



**PAPER MAKING FOR
A BETTER WORLD.**

Combined - Current and Stage 2 - Water Balance for Visy Pulp and Paper, Tumut, NSW

Fresh Water is required in the production of Pulp and Paper for the following reasons:

- a) Replacement of the water loss in evaporation when drying the paper, together with the water that remains with the paper
- b) A replacement of the water loss in removing excess heat from the Pulp and Paper production cycle. This is being done by evaporation of water in Cooling Towers and in other similar equipment
- c) As a medium for the removal of unrequired elements such as Halides and other unrequired anions, together with heavy metals. This is necessary to get a dilute solution/effluent having the salt concentration below 500ppm which at the end it is used for irrigation purposes
- d) There are other areas of loss which are relatively minor, such as water loss in the lime kiln together with the grits and dregs

Table 1. Water Users

Water Users	m³/ADT of paper	m³/ADT of pulp
COOLING TOWERS	1.28	1.66
TURBINE / WSAC	0.23	0.30
PAPER MACHINE		
Evaporation	1.05	1.36
Retained with the Paper	0.08	0.10
Vacuum Pump Exhaust	0.43	0.56
EFFLUENT	0.30	0.39
OTHER MINOR USERS	0.68	0.88
TOTAL	4.05	5.24

Based on 680,000 Adt of paper production



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There are two main sources of the required water:

1. The water in the green wood
2. Fresh water (River and Bore) to make up any balance needed by the process

together with some minor ones

- i) the waste paper and any purchased pulp, which together make up around 25% of the fibre component in the paper, which has only 8% water content and
- ii) rain water

Table 2. Water Supply

Water Supply	m³/ADT of paper	m³/ADT of pulp
Water in the Green Wood	1.50	1.94
Water with Waste Paper	0.02	0.03
Rain Water	0.03	0.04
Raw & Bore Water Balance	2.50	3.24
TOTAL	4.05	5.24

Based on 680,000 Adt of paper production