5. BIOPHYSIOGRAPHY

5.1 Physiography, Geology and Soils

The landscape of the catchment is dominated by the Baw Baw massif and adjoining McDonald Range; these plateaux are flanked by steep sideslopes and narrow ridgelines which give way firstly to moderately steep foothills, then to rounded foothills, and finally to a small riverine plain at the lower end of the catchment.

The dominant landforms, geology and soil types which occur in the catchment are shown in Table 5.1 and Figure 5.1, along with associated erosion hazard ratings for both undisturbed and disturbed sites.

5.2 Climate

The higher elevations in the catchment are subject to a sub-alpine climate (snow cover in winter and moderate summer temperatures). Most precipitation occurs during July, August, September and October, with summer thunderstorms common. Lower elevations are subject to a cool temperate climate (winter temperatures rarely below freezing point, moderate to high summer temperatures and the majority of rainfall falling over winter). High intensity summer storms are common in this part of the catchment.

Recorded mean annual rainfall ranges from 1 737 mm at Tanjil Bren to near 1 000 mm in the south (the mean annual rainfall at Moe is 969 mm); rainfall is directly related to altitude.

Limited data on temperatures are available, with Tanjil Bren being the only recording station in the catchment. Daily minimum and maximum temperatures reach a low of 1.3°C (July) and 9°C (June) respectively, and a high or 10.8°C (February) and 23.9°C (February) respectively. No other data for areas within the catchment area are available. However, it could be expected that both minimum and maximum daily temperatures would be some 5-10°C higher in the more southerly areas.

5.3 Vegetation

The majority of the freehold land has been cleared and sown to pastures. Several relatively large areas and many major and some minor drainage lines retain a cover of native eucalypt forest. Minor areas are used for horticulture (potato and carrot production) and softwood production.

Public land supports predominantly native vegetation, with some conversion for softwood production in the central and southern areas.

Snow gum – alpine heath communities dominate the plateau areas, giving way variously to alpine ash, hickory wattle or mountain ash stands at and below the snow line. Mountain ash, messmate and mountain grey gum stands occupy the moisture slopes and drainage lines, giving way to brown, red moister slopes and drainage lines, giving way to brown, red and white stringybark, messmate, peppermint and silvertop occasional stands of yertchuk and apple box on the poorer soils.

