REEF CATCHMENTS

Healthy Waterways Alliance

Australian Government

WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

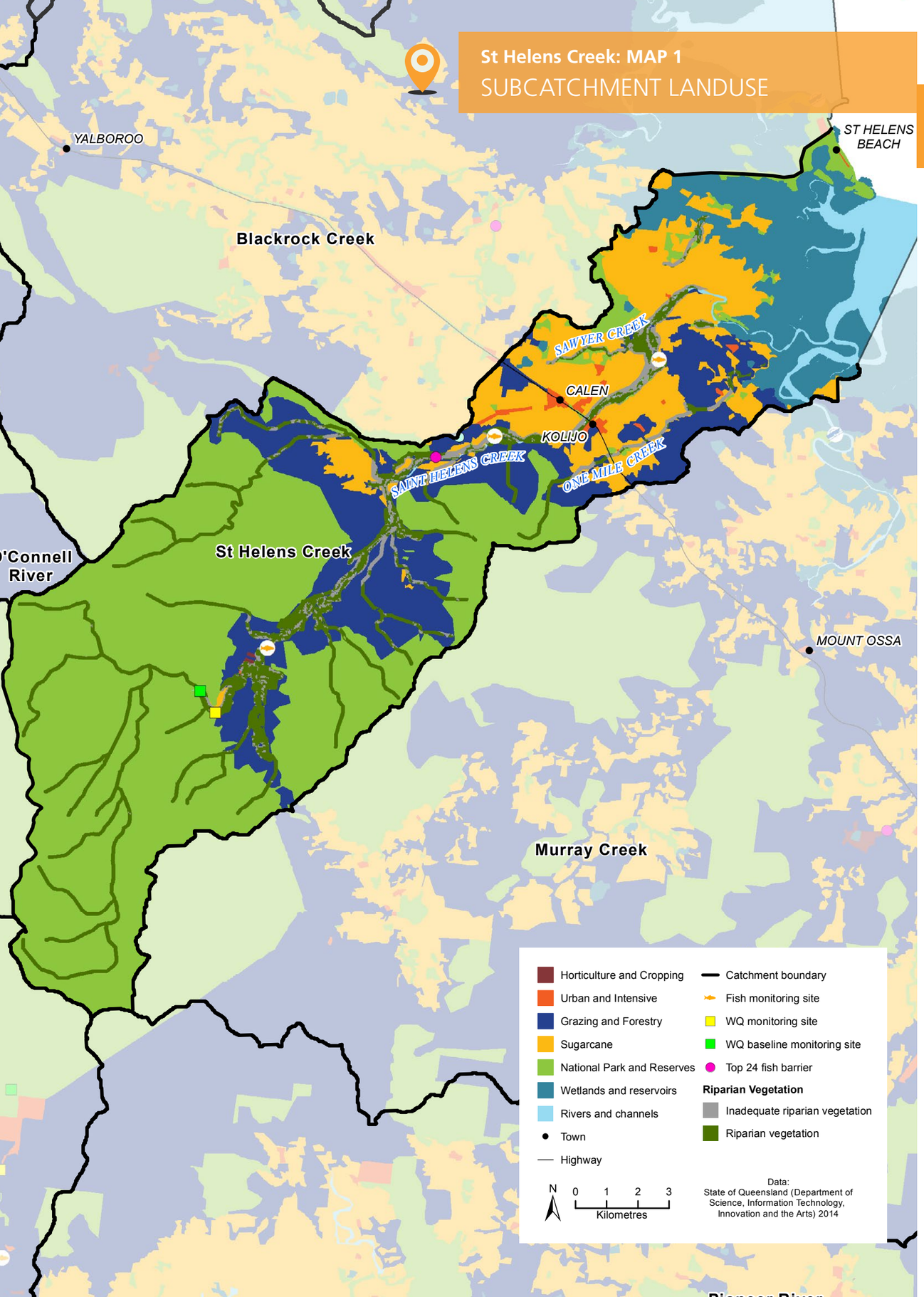
CATCHMENT MANAGEMENT AREA REPORT

14 St Helens Creek

CATCHMENT MANAGEMENT AREA REPORT

14 St Helens Creek

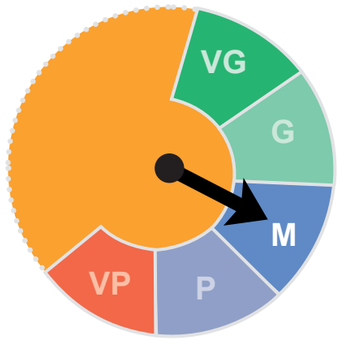
St Helens Creek: MAP 1
SUBCATCHMENT LANDUSE



