals (mm) Week Ending 22nd August 2018
Australian Bureau of Meteorology



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Map 1 - Murray-Darling Basin rainfall map week ending 22nd August 2018 (Source: Bureau of Meteorology).

Flow in the upper Murray tributaries fluctuated in response to this week's rainfall. On the Mitta Mitta River at Hinnemunjie Bridge, the flow peaked early in the week around 2,100 ML/day before gradually receding to the current flow near 600 ML/day. More frequent rainfall in the upper Murray resulted in the flows at Biggara fluctuating between 1,000 ML/day and 1,300 ML/day.

Downstream of Hume Reservoir, inflows from the Kiewa River measured at Bandiana average near 2,300 ML/day, while the Ovens River at Wangaratta varied between 7,400 ML/day and 8,400 ML/day, and is expected to recede over the coming days.



River operations

- Water being transferred from Dartmouth to Hume and Hume to Lake Victoria
- Inter Valley Transfers occur from Goulburn system

MDBA active storage increased by 42 GL this week to 5,089 GL (60% capacity).

The storage volume at **Dartmouth Reservoir** decreased by 3 GL to 3,458 GL (90% capacity). The release, measured at Colemans gauge, is currently around 3,700 ML/day. The release is planned to increase to 4,500 ML/day this coming Saturday as water is transferred to Hume Reservoir ahead of increasing downstream demands in the coming months. Looking further ahead, transfers are expected to continue for the coming months which means the release from Dartmouth is expected to remain well above minimum flow rates over this time.

The storage volume at **Hume Reservoir** increased by 53 GL this week to 1,485 GL (49% capacity). During the past week releases from Hume were gradually decreased from 6,500 ML/day to 1,200 ML/day in response to increased tributary inflows downstream and temporary reduction in downstream irrigation orders. Releases have now increased to 2,000 ML/day and are expected to increase further over the coming days as inflows from the Ovens River recede.



Photo 1 – Sandy banks at Doctors Point following the lower Hume releases. Photo: Adam McLean, MDBA

At **Lake Mulwala** the level has risen to 124.89 m AHD, which is within the normal operating range. Diversions into Mulwala Canal decreased from 3,500 ML/day last week to the current rate of 3,000 ML/day. Diversion to Yarrawonga Main Channel remained around 1,700 ML/day. The release from



Yarrawonga Weir continues to target 9,500 ML/day and is expected to remain near this rate this coming week as water is transferred downstream to Lake Victoria in preparation for peak season demands.

Regulators in the Barmah-Millewa forest remain open to provide connectivity between the river and the forest floodplain in winter and into spring. This action will benefit native fish and improve the transfer of valuable nutrients from the floodplain to the river to increase ecosystem productivity. The water used in the forest through plant take-up, seepage and evaporation is being debited from environmental water holder's accounts.

Flow at the **Edward River** offtake is currently 1,550 ML/day and will fluctuate around this level over the coming week. At **Gulpa Creek** offtake the flow is targeting the maximum regulated flow rate of 350 ML/day. Downstream, return flows from the Millewa Forest are contributing to the flow at Toonalook which is currently 2,550 ML/day. Diversion into Wakool Main Canal is around 400 ML/day, while the Wakool, Yallakool and Colligen offtakes are currently passing around 50, 350 and 200 ML/day respectively. The flow downstream of **Stevens Weir** has increased to around 2,000 ML/day.

Inflow to the Murray from the **Goulburn River**, measured at McCoys Bridge, decreased from 2,000 ML/day to 1,400 ML/day this week before rising to 1,600 ML/day. Over the coming week flows are expected to increase towards 2,800 ML/day as water from the Inter Valley Trade (IVT) account is called upon to help meet demands downstream in the Murray. Up to 40 GL of IVT water may be called out of the Goulburn system by mid-September. Information regarding current opportunities for allocation trade between the Goulburn and Murray valleys is available at the [Victorian water register website](#).

At **Torrumbarry Weir** the flow downstream has slowly fallen from 5,700 ML/day to 4,750 ML/day and is expected to fall over the next couple of days as diversions into National Channel increase. By the end of the weekend flows downstream of Torrumbarry are likely to increase as higher Goulburn inflows progress downstream. Environmental deliveries continue to Gunbower Creek and Gunbower Forest. More information on the Gunbower Forest watering can be found on the [North Central Catchment Management Authority \(NCCMA\) website](#).

Inflow from the **Murrumbidgee River**, measured at Balranald, averaged around 930 ML/day and may slowly increase during the coming week.

