



Moyne Shire Council

Environmental Sustainability Strategy

Objective of the Environmental Sustainability Strategy

“To raise awareness of environmental issues and develop strategies and identify actions, that through implementation, will lead to increased protection and enhancement of the natural and built environment in a sustainable manner.”

To reduce waste, this document is only available electronically at www.moyne.vic.gov.au
Printed copies were never commissioned, though the document is presented in a readily printable format.

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Message from Council's Conservation & Environment Committee

The Environmental Sustainability Strategy has been developed over two years, and recognises the work previously undertaken and lessons learned from the original 2005 Strategy. It has been written as a stand-alone document that endeavours not to duplicate the objectives and actions listed in other existing Moyne Shire Strategies and Plans.

The nine members of the Conservation and Environment Committee have worked together to develop a Strategy that considers five themes that are relevant to environmental sustainability in the Moyne Shire. From these themes, achievable objectives and subsequent actions have been prioritised. The Committee is aware that resources are required to achieve the stated objectives, and has noted that some objectives can only be met when external funding is available. It has also considered the timeframe and impact for each action.

Consequently the Strategy provides realistic and achievable outcomes that will support Moyne Shire Council's three Principles for Environmental Sustainability (to protect remaining values, enhance that which is degraded and restore some of that which has been lost).

Cr Jill Parker

Chairperson

Moyne Shire Council Conservation and Environment Committee

June 2012

Background

The Moyne Shire Council endorsed their first Environmental Sustainability Strategy in July 2005. The Strategy identified 69 priority and 28 long term actions for Council to implement. Council appointed an Environment Project Coordinator in December 2005 to coordinate implementation of the Strategy that lead to 65 of the 69 priority actions and 25 of the 28 long term actions being commenced or completed by June 2009. Key achievements delivered through the implementation of the July 2005 Environmental Sustainability Strategy were:

- ♦ Achieved a 20% greenhouse gas emission target ahead of scheduled;
- ♦ Prepared a Sustainable Water Use Plan to achieve water savings across Council services and business;
- ♦ First Rural Council to achieve milestone 5 under the Cities for Climate Protection Program (greenhouse emissions reduction program);
- ♦ Improved coastal management of the Crown land reserves and protection of biodiversity values between Warrnambool and Port Fairy;
- ♦ Mapped roadside vegetation conservation values and weeds on all Moyne Shire managed roadsides using GPS and developed an interactive GIS layer to assist with management of vegetation values and weed threats;
- ♦ First Council to develop a “Biodiversity and Land Capability” study to inform Planning Scheme Amendments to protect biodiversity values and productive agricultural land;
- ♦ Coordinated a Small to Medium Business Energy Efficiency Project to assist business with greenhouse gas emission reductions;
- ♦ Protected the cultural sites and enhanced biodiversity at the Craggs Coastal Reserve;
- ♦ Closed the Mortlake Landfill and established a transfer station to reduce waste to landfill; and
- ♦ Derived 25% of power for street lights through green energy sources.

The key lessons learnt through the implementation of the Councils first Environmental Sustainability Strategy were that the actions need to be measurable, realistic, Council’s responsibility, clearly defined, have the ability to build community capacity and raise Council and community understanding of environmental sustainability.

Overview

The Environmental Sustainability Strategy recognises the work previously undertaken and lessons learnt from the original 2005 Strategy. The revised version focuses on Environmental Sustainability whilst recognising that 'Sustainability' itself covers all aspects of Council's services (i.e. social sustainability, financial sustainability, etc). This Strategy is therefore just one of the many strategic documents, plans and policies that contribute towards Council's overall sustainability principles, decision making and subsequent actions.

Council's Section 86 Conservation and Environment Committee extensively workshopped the revised Strategy during late 2009 and throughout 2010 providing extensive advice and direction on the actions contained within. These actions will enable Moyne Shire Council to work towards environmental sustainability¹. It seeks to provide a coordinated decision making framework and reference point for the protection and management of key environmental assets within the Shire.

To achieve an environmentally sustainable Shire, the Strategy is based upon the following Hierarchy of Principles for the municipality's natural environments:

- Protect remaining values
- Enhance that which is degraded, and;
- Restore some of that which has been lost.

The Strategy also ensures compliance with Council's legislative obligations regarding environmental decision-making and management.

¹ The Council of Australian Governments (1992) National Strategy for Ecological Sustainable Development defines environmental sustainability as (extract): 'Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.'

The document details the Vision, Issues, Objectives and Actions that the Moyne Shire Council has adopted in order to guide progress towards improved sustainability outcomes. Council is committed to environmental sustainability and has set targets to improve:

1. Education & Awareness
2. Water Quality & Water Conservation
3. Greenhouse Gas Emissions
4. Waste Management Practices
5. Biodiversity Management

Through the implementation of this Strategy, Council can achieve the policies and objectives outlined in the Moyne Shire Municipal Strategic Statement, the Moyne Shire Council Plan, the Moyne Shire Planning Scheme and the Best Value Review of Environmental Management Services as they relate to environmental sustainability.

The Environmental Sustainability Strategy will enable Moyne Shire Council to lead by example through applying the principles of environmental sustainability into everyday practices. The Strategy also endeavours to empower and inspire the Moyne Shire community to incorporate sustainable actions and activities into their everyday lives.

Introduction

The Environmental Sustainability Strategy has been developed against a background of government and community expectations that issues of environmental sustainability urgently require addressing at the local level, based on the accepted notion that environmental sustainability is a global issue.

The catalyst for the global movement towards sustainability was through the United Nations Conference on Environment and Development in Rio, 1992. This led to the development of *Agenda 21* that called for local councils to develop initiatives for sustainable living.

Numerous Strategies, Acts and Plans have been developed at a National, State and Regional level to support and foster environmental sustainability. These include:

Commonwealth

Principle Policy/Document: National Strategy for Ecological Sustainable Development 1992 (NSES D).

