



# River Murray Weekly Report

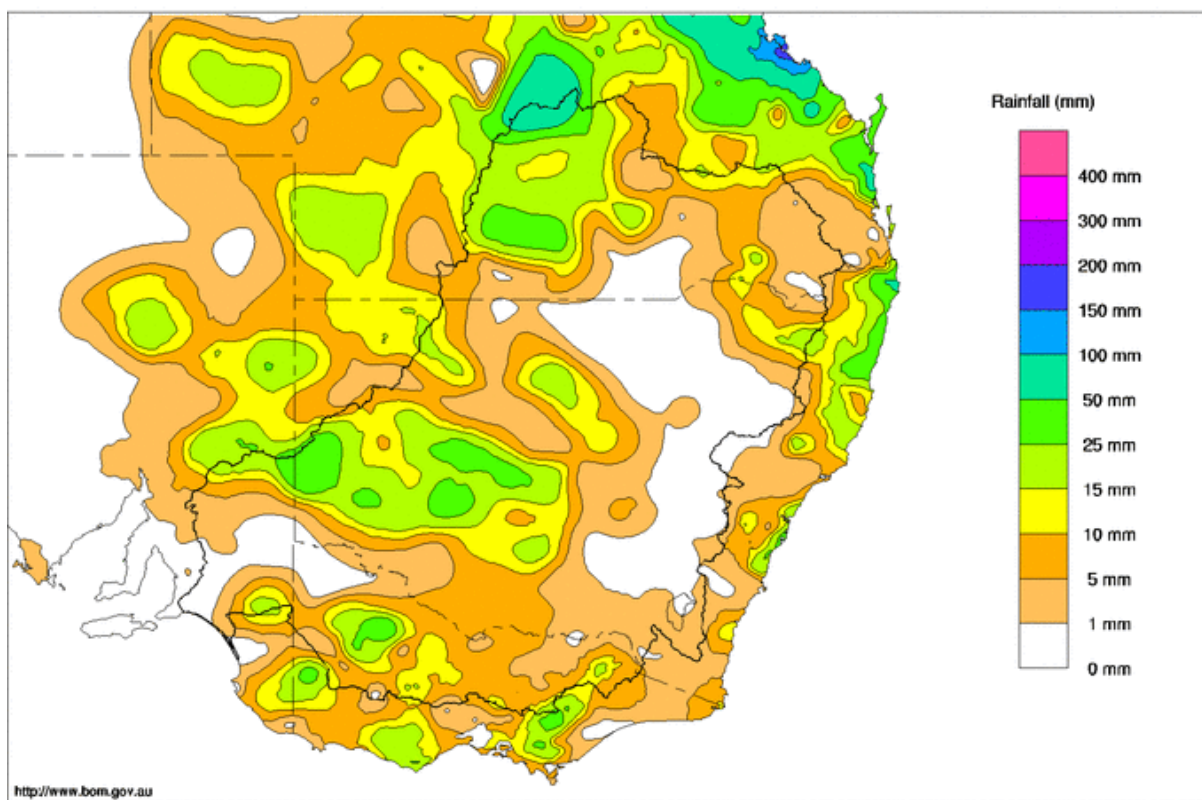
For the week ending Wednesday, 16 March 2022

Trim Ref: D22/5432

## Rainfall and inflows

Rainfall was widespread across much of the Murray-Darling Basin this week, with higher totals recorded in the western catchments (Map 1). In New South Wales highest totals included 78 mm at Broken Hill AWS in the far west and 56 mm at Hay airport AWS in the Murrumbidgee. In Queensland, Wallen and Derbyshire Downs in the Warrego catchment recorded 38 mm and 36 mm respectively. Highest totals in Victoria included 46 mm at Birchip in the Mallee and 32 mm in the upper Buckland in the northeast. In South Australia Lameroo AWS recorded 27 mm.

Murray-Darling Rainfall Totals (mm) Week Ending 16th March 2022  
Australian Bureau of Meteorology



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Issued: 16/03/2022

Map 1: Murray-Darling Basin rainfall for the week ending Wednesday 16 March 2022. Source: Bureau of Meteorology.

