REEF CATCHMENTS

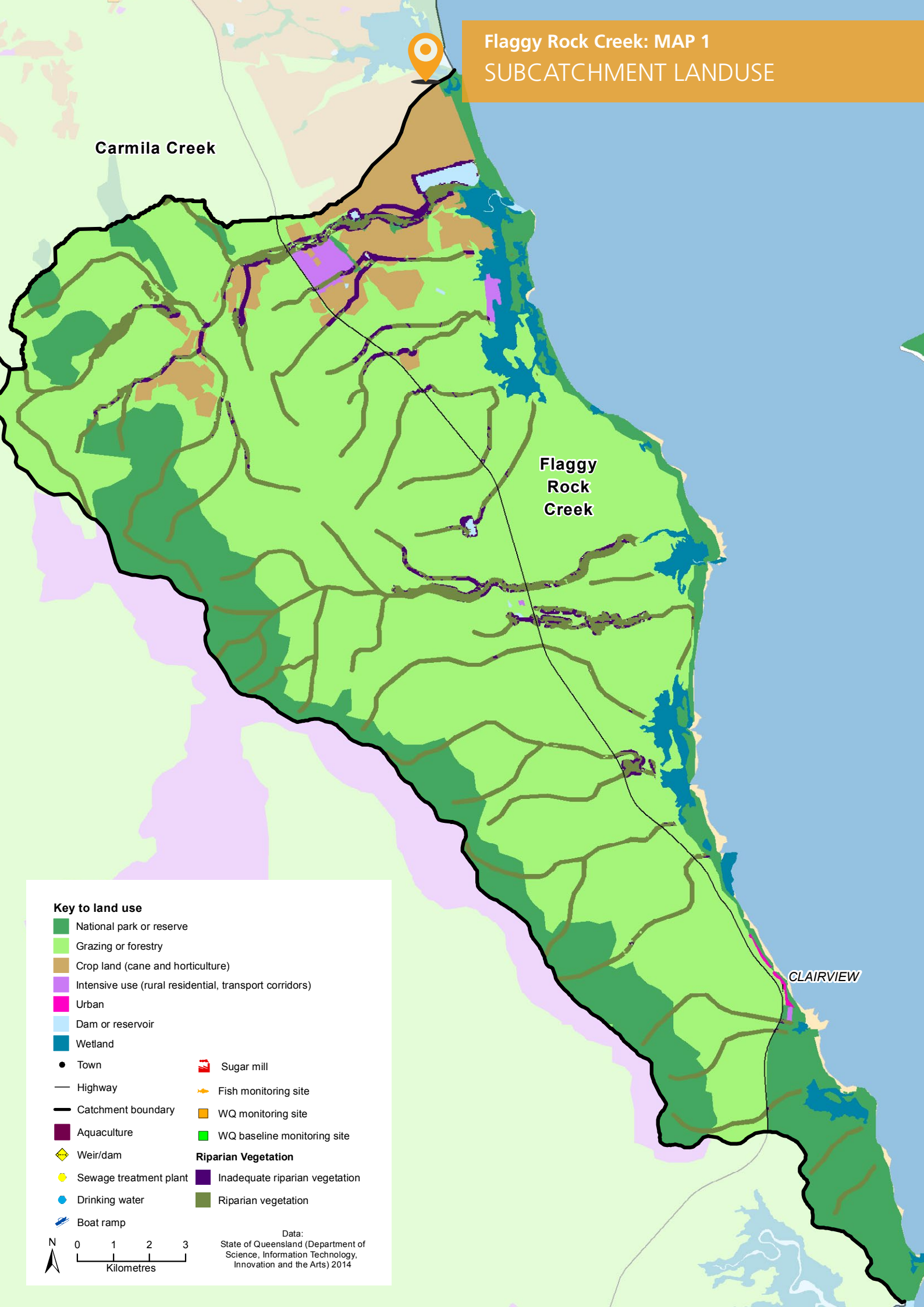
Healthy Waterways Alliance

Australian Government

WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

CATCHMENT MANAGEMENT AREA REPORT

33 Flaggy Rock Creek


Flaggy Rock Creek: MAP 1
SUBCATCHMENT LANDUSE
Carmila Creek
Flaggy Rock Creek
CLAIRVIEW
Key to land use
National park or reserve
Grazing or forestry
Crop land (cane and horticulture)
Intensive use (rural residential, transport corridors)
Urban
Dam or reservoir
Wetland
Town
Highway
Catchment boundary
Aquaculture
Weir/dam
Sewage treatment plant
Drinking water
Boat ramp
Sugar mill
Fish monitoring site
WQ monitoring site
WQ baseline monitoring site
Riparian Vegetation
Inadequate riparian vegetation
Riparian vegetation
N
0 1 2 3
Kilometres
Data:
State of Queensland (Department of Science, Information Technology, Innovation and the Arts) 2014

