

Annual Waterways Report

Forth - Wilmot Catchment

Water Assessment Branch

2009

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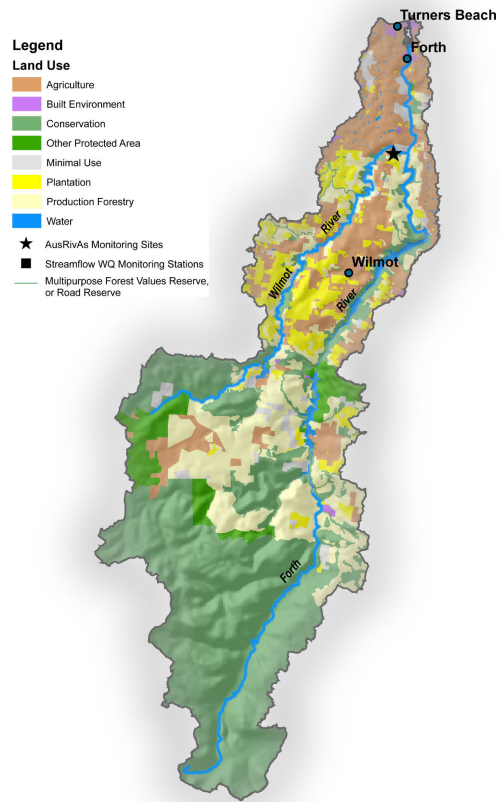
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Forth-Wilmot Catchment

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1. About the catchment

The Forth and the Wilmot rivers are the two main systems draining this catchment of 1,180 km², and both are modified by hydro-electric power developments. In the upper Wilmot River, the Wilmot Dam impounds runoff from the Iris River and the top 16 km of the Wilmot River and diverts this water into the Forth River system at Lake Cethana. Lake Cethana is the largest impoundment on the Forth River and as well as capturing flow from the upper Forth and Wilmot rivers it also receives diverted water from the Mersey catchment via the Parangana Tunnel. Below Lake Cethana, a further 2 run-of-river impoundments (Lake Barrington and Lake Palooana) capture water for hydro-electric power generation before the Forth River flows into Bass Strait.

Most of the catchment above Lake Cethana lies within the Tasmanian Wilderness World Heritage Area and is used only for tourism and bushwalking. In the middle of the catchment, land use is predominantly forestry, while agriculture is concentrated on the western side of the Forth River, in the area around Lower Wilmot, Kindred and Forth.

2. Streamflow & Water Allocation

Streamflow

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

- Claytons Rivulet upstream Old Bass Highway (14237).

This is a new station opened in December 2007. High stream levels have not as yet been converted to streamflow, and are expressed below as gaps in data (Jun-Sep).

Claytons Rivulet experienced lowest flows in early autumn and highest flows in winter to spring. The minimum streamflow recorded during the year was 1 ML/day (Nov), and the maximum 37 ML/day (Aug).

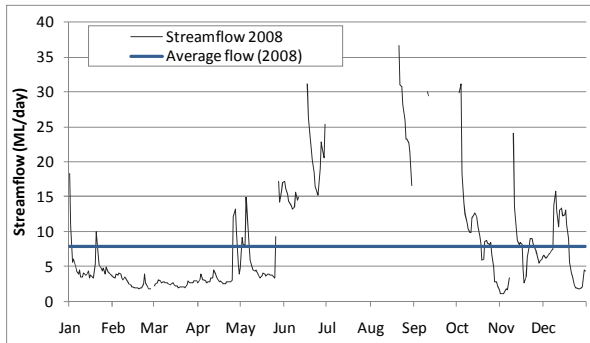


Fig: Time series and average of streamflow in Claytons Rivulet upstream Old Bass Hwy (station 14237) during 2008.

Recorded monthly discharges were highest in June (461 ML) and lowest in February (76 ML).

