

# Water Balance Report



## Macquarie Valley 2017/18

Water Balance Component	Sources of water		Distribution of water		% of volume measured
	Volume (ML)	% of total	Volume (ML)	% of total	
<b>Storage Volume</b>					
Volume in storage at start of year	1,223,848				100%
Volume in storage at end of year	596,998				100%
<b>Change in storage</b>	<b>626,850</b>	<b>94%</b>		<b>0%</b>	100%
<b>Storage net evaporation</b>			<b>52,550</b>	<b>8%</b>	100%
<b>Inflows</b>					
Storage inflows	31,297	5%			100%
Downstream tributaries (1)	10,388	2%			100%
<b>Subtotal</b>	<b>41,685</b>	<b>6%</b>			100%
<b>Net water diverted under water rights (2)</b>					
Domestic and stock rights			1,200	0%	0%
Native title rights			0	0%	0%
<b>Subtotal</b>			<b>1,200</b>	<b>0.2%</b>	0%
<b>Net water diverted under access licences</b>					
Domestic and stock			2,028	0.3%	100%
High security			10,479	2%	100%
General security			370,915	55%	100%
Local water utility			16,653	2%	100%
Major water utility (3)			0		
Supplementary water			0	0%	100%
Conveyance			0		
<b>Subtotal (4)</b>			<b>400,075</b>	<b>60%</b>	100%
<b>Environmental water</b>					
Net diversion to wetlands (5)			87,365	13%	100%
End of system flows (6)			23,241	3%	100%
<b>Subtotal</b>			<b>110,606</b>	<b>17%</b>	100%
<b>Other Outflows (7)</b>			<b>9,554</b>	<b>1%</b>	100%
<b>Unaccounted difference (8)</b>			<b>94,550</b>	<b>14%</b>	
<b>TOTAL</b>	<b>668,535</b>	<b>100%</b>	<b>668,535</b>	<b>100%</b>	

### 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 (This year no inflows were estimated from ungauged Tributaries) .

(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 70,145 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 2017-18. The net diversion to wetlands include delivery of environmental water allowance of 64,231 ML and the flows into wetlands due to unregulated tributary flows, operational surplus, rain rejections.

(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 2017-18 about 7617 ML into Marra Ck and 1937 ML into Lower Bogan below Gunningbar Confluence (up to 30th June 2018 and continued into next water year) were delivered according to Work Approval rules.

(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.