St Helens Creek Ecosystem Health Rating

Very Good | Good | Moderate | Poor | Very Poor

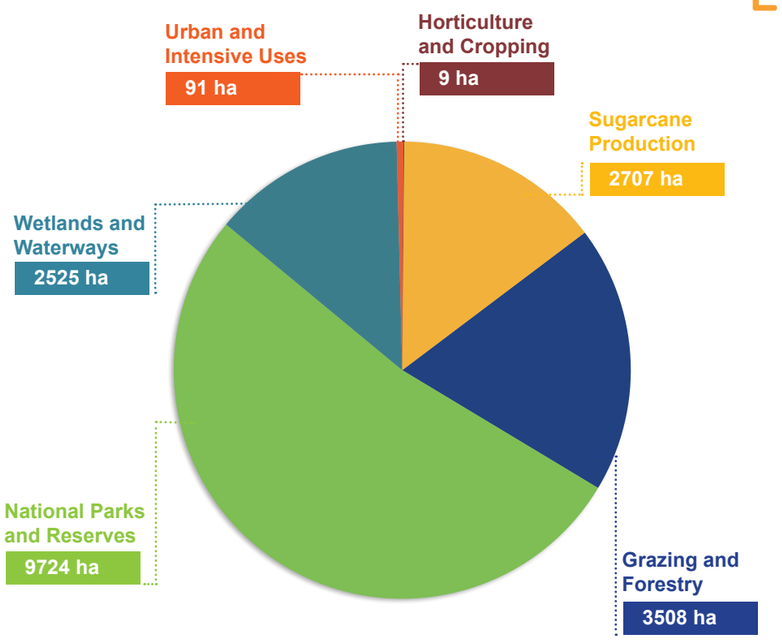
FRESHWATER
Ecosystem Health



M

The St Helens Creek **freshwater ecosystem** received an overall score of **Moderate.**

Total Area by Landuse



Total hectares St Helens Creek
18564 ha

St Helens Creek flows from the forested highlands of Eungella National Park in the Clarke Range west of the township of Calen before entering the coastal plain and joining the estuary of Murray Creek at St Helens Bay. While the upper catchment is protected by National Park and reserves, the lowland areas have been extensively cleared for grazing and cane production, especially along the creek flats.

Grazing and cane management practices that reduce nitrogen loads are the highest priority for continued improvement of event water quality. Management practices that reduce other nutrients and residual herbicides are a moderate priority.

System repair actions for instream habitat and riparian vegetation restoration and connectivity are of the highest priority to enable fish communities to gain the maximum benefits from the improvement in water quality.

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

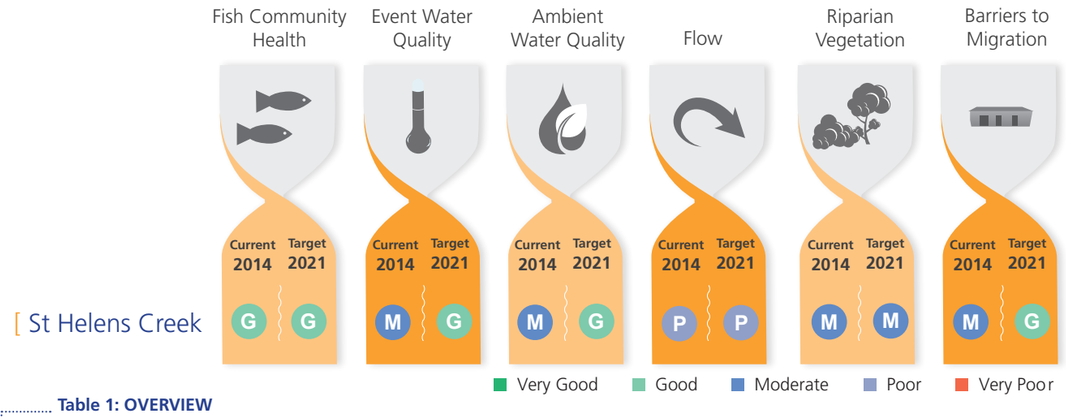


Table 1: OVERVIEW

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
ST HELENS CREEK SUBCATCHMENT					
Dissolved Inorganic Nitrogen µg/L	302	267	267	HIGH	CIU
Particulate Nitrogen µg/L	121	121	121	LOW	CIUG
Filterable Reactive Phosphorus µg/L	26	23	23	HIGH	CIU
Particulate Phosphorus µg/L	33	33	33	LOW	CIUG
Total Suspended Sediment mg/L	45	45	45	LOW	CIUG
Ametryn µg/L	<LOD	<LOD	<LOD	LOW	CIU
Atrazine µg/L	0.05	0.04	0.04	HIGH	CIU
Diuron µg/L	0.51	0.46	0.30	HIGH	CIU
Hexazinone µg/L	0.26	0.23	0.20	HIGH	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
	St Helens Creek			
Barriers (number)	3	1	L	$20,000
Riparian Vegetation Management (hectares)	1384 ha	21 ha	H	$260,000
Bank and bed stabilisation (kilometres)	n/a	9	H	$ 919,000
In-stream Habitat Works (number)	n/a	3	H	$46,000
			Total Cost = $1,245,000	

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 % D	2014 C	2014 B	2014 A	2021 Adoption % D	2021 C	2021 B	2021 A	Total Cost $ '000s
ST HELENS CREEK SUBCATCHMENT										
Cane & Horticulture	Soil	15%	24%	37%	24%	10%	15%	45%	30%	5
	Nutrient	20%	22%	49%	9%	10%	15%	65%	10%	174
	Herbicide	20%	23%	43%	14%	15%	20%	50%	15%	81
Grazing	Soil	25%	37%	33%	5%	25%	35%	35%	5%	13

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