1. National Water Quality Management Strategy 1992, National Action Plan for Salinity and Water Quality 2000
2. National Greenhouse Strategy 2000
3. National Waste Policy 2009
4. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).
5. Climate Change Adaptation Actions for Local Government 2007
6. National Action Plan for Education for Sustainability 2009

State

Principle Policy/Document: Victoria's Environmental Sustainability Framework 2005

1. Securing our Natural Future: Land & Biodiversity at a time of climate change 2009
2. Securing Our Water Future Together 2004
3. (Victorian) Water Act 1989
4. Coastal Management Act 1995
5. Victorian River Health Strategy 2002
6. Victorian Coastal Strategy 2008
7. Victorian Climate Change Green Paper 2009
8. Victoria's Greenhouse Strategy 2002
9. Towards Zero Waste 2005
10. Catchment and Land Protection Act 1994
11. Flora and Fauna Guarantee Act 1988
12. Crown Land (Reserves) Act 1978
13. Environmental Protection Act 1970

Regional

Principle Policy/Document: Southwest Sustainability Partnership Blueprint 2001.

1. Glenelg Hopkins Regional Catchment Strategy 2003-2007
2. Glenelg Hopkins River Health Strategy 2004-2009
3. Glenelg Hopkins Nutrient Management Plan 2002
4. Glenelg Hopkins Native Vegetation Plan 2000
5. Glenelg Hopkins Regional Weed Plan 2007
6. Glenelg Hopkins Invasive Animal Strategy 2010-2014
7. Corangamite Regional Catchment Strategy, 2003-2008
8. Corangamite River Health Strategy 2004
9. Moyne Shire Coastal Action Plan 2001
10. South West Victoria Regional Coastal Action Plan 2002
11. South West Estuaries Coastal Action Plan 2002
12. Waste Reduction Group (draft) Regional Waste Management Plan 2007
13. Great South Coast Regional Strategic Plan 2010
14. Moyne Shire Council Local Greenhouse Reduction Action Plan 2004
15. Moyne Shire Sustainable Water Use Plan 2007

The wealth of the Shire of Moyne is based upon its natural environment. All industries, from agriculture and fishing through to tourism and mining are dependent upon the natural environment comprising of clean air and water, productive soils, efficient and effective waste disposal and endemic plants and animals.

The Moyne Shire Environmental Sustainability Strategy's Hierarchy of Principles is to:

- Protect remaining values;
- Enhance that which is degraded; and
- Restore some of that which has been lost.

This Environmental Sustainability Strategy presents the Moyne Shire's values, issues, objectives and actions for the future.

While the Moyne Shire Council is committed to the management and enhancement of all environmental issues, it is acknowledged that resource limitations apply. Thus this strategy provides a foundation for environmental sustainability throughout the Shire and is not intended to be inclusive of all actions required by Council in order to achieve full environmental sustainability.

Moyne Shire Profile

The Moyne Shire is located in Victoria's southwest. The Shire was created in 1994 and covers an area of approximately 5,500 square kilometres with a population of around 16,500 people.



Moyne is characterised by its significant agricultural production, growing tourism industry, extensive dairy industry and an infrastructure of towns connected by an expansive road system. It is home to a wide range of services and industry, including dairy products, fresh fish, seafood processing, pharmaceuticals, manufactured foods, quarrying (road materials and cut bluestone), transport and education centres.

Council Managed Environmental Reserves

A number of important public land areas of natural interest are located within the Moyne Shire including national parks, state forests, coastal reserves, state game reserves, wildlife reserves, riparian areas. These are managed by a myriad of public and private agencies and groups such as Parks Victoria, DSE, Indigenous groups, 'Friends of' or other community groups, and Moyne Shire Council itself. Some of the more notable 'environmental' areas directly managed by Council include:

- ♦ Griffiths Island Public Park
- ♦ Sandy Cove Reserve
- ♦ Southcombe Park
- ♦ The Craggs Coastal Reserve
- ♦ Yambuk Lakes
- ♦ Tea Tree Lake
- ♦ Killarney Recreation Reserve
- ♦ Battery Hill Historic Reserve
- ♦ R.A. Crothers (Hopkins Falls) Reserve
- ♦ Apex Park Hawkesdale
- ♦ Peterborough Foreshore Reserve
- ♦ Mepunga Water Reserve
- ♦ Panmure Springs
- ♦ Woorndoo Flora Reserve
- ♦ Caramut Conservation Reserve
- ♦ Botanic Gardens at Koroit, Port Fairy and Mortlake
- ♦ Sections of Belfast Coastal Reserve & Belfast Lough
- ♦ Small sections of the Hopkins, Moyne, and Shaw Rivers and Mt Emu Creek
- ♦ Numerous Roadside Reserve areas – particularly those containing remnant grassland vegetation

Extensive areas of remnant vegetation, wetlands, rivers, estuaries and coastal areas are contained on, or adjoin, privately owned land. All of these areas contribute significantly to biodiversity and environmental landscape values within the Shire.

Benefits of Environmental Sustainability

Moyne Shire Council's three Principles for Environmental Sustainability (to protect remaining values, enhance that which is degraded and restore some of that which has been lost) provides a focus for environmental actions and will result in significant positive outcomes for the Shire through action taken by the Council.

As the broader community, following the lead of the Council, takes up the principles and practices of environmental sustainability, the overall sustainability of the Shire will continue to improve.

Some of the benefits that can be expected to be seen through the implementation of this Strategy within Council operations are:

- More efficient policy development and implementation;
- Enhanced capacity to meet community needs and expectations;
- Stronger links with key regional and community stakeholders; and
- Improved financial sustainability derived from a mixture of cost savings and sound investment in environmental projects.

Positive outcomes anticipated for the Shire as a whole are:

- Stronger partnerships between Council and its community;
- Improved water quality;
- Reduced greenhouse emissions and associated impacts of climate change;
- Minimisation of waste and the use of non-renewable resources; and
- Enhancement of biodiversity values/prevention of the loss of biodiversity.

Objectives and Actions Overview

Objectives and actions designed to achieve the vision for sustainability for the Moyne Shire are grouped under five (5) key themes:

1. Education and Awareness
2. Water Quality & Water Conservation
3. Greenhouse Gas Emissions
4. Waste Management Practices
5. Biodiversity Management

With a sixth theme – Monitoring & Review – in place to track Council's progress.

