



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 1 JULY 2015

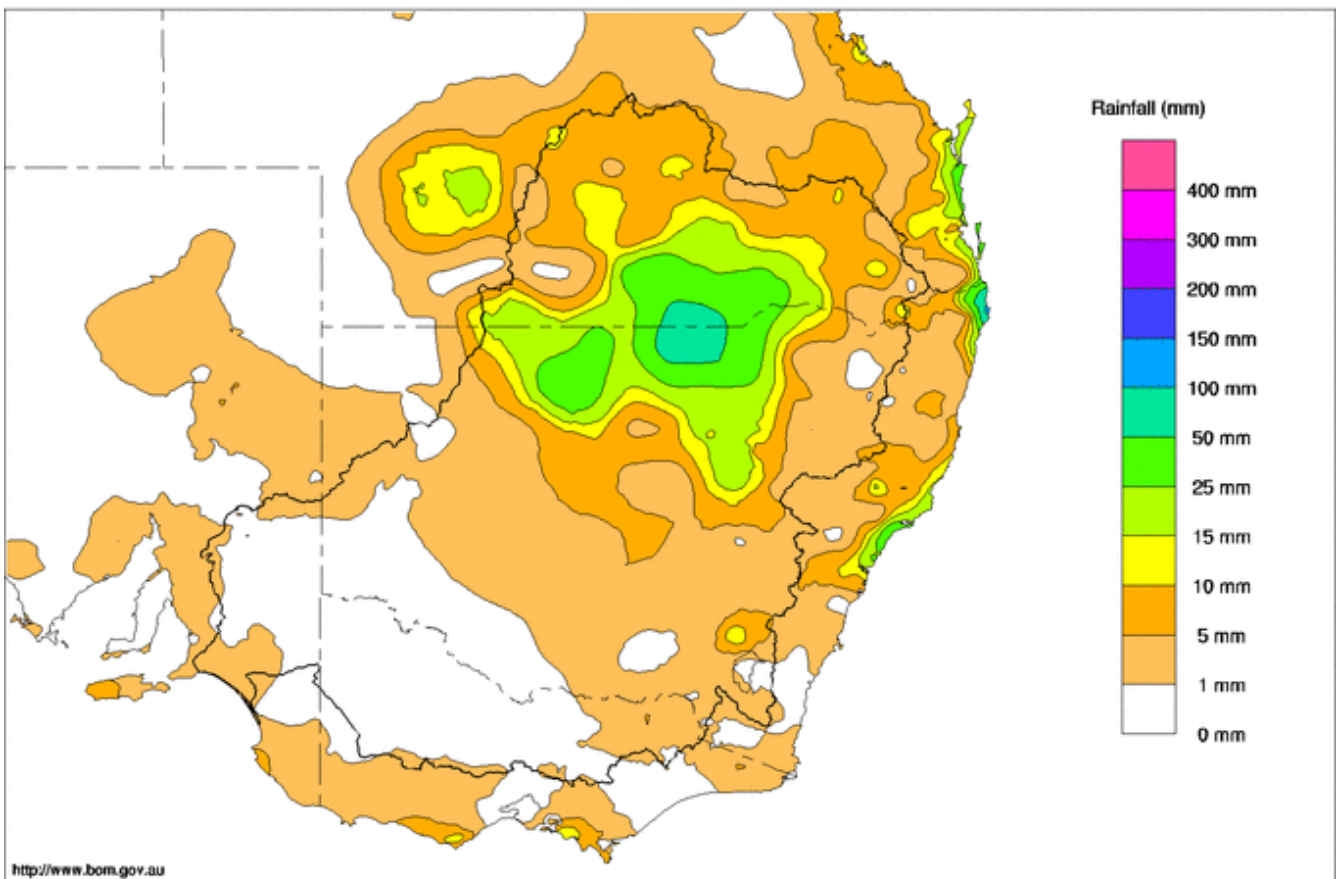
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Rainfall and Inflows

It was a fairly dry week over much of the Murray-Darling Basin, with most areas receiving no more than 5 mm in total. The exception was in the northern Basin, where there was rain at the beginning and end of the week over inland areas. This resulted in isolated totals up to 80 mm either side of the NSW-Queensland border over the Barwon and Narran River valleys (Map 1).

