

WTL-MC 1: Rehabilitate and Reinststate Wetlands on Marginal Cane Land in the Mulgrave Catchment

In collaboration with landholders, construct large-scale wetland treatment systems in the Mulgrave Catchment to reduce nutrient and sediment discharge.

This strategy delivers on these Regional Themes	Biodiversity	Biosecurity	Coastal Systems	Sustainable Industries	Water
	✓		✓	✓	✓
This strategy delivers on these Strategic Outcomes	Supportive policies, plans and regulations	Collaborative, adaptive planning and action	Traditional Owner benefits	Sustained and diverse resourcing	Community stewardship, values and action
		✓			✓

Outcome	<p>Working collaboratively with landholders to identify marginal cane land for the construction of wetland treatment systems will:</p> <ul style="list-style-type: none"> ▪ Reduce discharge of nutrients and sediment from the system, improving water quality downstream and in the Great Barrier Reef lagoon. ▪ Improve aquatic environments within the system. ▪ Improve riparian connectivity within the local area.
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Justification	<p>High levels of nutrients and sediments in waterways can significantly impact on water quality and the health of the Great Barrier Reef. Treating farm runoff water before it leaves the property, in particular denitrification of surface and ground water, can help reduce nutrient and sediment levels, resulting in important improvements to water quality and reef health. Using a collaborative approach with landholders and incorporating education around farming practices to improve water quality will assist with farmer buy-in to the project, which will be essential for accessing land for the construction of large-scale wetlands.</p>
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Key steps	<ol style="list-style-type: none"> 1) Collaborate with landholders to identify marginal cane land areas suitable for wetland reinstatement. 2) Develop management plan for identified areas to design the whole system, including bioreactors, drains, wetland systems, etc. 3) Construct large-scale (>10ha) treatment wetland systems in the clay soils in agreed locations, ensuring treatment systems are designed correctly, using a “treatment train” approach for nutrients. 4) Plan and conduct revegetation of the channels / drains leading into lagoon. 5) Conduct a BMP program for farming practices.
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Feasibility considerations	<ul style="list-style-type: none"> ✓ Strong local community landcare group with good capacity and relationships with landholders. ✓ There are areas of marginal cane land which would be suitable for the construction of wetland treatment systems, without significantly affecting farm productivity. ✓ There are heavy clay soils in some low-lying parts of the Mulgrave Catchment which would provide opportunities for constructed treatment systems such as wetlands. ✓ There are many supportive landholders in the area. ✗ Detailed research and management planning required to identify potential locations and determine feasibility of wetland reinstatement. ✗ Need to determine if sufficient land is available within farming systems for establishment of large-scale lagoons. ✗ Need to ensure works do not increase flood risk in local area and system.
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