



River Murray Weekly Report

For the week ending Wednesday, 8 July 2020

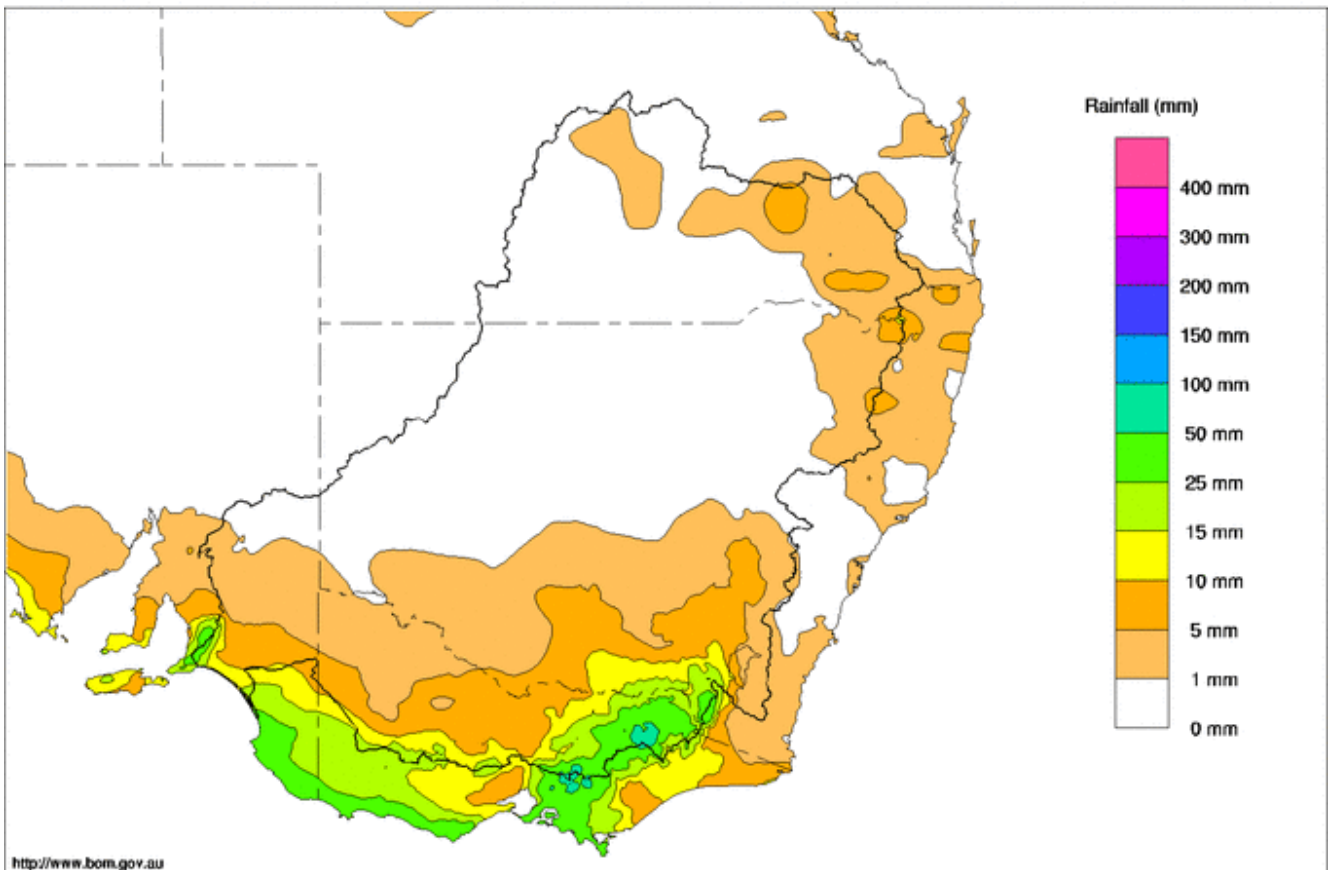
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Rainfall and inflows

Rainfall was widespread across the southern Murray-Darling Basin this week, with higher totals predominantly in northeast Victoria (Map 1). Highest totals included 83 mm at Rocky Valley above the Kiewa River catchment and 48 mm at Lake Buffalo in the upper reaches of the Ovens River catchment. In the Goulburn river catchment, Lake Eildon recorded 20 mm. In NSW, 18 mm fell at Khancoban in the upper Murray and 10 mm fell at Burrinjuck Dam.

