



WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

CATCHMENT MANAGEMENT AREA REPORT

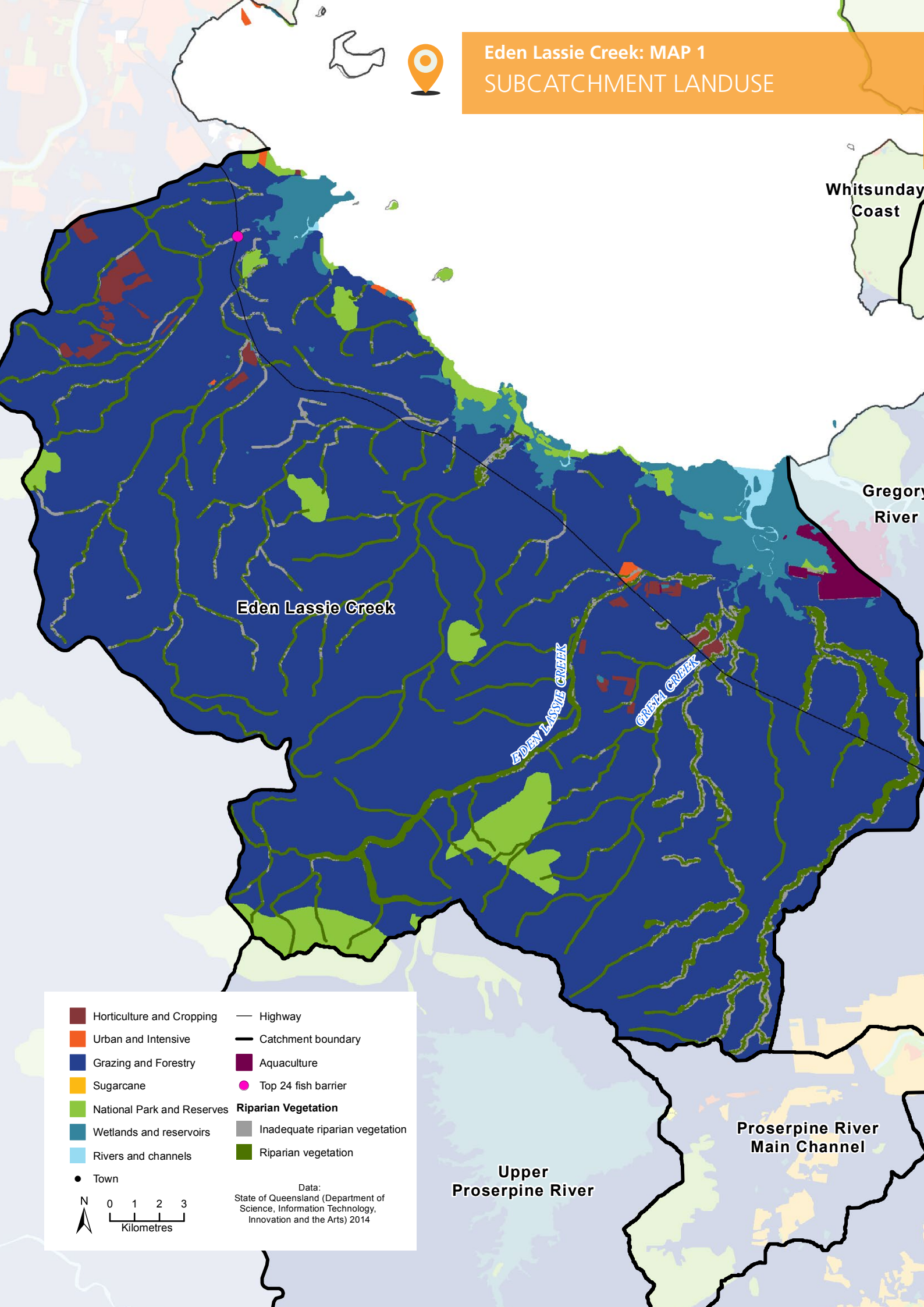
1 Eden Lassie Creek



CATCHMENT MANAGEMENT AREA REPORT

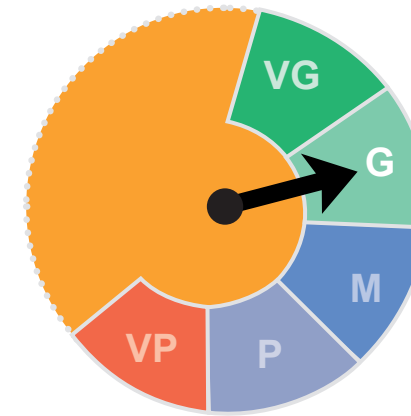
1 Eden Lassie Creek

Eden Lassie Creek: MAP 1
SUBCATCHMENT LANDUSE



Eden Lassie Creek Ecosystem Health Rating

Very Good Good Moderate Poor Very Poor

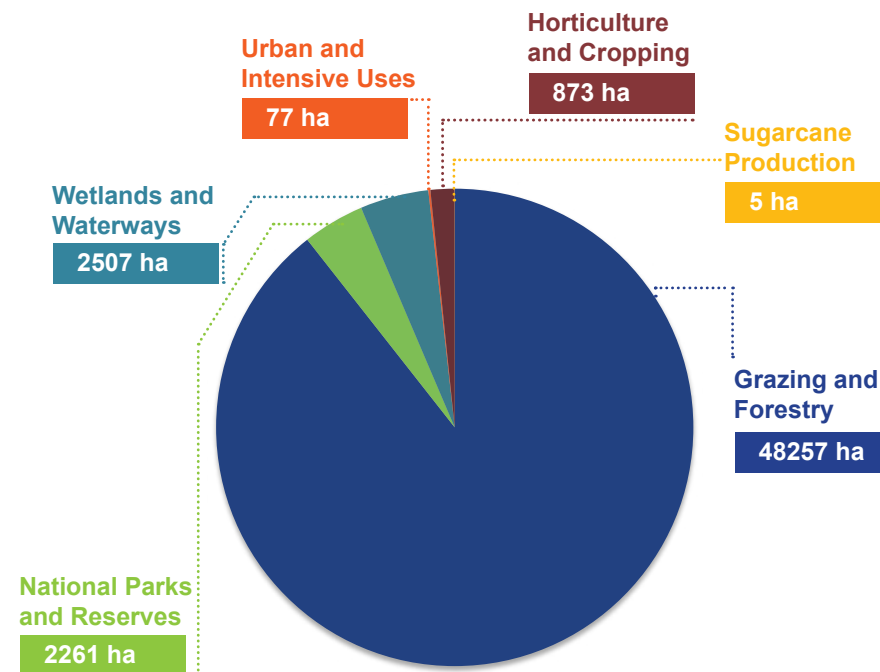


FRESHWATER Ecosystem Health

G

Eden Lassie Creek **freshwater ecosystem** received an overall score of **Good**.

Total Area by Landuse



Total hectares Eden Lassie Creek

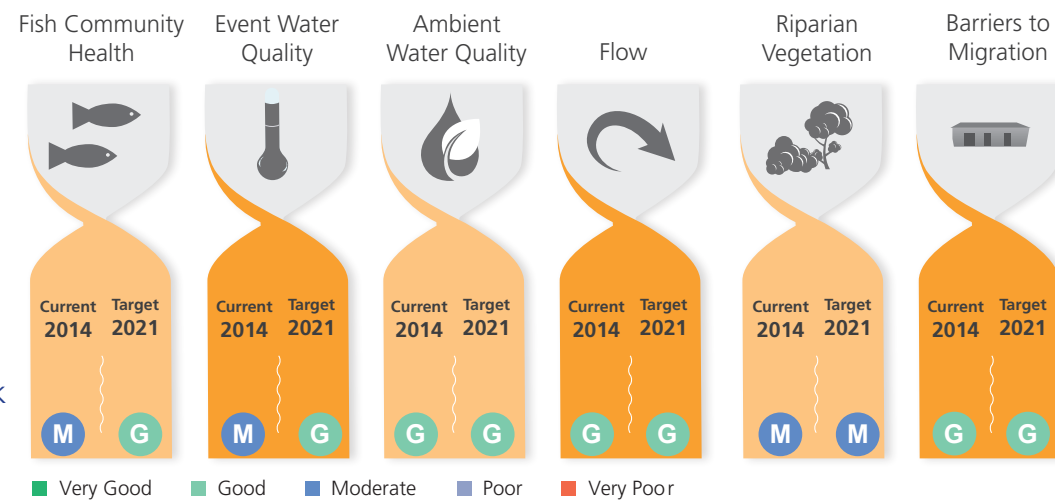
53980 ha

The Eden Lassie Creek catchment is the northern most catchment management area of the Mackay Whitsunday region. The Eden Lassie catchment area drains into the Declared Fish Habitat and Dugong Protection Area of Edgumbe Bay. The catchment is dominated by grazing with some horticulture production.

In 2007, the water quality and ecological health of Eden Lassie Creek catchment area was rated among the highest in the Mackay Whitsunday region, while the estuary condition was moderate.

Grazing management practices that reduce particulate phosphorus loads will continue to be the priority for ongoing improvement in event water quality in Eden Lassie Creek catchment area. Management practices that reduce other nutrients and residual herbicides are a moderate priority. System repair actions for instream habitat, riparian vegetation, barrier removal, mangroves and saltmarsh 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 maximum benefits from improved water quality.

