



River Murray Weekly Report

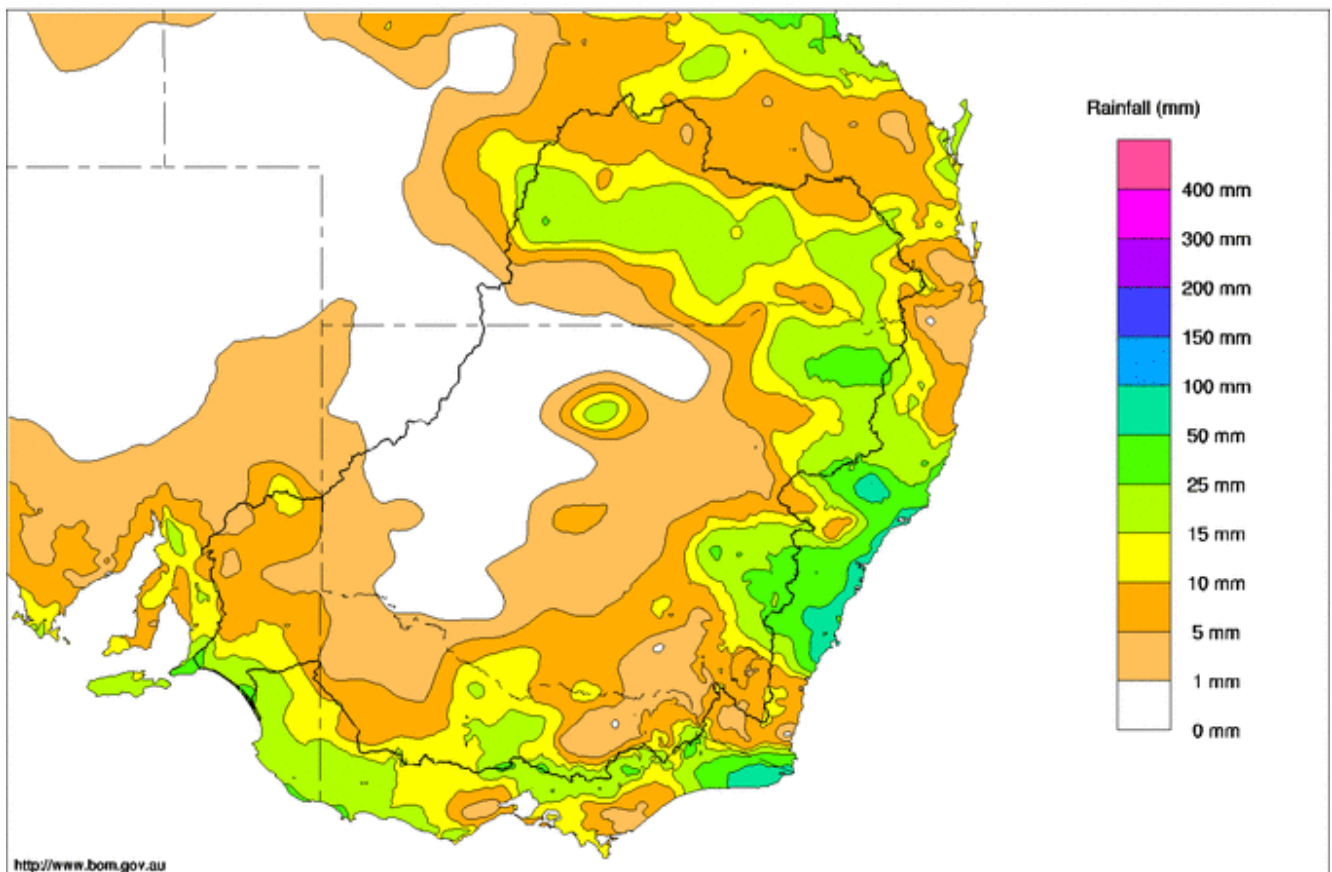
For the week ending Wednesday, 27 May 2020

Trim Ref: D20/17338

Rainfall and inflows

Widespread light to moderate falls were recorded across the Murray-Darling Basin this week (Map 1). In Victoria's Goulburn Valley region, 20 mm fell at Euroa and 17 mm fell in Kyabram. In South Australia, the Lower Lakes and Coorong area received moderate totals, including 26 mm at Meningie. Further north in NSW, 53 mm was recorded at Eugowra near the upper Lachlan River and on the Border Rivers, 50 mm fell at Inverell on the Macintyre River. In Queensland, up to 25 mm was recorded across most of the northern river catchments.