For each of the six (6) themes, this Strategy identifies:

- Values;
- Issues;
- Objectives; and
- Actions to achieve each objective.

Each individual action has then been further evaluated by Council's Conservation & Environment Committee with regards to its implementation across three areas:

1. Resourcing – for an action to be implemented it will require resources either from within *Existing* Council budgets, an *Increase* in Council budget funding, or a large proportion to be funded from an external source (displayed as a *Mix* of Council and/or external funds). As a guide only, each is colour coded to indicate approximate direct costs to Council on the following basis:
Green = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k
2. Timeframe – a particular action is likely to be implemented either in the *Short Term* (within 2 years), in the *Medium Term* (2-5 years), or in the *Long Term* (>5 years)
3. Impact – an action is considered as having either a *Low*, *Medium* or *High* overall impact to help focus the Committee and Council on those actions believed to produce the greatest gains in achieving Environmental Sustainability.

It is worth noting that wherever possible, this Strategy has attempted to be a stand-alone document and not duplicate the objectives and actions listed in other existing Moyne Shire Strategies and Plans. As an example, the 'Waste Management Practices' theme could easily contain a number of actions that are covered by existing (or proposed) Waste Action Plans. The same can be said for the 'Water Quality & Water Conservation' theme where many actions contained in the Sustainable Water Use Plan have not been replicated in this document.

Furthermore, this Strategy only contains Actions where Moyne Shire Council is considered the lead agency for their implementation. While there is a near endless list of potential partner organisations that may contribute and assist Council in achieving these Actions, it is expected that these organisations are developing their own Environmental Sustainability Strategy to cover the issues they face within their own operations.

1. Education and Awareness

Values

Environmental education and awareness is considered the most important section of this strategy as it provides the basis for the appreciation and understanding of the various values for the remaining four targets. Without continual education and increased awareness of Moyne Shire's environment and the requirements for its protection and enhancement, there is little chance of ensuring the future environmental sustainability of the Shire.

Environmental education and awareness can target two distinct groups within the Shire:

- ♦ The Moyne Shire councillors and staff; and
- ♦ The broader community (residents, business groups and visitors).

In 2010, there are approximately 316 staff (213 FTE) employed at the Moyne Shire Council. There are also numerous volunteers that provide their time and skills toward various Council-run services and community programs. The opportunity therefore exists to educate staff, both paid and voluntary, as to the benefits of sustainable actions, and for staff to actively demonstrate to the community the ways in which sustainable actions can contribute to the overall well being and sustainability of the Shire.

Throughout the broader community, there exist a number of opportunities to enhance the understanding of the local environment and to foster awareness of sustainable actions to protect and enhance the natural and built environment.

The availability of written and electronic information, special promotions or events, and the provision of specialist advice remain valuable ways that awareness of local environmental values and issues can be increased throughout the community by Council.

There are a number of established environmental groups within the Moyne Shire that are actively involved in enhancing and protecting our natural environment and who work tirelessly to raise community awareness of environmental issues. The continual involvement of various community groups such as Coastcare, Landcare, 'Friends of' groups, service clubs, local crown land Committees of Management and others, over many years illustrates the commitment many community members make towards preserving and enhancing the environmental values of the Shire for future generations.

The importance of community groups and volunteers cannot be overestimated. These people contribute in many valuable ways, particularly with regard to the diversity of skills participants bring to their various projects and the community participation they foster. It is therefore essential that Council encourage and support community groups and individuals that are working towards a sustainable future for the Shire.

Issues

- ◆ Gap between knowledge and behaviour of Council and community on actions related to environmental sustainability issues
- ◆ Perceived lack of Council and community involvement in environmental sustainability issues
- ◆ Environmental sustainability of future development

OBJECTIVE: 1.1 To increase and maintain Council and community understanding and awareness of environmental sustainability practices and values.				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
1.1.1	Maintain Council support for the Section 86 Conservation and Environment Committee to oversee implementation of the Environmental Sustainability Strategy (ESS)	Existing	Short Term	High
1.1.2	Allocate resources to implement ESS actions through the Conservation and Environment Committee on an annual basis	Increase	Short Term	High
1.1.3	Establish an annual program to recognise excellence by environmental sustainability champions in the municipality	Existing	Short Term	Medium
1.1.4	Promote actions and achievements listed within the ESS to Council and the community at a minimum of two (2) community events	Existing	Short Term	Medium
1.1.5	Forward plan for areas of significant urban development that are considered 'environmentally sustainable'	Existing	Long Term	Low

OBJECTIVE: 1.2 To provide opportunities for Council and the community to participate in environmental sustainability programs and initiatives.				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
1.2.1	Allow a community garden in two locations within the municipality	Mix	Long Term	Low
1.2.2	Investigate the feasibility of establishing an environmental sustainability/transition town demonstration site incorporating community and Council space	Mix	Long Term	Low
1.2.3	Replace areas of existing high maintenance garden beds/grass at Council offices in Mortlake, Macarthur and Port Fairy with either food plants/trees or low maintenance native plants where possible	Existing	Long Term	Low

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

2. Water Quality and Water Conservation

Values

Water represents one of the most significant natural resources in the region. The Shire encompasses large sections of the Hopkins and Portland Coast catchment basins, as well as a small slither of the Otway catchment basin. Major waterways of the Shire include the Eumeralla, Hopkins, Merri, Moyne, Shaw and Curdies rivers in addition to numerous creeks, estuaries and smaller tributaries. Water carried by these rivers and other drainage systems supplies an extensive network of wetlands and small lakes. Both the Glenelg Hopkins and Corangamite Catchment Management Authorities are responsible for waterway (includes designated drainage schemes) and catchment management, with the Western Coastal Board responsible for strategic coastal planning, within the municipality. Council will continue to assist these agencies in the development and implementation of waterway and coastal management practices affecting the Shire.

The health of our waterways is directly related to the health of our catchments. High nutrient inputs, algal blooms, loss of catchment vegetation, erosion, water extraction, salinity, altered flow regimes and siltation can all have a negative impact on the overall health and utility of a waterway.

