



River Murray Weekly Report

For the week ending Wednesday, 22 January 2020

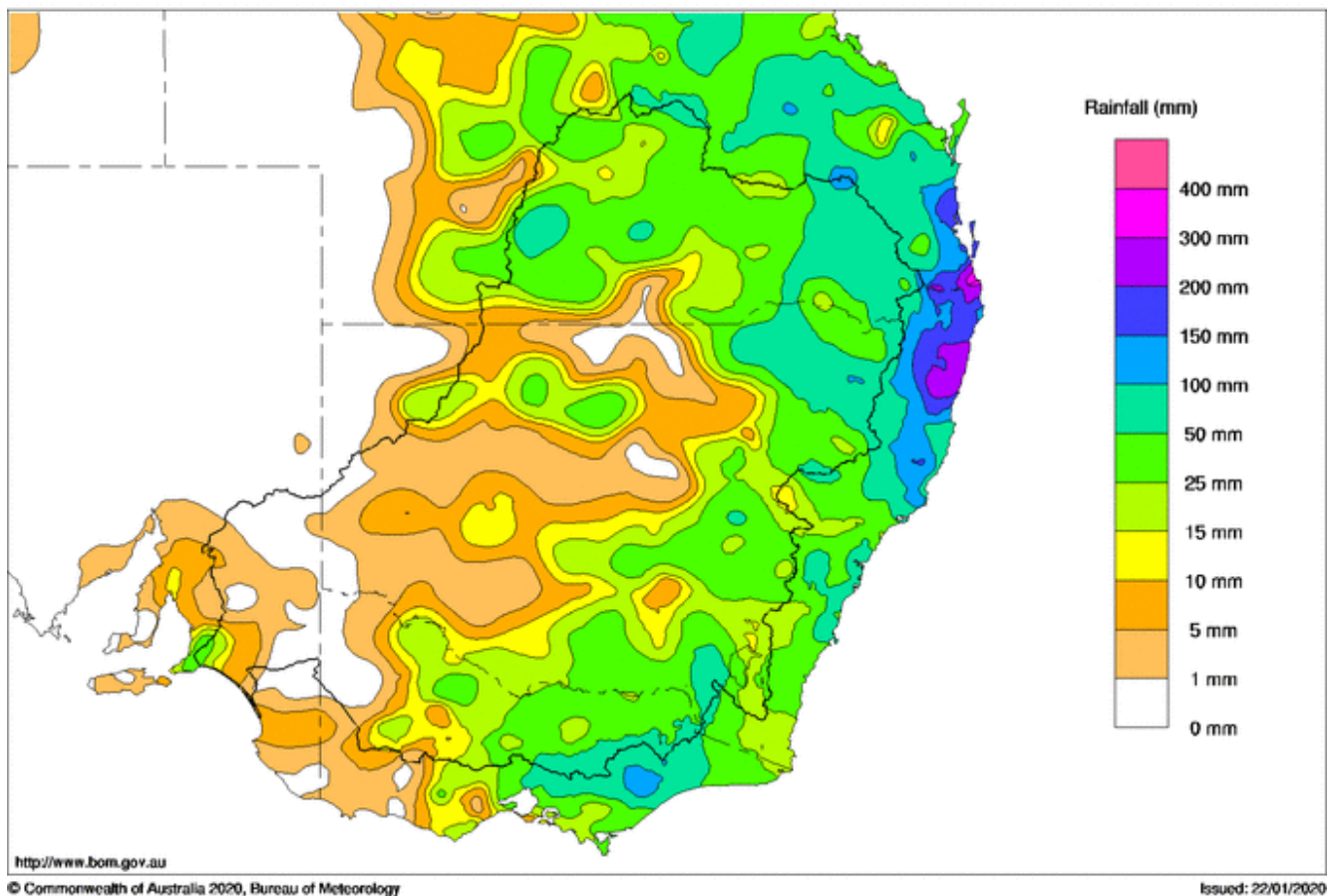
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Rainfall and inflows

There was widespread rainfall recorded across the Murray-Darling Basin (MDB) this week (Map 1). In Victoria, storms delivered higher totals along the southern Great Divide with over 70 mm recorded at Jamieson and Rocky Valley. In New South Wales the highest totals were recorded along the Great Dividing Range and Northern Tablelands, including 115 mm recorded at Armidale. Rainfall was more evenly spread across the Queensland MDB including 110 mm at Leslie Dam near Warwick.

The Bureau of Meteorology is currently forecasting rainfall across the northern MDB for the [coming 8 days](#).

