

River Murray Weekly Report

River Murray Weekly Report

For the week ending Wednesday, 23 September 2020

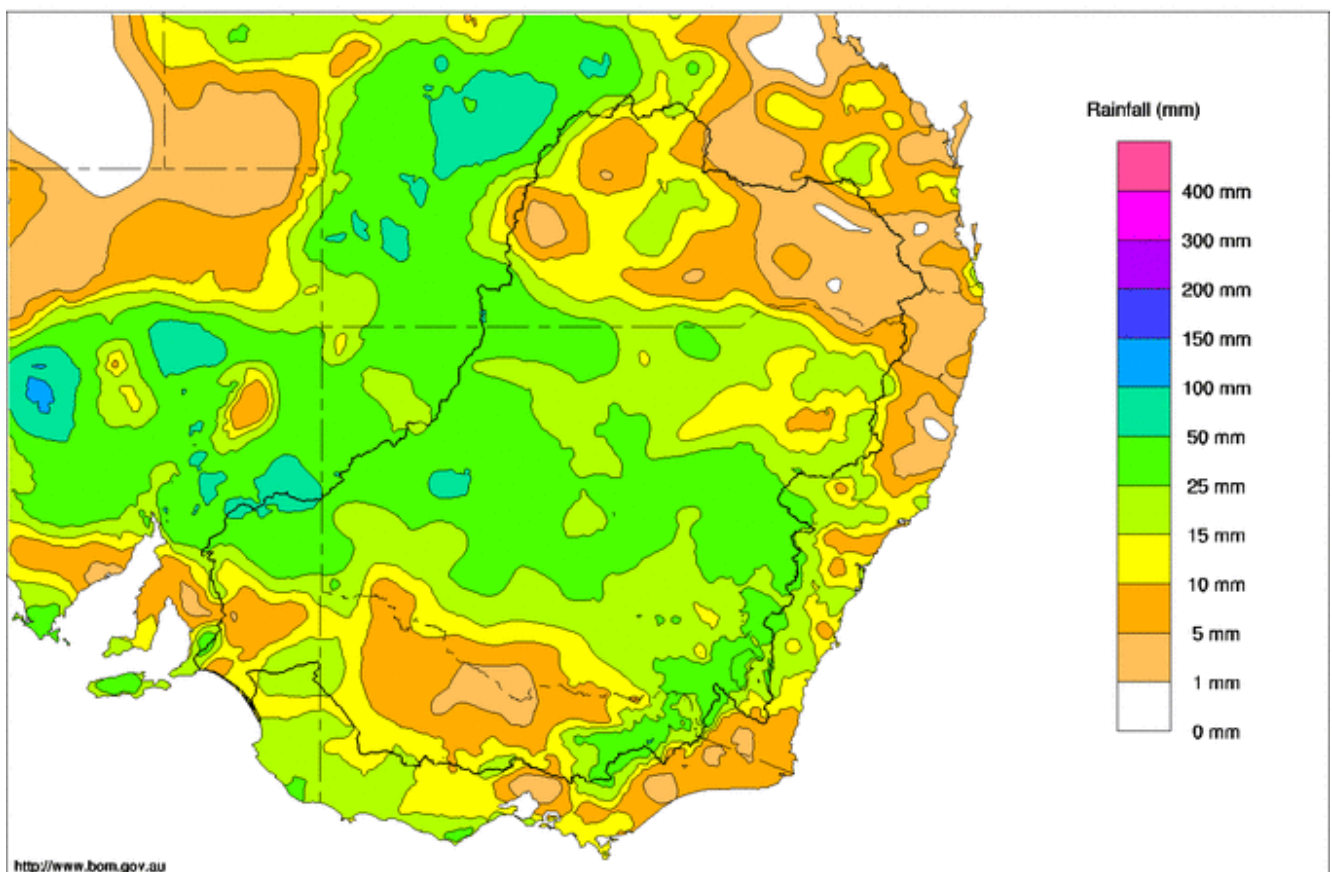
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Rainfall and inflows

Rainfall was widespread across the Murray-Darling Basin this week (Map 1). Totals between 25 to 50 mm were recorded across most of inland New South Wales. In particular, 31 mm was recorded at Menindee in the lower West of NSW. In Victoria's north east, 40 mm fell at Rocky Valley in the upper Ovens River and 39 mm fell at Cheshunt in the upper King River.

The Bureau of Meteorology is currently forecasting further moderate rainfall across much of the Murray-Darling Basin in the coming [8 days](#) (Map 2).

