



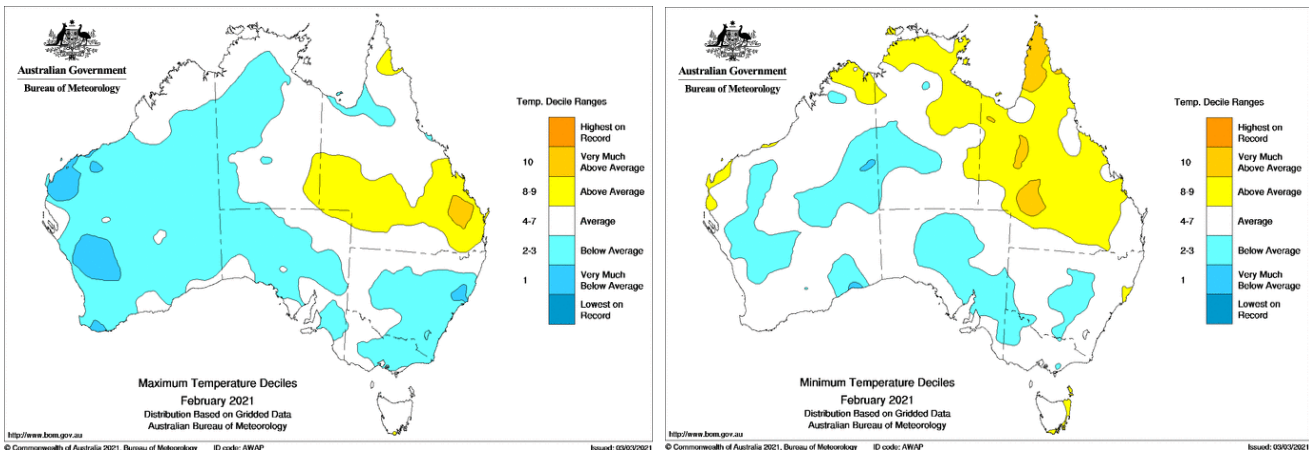
River Murray Weekly Report

For the week ending Wednesday, 3 March 2021

Trim Ref: D21/5968

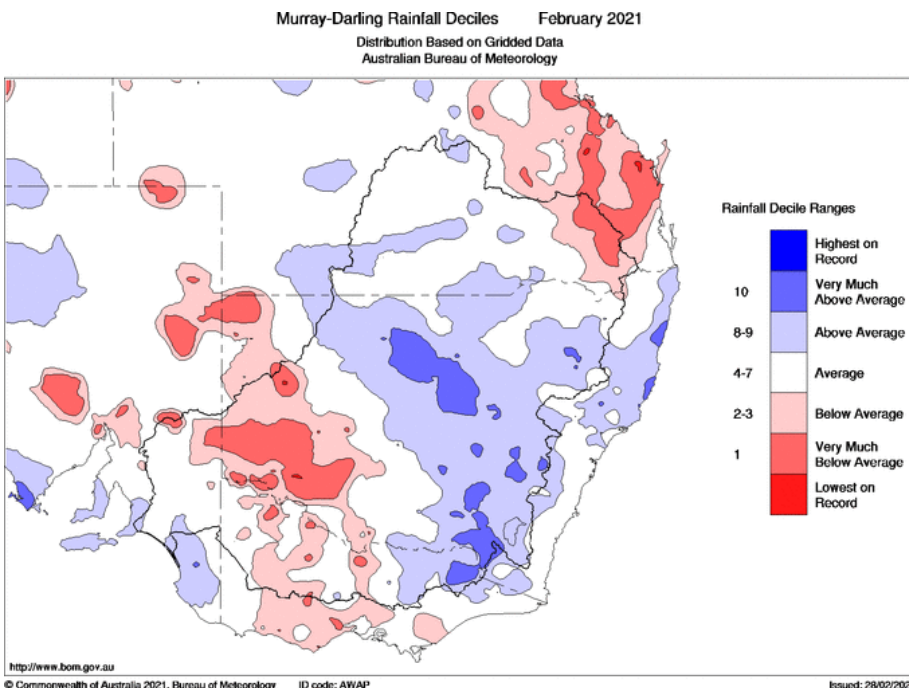
February 2021 Summary

The Bureau of Meteorology (BoM) [reports](#) that the national mean temperature for February was 0.22°C cooler than average for Australia. Across the Murray-Darling Basin, maximum and minimum temperatures were mostly cooler than average to average, except for Queensland which was average to warmer than average (Map 1).



