



FUTURE WATER DEMAND  
REPORT  
*for the*  
SOUTH ESK RIVER  
(above Macquarie River junction)

Water Policy and Planning Branch  
Water Resources Division  
Department of Primary Industries and Water  
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**The Department of Primary Industries and Water**

The Department of Primary Industries and Water provides leadership in the sustainable management and development of Tasmania's resources. The Mission of the Department is to advance Tasmania's prosperity through the sustainable development of our natural resources and the conservation of our natural and cultural heritage for the future.

The Water Resources Division provides a focus for water management and water development in Tasmania through a diverse range of functions including the design of policy and regulatory frameworks to ensure sustainable use of the surface water and groundwater resources; monitoring, assessment and reporting on the condition of the State's freshwater resources; facilitation of infrastructure development projects to ensure the efficient and sustainable supply of water; and implementation of the *Water Management Act 1999*, related legislation and the State Water Development Plan.

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## **1 Background**

This report provides details on current knowledge of future water demands within the South Esk River (above Macquarie River junction) catchment. The report provides details on the prospect for growth in rural industries within the region and also provides information on up to date land usage and groups this usage in to land capabilities classes.

It has been prepared by Water Policy and Planning Branch and will be used as background information for the development of a Water Management Plan for this catchment.

## **2 Prospect for Growth<sup>1</sup>**

The results of a report commissioned by the Department in 2006 identified several rural industries that had the greatest capacity to contribute to growth in gross value of production over the next 10 years.

The dairy industry is the one that stands out as having the most potential for the Northern Midlands Municipality. Poppies and potatoes also provide opportunities but are not as significant as the dairy industry.

The dairy industry within the Northern Midlands, estimated growth for the 2005-2015 period based on the Gross Value of Production (GVP) is \$19.1m covering 9,065ha and requiring 21,900ML of water. Current GVP for the Dairy industry is around \$1.0m, the estimated growth for this industry is very substantial.

The report has estimated that the water required to support this growth for the three main industries within the Northern Midlands requires 33,600ML of water and requiring just under 15,000ha of suitable land.

## **3 Land Use**

Land within this catchment comprises of several usages and have been grouped in to the following areas including, dryland agriculture, irrigated agriculture, plantation forestry, production forestry, reserves and parks, residential, water bodies and other usage (including roads, pipelines, power supply systems etc).

Data used in this report is derived from land use mapping during 2001 and 2003 under the Australian Collaborative Land Use Mapping Programme (ACLUMP) and coordinated by the Bureau of Rural Sciences. The Australian Land Use and Management (ALUM) Classification system was used in displaying the data.

Data used in this mapping was provided by the GIS Section of the Department and was supplied at 1:25 000 scale for most of agricultural land with the remaining land mapped at 1:100 000 scale.

Figure 1 provides a summary of land use as at 2001-2003 period for this catchment.

<sup>1</sup>Tasmania's Rural Industries Prospects for Growth to 2015-Identification of Water Development Requirements, January 2006, Draft Report-National Strategic Services Pty Ltd, Davey & Maynard Pty Ltd and Armstrong Agricultural Services Pty Ltd.

Production Forestry and Reserves and Parks collectively occupy 60% of the catchment, whereas dryland agriculture and irrigated agriculture covering only 34% and 4% respectively and are mostly represented on private land.

Plantation Forestry only covers 0.45% of the catchment with the remaining usages (Residential, Water Bodies and Other Usage) covering less than 2%. These land uses are on a mixture of private and public/crown land tenure.

#### **4 Land Capability**

Land capability assessment for this catchment has adopted the Land Capability Classification System (LCCS) for Tasmania published by the Department in 1992. The system classifies private land into 7 land capability classes. Details of each class relating to this catchment are provided below.

The LCCS is designed to classify land on a sustainable basis, incorporating land that is privately owned and leased Crown land but does not include public land managed on behalf of the Crown ie Parks and Forestry land.

The data used in this report is derived from mapping the area at 1:100 000 scale, at this scale its usage is primarily for catchment scale planning not property planning level.

Figure 2 provides results of current land usage on each land capability class.

##### **4.1 CLASS 1, 2 and 3**

These classes are not represented within the catchment area.

##### **4.2 CLASS 4**

Land marginally suitable for cropping due to its limitations, which restrict the range of crops, that can be grown. Cropping rotation should be restricted to one to two years out of ten in a rotation with pasture. This land is well suited to intensive grazing (Land Capability Handbook).

Class 4 land represents just over 20% of the catchment with majority of this land used for agricultural activities.

##### **4.3 CLASS 5**

Land with slight to moderate limitations to pastoral use. This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices (Land Capability Handbook).

This class represents 13.4% of the catchment again with the majority used for agricultural activities but there is a large proportion is also listed as reserves and parks.

