



River Murray Weekly Report

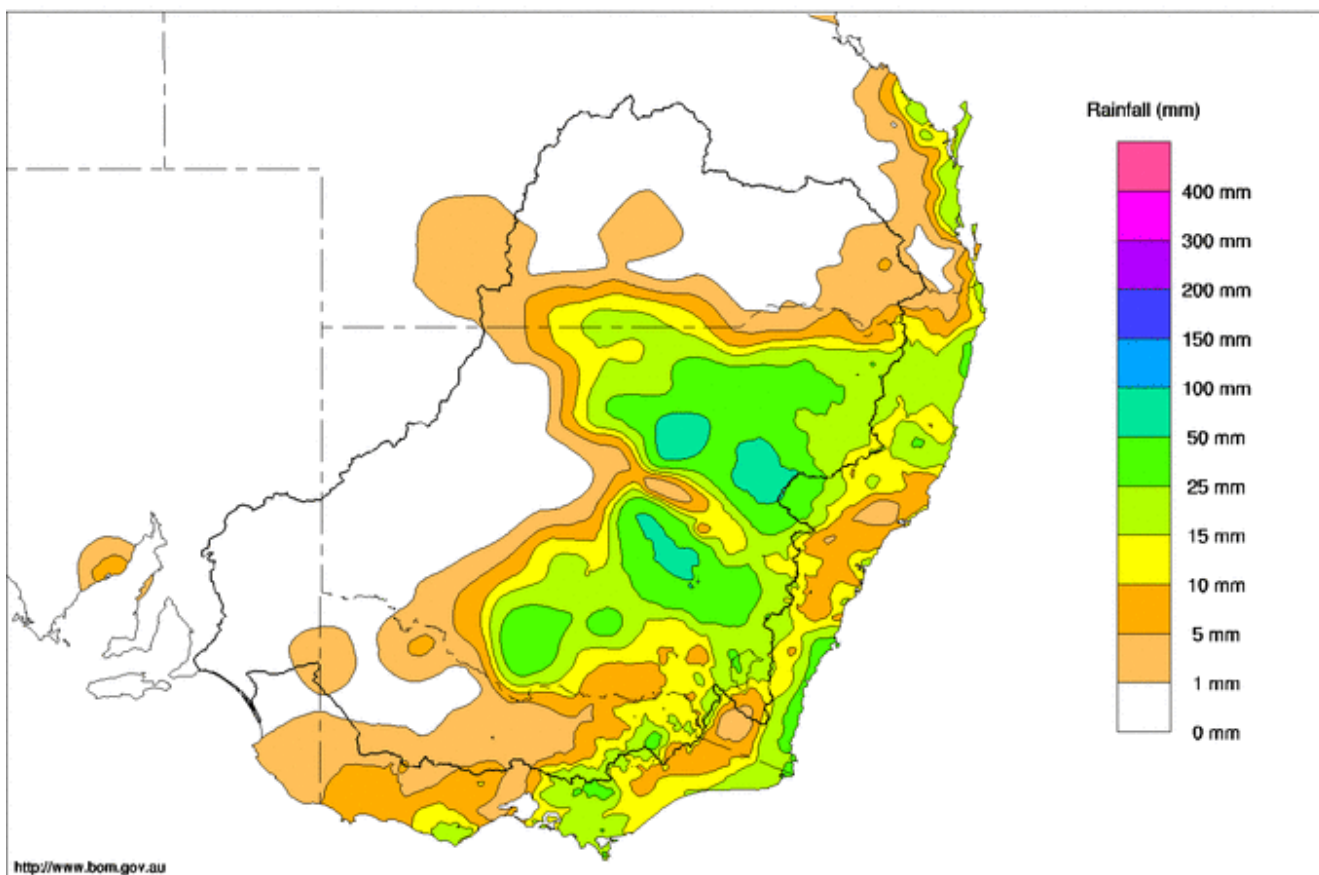
For the week ending Wednesday, 15th April 2020

Trim Ref: D20/12730

Rainfall and inflows

A low-pressure trough and cold front produced most of this week’s rainfall in the Murray-Darling Basin. Thunderstorm activity in New South Wales resulted in the heaviest falls, including 93 mm at Quambone and 74 mm at both Coonabarabran AWS and Dunedoo. In Victoria, rainfall was highest along the ranges with 28 mm at Falls Creek. Most of Queensland and South Australian areas of the Basin received little rainfall.

