



# RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 11<sup>TH</sup> MARCH 2015

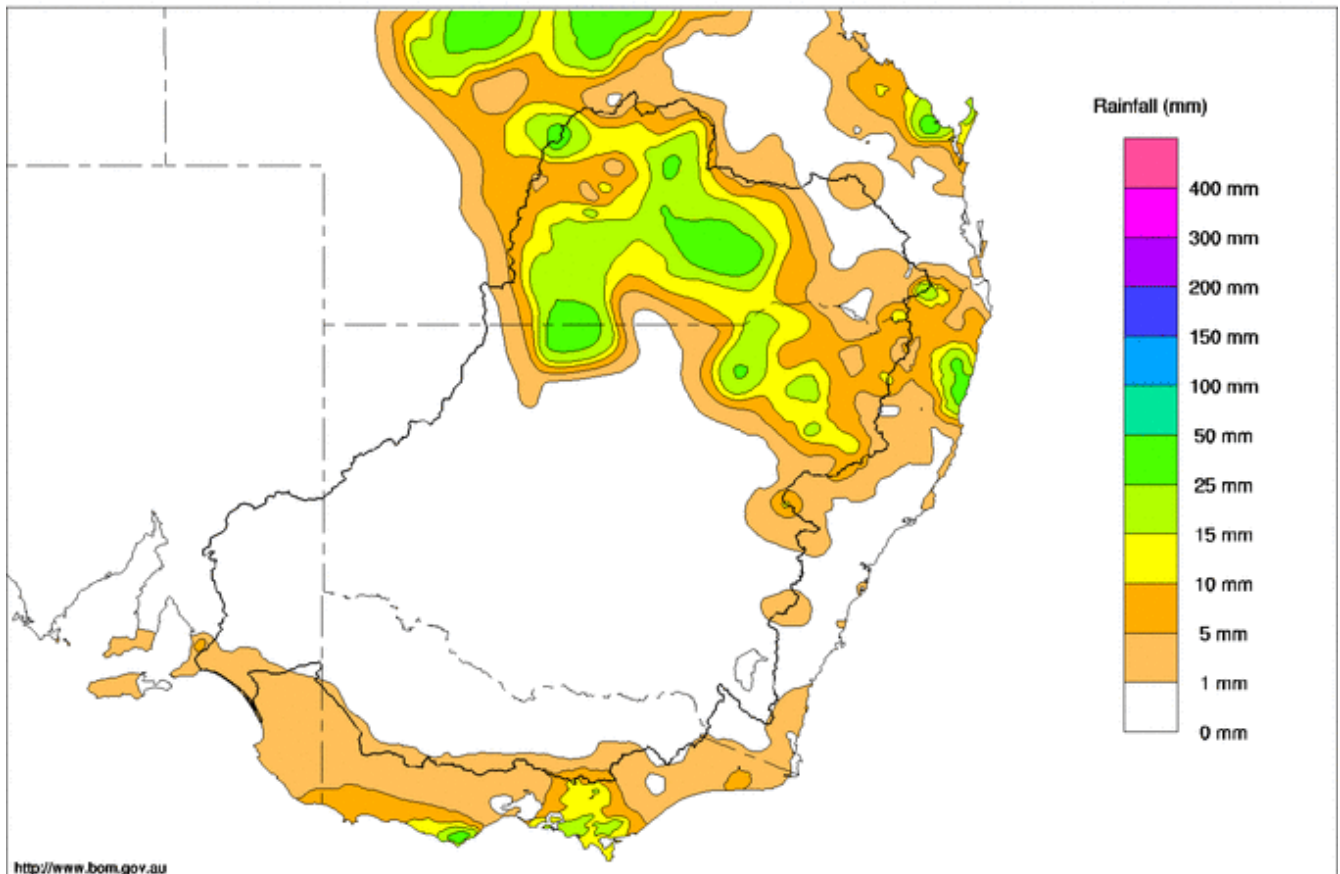
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## Rainfall and Inflows

Fine and mostly dry early autumn weather has been a feature of the past week across the Murray-Darling Basin. The only rain of any significance was recorded towards the end of the week over the northern Basin, where a weak inland trough triggered showers across northern NSW and southern Queensland (Map 1).