Stream flows in the upper and mid-Murray tributaries and Ovens and Kiewa Rivers rose following the rainfall this week and are now receding. Flows from the Ovens and Kiewa Rivers have remained sufficient to meet and exceed downstream requirements. The Bureau of Meteorology (BoM) is currently forecasting moderate rainfall totals over the southern Murray-Darling Basin in the coming [8 days](#) that are expected to result in reasonable tributary inflows over the coming week.

Murray-Darling Rainfall Totals (mm) Week Ending 7th July 2020
Australian Bureau of Meteorology



Map 1 - Murray-Darling Basin rainfall totals for week ending 8 July 2020 (Source: Bureau of Meteorology)

Specific information about flows at key locations can be found at the MDBA’s [River Murray data](#) webpage. Up-to-date river data for sites in the upper Murray can also be found on BoM’s [website](#) and in the Murray River Basin Daily River Report at the WaterNSW [website](#).



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System operations

Unregulated flow event

Despite releases from Hume Dam remaining at the minimum flow, recent inflows from the Ovens, Kiewa and Goulburn Rivers have resulted in sustained elevated flows through the mid-Murray and the capture of around 200 GL in Lake Victoria since the beginning of June. Lake Victoria has now exceeded 90% capacity and the storage is forecast to fill with sufficient surplus flow remaining to extend the period of unregulated flow that was declared on 26 June (and commenced on 27 June). For more information on the expected duration and the river reaches where unregulated flow currently applies, refer to Supplementary Announcements from your local water authority at [WaterNSW](#), [GMW](#) and [SA Water](#).

In the Murrumbidgee system, this week WaterNSW announced an [extension of access](#) to supplementary water for the Murrumbidgee River and Yanco/Billabong Creek Systems.

River operations

- Minimum releases from Hume Dam continue as tributary inflows exceed downstream requirements
- Inlet rate to Lake Victoria slows as storage rises above 90%
- Unregulated flow event extended

River operations and the COVID-19 virus

The MDBA is continuing to work with government partners and stakeholders during this challenging time. In response to the impact of COVID-19, the MDBA has enacted business continuity arrangements to ensure the continued operation of our business functions. River operations have been identified as a priority in this time as running the river is essential to supporting irrigation supply to [agricultural industries](#).

We hope all our community members remain safe at this time. We encourage all river users to evaluate plans against government advice, social distancing and travel, and to support actions to limit the spread of COVID-19.

Water quality impacts

A small number of amber alerts for **blue-green algae** remain current in the River Murray system. It is important that water users regularly keep up to date with algal alerts, notices and health warnings. This information is available through [Goulburn-Murray Water](#) and [WaterNSW](#).

River operations

Over the past week, MDBA total active storage (Dartmouth, Hume and Lake Victoria) increased by 110 GL to 3,683 GL (44% capacity).

At **Dartmouth Reservoir**, the [storage](#) increased by 16 GL to 2,024 GL (52% capacity). The [release](#) from Dartmouth, measured at Colemans, increased this week from 200 ML/day to 1,200 ML/day for the purposes of electricity generation. Releases may continue at this rate as electricity generation is required, after which the flow will reduce again to target the minimum 200 ML/day.

At **Hume Reservoir**, the [storage](#) increased by 77 GL to 1,231 GL (41% capacity). Contributing to this rise was approximately 34 GL released from the Snowy Hydro via Murray 1 into the upper Murray River upstream of Bringenbrong. The storage is expected to continue to rise in the coming weeks, due to elevated upper Murray tributary inflows following recent rainfall and releases from Snowy Hydro.

Downstream of Hume, continued elevated tributary inflows have been sufficient to meet and exceed downstream flow requirements, and the release from Hume is continuing at the minimum requirement of 600 ML/day.



