



River Murray Weekly Report

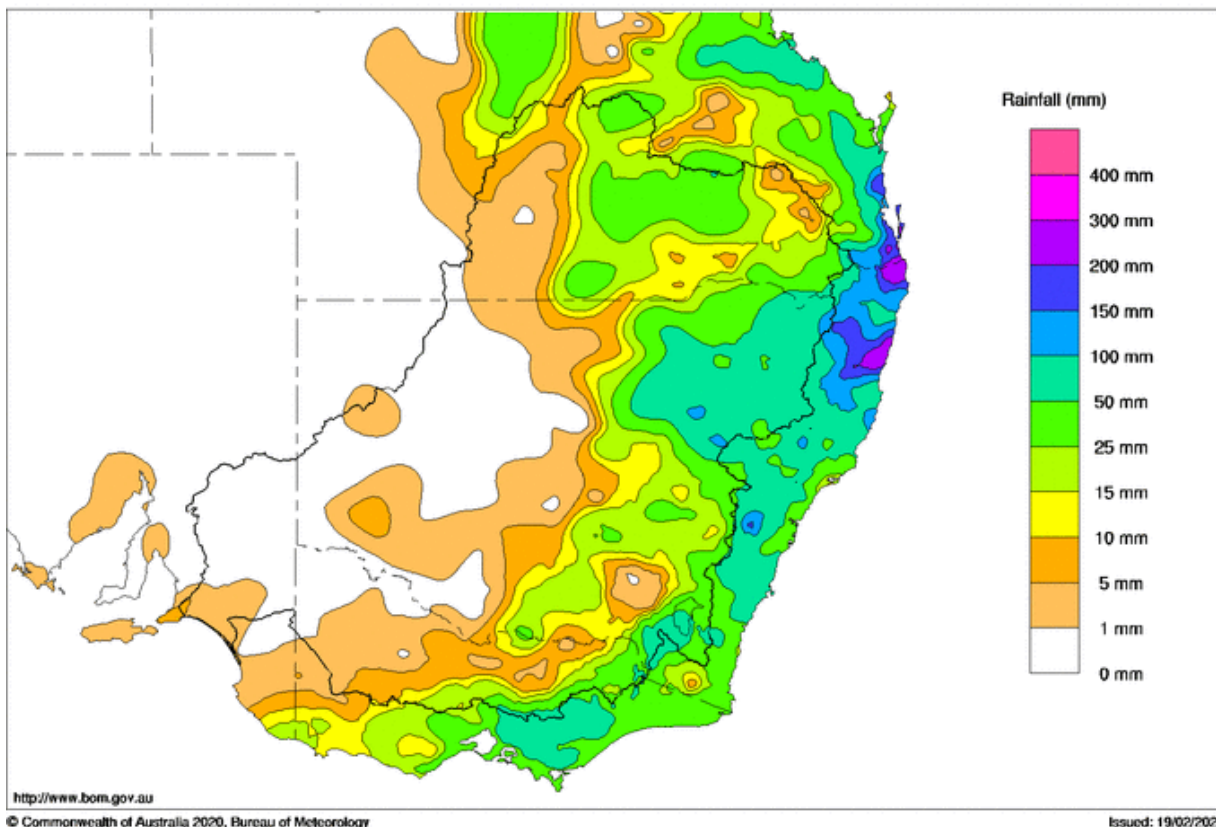
For the week ending Wednesday, 19 February 2020

Trim Ref: D20/7525

Rainfall and inflows

Widespread rainfall was recorded across eastern and far southern parts of the Murray-Darling Basin this week, with patchy totals in central areas. Western parts of the Basin remained mostly dry (Map 1). Rainfall totals of up to 150 mm were recorded in eastern NSW. The highest totals were in the central west including 137 mm at Coonabarabran; and in the Snowy Mountains including 114 mm at Perisher Valley (just outside the Basin) and 76 mm at Cabramurra. Along the upper River Murray, 41 mm was recorded at Biggara.

