

LOWER ROSS RIVER SUB BASIN FACTSHEET



The Lower Ross River Sub Basin includes the Pallarenda, Mundy Creek, Esplanade, Ross Creek and Ross River (below the dam) catchments. There are a number of smaller waterways that have been included in these catchment groupings.



Australian Government



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POPULATION

The 2006 Census counted 76,541 people resident within the Lower Ross River Sub Basin area. The sub basin extends from Pallarenda in the north to the Ross River Dam wall in the south, encompassing Townsville's major inner urban suburbs, Townsville Port, the central business district (CBD) and the Laverack Army Base.

The median age of the Lower Ross River Sub Basin population is reported at 34 years (2006 Census). Over 26% of total households in the sub basin report only one person usually resident. Average household size at 2.6 people per household is lower than the average occupancy for the Townsville local government area (2.8 people).

LAND USE

The Lower Ross River Sub Basin is approximately 135 square kilometres in size (~13,500 hectares). Residential and associated urban land uses are dominant in the Lower Ross River Sub Basin (51%). Nature conservation and minimal use (natural areas) including Mt Stuart Defence Hill are also significant land uses in the Lower Ross River Sub Basin occupying 41% of the land area.

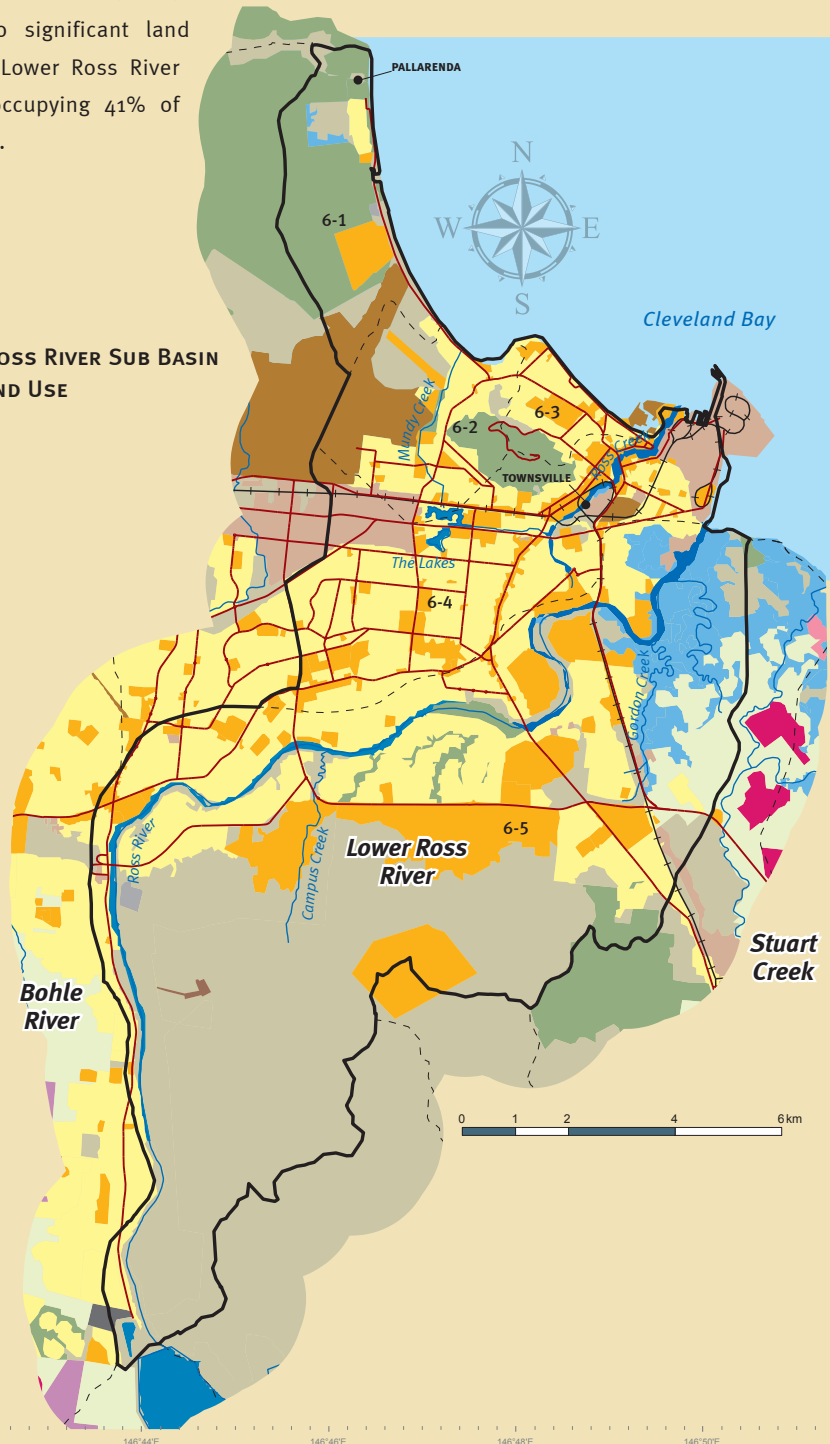
LEGEND:

