



# Natural Resources Asset Cards 2011



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# Alpine National Park

The Alpine National Park asset reports on extensive areas of highly diverse, often pristine, alpine and sub alpine ecosystems.



## Asset Description

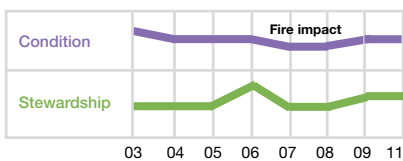
The Alpine National Park asset reports on extensive areas of highly diverse, often pristine, alpine and sub alpine ecosystems.

Based on the Highlands Southern Fall bioregion, the asset focuses predominantly on the Wonnangatta-Moroka Management Unit of the Alpine National Park (approximately 380,000 hectares west of Omeo). The area includes several Wilderness Zones, Heritage Rivers and Natural Catchment Areas. Major Gippsland rivers in this unit include the Wellington, Wonnangatta, Dargo and Avon.

*Bioregion reference: Victorian Alps and Highlands Southern Fall*

## Rating History

### ALPINE NATIONAL PARK



	Condition	Stewardship
2003	B	★★★★
2004	B-	★★★★
2005	B-	★★★★
2006	B-	★★★★★
	Standardisation	Standardisation
2007	C+	★★★★
2008	C+	★★★★
2009	B-	★★★★☆
<b>2011</b>	<b>B-</b>	<b>★★★★☆</b>



# Alpine National Park

## Asset Background

The 2003 Eastern Victorian Fires burnt a combined total of 1.3 million hectares of National Park, State Forest and private land in the North Eastern and East Gippsland regions of Victoria and southern New South Wales. Approximately 60% of the Alpine National Park was affected. The impact of the fires was widespread and diverse, including reduced water quality, fragmentation of vegetation, increased erosion and threats to endangered species.

The Great Divide Fires of 2006/2007 again burnt a significant area of the Alpine National Park and adjoining Avon Wilderness Park. The fires impacted many sensitive alpine species and communities. Catchment headwaters including alpine bogs were affected and erosion, stream sedimentation and reduced water quality resulted. The varying intensities of the fire across the landscape led to a mosaic of burnt, re-burnt and unburnt floristic communities – adding further complexity to the existing diverse habitats. Fires in 2009 did not impact the National Park.

Severe rainfall events in 2007 impacted areas that were recovering from the fires, mobilising sediment, ash and debris and reducing water quality of alpine and sub-alpine river systems. Landscape-scale changes to the Macalister River catchment have resulted (Parks Victoria, 2008). Many areas, however, continue to improve after the fires and floods, the removal of stock grazing from the park in 2005/2006 and extensive pest plant and animal control programs. 2010 saw floods affecting various river valleys.

The Alpine National Park was listed as part of the Australian Alps heritage area in 2008.

With increased rainfall in 2010 came moderate impact of floods. Improved condition of the alpine bogs and moss beds in the upper reaches, attributed to the removal of cattle grazing in 2005/2006, is reflected in a general improvement of water quality.

In 2011, six areas (totalling 26,000 hectares or 4% of the park) within the Alpine National Park were selected as trial sites to investigate the effectiveness of strategic cattle grazing on fuel and bushfire risk management. 400 head of cattle were reintroduced between January and April 2011, the end of the grazing season. Two of these trial sites are located within the Wonnangatta-Moroka unit of the park. Contention surrounds the trial, its design and legality; and the Commonwealth Department of Sustainability, Environment, Water, Population and Communities has halted further grazing in response to reports of cattle damage to federally protected ecosystems. The Department will ascertain whether Environment Protection and Biodiversity Conservation (EPBC) Act approval is required to conduct the remainder of the proposed six year trial.

# Alpine National Park

Condition

B-

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Good (4)	30	Highlands Down pest plant and animal program; flood impact. Weed reduction but increasing pressure from horses and deer. State of the Parks, Parks Victoria.
Water	Good (4)	30	Alpine rivers are in excellent condition. Stabilisation and improved peat and moss bed condition resulting from post-fire works and reduced grazing has increased filtering, decreased erosion and improved water quality. Flood impact was localised only. State of the Parks, Parks Victoria.
Biodiversity	Good (4)	40	Biodiversity is relatively intact, however, may be marginally declining as a result of increasing numbers of horses, deer, rabbits and cats. Dog control occurring around the park boundaries. Changing climate conditions impacts biodiversity to varying extents. Fire regimes improving with more evidence based planning. State of the Parks, Parks Victoria.

## Condition Comments and Specifics

Significant post-fire and flood investment in pest plant control has reduced infestations or arrested their increase in many areas. As reported in 2009, there has been ongoing recovery from past widespread cattle grazing. Fox control measures are starting to show signs of positive impact on small to medium sized mammal populations. Other feral populations are increasing rapidly and programs targeting these species are being given priority.

The condition rating of B- has been maintained to reflect consolidation of the significant post 2007 fire on-ground works and landscape weed management program success.

# Alpine National Park

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Reasonable (3)	Parks Victoria is developing a landscape-scale approach to Planning Reasonable management plans and an Adaptive Management Framework which will improve high level planning and prioritisation of on-ground works.
Implementation	Good (4)	Very significant investments have been and continue to be made in strategically important areas of natural values management. Highly skilled staff focus on strategically prioritised tasks.
Evaluation	Poor - Reasonable (2.5)	Although monitoring of works and effectiveness varies considerably between projects, the State of the Parks report (Parks Victoria, 2011) represents a significant assessment of asset condition and management impact. The Victorian Auditor-General's Office report on Invasive Plants and Animals in Victoria's Parks (tabled May 2010) highlighted some deficiencies in planning and resource allocation which are being addressed through the Adaptive Management Framework and landscape-scale management plans being developed.
Improvement	Good (4)	Parks Victoria and DSE are working to incorporate the recommendations of the Auditor-General's recommendations (pertaining predominantly to reporting capability and resource allocation) in the Adaptive Management Framework under development.
Partnerships	Good (4)	Many intra- and inter-state partnerships exist involving government agencies, traditional owners, neighbours, community and user groups.
Indigenous Engagement	Good (4)	Traditional Owners Reference Group established by Parks Victoria. Engagement with individual groups continues. Parks Victoria Indigenous Recruitment and Career Development Strategy and mandatory cross-cultural training policies.

## Stewardship Comments and Specifics

The high stewardship rating reflects strong partnerships developed through the Alps Reference Group; the Highlands Down and Protecting the Best projects; and the Greater Alpine National Parks Management Plan development. Based on the success of the strategic planning model used for this asset, involving transparent decision making and community input, Parks Victoria is now using the model more broadly.

The Highlands Down and Protecting the Best Projects utilise Federal Caring for Our Country and Victorian Investment Framework funding to undertake co-ordinated and strategic weed control across large areas and jurisdictions.

The stewardship rating of 3.5 stars has been maintained despite an increase in the evaluation parameter score. It is

anticipated that the landscape-scale approach to management plans and the Adaptive Management Framework under development will result in increased stewardship rating in the future.

### For more information

#### Parks Victoria Information Centre

13 1963, [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

#### Parks Victoria wiki-wePlan Alpine

<http://weplan.parks.vic.gov.au/node/220>

#### Australian Alps National Parks

[www.australianalps.deh.gov.au](http://www.australianalps.deh.gov.au)

#### Victorian Auditor-General's Office

[http://www.audit.vic.gov.au/reports\\_and\\_publications/latestreports/2009-10/20102605\\_invasive\\_plants.aspx](http://www.audit.vic.gov.au/reports_and_publications/latestreports/2009-10/20102605_invasive_plants.aspx)



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# Bataluk Cultural Trail

The Bataluk Cultural Trail asset reports on the physical condition of this example of what cultural heritage contributes to the natural environment.



## Asset Description

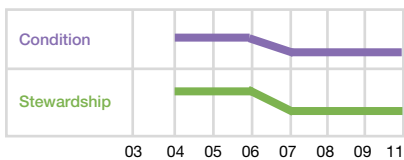
The Bataluk Cultural Trail asset reports on the physical condition of the trail, as an example of how cultural heritage contributes to the natural environment.

The Bataluk Trail extends from Sale through to Cape Conran along routes that Koori people of East Gippsland have been travelling for over 18,000 years. There are 11 points where indigenous cultural heritage of the Gippsland region is highlighted including The Knob Reserve, Den of Nargun, Howitt Park, Krowathunkoolong, Aboriginal Keeping Place and Museum, Legend Rock, Buchan Caves, Burnt Bridge Reserve and Moogji Aboriginal Council.

*Bioregion reference: Gippsland Plain and East Gippsland Lowlands*

## Rating History

### BATALUK CULTURAL TRAIL



	Condition	Stewardship
2003	-	-
2004	B	★★★
2005	B	★★★
2006	B	★★★
	Standardisation	Standardisation
2007	D	★★
2008	D	★★
2009	D	★★
<b>2011</b>	<b>D</b>	<b>★★</b>



# Bataluk Cultural Trail

## **Asset Background**

Indigenous cultural heritage values are recognised by the high concentration of sites that include artefact scatters, shell middens, scarred trees, massacre sites and axe grinding grooves (Bataluk Cultural Trail Brochure). Most of the cultural values are intact, but must be protected. Although often in protected locations, the Trail's sites were not reported to be actively managed or conserved. Pest plants and animals, human impact and fire pose some threat to the Trail.

The Trail passes through West and East Gippsland Regional Catchment Management areas and covers a range of public land types, potentially requiring the cooperative management of a number of Government departments (Bataluk Cultural Trail Brochure).

# Bataluk Cultural Trail

Condition

D

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor (2)	90	The asset is vulnerable to natural impacts such as wind, rain, erosion, fire and flood; and human impact, development, graffiti and vandalism. It is not being actively managed to protect from or repair impact. (Aboriginal Affairs Victoria, 2009)
Water	Not applicable	0	-
Biodiversity	Poor (2)	10	Much of the trail is through modified ecosystems. The trail is not managed to maintain or protect biodiversity.

## Condition Comments and Specifics

The values of the asset have not been formally assessed for some years. It is likely that they have been subject to environmental impacts such as erosion. As the asset has not been inspected for some years there is no direct evidence to support this, however, impacts can be predicted based on Aboriginal Affairs Victoria's experience with similar assets. A condition rating of D reflects an assumed condition and is consistent with previous years' ratings.

# Bataluk Cultural Trail

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Lacking (1)	Aboriginal Affairs Victoria, 2009
Implementation	Lacking (1)	Some interpretation and signage works have been undertaken. East Gippsland Shire Council, 2011.
Evaluation	Lacking (1)	No review of the asset or management has occurred for some time. Aboriginal Affairs Victoria, 2009
Improvement	Lacking (1)	There has been no overall improvement in managing this asset in recent years. Aboriginal Affairs Victoria, 2009
Partnerships	Reasonable (3)	Enormous potential for partnership development. Aboriginal Affairs Victoria, 2009
Indigenous Engagement	Reasonable (3)	Aboriginal Affairs Victoria, 2009

## Stewardship Comments and Specifics

Development of the Bataluk Cultural Trail was a joint initiative of the Far East Gippsland Aboriginal Corporation, Gippsland and East Gippsland Aboriginal Co-operative, Lake Tyers Aboriginal Trust, Moogji Aboriginal Council, Ramahyuck Aboriginal Corporation, Wellington Shire Council and East Gippsland Shire Council. There is therefore enormous potential for partnership and engagement. Management arrangements are in place but resources and clarification of responsibilities are required.

Some recent works have been undertaken to improve signage, information and interpretation for the trail (East Gippsland Shire Council, Gunai Kurnai Aboriginal Land and Water Corporation).

A stewardship rating of two stars, consistent with previous years, reflects the potential for but lack of information and active stewardship.

### For more information

#### Aboriginal Affairs Victoria

(03) 9208 3333 or [www.aboriginalaffairs.vic.gov.au](http://www.aboriginalaffairs.vic.gov.au)

#### Ramahyuck District Aboriginal Corporation

(03) 5143 1644 or

<http://www.ramahyuck.org/community>

#### Krowathunkooloong, the Keeping Place

(03) 5152 1891 or

<http://www.gippslandinfo.com.au/Aboriginal>

#### Maffra Community, Bataluk Cultural Trail,

<http://www.maffra.net.au/bataluk>



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# Brown Coal Reserves & Extraction

The Brown Coal Reserves and Extraction asset reports on the physical condition of the reserves and the impacts extraction has on the surrounding environment.



## Asset Description

The Brown Coal Reserves and Extraction asset reports on the physical condition of the reserves and the impacts extraction has on the surrounding environment.

The Latrobe Valley is estimated to hold 394,000 million tonnes of brown coal in reserves that are, in places, up to 330 metres thick. It is estimated that 50,000 million tonnes of this reserve are currently 'useable'. Brown coal from the Yallourn, Yallourn North, Yallourn North Extension, Morwell and Loy Yang open cut mines generates approximately 85 per cent of Victoria's electricity.

This asset focuses on the mines, their immediate vicinity and reserves earmarked for development in the immediate future. Loy Yang Power, TRUenergy Yallourn, and International Power Hazelwood electricity generation companies operate within the region.

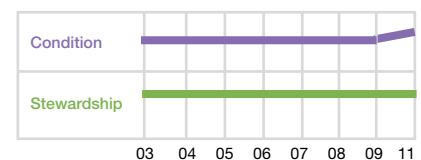
Location	Annual Brown Coal Extraction	Area of Complex
Loy Yang Power	30 million tonne	5,000 hectares
Hazelwood Power Station and Mine	18 million tonne	3,554 hectares
Yallourn Power Station and Mine	18 million tonne	Not known

By late 2011, the current Yallourn East Field will be exhausted and mining will start in the Maryvale Field. International Power Hazelwood has obtained the required approvals for West Field development which will supply the power station for the next 25 years. It is noteworthy that air emissions and greenhouse contribution is not considered in the evaluation of this asset.

*Bioregion reference: Strzelecki Ranges and Gippsland Plain*

## Rating History

### BROWN COAL RESERVES & EXTRACTION



	Condition	Stewardship
2003	D	★★★★★
2004	D	★★★★★
2005	D	★★★★★
2006	D	★★★★★
	Standardisation	Standardisation
2007	D	★★★★★
2008	D	★★★★★
2009	D	★★★★★
	Brown Coal Based Energy Industry Brown Coal Reserves and Extraction	
2011	<b>D+</b>	★★★★★

# Brown Coal Reserves & Extraction

## Asset Background

The original Morwell mining enterprise operated between 1887 and 1899 but was reopened by what became the State Electricity Commission in 1917. Since the 1920s less than 10% of the existing coal reserves of the Latrobe Valley have been mined (Clean Coal Victoria, pers comm 2009). Privatisation of the State Electricity Commission occurred in the mid to late 1990s.

The boundaries of this asset, reflecting community interest, are restricted to the active extraction areas, with a five year projection. The condition of the reserves within these boundaries is degraded (removed). It is predicted that technological advancement will make more of the reserve accessible, and mining and processing of the coal more viable.

The condition of this asset is not compared to a pristine environment, however, there is an impact and cost of aquifer dewatering and coal extraction.

Coal extraction in the Latrobe Valley requires complex management of groundwater aquifers for plant operations, operational area stability and broader aquifer depressurisation. Plant operations utilising groundwater include steam generation for turbines, cooling water and dust suppression amongst other things.

Depressurisation of the aquifers is required to counter the effect of removing the weight of overburden and coal - managing the upward pressure of the aquifer. Where differential subsidence has occurred as a result of dewatering, in the immediate vicinity of the mines, residents have been relocated. The uniform subsidence experienced across the Latrobe Valley does not adversely impact population centres.

Mines are required to progressively rehabilitate based on pre-existing landscapes. This rehabilitation has occurred where terminal faces have been reached.

Surface water channels have been altered by mining activities over time to provide access to coal reserves or through events such as the 2007 failure of the Yallourn batter. Although historic changes were not always undertaken with consideration of ecological health, more recent re-establishment of water courses has resulted in improved conditions.

The Yallourn East Field mine wall collapse and subsequent diversion of the Latrobe River resulted in localised damage to equipment and the mine wall, however, long term condition of the asset was not impacted.

Significant rainfall in February 2011 resulted in a large inflow of water to the Main Drain, within the boundary of the International Power Hazelwood open cut mine site. The consequent destabilisation of the mine wall and road cracking has meant the Morwell Bypass Freeway section of the Princes Highway has been closed since 10 February 2011. Horizontal bores have been installed to drain groundwater from the area and extensive monitoring of ground movement and groundwater continues as part of the investigation and risk management program. The freeway is scheduled to be reopened in September 2011.