At **Euston**, the weir pool is currently 4 cm below Full Supply Level (FSL) and is being gradually increased to target FSL. The downstream flow increased to 5,700 ML/day and is expected to steadily rise over the coming weeks.

The **Menindee Lakes** storage volume decreased by 7 GL to 183 GL (11% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). As part of drought contingency measures, WaterNSW has installed two temporary block banks across the lower Darling below Pooncarie near Jamesville and below Burtundy near Ashvale to assist in maintaining supply to domestic, stock and permanent plantings along the lower Darling. The release from Weir 32 continues at a rate of 220 ML/day to gradually fill pools behind these block banks.

At **Wentworth Weir**, operations continues to target a pool level of around 10 cm above FSL. This is to assist pumpers in the upper reaches of the Darling arm of the weir pool whilst there is low flow in the lower Darling River. The downstream release from Wentworth Weir remained steady over the week averaging 3,900 ML/day. In the coming weeks releases are expected to increase as water is transferred from Hume and the Goulburn to Lake Victoria.

The **Lock 7** and **9** weir pools continue to target a water level 10 cm below FSL and will vary between FSL and 10 cm below FSL over the coming weeks. The **Lock 8** weir pool is targeting 30 cm below FSL.

At **Lake Victoria**, the storage volume decreased by 8 GL to 340 GL (50% capacity). Flow to **South Australia** is currently targeting 4,300 ML/day and will increase towards 5,700 ML/day in the coming days.

Environmental deliveries to South Australia are supporting the operation of the **Chowilla** Environmental Regulator. The regulator is being operated to deliver an in-channel rise down Chowilla Creek and connected anabranches (Photo 2) to improve their ecological condition. Over the coming weeks the **Lock 6** water level is expected to be gradually increased to approximately 20 cm above FSL to assist the Chowilla action. Flows from this event are expected to remain mostly within creek banks.



Photo 2 – Fishway downstream of Pipeclay Weir at Chowilla. Photo: SA Water

Downstream at **Lock 3 (Overland Corner)**, the lock remains [temporarily closed for a major refurbishment](#) which commenced in mid-June. These works are expected to be completed by mid-September.

The 5-day average water level in the **Lower Lakes** is 0.79 m AHD. Lake levels are expected to remain relatively high over the coming weeks. When conditions allow, environmental water is being released through the barrages into the Coorong and Murray Mouth to provide a range of ecological benefits to the Coorong including facilitating the upstream spawning migration of pouched lamprey, which is a rare and unique eel-like fish that enters the Murray system via the Coorong estuary.

For media inquiries contact the Media Officer on 02 6279 0141

ANDREW REYNOLDS
Executive Director, River Management



Water in Storage

Week ending Wednesday 22 Aug 2018

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	479.74	3 458	90%	71	3 387	-3
Hume Reservoir	192.00	3 005	182.84	1 485	49%	23	1 462	+53
Lake Victoria	27.00	677	23.96	340	50%	100	240	-8
Menindee Lakes		1 731*		183	11%	(- -) #	0	-7
Total		9 269		5 466	59%	--	5 089	+35
Total Active MDBA Storage								60% ^

Major State Storages

Burrinjuck Reservoir	1 026	423	41%	3	420	+2
Blowering Reservoir	1 631	1 231	75%	24	1 207	+43
Eildon Reservoir	3 334	2 058	62%	100	1 958	+76

* 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 21 Aug 2018

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2018
Lake Eucumbene - Total	511	-37	Snowy-Murray	+22	444
Snowy-Murray Component	231	-20	Tooma-Tumut	+8	67
Target Storage	1 190		Net Diversion	14	377
			Murray 1 Release	+23	518

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2018	Victoria	This Week	From 1 July 2018
Murray Irrig. Ltd (Net)	27.2	66	Yarrowonga Main Channel (net)	11.9	18
Wakool Sys Allowance	1.7	4	Torrumbarry System + Nyah (net)	0	60
Western Murray Irrigation	0.1	1	Sunraysia Pumped Districts	1	5
Licensed Pumps	4.7	17	Licensed pumps - GMW (Nyah+u/s)	1	1
Lower Darling	0.2	1	Licensed pumps - LMW	4.6	14
TOTAL	33.9	89	TOTAL	18.5	98

* 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	31.6
Flow so far this month	127.3
Flow last month	239.7

(4 500 ML/day)

