



River Murray Weekly Report

For the week ending Wednesday, 16 September 2020

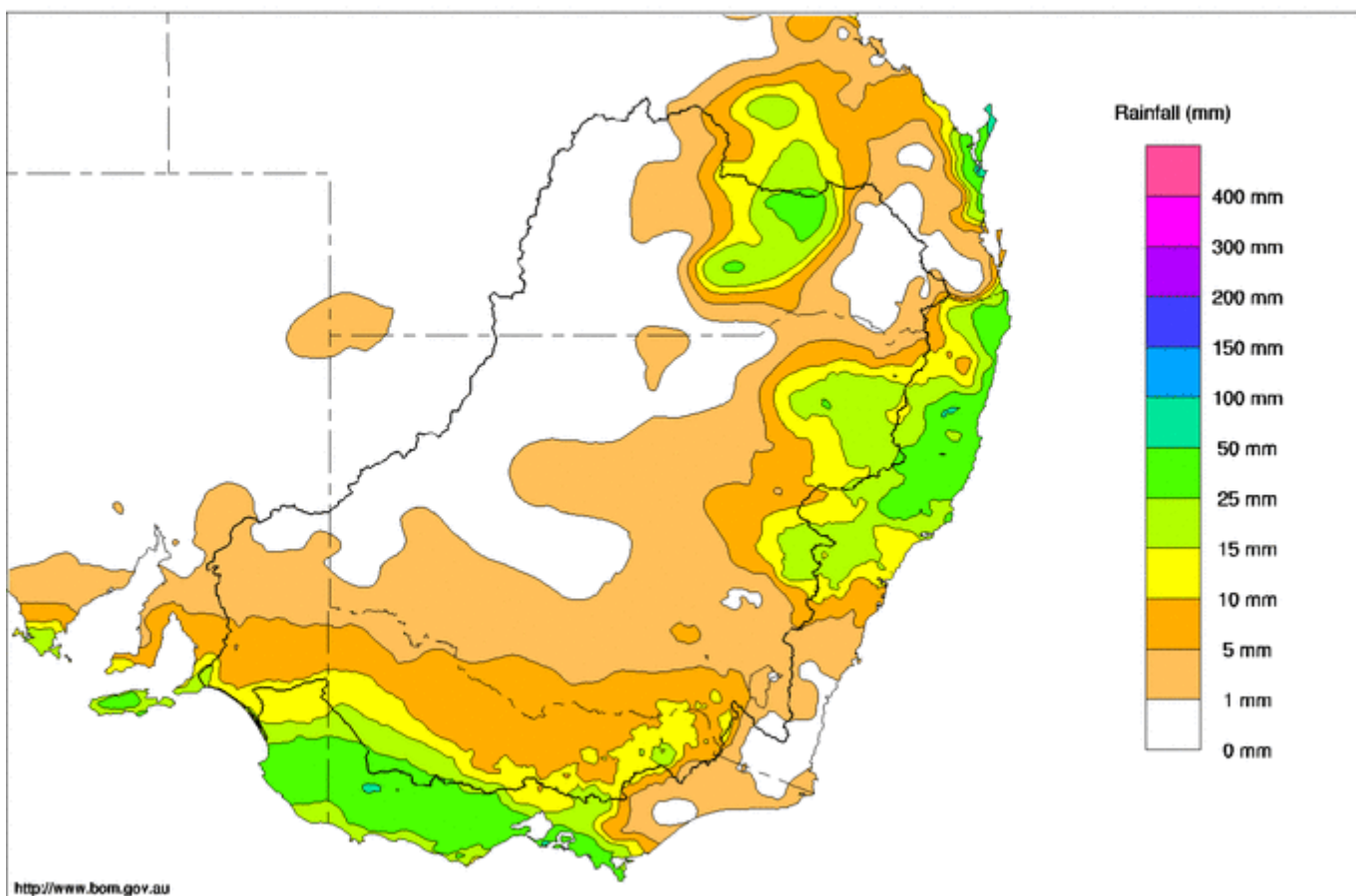
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Rainfall and inflows

Although some areas of the Murray-Darling Basin received moderate rainfall this week, conditions remained mostly dry across much of the Basin (Map 1). In New South Wales, Tamworth in the North West Slopes region received 16 mm while Culcairn in the Riverina received 5 mm. In Victoria's Wimmera district, 20 mm of rain was recorded at Horsham while in the Victorian Alps Falls Creek received 21 mm.

