



# *Biodiversity Strategy*

2012 - 2016

15 June 2012

# Introduction

Biodiversity is the variety of plants, animals, microbes, fungi, the genes that they contain and the ecosystems of which they are a part.

Biodiversity is valued for:

- Ecosystem services (carbon sequestration, oxygen production, food, water, materials)
- Goods and materials (food, fibre, timber, pharmaceuticals)
- Genetic resources (climate adaptation, plant/animal breeding)
- Regeneration services (soil fertility, nutrient and mineral cycling)
- Stabilising services (erosion control, climate moderation)
- Aesthetics (cultural, intellectual, spiritual values)

Many of the activities and operations associated with managing this land and providing necessary water, wastewater and re-use services have the potential to impact on biodiversity. Coliban Water recognises the biodiversity values that exist within the region and through its Integrated Quality System (IQS), identifies the activities that have the potential to impact upon these values.

The Significant Environmental Aspects identified by the business as impacting on biodiversity include:

- Grass slashing and fire management activities
- Pest Plant and Animal Control
- Treated effluent disposal to waterways and land
- Removal of native vegetation
- Land disturbance
- Open channel maintenance – cleaning grates, pest plant and animal control, etc
- Sub-standard site rehabilitation and reinstatement post works

Coliban Water manages a significant area of land across the north central region of Victoria, under freehold, leasehold and crown land management tenures. The Coliban Water region is primarily part of the Goldfields bioregion but also includes the Central Victorian Uplands in the south and the Victorian Riverina and Murray Fans bioregions in the north. Some Coliban Water assets are found within Regional and National Parks and as such have high biodiversity values.

## Purpose

This strategy:

- Replaces the previous *Coliban Water Biodiversity Strategy 2005 – 2008*
- Is an integral part of the Coliban Water Sustainability Strategy
- Delivers on objectives of the business' Environmental Policy, including:
  - Minimising biodiversity loss
  - Managing facilities and land in a manner that demonstrates good environmental stewardship
  - Contributing to catchment management and promoting a conservation ethic within our community
  - Working in partnership with our environmental stakeholders.

# Policy

Coliban Water is committed to conserving and enhancing biodiversity by:

- Considering biodiversity across the business
- Increasing awareness and skills on biodiversity management through staff training
- Understanding, documenting and auditing biodiversity values on Coliban Water land
- Effectively managing biodiversity through an asset-based approach
- Offsetting unavoidable native vegetation losses through the Net Gain process
- Working with the community and external stakeholders to protect and enhance biodiversity.

## 1. Biodiversity across the business

Biodiversity is a business-wide priority.

### Planning and infrastructure

Biodiversity impacts will be managed through design, the planning permit process (involving councils and Department of Sustainability and Environment (DSE) and Environment Protection Authority (EPA) regulations. The procedures and processes involved will be clearly documented as part of standard environmental project management.

Project contract partners will be required to have adequate Environmental Management Systems or equivalent in place to address biodiversity concerns. Project managers and contractors will be required to be aware of issues affecting biodiversity such as vehicle hygiene, vegetation protection and wildlife management.

### Operations

All environmental concerns including biodiversity impacts will be assessed throughout the project technical planning stage.

Where facilities are managed through contract partners Coliban Water will clearly state the level of biodiversity values and management required at sites. Compliance with legal obligations is the bare minimum.

Biodiversity management will be incorporated into Property Environment Management Plans (PEMP) for Coliban Water assets. Biodiversity Management Plans will be developed, resourced and implemented for sites of high biodiversity value.

### Third parties

Land management leases and licences will clearly state the biodiversity management actions required and will be audited annually. Where lease or licence conditions are not met, action will be taken with the lease/licence holder.

## **Future actions and opportunities**

Where possible, future actions will be carefully planned to minimise negative impacts on biodiversity. For example, the decommissioning of irrigation channels presents an opportunity to provide strategic connections between areas of native vegetation and drought refuge for wildlife.

See Action Plan (1) for details.

## **2. Awareness and skills**

### **Readily available information**

A user-friendly GIS Biodiversity Tool detailing information on biodiversity values, threats, management actions and threatened species at each site will be developed. It will be easily accessible to staff and contract partners. The layer will be regularly maintained.