Murray-Darling Rainfall Totals (mm) Week Ending 27th May 2020
Australian Bureau of Meteorology



© Commonwealth of Australia 2020, Bureau of Meteorology

Issued: 27/05/2020

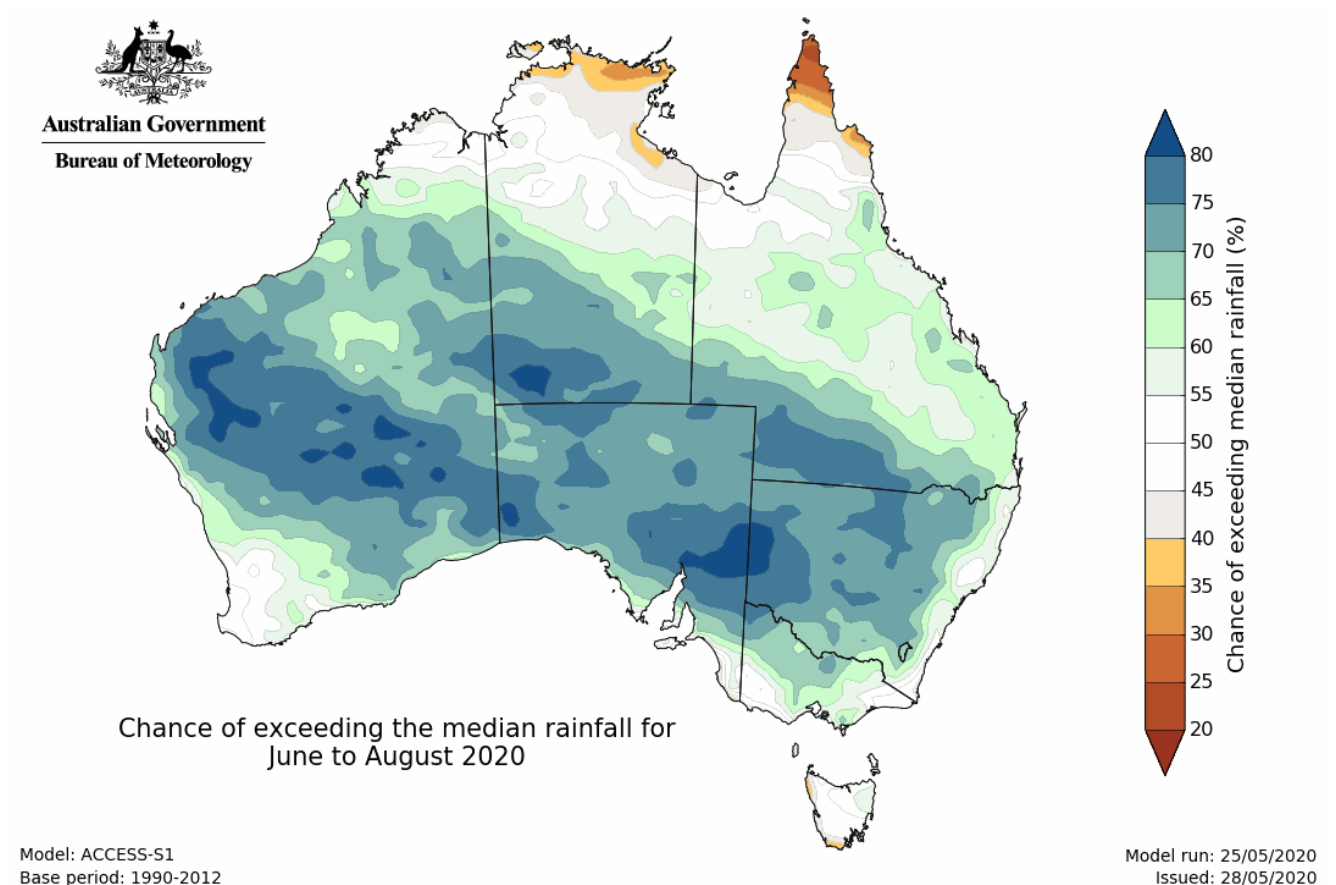
Map 1 – Rainfall across the Murray-Darling Basin for the week ending 27 May 2020. Source: Bureau of Meteorology.

