



River Murray Weekly Report

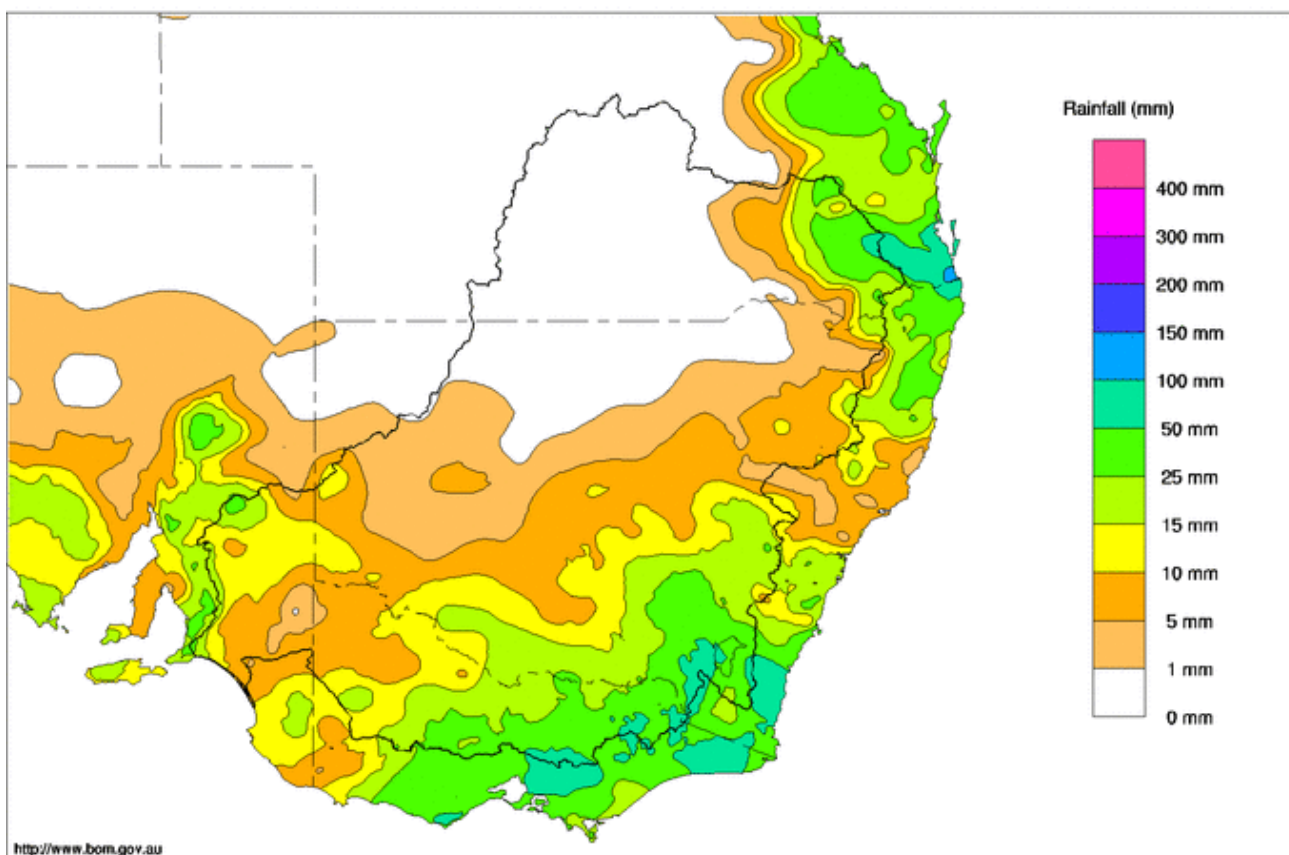
For the week ending Wednesday, 20 October 2021

Trim Ref: D21/42205

Rainfall and inflows

Rainfall was widespread across much of the southern Murray-Darling Basin this week, with the heaviest totals recorded along the Great Dividing Ranges (Map 1). In Victoria, Mt Buffalo in the Ovens catchment received 50 mm, while upstream of Dartmouth Dam, Gibbo Park recorded 38 mm. In New South Wales, Cabramurra in the Southwest Slopes recorded 108 mm, whilst Thredbo Village in the Snowy Mountains (just outside the Basin) received 70 mm.

