8 Thompson Creek

REEF CATCHMENTS

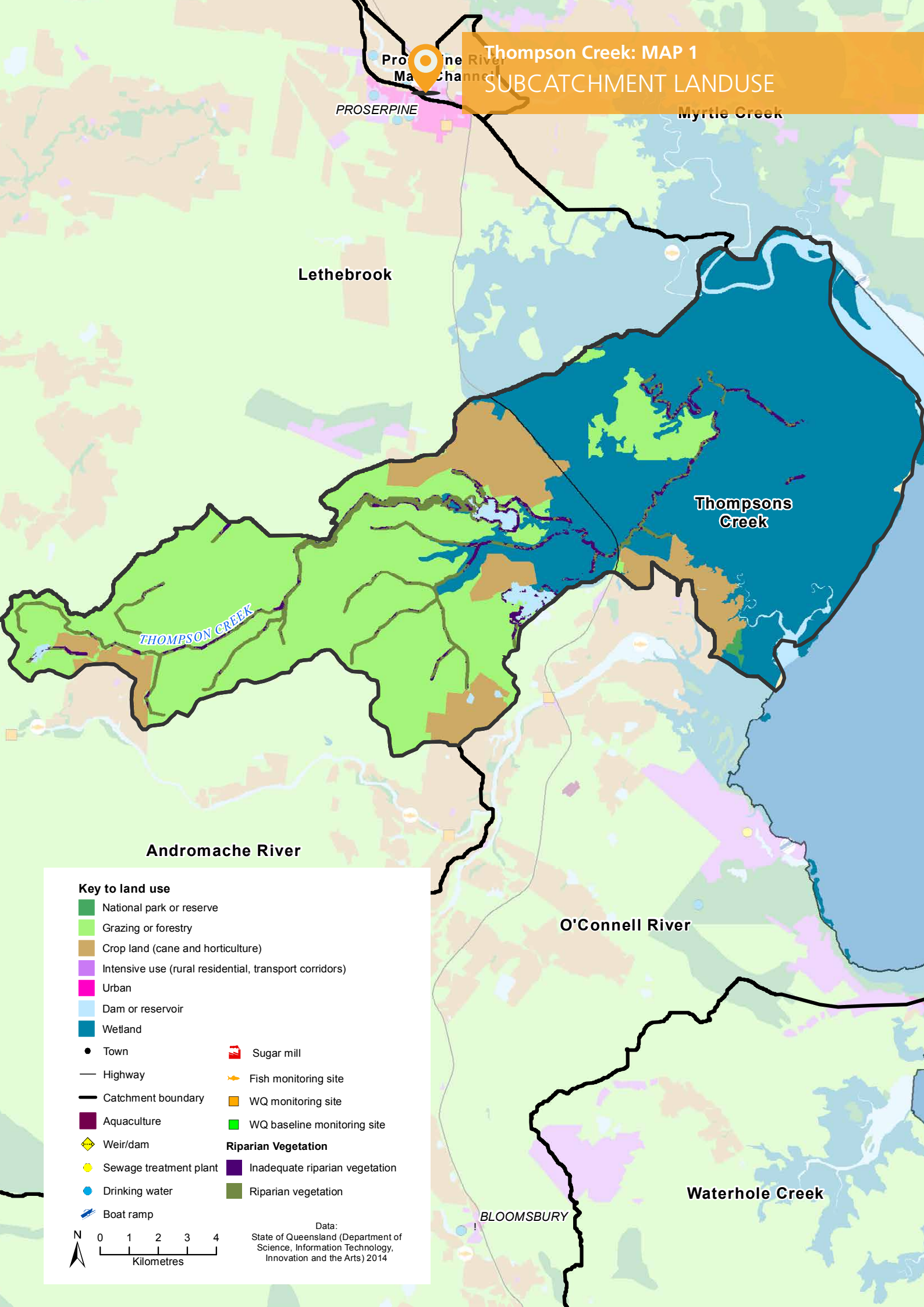
Healthy Waterways Alliance

Australian Government

WATER QUALITY IMPROVEMENT PLAN 2014 - 2021

CATCHMENT MANAGEMENT AREA REPORT

8 Thompson Creek


Thompson Creek: MAP 1
SUBCATCHMENT LANDUSE
PROSERPINE
Myrtle Creek
Lethebrook
Thompsons Creek
THOMPSON CREEK
Andromache River
O'Connell River
Waterhole Creek
BLOOMSBURY
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 4
Kilometres
Data:
State of Queensland (Department of Science, Information Technology, Innovation and the Arts) 2014