The Latrobe Valley 2100 Resources Project (LV2100), a Commonwealth funded report, was launched in 2005. The report examined likely resource demand scenarios in relation to the reserve location and consequent land use planning issues. Rehabilitation requirements and water use were also discussed (DPI, 2005).

# Brown Coal Reserves & Extraction

Condition

D+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor – Reasonable (2.5)	50	Extraction requires vegetation and overburden removal and rehabilitation cannot practically achieve reinstatement to previous land use. Localised differential and regional uniform subsidence has occurred. The area subject to mining is currently larger than that rehabilitated. Land not currently subject to mining (reserve and buffer areas) and rehabilitated land is reportedly actively managed (e.g. weed and erosion control).
Water	Reasonable (3)	40	Large volumes of groundwater are extracted causing approximately 10 metres of drawdown up to 10 kilometres from the mines. Waterways are altered to allow access to the reserve. Historic degradation of waterway environmental values improved with the recent Morwell River Diversion (MR5). Treated discharge waters are considered of higher quality than upstream waters although SEPP parameters must be constantly monitored to ensure compliance.
Biodiversity	Poor (2)	10	Habitat removal is inherent in open-cut mining. Revegetation and offset planting is undertaken with consideration of pre-existing species composition and seed collection/banking occurs (Loy Yang Power, 2011).

## Condition Comments and Specifics

The nature of the Brown Coal Reserves and Extraction asset makes assessment of its environmental condition difficult. Its intrinsic value is being realised by its removal. The environmental controls for operation of the mines; the supplementary activities undertaken by the mining companies in research and land management; and the progressive rehabilitation required by them must also be considered.

Extracted water is reused where possible and the water released to surface waterways is considered to be of higher quality than that upstream of the mines.

Past waterway diversions to provide access to the reserve were at times undertaken without consideration of the ecology or environmental health of the waterways. The Morwell River diversion (MR5) completed in 2010 replaced three kilometres of piped watercourse, established connectivity between the upper and lower reaches and resulted in an overall improvement in the condition of the local catchment.

The condition rating has been raised to a D+ in recognition of the reconnection of the upper and lower reaches of the Morwell River through the Morwell River diversion (MR5); the continual improvement and active management of land outside the mining footprint; and water reuse and discharge quality.

# Brown Coal Reserves & Extraction

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Reasonable – Good (3.5)	ISO14001 accreditation. Rehabilitation master plans. Mine and Strategic Action Plans. Environmental Policies.
Implementation	Good (4)	The strict requirements for rehabilitation and emissions standards are monitored and reported regularly.
Evaluation	Good (4)	Monitoring of all emissions is undertaken. Quarterly monitoring against actions plans and management system.
Improvement	Reasonable – Good (3.5)	Continual improvement is a requirement of ISO accreditation.
Partnerships	Reasonable (3)	Clean Coal Victoria to focus on regional impact and long term strategies. Individual operators undertake their own research and public relations.
Indigenous Engagement	Reasonable – Good (3.5)	Land Use Agreements. Loy Yang Power investigating establishment of a Keeping Place within the rehabilitated area to preserve artefacts identified on site.

## Stewardship Comments and Specifics

The power generators are required to demonstrate continual improvement in environmental management. There is also significant investment in research, land management and rehabilitation. Monitoring and treatment of emissions track compliance with the State and Federal codes of practice and emission targets. Clean Coal Victoria works to broker partnerships and liaise with stakeholders. The four star stewardship rating has been maintained.

### For more information

#### Department of Primary Industries

<http://www.dpi.vic.gov.au/DPI/dpinenergy.nsf/LinkView/02C73866B10B9510CA2572BB000D73CAAFE5D9442E22210ACA2572BB00096717#coal>

#### Loy Yang Power

[www.loyyangpower.com.au](http://www.loyyangpower.com.au)

#### TRUEnergy Yallourn

[www.trueenergy.com.au/Production/Yallourn/index.xhtm](http://www.trueenergy.com.au/Production/Yallourn/index.xhtm)

#### International Power, Hazelwood

[www.hazelwoodpower.com.au](http://www.hazelwoodpower.com.au)

#### Powerworks Energy Technology Centre

[www.powerworks.com.au](http://www.powerworks.com.au)

#### Yallourn Batter Failure Inquiry, 2008

[http://new.dpi.vic.gov.au/\\_\\_data/assets/pdf\\_file/0010/19819/Mining-Warden-Report.pdf](http://new.dpi.vic.gov.au/__data/assets/pdf_file/0010/19819/Mining-Warden-Report.pdf)

#### Morwell Freeway Diversion

<http://new.dpi.vic.gov.au/earth-resources/whats-new/morwelland-movement> and

[http://www.police.vic.gov.au/content.asp?Document\\_ID=30040](http://www.police.vic.gov.au/content.asp?Document_ID=30040)



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# Bunurong Marine National Park

The Bunurong Marine National Park asset reports on the highly diverse marine life of the Bunurong Marine National Park.



## Asset Description

The Bunurong Marine National Park asset reports on the highly diverse marine life of the Bunurong Marine National Park.

Extending five and a half kilometres offshore, the Park is located east of Cape Paterson and West of Inverloch, between Oaks Beach and Eagles Nest Beach, adjacent to the Bunurong Marine and Coastal Park.

In order to protect the seaweed and the life it supports, fishing and artefact removal are excluded activities.

	Condition	Stewardship
2003	-	-
2004	-	-
2005	-	-
2006	-	-
	Standardisation	Standardisation
2007	-	-
2008	-	-
2009	A-	★★★★
<b>2011</b>	<b>A-</b>	<b>★★★★</b>



# Bunurong Marine National Park

## Asset Background

Bunurong Marine National Park supports diverse and abundant marine flora and fauna; some species are only found in this area or are at their most eastern distributional limits. The 2,100 hectare park supports extensive intertidal rock platforms, sub-tidal soft sediments and sub-tidal rocky reefs extending offshore in shallow waters. Although it was declared a Marine National Park in 2002, it was one of the first marine sanctuaries in Victoria and has, as such, been afforded a level of protection area since 1991.

The catchment discharging into the waters of Bunurong is small in size. The main stream impacting the environment is the Tarwin River. Urbanisation within the catchment is resulting in greater freshwater flows after rain although lateral nutrient impact is recognised as a greater threat than creek discharge.

Unlike interstate marine reserves, the Victorian system does not involve zoned areas – the entire park is a ‘no take’ area which minimises user interpretation error and affords the park greater protection. The Bunurong Marine and Coastal Park flanks the Marine National Park one kilometre offshore from the high water mark and abuts the onshore boundaries. This provides the Marine National Park with a buffer although recreational and commercial fishing is allowed within the coastal reserve.

An invasion by Northern Pacific Sea Star in surrounding areas was identified quickly and responded to in an eradication program during 2004-2005.

Considerable data pertaining to environmental condition of the Bunurong region has been collected as part of the desalination plant currently under construction. Monitoring is expected to continue throughout development and operation of the plant.

The Catchment Condition for the Bunurong Coast Catchment Ecosystem report (West Gippsland Catchment Management Authority, 2010) indicates degraded river and stream condition reflecting a highly modified land condition (less than 17 per cent native vegetation). Landscape scale land management programs may ultimately influence the condition of the waters of the Bunurong Marine National Park.

# Bunurong Marine National Park

Condition

A-

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	-	0	This asset is defined by the boundaries of the Marine National Park. No land component exists although external influences are acknowledged.
Water	Reasonable – Good (3.5)	50	Agricultural runoff and stormwater from urban areas such as Cape Paterson and Inverloch impact marine water quality. Lateral migration is identified as a more important source of nutrient load. Waterwatch monitoring, Parks Victoria Sub-tidal Reef Monitoring Program and Bunurong Marine National Park Management Plan.
Biodiversity	Good – Excellent (4.5)	50	The diversity of intertidal and shallow sub-tidal invertebrate fauna is the highest recorded in Victoria on sandstone. Seaweed species richness is comparatively high; the seagrass <i>Amphibolis antarctica</i> is important. Over 87 species of fish have been recorded. Parks Victoria, 2011.

## Condition Comments and Specifics

The diverse and rich biodiversity of this area underpins the maintenance of an A- condition rating..

# Bunurong Marine National Park

## Stewardship



### Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	Parks Victoria is developing a landscape-scale approach to management plans and an Adaptive Management Framework which will improve high level planning and prioritisation of on-ground works. Bunurong Marine National Park Management Plan (Parks Victoria, 2006).
Implement	Good (4)	Waterwatch, Sea Search and Sub-Tidal Reef monitoring programs.
Evaluate	Good (4)	Victorian Auditor-General's 'Environmental Management of Marine Protected Areas' report (tabled March 2011). Waterwatch, Sea Search and Sub-Tidal Reef monitoring programs.
Improvement	Good (4)	Results of biota monitoring were the impetus for a targeted DPI (Fisheries) focus on poaching. The Victorian Auditor-General's recommendations have been incorporated into the development of a landscape-scale management plan approach and Adaptive Management Framework.
Partnerships	Good (4)	Parks Victoria and DPI respond together on abalone poaching and Northern Pacific Sea Star invasion delivering effective community and government agency approach.
Indigenous Engagement	Good (4)	Parks Victoria proactive Indigenous Recruitment and Career Development Strategy.

### Stewardship Comments and Specifics

There is considerable community and local stewardship associated with the Marine Park and the abutting coastal parks. The Parks Victoria and Department of Primary Industries (Fisheries) patrol the park waters as fishing and artefact removal are excluded activities. Parks Victoria also liaises with the federal agency responsible for oil spill response preparedness.

The Auditor-General's assessment of Environmental Management of Marine Protected Areas found an absence of demonstrable outcomes of the management mechanisms employed. The new Parks Victoria management plans and Adaptive Management Framework will address the identified shortcomings.

The stewardship rating of four stars is maintained to reflect

the continuing partnerships between agencies and the community; and the "evaluate – improve" loop illustrated by the Auditor-General's assessment and Parks Victoria response.

#### For more information

##### **Parks Victoria Information Centre**

13 1963, [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

##### **Sea Search**

<http://www.peopleandparks.org/programs/sea-search/54.html>

##### **Victorian Auditor-General's Office**

[http://www.audit.vic.gov.au/reports\\_publications/reports\\_by\\_year/2010-11/20110302\\_marine\\_parks.aspx](http://www.audit.vic.gov.au/reports_publications/reports_by_year/2010-11/20110302_marine_parks.aspx)

##### **Gippsland Coastal Board (03) 5152 0451,**

[www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)



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# Coastal Settlements

(Wilson's Promontory to Phillip Island)

The Coastal Settlements asset reports on the condition of and impact on coastal ecosystems within and surrounding set in Bass Coast & South Gippsland.



## Asset Description

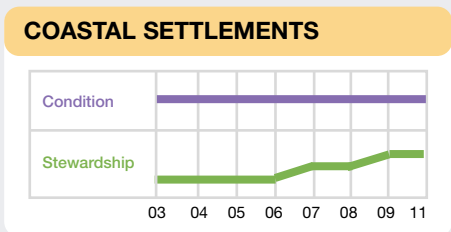
The Coastal Settlements asset reports on the condition of and impact on coastal ecosystems within and surrounding coastal towns in Bass Coast and South Gippsland Shires.

The asset includes coastal towns within the Bass Coast and South Gippsland Shire boundaries from Phillip Island to Wilson's Promontory – San Remo, Wonthaggi, Cape Paterson, Inverloch, Venus Bay, Sandy Point and Waratah Bay.

Issues of infringement, erosion, offsite impact (waterway discharge, refuse), urban design pressures and development are considered in the evaluation of condition and stewardship of this asset.

*Bioregion reference: Gippsland Plain and Strzelecki Ranges*

## Rating History



	Condition	Stewardship
2003	C	★★
2004	C	★★
2005	C	★★
2006	C	★★
	Standardisation	Standardisation
2007	C	★★☆
2008	C	★★☆
2009	C	★★★
<b>2011</b>	<b>C</b>	<b>★★★</b>

Coastal Living  
Coastal settlements



# Coastal Settlements

## (Wilson's Promontory to Phillip Island)

### **Asset Background**

This asset focuses on the natural environment in and surrounding the coastal settlements of Bass Coast and South Gippsland Shires.

Threats to the environment include those associated with urbanisation and population growth (permanent and seasonal) including wastewater, stormwater and sewage management; native vegetation fragmentation, pest plant and animals, dune erosion, planning controls and subdivision. Planning controls and community education and involvement are paramount to protecting the natural values of this asset.

High erosion potential is inherent in the coastal, sandy environment. Impacts of climate change on dune formations and sea level rise will influence the condition of this asset in the future.

Remnant vegetation along the coastal fringes is in good condition albeit under pressure from urbanisation and land use change. Much of the land surrounding the coastal settlements is, however, reserve managed by Parks Victoria, albeit narrow and fragmented.

Accommodating the seasonal and event-based population surges in coastal towns poses complex planning and infrastructure challenges to managing agencies. The Coastal Spaces and Urban Design Framework aim to constrain development to the existing town footprints, however, demand for real estate increases with growth of Melbourne's eastern fringe. The new Pakenham industrial estate is considered within commutable distance from Bass Coast so there is increasing pressure to provide for permanent residential and weekenders. A large number of housing lots have been released in Wonthaggi to promote its role as the region's hub.

# Coastal Settlements

(Wilson's Promontory to Phillip Island)

Condition

C

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	40	Pest plant and animal programs are implemented by various agencies and land management groups. Erosion potential is high and increasing permanent and transient population increases pressure on protecting infrastructure such as pathways and car parks.
Water	Reasonable (3)	30	Inappropriate clearing of foreshore vegetation by adjoining landowners threatens biodiversity and landscape values.
Biodiversity	Reasonable (3)	30	Pest plant and animal programs are implemented. Large domestic dog population exists in towns with designated dog walking beaches.

## Condition Comments and Specifics

The State Government recently overturned Bass Coast Shire Council's decision to reject a proposed development at Cape Paterson. Whilst Bass Coast rejected the application based on the development's location with regards to environmental impacts and hazards, among other issues, the State Government ruled that the development had considerable merit as an exemplary example of sustainable residential development. The future impact of this development on the Coastal Settlements asset, and the precedent it may have set, is unknown at this time.

The condition rating of C has been maintained.

# Coastal Settlements

(Wilson's Promontory to Phillip Island)

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	Victorian Coastal Strategy 2008; Bass Coast Environment Sustainability Plan 2008- 2013; Coastal Park Management Plans. Gippsland Coastal Action Plan, Gippsland Coastal Board). The Coastal and Marine Assets Framework whereby Gippsland coasts will be divided into assets and their values and threats identified, is nearing completion (Gippsland Coastal Board, 2011).
Implementation	Good (4)	Significant financial commitment by Bass Coast Shire, increasing in 2011 and 2012 for roadside management and pest plant and animal programs.
Evaluation	Good (4)	
Improvement	Good (4)	
Partnerships	Reasonable (3)	Active agency and community groups. Pest plants and animals programs with Landcare, Parks Victoria, VicRoads, Councils, schools, Friends groups etc.
Indigenous Engagement	Lacking (1)	Respondent not aware of Indigenous engagement activities. Compliance only.

## Stewardship Comments and Specifics

The stewardship rating of three stars is maintained, reflecting continued localised effort.

Bass Coast Shire's pest plant and animal funding will triple between 2010 and 2012.

### For more information

**Department of Planning and Community Development**  
[www.dpcd.vic.gov.au/planning](http://www.dpcd.vic.gov.au/planning)

**Bass Coast Shire Council**  
(03) 5671 2211 or [www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

**South Gippsland Shire Council**  
(03) 5662 9200 or [www.southgippsland.vic.gov.au](http://www.southgippsland.vic.gov.au)

**Parks Victoria Information Centre**  
13 1963 or [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

☐ **West Gippsland Catchment Management Authority**

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

**Port Phillip and Westernport Catchment Management Authority**

(03) 9785 0183 or [www.ppwcm.vic.gov.au](http://www.ppwcm.vic.gov.au)

**South Gippsland Landcare Network**

<http://www.southgippslandweeds.com.au>

**Victorian Coastal Council**

[www.vcc.vic.gov.au](http://www.vcc.vic.gov.au)

**Gippsland Coastal Board**

(03) 5152 0451 or [www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)

# Corner Inlet

The Corner Inlet asset reports on the significant marine bay and tidal mudflat system within the Corner Inlet Marine National Park, the Corner Inlet Marine and Coastal Park and Coastal Park and Nooramunga Marine and Coastal Park.