Murray-Darling Rainfall Totals (mm) Week Ending 20th October 2021
Australian Bureau of Meteorology



Map 1 – Murray-Darling Basin rainfall for the week ending 20 October 2021. Source: Bureau of Meteorology.

Minor streamflow responses were observed in the upper Murray tributaries following this week's rainfall. Upstream of Hume, Jingellic flows peaked around 13,700 ML/day, whilst downstream the Kiewa River at Bandiana peaked near 3,200 ML/day, before easing to the current flow of 2,600 ML/day. Over the next 8 days, the Bureau of Meteorology (BoM) is [forecasting](#) mostly dry conditions across much of the River Murray System.

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](#), at the WaterNSW real-time data [website](#), and in the Murray River Basin [Daily River Report](#) at the WaterNSW website. See also Victoria's DELWP water monitoring [website](#), South Australia's Water Data [website](#) and Queensland's [Water Monitoring Information Portal](#).

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River operations

- MDBA continues to monitor Hume dam and any potential requirement for airspace releases
- Elevated inflows to the Murray from the Murrumbidgee River continue
- Relatively dry conditions forecast over the coming week

Hume Dam Operations update

Hume Dam is currently 98 % full. As of Wednesday 20 October, inflows to Hume have reduced to around 13,000 ML/day.

The BoM is forecasting minor rainfall totals of 5-25 mm over the next week. Looking ahead, operations will focus on a daily assessment of future rain and likely flow responses, guided by BoM advice.

Deciding when to fill the storage is one of the most challenging aspects of dam operations at Hume. Filling targets must be met as downstream demands emerge to ensure as much water as possible can be provided for entitlement holders across the year ahead. However, as the storage fills, there is less potential to mitigate higher flow events. With water availability and state allocations increasing in recent weeks, early season demands are likely to be high and a few relatively dry weeks could also see demands increase quickly.

With warmer and drier weather experienced, downstream water demands are increasing and releases from Hume dam have been gradually reduced over the past week as the MDBA continues to steer the storage towards full.

If a significant rainfall event develops in the forecast outlook, potential inflows will be assessed, which may necessitate increased releases.

Andrew Reynolds, acting Chief Executive, provides an [overview](#) on how the Murray–Darling Basin Authority is managing the Hume Dam during the current high flows. This video update includes:

- catchment conditions
- water releases
- forecast rainfall and inflows
- planned management for the coming week.

Hume Dam operations update 20 October 2021

Andrew Reynolds
Acting Chief Executive



Further details about [flood management](#) at Hume Dam are available on the MDBA website.

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Unregulated flows

Releases from Hume dam have reduced to steer the storage towards full supply level and are now meeting system demands. Inflows from Murray tributaries in the Ovens, Kiewa and Goulburn River have continued receding. As a result, unregulated flows have ceased in the upper reaches. Unregulated flow access has been extended for reaches downstream. Information on access to Murray supplementary water licences in NSW is available from [WaterNSW Water insights](#). General information on River Murray unregulated flows can be accessed on the MDBA [webpage](#).

River operations

Total **active storage** increased by 65 GL over the last week to 8,022 GL (93% capacity).

At **Dartmouth Reservoir**, the [storage](#) increased by 29 GL to 3,156 GL (82% capacity). The release, measured at Colemans gauge, targeted the minimum rate of 200 ML/day this week and is expected to remain at this rate over the coming weeks.

The release from **Hume Reservoir** was gradually decreased from 13,500 ML/day to 8,000 ML/day this week as the storage is steered towards full. In response, the Hume Reservoir [storage](#) increased by 33 GL this week to 2,952 GL (98% capacity). Increased releases are forecast over the coming week, as water is released to achieve environmental outcomes downstream of Yarrowonga and meet downstream demands.

The **Lake Mulwala** level is currently 124.78 m AHD, within the normal operating range (124.6 to 124.9 m AHD). This week the diversion to Mulwala Canal averaged 2,350 ML/day and is forecast to increase over the coming week. Diversions at Yarrowonga Main Channel increased from 150 ML/day to 400 ML/day. The release from Yarrowonga Weir has continued to gradually recede from 29,000 ML/day to 18,000 ML/day. Releases are forecast to continue receding over the coming days until environmental water holders target of 15,000 ML/day downstream of Yarrowonga is reached. Over the coming week, the downstream flow will target between 14,500 to 15,000 ML/day.