Map 1 – Maximum and minimum February 2021 temperature deciles for Australia. Source: Bureau of Meteorology

The BoM reports that area averaged rainfall across the Murray-Darling Basin was 49.4 mm in February. This is 26% above the long-term February average, however the distribution across the Basin was highly variable. In the upper Murray catchment and large areas of NSW rainfall was above average. Far western NSW, parts of western and central Victoria and the north eastern Queensland area of the Basin were below average (Map 2).



Map 2 - Murray-Darling Basin rainfall deciles for February 2021. Source: Bureau of Meteorology

River Murray Weekly Report

River Murray System inflows in February (calculated excluding water for the environment, IVT, Darling and Snowy scheme contributions) totalled around 300 GL or 12 % annual exceedance probability (AEP). This is the highest February inflow volume observed since 2011 (1,949 GL) and compares with the long-term median February inflow of around 140 GL (Figure 1).

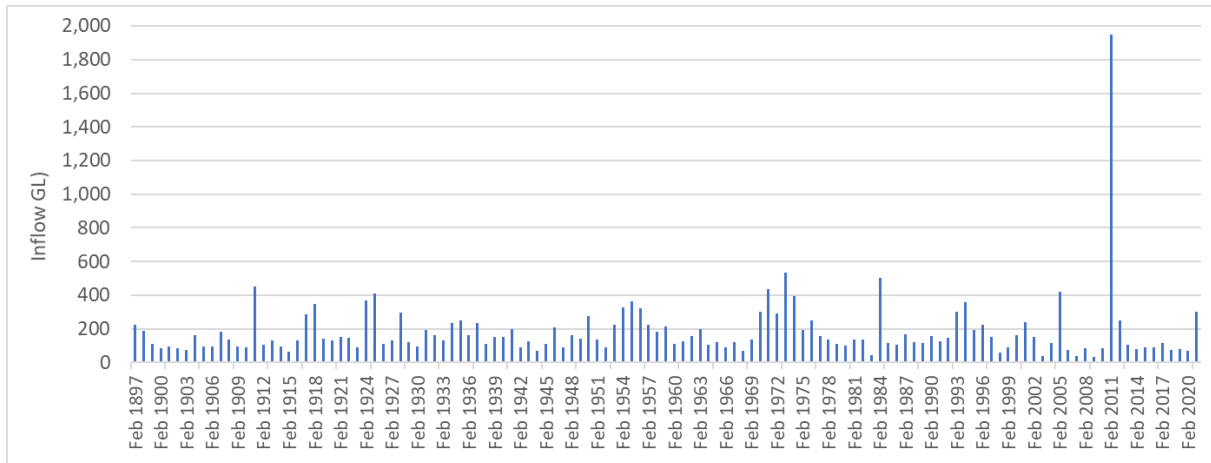
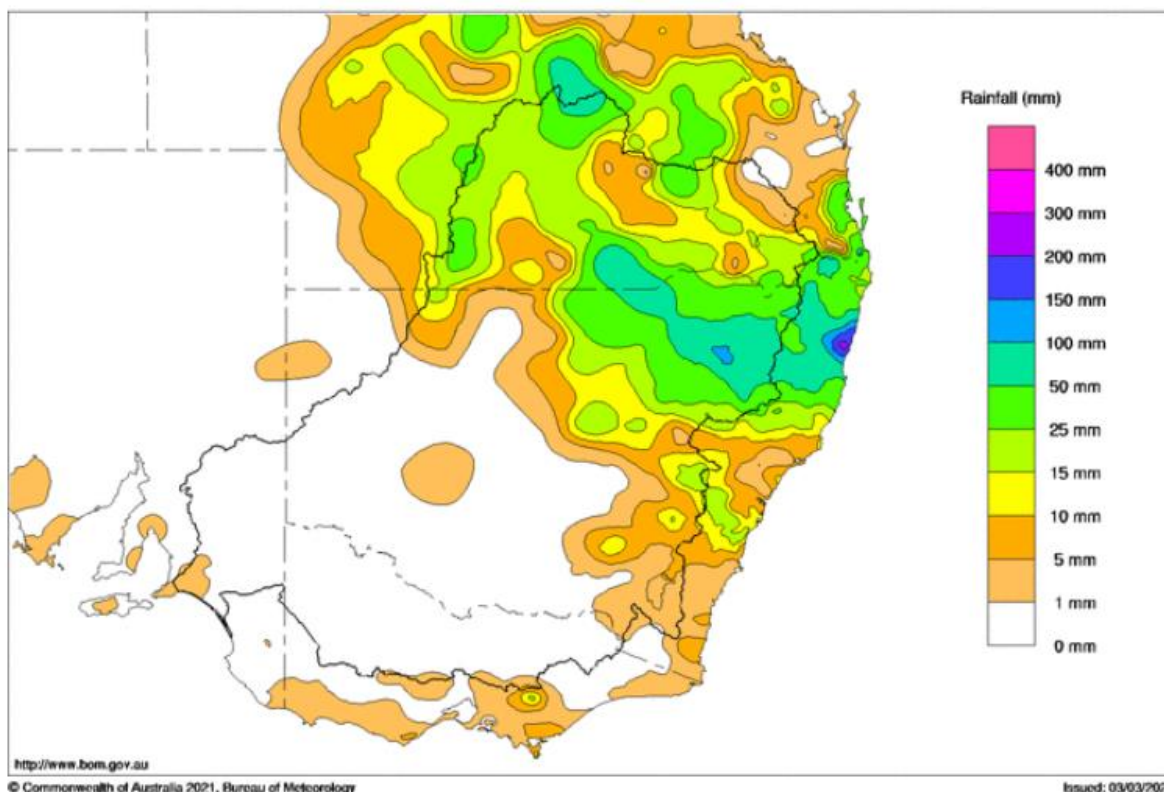