## Asset Description

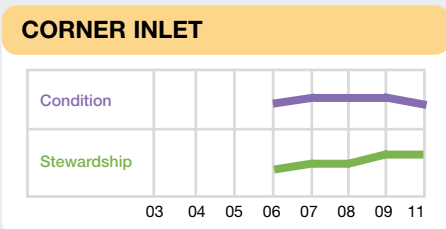
The Corner Inlet asset reports on the significant marine bay and tidal mudflat system within the Corner Inlet Marine National Park, Corner Inlet Marine and Coastal Park, and Nooramunga Marine and Coastal Park.

Corner Inlet, to the north east of Wilsons Promontory supports migratory birds, fisheries and various cultural attributes. The area coincides with the boundaries of the declared RAMSAR convention wetland, some 67,000 hectares; and is also listed under the UNESCO 'Man and the Biosphere' program as a biosphere reserve. Various species listed under the China- and Japan- Australia Migratory Bird Agreements frequent the area.

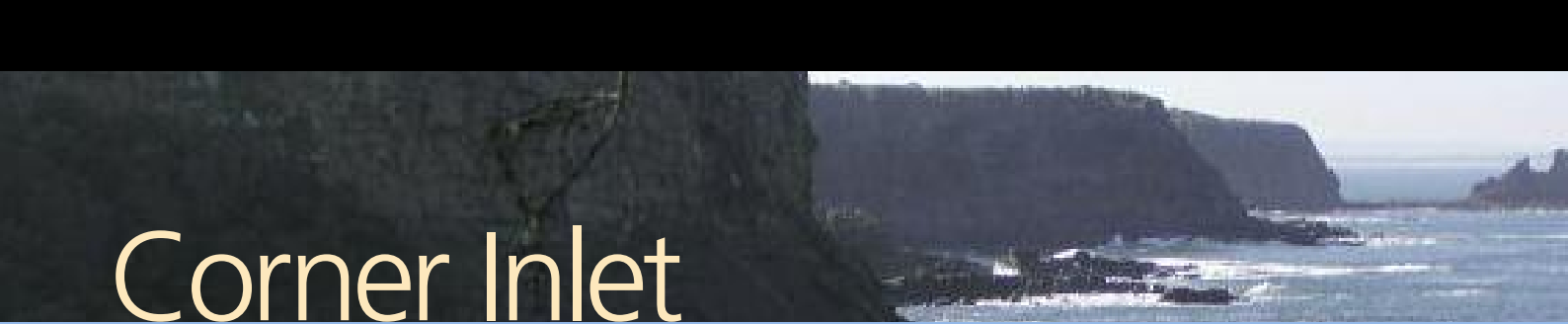
Corner Inlet supports significant fisheries, environmental, social and tourism values. There is a strong aboriginal cultural connection to the area and numerous historic shipwrecks. Corner Inlet is the most southern marine bay and tidal mudflat system on mainland Australia. It supports the world's most southerly population of White Mangroves (*Avicennia marina*) and important feeding and breeding grounds for water and shorebirds. Declaration of the Marine National Park reflects the rarity of habitat represented here.

*Bioregion reference: Wilsons Promontory and Gippsland Plain*

## Rating History



	Condition	Stewardship
2003	-	-
2004	-	-
2005	-	-
2006	C	★★
	Standardisation	Standardisation
2007	C+	★★☆
2008	C+	★★☆
2009	C+	★★★
<b>2011</b>	<b>C</b>	<b>★★★</b>



# Corner Inlet

## Asset Background

Corner Inlet is protected by a naturally fragmented barrier island system vulnerable to impact of sea level rise – the destruction of outer barrier islands would expose the estuarine islands to marine wave action.

Gippsland Ports manages and maintains infrastructure within designated areas geographically part of but excised from Corner Inlet and Nooramunga Marine and Coastal Parks.

Foxes, initially from Snake Island, pose danger to migratory bird populations.

Tidal influx results in frequent turnover of water and short nutrient resident time.

The Inlet's catchment includes a large area of northern Wilsons Promontory. Of that Promontory catchment area, approximately 90 per cent was subject to bushfire in 2009. As vegetation regenerates, the impacts of the fires will become less evident.

A significant increase in annual rainfall, in addition to a single significant down-pour in 2011, resulted in high freshwater inflow to the inlet. Initial monitoring suggests examples of seagrass die-back may have been found.

### Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	10	Impacts of the Wilsons Promontory fire are evident but expected to lessen into the future. Fencing of intertidal areas for salt marsh protection; Jack and Albert River Riparian zone fencing and revegetation. State of the Parks, Parks Victoria.
Water	Poor (2)	40	Fencing and revegetation projects improving water quality. Sedimentation and turbidity impacts of increased runoff after 2011 significant rainfall, particularly over fire affected areas of Wilsons Promontory catchment. State of the Parks, Parks Victoria.
Biodiversity	Reasonable (3)	50	Seagrass beds support fish nurseries and are therefore considered crucial to the Inlet's value and biodiversity. Progress is being made in fox control. Summer bird counts will be combined with 2012 data from which improvement may be apparent. Spartina control program is late. Subtidal and seagrass monitoring. Parks Victoria suggests examples of seagrass dieback have been identified as a result of 2011 rainwater influx. Landcare and Waterwatch data and reports to Steering Committee. State of the Parks, Parks Victoria.

### Condition Comments and Specifics

Suspended solids' propensity to block sunlight and therefore affect seagrass growth is seen as a serious threat to Corner Inlet ecosystems. The significant rainfall in 2011 occurred across the broader catchment where sediment loss from farmland requires active management. Combined with runoff from the fire affected areas of Wilsons Promontory, sedimentation is seen to have reduced water quality in this reporting period.

Changes in broad and narrow leaf seagrass distribution and meadow health have been noted but may not be fully understood.

Despite a shift from planning and research to implementation of management works, the inlet's condition is not yet reflecting the catchment improvements resulting from the multiple, multiagency programs. In fact, an improved understanding of the actual condition of the inlet as a result of these programs suggests that the condition rating of C+ until 2009 was optimistic.

A decrease in condition rating to a C reflects a more accurate understanding of the actual condition of the inlet. The significant fresh water influx and associated nutrient and sediment delivery in March 2011 may also have marginally reduced environmental condition.



### Stewardship Summary

Component	Score	Key Evidence
Planning	Excellent (5)	Corner Inlet Coastal Catchment Initiative Steering Committee Strategic Directions Statement, 2011. Gippsland Coastal Action Plans, Gippsland Coastal Board. Draft Management Plan for Corner Inlet and Nooramunga Marine and Coastal Parks may be replaced with the new Parks Victoria landscape scale management plan based on the Adaptive Management Framework. The Coastal and Marine Assets Framework whereby Gippsland coasts will be divided into assets and their values and threats identified, is nearing completion (Gippsland Coastal Board, 2011).
Implementation	Reasonable (3)	Subtidal and seagrass monitoring and habitat mapping by Parks Victoria; fox control works.
Evaluation	Reasonable (3)	Coastal Action Plans under review. Intertidal, subtidal and seagrass monitoring is undertaken by Parks Victoria. Three yearly weed mapping of abutting areas by Wellington Shire Council.
Improvement	Good (4)	The Steering Committee directs projects based on data and reports on condition.
Partnerships	Excellent (5)	The Corner Inlet Steering Committee comprises members from a broad range of agencies and organisations. Funding for engagement generally has decreased resulting in a reduction of community water quality data collection being scaled back. Coastal Agencies Liaison Group.
Indigenous Engagement	Reasonable (3)	Gunai Kurnai Indigenous Land Use Agreement. Parks Victoria indigenous Recruitment and Career Development Strategy and training programs.

### Stewardship Comments and Specifics

The planning and implementation works undertaken, initiated or overseen by the Steering Committee underpin the maintenance of a three star stewardship rating for this asset.

Management changes associated with the Gunai Kurnai Indigenous Land Use Agreement will eventuate.

#### For more information

##### Parks Victoria Foster

(03) 5683 9007 or visit [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

##### West Gippsland Catchment Management Authority

(03) 5175 7800, [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

#### Department of Sustainability and Environment, Ecological Character Description - Corner Inlet RAMSAR Site.

[www.dse.vic.gov.au/DSE/nrence.nsf/LinkView/25C78F0422CD4887CA25729D0000B8A048](http://www.dse.vic.gov.au/DSE/nrence.nsf/LinkView/25C78F0422CD4887CA25729D0000B8A048)

DB09C3A9A254C5CA257297001AE7C0

#### Sea Search

<http://www.peopleandparks.org/programs/sea-search/54.html>

#### Gippsland Coastal Board

(03) 5152 0451, [www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)





# Croajingolong National Park

The Croajingolong National Park asset reports on the high concentration of near pristine estuarine areas and the lowland forest, heath and coastal ecosystems.



## Asset Description

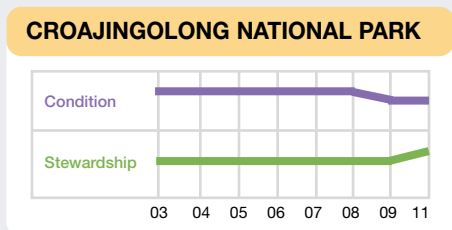
The Croajingolong National Park asset reports on the high concentration of near pristine estuarine areas and the lowland forest, heath and coastal ecosystems.

The 87,500 hectare Croajingolong National Park stretches east from Sydenham Inlet (west of Bemm River) to the NSW border. It hosts two wilderness areas, forms part of a designated Biosphere Reserve under the UNESCO 'Man and the Biosphere' program and is designated a Natural Catchment Area by the Heritage Rivers Act (1999).

The 306 species of birds recorded in Croajingolong National Park represent over half of Victoria's, and a third of Australia's, total bird species. The area hosts habitats supporting 43 species of threatened native animals.

*Bioregion reference: East Gippsland Lowlands*

## Rating History



	Condition	Stewardship
2003	A	★★★
2004	A	★★★
2005	A	★★★
2006	A	★★★
	Standardisation	Standardisation
2007	A	★★★
2008	A	★★★
2009	B+	★★★
<b>2011</b>	<b>B+</b>	★★★★☆

Coastal Parks of East Gippsland  
Croajingolong National Park



# Croajingolong National Park

## **Asset Background**

Covering up to 10 per cent of Croajingolong National Park, the Coastal Heathland vegetation community is extremely species-rich. It contains highly significant coastal streams and catchments which are relatively undisturbed with good populations of native fish. Pest plants and animals are regarded as the major threat to ecological health.

Parts of Croajingolong National Park burnt during bushfires in 2009 / 2010.

The Southern Ark predator control program and the associated population monitoring are indicating continued recovery of small mammal populations with, for instance, regular sightings of the Longnosed Potoroo.

# Croajingolong National Park

Condition

B+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Good (4)	30	State of the Parks, Parks Victoria 2011.
Water	Good (4)	30	Riparian vegetation is largely intact. Stream flow increased with increased rain. Some flood impact occurred during 2011.
Biodiversity	Good (4)	40	Ongoing funding for the Southern Ark predator control program has been guaranteed into the future. Arum lily eradication program at Point Hicks is in its final year. Protecting the Best program and targeted weed control to protect Bristlebird habitat continues.

## Condition Comments and Specifics

Croajingolong's rivers and biodiversity underpin the maintenance of a B+ condition rating.

Some view development within the park as problematic, opening areas to weed infestation and threats to natural assets. Dogs may affect biodiversity and have significant impact on neighbouring farm land.

# Croajingolong National Park

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	Croajingolong National Park Management Plan, 1996 will be reviewed in line with the new Adaptive Management Framework and landscape scale management plan approach.
Implementation	Good (4)	Southern Ark and Protecting the Best projects are being implemented. Controlled burning program employed.
Evaluation	Reasonable (3)	State of the Parks, Parks Victoria 2011. Monitoring plan now in place. The Victorian Auditor-General's Office report on Invasive Plants and Animals in Victoria's Parks (tabled May 2010) highlighted some deficiencies in planning and resource allocation which are being addressed through the new Adaptive Management Framework and landscape-scale management plans.
Improvement	Reasonable (3)	The Adaptive Management Framework and landscape scale management plan are being developed in response to identified deficiencies and opportunities to improve practices.
Partnerships	Good (4)	
Indigenous Engagement	Reasonable (3)	Parks Victoria Indigenous Recruitment and Career Development Strategy and mandatory cross-cultural training policy. Gunai Kurnai Indigenous Land Use Agreement.

## Stewardship Comments and Specifics

Victoria landscape scale approach to management planning will instruct revision of the 14 year old plan.

### For more information

#### Parks Victoria Information Centre

13 1963 or [www.East Gippsland Catchment Management Authority](http://www.East Gippsland Catchment Management Authority),

#### Department of Sustainability and Environment

#### Southern

<http://www.dse.vic.gov.au/DSE/nrence.nsf/childdocs/-8946409900BAC6344A256B260015D4AF?open>



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# Forests of East Gippsland

The Forests of East Gippsland asset reports on the commercial, social and biodiversity values of the forests within the East Gippsland Forest Management Area.



## Asset Description

The Forests of East Gippsland asset reports on commercial, social and biodiversity values of the forests within the East Gippsland Forest Management Area.

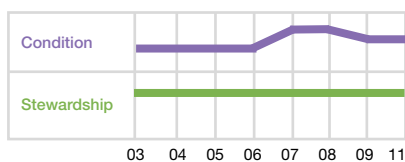
Under the 1997 East Gippsland Regional Forest Agreement approximately 350,000 hectares of State Forest are available for harvesting in the General Management Zone. Important natural values in the Forest Management Area are protected in Special Protection Zones. The Agreement also sets aside almost half the region's 1.2 million hectares as reserve, excluded from logging.

The area includes seven National Parks, various Heritage Rivers and a designated Natural Catchment Area under the Heritage Rivers Act (1999). Mammal, bird and plant species of significance exist in the area, some of which are found nowhere else.

*Bioregion reference: Victorian Alps, East Gippsland Uplands, East Gippsland Lowlands and Monaro Tablelands*

## Rating History

### FORESTS OF EAST GIPPSLAND



	Condition	Stewardship
2003	B	★★★★★
2004	B	★★★★★
2005	B	★★★★★
2006	B	★★★★★
	Standardisation	Standardisation
2007	A-	★★★★★
2008	A-	★★★★★
2009	B+	★★★★★
<b>2011</b>	<b>B+</b>	<b>★★★★★</b>



# Forests of East Gippsland

## **Asset Background**

Commercial timber harvesting has a long history in East Gippsland.

Department of Sustainability and Environment is responsible for managing the public native forest in the East Gippsland Forest Management Area for multiple uses, working from the 1995 Forest Management Plan. There is significant pest plant and animal control required by the Department, particularly in disturbed areas such as logging tracks.

VicForests is responsible for the sustainable harvest and commercial sale of Victoria's forest timber, as well as forest rehabilitation and silviculture.

One of the seven National Parks included in the East Gippsland Forest Management Agreement, Cooracambra National Park, is recognised as one of the largest areas of high quality wilderness in south eastern Australia. Croajingolong is another significant National Park recognised as having breadth and quality of biodiversity.

The forests of East Gippsland were not significantly affected by the major rain events of 2007. The 2003 Great Divide and 2006-2007 Victorian Alpine fires burnt portions of the north west and western reaches. The 2009-2010 fires also impacted forests across East Gippsland.

# Forests of East Gippsland

Condition

B+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Good (4)	30	The Code of Forest Practice is strictly adhered to harvest zones and includes controls and monitoring of soil erosion, sediment hazard, drainage, habitat and seed tree retention, storage of fuel and oil, streamside and rainforest buffers. VicForest stated that no significant spread of pests had been observed in the post 2009 fire recovery.
Water	Excellent (5)	30	Streams are in good condition with riparian vegetation intact. Riparian zones are protected by logging buffers. Code of Forest Practice and Index of Stream Condition.
Biodiversity	Good – Excellent (4.5)	40	Southern Ark and Protecting the Best programs are well established. Threatened species management arrangements in place for majority of species. Ecological-based fire management plans are implemented including landscape scale mosaic burning.

## Condition Comments and Specifics

While the condition of this asset is constrained by logging, high frequency of fuel reduction burning, erosion (mostly linked to roadways) and pest plant and animals, the following must also be considered:

- Fuel reduction burns are planned to create a mosaic of burnt and unburnt and a mosaic of intensities, and so minimise adverse impact on condition of the vegetation. This practice should also be considered in the context of the role that planned fire will have in moderating the impact of bushfires in a warming, drying climate - the impact of infrequent high intensity fire in long unburnt forest may be much greater than the impact of more frequent lower intensity fire.
- The planning processes associated with road works and bridge construction have become more rigorous, with more attention paid to minimising native vegetation clearing and soil erosion at work sites.
- The area available for logging has progressively decreased and the application and audit of prescriptions is rigorous. VicForests have also commenced pre-logging threatened flora and fauna surveys, the results of which can lead to changes to harvesting plans.