Murray-Darling Rainfall Totals (mm) Week Ending 23rd September 2020
Australian Bureau of Meteorology



<http://www.bom.gov.au>

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Map 1 - Murray-Darling Basin rainfall totals for week ending 23 September 2020 (Source: Bureau of Meteorology)

This week, modest rises in stream flows were observed in the upper Murray tributaries following rainfall. 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

Since heavy rainfall in late April soaked catchments and boosted tributary inflows from the Ovens, Kiewa and Goulburn Rivers, catchments have remained responsive to rainfall. Healthy tributary inflows have continued during May, June, July and August. These tributary inflows have resulted in the effective filling of Lake Victoria and an extended period of unregulated flows into South Australia since 27 June.

Recent warmer and drier conditions have resulted in reduced inflows and increasing system demands. Without further rainfall, the current period of unregulated flow is expected to conclude this Friday. As such, the re-filling of Lake Victoria is well underway and access to unregulated flows has ceased along river reaches upstream of Wentworth.

For more information on the expected duration and the specific river reaches where unregulated flow currently applies, please refer to your local water authority.

River operations

- MDBA active storage continues to rise
- Water for the environment supporting Murray Cod outcomes in Murray
- Lake Victoria approaching full supply
- Unregulated system flows set to finish at South Australian border this week
- Water for the environment to help native fish in lower Darling

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, physical distancing and travel, and to support actions to limit the spread of COVID-19.

Water quality impacts

An amber alert for **blue-green algae** is current in the River Murray system for the Gulpa Creek at Mathoura and the Edward River at Old Morago. 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](#).

As the Bureau of Metrology [continues to forecast wet conditions](#) across south eastern Australia, Murray Darling Basin communities should be aware there is a significant risk of hypoxic blackwater events occurring particularly in New South Wales. After three hot and dry years, floodplains have a high load of leaf litter. The high chance of La Niña conditions in spring increases the risk of floods, which can wash organic matter into waterways and lead to hypoxic blackwater events. More information is provided in the [MDBA and WaterNSW joint media release](#).

Monthly snapshot of water in the system

River Murray communities can now access a monthly point-in-time snapshot that shows what water is in the river for the environment compared with water for towns, industries and irrigators.

Every day, water enters the river at different points and for different purposes, including irrigation, town water supply, industries and specific environmental benefits. The monthly snapshot shows in simple terms the volume of flow and the extent to which it comprises water for the environment at five locations—in the Murray River at Yarrowonga and the South Australian border, and in the Murrumbidgee, Goulburn and Darling rivers just upstream of their junction with the Murray. Find out more on [Flows in the River Murray System in August](#).



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River operations

Over the past week, MDBA total active storage increased by 55 GL to 4,625 GL (55% capacity).

At **Dartmouth Reservoir**, the storage increased by 14 GL this week to 2,168 GL (56% capacity). The release, measured at Colemans, continued to target the minimum flow of 200 ML/day.

At **Hume Reservoir** the [storage](#) level increased by 33 GL to 1,982 GL (66% capacity). Hume releases eased from 5,500 ML/day to 2,500 ML/day this week in response to forecast rainfall. As the rainfall only produced modest stream flows in the Ovens and Kiewa rivers the release has since increased again to 5,500 ML/day to meet downstream irrigation and environmental demands. In the coming weeks, Hume releases will continue to be influenced by rainfall, irrigation demands and orders for water for the environment.

At **Lake Mulwala**, the pool [level](#) is 124.72 m AHD and within the normal operating range of between 124.6 and 124.9 m AHD. Across the week irrigation diversions reduced with rainfall and cooler weather. Towards the end of the week diversion to both Mulwala Canal and Yarrawonga Main Channel increased again to 1,300 ML/day and 700 ML/day, respectively.

The release from **Yarrawonga Weir** has varied between 7,000 and 7,500 ML/day, of which between 1,500 and 2000 ML/day is water for the environment. Without significant rainfall, similar releases are anticipated over coming weeks. These higher flows are designed to provide water levels that support the Murray Cod nesting season, while also increasing lateral connectivity between the River Murray and the **Barmah-Millewa Forest**. This greater connectivity has been enabled by the opening of selected regulators in the forest which promotes increased productivity in the river and supports plants and animals in the forest.

All actions associated with water for the environment are tracked and water usage debited from environmental water holder accounts.

With the gates raised clear of the water at **Edward River Offtake**, flows continue to respond to changes in the Murray. This week, with releases from Yarrawonga, flow through the offtake slowly increased to near 1,200 ML/day. Flow through the **Gulpa River Offtake** increased slightly to near 260 ML/day. Downstream, diversions to Wakool Main Canal averaged 280 ML/day. This week, the release from Stevens Weir increased from 700 ML/day to near 950 ML/day and is anticipated to remain near this rate in the coming week.

