



The restoration of Winton Wetlands is a project of national scientific, cultural and environmental significance. Water storages have been decommissioned elsewhere (eg. USA), but usually because of aging infrastructure and not with the specific aim of saving water lost through evaporation and restoring ecological function to a system.

Several wetland restoration projects also exist within the Murray-Darling system in Australia, however these usually focus on improving environmental flows. The Winton Wetlands project will create a major facility for wetland education and research; will demonstrate best practice natural resource management; develop opportunities for nature-based tourism and recreation and foster community inclusion and participation.

## Restoration and Monitoring Strategic Plan

The Winton Wetlands Restoration and Monitoring Strategic Plan (the Plan) guides the ecological restoration process and provides a framework for restoration and monitoring activities within the 8,750 ha reserve. It is more about the 'what, where and why' of restoration, rather than a 'how to' guide. Successful implementation will come from employing appropriate expertise.

### ► What are the Principal Objectives of the Plan?

Principal objectives to achieve designated targets are grouped under the following themes:

- Strategic planning for restoration
- Habitat protection, enhancement and revegetation
- Pest plant and animal management
- Research and monitoring
- Community engagement and strategic partnerships.

▶ **What sort of document is the Restoration and Monitoring Strategic Plan**

The Plan is a strategic document. It is informed by several supporting plans that are either completed, under development or planned. These supporting plans cover:

- Community Engagement
- Fire Management
- Fish Management
- Grazing Management
- Pest Animal Management
- Pest Plant Management
- Revegetation Management

These supporting plans provide detailed guidance on implementation.

▶ **Where can I find information relating to these supporting plans?**

Information and FACT SHEETS relating to the completed plans can be found on our website [www.wintonwetlands.org.au](http://www.wintonwetlands.org.au). Further plans will be added as they are completed.

▶ **How was the Restoration and Monitoring Strategic Plan developed?**

The Winton Wetlands Committee of Management in consultation with the Winton Wetlands Scientific and Technical Advisory Group developed the Plan during a series of expert workshops held in mid 2011. The restoration and monitoring objectives address strategic planning; habitat protection; pest plant and animal management; research and monitoring; and community engagement and partnerships.

▶ **What is the Scientific and Technical Advisory Group?**

For information on the Scientific and Technical Advisory Group including its Terms of reference please visit our website. [www.wintonwetlands.org.au](http://www.wintonwetlands.org.au)

▶ **Who will be responsible for implementing the Plan?**

The Winton Wetlands Committee of Management will work with the community, government agencies and other partners to implement, monitor, review and update the Plan as necessary.

## Key Land Uses

The Plan identifies the following land uses on the reserve;

- Wetland and dryland ecosystem restoration and protection
- Strategic grazing to manage old pasture
- Education and research opportunities
- Recreation (eg birdwatching, canoeing)

## Flora

The health of the wetland vegetation is extremely important as it oxygenates and filters water, limits erosion and sediment re-suspension and provides habitat for all sorts of wildlife invertebrate and vertebrate fauna.

▶ **What approach does the Plan recommend for the return of indigenous vegetation?**

The major strategy being employed is to enhance the potential for natural regeneration of indigenous vegetation (and thus habitat), an important component of which is managing weed invasion.

▶ **How will pest plants be managed on the reserve?**

The Winton wetlands will never be 'weed-free' but serious invasive weeds will be managed to minimise impact. The Winton Wetlands Pest Plant Management Plan can be viewed in the publications section of our website. [www.wintonwetlands.org.au](http://www.wintonwetlands.org.au)

## Fauna

The Plan favours the restoration of habitat over the deliberate introduction of fauna to the wetlands reserve. As a general rule of thumb, the restoration of wildlife populations is firstly achieved by the restoration of habitat. Mobile species can be expected to occupy habitat as it becomes available, providing of course it is physically accessible.

Winton Wetlands supports a diverse range of native wildlife. At the time of its development the Plan documents over 185 bird species to have been recorded at the Reserve as well as 22 mammals, 10 frog and twenty seven reptile species.

▶ **How will feral cats, rabbits and foxes be managed on the reserve?**

A Mammalian Predator Plan is under development. It will detail target species, control strategies (including OH&S and risk management), and outline monitoring requirements.

▶ **Why is the Winton Wetlands a sought after site for bird enthusiasts?**

The Winton Wetlands has historically been an important site for waterbirds in Victoria. More recently it has been identified as a site of international significance for the conservation of Latham's Snipe (Carr & Conole 2007), a migratory bird listed under a bilateral agreement with Japan (JAMBA), where it spends the northern hemisphere summer. Other notable wetland bird species occurring at Winton Wetlands are the White-bellied Sea-eagle, the Australasian Bittern, Freckled Duck (both nationally endangered), Australasian Shoveler and Hardhead, two species of duck listed as vulnerable in Victoria.

▶ **Why does the reserve need a fish management plan?**

A Fish Management Plan will resolve issues around exotic fish control and enhancement of native fish communities.