Figure 1 - River Murray System inflows in February (calculated excluding water for the environment, IVT, Darling and Snowy scheme contributions)

Rainfall and inflows

The southern Basin recorded little rainfall this week (Map 3). In the northern Basin the highest rainfall totals were observed in Armidale (just outside the Basin) in the North Tablelands and Inverell recording 84 and 90 mm respectively. Dry but mild conditions are forecast to persist in the southern Basin, followed by rain towards the [end of the week](#).

Murray-Darling Rainfall Totals (mm) Week Ending 3rd March 2021
Australian Bureau of Meteorology



River Murray Weekly Report

Map 3: Murray-Darling Basin rainfall for the week ending 3 March 2021. Source: Bureau of Meteorology.

Dry conditions across the southern Basin saw streamflows continue to recede. Further 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](#).

River operations

- Bushfire runoff affecting water quality from Hume dam
- Pulse of Murrumbidgee River Inter Valley Trade now receding
- Red alert level for blue-green algae continues for parts of Sunraysia and Lower Darling

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 remains low. 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 being closely monitored in consultation with states. Dry conditions, following the rainfall events in late January and early February, has meant the MDBA and states will continue to monitor this risk closely over the coming weeks and will take steps to minimise the risk of a shortfall as necessary.

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

A fortnight ago Hume Dam staff identified poor water quality immediately downstream of Hume Dam, witnessing stressed Murray Crayfish leaving the river. This behaviour is an early sign of low dissolved oxygen in river water which makes it difficult for crayfish to breathe. NSW Fisheries provided data and early observations to assist in managing the issue. Valves at Hume dam were opened to increase dissolved oxygen levels downstream of the dam.

