

Water Balance Report

Macquarie Valley 2016/17

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			452,320		100%
Volume in storage at end of year			1,223,848		100%
Change in storage			771,528	24.3%	100%
Storage net evaporation			30,131	1.0%	100%
Inflows					
Storage inflows	2,004,042	63%			100%
Downstream tributaries (1)	1,166,995	37%			100%
Subtotal	3,171,037	100%			100%
Net water diverted under water rights (2)					
Domestic and stock rights			1,200	0.0%	0%
Native title rights			0	0.0%	0%
Subtotal			1,200	0.0%	0%
Net water diverted under access licences					
Domestic and stock			1,772	0.1%	100%
High security			7,410	0.2%	100%
General security			176,895	5.6%	100%
Local water utility			11,512	0.4%	100%
Major water utility (3)			0		
Supplementary water			35,042	1.1%	100%
Conveyance			0		
Subtotal (4)			232,631	7.3%	100%
Environmental water					
Net diversion to wetlands (5)			890,379	28.1%	100%
End of system flows (6)			214,065	6.8%	100%
Subtotal			1,104,444	34.8%	100%
Other Outflows (7)			5,029	0.2%	100%
Unaccounted difference (8)			1,026,074	32.4%	
TOTAL	3,171,037	100%	3,171,037	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 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 54,102 ML 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) Planned environmental water delivery requirements were met 100% in 2016-17. The net diversion to wetlands include delivery of environmental water allowance of 26,375 ML and the flows into wetlands due to unregulated tributary flows, operational surplus, rain rejections, Floods and dam spill.

(6) End of system flows measured at Miltara

(7) Other outflows - Generally this represents S&D replenishments into Marra Ck, Crooked Ck below Mumblebone Dam, Gum Cowal, Belaringar Ck, Ewenmar Ck, Lower Macquarie and Bogan Rivers. In 2016-17 about 4003ML into Crooked Ck and 1026 ML into Belaringar Ck below APC were delivered according to Work Approval rules. All other systems were replenished by unreg trib flows and dam spill during floods and airspace operations in late 2016.

(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.

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.

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.