Water for the environment aims to maintain water depth in the Murray River downstream of Yarrowonga Weir for improved native fish habitat, support floodplain vegetation and improve river connectivity. Forest regulators will remain open to deliver water to the Barmah and Millewa forests and manage the river level below the capacity of the Barmah Choke. The flow at Barmah peaked this week near 18,700 ML/day and forecast to slowly recede over the coming week.

Flow through the **Kolety** (pronounced Kol-etch)/**Edward River** offtake and the **Gulpa Creek** offtake averaged near 2,300 ML/day and 1,000 ML/day, respectively. Further downstream on the Kolety/Edward River the flow at Toonalook has now peaked near 10,400 ML/day and forecast to recede gradually over the coming week.

At **Stevens Weir**, the pool level remains within the normal operating range. Diversions at Wakool Main Canal have remained relatively steady, averaging near 1,500 ML/day. Flow downstream of Stevens Weir increased to a peak of near 10,000 ML/day during the week and forecast to continue falling over the coming week.

On the **Goulburn River**, the flow measured at [McCoys Bridge](#) continued to reduce from a peak of 8,000 ML/day to the current flow of 5,000 ML/day as the delivery of a Spring Fresh concludes. For more information see the [Goulburn-Murray Water website](#). Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

The [diversion](#) to **National Channel** increased this week to the current rate of around 1,700 ML/day. Releases from **Torrumbarry Weir** are reducing steadily, following a peak of near 24,500 ML/day on Monday.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), remained steady averaging 11,100 ML/day and forecast to remain near this rate over the coming week. The [Murrumbidgee IVT](#) balance is open for trade from the Murray to the Murrumbidgee but remains closed to trade from the Murrumbidgee to the Murray. WaterNSW has announced access to **supplementary water** for the [Murrumbidgee River](#).

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At **Euston Weir**, the [weir pool level](#) is currently targeting FSL. This week the [downstream release](#) gradually increased to 34,300 ML/day. The release is expected to continue slowly increasing over the coming week as higher upstream flows are passed downstream.

Pumping to **Hattah Lakes** continued this week, targeting a rate of around 1,000 ML/day. Water is expected to be delivered through the remainder of spring to achieve full inundation of the wetlands, creeks and floodplains. For more information, visit the Mallee CMA [website](#).

At **Menindee Lakes**, the total [storage](#) volume reduced this week to 1,958 GL (113% capacity), following a peak storage volume of 1,980 GL (116% of active capacity) in the second week of October. WaterNSW continue to manage airspace in response to sustained inflows, to prevent the Menindee Lakes exceeding the maximum induced surcharge level. Water can only be held in the surcharge zone until 31 December.

To manage the water level in the Lakes, releases to the lower Darling River (measured at Weir 32) have averaged around 2,800 ML/day and are forecast to remain near 2,400 ML/day for the coming week. WaterNSW has also continued releases from Lake Cawndilla (part of Menindee Lakes) into the Great Darling Anabranch (currently around 1,000 ML/day). For more information on releases from Menindee Lakes please refer to WaterNSW [Lower Darling operational updates](#).

Over the coming months, the MDBA will continue to revise forecasts and operational plans that identify/outline the volume and timing of operational water to be released from Menindee Lakes to support all water users along the River Murray System once unregulated flows cease. This process will be on-going and will follow the practices agreed by the New South Wales, Victorian, South Australian and Commonwealth governments and are outlined in the Murray-Darling Basin Agreement and the [Objectives and Outcomes for River Operations in the River Murray System](#). These practices require State and Commonwealth agencies to provide ongoing advice on actual release decisions, and in particular, provide advice on any implications to water security, delivery efficiency, the community and environmental outcomes.

Further updates are provided in the [Annual Operating Outlook](#). Updates will be provided in future Weekly Reports as updated plans and release decisions are made. More information on the management of Menindee Lakes is also available in a [webinar](#) hosted by the MDBA.

At **Wentworth Weir**, the weir pool level continues to be managed around FSL. The downstream flow averaged 34,200 ML/day this week and is expected to slowly rise over coming weeks. Just upstream of Wentworth Weir at Curlwaa, Abbotsford Bridge is expected to be closed to traffic each night from Sunday to Thursday between 9pm and 6am, for five weeks commencing 20 September. This is to allow essential maintenance work to replace the existing timber deck of the lift span. More information can be found [here](#).