Murray-Darling Rainfall Totals (mm) Week Ending 15th April 2020
Australian Bureau of Meteorology



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Map 1 – Rainfall across the Murray-Darling Basin for the week ending 15 April 2020. Source: Bureau of Meteorology.

After elevated streamflows from the previous week’s rainfall, over the past week most upper Murray tributaries slowly receded. 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

- Blue – green algal alerts current at several locations in the River Murray system
- Upcoming reduction in Torrumbarry weir pool level and release
- Weir pool changes at Euston, Wentworth and Lock 7
- Lower Darling flows connect with Murray

River operations and the COVID-19 virus

The MDBA is continuing to work effectively with government partners and stakeholders during this challenging time. In response to the impact of COVID-19, the MDBA has enacted business continuity arrangements to ensure the continued operation of our business functions. River operations have been identified as a priority in this time as running the river is essential to supporting irrigation supply to [agricultural industries](#).

Across the system, [all WaterNSW Dams and Recreation](#) areas are closed to public access until further notice. In Victoria, [caravan parks and camping areas](#) are closed with houseboating also considered non-essential activity. We hope all our community members remain safe at this time.

We encourage all river users to evaluate plans against government advice, social distancing and travel, and to support actions to limit the spread of COVID-19.

Water quality impacts

Bushfire 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.

Risks to water quality remain from ash and sediment washing into the lake from bushfire affected areas. Re-growth of vegetation in less severely burnt areas is helping to reduce this risk through soil stabilisation. This process will take time and it is still possible that further fish deaths may result from poor water quality, particularly following intense rainfall.

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

Blue-green algal alerts are in place at several locations in the River Murray system. WaterNSW has advised that the alert status at Hume Dam remains at amber, however a cautionary warning remains in place for the Murray arm as surface scums persist. Red alerts are in place for the River Murray at Corowa, within and directly downstream of Lake Mulwala/Yarrowonga Weir, Cobram, Tocumwal, Picnic Point and Echuca/Moama, on the Gulpa Creek at Mathoura and the Edward River at Deniliquin. Further downstream on the lower River Murray, a red alert is still current at Buronga/Mildura. 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 operations

Over the past week, MDBA total active storage (Dartmouth, Hume and Lake Victoria) increased by 6 GL to 2,256 GL (27% capacity).

The increase in active storage is attributed to **Dartmouth Reservoir storage** increasing by 6 GL to 1,812 GL (47% capacity). The [release](#) from Dartmouth, measured at Colemans, continues to target a downstream flow at Tallandoon of 600 ML/day.

The **Hume Reservoir storage** remains at 406 GL (14% capacity) with no net increase this week. The release from Hume averaged about 4,000 ML/day and is anticipated to increase in coming days.

At **Lake Mulwala**, the pool [level](#) is currently 124.8 m AHD, which is within the normal operating range between 124.6 and 124.9 m AHD. Diversion to Yarrowonga Main Channel is currently near 520 ML/day, while on the New South Wales side diversion to Mulwala Canal is very low at 200 ML/day.

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The release from **Yarrowonga Weir** was maintained near 6,000 ML/day this week and is expected to be stepped down to 5,000 ML/day over the coming days as downstream demands ease further. The reduction in flow downstream of Yarrowonga Weir allows more water resource to be preserved in upstream storages, benefiting users along the length of the River Murray System by maximising the water available in the coming water year.

Flows through the **Edward River** offtake remained near 1,100 ML/day. Flow through the **Gulpa Creek** offtake is 180 ML/day. Downstream along the Edward River, diversion through the Wakool offtake regulator averaged 30 ML/day, 160 ML/day through Yallakool Creek offtake and 180 ML/day into Colligen Creek. At Stevens Weir, the downstream flow averaged 900 ML/day and is forecast to ease this coming week.

