



River Murray Weekly Report

For the week ending Wednesday, 09 February 2022

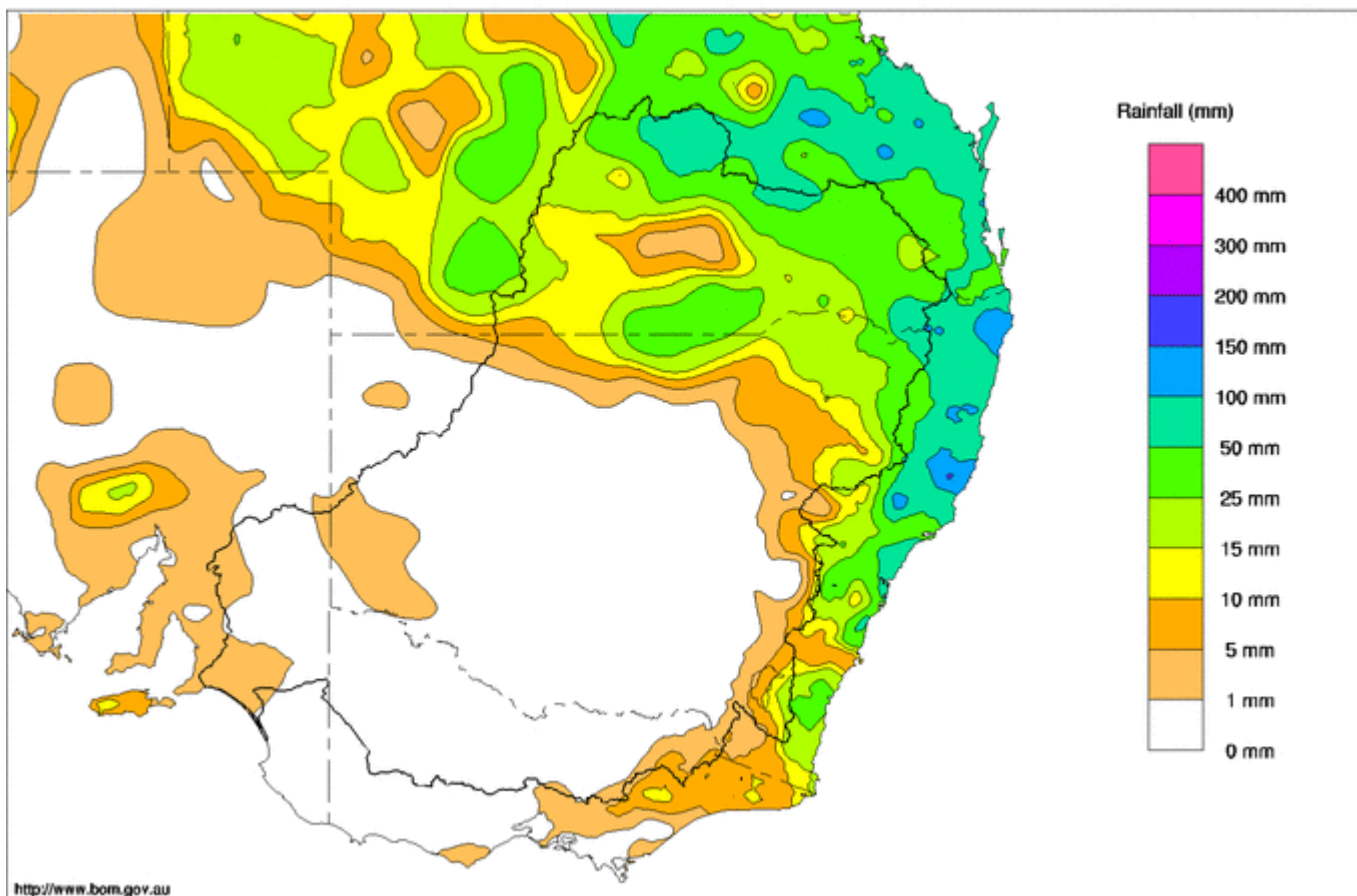
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Weekly rainfall and inflows

Following the high rainfall totals recorded last week, minimal rain was recorded in the southern Murray-Darling Basin this week (Map 1). In the northern Basin, highest rainfall totals recorded were 79 mm at Stanthorpe in south-east Queensland and 74 mm at Tenterfield in north-east NSW.