On the **Goulburn River**, the flow measured at McCoys Bridge receded from 3,200 ML/day to the current rate near 2,240 ML/day. The current inflow into the River Murray is comprised mostly of environmental water that has been used to slow the flow recessions in parts of the Goulburn system. Over the coming week, without rainfall, flows are expected to continue to gradually ease. Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

[Diversions](#) to National Channel from the **Torrumbarry Weir** pool reduced from 1,700 ML/day to 970 ML/day this week. Demands are expected to increase again to around 1,800 ML/day in the coming week. A portion of this flow is being used to maintain baseflows in the Gunbower Creek with the aim of providing increased habitat for native fish and other aquatic animals over the spring period. Flow in Gunbower Creek returns to the River Murray via Koondrook Spillway, downstream of Torrumbarry Weir near Barham. This week the release downstream of Torrumbarry Weir averaged 7,000 ML/day and over the coming week flows are anticipated to start to gradually reduce.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), is near the September end of system target of 1,330 ML/day. Similar flows are anticipated over the coming week before easing in October. With drier conditions across the last few weeks, supplementary access for the Murrumbidgee system has finished in most reaches. Please see the [WaterNSW website](#) for more information. The [Murrumbidgee IVT balance](#) is open for trade from the Murray to the Murrumbidgee (101 GL) but remains closed for trade from the Murrumbidgee to the Murray.



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Photo 1 – Storm developing over the upper Murrumbidgee catchment in the outskirts of Canberra (Photo by Trevor Jacobs, MDBA)

At **Euston Weir**, the [weir pool level](#) is at FSL. This week the [downstream release](#) averaged around 9,200 ML/day and is expected to remain around this rate in the coming week.

Continued inflows to **Menindee Lakes** resulted in the [storage](#) increasing by 6 GL to 470 GL (27% capacity). The downstream release, measured at Weir 32, increased slightly this week to near 440 ML/day with modest environmental releases commencing to the lower Darling. These flows aim to improve the condition of the lower Darling and help Murray Cod breed this spring. For more information refer to the [Commonwealth Environmental Water Office](#) and [NSW Department of Planning, Industry and Environment](#). Following the rainfall and streamflow responses during recent months, [water restrictions](#) have been lifted in many locations across NSW. Links to drought services and assistance can be accessed via the MDBA [drought webpage](#).

At **Wentworth Weir**, the weir pool level is being managed to target around FSL. The downstream flow reduced from the peak around 15,100 ML/day mid last week to the current rate near 8,000 ML/day. Flow is expected to continue around this rate for the coming week.

The **Lock 9, Lock 8 and Lock 7** weir pools continue to vary near FSL, within their normal operating range.

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The storage level at **Lake Victoria** increased by 2 GL to 669 GL (99% capacity) this week. The storage is approaching full, with the expectation that, without significant rainfall, unregulated flow to South Australia will cease on Friday. The storage is being deliberately filled at the end of unregulated flows in accordance with the Lake Victoria Operating Strategy. The strategy aims to fill the storage as late as possible while also minimising the length of time the storage is held at a steady level. This is done with the aim of minimising erosion and inundation impacts on sensitive foreshore vegetation and cultural heritage material.

The [flow](#) to **South Australia** remains above normal September Entitlement (4,500 ML/day) as unregulated flows continue. Over the past week the flow averaged around 9,400 ML/day. Flow is expected to ease early in the coming week as the unregulated flows cease and then target a more stable flow near 7,200 ML/day over the coming week as environmental water arrives from upstream.

The **Lower Lakes** 5-day average water level is 0.82 m AHD. Continuing unregulated flow into the Lower Lakes has allowed large volumes to be released to the Coorong to target outcomes in the Coorong and at the Murray Mouth. Increased barrage releases will continue to be made when conditions allow to push fresh water into the Coorong. For information on barrage releases and South Australia's Entitlement flow, 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



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Water in Storage

Week ending Wednesday 23 Sep 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	455.67	2 168	56%	71	2 097	+14
Hume Reservoir	192.00	3 005	186.28	1 982	66%	23	1 959	+33
Lake Victoria	27.00	677	26.94	669	99%	100	569	+2
Menindee Lakes		1 731*		470	27%	(- -) #	0	+6
Total		9 269		5 289	57%	--	4 625	+55
Total Active MDBA Storage				55% ^				

Major State Storages

Burrinjuck Reservoir	1 026		816	79%	3	813	-9
Blowering Reservoir	1 631		1 254	77%	24	1 230	-5
Eildon Reservoir	3 334		1 957	59%	100	1 857	+16