At **Lock 9**, the weir pool is currently around 15 cm above FSL. The **Lock 8** weir pool is currently targeting 30 cm above FSL. The continued high flows and expected flow increases in coming weeks have resulted in the temporary removal of the **Lock 7** weir, as per standard high flow management at the weir. At this stage the weir is expected to remain removed for several weeks until higher flows subside.

The [storage](#) at **Tar-ru/Lake Victoria** increased to 630 GL (93% capacity). Inflows to Tar-ru/Lake Victoria are now increasing and being managed to steer the storage level up prior to refilling the storage by the end of the current unregulated flow event. This action is in accordance with the Lake Victoria Operating Strategy (LVOS) as specified in the [Objectives and Outcomes for River Operations in the River Murray System](#). The LVOS aims to stabilise the lake foreshore and protect cultural heritage sites by encouraging the growth of native vegetation. To help achieve this, operations aim to reduce the length of time the foreshore vegetation is inundated.

During this week the [flow](#) to **South Australia** averaged around 29,000 ML/day and remains unregulated. Flows are expected to remain above 20,000 ML/day throughout October, well above the required flow to South Australia. Increasing demands mean flows in upstream reaches are gradually returning to regulated conditions. If conditions remain dry, access to supplementary flows will progressively cease moving downstream.



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Photo 1: Water at Slaneys Weir, a major structure that assists in the delivery of water to Chowilla Creek. Photo: Warren Beer

Additional Dilution Flow (ADF) to South Australia continues to be triggered. However, the current unregulated flows into South Australia mean that no additional releases from storage are needed to meet ADF at the current point in time. For information on ADF and the ADF triggers please refer to [Objectives and Outcomes for River Operations in the River Murray System](#) (pages 79-80).

The **Lower Lakes** 5-day average water level is 0.84 m AHD. Barrage releases will continue to be made, when conditions allow, to push fresh water into the Coorong to support a productive environment for fish and birds. For further 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 KREMOR

A/g Executive Director, River Management



Australian Government



**Water in Storage****Week ending Wednesday 20 Oct 2021**

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	474.67	3 156	82%	71	3 085	+29
Hume Reservoir	192.00	3 005	191.73	2 952	98%	23	2 929	+33
Lake Victoria	27.00	677	26.61	630	93%	100	530	+21
Menindee Lakes		1 731*		1 958	113%	(480 #)	1 478	-18
Total		9 269		8 696	94%	--	8 022	+65
Total Active MDBA Storage							93% ^	

Major State Storages

Burrinjuck Reservoir	1 026	980	96%	3	977	+45
Blowering Reservoir	1 631	1 576	97%	24	1 552	+14
Eildon Reservoir	3 334	2 772	83%	100	2 672	+44

* 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 19 Oct 2021

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2021
Lake Eucumbene - Total	1 532	+54	Snowy-Murray	+0	347
Snowy-Murray Component	674	+34	Tooma-Tumut	+11	207
Target Storage	1 400		Net Diversion	-11	141
			Murray 1 Release	+13	575

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2021	Victoria	This Week	From 1 July 2021
Murray Irrig. Ltd (Net)	23.8	219	Yarrowonga Main Channel (net)	1.6	27
Wakool Sys Allowance	0.0	1	Torrumbarry System + Nyah (net)	0	124
Western Murray Irrigation	0.3	3	Sunraysia Pumped Districts	1.4	16
Licensed Pumps	4.1	56	Licensed pumps - GMW (Nyah+u/s)	0.3	8
Lower Darling	7.1	31	Licensed pumps - LMW	8.2	61
TOTAL	35.3	310	TOTAL	11.5	236

* 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	170.0 *	
Flow this week	203.5	(29 100 ML/day)
Flow so far this month	591.8	
Flow last month	723.8	