Murray-Darling Rainfall Totals (mm) Week Ending 9th February 2022

Australian Bureau of Meteorology



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

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Issued: 09/02/2022

Map 1: Murray-Darling Basin rainfall for the week ending 9 February 2022. Source: Bureau of Meteorology.

In the upper Murray, streamflow generally receded across the week. Above Hume Dam, Jingellic receded from 9,800 ML/day to 5,500 ML/day, before rising back to 8,000 ML/day with increased releases from Khancoban Pond due to Snowy Hydro power generation. Downstream of Hume Dam, the Kiewa River at Bandiana fell from 1,850 ML/day to the current rate near 870 ML/day, while the Ovens River at Peechelba reduced from 4,500 ML/day to just below 2,000 ML/day.

Over the coming week, the BoM [8-day rainfall outlook](#) indicates that dry conditions will continue across south-eastern Australia.



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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](#).

River operations

- Lake Victoria storage continues to increase
- Regulated conditions return between Hume Dam to Yarrawonga Weir
- Unregulated conditions continue below Yarrawonga Weir as flow pulse moves downstream

Hume Dam operations update and post flood arrangements

Airspace management at Hume Dam has been frequent since early August. Since then, the storage has regularly been effectively spilling, with releases adjusted to maintain some airspace to help mitigate peak flows from upstream flood events, whilst also aiming to steer the storage towards full once conditions dry off.

Hume Dam peaked at 99% full last Thursday 3rd February, after which releases downstream of Hume transitioned from airspace management to supplying downstream demands. Inflows to Hume over the past week averaged around 7,700 ML/day and are expected to further recede over the coming week as dry conditions continue.

For now, the Hume Dam level is expected to steadily decrease as dry weather continues this week. However, with the upper Murray catchment remaining relatively wet for this time of year and the Hume storage level not far from full, the potential for another storage spill remains. River Operators will continue to work closely with the BoM to assess future rain and likely streamflow responses if another forecast for significant rain arises.

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

Unregulated flows

With dry conditions, the Hume and Yarrawonga reach returned to regulated conditions this week. At the time of this report unregulated flows continue downstream of Yarrawonga Weir to the South Australian border.

River operators will closely monitor the coming week's forecast rain and flow responses and provide updated advice on unregulated flows in due course. 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](#).

Water demand

The MDBA is actively monitoring shortfall risks. A shortfall occurs when water cannot be delivered to users when and where it is needed. A delivery shortfall occurs when actual water use is higher than it was forecast to be when river water was released from storages, weeks earlier, to meet the forecast needs for irrigation and environmental water. A system shortfall occurs when the combined capacity of the system is unable to supply all downstream requirements over the full season. More information about shortfalls can be found at [Water demand \(shortfalls\) | Murray-Darling Basin Authority \(mdba.gov.au\)](#).

The risk of a **delivery shortfall** in the River Murray between Wakool Junction and the SA border over the coming week is negligible. The MDBA is continuing to monitor weather conditions and forecast demands and will continue to actively manage the risk of delivery shortfall across the high demand summer-autumn period as conditions evolve.

The risk of a **system shortfall** is currently negligible. With unregulated flows to South Australia continuing and the Menindee Lakes available as a shared resource, transfers from Hume to meet lower system demands are unlikely to be required until March at the earliest.



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The MDBA, Basin state governments and their agencies have different roles and responsibilities in managing delivery shortfalls. Read more information on [delivery shortfall risks for Victorian water licence holders](#).

Water quality impacts

WaterNSW have recently declared several red and amber alerts for **blue-green algae** in the River Murray System. Currently, a **red alert** is declared for the Hume Dam. **Amber alerts** are current for the River Murray at Corowa, Yarrowonga Weir, Mulwala Canal Offtake, Cobram, and Picnic Point. In the lower River Murray amber alerts are current at all locations between Murray Downs and Fort Courage, near Wentworth. Along the Edward-Wakool River system **Amber alerts** are current for Gulpa Creek at Mathoura, Edward River at Deniliquin and Moulamein, and Wakool River at Kyalite. This information is available through [Goulburn-Murray Water](#), [WaterNSW](#) and [Water quality | Murray-Darling Basin Authority \(mdba.gov.au\)](#).

