



River Murray Weekly Report

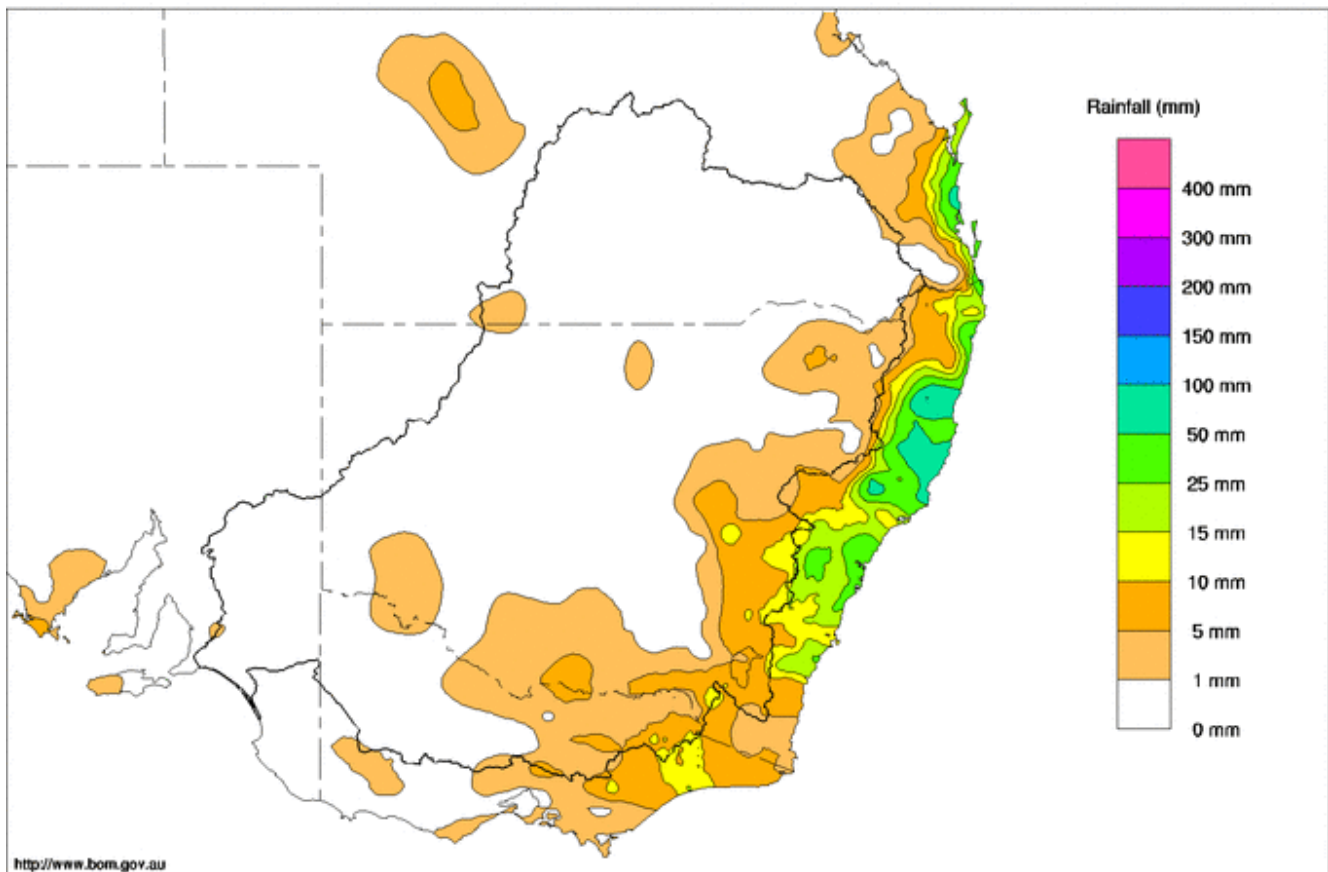
For the week ending Wednesday, 18 March 2019

Trim Ref: D20/10392

Rainfall and inflows

Rainfall was light and concentrated mainly around the eastern edge of the Murray-Darling Basin this week (Map 1). In Victoria, Cobram in the mid-Murray recorded 11 mm and Jokers Creek in the upper Mitta Mitta Valley recorded 9 mm. In NSW, Dubbo in the central west slopes recorded 17 mm. Little to no rainfall was recorded in South Australia and Queensland.

