

# Water Balance Report

## Lachlan Valley 2015 - 2016

Water balance component	Sources of water		Distribution of water		% of volume measured
	Volume (ML)	% of total	Volume (ML)	% of total	
<b>Storage Volume</b>					
Volume in storage at start of year			470,007		100%
Volume in storage at end of year			711,520		100%
<b>Change in storage</b>			<b>241,513</b>	<b>28%</b>	<b>100%</b>
<b>Storage net evaporation (1)</b>			<b>20,222</b>	<b>2%</b>	<b>100%</b>
<b>Inflows</b>					
Storage inflows	583,071	69%			100%
Downstream tributaries (2)	267,933	31%			100%
<b>Subtotal</b>	<b>851,004</b>	<b>100%</b>			<b>100%</b>
<b>Net Water diverted under riparian rights</b>					
Domestic and stock rights			4,211	0.5%	0%
Native title rights			0	0%	0%
<b>Subtotal</b>			<b>4,211</b>	<b>0.5%</b>	<b>0%</b>
<b>Net Water diverted under access licences</b>					
Domestic and stock			5,347	1%	100%
High security (4)			62,040	7%	100%
General security			106,059	12%	100%
Local water utility			7,615	1%	100%
Major utility (5)			0	0%	
Supplementary water			0	0%	
Conveyance			15,520	2%	100%
<b>Subtotal</b>			<b>196,581</b>	<b>22%</b>	<b>100%</b>
<b>Environmental water</b>					
Net diversions to wetlands (6)			72,967	8%	100%
End of system flows (7)			28,324	3%	100%
<b>Subtotal</b>			<b>101,291</b>	<b>11%</b>	<b>100%</b>
<b>Other outflows (8)</b>			<b>34,119</b>	<b>4%</b>	<b>100%</b>
<b>Unaccounted difference (9)</b>			<b>253,067</b>	<b>33%</b>	
<b>Total</b>	<b>851,004</b>	<b>100%</b>	<b>851,004</b>	<b>100%</b>	

### Notes:

(1) The evaporation figure includes net evaporation loss from Wyangala Dam, Lake Cargelligo and Lake Brewster.

(2) Downstream tributaries include Boorowa R and Belubula R contributed approximately 166G. Contributions from ungauged tributaries were assessed as Wyangala to Forbes were assessed as 102GL.

(3) Water rights are not metered. Values presented are as specified in Water Sharing Plan.

(4) Includes trading of allocations from General Security licences into state environmental licences.

(5) There are no Major Water Utility or Supplementary licences in Lachlan

(6) Planned environmental water delivery requirements were met 100% in 2015-16. About 72,967 ML/D was delivered as translucent release. Delivery of ECA was not allocated and WQA was not called for. License Env water delivered - 21,092 ML/D at Booligal, 12,431 ML/D at Willandra Ck, Fish reproduction flows (1st pulse) 3,221 M/d and (2nd pulse) 11,279 ML/D.

(7) Net flows in Willandra Ck at the homestead and at Booligal Weir over and above water extracted downstream are accounted as end of system flows.

(8) Other outflows - Stock and domestic flows monitored into Booberoi Ck (10,789ML), Merrowie Ck (8,016ML), Willandra Ck (7,303ML), Merrimajeel Ck (5,891ML) and Muggabah Ck (2,120ML).

(9) Unaccounted difference is estimated as the difference between inflows, outflows and change in channel storage. This includes river evaporation, evapotranspiration, seepage, ungauged overbank flows, water in transit and channel breakouts and any measurement errors recording other components. This also includes the delivery losses in the regulated section of Willandra Ck. All the above figures are based on operational data used by WaterNSW and are not quality coded. Archived data may differ from the operational data due to changes in the rating tables. There are some missing data due to instrument faults and have been The above water balance for Lachlan Valley includes Wyangala, Lake Cargelligo and Lake Brewster storages within the area covered by the Water Sharing Plan for the Lachlan Regulated River water source.

Environmental water delivery requirements were met 100% of the time throughout 2015/16.