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our waterways - our responsibility

ROLLINGSTONE CREEK

SUB BASIN FACTSHEET

2

The Rollingstone Creek Sub Basin includes the Rollingstone Creek, unnamed creek, Surveyors Creek, Wild Boar Creek, Station Creek, Saltwater Creek, Cassowary Creek (Camp Oven Creek) and Leichhardt Creek catchments and waterways. There are also a number of smaller waterways that have been included in the catchments of these larger creeks.

Australian Government

Queensland Government

Townsville

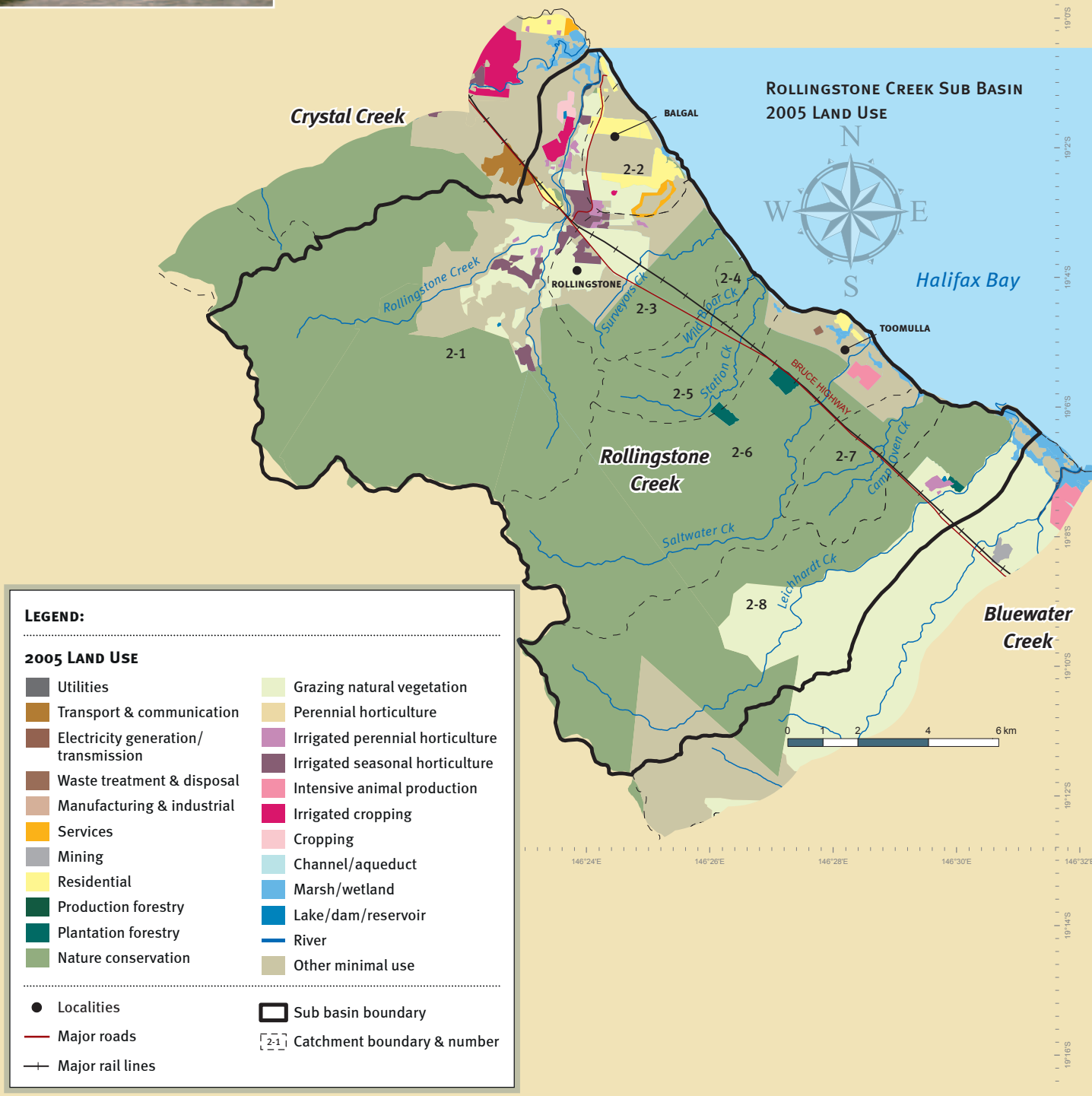
POPULATION

The 2006 Census counted 863 people resident within the Rollingstone Creek Sub Basin area with settlement mainly confined to the townships of Rollingstone and Balgal Beach (723 people), and the beachside area of Toomulla (141).