River operations

Over the last week **active storage** (Figure 1) increased by 23 GL to 8,037 GL (94% capacity).

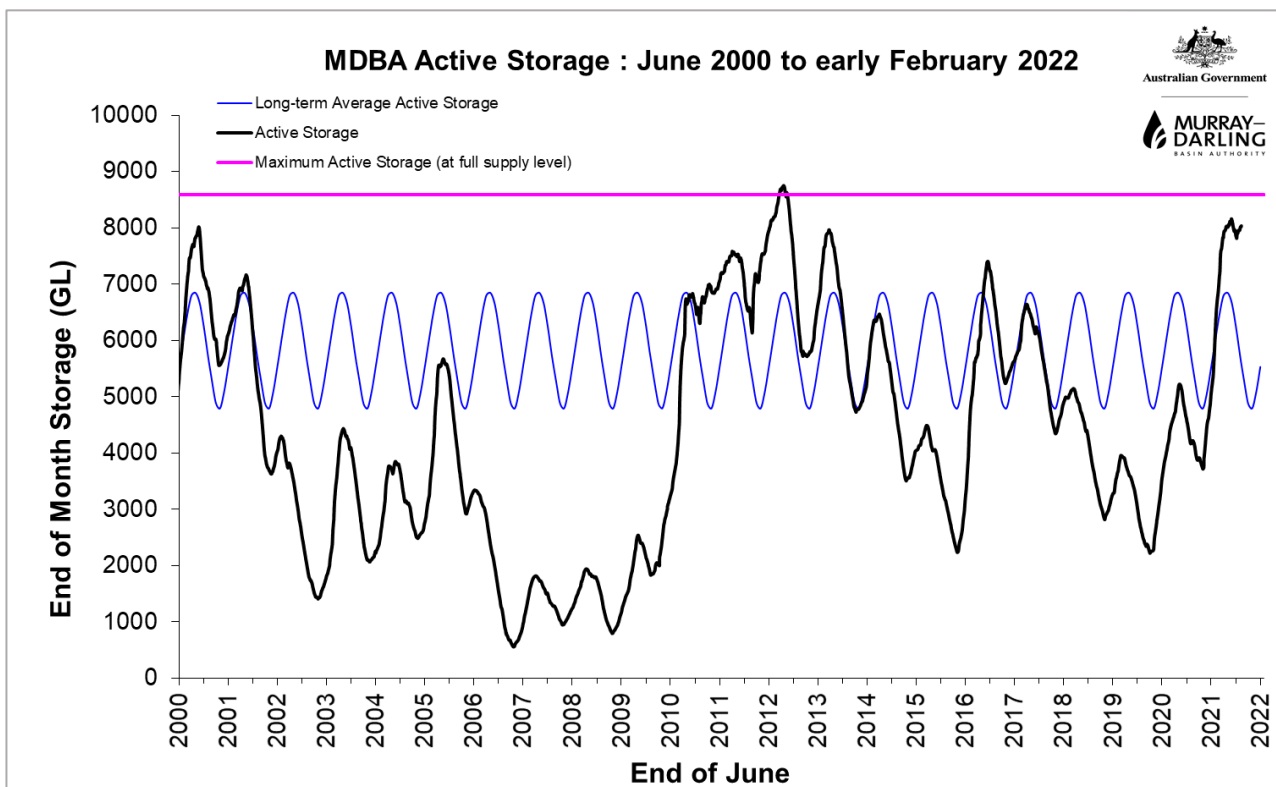


Figure 1: MDBA Active Storage, June 2000 to present. Includes active storage of Dartmouth Dam, Hume Dam, Lake Victoria and the Menindee Lakes. Source: MDBA.

At **Dartmouth Reservoir**, the [storage](#) increased by 7 GL to 3,573 GL (93% capacity). The release, measured at Colemans gauge, continues to target the minimum rate of 200 ML/day. The release may increase to a slightly elevated minimum flow in the coming weeks.