#### 4.4 CLASS 6 and 7

Class 6 land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use. Class 7 land with very severe to extreme limitations which make it unsuitable for agricultural use (Land Capability Handbook).

Totals of these classes represent 22.3% of the catchment and used primarily for dryland agriculture, forestry and preserves and parks.

#### 4.5 NO CLASS –Crown Land

Land that is non-freehold or leased crown land has not therefore been considered for land capability assessment. Land also included in this is urban centres and other non-agricultural areas (Land Capability Handbook).

Land that has no class represents a large proportion of the catchment with almost 44% coverage with the majority occupied as forestry and reserves and parks..

### **5 Conclusion**

Looking at the areas covered by class 4 and 5 land on freehold land in figure 2 there seems opportunities for land to be converted from dryland agriculture into irrigation agriculture with the majority of land available within class 4 land. This class 4 land under its class limitations has the potential for non-cropping irrigated agriculture like pasture. This potential land could be part of the land previously identified in the growth within the Northern Midlands for the dairy industry.

In determining where future demands are likely to be, the results of this report needs to be taken in light of any hydrology information, which would identify any further allocation potential within the catchment.

Figure 1-Land Use within the South Esk River catchment for the period 2001-2003

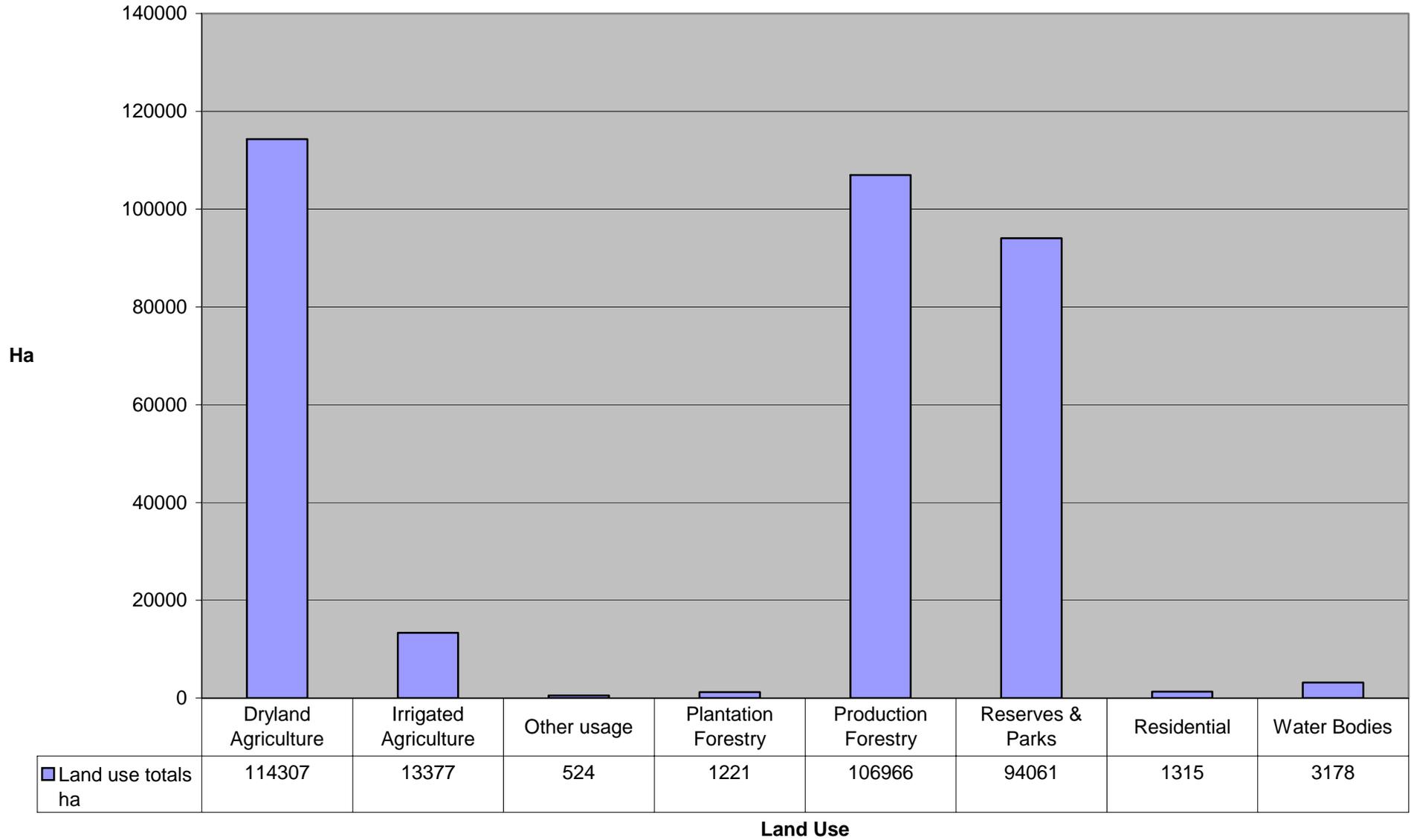
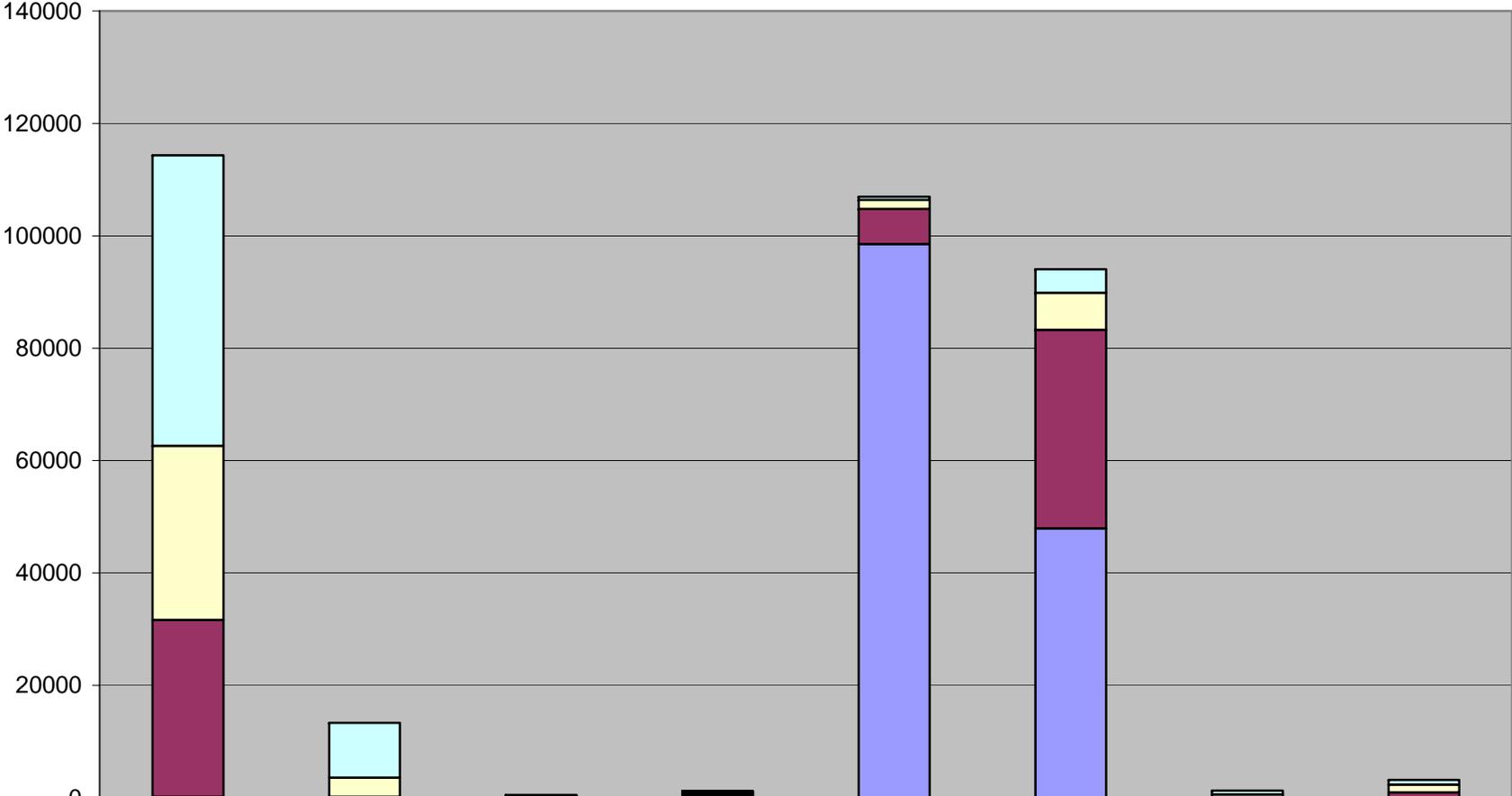


Figure 2- Land capability classes for each Land use (as at 2001-2003)



	Dryland Agriculture	Irrigated Agriculture	Other usage	Plantation Forestry	Production Forestry	Reserves & Parks	Residential	Water Bodies
Class 4	51633	9757	223	382	583	4179	672.03	798.26
Class 5	30991	3423	125	348	1613	6586	530.33	1407.64
Class 6 & 7	31475	196	73	473	6217	35326	112.43	957.6
No Class (Crown Land)	208	1	103	17	98553	47971	0.01	14.71