The poor quality water in Lake Hume is a result of runoff from catchments burnt in last season's bushfires. [Albury City Council](#) and [North East Water](#) are monitoring water quality supplied to their customers. The MDBA is supporting WaterNSW, Meridian Energy, NSW Fisheries and Albury and Wodonga Councils to understand the issue and plan possible management actions. While there has been some improvement in dissolved oxygen in river water which reduces impacts on aquatic life, elevated levels of manganese are still present leading to discolouration in the Albury water supply. Further information can be found in the MDBA [media release](#) and on the [Albury City Council](#) website.

The Murray and Lower Darling Regional Algal Coordinating Committee has continued to declare a number of red and amber alerts for **blue-green algae** in the River Murray System. Currently, a **red alert** has been declared at Ellerslie on the [lower Darling River](#) below Menindee Lakes and on the River at Curlwaa. **Amber alerts** are in place at a number of sites on the River Murray and along the Edward-Wakool River system. The locations of these sites are available on the [WaterNSW](#) website. 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](#).

River Murray Weekly Report

Monthly snapshot of water in the system

River Murray communities can access a monthly point-in-time snapshot that shows what proportion of water in the river has been provided for the environment compared with water for towns, industries, and irrigators. Find out more on [Flows in the River Murray system](#).

River operations

Total **active storage** decreased over the last week by 85GL to 4,074GL (48% capacity) (Figure 2). This compares with 2,341 GL for the same time last year.

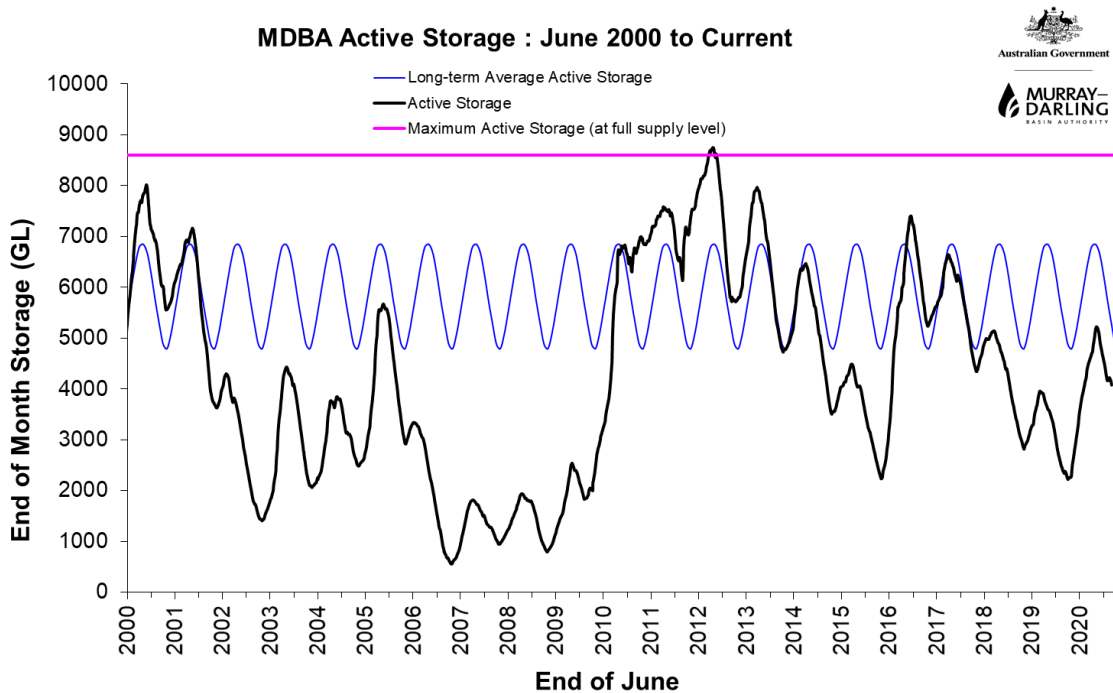


Figure 2 – MDBA active storage for the period June 2000 to current.