In the upper Murray, small rises following rain were observed in some areas. The Bureau of Meteorology is currently forecasting rain with totals of up to around 50 mm possible in the upper Murray catchments, in the [8-day rainfall outlook](#). This may result in modest streamflow rise in the upper Murray, Ovens and Kiewa rivers.

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 at Bureau of Meteorology's (BoM) [website](#) and in the Murray River Basin daily river report at the WaterNSW [website](#).

River Murray Weekly Report

The Bureau of Meteorology's latest three-month [outlook](#) (to August 2020, Map 2) indicates a greater chance of wetter conditions across the Murray for winter. A return to wetter conditions will provide a much needed boost to the system and state allocations.



Map 2 – Wetter than average conditions forecast across the Murray-Darling Basin for June to August 2020. Source: Bureau of Meteorology, issued 28 May 2020.



River Murray Weekly Report

River operations

- Following the higher flows in the river from the rainfall in early May:
 - The final Barmah-Millewa forest regulators closed this week, as flow through the Barmah Choke reduced below channel capacity
 - Flow to South Australia increases to deliver South Australia monthly entitlement, maximising the use of the higher flows in the river.
 - Remainder of the flows re-regulated in Lake Victoria.

River operations and the COVID-19 virus

The MDBA is continuing to work 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](#).

In Victoria, from 30 May, [public access restrictions will ease further](#), including for recreational houseboat use, caravan parks and camping areas. In NSW, from 1 June, public access to [dams and recreational areas will be allowed for day use only](#). Restrictions to overnight camping in NSW will continue. 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.

There are currently no red alerts for **blue-green algae** in the River Murray system. However, there are a number of amber alerts that remain current along the river. 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 182 GL to 2,912 GL (35% capacity). Tributary inflows downstream of Hume Dam are currently arriving at Lake Victoria, which will see Lake Victoria storage continue to rise over the coming month.

At **Dartmouth Reservoir**, the [storage](#) increased by 13 GL to 1,944 GL (50% capacity). The [release](#) from Dartmouth has been targeting the minimum flow requirement, measured at Colemans of 200 ML/day. Late this week the release was increased for electricity generation to target 1,200 ML/day. This rate will remain until the weekend, or as releases for electricity generation are required, after which the release will be reduced back to 200 ML/day.

At **Hume Reservoir**, the [storage](#) increased by 71 GL to 751 GL (25% capacity). Due to sufficient tributary inflows downstream of Hume persisting over the week, the release from Hume is currently continuing at the minimum release of 600 ML/day.

At **Lake Mulwala**, the pool [level](#) is currently 124.76 m AHD, which is within the normal operating range between 124.6 and 124.9 m AHD. Diversion into Yarrowonga Main Channel and Mulwala Canal have ceased as the irrigation season has now close for winter.

River Murray Weekly Report

At **Yarrowonga Weir**, the release reduced to around 6,000 ML/day and is expected to ease further over the coming week depending on rainfall and tributary inflow upstream of the weir.

Further downstream in the Barmah-Millewa forest, regulators were opened earlier in the month to manage the high flow through the Barmah Choke following the rain event at the end of April. With the release downstream of Yarrowonga now well below 9,000 ML/day and the flow rate through the Choke returned to within channel capacity (below 2.6 m on the local gauge), the final forest regulators have now been closed.