Rollingstone Creek Sub Basin has a mature age population, reflected in the high median age of 53 years, with a high percentage of couple families without children (68%). The average household size of 2.4 people is below the average occupancy rate of 2.8 people for the Townsville local government area.

LAND USE

The Rollingstone Creek Sub Basin is approximately 220 square kilometres in size (~22,000 hectares). Land use is dominated by nature conservation and minimal use (natural areas), totalling 85% of the land area, with grazing (11%), horticulture (2%) and combined urban and rural residential (1.5%) also being relatively significant land uses within the sub basin.



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

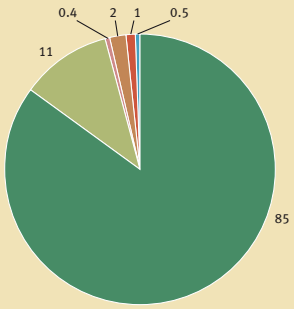
- Localities
- Major roads
- Major rail lines
- Sub basin boundary
- 2-1 Catchment boundary & number

2005 Land Use Rollingstone Creek Sub Basin

Land Use	Ha	%	Principal Land Use	Ha	%
Nature conservation	15,865	72.1	Conservation and natural areas	18,728	85.1
Other minimal use	2,863	13.0			
Grazing natural vegetation	2,382	10.8	Grazing	2,384	10.8
Production forestry	2	<0.1			
Residential	253	1.2	Rural residential	94	0.4
Cropping	28	0.1	Intensive agriculture	435	2.0
Intensive animal production	40	0.2			
Irrigated cropping	52	0.2			
Irrigated perennial horticulture	70	0.3			
Irrigated seasonal horticulture	215	1			
Plantation forestry	70	0.3			
Services	34	0.2	Urban	252	1.1
Transport and communication	15	<0.1			
Waste treatment and disposal	5	<0.1			
Reservoir/dam	5	<0.1	Water and wetlands	110	0.5
River	10	<0.1			
Marsh/wetland	96	0.4			
Totals	**22,003**	**100**		**22,023**	**100**

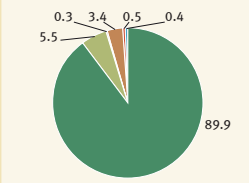
Note: Totals may not tally due to rounding of sub totals

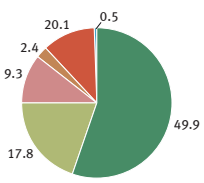
Rollingstone Creek Sub Basin Land Use

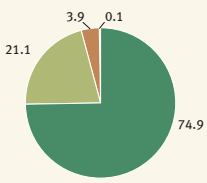


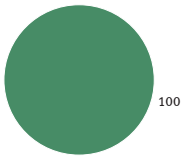
Land Use by Catchment

Land Use	Ha	%	Ha	%	Ha	%	Ha	%
	Rollingstone Creek (2-1)		unnamed Creek (2-2)		Surveyors Creek (2-3)		Wild Boar Creek (2-4)	
Conservation and natural areas	6,952	89.9	364	49.9	1,254	74.9	344	100
Grazing	425	5.5	130	17.8	353	21.1	0	
Rural residential	26	0.3	68	9.3	0		0	
Intensive agriculture	262	3.4	18	2.4	65	3.9	0	
Urban	36	0.5	147	20.1	2	0.1	0	
Water and wetlands	31	0.4	4	0.5	0		0	
Totals	**7,732**		**731**		**1,674**		**344**	

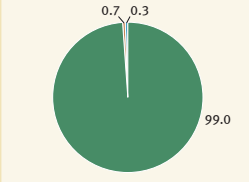


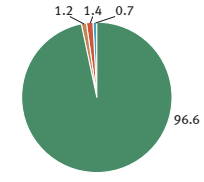


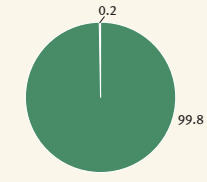


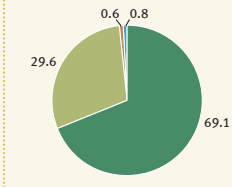


Land Use	Station Creek (2-5)		Saltwater Creek (2-6)		Cassowary Creek (2-7)		Leichhardt Creek (2-8)	
Conservation and natural areas	873	99.0	4,505	96.6	995	99.8	3,440	69.1
Grazing	0		2	0.0	0		1,473	29.6
Rural residential	0		0		0		0	
Intensive agriculture	6	0.7	54	1.2	0		30	0.6
Urban	0		67	1.4	0		0	
Water and wetlands	2	0.3	34	0.7	2	0.2	37	0.8
Totals	**882**		**4,662**		**997**		**4,981**	









The majority of the agricultural and residential land use occurs in the northern catchments of the Rollingstone Creek Sub Basin, and in the southern (Leichhardt Creek) catchment.

