



River Murray Weekly Report

For the week ending Wednesday, 9 March 2022

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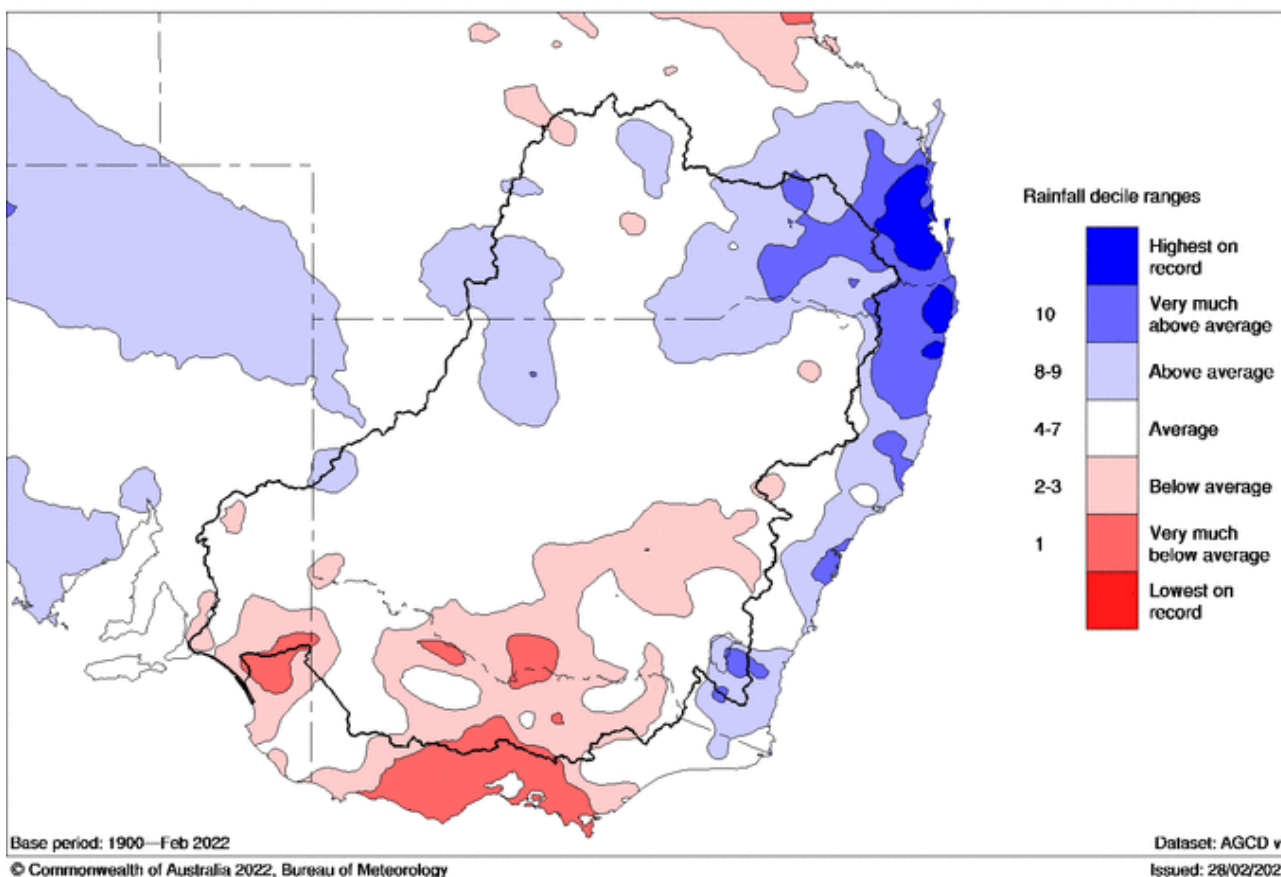
February 2022 Summary

February 2022 rainfall for the Murray-Darling Basin was around average. Within the Basin, it was relatively dry across parts of south-eastern South Australia, most of Victoria, and parts of southern NSW. Conditions were particularly dry across the central Victorian divide, where February rainfall was in the lowest 10% of historical observations.

In contrast, central parts of the Basin received mostly average rain, whilst in the northern Basin the Darling Downs and adjacent areas were wet, with much of the upper Condamine River catchment in Queensland recording very much above average rainfall for the month (Map 1).