This week, flow through the **Edward River** offtake decreased to 1,070 ML/day and flow through the **Gulpa Creek** fell to 190 ML/day. Flow through these offtakes may reduce further as flows in the River Murray recede over the coming weeks. Downstream on the Edward River at Toonalook, the flow receded from 3,300 ML/day to the current flow of around 1,700 ML/day and will continue to fall over the coming week. At Stevens Weir, the diversions through the Wakool River, Yallakool Creek and Colligen Creek offtake regulators averaged 55 ML/day, 420 ML/day and 410 ML/day respectively. At Stevens Weir, the downstream flow reduced from 2,750 ML/day to 2,000 ML/day, before increasing again slightly to 2,340 ML/day as a short period of managed releases from the Edward Escape are dewatering the Murray Irrigation Limited (MIL) irrigation network ahead of the winter maintenance period.

Back on the River Murray, the flow at **Barmah** receded from 8,570 ML/day to the current rate near 5,900 ML/day. The flow is expected to continue to fall away over the coming week.

Inflow from the **Broken Creek**, measured at Rice's Weir, also decreased this week to near 85 ML/day.

In the **Goulburn River**, the flow, measured at McCoys Bridge, rose late in the week to peak around 2,200 ML/day. This rise was the result of increased inflow from the Broken River, which joins the Goulburn River upstream of Shepparton, following rainfall in the Goulburn Valley. With no further rain, the flow will continue to decrease gradually over the coming weeks to target a minimum flow of around 600 ML/day. This target flow will be maintained on behalf of the Victorian Environmental Water Holder using environmental water if tributary inflows are not sufficient.

Delivery of Goulburn Valley IVT is not currently required to meet Murray system demands. 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 reduced this week to around 300 ML/day. Whilst diversions for irrigation have now ceased, water is expected to continue to be diverted near this rate over coming weeks to maintain base flows in the Gunbower Creek. The **Torrumbarr Weir pool** remains at the Full Supply Level (FSL) of 86.05 m AHD. Planning is underway to [vary the pool level at Torrumbarry Weir](#) as part of the weir pool variability program. The pool is expected to be varied between FSL and 30 cm below FSL between June and August. The release from Torrumbarry Weir continued to fall to the current rate near 8,100 ML/day and is expected to ease further over the coming weeks.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), increased this week to near 900 ML/day before falling again to the current rate around 610 ML/day. These higher inflows are in response to tributary inflows downstream of Burrinjuck and Blowering dams following rainfall in late April. The [Murrumbidgee IVT balance](#) is open, with small amounts (0.1 GL) able to be transferred in and 99.9 GL able to be transferred out.

At **Euston**, the [weir pool level](#) is targeting around 30 cm below FSL and will vary within the range of 20-30 cm below FSL over the 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. The [downstream release](#) averaged around 12,850 ML/day this week and is expected to ease in the coming days but will remain relatively high over the coming week.

This week the **Menindee Lakes storage** increased by 23 GL to 470 GL (27% capacity). [WaterNSW](#) has been providing regular updates on the streamflow response in the Barwon-Darling system. Numerous rainfall events over the last few months have contributed to Darling River flows continuing to reach the Menindee Lakes system. However, flows passing Bourke have reduced to the current rate near 1,160 ML/day. Based on current inflows and releases, the Menindee Lakes are forecast to reach near 480 GL, with a total forecast inflow volume of around 565 GL to



River Murray Weekly Report

580 GL since flows into the lakes recommenced. The balance of this inflow in comparison to storage volume results from the water released to recommence flows in the lower Darling and the losses to seepage and evaporation as water spreads across previously dry lake beds. WaterNSW is continuing to closely monitor inflows and storage volumes. Inflows to date have been sufficient to announce a general security allocation for the lower Darling which was made on the [15 May 2020](#).

To maximise the storage efficiency in the lakes, WaterNSW is moving water from Lake Wetherell to Lake Pamamaroo (now storing 314 GL) and the release at Weir 32 is continuing at 200 ML/day. More information including inflows and releases from the Menindee Lakes is available on the [WaterNSW website](#).

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](#).