Murray-Darling Rainfall Totals (mm) Week Ending 22nd January 2020
Australian Bureau of Meteorology



Map 1: Rainfall totals for week ending 22 January 2020 (Source: Bureau of Meteorology)

This week, modest flow increases were observed in the upper Murray tributaries following rainfall. 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

- Bushfire activity currently not impacting river operations.
- IVT deliveries continue from the Goulburn and Murrumbidgee valleys.
- Red Alerts for blue-green algae continue at numerous locations in the southern system.
- Pumping restrictions in place above Menindee Lakes.

Bushfire Impacts

The MDBA and state constructing authorities are continuing to monitor bushfire activity in the upper Murray catchment. To date, the fires have not posed any significant risk to any MDBA operated structures and have not impacted river operations. MDBA will continue to monitor the situation closely and will work with relevant fire and emergency management agencies where necessary. To stay updated on fire risks please visit:

New South Wales – [Rural Fire Service](#)

Victoria – [Vic Emergency](#)

South Australia – [Country Fire Service](#)

Water quality is likely to be impacted by fires as ash and sediment is washed into water courses following rain. However, the extent and timing of any impacts will depend on the location of the fires and intensity and duration of rainfall events. For information on current water quality and any impacts to your water supply, please contact your retail water supplier.



Photos 1: Nariel Creek at Nariel Upper (Upper Murray catchment). Photo: Hugo Bowman, MDBA

River operations

In the past week MDBA total active storage reduced by 89 GL to 2,692 GL (or 32% 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 32 GL to 1,933 GL (50% capacity). Over the last week the [release](#) from Dartmouth, measured at Colemans, increased from around 3,500 ML/d to 6,600 ML/d. Releases are planned to gradually fall to around 3,400 ML/d for the long weekend. These releases aim to transfer a total volume of around 120 GL during January to support water levels at Hume Reservoir, while natural inflows remain very low due to persisting dry conditions. Very dry catchments may suppress flow responses in the Hume catchment even if reasonable rainfall returns. Transfer requirements from Dartmouth to Hume Reservoirs are continually reviewed and revised in response to observed conditions and updated forecast demands across the system. In the months ahead, transfers will continue from Dartmouth to Hume to support expected demands further downstream.



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At **Hume Reservoir**, the [storage](#) decreased by 31 GL to 615 GL (20% capacity). The release from Hume varied between 11,000 and 12,000 ML/d over the week and is currently around 9,800 ML/d to accommodate forecast inflows from the Ovens catchment over the coming days.

At **Lake Mulwala**, the pool [level](#) remained above 124.74 m AHD during the week and is currently near 124.85 m AHD. Diversions into Yarrawonga Main Channel and Mulwala Canal averaged 300 ML/d and 1,800 ML/d respectively. Of the diversion to Mulwala Canal, approximately 1,600 ML/d is water being diverted around the Barmah Choke through Murray Irrigation Limited (MIL) infrastructure and released predominantly into the Edward River (around 1,400 ML/d via Edward escape), with smaller volumes to the River Murray (around 100 ML/d from Perricoota escape) and Billabong Creek via Finley Escape (flows varied between 50 ML/d and 150 ML/d this week). Similarly, on the Victorian side around 135 ML/d continues to travel through Yarrawonga 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 **Yarrawonga Weir** is forecast to vary from 8,500 ML/d and 8,900 ML/d over the coming week to meet expected downstream demands.

Flows through the **Edward River** offtake remain at around 1,550 ML/d. On the **Gulpa Creek** diversion at Gulpa offtake remained around 250 ML/d. Downstream on the Edward River at Toonalook, the flow remained steady averaging 1,700 ML/d. At Stevens Weir, the flow averaged 2,700 ML/d and should recede to around 2,500 ML/d over the coming week.

There are a number of water quality alerts current across the Edward and Wakool Rivers including a [Red Alert](#) for blue-green algae at Stoney Crossing on the Wakool River. A Red Alert level warning indicates that people should not undertake activities where they may come into direct contact with the water. For more information on this and other alerts, visit the [WaterNSW](#) website.



Photo 2: River Murray near Albury shrouded in smoke haze. Photo: Hugo Bowman, MDBA.



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Flow in the **Goulburn River**, measured at McCoys Bridge, has receded steadily over the last week from 2,300 ML/d to the current flow near 1,900 ML/d. Flow is expected to recede to 1,300 ML/d for the long weekend. This flow is above the normal January minimum flow rate of 350 ML/d due to the delivery of Inter Valley Trade (IVT) water to help 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.

