2026-2036





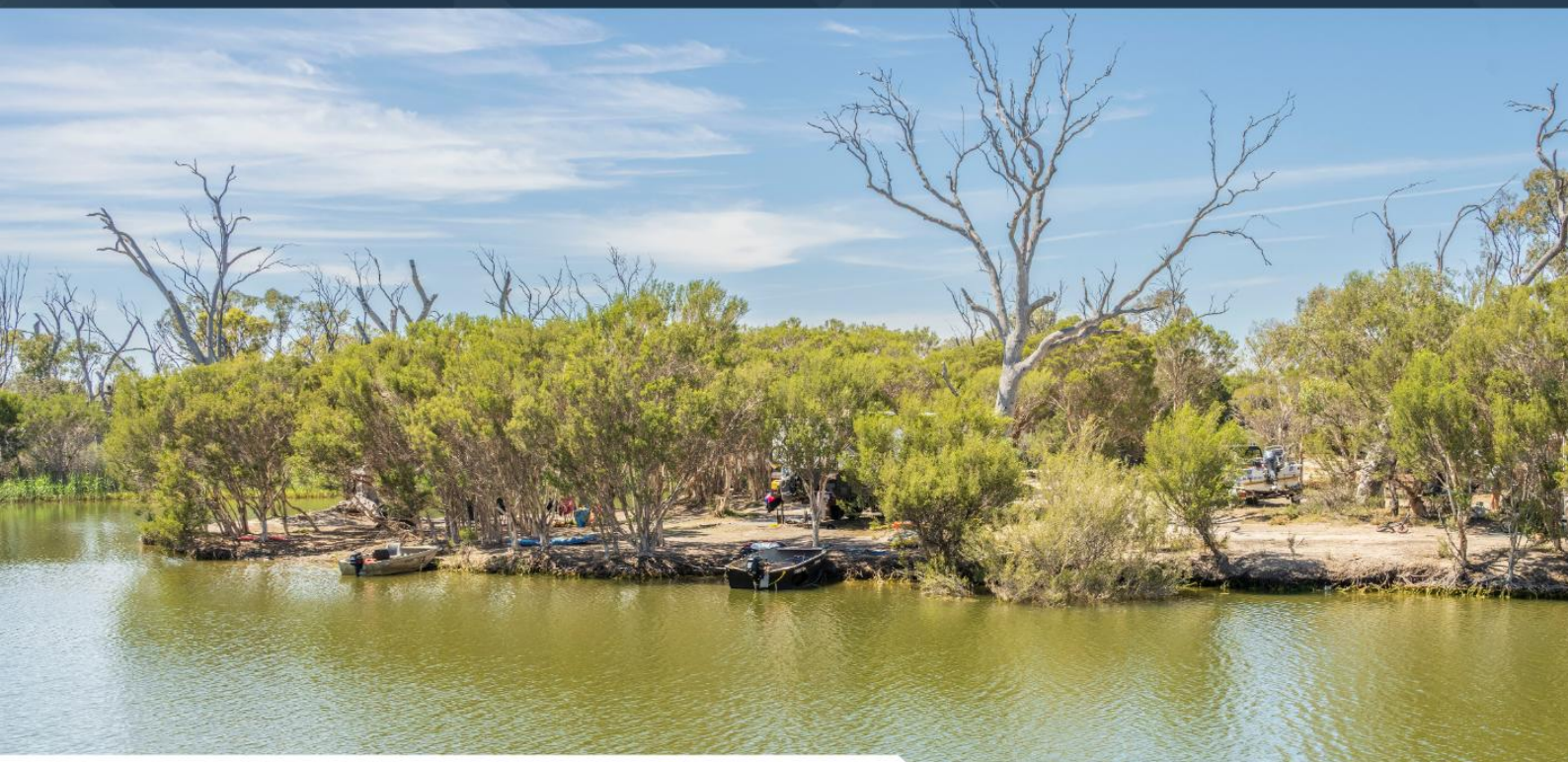


WIMMERA WATERWAY STRATEGY

IMPLEMENTATION PLAN

VICTORIA State Government Australia

Wimmera CMA



HINDMARSH

IMPLEMENTATION PLAN

VICTORIA State Government Australia

Wimmera CMA

Hindmarsh local area

About the Hindmarsh local area

The Hindmarsh local area encompasses the southern part of Hindmarsh Shire, extending from the Little Desert National Park in the south to Wyperfeld National Park in the north. Its four main townships, Nhill, Dimboola, Jeparit and Rainbow, have a combined population of approximately 5,700 people. (1)

Waterways play an important role in the area's liveability and character. Dimboola and Jeparit are located along the Barringgi Gadyin (Wimmera River), while Nhill is situated beside Nhill Swamp and Lake (see Figure 2).

Covering almost 486,800 hectares, the area is predominantly agricultural. Land use is dominated by dryland broadacre cropping (68%) and modified pasture grazing (11%), while more than 15% of the landscape comprises native vegetation and waterways. (2)

Key natural features include the Little Desert National Park, the Barringgi Gadyin (Wimmera River) and a terminal lakes system comprising Gurru (Lake Hindmarsh), Outlet Creek, Ngalpakatia/Ngelpagutya (Lake Albacutya), Ross Lakes and other wetlands extending north to the Wirrengren Plain in the Mallee region.

Together, these waterways create a natural corridor linking the Little Desert and Wyperfeld National Parks through a productive agricultural landscape.

The area also contains many culturally significant places along the Barringgi Gadyin (Wimmera River) and its associated wetlands, including Gurru (Lake Hindmarsh), Ngalpakatia/Ngelpagutya (Lake Albacutya) and Ross Lakes. This section of the river lies within the Wotjobaluk Nations Native Title area, reflecting its enduring cultural significance and deep connection to Country.

Rivers and streams

The Barringgi Gadyin (Wimmera River) runs north through the length of the Hindmarsh local area before flowing into Gurru (Lake Hindmarsh), Victoria's largest freshwater lake.

While water is generally present along these lower reaches of the river, Gurru (Lake Hindmarsh) only fills during extended wet periods or major flood events. In exceptionally wet years, the lake can overflow into Outlet Creek, which flows to Ngalpakatia/Ngelpagutya (Lake Albacutya) and then north to a series of smaller wetlands and the Wirrengren Plain in the Mallee region. The Barringgi Gadyin (Wimmera River) and both lakes hold high cultural significance for the Wotjobaluk Nations Peoples.

Ngalpakatia/Ngelpagutya (Lake Albacutya) last filled in the 1970s and retained water until 1983. Since then, it has received only occasional minor inflows from local runoff. (3)

Gurru (Lake Hindmarsh) holds water following high flows in the Barringgi Gadyin (Wimmera River), but it only reaches capacity during periods of prolonged high flows or flooding. Between 2016 and 2026, water entered the lake on several occasions, attracting thousands of waterbirds and recreational visitors. However, the lake's broad, shallow nature makes it highly susceptible to evaporation. As a result, despite significant inflows, it did not completely fill and periodically dried out.

When holding water, Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) support thousands of waterbirds and provide habitat for a range of significant species. Ngalpakatia/Ngelpagutya (Lake Albacutya) supports nationally threatened species and communities, including the regent parrot (*Polytelis anthopeplus*), pine-buloke woodlands and a distinctive salt-tolerant form of river red gum. Ngalpakatia/Ngelpagutya (Lake Albacutya) is internationally recognised as a Ramsar wetland and both lakes are listed as nationally important wetlands.

When inundated, the lakes become major recreation destinations for activities such as water skiing, fishing, yabbying, birdwatching and camping. Outlet Creek, which connects the two lakes, also supports significant biodiversity and cultural heritage values.

Datchak Creek is a 28-kilometre anabranch of the lower Barringgi Gadyin (Wimmera River). It branches from the river downstream of Dimboola, flows through Arkona and rejoins the river near Antwerp. The creek is an important cultural landscape for Wotjobaluk Nations Peoples and contains extensive cultural heritage values, including scarred and culturally modified trees.

Wetlands

Hindmarsh contains more than 280 wetlands, ranging from large systems like Gurru (Lake Hindmarsh) to small seasonal wetlands. Notable examples include Ramsar-listed Ngalpakatia/Ngelpagutya (Lake Albacutya), nationally important wetlands including Gurru (Lake Hindmarsh) and Pink Lake; and key local wetlands including Ross Lakes, Nhill Lake, Nhill Swamp, Mount Elgin Swamp and Yanac Swamp.