Murray-Darling Rainfall Totals (mm) Week Ending 19th February 2020
Australian Bureau of Meteorology



Map 1 – Rainfall across the Murray-Darling Basin for the week ending 19 February 2020. Source: Bureau of Meteorology.

Only modest streamflow responses were observed in the upper Murray tributaries following rainfall this week. Specific information about flows at key locations in the upper Murray catchment including [Hinnomunjie Bridge](#) on the upper Mitta Mitta River, [Biggara](#) on the upper Murray, [Bandiana](#) on the Kiewa River as well as [Peechelba](#) on the Ovens River 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 at Bureau of Meteorology's (BoM) [website](#) and in the Murray River Basin daily river report at the WaterNSW [website](#).

Looking ahead, the Bureau of Meteorology is currently [forecasting](#) further rainfall across parts of the Murray-Darling Basin, predominantly towards the latter half of the coming 8 days. Although forecast totals are relatively modest for most areas, more significant rain appears likely over the northern Basin.



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River operations

- Rainfall on bushfire affected areas in upper Murray may lead to poor water quality
- Blue-green algae warning for Lake Mulwala, and Red Alert from Yarrowonga to Tocumwal
- Red Alerts for blue-green algae continue in Menindee Lakes and lower Darling
- IVT deliveries continue from Goulburn and Murrumbidgee valleys

Bushfire and water quality impacts

The MDBA and State Constructing authorities are continuing to monitor bushfire activity in the upper Murray catchments. The recent bushfires in these areas have not posed significant risks to any MDBA operated structures nor impacted river operations.

As further rainfall is forecast across bushfire affected areas in the upper Murray catchment, it is likely water quality will deteriorate in some locations as ash and sediment is washed into water courses following rain. Further fish deaths could result. Several fish deaths have occurred in the upper Murray following recent rain. The extent and timing of water quality or aquatic impacts depends on the location of burnt catchment as well as the intensity and duration of rainfall events.

For information on current water quality and any impacts to your water supply, contact your retail water supplier.

River operations

In the past week MDBA total active storage reduced by 47 GL to 2,432 GL (29% capacity). Murray System inflows (excl. Snowy, Darling, inter-valley trade and environmental tributary inflows) continue to track well below the long-term average (see plot on last page of this report).

At **Dartmouth Reservoir**, the [storage](#) decreased by 19 GL to 1,816 GL (47% capacity). Over the last week the [release](#) from Dartmouth, measured at Colemans, gradually reduced from 4,500 ML/day to the current release near 2,570 ML/day. Releases are expected to gradually fall towards 1,900 ML/day before increasing back to 2,500 ML/day later in the coming week. Variable releases from Dartmouth aim to limit erosion in the lower Mitta Mitta River while transferring a total volume of around 100 GL during February to support water levels at Hume Reservoir. Transfer requirements from Dartmouth to Hume Reservoir are continually reviewed and revised in response to observed conditions and updated forecast demands across the system. At this stage, transfers are expected to continue during March.

At **Hume Reservoir**, the [storage](#) decreased by 6 GL to 535 GL (18% capacity). The Hume release gradually reduced from 10,500 ML/day to the current release of 8,400 ML/day. Releases within this range to are expected in the coming days.

At **Lake Mulwala**, the pool [level](#) is currently 124.69 m AHD which is within the normal operating range between 124.6 and 124.9 m AHD. This week diversion into Yarrowonga Main Channel averaged near 360 ML/day while diversion to Mulwala Canal reduced from 1,200 ML/day to 750 ML/day. System transfers through Murray Irrigation Limited (MIL) infrastructure continued to decrease this week as demand requirements eased. Of the diversion to Mulwala Canal this week, 100 ML/day continues to be delivered back into the Murray via the Perricoota escape, and delivery back into the Edward River via the Edward Escape reduced from 700 ML/day to 300 ML/day and is expected to cease over the coming week. Similarly, on the Victorian side, around 135 ML/day continues to travel through Yarrowonga Main Channel and into the Broken Creek, again to bypass the Barmah Choke and transfer water to meet demands in the lower system.

