

Annual Waterways Report

Cam Catchment

Water Assessment Branch

2009

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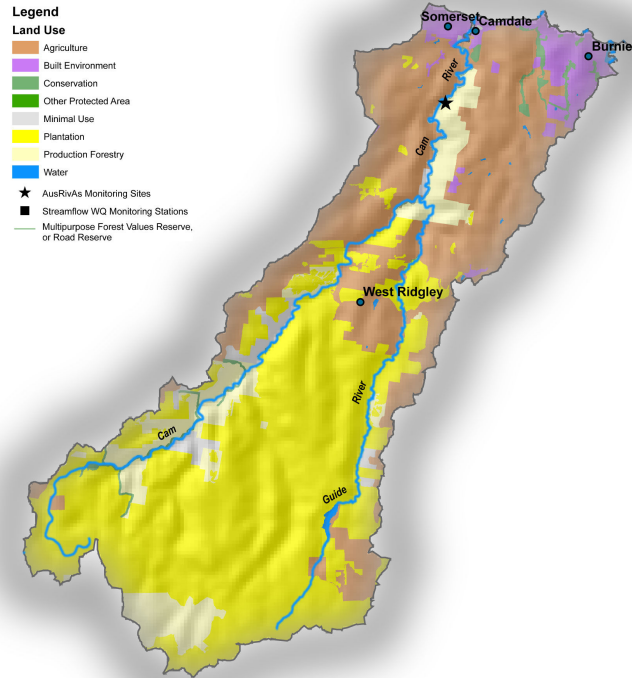
Cam Catchment

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1. About the catchment

The Cam River is a small catchment of approximately 288 km² drained by both the Cam and the Guide rivers. The Cam River is about 45 km long, originating in the Snowdon Plains near Oonah at an altitude of about 500m above sea level and flows in a north-easterly direction, entering Bass Strait at Somerset. The Guide River is about 22 km long and joins the Cam River about 8 km before the coast. Like many of the rivers in this area, the Cam River generally lies within a steep, forested valley that restricts agricultural activities to the hilltops on either side of the river. Forest plantations cover almost all of the middle and upper catchment.

The annual average rainfall, as recorded at Tewkesbury in the middle of the catchment, is 1,550 mm. The only major impoundment in the catchment is the Guide Reservoir, which was constructed to supply water to Burnie and nearby towns along the coast.

2. Streamflow & Water Allocation

Streamflow

There is one streamflow monitoring station maintained in the Cam River catchment as part of the DPIW state-wide monitoring network. This station is:

- Cam River upstream Somerset water supply (14212).

This station was re-opened in January 2008 after closure between 1997 and 2007.

Streamflow in the Cam River during 2008 was lowest over summer and autumn, peaking in early spring. The minimum flow recorded during the year was 24 ML/day (Apr), and the maximum 1,361 ML/day (Sep).

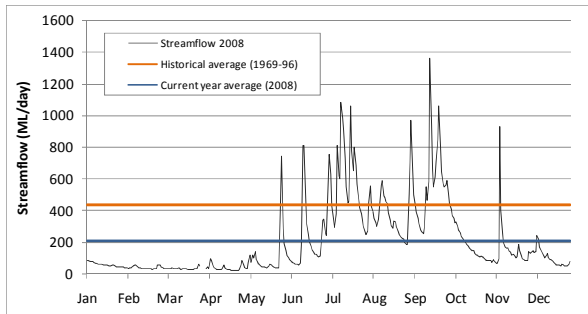


Fig: Time series of 2008 streamflow in the Cam River upstream Somerset water supply (station 14212), plus a comparison of current year average flow with the historical.

Monthly discharge amounts were all below the historical average. Greatest discharge at Cam River was experienced in September.

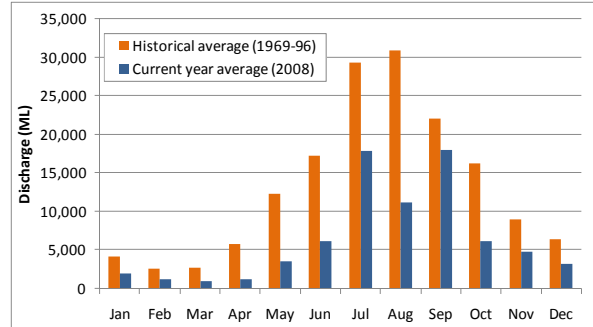


Fig: Comparison of total monthly discharge with historical average for the Cam River upstream Somerset water supply (station 14212).

