

MAGNETIC ISLAND

SUB BASIN FACTSHEET

10



The Magnetic Island Sub Basin includes the West Coast, Picnic Bay, Nelly Bay, Arcadia, Radical Bay, Horseshoe Bay, Five Beach Bay and Rollingstone Bay catchments and associated waterways.



Australian Government



Queensland
Government



Townsville

POPULATION

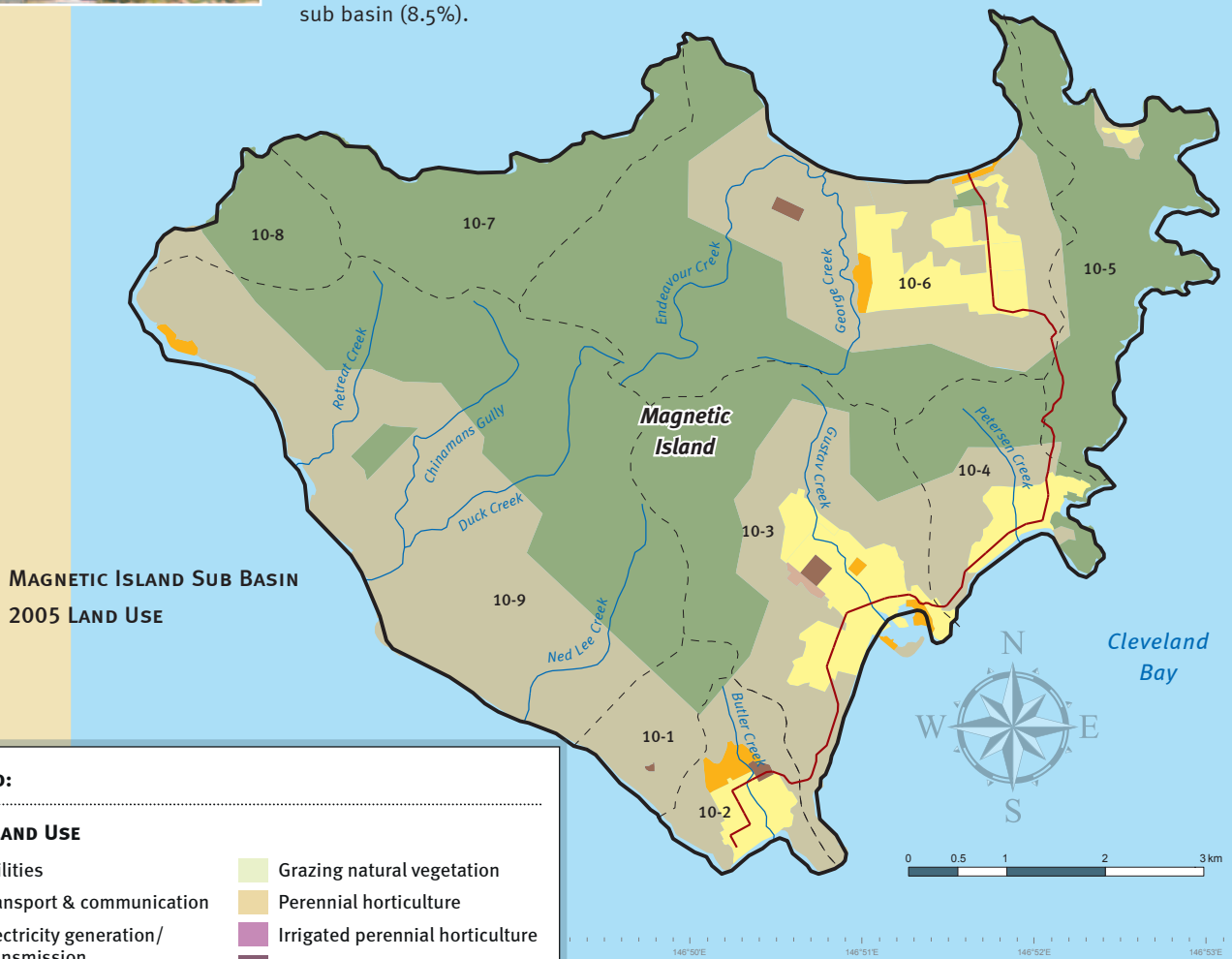


The 2006 census counted 2,111 residents on Magnetic Island. Tourism is a key activity for Magnetic Island, and in the 2006 census visitors swelled the total island population to 3,246 people.

