



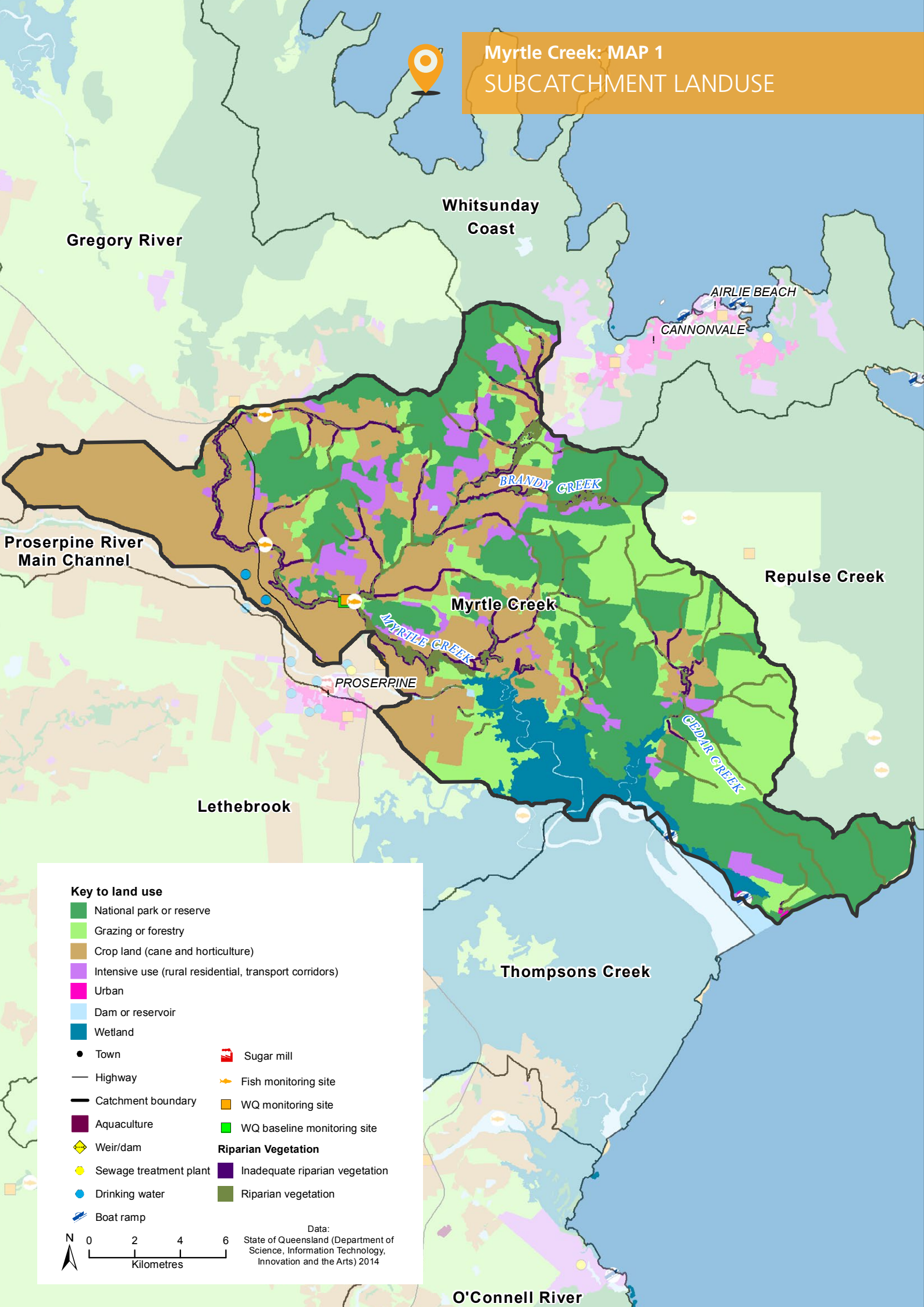
WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

CATCHMENT MANAGEMENT AREA REPORT

5 Myrtle Creek

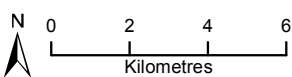


Myrtle Creek: MAP 1 SUBCATCHMENT LANDUSE



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
- Sugar mill
- Highway
- Catchment boundary
- Aquaculture
- Weir/dam
- Sewage treatment plant
- Drinking water
- Boat ramp
- Inadequate riparian vegetation
- Riparian vegetation



