

## Wetland top-ups complete

This year's targeted delivery of water for the environment to wetlands in Gunbower Forest was completed in July.

Water for the environment was used to top-up wetlands via the lower landscape regulators, including Reedy Lagoon, Little Gunbower wetland complex and Little Reedy complex. Black Creek was also engaged during the Little Gunbower complex watering, resulting in some inflows into Black Swamp.

Each year we plan for the best use of water under different climatic scenarios – wet, average, dry, and extreme dry. We draw on a range of information to plan each of these scenarios, including the monitoring results, previous years' conditions, the climatic outlook and how much water is available.

By late autumn 2019, most of the wetlands in Gunbower Forest had dried out or drawn down to residual pools. The seasonal outlook was for continued dry conditions and at 1 July water allocations were low but carryover was available.

This year is about using water as efficiently as possible to protect our high-priority wetlands in what is forecast to be a dry year. These wetlands are productive ecosystems that support an abundance of food and diverse habitats. They will also hold water through summer, providing refuge areas for native animals including small-bodied native fish, turtles, waterbirds, and terrestrial animals.

All main access tracks across the forest remain open. A small number of tracks within Little Reedy complex are closed and expected to dry out before the late spring tourist period.

For more information visit [www.nccma.vic.gov.au](http://www.nccma.vic.gov.au)

## The frogs are calling you

*Are you keen to learn more about frogs on your property or local wetlands? Are you interested in contributing to a statewide frog research program?*

Scientists from the Arthur Rylah Institute (ARI) for environmental research and Frogs Victoria are seeking interest from locals who are keen to join the program and collect frog data in northern Victoria.



*The endangered growling grass frog (L. raniformis) (Photo: Geoff Heard)*

Anyone can join the Citizen Science program and you can monitor any wetlands you like, including farm dams. The data you collect will contribute to the state-wide research program, WetMAP (Wetland Monitoring and Assessment Program for environmental water) to better understand how water in the landscape affects frogs.

Frogs are very sensitive, and act as early indicators of environmental change and stress. Many types of frogs are in trouble and becoming threatened. Knowing more about how they are supported by water for the environment and water across the landscape will help us protect these important creatures.

For more information and to register your interest please contact Lynette at [Lynette@frogsvic.org](mailto:Lynette@frogsvic.org) or visit [www.frogscalling.org](http://www.frogscalling.org)



**NORTH CENTRAL**  
Catchment Management Authority  
*Connecting Rivers, Landscapes, People*

# COMMUNITY NEWSLETTER

Edition 24: Winter 2019

**Welcome** to the 24<sup>th</sup> edition of the Flooding for Life community newsletter. This edition features recent work on Koondrook Weir fishway, water for the environment top-ups in Gunbower Forest's high priority wetlands, updates on the Gunbower Creek investigation and Floodplain Restoration project, and citizen science frog monitoring.

## Where there's a weir, there's a (fish) way

A fishway on the Koondrook Weir will allow thousands of native fish to freely move between the Murray River and Gunbower Creek with funding now secured. Monitoring has shown that large numbers of native fish accumulate below Koondrook Weir trying to access the habitats of Gunbower Creek.

With the help of environmental flows, Murray cod in the Gunbower Creek are now able to breed successfully and have their young survive through to adulthood. However, other native species such as golden perch and silver perch don't breed in the creek and we rely on these fish to move into the system from the Murray River.

"Golden perch and silver perch regularly move hundreds of kilometres from their spawning grounds such as in the Darling River and lower Murray areas. When they migrate upstream the juvenile fish are looking for new areas to live and Gunbower Creek will be a great home for them." North Central CMA project manager Anna Parker said.



*The Koondrook fishway will enable more golden perch to enter Gunbower Creek, like this one picked up during fish monitoring in 2018 (Photo: Katie Stevenson from Ecology Australia).*

The North Central CMA secured funding from the Victorian Environmental Water Holder to finalise the designs and construct the fishway at Koondrook Weir. North Central CMA and Goulburn-Murray Water are currently working closely on the detailed design with a focus on ensuring the fishway will pass a wide range of species, both large and small, under a range of flow conditions. The design aims to ensure the most ecological benefit to the native fish population, while not impacting on the delivery of water to irrigators.

