Belsar-Yungera story and FAQ

Belsar-Yungera 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	Between Mildura and Swan Hill in north-west Victoria, about 20 km south-east of Robinvale.
Landscape	Large floodplain complex with a network of wetlands, lakes and a watercourse.
Examples of threatened species	Blue-billed duck, regent parrot, white-bellied sea eagle, growling grass frog, Murray cod, spiny-fruit saltbush, painted honeyeater.

Belsar-Yungera (Photo: Mallee Catchment Management Authority)

Why do we need floodplain restoration works at Belsar-Yungera?

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 Belsar-Yungera floodplain complex is a network of waterways, wetlands and lakes. It consists of Belsar and Yungera Islands, which are formed by anabranches of the River Murray, including Narcooyia, Bonyaricall and Yungera creeks. To the south of the floodplain lie two large wetlands, Lakes Powell and Carpul, which currently rely on occasional and very high flows across the islands to fill.

Narcooyia Creek has been significantly modified for use as a delivery channel for irrigation water. Water is currently pumped from the Murray River into the creek to meet irrigation demand. The wider floodplain has seen significant drops in frequency, duration and extent of flooding.

Even more worrying is the length of time between floods. The Black Box communities used to see water at least once every 6 years. Now it's as long as 18 years between drinks. This is too long for floodplain plants and animals to endure – its longer than the Millennium drought.

Under our current environmental water program, we can pump water onto limited areas of wetland and Lakes Powell and Carpul with good results, but it's not enough.

The works planned under VMFRP will allow us to reach a much greater area across this important floodplain complex. 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 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 wet and dry cycles infuse the river with nutrients and support an extraordinarily rich tapestry of life on the floodplain. Rivers need their floodplains as much as a floodplain needs the river.

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.

It can take more than 100 years for trees to grow large enough to develop hollows suitable for nesting. Less regular flooding slows down this growth.

Black Box trees also flower prolifically after floods. These big flowering events are important for honeyeaters like the threatened painted honeyeaters, as well as other nectar feeders like possums and insects. With no flooding, Black Box cannot reproduce and replace themselves, so even though they are pretty tough and survive a long time without floods (though not forever, as we saw in the millennium drought), they can't replace themselves.

If we do not intervene, these iconic landscapes will continue to decline, probably 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 Belsar-Yungera?

Belsar-Yungera is home to century-old red gums and beautiful billabongs and wetlands. The mix of forests and wetlands supports nationally threatened species such as the regent parrot, the white-bellied sea eagle, growling grass frog and Murray cod.

Belsar-Yungera connects the semi-arid Mallee landscape with the Murray River floodplain, providing an essential biodiversity corridor. This is especially important for threatened woodland birds that rely on floodplains. For example, the regent parrot depends on large, healthy red gums near the river for nesting hollows, but mostly feeds in the nearby Mallee woodlands.

A recent study found at least 108 woodland birds in the Murray–Darling Basin area depend on floodplain vegetation, including owls, honeyeaters, babblers and parrots. The floodplains from Nyah-Vinifera to the renowned Hattah Lakes are in the top 5% of core habitat for the nationally threatened painted honeyeater, regent parrot and the superb parrot, so it's vital to conserve floodplains like Belsar-Yungera to help these species survive.

Belsar-Yungera is highly culturally significant to Traditional Owners. It is also a much-loved recreational hotspot – camping, walking, bike riding, birdwatching and canoeing are all popular activities.

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 Owners 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 Belsar-Yungera.

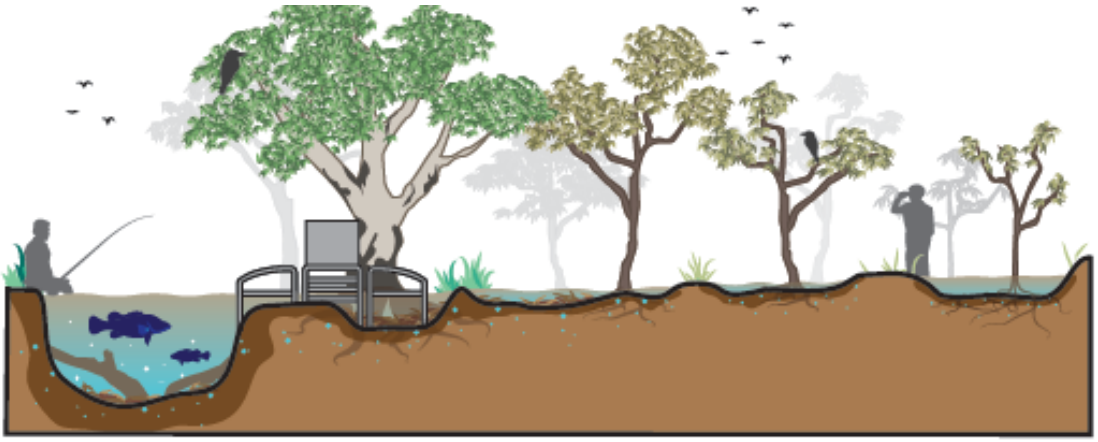
VMFRP partners have long-standing relationships with Traditional Owners and a strong desire and intent to continue to build stronger and more meaningful relationships, regardless of formal recognition status. We recognise the many Aboriginal Victorians who identify as Traditional Owners for Belsar-Yungera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