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At **Lake Mulwala**, the pool [level](#) is currently 124.78 m AHD, which is within the normal operating range between 124.6 and 124.9 m AHD. At **Yarrowonga Weir**, flow reduced at the start of the week from 9,000 ML/day to around 7,500 ML/day to pass inflows arriving from receding tributaries. On Monday, the release began to increase again and is currently near 10,000 ML/day, as higher tributary inflows from moderate rainfall totals arrived. In the coming days, the release is expected to remain around this rate to pass tributary inflows.

As Yarrowonga releases have varied to levels above 9,000 ML/day (approximate downstream channel capacity), some forest regulators in the Millewa and Barmah Forest are opened to manage river levels. This week, some of the Millewa Forest regulators that were opened in the preceding week were closed as flows returned to below channel capacity. As releases have increased back above channel capacity, some of the Barmah Forest regulators will be opened.

The gates at **Edward and Gulpa Creek offtake** regulators were recently reinstated to manage flows near 1,550 ML/day and around 220 ML/day, respectively. Flow in the Edward River at Toonlook increased to peak around 3,200 ML/day with the addition of return flows from the Millewa Forest. Diversions into the Wakool River, Yallakool and Colligen Creek increased to 60, 380 and 360 ML/day, respectively, providing entitlement holders access to unregulated flows. Likewise, at Wakool Main Canal diversions increased to 900 ML/day. At Stevens Weir, the downstream flow increased this week to around 1,700 ML/day but has since reduced to near 1,470 ML/day. Downstream flow is expected to continue to reduce over the coming week.

Back on the River Murray, the flow at **Barmah** fell away this week to the current rate near 5,800 ML/day. With higher releases from Yarrowonga, the flow is expected to increase again over the coming week. Inflows from the **Broken Creek**, measured at Rice's Weir, averaged around 35 ML/day this week.

On the **Goulburn River**, the flow measured at McCoy's Bridge mostly receded this week but has started to rise again and is currently near 4,520 ML/day. With the Waranga Basin now at its winter target level, all Goulburn tributary inflows entering the river downstream of Lake Eildon will flow through to the Murray. Flow in the Murray will vary with rainfall and streamflow responses in the Goulburn catchment.

[Diversions](#) to National Channel from the Torrumbarry Weir pool continued to remain steady, averaging around 420 ML/day. Whilst diversions for irrigation have now ceased, water is expected to continue to be diverted at around this rate over coming weeks to maintain baseflows in the Gunbower Creek. The **Torrumbarry Weir pool** is currently targeting a level between 20-30 cm below the Full Supply Level (FSL) as part of the weir pool variability program. Varying pool levels assists with reducing the incidence of notching and can help improve bank stability for riverbanks within the influence of the weir pool. The release from Torrumbarry Weir peaked early in the week around 14,500 ML/day and has since gradually reduced to near 10,300 ML/day, as peak inflows from the Goulburn River combined with higher upstream Murray flows travel downstream. The release is expected to remain around this rate for the coming week.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), increased this week from 1,050 ML/day to near 1,700 ML/day. Elevated flows at Balranald have resulted from rain and are expected to vary in response to use of supplementary water available to entitlement holders upstream. The [Murrumbidgee IVT balance](#) is open for trade from the Murray to the Murrumbidgee (99.2 GL) but is now closed to trade from the Murrumbidgee to the Murray.

At **Euston Weir**, the [weir pool level](#) is targeting around 30 cm below FSL as part of the weir pool variability program. The [downstream release](#) increased this week to 15,200 ML/day, as the peak flows in the Murray River reaches the weir and are passed downstream. The flow is near the expected peak and will recede in the coming week.

This week the **Menindee Lakes storage** decreased slightly by 4 GL to 475 GL (27% capacity) from the Lakes' peak level of just under 481 GL. [WaterNSW](#) has been providing regular updates on the streamflow response in the Barwon-Darling system and report inflows into the Menindee Lakes have now reduced to low levels. The downstream release, measured at Weir 32 (Photo 1), averaged around 245 ML/day over the past week. Despite the rainfall and streamflow responses during recent months, in many parts of NSW drought conditions persist with extensive [water restrictions](#) still in place. Links to drought services and assistance can be also accessed via the MDBA [drought webpage](#)



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Photo 1: Darling River at Weir 32 (Image courtesy Anita Wilkinson)

At **Wentworth Weir**, the weir pool level is being managed to a target level around FSL (30.80 m AHD) but is expected to vary 10 cm above and below this level as part of normal operations. The downstream release is rising and is currently near 13,400 ML/day. The release is expected to continue to rise over the coming week.