Murray-Darling rainfall deciles February 2022

Australian Gridded Climate Data

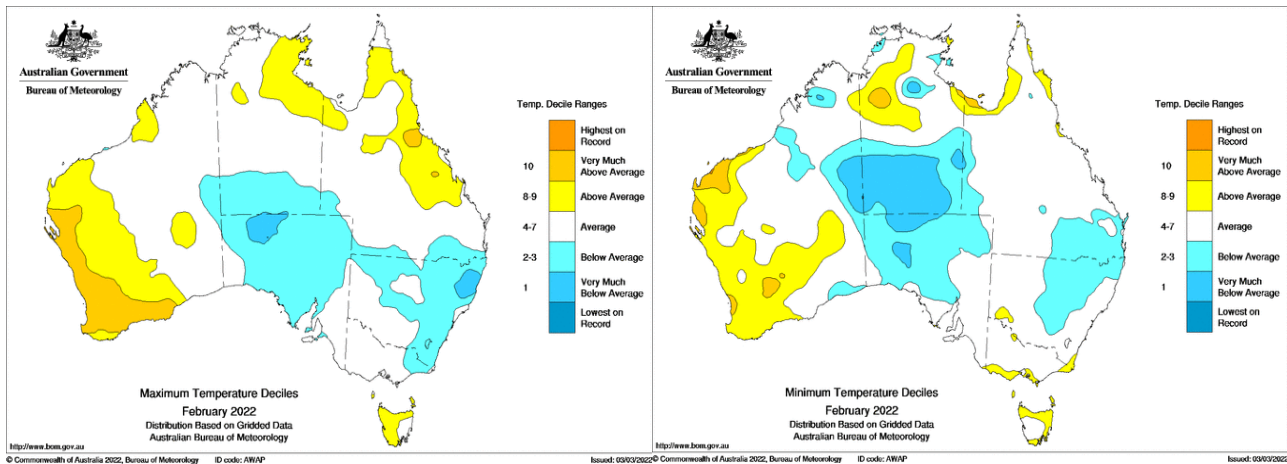


Map 1: Murray-Darling Basin rainfall deciles February 2022. Source: Bureau of Meteorology.

Temperatures across the Basin during February were relatively mild in comparison to many recent years. Both daytime maximums and overnight minimums were either close to average or a little below average for almost the entire Basin (Maps 2 and 3).



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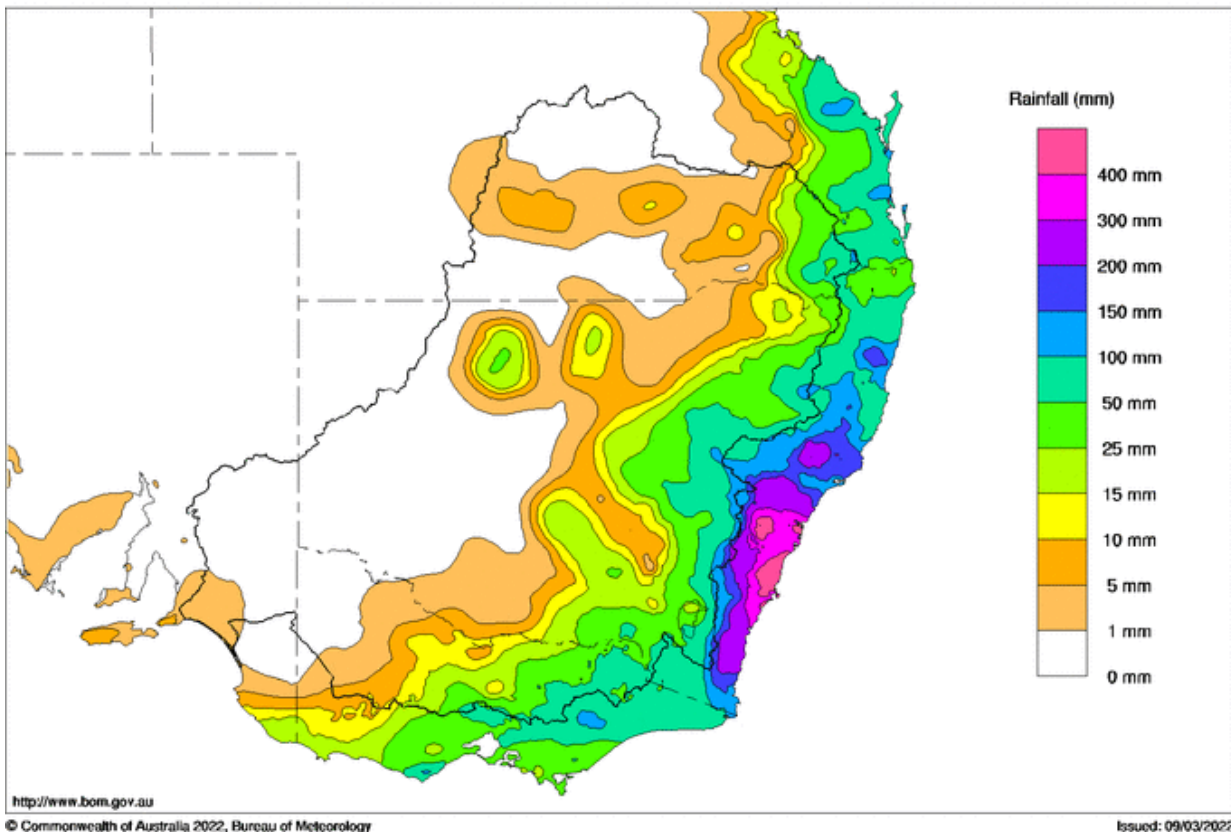