The highest weekly totals were 78 mm at Angledool and 60 mm at Bourke Airport. Other notable totals included 49 mm at Mogil Mogil, 43 mm at Collarenebri, 38 mm at Mungindi and 33 mm at Nindigully.

Murray-Darling Rainfall Totals (mm) Week Ending 1st July 2015
Australian Bureau of Meteorology



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Issued: 01/07/2015

Map 1 - Murray-Darling Basin rainfall for the week ending 1 July 2015 (Source: Bureau of Meteorology).

Stream flows along the upper Murray tributaries remain fairly low for this time of the year due to a recent lack of precipitation over the southern ranges. On the Mitta Mitta River, flows receded this week at Hinnomunjie Bridge from 800 to 600 ML/day. It was a similar story on the upper Murray at Biggara, where the flow also decreased from 800 to 600 ML/day. On the Ovens River at Wangaratta, the average flow rate during June of about 1,200 ML/day was less than a third of the long-term average, and the current flow has now receded below 1,000 ML/day for the first time since late May.



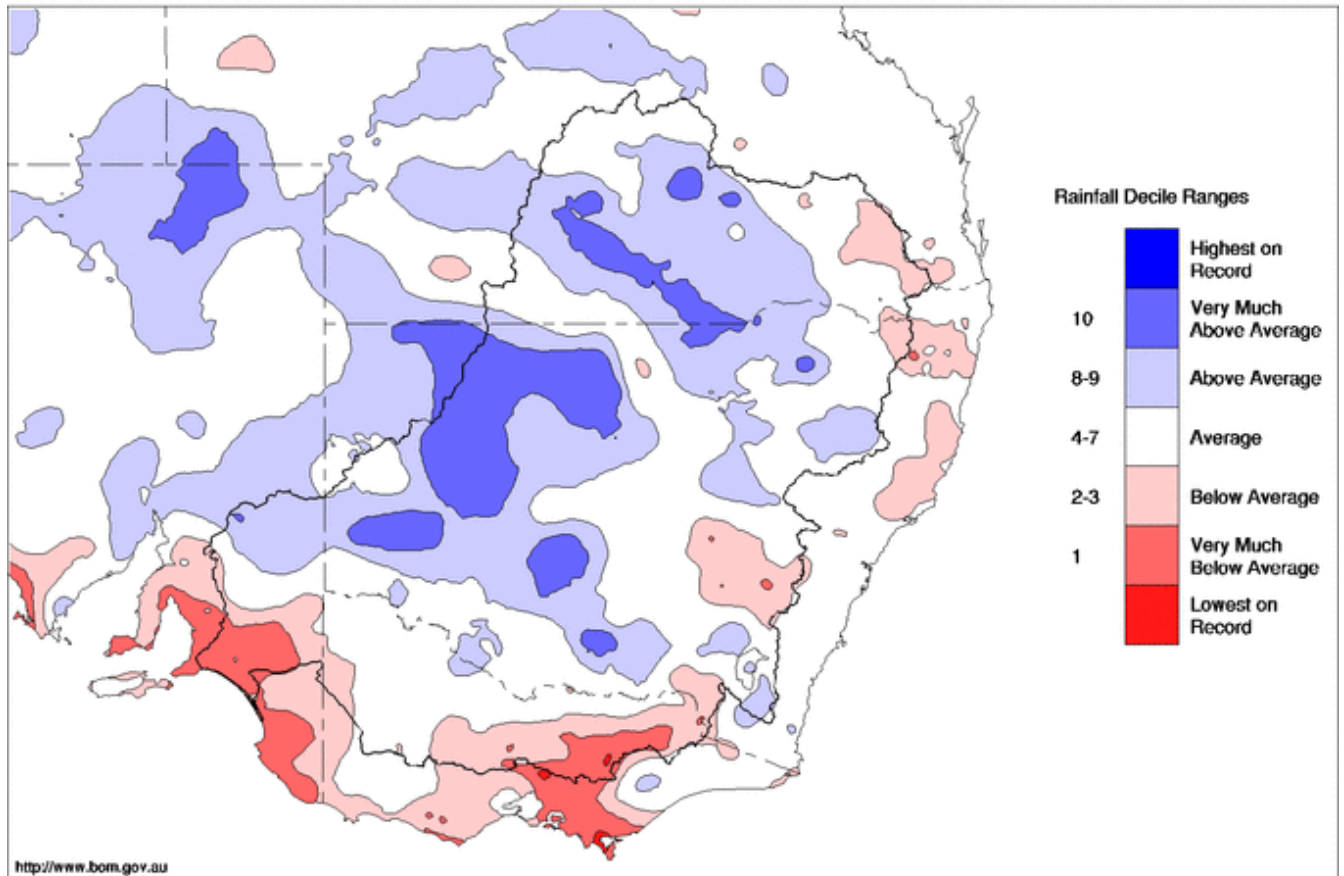
June 2015 Summary

Rainfall across the Basin during June was characterised by average to above-average totals across most northern and central areas and below-average rain in the far south (Map 2). The lower Murray valley in South Australia and the Victorian ranges were particularly dry, with ‘very much below average’ and even ‘lowest on record’ rain recorded over the important upper catchments of the Goulburn and Ovens Rivers. In contrast, parts of western and central NSW were wetter than usual during June with at least two rain bearing systems bringing relatively high rainfall to these areas.

Across the Basin as a whole, the Bureau of Meteorology has reported area-averaged rain totalling 45.6 mm, which is 36% above the long-term June mean. Both daytime and overnight temperatures were, in broad terms, fairly close to the long-term average for June.

Murray-Darling Rainfall Deciles June 2015

Distribution Based on Gridded Data
Australian Bureau of Meteorology



Map 2 - Murray Darling Basin rainfall deciles for June 2015 (Source: Bureau of Meteorology).

River Murray system inflows for June (excluding Snowy Scheme, Darling River and managed environmental inflows) totalled around 240 GL. River flows were boosted by a significant environmental release into the Goulburn River that added a further 80 GL. However, system inflows still remained well below the long-term monthly average for June of about 740 GL.