Murray-Darling Rainfall Totals (mm) Week Ending 18th March 2020
Australian Bureau of Meteorology



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Map 1 – Rainfall across the Murray-Darling Basin for the week ending 18 March 2020. Source: Bureau of Meteorology.

Stream flows in the upper Murray tributaries mostly receded following the moderate rises observed after rainfall the previous week. Smaller rises were observed in some tributaries after light 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](#).



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River operations

- Low flows may be observed along the mid-Murray in the coming week
- Reduced IVT deliveries from Goulburn and Murrumbidgee valleys
- Darling River flows reach Lake Wetherell at the Menindee Lakes
- Releases from Main Weir at Menindee Lakes re-commence

Water quality impacts

The MDBA and State Constructing Authorities are continuing to monitor water quality in areas affected by the summer bushfires in the upper Murray catchment, particularly following rainfall events. Mobilised ash and sediment have been observed in Lake Hume.

A significant risk of reduced water quality remains from ash and sediment washing into the lake. However, re-growth of vegetation in less severely burnt areas is being observed and as re-growth continues there is a reduced risk of water quality impacts as new vegetation re-stabilises the soil. Yet, this process will take time and it is still possible that further fish deaths may result from poor water quality, particularly following rainfall.

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

Blue-green algal alerts remain in place at several locations in the River Murray system. A red alert remains for Hume Dam, Lake Mulwala/Yarrowonga Weir, the lower River Murray between Mildura and Fort Courage and Lake Wetherell on the Darling River near Menindee. Amber alerts are widespread along much of the mid-Murray and Edward-Wakool system. 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](#) (GMW) and [WaterNSW](#).

River operations

Over the past week, MDBA total active storage reduced by approximately 30 GL to 2,350 GL (28% capacity). *Active storage* is different from the total volume in storage. Active storage is the volume available in storage for use by the MDBA and excludes water which is below the dam outlets and cannot be released as well as water in the Menindee Lakes while they are below 640GL as is currently the case. The water in Menindee Lakes is reserved for local use and not available to support the Murray system. As such, the Menindee Lakes do not currently contribute to the MDBA active storage volume. When the lakes' total volume rises above 640 GL, the storage once again contributes to MDBA active storage and does so until such time as the lakes' volume reduces to below 480 GL.

Stream flows from the recent rainfall events in the northern Basin have reached Lake Wetherell in the Menindee Lakes. This is the first time since 2017 that the storage has received significant inflows. Therefore, this week, despite the MDBA active storage decreasing, the total storage *increased* by 47 GL to 2,692 GL (28% capacity).

At **Dartmouth Reservoir**, the [storage](#) increased by 1 GL to 1,803 GL (47% capacity). Over the last week the [release](#) from Dartmouth, measured at Colemans, targeted between around 350-400 ML/day. Over the coming month, releases will be adjusted in response to inflow from the Snowy Creek to target a flow of approximately 600 ML/day at Tallandoon. This flow rate aims to help facilitate pumping access for landholders in the lower Mitta Mitta River.

At **Hume Reservoir**, the [storage](#) decreased by 21 GL to 485 GL (16% capacity). This week, the release from Hume averaged 5,000 ML/day. Autumn irrigation demands are now increasing as drier conditions return following recent widespread rainfall. As such, the release from Hume is anticipated to increase over the coming week in accordance with system demand requirements, particularly if conditions remain dry over irrigation areas.