Maps 2 and 3: Maximum and Minimum temperature deciles for February 2022. Source: Bureau of Meteorology.

Weekly rainfall and inflows

For the week to 8 March 2022, there was moderate to heavy rain across the eastern and southern Basin, whilst western areas stayed dry (Map 4). Highest totals occurred along the NSW Great Divide and adjacent slopes as well as the Queensland Darling Downs and across north-east Victoria. Light rainfall was also recorded in small areas in the south of South Australia. Notable rainfall totals included 144 mm at Perisher Valley (just outside the Basin in the NSW Snowy Mountains) and 101 mm observed at Dunedoo on the north-west slopes of NSW.

Murray-Darling Rainfall Totals (mm) Week Ending 9th March 2022
Australian Bureau of Meteorology



Map 4: Murray-Darling Basin rainfall for the week ending Wednesday 9 March 2022. Source: Bureau of Meteorology.

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In the upper Murray, streamflow fluctuated throughout the week in response to rainfall. Upstream of Hume Dam, Jingellic peaked near 9,100 ML/day. Over the coming week, the BoM [8-day rainfall outlook](#) suggests the next few days will be mostly dry for the Basin, although some modest rain is possible later in the week.

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

- **Wet conditions affect large parts of the Murray-Darling Basin.**
- **Unregulated flows continue below the Murrumbidgee as inflows from recent rainfall reach Balranald**
- **Drier conditions expected in the coming days**

Hume Dam operations update

Over the last week the volume of water in Hume Dam remained relatively steady, as inflows increased, whilst easing demands and higher tributary inflows to the Murray downstream meant releases decreased. As a result, the storage remains at around 95% capacity.

With a drier outlook for the Basin over the coming week, Hume Dam storage is expected to fall as demands start to increase. However, with the upper Murray catchment remaining relatively wet for this time of year and the storage not far from full, the potential for another spill remains. Looking further ahead, the MDBA is also considering the possible need to actively reduce the storage ahead of winter if wet conditions persist through Autumn that provide additional inflow or suppress irrigation demands. Further updates on these plans will be provided to river communities in the coming months including via future weekly reports.

Unregulated flows

At the time of this report unregulated flows have continued downstream of the Murrumbidgee Junction to the South Australian border. Unregulated flows are expected to progressively cease downstream of the Murrumbidgee Junction in coming weeks.

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 late 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 amber alerts for **blue-green algae** in the River Murray System. **Amber alerts** are current for Hume Dam, the River Murray at Corowa, Cobram, and Picnic Point. In the lower River Murray amber alerts are current for River Murray Moama and between Tooleybuc and Fort Courage, near Wentworth. Along the Edward-Wakool River system **Amber alerts** are present for much of the Edward-Wakool system. In the Murrumbidgee a **red alert** is declared for Yanga Lake at Regatta Beach. 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** decreased by 20 GL to 8,186 GL (95% capacity).

At **Dartmouth Reservoir**, the [storage](#) increased by 10 GL to 3,591 GL (93% capacity). The release, measured at Colemans gauge, has been around 450 ML/day. Releases will increase to 500 ML/day during this week. The increased rate is permissible within the minimum flow rules for Dartmouth Dam, which provide some flexibility to improve environmental conditions in the lower Mitta Mitta River, whilst continuing to meet water conservation objectives. The Mitta Mitta flow advice can be found [here](#).