Hume Reservoir [storage](#) decreased by 12 GL to 2,965 GL (99% capacity). During the week, releases remained near 8,000 ML/day before increasing at the end of the week to 10,500 ML/day to supply downstream demands. Over the coming week, the release is expected to increase further in response to downstream irrigation demands with warm and dry weather forecast.

Since the 2019-20 bushfires, Hume Dam operations have, at times, needed to consider altered water quality within the reservoir to help manage its effect on water quality downstream. This has required changes to the release configuration to improve dissolved oxygen levels and help aquatic animals downstream of the dam to breathe. In



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recent weeks operators have trialed a variety of configurations and have now implemented an optimal approach that will be further monitored and adjusted in the weeks ahead.



Photo 1 Goobarragandra river at Rick Flat campground. Photos: Tom Zouch

Lake Mulwala is currently at 124.8 m AHD and within the normal operating range (124.6 to 124.9 m AHD). Diversions to Mulwala Canal averaged 2,900 ML/day this week, while diversions into Yarrowonga Main Channel increased from 750 to 1,350 ML/day.

As the higher flows from recent Hume airspace management releases and tributary inflows from the Ovens and Kiewa receded, releases from **Yarrowonga Weir** reduced from the peak of 26,000 ML/day to 8,500 ML/day. Additional Barmah-Millewa Forest regulators were opened to manage river levels through the Choke as the flow moved downstream. As the high flows subside, forest managers will gradually close most regulators.

With the flow pulse moving downstream and dry weather returning, water for the environment is once again being delivered to maintain the Yarrowonga Weir release at 8,500 ML/day during February. Several smaller regulators will remain open to the Barmah-Millewa Forest to support critical water bird nesting habitat whilst this flow continues, with the additional water use from this action covered by environmental water accounts.

Flow through the **Kolety** (pronounced Kol-etch)/**Edward River** offtake averaged 1,590 ML/day, while the **Gulpa Creek** offtake reduced from 700 to 570 ML/day over the last week. As higher flows return from the Millewa Forest to the Edward River, the flow

downstream of **Stevens Weir** increased to 2,400 ML/day and is expected to temporarily increase to around 3,000 ML/day this week before receding back below the channel capacity of 2,700 ML/day.

On the **Goulburn River**, the flow measured at [McCoys Bridge](#) increased in response to recent rainfall. The flow peaked near 1,500 ML/day and has receded back to the previous rate near 1,000 ML/day. Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website and the Goulburn-Murray Water website](#).

The [diversion](#) to **National Channel** is currently around 1,400 ML/day. Releases from **Torrumbarry Weir** averaged 7,800 ML/day and the release is expected to increase over the coming week. The Torrumbarry weir pool is currently targeting 15 cm below FSL.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), remained above channel capacity over the past week and high flows are expected to continue into the coming week.

At **Euston Weir**, the [downstream release](#) remained steady and averaged 19,100 ML/day. The release is expected to remain near this rate for the coming week.

At **Menindee Lakes**, the storage is now slowly rising as peak flows arrive from the Barwon-Darling River. The total [storage](#) volume increased to 1,639 GL (95% capacity). The airspace generated by WaterNSW in recent weeks is now being used to mitigate peak inflows resulting from widespread northern Basin flooding in late 2021. Upstream of Menindee Lakes, the flow at Wilcannia has reached 29,000 ML/day and is expected to peak in the coming days.

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Releases to the lower Darling River (measured at Weir 32) remained at 18,000 ML/day over the last week. WaterNSW has also continued releases from Lake Cawndilla (part of Menindee Lakes) into the Great Darling Anabranch (currently around 2,000 ML/day). Over the coming week, WaterNSW will start to reduce the Weir 32 release by 1,000 ML/day each day to a rate of 10,000 ML/day by 18 February. From 10,000 ML/day, the rate of reduction will be slowed considerably to prolong the recession and help with bank stability and water quality. Further information will be provided on the [WaterNSW](#) water insights portal. Downstream on the lower Darling at Burtundy, the flow continues near 14,200 ML/day and is expected to remain steady over the coming week.