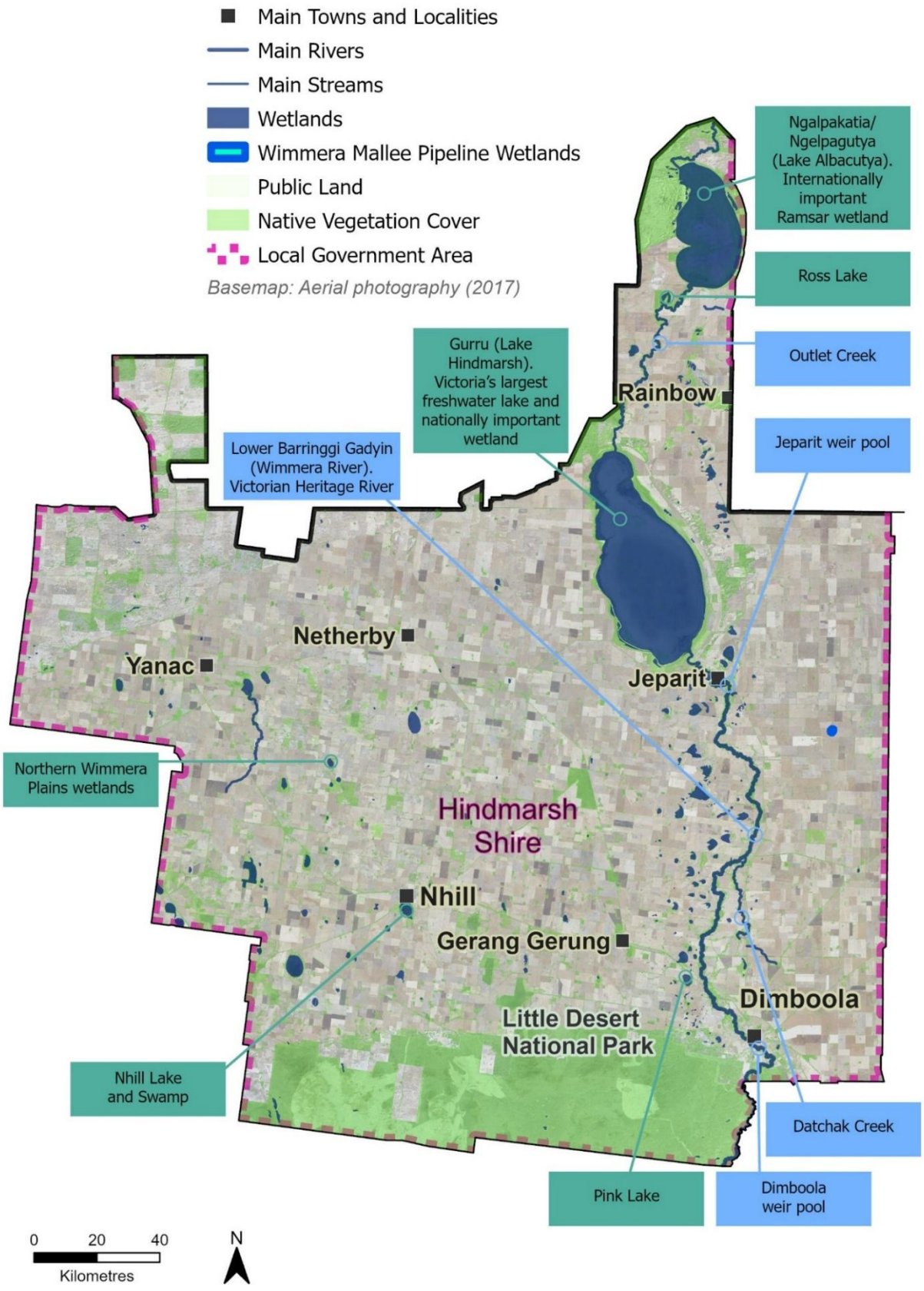


Figure 2. The Hindmarsh local area and key waterway assets. Information boxes are colour-coded by feature type: blue for rivers and streams and teal for wetlands.

Lower Barringgi Gadyin (Wimmera River) and terminal lakes

Flagship Waterway

The Lower Wimmera River Flagship Waterway project focuses on the Lower Barringgi Gadyin (Wimmera River) downstream of Horsham, including Outlet Creek and terminal lakes, Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) (see Figure 3).

The project's vision is to ensure that, by 2040, the Lower Barringgi Gadyin (Wimmera River) will be a healthy, functioning ecosystem that supports social, cultural and recreational activities. Wimmera CMA is leading the project, working in partnership with public and private land managers, Traditional Owners and community groups.

To achieve this vision, the project will deliver a range of threat mitigation and environmental enhancement activities aimed at improving the quality, extent and connectivity of riparian vegetation and habitat. It will also support local and regional investment in the Lower Barringgi Gadyin (Wimmera River) and enable angling clubs and community groups to undertake priority work along the waterway.

Key activities include:

- **Pest plant and animal control** to reduce competition and grazing pressure on native vegetation and wildlife.
- **Fencing and revegetation** to protect existing habitat, increase native vegetation cover and improve biodiversity outcomes.
- **Bank stabilisation works** to reduce erosion and sedimentation, while protecting environmental, cultural and recreational values.

The project will be delivered as part of a broader program of work across the Lower Barringgi Gadyin (Wimmera River). This includes the management and delivery of environmental water, as well as initiatives that support land stewardship, recreation and community wellbeing through the Victorian Government's *Our Catchments, Our Communities* program.

River and stream values

The Barringgi Gadyin (Wimmera River) downstream of Polkemmet, along with Gurru (Lake Hindmarsh), Ngalpakatia/Ngelpagutya (Lake Albacutya) and Outlet Creek, is listed as the *Wimmera Heritage River* under the *Heritage Rivers Act 1992*. This 165-kilometre system is recognised for its conservation, scenic, recreational and cultural significance. [4]

Environmental values

The Wimmera Heritage River forms an important native vegetation corridor through a largely agricultural landscape. Riparian vegetation remains highly intact, with 92% of the Barringgi Gadyin (Wimmera River) and Outlet Creek protected from stock access.[5] Significant vegetation communities include the depleted Riverine Chenopod Woodlands, vulnerable Intermittent Swampy Woodlands, Lignum Swampy Woodlands and Semi-arid Woodlands as well as scattered remnants of the endangered Low Rise Woodlands. [6]

The river system supports a range of significant fauna, including the critically endangered pink cockatoo (*Lophochroa leadbeateri)* and Australasian bittern *(Botaurus poiciloptilus)*. [7] Native fish species include Australian smelt (*Retropinna semoni),* common galaxias (*Galaxias maculatus*), carp gudgeon (*Hypseleotris spp.*) and flat-headed gudgeon (*Philypnodon grandiceps*). Other species present, thought to have been introduced to the Wimmera, include the endangered freshwater catfish (*Tandanus tandanus*), golden perch (*Macquaria ambigua)* and silver perch (*Bidyanus bidyanus*). Exotic fish species recorded in the system include carp (*Cyprinus carpio*), eastern gambusia (*Gambusia holbrooki*), goldfish, redfin (*Perca fluviatilis*) and roach (*Rutilus rutilus*).

When water is present, terminal lakes Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) provide habitat for thousands of waterbirds. Ngalpakatia/Ngelpagutya (Lake Albacutya) supports nationally threatened species, including the regent parrot (*Polytelis anthopeplus*) and a unique salt tolerant form of river red gum. The lake is internationally recognised as a Ramsar wetland of importance, while both Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) are listed as nationally important wetlands.