The release from **Yarrowonga Weir** reduced from 8,400 ML/day and is now targeting 7,900 ML/day. The current release meets the expected downstream demands and may be reduced further over the coming week.

Goulburn-Murray Water (GMW) has issued a [blue-green algae warning for Yarrowonga Weir and Lake Mulwala](#). In addition, [WaterNSW](#) has issued a Red Alert for the River Murray downstream of Yarrowonga Weir to Tocumwal, including Cobram to advise that harmful concentrations of blue-green algae may be present.

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Photo 1 - Kayak/Canoe launch facility (upper reach of the Edward River). Photo: MDBA

Flows through the **Edward River** offtake remain at around 1,550 ML/day. Flow through the **Gulpa Creek** offtake is about 250 ML/day. Downstream along the Edward River, approximately 40 ML/day is passing through the Wakool offtake regulator, 250 ML/day through Yallakool Creek offtake and 190 ML/day into Colligen Creek. The flow downstream of Stevens Weir has gradually reduced over the week from 2,000 ML/day to 1,700 ML/day and is expected to continue to reduce to around 1,100 ML/day over the coming week.

Flow in the **Goulburn River**, measured at McCoys Bridge, rose to 2,700 ML/day during the week before receding to the current flow near 2,200 ML/day. This comprises the normal February minimum flow rate of 350 ML/day and delivery of Goulburn Inter Valley Trade (IVT) water to meet demands on the River Murray as a result of trade from the Goulburn to the Murray Valley. The delivery of IVT from the Goulburn System is being managed in consultation with Goulburn-Murray Water (GMW) and Goulburn Broken Catchment Management Authority (GBCMA) to deliver flows at a variable rate to limit environmental impacts to the lower Goulburn River. Over the coming week, the flow at McCoys Bridge is expected to continue to reduce towards 1,000 ML/day.

Small volumes of IVT are also being delivered via the Broken Creek and Campaspe River. For February, the volume of IVT from the Goulburn System has reduced to 45 GL as specified on the [GMW website](#). Delivery of IVT water is likely to continue over coming months to meet the demands of entitlement holders that have traded water from the Goulburn system. Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

[Diversions](#) to National Channel from the Torrumbarry weir pool have reduced over the last week to around 1,200 ML/day and are expected continue at this rate over the coming week. The **Torrumbarray Weir pool** is currently at the Full Supply Level (FSL) of 86.05 m AHD. Downstream of Torrumbarry Weir, the flow increased to a peak of 7,700 ML/day and is expected to decrease towards 5,000 ML/day over the coming week.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), averaged around 1,400 ML/day. This is comprised of normal end of system flows and delivery of Murrumbidgee IVT water. The MDBA has requested WaterNSW to deliver up to 40 GL for the month of February. Approximately 100 ML/day of Murrumbidgee IVT is currently being delivered via the Billabong Creek, which reaches the Murray through the Edward-Wakool River system.

The [Murrumbidgee IVT balance](#) is currently below 80 GL and trade out of the valley is open. Further information on expected IVT deliveries from the Murrumbidgee is provided by [WaterNSW](#).

At **Euston**, the [weir pool level](#) is targeting FSL. Over the past week the [downstream release](#) eased slightly and is currently near 9,000 ML/day. The downstream release is expected to remain near this rate for the coming week.

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The **Menindee Lakes storage** is approximately 6 GL (less than 1% capacity). WaterNSW continues to manage the Menindee Lakes in accordance with the [Lower Darling Annual Operations Plan](#). WaterNSW has advised that releases at Weir 32 are only planned to recommence when significant inflows are received into the Menindee Lakes. A [Red Alert](#) for blue-green algae is in place for Lake Wetherell and Wilcannia and parts of the lower Darling. More information is available on the [WaterNSW Algae webpage](#).