In the upper Murray catchment, streamflows continued to ease in response to the low rainfall. Over the coming week, the BoM [8-day rainfall outlook](#) suggests the next week will be mainly dry for the Basin, with some modest rain totals along the slopes and ranges possible.

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 Basin can also be found on:

- BoM's [website](#)
- WaterNSW's WaterInsights [website](#)
- Victoria's DELWP water monitoring [website](#)
- South Australia's Water Data [website](#)
- Queensland's [Water Monitoring Information Portal](#)



# River Murray Weekly Report

## River operations

- Irrigation demands increase for autumn watering
- Unregulated inflows from the Murrumbidgee River increasing
- WaterNSW forecast renewed inflow to the Menindee Lakes

### Hume Dam operations update

Over the last week the volume of water in Hume Dam eased to 93% in response to reduced inflows and higher releases to meet irrigation demands for autumn watering.

With a drier outlook for the Basin over the coming week, Hume Dam storage is expected to continue to ease as demands remain higher. However, with the upper Murray catchment 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

Unregulated flows in the River Murray are continuing downstream of the junction with the Murrumbidgee River in response to higher inflows from the Murrumbidgee and Darling Rivers. Upstream of the Murrumbidgee junction, releases from Hume are being managed to deliver system requirements, including meeting minimum flow requirements at Swan Hill.

River operators will continue to monitor rainfall forecasts, tributary inflows and system demands and provide updated advice on unregulated flows. 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.

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](#).

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## Water quality impacts

WaterNSW have 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 108 GL to 8,078 GL (94% capacity).

At **Dartmouth Reservoir**, the [storage](#) increased by 4 GL to 3,594 GL (93% capacity). The release, measured at Colemans gauge, is currently targeting 500 ML/day. A brief increase in release to around 2,200 ML/day is planned to commence on 21 March to benefit water quality and ecosystem function in the Mitta Mitta River downstream of Dartmouth Dam. For more information, see the Mitta Mitta [flow advice](#) on the MDBA website.

**Hume Reservoir** [storage](#) decreased by 62 GL to 2,782 GL (93% capacity). Early in the week, releases increased to around 12,000 ML/day to meet downstream demands. However isolated rainfall in the irrigation areas reduced demands resulting in releases from Hume easing. Over the coming week, the release will be managed in response to downstream irrigation demands and weather conditions.



Photo 1: Releases from Hume Dam. Photo: Courtesy Amber Craig (MDBA).

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

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configuration to improve dissolved oxygen levels and help aquatic animals downstream of the dam to breathe. In recent weeks operators have trialled 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 124.76 m AHD and within the normal operating range (124.6 to 124.9 m AHD). Diversions to Mulwala Canal increased over the week, reaching a peak of 4,300 ML/day. Similarly, at Yarrawonga Main Channel diversions also increased reaching around 1,500 ML/day. However, modest rainfall at the end of the week has resulted in diversions to the irrigation areas being reduced. Water released from Hume earlier this week to meet previously anticipated higher irrigation demands will now be re-regulated over the coming days in Lake Mulwala and is likely to result in the pool level approaching the full supply level of around 124.9 m AHD over the coming days.

Downstream of Yarrawonga Weir, the release is targeting around 7,500 ML/day. This is a relatively low flow rate for this time of year, compared with other high allocation years. This autumn, high inflows from the Murrumbidgee and the lower Darling rivers are continuing to meet Murray system demands downstream of the junction with the Murrumbidgee. In response, to maximise water availability, operations are targeting a release downstream of Yarrawonga weir sufficient to meet system demands to the junction with the Murrumbidgee, including the minimum flow requirement at Swan Hill.

Flow through the **Kolety** (pronounced Kol-etch)/**Edward River** offtake has reduced to 1,330 ML/day, while the **Gulpa Creek** offtake averaged 240 ML/day over the last week. Around 900 ML/day is also being released from Edward Escape to the Kolety/Edward River to supply irrigation diversions to Wakool Canal. Flow downstream of **Stevens Weir** averaged 840 ML/day. Further downstream, inflows from the Billabong Creek (measured at Darlot) are continuing well above the end of system target (50 ML/day) at around 550 ML/day due to continuing wet conditions in the Murrumbidgee catchment (the Kolety/Edward River is connected to the Murrumbidgee River via the Yanco/Colombo/Billabong Creek system). These higher inflows are expected to continue during March and into April.