At **Wentworth Weir**, the weir pool level will target around FSL (30.80 m AHD) but is expected to vary 10 cm above and below this level as part of normal operations. River users are advised to adjust their activities, pumps and moorings to accommodate any changes in weir pool level. The downstream release peaked this week at 13,300 ML/day as higher flows from upstream passed. The release has since decreased to 12,150 ML/day and is expected to remain around this higher rate for the coming week.

The peak flow in the River Murray, as a result of the rain in late April and early May is currently being re-regulated in Lake Victoria.

At **Lock 9**, the pool level has been surcharged to maximise the capture of water into Lake Victoria. Around 8,800 ML/day is currently being diverted with all inlet gates to the lake fully open. At **Lake Victoria**, the storage volume increased by 75 GL to 411 GL (61% capacity). The storage will continue to rise into the coming month as the high river flows in the lower Murray are captured in the lake.

The **flow to South Australia** increased this week to peak around 5,900 ML/day. This higher rate was expected, as the higher flow from upstream reached a rate that exceeded the average daily flow requirements for South Australia for May and the channel capacity of the inlet to Lake Victoria by a small amount. To manage this, the delivery of South Australian Entitlement has been varied throughout May to maximise the use of these higher flows to meet the South Australian Entitlement as well as the capture of water in Lake Victoria. This was achieved by reducing the daily delivery to South Australia in early May allowing higher deliveries in late May to coincide with the higher flows. In undertaking this operation, the total volume of South Australian Entitlement delivered in May remains unchanged. Over the coming week the flow to South Australia will be gradually reduced to target around 3,500 ML/day for the beginning of June. 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 0.61 m AHD. Releases have been occurring through fishways and opportunistic releases through Tauwitchere barrage when tide and wind conditions permit. 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



River Murray Weekly Report

Water in Storage

Week ending Wednesday 27 May 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	450.68	1 944	50%	71	1 873	+13
Hume Reservoir	192.00	3 005	176.37	751	25%	23	728	+71
Lake Victoria	27.00	677	24.65	411	61%	100	311	+75
Menindee Lakes		1 731*		470	27%	(- -) #	0	+23
Total		9 269		3 576	39%	- -	2 912	+182
Total Active MDBA Storage							35% ^	

Major State Storages

Burrinjuck Reservoir	1 026		0%	3	- 3	-0
Blowering Reservoir	1 631	822	50%	24	798	+4
Eildon Reservoir	3 334	1 458	44%	100	1 358	+25

* 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 26 May 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2020
Lake Eucumbene - Total	942	+2	Snowy-Murray	+39	98
Snowy-Murray Component	524	-12	Tooma-Tumut	+6	36
Target Storage	1 290		Net Diversion	33	62
			Murray 1 Release	+51	137

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	136	Yarrowonga Main Channel (net)	0	127
Wakool Sys Allowance	0.0	54	Torrumbarry System + Nyah (net)	0.1	291
Western Murray Irrigation	0.1	23	Sunraysia Pumped Districts	0.7	107
Licensed Pumps	0.6	130	Licensed pumps - GMW (Nyah+u/s)	0.4	28
Lower Darling	0.0	1	Licensed pumps - LMW	1.7	385
TOTAL	-1.7	344	TOTAL	2.9	938

* 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	93.0 *	
Flow this week	38.9	(5 600 ML/day)
Flow so far this month	103.5	
Flow last month	120.4	

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

	Current	Average over the last week	Average since 1 August 2019
Swan Hill	90	90	70
Euston	-	-	-
Red Cliffs	40	30	50
Merbein	110	100	100
Burtundy (Darling)	320	310	710
Lock 9	100	110	100
Lake Victoria	110	120	120
Berri	200	210	150
Waikerie	250	270	210
Morgan	280	280	220
Mannum	250	250	260
Murray Bridge	310	330	290
Milang (Lake Alex.)	960	950	890
Poltalloch (Lake Alex.)	720	730	810
Meningie (Lake Alb.)	1 640	1 590	1 770
Goolwa Barrages	4 470	5 770	2 790