Small volumes of IVT are also being delivered via the Broken Creek and Campaspe River. For January, a maximum volume of 60 GL will be called from the Goulburn System as specified on the [GMW website](#). Delivery of IVT water will continue over coming months to meet the demands of entitlement holders that have traded water from the Goulburn system. Trade opportunity opened this week as the Goulburn IVT balance fell below 200 GL and has now closed. More information regarding opportunities for allocation trade between the Goulburn and Murray Valleys is available at the Victorian water register [website](#).

The **Torrumbarry Weir pool** is currently at the Full Supply Level (FSL) of 86.05 m AHD. [Diversion](#)s to National Channel from the Torrumbarry weir pool have remained around 1,450 ML/d. Downstream of Torrumbarry Weir, the release remained steady at around 8,000 ML/d this week. The flow is expected to gradually decrease to around 6,700 ML/d over the coming week as the Goulburn flow reduces.

Inflow from the **Murrumbidgee River**, measured at [Balranald](#), has averaged 1,150 ML/d. This is above the end of system target due to the delivery of IVT to the Murray. The MDBA has requested WaterNSW to deliver up to 40 GL for the months of January and February respectively. Approximately 100 ML/d of Murrumbidgee IVT is currently being delivered via the Billabong Creek, which reaches the Murray through the Edward-Wakool River system.

Trade from the Murrumbidgee to the Murray has been closed over the week with the current [Murrumbidgee IVT balance](#) around 93 GL. It will remain closed until the account returns to below 85 GL. This can occur if enough water is traded from the Murray back to the Murrumbidgee, or if sufficient IVT is delivered from the Murrumbidgee to the Murray. Further information on expected IVT deliveries from the Murrumbidgee is provided by WaterNSW.

There are several water quality alerts for the lower Murrumbidgee River, including a Red Alert at Redbank Weir. As mentioned above, please visit the [WaterNSW](#) website for more information.

At **Euston**, the [weir pool level](#) is targeting FSL. Over the past week the [downstream release](#) increased from 9,000 ML/d to 10,000 ML/d and is expected to remain around that flow rate over the coming week.

The **Menindee Lakes storage** is approximately 6 GL (less than 1% capacity). A [Red Alert](#) for blue-green algae is in place for Lake Wetherell and Wilcania. 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. Inflows are currently zero and no significant inflows are expected in the near future.

For the week to 20 January, rainfall of between 25 and 150 mm fell over the northern and north-eastern parts of the northern Basin, providing localised runoff and streamflow. The NSW Department of Primary Industries and Environment [has put a restriction order in place until 31 January](#) to protect first flows in drought-affected inland river systems of northern NSW. Many of the northern rivers have been dry for several months, hence more rainfall is required to reconnect the northern river system and provide inflows to Menindee Lakes.

As a result of the widespread drought conditions in NSW, extensive [water restrictions](#) 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 7,000 ML/d and is expected to remain around this rate for the coming week.

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



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FSL. Lowering the weir pools below FSL is also expected to result in small water savings due to reduced seepage and evaporation as the area inundated by the weir pools reduces.

At **Lake Victoria**, the storage volume reduced by 27 GL to 338 GL (50% 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 additional water is released to assist meeting peak summer demands. Current planning forecasts indicate that Lake Victoria is likely to reach relatively low levels by early autumn 2020 if the dry conditions continue.

This week, the [flow](#) to **South Australia** averaged 8,150 ML/d, which comprises the delivery of monthly South Australian Entitlement, net trade into the state and small volumes of environmental water. A target flow to South Australia of around 8,100 ML/d is expected to continue for the remainder of January. 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 has reduced by 2 cm over the last week to 0.57 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 22 Jan 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	450.43	1 933	50%	71	1 862	-32
Hume Reservoir	192.00	3 005	174.87	615	20%	23	592	-31
Lake Victoria	27.00	677	23.94	338	50%	100	238	-27
Menindee Lakes		1 731*		6	0%	(- -) #	0	-0
Total		9 269		2 892	31%	- -	2 692	-89
Total Active MDBA Storage							32% ^	

Major State Storages

Burrinjuck Reservoir	1 026	319	31%	3	316	-1
Blowering Reservoir	1 631	602	37%	24	578	-26
Eildon Reservoir	3 334	1 348	40%	100	1 248	-15

* 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 21 Jan 2020

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2019
Lake Eucumbene - Total	982	-15	Snowy-Murray	+12	290
Snowy-Murray Component	543	-6	Tooma-Tumut	+3	186
Target Storage	1 520		Net Diversion	9	104
			Murray 1 Release	+10	450