On the **Goulburn River**, the flow measured at [McCoys Bridge](#) averaged 1,100 ML/day. Inflows to the Murray from the Goulburn are expected to increase over the coming week to around 6,000 ML/day due to the delivery of an autumn fresh on behalf of environmental water holders. The higher flow rates are targeting environmental outcomes in the lower Goulburn River and further downstream along the River Murray, including to entice golden and silver perch to move into the Goulburn River. For more information, see the Goulburn-Broken CMA [website](#). 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](#).

At **Torrumbarry Weir**, the pool is at the full supply level. The [diversion](#) to **National Channel** has increased to around 2,500 ML/day. Releases from Torrumbarry Weir eased over the week and are currently steady at around 3,800 ML/day. The release is expected to increase over the coming week in response to the arrival of the autumn pulse from the Goulburn River.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), increased to 5,200 ML/day and is expected to increase further in the coming week. This increase is in response to releases from Murrumbidgee storages by WaterNSW to manage airspace following rain and higher inflow in recent weeks.

At Menindee Lakes, the storage is currently at 1,877 GL (108% capacity). Upstream of Menindee Lakes, heavy rainfall over the past month in southern Queensland has resulted in renewed high flows across the Barwon Darling River system. WaterNSW is forecasting a further 450 - 750 GL inflow to the Menindee lakes system by the end of May. More information is available from the WaterNSW WaterInsight [website](#).

Releases to the lower Darling River (measured at Weir 32) reduced to 6,600 ML/day over the past week. With further inflows to the Lake now forecast, WaterNSW is currently reviewing the release plan. Further information will be provided by WaterNSW in the coming week. Releases from Lake Cawndilla (part of Menindee Lakes) into the Great Darling Anabranch have been increased to 500 ML/day to meet environmental demand. However, due to forecast inflows, this will be replaced with operational releases of 2,000 ML/day in the coming week. Downstream on the lower Darling at Burtundy, the flow has fallen to around 8,100 ML/day and is expected to reduce in the coming week.



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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 17,100 ML/day and are expected to reduce to around 15,000 ML/day over the coming week.

The [storage](#) at **Tar-ru/Lake Victoria** reduced by 32 GL this week to 74%. 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 maximise water availability by the end of the current unregulated flow event.

The flow to **South Australia** averaged 20,600 ML/day this 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 0.7 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 KREMOR

A/g Executive Director, River Management



**Australian Government**



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## Water in Storage

Week ending Wednesday 16 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	481.93	3 594	93%	71	3 523	+4
Hume Reservoir	192.00	3 005	190.86	2 782	93%	23	2 759	-62
Lake Victoria	27.00	677	25.48	499	74%	100	399	-32
Menindee Lakes		1 731*		1 877	108%	(480 #)	1 397	-17
<b>Total</b>		<b>9 269</b>		<b>8 752</b>	<b>94%</b>	<b>--</b>	<b>8 078</b>	<b>-108</b>
Total Active MDBA Storage							94% ^	

### Major State Storages

Burrinjuck Reservoir	1 026	963	94%	3	960	+2
Blowering Reservoir	1 631	1 529	94%	24	1 505	-22
Eildon Reservoir	3 334	2 733	82%	100	2 633	-33

\* 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 Mar 2022

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2021
Lake Eucumbene - Total	1 863	0	Snowy-Murray	+6	555
Snowy-Murray Component	895	0	Tooma-Tumut	+2	307
Target Storage	1 410		Net Diversion	4	248
			Murray 1 Release	+5	904

### 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)	26.0	675	Yarrowonga Main Channel (net)	9.2	145
Wakool Sys Allowance	1.9	14	Torrumbarry System + Nyah (net)	0.1	284
Western Murray Irrigation	0.7	23	Sunraysia Pumped Districts	1.9	93
Licensed Pumps	6.1	216	Licensed pumps - GMW (Nyah+u/s)	2.1	23
Lower Darling	2.8	254	Licensed pumps - LMW	10.7	384
<b>TOTAL</b>	<b>37.5</b>	<b>1182</b>	<b>TOTAL</b>	<b>24</b>	<b>929</b>

\* 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 and water for the environment.