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

Murray-Darling Rainfall Totals (mm) Week Ending 16th September 2020
Australian Bureau of Meteorology



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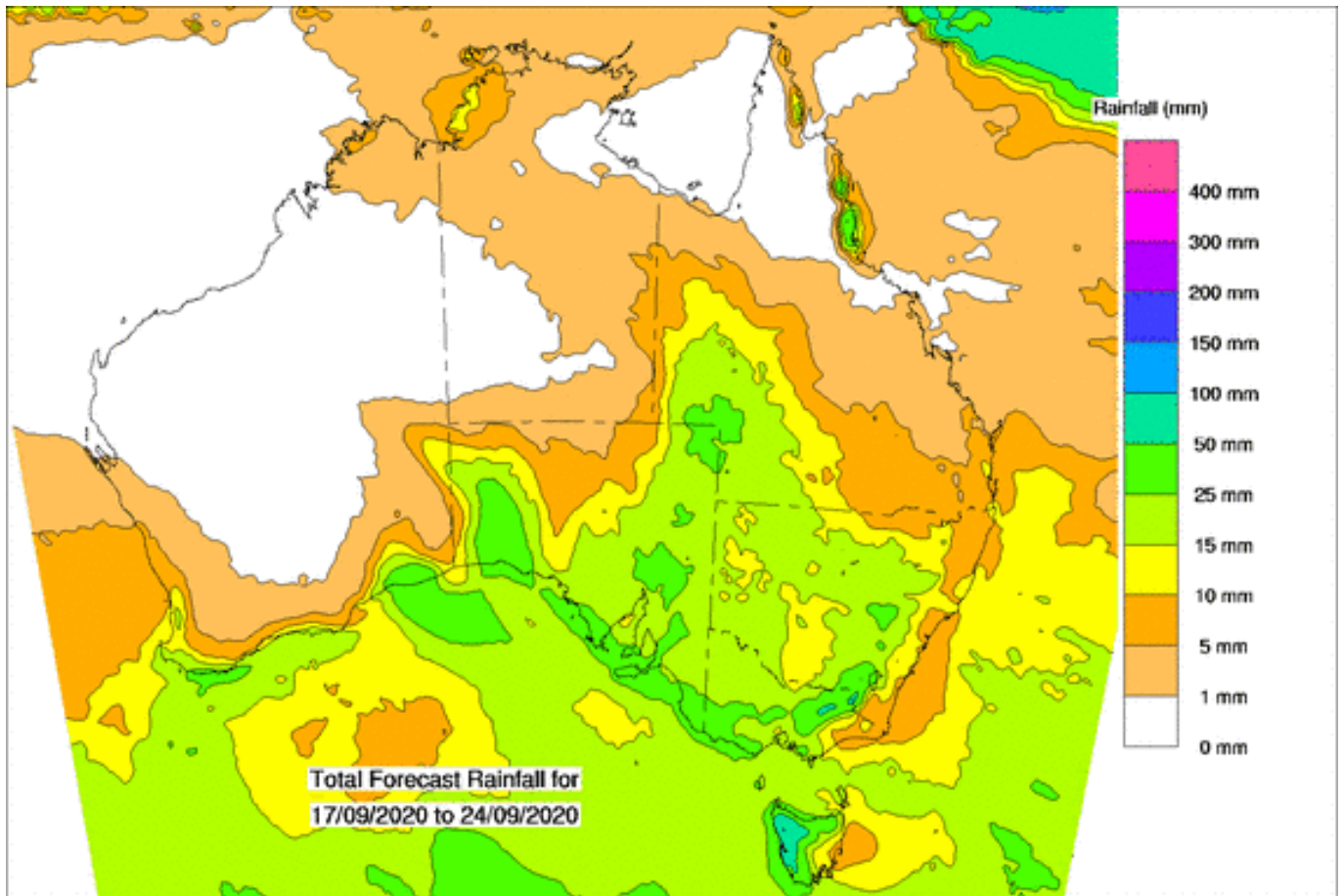
Issued: 16/09/2020

Map 1 - Murray-Darling Basin rainfall totals for week ending 16 September 2020 (Source: Bureau of Meteorology)

Stream flows in the upper Murray tributaries continued to mostly recede this week following minor rises from the previous week's 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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Map 2 – Forecast rainfall for the period 17 September to 24 September 2020 (Source: Bureau of Meteorology)

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 in the coming week. 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.



