MACKAY WHITSUNDAY REGION

Plane catchment water quality targets

Catchment profile

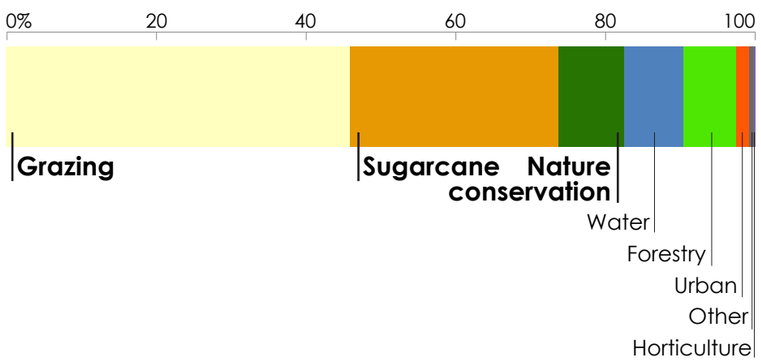
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

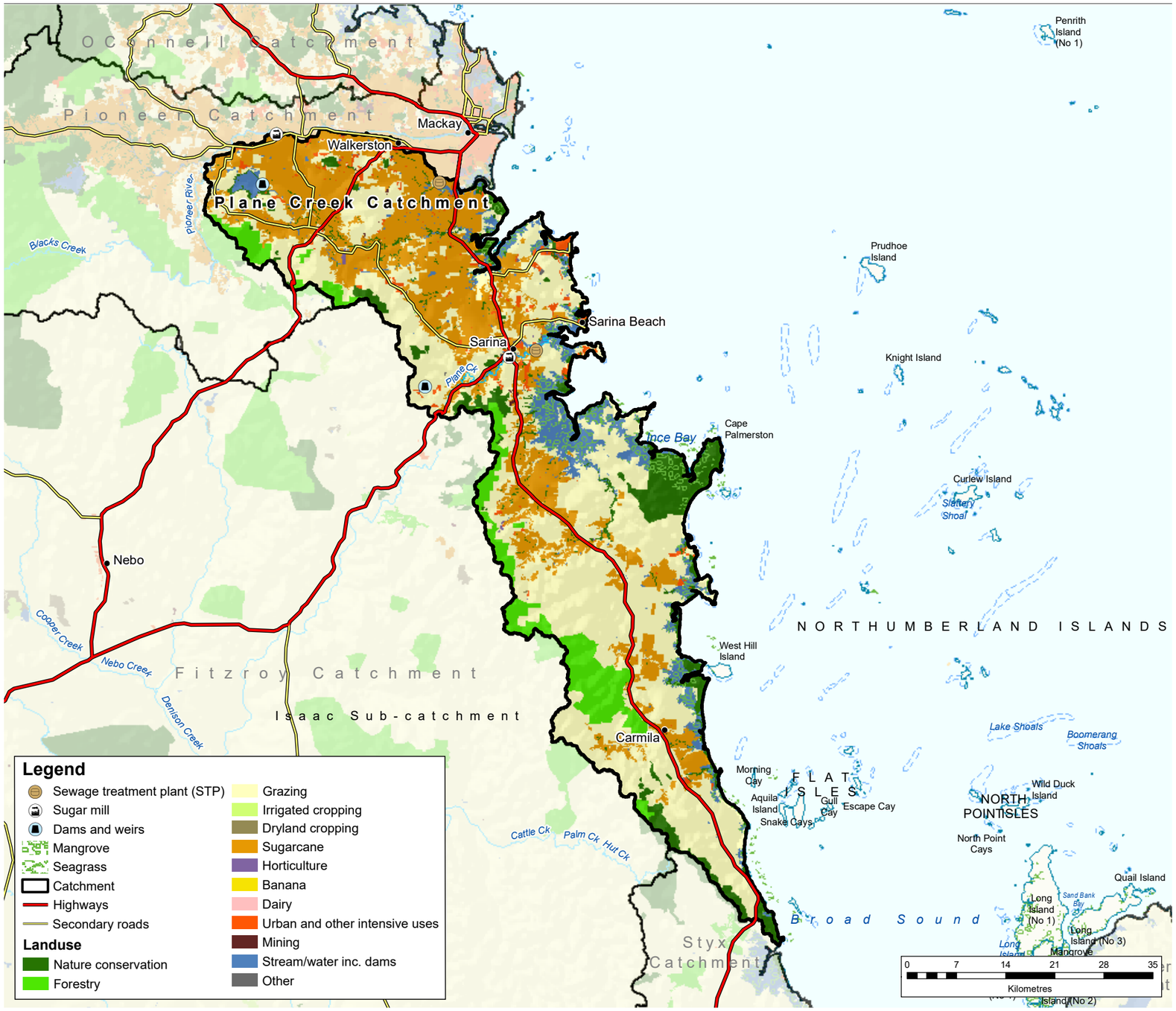
The Plane catchment covers 2539 km^2 (28% of the Mackay Whitsunday region). Rainfall averages 1526 mm a year, which results in river discharges to the coast of about 1261 GL each year.