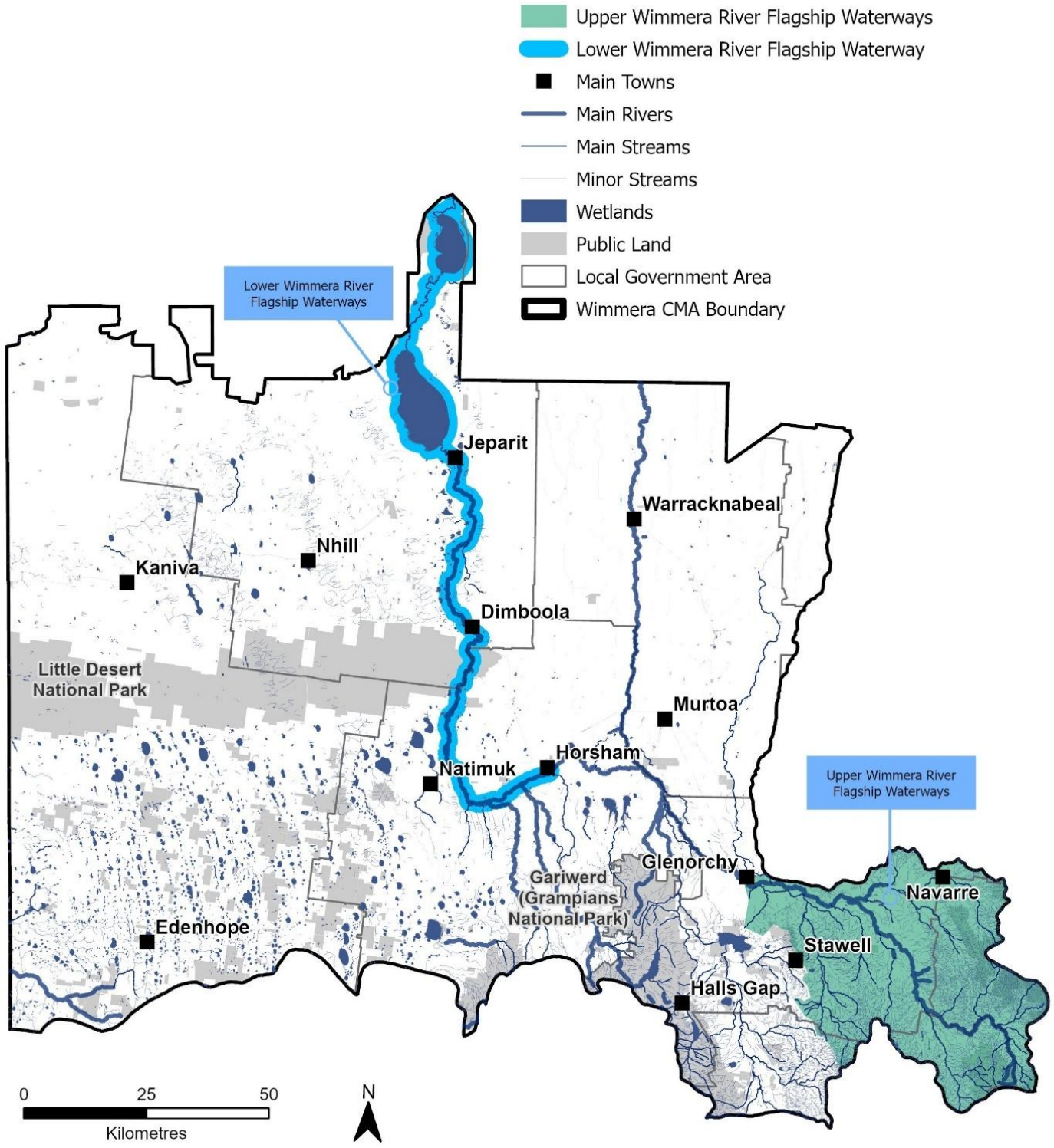


Figure 3. Flagship waterways in the Wimmera, including the Lower Wimmera Flagship Waterway.

Cultural values

The Barringgi Gadyin (Wimmera River) is central to the cultural identity, traditions and wellbeing of the Wotjobaluk Nations Peoples. For thousands of years, it has provided water, food and a focus for cultural life, with hundreds of significant cultural sites located along its banks. Traditional foods sourced from the river system included mussels, fish and water ribbons, while seasonal movements for ceremony and resource gathering reflected a deep understanding of Country.

Several places along the river remain important to Traditional Owners, including Ranch Billabong, The Common and the Antwerp property, all of which continue to provide opportunities for cultural connection, recreation and community gatherings. [8]

Ranch Billabong, near Dimboola, is owned freehold by Barengi Gadjin Land Council and managed on behalf of the Wotjobaluk Nations Peoples. The site holds strong cultural significance as a place where families lived, children were raised and people fished in the billabong. Registered with Aboriginal Victoria as an Aboriginal Place, it is a rare surviving example of a former Aboriginal 'fringe camp.'

The Common, also located on the Barringgi Gadyin at Dimboola, is another place of great cultural importance. Many Aboriginal families settled there following the closure of Ebenezer Mission and the area contains significant cultural heritage, including scarred trees and other Aboriginal cultural sites.

The Antwerp property has long been valued by Traditional Owners for camping, swimming and fishing along Datchak Creek and the Barringgi Gadyin. Following the closure of Ebenezer Mission, many families relocated to Antwerp and Elders continued to live there until recently. Traditional Owners maintain a strong connection to the area and aspire to see it restored as a place for gathering and cultural practice.

Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) also hold profound cultural significance. Gurru was part of an important traditional trading route, while Ngalpakatia/Ngelpagutya contains evidence of long-standing Aboriginal occupation, including shell middens, oven mounds, scarred trees and artefact scatters.

The significance of the Barringgi Gadyin river system is further reflected in the many Creation stories that have been passed down through generations. In 2005, the Federal Court recognised non-exclusive Native Title rights for the Wotjobaluk, Jaadwa, Jadawadjali, Wergaia and Jupagulk Peoples across much of the lower Barringgi Gadyin. These rights include hunting, fishing, gathering and camping for personal, cultural and communal purposes in accordance with traditional laws and customs.

Scarred trees, shell middens, burial sites and artefact scatters found throughout the river corridor, particularly along the Barringgi Gadyin, provide enduring evidence of the deep and continuing connection between the Wotjobaluk Nations Peoples and the river system. While many sites have been recorded on the Victorian Aboriginal Heritage Register, numerous others remain uncatalogued along the length of the waterway.

Social and recreational values

The Barringgi Gadyin (Wimmera River) is an important recreational and tourism asset for the region. Its connection to the Little Desert National Park and surrounding reserves supports nature-based tourism, particularly during the spring wildflower season.

The Wimmera River Discovery Trail, which officially opened in late 2025, links the townships of Dimboola and Jeparit. Stretching 56 kilometres, the trail attracts visitors seeking walking, cycling and camping opportunities along the river corridor.

The Dimboola and Jeparit weir pools are focal points for community recreation and tourism. They provide access to walking tracks, picnic areas, campgrounds and water-based activities. Water skiing is popular when water levels are sufficient, particularly at the Dimboola weir pool and downstream of Jeparit near Gurru (Lake Hindmarsh).

Fishing is another major recreational activity, with golden perch and silver perch populations augmented through stocking programs, alongside a valued population of freshwater catfish. Recreational fishing competitions attract participants from across western Victoria and interstate.

Dimboola hosts several high-profile water sports events, including its annual rowing regatta and barefoot water-skiing competitions. Among these is Australia's largest night-jump competition, which attracts more than 2,000 visitors each year. Local clubs have also invested substantially in riverfront infrastructure and facilities, further enhancing the river's recreational appeal.

In Jeparit, the annual Easter fishing competition is a key community event, drawing hundreds of competitors and spectators to the township.

When water is present, Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) become major regional recreation destinations, supporting activities such as water skiing, fishing, yabbying, birdwatching and camping.

Economic values

The lower Barringgi Gadyin (Wimmera River) is an important driver of economic activity in the region. In 2022-23, an estimated 21,500 people used the river in Dimboola and 6,400 in Jeparit, generating approximately $737,000 in economic activity through visitor spending on accommodation, food, fuel, retail purchases and recreational activities. River-based events provide additional economic benefits for local communities, with the 2022 Dimboola barefoot skiing event contributing $67,000 and the Jeparit Easter fishing competition generating a further $48,000 from day and overnight visitors. [9]

Recreation opportunities support local businesses and tourism operators, while major community events help attract visitors from across western Victoria and interstate, strengthening the economic contribution of the lower Wimmera River to the region.

River and stream condition

River condition in the Hindmarsh area is strongly influenced by rainfall, runoff and streamflow patterns. In the 2010 Index of Stream Condition surveys, the Barringgi Gadyin (Wimmera River) reach between Antwerp and Gurru (Lake Hindmarsh) was assessed as being in poor condition, while the reach upstream of Antwerp was rated moderate. These assessments were undertaken following the Millennium Drought and have not been repeated. However, conditions have improved substantially since that time, with higher water availability, including water for the environment allocations, contributing to healthier river and floodplain ecosystems.

Although Outlet Creek has not flowed since Index of Stream Condition monitoring commenced in 1999, it remains protected as part of the Wimmera Heritage River. Its riparian corridor has retained relatively good condition, achieving moderate streamside zone ratings and continuing to provide valuable habitat and landscape connectivity. (10)

Water quality does not always meet the targets set in Victoria's *Environment Reference Standards*. Nevertheless, since the end of the Millennium Drought water quality has generally been sufficient to support native fish populations, recreational use and community activities, including fishing competitions, rowing regattas and other river-based events.