At 45 years, the median age of Magnetic Island residents is significantly higher than the Townsville median age of 33 years. A significant percentage (14.4%) of island residents are aged 65 years and above. Average household size at 2.5 persons is significantly lower for Magnetic Island than for Townsville (2.8). Couple-only households are predominant on the Island. These statistics are fairly typical of an area that holds appeal for retirement living.

LAND USE

The Magnetic Island Sub Basin is approximately 51 square kilometres in size (~5,100 hectares). Nature conservation (53%) and minimal use (39%) are the main land uses of the Magnetic Island Sub Basin. Pockets of urban and rural residential land use occupy the remainder of the sub basin (8.5%).



LEGEND:

2005 LAND USE

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

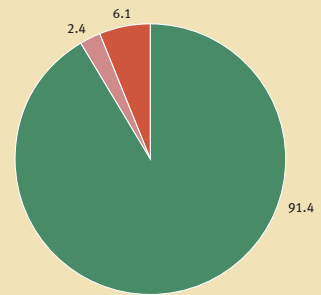
- | | |
|------------------|-----------------------------|
| Localities | Sub basin boundary |
| Major roads | Catchment boundary & number |
| Major rail lines | |

19°55' 19°50' 19°45' 19°40' 19°35' 19°30' 19°25' 19°20' 19°15' 19°10' 19°05'

2005 LAND USE MAGNETIC ISLAND SUB BASIN

Land Use	Ha	%	Principal Land Use	Ha	%
Nature conservation	2,639	52.9	Conservation and natural areas	4,562	91.4
Other minimal use	1,924	38.6			
			Grazing	0	
Residential	383	7.7	Rural residential	121	2.4
			Intensive agriculture	0	
Manufacturing and industrial	5	0.1	Urban	307	6.1
Services	27	0.5			
Waste treatment and disposal	13	0.3			
			Water and wetlands	0	
Totals	4,990	100		4,990	100

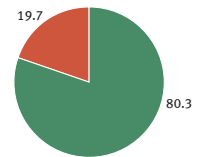
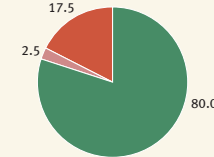
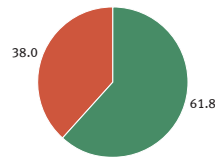
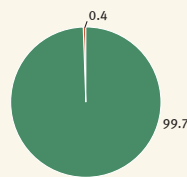
Magnetic Island Sub Basin Land Use



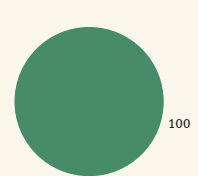
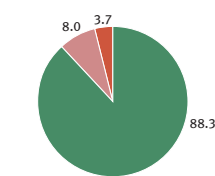
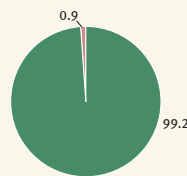
Note: Totals may not tally due to rounding of sub totals

LAND USE BY CATCHMENT

Land Use	West Coast (10-1)		Picnic Bay (10-2)		Nelly Bay (10-3)		Arcadia (10-4)	
	Ha	%	Ha	%	Ha	%	Ha	%
Conservation and natural areas	1,626	99.7	109	61.8	621	80.0	212	80.3
Grazing	0		0		0		0	
Rural residential	0		0		20	2.5	0	
Intensive agriculture	0		0		0		0	
Urban	6	0.4	67	38.0	136	17.5	52	19.7
Water and wetlands	0		0		0		0	
Totals	1,632		177		777		264	



Land Use	Radical Bay (10-5)		Horseshoe Bay (10-6)		Five Beach (10-7)		Rollingstone Bay (10-8)	
	Ha	%	Ha	%	Ha	%	Ha	%
Conservation and natural areas	369	99.2	1,080	88.3	386	100.0	159	100.0
Grazing	0		0		0		0	
Rural residential	3	0.9	98	8.0	0		0	
Intensive agriculture	0		0		0		0	
Urban	0		45	3.7	0		0	
Water and wetlands	0		0		0		0	
Totals	372		1,223		386		159	



[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 is heavily impacted. Three of the nine catchments are rated as heavily impacted with one catchment, Gustav Creek, being slightly impacted. There is insufficient data to assess the remaining five catchments.