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)	0.7	107	Yarrowonga Main Channel (net)	1.9	80
Wakool Sys Allowance	1.7	28	Torrumbarry System + Nyah (net)	7.3	180
Western Murray Irrigation	1.1	16	Sunraysia Pumped Districts	3.7	73
Licensed Pumps	4.1	79	Licensed pumps - GMW (Nyah+u/s)	1	13
Lower Darling	0.0	1	Licensed pumps - LMW	4.6	251
TOTAL	7.6	231	TOTAL	18.5	597

* 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	217.0 *	
Flow this week	57.1	(8 200 ML/d)
Flow so far this month	178.8	
Flow last month	223.0	

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

	Current	Average over the last week	Average since 1 August 2019
Swan Hill	60	60	70
Euston	-	-	-
Red Cliffs	30	30	50
Merbein	90	90	90
Burtundy (Darling)	-	-	1 220
Lock 9	100	100	100
Lake Victoria	120	110	110
Berri	140	140	140
Waikerie	190	200	210
Morgan	210	210	220
Mannum	280	270	260
Murray Bridge	250	230	290
Milang (Lake Alex.)	930	940	840
Poltalloch (Lake Alex.)	860	860	800
Meningie (Lake Alb.)	1 910	1 910	1 690
Goolwa Barrages	1 760	1 780	1 850



River Levels and Flows

Week ending Wednesday 22 Jan 2020

	Minor Flood Stage (m)	Gauge	Height	Flow (ML/d)	Trend	Average Flow this Week (ML/d)	Average Flow last Week (ML/d)
		local (m)	(m AHD)				
River Murray							
Khancoban	-	-	-	910	F	1 000	4 280
Jingellic	4.0	1.55	208.07	3 530	R	2 670	3 700
Tallandoon (Mitta Mitta River)	4.2	2.91	219.80	6 920	R	5 330	2 440
Heywoods	5.5	2.81	156.44	9 840	F	11 330	11 920
Doctors Point	5.5	2.64	151.11	10 770	F	12 130	12 690
Albury	4.3	1.64	149.08	-	-	-	-
Corowa	4.6	2.60	128.62	11 830	F	11 640	11 820
Yarrowonga Weir (d/s)	6.4	1.46	116.50	8 480	S	8 750	8 770
Tocumwal	6.4	2.05	105.89	8 700	F	8 880	8 770
Torrumbarry Weir (d/s)	7.3	2.65	81.20	7 920	S	7 960	8 150
Swan Hill	4.5	1.55	64.47	8 370	S	8 400	8 010
Wakool Junction	8.8	3.49	52.61	10 370	S	10 190	9 410
Euston Weir (d/s)	9.1	1.79	43.63	10 100	S	9 730	8 830
Mildura Weir (d/s)	-	-	-	7 550	F	7 640	7 200
Wentworth Weir (d/s)	7.3	2.97	27.73	6 950	R	5 980	5 720
Rufus Junction	-	3.69	20.62	7 890	R	7 740	7 780
Blanchetown (Lock 1 d/s)	-	0.55	-	4 910	R	4 260	4 930
Tributaries							
Kiewa at Bandiana	2.8	0.95	154.18	420	R	260	200
Ovens at Wangaratta	11.9	7.96	145.64	520	R	240	210
Goulburn at McCoys Bridge	9.0	2.00	93.42	1 870	F	2 040	2 550
Edward at Stevens Weir (d/s)	5.5	2.43	82.20	2 680	S	2 670	2 570
Edward at Liewah	-	2.94	58.32	2 440	R	2 380	2 330
Wakool at Stoney Crossing	-	1.39	54.88	410	R	400	400
Murrumbidgee at Balranald	5.0	1.73	57.69	1 310	R	1 160	1 150
Barwon at Mungindi	6.1	2.12	-	0	F	0	0
Darling at Bourke	9.0	3.04	-	0	F	0	0
Darling at Burtundy Rocks	-	0.50	-	0	F	0	0

Natural Inflow to Hume	1 350	1 100
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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	-0.05	-	No. 7 Rufus River	22.10	-0.41	+1.36
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.00	+0.13
No. 15 Euston	47.60	+0.00	-	No. 5 Renmark	16.30	+0.03	+0.25
No. 11 Mildura	34.40	+0.04	+0.26	No. 4 Bookpurnong	13.20	+0.06	+0.80
No. 10 Wentworth	30.80	+0.12	+0.33	No. 3 Overland Corner	9.80	+0.04	+0.24
No. 9 Kulnine	27.40	+0.05	-0.76	No. 2 Waikerie	6.10	+0.04	+0.19
No. 8 Wangumma	24.60	-0.90	-0.19	No. 1 Blanchetown	3.20	+0.05	-0.20