Estimated evaporation losses from MDBA storages for June 2015 are reported in Table 1. Evaporation is estimated by multiplying the surface area of the storage by the net evaporation. Net evaporation is derived by subtracting the rainfall recorded at the storage from the calculated evaporation. As a result of rainfall exceeding evaporation during June, net evaporation at both Dartmouth and Hume Reservoirs was negative. Net evaporation at Lake Victoria and the Menindee Lakes was also relatively low during June due to a combination of short, cool days and local rainfall.



Table 1: Monthly evaporation figures for MDBA storages

Storage	*Approximate (net) evaporative loss in June 2015 (GL)	Average storage volume in June 2015 (GL)
Dartmouth	-1.2	2,843
Hume	-4	887
Lake Victoria	2	400
Menindee Lakes	0	77

* Evaporative loss from storage = surface area of the storage x net evaporation. Net evaporation = measured evaporation (using a 'pan' instrument) - rainfall.

River Operations

- Initial water allocations announced by states
- Water transfer from Dartmouth to Hume Reservoir continues
- Low flows persist downstream of Yarrowonga

NSW, Victoria and South Australia have announced their initial water allocations for 2015-16 (see table on page 7, which also includes links to the states' websites). For the Murray Valley, the opening allocations are 80% for NSW high security entitlements, 35% for Victorian high reliability shares and 100% of entitlement in South Australia. Opening allocations were 0% for NSW general security entitlements and Victorian low reliability shares in the Murray Valley.

MDBA total storage increased by 20 GL this week. The active storage is now 4,048 GL (48% capacity), while total inflows to the River Murray system have receded to around 7,000 ML/day.

The storage volume in Dartmouth Reservoir decreased by 13 GL to 2,819 GL (73% capacity) as bulk transfers continue from Dartmouth to Hume Reservoir. During the week, the flow at Colemans gauge peaked at 4,500 ML/day, with the release from Dartmouth Reservoir now reducing towards 2,400 ML/day by late July. These bulk transfers during July are aiming to avoid the need for transfers at high flow rates later in the season.