LEGEND:

DRAINAGE - ECOLOGICAL IMPACT

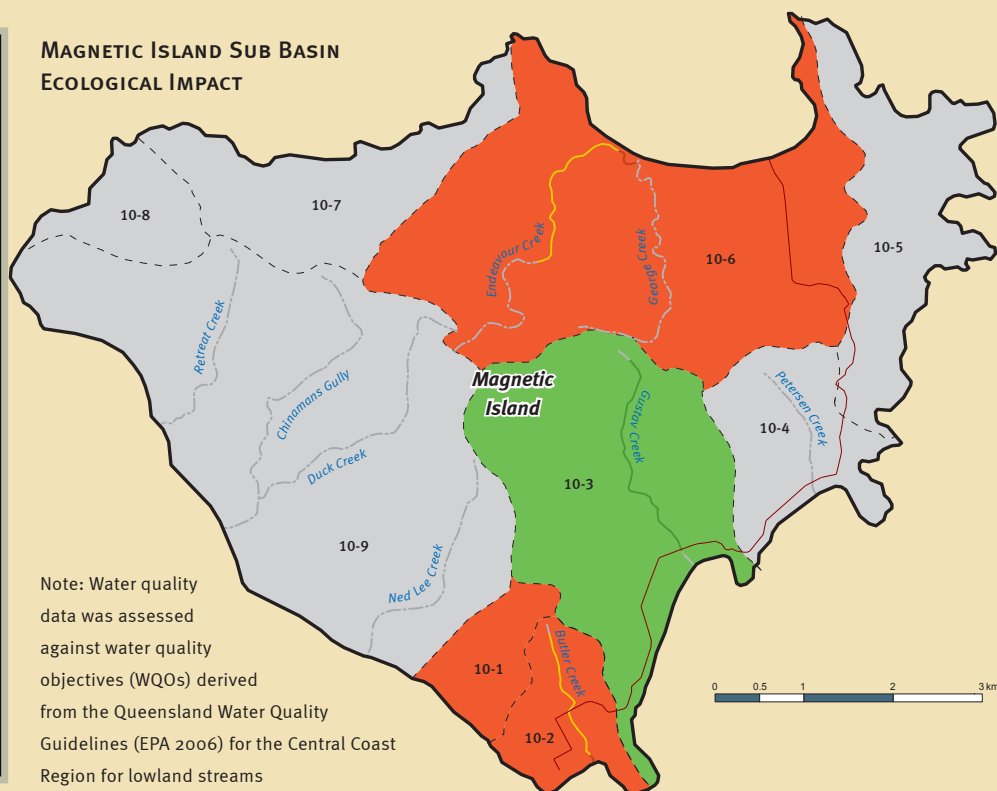
- No data
- Insufficient data
- Healthy/Slightly impacted
- Slightly/Moderately impacted
- Moderately/Heavily impacted

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
- Catchment boundary & number

MAGNETIC ISLAND SUB BASIN ECOLOGICAL IMPACT



WATER QUALITY AND WATER QUALITY OBJECTIVES (WQOs)

Water quality condition data for the Magnetic Island Sub Basin is variable and paints a mixed picture in relation to the WQOs for most of the water quality indicators.

COMPARING WQOs WITH WATER QUALITY

Magnetic Island Sub Basin	DIN	Org N	TN	FRP	TP	TSS
Cockle Creek 10-1	ND	ND	✗ 26%	✓ *100%	✗ 110%	✗ 70%
Butler Ck (Picnic Bay) 10-2	ND	ND	✗ 14%	✓ *100%	✗ 140%	✗ 100%
Gustav Creek 10-3	ND	ND	✓ *55%	✓ *50%	✓ *60%	✓ *30%
Endeavour Creek 10-6	✗ 13%	ND	✗ 90%	✓ *100%	✗ 100%	✗ 590%

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)]



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.