REEF CATCHMENTS

Healthy Waterways Alliance

Australian Government

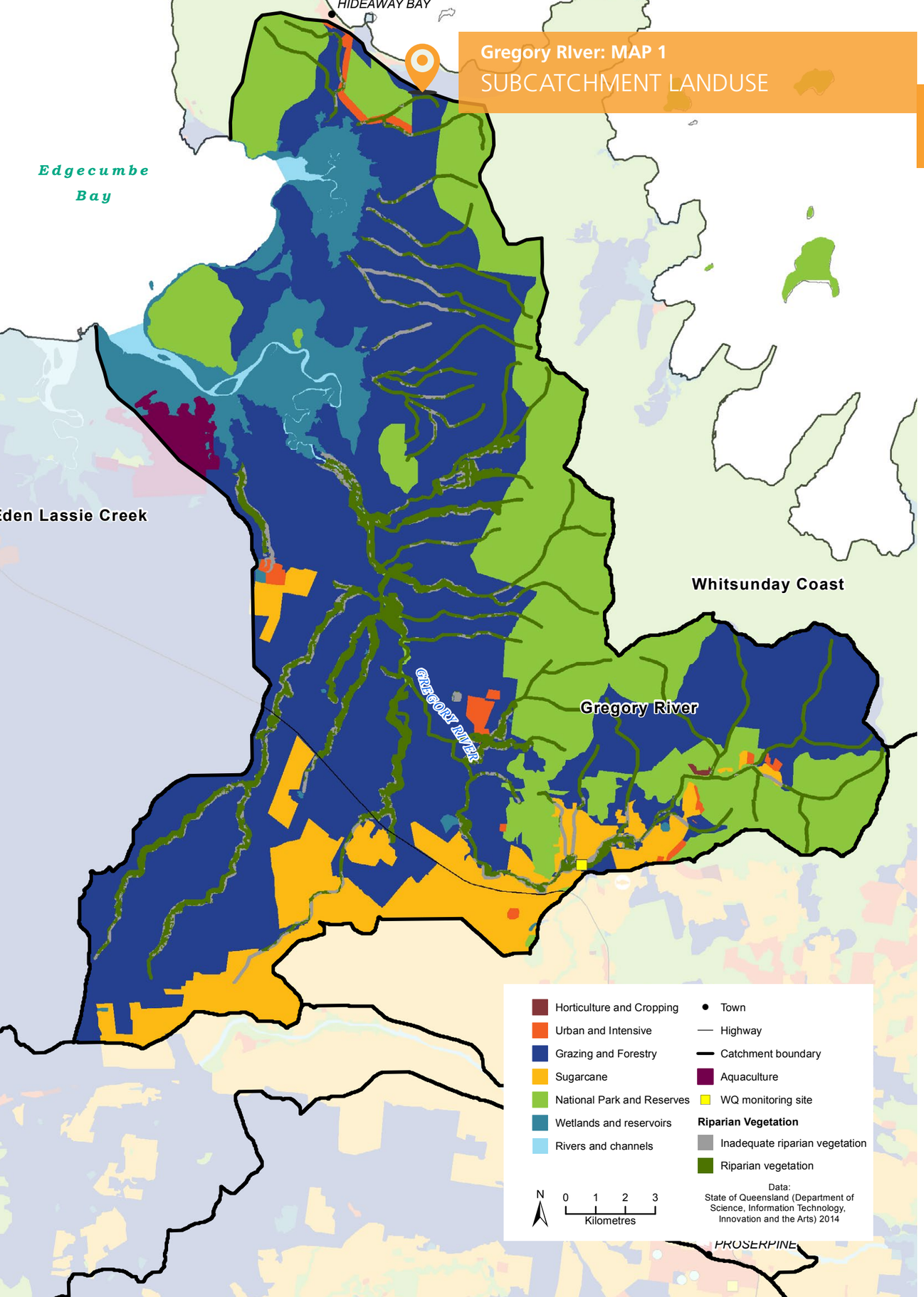
WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