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

	Current	Average over the last week	Average since 1 August 2018
Swan Hill	70	90	80
Euston	-	-	-
Red Cliffs	150	150	140
Merbein	150	140	130
Burtundy (Darling)	740	740	730
Lock 9	130	130	130
Lake Victoria	200	200	200
Berri	190	200	180
Waikerie	230	240	220
Morgan	230	230	230
Mannum	320	330	360
Murray Bridge	410	420	450
Milang (Lake Alex.)	830	820	810
Poltalloch (Lake Alex.)	950	810	670
Meningie (Lake Alb.)	1 530	1 500	1 480
Goolwa Barrages	4 400	4 610	6 990



River Levels and Flows

Week ending Wednesday 22 Aug 2018

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	-	-	-	5 020	F	4 450	4 200
Jingellic	4.0	2.10	208.62	7 950	R	7 120	7 690
Tallandoon (Mitta Mitta River)	4.2	2.56	219.45	4 680	S	4 390	3 470
Heywoods	5.5	1.68	155.31	1 780	R	3 810	3 680
Doctors Point	5.5	2.04	150.51	4 550	R	6 670	7 210
Albury	4.3	1.11	148.55	-	-	-	-
Corowa	4.6	1.40	127.42	4 800	F	7 390	6 270
Yarrowonga Weir (d/s)	6.4	1.60	116.64	9 450	S	9 520	9 570
Tocumwal	6.4	2.17	106.01	9 140	F	9 240	9 010
Torrumbarry Weir (d/s)	7.3	1.78	80.32	4 750	R	4 930	4 450
Swan Hill	4.5	1.08	64.00	5 110	S	5 090	3 500
Wakool Junction	8.8	2.49	51.61	5 690	R	5 150	3 980
Euston Weir (d/s)	9.1	1.20	43.04	5 700	R	4 950	4 510
Mildura Weir (d/s)	-	-	-	4 810	F	4 500	4 910
Wentworth Weir (d/s)	7.3	2.70	27.46	3 970	R	3 880	4 380
Rufus Junction	-	3.03	19.96	3 800	F	4 090	5 570
Blanchetown (Lock 1 d/s)	-	0.72	-	2 290	S	2 970	5 870
Tributaries							
Kiewa at Bandiana	2.8	2.19	155.42	2 340	R	2 330	2 770
Ovens at Wangaratta	11.9	10.24	147.92	7 700	F	7 960	9 110
Goulburn at McCoys Bridge	9.0	1.86	93.28	1 590	R	1 570	1 620
Edward at Stevens Weir (d/s)	5.5	2.02	81.79	2 020	S	1 940	1 180
Edward at Liewah	-	1.49	56.87	850	R	560	540
Wakool at Stoney Crossing	-	1.24	54.73	180	R	140	140
Murrumbidgee at Balranald	5.0	1.42	57.38	930	R	930	970
Barwon at Mungindi	6.1	2.82	-	0	F	0	0
Darling at Bourke	9.0	3.90	-	0	F	0	10
Darling at Burtundy Rocks	-	0.69	-	80	R	70	80

Natural Inflow to Hume	8 970	10 720
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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	-0.01	-	No. 7 Rufus River	22.10	-0.09	+0.72
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.02	+0.24
No. 15 Euston	47.60	-0.04	-	No. 5 Renmark	16.30	+0.26	+0.11
No. 11 Mildura	34.40	+0.03	+0.15	No. 4 Bookpurnong	13.20	+0.06	+0.38
No. 10 Wentworth	30.80	+0.11	+0.06	No. 3 Overland Corner	9.80	+0.01	+0.52
No. 9 Kulnine	27.40	-0.10	-0.28	No. 2 Waikerie	6.10	+0.44	+0.04
No. 8 Wangumma	24.60	-0.29	-0.04	No. 1 Blanchetown	3.20	-0.01	-0.03

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.79
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Barrages

