

WET TROPICS REGION

Mulgrave-Russell catchment water quality targets

Catchment profile

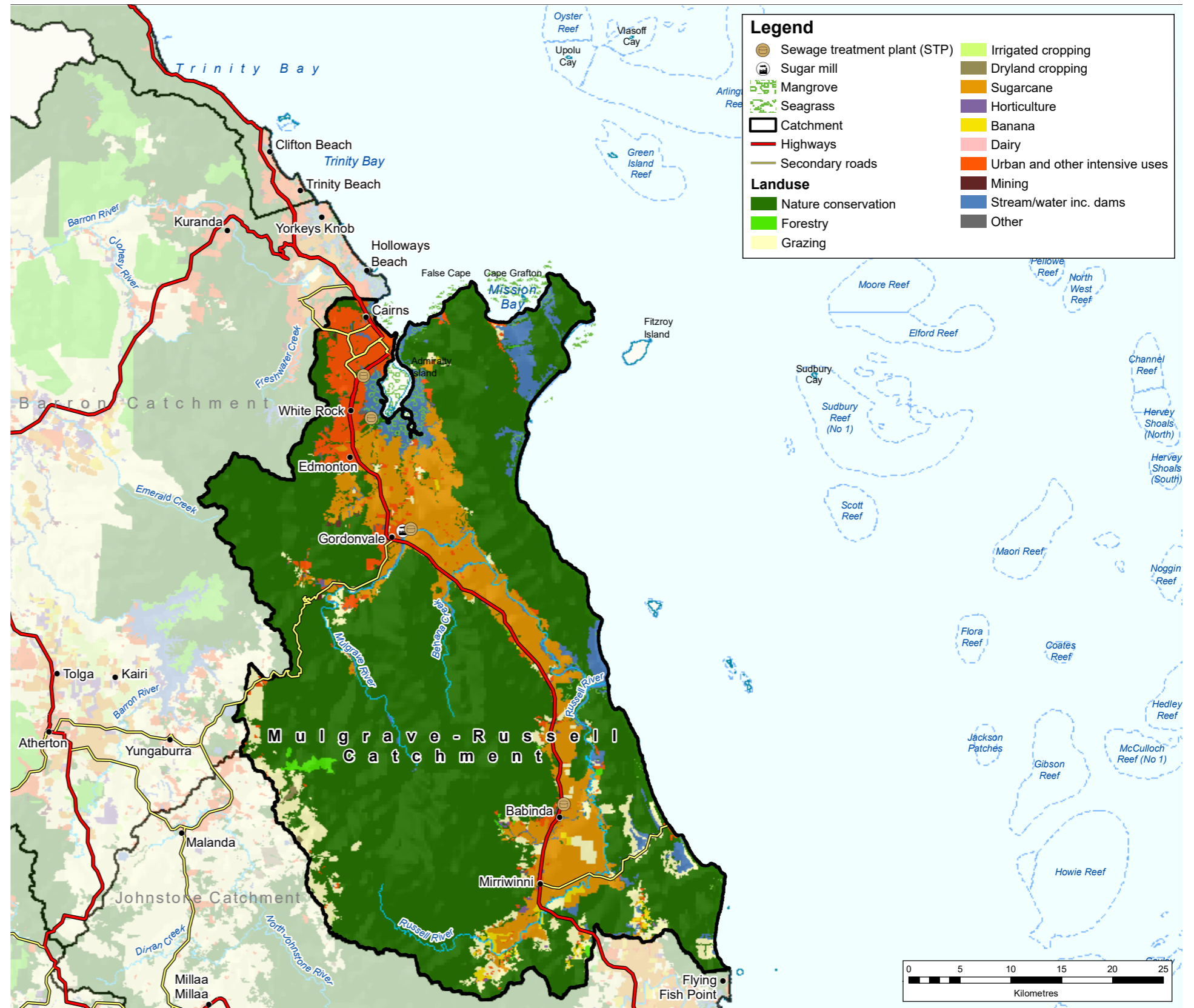
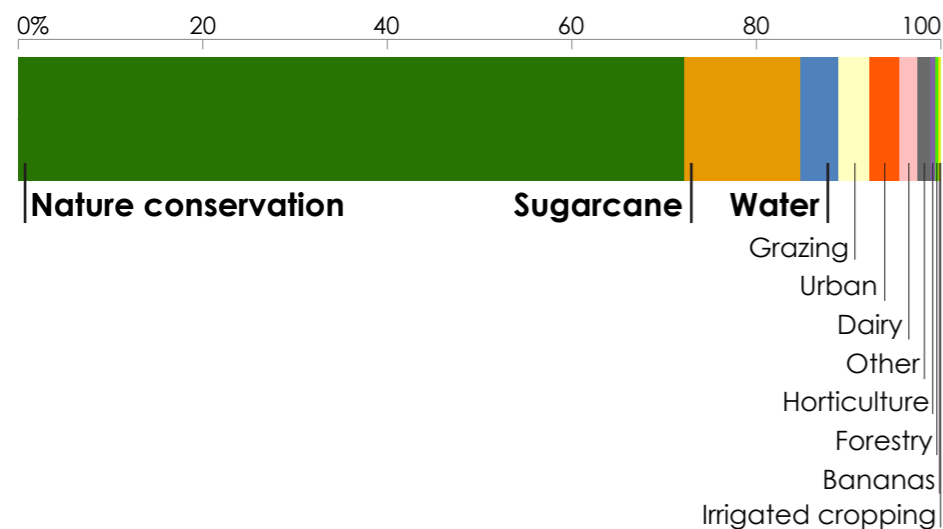
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Mulgrave-Russell catchment covers 1983 km² (9% of the Wet Tropics region). Rainfall averages 3239 mm a year, which results in river discharges to the coast of about 4243 GL each year.