Inflow from the **Broken** Creek, measured at Rice's Weir, are currently around 200 ML/day. The majority of this flow is environmental water.

Rainfall from almost a fortnight ago produced a peak inflow of 3,200 ML/day at McCoys Bridge in the **Goulburn River** at the start of this week. Over the remainder of the week the inflow gradually receded to 1,750 ML/day and will reduce towards a target flow of 940 ML/day over the coming days. This target flow will be mostly comprised of environmental water delivered on behalf of the Victorian Environmental Water Holder to achieve ecological objectives in the lower Goulburn River.

While delivery of Goulburn Valley IVT is not currently required to meet Murray system demands, further IVT delivery could still be called over the coming months to meet demands or system requirements. Information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

On the **Campaspe River**, a peak inflow near 1,500 ML/day was measured at Rochester following rain but has now receded to around 50 ML/day.

[Diversion](#)s to National Channel from the Torrumbarry weir pool averaged around 1,600 ML/day over the week. The **Torrumbarry Weir** [pool](#) remains at the Full Supply Level (FSL) of 86.05 m AHD. Following increased inflows from the Goulburn and Campaspe, flow downstream of Torrumbarry Weir reached 6,500 ML/day but has since receded to 5,600 ML/day. Over the coming week the flow is forecast to further drop towards 3,000 ML/day.

On 23 April the Torrumbarry release is planned to be briefly paused for one hour in both the morning and afternoon to allow for a geophysical survey of the weir and embankments. Also, as part of this action, the Torrumbarry pool level will be lowered slightly to around 5 cm below Full Supply Level from Tuesday 21 April (and will return to FSL following the final survey). This action is expected to have minimal impact on downstream pumpers given the effect of the two periods of no flow will be short-lived and expected to attenuate a short distance downstream.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), averaged 300 ML/day this week. The [Murrumbidgee IVT balance](#) is currently near 40 GL and trade into and out of the valley is open.

At **Euston**, lowering of the weir pool has now commenced. The [weir pool level](#) is currently 2 cm below FSL and over the coming week will gradually reduce to the target range of 20 to 30 cm below FSL. The pool level will then remain around this range over coming months 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. While the partial drawdown is part of the weir pool variability program, the timing helps provide additional flow downstream to Wentworth Weir to help manage any potential water quality impacts associated with the lower Darling recommencement flows entering the Murray. Over the past week the [downstream release](#) increased from around 5,800 ML/day to around 6,500 ML/day and is likely to rise further this coming week.

This week the **Menindee Lakes** [storage](#) increased by 38 GL to 282 GL (16% capacity). [WaterNSW](#) has been providing updates on the streamflow response in the Barwon-Darling system in recent weeks and currently forecasts a volume in the order of 400 to 440 GL will flow into the Menindee Lakes. 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. WaterNSW is moving water from Lake Wetherell to Lake Tandure (74 GL) and Lake Pamamaroo (now storing 100 GL) to maximise the storage efficiency in the lakes. Flow through the Pamamaroo inlet regulator is currently 4,000 ML/day.



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This week the release from Lake Wetherell to the lower Darling was reduced from 2,500 ML/day to 1,000 ML/day and will be reduced further in coming days. More information about inflows and releases from the Menindee Lakes can be found [here](#). Despite recent rainfall and streamflow responses, in many parts of NSW drought conditions persist with extensive [water restrictions](#) still in place. Links to drought services and assistance can be also accessed via the MDBA [drought webpage](#).

The flow in the lower Darling River reached Burtundy during the week and has now joined the Darling arm of the Wentworth Weir pool. The salinity of the initial water from the Darling has been better than expected and is better than the quality experienced in 2016. Brief salinity spikes of around 2,000 EC were recorded at Pooncarie for less than one day. Real time salinity data for the Darling River can be found [here](#).