At **Dartmouth Reservoir**, the [storage](#) increased by 1 GL to 2,443 GL (63% capacity). During the week flows at Colemans were increased to around 1,100 ML/day to benefit water quality and ecosystem function in the Mitta Mitta River, see flow advice [here](#). The flow at Colemans is now 300 ML/day which will assist in keeping flows at Tallandoon above 600 ML/day.

Over the past week the **Hume Reservoir** [storage](#) reduced by 63 GL to 1,584 GL (53% capacity). The current Hume release is near 16,500 ML/day. Flow is being released from both the outlet valves and through the power station to help improve water quality in the river downstream of the dam.

At **Lake Mulwala**, the pool [level](#) remained within normal operating levels across the week (124.6 to 124.9 m AHD). Diversions to Mulwala Canal, Yarrowonga Main Channel and West Corugan increased this week to around 4,600 ML/day, 1250 ML/day and 300 ML/day, respectively. Around 250 ML/day of this diversion is returning to the river system to meet demands downstream of the Barmah Choke. The release from **Yarrowonga Weir** increased to 9,000 ML/day and will increase again to near 9,200 ML/day in the coming week. The pool level is currently around 124.65 m AHD (as at Thursday 4 February). With the recent increase in irrigation diversions and expected increase to downstream Yarrowonga releases, Hume releases have been increased to raise the pool level prior to this coming Victorian long weekend.

Every year the MDBA investigates whether lowering Lake Mulwala is required to assist any works on Yarrowonga Weir or bridge, or for the management of the invasive weed *Egeria densa*. Lowering Lake Mulwala can help manage *Egeria* and is typically undertaken every 3 to 5 years. When needed, lowering Lake Mulwala is done in late autumn and early winter to avoid the irrigation season (having Lake Mulwala at full supply level is required for gravity



River Murray Weekly Report

diversions into Yarrawonga Main Channel and Mulwala Canal) and important tourism and recreation periods. Following assessment of the extent of weed in the lake, the MDBA has determined that Lake Mulwala will not be drawn down in 2021. However, this year's assessment has identified that a lowering in winter 2022 is likely to be required to manage Egeria and assist with works.

Flow through the **Edward River Offtake** has averaged near 1,600 ML/day, while flow through **Gulpa Creek Offtake** has remained steady around 250 ML/day this week.

Downstream on the **Edward River**, the release from Edward Escape has averaged around 1300 ML/day and the diversion to Wakool Main Canal has remained steady around 700 ML/day. The flow downstream of Stevens Weir was around 1,600 ML/day but will increase over the coming weeks to assist in meeting downstream demands. Flow through the Wakool River, Yallakool Creek and Colligen Creek offtakes is currently around 80, 280 and 190 ML/day, respectively.

On the **Goulburn River**, the flow measured at [McCoys Bridge](#) was near 1,400 ML/day and is anticipated to continue at this rate over the coming week.

In addition to the Goulburn River, the delivery of water from the Goulburn IVT account to the Murray is continuing via the Campaspe River and Broken Creek. Combined, IVT deliveries are expected to total 40 GL in March. 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](#).

[Diversions](#) to **National Channel** have averaged around 1,700 ML/day and are forecast to increase to around 2,500 ML/day. The release from **Torrumbarry Weir** is currently around 5,000 ML/day and is expected to increase to 6,000 ML/day throughout the week.

Inflow from the **Murrumbidgee River** measured at [Balranald](#), is currently around 900 ML/day and is anticipated to increase to 1,600 ML/day in the coming week. Around 40 GL of Murrumbidgee IVT has been ordered from the Murrumbidgee system in March. The [Murrumbidgee IVT balance](#) is open for trade from the Murray to the Murrumbidgee (98.5 GL) but remains closed for trade from the Murrumbidgee to the Murray.