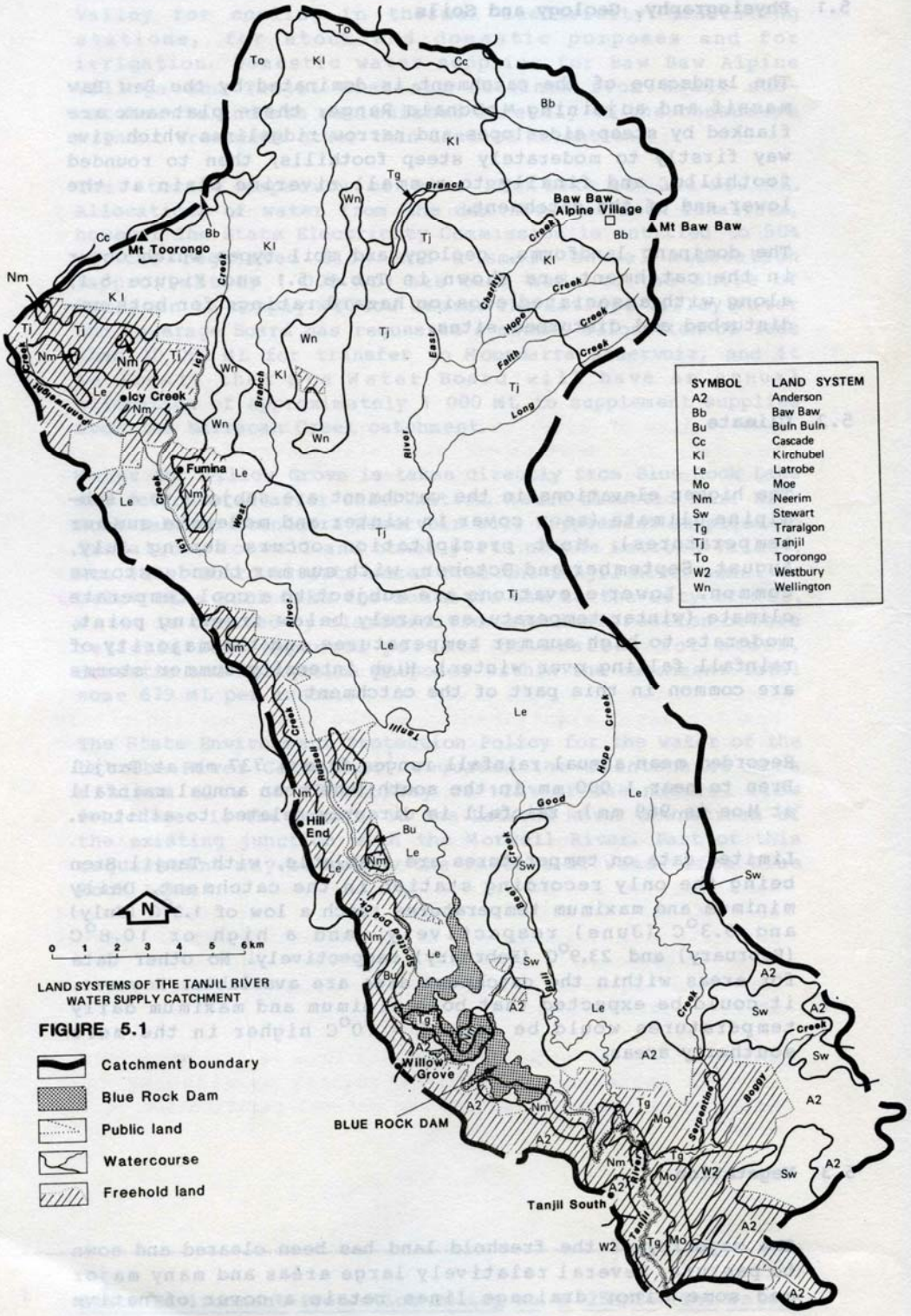
Mt Baw Baw
Baw Baw Alpine Village
Mt Toorongo
Icy Creek
Fumina
Hill End
Willow Grove
BLUE ROCK DAM
Tanjil South
SYMBOL LAND SYSTEM
A2 Anderson
Bb Baw Baw
Bu Buln Buln
Cc Cascade
Kl Kirchubel
Le Latrobe
Mo Moe
Nm Neerim
Sw Stewart
Tg Traralgon
Tj Tanjil
To Toorongo
W2 Westbury
Wn Wellington
N
0 1 2 3 4 5 6km
LAND SYSTEMS OF THE TANJIL RIVER WATER SUPPLY CATCHMENT
FIGURE 5.1
Catchment boundary
Blue Rock Dam
Public land
Watercourse
Freehold land

Table 5.1 – Physiography of the Catchment

LANDFORM	GEOLOGY	LAND SYSTEM(S)	DOMINANT SOIL TYPES	EROSION HAZARD Undisturbed	Disturbed Site
Plateau	Devonian granitics	Baw Baw Cascade Toorongo	Brown and red earths, moderately deep and friable, alpine humic and peat soils	Low	Moderate to high (cold inhibits revegetation)
Sideslopes of plateau areas, steep	Devonian granitics and associated metamorphics	Kirchubel	Gradational red and brown earths	Low	Low to moderate (depending upon slope)
Foothills, moderately steep	Devonian metamorphics	Wellington Tanjil	Gradational red, brown and yellow earths	Low	Low to moderate (depending upon slope)
	Devonian sediments	Latrobe Buln Buln	Gradational grey and yellow earths	Moderate	High
Foothills rounded	Devonian and Tertiary sediments	Stewart	Gradational and duplex yellow soils; yellow podzolics; yellow earths	Moderate	Extreme
	Tertiary volcanics	Neerim	Friable red earths	Low	Low
	Tertiary gravels, sands and clays	Anderson 2 Westbury 2	Duplex and gradational yellow soils	Low	Low to high (depending upon slope)
Riverine plain	Quaternary and recent alluvium	Moe Trafalgar	Gradational grey; grey brown soils; friable loams; uniform sandy soils	Low	Low (except for stream edges)

(after WELLS, M. 1982 Tanjil River Catchment – a description of the land and its capability for development, Volume 1: Methods and Results. Soils conservation Authority, Kew.)