At **Wentworth Weir**, the MDBA continues to work closely with WaterNSW and SA Water to manage water quality impacts in the Darling arm of the Wentworth Weir pool and the River Murray associated with the arrival of renewed flows from the lower Darling River.

To support this objective, the Wentworth Weir [pool level](#) is being slowly [lowered](#) to assist in the passage of any poor-quality water arriving from the lower Darling, particularly with the head of the flow pulse. Salinities in the Murray are expected to rise for around a week or two as the Darling water mixes with the water in the Murray and this moves downstream. Daily updates on water quality and flows along the River Murray can be found [here](#).

Thus far, the Wentworth Weir pool level has reduced from around 10 cm above FSL to 4 cm below FSL. The pool is expected to continue falling by around 5-7 cm per day, with a level between 20 to 30 cm below FSL targeted over the coming week. River users are advised to adjust their activities, pumps and moorings to accommodate the change in weir pool level. The downstream release has increased over the week from 4,800 ML/day to 7,400 ML/day and may increase further in coming days as the pool is lowered further.

The **Lock 9** weir pool level is currently targeting FSL to 10 cm below FSL, while at **Lock 8** the weir pool level continues to target a level between 90 and 100 cm below FSL as part of the weir pool variability program. The **Lock 7** weir pool was previously targeting a level between 50 and 60 cm below FSL and over the last week has been increased towards FSL to provide operational flexibility in delivering flow to South Australia and to assist with the dilution of any poor-quality water originating from the restart of the lower Darling River.

At **Lake Victoria**, the storage volume remained steady at 232 GL (34% capacity).

The [flow to South Australia](#) averaged 4,100 ML/day and will reduce to 3,600 ML/day in the coming days. This flow comprises the delivery of South Australia's Monthly Entitlement, trade 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 0.52 m AHD. Releases have been occurring through fishways and small releases 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 15 Apr 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	447.56	1 812	47%	71	1 741	+6
Hume Reservoir	192.00	3 005	172.27	406	14%	23	383	+0
Lake Victoria	27.00	677	22.84	232	34%	100	132	-0
Menindee Lakes		1 731*		282	16%	(- -) #	0	+38
Total		9 269		2 732	29%	- -	2 256	+44
Total Active MDBA Storage							27% ^	

Major State Storages

Burrinjuck Reservoir	1 026	387	38%	3	384	+4
Blowering Reservoir	1 631	760	47%	24	736	+15
Eildon Reservoir	3 334	1 208	36%	100	1 108	+4

* 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 14 Apr 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2019
Lake Eucumbene - Total	775	-3	Snowy-Murray	+6	423
Snowy-Murray Component	484	-3	Tooma-Tumut	+0	206
Target Storage	1 340		Net Diversion	6	216
			Murray 1 Release	+5	608

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)	1.5	131	Yarrowonga Main Channel (net)	3.2	116
Wakool Sys Allowance	1.1	50	Torrumbarry System + Nyah (net)	0.1	260
Western Murray Irrigation	0.1	23	Sunraysia Pumped Districts	1.1	103
Licensed Pumps	1.6	124	Licensed pumps - GMW (Nyah+u/s)	0.4	22
Lower Darling	0.0	1	Licensed pumps - LMW	4	373
TOTAL	4.3	329	TOTAL	8.8	874

* 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 less than normal Entitlement for this month. It includes a reduced monthly Entitlement plus the delivery of environmental and traded water.

Entitlement this month	135.0 *	
Flow this week	28.6	(4 100 ML/day)
Flow so far this month	61.7	
Flow last month	171.6	

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

	Current	Average over the last week	Average since 1 August 2019
Swan Hill	80	70	70
Euston	-	-	-
Red Cliffs	40	40	50
Merbein	110	680	110
Burtundy (Darling)	250	630	1 150
Lock 9	110	110	100
Lake Victoria	140	140	120
Berri	180	170	140
Waikerie	220	220	210
Morgan	220	220	220
Mannum	250	250	260
Murray Bridge	270	270	280
Milang (Lake Alex.)	970	970	870
Poltalloch (Lake Alex.)	890	890	820
Meningie (Lake Alb.)	2 020	2 010	1 790
Goolwa Barrages	4 630	4 530	2 190