At **Lock 9**, the pool level, which was surcharged by 20 cm above FSL to manage the inflow of water into Lake Victoria, is current being lowered back to FSL as the inlet rate into the Lake continues to slow.

This week, the **Lake Victoria** storage volume increased by 21 GL to 622 GL (92% capacity). Over the week, diversions into Lake Victoria averaged 5,000 ML/day and are now being gradually stepped down over the coming week to target 1,500 ML/day. These inflows are being managed to continue raising the storage level towards full, but at a more gradual rate. The storage level in Lake Victoria will continue to be managed over the coming weeks in accordance with the Lake Victoria Operating Strategy. The aim is to fill the storage, whilst helping to minimise erosion and inundation impacts on sensitive foreshore vegetation and cultural heritage material.

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Photo 2 and 3: Both images show the Darling River flowing below Weir 32, looking upstream and downstream from the same point (Image courtesy Anita Wilkinson)

The [flow](#) to South Australia increased from around 6,600 ML/day to near 9,400 ML/day this week, as unregulated flows increased across the border. Flow to South Australia is expected to continue to increase in coming weeks with the arrival of high flows from upstream. For more information on South Australia's Entitlement flow, see the South Australian Department for Environment and Water's latest [River Murray flow report](#).

The **Lower Lakes** 5-day average water level is currently 0.69 m AHD. Releases have continued through fishways, with opportunistic releases through Tauwitchere barrage when tide and wind conditions permit. The variable barrage release strategy will continue to target the incoming high tide window in order to push fresh water along the Coorong. For information on barrage releases see the South Australian [Department for Environment and Water Weekly River Murray Flow Report](#).

For media inquiries contact the Media Officer on 02 6279 0141

ANDREW REYNOLDS
Executive Director, River Management



Australian Government



MURRAY-DARLING
BASIN AUTHORITY

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Water in Storage

Week ending Wednesday 08 Jul 2020

MDBA Storages	Full Supply Level (m AHD)	Full Supply Volume (GL)	Current Storage Level (m AHD)	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)
				(GL)	%			
Dartmouth Reservoir	486.00	3 856	452.50	2 024	52%	71	1 953	+16
Hume Reservoir	192.00	3 005	180.83	1 231	41%	23	1 208	+77
Lake Victoria	27.00	677	26.54	622	92%	100	522	+21
Menindee Lakes		1 731*		475	27%	(- -) #	0	-4
Total		9 269		4 352	47%	- -	3 683	+110
Total Active MDBA Storage							44% ^	

Major State Storages

Burrinjuck Reservoir	1 026	452	44%	3	449	+3
Blowering Reservoir	1 631	957	59%	24	933	+17
Eildon Reservoir	3 334	1 661	50%	100	1 561	+39

* 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 07 Jul 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2020
Lake Eucumbene - Total	920	-0	Snowy-Murray	+22	272
Snowy-Murray Component	416	-16	Tooma-Tumut	+5	69
Target Storage	1 170		Net Diversion	17	203
			Murray 1 Release	+29	346

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2020	Victoria	This Week	From 1 July 2020
Murray Irrig. Ltd (Net)	1.1	1	Yarrowonga Main Channel (net)	0	0
Wakool Sys Allowance	1.5	2	Torrumbarry System + Nyah (net)	0	0
Western Murray Irrigation	0.1	0	Sunraysia Pumped Districts	0.2	0
Licensed Pumps	4.9	6	Licensed pumps - GMW (Nyah+u/s)	0	0
Lower Darling	0.0	0	Licensed pumps - LMW	0.5	1
TOTAL	7.6	9	TOTAL	0.7	1

* 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 some environmental flows and unregulated flows crossing the SA border.