For more information on the project visit [www.nccma.vic.gov.au](http://www.nccma.vic.gov.au)

## CONTACT

North Central CMA  
Reception  
Ph: 03 5448 7124

*The North Central Catchment Management Authority acknowledges Aboriginal Traditional Owners within the region, their rich culture and spiritual connection to Country. We also recognise and acknowledge the contribution and interest of Aboriginal people and organisations in land and natural resource management.*

This newsletter is made possible by funding provided by The Living Murray initiative of the Murray-Darling Basin Authority. This publication may be of assistance to you, but the North Central Catchment Management Authority and its employees do not guarantee that the publication is without flaw of any kind, or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on information in this publication.

The Living Murray is a joint initiative funded by the New South Wales, Victorian, South Australian, Australian Capital Territory and Commonwealth governments, coordinated by the Murray-Darling Basin Authority.



Healthy Parks  
Healthy People





## Floodplain Restoration Project in full swing

The Victorian Murray Floodplain Restoration Project is now in full swing across the north of our region.



*Flood dependent river red gum communities require regular flooding to maintain good condition.*

Engineering works are being designed to deliver water to the upper Gunbower National Park and Guttrum and Benwell forests.

The works will improve the condition of floodplain and wetland environments at these locations using less water than a natural flood, meaning more irrigation water can be kept in the region under the Murray-Darling Basin Plan.

The infrastructure includes a combination of pumps, regulators, pipelines and improvements to tracks and levees.

Within Guttrum and Benwell forests, the works will enable watering of the river red gum forests and targeted water deliveries to wetland systems such as Reed Bed Swamp (the largest wetland in Guttrum Forest).

In Gunbower National Park, the infrastructure will enable watering of river red gum forests downstream of Old Straight Cut Channel, as well as targeted deliveries to wetlands such as Pig Swamp and Black Charlie Lagoon (the only permanent refuge wetland in the Gunbower National Park).

For more information on these local projects, as well as the larger Victorian Murray Floodplain Restoration Project, see [www.vmfrp.com.au](http://www.vmfrp.com.au)

## Gunbower Creek investigation continues

Investigations into flow limits in the upper Gunbower Creek have been broadened to include observed changes in other parts of the creek. In recent decades, the amount of water that the Gunbower Creek can carry has declined downstream of Gunbower Weir, downstream of Cohuna Weir and in the National Channel. However, at this stage the exact causes of the decline are unclear.



*Gunbower Creek below Cohuna Weir (Photo: NCCMA).*

“Members of the community have shared with us their concerns about erosion, the number of trees falling into the creek, weeds and silting of the creek. We need to understand the processes driving these changes and if they are impacting the amount of flow that can be delivered through the creek,” North Central CMA’s Sophia Piscitelli said.

A team of experts from consultants Jacobs have been engaged to assist North Central CMA and GMW with the investigation.

The Gunbower Creek Flow Investigation Community Group has also been revised (previously the Cockatoo Lagoon community group) to include members that irrigate from the lower Gunbower Creek and representatives from the Torrumbarry Water Services Committee. The group recently met with Jacobs, North Central CMA and GMW to discuss the changes locals have observed along Gunbower Creek. The Jacobs team is analysing the available information to inform our understanding of the changes and their impact on capacity, to provide long-term options to ensure the creek can continue to provide its important role in irrigation and protect its environmental values.

## Gunbower Forest comes alive after watering



*Gunbower Forest with a flush of flood dependent aquatic understory plants in spring 2018 after water for the environment was delivered (left), and the same site in August 2019 (right) once the understory plants have disappeared and dropped their seeds which will lay dormant until the next flood comes and the understory comes alive again (Photo: Genevieve Smith).*

For the past 15 years, North Central CMA has been monitoring Gunbower Forest and delivering water for the environment.