Plant succession is hindered by Samba deer across all forest types and, in forests managed for harvest, the understorey is minimised. Significant regeneration after the bushfires is occurring. The B+ condition rating is maintained.

# Forests of East Gippsland

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	Ecological-based fire management plans; Australian Forestry Standard accreditation; Timber Release Plan under the Sustainable Forest Timer Act. East Gippsland Forest Management Plan, East Gippsland Regional Forest Agreement, ABC database, Southern Ark Operations Plan and Protecting the Best Project Plan. Trust for Nature Conservation Plans for private land.
Implementation	Good (4)	Regeneration monitoring and forest coupe hand-back to DSE. Trust for Nature Conservation Plans for private land.
Evaluation	Good (4)	Fire ecology monitoring. DSE annually audit application of the Forest Code (2010 audit involved assessment of 30 logging coupes); AFS certification audits. Trust for Nature Conservation Plans for private land with conservation covenants.
Improvement	Good (4)	Continual improvement is a requirement of the AFS certification.
Partnerships	Good (4)	Central Highlands and East Gippsland communications and community managers participate in events, provide sponsorships. VicForests work with DSE, DPI, certification auditors and industry contractors.
Indigenous Engagement	Reasonable to Good (3.5)	VicForest Indigenous Engagement Strategy; compliance with legislative requirements.

## Stewardship Comments and Specifics

The trinity of landscape scale programs including fox control (Southern Ark), weed control (Protecting the Best and Highlands Down) and ecologically based fire planning and implementation represents integrated management of threatening processes at a landscape scale by public land managers. There are positive indicators of improving condition across approximately one million hectares of public land. This is reflected in the maintained already high stewardship rating of four stars.

### For more information

**Department of Sustainability and Environment, Orbost,**

(03) 5161 1222 or [www.dse.vic.gov.au](http://www.dse.vic.gov.au)

**Parks Victoria Information Centre**

13 1963 or [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

**VicForests – Bairnsdale,**

5152 0400 or [www.vicforests.com.au](http://www.vicforests.com.au)



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# Gippsland Lakes

The Gippsland Lakes asset reports on the water quality, estuarine and lake health with reference to maintaining recreational, commercial and tourism values and biodiversity.



## Asset Description

The Gippsland Lakes asset reports on the water quality, estuarine and lake health with reference to maintaining recreational, commercial, tourism and biodiversity values.

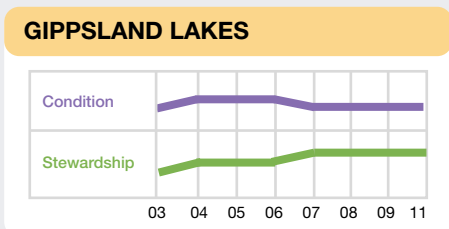
Approximately 70 kilometres long and 10 kilometres at the widest point, the Gippsland Lakes is the largest estuarine coastal lagoon system and the largest navigable estuarine lagoon system in Australia.

The lakes and estuaries support a diverse range of native flora and fauna. The area is listed as a RAMSAR wetlands site and supports various species listed under the China- and Japan- Australia Migratory Bird Agreements. The Gippsland Lakes provide important recreation and tourism values while supporting more than 540 native plant and 300 native animal species (including five endangered species).

Fresh water enters the lakes via six major river catchments which together drain a catchment area of 20,600 square kilometres. Fresh water from these rivers provides an important flushing mechanism but is also the source of nutrient and sediment loads into the Lakes.

*Bioregion reference: Gippsland Plain.*

## Rating History



	Condition	Stewardship
2003	C	★★
2004	C+	★★★
2005	C+	★★★
2006	C+	★★★★☆
	Standardisation	Standardisation
2007	C	★★★★☆
2008	C	★★★★☆
2009	C	★★★★☆
<b>2011</b>	<b>C</b>	★★★★☆



# Gippsland Lakes

## Asset Background

The Gippsland Lakes environment is one that must respond to varied and changing conditions – a naturally freshwater system, it has been evolving to cope with variable but increasing salinity since the permanent opening of The Entrance in 1890. Variations in catchment rainfall impact salinity levels as a function of both freshwater dilution and nutrient transport and deposition. Although specific events, such as the 2007 floods, cause spikes in various condition indicators, the overall health and condition of the Lakes can best be assessed over long time spans.

The Lakes are managed for a broad range of competing priorities and uses including recreation, commercial fishing, marine safety, biodiversity, aesthetics and tourism. Although there is obvious overlap between many uses, the priorities of management differ between interest groups and respective managers.

After several years of drier conditions and low river flows that resulted in increased lake salinity, the 2007 floods delivered approximately 80% of the annual nutrient load in a single event. This in turn resulted in an extensive and long lasting algal bloom. Algal blooms are a natural response and an indication of a system processing the nutrient load. The initial bloom (*Synechococcus* sp. from November 2007 to August 2008) was followed by another bloom (*Noctilca scintillans* from November 2008 to February 2009) in the northern embayments of the eastern Lakes. As *Noctilca scintillans* predate *Synechococcus* sp., the succession of blooms is further evidence of the food chain effectively managing or responding to the conditions presented by flood (and earlier fire).

Improved farming practices, waterway management and erosion control in the feeding catchments directly benefit the Lakes by reducing nutrient loads in rivers.

# Gippsland Lakes

Condition

C

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	10	There has been significant focus on land management in the MID. The West Gippsland CMA is now also focusing on agricultural activities in the upper catchment. Wellington Shire Council provide grants for private land holders to protect wetlands and/or remnant vegetation (some along streamsides), contributing to improvement of water quality discharged into the lakes. Increasing salinity is causing ongoing loss of foreshore vegetation and consequent erosion.
Water	Reasonable (3)	50	EPA monitors SEPP (Waters of Victoria) parameters at five locations and for salinity in Lake Wellington. The Gippsland Lakes and Catchment Taskforce Report Card (2011) states that salinity in Lake Wellington was above the nominated trigger point throughout 2010. Increased rainfall since late 2010 is likely to have resulted in increased nutrient and sediment loads, particularly in the Latrobe Catchment and therefore the western extent of the Lakes. Major flushes of river systems in the upper catchments have also resulted in a reduced salinity in the lakes system. Sewage pump-outs will reduce unauthorised discharge from water craft.
Biodiversity	Reasonable (3)	40	The Gippsland Lakes and Catchment Taskforce Report Card (2011) reports that bird abundance, and occurrence of threatened bird species, appear to be in decline; and that a 'substantial decline' has been noted in some bird taxa. Although the Lakes support significant fish diversity (species number, composition and representation of southern ocean temperate water fish; life forms; and interaction) the commercial fish catch data suggests a decline in catch since 1993. Parks Victoria is targeting the increasing threat of European Shore Crab as part of its pest animal programs.

## Condition Comments and Specifics

The size and diversity of catchments contributing to the Gippsland Lakes reflects the number and diversity of influences on their condition. No one issue or program can resolve, control or manage the myriad issues presented by the Lakes system. The complexity of the interactions and influences is reflected in the number of broad scale land management programs affecting this asset. And many of the influencing factors involve cultural change and/or financial commitment from private land holders. Management of nutrient load reduction from the Macalister Irrigation District must be addressed differently from that discharging from the dry land dairy in the upper catchment. The move towards landscape scale approaches to environmental management is therefore essential to management of the Gippsland Lakes.

The Gippsland Lakes and Catchment Taskforce has commissioned a report card for the Gippsland Lakes (July 2011). Based on available data, six chosen environmental indicators were assigned a rating from A to E to represent their current condition. The ratings are as follows:

Seagrass C, Fish D, Wetlands B, Birds C, Algal blooms C and Water quality B.

Based on the information in the Taskforce report and the data provided by the survey respondents, this translates to a GINRF condition rating of C which is consistent with previous years' ratings. The condition rating of C has been maintained.

# Gippsland Lakes

## Stewardship



### Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	The Gippsland Region Sustainable Water Strategy Draft was published in September 2010. This informs water resource allocation planning and on-ground works. The Coastal and Marine Assets Framework whereby Gippsland coasts will be divided into assets and their values and threats identified, is nearing completion (Gippsland Coastal Board, 2011). Environmental Significance planning controls such as zoning and overlays on lake foreshores prevent inappropriate development. East Gippsland Shire administers an Inundation Plan pertaining to townships on the Gippsland Lakes and the East Gippsland Environmental Sustainability Strategy. Urban Design Framework. Coastal Action Plans.
Implementation	Reasonable – Good (3.5)	Actions from the Gippsland Region Sustainable Water Strategy will include limiting water extraction from inflowing rivers. Enforcement of infringements by the public was cited as challenging. East Gippsland Shire administer a Structure Plan for Lakes Entrance which is enforceable on private land.
Evaluation	Reasonable (3)	Gippsland Lakes and Catchment Taskforce Report Card 2011. Integrated Planning Boating and Gippsland Lakes Coastal Action Plans are under review. Wellington Shire funds groundwater monitoring to assess wetland health and salinity. DSE undertaking evaluation of climate change impact to the Lakes and coast; CMA assessing Extreme Flood Levels to assist in future planning.
Improvement	Reasonable (3)	Coastal Action Plans will be updated with reference to monitoring data and experience since their initial implementation.
Partnerships	Good (4)	Use of consultants in program delivery was cited as being a successful way of taking away the bureaucratic flag' and improving uptake of initiatives. A general lack of cohesion between agencies was, however, highlighted.
Indigenous Engagement	Poor (2)	Gunai Kurnai Indigenous Land Use Agreement. Wellington Shire reported a lack of systematic indigenous engagement outside statutory obligation.

### Stewardship Comments and Specifics

Finalisation of the Gippsland Region Sustainable Water Strategy represents a jump in stewardship for this asset. Realisation of its recommended environmental flows and extraction limits on inflowing rivers will have flow on effects on the condition of the Gippsland Lakes.

There is a complex array of individual and partnering projects although a lack of cohesion between agencies was cited. Although individual components of stewardship were rated differently to 2009, the over stewardship rating of three and a half stars has been maintained.

#### For more information

Gippsland Coastal Board

(03) 5152 0451 or [www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)

Environment Protection Authority Victoria Marine

#### Sciences Unit

[http://epanote2.epa.vic.gov.au/EPA/publications.nsf/515bc2fde7bf93f44a2565b6001ee896/64e0b189afb26cdeca256e3c0002705f/\\$FILE/SR4.pdf](http://epanote2.epa.vic.gov.au/EPA/publications.nsf/515bc2fde7bf93f44a2565b6001ee896/64e0b189afb26cdeca256e3c0002705f/$FILE/SR4.pdf).

#### Department of Sustainability and Environment

[http://www.gippslandlakestaskforce.vic.gov.au/publications/monitoring/Gippsland\\_Lakes\\_seagrass\\_fish\\_survey\\_final\\_report\\_July2009.pdf](http://www.gippslandlakestaskforce.vic.gov.au/publications/monitoring/Gippsland_Lakes_seagrass_fish_survey_final_report_July2009.pdf)

#### Gippsland Lakes and Catchment Taskforce

<http://www.gippslandlakestaskforce.vic.gov.au/>



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# Latrobe Group Aquifer

The Latrobe Group Aquifer asset reports on long term availability and quality of water in the aquifer and the impacts of extraction.



## Asset Description

The Latrobe Group Aquifer asset reports on long term availability and quality of water in the aquifer; and the impacts of extraction.

The deepest groundwater bearing rock layers within the Gippsland sedimentary basin, the Latrobe Group Aquifer contains high yield and quality (typically <500mg/L total dissolved solids) groundwater onshore and massive hydrocarbon resources offshore.

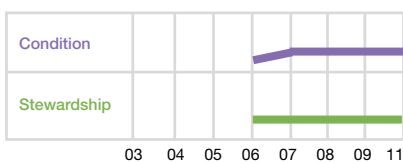
Fresh water recharge of the aquifer is reported to be substantially less than the volume extracted, which CSIRO's modelling has suggested may result in coastal subsidence and salt water intrusion in the long term.

Total groundwater extraction by industries across South and Central Gippsland is approximately 120,000ML per year – approximately 90,000ML per year by offshore oil and gas production; 20,000 to 30,000ML by Latrobe Valley coalmine dewatering and approximately 8,000 ML for irrigation and domestic use in the Yarram district.

*Bioregion reference: Gippsland Plain, Strzelecki Ranges, Twofold Shelf*

## Rating History

### LATROBE GROUP AQUIFER



	Condition	Stewardship
2003	-	-
2004	-	-
2005	-	-
2006	F	★★
	Standardisation	Standardisation
2007	E	★★★
2008	E	★★★
2009	E	★★★
<b>2011</b>	<b>E</b>	<b>★★★</b>



# Latrobe Group Aquifer

## Asset Background

The Latrobe Group Aquifer is accessed by the coal mining, offshore oil and gas extraction and agricultural industries with varying appreciable impact.

Over the past 30 years, groundwater levels in the Latrobe Group Aquifer have declined by an average of approximately 1.1 meters per year (SKM, 2004). This decline is due to the extraction rate exceeding the rate of recharge to the aquifer. CSIRO (2004) states that recharge is in the order of 80,000ML per year while total extraction is approximately 120,000ML per year.

Impacts of declining groundwater levels include:

- Changes to groundwater-surface water interaction where stream base flows could be reduced. The loss of base flow during low flow periods can impact significantly on river ecology and on the reliability of surface water supplies for urban, stock, domestic and irrigation purposes;
- Salt water intrusion in the offshore and near shore areas due to a lowering of hydrostatic pressure; and
- Inland land subsidence due to compaction of overlying strata associated with falling groundwater levels.

CSIRO (2007) reported that no measurable coastal subsidence was identified although modelling suggests that under a realistic scenario there is risk of up to 0.48m land subsidence along Ninety Mile Beach by 2056.

The management of offshore gas, oil and groundwater extraction is a joint Commonwealth/State responsibility under the Commonwealth Petroleum Submerged Lands Act that covers the area greater than three nautical miles off-shore. The Department of Primary Industries is the State Government authority responsible for administering the State responsibilities as part of this Act.

Southern Rural Water is the agency responsible for issuing and managing groundwater licences onshore and for the Yarram Water Supply Protection Area Groundwater Management Plan.

In recognition of the decline in aquifer depth government financial assistance was provided to irrigators allowing them to deepen bores and maintain access to water. It is recognised that this measure extends the viability of irrigation in the district, however, it does not address, in fact it marginally exacerbates, the continued decline of the aquifer. It is noted that the volume extracted for irrigation purposes is an order of magnitude less than that extracted by the mining industries.

Onshore, differential subsidence in the immediate vicinity of the coal mines has been addressed by relocating the surrounding population. The impact remains and subsidence continues, however, property is unaffected. Regional subsidence also occurs but is uniform. Cost of this subsidence is measured only in terms of its impact on property and population centres.

# Latrobe Group Aquifer

Condition

E

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor – Reasonable (2.5)	10	Aquifer extraction for mine dewatering results in localised, differential subsidence. Impacted residents have been relocated. Regional subsidence is uniform and is not therefore problematic to the Latrobe Valley population. Longer term coastal subsidence remains a possible threat (CSIRO, 2007), although no measurable coastal subsidence was identified during ground survey.
Water	Poor (2)	90	Groundwater quality is high (less than 500mg/L total dissolved solids). Typical widespread water table reduction of 1.0 metre is experienced; 1.5 metres per year has been recorded. Although financial assistance has been provided to irrigators to facilitate continued access, this level of aquifer reduction cannot be sustained. There are possible impacts on stream flow / recharge dynamics where the aquifer becomes unconfined at the foothills of the Strzelecki Ranges and central Gippsland.
Biodiversity	-	0	

## Condition Comments and Specifics

Subsidence and high volume extraction are reflected in the maintained condition rating of E. The water is of high quality but the water table will continue to decline.