The condition of culturally significant trees varies across the river system, ranging from good to poor depending on water availability and water quality.

Threats and drivers of change

Hydrology – Climate change and dry conditions

Climate change is placing increasing pressure on the natural assets of the Hindmarsh area. Rising temperatures and a decline in rainfall across the headwaters of the Barringgi Gadyin (Wimmera River) have reduced flows to the lower river system. Water availability is further affected by upstream extraction for urban water supplies, agriculture and stock and domestic use.

Reduced river flows diminish aquatic habitat and limit connectivity between river and wetland environments, affecting the movement of native species and the health of aquatic ecosystems. Lower flows also contribute to declining water quality. Salinity can increase when saline groundwater enters the river and there is insufficient freshwater flow to dilute or flush salts. As a result, the resilience of the river system and the environmental values it supports are increasingly vulnerable to prolonged dry conditions

Saline groundwater intrusion

Saline groundwater entering the lower Barringgi Gadyin (Wimmera River) is a major threat to water quality and the health of fish, aquatic ecosystems and riparian vegetation. This risk is greatest during periods of low or zero river flow, when reduced volumes of freshwater are less able to reduce and dilute saline groundwater inputs.

During the Millennium Drought, streamflows declined dramatically and salinity levels in some pools rose to concentrations exceeding seawater. These conditions contributed to severe declines in river health.

Since the drought ended and the major floods of 2010 and 2011, targeted management of water for the environment flows has helped improve water quality. Natural flows and water for the environment have flushed and diluted salts, maintained connectivity between pools, protected drought refuges and supported instream and riparian vegetation. As a result, overall river health has generally improved, although drought periods in 2014-15, 2018 and 2020-21 again reduced flows and led to declines in water quality.

Weeds and pest animals

A range of invasive weeds threaten the health and integrity of riparian and wetland vegetation along the lower Barringgi Gadyin (Wimmera River). Key species include boneseed (*Chrysanthemoides monilifera subsp. Monilifera*), African boxthorn (*Lycium ferocissimum*), bridal creeper (*Asparagus asparagoides*), horehound (*Marrubium vulgare*), prickly pear (*Opuntia spp.*), wheel cactus (*Opuntia robusta*) and olives (*Olea eurpaea*). Ongoing monitoring and management are needed to prevent these weeds from spreading, particularly as floods and wildlife can disperse them further down the river and terminal lake system.

Rabbits also pose an ongoing threat to riparian vegetation by damaging native plants and hindering natural regeneration.

Annual fish monitoring indicates that native fish populations are improving. However, carp and other introduced fish species remain a significant threat. These species compete with native fish for habitat and food, disturb river sediments and increase water turbidity and nutrient levels through their feeding behaviour. Carp can also reproduce rapidly when conditions are favourable.

Monitoring results up to 2025 indicate that, despite their continued presence, the impacts of carp have not increased. (11)

Grazing by livestock

Livestock grazing is considered a relatively low threat to the lower Barringgi Gadyin (Wimmera River). Approximately 92% of the river frontage is protected from livestock access, helping to reduce impacts on riverbanks, vegetation and water quality. (12)

Grazing pressure is further reduced by the surrounding land use, which is predominantly broadacre cropping. Many landholders no longer run livestock, limiting the potential for stock to affect riparian vegetation and river health.

Impacts of recreation

Recreational activities, particularly motorised boating and water-skiing, can affect the health of the Barringgi Gadyin (Wimmera River). Boat wake can contribute to riverbank erosion, which may destabilise riverbank trees and increase the risk of trees falling into the river, creating hazards for river users. To address these issues, Wimmera CMA collaborates with Hindmarsh Shire Council, Barengi Gadjin Land Council, land managers and local community groups to implement measures to reduce erosion and help protect cultural heritage values along the river corridor.

Illegal activities, including the creation of informal vehicle tracks, rubbish dumping and firewood collection, continue to damage riverbanks and vegetation, contributing to erosion and degradation of the river environment.

Jeparit Waterwatch Group – more than 30 years



Jeparit Waterwatch Group volunteers Jeanie Clark, Sue Afford and Martin Stone (pictured above) celebrated 30 years of water quality monitoring in the lower Wimmera catchment in 2025. The group is Victoria's longest running Waterwatch group.

Established in May 1995 by a group of retired farmers based at the Jeparit Museum, the Jeparit Waterwatch Group has built an invaluable citizen science record of water quality across the region. Over three decades, volunteers have collected around 350 water quality records at each of six monitoring sites on the Wimmera River at Jeparit.

The group's monitoring network has extended from Antwerp along the Barringgi Gadyin (Wimmera River) to Gurru (Lake Hindmarsh) and has included farm dams, before the introduction of Wimmera Mallee Pipeline water, as well as more recent monitoring of the Yarriambiack Creek and its Hopetoun Lakes in the Mallee region. The data captures significant environmental changes over time, recording between three and six water quality measures at each sampling event. Salinity has been one of the most important indicators monitored. The data is available through the Waterwatch Victoria website (https://www.vic.waterwatch.org.au/).

Regular visits to the same monitoring locations have also allowed volunteers to observe and document seasonal changes in plants and wildlife, particularly birds. The group has raised concerns about environmental issues and supported local action on threats such as invasive prickly pear growing along the river and the spread of ash trees into wetlands. (52)

Northern Wimmera Plains Wetlands

The Hindmarsh area contains more than 280 wetlands, including the terminal lakes system of the Barringgi Gadyin (Wimmera River), which encompasses Gurru (Lake Hindmarsh), Ngalpakatia/Ngelpagutya (Lake Albacutya), the Ross Lakes and a range of smaller associated wetlands. Numerous additional wetlands are scattered throughout the surrounding landscape.

Other significant wetlands in the area include Pink Lake, Nhill Lake, Nhill Swamp, Mount Elgin Swamp and Yanac Swamp, which contribute to the region's ecological diversity and provide important habitat for native plants and wildlife.

Wetland Values

Environmental values

The Hindmarsh local area's wetlands support diverse ecosystems and provide important habitat for many native plant and animal species. Among these, Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) are recognised for their outstanding ecological, hydrological and cultural values at both national and international levels.

Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) are both recognised as nationally important wetlands. As key components of the Barringgi Gadyin (Wimmera River) terminal lakes system, they:

- Represent important wetland types within their biogeographic region.
- Play key ecological and hydrological roles in the functioning of the Barringgi Gadyin (Wimmera River)'s terminal wetland complex.
- Provide essential habitat and drought refuge for wildlife, supporting species during vulnerable life stages.
- Hold outstanding historical and cultural significancea.

In addition to meeting the national criteria above, Ngalpakatia/Ngelpagutya (Lake Albacutya) is recognised as a wetland of international importance under the Ramsar Convention because it:

- Regularly supports large populations of waterbirds, including more than 20,000 birds during wet periods.
- Supports at least 1% or more of the national population of native waterbirds, meeting key international conservation thresholds.
- Provides habitat for vulnerable, endangered or critically endangered species, contributing to regional biodiversity.
- Contains rare or representative wetland types in a near-natural condition.
- Supports migratory bird species protected under international conservation agreements. [3]

Bird surveys undertaken at Gurru (Lake Hindmarsh) between 2023 and 2025, following partial filling of the lake, further demonstrated its importance for threatened and migratory bird species. More than 40 waterbird species were recorded, including large numbers of individual birds. Notable sightings included the Australasian bittern (*Botaurus poiciloptilus*), great egret (*Ardea alba*), Australasian shoveler (*Spatula rhynochotis*), musk duck (*Biziura lobata*) and gull-billed tern *(Gelochelidon nilotica*), all of which are listed as threatened under Victoria's *Flora and Fauna Guarantee Act 1988*.

Two migratory shorebird species, the red-necked stint (*Calidris ruficollis*) and sharp-tailed sandpiper (*Calidris acuminata*), were also recorded. Both species are protected under international migratory bird agreements with Japan, China and Republic of Korea. [13]

Across the Hindmarsh local area, endangered and vulnerable vegetation communities occur around wetlands and along the Barringgi Gadyin (Wimmera River). These include Plains Grassland, Low Rises Woodland, Red Gum Swamp, Lignum Swampy Woodland and the Salt Paperbark Woodland/Samphire Shrubland Mosaic. Together, these communities contribute significantly to the region's biodiversity and ecological resilience. [6]

Cultural values

Many of the Wimmera's wetlands hold significant cultural value for First Nations Peoples, providing important resources, places for gathering and ongoing connections to Country.

Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) are of particular cultural significance to the Wotjobaluk Nations Peoples. Gurru was part of an important traditional trading route, while the shores of Ngalpakatia/Ngelpagutya contain numerous cultural heritage sites, including shell middens, oven mounds, scarred trees, artefacts and culturally significant stories. Together, these places reflect a long and enduring connection to Country.

This connection is further demonstrated by a 2017 cultural heritage study at Ross Lakes, near Ngalpakatia/Ngelpagutya. The study confirmed the presence of previously recorded middens and scarred trees and documented many additional cultural sites, including dozens of newly identified scarred trees, a rare carved tree, clay balls and additional middens. The findings indicate that the Ross Lakes area was an important meeting place and has been used by First Nations Peoples over many generations, highlighting its ongoing cultural significance.

Social and recreational values

The Hindmarsh local area is characterised by expansive landscapes and a strong connection between waterways and community life. Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya) are highly valued by residents and visitors, particularly when high river flows and floodwaters fill the lakes. During these periods, they provide opportunities for water-skiing, fishing, camping, birdwatching and nature-based tourism. Even when water levels are low, both lakes remain popular destinations for visitors seeking to experience the region's natural and cultural landscapes.

Gurru (Lake Hindmarsh) is a particularly important recreation destination, attracting an estimated 6,700 participants in recreational activities during 2022-23 after partially filling. [9]

Nhill Lake is a key community asset, supporting a range of recreational activities including fishing, water-skiing, swimming, birdwatching and community events. Nearby Nhill Swamp is also a popular attraction, with its boardwalk providing opportunities for nature appreciation and wildlife observation.

Pink Lake, near Dimboola, is a major tourism drawcard for travellers along the Western Highway. The lake is well-known for its distinctive pink colour, created by naturally occurring pigment-producing algae.

Economic values

Waterbodies across the Hindmarsh area provide important economic benefits to local communities by attracting visitors and supporting recreation-based spending.

A study examining the social and economic value of water in the Wimmera and southern Mallee found that, during 2022-23, recreational use of Gurru (Lake Hindmarsh) contributed an estimated $80,100 to the local economy. Rainbow Lake contributed approximately $9,400, while Nhill Lake contributed around $6,500.

These economic benefits reflect spending by both local residents and visitors on activities such as recreation, tourism and community events, highlighting the importance of healthy and accessible waterways to social and economic wellbeing. [9]

Wetland condition

Index of Wetland Condition assessments were undertaken at several wetlands in the Hindmarsh area during 2009-10, including Gurru (Lake Hindmarsh), Ngalpakatia/Ngelpagutya (Lake Albacutya) and some smaller terminal lakes downstream.

The condition ratings of these wetlands were affected by changes to natural flow patterns caused by upstream river regulation and dry climate, which reduced their hydrology scores. At the time of assessment, all wetlands except Gurru (Lake Hindmarsh) were dry. Gurru (Lake Hindmarsh) recorded relatively poor water quality, which lowered its overall condition rating despite the presence of water in the lake. [14]

Threats and drivers of change

Hydrology - climate change and dry conditions

Climate change is increasing pressure on wetlands across the Hindmarsh local area by reducing the frequency, extent and duration of inundation. Many wetland plants, waterbirds and other wildlife depend on periodic flooding to complete their life cycles and less frequent filling events can lead to declines in habitat quality and biodiversity. The very wet years and major floods needed to replenish the region's wetlands are expected to become less common under a drier climate, increasing the vulnerability of the lower Barringgi Gadyin (Wimmera River)'s terminal lakes system.

Gurru (Lake Hindmarsh) typically receives water during periods of high flow and flooding in the Barringgi Gadyin (Wimmera River). However, for water to reach Ngalpakatia/Ngelpagutya (Lake Albacutya) and the terminal lakes further downstream, multiple consecutive wet years and substantial flooding are usually required.

Ngalpakatia/Ngelpagutya (Lake Albacutya) last filled in 1974 and retained water until 1983. Since then, only small inflows have reached the lake. Historical records indicate that the lake has experienced only four major filling events since 1920, highlighting the rarity of the conditions needed to sustain this internationally significant wetland. [3] As the climate becomes drier, such events are expected to occur even less frequently.

Weeds and pest animals

Invasive weeds, including boneseed, African boxthorn, bridal creeper, horehound, prickly pear, wheel cactus and wild olive, pose an ongoing threat to the health of riparian and wetland vegetation across the Hindmarsh local area. These species can outcompete native plants, reduce habitat quality and alter ecosystem function. Floodwaters, wildlife and other natural dispersal processes can also spread weeds, increasing the need for ongoing monitoring and management.

Rabbits remain a significant pest species, threatening native vegetation around lakes and wetlands. Their impacts are particularly evident in the sandy dune systems that border many wetlands, including Gurru (Lake Hindmarsh) and Ngalpakatia/Ngelpagutya (Lake Albacutya). Grazing and burrowing by rabbits can damage native plant communities, hinder natural regeneration and contribute to soil erosion.

Bed and bank modifications

Many wetlands across the Hindmarsh area have been altered. A 2017 Wimmera CMA study found that of the 281 recorded wetlands, around half were wholly or partly used for cropping. The study also identified 67 wetlands containing dams and 71 wetlands affected by drains or levees.

Only 95 wetlands were found to be largely unmodified. Most of these wetlands fill only during very wet years, making them important examples of the region's natural wetland systems and valuable refuges for native plants and animals. [15] Changes to wetland beds, banks and hydrology can affect wetland function, reducing habitat quality and altering natural water regimes.

Impacts of recreation

Recreational use of rivers, streams and wetlands can place pressure on these environments. Activities that increase access to waterways can contribute to wetland bed and buffer erosion, damage native vegetation, disturb wildlife habitat and lead to issues such as rubbish dumping and illegal firewood collection.

If not managed appropriately, these impacts can degrade the condition of waterways and wetlands, reducing their environmental, cultural and recreational values. Ongoing management and community awareness help minimise these pressures and protect these important natural assets.

Previous waterway strategy achievements

The *Wimmera Waterway Strategy 2014-2022* focused on protecting and enhancing high-value waterways across the Hindmarsh local area. In the lower Barringgi Gadyin (Wimmera River) and Outlet Creek, this included supporting landholders to manage livestock access, improving riparian vegetation condition and controlling rabbits and invasive weeds such as boneseed and bridal creeper.

Water for the environment played an important role in improving water quality, supporting native fish populations, maintaining instream vegetation and restoring more natural flow patterns. These actions delivered environmental, cultural, social, recreational and economic benefits.

During wetter years, inflows to Gurru (Lake Hindmarsh) created important habitat for a wide range of waterbird species. Wimmera CMA also monitored fish, bird and vegetation communities to evaluate environmental outcomes and inform future management.

At Ngalpakatia/Ngelpagutya (Lake Albacutya), Parks Victoria and Barengi Gadjin Land Council undertook extensive rabbit-control programs that significantly reduced impacts on native vegetation, enabling regeneration of nationally endangered Pine-Buloke Woodland communities.

Wimmera CMA also commissioned studies investigating the movement and behaviour of carp and salinity management in the lower Barringgi Gadyin (Wimmera River). Community-based monitoring has complemented this work. The Jeparit Waterwatch Group collected valuable citizen science data on salinity and water quality in the Barringgi Gadyin (Wimmera River) at Jeparit. Through regular monitoring, volunteers also recorded seasonal changes in waterway condition, flora and fauna and helped identify emerging environmental issues including invasive prickly pear cactus (*Opuntia* spp.), a Weed of National Significance and ash trees encroaching into wetlands. [16]

Barengi Gadjin Land Council, supported by Wimmera CMA, restored the culturally significant Ranch Billabong near Dimboola. Works included installing infrastructure to reconnect the billabong to the river, enabling controlled watering to support its ecological and cultural values.

Additional river protection and restoration works included the installation of floating vegetated pontoons upstream of Dimboola to help reduce riverbank erosion.

To improve drought resilience, Wimmera CMA and partner organisations commenced work to connect key drought-refuge pools in the lower Barringgi Gadyin (Wimmera River) to the Wimmera Mallee Pipeline. The pipeline connections will enable water for the environment to be delivered directly to refuge pools during prolonged dry periods, helping maintain water quality and reducing the risk of fish deaths when natural flows and water for the environment allocations are insufficient to reach this part of the river. Pipeline construction, led by GWMWater, is planned for 2026-27.