We work with specialists to monitor the condition of the forest, including wetland and floodplain plants, fish, birds, water quality and groundwater, as well as work to understand and manage threats to the ecosystem, such as carp.

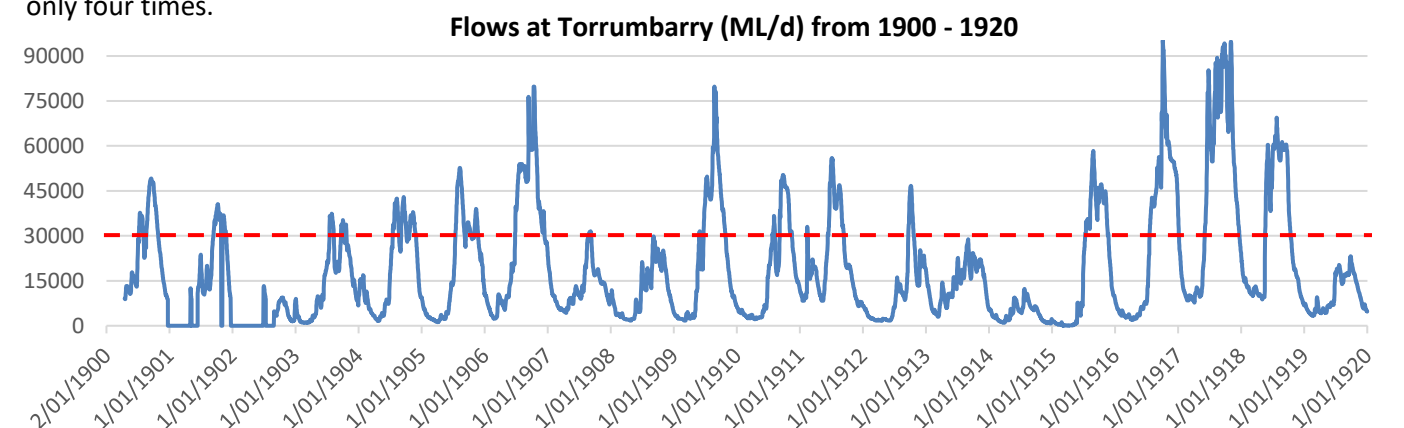
The river flow data recorded at Torrumbarry since the late 1800s indicates Gunbower Forest would have flooded in most years, and often for months at a time. For example, between 1900 and 1920 before the construction of large-scale dams and weirs (see figure below), flows at Torrumbarry exceeded 30,000 ML/day for at least a month in 14 of the 20 years, even though there were dry periods during this time. We know from recent and historical flood mapping this inundates large areas of river red gum forest. In the past 20 years including the Millennium Drought, flows at Torrumbarry Weir exceeded 30,000 ML/day for more than a month only four times.

Water for the environment is used to supplement unmanaged (natural) floods, providing wetland ‘top-ups’ and re-instating the small to moderate sized floods that the forest would otherwise miss out on.

“And the results we are observing are overall positive”, vegetation ecologist Kate Bennetts, who has been monitoring the forest since 2005, said. “River red gum areas that have received the combination of water for the environment and natural floods over the past 10 years, typically have healthier canopies, faster tree growth and supported more native floodplain plants, than areas that only received natural floods and those that remained dry over the same period.

“The cyclic nature of flooding and drying is reflected in the floodplain flora. There is a flush of growth with flooding, followed by a drying phase where many plants wither back to their root stock and/or seed bank, only to emerge again with the next flood. Floodplains and wetlands are very dynamic ecosystems and can look very different in the alternate phases of the hydrological cycle.”

For more information visit [www.nccma.vic.gov.au](http://www.nccma.vic.gov.au)



*Historic flows recorded at Torrumbarry between 1900-1920 before construction of large-scale dams and weirs. Inflows into Gunbower Forest over 30,000 ML/d (red dashed line) for more than one month occurred in 14 of the 20 years.*