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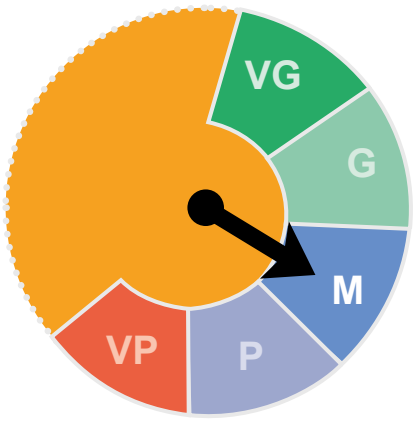
Thompson Creek Ecosystem Health Rating

Very Good | Good | Moderate | Poor | Very Poor

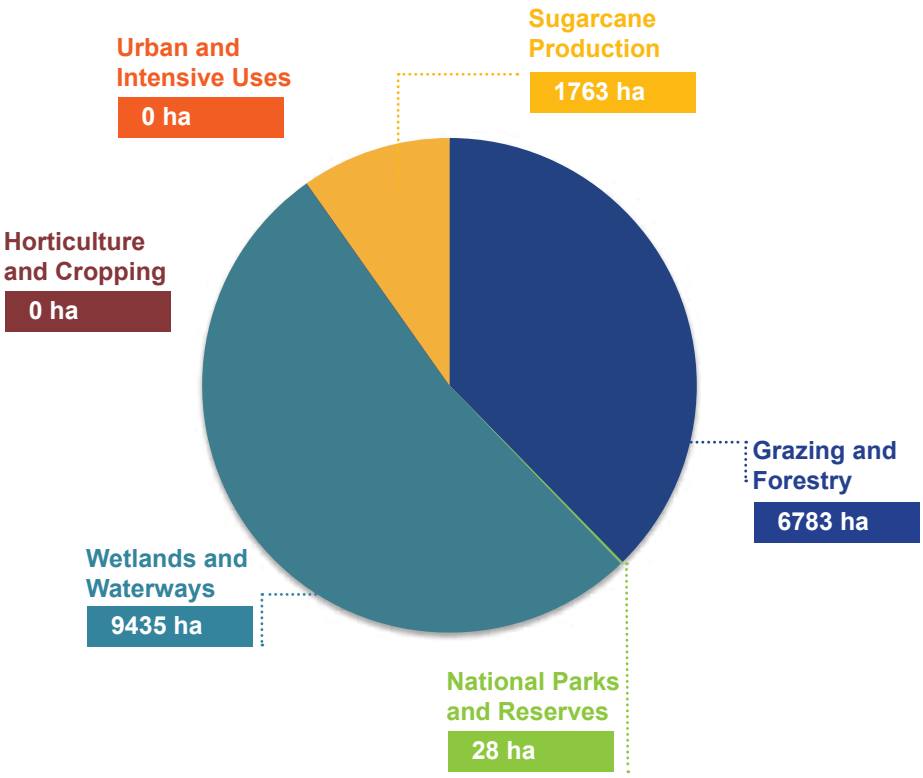
FRESHWATER
Ecosystem Health



M

Thompson Creek **freshwater ecosystem** received an overall score of **Moderate.**

Total Area by Landuse



Total hectares Thompson Creek

18009 ha

The Thompson Creek catchment area includes the Nationally Significant Goorganga Plains Wetland Complex. This seasonal wetland covers more than 16,000 hectares and is habitat for a diversity of significant flora and fauna as well as providing a nursery for recreational and commercial fisheries. Beyond the wetlands almost 40% of the catchment supports grazing with an additional 10% under cane production.