Over the coming months, the MDBA will continue to revise forecasts and operational plans for 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 is on-going and will follow the practices agreed by the New South Wales, Victorian, South Australian and Commonwealth governments as stated 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 release decisions, and implications for water security, delivery efficiency, the community, and environmental outcomes.

The flow downstream of **Wentworth Weir** is currently 30,300 ML/day and flows are expected to remain steady over the coming week.

At **Lock 9** and **Lock 8** the pool levels are being managed near FSL. The extended high flows resulted in the temporary removal of the **Lock 7** weir, as per standard high flow management at the weir. As higher flows have subsided, currently 24,000 ML/day at Lock 7, the weir is planned to be reinstated in the coming week.

The [storage](#) at **Tar-ru/Lake Victoria** increased by 18 GL this week to 79%. Inflows and outflows from Tar-ru/Lake Victoria are being managed to operate the storage volume 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 stabilize 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. The storage level will be managed to maximize water availability by the end of the current unregulated flow event. Inflows to the lake remained at 5,000 ML/day this week to target the end of month storage volume specified in the LVOS.

The flow to **South Australia** averaged 27,300 ML/day as unregulated flows continue. Flows are expected to remain relatively steady in the coming week.

Additional Dilution Flow (ADF) to South Australia continues to be triggered. 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 0.74 m AHD. Barrage releases are continuing as unregulated flows reach the lower lakes. For further information on barrage releases and South Australia's Entitlement flow, see the South Australian Department for Environment and Water Weekly [Department for Environment and Water | Barrage flow data available at the click of a button](#).

For media inquiries contact the Media Officer on 02 6279 0141

ANDREW REYNOLDS
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Australian Government



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Water in Storage

Week ending Wednesday 09 Feb 2022

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	481.58	3 573	93%	71	3 502	+7
Hume Reservoir	192.00	3 005	191.80	2 965	99%	23	2 942	-12
Lake Victoria	27.00	677	25.79	534	79%	100	434	+18
Menindee Lakes		1 731*		1 639	95%	(480 #)	1 159	+9
Total		9 269		8 711	94%	--	8 037	+23
Total Active MDBA Storage							94% ^	

Major State Storages

Burrinjuck Reservoir	1 026	966	94%	3	963	-12
Blowering Reservoir	1 631	1 528	94%	24	1 504	-36
Eildon Reservoir	3 334	2 832	85%	100	2 732	-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 08 Feb 2022

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2021
Lake Eucumbene - Total	-	n/a	Snowy-Murray	+7	515
Snowy-Murray Component	-	n/a	Tooma-Tumut	+0	283
Target Storage	1 460		Net Diversion	6	231
			Murray 1 Release	+7	853

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	560	Yarrowonga Main Channel (net)	7.8	108
Wakool Sys Allowance	0.0	8	Torrumbarry System + Nyah (net)	7.1	244
Western Murray Irrigation	1.1	18	Sunraysia Pumped Districts	3.7	79
Licensed Pumps	7.9	174	Licensed pumps - GMW (Nyah+u/s)	0.3	18
Lower Darling	14.1	216	Licensed pumps - LMW	16.8	317
TOTAL	46.9	976	TOTAL	35.7	766

* 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 and environmental flows.

Entitlement this month	194.0 *	
Flow this week	190.9	(27 300 ML/day)
Flow so far this month	249.4	
Flow last month	932.1	

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

	Current	Average over the last week	Average since 1 August 2021
Swan Hill	110	100	80
Euston	-	-	-
Red Cliffs	160	160	130
Merbein	160	170	140
Burtundy (Darling)	380	380	330
Lock 9	260	260	170
Lake Victoria	230	220	140
Berri	300	300	180
Waikerie	280	290	200
Morgan	330	300	210
Mannum	280	270	220
Murray Bridge	280	270	230
Milang (Lake Alex.)	350	340	520
Poltalloch (Lake Alex.)	300	300	370
Meningie (Lake Alb.)	1 370	1 330	1 460
Goolwa Barrages	500	510	850

