Nyah story and FAQ

Nyah is one of nine ecologically significant floodplains in north-west Victoria earmarked for restoration under the Victorian Murray Floodplain Restoration Project (VMFRP). Visit vmfrp.vic.gov.au for more information.

Location	Nyah is part of Nyah-Vinifera Park and is 30 km north-west of Swan Hill, in north-west Victoria
Landscape targeted	Parnee Malloo creek, wetlands and red gum woodlands and forests
Examples of threatened animal species	Eastern great egret, grey-crowned babbler, broad shelled turtle, regent parrot, white-bellied sea eagle, carpet python, growling grass frog

Nyah-Vinifera Park (Photo: Mallee Catchment Management Authority)

Why do we need floodplain restoration works at Nyah?

Over time, we have changed the way the Murray flows to suit our needs, building weirs, dams and levees. Regional communities have benefited in many ways from river regulation, but we continue to see serious ecological impacts to floodplain health.

The Murray River and its floodplains depend on intermittent flooding to stay healthy. River regulation has caused blockages to flow and reduced the frequency, duration and extent of flood events. It also causes increasingly long dry periods between floods, making it harder for floodplains to bounce back.

The Nyah floodplain in Nyah-Vinifera Park is made up of forests of river red gums and wetlands. Before river regulation, the Murray would reliably flood these low-lying floodplains almost every winter to spring. Even the red gums on the higher parts of the floodplain would spend 7 out of 10 years with their roots under water for about three months of the year.

The southern end of Nyah's creek (Parnee Malloo Creek) has been modified over time, restricting the flow of water into the floodplain. River regulation has also reduced the frequency and duration of floods at Nyah by about a third. The red gum forests and woodlands sometimes wait as long as 4 years between floods, where they used to wait 1.6 years in the forest and 2.5 years in the woodlands pre-regulation.

Under our current environmental water program (and unlike most other VMFRP sites), we can pump water onto Nyah's floodplain and hold it there with temporary containment banks, but only to a low level. We cannot get water further out onto the floodplain, which is where we are seeing the biggest decline in floodplain health.

The other issue at Nyah is that we cannot get the water back off the floodplain, which can increase the risk of blackwater events and mosquitos. It's also time-consuming for us to remove and rebuild the temporary containment banks needed to hold water on the floodplain.

The works planned under VMFRP will allow us to manage this floodplain more efficiently over the long-term. The infrastructure we build will remove blockages to natural flows and allow us to hold water on the floodplain for as long as needed to support the environment, before returning it to the river.

More importantly, if the floodplain goes too long between natural floods, we'll be able to give the environment a `top up' to keep it healthy, making the floodplains more resilient as we face a future with less water.

Bringing these floodplains back to life will benefit all of our river communities – people, plants and animals – as we restore them for generations to come.

What happens if we don't restore our floodplains?

The Murray River and its floodplains are part of a highly interconnected ecosystem where cyclical wet and dry cycles infuse the river with nutrients and support an extraordinarily rich tapestry of life on the floodplain.

Varying degrees of stress are already apparent across our floodplains. The tree canopy lacks vigour and flood-tolerant vegetation are stressed, which reduces habitat and food available for animals that rely on healthy floodplains.

If we do not intervene, these iconic landscapes will continue to decline, potentially beyond the point of rejuvenation. We risk losing areas that are vital to biodiversity, to Traditional Owners, and to regional communities.

Returning to pre-regulation flows would be devastating for the towns, cities, agriculture and industries along the river. The Basin Plan recovers significant amounts of water for environmental use. Infrastructure helps us use this water to bring our ecologically significant floodplains back to health, without impacting river communities.

Why choose Nyah?

Nyah-Vinifera Park is home to majestic forests with century-old red gums and beautiful billabongs and wetlands. The park provides food and habitat for a vast array of animals and plants, including waterbirds, woodland birds, mammals and reptiles, and small and large-bodied fish.

It connects the semi-arid Mallee landscape with the Murray River floodplain, providing an essential biodiversity corridor. The regent parrot for example feeds in the nearby Mallee woodlands, but depends on large, healthy red gum near the river for nesting hollows. The carpet python and black wallaby are common in the park, along with the swamp wallaby, grey-crowned babbler and other woodland species.