# Latrobe Group Aquifer

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Poor - Reasonable (2.5)	Rating is in context of the entire asset. Local use planning is significant, however, no aquifer-wide management or strategy document exists for the asset. The Yarram Region Water Supply Protection Area Management Plan deals with the Victorian jurisdiction. It recommends limiting allocation at current level such that no more licences will be issued; and that better understanding of surface water interaction is achieved. The Southern Rural Water Yarram Groundwater Management Plan was approved in December 2010; Hydrogeological Mapping of the Southern Rural Water region has been published.
Implementation	Poor (2)	Local implementation of irrigation based initiatives and management is successful, however, in the absence of aquifer-wide strategies, broad management is poor. The Yarram Region Water Supply Protection Area Management Plan recommendations are reflected in bore installation. Offshore aquifer reinjection by the oil and gas industry remains significantly less than that which is extracted.
Evaluation	Reasonable (3)	Southern Rural Water monitors water quality, depth, use, management and delivery to irrigators. Federal funding contributed to research on decline and impact, however, no known evaluation pertaining to offshore contribution to onshore decline in water table. Hydrogeological mapping of Southern Rural Water region.
Improvement	Poor (2)	In the absence of aquifer-wide evaluation/planning, improvement of aquifer-wide programs cannot occur. Southern Rural Water's monitoring instructs or drives planning.
Partnerships	Poor (2)	Limited interaction between state and federal / on- and offshore management authorities. Strong local partnerships exist in the irrigation district; the Yarram Groundwater Management Plan was developed with contributions from South Gippsland Water, Wellington Shire, Southern Rural Water, the West Gippsland CMA, Gippsland Coastal Board and the DSE; the introduction of Clean Coal Victoria aims to improve partnerships revolving around the Latrobe Valley coal industry.
Indigenous		Engagement is limited by virtue of the asset's nature.



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## Stewardship Comments and Specifics

This asset extends over a large geographic area and has three distinct uses involving three separate managers. This makes determination of an overall rating difficult. Although an individual manager may be exercising significant stewardship, without a collaborative approach to agreed outcomes/goals, the influence of those works on the overall condition is limited.

Some 'stewardship' employed has addressed the impact of condition decline on people and in doing so reduces the pressure to address actual impact on the condition of the asset. In this way, we may be accommodating a decline in condition of the Latrobe Group Aquifer as a cost of coal, gas and oil extraction.

The competing demands and priorities pertaining to the Latrobe Group Aquifer may not allow recovery or improvement in asset condition in the short term.

Although local stewardship pertaining to extraction for agriculture is strong, a broad, aquifer-wide management strategy involving all asset managers does not exist. This is reflected in the unchanged two star stewardship rating.

### For more information

**Southern Rural Water:** (03) 5139 3100

[http://www.srw.com.au/Page/Page.asp?Page\\_Id=517&h=1&p=1](http://www.srw.com.au/Page/Page.asp?Page_Id=517&h=1&p=1)

**Department of Sustainability and Environment**

(03) 9637 8000

**Our Water Financial Assistance Program**

<http://www.ourwater.vic.gov.au/saving/farms/latrobe-aquifer/faq>

**Department of Primary Industries:** (03) 9637 8000

[http://www.dpi.vic.gov.au/dpi/vro/wgregn.nsf/pages/wg\\_water](http://www.dpi.vic.gov.au/dpi/vro/wgregn.nsf/pages/wg_water)

**Gippsland Coastal Board** (03) 5152 0451, [www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)

**CSIRO** [www.csiro.au/files/files/pkz8.pdf](http://www.csiro.au/files/files/pkz8.pdf)



# Latrobe River

The Latrobe River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity - of the Latrobe River.



## Asset Description

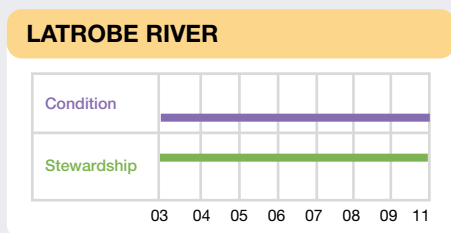
The Latrobe River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity of the Latrobe River.

The Latrobe River rises on the southern side of the Great Dividing Range and the northern side of the Strzelecki Ranges, and travelling 80 kilometres to the western reaches of the Gippsland Lakes at Lake Wellington.

The Latrobe River is characterised by its size and capacity, forested upper reaches, extensive floodplain areas in the middle reaches, and connectivity with freshwater marshes and the Lake Wellington (Gippsland Lakes) Ramsar wetland environment in the lower reaches.

*Bioregion reference: Highlands – Southern Fall, Gippsland Plain*

## Rating History



	Condition	Stewardship
2003	D	★★★
2004	D	★★★
2005	D	★★★
2006	D	★★★
	Standardisation	Standardisation
2007	D	★★★
2008	D	★★★
2009	D	★★★
<b>2011</b>	<b>D</b>	<b>★★★</b>



# Latrobe River

## Asset Background

The Latrobe River is considered one of the most highly modified rivers in Victoria (outside major urban areas). Although the Index of Stream Condition rated 92% of the upper reaches to be in 'good' condition, 89% of the lower reaches were characteristic of 'moderate' or 'poor' condition. Each section of the river, however, has its own character and value

- the upper reaches of the river are considered to be ecologically healthy, have no major diversions or storages.
- the middle reaches below Lake Narracan are heavily utilised by industry and agriculture, and are dominated by artificial meander cut offs (21.5% of the stream length below the Lake).
- the lower reaches below Rosedale have some remnant flood plain and wetland ecological values despite the meander straightening.

The Latrobe River is affected by water regulation and harvesting for consumptive use. An environmental flow study established that to maintain existing ecological objectives at a low level of risk, the river would require an additional annual average volume of about 37GL per year (based on long term climate records) (Draft GSWS, 2011).

The Draft Gippsland Region Sustainable Water Strategy proposes to permanently assign a share equivalent to 10GL of the unallocated water in Bluerock Reservoir to the environment. Since September 2010, the Latrobe River has experienced average flows and rainfall, something it hasn't experienced for many years. The flood plains have experienced minor floods most months in 2011. Increased rainfall has had the positive effects of wetting margins, triggering fish movement, mobilising seeds, filling wetlands, recharging aquifers etc. These effects are balanced to some extent by sediment mobilisation decreasing water quality, landslips in some parts of the catchment and in-stream scouring along straightened tracts of the waterway.

The historic straightening of the river below Lake Narracan has resulted in a wider, deeper and faster flowing watercourse. Restoring the river's natural course is seen as an important measure in restoring river health.

Threats or pressures on the river include soil erosion and sediment loading, waste water discharge, riparian impact or removal in agricultural areas and water extraction for use in the paper mill and power stations. Pest plants and animals, particularly willows and foxes, are also identified as threatening to the river's health.

The Yallourn mine wall collapse on 14 November 2007 resulted in the Latrobe River being diverted away from the mine. Although the diversion had a localised impact on water quality and ecology, no long term environmental decline was reported.

# Latrobe River

Condition

D

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor (2)	10	Works continue in gully management and preparation of Soil Erosion Management Plans as part of the Soil Sediment Management Plan (WGCMA, 2008) target of erosion prevention over 7,500 ha. Native vegetation condition declines as land use intensifies. Increased rainfall after an extended period of below average falls has resulted in mobilisation of sediment and landslips around Yarram. Latrobe Catchment Ecosystem Catchment Condition Report, 2010.
Water	Reasonable (3)	50	Increased flows have assisted to flush the river and meet demand for use; while scouring some sections and having implications on water quality. Acidity and salinity in Heart Morass have declined with increased flow.
Biodiversity	Poor (2)	40	A dramatic increase in water bird diversity and number has been observed in the lower reaches, for example at the Heart Morass. High incidence of introduced species (particularly carp) was reported in the Latrobe River.

## Condition Comments and Specifics

Assessment of the Latrobe River condition is made difficult by the recent high rainfall – it has provided a much needed flushing of the watercourse but contributed to an increase in sedimentation. The work undertaken in the upper catchment on reducing and preventing soil erosion will become evident over time, however, the lower reaches of the river still exhibit pressures from historical channel straightening, heavy-industry pollution and a lack of environmental flows. Major revegetation works in the Heart Morass have, however, improved the condition of land and water in this section; a state which is reflected by the observed increase in birdlife.

The condition rating of D is maintained although it is anticipated that water allocation changes and continued land improvement works will be reflected in improved condition in the coming years.



### Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	The draft Gippsland Region Sustainable Water Strategy has been published, superseding the Central Region Sustainable Water Strategy previously incorporating the Latrobe. The Gippsland SWS recommends a 10 GL allocation.
Implementation	Reasonable – Good (3.5)	The Lower Latrobe Wetlands and Estuary Water Program is being implemented. Good gains in fencing of riparian zones in the upper catchment; willow removal and weed control.
Evaluation	Reasonable – Good (3.5)	Hydrodynamic models are being developed to investigate the interface and interaction between fresh and saline water. Results will inform the placement of extraction structures etc. Track Fire community monitoring program capturing fire recovery.
Improvement	Reasonable – Good (3.5)	The Draft Business Case for Future Actions Plan and Gippsland Sustainable Water Strategy are driving on-ground works.
Partnerships	Good (4)	A reference group has been formed by the WGCMA to aid with the lower Latrobe works. Other examples of partnerships include: Heart Morass – strong and sometimes unlikely alliances; Traralgon Creek - bushfire recovery, community engagement and monitoring; and Sale Common.
Indigenous Engagement	Lacking – Poor (1.5)	A lack of systematic indigenous engagement outside statutory obligation was reported.

### Stewardship Comments and Specifics

Partnerships associated with Heart Morass, Traralgon Creek and Sale Common are reflected in an increase in the Partnerships component of stewardship for this asset.

The overall stewardship rating of three stars has been maintained for 2011 based on pending finalisation of the Gippsland Region SWS.

#### For more information

**West Gippsland Catchment Management Authority**

(03) 5175 7800 or

[www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

**Department of Sustainability and Environment –**

**Central Region Sustainable Water Strategy**

[www.dse.vic.gov.au](http://www.dse.vic.gov.au)





The MID asset reports on the physical condition of the farming land irrigated by the Macalister River and the impacts irrigation has on the surrounding environment.



## Asset Description

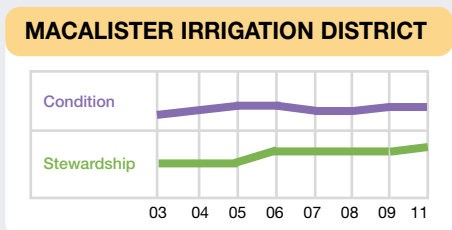
The Macalister Irrigation District asset reports on the physical condition of the farming land irrigated by the Macalister River and the impacts irrigation has on the surrounding environment.

The Macalister Irrigation District (MID) in central Gippsland extends approximately 53,000 hectares from Lake Glenmaggie to near Sale. Approximately 33,500 hectares are currently under irrigation from the Macalister and Thomson Rivers and of this, 90% is under pasture.

Production resulting from irrigation in the district is important to the economic health of various urban centres including Sale, Stratford, Maffra and Heyfield, however, rising soil salinity and reduced river flows threaten the environmental sustainability of the industry.

*Bioregion reference: Gippsland Plain*

## Rating History



	Condition	Stewardship
2003	D-	★★★
2004	D	★★★
2005	D+	★★★★☆
2006	D+	★★★★☆
	Standardisation	Standardisation
2007	D	★★★★☆
2008	D	★★★★☆
2009	D+	★★★★☆
<b>2011</b>	<b>D+</b>	<b>★★★★★</b>



# Macalister Irrigation District

## Asset Background

Irrigation of dairy farms and horticulture in the Macalister Irrigation District has occurred since the 1926 when water from the new Glenmaggie Dam first supplied areas near Sale (SRW, 2011). Impacts of irrigated farming include high nutrient loads entering the lower reaches of Macalister, Thomson and Latrobe Rivers; and irrigation-induced salinity exacerbated by extensive clearing and draining of wetlands. Water quality is poor with elevated turbidity levels. There is an upward trend in conductivity/salinity and increasing acidity of agricultural land.

The 2006/2007 Great Divide bushfires affected approximately 159,400 hectares of vegetation in the upper catchment. The various storms of 2007 resulted in significant erosion, sediment and ash loads into Lake Glenmaggie.

Inflow to Lake Glenmaggie during 2006/2007 was the lowest on record. In contrast, the 2007/2008 floods saw infrastructure damage and 55,000ML daily releases to the Macalister River. Prior to the floods, Lake Glenmaggie Weir stored approximately 100ML of the 195ML capacity. Inflows in November 2007 were approximately 315 ML in less than 24 hours.

The nutrient load for July to December 2007 was in excess of the full year's target impacting off site receptors, such as the Gippsland Lakes.

During the 2006/2007 irrigation season there were extended and significant Blue Green Algae blooms in both Lake Glenmaggie and the irrigation channel network.

Substantial water savings and increased irrigation efficiency has been achieved through recent channel automation.

Low rainfall following the 2007 floods adversely affected fish migration and water quality but the recent increased rainfall has allowed irrigation water to be allocated and environmental flows to occur for the first time in over a decade. With this rainfall, however, comes the increased or returned threat of nutrient export and salinity with the consequential rise in water table.

# Macalister Irrigation District

Condition

D+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor – Reasonable (2.5)	50	After the EPA Dairy Audit program, infrastructure, knowledge and management plans are in place to allow landholders to continue to manage effluent and nutrient discharge on farms. Threat of soil salinity was in decline however, increased rainfall in late 2010 - 2011 has reversed this trend. Groundwater pumping and depth monitoring have been employed to manage this threat.
Water	Reasonable (3)	40	With increased drain flow, the corresponding increase in nutrient export was reported; however, there have been significant improvements in farm management and irrigation methods over the 10 years of drought. Onsite reuse and 'drain harvesting' whereby nutrient rich waters are extracted from the irrigation drains before they discharge to rivers, is reported to further reduce water discharge to waterways. Improvements in infrastructure have resulted in improved delivery efficiency and reduced loss. Reduced seepage to groundwater and reduced run off to drains and waterways is also reported.
Biodiversity	Lacking – Poor (1.5)	10	The MID is a highly modified, intensive agricultural environment that is not principally managed for biodiversity values. Native vegetation in the region and the fauna it supports is incidental. A proactive approach is applied to pest plant and animal control. A carp reduction program is employed in the irrigation channel system. Revegetation is undertaken, in the Nambrok area for example.

## Condition Comments and Specifics

The nutrient discharge data for the district is recognised as conservative as a result of drain harvesting and the current calculation methodology. This method is under review.

Although EPA reported only seven complaints pertaining to dairy effluent and irrigation practices since June 2009, the cessation of the Dairy Audit program three years ago and the reduction of DPI technical services to farmers around dairy effluent management was reported to have resulted in a slight drop in performance on some farms.

Annual nutrient discharge from the irrigation drains of the MID has decreased despite increases in fertiliser application and productivity over the last 10 years. Low rainfall has influenced discharge during this time but a number of initiatives have resulted in less water entering the drains; channel modernisation which has improved efficiency of water delivery; improvements in on farm irrigation practices; and water reuse. There has also been a significant increase in drain harvesting whereby farmers extract water from the irrigation drains for use on their properties.

The condition rating of D+, increased in 2009 to reflect that long term improvement, has been maintained.

# Macalister Irrigation District

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	Macalister Land and Water Management Plan; WGCMA Salinity Management Plan; MID2030 Strategy.
Implementation	Good (4)	MID Irrigation Efficiency Program; channel automation; on-Farm Sustainability incentives; Farm Planning. Key items in the Macalister Land and Water Management Plan reportedly implemented.
Evaluation	Reasonable (3)	WGCMA, SRW, DPI and DSE undertook a mid plan review of the Macalister Land and Water Management Plan.
Improve	Reasonable (3)	Monitoring data informs groundwater pumping and management strategies. Most planning documents are not yet in review-improve stages.
Partnerships	Good to Excellent (4.5)	A memorandum of understanding exists between EPA and DairySafe Victoria to conduct checks on effluent systems during their biannual farm audits. Macalister Demonstration Farm, Bass Coast Landcare Network, Southern Farming Systems and WGCMA undertaking a three year soil trial; Macalister Sustainability Group involves EPA, CMA, Shires, SRW, DSE and DPI and focuses on water quality. Various working groups operate such as Nutrient Technical Working Group, Irrigation Salinity Technical Committee; and Linking Farms Working Group.
Indigenous Engagement	Reasonable (3)	Compliance is achieved in indigenous engagement. It is undertaken in accordance with regulations and as required.

## Stewardship Comments and Specifics

In recognition of sustained improvement in management and coordinated stewardship by multiple agencies and hundreds of landholders, the stewardship rating has been increased to four stars.

