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BLUEWATER CREEK 3

SUB BASIN FACTSHEET

The Bluewater Creek Sub Basin includes the Sleeper Log Creek, Two Mile Creek, Bluewater Creek and Deep Creek catchments and waterways. There are also a number of smaller waterways and tributaries that have been included in the catchments of these larger creeks.

Australian Government

Queensland Government

Townsville

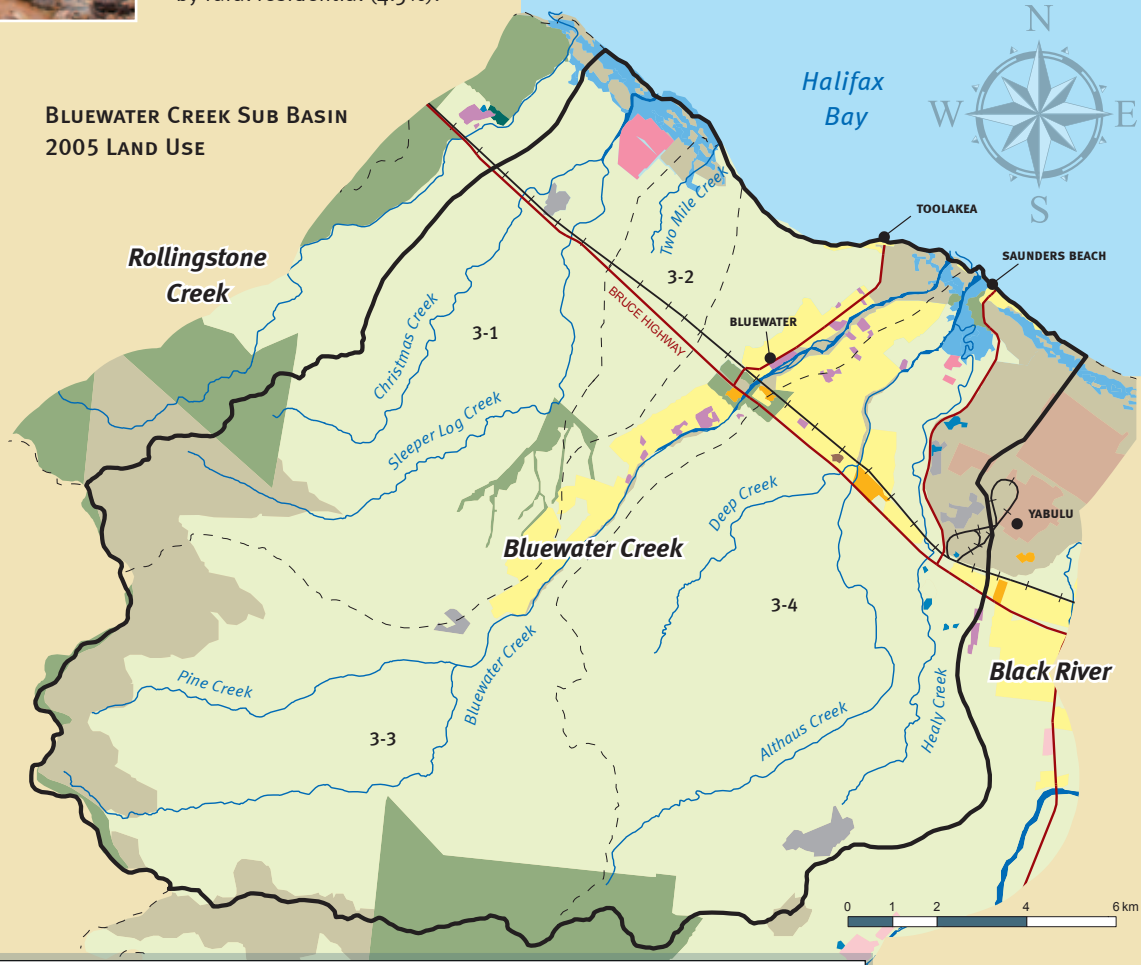
POPULATION

The 2006 Census counted 2,876 people resident within the Bluewater Creek Sub Basin area, which includes the beachside settlements of Toolakea and Saunders Beach, rural residential development and parts of the Queensland Nickel Industry Yabulu manufacturing and refining plant.

The median age of the Bluewater Creek Sub Basin population at 2006 is reported at 38 years. The average household size of 2.8 people is the same as the average occupancy rate for the Townsville local government area.

LAND USE

The Bluewater Creek Sub Basin is approximately 290 square kilometres in size (~29,000 hectares). Land use in the Bluewater Creek Sub Basin is dominated by grazing (75%). Nature conservation and minimal use (natural areas), at 17%, is the next most prolific land use followed by rural residential (4.5%).