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



Eden Lassie Creek

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
EDEN LASSIE CREEK SUB CATCHMENT					
Dissolved Inorganic Nitrogen µg/L	210	210	210	LOW	CIU
Particulate Nitrogen µg/L	318	264	264	V HIGH	CIUG
Filterable Reactive Phosphorus µg/L	31	31	30	LOW	CIU
Particulate Phosphorus µg/L	72	60	60	V HIGH	CIUG
Total Suspended Sediment mg/L	139	115	115	V HIGH	CIUG
Ametryn µg/L	<LOD	<LOD	<LOD	LOW	CIU
Atrazine µg/L	<LOD	<LOD	<LOD	LOW	CIU
Diuron µg/L	0.07	0.06	0.06	MEDIUM	CIU
Hexazinone µg/L	<LOD	<LOD	<LOD	LOW	CIU
Tebuthiuron µg/L	<LOD	<LOD	<LOD	LOW	G
Tebuthiuron µg/L	<LOD	<LOD	<LOD	LOW	G

Table 2: OVERVIEW

C Cane IU Intensive Uses G Grazing

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
Eden Lassie Creek				
Barriers (number)	6	0	L	\$0
Riparian Vegetation Management (hectares)	4510 ha	68 ha	H	\$845,680
Bank and bed stabilisation (kilometres)	n/a	30 km	H	\$2,995,787
In-stream Habitat Works (number)	n/a	7	H	\$149,789
				Total Cost = \$3,991,256

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	
EDEN LASSIE CREEK SUB CATCHMENT										
Cane & Horticulture	Soil	35%	45%	15%	5%	30%	35%	30%	5%	6
	Nutrient	18%	21%	56%	5%	15%	15%	65%	5%	16
	Herbicide	40%	45%	10%	5%	30%	40%	25%	5%	17
Grazing	Soil	25%	35%	35%	5%	20%	30%	45%	5%	577

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