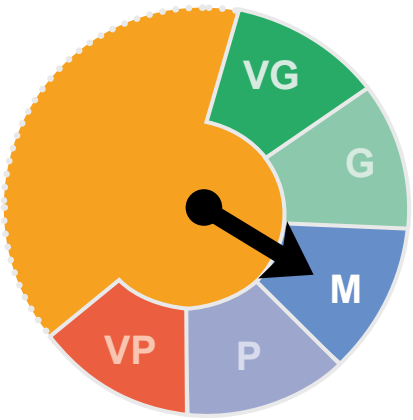
CATCHMENT MANAGEMENT AREA REPORT

33 Flaggy Rock Creek

Flaggy Rock Creek Ecosystem Health Rating

Very Good | Good | Moderate | Poor | Very Poor

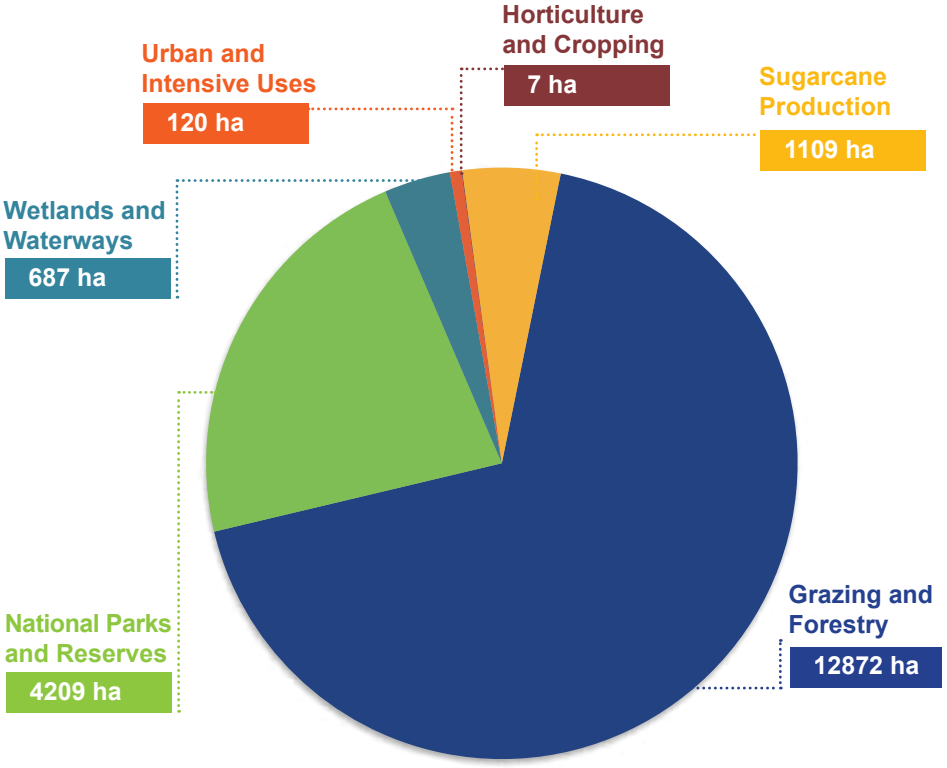
FRESHWATER
Ecosystem Health



M

The Flaggy Rock Creek **freshwater ecosystem** received an overall score of **Moderate.**

Total Area by Landuse



The Flaggy Rock Creek catchment area drains the coastal lowlands just south of the settlement of Carmila. The Flaggy Rock Creek estuary creates important local wetlands that are part of West Hill National Park. The National Park comprises 20% of the catchment area. The catchment area extends down the coast for approximately 50km. Seventy percent of the catchment is under grazing production, much of which extends to the coast. Cane production accounts for 5% of the catchment area.

Management practices that reduce particulate phosphorus and particulate nitrogen in grazing management practices will be priority.

System repair actions that contribute to instream habitat improvement and the removal of barriers to fish migration will continue to be a priority. Future management efforts should also focus on protecting and improving the coastal wetland extent and condition to support regeneration of inshore seagrass beds.

Total hectares Flaggy Rock Creek

18904 ha

Table 1 [Subcatchment Freshwater Ecosystem Health Indicator Score: Current Condition 2014 and Target 2021