Waterways within the Moyne Shire typically lack extensive tracts of riparian (streamside) vegetation that increases the potential for streamside erosion and pollutants to enter waterways. A major contributor to waterway pollution in the Moyne Shire comes via runoff from agricultural practices, in the form of pesticides, herbicides, soil erosion and effluent discharges. Other major sources of pollution are predominantly derived from the discharge of stormwater directly into waterways.

Consumption of water is an additional issue of ever-increasing importance for the Moyne Shire. The health of both the Glenelg Hopkins and Corangamite catchments has been adversely affected by changes in both surface water quality and quantity. Due to the generally poor quality of much of the surface water across the region, there is a heavy reliance on groundwater resources for stock, irrigation, industry and town supplies.

Despite the presence of substantial reserves of groundwater throughout the Shire, comprehensive data outlining sustainable extraction limits, rates of consumption, and the effects groundwater extraction has on the health of the waterways and catchments is lacking. Council must continue to work in partnership with all agencies responsible for the management of water resources, but particularly Wannon Water and Southern Rural Water, in a bid to ensure water security and reliable supply for its community.

Issues

- Activities undertaken by Council and the community can lead to the pollution of waterways (e.g. litter, sediments, etc).
- There is limited accountability for the amount (quantity) of potable water being used to provide Council services potentially leading to large volumes of water being used across all Council services.
- The infrastructure and/or services being provided by Council are not always water efficient in their design.
- Council is using potable water where greywater may be a suitable alternative.
- Lack of understanding and knowledge of :
 - water quality and conservation by Council and its community; and
 - environmental flows needed within the waterways & wetlands within the municipality.

OBJECTIVE: 2.1 To decrease potable water consumption Shire-wide				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.1.1	Install greywater reuse systems in: a) Southcombe Park caravan park and sports precinct b) Gardens Caravan park, sports ground and botanical gardens c) Victoria park, Koroit (for reuse in the sports ground, botanical gardens and caravan park)	Mix	Long Term	High
2.1.2	Prepare an information brochure on greywater use in the home for distribution with planning/building permits and for publication on Council's website	Existing	Short Term	High
2.1.3	Implement a 'user payers' system on all Council managed water pipe stands	Existing	Short Medium Term	High

OBJECTIVE: 2.2 To increase the re-use and capture of stormwater throughout the Shire whilst allowing environmental flows				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.2.1	Install rainwater tanks on Council offices at Port Fairy, Mortlake and Macarthur for water use in the office toilets and gardens	Mix	Short Term	Low
2.2.2	Encourage the installation of rainwater tanks on new buildings and any building renovations on planning and building permits	Existing	Short Term	Medium
2.2.3	Prepare an information brochure on the installation and maintenance of rainwater tanks for distribution and publication on Council's website	Existing Mix	Medium Long Term	Low

Resources Key: **Green** = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 2.3 To improve stormwater management and the quality of stormwater runoff				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.3.1	Ensure Council public waste bins are cleaned using an environmentally and water efficient method. No further cleaning in the streets/gutters is to be permitted	Increase	Short Term	High
2.3.2	Install litter traps onto all stormwater outlets entering directly into designated waterways	Mix	Long Term	Medium
2.3.3	Design and implement a maintenance program to ensure all stormwater litter traps are regularly emptied and in working order	Existing	Short Term	High
2.3.4	Develop guidelines for private construction work sites that are to be included in planning/building permits that prevent pollutants and sediments entering waterways	Existing	Short Medium Term	Medium
2.3.5	Develop guidelines for Council construction work sites that prevent pollutants and sediment entering waterways	Existing	Short Term	High

OBJECTIVE: 2.4 To ensure the principles of Water Sensitive Urban Design (WSUD) are adhered to in future land and or roadways development				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.4.1	Conduct an information session/training for developers, staff and Councillors in the municipality on WSUD principles	Existing	Medium Term	Low
2.4.2	All future subdivisions greater than 5 allotments must incorporate WSUD principles in their design	Existing	Medium Term	Low

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 2.5 To improve Council and its community's understanding and awareness of the impacts of water quality and quantity on the environment				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.5.1	Participate in National Water Week activities to improve Council and community understanding of water quality and conservation	Existing	Short Term	Medium
2.5.2	Monitor all groundwater bores being used by Council to track water consumption	Existing	Short Medium Term	Medium
2.5.3	Audit all Council bores and update registration details through relevant water authority	Existing	Short Term	Medium
2.5.4	Encourage all private landholders to register their bores	Existing	Medium Term	Low

OBJECTIVE: 2.6 To improve the management of septic tanks to reduce environmental impacts				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
2.6.1	Establish an internal monitoring program/database for septic tank management	Increase	Long Term	Low

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

3. Greenhouse Gas Emissions

Values

The Greenhouse effect is a natural phenomenon that traps the sun's warmth in a blanket of gases in the lower atmosphere keeping the Earth's temperature at a level necessary to support life. Human activity, particularly burning fossil fuels (coal, oil and natural gas), increasing waste volumes (and their ongoing management) and intense land clearing, is generating more of these greenhouse gases (measured as Carbon Dioxide Equivalent – known as CO₂e). Most scientists are convinced that this will trap more heat and raise the Earth's surface temperature, thus leading to an increase of global surface temperature; an increase in incidences of cyclones and storms; changes in rainfall patterns; and an increase in sea level due to warmer ocean temperatures.

Australia is one of the biggest greenhouse gas emitters on a per capita basis; some 32 tonnes of CO₂e emitted for every Australian annually, reflecting the nature of the country's size, economy and residents' lifestyle. A 2002 report containing analysis of greenhouse gas emissions commissioned by the Moyne Shire Council in conjunction with the (now defunct) Cities for Climate Protection Program™ in 2002 revealed that over one million tonnes of greenhouse gases were emitted from the Moyne Shire residential, commercial, industrial and agricultural communities combined. In rough terms, each member of the Moyne community produces >17 tonnes of CO₂e, a figure substantially greater than the accepted sustainable level of 3.5 tonnes of CO₂e per person per year. Given total energy consumption across Victoria is known to have risen by an average of 8% since this calculation was made more than a decade ago, it is a certainty that the per person CO₂e figure is now much higher.