Weekly rainfall totals were generally under 15 mm, although there were isolated higher falls including 69 mm at Karoola Park, 53 mm at Warroo, 47 mm at Mungallala, 41 mm at Rowena, 31 mm at Enngonia and 24 mm at Narrabri.

Murray-Darling Rainfall Totals (mm) Week Ending 11th March 2015  
Australian Bureau of Meteorology



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Map 1- Murray Darling Basin rainfall week ending 11th March 2015 (Source: Bureau of Meteorology)

Dry conditions over the south-eastern ranges resulted in a slow recession along the upper system tributaries, which are now providing no more than a limited base flow. For example, on the Mitta Mitta River, the flow at Hinnomunjie Bridge decreased from 200 to 160 ML/day. On the upper Murray, the flow at Biggara receded from 260 to 230 ML/day – the lowest flow seen here since February 2010. On the Ovens River, flows are mostly being maintained by releases from Lake Buffalo, with the flow at Wangaratta steady at around 190 ML/day.



## River Operations

- Irrigation demands increase as dry weather persists;
- Hume Reservoir storage volume below 1,000 GL;
- Small inflows recommence at Menindee Lakes.

MDBA total storage decreased by 151 GL this week, with the active storage now at 4,077 GL (48% capacity).

At **Dartmouth** Reservoir, the storage decreased by 3 GL to 3,034 GL (79% capacity). The release, measured at Colemans gauge, is currently at 600 ML/day and is planned to remain at this rate during the coming days.

At **Hume** Reservoir, the volume of stored water continues to decrease as autumn system demands are supplied and inflows remain low. The volume has now decreased to below 1,000 GL with the current volume at 999 GL (33% capacity). This is the first time that Hume Reservoir has fallen this low since the final stages of the Millennium Drought in July 2010. The level is expected to decrease further over the next few weeks unless there is significant rainfall. The release at Hume Dam was increased early in the week to meet higher downstream demands, but has been eased slightly in the last few days to a target of 18,500 ML/day at Doctors Point.

At **Lake Mulwala**, irrigation diversions have increased to their highest levels since early January, with total diversions through Mulwala Canal and the Yarrawonga Main Channel now in excess of 7,500 ML/day. The Lake Mulwala pool level has risen to 124.83 m AHD and the downstream release from **Yarrawonga Weir** is 9,800 ML/day. A target of 9,900 ML/day is planned for the coming days.

On the **Edward** River system, total flow through the Edward River and Gulpa Creek offtakes continues at around 1,900 ML/day. Diversions to Wakool Main Canal have averaged 760 ML/day this week and the flow downstream of Stevens Weir is currently 2,400 ML/day.

On the **Goulburn** River, the flow at McCoys Bridge has been steady at around 940 ML/day during the last few days. A renewed rise is expected in the coming week with the arrival of another flow pulse released from upstream, partially to facilitate the delivery of Inter Valley Transfer (IVT) water, but also for environmental purposes.

At **Torrumbarry** Weir, diversions at National Channel are currently around 2,400 ML/day and are expected to increase to at least 3,000 ML/day in one week's time. The flow downstream of Torrumbarry has receded to around 5,400 ML/day, with a flow rate below 5,000 ML/day currently expected for a day or two in the coming week before rising again.

On the **Murrumbidgee** River the flow at Balranald has decreased from 750 to 275 ML/day. The flow is expected to remain steady for a few days before rising in around one week's time due to another delivery of IVT water to help meet River Murray system demands. At this stage, flow rates in the order of 900 ML/day are expected to be maintained over a three week period during this delivery.

At **Euston** Weir, a pool level up to 10 cm above the normal Full Supply Level (FSL) continues to be targeted. The current pool level is 47.66 m AHD (6 cm above FSL). The downstream flow has receded from 9,600 ML/day to 7,400 ML/day and is expected to continue receding during the coming week.