Nyah-Vinifera Park is highly culturally significant to Traditional Owners. It is also a much-loved recreational hotspot with wonderful camping sites, fishing spots and watering holes.

How are Traditional Owners involved?

Traditional Owners have cared for and sustainably managed the cultural landscapes of the Murray River and its floodplains for thousands of years and their connection to Country continues to the present.

The nine VMFRP sites are culturally significant with many registered heritage sites. The *Aboriginal Heritage Act 2016* describes a legislative pathway for protection of Aboriginal cultural heritage in Victoria. The process requires detailed on-ground assessments to document cultural heritage sites and consultation with Traditional Owner on the proposed works and their potential impacts.

The outcomes of this assessment along with proposed measures to protect sites are documented in a Cultural Heritage Management Plan. First Peoples – State Relations (formerly Aboriginal Victoria) is the regulatory approver at Nyah.

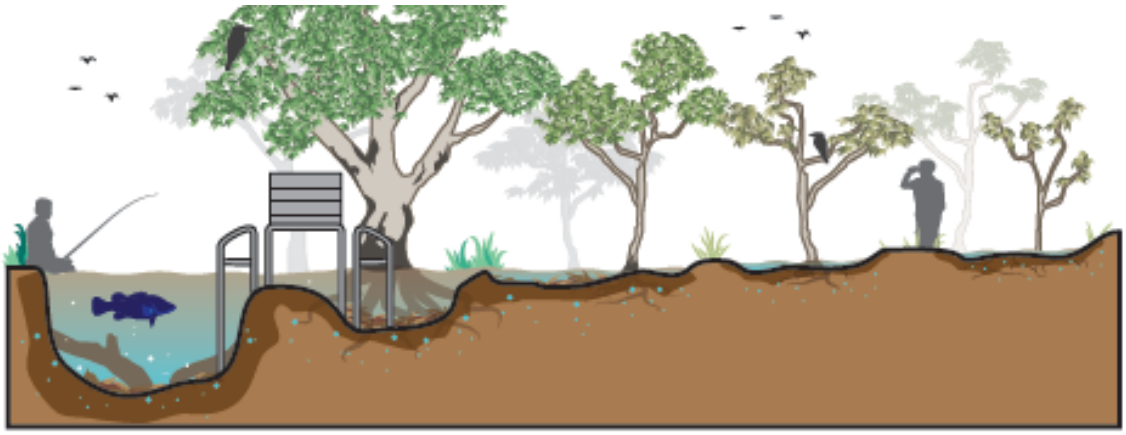
VMFRP partners have long-standing relationships with Traditional Owners and a strong desire and intent to continue to build stronger and more meaningful relationships, regardless of formal recognition status. We recognise the many Aboriginal Victorians who identify as Traditional Owners for Nyah and the importance of waterways to their identity and sense of belonging.

We recognise the strength and courage of Traditional Owners which has enabled continued connections to Country and culture. As well as our work with these groups to preserve cultural heritage, we are exploring opportunities to support their rights and obligations to progress their aspirations for Country.

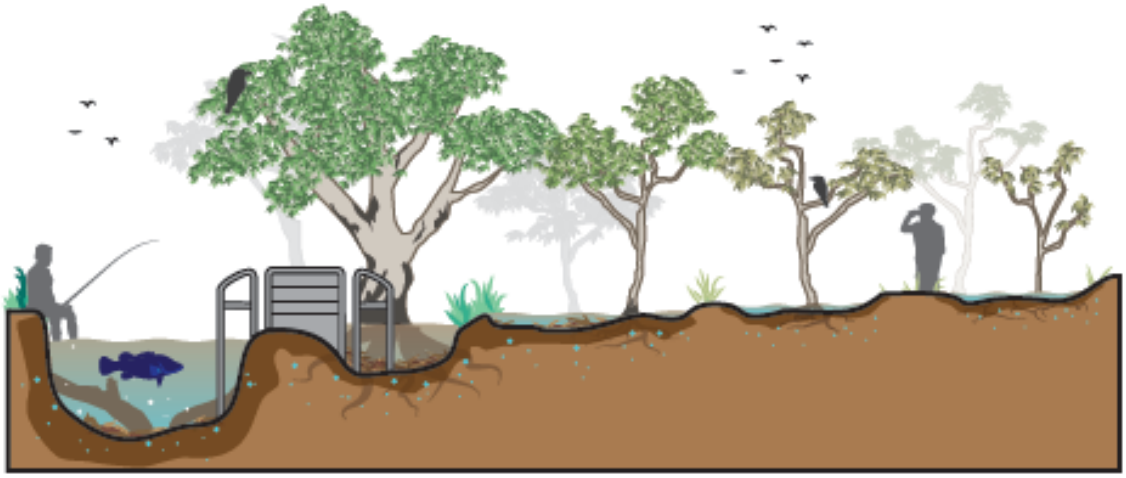
How will you get water onto the floodplain at Nyah?