River users and houseboat owners should be aware that the **river will vary between Torrumbarry and Wentworth Weirs** over the coming weeks, particularly as the Murray and Murrumbidgee rivers recede and then increase again.

At **Euston Weir**, the [weir pool level](#) remains near FSL. The [downstream release](#) is currently around 5,300 ML/day and forecast to increase to around 6,000 ML/day in a week's time.

Menindee Lakes total [storage](#) reduced by 5 GL to 308 GL (18% capacity) over the last week. Upstream of the Lakes, flow in the Darling River at Wilcannia is currently around 350 ML/day. WaterNSW currently forecast around 12-16 GL inflow will reach Lake Wetherell from this event. More information is provided in the WaterNSW [regional water availability report](#). Some [water restrictions](#) remain current in NSW. Links to drought services and assistance can be accessed via the MDBA [drought webpage](#). At Weir 32, the release is around the normal summer minimum rate of 350 ML/day.

At **Wentworth Weir** (Photo 1), the weir pool level continues to be managed around FSL. The downstream flow is 3,800 ML/day and is forecast to reduce to 3,200 ML/day within the week.

Downstream at **Lock 9** the weir pool continues to vary near FSL. The **Lock 8** and **Lock 7** weir pools are currently at around 40 cm below FSL and will vary around these levels over the coming month.

This week the [storage](#) level at **Lake Victoria** reduced by 23 GL to 241 GL (36% capacity) as releases continue to supplement Murray flows to meet system demands. If dry conditions persist in March, then Lake Victoria's active storage is likely to be fully utilised to meet system demands. Operating Lake Victoria to a low level will allow any inflows to be captured over the coming months to maximise water availability for users.



River Murray Weekly Report



Photo 1: Looking upstream to Lock and Weir No. 10 - Wentworth (Photo Courtesy: T Milne, MDBA)

The [flow to South Australia](#) averaged 7,800 ML/day and is forecast to decrease to 6,300 ML/day this week. The flow includes South Australia's normal monthly Entitlement flow, small volumes of consumptive trade and water for the environment.

The **Lower Lakes** 5-day average water level is 0.73 m AHD. Barrage releases will continue to be made, when conditions allow, to push fresh water into the Coorong and to support Black Bream spawning over the coming months. 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



River Murray Weekly Report

Water in Storage

Week ending Wednesday 03 Mar 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	461.41	2 443	63%	71	2 372	+1
Hume Reservoir	192.00	3 005	183.58	1 584	53%	23	1 561	-62
Lake Victoria	27.00	677	22.94	241	36%	100	141	-23
Menindee Lakes		1 731*		308	18%	(- -) #	0	-5
Total		9 269		4 576	49%	- -	4 074	-89
Total Active MDBA Storage							48% ^	

Major State Storages

Burrinjuck Reservoir	1 026	666	65%	3	663	-35
Blowering Reservoir	1 631	1 250	77%	24	1 226	+3
Eildon Reservoir	3 334	2 086	63%	100	1 986	-22

* 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 02 Mar 2021

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2020
Lake Eucumbene - Total	1 122	-30	Snowy-Murray	+23	692
Snowy-Murray Component	535	-25	Tooma-Tumut	+3	228
Target Storage	1 410		Net Diversion	20	463
			Murray 1 Release	+20	965

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)	16.8	460	Yarrowonga Main Channel (net)	7.9	142
Wakool Sys Allowance	2.2	84	Torrumbarry System + Nyah (net)	11.5	215
Western Murray Irrigation	1.0	20	Sunraysia Pumped Districts	3.3	89
Licensed Pumps	6.2	187	Licensed pumps - GMW (Nyah+u/s)	0.6	18
Lower Darling	0.1	2	Licensed pumps - LMW	14.3	345
TOTAL	26.3	753	TOTAL	37.6	809

* 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 environmental flows.