The catchments from Wild Boar Creek to Cassowary Creek have a much higher percentage of 'Conservation and natural areas' land use than the other sub basin catchments, and the overall sub basin total. Based on land use types and ratios the Leichhardt Creek Catchment appears to be more closely aligned with the Bluewater Creek Sub Basin, and the higher percentage grazing land use catchments of the 'drier' southern sub basins.

[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

LEGEND:

DRAINAGE - ECOLOGICAL IMPACT

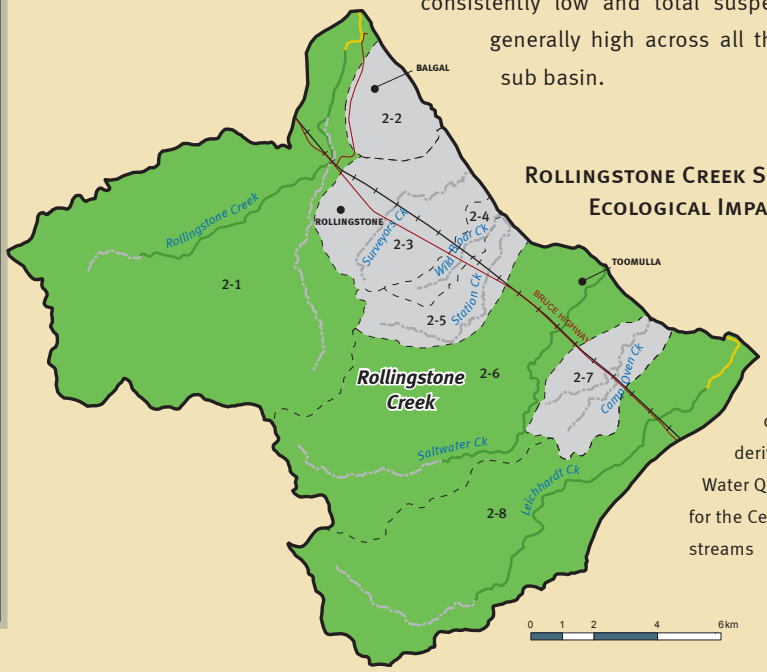
- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted

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
- 2-1 Catchment boundary & number

The Black Ross WQIP area water quality condition assessment (Connell Wagner 2008) indicated that the water quality of this sub basin was generally representative of ecologically healthy lowland stream systems. However, the data also suggested that dissolved oxygen was consistently low and total suspended sediment was generally high across all the catchments of the sub basin.



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)

When the water quality data was assessed against the water quality objectives (WQOs) derived from the Queensland Water Quality Guidelines (EPA 2006) for the Central Coast Region for lowland streams, the water quality condition of the streams of the Rollingstone Creek Sub Basin met virtually all of the corresponding WQOs. The only exception was total suspended solids (TSS) in Saltwater Creek.

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.

COMPARING WQOS (CENTRAL COAST VALUES) WITH WATER QUALITY

Rollingstone Creek Sub Basin	DIN	Org N	TN	FRP	TP	TSS
Rollingstone Creek 2-1	✔ 50%	✔ 29%	✔ 28%	ND	✔ 60%	✔ 20%
Saltwater Creek 2-6	✔ 81%	✔ 52%	✔ 55%	✔ 75%	✔ 60%	✘ 40%
Leichhardt Creek 2-8	✔ 63%	✔ 29%	✔ 34%	ND	✔ 60%	✔

When comparing water quality condition to the WQOs derived from the Queensland Water Quality Guidelines (EPA 2006) based on the values for the Wet Tropics Region lowland streams (adopted in the Black Ross WQIP for the two northern sub basins), the streams only meet WQOs for 40-67% of the water quality indicators.

COMPARING WQOS (WET TROPICS VALUES) WITH WATER QUALITY

Rollingstone Creek Sub Basin	DIN	Org N	TN	FRP	TP	TSS
[1] Rollingstone Creek 2-1	✔	✘ 100%	✘ 50%	ND	✘ 100%	✔ 20%
[1] Saltwater Creek 2-6	✔ 65%	✔	✔ 7%	✔ 25%	✘ 100%	✘ 40%
[1] Leichhardt Creek 2-8	✔ 25%	✘ 100%	✘ 38%	ND	✘ 100%	✔

[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)]

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.