Everyday Council activities and services such as vehicle fleet use, road construction, street lighting and waste generation all contribute to greenhouse gas emissions. The 2002 report found that the largest proportion of corporate (Council) emissions is generated from the consumption of electricity (48%), with transport fuels producing 39% and the remaining emissions produced by paper products and food waste. With a 'business as usual' approach, corporate greenhouse gas emissions were expected to increase by 4% from 3,555 tonnes in 2002, to approximately 3,700 tonnes in 2010.

In recognition of the importance of reducing greenhouse gas emissions at the local level, Moyne Shire Council resolved in December 2002 to participate in the Cities for Climate Protection Program™. Through its involvement in this program, Council was able to reduce its corporate greenhouse gas emissions by 20% from 2002 levels by 2009. Sadly this program was dissolved in 2009 but Council should continue to build on the immense momentum gained through its participation by resolving to regularly question and review how it can improve its everyday operations. Council does recognise that the majority of energy production and a vast quantity of greenhouse gases are generated outside the Shire boundaries. Council must continue to remain vigilant in its quest to influence external parties (such as Sustainability Victoria, the Environmental Protection Authority, the South West Sustainability Partnership, local Transition Towns groups) and projects in a bid to create positive outcomes within its own community.

Issues

- ◆ The amount of energy being used across all Council services
- ◆ There is limited accountability for the amount of energy being used to provide Council services
- ◆ The infrastructure and/or services being provided by Council is not energy efficient in their design or are surplus/excessive to needs
- ◆ Council is using more non-renewable energy sources than renewable or alternative energy sources
- ◆ Lack of understanding and knowledge on the impacts non-renewable energy consumption has on the environment
- ◆ The current State energy rating system for buildings does not always lead to efficient design and resource use
- ◆ The size of the municipality leads to Council and community reliance on vehicles to provide/access services
- ◆ The focus of energy efficiency has been on new buildings rather than 'retrofitting' existing buildings
- ◆ Lack of passive transport networks and/or supported services within townships and across the municipality
- ◆ Low population numbers across the municipality leads to inefficient use of energy in public buildings

OBJECTIVE: 3.1 To reduce Council's greenhouse gas emissions through reduced energy consumption				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.1.1	All new Council buildings to be designed to meet a minimum 8 star (out of 10) energy rating	Mix	Short Long Term	High
3.1.2	Establish an energy audit program for key Council buildings and infrastructure to enable accurate three (3) year reporting of energy usage	Existing	Short Term	High
3.1.3	Prepare an energy reduction policy document to reduce Council energy consumption 15% by 2015 from 2009/10 levels	Existing	Short Term	High
3.1.4	Audit all Council and community managed public buildings to implement a light globe replacement/retrofit program to achieve energy efficiency	Increase	Medium Term	High
3.1.5	As street light globes require replacement, change fixtures and/or globes over to be more energy efficient	Mix	Short Term	High
3.1.6	All new subdivisions of greater than 5 allotments that require street lighting to be fitted with solar powered public lighting as standard	Existing	Short Term	High
3.1.7	Install insulation, window/door seals and window coverings to reduce energy loss/gain in the Macarthur, Mortlake and Port Fairy office buildings and in all future Council buildings	Increase	Medium Term	Medium
3.1.8	Install climate control switches on all heating/cooling appliances in the Macarthur, Mortlake and Port Fairy offices to control temperature and reduce energy consumption	Increase	Medium Term	Medium
3.1.9	Rationalise the number of refrigeration units in Council offices and buildings by implementing a 'kitchen/lunch room only' reduction policy (immunosation refrigeration excluded)	Existing	Short Term	High
3.1.10	Rationalise the number of water coolant units in Council offices and buildings by implementing a 'kitchen/lunch room only' reduction policy	Existing	Short Term	High
3.1.11	Investigate alternative refrigeration systems/arrangements for sporting facilities and public halls	Increase	Long Term	Low

Resources Key: **Green** = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 3.2 To increase Council and community use of renewable and alternative energy sources				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.2.1	Install solar interactive grid panels on Council buildings (offices and depots) at Macarthur, Mortlake and Port Fairy to offset power usage at these facilities	Mix	Long Term	Medium
3.2.2	Retrofit five key outdoor public amenities buildings with solar powered lighting	Increase	Short Term	High
3.2.3	Install solar hot water systems on key Council buildings that have heated water supply	Increase	Long Term	High
3.2.4	Install solar heating systems for all heated Council pools	Mix	Long Term	High
3.2.5	Coordinate/support bulk purchasing of solar panels, solar hot water services and other energy efficient appliances for private properties within the municipality	Existing	Long Term	High
3.2.6	Retrofit all 80W Mercury Vapour street lighting lamps with more energy efficient models	Increase	Short Term	High
3.2.7	All newly installed additional public lighting by Council to be powered by solar energy as standard	Increase	Long Term	High

OBJECTIVE: 3.3 To use Council related business vehicular transport more efficiently				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.3.1	Establish an interactive computer booking system for Council fleet vehicles to encourage vehicle pooling by Council staff	Mix	Short Term	Medium
3.3.2	Establish a vehicle pooling system between Warrnambool – Port Fairy and Warrnambool – Mortlake for staff to and from work	Mix	Short Term	Medium
3.3.3	Incorporate bicycles for staff to use at the Mortlake and Port Fairy offices into the Council fleet	Mix	Short Term	Medium