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

	Current	Average over the last week	Average since 1 August 2021
Swan Hill	90	80	80
Euston	-	-	-
Red Cliffs	110	110	120
Merbein	110	110	120
Burtundy (Darling)	280	300	310
Lock 9	120	120	130
Lake Victoria	130	120	130
Berri	150	160	140
Waikerie	200	190	170
Morgan	190	190	190
Mannum	190	190	200
Murray Bridge	180	180	220
Milang (Lake Alex.)	570	560	660
Poltalloch (Lake Alex.)	310	350	440
Meningie (Lake Alb.)	1 520	1 550	1 550
Goolwa Barrages	610	670	1 320

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River Levels and Flows

Week ending Wednesday 20 Oct 2021

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	-	-	-	810	F	2 830	4 620
Jingellic	4.0	2.25	208.77	9 400	F	11 950	13 380
Tallandoon (Mitta Mitta River)	4.2	1.82	218.71	1 620	F	1 830	2 200
Heywoods	5.5	2.49	156.12	8 090	F	11 170	18 830
Doctors Point	5.5	2.68	151.15	10 720	F	13 800	23 210
Albury	4.3	1.74	149.18	-	-	-	-
Corowa	4.6	2.83	128.85	13 560	F	16 990	27 730
Yarrowonga Weir (d/s)	6.4	2.58	117.62	18 030	F	22 730	38 420
Tocumwal	6.4	3.58	107.42	21 670	F	26 990	36 770
Torrumbarry Weir (d/s)	7.3	5.96	84.50	23 850	F	24 090	20 170
Swan Hill	4.5	3.36	66.28	20 400	S	20 010	17 980
Wakool Junction	8.8	6.58	55.70	28 840	S	28 480	27 770
Euston Weir (d/s)	9.1	4.79	46.63	34 370	S	34 070	32 390
Mildura Weir (d/s)	-	-	-	33 670	F	33 730	32 130
Wentworth Weir (d/s)	7.3	4.87	29.63	34 900	S	34 210	31 470
Rufus Junction	-	6.02	22.95	29 980	R	29 070	29 700
Blanchetown (Lock 1 d/s)	-	2.02	-	30 610	R	29 880	27 650
Tributaries							
Kiewa at Bandiana	2.8	2.36	155.59	2 660	F	2 890	3 670
Ovens at Wangaratta	11.9	9.77	147.45	5 970	F	6 580	8 170
Goulburn at McCoys Bridge	9.0	3.56	94.98	5 040	F	6 560	6 970
Edward at Stevens Weir (d/s)	5.5	4.99	84.76	9 880	S	9 770	7 510
Edward at Liewah	-	4.07	59.45	4 440	R	4 410	4 840
Wakool at Stoney Crossing	-	3.15	56.64	5 720	R	5 630	5 790
Murrumbidgee at Balranald	5.0	6.01	61.97	11 050	F	11 110	10 510
Barwon at Mungindi	6.1	3.61	-	1 730	F	2 020	2 290
Darling at Bourke	9.0	4.67	-	4 700	R	3 690	3 220
Darling at Burtundy Rocks	-	1.64	-	2 350	R	2 120	1 250

Natural Inflow to Hume	21 730	23 180
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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	+0.88	+3.72
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.41	+1.78
No. 15 Euston	47.60	-0.08	-	No. 5 Renmark	16.30	+0.44	+1.50
No. 11 Mildura	34.40	+0.00	+1.85	No. 4 Bookpurnong	13.20	+0.25	+2.41
No. 10 Wentworth	30.80	+0.02	+2.23	No. 3 Overland Corner	9.80	+0.07	+1.96
No. 9 Kulnine	27.40	+0.14	+1.51	No. 2 Waikerie	6.10	+0.25	+1.98
No. 8 Wangumma	24.60	+0.33	+2.19	No. 1 Blanchetown	3.20	+0.10	+1.27