[Recent rainfall in the northern Basin](#), including from the recent storms in the Namoi, has produced some welcome streamflow responses in the Barwon-Darling system. WaterNSW reports that the forecast flow may result in some inflow into the Menindee Lakes in the coming months. Due to very dry conditions and long travel times there is significant uncertainty in the volume that might reach Menindee Lakes. WaterNSW has estimated that inflows into Lake Wetherell in the order of 15 to 35 GL are possible.

Despite recent rainfall and streamflow responses, drought conditions in NSW persist and extensive [water restrictions](#) in the northern Basin remain in place. More information on drought management activities in NSW can be found on the NSW Government website - [Drought Hub](#). Links to other drought services and assistance can be also accessed via the MDBA [drought webpage](#).

At **Wentworth Weir**, the [pool level](#) is currently targeting 10 cm above FSL to assist pumpers in the upper reaches of the Darling River arm of the weir pool whilst there is no inflow from the Darling River. The downstream release is near 6,650 ML/day and expected to gradually reduce over the coming week.

The **Lock 9** weir pool level is targeting FSL to 10 cm below FSL. At **Locks 8 and 7**, the weir pool levels are being varied as part of the weir pool variability program. Currently, Lock 8 is targeting a level between 90 and 100 cm below FSL and Lock 7 is targeting a level between 50 and 60 cm below FSL.



Photo 2: Aerial view of Lake Victoria, (far south-west NSW). Photo: MDBA

At **Lake Victoria**, the storage volume reduced by 22 GL to 275 GL (41% capacity). Lake Victoria's current storage volume is relatively low for this time of year. Current forecasts indicate the storage will continue to fall over the coming months as water is released to assist meeting demands. Current planning forecasts indicate that Lake Victoria is likely to reach low levels by early autumn 2020 if the dry conditions persist.



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This week, the [flow](#) to **South Australia** is targeting 8,500 ML/day, which comprises the delivery of South Australia's monthly Entitlement, net trade into the state and environmental water. The flow is expected to continue to target 8,500 ML/day for the rest of the month. For more information on South Australia's Entitlement flow, see the South Australian Department for Environment and Water's latest [River Murray flow report](#).

The **Lower Lakes** 5-day average water level remained steady this week at 0.6 m AHD. Releases are currently only occurring through fishways with all barrage gates now closed to help manage the level of the Lower Lakes through the warmer months. For information on barrage releases 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



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Water in Storage

Week ending Wednesday 19 Feb 2020

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	447.67	1 816	47%	71	1 745	-19
Hume Reservoir	192.00	3 005	173.93	535	18%	23	512	-6
Lake Victoria	27.00	677	23.30	275	41%	100	175	-22
Menindee Lakes		1 731*		6	0%	(- -) #	0	-0
Total		9 269		2 632	28%	- -	2 432	-47
Total Active MDBA Storage							29% ^	

Major State Storages

Burrinjuck Reservoir	1 026	352	34%	3	349	+30
Blowering Reservoir	1 631	625	38%	24	601	+10
Eildon Reservoir	3 334	1 265	38%	100	1 165	-20

* 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 18 Feb 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2019
Lake Eucumbene - Total	872	n/a	Snowy-Murray	+18	350
Snowy-Murray Component	504	n/a	Tooma-Tumut	+1	191
Target Storage	1 460		Net Diversion	17	159
			Murray 1 Release	+28	524

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2019	Victoria	This Week	From 1 July 2019
Murray Irrig. Ltd (Net)	2.4	114	Yarrowonga Main Channel (net)	2.4	90
Wakool Sys Allowance	2.2	36	Torrumbarry System + Nyah (net)	5.5	209
Western Murray Irrigation	0.9	20	Sunraysia Pumped Districts	3.1	88
Licensed Pumps	4.1	97	Licensed pumps - GMW (Nyah+u/s)	0.1	14
Lower Darling	0.0	1	Licensed pumps - LMW	12.8	306
TOTAL	9.6	268	TOTAL	23.9	707

* 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	194.0 *	
Flow this week	59.9	(8 600 ML/day)
Flow so far this month	154.1	
Flow last month	251.2	

