

Water Balance Report

Lachlan River 2011 – 2012

Water balance component	Sources of water		Distribution of water		% of volume measured
	Volume (ML)	% of total	Volume (ML)	% of total	
Storage Volume					
Volume in storage at start of year			1,230,434		100%
Volume in storage at end of year			1,315,555		100%
Change in storage			85,121	7%	100%
Storage net evaporation (1)			70,250	5%	100%
Inflows					
Storage inflows	910,932	70%			100%
Downstream tributaries (2)	383,800	30%			100%
Subtotal	1,294,732	100%			100%
Net water diverted under riparian rights (3)					
Domestic and stock rights			4,211	0.3%	0%
Native title rights			0	0%	0%
Subtotal			4,211	0.3%	0%
Net Water diverted under access licences					
Domestic and stock			2,702.3	0.2%	100%
High security			53,999.3	4%	100%
General security			138,445.9	11%	100%
Local water utility			5,071.2	0.4%	100%
Major water utility (4)			0	0%	
Supplementary water			0	0%	
Conveyance			12,550	1%	100%
Subtotal (5)			212,769	16%	100%
Environmental water					
Net diversions to wetlands (6)			11,350	1%	100%
End of system flows (7)			376,897	29%	100%
Subtotal			388,247	30%	100%
Other outflows (8)			180,916	14%	100%
Unaccounted difference (9)			353,218	27%	
Total	1,294,732	100%	1,294,732	100%	

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. Ungauged tributaries were estimated from the increase in mass balance between Wyangala Dam and Nanami. Nanami to Forbes section is not accounted as there has been large breakout of flood flows.
3. Water rights are not metered. Values presented are as specified in Water Sharing Plan.
4. There are no Major Water Utility or Supplementary licences in Lachlan
5. About 27,551ML have been assessed as usage by licences held by State and Commonwealth and are included in the total extraction. These flows have been delivered to wetlands in Merrowie, Merrimajeel and Muggabah Creeks.
6. Translucent flows measured at Brewster Weir are accounted
7. Flows at Booligal over and above water extracted and flows in Willandra Ck at the homestead are included.

8. Other outflows - Stock and domestic and flood flows into Booberoi Creek (net 37,353ML), Merrowie Ck (72,261ML) and Merrimajeel (46,931ML), Muggabah (24,371ML) Creeks.
9. Unaccounted difference is estimated as the difference between inflows, outflows and change in channel storage. This includes river evaporation, evapotranspiration, seepage, overbank flows and any measurement errors recording other components. This also includes the delivery losses in the regulated section of Willandra Ck. In 2011-12 major proportion of this volume is due to overbank and channel breakout flows during high flows.

All the above figures are based on operational data used by State Water 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 filled by estimates.

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.