At **Lake Mulwala**, the pool [level](#) is currently 124.75 m AHD, which is within the normal operating range between 124.6 and 124.9 m AHD. At Yarrowonga Main Channel, diversions increased from 230 to 810 ML/day as autumn irrigation demands increased. Likewise, the diversion into Mulwala Canal increased from 200 to 680 ML/day.

The release from **Yarrowonga Weir** averaged around 5,700 ML/day. With downstream autumn irrigation demands now increasing, the release is expected to increase to 7,000 ML/day and is likely to remain at or around this rate for at least the coming week.



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Photo 1 – Early autumn on the Goodradigbee River at Wee Jasper Bridge, upstream of Burrinjuck Dam (photo, MDBA)

Flows through the **Edward River** offtake reduced from 1,530 to 1,130 ML/day. Flow through the **Gulpa Creek** offtake fell slightly to the current rate near 175 ML/day. Downstream along the Edward River, approximately 20 ML/day is passing through the Wakool offtake regulator, 220 ML/day through Yallakool Creek offtake and 170 ML/day into Colligen Creek. At Stevens Weir, the downstream flow decreased from 1,080 to 730 ML/day and may fall further over the coming week.

Flow in the **Goulburn River**, measured at McCoys Bridge, fell from 1,100 ML/day to 850 ML/day. The flow is expected to increase again to target near 940 ML/day. This week, the MDBA ceased the call on Goulburn Valley Inter Valley Trade (IVT). Environmental water is now being delivered on behalf of the Victorian Environmental Water Holder to maintain the environmental desirable flow the lower Goulburn River for this time of year that was previously being achieved using IVT. Small volumes of IVT in the Broken Creek also ceased this week and have been replaced with environmental flows to continue benefit to the lower Broken Creek.

While delivery of Goulburn Valley IVT is not currently required to help meet Murray system demands, there remains a possibility that further IVT delivery could still be required over the remainder of the irrigation season depending on future system demands. Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

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[Diversions](#) to National Channel from the Torrumbarry weir pool increased this week from 1,200 to 1,600 ML/day to meet increased demands in the Torrumbarry irrigation district. The **Torrumbarry Weir pool** remains at the Full Supply Level (FSL) of 86.05 m AHD. Flow downstream of Torrumbarry Weir fell from 5,500 to 3,800 ML/day and is expected to fall slightly further over the coming week, possibly to 3,000 ML/day.

Flows through the mid-Murray are currently falling to levels lower than those experienced over the recent summer period, however flows are expected to remain at or above minimum levels at key gauges such as Swan Hill. These lower flows are the result of reduced system requirements following cooler weather and recent rainfall events. Reducing system flows when conditions ease is an important operational objective to help retain as much water as possible in headwater storages and maximise water available in the system for the coming water year. Community members, including river pumpers and boat owners and operators, should be aware of changing river levels in case adjustments need to be made to pumps, moorings or recreational activities.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), gradually reduced to 830 ML/day and small volumes of Murrumbidgee IVT continue to be delivered. Reductions may occur this week with the delivery of Murrumbidgee IVT expected to cease later this month. The [Murrumbidgee IVT balance](#) is currently below 50 GL and trade into and 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 from 8,800 ML/d to 7,080 ML/day and will fall further over the coming week. Euston weir pool is planned to be gradually lowered from the beginning of April to target around 20 to 30 cm below FSL as part of the weir pool variability program. Varying pool levels helps restore a more natural wetting and drying cycle to riverbanks and adjacent wetlands within the influence of the weir pool.

This week, the **Menindee Lakes storage** increased by 79 GL to 85 GL (5% capacity). This is the first time since 2016 that the storage volume has increased. [WaterNSW](#) has been following the streamflow response in the Barwon-Darling system in recent weeks and on 10 March the flow front reached Lake Wetherell at the Menindee Lakes. Latest forecasts indicate a volume in the order of 275 and 340 GL will flow into the Menindee lakes in the coming weeks. Due to the very dry conditions preceding these flows and long travel times, some uncertainty remains as to the volume of water that will ultimately reach Menindee Lakes from this event.