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

	Current	Average over the last week	Average since 1 August 2019
Swan Hill	70	60	70
Euston	-	-	-
Red Cliffs	-	-	50
Merbein	90	90	90
Burtundy (Darling)	-	-	1 220
Lock 9	100	90	100
Lake Victoria	120	120	110
Berri	140	140	140
Waikerie	210	200	210
Morgan	200	200	220
Mannum	240	240	260
Murray Bridge	270	270	290
Milang (Lake Alex.)	950	950	850
Poltalloch (Lake Alex.)	940	900	820
Meningie (Lake Alb.)	1 900	1 880	1 750
Goolwa Barrages	2 190	2 260	1 980



River Levels and Flows

Week ending Wednesday 19 Feb 2020

	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	-	-	-	1 500	F	4 090	2 370
Jingellic	4.0	1.59	208.11	3 760	R	5 420	2 710
Tallandoon (Mitta Mitta River)	4.2	2.16	219.05	2 960	F	3 680	5 400
Heywoods	5.5	2.74	156.37	8 370	F	9 210	9 610
Doctors Point	5.5	2.53	151.00	9 580	S	10 230	10 540
Albury	4.3	1.54	148.98	-	-	-	-
Corowa	4.6	2.14	128.16	9 000	F	9 720	9 610
Yarrowonga Weir (d/s)	6.4	1.32	116.36	7 900	S	8 240	8 450
Tocumwal	6.4	1.90	105.74	7 690	F	7 960	8 410
Torrumbarry Weir (d/s)	7.3	2.60	81.15	7 730	S	7 240	6 590
Swan Hill	4.5	1.40	64.32	7 360	R	7 120	6 850
Wakool Junction	8.8	3.15	52.27	8 810	S	8 900	9 130
Euston Weir (d/s)	9.1	1.63	43.47	9 050	F	9 360	9 410
Mildura Weir (d/s)	-	-	-	7 930	F	8 090	8 220
Wentworth Weir (d/s)	7.3	2.86	27.62	6 650	S	6 670	6 840
Rufus Junction	-	3.70	20.63	7 980	F	8 210	7 480
Blanchetown (Lock 1 d/s)	-	0.87	-	5 190	R	5 050	5 320
Tributaries							
Kiewa at Bandiana	2.8	0.89	154.12	350	R	320	190
Ovens at Wangaratta	11.9	7.80	145.48	270	F	310	200
Goulburn at McCoys Bridge	9.0	2.16	93.58	2 210	F	2 360	1 250
Edward at Stevens Weir (d/s)	5.5	1.82	81.59	1 720	F	1 860	2 000
Edward at Liewah	-	2.66	58.04	2 070	F	2 180	2 470
Wakool at Stoney Crossing	-	1.38	54.87	400	F	400	400
Murrumbidgee at Balranald	5.0	1.81	57.77	1 390	F	1 410	1 470
Barwon at Mungindi	6.1	3.77	-	1 850	R	560	0
Darling at Bourke	9.0	2.77	-	0	F	0	0
Darling at Burtundy Rocks	-	0.50	-	0	F	0	0

Natural Inflow to Hume	770	1 000
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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	-0.21	-	No. 7 Rufus River	22.10	-0.56	+1.39
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.03	+0.21
No. 15 Euston	47.60	-0.02	-	No. 5 Renmark	16.30	+0.07	+0.32
No. 11 Mildura	34.40	+0.02	+0.25	No. 4 Bookpurnong	13.20	+0.08	+0.85
No. 10 Wentworth	30.80	+0.10	+0.22	No. 3 Overland Corner	9.80	+0.04	+0.26
No. 9 Kulnine	27.40	-0.09	-0.81	No. 2 Waikerie	6.10	+0.06	+0.24
No. 8 Wangumma	24.60	-1.00	-0.28	No. 1 Blanchetown	3.20	+0.06	+0.12