### For more information

**Department of Primary Industries, Maffra**

(03) 51470800

**West Gippsland Catchment Management Authority**

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

**Southern Rural Water**

(03) 5139 3100 [www.srw.com.au](http://www.srw.com.au)

- **History of MID**

[http://www.srw.com.au/page/page.asp?page\\_id=155](http://www.srw.com.au/page/page.asp?page_id=155)

**Environment Protection Authority, Traralgon**

(03) 5173 9800 [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

# Mitchell River

The Mitchell River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity – of the Mitchell River.



## Asset Description

The Mitchell River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity of the Mitchell River.

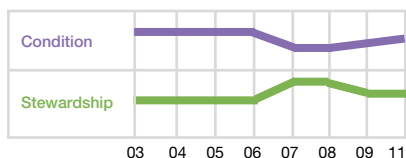
Rising in the Victorian Alps, the Mitchell is a Heritage River with very high conservation value, predominantly natural flows and significant fish habitat. It discharges into the Gippsland Lakes at Lake King.

The Mitchell River provides water to urban centres between Lindenow and Nowa Nowa, including Bairnsdale and Lakes Entrance.

*Bioregion reference: Highlands – Southern Fall and Gippsland Plain*

## Rating History

### MITCHELL RIVER



	Condition	Stewardship
2003	B	★★★
2004	B	★★★
2005	B	★★★
2006	B	★★★
Standardisation		Standardisation
2007	D	★★★★★
2008	D	★★★★★
2009	C-	★★★★☆
<b>2011</b>	<b>C</b>	★★★☆☆



# Mitchell River

## Asset Background

The environmental condition of the Mitchell River suffered severely as a result of long term low river flows, the 2003 Alpine fires and the 2006/2007 Great Divide Bushfires. Flows at Glenaladale dropped in early 2007 to less than 3% of the long term average. The Great Divide Bushfires burnt 76% of the catchment upstream of Glenaladale.

Although its condition recovered to a degree after the fires, the June 2007 floods caused another significant fall in condition. June 2007 saw the first extreme rainfall episode which caused flood conditions and flows as high as 900% of the long-term June average.

The severe thunderstorms in 2007 mobilised sediment and caused severe gullyng, in some instances right up to the ridgelines. The sediment and ash mobilised immediately after the fires smothered the substrate and caused high turbidity. Flooding along the water course and downstream then scoured the river bank and beds. Extensive damage to streamside vegetation, introduction of weeds and manmade litter to streamside vegetation and deposition of excessive amounts of silt along the watercourse and downstream resulted.

Significant post fire and flood restoration works have been undertaken, seizing the opportunity to control weeds during native vegetation regeneration.

Water yields from the Mitchell River are likely to be reduced as a result of the catchment regeneration for years to come. The natural cycle - of increased runoff immediately post fire, reduced runoff while the vegetation regenerates and a return to equilibrium as the vegetation matures - is reflecting regeneration of the impacted catchment.

Important in the restoration and protection of riparian and water quality is the fencing of river frontage to exclude stock. Agreements under the Crown Lands Act with landholders or custodians of the river and surrounds, bind them to maintaining fences and excluding stock from fenced areas. The agreements, under the Crown Lands Act, are binding and are transferred with title or grazing licence. The Crown Land Management division of DSE has the power to enforce the licence conditions while the EGCMA has the funding allocated to develop, monitor and implement agreements.

# Mitchell River

## Condition

C

### Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	10	Weed control including third pass willow removal; binding land management agreements with landholders through DSE Public Lands (many have been surveyed, negotiated and fenced but are waiting on formal signature). East Gippsland Shire and Landcare revegetation works in the Bairnsdale region focus on recreation but are designed with a conservation objective. Vegetation, Erosion and Environmental Significance overlays aim to protect river values where bordering private land. East Gippsland Shire Council Sustainability Strategy 2008 – 2013.
Water	Good (4)	50	Catchment conditions reflect the current stage of post fire recovery combined with increased riparian stock exclusion. Water quantity is improving however, yield from the catchment is on the decline as a natural result of regeneration and competition for water by establishing vegetation. Recent floods have been positive as they have been tempered by recovering vegetation. Seasonal and minimum flow restrictions apply to extraction of irrigation and urban water entitlements. Urban Waterway program targets Gippsland Lakes but benefits the Mitchell River.
Biodiversity	Reasonable (3)	40	Revegetation, weed and exotic tree removal along the fitness circuit in Bairnsdale are undertaken or funded by East Gippsland Shire Council.

### Condition Comments and Specifics

A shift towards reach-based management has occurred such that on-ground works focus on increasing resilience and resistance of the system, achieving enduring gains in river health values. These works are beginning to achieve fencing of long reaches of waterway and effective removal of willows from the catchment.

The increased condition rating of C reflects the continued recovery after the 2006 fire and floods. Reflecting natural post-fire recovery dynamics, future declines in catchment yield are expected.



### Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	An amendment to the bulk entitlement in 2010 transferred a volume previously allocated to the Nicholson River, to the Mitchell River. Gippsland Sustainable Water Strategy; EGCMA Corporate Plan and goals; East Gippsland River Health Strategy; East Gippsland Regional Catchment Strategy.
Implementation	Good (4)	Highlands Down; progress towards goals
Evaluation	Reasonable (3)	Review of various planning documents as per Improvement below. River Health Strategy and Regional Catchment Strategy were evaluated in terms of usefulness and effectiveness.
Improvement	Reasonable (3)	Recalculation of the irrigation allocation based on local conditions and data reflects a significant improvement in planning. Reviewed and renewing East Gippsland Regional Catchment Strategy; revising Regional Strategy for Healthy Rivers, Estuaries and Wetlands (previously River Health Strategy). EGCMA Corporate Plan sets three year goals which are being used to better direct and communicate operations and progress.
Partnerships	Good – Excellent (4.5)	Highlands Down project involving Parks Victoria, DPI, Public Land Management in landscape scale approach to land management. Indigenous Engagement
Reasonable –	Good (3.5)	Fulfilling obligations under the Aboriginal Cultural Heritage Protection legislation; Parks Victoria Indigenous Recruitment and Career Development Strategy and mandatory crosscultural training policies.

### Stewardship Comments and Specifics

The Gippsland Sustainable Water Strategy recommendation to provide an additional water allocation from the Mitchell River to irrigators reflects a precautionary approach based on the known basic needs of the river.

The 'Highlands Down' project drives, co-ordinates and delivers realistic and transparent objectives on a landscape scale that are reset every year to adapt to the current priority threats. A clear understanding of what needs to be done, and how, was reported at an organisation and interagency level.

The three and half star stewardship rating has been maintained.

#### For more information

**East Gippsland Catchment Management Authority,**

(03) 5152 0600, [www.egcma.com.au](http://www.egcma.com.au)

**East Gippsland Water,**

1300 720 700, 03 5150 4444 or [www.egwater.vic.gov.au](http://www.egwater.vic.gov.au)

**Southern Rural Water**

(03) 5139 3100 [www.srw.com.au](http://www.srw.com.au)





# Ninety Mile Beach

The Ninety Mile Beach asset reports on the integrity of the coastal dune system and beach sands of Ninety Mile Beach.



## Asset Description

The Ninety Mile Beach asset reports on the integrity of the coastal dune system and beach sands of Ninety Mile Beach.

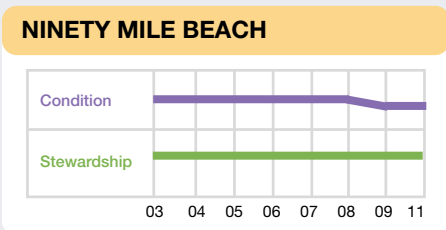
Extending from McLaughlin's Beach to Lakes Entrance, the Ninety Mile Beach coastal dunes separate the ocean from the Gippsland Lakes, Lake Reeve, Jack Smiths Lake and Lake Denison. The Gippsland Lakes Coastal Park and the Ninety Mile Beach Marine National Park are within the bounds and adjacent to this asset.

Seaward vegetation includes hardy grasses and sedges such as Marram grass, spinifex and saltbush. Vegetation of leached sand dunes includes coastal, swamp and heathy woodland, while, sheltered from the wind and salt spray, the vegetation behind the dunes includes Coastal Tea-tree thickets and Coast Banksia woodlands.

Ninety Mile Beach hosts a number of key infrastructure assets for the Gippsland region including Delray Beach Ocean Outfall, Saline Waste Outfall Pipeline to McGaurans Beach, Tasmanian Natural Gas Pipeline, Bass Strait oil/gas pipelines, and Baslink.

*Bioregion Reference: Gippsland Plain and Twofold Shelf*

## Rating History



	Condition	Stewardship
2003	B	★★★
2004	B	★★★
2005	B	★★★
2006	B	★★★
	Standardisation	Standardisation
2007	B	★★★
2008	B	★★★
2009	C+	★★★
<b>2011</b>	<b>C+</b>	<b>★★★</b>

Ninety Mile Beach incl marine environment Ninety Mile Beach dunes and foreshore



# Ninety Mile Beach

## Asset Background

The Ninety Mile Beach asset focuses on the dune system and foreshore only. Protection of environmental values is afforded through the Lakes National Park, Gippsland Lakes Coastal Park and Ninety Mile Beach Marine National Park.

The dunes between the Honeysuckles and Seaspray were breached in the 1950s and the extensive revegetation undertaken thereafter has deteriorated over time. Coastal erosion resulting from recreational use and development along the foreshore, combine with natural processes, climate change and sea level rise making the inland wetlands and coastal townships vulnerable to inundation.

Pest plant and animals pose considerable threat to the dune system. Exotic Marram grass dominates the primary and secondary dune for much of the assets extent, arresting natural geomorphological processes and displacing native grasses. Although the established vegetation on the secondary and tertiary dunes appears in good condition, hog deer prevent succession or replacement occurring. Their condition in the future will be significantly compromised as a result.

Climate change predications suggest an increased threat to the dune integrity with the single crest dune system near Seaspray increasingly vulnerable to erosion and breaching. The Victorian Coastal Strategy (VCS, 2008) states that coastal managers and future development must adopt a precautionary principle and plan for sea level rise of not less than 0.8 metres by the year 2100. The policy also requires the combined effects of tides, storm surges coastal processes and local conditions to be taken into account.

The extreme rainfall and storm of 2007 caused extensive erosion of the dune system, risking inland wetland systems (West Gippsland Catchment Management Authority, 2008). Works continue to shore up the dunes damaged in these storms to protect townships and to provide shared pathways to prevent erosion of existing vegetation.

# Ninety Mile Beach

Condition

C+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	50	Works occur to shore up the dunes around townships. Shared pathways direct pedestrian traffic to protect existing vegetation. Seaspray dune rehabilitation project is complete. Marram grass impacts coastal processes and alters dune shape. Ninety Mile Beach Catchment Ecosystem catchment Condition Report (WGCMA, 2010).
Water	Good (4)	20	Recent rainfall rejuvenating coastal wetlands.
Biodiversity	Good (4)	30	Established vegetation on secondary and tertiary dunes in good condition, however, hog deer threaten succession/ replacement. Marram grass displaces native species and prevents establishment of native vegetation communities.

## Condition Comments and Specifics

Pest plant and animal control is paramount to the future condition of Ninety Mile beach. Hog deer are reportedly the primary hindrance to vegetation succession on the secondary and tertiary dunes. Although marram grass is very effective in capturing and stabilising sand, steep dunes that are more susceptible to wave erosion are characteristic of marram dominated foreshores.

The C+ condition rating is maintained.

# Ninety Mile Beach

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Reasonable (3)	Coastal park management plans will be updated in line with the new Parks Victoria Adaptive Management Framework. Seaspray Dunes Management Plan completed.
Implementation	Reasonable - Good (3.5)	Wellington Shire Council will buy back inappropriately subdivided lots in the Golden Beach area. Difficulty reported in coordination of pest plant and animal control programs – result of remoteness and multiple management bodies, private and government agencies.
Evaluation	Good (4)	A weed survey of the coast has been completed by EGCMA. The Victorian Auditor-General's Office report on Invasive Plants and Animals in Victoria's Parks (tabled May 2010) highlighted some deficiencies in planning and resource allocation which are being addressed through the new Adaptive Management Framework and landscape-scale management plans. State of the Parks, Parks Victoria 2011.
Improvement	Good (4)	Evaluation results are directing on-ground works and planning tools.
Partnerships	Reasonable (3)	Volunteer community groups are active in areas surrounding townships.
Indigenous Engagement	Poor (2)	Parks Victoria Indigenous Recruitment and Career Development Strategy and mandatory cross-cultural training policies relate to the coastal parks. Areas of cultural value along the Ninety Mile Beach including the Lakes Entrance Cranium site on Boole Poole (western side of The Entrance) and various shell midden and artefacts scatters have been identified, however, no indigenous engagement activities were reported.

## Stewardship Comments and Specifics

Wellington Shire Council has resolved the issue of historic inappropriate subdivision and is implementing a buy back scheme in the Golden Beach area. The three star stewardship rating is maintained.

### For more information

#### West Gippsland Catchment Management Authority

(03) 5175 7800 or  
[www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

#### Parks Victoria Information Centre

13 1963 or [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

#### Wellington Shire Council

1300 366 244 or [www.wellington.vic.gov.au](http://www.wellington.vic.gov.au)

#### Department of Sustainability and Environment

[www.dse.vic.gov.au](http://www.dse.vic.gov.au)

#### Gippsland Coastal Board

(03) 5152 0451 or [www.gcb.vic.gov.au](http://www.gcb.vic.gov.au)

#### Landcare Victoria

[www.landcarevic.net.au](http://www.landcarevic.net.au)

[www.parks.tas.gov.au/file.aspx?id=6737](http://www.parks.tas.gov.au/file.aspx?id=6737)



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# Redgum Plains

The Redgum Plains asset reports on the recovery of the Gippsland Plains bioregion.



## Asset Description

The Redgum Plains asset reports on the recovery of the Gippsland Plains bioregion.

Dominated by agriculture, the Redgum Plains stretch from Traralgon to Lakes Entrance. Once covered by Redgum forests and significant grasslands and wetlands, vegetation clearing, timber harvesting, grazing, cropping, pest plant and animals and altered hydrology have contributed to the degradation of the area.

Native flora and fauna of State and National significance occur throughout the region. Rich riparian diversity exists along the main rivers that include the Latrobe, Thomson, Macalister, Avon, Perry, Mitchell, Nicholson and Tambo Rivers.

*Bioregion: Gippsland Plain*

	Condition	Stewardship
2003	-	-
2004	-	-
2005	-	-
2006	-	-
	Standardisation	Standardisation
2007	-	-
2008	-	-
2009	C-	★★★
<b>2011</b>	<b>D</b>	★★★★☆



# Redgum Plains

## Asset Background

The Redgum Plains support important and productive sheep grazing and cropping land. Although a recent cultural shift has resulted in better funding for protection of the Plains, drought reduced people's capacity to divert time, money or land to conservation. The loss of habitat is currently considered equal to the gains achieved.

Impacts and threats include clearing and fragmentation; tree decline and dieback; fire wood collection; lack of management in unprotected remnants; stock grazing; urbanisation; environmental weeds and consequential altered hydrology.

Core areas of remnant vegetation, on both private and public land, have been secured. The securing of outlying remnants is occurring, however, strategic linkages are needed or require widening.

Small mammals are extinct on the Plains. Changes in hydrology and the falling water table are resulting in a reduction of wetlands.

The Gippsland Red Gum Grassy Woodland and Associated Native Grassland community was listed as 'critically endangered' under the Commonwealth Environment Protection and Biodiversity Conservation Act in January 2009.

A pristine or pre-European settlement state is not the objective of restoration efforts.

# Redgum Plains

Condition

D

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Poor (2)	30	Continued clearing/ cropping/ grazing of native woodlands and grasslands and continued tree dieback were reported. Key on-ground improvements include: at least 100 hectares of revegetation; approximately 2070 hectares, plus vegetation offsets, have come under permanent protection through covenants since 2009; at least 300 hectares of non-covenanted remnant protection. Trust for Nature conservation management plans for covenanted remnants; Landscape Cross Property Plan (EGCMA and TFN, 2011); DSE BAP for Gippsland Plains.
Water	Degraded – Poor (1.5)	30	Changing surface and groundwater hydrology threaten wetland health and extent. The dry conditions resulted in a lowering of the water table; channelling and farm dams alter natural surface runoff. Shrubs and eucalypts are invading many sedge wetlands due to the dry conditions and loss of fringing vegetation threatens wetland health.
Biodiversity	Degraded – Poor (1.5)	40	Many ecological vegetation classes represented are threatened. A large number of woodland bird species are classified as of conservation concern' and small to medium size mammals do not exist on the Plains. African love grass threatens agriculture and biodiversity. Changing land use (i.e. cropping) threatens native grasslands. Increasing pest or feral animal populations such as deer, foxes and rabbits were reported. Remnant connectivity and structural diversity in remnants are poor. Protected sites where works have occurred are improving in quality. 2007 DSE EVC data. Remnant Native Vegetation Investigation Final Report March 2011. Victorian Environment Assessment Council. Various biodiversity action plans (DSE) and native vegetation plans (CMA).

