

Water Balance Report

Lachlan River 2012 – 2013

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	1,315,555				100%
Volume in storage at end of year	871,650				100%
Change in storage	443,905	44%			100%
Storage net evaporation (1)			133,968	13%	100%
Inflows					
Storage inflows	412,272	41%			100%
Downstream tributaries (2)	148,617	15%			100%
Subtotal	560,889	56%			100%
Net water diverted under riparian rights (3)					
Domestic and stock rights			4,211	0%	0%
Native title rights			-	0%	0%
Subtotal			4,211	0%	0%
Net Water diverted under access licences					
Domestic and stock			4,285	0%	100%
High security (4)			132,818	13%	100%
General security			223,669	22%	100%
Local water utility			7,515	1%	100%
Major water utility (5)			0	0%	
Supplementary water			0	0%	
Conveyance			17,911	2%	100%
Subtotal (6)			386,198	38%	100%
Environmental water					
Net diversions to wetlands (7)			0	0%	100%
End of system flows (8)			285,387	28%	100%
Subtotal			285,387	28%	100%
Other outflows (9)			99,654	10%	100%
Unaccounted difference (10)			95,376	9%	
Total	1,004,794	100%	1,004,794	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 and estimated contribution from Lake Cowal into Wallamundry system in July to September 2012.
3. Water rights are not metered. Values presented are as specified in Water Sharing Plan.
4. Very high usage by high security licences through trading in from general security licences. This includes trading of allocations from Commonwealth environmental licences into state environmental licences.
5. There are no Major Water Utility or Supplementary licences in Lachlan
6. About 65,837 ML have been assessed as used by licences held by State and Commonwealth and are included in the total extraction.

7. A total of 196,768 ML have been measured as translucent flows at Brewster Weir from 1 July 2012 to 17 October 2012. However, this volume is not accounted separately as most of the translucent environmental flows have been accounted as end of system flows and some as other outflows and unaccounted differences.
8. Net flows at Booligal Weir over and above water extracted downstream and flows in Willandra Ck at the homestead are accounted as end of system flows.
9. Other outflows - Stock and domestic and flood flows monitored into Booberoi Creek (net 18,065ML), Merrowie Ck (34,422ML) and Merrimajeel (31,075ML), Muggabah (15,227ML) Creeks and 872ML into Willandra Creek.
10. Unaccounted difference is estimated as the difference between inflows, outflows and change in channel storage. This includes river evaporation, evapotranspiration, seepage, ungauged overbank flows and channel breakouts and any measurement errors recording other components. This also includes the delivery losses in the regulated section of Willandra Ck. In 2012-13 major proportion of this volume is due to overbank and channel breakout flows during airspace operation and translucent environmental flows.

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.