Data:
State of Queensland (Department of
Science, Information Technology,
Innovation and the Arts) 2014

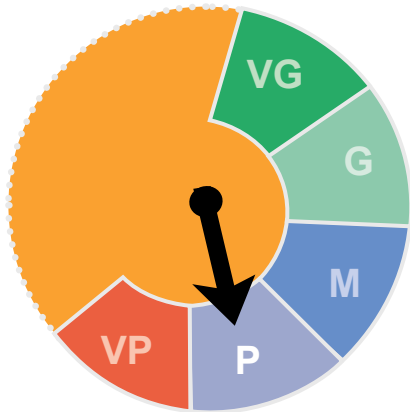
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Myrtle Creek Ecosystem Health Rating

Very Good Good Moderate Poor Very Poor

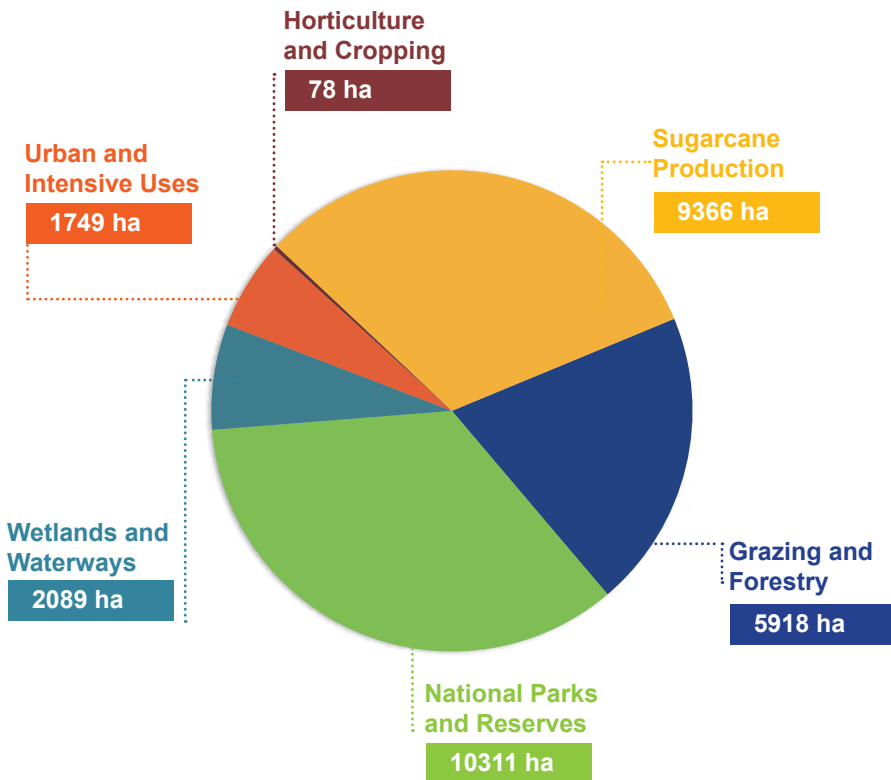


FRESHWATER Ecosystem Health

P

The Myrtle Creek **freshwater ecosystem** received an overall score of **Poor**.

Total Area by Landuse



Total hectares Myrtle Creek

29511 ha

Myrtle Creek captures runoff from the southern edge of Dryander National Park the flows through the area near the Strathdickie township. The creek connects with the lower reaches of the Proserpine River, which enters the sea at Repulse Bay. The catchment is dominated by intensive cropping, with low level of grazing. While the upper reaches still maintain good riparian zones, there has been a high degree of riparian vegetation removal throughout the creek system. Even though large areas are with the National Park reserve, the demands on the natural system of the Myrtle Creek catchment by agricultural production are high, with significant impacts on ecosystem health.

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

All system repair actions that improve fish habitat and species diversity and abundance are critical to improve the poor ecological health rating for the Myrtle Creek catchment area. Riparian vegetation restoration and connectivity is also a high priority to support fish communities and stabilise stream bed and banks for improved water quality.