Water will be delivered through a combination of natural inflows and, in times when the floodplain is too dry, by temporary pumping using environmental water entitlements. A hardstand will be built at the southern end of the creek to enable us to bring in temporary pumps.

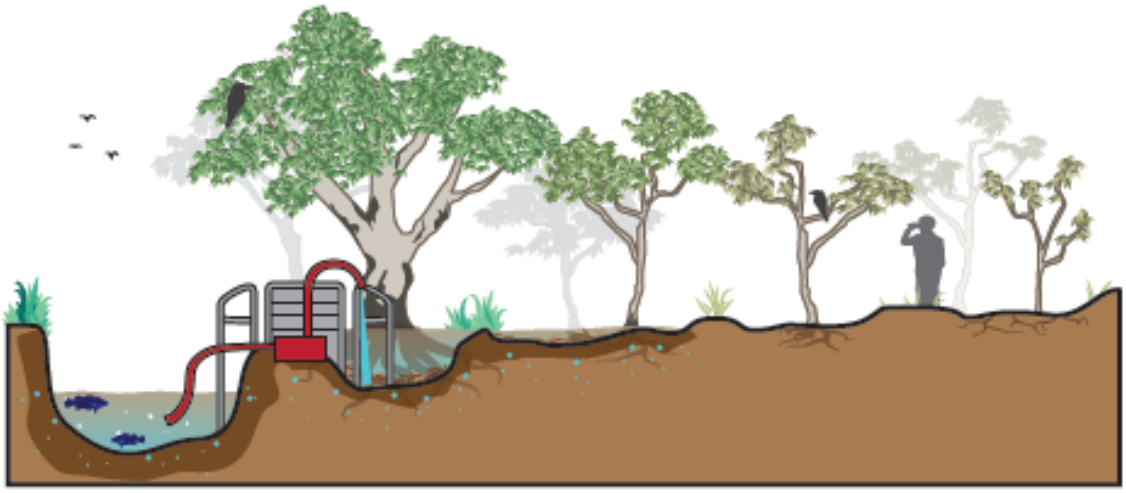
The works at Nyah will operate under three potential watering scenarios, as shown in Figure 1.



Scenario 1: Infrequently, when the river is high and flowing into the forest, and the water will stay on the floodplain for long enough, we will open the regulators and leave the water to flow naturally.



Scenario 2: Often, when the river is high and flowing into the forest, but the flood won't last as long as needed, we will shut the regulators and hold the water on the floodplain, before returning the water to the river.



Scenario 3: If the floodplain is too dry, we can use a temporary pump to get environmental water onto the floodplain and close the regulators to hold the water there for as long as needed, before returning the water to the river.

Figure 1: Watering scenarios planned for Nyah

What infrastructure will you build?

Five small regulators and a series of containment banks will enable us to get water into the creek and floodplain and hold it there for as long as needed. We will return the water to the river via a rock chute – a rocky path that slows the water's return to the river. It's a tried and tested way to avoid erosion and reduce the risk of damage to the stream banks, vegetation and cultural heritage values.

We will also remove the redundant irrigation infrastructure once used by the old Nyah golf course.

The infrastructure we build will allow us to target different parts of the floodplain to improve the condition of 488 hectares of wetlands, red gum forests and red gum woodlands. Figure 2 shows the extent of vegetation we can reach with different flows using VMFRP works.

Figure 2: Extent of vegetation that can be reached with VMFRP works

What will the infrastructure look like at Nyah?

We have designed infrastructure to deliver environmental water that is tailored to the site conditions, the landscape being targeted and the species that live there.

As much as possible, new infrastructure will be sited on areas that are already disturbed, such as existing access tracks. This helps us minimise ecological impacts during construction.