## Condition Comments and Specifics

Although the quality of vegetation in areas under active management is improving, it was reported that the health and extent of vegetation outside the areas under covenant continues to decline. The area of private land under permanent protection has, however, almost doubled in the last two years. Biodiversity gains will not be evident for some time due to the slow nature of regeneration.

The increased rainfall experienced during 2011 has assisted biodiversity in the short-term.

Reclassification of the weed African Love-grass from Regionally Prohibited to Regionally Controlled means DPI will no longer pursue private landholders to control it. It remains a major threat to agriculture and native woodlands and grasslands.

Although there has been substantial increase in the area under covenants, active restoration and revegetation works and continued monitoring, the condition rating has been decreased to a D. This reduction in score reflects an increased understanding of the deteriorated nature of the asset.

# Redgum Plains

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Reasonable (3)	All covenanted sites have management plans and the cross property plan has been completed and priorities sites for protection and works on the East Gippsland Plains.
Implementation	Reasonable – Good (3.5)	Over 2070 ha have been added to the national reserve system via Trust for Nature conservation covenants in 2010 and 2011. Management Plans are being implemented on priority sites.
Evaluation	Reasonable – Good (3.5)	The Trust for Nature stewardship program involves three yearly visits of all covenanted properties. Where restoration works are occurring, regular on-ground work monitoring visits are undertaken. This allows evaluation of remnant management and condition.
Improvement	Reasonable (3)	Adaptive management employed. Re evaluation of habitat quality continuing.
Partnerships	Good – Excellent (4.5)	Conservation Management Network, Landcare network, Greening Australia, Australian Landscape Trust, Wet Trust, CMs, DSE (burning), landholders, Bird Australia, Australian Deer Hunters' Association, Sporting Shooters Association, East Gippsland and Wellington Shire Councils.
Indigenous Engagement	Poor – Reasonable (2.5)	The Gunai Kurnai Indigenous Land Use Agreement will see changes to management and indigenous engagement over this area.

## Stewardship Comments and Specifics

The 2009 listing of the Gippsland Red Gum Grassy Woodland and Associated Native Grassland community as 'critically endangered' under the EPBC Act has resulted in increased funding and resources for protection programs. Recognition that the Gippsland Plains Ecological Vegetation Class is under represented in National Parks and reserves has resulted in State funding also.

As a result, Trust for Nature has negotiated the largest private conservation covenant (800ha) on private land in Gippsland over many threatened vegetation types on the Australian Landscape Trust property at Strathfieldsaye, Perry Bridge. A covenant over 1000ha of Heart Morass (with Watermark and the Wetlands Environment Trust) has also been recently negotiated.

As a result of the federal listing and achievements in the negotiation of permanent protection covenants, the stewardship rating has been increased to three and a half stars.

### For more information

#### Trust for Nature

1800 9999 33 or [www.trustfornature.org.au](http://www.trustfornature.org.au)

#### Department of Sustainability and Environment

(03) 9637 8000 or [www.dse.vic.gov.au](http://www.dse.vic.gov.au)

#### East Gippsland Catchment Management Authority

(03) 5152 0600 or [www.egcma.com.au](http://www.egcma.com.au)

#### West Gippsland Catchment Management Authority

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

#### Landcare Victoria

[www.landcarevic.net.au](http://www.landcarevic.net.au)

#### Department of Primary Industries

[www.dpi.vic.gov.au/DPI/Vro/vrosite.nsf/pages/bap\\_landscape\\_red\\_gum](http://www.dpi.vic.gov.au/DPI/Vro/vrosite.nsf/pages/bap_landscape_red_gum)



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# Red Soils Agriculture

The Red Soils Agriculture asset reports on the physical condition of the soil and the environmental sustainability of the industries it supports.



## Asset Description

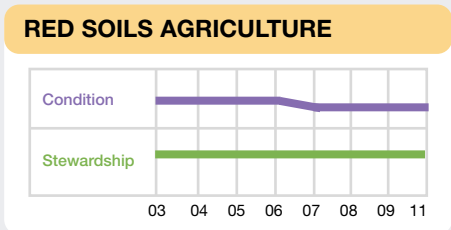
The Red Soils Agriculture asset reports on the physical condition of the soil and the environmental sustainability of the industries it supports.

This historically high rainfall region of the Strzelecki Ranges surrounds the townships of Warragul, Thorpdale, Neerim, Mirboo North, Leongatha, Korumburra and Meeniyan.

Supporting predominantly dairy farming with some horticulture and viticulture, the asset is under increasing pressure from population growth, urbanisation and intensive land use.

*Bioregion reference: Strzelecki Ranges and Gippsland Plain*

## Rating History



	Condition	Stewardship
2003	C	★★★★
2004	C	★★★★
2005	C	★★★★
2006	C	★★★★
	Standardisation	Standardisation
2007	C-	★★★★
2008	C-	★★★★
2009	C-	★★★★
<b>2011</b>	<b>C-</b>	<b>★★★★</b>

Non-Irrigated Dairy Farming of East & West Gippsland Red Soils Agriculture



# Red Soils Agriculture

## **Asset Background**

The Red Soils Agriculture asset includes dairy, beef and potato farming in the 'red soils' region. The deeply weathered, friable, volcanic soils are high in organic matter and have excellent drainage. When compared with other Victorian soils, the dark brown clay loams are considered fertile and productive. It is, however, acknowledged that the organic content of the soil, when compared to pre European settlement, is significantly reduced.

The agricultural capacity of the region is threatened by urban encroachment and degradation of the soil through erosion and nutrient loss.

Each land use exerts a different set of pressures on the soils they utilise. The methods employed at both a land use and individual farm level will result in differing impact on the soils. Continual cropping for example will result in a continual reduction of soil productivity. Inappropriate irrigation methods may leach the soil of nutrients with the same result.

# Red Soils Agriculture

Condition

C-

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	60	Urban creep whereby highly productive land is subdivided for new residential estates reduces the availability of the resource. The sustainability of some horticultural practices employed in the district has been questioned. Land slips and farm dam failure have occurred in South Gippsland with increased rainfall.
Water	Reasonable (3)	20	Water quality is poor with degraded riparian zones.
Biodiversity	Poor (2)	20	Little remnant vegetation resulting in poor biodiversity values and high risk of erosion.

## Condition Comments and Specifics

Continued urbanisation and intensive agricultural practices threaten the value of this asset. It is, however, recognised that significant improvement and continued management by individual landholders contributes to protection of its values. The condition rating of C- is maintained.

# Red Soils Agriculture

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	The GippsDairy Natural Resource Action Plan 2009 outlines priorities and challenges faced by the dairy industry with regard to natural resource management. Addresses water; land; and people and industry. The five yearly Dairying for Tomorrow survey is to occur in 2011.
Implementation	Good (4)	Multiple programs in the following priority areas have been initiated by GippsDairy and partners: nutrient and effluent management, water use efficiency, waterway protection, sustainability of natural resources, soil health, adapting to climate variability and pest plant and animal management. Natural Resource Action Plan 2009 – 2011, GippsDairy.
Evaluation	Reasonable (3)	Evaluation components are included in GippsDairy projects. Situation and Outlook Survey, Dairy Australia 2009. Dairying for Tomorrow survey is due.
Improvement	Reasonable (3)	Industry survey results and stakeholder consultation feed action plan and program development. Results of programs are encouraging i.e. riparian zone fencing, implementation of actions to reduce fertiliser loss etc.
Partnerships	Good (4)	Partnerships/funding with Dairy Australia, GippsDairy, Landcare, DPI, CMAs, Melbourne Water, AgVet, Murray Goulburn, Gippsland Lakes Rescue Package, DAFF, University of Melbourne, CSIRO, Geoffrey Gardiner Foundation, National Water Initiative.
Indigenous Engagement .	Poor (2)	No Indigenous engagement was reported.

## Stewardship Comments and Specifics

Information pertaining to dairy farming and its management suggests active and strong stewardship. Specific input from other farming sectors and planning authorities was not obtained. The three star stewardship rating has been maintained.

### For more information

#### GippsDairy

(03) 5622 6014 or [www.gippsdairy.org.au](http://www.gippsdairy.org.au)

#### DairyAustralia

(03) 9694 3777 or [www.dairyaustralia.com.au](http://www.dairyaustralia.com.au)

#### EPA Gippsland

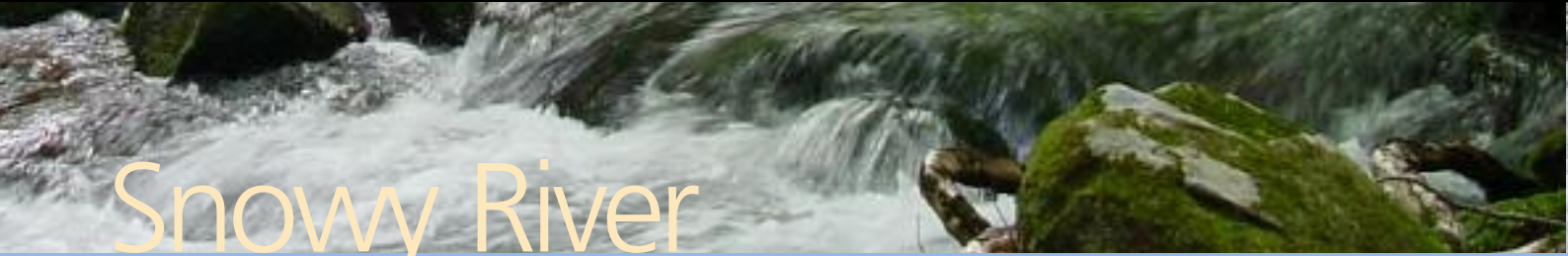
(03) 5173 9800 or [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

#### West Gippsland Catchment Management Authority

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)



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The Snowy River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity – of the Snowy River.



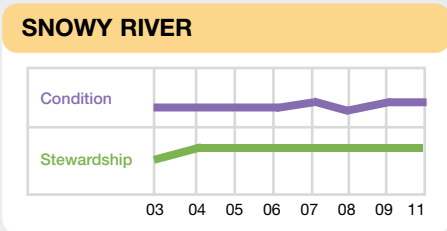
### Asset Description

The Snowy River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity for instance of the Snowy River.

Flowing from Mount Kosciusko in NSW to Marlo in East Gippsland, the Snowy River is in a remote wilderness area. Despite this, this Heritage River is under significant pressure with natural flows diverted by the Snowy Mountains Hydro-Electric Scheme. The river’s ecology has been significantly altered over recent decades as a result of this diversion and past land management practices.

*Bioregion reference: East Gippsland Uplands and East Gippsland Lowlands*

### Rating History



	Condition	Stewardship
2003	C	★★★
2004	C	★★★★
2005	C	★★★★
2006	C	★★★★
	Standardisation	Standardisation
2007	C+	★★★★
2008	C	★★★★
2009	C+	★★★★
<b>2011</b>	<b>C+</b>	<b>★★★★</b>



# Snowy River

## Asset Background

The Snowy River hydroelectricity dam was constructed between 1949 and 1974. It was intended (and was the case in 1967) that 99% of the Snowy River flow below Lake Jindabyne would be diverted inland, producing electricity and supplying water for irrigation west of Great Dividing Range.

In 1996 The Expert Panel Environment Flow Assessment of the Snowy River recommended that 28% of natural flows were required by the Snowy River to maintain ecological health. In October 1998 the Snowy River Inquiry recommended a return of 15% natural flows. In December 2000, Commonwealth, NSW and Victorian governments agreed on a target of 21% by 2012. They further committed to increase these flows to 28% in the longer term.

Although 6% of natural flows were released in August 2002, only 4% were available in October 2008. There is insufficient water to cater for the competing demands of the river, power generation and irrigation.

Offsetting the lack of rainfall and water diversion is the considerable investment made in on-ground works.

The exclusion of stock from the river frontage is crucial to preservation of these areas and the cooperation of the landholders or licensees is a necessity. The agreements, under the Crown Lands Act, are binding and are transferred via title or grazing licence. The Crown Land Management division of DSE has the powers to enforce the licence conditions while the EGCMA has the funding allocated to develop, monitor and implement agreements.

The 2003 Eastern Victorian Fires impacted upon the upper reaches of Snowy River National Park, however, the Great Divide Fires of 2006/2007 did not reach this asset.

The major storm and flood event in June 2007 led to extremely high river flows, flooding along the watercourse and downstream. This event led to transport of silt along the watercourse and downstream, introduction of weeds, damage to streamside vegetation, and introduction of manmade litter to streamside vegetation.

The purge of flood water did not substitute environmental flows required to sustain the natural river health.

The Snowy River National Park protects natural values along part of the river's length in East Gippsland.

In 2001, the Victorian Government committed to implementing a 10-year program of rehabilitation works on the Snowy River within Victoria. Snowy River Rehabilitation is a multifaceted, integrated program of rehabilitation works. It encompasses a diverse range of projects that will be implemented co-operatively by Government agencies, community groups and landowners. Snowy River Rehabilitation brings existing plans and strategies together with new initiatives aimed at improving the ecological health of the Snowy River.

A 40 hectare area of rainforest and riparian vegetation was rehabilitated during 2008 by the East Gippsland Catchment Management Authority's Snowy River Project, restoring important habitat for rare, threatened and significant species.

Environmental flows were released in spring and early autumn 2011.

# Snowy River

Condition

C+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Good (4)	10	Weed control including third pass willow removal is complete across the catchment, with the exception of a small section of the Orbost flood plain reach. Binding land management agreements with landholders through DSE Public Lands (many have been surveyed, negotiated and fenced but are waiting on formal signature). Transformation on the Orbost flood plain has been achieved including establishment of some rainforest and canopy closure.
Water	Reasonable (3)	50	Increased rainfall and provision of environmental flows last spring and early autumn 2011 has improved condition although significant progress is still to be made. The small flows achieved some flushing, wetting of the margins, shift of seed and some sediment, however, they are insufficient to generate significant benefit for the flood plain and estuary.
Biodiversity	Reasonable – Good (3.5)	40	Weed management is resulting in improved biodiversity. Willow control at third pass for the whole of the catchment except a small section of the Orbost floodplain. Re-establishment of rainforest and some canopy closure on the flood plain. Nodes and threats management has been occurring since 2005 but with renewed focus of works since 2009.

## Condition Comments and Specifics

Although significant works and achievements have been made, the condition and condition rating of C+ has been maintained.

# Snowy River

## Stewardship



### Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	The Snowy River Rehabilitation Plan expires in 2012 when works will revert to maintaining the rehabilitation recovery trajectory.
Implementation	Good (4)	The Rehabilitation Plan and Protecting the Best continue to be implemented.
Evaluate	Reasonable (3)	Program evaluation undertaken in 2008 remains relevant. Hydraulic modelling and evaluation of long term maintenance needs to maintain health gains achieved. VEFMAPP environmental flow monitoring.
Improvement	Good (4)	The Protecting the Best program recognises the next phase is approaching – maintaining what has been achieved. Partnerships Good (4) Protecting the Best - Landscape scale project involving all agencies to common goals.
Indigenous Engagement	Good (4)	A long term and enduring program exists through engagement with Mugee and training of a four member indigenous crew.

### Stewardship Comments and Specifics

Continued and focused stewardship has recognised in maintenance of the four star stewardship rating.

#### For more information

**East Gippsland Catchment Management Authority,**

(03) 5152 0600 or [www.egcma.com.au](http://www.egcma.com.au)

**Department of Sustainability and Environment, Orbost**

(03) 5161 1222 or [www.dse.vic.gov.au/](http://www.dse.vic.gov.au/)

**Snowy Project Team, Department of Sustainability and Environment**

13 6186



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# Strzelecki Ranges

The Strzelecki Ranges asset reports on the commercial, social and biodiversity values of the Strzelecki Ranges.



## Asset Description

The Strzelecki Ranges asset reports on the commercial, social and biodiversity values of the Strzelecki Ranges.

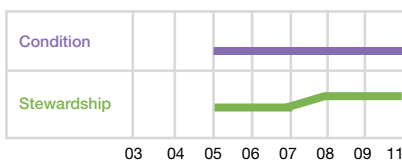
Stretching south and south east of Warragul, this region was covered in tall Mountain Ash forest until logging began in the 1800s. Now primarily freehold dominated by rural-residential living, agricultural land and private forestry, remnant vegetation and regenerating bushland are represented in Tarra Bulga National Park and Mount Worth State Park.