Stakeholder and community feedback

Wimmera CMA sought feedback from stakeholders and the community during the development of the Strategy and Plan. Participants identified a range of waterways in the Hindmarsh local area as being particularly important, including:

- Lower Barringgi Gadyin (Wimmera River)
- Jeparit and Dimboola weir pools
- Gurru (Lake Hindmarsh)
- Ngalpakatia/Ngelpagutya (Lake Albacutya)
- Ross Lakes
- Rainbow Lake
- Nhill Lake and Nhill Swamp
- Ranch Billabong
- Datchak Creek
- Wetlands across the region.

Key themes raised through consultation included:

- **Supporting recreation and community events:** Some stakeholders highlighted the importance of maintaining good water quality, reliable water availability and appropriately managed vegetation to support safe access, recreation and community events. Concerns were raised about the condition of the Barringgi Gadyin (Wimmera River), particularly the impacts of low flows, declining water quality and excessive instream vegetation on recreational use.
- **Protecting environmental and cultural values:** Some participants emphasised the importance of maintaining healthy waterways, protecting important species and habitats and recognising and protecting cultural values.
- **Developing clear management plans:** Local government stakeholders supported the development of dedicated management plans for the Dimboola and Jeparit weir pools and their surrounding riparian areas. Concerns were also raised about the ageing Jeparit weir, with stakeholders noting the need for replacement to maintain the social and economic benefits it provides to the community and to ensure safe operation for managing water flows and floods.
- **Managing invasive species:** Stakeholders identified invasive species as a continuing concern, particularly woody weeds such as boneseed, as well as carp, deer and feral cats. These species were seen as significant threats to native vegetation, wildlife and ecosystem health.
- **Supporting a Ramsar boundary extension:** Some stakeholders supported extending the Ramsar listing of Ngalpakatia/ Ngelpagutya (Lake Albacutya) to include Gurru (Lake Hindmarsh). This support was based on Gurru's ability to hold water more frequently and its importance for waterbirds, biodiversity and environmental, cultural, social and economic values.

Priority areas for management

The Strategy identified several priority areas in the Hindmarsh local area for targeted management and investment, including:

- Lower Barringgi Gadyin (Wimmera River)
- Jeparit and Dimboola weir pools
- Gurru (Lake Hindmarsh)
- Ngalpakatia/Ngelpagutya (Lake Albacutya)
- Outlet Creek
- Datchak Creek
- Wetlands with high environmental value
- Crow Swamp - pipeline watered wetland
- Pink Lake
- Nhill Lake and Swamp.

The location of these areas is shown in Figure 2. These priority areas were identified because of their high environmental, cultural, social and recreational values, as well as the opportunities and challenges associated with their ongoing management. Together, they represent the waterways and wetlands where management actions are expected to deliver the greatest benefits for the community and the environment.

Hindmarsh local area - Implementation plan

The following tables outline management actions for the Lower Barringgi Gadyin (Wimmera River) Heritage River and Flagship Waterway and the Northern Wimmera Plains Wetlands. These actions are intended to be implemented over the ten-year period from 2026 to 2036 to help achieve desired environmental, cultural, social and recreational outcomes for the Hindmarsh local area.

Management actions are shaded green for high priority and orange for medium priority. Actions with no shading are low priority.

Unless otherwise specified, actions are currently funded through the Environmental Contribution Levy and other funding sources until 2028. For the purposes of the Strategy, funding is assumed to continue at current levels through to 2036.

This Plan is a living document that will be updated over time to reflect changes in funding, resources and other factors influencing catchment condition and management.

Implementation plan - Lower Barringgi Gadyin (Wimmera River) and terminal lakes system

This Plan sets out an integrated program of management actions including water for the environment and complementary waterway management activities to maintain and improve the environmental, cultural and social values of the lower Barringgi Gadyin (Wimmera River) and its terminal lakes system.

Water for the environment will play a central role in supporting native vegetation, waterbirds, fish and broader ecosystem processes, while complementary actions such as invasive species control, riparian vegetation protection, habitat restoration, infrastructure management and partnerships with Barengi Gadjin Land Council and other stakeholders including community groups will address key threats and improve long-term resilience. Many of these complementary management actions are being delivered through the Lower Wimmera River Flagship Waterway Project.

A particular focus of the plan is the protection and management of drought refuge pools, which provide critical habitat and safe havens for native fish, aquatic fauna and other species during extended dry periods. Protecting and enhancing refuge areas will help build the resilience of the system to climate change impacts, support species persistence and recovery, and improve the ability of the lower Barringgi Gadyin (Wimmera River) to withstand future environmental change.

Management actions are grouped in this Plan according to management themes:

Management theme	Table number
Enhancing riparian habitat, landscape connectivity and resilience.	Table 1
Water for the environment.	Table 2
Drought refuge area management.	Table 3
Ramsar site management.	Table 4
Supporting recreational access in balance with environmental and cultural values.	Table 5

Appendix 1 contains the logic framework outlining the medium-term outcomes, values, threats and management actions that underpin this Plan. The key values supported and threats addressed by the Plan are summarised below.

Key values supported by this implementation plan
Internationally important wetland, the Ngalpakatia/Ngelpagutya (Lake Albacutya) Ramsar site.
Nationally important wetlands, Ngalpakatia/Ngelpagutya (Lake Albacutya), Gurru (Lake Hindmarsh) and the Lower Barringgi Gadyin (Wimmera River).
Victorian Heritage River, the Lower Barringgi Gadyin (Wimmera River).
Strong cultural connections and values for Wotjobaluk Nations Peoples.
A **regionally significant native vegetation corridor** linking Little Desert and Wyperfeld National Parks.
Habitat for threatened species and ecological communities, including Australasian bittern, floodplain rustyhood, regent parrot, pink cockatoo, pine-buloke woodlands and riparian vegetation communities.
Important habitat for waterbirds and native fish.
High community value for recreation, tourism and amenity.
Economic values include tourism, events and water supply.

Key threats addressed by this implementation plan
Reduced flows and inundation from climate change, drought and altered water regimes.
Salinity impacts and **declining water quality**.
Invasive plants and pest animals.
Habitat degradation, including overgrazing and recreation impacts.
Impacts of floods and bushfire.
Declining waterway infrastructure, affecting delivery of water for the environment and river health.
Carp increasing instream turbidity and impacting aquatic plants and native fish.
Impacts of recreation and access, such as off-road vehicles, littering, and illegal firewood removal.

Enhancing riparian habitat, landscape connectivity and resilience

Table 1. Management actions associated with maintaining or improving riparian areas.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Lower Barringgi Gadyin (Wimmera River) and Outlet Creek	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO7.** Healthier waterways enable more On Country activities for First Nations Peoples. **MO10.** Stewardship increases, with more people taking action to care for waterways.	The extent of riparian habitat and condition of river red gum communities are maintained or improved. The connectivity of riparian habitat is maintained or improved, enabling the movement and dispersal of terrestrial species.	Support private landholders to protect and manage riparian areas on their properties by managing stock access and controlling weeds, foxes and rabbits.	27 management agreements. 60 km of fence. 180 ha of grazing access management.	**Wimmera CMA.** Private landholders.	*Lower Wimmera Flagship Waterway Project.* *Wimmera Proportion of Waterways Protected (2023).* *Wimmera Invasive Plant and Animal Management Strategy (2019).* *Heritage River Waterway Action Plan (2005).*	Part of the Lower Wimmera Flagship Waterway Project. A proportion of the identified action amounts are funded until June 2028.
			Enhance riparian vegetation by revegetating with native species.	90 ha of revegetation.	**Wimmera CMA.** Public land managers. Landcare groups. Private landholders.		
			Reduce the impact of problem invasive fauna on riparian vegetation by controlling rabbits.	2,760 ha of pest animal control.			
			Reduce the impact of weeds on riparian vegetation by controlling problem weeds.	4,560 ha of weed control (woody and non-woody).			
			Monitor for new incursions or spread of pest plants and animals. Treat populations to prevent new, or greater, establishment where feasible.	1 partnership per year in collaboration with land managers.	**Wimmera CMA.** Public land managers. Agriculture Victoria. Private landholders.		