We've been building environmental water infrastructure for more than 15 years. This experience has taught us what works best to deliver water to the largest area to get the greatest ecological results.

The infrastructure in Figure 3 is similar in scale to the infrastructure planned for Nyah.

Raised track (containment bank) at Hattah Lakes

Horseshoe Lagoon regulator at Wallpolla Island

Figure 3: The scale of infrastructure planned at Nyah

Will access to the park be restricted during flow events?

Watering events will mostly occur in winter and spring over 2 to 4 months.

The smaller (more regular) flows won't go beyond Parnee Malloo Creek, which means no tracks will be inundated and full access to the park will be maintained.

With larger natural flows, many tracks do get flooded by water escaping the banks of the Murray River and Parnee Malloo Creek, which restricts vehicle access. In the years that we need to top up these natural floods with environmental water, additional internal tracks may also be affected and could be impassable for a few months after the natural flood peak has receded.

Parks Victoria will provide information to park users to plan their visits when environmental water occurs. Check the Parks Victoria website for the latest information and closures in Nyah-Vinifera Park.

What about mosquitos and blackwater?

Before river regulation, the floodwater would usually recede back to the Murray in spring. When floodwater stays on the floodplain over summer, there's more chance of mosquitos and blackwater events.

At Nyah, we can pump water onto the floodplain, but without infrastructure, we cannot get this water off the floodplain and back into the river. The infrastructure we build will enable us to get floodwater on and off the floodplain during winter and spring, reducing the risk of blackwater events and mosquitos.

Will the VMFRP improve access tracks at Nyah

Tracks used during construction to transport equipment and materials will be restored and left in good condition at project completion. Improving access tracks beyond this is outside the scope of this project.

Parks Victoria will maintain tracks to ensure visitors can access the park, including the wetlands and healthy floodplains. Check the Parks Victoria website for the latest conditions and closures in Nyah-Vinifera Park.

To support the delivery of environmental water, Parks Victoria will manage pest, plant and animals to ensure the best ecological outcomes are achieved.

How does it fit in with the other VMFRP sites?

The infrastructure at Nyah is one part of a package of works to be delivered in Victoria under the Basin Plan.

Floodplain infrastructure is designed to target specific ecological results at each site. The decision to release water at a site is based on monitoring of floodplain conditions and is part of a holistic approach to keeping the Murray and its floodplains healthy.

Floodplains are interconnected with the river and the greater Murray–Darling ecosystem. Operations at individual sites can influence ecological outcomes in others. For example, release of water from one site may trigger a fish migration and breeding event to repopulate other sites, or watering at multiple sites concurrently could ensure plentiful food supply for colonial nesting waterbirds.

The Basin States and the Australian Government work together each year to work out how to operate the river system as a whole, and how to coordinate and prioritise environmental water delivery across all the different regions. This process has been in place for more than a decade.

How is this different to existing environmental water programs?

Planning and delivery of environmental water operations is coordinated via catchment management authorities, in consultation with stakeholders including Traditional Owners, land managers, water authorities and the local community, and informed by the results of ecological monitoring programs.

Infrastructure gives us greater reach across more floodplains and helps us get better ecological outcomes at sites that are either difficult or impossible to reach under our current environmental water program.

Will the other wetlands and floodplain spaces still get water?

Murray River floodplains and wetlands will continue to receive naturally occurring floods.

VMFRP and other floodplains across north-west Victoria will also receive environmental water when needed to complement existing natural flows as part of a holistic approach to maintaining healthy rivers and floodplains. Figure 4 shows the sites included in Mallee Catchment Management Authority's environmental water program, alongside VMFRP sites.

