

AN OPPORTUNITY TO MAKE A DIFFERENCE

This project provides a number of opportunities including:

- Increasing capacity in Gunbower Creek to ensure all customers can access water during peak demand
- Securing long-term supply and improving water quality for Cockatoo Lagoon irrigators; and
- Maintaining and restoring the ecological values of Cockatoo Lagoon.

We are focused on working with the local community to develop a plan that will restore and protect Cockatoo Lagoon. If the lagoon no longer needs to be part of the irrigation system there is an opportunity to address threats and improve the Lagoon's health for the future. This project provides an opportunity to look at how the water is managed in the lagoon and more broadly at the health of the lagoon and what management actions can be taken, such as weed, fox and carp control. We are keen to learn from the community about how they think the health of the lagoon can be improved and ensure it can continue to be a community asset and tourism drawcard.



SECURING THE FUTURE OF COCKATOO LAGOON



Figure 1 Cockatoo Lagoon in 1996 (left, photo by Shirley and Douglas, 1996), and the same location in 2013 (right, photo by L. Rogers, North Central CMA), showing significant retreat of native vegetation and pale yellow waterlily expansion.

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Cockatoo Lagoon is a natural billabong of the Gunbower Creek. Before European occupation, water levels in Cockatoo Lagoon would have fluctuated with wet and dry periods. A permanent pool was most likely retained in the deeper sections, with total drying occurring in periods of extended drought. Since the 1920s, Cockatoo Lagoon has been used as part of the Gunbower Creek irrigation system. This has impacted upon the health of the Lagoon. The Lagoon is silting up and no longer supports as many freshwater catfish, turtles or platypus.

A LAGOON IN DECLINE

Recent ecological investigations have shown Cockatoo Lagoon is in a state of significant decline. The lagoon has lost many of its native species, including reduced numbers of freshwater catfish, turtles and platypus, and is dominated by the aquatic weed pale yellow water lily. A century of operating the system to allow irrigation has also resulted in Cockatoo Lagoon silting up, causing it to shallow out, making it harder to pump from in some places, and allowing pale yellow water lily to flourish. As time goes on, the silt problem is only going to get worse, making it harder, and more costly, to access water for irrigation and providing more area for aquatic weeds, like the pale yellow water lily, to flourish.



A CREEK UNDER STRESS

Gunbower Creek is a natural waterway and therefore is constantly changing. Use of the creek to deliver water for irrigation for more than 100 years, and more recently for the environment, has impacted changes in the creek such as erosion and sediment transportation. These changes to the creek limit the ability to pass large volumes of water. Goulburn-Murray Water (GMW) is currently managing the creek at a maximum flow of approximately 800 ML/day. This volume is not enough to deliver the full suite of demands that may be placed on the creek, including all irrigation allocations even in the absence of environmental water needs. This means that **during peak demand periods, water in the creek may need to be rationed.** It also means that water may not be delivered to Gunbower Forest during spring when it would have naturally flooded, and that flows down the creek that promote Murray cod spawning may go unmet, putting at risk optimum conditions for breeding.

The North Central CMA and Goulburn-Murray Water (GMW) have identified a number of constraints along Gunbower Creek and have been investigating options to increase the capacity of the Creek. **One option being investigated is to remove Thompsons Weir and address other key constraints.** This would significantly increase the capacity of the creek to allow delivery of irrigation water and water for the environment during peak demand.

A SOLUTION IS NEEDED

Removing Thompsons Weir would reduce connectivity between Gunbower Creek and Cockatoo Lagoon. This could impact upon landholders' ability to draw water from Cockatoo Lagoon. GMW is working with these landholders to investigate alternative supply options to ensure they can continue to access water.

As part of this project, Cockatoo Lagoon irrigators may have access to a more secure and long-term water supply. **With siltation becoming an increasing problem in the lagoon, this is an opportunity for irrigators to establish supply options that will allow them to access water for decades to come.** However, no final decision will be made about Thompson's Weir and Cockatoo Lagoon without prior landholder consent to alternative supply options.



Thompsons Weir



Thompsons Weir

Cockatoo Combine Structure

Jumbo's Cut 2 Regulator

Jumbo's Cut 1 Regulator