

## FACT SHEET



*The Macleod Morass*

### The Macleod Morass story

The Macleod Morass is a naturally-formed 520 hectare deep freshwater marsh on the outskirts of Bairnsdale. It once formed the bed of Lake King and the Mitchell River, with the escapement along the western boundary and relic gravel beaches and sand spits marking out the former shoreline of Lake King.

### Human use

The Tatungalung Clan of the Gunaikurnai aboriginal people traditionally used the Macleod Morass as a food source and the nearby open forest for shelter. In the latter part of the 19th century, European settlers cleared much of the surrounding forest.

Following this, drains, levees and floodgates were constructed to prevent flooding on those areas of the Morass used for agriculture. The majority of these works remain in use today and help to control water levels in the Morass, and prevent the inflow of salt water from the Mitchell River estuary.

Treated wastewater has been discharged to the Morass since 1939, further increasing nutrient levels within the system. This in turn changed the distribution and abundance of vegetation in the wetland area.

### Conserving the wetland

The Morass was officially recognised as a reserve by the Fisheries and Wildlife Department in 1961. With the introduction of new legislation in the 1970s, it was formally recognised as a State Wildlife Reserve and a State Game Reserve. It was listed as an internationally significant wetland site under the Ramsar Convention, which plays a key role in ensuring its conservation.

A co-ordinated program to improve the long-term health and ecological viability of the Morass began in 1994 with the formation of a wastewater management working party involving Department of Conservation and Natural Resources, Environment Protection Authority Victoria, Mitchell Water Board now East Gippsland Water, Bairnsdale City and Shire Council now as East Gippsland Shire Council and community representatives.

This group recommended a range of actions including improved treatment at the Bairnsdale Wastewater Treatment Plant and establishing constructed wetlands.

## Ongoing management of the morass

New engineering works ensure high quality treated water can be released in to various sections of the Morass rather than entering solely at the Upper Morass. It is now possible to allow the Upper Morass to mimic natural drying cycles wetlands require, as it no longer receives a constant inflow of water from the Bairnsdale Wastewater Treatment Plant.

In 2001, East Gippsland Water and Parks Victoria signed a Memorandum of Understanding to provide a framework within which both organisations can work towards the common goal of protecting and enhancing the ecological values of the wetland.

During 2001/02, East Gippsland Water completed a major project to build three constructed wetland cells and related structures to control water flow and levels through the Macleod Morass. The works have ensured the ecological value of the wetland will be protected and that its value as a waterbird habitat will be maintained.

Funding for the project was provided by the Victorian Government, East Gippsland Water and the National Heritage Trust.

## Wetlands need water

To measure the health of a wetland various factors regarding its water requirements need to be considered including;

- Is there enough water for wetlands needs?
- Is water entering largely free of damaging sediments, nutrient loads or pollutants?

Reclaimed water supplied to the Macleod Morass meets all these requirements, which can be seen by the large number of native wildlife found within the site. While events such as flooding can complicate matters, the overall long term health of the wetland is being maintained. In part, due to its international significance for migratory birds, a healthy future for the Morass is now certain with East Gippsland Water and Parks Victoria working to sustain this important wetland into the future.

## Wetlands at work

Water entering the Bairnsdale Wastewater Treatment Plant is filtered to remove solids, bacteria and some nutrients. It is then released to the three constructed wetland cells.

Aquatic plants in cells one and two are the ecological engine rooms, eating up large amounts of nutrients. The water then flows to cell three for final polishing, before entering the distribution channel.

Levees block water in various parts of the Morass and act as pathways to allow management and pedestrian access. Two spillways accommodate any flooding.

The distribution channel also provides further polishing as it carries water from the cells to other areas of the Morass. Deliberate drying of sections of the wetland can be used to control carp and other pest plants and animals.

## For more information-

Contact East Gippsland Water on 1800 671 841 or by emailing [egw@egwater.vic.gov.au](mailto:egw@egwater.vic.gov.au)

Alternatively visit the Bairnsdale office at 133 Macleod Street, Bairnsdale on weekdays during business hours.