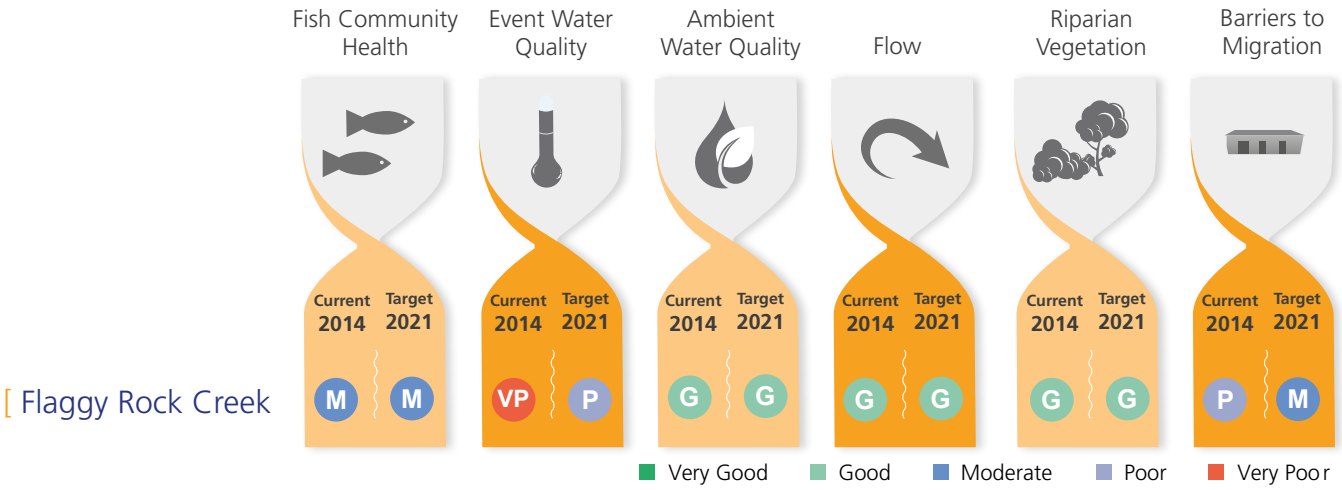


Table 1: OVERVIEW

This index presents the indicators chosen to assess the condition of freshwater ecosystem health. The index uses a combination of monitored data and expert opinion to provide a score for the current condition of fish community health, event water quality, ambient water quality, flow, riparian vegetation, and barriers to migration for each of the region's 33 catchment management areas. The table also presents the target for each indicator to be reached by 2021.

Table 2 [Event Freshwater Quality: Current Condition, Targets and Objectives

Key Pollutant	Current Condition	Target 2021	Objective 2050	Action	Pollutant Source
FLAGGY ROCK CREEK SUBCATCHMENT					
Dissolved Inorganic Nitrogen µg/L	300	282	282	HIGH	CIU
Particulate Nitrogen µg/L	701	659	340	MEDIUM	CIUG
Filterable Reactive Phosphorus µg/L	30	28	28	HIGH	CIU
Particulate Phosphorus µg/L	368	253	70	V HIGH	CIUG
Total Suspended Sediment mg/L	268	186	186	V HIGH	CIUG
Ametryn µg/L	<LOD	<LOD	<LOD	LOW	CIU
Atrazine µg/L	0.03	0.03	0.03	MEDIUM	CIU
Diuron µg/L	0.13	0.12	0.12	MEDIUM	CIU
Hexazinone µg/L	0.02	0.02	0.02	MEDIUM	CIU
Tebuthiuron µg/L	0.05	0.04	0.02	HIGH	G

C Cane **IU** Intensive Uses **G** Grazing

Table 2: OVERVIEW

This table presents the current condition (2014) event freshwater quality values for nutrients, sediment, and herbicides. It also presents water quality targets for 2021 and 2050 water quality objectives that have been calculated based on an achievable level of adoption of improved management practices and the level of effort that will be required ("Action"). For each of the pollutants listed, the table also identifies the main pollutant source.

Table 3 Action Targets: Ecosystem Health Management

L = Low, M = Moderate, H = High

		Condition 2014	Planned Activities to 2021	Effort	$ Cost
		Flaggy Rock Creek			
Barriers **(number)**		6	1	M	$40,000
Riparian Vegetation Management **(hectares)**		1589 ha	24 ha	H	$494,545
Bank and bed stabilisation **(kilometres)**		n/a	8	H	$780,000
In-stream Habitat Works **(number)**		n/a	3	H	$60,000
				Total Cost = $1,374,545	

Table 3: OVERVIEW

This table presents the on-ground management actions determined to be required to improve ecosystem health, including the removal of barriers to fish migration, establishment of riparian vegetation, bank stabilisation, and in-stream habitat works. The table displays the current condition for each component, as well as the planned activities to be completed by 2021, the level of effort required and associated costs.

Table 4: OVERVIEW

The table below displays the current level of management practices for Sugarcane/Horticulture, Grazing, and Urban within D, C, B and A Management Framework classifications at 2014. The table also presents the level of voluntary adoption of management practices required to meet 2021 objectives and their associated costs.

Table 4 Agriculture ABCD Adoption Targets

Land Use		2014 Adoption %				2021 Adoption %				Total Cost $ '000s
		D	C	B	A	D	C	B	A	
FLAGGY ROCK CREEK SUBCATCHMENT										
Cane & Horticulture	Soil	18%	24%	39%	20%	10%	15%	50%	25%	45
	Nutrient	13%	29%	54%	5%	5%	15%	75%	5%	84
	Herbicide	20%	33%	43%	5%	15%	20%	60%	5%	10
Grazing	Soil	25%	11%	58%	6%	15%	5%	75%	5%	532

D Dated practice **C** Common practice **B** Best practice **A** Cutting-edge practice