

# SYSTEMS REPAIR FUNDING INCREASES IRRIGATION CAPACITY



Rehabilitation works at Shane Cowley's property, Bakers Creek. Shane has been able to increase the on-farm water supply available for cane farm irrigation by installing a sediment detention basin and second flush chamber directly upstream from his wetland.

## **Systems Repair funding increases irrigation capacity and helps improve water quality entering local waterways.**

Bakers Creek sugarcane grower, Shane Cowley, has been able to increase the on-farm water supply available for cane farm irrigation by installing a sediment detention basin and second flush chamber directly upstream from his wetland, which flows into Bakers Creek.

With assistance from the Australian Government Reef Programme (Systems Repair), Shane was able to build a 1 ML first flush detention basin that catches most of the sediment in the runoff water entering his farm.

A second flush chamber was also created, consisting of a shallow macrophyte (sedges) zone for filtering nutrients and fine sediment from the water. The second flush chamber features a 3 ML waterhole at its end to supply irrigation water.

The water flows over a rock weir at the end of the waterhole into Shane's wetland, ensuring cleaner re-oxygenated water entering the wetland.

The project has been successful, and is set to deliver both environmental and production benefits. An auto-sampler has been installed at the entry and exit to measure change in nutrient, sediment and pesticide loads. Early results indicate that the system is already delivering good outcomes.

"The auto-sampler will enable us to monitor the improvement that this project has had on improving water quality. It is early days and the wetland will only improve in its ability to clean the water as the macrophyte zone increases in density and the biofilms develop" said Chris Dench, Reef Catchments healthy waterways project officer.

"However early results from after the first wet season have been encouraging, showing some herbicide concentrations being reduced by 50%."

Landholder Shane Cowley said in addition to delivering significant environmental and ecosystem benefits, the system was providing good operation and production outcomes.

"This extra water means that I can irrigate those nearby cane blocks several more times each year and significantly increase their production, as well as improving the water quality for my wetland and the Great Barrier Reef Lagoon," Shane said.

A rock ramp fishway was incorporated at the exit of the wetland, enabling both scour protection and fish connectivity with downstream habitats. Shane is also a keen fisherman and hopes the fishway will help attract barramundi into the wetland.

Reef Programme Systems Repair project funding available to farmers is an additional source of funding, separate from the Reef Programme water quality grants (formerly Reef Rescue).

Reef Catchments worked together with Shane on this project to provide help with the system design and funding for up to 50 per cent of the costs. The wetland has also been revegetated with native plants to restore habitat and connectivity.

This additional source of funding for water reuse structures is only available in priority Sub Catchments of the Pioneer River Main Channel, Sandy and Bakers Creek due to funding restrictions.

**To find out if you are eligible and for more information on other activities throughout Mackay and the Whitsundays, contact Peter Muller from Reef Catchments on 0437 640 186 or email [peter.muller@reefcatchments.com](mailto:peter.muller@reefcatchments.com) .**

**ENDS**

**IMAGES (originals attached).**

The below images show the project at various stages of implementation.

**IMG 1 - 4: Revegetation, fishway construction and wetland restoration October 2014. #**

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IMG 5 & 6: Revegetation and wetland restoration May 2015. #



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**IMG 7:** Autosampler.



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