Water for the environment

Table 2. Management actions associated with providing water for the environment to support instream and riparian values.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Lower Barringgi Gadyin (Wimmera River). Gurru (Lake Hindmarsh), Ngalpakatia/ Ngelpagutya (Lake Albacutya), Outlet Creek and other terminal lakes.	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO5.** Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values. **MO7.** Healthier waterways enable more On Country activities for First Nations Peoples.	The abundance, movement and species richness of native fish species is maintained or improved. The species richness and spatial extent of in-channel aquatic vegetation are maintained or improved and the abundance of aquatic vegetation is increased. The availability and quality of refuge habitats for native fish species are maintained or improved, with channel capacity preserved and sediment accumulation minimised. Riparian habitat extent and the condition of river red gum communities are maintained or improved. Geomorphic habitat quality is maintained or improved through the preservation of channel form, clean substrates and an open stream bed. The connectivity of instream habitat between river reaches is maintained or improved, enabling the movement and dispersal of native fish. Where possible, salinity and dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values. Management of water for the environment achieves the waterbird outcomes identified in the environmental water management plan.	Develop annual seasonal watering proposals for the Barringgi Gadyin (Wimmera River).	10 proposals (comprised of 1 proposal annually).	**Wimmera CMA.** GWMWater. Victorian Environmental Water Holder. Commonwealth Environmental Water Holder. Hindmarsh Shire Council.	*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* Annual seasonal watering plans.	Continuation of work under the previous regional waterway strategy.
			Deliver water for the environment to the lower Barringgi Gadyin (Wimmera River) in line with the Victorian Environmental Water Holder's annual seasonal watering plans.	The volume (ML) of water delivered and extent of river watered depends on annual watering entitlements.			

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Lower Barringgi Gadyin (Wimmera River). Dimboola and Jeparit weir pools.	**MO5.** Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values.	Where possible, salinity and dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values. Where flow conditions can be influenced, the frequency, duration and severity of hypoxic events is managed to reduce risks to native fish and recreation and amenity values. Where possible, nutrient levels are effectively managed to reduce the risk of blue-green algae blooms impacting native fish, recreation and amenity values.	If water quality poses an emergency or unexpected risk of blue green algae or fish deaths, provide water for the environment to improve water quality in consultation with the Victorian Environmental Water Holder, if sufficient water allocations are available.	As needed.	**Wimmera CMA.** **Victorian Environmental Water Holder.**	*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* Annual seasonal watering plans.	Continuation of approach under the previous regional waterway strategy.
Lower Barringgi Gadyin (Wimmera River). Dimboola and Jeparit weir pools.	**MO5.** Risks to water quality in Wimmera waterways are managed where possible to reduce impacts on values.	Where possible, salinity and dissolved oxygen levels are effectively managed to reduce risks to native fish, instream and riparian vegetation and recreation and amenity values in the Lower Barringgi Gadyin (Wimmera River) and weir pools.	Plant native vegetation in areas where saline groundwater is close to the surface to reduce the impact of saline groundwater entering the Barringgi Gadyin (Wimmera River) and floodplain areas.	To be determined.	**Wimmera CMA.** **Barengi Gadjin Land Council.**	*Wimmera Saline Pools Investigation.*	New action.

Drought refuge area management

Table 3. Management actions associated with managing drought refuge pool management, including providing water for the environment and complementary measures.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Lower Barringgi Gadyin (Wimmera River). Drought refuge areas at: • Lochiel • Tarranyurk • Arkona • Antwerp.	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO4.** Drought refuges support native species' survival and resilience during dry periods.	During and after dry conditions and drought, waterway habitat, environmental values including native fish, riparian and aquatic vegetation, frogs and waterbirds and recreational values are maintained at drought refuge areas.	Deliver water for the environment to drought refuge pools during dry periods, in line with the Victorian Environmental Water Holder's annual seasonal watering plans.	4 drought refuges sites in the lower Barringgi Gadyin (Wimmera River) connected to the Wimmera Mallee Pipeline. The volume (ML) of water delivered and number of pools receiving water depends on river conditions and annual watering entitlements.	**Wimmera CMA.** Victorian Environmental Water Holder. GWMWater. Barengi Gadjin Land Council.	*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).* Annual seasonal watering plans. *Wimmera CMA's Dry Conditions Action Plan (2025).*	New action.
			Prepare site management plans for drought refuge areas, identifying measures to enhance habitat and reduce threats to environmental values, complementing provision of water for the environment.	4 drought refuge areas in the lower Barringgi Gadyin (Wimmera River) connected to the Wimmera Mallee Pipeline.	**Wimmera CMA.** Victorian Environmental Water Holder. GWMWater. Barengi Gadjin Land Council.	*Environmental Water Management Plan - Wimmera River, Yarriambiack Creek and their terminal lakes (2024).*	New action.

Ramsar site management

Table 4. Management actions associated with maintaining the values of the Ngalpakatia/Ngelpagutya (Lake Albacutya) Ramsar site.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Ngalpakatia/ Ngelpagutya (Lake Albacutya) and adjoining waterways including Outlet Creek.	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO7.** Healthier waterways enable more On Country activities for First Nations Peoples. **MO10.** Stewardship increases, with more people taking action to care for waterways.	Riparian and woodland vegetation is maintained and improved so that Lake Albacutya continues to provide habitat in dry phases and, when inundated, supports water-dependent species. Fringing woodland habitat continues to provide habitat and refuge for migratory and resident woodland bird species, including regent parrot and pink cockatoo. Endangered Pine-Buloke Woodland condition and regeneration are maintained or improved, supported by reduced rabbit impacts, decreased erosion risk and enhanced dune stability.	Reduce the impact of weeds on riparian vegetation by controlling priority and problem weeds including boxthorn, boneseed, bridal creeper, melons and other new and emerging weeds.	500 ha (annually).	**Parks Victoria.** Barengi Gadjin Land Council. Wimmera CMA.	*Lake Albacutya Ramsar Site Annual Action Plan.* *Lake Albacutya Ramsar site Ecological Character Description (2010).* *Wimmera Regional Land Partnerships Program Action Plan (2021).* *Wimmera Invasive Plant and Animal Management Strategy (2019).*	Funded under the Victorian Waterway Health Ramsar Program until June 2028. Continuation of work under the previous regional waterway strategy.
			Reduce the impact of invasive fauna on Pine-Buloke woodlands and soil and dune stability by controlling rabbits.	250 ha (annually).			
Gurru (Lake Hindmarsh).	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience.	Foundational activity informing future management decisions and conservation priorities for Gurru (Lake Hindmarsh) and the broader lower Barringgi Gadyin (Wimmera River) and terminal lakes system, including Ngalpakatia/Ngelpagutya (Lake Albacutya) Ramsar site.	Assess Gurru (Lake Hindmarsh) to inform future management and conservation priorities across the lower river and terminal lakes system, including its ecological relationship with the Lake Albacutya Ramsar site, and whether expansion of the Ramsar boundary is warranted.	1 investigation.	**Wimmera CMA.** Parks Victoria. Barengi Gadjin Land Council.	*Wimmera Regional Catchment Strategy (2021).*	Continuation of previous work under the Regional Catchment Strategy.