Salinity levels in the Murray at Euston continue to remain relatively low with the salinity mostly remaining below 100 EC throughout the 2014-15 summer. This result maintains a trend observed more broadly in River Murray salinity levels over a number of years. High salinity has historically been a significant issue for water users and the riverine environment along much of the River Murray, with particularly high river salinities being a feature of the 1980s and 1990s. However during the period of very low flows during the Millennium drought, there was a considerable decrease in river salinity in the mid reaches. This would be expected as the dry conditions meant that accessions to the river from saline ground water and tributary inflows reduced and the majority of the flow came from releases of relatively fresh water in the headwater storages. However, in the 5 years since the ending of the drought, salinity levels have not returned to the levels previously observed, but instead increased only a small amount on average



(Figure 1). There are several possible factors that may be contributing to this trend, including salt interception works and measures upstream of Euston, changes to irrigation (such as irrigation scheme rehabilitation, water use efficiency and improved management of return flows) and other land use practises, as well as shifts in hydrological patterns due to water trade, the growing use of environmental flows and generally lower volumes of tributary inflow downstream of the Barmah Choke.

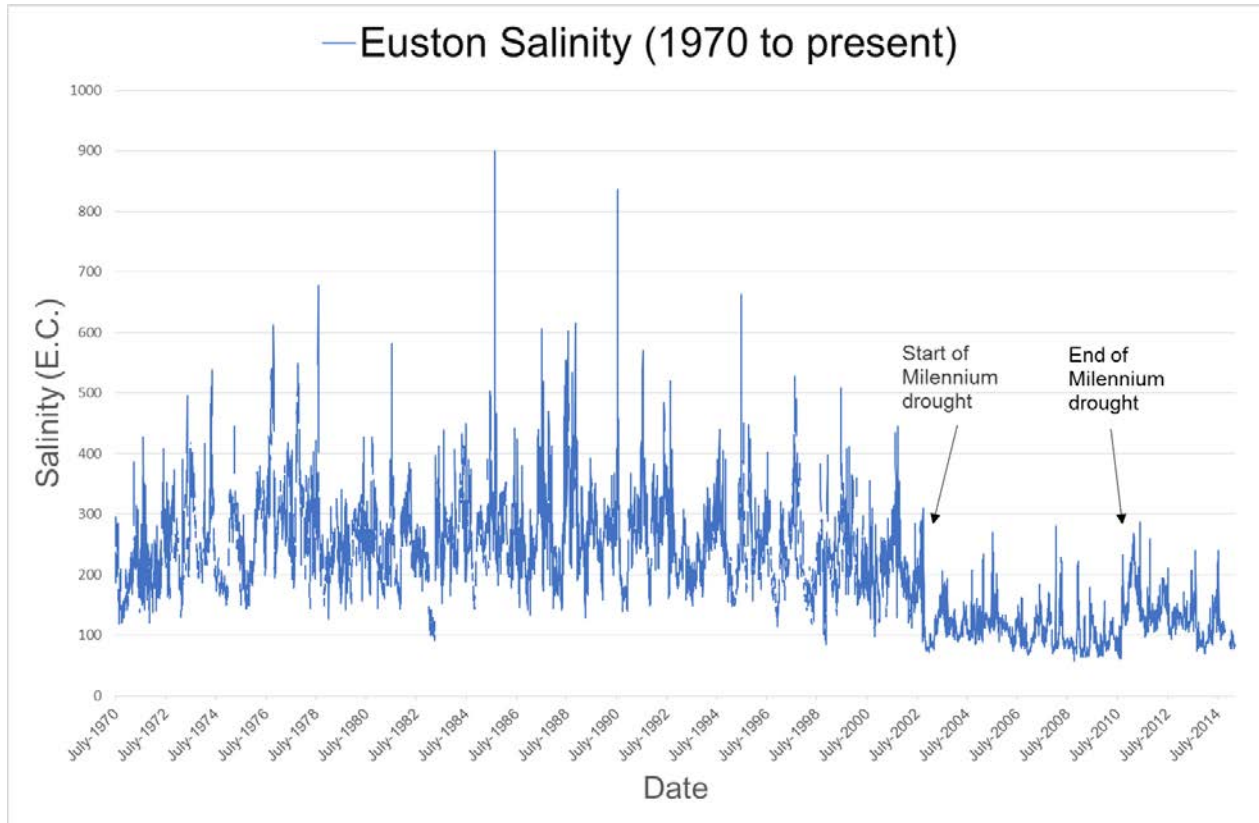


Figure 1 – River Murray salinity (measured as Electrical Conductivity (E.C.)) at Euston Weir since 1970.