Despite recent rainfall and streamflow responses, in the many parts of NSW drought conditions persist with extensive [water restrictions](#). Links to drought services and assistance can be also accessed via the MDBA [drought webpage](#).

Due to the volume of water observed and forecast to enter the Menindee Lakes, [WaterNSW has re-started operations at the Menindee Lakes](#) including the recommencement of releases into the lower Darling River. Small releases from Main Weir of around 200 ML/day are now taking place. Block banks installed as a drought measure at several locations on the lower Darling are now in the process of being removed.

Current advice from WaterNSW is that releases from Weir 32 (downstream of Main Weir) are expected to recommence in the week of the 23 March and increase over 3-4 days to a rate around 4,000 ML/day for a period of about six days, before stepping down to lower rates of around 200 - 400 ML/day. This approach to recommencing flow to the lower Darling is needed to minimise water quality impacts that may result as the flow front reaches remnant pools of water in the lower Darling channel. Effectively flushing this water through the system can be aided by an initial higher flow rate, that will mix and dilute poor quality water and then move it more quickly through the system.

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 decreased this week from 6,200 to near 4,200 ML/day.

Planning is currently underway to potentially lower the Wentworth Weir pool to reduce the impact of high salinity levels as the flow front from the Darling River arrives into the River Murray. Confirmation of this action and preliminary public advice will be made available as soon as possible. The action would be similar to the one undertaken following the recommencement of lower Darling River flows in 2016. The temporary lowering would be timed to coincide with the arrival of inflows from the Darling River, which are currently expected to occur from early



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to mid-April. Further information will be provided in future weekly reports and via media outlets as planning progresses.

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.

At **Lake Victoria**, the storage volume decreased by 12 GL to 256 GL (38% capacity).

The [flow to South Australia](#) reduced this week from 6,000 ML/day to the current target of 5,000 ML/day. This rate is expected to continue for the remainder of March. This flow comprises the delivery of South Australia's monthly Entitlement, net trade into the state and environmental water delivery. 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 is currently 0.55 m AHD. Releases have recently been occurring through fishways and a small release through Tauwitchere barrage. 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 18 Mar 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	447.35	1 803	47%	71	1 732	+1
Hume Reservoir	192.00	3 005	173.31	485	16%	23	462	-21
Lake Victoria	27.00	677	23.10	256	38%	100	156	-12
Menindee Lakes		1 731*		85	5%	(- -) #	0	+79
Total		9 269		2 629	28%	- -	2 350	+47
Total Active MDBA Storage							28% ^	

Major State Storages

Burrinjuck Reservoir	1 026	388	38%	3	385	+1
Blowering Reservoir	1 631	666	41%	24	642	+18
Eildon Reservoir	3 334	1 227	37%	100	1 127	-13

* 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 17 Mar 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2019
Lake Eucumbene - Total	827	n/a	Snowy-Murray	+8	390
Snowy-Murray Component	492	n/a	Tooma-Tumut	+0	198
Target Storage	1 410		Net Diversion	7	192
			Murray 1 Release	+10	564

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)	3.4	114	Yarrowonga Main Channel (net)	4.3	101
Wakool Sys Allowance	1.1	44	Torrumbarry System + Nyah (net)	0.2	236
Western Murray Irrigation	0.7	22	Sunraysia Pumped Districts	2	97
Licensed Pumps	3.0	112	Licensed pumps - GMW (Nyah+u/s)	0.4	15
Lower Darling	0.0	1	Licensed pumps - LMW	10.7	348
TOTAL	8.2	293	TOTAL	17.6	797

* 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 includes monthly Entitlement plus the delivery of environmental and traded water.