River Levels and Flows

Week ending Wednesday 15 Apr 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	-	-	-	900	F	1 150	3 350
Jingellic	4.0	-	-	2 670	F	3 400	5 660
Tallandoon (Mitta Mitta River)	4.2	1.40	218.29	590	F	630	1 070
Heywoods	5.5	2.21	155.84	3 750	F	4 090	3 150
Doctors Point	5.5	2.08	150.55	4 890	F	5 710	4 230
Albury	4.3	1.15	148.59	-	-	-	-
Corowa	4.6	1.42	127.44	5 040	F	4 590	5 430
Yarrowonga Weir (d/s)	6.4	1.05	116.09	6 030	S	6 030	6 550
Tocumwal	6.4	1.56	105.40	5 500	S	5 570	6 310
Torrumbarry Weir (d/s)	7.3	2.03	80.57	5 640	F	5 950	4 980
Swan Hill	4.5	1.27	64.19	6 470	R	5 650	4 930
Wakool Junction	8.8	2.69	51.81	6 750	R	6 380	5 730
Euston Weir (d/s)	9.1	1.27	43.11	6 550	R	6 140	5 450
Mildura Weir (d/s)	-	-	-	5 260	F	5 220	4 420
Wentworth Weir (d/s)	7.3	2.89	27.65	7 400	R	5 340	4 070
Rufus Junction	-	2.99	19.92	3 870	R	3 700	3 720
Blanchetown (Lock 1 d/s)	-	0.43	-	2 660	F	2 860	2 950
Tributaries							
Kiewa at Bandiana	2.8	1.25	154.48	820	R	910	790
Ovens at Wangaratta	11.9	8.21	145.89	1 140	F	1 520	2 530
Goulburn at McCoys Bridge	9.0	1.93	93.35	1 740	F	2 550	1 300
Edward at Stevens Weir (d/s)	5.5	1.21	80.98	930	F	910	930
Edward at Liewah	-	1.68	57.06	1 000	S	980	870
Wakool at Stoney Crossing	-	1.40	54.89	430	R	410	360
Murrumbidgee at Balranald	5.0	0.62	56.58	310	F	290	280
Barwon at Mungindi	6.1	3.23	-	150	S	150	210
Darling at Bourke	9.0	4.41	-	2 410	R	2 240	4 640
Darling at Burtundy Rocks	-	1.73	-	2 700	R	1 380	0

Natural Inflow to Hume	4 150	5 190
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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	-0.09	-	No. 7 Rufus River	22.10	-0.06	+0.67
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.01	-0.02
No. 15 Euston	47.60	-0.02	-	No. 5 Renmark	16.30	+0.00	+0.15
No. 11 Mildura	34.40	+0.03	+0.13	No. 4 Bookpurnong	13.20	+0.09	+0.40
No. 10 Wentworth	30.80	-0.04	+0.25	No. 3 Overland Corner	9.80	+0.08	+0.19
No. 9 Kulnine	27.40	-0.04	-0.89	No. 2 Waikerie	6.10	+0.09	+0.12
No. 8 Wangumma	24.60	-0.93	-0.01	No. 1 Blanchetown	3.20	+0.09	-0.32