At **Menindee Lakes**, the total combined storage volume has decreased to just 97 GL (6% capacity). However, a small inflow has recommenced during the past week for the first time in many months. The flow upstream at Wilcannia has peaked at around 3,000 ML/day and is now receding, meaning the inflow volume to the Menindee Lakes is expected to be small. The release from the Lakes averaged around 170 ML/day during the past week, however it will be increased slightly during the coming week to provide some extra flow and water access along the lower reaches of the Darling River.

At **Wentworth Weir**, the flow has been fairly steady at just over 8,000 ML/day, but is expected to recede during the coming week.

At **Lake Victoria**, the storage volume has decreased by 26 GL to 238 GL (35% capacity). The flow to South Australia averaged 9,900 ML/day during the week, but will decrease to a target of 6,500 ML/day after the coming weekend.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina decreased by 1 cm to 0.54 m AHD. The arrival of higher inflows during the last week has helped maintain the lake level while on-going barrage releases of around 2,000 ML/day have continued.

**For media inquiries contact the Media Officer on 02 6279 0141**

DAVID DREVERMAN  
Executive Director, River Management





**Water in Storage**

**Week ending Wednesday 11 Mar 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	472.54	3 034	79%	71	2 963	-3
Hume Reservoir	192.00	3 005	178.81	999	33%	23	976	-111
Lake Victoria	27.00	677	22.91	238	35%	100	138	-26
Menindee Lakes		1 731*		97	6%	(- -) #	0	-10
<b>Total</b>		<b>9 269</b>		<b>4 368</b>	<b>47%</b>	<b>--</b>	<b>4 077</b>	<b>-151</b>
Total Active MDBA Storage							48% ^	

**Major State Storages**

Burrinjuck Reservoir	1 026	338	33%	3	335	-29
Blowering Reservoir	1 631	530	32%	24	506	-4
Eildon Reservoir	3 334	2 149	64%	100	2 049	-40

\* 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 10 Mar 2015

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2014
Lake Eucumbene - Total	2 227	-5	Snowy-Murray	+15	306
Snowy-Murray Component	1 068	-14	Tooma-Tumut	+1	208
Target Storage	1 410		Net Diversion	15	98
			Murray 1 Release	+13	574

**Major Diversions from Murray and Lower Darling (GL) \***

New South Wales	This Week	From 1 July 2014	Victoria	This Week	From 1 July 2014
Murray Irrig. Ltd (Net)	25.4	711	Yarrawonga Main Channel (net)	11.4	234
Wakool Sys Allowance	3.1	59	Torrumbarry System + Nyah (net)	16.4	500
Western Murray Irrigation	0.5	22	Sunraysia Pumped Districts	2.4	94
Licensed Pumps	8.4	215	Licensed pumps - GMW (Nyah+u/s)	1.5	53
Lower Darling	0.7	60	Licensed pumps - LMW	4.3	253
<b>TOTAL</b>	<b>38.1</b>	<b>1067</b>	<b>TOTAL</b>	<b>36</b>	<b>1134</b>

\* 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	186.0 *
Flow this week	69.6
Flow so far this month	108.6
Flow last month	260.6

(9 900 ML/day)

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

	Current	Average over the last week	Average since 1 August 2014
Swan Hill	70	60	90
Euston	90	80	100
Red Cliffs	110	120	120
Merbein	100	100	130
Burtundy (Darling)	840	830	760
Lock 9	120	130	140
Lake Victoria	240	230	210
Berri	220	220	220
Waikerie	250	250	280
Morgan	270	260	280
Mannum	290	300	330
Murray Bridge	340	340	360
Milang (Lake Alex.)	950	890	770
Poltalloch (Lake Alex.)	720	700	610
Meningie (Lake Alb.)	2 460	2 490	2 410
Goolwa Barrages	1 310	1 310	1 150



