

Water Balance Report - Macquarie Valley 2019 - 2020

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			214,268		100%
Volume in storage at end of year			403,614		100%
Change in storage			189,346	37%	100%
Storage net evaporation			12,277	2%	100%
Inflows					
Storage inflows	268,856	52%			100%
Downstream tributaries (1)	249,864	48%			100%
Subtotal	518,720	100%			100%
Net water diverted under water rights (2)					
Domestic and stock rights			1,200	0%	0%
Native title rights			0	0%	0%
Subtotal			1,200	0.2%	0%
Net water diverted under access licences					
Domestic and stock			1,414	0.3%	100%
High security			6,035	1%	100%
General security			3,819	1%	100%
Local water utility			9,749	2%	100%
Major water utility (3)			0	0%	
Supplementary water			34,730	7%	100%
Conveyance			0	0%	
Subtotal (4)			55,747	11%	100%
Environmental water					
Net diversion to wetlands (5)			136,157	26%	100%
End of system flows (6)			16,300	3%	100%
Subtotal			152,457	29%	100%
Other Outflows (7)			40,815	8%	100%
Unaccounted difference (8)			66,878	13%	
Total	518,720	100%	518,720	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 (around 94,591ML of inflows were estimated from oolaboggie ck and 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) In year 2019-20, due to drought conditions, all general security carryover allocations were kept in drought account and were not available to access. The allocations assigned from high security licences into general security accounts and used are accounted as general security use.

(5) Due to drought conditions in Macquarie Planned environmental water was not accessible for use and was suspended. Therefore no PEW was delivered. However due to recent rainfall and unregulated tributary flows surplus water was diverted to Macquarie Marshes. Extractions under floodplain harvesting is not monitored and not discounted.

(6) End of system flows measured at Milara

(7) Other outflows - Generally this represents S&D replenishments into Murrumbidgee Ck, Crooked Ck below Murrumbidgee Dam, Gum Cowl, Beleringar Ck, Ewenm or Ck, Lower Macquarie and Bogan Rivers. In 2019-20 about Gum Cowl - 6,248ML, Crooked Ck - 2,340ML, Bogan R Nyngan To Gbar Conf - 850ML, Beleringar Ck d/s APC - 405ML, Ewenm or Ck - 2000ML, Beleringar Ck 5000ML, Murrumbidgee Ck - 16,737ML, Lower Bogan River - 4,235ML, Murrumbidgee Marshes - 8,077ML (not accounted here) 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 regarding 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.