



# UPPER ROSS RIVER

## SUB BASIN FACTSHEET



*The Upper Ross River Sub Basin includes the Ross River (above the dam), Six Mile Creek, Toonpan Lagoon, Antill Plains Creek, Sachs Creek and Mt Stuart catchments and waterways. There are also a number of smaller waterways that have been included in the catchments of these larger waterways.*



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## POPULATION

The 2006 census counted 1,357 residents within the Upper Ross River Sub Basin. The sub basin includes areas to the west of Mount Stuart and rural lands towards Woodstock. Woodstock township is not included in the Upper Ross River Sub Basin.

The median age of the Upper Ross River Sub Basin population is reported at 38 years at the time of the 2006 Census. Average household size at 3.0 people per household is above the average occupancy for the Townsville local government area (2.8 people).

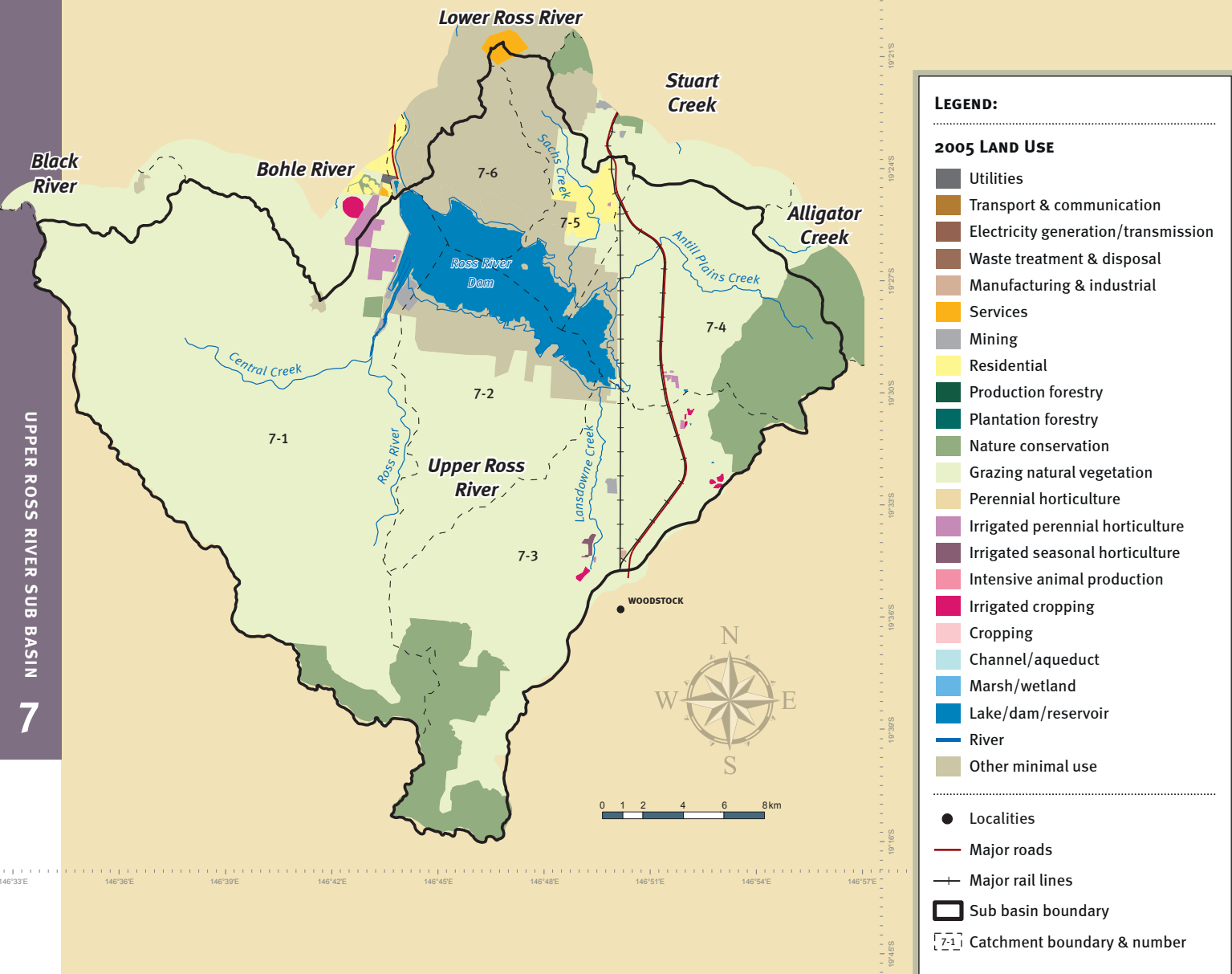
## LAND USE

The Upper Ross River Sub Basin is 755 square kilometres in size (~75,500 hectares). The Upper Ross River Sub Basin is the catchment for the Ross River Dam, Townsville's main raw drinking water supply.