**River Levels and Flows**

**Week ending Wednesday 11 Mar 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	-	-	-	3 440	R	2 330	3 260
Jingellic	4.0	1.51	208.03	3 020	F	2 910	3 620
Tallandoon ( Mitta Mitta River )	4.2	1.49	218.38	730	F	760	1 850
Heywoods	5.5	3.43	157.06	17 420	S	18 510	15 670
Doctors Point	5.5	3.24	151.71	17 700	S	18 880	16 010
Albury	4.3	2.31	149.75	-	-	-	-
Corowa	3.8	3.47	129.49	17 480	F	18 150	15 210
Yarrowonga Weir (d/s)	6.4	1.62	116.66	9 820	S	9 550	9 930
Tocumwal	6.4	2.23	106.07	9 890	F	9 640	10 040
Torrumbarry Weir (d/s)	7.3	1.92	80.47	5 370	F	5 970	7 040
Swan Hill	4.5	1.15	64.07	5 720	S	5 970	7 420
Wakool Junction	8.8	2.89	52.01	7 410	F	8 180	9 700
Euston Weir (d/s)	8.8	1.48	43.32	7 350	F	8 380	9 460
Mildura Weir (d/s)	-	-	-	7 780	F	8 340	7 850
Wentworth Weir (d/s)	7.3	2.86	27.62	8 020	F	8 110	7 250
Rufus Junction	-	3.90	20.83	9 120	R	9 140	8 750
Blanchetown (Lock 1 d/s)	-	0.66	-	7 260	S	7 240	6 420
<b>Tributaries</b>							
Kiewa at Bandiana	2.7	0.75	153.98	210	R	200	300
Ovens at Wangaratta	11.9	7.74	145.42	180	S	190	260
Goulburn at McCoys Bridge	9.0	1.48	92.90	940	S	1 000	1 460
Edward at Stevens Weir (d/s)	-	2.26	82.03	2 400	S	2 260	2 330
Edward at Liewah	-	2.66	58.04	2 110	F	2 230	2 340
Wakool at Stoney Crossing	-	1.36	54.85	320	F	350	390
Murrumbidgee at Balranald	5.0	0.58	56.54	280	F	380	1 200
Barwon at Mungindi	-	3.18	-	60	F	100	120
Darling at Bourke	-	4.12	-	450	S	610	1 270
Darling at Burtundy Rocks	-	0.62	-	1	F	10	10

Natural Inflow to Hume	360	360
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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	-0.08	-	No. 7 Rufus River	22.10	+0.04	+1.57
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.01	+0.19
No. 15 Euston	47.60	+0.06	-	No. 5 Renmark	16.30	+0.04	+0.37
No. 11 Mildura	34.40	+0.03	+0.22	No. 4 Bookpurnong	13.20	+0.06	+1.11
No. 10 Wentworth	30.80	+0.09	+0.22	No. 3 Overland Corner	9.80	+0.03	+0.35
No. 9 Kulnine	27.40	-0.09	-0.44	No. 2 Waikerie	6.10	+0.03	+0.27
No. 8 Wangumma	24.60	-0.58	+0.21	No. 1 Blanchetown	3.20	-0.10	-0.09

**Lower Lakes FSL = 0.75 m AHD**

Lake Alexandrina average level for the past 5 days (m AHD)	0.54
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**Barrages**