The Plane catchment occupies the southern section of the Mackay Whitsunday region. It is bordered by the Connors Range in the west and encompasses a number of small sub-catchments that flow straight to the coast. The Plane catchment has the highest area of sugarcane farming across the Mackay Whitsunday region, and this is found primarily in the northern sub-catchments of Sandy, Bakers and Alligator creeks. Further south, the land use becomes dominated by grazing, although sugarcane is still widespread throughout. There are also small areas of forestry and conservation in the catchment. The major township of Sarina is situated on the lower part of Plane Creek. The other sub-catchments are distributed south along the coast from Rocky Dam Creek to Cape, Marion, Flaggy Rock and Carmila creeks, which drain into the Sarina Inlet, Ince Bay and Carmila Coast receiving waters.

Land uses in the Plane catchment

The main land uses are grazing (46%), sugarcane (28%), and nature conservation (9%).





2025 water quality targets and priorities

End-of-catchment anthropogenic load reductions required from 2013 baseline				Pesticides
Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)	
70% 260 tonnes	**maintain current load**	**maintain current load**	**maintain current load**	To protect at least **99%** of aquatic species at the end of catchment

The 2025 targets aim to reduce the amounts of fine sediments, nutrients (nitrogen and phosphorus) and pesticides flowing to the reef. Where there are minimal anthropogenic pollutant loads, the aim is to maintain current water quality so there are no increases in loads. 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.

Water quality relative priority

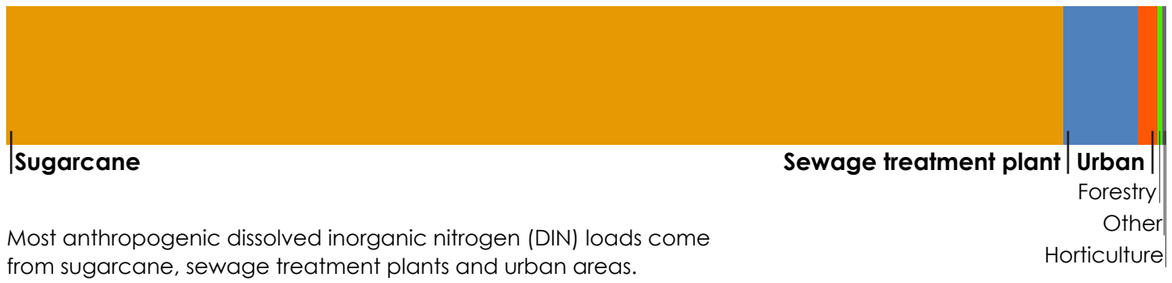
- Very high
- High
- Moderate
- Low
- Minimal
- Not assessed

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.

Modelled water quality pollutant loads

Of the Mackay Whitsunday catchments, the Plane contributes the largest loads of anthropogenic dissolved inorganic nitrogen, mostly from sugarcane.

Dissolved inorganic nitrogen



Most anthropogenic dissolved inorganic nitrogen (DIN) loads come from sugarcane, sewage treatment plants and urban areas.