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River operations

- MDBA active storage continues to rise
- Water for the environment supporting Murray Cod outcomes in Murray
- Lock 11 at Mildura reopens to boat traffic following maintenance works
- Lake Victoria approaching full supply
- 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](#).

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](#).

River operations

Over the past week, MDBA total active storage increased by 51 GL to 4,575 GL (54% capacity).

At **Dartmouth Reservoir**, the storage increased by 14 GL this week to 2,154 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 21 GL to 1,948 GL (65% capacity). Hume releases were increased to 7,000 ML/day earlier in the week in response to both irrigation and environmental demands. The release has since eased to 5,500 ML/day and is expected to be relatively steady in coming days. 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 124.74 m AHD and within the normal operating range of between 124.6 and 124.9 m AHD. Across the week irrigation diversions have been increasing. Diversion to both Mulwala Canal and Yarrowonga Main Channel have been steady at 2,000 ML/day and 800 ML/day, respectively.

Without an order for water for the environment from Hume Reservoir, the release from **Yarrowonga Weir** would have targeted around 5,000 ML/day for most of this week. Instead, the release of environmental water from Hume resulted in releases from Yarrowonga Weir gradually increasing to 7,000 ML/day and, 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

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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, as releases from Yarrowonga increased, flow through the offtake slowly increased to over 1,000 ML/day. Flow through the **Gulpa River Offtake** is targeting around 250 ML/day. Downstream, diversions to Wakool Main Canal increased from near 100 ML/day to 380 ML/day and further increase is expected in coming days. This week the release from Stevens Weir averaged 800 ML/day.

On the **Goulburn River**, this week the flow measured at McCoys Bridge fluctuated between 2,600 and 3,400 ML/day. The current flow near 3,300 ML/day 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 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 were steady at 1,700 ML/day this week and are expected to reduce to around 1,400 ML/day for 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 varied between 6,400 and 4,400 ML/day and over the coming week flows are anticipated to vary within a similar range.

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 next fortnight 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 (100 GL) but remains closed for trade from the Murrumbidgee to the Murray.

At **Euston Weir**, the [weir pool level](#) is at FSL. After peak release near 15,800 ML/day, this week the [downstream release](#) receded to 10,600 ML/day and will continue to reduce in coming days.

At **Mildura Weir**, Lock 11 has now reopened to boat traffic after the successful installation and load testing of the upgraded lock bridge.

Continued inflows to **Menindee Lakes** resulted in the [storage](#) increasing by 4 GL to 464 GL (27% capacity). The downstream release, measured at Weir 32, averaged 240 ML/day until late this week when modest environmental releases to the lower Darling commenced. 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 peaked at 15,100 ML/day this week and has since reduced to 12,100 ML/day and will reduce further over the coming week.

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

The storage level at **Lake Victoria** increased by 16 GL to 667 GL (99% capacity) this week. The storage continues to be filled with the expectation that, without significant rainfall, unregulated flow to South Australia ceases in the coming week. 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



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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.



Photo 1 & 2: Lake Victoria nearing Full Supply. Photo courtesy Clay Smith, SA Water.

The [flow](#) to **South Australia** remains above normal September Entitlement (4,500 ML/day) as unregulated flows continue. Over the past week the flow reduced to around 8,200 ML/day and will ease further over the coming week before environmental water arrives from upstream.



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The **Lower Lakes** 5-day average water level is 0.81 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 16 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	455.37	2 154	56%	71	2 083	+14
Hume Reservoir	192.00	3 005	186.07	1 948	65%	23	1 925	+21
Lake Victoria	27.00	677	26.92	667	99%	100	567	+16
Menindee Lakes		1 731*		464	27%	(- -) #	0	+4
Total		9 269		5 233	56%	- -	4 575	+55
Total Active MDBA Storage							54% ^	

Major State Storages

Burrinjuck Reservoir	1 026	824	80%	3	821	-24
Blowering Reservoir	1 631	1 259	77%	24	1 235	-13
Eildon Reservoir	3 334	1 941	58%	100	1 841	+17