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.60
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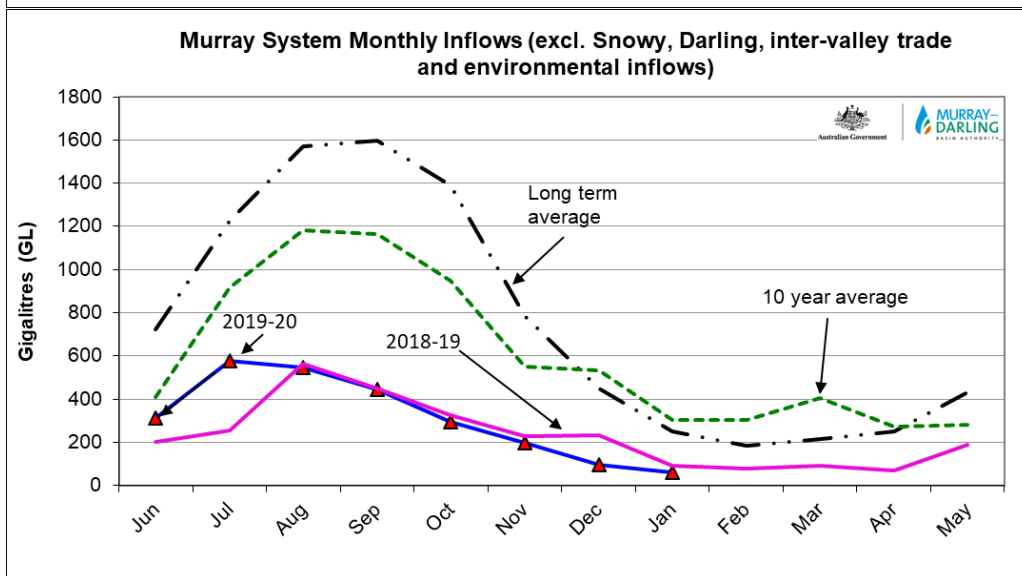
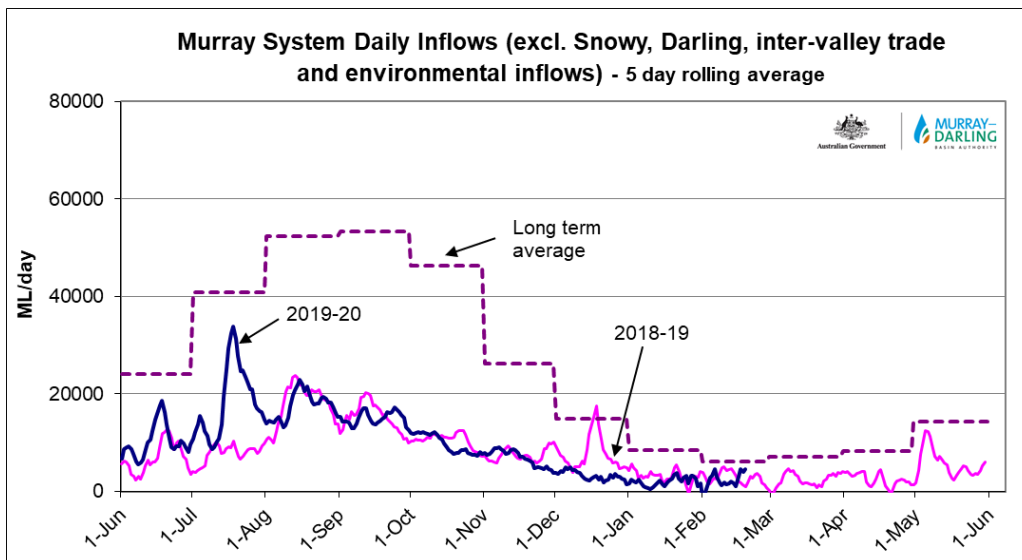
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.53	All closed	-	Open	Open	-
Mundoo	26 openings	0.48	All closed	-	-	-	FALSE
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.51	All closed	Open	Open	Open	-

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





State Allocations (as at 19 Feb 2020)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	57%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	6%

Victorian - Goulburn Valley

High reliability	71%
Low reliability	0%

NSW - Lower Darling

High security	30%
General security	0%

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 : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>