Entitlement this month	186.0 *	
Flow this week	144.2	(20 600 ML/day)
Flow so far this month	371.9	
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	80	80	80
Euston	-	-	-
Red Cliffs	170	160	140
Merbein	170	160	140
Burtundy (Darling)	390	390	340
Lock 9	310	300	190
Lake Victoria	180	170	150
Berri	310	310	200
Waikerie	330	330	210
Morgan	340	330	220
Mannum	300	290	230
Murray Bridge	290	290	240
Milang (Lake Alex.)	360	340	490
Poltalloch (Lake Alex.)	300	310	360
Meningie (Lake Alb.)	1 380	1 400	1 450
Goolwa Barrages	360	390	790



## River Levels and Flows

Week ending Wednesday 16 Mar 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)				
<b>River Murray</b>							
Khancoban	-	-	-	430	F	1 520	1 950
Jingellic	4.0	1.72	208.24	4 400	R	4 120	6 030
Tallandoon ( Mitta Mitta River )	4.2	1.56	218.45	920	S	910	960
Heywoods	5.5	3.07	156.70	12 080	R	11 230	7 340
Doctors Point	5.5	2.95	151.42	14 590	R	13 770	8 800
Albury	4.3	1.97	149.41	-	-	-	-
Corowa	4.6	2.76	128.78	13 260	S	12 720	9 020
Yarrowonga Weir (d/s)	6.4	1.27	116.31	7 560	R	7 510	8 020
Tocumwal	6.4	1.95	105.79	8 290	F	8 300	8 890
Torrumbarry Weir (d/s)	7.3	1.46	80.00	3 750	R	3 980	5 370
Swan Hill	4.5	0.86	63.78	3 670	F	4 270	5 410
Wakool Junction	8.8	2.55	51.67	6 150	F	6 780	8 260
Euston Weir (d/s)	9.1	1.87	43.71	10 630	S	10 460	11 470
Mildura Weir (d/s)	-	-	-	9 620	F	9 610	12 500
Wentworth Weir (d/s)	7.3	3.63	28.39	17 090	S	17 180	21 250
Rufus Junction	-	5.19	22.12	19 450	F	20 130	24 160
Blanchetown (Lock 1 d/s)	-	1.33	-	18 260	S	19 510	25 480
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	1.11	154.34	650	R	540	780
Ovens at Wangaratta	11.9	8.10	145.78	870	S	930	1 470
Goulburn at McCoys Bridge	9.0	1.56	92.98	1 120	S	1 110	900
Edward at Stevens Weir (d/s)	5.5	1.14	80.91	860	F	840	820
Edward at Liewah	-	1.97	57.35	1 260	F	1 460	1 940
Wakool at Stoney Crossing	-	1.48	54.98	620	R	540	580
Murrumbidgee at Balranald	5.0	4.43	60.39	5 170	R	4 180	2 770
Barwon at Mungindi	6.1	6.89	-	12 510	F	15 520	9 000
Darling at Bourke	9.0	4.94	-	6 930	R	4 920	2 810
Darling at Burtundy Rocks	-	4.13	-	8 150	F	8 660	9 360

Natural Inflow to Hume	2 840	7 710
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(i.e. Pre Dartmouth &amp; 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	-0.14	-	No. 7 Rufus River	22.10	+0.38	+2.88
No. 26 Torrumbarry	86.05	+0.01	-	No. 6 Murtho	19.25	+0.01	+1.03
No. 15 Euston	47.60	+0.06	-	No. 5 Renmark	16.30	+0.04	+0.92
No. 11 Mildura	34.40	+0.04	+0.26	No. 4 Bookpurnong	13.20	+0.03	+1.81
No. 10 Wentworth	30.80	+0.04	+0.99	No. 3 Overland Corner	9.80	+0.04	+1.13
No. 9 Kulnine	27.40	+0.08	+0.64	No. 2 Waikerie	6.10	+0.02	+1.14
No. 8 Wangumma	24.60	+0.14	+1.09	No. 1 Blanchetown	3.20	+0.01	+0.58

## Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.70
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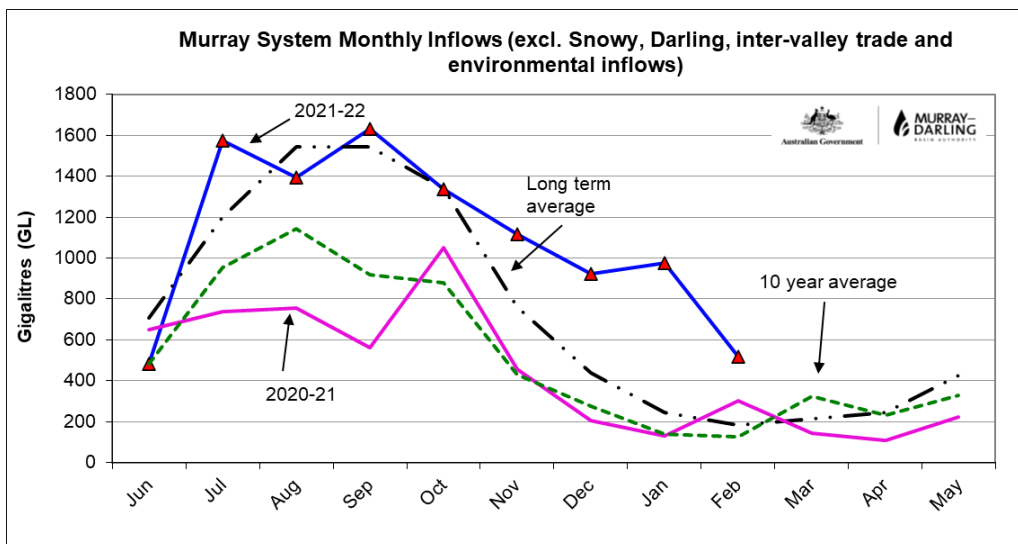
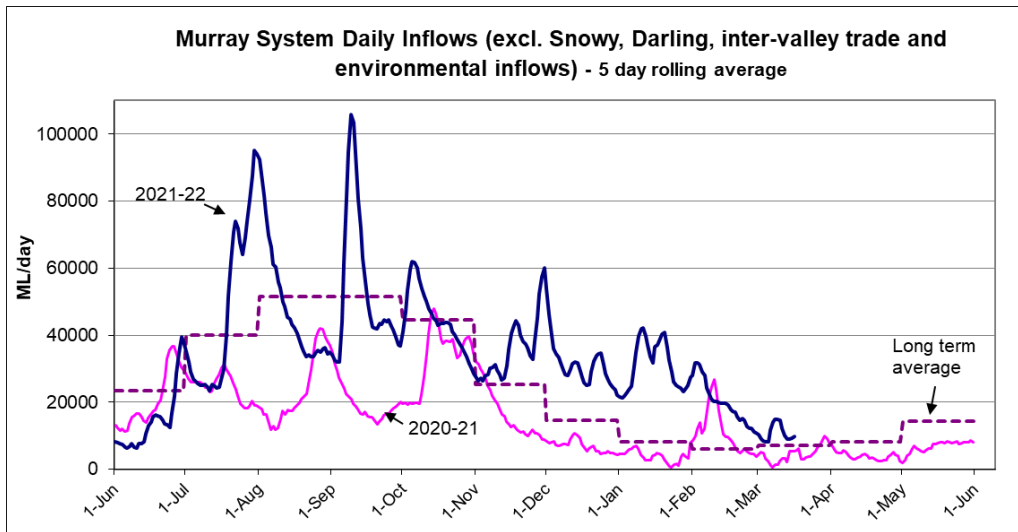
## Barrages

## Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.77	5	-	Open	Open	-
Mundoo	26 openings	0.71	4	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.79	30	Open	Open	Open	-

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





**State Allocations (as at 16 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 Valley**

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)