Hume storage volume gained 18 GL this week and is now 975 GL (32% capacity). The estimated natural inflow to Hume Reservoir (including Dartmouth inflows but excluding the Snowy scheme) is currently about 3,400 ML/day. The release from Hume is currently 3,300 ML/day, which includes approximately 2,700 ML/day of environmental water (for more information, see the [Commonwealth Environmental Water Office](#) website). The release from Hume will be increased during the coming days towards 3,800 ML/day, including about 3,200 ML/day environmental water. If conditions remain dry, higher releases from Hume may soon be required to re-fill Lake Mulwala and commence transfers to Lake Victoria.

Lake Mulwala is currently drawn down 3.6 m below full supply level (see Figure 1), and the release from Yarrowonga Weir is 6,300 ML/day. Without further rain, the release is likely to be reduced to 4,500–5,000 ML/day in the coming week which may result a small (less than 50 cm) rise in water level.

On the Edward-Wakool system, around 1,200 ML/day is flowing through the Edward River offtake, which remains fully open. The Gulpa Creek offtake is being managed to limit the flow to 350 ML/day. At Stevens Weir, the pool level is currently 2.3 m local gauge height and may be lowered further during the coming week. The release from the weir is currently 1,200 ML/day and could increase to around 1,600 ML/day in the coming week.

On the Goulburn River, the flow at McCoys Bridge has receded to 2,700 ML/day, after peaking at 7,000 ML/day about one week ago, as a winter pulse of environmental water was delivered from Eildon Reservoir. The flow at McCoys Bridge is expected to recede to about 550 ML/day by mid-July.

At Torrumbarry Weir, about 450 ML/day of environmental water continues to be diverted into National Channel to maintain winter base flows through Gunbower Creek. Downstream of the weir, the flow peaked at nearly 10,000 ML/day during the week and is expected to drop towards 6,000 ML/day in the coming week.



The flow at Swan Hill is now at a peak of 9,000 ML/day (1.65 m local gauge height) and the river level is expected to fall below 1 m gauge height by mid-July. If conditions remain dry, the river level could reduce further in late July.



Figure 1 – An aerial view of Lake Mulwala in mid-June when the water level was about 3.7 m below full supply level (Photo courtesy: Peter McLean. Copied with the permission of Yarrawonga Flight Training)

On the Murrumbidgee River, the flow at Balranald is currently 600 ML/day and expected to rise to around 830 ML/day in the coming week.

At Euston Weir, the pool level is currently 20 cm above Full Supply Level, and the flow downstream is expected to remain close to 10,000 ML/day for the coming week before receding.

Work to re-instate Mildura Weir will commence on Wednesday 15 July, with the weir pool expected to be at full supply level by late July. Prior to returning the weir's trestles into position, there may be an opportunity from 12-14 July to move boats across the base of the weir (see attached media release). The lock at Mildura Weir will remain closed for refurbishment until mid-September 2015.

The salinity at Mildura reached 300 EC during the past week, but is expected to reduce in the coming week due to dilution by higher river flows. The salinity is forecast to be less than 250 EC by this weekend. For more [salinity forecasts](#), see the MDBA website.

Storage in the Menindee Lakes increased by 4 GL to 83 GL (5% capacity). The flow at Weir 32 remains negligible.

At the South Australian border, the flow is increasing as environmental water originating from the winter pulse in the Goulburn River arrives. The flow has increased from 3,800 ML/day in late June to 5,500 ML/day on 1 July. The flow is expected to reach a peak of about 9,200 ML/day in the next week or so.

The water level in the Lower Lakes has been relatively steady at about 0.67 m AHD during the last week. Water is being released through the fishways, with gates adjacent to the fishways also being opened to provide attractant flows for fish. Higher releases are possible in the next few weeks as inflows to the lakes increase.