**River Levels and Flows****Week ending Wednesday 09 Feb 2022**

	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	-	-	-	-	F	1 430	2 670
Jingellic	4.0	2.09	208.61	7 940	R	7 150	9 760
Tallandoon (Mitta Mitta River)	4.2	1.51	218.40	780	R	810	930
Heywoods	5.5	2.76	156.39	8 910	R	8 210	10 790
Doctors Point	5.5	2.69	151.16	11 280	R	10 790	14 690
Albury	4.3	1.72	149.16	-	-	-	-
Corowa	4.6	2.39	128.41	10 760	F	12 240	17 060
Yarrowonga Weir (d/s)	6.4	1.39	116.43	8 380	F	12 400	14 620
Tocumwal	6.4	2.19	106.03	9 900	F	16 340	12 470
Torrumbarry Weir (d/s)	7.3	2.59	81.14	7 820	R	7 460	6 480
Swan Hill	4.5	1.42	64.34	7 510	R	7 120	6 590
Wakool Junction	8.8	4.01	53.13	12 200	S	12 070	11 940
Euston Weir (d/s)	9.1	3.09	44.93	19 150	S	19 160	19 450
Mildura Weir (d/s)	-	-	-	18 410	F	18 770	18 720
Wentworth Weir (d/s)	7.3	4.58	29.34	30 290	F	30 690	30 920
Rufus Junction	-	5.75	22.68	25 910	S	26 360	29 390
Blanchetown (Lock 1 d/s)	-	1.70	-	24 030	F	24 890	25 120
Tributaries							
Kiewa at Bandiana	2.8	1.27	154.50	870	F	1 070	1 640
Ovens at Wangaratta	11.9	8.38	146.06	1 600	F	2 170	2 950
Goulburn at McCoys Bridge	9.0	1.50	92.92	1 000	F	1 240	1 000
Edward at Stevens Weir (d/s)	5.5	2.28	82.05	2 430	F	2 010	2 650
Edward at Liewah	-	3.50	58.88	3 320	F	3 360	3 210
Wakool at Stoney Crossing	-	1.74	55.23	1 390	F	1 470	1 310
Murrumbidgee at Balranald	5.0	5.79	61.75	9 430	F	9 650	10 290
Barwon at Mungindi	6.1	3.74	-	2 060	F	1 970	2 120
Darling at Bourke	9.0	5.59	-	11 330	F	18 200	35 000
Darling at Burtundy Rocks	-	6.09	-	14 240	S	14 180	14 100

Natural Inflow to Hume	5 780	13 140
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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	-0.10	-	No. 7 Rufus River	22.10	+0.62	+3.44
No. 26 Torrumbarry	86.05	-0.15	-	No. 6 Murtho	19.25	+0.01	+1.43
No. 15 Euston	47.60	+0.04	-	No. 5 Renmark	16.30	+0.00	+1.23
No. 11 Mildura	34.40	+0.00	+0.72	No. 4 Bookpurnong	13.20	-0.00	+2.13
No. 10 Wentworth	30.80	-0.02	+1.94	No. 3 Overland Corner	9.80	+0.01	+1.53
No. 9 Kulnine	27.40	+0.02	+1.15	No. 2 Waikerie	6.10	-15.10	+1.59
No. 8 Wangumma	24.60	+0.03	+1.83	No. 1 Blanchetown	3.20	+0.02	+0.95