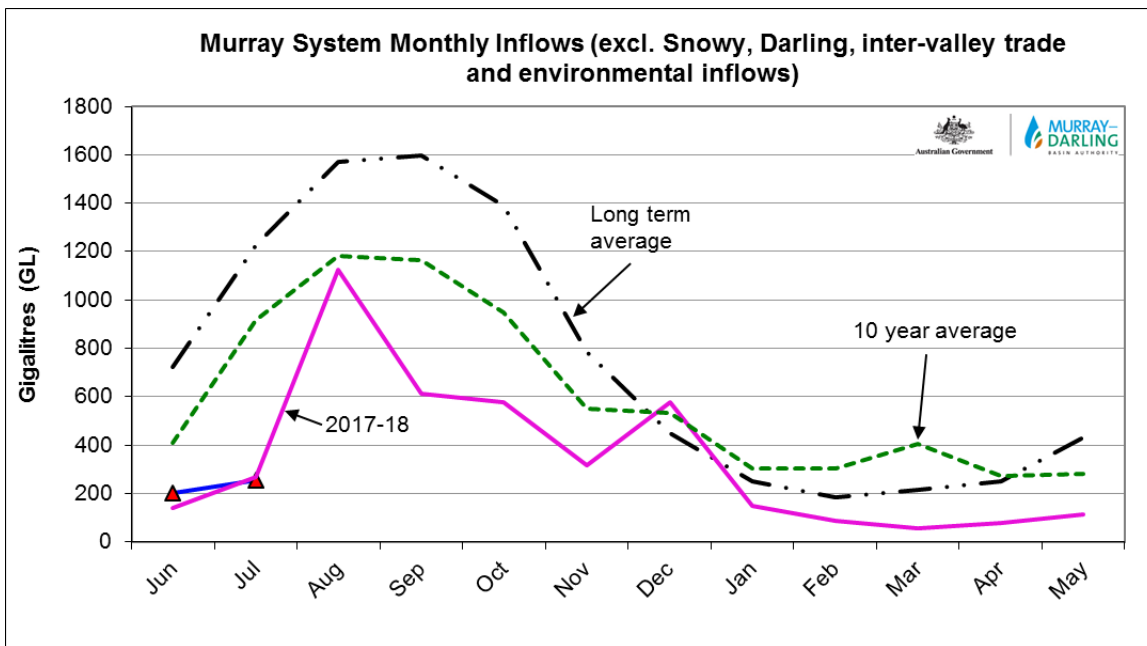
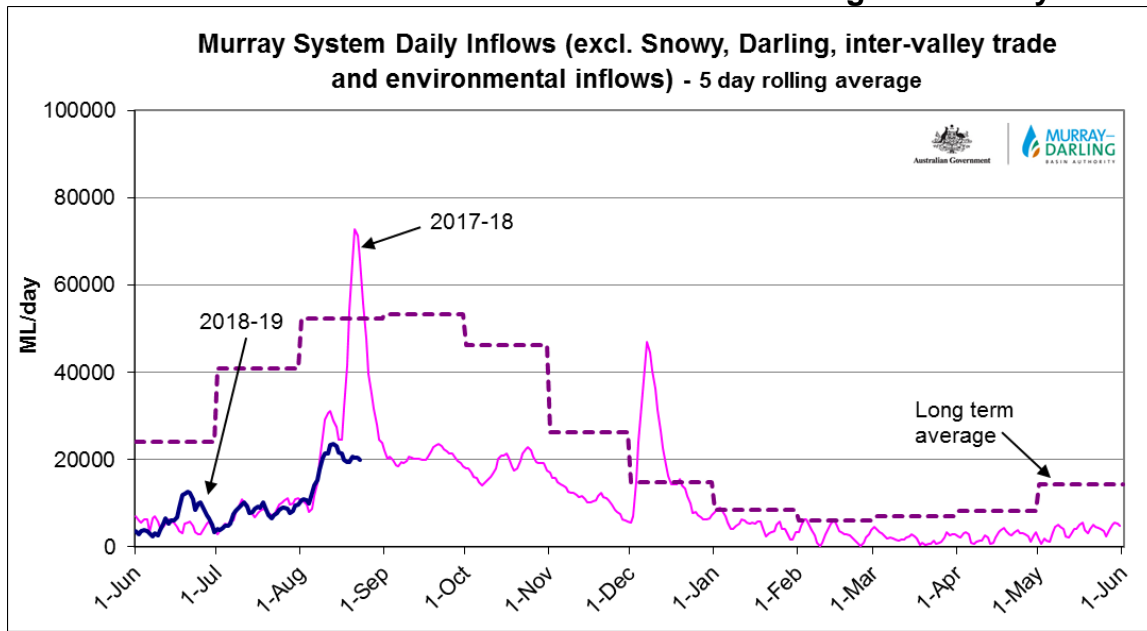
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.87	3	-	Open	Open	-
Mundoo	26 openings	0.89	All closed	-	-	-	FALSE
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.86	2	Open	Open	Open	-

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



Week ending Wednesday 22 Aug 2018



State Allocations (as at 22 Aug 2018)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	59%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	6%

Victorian - Goulburn Valley

High reliability	47%
Low reliability	0%

NSW - Lower Darling

High security	100%
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>
- VIC : <http://nvrn.net.au/seasonal-determinations/current>
- SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>