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.52
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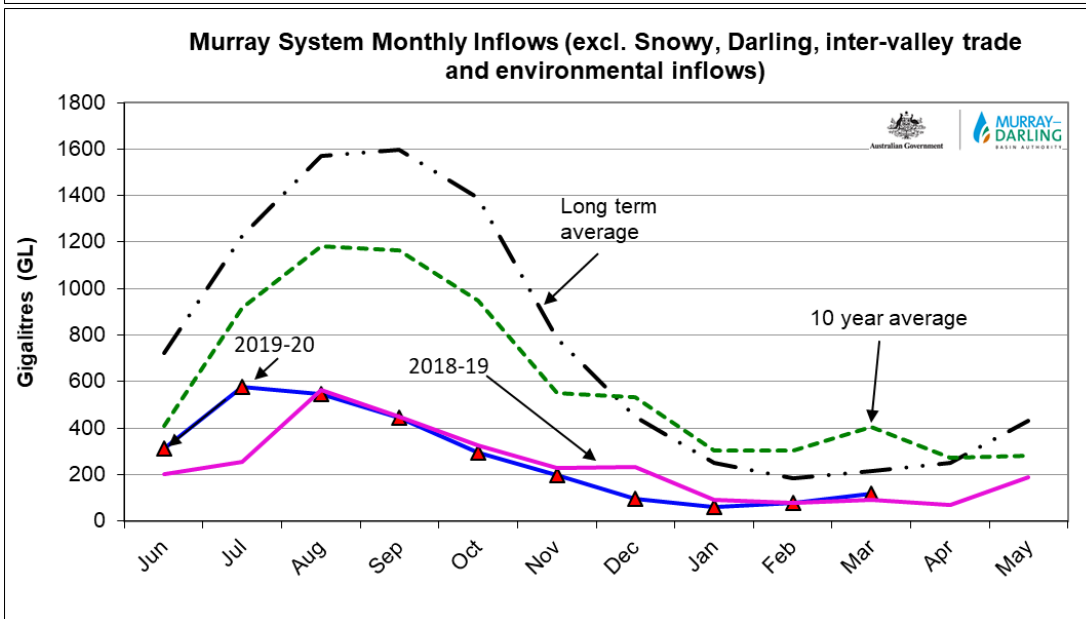
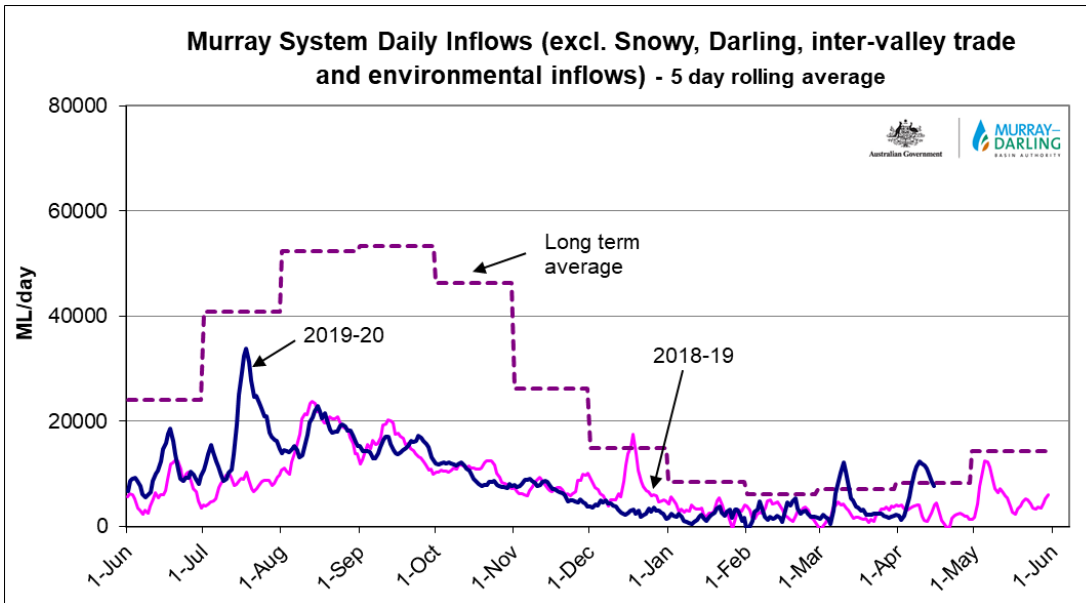
Barrages

Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.57	All closed	-	Closed	Open	-
Mundoo	26 openings	0.52	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.58	1	Open	Open	Open	-

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





State Allocations (as at 15 Apr 2020)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	66%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	6%

Victorian - Goulburn Valley

High reliability	80%
Low reliability	0%

NSW - Lower Darling

High security	100%
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>