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

Highest priority system repair actions should be planned to improve flow in wetland areas, restore mangroves and saltmarsh for fishery productivity and remove instream barriers. Restoration of instream habitat to support improved bed and bank stability are also important future activities for the ecological health of the catchment.

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

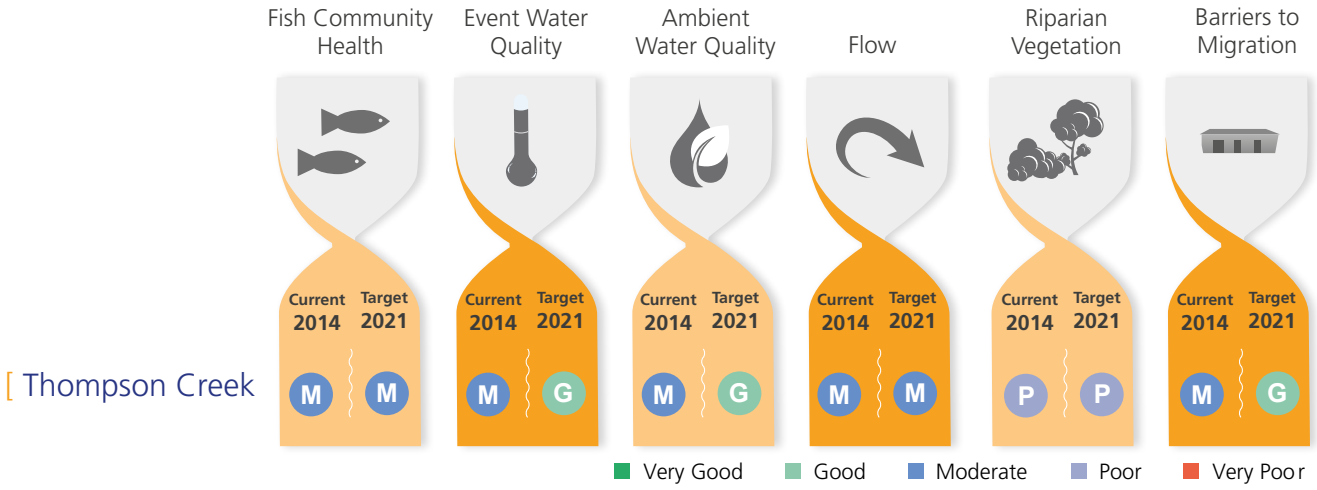


Table 1: OVERVIEW

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
THOMPSON CREEK SUBCATCHMENT					
Dissolved Inorganic Nitrogen µg/L	356	303	300	V HIGH	CIU
Particulate Nitrogen µg/L	66	66	66	LOW	CIUG
Filterable Reactive Phosphorus µg/L	37	30	30	V HIGH	CIU
Particulate Phosphorus µg/L	15	15	15	LOW	CIUG
Total Suspended Sediment mg/L	22	22	22	LOW	CIUG
Ametryn µg/L	<LOD	<LOD	<LOD	LOW	CIU
Atrazine µg/L	0.18	0.15	0.15	V HIGH	CIU
Diuron µg/L	0.56	0.46	0.30	V HIGH	CIU
Hexazinone µg/L	0.20	0.17	0.17	V HIGH	CIU
Tebuthiuron µg/L	<LOD	<LOD	<LOD	LOW	G

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
	Thompson Creek			
Barriers **(number)**	5	1	L	$80,000
Riparian Vegetation Management **(hectares)**	599 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 = $80,000	

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 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	
THOMPSON CREEK										
Cane & Horticulture	Soil	18%	29%	49%	5%	15%	25%	50%	10%	0
	Nutrient	20%	34%	41%	5%	10%	20%	65%	5%	165
	Herbicide	20%	34%	41%	5%	15%	25%	55%	5%	97
Grazing	Soil	25%	39%	31%	5%	25%	35%	35%	5%	0

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