

# Gunbower National Park

This project will improve environmental outcomes using less water than a natural flood while keeping more irrigation water in the region.



Gunbower National Park makes up almost 8,900 hectares of the internationally significant Gunbower Forest. It supports a range of rare and threatened flora and fauna species; and is home to the Barapa Barpa and Wamba Wamba Traditional Owners who have cared for Country for thousands of years.

The Gunbower National Park is one of the few remaining river red gum floodplain systems in Victoria and has a significant ecological importance in the Murray-Darling Basin. The forest is a prime example of remnant floodplain and the remaining habitats have high conservation value, providing refuges and hotspots for biodiversity.

The Gunbower National Park Victorian Murray Floodplain Restoration Project is designed to enable water for the environment to be delivered efficiently and effectively, without further water buybacks to give the plants and animals of Gunbower National Park the water they need to flourish. The water will help to restore the extent and distribution of wetland vegetation and build resilience into both forests. Native fish numbers in the river will also benefit, as food-rich water is returned to the Murray.



The local project will use engineering works such as regulators and pump stations to efficiently and effectively deliver water to the floodplains without placing additional strain on local irrigators, and the local irrigation system.

This project is a major step towards restoring the floodplain's health and protecting it for future generations to experience and enjoy. The works will also provide a benefit for the local community by increasing tourism, local jobs and buying materials locally.

The project will be a significant boost for the local community and area by supporting irrigated agriculture, achieving environmental improvements and increasing recreation opportunities.

### **The Basin Plan**

The Murray Darling Basin Plan aims to balance the needs of Basin communities, agriculture and the environment, to achieve a healthy and productive river system.

To facilitate this, state and federal governments have agreed to set a new Sustainable Diversion Limit (SDL), which determines how much consumptive water can be sustainably used by irrigation and shared with the environment.

The Murray Darling Basin Ministerial Council endorsed the final package of SDL Adjustment projects, including the Gunbower National Park. This enables further development of the project; working with communities and Traditional Owners on project design and implementation.

Victoria has put forward nine projects that will achieve a healthy river system without the need for further Commonwealth buy-backs, including two in the North Central CMA region. As a program of infrastructure works, environmental watering of highly valued floodplains and forests along the Murray River in Victoria will be enhanced.

Without this, major releases from storages would be needed to raise river levels high enough for it to spill into wetlands and overbank floods onto the floodplain. Using the proposed infrastructure saves water; keeps it in the region and aims to achieve similar environmental benefits that natural flooding provides.

### **How Will The Water Be Delivered?**

On Camerons Creek, the project will likely replace an existing small weir and regulating structure and upgrade an existing bridge structure to enable the right amount of water at the right time to be delivered to the creek, Black Charlie Lagoon and Baggots Swamp. An alternative irrigation supply arrangement is being investigated, as part of the project, for the irrigators currently using the creek.

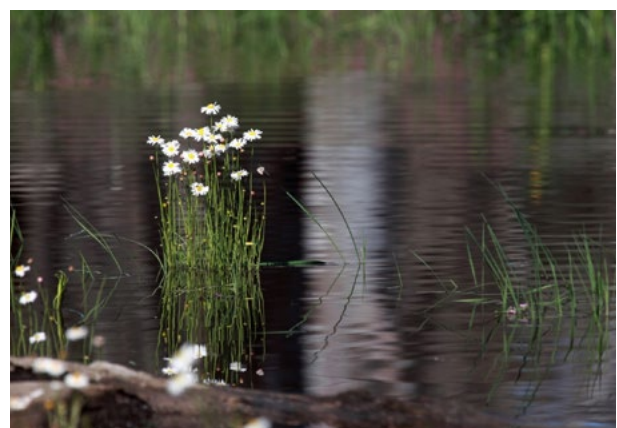
A pump station is proposed to be built on the Murray River to pump into a former irrigation channel which connects to Pig Swamp. Regulators will be built in the channel to control water entering Pig Swamp and the forest. The plan is to pump water into the channel and direct it into either Pig Swamp or the river red gums areas of the forest.

Levees are also proposed to be built or repaired, to fully contain water within the Gunbower National Park.

### **How Often Will The National Park Be Watered?**

To ensure Camerons Creek continues to provide important habitat for small-bodied fish, water would be delivered to the creek several times a year. Water for the environment would also be delivered to Black Charlie Lagoon about once a year to top it up. The wetland would then be allowed to slowly drawdown the rest of the year. The goal for Baggots Swamp is to deliver water about every three years in 10, in addition to natural flooding, to support the river red gums and recovery of the understorey to meet its ecological needs.

Water is planned to be pumped into Pig Swamp and the surrounding river red gum forest, which combined with natural flooding should provide this part of the national park with a drink every two to three years.





### An Important System

Camerons Creek is at the eastern end of the national park and connects to a series of permanent wetlands, including Black Charlie Lagoon. Prior to European settlement Camerons Creek flowed only when there was a rise in water levels in the Murray River. As water spilled down the creek, the permanent wetlands would fill and eventually spill down into the river red gum areas around Baggots Swamp. Camerons Creek and the associated wetlands today provide important habitat for small bodied native fish and waterbirds.

In the middle section of Gunbower National Park is Pig Swamp, a semi-permanent wetland that provides habitat for waterbirds, frogs and turtles. Before European settlement, Pig Swamp overtopped during large flood events, flooding the broader river red gum forest six or seven years in every decade. The floods would inundate the area for months on end. During these events the upper and middle sections of the forest provided important foraging areas for waterbirds that breed in the wetlands of Gunbower Forest.





### Impacts Of Change

The upper section of Camerons Creek has been a permanent waterway for approximately 50 years since it was connected to the Murray River after construction of the Torrumbarry Weir and removal of Berrys Weir from the National Channel. When irrigation water is delivered, water flows slowly through the creek, keeping Black Charlie Lagoon full most of the time, and sometimes spilling water into Baggots Swamp further in the forest. Operating the creek for irrigation has meant that the creek and wetlands have been receiving too much water at the wrong time of year. This has resulted in trees drowning, the forest understorey changing and Black Charlie Lagoon being less able to support a range of fish, ducks, frogs and other species.

River regulation, climate change and construction of irrigation infrastructure across the landscape have had a dramatic impact on Pig Swamp and the broader river red gum forest it is connected to.

For decades, Pig Swamp was used as part of the irrigation system, and was wet for nine months of the year, almost every year. This changed the wetlands vegetation, resulting in thick cumbungi stands which smother the sedges and delicate wetland herbs that would have once germinated.

Levees and channels built on the floodplain have also modified the way water moves into and across Gunbower Forest. Earthworks on the floodplain and the impact of river regulation have halved the amount of flooding experienced by the river red gum forest. This reduced flooding has impacted on the health of the forest, which is evidenced in the thinning tree canopies and sparse understorey. These changes mean the forest is not able to support the number and diversity of animals and plants it once did.

### Want to know more?

If you would like to know about the Victorian Murray Floodplain Restoration Project see our website [www.vmfrp.com.au](http://www.vmfrp.com.au) or email [info@vmfrp.com.au](mailto:info@vmfrp.com.au)

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