Supporting recreational access in balance with environmental and cultural values

Table 5. Management actions associated with supporting recreational access and amenity while minimising impacts on environmental and cultural values.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Dimboola weir pool.	**MO6.** Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising impacts on their environmental values.	High-priority recreational waterways provide safe, inclusive and well-maintained access that supports a range of recreational activities. Visitor impacts are effectively managed through infrastructure, site design and access controls that prevent environmental damage. Community members increasingly use and enjoy waterways for recreation, relaxation, cultural activities and connection with nature.	Collaborate to implement the *Wimmera River Waterway Management Plan Dimboola (2021).*	1 plan implemented.	**Hindmarsh Shire Council.** Wimmera CMA. Barengi Gadjin Land Council. DEECA - public land management. Parks Victoria. GWMWater. Recreational user groups.	*Wimmera River Waterway Management Plan Dimboola (2021).*	Continuation of existing arrangements.
		Erosion risks associated with ski-boat use are minimised where practical, supporting sustainable recreation while protecting ecological values, cultural heritage and river health.	Inspect and collaborate with partners to maintain the effectiveness of erosion control measures installed to reduce bank erosion in the Dimboola weir pool, including floating wetlands and a retaining wall.	Erosion reduction measures maintained.	**Wimmera CMA** Hindmarsh Shire Council. Barengi Gadjin Land Council. Recreational user groups.	*Lower Wimmera Flagship Waterway Project.*	Part of the Lower Wimmera Flagship Waterway Project. A proportion of the identified action amounts are funded until June 2028.
Jeparit weir pool.	**MO6.** Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising	High-priority recreational waterways provide safe, inclusive and well-maintained access that supports a range of recreational activities. Visitor impacts are effectively managed through infrastructure, site design and access controls that prevent environmental damage. Community members increasingly use and enjoy waterways for recreation,	Develop a management plan for Jeparit weir pool.	1 management plan.	**Hindmarsh Shire Council.** Wimmera CMA. Barengi Gadjin Land Council. Parks Victoria. GWMWater. Recreational user groups.		New action.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes (What the management action seeks to influence to achieve the outcome).	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
	impacts on their environmental values.	relaxation, cultural activities and connection with nature.	Investigate replacement options for Jeparit weir to allow for the safe management of flows and floodwater in the Barringgi Gadyin (Wimmera River) at Jeparit while maintaining the social and economic values of Jeparit weir pool.	1 investigation.		*Redevelopment Overview - Jeparit Weir Replacement. Hindmarsh Shire Council (2026).* [17]	Building on investigations by Hindmarsh Shire Council.
Lower Barringgi Gadyin (Wimmera River). Dimboola and Jeparit weir pools.	**MO1.** Ongoing collaboration and two-way learning in waterway planning and management, supporting self-determination and strengthening partnerships with First Nations Peoples. **MO6.** Waterways identified as high priority for recreation and amenity provide enhanced recreational opportunities and community benefits, while minimising impacts on their environmental values.	Tree-fall risks and instream vegetation growth are collaboratively assessed and managed with key stakeholders to balance access for recreation with sustainable, environmentally and culturally responsible river access and use.	Collaboratively assess and manage tree-fall risks and instream vegetation growth with key stakeholders and in line with permit processes and requirements.	Dependent on the number requiring assessment.	**Wimmera CMA.** **Barengi Gadjin Land Council.** DEECA - public land management. Parks Victoria. Hindmarsh Shire Council. Recreational user groups.	Works on Waterways Permit processes. Cultural heritage processes.	Continuation of existing arrangements.

Implementation plan - Northern Wimmera Plains Wetlands

This Plan sets out an integrated program of management actions including water for the environment and complementary waterway management activities to maintain and improve the environmental, cultural and social values of the Northern Wimmera Plains Wetlands.

Management actions such as invasive species control, habitat restoration, community partnerships and riparian vegetation and buffer zone maintenance and improvement will address key threats and improve long-term resilience.

Management actions are grouped in this Plan according to management themes:

Management theme	Table number
Reducing threats to wetlands and maintaining values.	Table 6
Water for the environment and complementary measures supporting drought refuge areas and wetland values.	Table 7

Appendix 1 contains the logic framework outlining the medium-term outcomes, values, threats and management actions that underpin this Plan. The key values supported and threats addressed by the Plan are summarised below.

Key values supported by this implementation plan
Provide **wetland habitat and drought refuges** in a largely dry agricultural landscape.
Wimmera Mallee Pipeline Wetland, **Crow Swamp, provides a drought refuge area** supporting native plants and animals.
Strong cultural connections and values for Wotjobaluk Nations Peoples.
High social value, with strong community support for their conservation.

Key threats addressed by this implementation plan
Reduced flows and inundation from climate change, drought and altered water regimes.
Changes to hydrology such as channels and dams in the wetland basin and surrounds.
Invasive plants and pest animals.
Habitat degradation, including overgrazing and recreation impacts.
Lack of connectivity, with narrow buffer areas generally surrounded by agricultural land.

Reducing threats to wetlands and maintaining values.

Table 6. Management actions associated with reducing threats to wetlands with high environmental value and maintaining environmental and other values.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes What the management action seeks to influence to achieve the outcome.	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Wetlands with high environmental value.	**MO3.** Wetland modification, loss and deterioration of condition occurs at a declining rate. **MO10.** Stewardship increases, with more people taking action to care for waterways.	The rate of wetlands impacted by modifications including drainage changes, dam construction, cropping and new land development slows or stabilises over time. Wetland buffers, wetland vegetation communities and wetland physical form are maintained or improved on private and public land.	Implement community education activities to increase awareness of cropping, grazing and drainage impacts on wetlands, the values of wetlands and appropriate conservation management techniques.	To be determined based on funding.	**Wimmera CMA.** Landcare. Trust for Nature.	*Wimmera Wetland Asset Strategy.*	Continuation of work under the previous regional waterway strategy.
			Support private landholders to protect and manage wetlands on their properties by controlling stock access, reducing the impact of weeds and pest animals, and maintaining natural hydrology.	To be determined based on funding.	**Wimmera CMA.** Trust for Nature. Private landholders.	*Trust for Nature's Statewide Conservation Plan 2021-2030.* *Wimmera Wetland Asset Strategy.*	Continuation of work under the previous regional waterway strategy.
Public wetlands including Gurru (Lake Hindmarsh).	**MO3.** Wetland modification, loss and deterioration of condition occurs at a declining rate. **MO7.** Healthier waterways enable more On Country activities for First Nations Peoples. **MO10.** Stewardship increases, with more people taking action to care for waterways.	Wetland buffers, wetland vegetation communities and wetland physical form are maintained or improved on private and public land.	Control pest animals in priority areas to reduce their impact on key wetland values.	50 ha (annually).	**Parks Victoria.** **Wimmera CMA.** **Barengi Gadjin Land Council.**	*Wimmera Invasive Plant and Animal Management Strategy 2019.*	Continuation of work under the previous regional waterway strategy.
			Control weeds in priority areas to reduce their impact on key wetland values.	100 ha (annually).			
			Monitor for new incursions and spread of pest plants and animals. Treat problem populations to prevent new or greater establishment, where feasible.	1 partnership per year in collaboration with land managers.	**Wimmera CMA.** **Parks Victoria.** **Barengi Gadjin Land Council.** **Local Government.** Landcare.		

Water for the environment and complementary measures supporting drought refuge areas and wetland values

Table 7. Management actions associated with maintaining or improving the values of wetlands connected to the Wimmera Mallee Pipeline, including management of water for the environment and complementary measures.

Priority area	Medium-term outcomes (MO)	Contribution to the medium-term outcomes What the management action seeks to influence to achieve the outcome.	Management action	Amount by 2036	Responsible parties (Lead organisations are **bold**).	Connection with other plans or strategies	Status
Wimmera Mallee Pipeline Wetlands including Crow Swamp. (Pipeline wetlands are also present in the Upper Catchment and Yarriambiack and Buloke local areas).	**MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO4.** Drought refuges support native species' survival and resilience during dry periods.	Wetland vegetation and riparian habitat condition are maintained or improved. The condition of Wimmera Mallee Pipeline wetlands to function as refugia for water-dependent flora and fauna and terrestrial fauna is maintained or enhanced, particularly during drought and dry conditions.	Develop annual seasonal watering proposals for the Wimmera Mallee Pipeline Wetlands, including Crow Swamp.	10 proposals (comprised of 1 proposal annually).	**Wimmera CMA.** GWMWater. Victorian Environmental Water Holder. Hindmarsh Shire Council. Mallee CMA. North Central CMA.	*Environmental Water Management Plan – Wimmera Mallee Pipeline Wetlands – Wimmera CMA Region (2016).* Annual seasonal watering plans issued by the Victorian Environmental Water Holder.	Continuation of existing arrangements.
			Deliver water to Wimmera Mallee Pipeline Wetland, Crow Swamp, on behalf of GWMWater and in line with annual seasonal watering plans.	The volume (ML) of water delivered and timing of deliveries depends on annual watering entitlements and seasonal watering plans.	**Wimmera CMA.** GWMWater. Victorian Environmental Water Holder.		
	MO1. Ongoing collaboration and two-way learning in waterway planning and management, supporting self-determination and strengthening partnerships with First Nations Peoples. **MO2.** Priority areas have improved management to enhance habitat, landscape connectivity and resilience. **MO7.** Healthier waterways enable more On Country activities for First Nations Peoples.	First Nations Peoples are empowered to actively care for and make decisions about healthy waterways, supporting self-determination and strengthening connections to Country. Wetland vegetation and riparian habitat condition are maintained or improved.	Explore traditional methods of vegetation management such as cultural burning to enhance wetland habitat in wetlands connected to the Wimmera Mallee Pipeline, including Crow Swamp.	To be confirmed in consultation with Barengi Gadjin Land Council and Parks Victoria.	**Wimmera CMA.** **Barengi Gadjin Land Council.** Parks Victoria.	*Environmental Water Management Plan – Wimmera Mallee Pipeline Wetlands – Wimmera CMA Region (2016).* *Growing What Is Good Dya (Country) Plan (2026).*	New action.