Tarra Bulga National Park is recognised for its important remnant fern gullies, giant eucalypts, myrtle beeches and cool temperate rainforest.

*Bioregion Reference: Strzelecki Ranges*

## Rating History

### STRZELECKI RANGES



	Condition	Stewardship
2003	-	-
2004	-	-
2005	C	★★★
2006	C	★★★
	Standardisation	Standardisation
2007	C	★★★
2008	C	★★★★☆
2009	C	★★★★☆
<b>2011</b>	<b>C</b>	<b>★★★★☆</b>



# Strzelecki Ranges

## Asset Background

The soils of the Strzelecki Ranges are dispersive and therefore have high gully erosion potential. Drought and fire impact put additional pressure on soils resulting in sediment loading of waterways. The area is a significant catchment for Corner Inlet and the Gippsland Lakes.

The 2007 fires and ongoing drought are considered likely to have a long lasting impact on the Strzelecki forests. Gully erosion potential and associated risks to waterways have increased as a consequence. There has been general improvement over years, however, 'spikes' such as the 2009 fires have cancelled that overall improvement.

While the fires may have aided biodiversity, HVP Plantations manage plantation areas to minimise understorey and therefore limit biodiversity. The plantations are, although a large area of land, only a portion of the district's land use. Primary production, National Park (including Tarra Bulga) and indigenous and non-indigenous heritage sites make up the multiple values of the region.

Through the Cores and Links project, over 23,000 hectares of native forest controlled by HVP Plantations has been permanently protected, with 8,000 hectares to be handed back to the Government to form a reserve. This includes four core biodiversity areas and has increased permanently protected forest in the Strzelecki Ranges by three times.

# Strzelecki Ranges

Condition

C

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	30	The soils of the Strzelecki's are of low to moderate erosion potential and are well protected by existing vegetation and exclusion of grazing and cropping in the eastern ranges. Landslips, slumps and dam failure have recently occurred, however, as a result of the slope and increased summer and autumn rainfall. Vegetation recovery has been good following the 2009 fires, providing considerable land and soil protection.
Water	Good (4)	30	Waterwatch data shows generally high quality water in the upper ranges, decreasing as it descends into the lower urbanised and agricultural reaches. 'Reducing the Load' project works are resulting in increased buffers and revegetation along streams. The Macks Creek Warm Temperate Rainforest Restoration project has added considerable vegetation to a major tributary of the Tarra River which will have caused improved water quality of that area.
Biodiversity	Reasonable (3)	40	This diverse area supports significant tracts of agricultural land, plantation forest and high quality native vegetation, including rainforest. Roadside and riparian weed control and management of streamside and gully remnant vegetation around plantation forests occurs. The Cores and Links Agreement has seen over 23,000 ha of native forest placed in permanent protection; 500 ha of mountain ash plantation harvested and replaced with native forest revegetation. Riparian zone revegetation on private land has increased native vegetation; Macks Creek project has seen warm temperate rainforest restoration; significant post fire regeneration has occurred with re-emergence of various species observed. Habitat fragmentation over the bioregion remains a major issue.

## Condition Comments and Specifics

Significant post-fire regeneration, particularly in the Traralgon Creek, Bennets Creek and Merrimans Creek catchments has occurred, reducing erosion risks. Habitat fragmentation across the area is being addressed through the Enhancing the Cape Liptrap to Bunurong Biolink project; and the Cores and Links project has significantly increased the area of native forest under permanent protection. The condition rating of C has been maintained.

# Strzelecki Ranges

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	WGCMA 2009 Strzelecki Ranges Bioregion - Grand Ridge Biodiversity Landscape Plan published. WGCMA 2009 Strzelecki Integrated Management Strategy published. Grand Strzelecki Walking Track Plan being developed and implemented now as part of the post-fire recovery plan. A Best Management Practice and Operating Standard has been developed for Koala protection in plantation operations. Significant planning for fire recovery has occurred.
Implementation	Reasonable - Good (3.5)	Enhancing the Cape Liptrap to Bunurong Biolink project. Macks Creek Warm Temperate Rainforest Restoration project. Reducing the Load program (reducing sediment load in streams on the northern and southern falls). Grand Strzelecki Walking Track implementation. The Best Management Practice and Operating Standard for Koala protection in plantation operations implementation.
Evaluation	Reasonable - Good (3.5)	All land managers that were affected by the 2009 fires in the Strzelecki Ranges have been monitoring landscape renewal. Weed control monitoring by the Landcare network.
Improvement	Poor - Reasonable (2.5)	Weed control monitoring is directing improvement of control programs. Fire recovery monitoring is information future works.
Partnerships	Good – Excellent (4.5)	Bunurong Biolink project involves partnerships between WGCMA, GAV and SGLN. Co-operation between land managers on private and crown land in the areas of weed control is evident – Landcare and landowners, Council, VicRoads and Parks Victoria.
Indigenous Engagement	Poor - Reasonable (2.5)	There is little evidence of Indigenous engagement in land management issues in the Strzelecki Ranges currently.

## Stewardship Comments and Specifics

The broad landscape recovery following the extensive and devastating 2009 fires is testament to the effective stewardship of this asset and implementation of rehabilitation plans.

Finalisation of the Cores and Links project is a significant increase in area of permanently protected forest. Agencies continue to work in fire, erosion and biodiversity management. The stewardship rating of three and a half stars has been maintained.

### For more information

#### West Gippsland Catchment Management Authority

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

#### HVP Plantations

(03) 5134 3433 or [www.hvp.com.au](http://www.hvp.com.au)

#### Trust for Nature

1800 9999 33 or [www.trustfornature.org.au](http://www.trustfornature.org.au)

#### Parks Victoria Information Centre

13 1963 or [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)





# Thomson River

The Thomson River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity - of the Thomson River.



## Asset Description

The Thomson River asset reports on river health – water quality and quantity, riparian vegetation, species composition, connectivity and habitat diversity of the Thomson River.

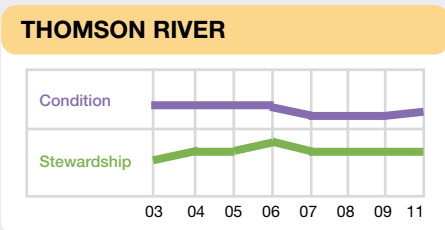
Rising on the Baw Baw Plateau, the Thomson River flows east to the Thomson Reservoir then south east to its junction with the Latrobe River south of Sale. The Aberfeldy River joins the Thomson south of the Reservoir and the Macalister River, flowing from Alpine National Park in the Snowy Ranges, joins between Maffra and Sale.

The catchment represents almost 20% of the total catchment of the Gippsland Lakes. The Thomson Reservoir and Lake Glenmaggie store 1,068,000ML and 190,000ML respectively. Both reservoirs supply the Macalister Irrigation District; and the Thomson Reservoir forms 60% of Melbourne’s storage capacity.

Domestic use and irrigation further reduce flows in the Thomson River. Environmental flows from the Thomson Reservoir are controlled by Melbourne Water.

*Bioregion reference: Highlands Southern Fall and Gippsland Plain*

## Rating History



	Condition	Stewardship
2003	C-	★★★★
2004	C-	★★★★☆
2005	C-	★★★★☆
2006	C-	★★★★★
	Standardisation	Standardisation
2007	D	★★★★☆
2008	D	★★★★☆
2009	D	★★★★☆
<b>2011</b>	<b>D+</b>	★★★★☆



# Thomson River

## Asset Background

The Thomson Reservoir on the upper reaches of the Thomson River was completed in 1982 and supplies the Macalister Irrigation District and metropolitan Melbourne.

The Thomson River is impacted by the demands of the Thomson Reservoir and the adjoining irrigation district. Environmental flows have been reduced significantly in previous years, which has led to increased risks to native fish populations, riparian vegetation and adjoining wetlands. Loss of environmental flows has impacted biodiversity with habitat reduction and the presence of fish barriers such as Horseshoe Bend Tunnel and Cowwarr Weir further impeding fish populations.

The upper reaches of this regulated river are in good condition, however, in the lower reaches where intensive agriculture dominates, river health is degraded.

In 2004, the Thomson Macalister Task Force identified the necessary environmental water requirements of the Thomson River. The Victorian Government's "Our Water Our Future Action Plan" (2006/2007) established the bulk water entitlement of 10,000ML for environmental maintenance.

The 2006/07 Great Divide bushfires affected approximately 62,700 hectares of the Thomson River catchment – the entire forested section from Thomson Bridge to Cowarr. The extreme rainfall events that followed resulted in significant stream bank and track erosion, spread of pest plants, short term siltation and reduced water quality, impact to riparian ecological vegetation classes, and loss of large trees and aquatic ecosystems.

# Thomson River

Condition

D+

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Reasonable (3)	10	River structure, fish and vegetation positively affected by increased rainfall and environmental flows. Flood plains have experienced minor floods each month. The river is in recovery trajectory from the 2009 fires. Intensive agricultural land use minimises native vegetation extent and quality in the lower reaches.
Water	Good (4)	50	The Thomson has experienced good environmental flows this autumn (2011). Increased rainfall and flows have helped flush the river and meet demand for use, but have implications on sediment mobilisation and total dissolved solids. Water quality remains high in the upper reaches.
Biodiversity	Reasonable (3)	40	There have been indications of increased fish numbers. The fish barrier at Cowwarr Weir has been removed and a new fresh water fish ladder installed.

## Condition Comments and Specifics

The increase in rainfall has relieved some pressure of competing demands between river health and metropolitan water supply. The river and catchment is recovering from the 2009 fires. The condition rating has been increased to D+ to reflect this recovery.

# Thomson River

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Good (4)	The completion and publication of the Thomson Catchment Condition Report provides a benchmark condition for future comparison. Thomson regulations and DSE fire operations plan. Seasonal Watering Proposal replaces the Annual Watering Plan. Works occurring in riparian vegetation, aquatic plants, channel form and water quality.
Implementation	Reasonable (3)	Victorian Environmental Flows Monitoring and Assessment Program includes native fish, water quality, macroinvertebrates, vegetation and physical form and photo point monitoring. Data used to evaluate environmental flow impact and to determine ideal flows to maximise specific responses.
Evaluation	Good (4)	The Thomson River Catchment Condition Report.
Improvement	Good (4)	There has been an increased investment in roads.
Partnerships	Reasonable (3)	The WGCMA landscape planning process.
Indigenous Engagement	Poor (2)	Indigenous engagement is starting to occur but requires improvement.

## Stewardship Comments and Specifics

The stewardship rating of three and a half stars has been maintained.

### For more information

**West Gippsland Catchment Management Authority**

(03) 5175 7800 or [www.wgcma.vic.gov.au](http://www.wgcma.vic.gov.au)

**Melbourne Water** [www.melbournewater.com.au](http://www.melbournewater.com.au)

Southern Rural Water [www.srw.com.au](http://www.srw.com.au)

**Department of Sustainability and Environment**

[www.water.vic.gov.au/environment/rivers](http://www.water.vic.gov.au/environment/rivers)



Gippsland integrated  
**natural resources**  
forum



# Wilson's Promontory

The Wilson's Promontory asset reports on the diverse, largely undisturbed ecosystems of Wilson's Promontory National Park.



## Asset Description

The Wilson's Promontory asset reports on the diverse, largely undisturbed ecosystems of Wilson's Promontory National Park.

The most southern tip of Mainland Australia, Wilson's Promontory is a declared Biosphere Reserve under the UNESCO Man and the Environment program and is on the National Estate registry.

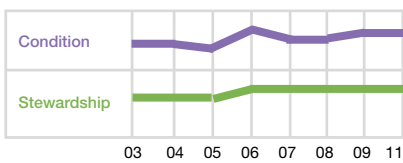
Wilson's Promontory maintains 96% native vegetation cover. Less than one per cent is cleared for visitor and staff facilities, largely at Tidal River.

The promontory is described as Victoria's smallest bioregion but it supports 20% of the state's vascular plants (including ~30% of the State's orchids), approximately 50% the State's bird species and about 30% of the State's mammal species. The catchments are currently free of introduced fish species.

*Bioregion reference: Wilson's Promontory*

## Rating History

### WILSONS PROMONTORY



	Condition	Stewardship
2003	B	★★★
2004	B	★★★
2005	B-	★★★
2006	A	★★★★
	Standardisation	Standardisation
2007	B+	★★★★
2008	B+	★★★★
2009	A-	★★★★
<b>2011</b>	<b>A-</b>	<b>★★★★</b>



# Wilson's Promontory

## Asset Background

Wilson's Promontory was declared a National Park in 1898 and afforded permanent protection in 1907. Less than one per cent of the National Park has been cleared or otherwise modified. Although cattle grazing, sealing, whaling and timber extraction occurred in the park, the majority of the promontory has remained unmodified by European settlement.

Threats to the biodiversity and excellent environmental condition of the Park include predator impact on threatened animals, pest plants and uncontrolled human impact on sensitive sites (DSE, 2008).

In April 2005 an escape prescribed burn at Tidal River in Wilson's Promontory National Park burnt from Tidal River to Waterloo Bay in the east and the lighthouse station in the south. Approximately 6,200 hectares or 13% of the park was burnt. The fire and subsequent recovery created a mosaic of unburnt, burnt and recovering vegetation.

In February 2009 lightning strike started the Cathedral fires which proceeded to burn 25,200 hectares or almost 50 per cent of the National Park area.

A significant down-pour occurred in March 2011 during which 400 millimetres of rain fell in a 30 hour period. The subsequent wide-spread impact, particularly on riparian zones and infrastructure, is thought to have been exacerbated by the recent exposure to fire in 2009.

# Wilson's Promontory

Condition

A-

## Condition Summary

Condition Parameter	Score (/5)	Weight %	Key Issues and Evidence
Land	Good (4)	30	The 2009 fires followed by the March 2011 major rainfall event resulted in landslips, river sedimentation and ocean water quality decrease. Integrated pest plant and animal control programs continue; and threatened species monitoring continue.
Water	Good – Excellent (4.5)	30	Unmodified catchments without introduced aquatic species.
Biodiversity	Excellent (5)	40	Range and diversity of known threatened species and ecological vegetation classes are represented. There are no introduced fish or aquatic plant species in rivers, however, the presence of foxes, weeds, hog deer and cats do pose threats to terrestrial native species populations.

## Condition Comments and Specifics

Despite widespread fire and the exacerbated impact of the March 2011 rainfall, the condition of the Wilson's Promontory National Park remains at an A- condition rating. This reflects the unmodified river catchments, lack of introduced aquatic species and continued pest plant and animal control programs.

# Wilson's Promontory

Stewardship



## Stewardship Summary

Component	Score	Key Evidence
Planning	Excellent (5)	The Wilson's Promontory National Park Management Plan, 2002 will be updated in line with the new Parks Victoria Adaptive Management Framework. This will incorporate the Environmental Action Plan, 2003; Biodiversity Management Strategy post fire 2009; Biodiversity (Value/Threat) Monitoring Plan 2009.
Implementation	Excellent (5)	Yanakie Isthmus Coastal Grassy Woodland restoration program.
Evaluation	Excellent (5)	Post fire and flood monitoring; predator control and prey species monitoring; threatened species management program including critical review; and significant external review through researchers. State of the Parks, Parks Victoria 2011. The Victorian Auditor-General's Office report on Invasive Plants and Animals in Victoria's Parks (tabled May 2010) highlighted some deficiencies in planning and resource allocation which are being addressed through the new Adaptive Management Framework and landscape-scale management plans.
Improve	Excellent (5)	Adaptive Management Framework development in response to the Auditor-General's recommendations.
Partnerships	Excellent (5)	Significant involvement in a wide range of partnerships including DSE, DPI, external research and educational institutions, volunteer groups, community groups including the South Gippsland Conservation Society, Friends of the Prom, Green Corps, Wilson's Promontory National Park Advisory Committee.
Indigenous Engagement	Good (4)	Ongoing liaison and engagement with indigenous representatives. Parks Victoria Indigenous Recruitment and Career Development Strategy and mandatory cross-cultural training policies.

## Stewardship Comments and Specifics

The four star stewardship rating has been maintained reflecting the ongoing co-ordinated stewardship.

### For more information

#### Parks Victoria Information Centre

13 1963 or visit [www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)

#### Friends of the Prom Inc. at

[www.friendsoftheprom.org.au](http://www.friendsoftheprom.org.au)