Land use in the Upper Ross Sub Basin is dominated by grazing (72%) and conservation and natural areas (21%). The Ross River Dam occupies approximately 6% of the sub basin area.

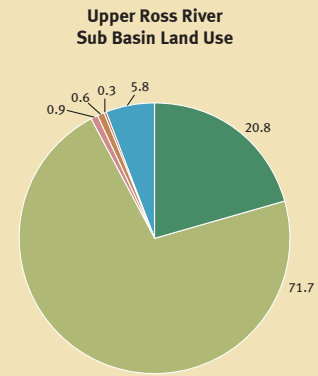


UPPER ROSS RIVER SUB BASIN  
2005 LAND USE



2005 LAND USE UPPER ROSS RIVER SUB BASIN

Land Use	Ha	%	Principal Land Use	Ha	%
Nature conservation	8,218	10.9	Conservation and natural areas	15,680	20.8
Other minimal use	7,461	10.0			
Grazing natural vegetation	54,082	71.7	Grazing	54,082	71.7
Residential	647	0.9	Rural residential	646	0.9
Irrigated cropping	63	<0.1	Intensive agriculture	422	0.6
Irrigated perennial horticulture	323	0.4			
Irrigated seasonal horticulture	35	<0.1			
Manufacturing and industrial	11	<0.1	Urban	259	0.3
Mining	173	0.2			
Services	75	0.1	Water and wetlands	4,372	5.8
Reservoir/dam	4,332	5.7			
River	27	<0.1			
Marsh/wetland	12	<0.1			
<b>Totals</b>	<b>75,460</b>	<b>100</b>		<b>75,460</b>	<b>100</b>

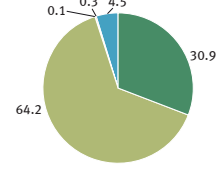
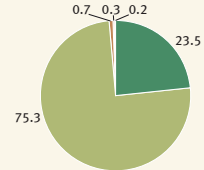
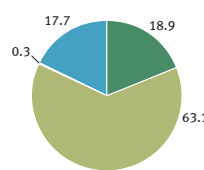
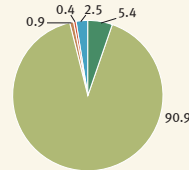


Note: Totals may not tally due to rounding of sub totals

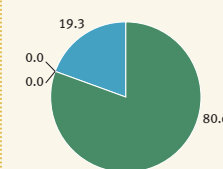
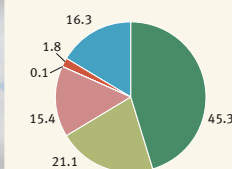
LAND USE BY CATCHMENT

Land Use	Ha	%	Ha	%	Ha	%	Ha	%
	Ross River (atd) (7-1)		Six Mile Creek (7-2)		Toonpan Lagoon (7-3)		Antill Plains Creek (7-4)	
Conservation and natural areas	1,626	5.4	1,821	18.9	3,983	23.5	3,315	30.9
Grazing	27,487	90.9	6,077	63.1	12,757	75.3	6,888	64.2
Rural residential	0		0		0		11	0.1
Intensive agriculture	279	0.9	0		112	0.7	29	0.3
Urban	109	0.4	26	0.3	49	0.3	0	
Water and wetlands	747	2.5	1,701	17.7	34	0.2	484	4.5
<b>Totals</b>	<b>30,247</b>		<b>9,625</b>		<b>16,935</b>		<b>10,726</b>	

Note: atd is above the dam



Land Use	Sachs Creek (7-5)		Mt Stuart (7-6)	
	Ha	%	Ha	%
Conservation and natural areas	1,873	45.3	3,062	80.6
Grazing	872	21.1	1	0.0
Rural residential	634	15.4	2	0.0
Intensive agriculture	3	0.1	0	
Urban	75	1.8	0	
Water and wetlands	673	16.3	733	19.3
<b>Totals</b>	<b>4,130</b>		<b>3,798</b>	



The Upper Ross River is one of the main sub basins requiring special attention in terms of water quality management, as it is the main water supply catchment for the Townsville region. While land use is ostensibly dominated by grazing, there are a number of additional pressures that can impact water quality in the sub basin, including peri-urban and rural residential activities, and potential urban development.