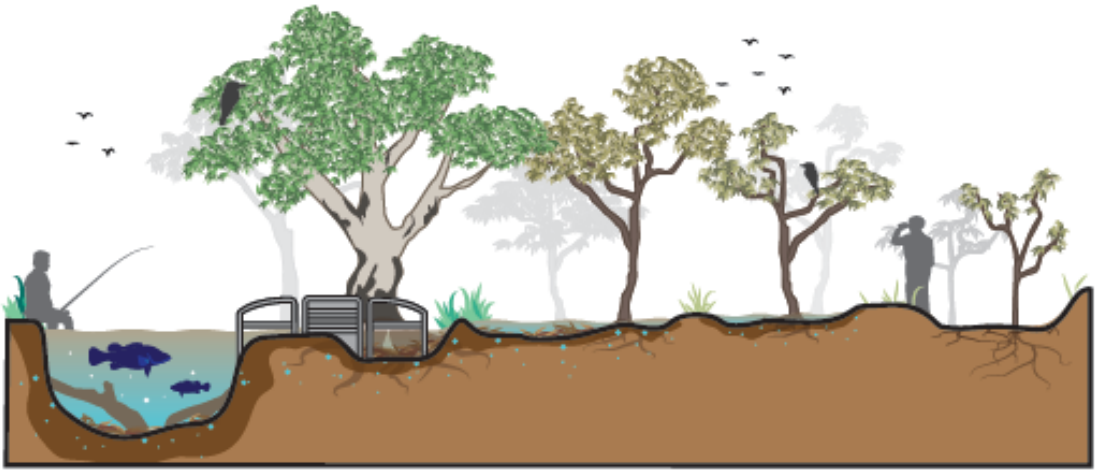
How will you get water onto the floodplain at Belsar-Yungera?

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. Numerous hardstand areas will be built at strategic points to enable us to bring in temporary pumps.

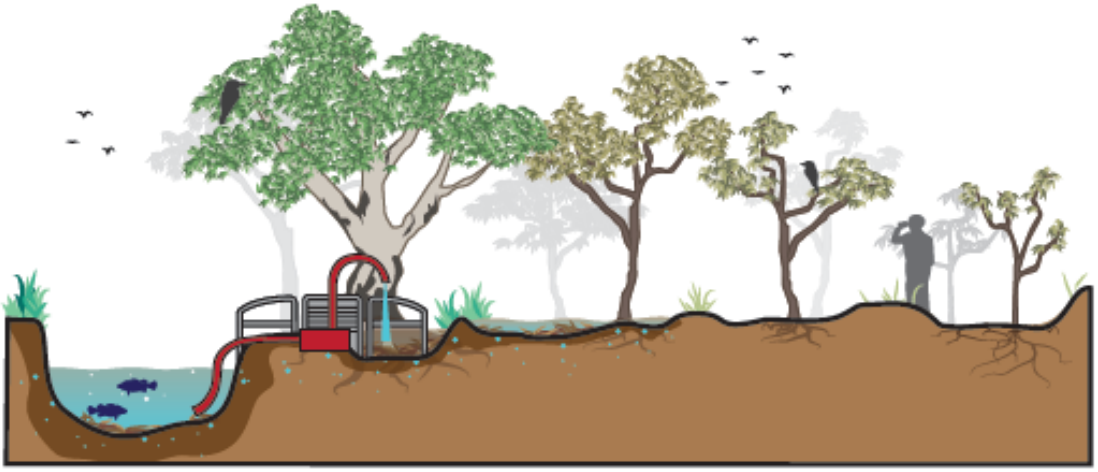
The works at Belsar-Yungera will operate under three potential watering scenarios, as shown in Figure 1.



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 it's 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 Belsar-Yungera

What infrastructure will you build?