All biodiversity management actions will be clearly articulated in Property Environmental Management Plans and contracts.

### **Training**

Relevant staff will be trained to use the GIS Biodiversity Tool.

Skills and competencies relevant to particular positions will be assessed and documented. A variety of training techniques and tools will be used including the Intranet, courses, speakers, workshops and field guides.

See Action Plan (2) for details.

## **3. Biodiversity values**

Currently Coliban Water does not have a full inventory of the biodiversity values on its land . In Victoria, Ecological Vegetation Classes (EVCs) are classified according to Bioregional Conservation Status, as 'endangered', 'vulnerable', 'depleted' or 'least concern'. All of these as well as flora, fauna and ecological communities protected under the *Flora & Fauna Guarantee Act 1988* and *Environment Protection Biodiversity Conservation Act 1999* are present on various Coliban Watersites. Biodiversity information for individual sites is currently gathered via ecological consultants' reports, DSE or on a limited basis by the Senior Environmental Coordinator.

### **Documenting biodiversity values**

In order to meet its legal obligations Coliban Water must improve its understanding of the ecological communities and species, particularly threatened species under its management.

A desktop study of DSE data will enable a GIS Biodiversity Tool and database to be developed. This will incorporate EVCs, Bioregional Conservation Status, conservation significance, threatened

species and communities, Highly Localised Assets, Biosites and EPBC listed matters into an easily accessible tool for all staff. Mapping of biodiversity values is a priority

Targeted field assessments of high value areas will enable further information to be gathered and incorporated. This information will be used to develop management plans for areas of special significance.

The register of threatened species and communities will be maintained and regularly updated on IQS.

### **Biodiversity data collection**

Under its Data Exchange Agreement with DSE Coliban Water is able to use DSE biodiversity data for its own purposes. In return Coliban Water supplies its flora and fauna records to the Department of Sustainability and Environment, contributing to the Victorian Biodiversity Atlas, a state-wide database.

Assessments undertaken by project ecological consultants will continue to be incorporated into the GIS Biodiversity Tool and database. These include aquatic macroinvertebrate studies as well as flora and fauna records for specific projects. Survey data contributed by community groups such as Field Naturalists and individuals will also be incorporated.

See Action Plan (3) for details.

## **4. Asset-based approach**

Coliban Water is responsible for over 4500 ha of land, either directly managed by Coliban Water, or through contract partners or third party leases/licences. The level of active management for biodiversity values should be asset-based, concentrating resources where most benefit can be obtained.

Biodiversity values should be considered in all management actions. Native revegetation at sites not only increases biodiversity, but also cuts costs associated with weed control. Biodiversity benefits can be derived from appropriate management of woodlots and carbon sinks at irrigated sites.

### **Manage biodiversity**

The Biodiversity Tool will identify where further investment and management actions are required. Those areas with very high biodiversity values will have Property Environmental Management Plans developed as a priority. Examples are sites where threatened species or endangered EVCs are present. The plans will detail the actions to be undertaken and how habitat improvement will be measured and monitored.

Active management coordinated with community groups, private landholders and environmental stakeholders will also be prioritised.

## Managing threats to biodiversity

The *FFG Act 1988* lists the following Potentially Threatening Processes, which may result from Coliban Water actions:

- Alteration to the natural flow regimes of rivers and streams
- Alteration to the natural temperature regimes of rivers and streams
- Degradation of native riparian vegetation along Victorian rivers and streams
- Habitat fragmentation for fauna in Victoria
- Inappropriate fire regimes causing disruption to sustainable ecosystem processes and resultant loss of biodiversity
- Increase in sediment input into Victorian rivers and streams due to human activities.
- Infection of amphibians with Chytrid Fungus, resulting in chytridiomycosis
- Input of toxic substances into Victorian rivers and streams
- Invasion of native vegetation by Blackberry *Rubus fruticosus* L. agg.
- Invasion of native vegetation by environmental weeds
- Loss of coarse woody debris from Victorian native forests and woodlands
- Loss of hollow-bearing trees in Victorian native forests
- Loss of terrestrial climatic habitat caused by anthropogenic emissions of greenhouse gases
- Reduction in biomass and biodiversity of native vegetation through grazing by the Rabbit *Oryctolagus cuniculus*
- Predation of native wildlife by the introduced Red Fox *Vulpes vulpes*.