* 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 15 Sep 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2020
Lake Eucumbene - Total	1 054	+49	Snowy-Murray	+0	419
Snowy-Murray Component	482	+34	Tooma-Tumut	+10	121
Target Storage	1 240		Net Diversion	-10	298
			Murray 1 Release	+16	550

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)	14.9	119	Yarrowonga Main Channel (net)	5.2	16
Wakool Sys Allowance	2.8	23	Torrumbarry System + Nyah (net)	8.8	41
Western Murray Irrigation	0.2	1	Sunraysia Pumped Districts	1.5	8
Licensed Pumps	3.5	35	Licensed pumps - GMW (Nyah+u/s)	0.3	2
Lower Darling	0.0	0	Licensed pumps - LMW	5.7	25
TOTAL	21.4	178	TOTAL	21.5	92

* 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 unregulated flows.

Entitlement this month	135.0 *	
Flow this week	71.0	(10 100 ML/day)
Flow so far this month	159.6	
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	120	120	120
Euston	-	-	-
Red Cliffs	140	130	140
Merbein	1 330	390	190
Burtundy (Darling)	310	310	310
Lock 9	140	140	130
Lake Victoria	120	130	120
Berri	150	150	140
Waikerie	190	190	200
Morgan	190	190	210
Mannum	230	230	220
Murray Bridge	240	220	240
Milang (Lake Alex.)	790	770	880
Poltalloch (Lake Alex.)	550	510	460
Meningie (Lake Alb.)	1 610	1 590	1 690
Goolwa Barrages	1 070	1 180	1 580



River Levels and Flows

Week ending Wednesday 16 Sep 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	-	-	-	4 610	R	4 050	2 060
Jingellic	4.0	2.05	208.57	7 570	R	7 350	6 430
Tallandoon (Mitta Mitta River)	4.2	1.55	218.44	890	F	950	1 030
Heywoods	5.5	2.25	155.88	5 560	F	6 030	990
Doctors Point	5.5	2.31	150.78	7 140	F	7 670	2 520
Albury	4.3	1.32	148.76	-	-	-	-
Corowa	4.6	1.77	127.79	7 000	F	6 050	2 140
Yarrowonga Weir (d/s)	6.4	1.19	116.23	7 010	S	6 390	5 800
Tocumwal	6.4	1.68	105.52	6 300	R	5 840	5 140
Torrumbarry Weir (d/s)	7.3	2.11	80.66	5 950	R	5 590	9 880
Swan Hill	4.5	1.19	64.11	5 900	S	7 050	13 540
Wakool Junction	8.8	3.00	52.12	8 120	F	10 270	14 360
Euston Weir (d/s)	9.1	1.87	43.71	10 630	F	12 880	14 470
Mildura Weir (d/s)	-	-	-	12 440	F	14 540	12 310
Wentworth Weir (d/s)	7.3	3.25	28.01	12 150	F	14 190	11 630
Rufus Junction	-	3.60	20.53	7 360	F	9 250	9 310
Blanchetown (Lock 1 d/s)	-	0.86	-	8 060	F	9 390	8 400
Tributaries							
Kiewa at Bandiana	2.8	1.71	154.94	1 500	F	1 580	1 580
Ovens at Wangaratta	11.9	8.69	146.37	2 410	F	2 640	4 080
Goulburn at McCoys Bridge	9.0	2.71	94.13	3 270	F	3 150	4 420
Edward at Stevens Weir (d/s)	5.5	1.08	80.85	790	S	810	1 110
Edward at Liewah	-	1.95	57.33	1 240	F	1 210	790
Wakool at Stoney Crossing	-	1.45	54.94	530	R	480	440
Murrumbidgee at Balranald	5.0	1.79	57.75	1 370	F	1 370	1 810
Barwon at Mungindi	6.1	3.24	-	160	R	170	430
Darling at Bourke	9.0	4.22	-	1 020	F	1 310	1 220
Darling at Burtundy Rocks	-	0.70	-	150	S	150	150

Natural Inflow to Hume	11 980	11 880
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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	-0.16	-	No. 7 Rufus River	22.10	+0.05	+1.29
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.13	+0.35
No. 15 Euston	47.60	-0.01	-	No. 5 Renmark	16.30	+0.19	+0.54
No. 11 Mildura	34.40	-0.05	+0.54	No. 4 Bookpurnong	13.20	+0.33	+0.92
No. 10 Wentworth	30.80	+0.02	+0.61	No. 3 Overland Corner	9.80	+0.03	+0.47
No. 9 Kulnine	27.40	+0.03	+0.19	No. 2 Waikerie	6.10	+0.18	+0.42
No. 8 Wangumma	24.60	+0.06	+0.31	No. 1 Blanchetown	3.20	+0.17	+0.11