Resources Key: **Green** = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 3.4 To improve options for Council and community to use alternative travel options such as walking, riding, car pooling and public transport				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.4.1	Encourage and support the walking school bus program in Hawkesdale, Koroit, Macarthur, Mortlake, Port Fairy and Panmure	Increase	Short Term	Medium
3.4.2	All new subdivisions greater than 5 allotments to have a passive transport network to link to other infrastructure within the area	Existing	Short Term	Medium
3.4.3	Establish a 'bond' system to require up front payment from developers for the creation of passive transport networks	Increase	Medium Term	Medium
3.4.4	Promote the use, and encourage the expansion, of public transport options in/to/from Hawkesdale, Koroit, Macarthur, Mortlake, Port Fairy and Peterborough	Existing	Short Term	Low
3.4.5	Investigate options for improving public transport in/to/from Hawkesdale, Koroit, Macarthur, Mortlake, Port Fairy and Peterborough	Existing	Medium Term	Low
3.4.6	Prepare a passive transport plan for Hawkesdale, Koroit, Macarthur, Mortlake and Port Fairy to maximise opportunities for residents and business to walk and ride within these townships	Mix	Long Term	Low
3.4.7	Implement a bicycle hire program initially based at Council caravan parks at Port Fairy and Koroit, and the Port Fairy Visitor Information Centre, to promote riding on the rail trail and surrounds	Mix	Long Term	Medium

OBJECTIVE: 3.5 To prepare adaptation and mitigation strategies to respond to climate change				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.5.1	Support and promote 'transition towns' within the municipality	Existing	Short Term	Low
3.5.2	Prepare a Council adaptation strategy to climate change	Mix	Long Term	Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 3.6 To offset Council's greenhouse emissions				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.6.1	Offset Council's fleet emissions through annual community indigenous vegetation planting programs on Council or community managed land	Existing	Short Term	High

OBJECTIVE: 3.7 To increase Council and community understanding and awareness of energy consumption and the impacts of greenhouse gas emissions on the environment				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
3.7.1	Promote and participate in National Earth Hour	Existing	Short Term	High
3.7.2	Promote and participate in ride/walk to work day	Existing	Short Term	High
3.7.3	Modify charges at Council buildings to include energy used during facility use	Existing	Medium Term	Medium
3.7.4	Establish procedures to enable community groups to utilise computer & tele-conferencing facilities	Existing	Medium Term	Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

4. Waste Management Practices

Values

One of the major issues for the environment is the rate at which we are consuming natural our resources and how we dispose of them. It is important that society takes responsibility for the resources it consumes and to understand the consequences of their use. Historically, the focus has been towards the disposal of waste to landfill rather than integrating recycling or re-use programs. In addition to minimising waste by reducing the quantity of resources used, individuals should ensure that any waste produced is disposed of thoughtfully. The space that is required for landfill and the by-products of waste disposal is an on going liability to Council and the environment. The ethos of the waste hierarchy principle – reducing, reusing and recycling – is a concept that must be embraced if Council and its community are to have a major impact on the amount of waste currently generated.

Council is progressively developing a series of plans and strategies relating to waste management. These documents will set Council's direction for achieving effective waste management that meets the needs and expectations of the community and the environment. Council endorsed its Kerbside Waste Collection Action Plan in December 2009 and its draft Waste Facilities Management Strategy 2011-2016 was released for public comment in March 2011. Other plans are expected to be created focussing on Public Places & Events and Corporate (Council) Waste. These are expected during 2012.

These documents take into account the strategic direction set by the Victorian Government in its Towards Zero Waste 2005 policy and the more specific regional issues identified in the (draft) Regional Waste Management Plan 2007. They should identify cost savings through improved efficiencies, assist in promoting higher levels of recycling, create improved local employment opportunities, and better meet community demands for recycling.

In 2010 Moyne Shire Council expanded its kerbside service to include >1200 more properties from most township areas (and the major routes between towns) across the Shire. Council also added an improved fortnightly 'organics' collection to its weekly domestic garbage and fortnightly recycling service that aims to divert the 30% of compostable waste placed in domestic garbage away from landfill and into a re-usable product.

In addition, Council operates twelve waste facilities spread throughout the Shire that each provides varying levels of service quality and quantity to the community. Currently there are two operating landfill sites (Macarthur and Killarney) but in recent times three landfill sites (Mortlake, Hawkesdale and Peterborough) have been decommissioned as Council continues to work to reduce the amount of waste being deposited at landfills in the Shire.

Moyne Shire Council will continue to lead by example in the area of waste management, working in with Sustainability Victoria and the Regional Waste Reduction Group to identify the best approach towards establishing practical ways to reduce, reuse and recycle, as well as providing increased opportunities for the community to improve their waste disposal practices.

Issues

- ◆ The amount of waste being generated across all Council services and community
- ◆ There is limited accountability for the amount of waste being generated to provide Council services
- ◆ The infrastructure and/or services being provided by Council are not always waste efficient in their design or are surplus/excessive to needs
- ◆ Council is a large consumer of products containing raw materials, does not always preferentially purchase products containing recycled content, has limited access to 'bulk' purchased items and/or does not always reuse something ahead of purchasing new
- ◆ The current waste management systems provided or used by Council do not always lead to effective waste minimisation
- ◆ Perceived lack of understanding and knowledge within council and community on the impacts of waste on the environment

OBJECTIVE: 4.1 To improve opportunities to minimise waste generated by Council and the community				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.1.1	Install waste separation bins at Mortlake & Macarthur Council offices and the Port Fairy Community Services Centre as piloted in Port Fairy office	Existing	Short Term	High
4.1.2	Instigate electronic based record keeping systems for office-based staff payroll matters	Increase	Medium Term	High
4.1.3	Continue the supply of recycled office paper and stationary	Existing	Short Term	High
4.1.4	All Council depots to have waste separation facilities to reduce waste to landfill and encourage recycling	Existing	Short Term	High
4.1.5	Install public place recycling bins at Hawkesdale, Koroit, Macarthur, Mortlake, Port Fairy and Woolsthorpe if trials in Port Fairy and Koroit prove successful	Mix	Short Term	High
4.1.6	Install appropriate infrastructure at Council caravan parks to encourage increased waste separation	Mix	Short Term	High
4.1.7	Provide information to landowners on the impacts of inappropriate disposal of farm waste	Existing	Short Term	High