Lower Lakes FSL = 0.75 m AHD

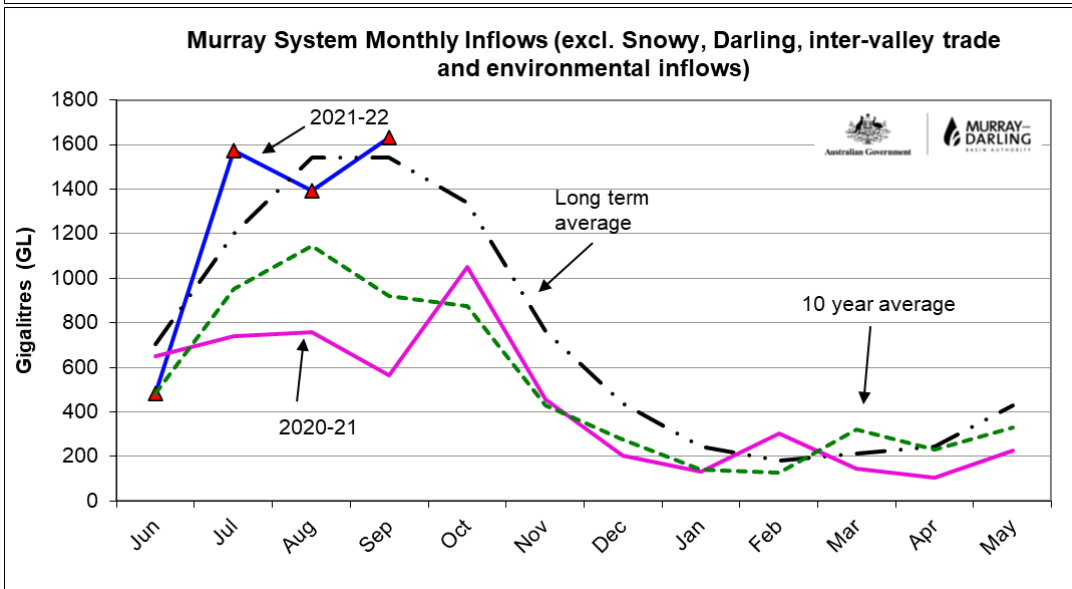
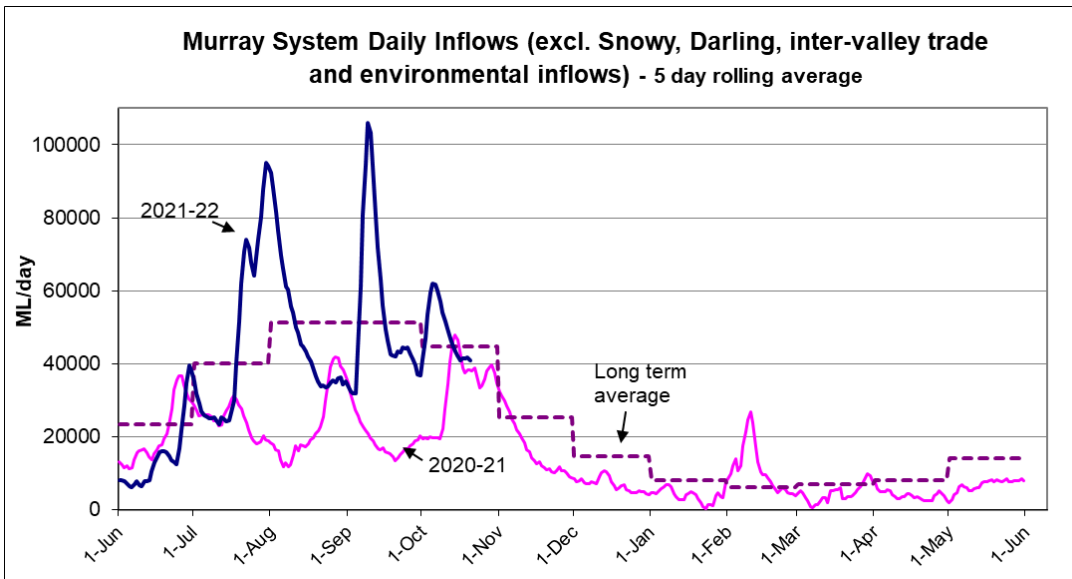
Lake Alexandrina average level for the past 5 days (m AHD)	0.84
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Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.92	5	-	Open	Open	-
Mundoo	26 openings	0.82	6	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	12	-	-	-	Open
Tauwichee	322 gates	0.92	40	Open	Open	Open	-

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



State Allocations (as at 20 Oct 2021)

NSW - Murray Valley

High security	100%
General security	110%^

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	63%&

Victorian - Goulburn Valley

High reliability	100%
Low reliability	0%

&average carryover = 22%, effective GS = 85%

NSW - Lower Darling

High security	100%
General security	100%

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 : [Department for Environment and Water | Current allocations](http://www.environment.sa.gov.au/department-for-environment-and-water/current-allocations)