River Levels and Flows

Week ending Wednesday 27 May 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	-	-	-	8 560	F	7 780	7 080
Jingellic	4.0	2.42	208.94	11 030	R	9 730	9 770
Tallandoon (Mitta Mitta River)	4.2	1.54	218.43	870	F	980	1 020
Heywoods	5.5	1.51	155.14	600	S	600	600
Doctors Point	5.5	1.76	150.23	2 450	F	2 600	2 960
Albury	4.3	0.89	148.33	-	-	-	-
Corowa	4.6	0.88	126.90	2 610	F	2 580	3 330
Yarrowonga Weir (d/s)	6.4	1.04	116.08	6 010	F	6 440	9 190
Tocumwal	6.4	1.61	105.45	5 870	F	6 710	9 680
Torrumbarry Weir (d/s)	7.3	2.70	81.24	8 100	F	9 110	10 570
Swan Hill	4.5	1.73	64.65	9 600	F	10 420	12 190
Wakool Junction	8.8	3.92	53.04	12 460	S	12 400	13 670
Euston Weir (d/s)	9.1	2.22	44.07	13 030	R	12 870	13 610
Mildura Weir (d/s)	-	-	-	12 850	F	13 080	11 040
Wentworth Weir (d/s)	7.3	3.30	28.06	12 150	R	12 620	10 230
Rufus Junction	-	3.26	20.19	5 320	S	5 140	2 310
Blanchetown (Lock 1 d/s)	-	0.59	-	4 830	R	3 250	2 050
Tributaries							
Kiewa at Bandiana	2.8	2.03	155.26	2 050	R	2 100	2 430
Ovens at Wangaratta	11.9	8.98	146.66	3 380	F	3 870	4 390
Goulburn at McCoys Bridge	9.0	2.17	93.59	2 220	R	1 450	1 650
Edward at Stevens Weir (d/s)	5.5	2.22	82.00	2 340	F	2 320	2 850
Edward at Liewah	-	2.72	58.10	2 130	R	1 770	1 070
Wakool at Stoney Crossing	-	1.60	55.09	920	R	720	490
Murrumbidgee at Balranald	5.0	0.99	56.95	610	S	710	390
Barwon at Mungindi	6.1	3.17	-	110	F	120	120
Darling at Bourke	9.0	4.25	-	1 160	R	950	1 220
Darling at Burtundy Rocks	-	0.71	-	160	R	150	110

Natural Inflow to Hume	7 450	8 000
------------------------	-------	-------

(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	-0.14	-	No. 7 Rufus River	22.10	-0.43	+0.94
No. 26 Torrumbarry	86.05	-0.00	-	No. 6 Murtho	19.25	+0.08	+0.11
No. 15 Euston	47.60	-0.22	-	No. 5 Renmark	16.30	+0.08	+0.30
No. 11 Mildura	34.40	+0.02	+0.42	No. 4 Bookpurnong	13.20	+0.19	+0.63
No. 10 Wentworth	30.80	+0.02	+0.66	No. 3 Overland Corner	9.80	+0.18	+0.35
No. 9 Kulnine	27.40	+0.16	-0.92	No. 2 Waikerie	6.10	+0.18	+0.28
No. 8 Wangumma	24.60	-0.97	-0.34	No. 1 Blanchetown	3.20	+0.15	-0.16