2005 LAND USE

- Utilities
- Transport & communication
- Electricity generation/transmission
- Waste treatment & disposal
- Manufacturing & industrial
- Services
- Mining
- Residential
- Production forestry
- Plantation forestry
- Nature conservation
- Grazing natural vegetation
- Perennial horticulture
- Irrigated perennial horticulture
- Irrigated seasonal horticulture
- Intensive animal production
- Irrigated cropping
- Cropping
- Channel/aqueduct
- Marsh/wetland
- Lake/dam/reservoir
- River
- Other minimal use

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

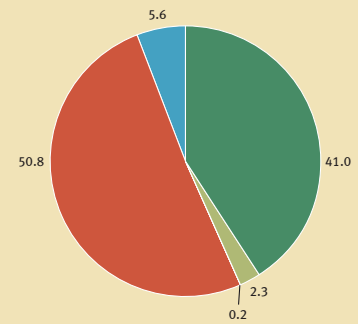
**LOWER ROSS RIVER SUB BASIN
2005 LAND USE**



2005 LAND USE LOWER ROSS RIVER SUB BASIN

Land Use	Ha	%	Principal Land Use	Ha	%
Nature conservation	944	7.0	Conservation and natural areas	5,528	41.0
Other minimal use	4,584	34.0			
Grazing natural vegetation	316	2.4	Grazing	316	2.3
Residential	4,046	30.0	Rural residential	30	0.2
			Intensive agriculture	0	
Manufacturing and industrial	381	2.8	Urban	6,846	50.8
Mining	21	0.2			
Services	2,004	14.9			
Transport and communication	416	3.1			
Utilities	9	<0.1			
Reservoir/dam	149	1.1			
River	91	0.7	Water and wetlands	754	5.6
Marsh/wetland	515	3.8			
Totals	13,475	100		13,475	100

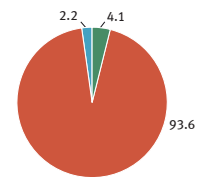
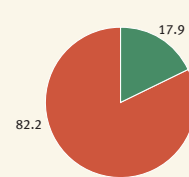
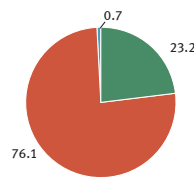
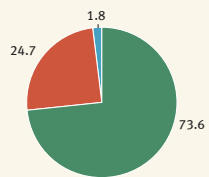
Lower Ross River Sub Basin Land Use



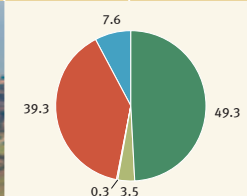
Note: Totals may not tally due to rounding of sub totals

LAND USE BY CATCHMENT

Land Use	Ha	%	Ha	%	Ha	%	Ha	%
	Pallarenda (6-1)		Mundy Creek (6-2)		Esplanade (6-3)		Ross Creek (6-4)	
Conservation and natural areas	709	73.6	225	23.2	52	17.9	92	4.1
Grazing	0		0		0		0	
Rural residential	0		0		0		0	
Intensive agriculture	0		0		0		0	
Urban	238	24.7	739	76.1	240	82.2	2,084	93.6
Water and wetlands	17	1.8	6	0.7	0	0.0	49	2.2
Totals	963		971		292		2,225	



Land Use	Ross River (btd) (6-5)	
Conservation and natural areas	4,449	49.3
Grazing	316	3.5
Rural residential	30	0.3
Intensive agriculture	0	
Urban	3,545	39.3
Water and wetlands	682	7.6
Totals	9,023	



The Lower Ross River Sub Basin is the only sub basin in the Townsville region at present, which is dominated by urban land uses. With such a polarisation of land use between urban and natural areas there is considerable development pressure on the remaining 'available' natural areas.

