Water Balance Report

Macquarie 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	143,0142				100%
Volume in storage at end of year	738,510				100%
Change in storage	**691,632**	**55%**			**100%**
Storage net evaporation			**77,509**	**6%**	**100%**
Inflows					
Storage inflows	454,486	36%			100%
Downstream tributaries (1)	103,779	8%			100%
Subtotal	**558,265**	**45%**			**100%**
Net water diverted under riparian rights (2)					
Domestic and stock rights			1,200	0%	0%
Native title rights			0	0%	0%
Subtotal			**1,200**	**0%**	**0%**
Net Water diverted under access licences					
Domestic and stock			1,776	0%	100%
High security			8,634	1%	100%
General security			532,037	43%	100%
Local water utility			14,117	1%	100%
Major water utility (3)			0		
Supplementary water			2,293	0%	100%
Conveyance			0		
Subtotal (4)			**558,856**	**45%**	**100%**
Environmental water					
Net diversions to wetlands (5)			451,698	36%	100%
End of system flows (6)			151,639	12%	100%
Subtotal			**603,337**	**48%**	**100%**
Other outflows (7)			**8,860**	**1%**	**100%**
Unaccounted difference(8)			135	0%	
Total	**1,249,897**	**100%**	**1,249,897**	**100%**	

Notes:

1. Downstream tributaries include the Bell R, Little R and Talbragar R. Ungauged tributaries were estimated from the increase in mass balance between Burrendong Dam and Baroona.
2. Water rights are not metered. Values presented are estimated from recommended values as specified in the Water Sharing Plan
3. There are no Major Water Utility or Conveyance licences in this water source
4. About 137,718ML of usage by environmental licences held by State and Commonwealth are included in the total extraction. This water has been delivered to Macquarie Marshes.
5. The net diversion to wetlands include delivery of environmental water allowance of 128,119ML and the flows into wetlands due to unregulated tributary flows, operational surplus, airspace operation flows and rain rejections.
6. End of system flows measured at Miltara

7. Other outflows - The domestic and stock replenishment flows were delivered in Marra Creek 6968ML , Belringar Ck below APC channel 916MLand Bogan River D/S Nyngan to Gunningbar Creek Confluence 976ML. Crooked Creek was replenished through surplus flows(ungauged cross-country flows). Lower Bogan was replenished through surplus flows. Belaringar Ck U/S was replenished through surplus flows (Ungauged). Gum Cowal was replenished through Macquarie Marsh Release and surplus flows. Lower Macquarie was replenished through marsh release and surplus flows.
8. 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.

The above water balance for Macquarie Valley includes Burrendong and Windamere storages within the area covered by the Water Sharing Plan for the Macquarie-Cudgegong Regulated Rivers water source.