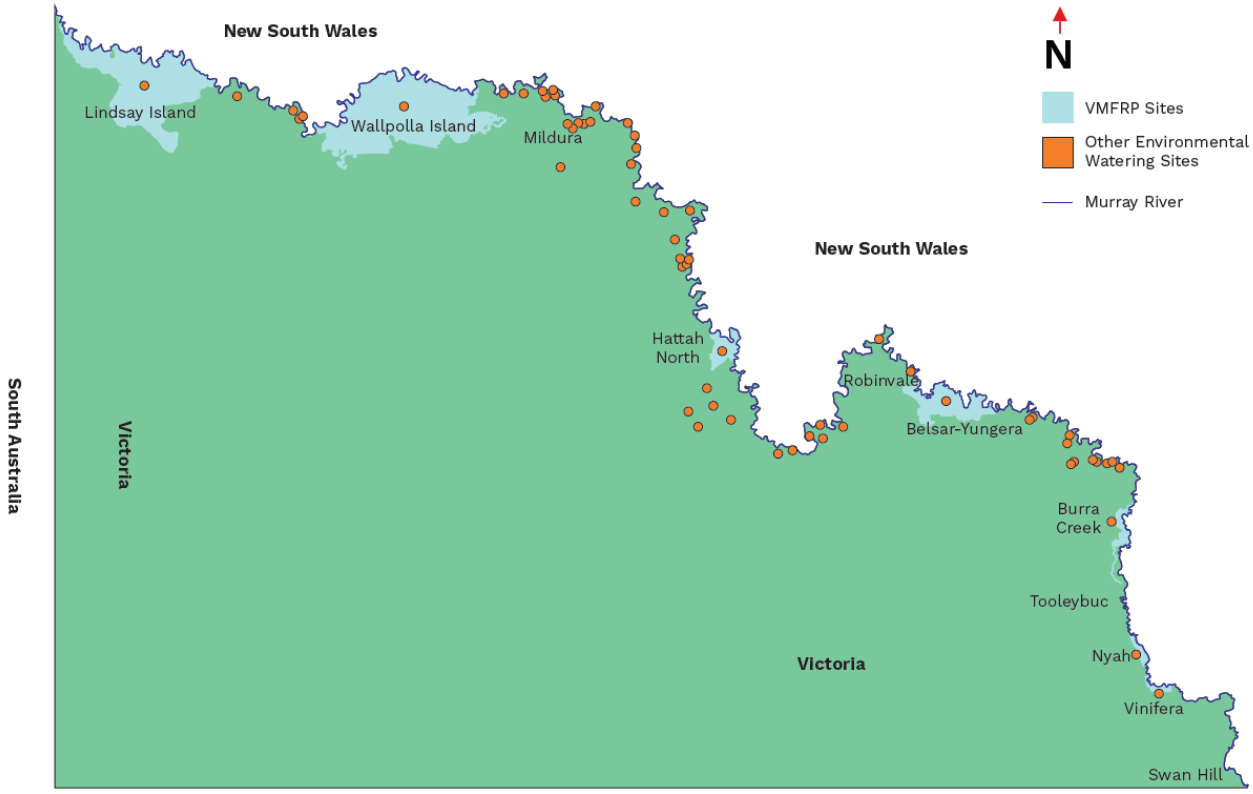


Figure 4: Environmental watering sites in the Mallee Catchment Management Authority area

When will you start building?

Construction is anticipated to start around December 2022, depending on funding, the environment assessment process outcome, and obtaining other legislative approvals. Projects will take about six to nine months to complete. All projects are to be operational by mid-2024 under legislation.

How do you know it will work?

The VMFRP partners have a long history of working with environmental water and using infrastructure to deliver environmental water. Specialist engineers and ecologists have been working together on the project design for Nyah since 2012.

Projects are currently undergoing a rigorous, transparent and comprehensive environmental assessment process to assess potential ecological impacts and benefits. We are confident that these works will bring these floodplains back to life and help them to flourish, restoring these valuable landscapes for generations to come.

We already know from infrastructure built at six icon sites under The Living Murray (TLM) program that these types of projects help us restore river connectivity and health and deliver great outcomes for plants and animals.

What is the environmental assessment process?

In December 2020, the Minister for Planning determined that an environment report is required to assess any potential environmental impacts at Nyah during construction and beyond. The Commonwealth Government also requires an assessment of potential impacts to threatened species.

Specialist investigations are now under way to assess potential impacts to areas such as biodiversity and habitats, water quality, cultural heritage, social, economic and amenity impacts, and waterway use and infrastructure.

Community consultation and advice is a significant part of this assessment process.

The environment report will be publicly exhibited in 2022, giving the community and stakeholders an opportunity to have their say.

An Advisory Committee will consider the environment report and public submissions received, and will then prepare a report for the Minister for Planning.

Find out more about the regulatory assessments at www.vmfrp.com.au/planning-approvals and how you can get involved at www.vmfrp.com.au/get-involved.