For media inquiries contact the Media Officer on 02 6279 0141

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Water in Storage

Week ending Wednesday 01 Jul 2015

MDBA Storages	Full Supply Level	Full Supply Volume (GL)	Current Storage Level	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)	
	(m AHD)		(m AHD)	(GL)	%				
Dartmouth Reservoir	486.00	3 856	468.66	2 819	73%	71	2 748	-13	
Hume Reservoir	192.00	3 005	178.59	975	32%	23	952	+18	
Lake Victoria	27.00	677	25.00	448	66%	100	348	+11	
Menindee Lakes		1 731*		83	5%	(- -) #	0	+4	
Total		9 269		4 325	47%	- -	4 048	+20	
Total Active MDBA Storage							48% ^		

Major State Storages

Burrinjuck Reservoir	1 026	486	47%	3	483	+10
Blowering Reservoir	1 631	514	31%	24	490	+30
Eildon Reservoir	3 334	1 853	56%	100	1 753	-3

* Menindee surcharge capacity – 2050 GL

** All Data is rounded to nearest GL **

NSW takes control of Menindee Lakes when storage falls below 480 GL, and control reverts to MDBA when storage next reaches 640 GL

^ % of total active MDBA storage

Snowy Mountains Scheme

Snowy diversions for week ending 30 Jun 2015

Storage	Active Storage (GL)	Weekly Change (GL)	Diversions (GL)	This Week	From 1 May 2015
Lake Eucumbene - Total	2 166	n/a	Snowy-Murray	+6	76
Snowy-Murray Component	1 075	n/a	Tooma-Tumut	+3	31
Target Storage	1 170		Net Diversion	4	45
			Murray 1 Release	+10	119

Major Diversions from Murray and Lower Darling (GL) *

New South Wales	This Week	From 1 July 2015	Victoria	This Week	From 1 July 2015
Murray Irrig. Ltd (Net)	0.0	0	Yarrowonga Main Channel (net)	0	0
Wakool Sys Allowance	-0.5	0	Torrumbarry System + Nyah (net)	0.8	0
Western Murray Irrigation	0.2	0	Sunraysia Pumped Districts	0	0
Licensed Pumps	0.3	0	Licensed pumps - GMW (Nyah+u/s)	0	0
Lower Darling	0.1	0	Licensed pumps - LMW	1.5	0
TOTAL	0.1	0	TOTAL	2.3	0

* Figures derived from estimates and monthly data. 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 the delivery of additional environmental water.

Entitlement this month	108.5 *	
Flow this week	29.0	(4 100 ML/day)
Flow so far this month	5.5	
Flow last month	113.5	

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

	Current	Average over the last week	Average since 1 August 2014
Swan Hill	70	70	80
Euston	-	-	100
Red Cliffs	280	270	130
Merbein	300	280	130
Burtundy (Darling)	920	920	830
Lock 9	220	210	130
Lake Victoria	170	170	200
Berri	260	260	220
Waikerie	320	320	290
Morgan	340	340	280
Mannum	340	340	320
Murray Bridge	340	340	350
Milang (Lake Alex.)	760	760	750
Poltalloch (Lake Alex.)	550	560	640
Meningie (Lake Alb.)	2 090	2 190	2 410
Goolwa Barrages	1 780	1 890	1 610



River Levels and Flows

Week ending Wednesday 01 Jul 2015

River Murray	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)				
Khancoban	-	-	-	2 020	F	2 120	2 520
Jingellic	4.0	1.62	208.14	3 620	F	3 520	4 910
Tallandoon (Mitta Mitta River)	4.2	2.53	219.42	4 540	S	3 210	2 540
Heywoods	5.5	1.93	155.56	3 270	F	4 070	1 180
Doctors Point	5.5	1.99	150.46	4 140	F	4 920	2 910
Albury	4.3	1.08	148.52	-	-	-	-
Corowa	4.6	1.48	127.50	5 070	F	4 820	2 750
Yarrowonga Weir (d/s)	6.4	1.16	116.20	6 300	S	6 010	3 620
Tocumwal	6.4	1.73	105.57	6 540	R	6 010	3 250
Torrumbarry Weir (d/s)	7.3	2.60	81.15	8 040	F	9 140	6 720
Swan Hill	4.5	1.65	64.57	9 010	R	8 140	4 090
Wakool Junction	8.8	3.40	52.52	9 610	R	8 270	5 630
Euston Weir (d/s)	9.1	1.82	43.66	9 720	F	7 440	6 570
Mildura Weir (d/s)	-	-	-	7 320	F	6 630	7 570
Wentworth Weir (d/s)	7.3	2.90	27.66	6 870	R	6 750	8 040
Rufus Junction	-	3.27	20.20	5 160	R	3 790	3 460
Blanchetown (Lock 1 d/s)	-	0.64	-	3 300	S	3 300	3 350
Tributaries							
Kiewa at Bandiana	2.8	1.41	154.64	1 060	F	1 110	1 610
Ovens at Wangaratta	11.9	8.13	145.81	920	F	1 080	1 340
Goulburn at McCoys Bridge	9.0	2.43	93.85	2 730	F	4 620	6 010
Edward at Stevens Weir (d/s)	5.5	1.39	81.16	1 180	F	750	700
Edward at Liewah	-	1.66	57.04	1 000	S	1 040	1 290
Wakool at Stoney Crossing	-	1.30	54.79	220	F	280	360
Murrumbidgee at Balranald	5.0	0.99	56.95	600	R	500	490
Barwon at Mungindi	6.1	3.49	-	720	R	420	370
Darling at Bourke	9.0	4.27	-	1 210	R	760	470
Darling at Burtundy Rocks	-	1.08	-	0	F	0	0

Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme)	4 740	7 290
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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	-3.58	-	No. 7 Rufus River	22.10	+0.02	+0.94
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.04	+0.03
No. 15 Euston	47.60	+0.19	-	No. 5 Renmark	16.30	+0.04	+0.15
No. 11 Mildura	34.40	-3.40	+0.12	No. 4 Bookpurnong	13.20	+0.07	+0.43
No. 10 Wentworth	30.80	+0.02	+0.26	No. 3 Overland Corner	9.80	+0.03	+0.11
No. 9 Kulnine	27.40	-0.02	+0.01	No. 2 Waikerie	6.10	+0.01	+0.03
No. 8 Wangumma	24.60	+0.00	+0.08	No. 1 Blanchetown	3.20	-0.09	-0.11

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.67
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Barrages

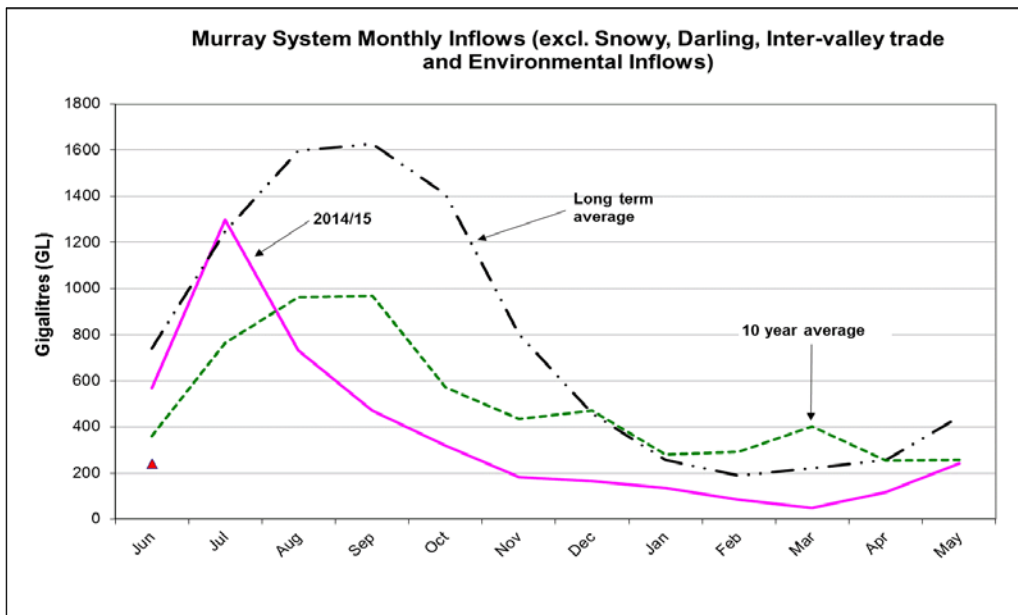
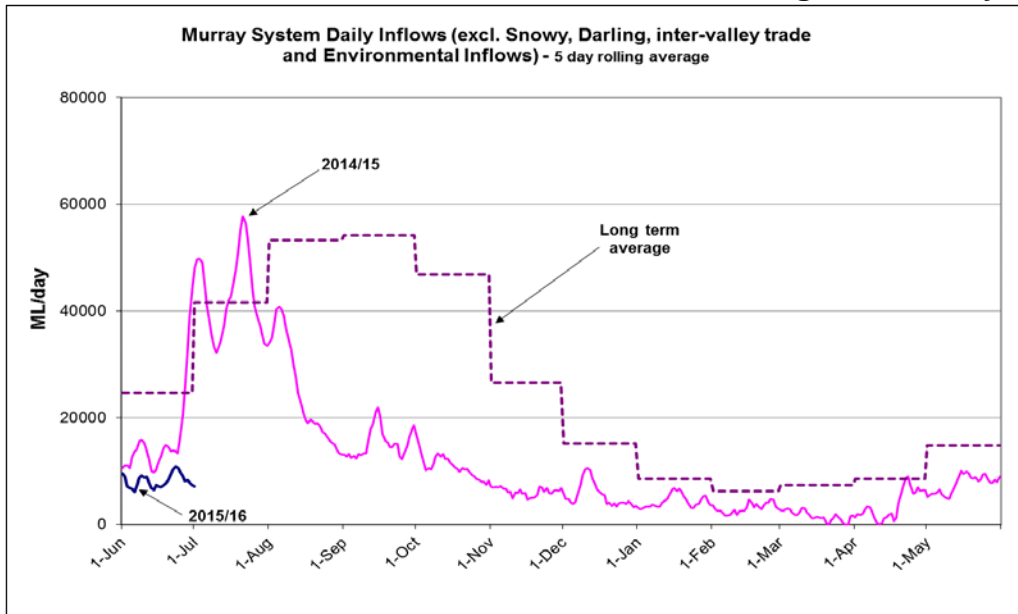
Fishways at Barrages