Entitlement this month	186.0 *	
Flow this week	41.3	(5 900 ML/day)
Flow so far this month	107.1	
Flow last month	218.5	

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	-	40	50
Merbein	90	90	90
Burtundy (Darling)	-	-	1 220
Lock 9	90	90	100
Lake Victoria	110	110	120
Berri	150	150	140
Waikerie	190	190	210
Morgan	200	200	220
Mannum	240	240	260
Murray Bridge	260	260	280
Milang (Lake Alex.)	940	950	860
Poltalloch (Lake Alex.)	760	750	820
Meningie (Lake Alb.)	1 920	1 890	1 770
Goolwa Barrages	2 180	2 130	2 010



River Levels and Flows

Week ending Wednesday 18 Mar 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	-	-	-	2 520	F	1 500	1 480
Jingellic	4.0	-	-	3 470	R	2 670	4 340
Tallandoon (Mitta Mitta River)	4.2	1.43	218.32	630	F	680	1 480
Heywoods	5.5	2.54	156.17	5 940	R	4 940	3 430
Doctors Point	5.5	2.35	150.82	7 580	R	6 400	5 460
Albury	4.3	1.38	148.82	-	-	-	-
Corowa	4.6	1.43	127.45	5 090	F	5 430	5 670
Yarrowonga Weir (d/s)	6.4	0.96	116.00	5 490	R	5 650	7 060
Tocumwal	6.4	1.43	105.27	4 730	F	5 480	6 810
Torrumbarry Weir (d/s)	7.3	1.50	80.04	3 790	F	4 780	5 390
Swan Hill	4.5	1.09	64.01	5 200	F	5 600	5 550
Wakool Junction	8.8	2.71	51.83	6 830	F	6 890	7 310
Euston Weir (d/s)	9.1	1.28	43.12	6 670	F	6 680	7 960
Mildura Weir (d/s)	-	-	-	5 450	F	5 980	7 730
Wentworth Weir (d/s)	7.3	2.72	27.48	4 160	F	5 100	7 130
Rufus Junction	-	3.12	20.05	4 540	F	5 510	5 780
Blanchetown (Lock 1 d/s)	-	0.51	-	3 790	F	4 020	3 960
Tributaries							
Kiewa at Bandiana	2.8	0.99	154.22	470	R	540	1 190
Ovens at Wangaratta	11.9	8.11	145.79	860	F	990	1 800
Goulburn at McCoys Bridge	9.0	1.41	92.83	840	F	900	1 090
Edward at Stevens Weir (d/s)	5.5	1.02	80.79	730	F	940	1 230
Edward at Liewah	-	1.94	57.32	1 230	F	1 260	1 360
Wakool at Stoney Crossing	-	1.37	54.86	370	F	390	430
Murrumbidgee at Balranald	5.0	1.23	57.19	830	R	870	990
Barwon at Mungindi	6.1	3.51	-	880	F	1 170	1 450
Darling at Bourke	9.0	5.41	-	10 790	F	12 590	14 360
Darling at Burtundy Rocks	-	0.49	-	0	F	0	0

Natural Inflow to Hume	1 390	5 710
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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	-0.15	-	No. 7 Rufus River	22.10	-0.58	+0.80
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.04	+0.04
No. 15 Euston	47.60	+0.04	-	No. 5 Renmark	16.30	+0.04	+0.18
No. 11 Mildura	34.40	+0.03	+0.13	No. 4 Bookpurnong	13.20	+0.09	+0.45
No. 10 Wentworth	30.80	+0.10	+0.08	No. 3 Overland Corner	9.80	+0.05	+0.21
No. 9 Kulnine	27.40	-0.07	-0.98	No. 2 Waikerie	6.10	+0.08	+0.15
No. 8 Wangumma	24.60	-0.99	-0.51	No. 1 Blanchetown	3.20	+0.08	-0.24