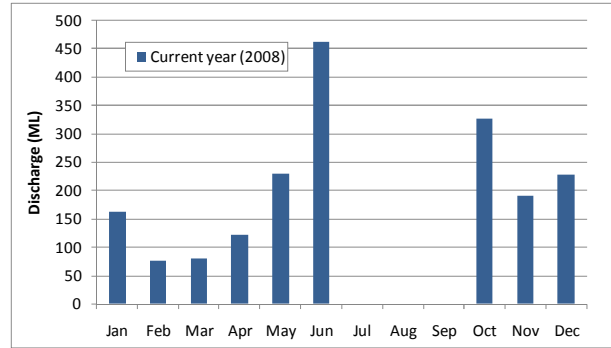


Fig: Total monthly discharge for the Claytons Rivulet upstream Old Bass Hwy (station 14237).

Water Allocation

The Forth-Wilmot catchment had a total of 12,547 ML in licensed allocations for 2008. The following table shows the breakdown of the allocations.

	Total Allocation (ML)
Irrigation	4,341
Stock & Domestic	145
Water supply	6,420
Power generation*	1,599
Other	42

*non-consumptive

Of the total licensed water allocation within the catchment, 2,079 ML is held within constructed storages and 10,468 ML is taken directly from rivers and streams.

Water Use Restrictions

Water restriction triggers for irrigation have been developed for the catchment at Claytons Rivulet, southwest of the Forth township. These triggers are given in the table below, together with how long the restriction was applied in 2008.

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River	ML/d	Stage	%	Restriction	In effect 2008
Claytons Rivulet at Thompsons Rd Bridge	1.3	1	100	Ban on surety 6 direct takes	55 days (Jan-Mar)
	0.8	2	100	Ban on surety 5 direct takes	55 days (Jan-Mar)

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.



Fig: Wilmot River at Alma Reserve.

Wilmot River at Alma Reserve

This site is located at the Alma Reserve picnic area which is approximately 1.5 kilometres upstream from the confluence of the Wilmot and Forth rivers. Land use in the catchment is a mixture of forestry and agricultural activities. In the upper catchment, hydro-electric power development has resulted in a water transfer from the Wilmot to the Forth River as part of the Mersey-Forth power scheme.

Riparian vegetation at the site is mainly native, although there is significant intrusion by willows and blackberries. Visual assessments indicate the instream habitat is impacted by sedimentation, filamentous algae and there has been some encroachment by exotic aquatic plants.

Combined season AUSRIVAS assessments of the riffle habitat show that the condition of this site has decreased from equivalent to reference (Band A) or above (Band X) to significantly impaired (Band B) during 2008.

To date, Combined season AUSRIVAS assessments of the edgewater have classed this site as equivalent to reference (Band A) or below (Band B).

Name	Season	O/E Taxa Riffle	Band	O/E Taxa Edgewater	Band
Wilmot River at Alma Reserve	Spr94/ Au95	1.09	A	0.92	A
	Spr95/ Au96	0.91	A		NS
	Spr03/ Au04	1.14	X	0.99	A
	Spr04/ Au05	0.99	A	0.91	A
	Spr05/ Au06	0.99	A	0.76	B
	Spr06/ Au07	0.94	A	0.9	A
	Spr07/ Au08	0.91	A		NS
	Au08/ Spr08	0.87	B		NS

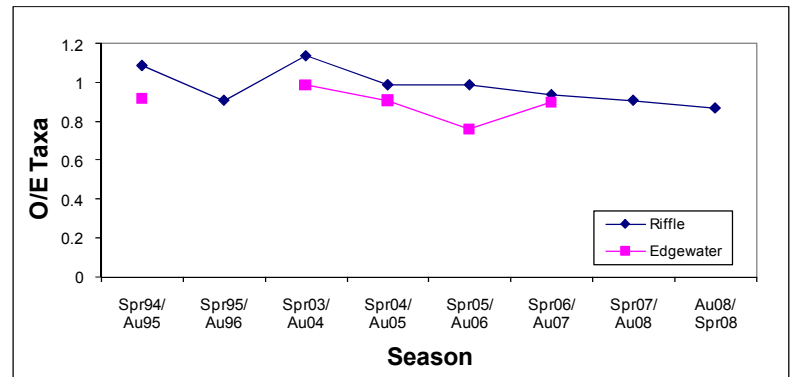


Fig: Combined season AUSRIVAS O/E Taxa scores for the Wilmot River at Alma Reserve.