OBJECTIVE: 4.2 To operate waste management facilities and services to reduce environmental impacts				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.2.1	Provide information at Council waste management facilities on environmental benefits of reducing waste to landfill	Mix	Short Term	Low
4.2.2	Council Directorates to be accountable for the waste management costs generated within their Directorate	Existing	Medium Term	Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 4.3 To reduce litter across the municipality				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.3.1	Participate in Clean up Australia day activities through registering at least one (1) site each year as a Council activity site & providing support to community groups to get involved in additional sites across the shire	Existing	Short Term	Medium
4.3.2	Place EPA "Report a litterer" forms in all Council offices for staff and community use and provide training to staff on how to complete the forms	Existing	Short Term	Low
4.3.3	Install signage on appropriate disposal of fishing bait bags and tackle at boat ramp and fishing locations within Moyne Shire	Existing	Short Term	Low
4.3.4	Conduct a one week blitz on littering in the townships of Koroit, Macarthur, Mortlake, Peterborough and Port Fairy to provide information on the impacts of littering on water quality	Existing	Short Term	Low
4.3.5	Audit all public place cigarette 'butt out' containers to determine usage, identify any further hot spot areas with cigarette butt litter and modify/increase cigarette butt out containers according to audit	Mix	Short Term	Low

OBJECTIVE: 4.4 To improve availability and/or use of reused, recycled or bulk purchased materials across the municipality				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.4.1	Continue to support and internally promote the EcoBuy and Green a local purchasing program	Existing	Short Term	High
4.4.2	Conduct information sessions, and promote opportunities to use reused, recycled or bulk purchased materials across the municipality	Existing	Short Term	High
4.4.3	Establish filtered public drinking water points in high use public places at Port Fairy, Koroit and Peterborough to reduce reliance on bottled water and raise public awareness	Mix	Medium Long Term	High

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 4.5 To improve Council and community awareness and understanding of the impacts of waste on the environment				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.5.1	Implement and support Council and community important waste education programs, with a focus on the waste management hierarchy principles (avoid, reduce, reuse, recycle)	Mix	Short Term	High
4.5.2	To conduct education/awareness campaign and distribute information package on waste management (kerbside and waste facilities, public places)	Existing	Short Term	High
4.5.3	Provide information on the landfill levy and why it is paid by all ratepayers	Existing	Short Long Term	High Medium
4.5.4	Provide information on the costs associated with providing waste services across Council and the community	Existing	Short Term	High
4.5.5	Investigate the removal of the charge on recyclables at waste facilities	Existing	Short Term	High

OBJECTIVE: 4.6 To reduce the impacts of animal (particularly dog & horse) faeces in public places within the municipality				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
4.6.1	Install designated public place waste bins to manage animal faeces at Southcombe Park (Port Fairy) and Tea Tree Lake (Mortlake)	Mix	Medium Term	Medium
4.6.2	Review the Council's Local Laws to: <ul style="list-style-type: none"> a) increase the areas where animal faeces must be picked up b) increase the penalties associated with not picking up animal faeces 	Increase	Long Term	Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

5. Biodiversity Management

Values

Biodiversity describes the variety of organisms (different plants, animals, fungi and microorganisms) that form part of the natural ecosystem of an area. This includes the whole spectrum of interdependent life forms that provide essential life support services including clean air, fresh water, soil fertility and biological pest control. Biodiversity is fundamental to the future sustainability of the world's natural resources. These ecosystems are under threat from human activities such as induced climate change, loss of habitat due to land clearing and urban development, introduction of competitive pest species and degradation of the little habitat that remains.

Biodiversity values within the Moyne Shire area have undergone dramatic changes from those that were apparent prior to European settlement. The soil types, landforms and climatic conditions of particular geographic areas enable the ecological processes to develop similar vegetation communities known as 'Bioregions'. There are 28 bioregions in Victoria, with the three present in Moyne Shire being:

- Victorian Volcanic Plain: characteristics include open grasslands, stony rises from past volcanic activity, low volcanic peaks and extensive volcanic plains with areas of open woodland. This is the most cleared bioregion of Victoria.
- Warrnambool Plain: characteristics include coastal heathlands, grassy woodland forests and swamp scrub. This is the third most cleared bioregion of Victoria.
- Dundas Tablelands: characteristics include undulating plains of grassy woodlands and grasslands. This is the seventh most cleared bioregion in Victoria.

Biodiversity management is a complex issue, made more difficult in the Moyne Shire as the majority of areas of remnant habitat that remain occur at sites that are privately owned or managed, or in areas that were historically not recognised as areas of valuable habitat such as roadsides, water source reserves, cemeteries and railway lines. Council has an obligation – both moral and specified under law – to protect and enhance habitats under their management responsibility.

The long-term security of a range of flora and fauna species is dependent on the conservation and enhancement of the little remaining bioregional remnant vegetation within, and neighbouring, the Moyne Shire. Council will continue to rely heavily on the support of government agencies such as Glenelg Hopkins CMA, Parks Victoria, the Department of Sustainability & Environment, and the Department of Primary Industries, as well as non-government bodies like Trust for Nature, local crown land committees of management, 'Friends of' groups, and others as this is a task that Council acknowledges it will never be able to achieve on its own.

Issues

- ♦ Council and community activities can have a negative impact on biodiversity and wetland values in the municipality
- ♦ Inappropriate management and or pest plants and animals can lead to the loss of species
- ♦ Pest plants and animals, garden plants and domestic animals can lead to the loss or fragmentation of biodiversity and habitats
- ♦ Lack of information on location of species and/or sites
- ♦ Ability to access appropriate equipment and skills to manage areas
- ♦ Council Local Laws do not take into account biodiversity and/or habitat values
- ♦ Risk with non-compliance of Acts and regulations associated with the protection of biodiversity and habitats and the removal of pest plants and animals
- ♦ Requirement for Council to adequately offset all non-exempt native vegetation removal
- ♦ Lack of understanding and knowledge of the value that biodiversity and natural habitats provide the community
- ♦ Limited opportunities for the community to work with Council on the protection and enhancement biodiversity
- ♦ The lack of strategic management plans for areas managed/owned by Council of high biodiversity value
- ♦ Competing priorities for Council's limited resources leading to biodiversity projects and initiatives missing out or receiving limited Council funds