Lower Lakes FSL = 0.75 m AHD

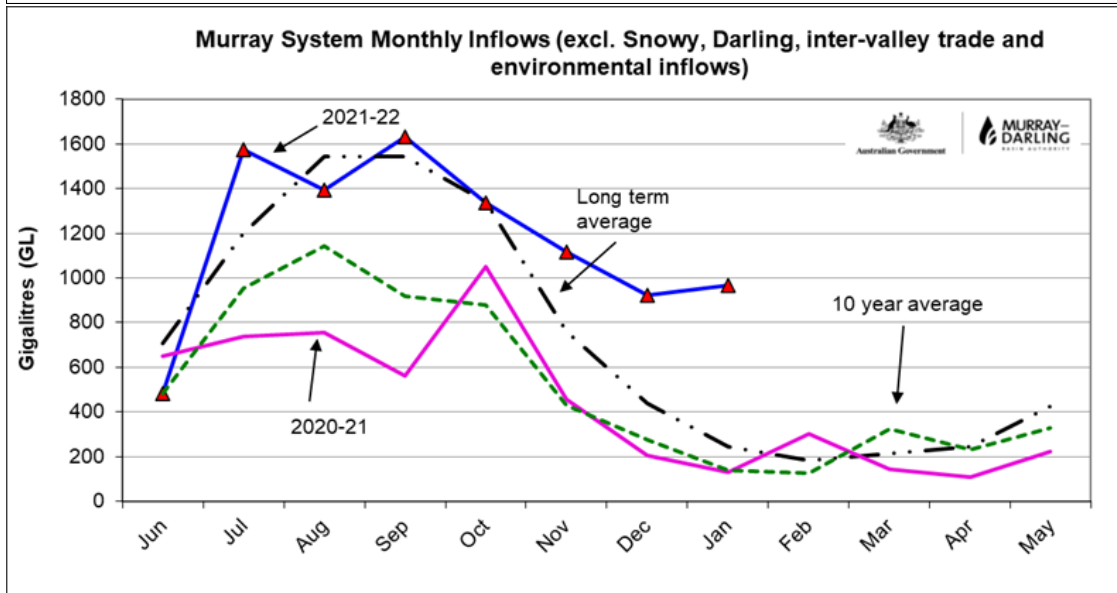
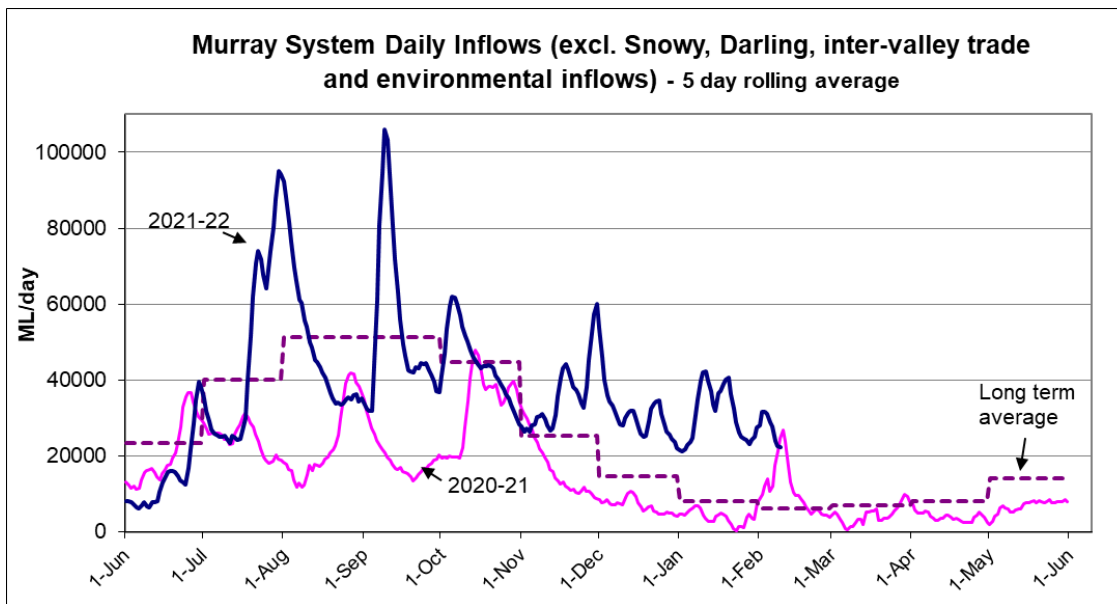
Lake Alexandrina average level for the past 5 days (m AHD)	0.74
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Barrages**Fishways at Barrages**

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.65	3	-	Open	Open	-
Mundoo	26 openings	0.68	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	6	-	-	-	Open
Tauwichee	322 gates	0.71	40	Open	Open	Open	-

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





State Allocations (as at 09 Feb 2022)

NSW - Murray Valley

High security	100%
General security	110%

Victorian - Murray Valley

High reliability	100%
Low reliability	72%

NSW - Murrumbidgee Valley

High security	100%
General security	100%

Victorian - Goulburn

High reliability	100%
Low reliability	0%

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)