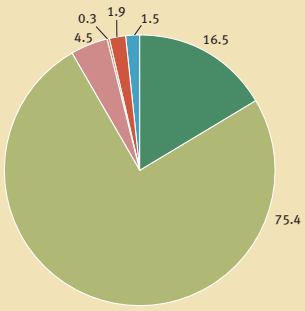


2005 Land Use Bluewater Creek Sub Basin

Land Use	Ha	%	Principal Land Use	Ha	%
Nature conservation	1,645	5.7	Conservation and natural areas	4,778	16.5
Other minimal use	3,133	10.8			
Grazing natural vegetation	21,893	75.4	Grazing	21,893	75.4
Residential	1,473	5.1	Rural residential	1,299	4.5
Intensive animal production	117	0.4	Intensive agriculture	77	0.3
Irrigated perennial agriculture	77	0.3			
Manufacturing and industrial	48	0.2	Urban	564	1.9
Mining	177	0.6			
Services	45	0.2			
Waste treatment and disposal	4	<0.1			
Channel/aquaduct	7	<0.1	Water and wetlands	426	1.5
Reservoir/dam	20	<0.1			
Marsh/wetland	341	1.2			
River	58	0.2			
Totals	**29,037**	**100**		**29,037**	**100**

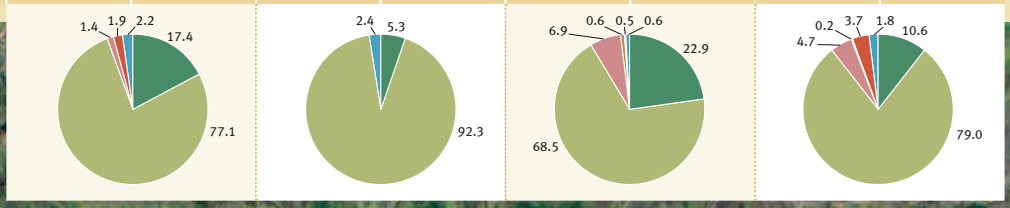
Note: Totals may not tally due to rounding of sub totals

Bluewater Creek Sub Basin Land Use



Land Use by Catchment

	Ha	%	Ha	%	Ha	%	Ha	%
Land Use	**Sleeper Log Creek (3-1)**		**Two Mile Creek (3-2)**		**Bluewater Creek (3-3)**		**Deep Creek (3-4)**	
Conservation and natural areas	1,244	17.4	71	5.3	2,404	22.9	1,066	10.6
Grazing	5,528	77.1	1,235	92.3	7,189	68.5	7,941	79.0
Rural residential	98	1.4	0		725	6.9	476	4.7
Intensive agriculture	0		0		61	0.6	16	0.2
Urban	138	1.9	0		51	0.5	376	3.7
Water and wetlands	161	2.2	33	2.4	63	0.6	182	1.8
Totals	**7,169**		**1,338**		**10,492**		**10,057**	



While the sub basin is dominated by grazing the other notable land use feature is the extent of rural residential land in the Bluewater Creek and Deep Creek catchments.

[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

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, total suspended solids (sediment) (TSS) were found to be generally high for this sub basin while dissolved oxygen was generally low.

LEGEND:

DRAINAGE - ECOLOGICAL IMPACT

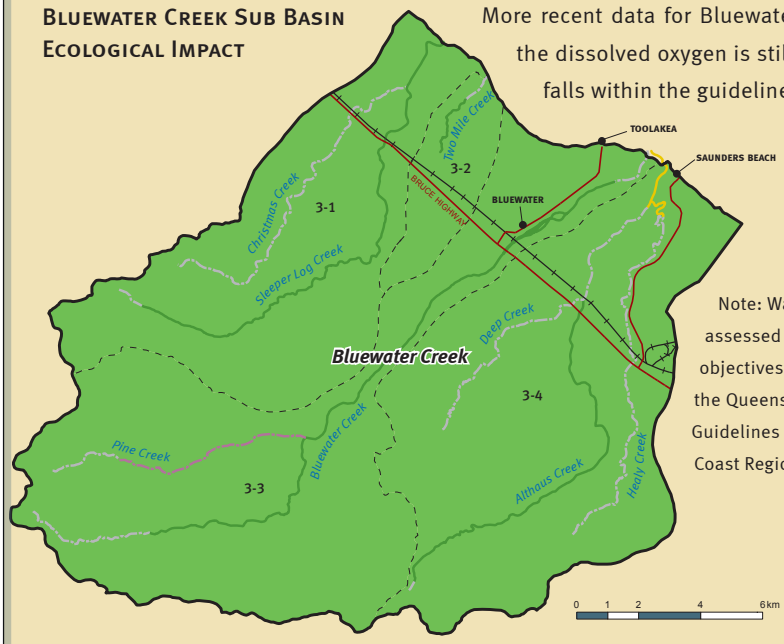
- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted

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
- 3-1 Catchment boundary & number

BLUEWATER CREEK SUB BASIN ECOLOGICAL IMPACT



More recent data for Bluewater Creek shows that the dissolved oxygen is still low while TSS now falls within the guideline limit.

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 comparing water quality condition data with the WQOs for the Bluewater Creek Sub Basin we can see that the WQOs are met for the majority of the water quality indicators for each of the streams in the sub basin.

The exceptions are:

- Three of the four streams do not meet the WQO for total suspended solids (TSS),
- The fourth stream (Bluewater Creek) does not meet the WQO for dissolved inorganic nitrogen (DIN).

COMPARING WQOS WITH WATER QUALITY

Bluewater Creek Sub Basin	DIN	Org N	TN	FRP	TP	TSS
[1]Sleeper Log Creek 3-1	✔ 78%	✔ 52%	✔ 52%	✔ 75%	✔ 40%	✘ 70%
[1]Two Mile Creek 3-2	✔ 76%	✔ 52%	✔ 54%	✔ 55%	✔ 20%	✘ 150%
Bluewater Creek 3-3	✘ 109%	✔ *61%	✔ *44%	✔ 70%	✔ *66%	✔ *50%
[1]Deep Creek 3-4	✔ *50%	✔ 29%	✔ *26%	ND	✔ *60%	✘ 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.

[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)]