Entitlement this month	108.5 *	
Flow this week	58.7	(8 400 ML/day)
Flow so far this month	64.0	
Flow last month	104.7	

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

	Current	Average over the last week	Average since 1 August 2019
Swan Hill	120	110	70
Euston	-	-	-
Red Cliffs	130	130	60
Merbein	140	130	100
Burtundy (Darling)	330	320	580
Lock 9	110	100	100
Lake Victoria	130	130	120
Berri	210	210	160
Waikerie	260	310	220
Morgan	320	310	230
Mannum	300	280	260
Murray Bridge	270	320	290
Milang (Lake Alex.)	1 010	940	900
Poltalloch (Lake Alex.)	640	630	790
Meningie (Lake Alb.)	1 680	1 690	1 810
Goolwa Barrages	4 900	4 890	3 120



River Levels and Flows

Week ending Wednesday 08 Jul 2020

	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)				
River Murray							
Khancoban	-	-	-	8 600	F	5 650	4 730
Jingellic	4.0	2.53	209.05	12 150	R	8 860	9 600
Tallandoon (Mitta Mitta River)	4.2	1.97	218.86	2 150	R	1 600	1 760
Heywoods	5.5	1.44	155.07	600	S	600	600
Doctors Point	5.5	1.87	150.34	3 160	R	2 850	2 970
Albury	4.3	0.98	148.42	-	-	-	-
Corowa	4.6	1.02	127.04	3 140	F	2 770	3 270
Yarrowonga Weir (d/s)	6.4	1.49	116.53	9 070	R	8 180	10 630
Tocumwal	6.4	1.94	105.78	8 000	R	8 060	10 600
Torrumbarry Weir (d/s)	7.3	3.26	81.81	10 330	F	12 330	12 860
Swan Hill	4.5	2.17	65.09	12 400	F	13 280	10 880
Wakool Junction	8.8	4.21	53.33	14 020	F	13 460	10 830
Euston Weir (d/s)	9.1	2.54	44.38	15 260	S	13 970	11 440
Mildura Weir (d/s)	-	-	-	13 770	F	12 750	11 110
Wentworth Weir (d/s)	7.3	3.35	28.11	13 370	S	12 140	10 430
Rufus Junction	-	3.86	20.79	9 010	R	7 990	3 550
Blanchetown (Lock 1 d/s)	-	0.81	-	9 130	R	7 440	3 000
Tributaries							
Kiewa at Bandiana	2.8	2.34	155.57	2 620	R	2 380	2 410
Ovens at Wangaratta	11.9	9.79	147.47	6 040	F	5 890	6 150
Goulburn at McCoys Bridge	9.0	3.33	94.75	4 520	R	4 770	7 560
Edward at Stevens Weir (d/s)	5.5	1.64	81.42	1 470	F	1 400	1 160
Edward at Liewah	-	1.69	57.07	1 010	R	890	940
Wakool at Stoney Crossing	-	1.28	54.78	230	F	260	510
Murrumbidgee at Balranald	5.0	2.09	58.05	1 710	R	1 390	1 050
Barwon at Mungindi	6.1	3.29	-	270	F	260	130
Darling at Bourke	9.0	3.97	-	50	F	50	60
Darling at Burtundy Rocks	-	0.72	-	170	R	160	160

Natural Inflow to Hume	12 270	13 480
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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	-0.12	-	No. 7 Rufus River	22.10	+0.03	+1.56
No. 26 Torrumbarry	86.05	-0.22	-	No. 6 Murtho	19.25	-0.01	+0.26
No. 15 Euston	47.60	-0.28	-	No. 5 Renmark	16.30	+0.03	+0.37
No. 11 Mildura	34.40	+0.03	+0.48	No. 4 Bookpurnong	13.20	+0.10	+1.06
No. 10 Wentworth	30.80	-0.01	+0.71	No. 3 Overland Corner	9.80	+0.16	+0.50
No. 9 Kulnine	27.40	+0.09	-0.27	No. 2 Waikerie	6.10	+0.10	+0.47
No. 8 Wangumma	24.60	-0.59	+0.39	No. 1 Blanchetown	3.20	+0.13	+0.06