Entitlement this month	186.0 *	
Flow this week	54.8	(7 800 ML/day)
Flow so far this month	20.3	
Flow last month	238.2	

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

	Current	Average over the last week	Average since 1 August 2020
Swan Hill	80	80	100
Euston	-	-	-
Red Cliffs	120	110	130
Merbein	110	110	130
Burtundy (Darling)	500	490	380
Lock 9	130	130	130
Lake Victoria	120	120	120
Berri	140	150	160
Waikerie	220	210	200
Morgan	230	230	210
Mannum	210	220	230
Murray Bridge	260	260	240
Milang (Lake Alex.)	720	710	760
Poltalloch (Lake Alex.)	660	650	1 150
Meningie (Lake Alb.)	1 550	1 570	1 630
Goolwa Barrages	1 100	1 110	1 220



River Levels and Flows

Week ending Wednesday 03 Mar 2021

	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	-	-	-	1 160	F	3 290	4 280
Jingellic	4.0	1.54	208.06	3 420	F	5 350	6 560
Tallandoon (Mitta Mitta River)	4.2	1.61	218.50	1 030	F	780	650
Heywoods	5.5	3.48	157.11	15 300	R	12 360	11 100
Doctors Point	5.5	3.31	151.78	18 360	R	15 260	13 480
Albury	4.3	2.35	149.79	-	-	-	-
Corowa	4.6	2.93	128.95	14 260	R	12 670	11 760
Yarrowonga Weir (d/s)	6.4	1.48	116.52	8 990	S	8 890	8 030
Tocumwal	6.4	2.04	105.88	8 880	S	8 490	7 880
Torrumbarry Weir (d/s)	7.3	1.87	80.41	5 070	F	5 140	5 020
Swan Hill	4.5	1.04	63.96	4 830	F	4 900	5 760
Wakool Junction	8.8	2.52	51.64	5 990	F	6 310	7 990
Euston Weir (d/s)	9.1	1.09	42.93	5 320	F	6 330	9 170
Mildura Weir (d/s)	-	-	-	5 110	F	6 320	8 640
Wentworth Weir (d/s)	7.3	2.73	27.49	4 160	F	5 400	7 600
Rufus Junction	-	3.29	20.22	5 490	F	7 440	8 180
Blanchetown (Lock 1 d/s)	-	0.79	-	4 380	F	5 280	5 260
Tributaries							
Kiewa at Bandiana	2.8	1.04	154.27	540	R	480	870
Ovens at Wangaratta	11.9	8.01	145.69	590	R	650	1 000
Goulburn at McCoys Bridge	9.0	1.72	93.14	1 370	F	1 310	910
Edward at Stevens Weir (d/s)	5.5	1.96	81.74	1 940	F	1 580	1 350
Edward at Liewah	-	2.10	57.48	1 380	F	1 450	1 870
Wakool at Stoney Crossing	-	1.35	54.84	340	F	360	430
Murrumbidgee at Balranald	5.0	1.71	57.67	1 290	R	940	1 570
Barwon at Mungindi	6.1	3.12	-	0	F	10	60
Darling at Bourke	9.0	4.01	-	110	F	230	600
Darling at Burtundy Rocks	-	0.74	-	170	F	160	150

Natural Inflow to Hume	170	2 510
------------------------	-----	-------

(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	-0.23	-	No. 7 Rufus River	22.10	-0.45	+0.97
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	-0.03	+0.11
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.04	+0.18
No. 11 Mildura	34.40	-0.02	+0.06	No. 4 Bookpurnong	13.20	+0.04	+0.61
No. 10 Wentworth	30.80	+0.03	+0.09	No. 3 Overland Corner	9.80	+0.04	+0.23
No. 9 Kulnine	27.40	-0.07	-0.42	No. 2 Waikerie	6.10	+0.05	+0.16
No. 8 Wangumma	24.60	-0.42	-0.39	No. 1 Blanchetown	3.20	+0.01	+0.04