We will build new infrastructure, modify existing infrastructure and remove some blockages created by existing irrigation and road infrastructure.

Twenty-one regulators and 3.6 km of containment banks will enable us to get water onto the floodplain and hold it there for as long as needed, before releasing back to the river. This includes one very large regulator with a fishway, two large regulators and 18 smaller regulators.

An underground pipeline will also be built to connect Lakes Powell and Carpul to a temporary pump site located on Bonyarical Creek.

The proposed works would facilitate an inundation of up to 2,374 hectares of Lignum shrubland, Red Gum forest and Black Box forests and woodlands (Figure 2).

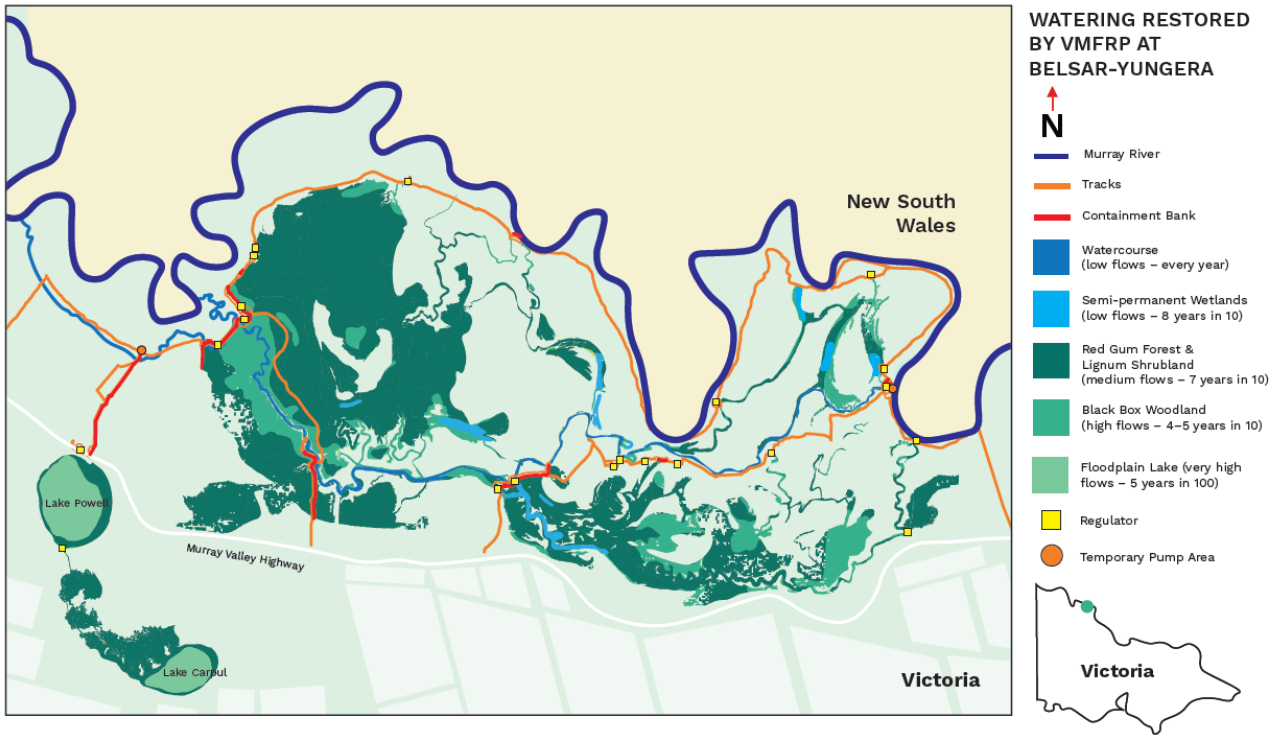


Figure 2: Extent of vegetation that can be reached with VMFRP works (based on conceptual design from October 2021)

What will the infrastructure look like at Belsar-Yungera?

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.

Most of the infrastructure at Belsar-Yungera will be similar in scale to infrastructure built under the TLM program at Hattah and Wallpolla Island. The one very large regulator with fishway will be similar in scale to the regulator built at Pike Floodplain in South Australia (Figure 3).

Example of a raised track containment bank at Hattah Lakes

Example of a small regulator (Horseshoe Lagoon regulator) at Wallpolla Island

Example of a large regulator at Pike Floodplain in South Australia

Figure 3: The scale of proposed infrastructure at Belsar-Yungera

Will access to the park be restricted during flow events?

Watering events will mostly occur in winter and spring over 1 to 3 months.