## Main impacts by Coliban Water activities

Coliban Water has a major impact on waterways through water storage and disruption of natural flows as well as licensed and emergency discharge of reclaimed water from water reclamation plants.

The main threat to biodiversity on Coliban Water land is pest plant and animal invasion. Coliban Water has legal obligations to eradicate or control noxious weeds however environmental weeds are also a threat and should be managed appropriately.

## Managing threats

Land and asset management actions, processes and procedures will be developed to mitigate these impacts on Coliban Water land.

An Integrated Weed Management Program is a fundamental requirement.

There are opportunities to:

- Link habitats through improved connectedness across the landscape using revegetation and habitat improvement works
- Improve riparian vegetation through project partnerships
- Increase habitat quality through retention of fallen timber, protection of hollow-bearing trees and the installation of nest-boxes
- Control environmental weeds in sensitive areas

## Developing management plans for threatened species

To meet legal obligations under the *EPBC Act* and *FFG Act* Coliban Water will ensure that known threatened and protected species will not be harmed by the business's actions. Sites which support threatened species populations and communities will have specific management plans developed using *FFG* Action Statements and with advice from DSE.

Bendigo Water Reclamation Plant supports *EPBC* listed Growling Grass Frogs and a management plan addressing threats to this population is a priority. Threatened bird species are regularly recorded at the WRP and management actions for these will be incorporated.

See Action Plan (4) for details.

## 5. Offsetting

The Native Vegetation Management Framework (NRE 2002) is State government policy for the protection, enhancement and re-vegetation of native vegetation in Victoria. The primary goal of the Framework is "a reversal, across the whole landscape, of a long-term decline in the extent and quality of native vegetation, leading to a Net Gain." (NRE 2002)

A three step process to address Victoria's Net Gain policy is outlined in the Framework.

Step 1 - Avoid the removal of native vegetation, where possible

Step 2 - Minimise the removal of native vegetation

Step 3 - Appropriately offset the loss of native vegetation

### Avoiding impacts on native vegetation

Coliban Water will demonstrate this three step approach in all infrastructure projects and in asset management.

### Offsetting unavoidable impacts

Where clearing of native vegetation for projects cannot be avoided, Native Vegetation Credits may be required. These are either bought from third parties or can be generated through active management of existing remnant vegetation on Coliban Water land. To a lesser extent revegetation can be used for Native Vegetation Credits.

The business maintains a Native Vegetation Credit account which supplies offsets at cost for projects. Coliban Water will supply Native Vegetation Credits for projects at or below market rates which will generate internal income for biodiversity actions in four ways:

1. On suitable Coliban Water freehold land, remnant native vegetation will be secured as Native Vegetation Credits (Habitat Hectares). Projects will be charged market rates or less for these. The funds generated will cover the cost of managing and monitoring the vegetation over the prescribed 10 year management period.

2. To generate native Vegetation Credits (recruits) for the loss of scattered trees Coliban Water will undertake targeted revegetation on Coliban Water sites. This revegetation will be cost neutral as the project will pay for the recruits at less than market rates.
3. The development of an internal market for the native Vegetation Credits from Coliban Water land which has been handed over to Parks Victoria for incorporation into Greater Bendigo National Park.
4. Coliban Water may sell limited amounts of Native Vegetation Credits to external buyers.

The aim is a measurable increase in the extent and quality of native vegetation on Coliban Water land.

Biodiversity outcomes can be incorporated into carbon sequestration, revegetation and cropping projects on Coliban Water land where practical.

See Action Plan (5) for details.

## 6. Community, stakeholders

Coliban Water will support work by local communities to improve biodiversity values to mutual benefit. Many community groups contribute to the enhancement of local biodiversity and many provide valuable survey data to Coliban Water. For example, “Friends of Campbell’s Creek” are actively controlling weeds and re-vegetating along Campbell’s Creek, where Coliban Water discharges reclaimed water from the Castlemaine Water Reclamation Plant.