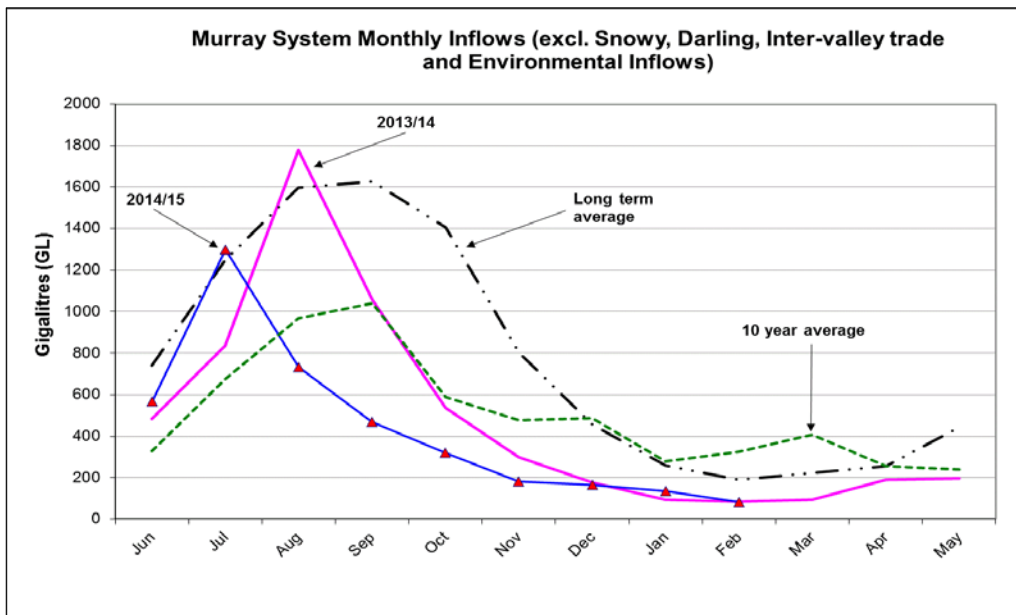
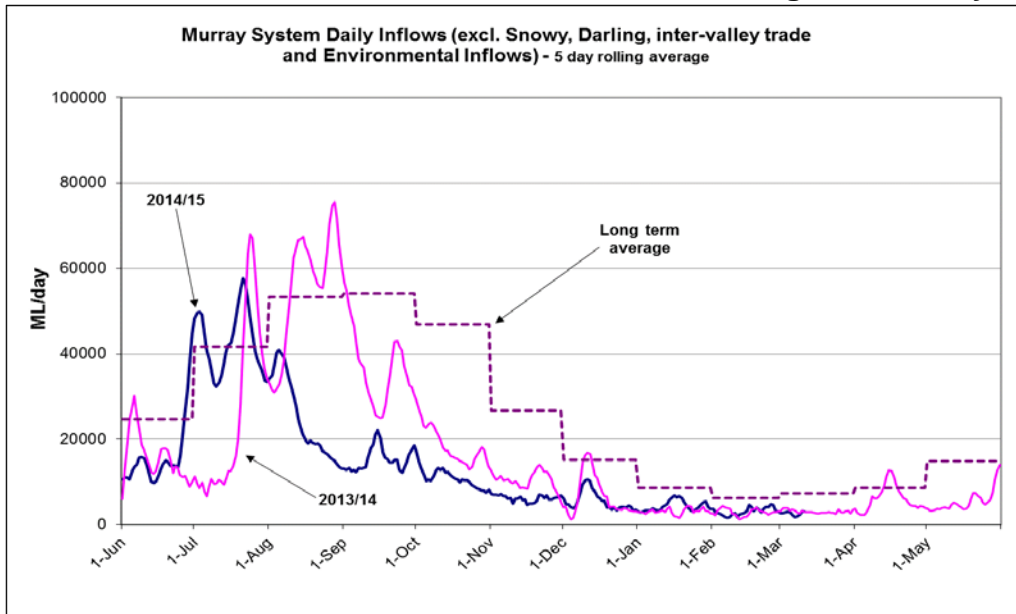
**Fishways at Barrages**

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.54	4	-	Open
Mundoo	26 openings	0.53	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	0.55	10	Open	Open

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



Week ending Wednesday 11 Mar 2015



**State Allocations (as at 11 Mar 2015)**

**NSW - Murray Valley**

High security	97%
General security	59%

**Victorian - Murray Valley**

High reliability	100%
Low reliability	0%

**NSW - Murrumbidgee Valley**

High security	95%
General security	51%

**Victorian - Goulburn Valley**

High reliability	100%
Low reliability	0%

**NSW - Lower Darling**

High security	100%
General security	100%

**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.nvrm.net.au/allocations/current.aspx>  
 SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>