* 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 22 Sep 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2020
Lake Eucumbene - Total	1 109	+55	Snowy-Murray	+0	420
Snowy-Murray Component	519	+37	Tooma-Tumut	+7	128
Target Storage	1 240		Net Diversion	-6	291
			Murray 1 Release	+13	563

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)	9.8	129	Yarrowonga Main Channel (net)	3.2	19
Wakool Sys Allowance	2.4	25	Torrumbarry System + Nyah (net)	3.6	45
Western Murray Irrigation	0.2	1	Sunraysia Pumped Districts	0.9	8
Licensed Pumps	2.9	38	Licensed pumps - GMW (Nyah+u/s)	0.2	2
Lower Darling	0.0	0	Licensed pumps - LMW	4.3	29
TOTAL	15.3	193	TOTAL	12.2	103

* 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	135.0 *	
Flow this week	64.5	(9 200 ML/day)
Flow so far this month	224.1	
Flow last month	261.6	

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

	Current	Average over the last week	Average since 1 August 2020
Swan Hill	110	110	120
Euston	-	-	-
Red Cliffs	160	160	140
Merbein	180	160	180
Burtundy (Darling)	330	320	310
Lock 9	130	130	130
Lake Victoria	120	120	120
Berri	160	160	150
Waikerie	180	180	200
Morgan	190	190	200
Mannum	240	230	220
Murray Bridge	250	250	240
Milang (Lake Alex.)	820	810	870
Poltalloch (Lake Alex.)	400	480	460
Meningie (Lake Alb.)	1 740	1 710	1 690
Goolwa Barrages	1 500	1 130	1 520



River Levels and Flows

Week ending Wednesday 23 Sep 2020

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	-	-	-	2 710	F	3 750	4 050
Jingellic	4.0	2.05	208.57	7 650	F	7 460	7 350
Tallandoon (Mitta Mitta River)	4.2	1.58	218.47	970	F	950	950
Heywoods	5.5	2.13	155.76	4 350	R	4 120	6 030
Doctors Point	5.5	2.22	150.69	6 330	R	5 710	7 670
Albury	4.3	1.24	148.68	-	-	-	-
Corowa	4.6	1.21	127.23	4 240	F	5 830	6 050
Yarrowonga Weir (d/s)	6.4	1.19	116.23	6 980	F	7 250	6 390
Tocumwal	6.4	1.80	105.64	7 080	S	6 780	5 840
Torrumbarry Weir (d/s)	7.3	2.44	80.99	7 140	F	7 000	5 590
Swan Hill	4.5	1.44	64.36	7 620	R	6 790	7 050
Wakool Junction	8.8	3.03	52.15	8 280	R	7 970	10 270
Euston Weir (d/s)	9.1	1.64	43.48	9 150	F	9 170	12 880
Mildura Weir (d/s)	-	-	-	8 790	F	9 590	14 550
Wentworth Weir (d/s)	7.3	2.99	27.75	8 010	F	9 370	14 190
Rufus Junction	-	3.65	20.58	7 670	F	8 360	9 250
Blanchetown (Lock 1 d/s)	-	0.94	-	8 050	F	8 370	9 390
Tributaries							
Kiewa at Bandiana	2.8	1.82	155.05	1 690	F	1 500	1 580
Ovens at Wangaratta	11.9	8.90	146.58	3 120	F	2 690	2 640
Goulburn at McCoys Bridge	9.0	2.18	93.60	2 240	F	2 700	3 150
Edward at Stevens Weir (d/s)	5.5	1.19	80.96	910	F	800	810
Edward at Liewah	-	1.50	56.88	860	F	1 030	1 210
Wakool at Stoney Crossing	-	1.44	54.93	520	F	530	480
Murrumbidgee at Balranald	5.0	1.75	57.71	1 320	R	1 290	1 370
Barwon at Mungindi	6.1	3.21	-	130	F	140	170
Darling at Bourke	9.0	4.16	-	760	F	830	1 310
Darling at Burtundy Rocks	-	0.71	-	160	R	150	150

Natural Inflow to Hume	12 170	12 000
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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	-0.18	-	No. 7 Rufus River	22.10	+0.01	+1.34
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.12	+0.31
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.15	+0.50
No. 11 Mildura	34.40	-0.01	+0.19	No. 4 Bookpurnong	13.20	+0.30	+0.91
No. 10 Wentworth	30.80	-0.04	+0.35	No. 3 Overland Corner	9.80	+0.03	+0.50
No. 9 Kulnine	27.40	-0.01	+0.10	No. 2 Waikerie	6.10	+0.20	+0.41
No. 8 Wangumma	24.60	+0.01	+0.21	No. 1 Blanchetown	3.20	+0.15	+0.19