Hume Reservoir [storage](#) increased by 4 GL to 2,844 GL (95% capacity). During the week, releases remained near 8,500 ML/day to supply downstream demands. Over the coming week, the release will be managed in response to downstream irrigation demands and weather conditions.

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 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.

Lake Mulwala is currently at 124.73 m AHD and within the normal operating range (124.6 to 124.9 m AHD). Due to widespread rainfall and reduced demands, diversions from Lake Mulwala were lower than usual for this time of year. Mulwala Canal averaged 1,900 ML/day this week, while diversions into Yarrawonga Main Channel averaged 650 ML/day.

Flow through the **Kolety** (pronounced Kol-etch)/**Edward River** offtake averaged 1,550 ML/day, while the **Gulpa Creek** offtake averaged 240 ML/day over the last week. Flow downstream of **Stevens Weir** averaged 680 ML/day.

On the **Goulburn River**, the flow measured at [McCoys Bridge](#) increased to near 1,100 ML/day after rainfall over the weekend. Over the coming week, flows are expected to rise with the delivery of a pulse of water for the environment. 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** has increased to around 1,550 ML/day. Releases from **Torrumbarry Weir** have remained steady and are now at around 4,820 ML/day, the release is expected to gradually reduce over the coming week. The Torrumbarry weir pool is currently targeting a return to Full Supply level. This will be achieved by this coming weekend.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), increased from 2,700 ML/day to near 3,100 ML/day and is expected to increase in the coming week. This increase is in response to higher releases from Murrumbidgee storages following rain and inflow from the upper Murrumbidgee catchments in recent weeks.

At **Euston Weir**, the [downstream release](#) reduced from 13,900 ML/day to around 10,500 ML/day. The release is expected to remain steady over the coming week.

At **Menindee Lakes**, the storage has peaked as flows from the Barwon-Darling River recede. The total [storage](#) volume reduced to 1,894 GL (109% capacity). Upstream of Menindee Lakes, the flow at Wilcannia is around 3,800 ML/day and is expected to continue receding in the coming days.

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Photo 1: Looking upstream from the Menindee Inlet Regulator as flows arrive from Lake Pamamaroo. Photo: J Mak MDBA.

Releases to the lower Darling River (measured at Weir 32) have reduced from about 9,200 to 8,000 ML/day over the last week. Releases will be gradually reduced to prolong the recession and help with bank stability and water quality. Further information will be provided on the [WaterNSW](#) water insights portal. Releases from Lake Cawndilla (part of Menindee Lakes) into the Great Darling Anabranch have been reduced to 150 ML/day. Downstream on the lower Darling at Burtundy, the flow has fallen to around 9,000 ML/day and is expected to reduce in 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 18,300 ML/day and flows are expected to reduce over the coming week.

At **Lock 9, and Lock 8** the pool levels are being managed near FSL. **Lock 7** has remained around 30 cm above FSL as the higher flows of recent months have continued.

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Photo 2: Inflow regulator to Lake Menindee, estimated inflow 8000 ML/day. Photo: C Daamen. MDBA.

The [storage](#) at **Tar-ru/Lake Victoria** reduced by 22 GL this week to 78%. 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.

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

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Australian Government



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[Water in Storages](#)

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Water in Storage

Week ending Wednesday 09 Mar 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	481.87	3 591	93%	71	3 520	+10
Hume Reservoir	192.00	3 005	191.19	2 844	95%	23	2 821	+4
Lake Victoria	27.00	677	25.76	531	78%	100	431	-22
Menindee Lakes		1 731*		1 894	109%	(480 #)	1 414	-13
Total		9 269		8 860	96%	--	8 186	-20
Total Active MDBA Storage							95% ^	

Major State Storages

Burrinjuck Reservoir	1 026	961	94%	3	958	+5
Blowering Reservoir	1 631	1 551	95%	24	1 527	+8
Eildon Reservoir	3 334	2 766	83%	100	2 666	-11

* 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 Mar 2022

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2021
Lake Eucumbene - Total	1 863	+15	Snowy-Murray	+9	547
Snowy-Murray Component	895	+37	Tooma-Tumut	+13	304
Target Storage	1 410		Net Diversion	-4	244
			Murray 1 Release	+9	899