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.69
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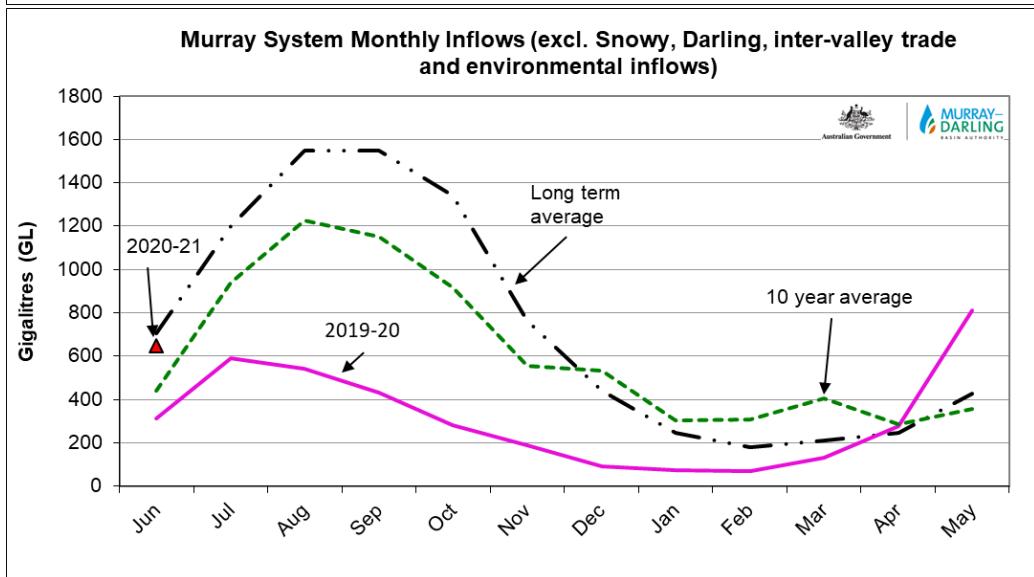
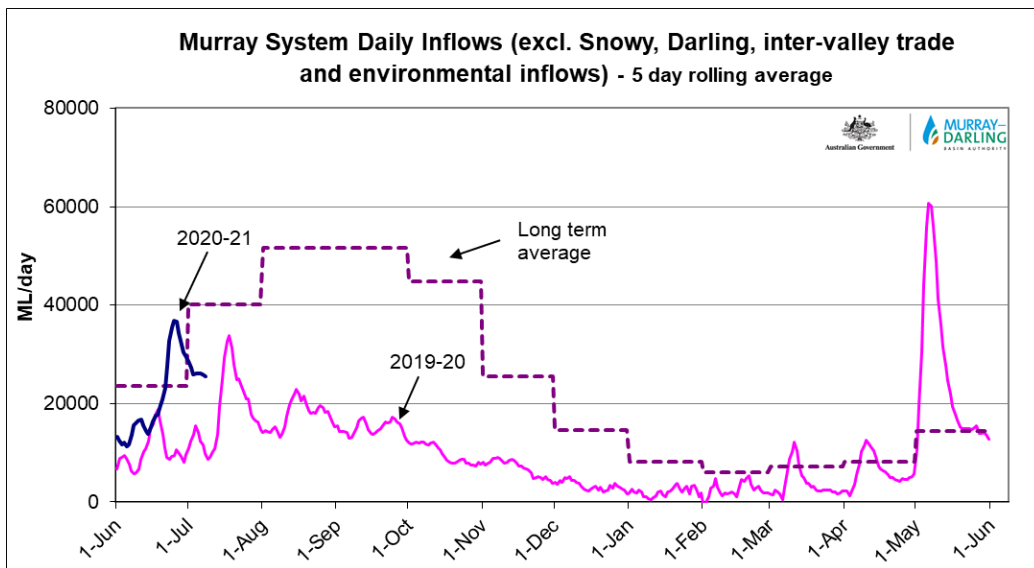
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.74	1	-	Closed	Open	-
Mundoo	26 openings	0.71	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.74	3	Open	Open	Open	-

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





State Allocations (as at 01 Jul 2020)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	8%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	10%

Victorian - Goulburn Valley

High reliability	35%
Low reliability	0%

NSW - Lower Darling

High security	100%
General security	30%

South Australia - Murray Valley

High security	54%
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NSW : <https://www.industry.nsw.gov.au/water/allocations-availability/allocations/summary>

VIC : <http://nvrn.net.au/seasonal-determinations/current>

SA : <https://www.environment.sa.gov.au/topics/river-murray/water-allocations-and-announcements>