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.56
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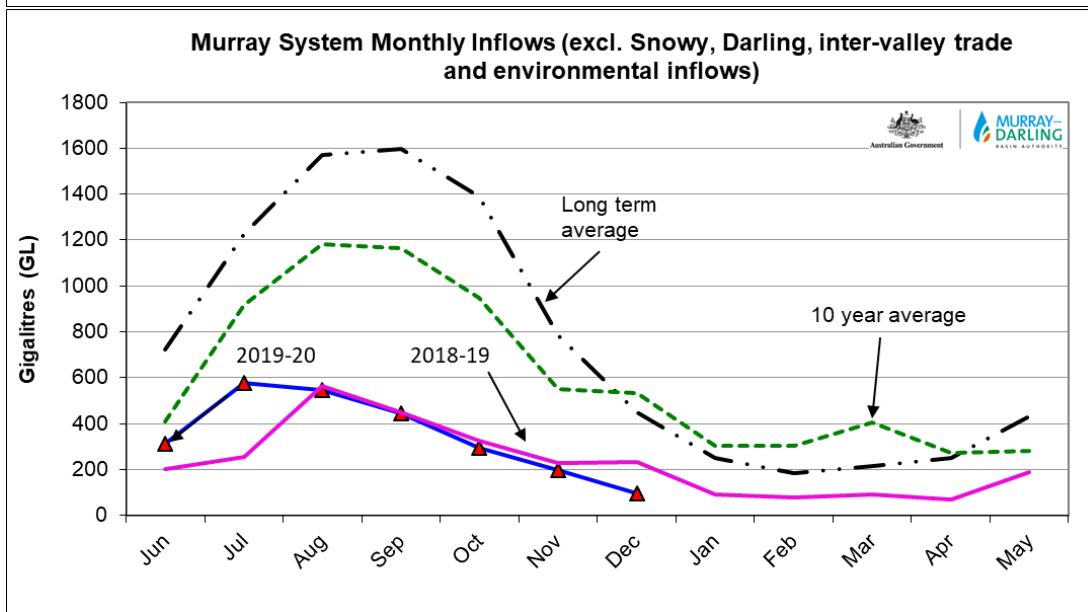
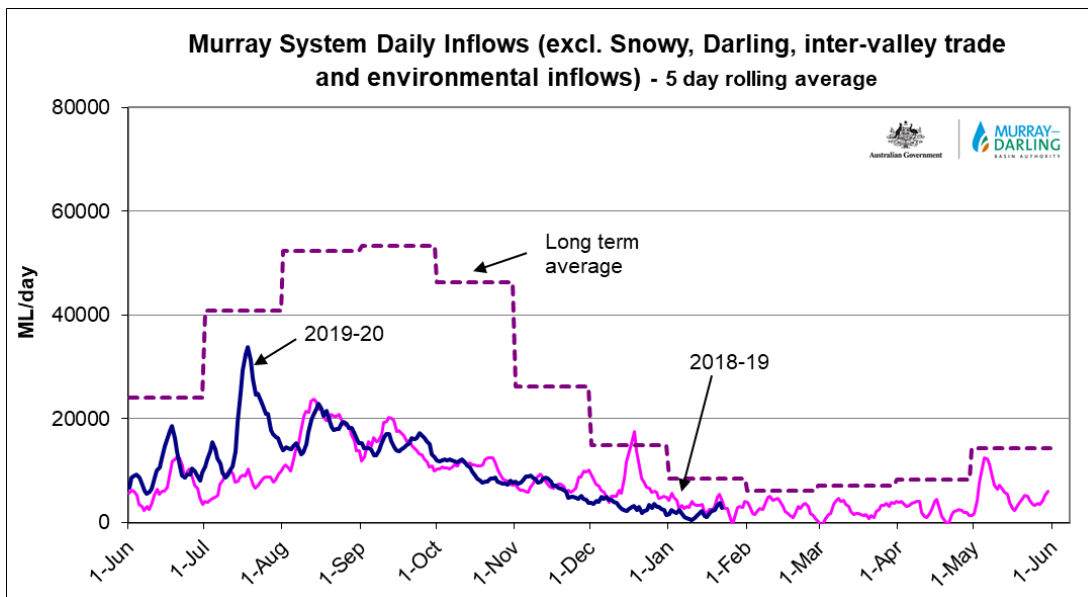
Barrages

Fishways at Barrages

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

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





State Allocations (as at 22 Jan 2020)

NSW - Murray Valley

High security	97%
General security	0%

Victorian - Murray Valley

High reliability	56%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	6%

Victorian - Goulburn Valley

High reliability	68%
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 : <https://nvrn.net.au/seasonal-determinations/current>

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