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)	14.0	649	Yarrowonga Main Channel (net)	4.3	136
Wakool Sys Allowance	1.8	12	Torrumbarry System + Nyah (net)	0.1	270
Western Murray Irrigation	0.5	22	Sunraysia Pumped Districts	2.1	92
Licensed Pumps	n/a	211	Licensed pumps - GMW (Nyah+u/s)	n/a	20
Lower Darling	n/a	257	Licensed pumps - LMW	n/a	374
TOTAL	16.3	1151	TOTAL	6.5	892

* 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	186.0 *	
Flow this week	172.7	(24 700 ML/day)
Flow so far this month	227.7	
Flow last month	766.3	

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

	Current	Average over the last week	Average since 1 August 2021
Swan Hill	100	90	80
Euston	-	-	-
Red Cliffs	160	160	140
Merbein	160	170	140
Burtundy (Darling)	410	410	340
Lock 9	280	270	180
Lake Victoria	170	180	150
Berri	320	320	190
Waikerie	310	290	210
Morgan	300	290	220
Mannum	290	290	230
Murray Bridge	280	290	240
Milang (Lake Alex.)	340	350	490
Poltalloch (Lake Alex.)	310	310	360
Meningie (Lake Alb.)	1 360	1 370	1 450
Goolwa Barrages	420	410	800



River Levels and Flows

Week ending Wednesday 09 Mar 2022

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	-	-	-	430	S	1 950	2 010
Jingellic	4.0	1.61	208.13	3 610	F	6 030	4 930
Tallandoon (Mitta Mitta River)	4.2	1.54	218.43	870	F	960	1 120
Heywoods	5.5	2.71	156.34	8 600	S	7 340	8 810
Doctors Point	5.5	2.63	151.10	10 900	F	8 800	11 320
Albury	4.3	1.67	149.11	-	-	-	-
Corowa	4.6	2.48	128.50	11 370	R	9 020	11 850
Yarrowonga Weir (d/s)	6.4	1.26	116.30	7 460	S	8 020	8 070
Tocumwal	6.4	1.95	105.79	8 320	S	8 890	9 070
Torrumbarry Weir (d/s)	7.3	1.78	80.33	4 890	F	5 370	5 390
Swan Hill	4.5	1.08	64.00	5 100	F	5 410	5 840
Wakool Junction	8.8	2.90	52.02	7 700	F	8 260	10 020
Euston Weir (d/s)	9.1	1.85	43.69	10 500	F	11 470	15 530
Mildura Weir (d/s)	-	-	-	9 770	F	12 490	16 550
Wentworth Weir (d/s)	7.3	3.69	28.45	18 320	F	21 250	28 430
Rufus Junction	-	5.38	22.31	21 500	F	24 160	28 610
Blanchetown (Lock 1 d/s)	-	1.85	-	24 290	F	25 480	24 410
Tributaries							
Kiewa at Bandiana	2.8	1.20	154.43	780	F	780	620
Ovens at Wangaratta	11.9	8.21	145.89	1 170	F	1 470	930
Goulburn at McCoys Bridge	9.0	1.54	92.96	1 080	R	900	810
Edward at Stevens Weir (d/s)	5.5	1.09	80.86	800	F	820	920
Edward at Liewah	-	2.36	57.74	1 700	F	1 940	2 720
Wakool at Stoney Crossing	-	1.44	54.93	520	F	580	620
Murrumbidgee at Balranald	5.0	3.39	59.35	3 160	R	2 770	3 550
Barwon at Mungindi	6.1	7.17	-	14 630	R	9 000	2 390
Darling at Bourke	9.0	4.48	-	2 970	R	2 810	3 390
Darling at Burtundy Rocks	-	4.48	-	9 090	S	9 360	12 210

Natural Inflow to Hume	5 480	3 610
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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	+0.33	+3.08
No. 26 Torrumbarry	86.05	-0.09	-	No. 6 Murtho	19.25	-0.01	+1.19
No. 15 Euston	47.60	+0.07	-	No. 5 Renmark	16.30	-0.00	+1.06
No. 11 Mildura	34.40	+0.05	+0.23	No. 4 Bookpurnong	13.20	-0.03	+1.98
No. 10 Wentworth	30.80	-0.01	+1.05	No. 3 Overland Corner	9.80	+0.01	+1.44
No. 9 Kulnine	27.40	+0.05	+0.67	No. 2 Waikerie	6.10	+0.05	+1.58
No. 8 Wangumma	24.60	+0.08	+1.15	No. 1 Blanchetown	3.20	+0.07	+1.10