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.81
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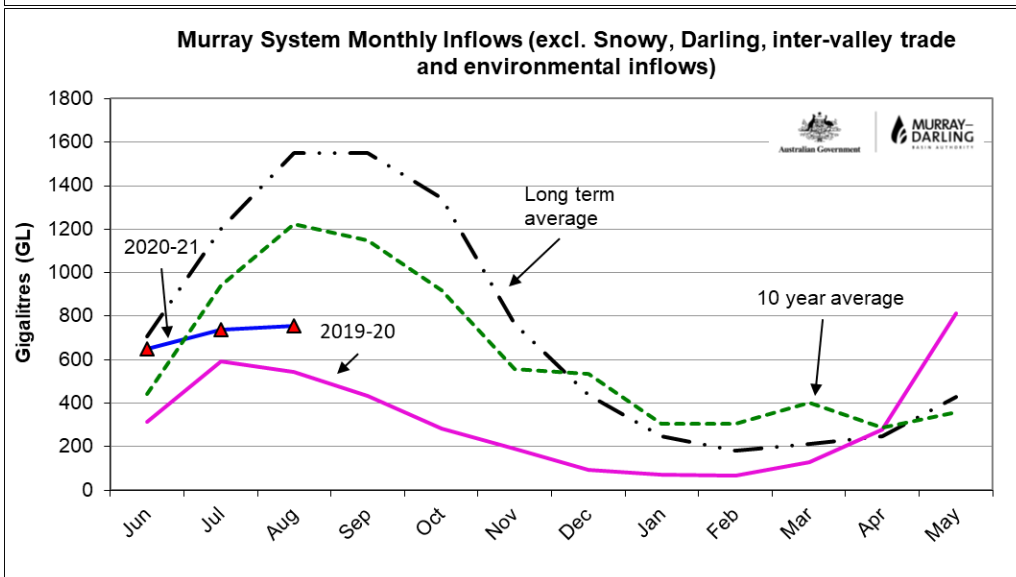
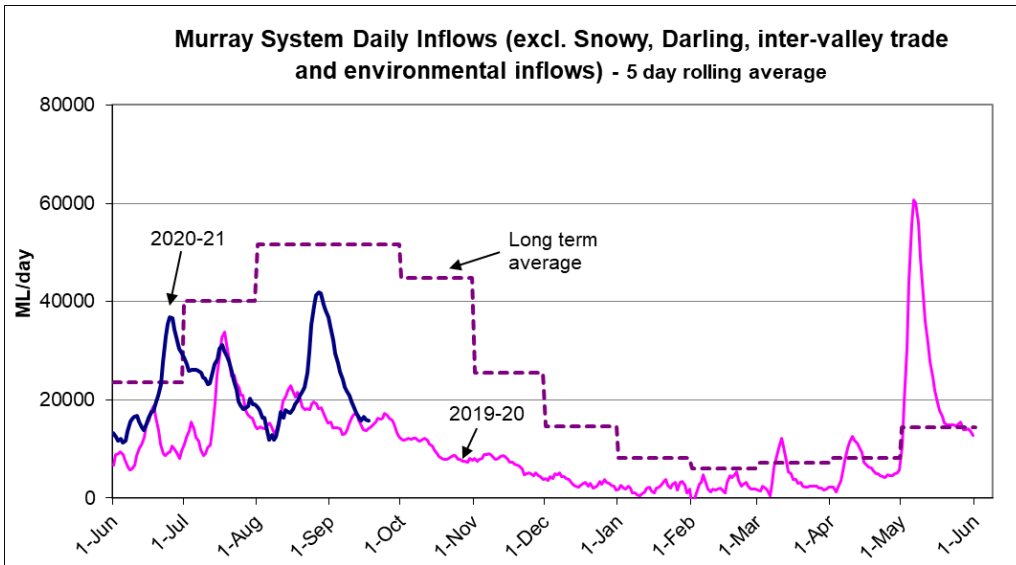
Barrages

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	0.84	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.85	6	Open	Closed	Open	-

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





State Allocations (as at 16 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>