[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)]

LEGEND:

DRAINAGE - ECOLOGICAL IMPACT

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

CATCHMENTS - ECOLOGICAL IMPACT

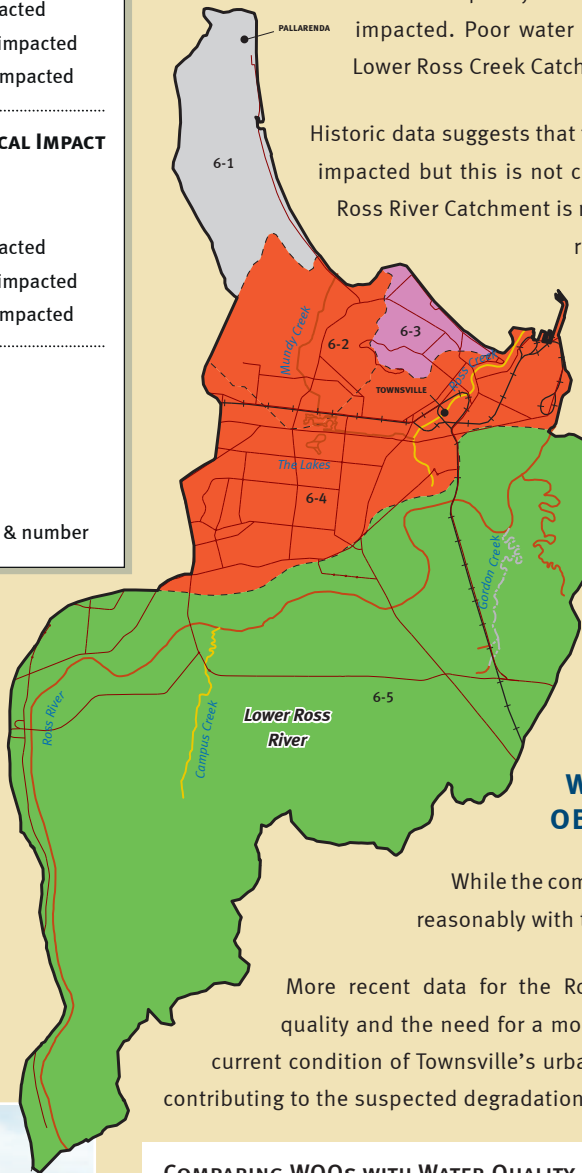
- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted

- Localities
- Major roads
- Major rail lines
- Sub basin boundary
- [6-1] Catchment boundary & number

WATER RESOURCE CONDITION

The Black Ross WQIP area water quality condition assessment (Connell Wagner 2008) indicated that the water quality of the Ross River Sub Basin was moderately to heavily impacted. Poor water quality in The Lakes was the main reason that the Lower Ross Creek Catchment was assessed as heavily impacted.

Historic data suggests that the Ross River Catchment below the dam was slightly impacted but this is not consistent with recent data, which indicates that the Ross River Catchment is now moderately to heavily impacted. This is probably reflective of the continual expansion of urban land uses within this catchment.



LOWER 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)

While the combined water quality condition data seems to compare reasonably with the WQOs the data is often inconsistent or dated.

More recent data for the Ross River Sub Basin shows deterioration in water quality and the need for a more comprehensive monitoring program to assess the current condition of Townsville’s urban waterways, and identify the key pollutant sources contributing to the suspected degradation.

COMPARING WQOS WITH WATER QUALITY

Lower Ross River Sub Basin	DIN	Org N	TN	FRP	TP	TSS
Mundy Creek 6-2	ND	✓ 15%	✗ 28%	✗ 590%	✗ 390%	✗ 50%
Esplanade 6-3	✓ 63%	✓ *29%	✓ *31%	ND	✓ 20%	ND
Ross Creek 6-4	✓ 29%	✓ 33%	✓ 29%	✓	✓ *20%	✗ 40%
Ross River (below Dam) 6-5	✓ *50%	✓ *20%	✓ *14%	✓ 40%	✓ 6%	✗ 40%

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)]