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD) 0.74

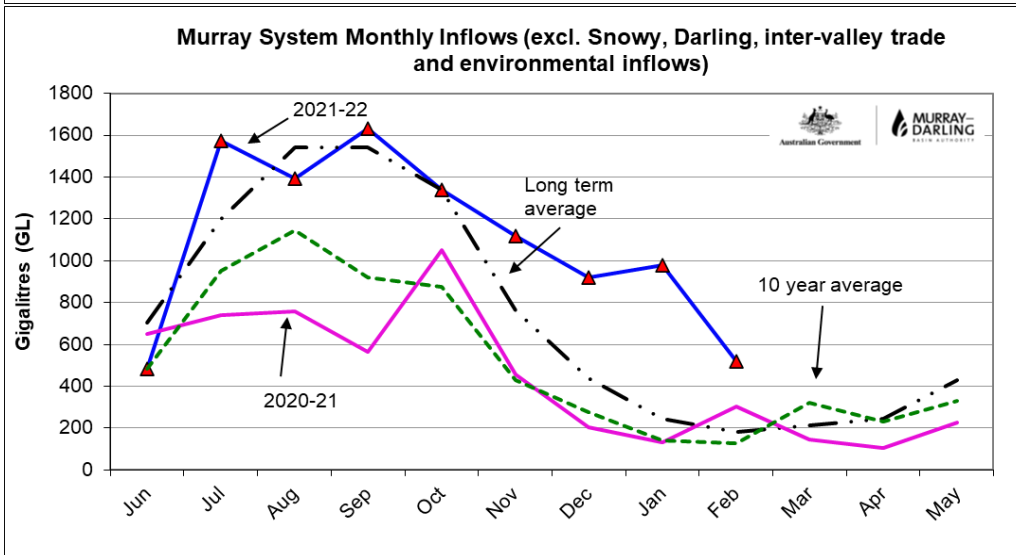
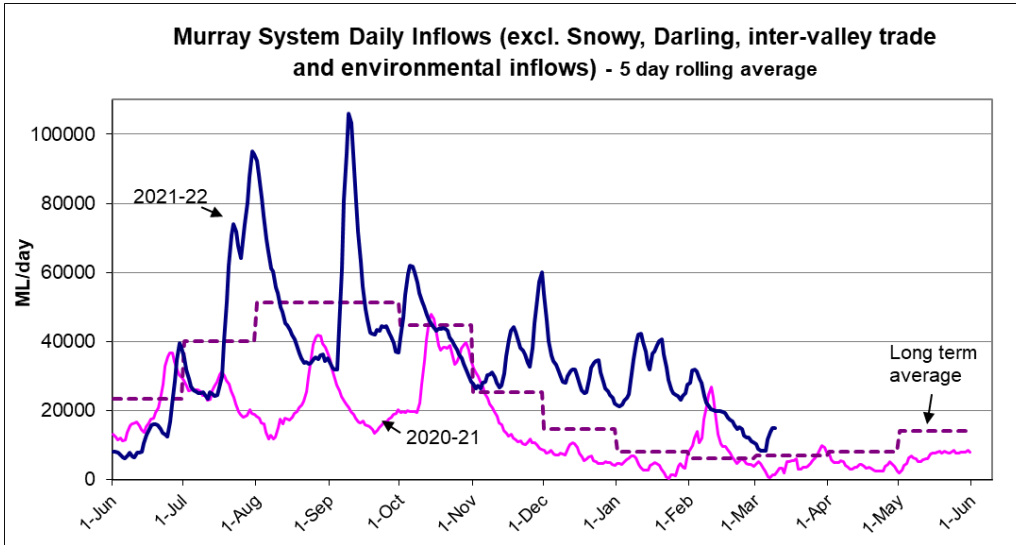
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.76	6	-	Open	Open	-
Mundoo	26 openings	0.65	6	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	12	-	-	-	Open
Tauwichee	322 gates	0.72	40	Open	Open	Open	-

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





State Allocations (as at 09 Mar 2022)

NSW - Murray Valley

High security	100%
General security	110%

Victorian - Murray Valley

High reliability	100%
Low reliability	100%

NSW - Murrumbidgee Valley

High security	100%
General security	100%

Victorian - Goulburn

High reliability	100%
Low reliability	100%

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)