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.82
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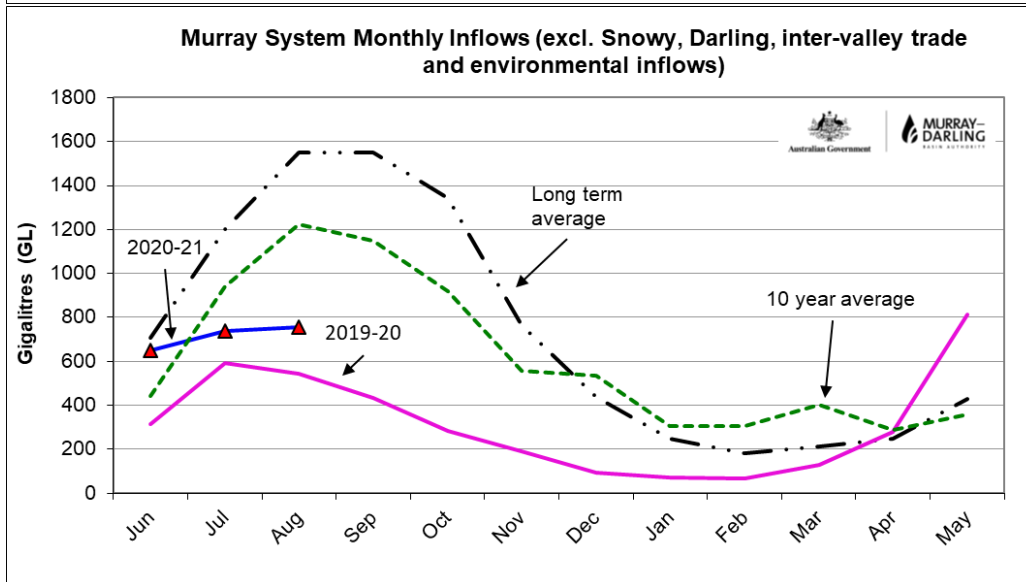
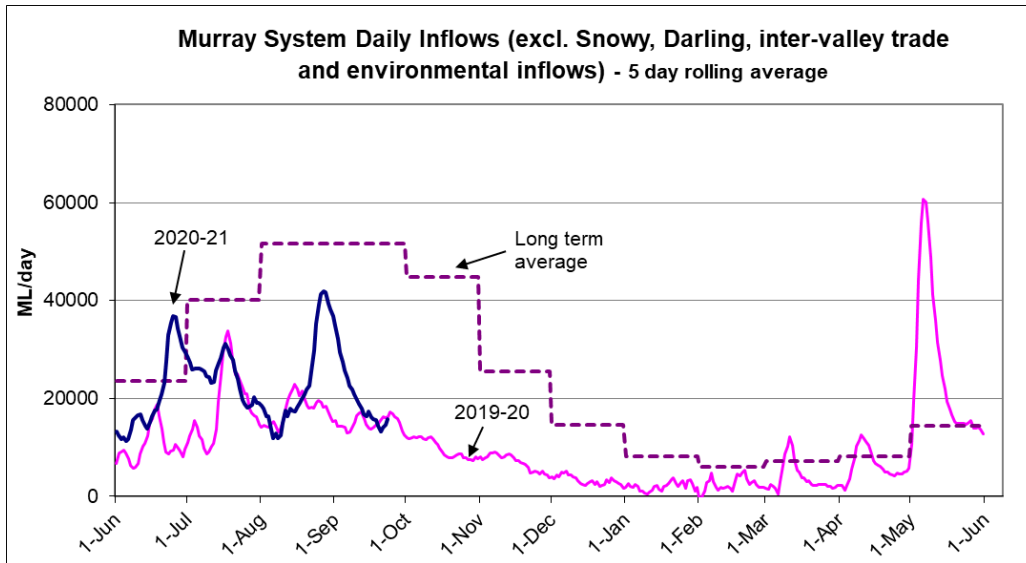
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.72	All closed	-	Open	Open	-
Mundoo	26 openings	0.73	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.76	6	Open	Closed	Open	-

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





State Allocations (as at 23 Sep 2020)

NSW - Murray Valley

High security	97%
General security	15%

Victorian - Murray Valley

High reliability	36%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	46%

Victorian - Goulburn Valley

High reliability	51%
Low reliability	0%

NSW - Lower Darling

High security	100%
General security	30%

South Australia - Murray Valley

High security	100%
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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>