Lower Lakes FSL = 0.75 m AHD

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

Barrages

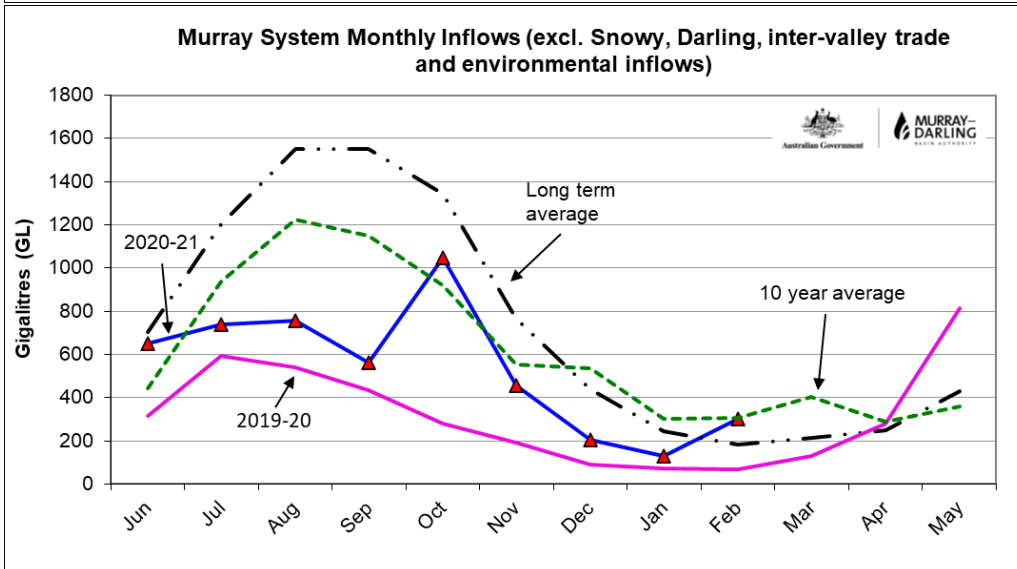
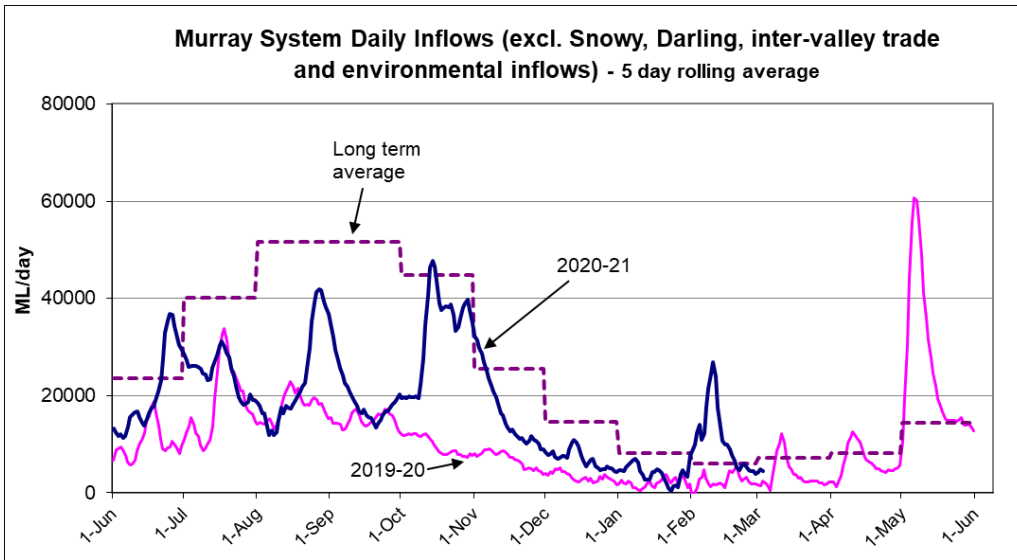
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.73	1	-	Open	Open	-
Mundoo	26 openings	0.68	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	1	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.72	7	Open	Open	Open	-

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



Week ending Wednesday 03 Mar 2021



State Allocations (as at 03 Mar 2021)

NSW - Murray Valley

High security	97%
General security	50%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

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	30%

South Australia - Murray Valley

High security	100%
---------------	------

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>