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.69	1	-	Open
Mundoo	26 openings	-	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwitchere	322 gates	0.69	2	Open	Open

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



Week ending Wednesday 01 Jul 2015



State Allocations (as at 01 Jul 2015)

NSW - Murray Valley

High security	80%
General security	0%

Victorian - Murray Valley

High reliability	35%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	8%

Victorian - Goulburn Valley

High reliability	42%
Low reliability	0%

NSW - Lower Darling

High security	20%
General security	0%

South Australia - Murray Valley

High security	100%
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NSW : <http://www.water.nsw.gov.au/Water-management/Water-availability/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>

VIC : <http://www.nvrn.net.au/allocations/current.aspx>

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

MEDIA RELEASE



30 June 2015

Boat passage at Mildura possible in mid-July

Boat owners at Mildura may have a small window of opportunity in mid-July to move their boats across the Mildura weir, before work begins to reinstall the weir following a successful upgrade.

Lock 11 will remain closed for refurbishment, so this will be the only opportunity for boat operators to shift their vessels up or downstream until the lock reopens in mid-September 2015.

Work to reinstate the weir will start on Wednesday 15 July 2015, and is expected to take up to two weeks as the weir's trestles are positioned and the weir pool is raised. The weir pool is planned to be back to normal full supply level (34.40 metres AHD) by the end of July.

Boat operators who wish to move their vessels upstream or downstream may be able to pass over the sill of the weir in the days prior to the weir being re-instated, in the following period:

- **9.00am Sunday 12 July until 2.00pm Tuesday 14 July 2015**

There will be no Goulburn–Murray Water or MDBA staff on hand supervising the passage of vessels.

The MDBA reminds boat operators that they are responsible for the safety of their vessel and the people on board, and should take into account prevailing river conditions and their boat's clearance needs before navigating across the weir.

Flows at Mildura between 12 and 14 July 2015 are currently forecast to be approximately 9000 megalitres per day, which corresponds to a river level of about 31.0 metres AHD. At this river height, there would be approximately 1.5 metres clearance between the water level and the weir's concrete base on the riverbed.

Snags and other hazards may also be present upstream and downstream of the weir and boat operators are advised to take extra caution in these unusual conditions.

Updated forecasts on river flows and salinities, along with additional information will be on the MDBA's website at <http://www.mdba.gov.au/river-data/current-information-forecasts>

ENDS

For more information, contact the MDBA Media office at media@mdba.gov.au or 02 6279 0141 or Goulburn–Murray Water on 1800 013 357.

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