CATCHMENT MANAGEMENT AREA REPORT

2 Gregory River

CATCHMENT MANAGEMENT AREA REPORT

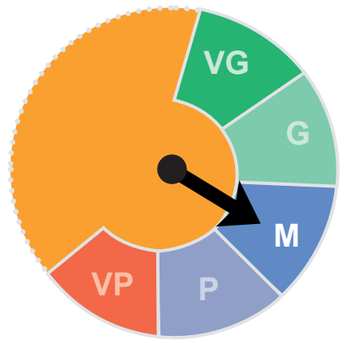
2 Gregory River



Gregory River Ecosystem Health Rating

Very Good | Good | Moderate | Poor | Very Poor

FRESHWATER Ecosystem Health



M

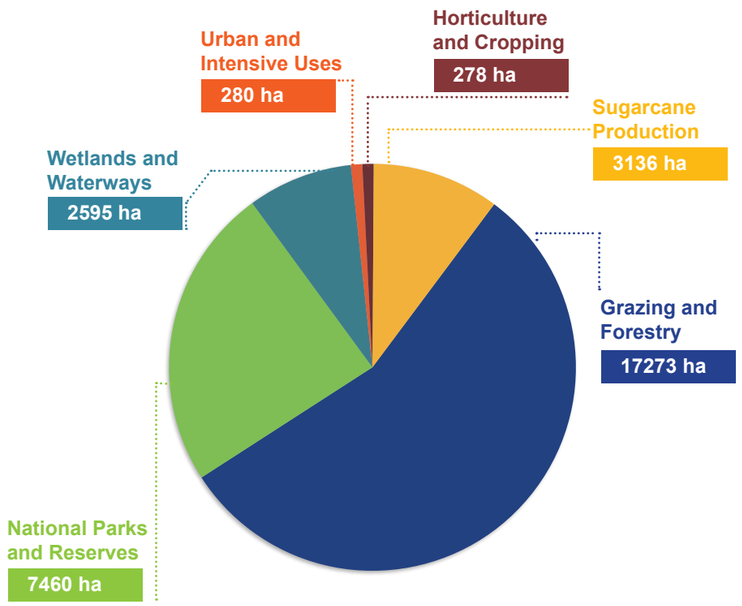
Gregory River **freshwater ecosystem** received an overall score of **Good.**

The Gregory River flows from Dryander National Park to the Declared Fish Habitat and Dugong Protection Area of Edgecumbe Bay. The catchment supports a diverse suite of land uses with 70% under cane, grazing and horticulture while 30% remains uncleared. Recent peri-urban development has replaced some production land.

Grazing and cane management practices that reduce particulate phosphorous loads are the highest priority in the Gregory River catchment. Management practices that reduce other nutrients and residual herbicides are a moderate priority.

System repair actions for flow, instream habitat, riparian vegetation and weed control are the highest priority. A significant increase in investment towards active management and restoration of instream habitat and riparian vegetation is required to enable fish communities to gain the maximum benefits from the improved water quality.

Total Area by Landuse



Total hectares Gregory River subcatchment

31022 ha

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

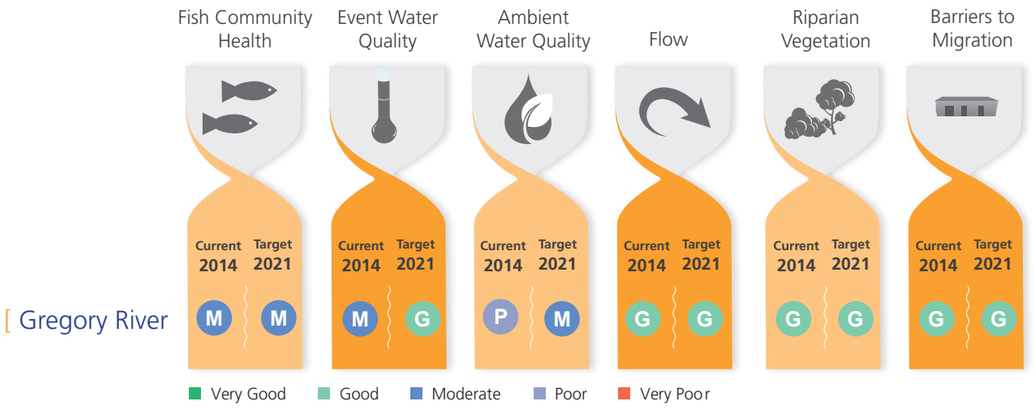


Table 1: OVERVIEW

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
GREGORY RIVER SUB CATCHMENT					
Dissolved Inorganic Nitrogen µg/L	391	300	300	HIGH	CIU
Particulate Nitrogen µg/L	250	250	250	LOW	CIUG
Filterable Reactive Phosphorus µg/L	54	30	30	V HIGH	CIU
Particulate Phosphorus µg/L	56	56	56	LOW	CIUG
Total Suspended Sediment mg/L	41	41	41	LOW	CIUG
Ametryn µg/L	1.26	0.50	0.02	LOW	CIU
Atrazine µg/L	0.06	0.06	0.06	LOW	CIU
Diuron µg/L	0.31	0.25	0.20	HIGH	CIU
Hexazinone µg/L	0.04	0.04	0.04	LOW	CIU
Tebuthiuron µg/L	<LOD	<LOD	<LOD	LOW	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
Gregory River				
Barriers (number)	4	0	L	$0
Riparian Vegetation Management (hectares)	2468 ha	37 ha	H	$462,675
Bank and bed stabilisation (kilometres)	n/a	16 km	H	$1,639,000
In-stream Habitat Works (number)	n/a	4	H	$82,000
Total Cost = $2,183,675				

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.

Tables 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	
GREGORY RIVER SUB CATCHMENT										
Cane & Horticulture	Soil	6%	11%	56%	27%	5%	10%	55%	30%	17
	Nutrient	10%	12%	69%	9%	5%	5%	80%	10%	146
	Herbicide	10%	12%	73%	5%	5%	10%	80%	5%	12
Grazing	Soil	25%	40%	30%	5%	25%	40%	30%	5%	0

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