Among the issues to be considered by a Fish Management Plan are:

- understanding fish species currently found in Winton (especially small bodied fish such as Gudgeons and Rainbow fish) investigating the feasibility of installing a fish ladder at Winton Wetlands outlet to provide connectivity for aquatic biota to the Broken River;
- installation of a carp trap at Boggy Creek Bridge and Winton Outlet; and
- feasibility of re-introducing native fish.

## Land Management

Land management activities will focus on protecting and enhancing existing wetland, grassland and woodland vegetation, facilitating and/or assisting natural regeneration, and managing aquatic and land pest plant and animal species. Management tools will include fire, slashing, spraying and grazing used specifically for improving biodiversity outcomes.

▶ **What is Biomass?**

Biomass is the name given to any material which originated from plants that use sunlight to grow. That is plant and animal material such as wood from forests, material left over from agricultural and forestry processes, and organic industrial, human and animal. In the context of Winton Wetlands, biomass refers to the total amount (or 'load') of a particular item, such as fish biomass or grass biomass.

▶ **Why is Weed biomass a concern at the Winton Wetlands?**

Excessive accumulation of introduced grasses, especially Phalaris and Wild Oats basically smothers out any remaining or germinating native vegetation. It also reduces landscape aesthetics and increases the overall fire hazard.

▶ **Where can I find information relating to the Reserve's Fire Management Plan?**

The Winton Wetlands Fire Management Plan can be viewed in the publications section of our website. [www.wintonwetlands.org.au](http://www.wintonwetlands.org.au)

▶ **Does the Plan recommend grazing on the reserve?**

Yes. A grazing management plan will be developed to manage Phalaris and other weedy pasture species such as Wild Oats on designated areas (mainly former grazing licence areas).

▶ **What is an Ecological Vegetation Class?**

Ecological Vegetation Classes (EVCs) are the basic mapping units used to plan and assess landscapes. They are usually named after one or two of the main features of a landscape. The wetter areas of the Winton Wetlands Reserve are dominated by Red Gum Swamp for example, and the drier slopes and rises by Grassy Woodlands etc.

## Water

Water quality itself is seen as a key part of the wetlands ecological function. Blue-green algae outbreaks and other water quality issues were an on-going issue at the former Lake Mokoan. Water depth, through-flow, turbidity and nutrient levels have changed considerably since Lake Mokoan was decommissioned. Managers will closely monitor a range of water quality indicators throughout the Reserve to prevent any such issues.

▶ **What is a 'natural hydrological regime'?**

Under a natural hydrological regime there is little-to-no opportunity to intervene manipulate water levels other than as determined by seasonal rainfall. This is in comparison to, for example, the managed delivery of environmental water to wetlands and rivers experiencing drought conditions.

► **What role will the Inlet Channel play in the restoration of the Winton Wetlands?**

The Inlet Channel which carried water diverted from the Broken River to the former Lake Mokoan will continue to provide some inflow from the local catchment particularly during flood events.

The Plan recommends regulation of the outlet valve on the Channel so as to allow gradual drawdown between storm events to facilitate the establishment of appropriate aquatic vegetation. The Plan also recommends investigating the feasibility of modifying the Inlet Channel with a series of vegetated retention ponds to improve water quality prior to entering the wetlands.

## Community

The Winton Wetlands Committee of Management considers community involvement and consultation as key to the success of the overall project.

Over the coming years, Winton Wetlands will collaborate with the community and other strategic partners on the following:

- a 'Winton through the Ages' project that details the geomorphological (structure of landforms), hydrological and cultural history/values of the site
- high quality environmental interpretation facilities and services to 'tell the restoration story'
- a 'Winton Wetlands Catchment Conservation Management Network' in collaboration with existing groups to engage all land managers in the catchment in sustainable land management, pest plant and animal management, and habitat restoration (particularly for woodland fauna) outside the Reserve
- a Land Management Advisory Committee to initiate innovative and ecologically appropriate use of land not immediately required for habitat restoration

## Ecological Monitoring

Ecological monitoring is the regular assessment of an ecological condition or state. At the Winton Wetlands ecological monitoring will chart trends in ecological function at the wetlands reserve.

Monitoring is an essential component of any ecological restoration or management program. Without it there can be no improvement in understanding of the values and function of the system, and no feedback to guide or inform management effectiveness.

► **What sort of things would indicate an improvement in ecological function at the Winton Wetlands?**

The following have been identified as key indicators of improving ecological function (or 'health') at Winton;

- Water quality readings within acceptable limits for natural aquatic ecosystems
- A decrease in soil nutrients to within acceptable limits for remnant vegetation
- A sustained reduction in the cover and abundance of pest plants
- A sustained increase in the cover of indigenous vegetation
- Re-establishment of River Red Gum woodland in appropriate locations
- An increase in the diversity of frogs, and abundance of water rats and long-necked turtles
- Increased diversity of native fish species, and reduction in exotic fish numbers
- Breeding by colonial water birds.