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.61
--	------

Barrages

Fishways at Barrages

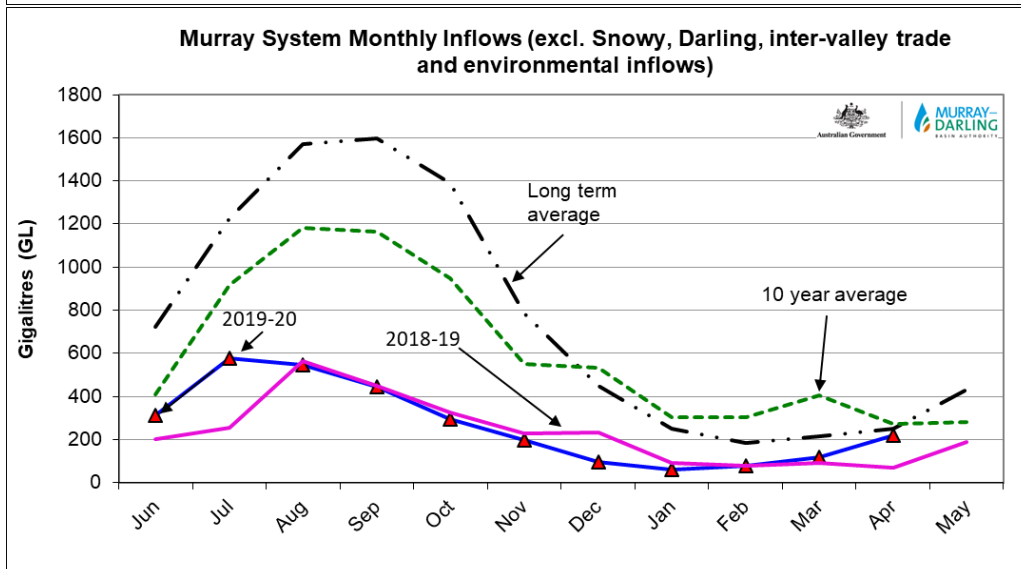
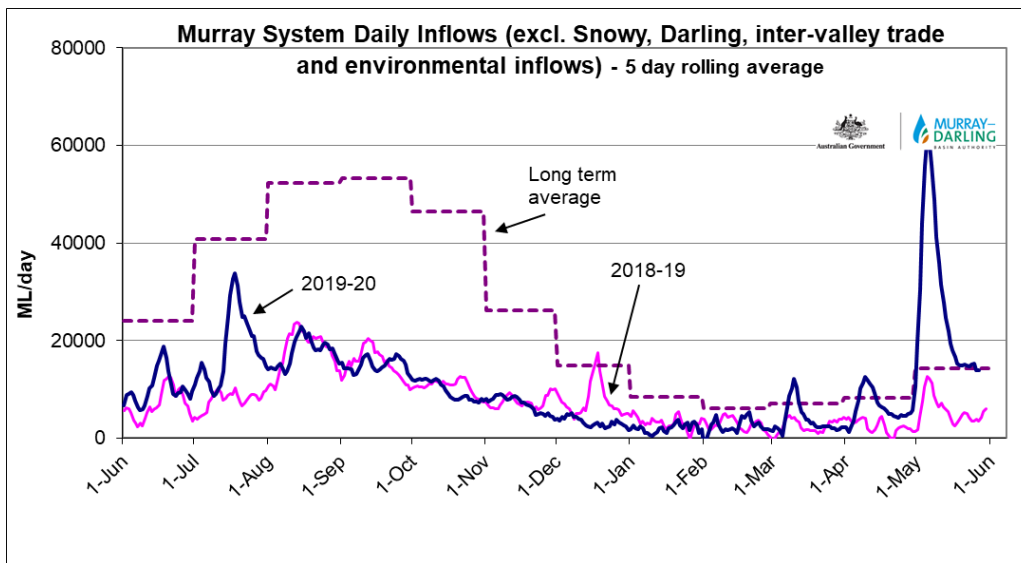
	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot 1	Vertical Slot 2	Dual Vertical Slots
Goolwa	128 openings	0.60	All closed	-	Closed	Open	-
Mundoo	26 openings	0.58	All closed	-	-	-	Open
Hunters Creek	-	-	-	-	Open	-	-
Boundary Creek	6 openings	-	All closed	-	Open	-	-
Ewe Island	111 gates	-	All closed	-	-	-	Open
Tauwichee	322 gates	0.63	2	Open	Open	Open	-

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





Week ending Wednesday 27 May 2020



State Allocations (as at 27 May 2020)

NSW - Murray Valley

High security	97%
General security	3%

Victorian - Murray Valley

High reliability	66%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	11%

Victorian - Goulburn Valley

High reliability	80%
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 : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>