[ More information about the basins, sub basins and catchments of the Black Ross WQIP can be found in; *Basins, Catchments and Receiving Waters of the Black Ross Water Quality Improvement Plan Area* (Gunn and Manning 2009) ]

## WATER RESOURCE CONDITION

Despite a very limited dataset, the Black Ross WQIP area water quality condition assessment (Connell Wagner 2008) indicated that the water quality of this sub basin was most likely to be slightly to moderately impacted.

The data associated with the Ross Dam Catchment was all taken from within the Ross River Dam so it was not considered to be representative of the various catchments feeding into the dam. Recent data from Sachs Creek generally confirms the rating for this sub basin i.e. slightly to moderately impacted. However this may only be indicative of the land use and management activities of the Sachs Creek Catchment and not of the whole sub basin.

**LEGEND:**

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**DRAINAGE - ECOLOGICAL IMPACT**

- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted
- ▨ Moderately/Heavily impacted

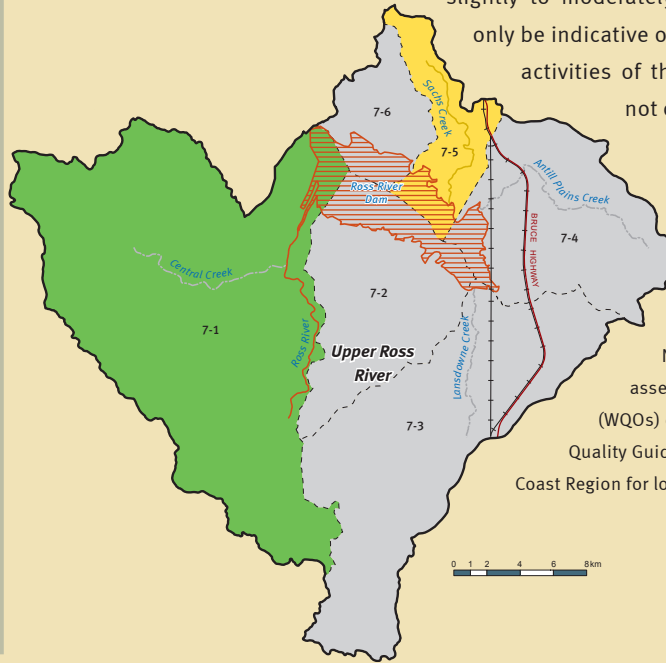
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**CATCHMENTS - ECOLOGICAL IMPACT**

- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted

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- Localities
- Major roads
- Major rail lines
- ▭ Sub basin boundary
- ▭ Catchment boundary & number



### UPPER ROSS RIVER SUB BASIN ECOLOGICAL IMPACT

Note: Water quality data was assessed against water quality objectives (WQOs) derived from the Queensland Water Quality Guidelines (EPA 2006) for the Central Coast Region for lowland streams

## WATER QUALITY AND WATER QUALITY OBJECTIVES (WQOS)

The water quality condition data does not match the WQOs for many of the water quality indicators in the Upper Ross River Sub Basin. It should be noted that the water quality data for Lake Ross has been compared to the WQOs for lakes, which are more stringent than the WQOs for lowland streams.

The water quality data from Sachs Creek indicates above average concentrations of nutrients, which also have the potential to impact water quality in Lake Ross.



### COMPARING WQOS WITH WATER QUALITY

Upper Ross River Sub Basin	DIN	Org N	TN	FRP	TP	TSS
Lake Ross (Ross Dam) 7-1	✗ 100%	✗ 52%	✗ 60%	✗ 200%	✗ 200%	✓ *80%
Sachs Creek 7-5	ND	✓ 41%	✗ 13%	✗ 45%	✓	✓ *30%

Notes: Tick/cross denotes if the WQO is met (✓) or not (✗) for the waterway based on the median value for the water quality indicator. The percentage indicates the amount by which the WQO is met or not met (the difference between the WQO and water quality condition median as a percentage of the WQO). No % is listed if the water quality condition is the same as the WQO. ND is no data.

DIN is dissolved inorganic nitrogen, Org N is organic nitrogen, TN is total nitrogen, FRP is filterable reactive phosphorus, TP is total phosphorus and TSS is total suspended solids (sediment).

\* indicates inconsistency or a wide variation in the data, or insufficient data to calculate percentiles.

1 indicates data is dated and may not reflect current condition.

**DISCLAIMER:** Townsville City Council advises that the information in this document is derived from a number of different sources. The information may not be accurate or up to date and should not be solely relied upon for decision-making purposes.

[ More information about water quality conditions and WQOs can be found in; *Environmental Values, Water Quality Objectives and Targets for the Black Ross Water Quality Improvement Plan* (Gunn, Manning, and McHarg 2009), and *Water Quality Condition of the Black and Ross River Basins* (Connell Wagner 2008) ]