Watering scenarios have been developed that allow us to align flow events at Belsar-Yungera with the frequency, duration, timing and interval of flooding before river regulation. With these works, we will monitor the health of the floodplain and adapt our proposed watering schedule to respond to environmental conditions.

With larger natural flows, many tracks do get flooded by water escaping the banks of the Murray River and the watercourses in the park, 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 Belsar and Yungera Island.

How will it affect existing irrigation infrastructure?

The proposed works are next to irrigation properties, which use Narcooyia Creek as a key component of their irrigation supply system. Operation of the environmental works has been planned to ensure irrigation supply is maintained, along with access to irrigation infrastructure during environmental watering events.

Will the VMFRP improve access tracks at Belsar-Yungera

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 Belsar and Yungera Islands.

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 Belsar-Yungera 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 sites along with 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 with VMFRP sites.

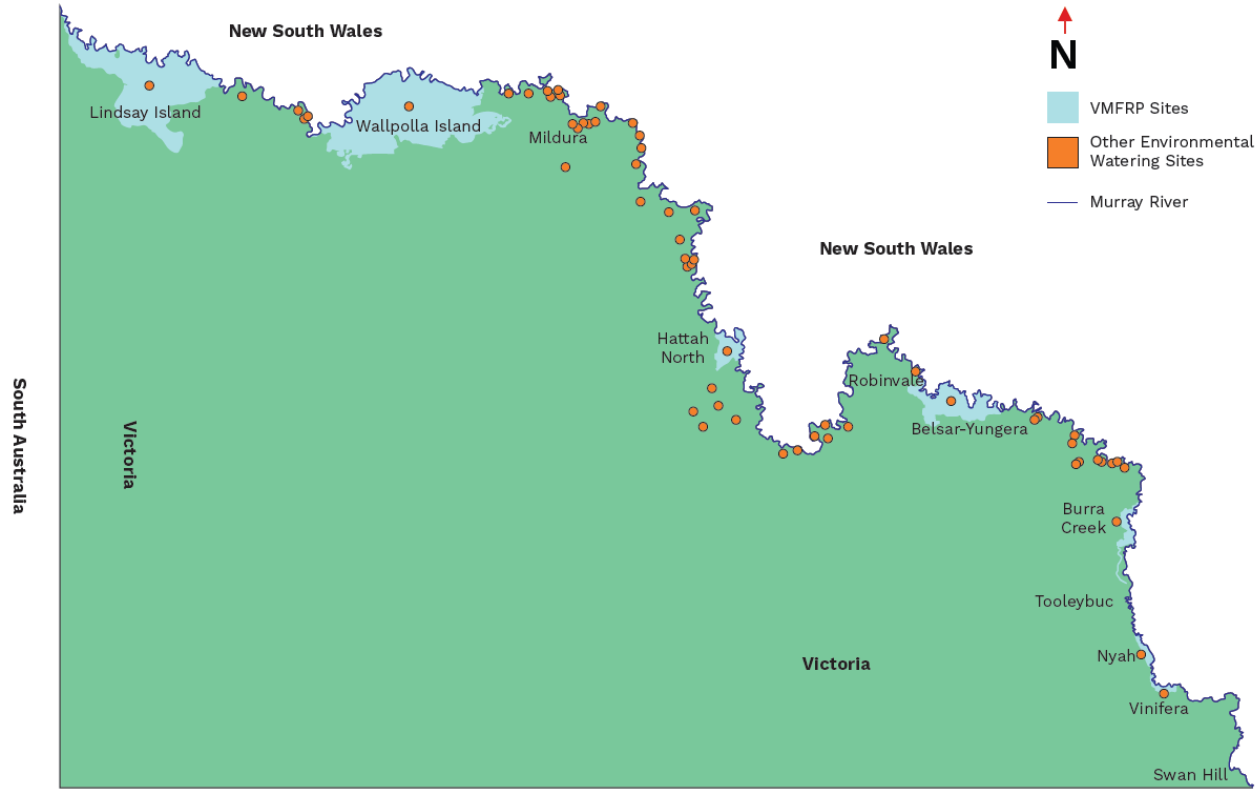


Figure 4: Environmental watering sites in the Mallee Catchment Management Authority area

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 scientists have been working together on the project design for Belsar-Yungera 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 Victorian Minister for Planning determined that an Environment Effects Statement (EES) is required to assess any potential environmental impacts at Belsar-Yungera 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 EES will be publicly exhibited in mid-2022, giving the community and stakeholders an opportunity to have their say.

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.