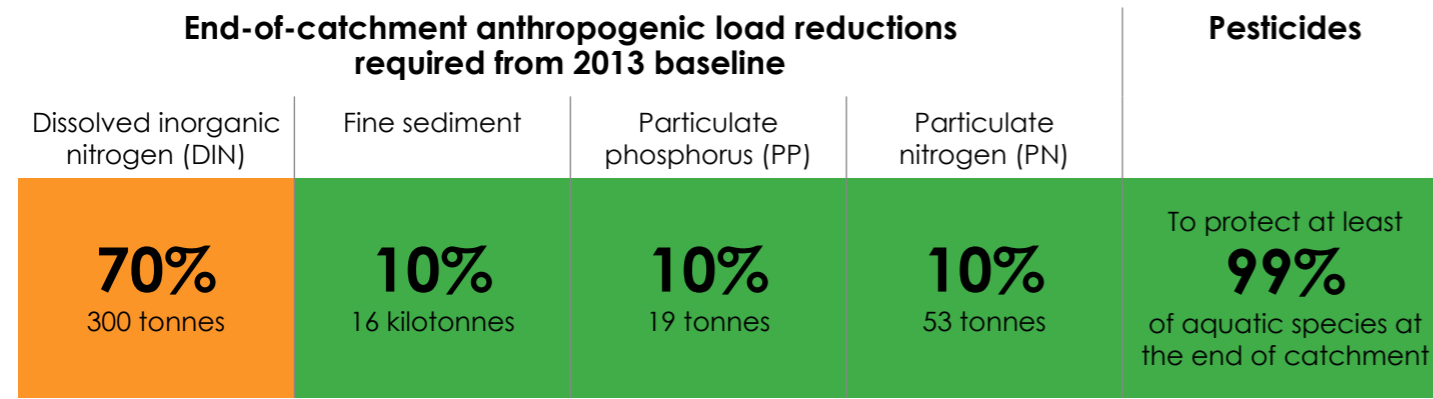
The Mulgrave-Russell catchment sits in the central section of the Wet Tropics region, located along the coastal plain south of Cairns. The catchment is divided into two major sub-catchments that join together close to the coast, the Mulgrave River in the north and the Russell River in the south, and a number of smaller creeks that flow into Trinity Inlet or directly to the coast. The upper catchment is in the relatively undisturbed rainforest environments of the Bellenden Ker Range. A small portion of the upper catchment is on the edge of the developed agricultural area of the Atherton Tableland. The lowland reaches of the two catchments flow through the floodplains of a river valley dominated by sugarcane farms. The northern section of the Mulgrave-Russell includes the city of Cairns and Trinity Inlet.

Land uses in the Mulgrave-Russell catchment

The main land uses are nature conservation (72%), sugarcane (13%), and water (4%).



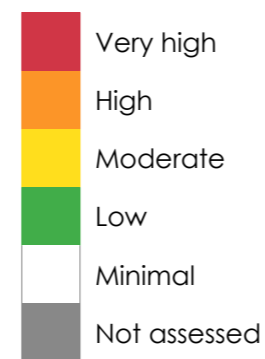
2025 water quality targets and priorities



The 2025 targets aim to reduce the amounts of fine sediments, nutrients (nitrogen and phosphorus) and pesticides flowing to the reef. Each target for sediment and nutrients is expressed as: (a) the percentage load reduction required compared with the 2013 estimated load of each pollutant from the catchment; and (b) the load reductions required in tonnes. Progress made since 2013 will count towards these targets. [Previously reported](#) progress between 2009 and 2013 has already been accounted for when setting the targets. The pesticide target aims to ensure that concentrations of pesticides at the end of each catchment are low enough that 99% of aquatic species are protected. The targets are ecologically relevant for the Great Barrier Reef, and are necessary to ensure that broadscale land uses have no detrimental effect on the reef's health and resilience.

A high percentage reduction target may not necessarily mean it is the highest priority. The priorities (ranked by colour) reflect the relative risk assessment priorities for water quality improvement, based on an independent report, the [2017 Scientific Consensus Statement](#). The priorities reflect scientific assessment of the likely risks of pollutants damaging coastal and marine ecosystems.

Water quality relative priority



Modelled water quality pollutant loads

Of the Wet Tropics catchments, the Mulgrave-Russell contributes the third largest loads of anthropogenic dissolved inorganic nitrogen and fine sediment from sugarcane. The Mulgrave-Russell is also one of the five highest contributors for dissolved inorganic nitrogen of all catchments draining to the Great Barrier Reef.

Dissolved inorganic nitrogen



Fine sediment



Types of sediment erosion



Australian Government



Queensland Government