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.55
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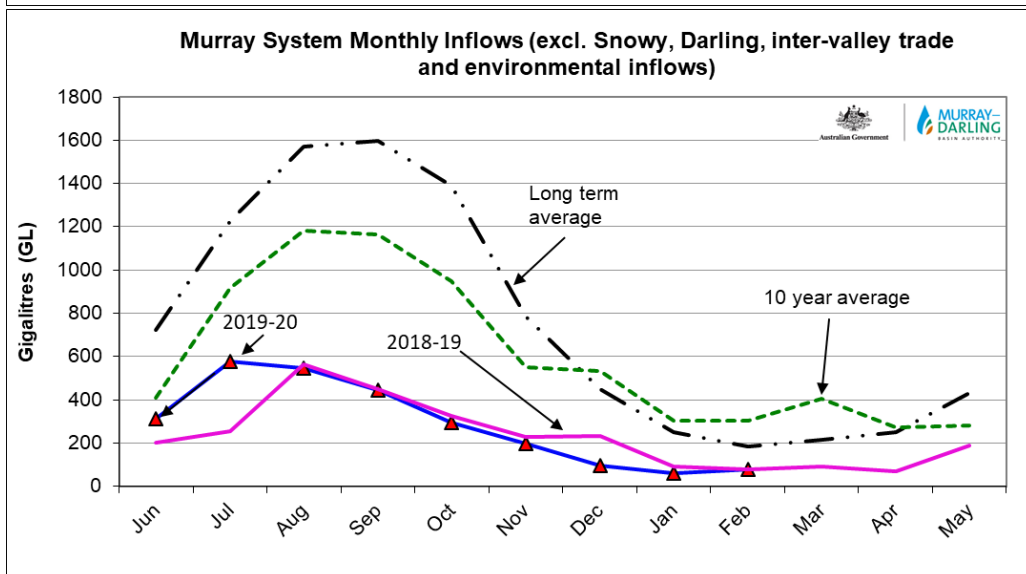
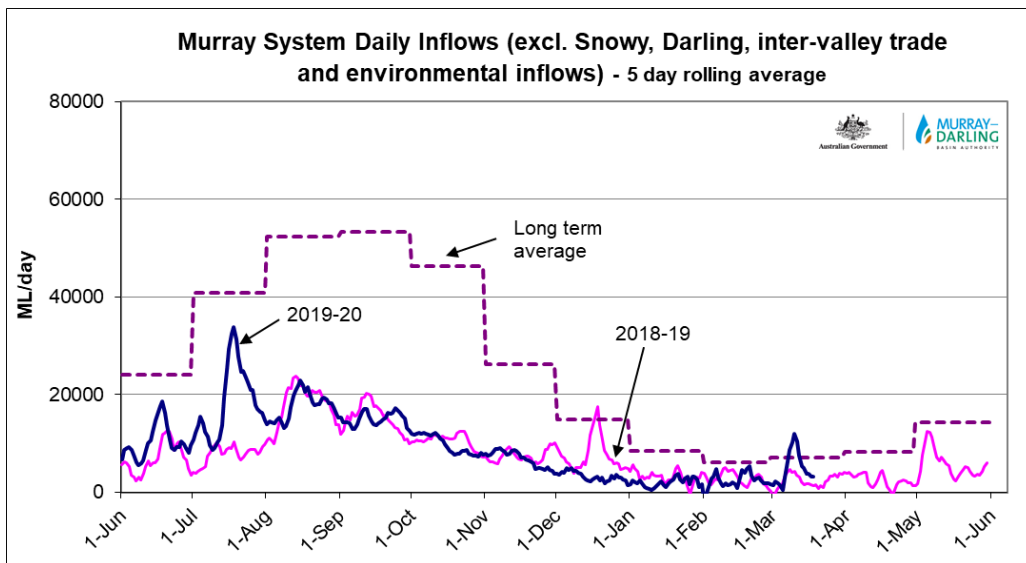
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.56	All closed	-	Closed	Open	-
Mundoo	26 openings	0.53	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.56	1	Open	Open	Open	-

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





State Allocations (as at 18 Mar 2020)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	65%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	6%

Victorian - Goulburn Valley

High reliability	78%
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>