Water Allocation

The Cam River catchment had a total of 8,814 ML in licensed allocations for 2008. The following table shows the breakdown of the allocations.

	Total Allocation (ML)
Irrigation	2,190
Stock & Domestic	128
Water supply	6,444
Other	52

Of the total licensed water allocation within this catchment, 5,075 ML is held within constructed storages and 3,739 ML is taken directly from rivers and streams.

Water Use Restrictions

There are no water restriction triggers in existence for the Cam River catchment.

3. River Health

The Australian River Assessment System (AUSRIVAS) is a standardised national system for assessment of river condition that uses benthic macroinvertebrates.

The AUSRIVAS models predict the aquatic macroinvertebrate fauna that would be expected to occur at a site in the absence of environmental stress such as pollution, habitat degradation or flow regulation. A comparison of the macroinvertebrates expected to occur at the test site with those actually collected (O/E ratio) provides a site specific measure of the biological impairment of the test site. Further details about AUSRIVAS can be found at:

www.ausrivas.canberra.edu.au/ausrivas.

AUSRIVAS assessments are carried out at one a single location in the Cam River catchment.



Fig: Cam River off Back Cam Road.

Cam River off Back Cam Road

This site is in the lower reaches of the Cam River catchment, approximately 5 kilometres upstream of the river mouth. The river at this point is approximately 25 metres wide and is characterised by shallow riffles and runs flowing over cobble/pebble substrate. Although riparian vegetation on the right-hand bank (facing downstream) is extensive (>40m) and in good condition, sections of the left-hand bank have been cleared for pasture/grazing, leaving a sparse 5-10 metre native riparian buffer with some intrusion by blackberries. Small sections of the river near the left-hand bank have also been colonised by cumbungi (*Typha* sp).

Combined season AUSRIVAS assessments of the riffle habitat indicate that the condition of this site has deteriorated from equivalent to reference (Band A) condition to severely impaired (Band C) condition in the past year. There has been a notable reduction in the diversity and abundance of ephemeroptera (mayflies), Plecoptera (stoneflies), Diptera (true flies) and trichoptera (caddisflies) at this site in the past year. Sites in neighbouring catchments (eg Blythe and Emu) do not display a similar reduction in condition over this time period.

Name	Season	Riffle		Edgewater	
		O/E Taxa	Band	O/E Taxa	Band
Cam River off Back Cam Rd	Spr94/ Au95	1	A	1.22	X
	Spr95/ Au96	0.92	A	1.06	A
	Spr03/ Au04	0.98	A	1.2	X
	Spr04/ Au05	1.01	A	1.21	X
	Spr05/ Au06	1.03	A	1.2	X
	Spr06/ Au07	1.04	A	1.23	X
	Spr07/ Au08	0.8	B		NS
	Au08/ Spr08	0.58	C		NS

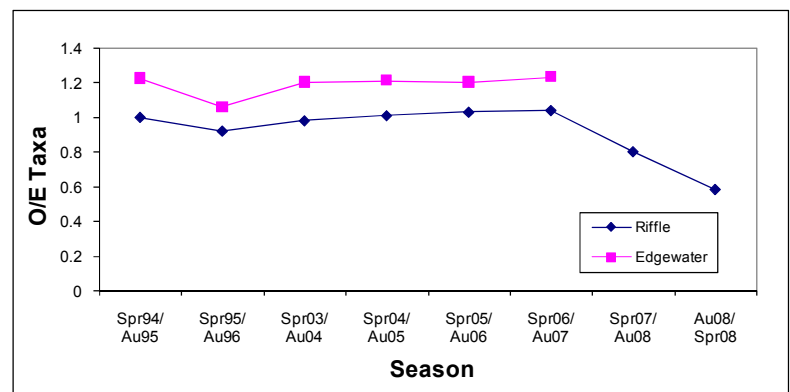


Fig: Combined season AUSRIVAS O/E Taxa scores for the Cam River off Back Cam Road.