Bendigo Field Naturalists, Field and Game Victoria and other bird observer groups and individuals survey birds annually at Bendigo Water Reclamation Plant and other sites.

### **Community projects and partnerships**

Coliban Water supports community-based approaches to appropriately managing discharges of reclaimed water to waterways.

The Good Neighbour Program for pest plant and animal management will be reviewed by the Catchment Coordinator.

Partnerships with local educational institutions such as student projects and work placements will contribute positively to our biodiversity programs.

### **Relationships with external stakeholders**

Continued and improved communication and cooperation with Department of Sustainability and Environment, Department of Primary Industries, Department of Sustainability, Environment, Water, Population and Communities and North Central Catchment Management Authority will enhance biodiversity outcomes for the business and for the region.

See Action Plan (6) for details



# Glossary

## **Advisory List**

The Advisory Lists are maintained by the Department of Sustainability and Environment and are based on technical information and advice obtained from a range of experts. There are no legal requirements or consequences that flow from inclusion of a species in advisory lists. However, some of the species in these advisory lists are also listed as threatened under the FFG Act.

## **Bioregion**

Biogeographic areas capture the patterns of ecological characteristics in the landscape, providing a natural framework for recognizing and responding to biodiversity values. A landscape-based approach to classifying the land surface using a range of environmental attributes such as climate, geomorphology, lithology and vegetation.

## **Bioregional Conservation Status (of an EVC)**

A statewide classification of the degree of depletion in the quality/extent of an Ecological Vegetation Class within the bioregion in comparison to the State's estimation of its pre-1750 extent and condition. There are 6 classes: Presumed Extinct, Endangered, Vulnerable, Depleted, Rare and Least Concern.

## **Biosite**

Site of biological conservation significance, whose location and details are registered by the Department of Sustainability and Environment.

## **DSE**

Department of Sustainability and Environment

## **DSEWPC**

Department of Sustainability, Environment, Water, Population and Communities

## **DPI**

Department of Primary Industries

## **Ecological Vegetation Class (EVC)**

A type of native vegetation classification described through a combination of its floristic, life form and ecological characteristics, and through an inferred fidelity to particular environmental attributes.

## **Highly Localised Assets**

Ecological Vegetation Classes or flora or fauna species that live in such a small area that even small amounts of vegetation removal would result in considerable impact.

## **NCCMA**

North Central Catchment Management Authority

## **Net Gain**

Where, over a specified area and period of time, losses of native vegetation and habitat, as measured by a combined quality-quantity measure (habitat hectare), are reduced, minimized and more than balanced by commensurate gains.



### **Offset**

A native vegetation offset is any works or other actions to make reparation for the loss of native vegetation arising from the removal or destruction of native vegetation. The gains achieved must be permanent and on-going, and linked to a specific clearing site.

### **Over the Counter**

A process for sourcing third party offsets required to offset the clearing of native vegetation. These third party offsets are created by a landowner protecting existing native vegetation or conducting revegetation on their own property.

### **Protected species**

Plant species that have legal protection under the *FFG Act*.

### **Threatened species, communities and processes**

The *Flora and Fauna Guarantee Act 1988* provides for the listing of taxa (genera, species, subspecies, varieties) and communities of flora and fauna which are threatened (the Threatened List), and potentially threatening processes (the Processes List).

## References

*Coliban Water Biodiversity Strategy 2005 – 2008*

Department of Sustainability and Environment (2009) *Securing Our Natural Future: A white paper for land and biodiversity in a time of climate change*. State of Victoria

Department of Natural Resources and Environment (2002) *Victoria's Native Vegetation Management - A Framework for Action*. Department of Natural Resources and Environment

North Central Catchment Management Authority (2006) *North Central Native Vegetation Plan*. North Central Catchment Management Authority

Natural Resource Management Ministerial Council (2010), *Australia's Biodiversity Conservation Strategy 2010-2030*, Australian Government, Department of Sustainability, Environment, Water, Population and Communities, Canberra.