Water Balance Report

Lachlan River 2010 – 2011

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			107,959		100%
Volume in storage at end of year			1,232,811		100%
Change in storage			**1,124,852**	**55%**	100%
Storage net evaporation (1)			**92,687**	**5%**	100%
Inflows					
Storage inflows	1,114,288	55%			100%
Downstream tributaries (2)	913,591	45%			100%
Subtotal	**2,027,879**	**100%**			100%
Net water diverted under riparian rights (3)					
Domestic and stock rights			4,211	0.2%	0%
Native title rights			0	0	0%
Subtotal			**4,211**	**0.2%**	0%
Net Water diverted under access licences					
Domestic and stock			3558.4	0.2%	100%
High security			29785.5	1%	100%
General security			39062.3	2%	100%
Local water utility			4358.9	0.2%	100%
Major water utility (4)			0	0%	
Supplementary water			0	0%	
Conveyance			4,347	0%	100%
Subtotal (5)			**81,112**	**4%**	100%
Environmental water					
Net planned diversions to wetlands (6)			109,277	5%	100%
End of system flows (7)			212,936	11%	100%
Subtotal			**322,213**	**16%**	100%
Other outflows (8)			**45,032**	**2%**	100%
Unaccounted difference (9)			**357,771**	**8%**	
Total	**2,027,879**	**100%**	**2,027,879**	**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 Forbes.
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 1,733ML of HS and 8,600ML of GS usage by licences held by State and Commonwealth are included in the total extraction. These flows have been delivered to wetlands in Merrowie and Merrimajeel Creeks.
6. Tributary flows delivered as translucent flows and volumes debited from ECA and WQA accounts for lost opportunity in filling Lake Brewster and volume debited extra evaporation from Lake Brewster for managing under BGA protocol are accounted

7. Flows at Booligal over and above water extracted and flows in Willandra Ck at the homestead excluding S&D replenishment flows are included
8. Other outflows - Replenishment flow into Booberoi Creek (net 13,182ML), Merrowie Ck (11,012ML) and Merrimajeel/Muggabah Creeks (9338ML) and Willandra Creek below Homestead (11,500ML).
9. Unaccounted difference is estimated as the difference between inflows, outflows and change in 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 2010-11 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