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

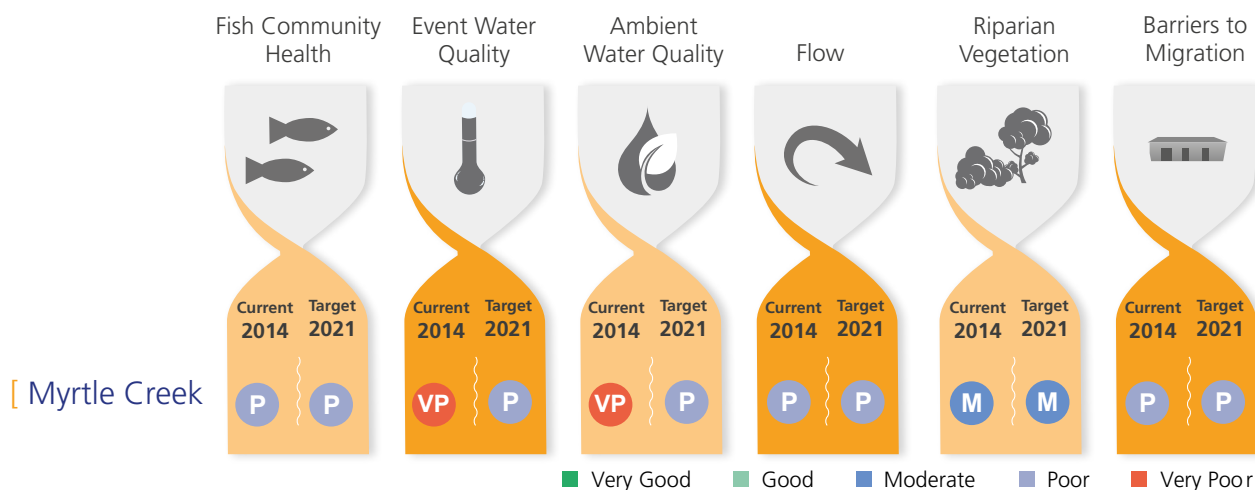


Table 1: OVERVIEW

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
MYRTLE CREEK SUBCATCHMENT					
Dissolved Inorganic Nitrogen µg/L	429	300	300	HIGH	CIU
Particulate Nitrogen µg/L	346	309	300	V HIGH	CIUG
Filterable Reactive Phosphorus µg/L	200	193	30	V HIGH	CIU
Particulate Phosphorus µg/L	125	112	70	V HIGH	CIUG
Total Suspended Sediment mg/L	38	34	34	V HIGH	CIUG
Ametryn µg/L	0.14	0.12	0.10	HIGH	CIU
Atrazine µg/L	1.06	0.94	0.70	HIGH	CIU
Diuron µg/L	2.45	1.50	0.30	HIGH	CIU
Hexazinone µg/L	0.55	0.49	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
Myrtle Creek					
Barriers (number)		25	0	L	\$0
Riparian Vegetation Management (hectares)		2545 ha	0	L	\$0
Bank and bed stabilisation (kilometres)		n/a	0	L	\$0
In-stream Habitat Works (number)		n/a	0	L	\$0
Total Cost = \$0					

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 and 5: OVERVIEW

The tables below display 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	
MYRTLE CREEK SUB CATCHMENT										
Cane & Horticulture	Soil	3%	11%	39%	46%	5%	5%	45%	45%	0
	Nutrient	9%	16%	59%	16%	5%	5%	70%	20%	561
	Herbicide	20%	25%	43%	12%	5%	10%	70%	15%	1082
Grazing	Soil	25%	40%	30%	5%	15%	35%	45%	5%	126

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

Table 5 Urban Practice ABCD Adoption Targets

Land Use		2014 Adoption %				2021 Adoption %				Total Cost \$ '000s
		D	C	B	A	D	C	B	A	
MYRTLE CREEK SUBCATCHMENT										
Diffuse Source Water Quality - DEVELOPMENT PLANNING AND CONSTRUCTION PHASE		20%	80%	0%	0%	0%	50%	40%	10%	1246
Diffuse Source Water Quality - POST-CONSTRUCTION/ OPERATIONAL PHASE		15%	85%	0%	0%	0%	50%	40%	10%	1246

D Dated practices C Conventional practices B Best practices A Aspirational