OBJECTIVE: 5.1 To protect and enhance biodiversity and habitat values				
#: 	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
5.1.1	Establish a community grants program to support protection and enhancement of biodiversity and habitat values on Council or community managed land	Increase	Short Term	Medium
5.1.2	Develop a five year biodiversity and habitat protection and enhancement management plan for four locations managed/owned by Council that have high conservation values and community interest for participation	Existing	Medium Term	Low
5.1.3	Coordinate an ongoing weed control program at high conservation areas to protect and enhance biodiversity and habitat values	Existing	Short Term	Medium
5.1.4	Revise Council's vehicle and plant policy on hygiene protocols to minimise and prevent the spread of weeds	Existing	Short Term	Medium
5.1.5	Review Council local laws to include controls on domestic animals to protect biodiversity and high conservation habitat areas	Increase	Long Term	Medium
5.1.6	Coordinate pest animal control programs to protect high biodiversity values commencing with Griffiths Island, Battery Hill, the Craggs and Killarney Recreation Reserve/Beach	Mix	Short Term	Medium

Resources Key: **Green** = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 5.2 To minimise the impacts of the delivery of Council services and programs on biodiversity and habitat values				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
5.2.1	Develop staff and contractor induction and training program on biodiversity and habitat values in the municipality	Existing	Long Term	Low
5.2.2	Develop a street tree management and replacement program for towns including Port Fairy, Mortlake, Macarthur, Hawkesdale, Peterborough, Panmure, Yambuk and Caramut commencing with Port Fairy	Increase	Medium Long Term	High
5.2.3	Develop a street tree and garden bed planting policy for all Council managed parks and gardens (excluding botanic gardens)	Increase	Short Medium Term	High
5.2.4	Review permits for roadside grazing and cropping to reduce impacts on roadside vegetation and habitats with high conservation value	Existing	Long Term	High
5.2.5	Investigate the creation of a native vegetation 'offset bank' to allow Council to make 'withdrawals' as required and deliver an aggregated net gain in native vegetation within its own Shire	Existing	Short Term	Low Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

OBJECTIVE: 5.3 To provide opportunities for Council and the community to increase their awareness and understanding of biodiversity and habitats in the municipality				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
5.3.1	Conduct training for Council staff and raise awareness within the community on the roadside conservation GIS maps	Existing	Short Term	High
5.3.2	Conduct at least four annual on-ground community activities to protect and enhance biodiversity and habitat values	Existing	Short Term	High
5.3.3	Implement a 'creeping backyards' program in Peterborough and Port Fairy to encourage responsible planting in gardens	Mix	Long Term	High
5.3.4	Develop an 'Environmental Weeds of the Moyne Shire' booklet	Mix	Medium Term	Medium
5.3.5	Develop a formal policy to provide rate incentive/relief for covenanted properties within the municipality	Existing	Short Term	High
5.3.6	Establish a minor equipment borrowing scheme to support small landowners and community groups with projects to protect and enhance biodiversity and habitat values within the municipality	Existing	Medium Term	High

OBJECTIVE: 5.4 To provide opportunities for community to be involved in programs and initiatives to protect and enhance habitats and biodiversity				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
5.4.1	Encourage and support conservation programs such as Conservation Volunteers Australia, Landcare/Coastcare, International Student Volunteers, Educational institutions, 'Friends of' groups, service clubs and other interested parties to assist with biodiversity protection and enhancement projects	Existing	Short Term	Medium

Resources Key: Green = <\$5k, Orange = \$5-10k, Red = >\$10k

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5 years

6. Monitoring and Review

Values

In order to measure Moyne Shire's progress towards environmental sustainability, a number of different methods of monitoring will be required. Monitoring and accountability will be provided through the development of appropriate performance measures for key staff. Council will also need to consult with the community through forums, surveys and discussions on a regular basis, so as to have an understanding of the impact of the implementation of the Strategy on its community.

Adaptive management is essential to the successful implementation of the Strategy, as it is anticipated that priorities for protecting and enhancing the environment will change over time as circumstances – particularly community attitudes and state + federal government priorities – change. Given the success of the 2005 Strategy, it is highly recommended that the maximum lifespan of this version is set at no longer than four years once endorsed by Council.

Issues

- ♦ The scientific monitoring of improvements and/or deterioration in environmental condition is very complex and involves many years of research which is beyond the resource capacity of Council
- ♦ Council needs to be able to produce annual reports on achievements and expenditure for social and financial accountability.
- ♦ Limited knowledge on environmental sustainability reporting

OBJECTIVE: 6.1 Monitor the progress of the Environmental Sustainability Strategy				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
6.1.1	Produce an annual summary on implementation achievements of the Environmental Sustainability Strategy	Existing	Short Term	High
6.1.2	To investigate Council's future involvement in State of the Environment Reporting to improve monitoring	Existing	Short Medium Term	Medium

OBJECTIVE: 6.2 To be accountable for the implementation of environmental sustainability programs and initiatives within and across Council				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
6.2.1	Produce an annual financial summary on the implementation of the Environmental Sustainability Strategy	Existing	Short Term	High

OBJECTIVE: 6.3 To review the Environmental Sustainability Strategy				
#:	ACTION:	RESOURCES:	TIMEFRAME:	IMPACT:
6.3.1	Council's Conservation and Environment Committee review the Environmental Sustainability Strategy on a bi-yearly basis to ensure listed objectives and actions are in line with any significant changes in the attitudes of the community or priorities of the environment	Existing	Medium Term	Medium

Resources Key: **Green** = <\$5k, **Orange** = \$5-10k, **Red** = >\$10k
years

Timeframe Key: Short Term = <2 years, Medium Term = 2-5 years, Long Term = >5

Summary of Action Resources

As previously mentioned, while the Moyne Shire Council is committed to the management and enhancement of all environmental issues, it is acknowledged that resource limitations apply.

Implementation of the Actions listed within this strategy will unquestionably require substantial investment of resources from Council and, in many instances, external sources/partners (e.g. State and/or Commonwealth governments).

This Strategy attempts to find a suitable balance between keeping Actions realistic and aspirational. As shown in the table below, 85 (79%) of the 107 Actions should cost <\$10k to implement – a figure considered reasonable for a project within a small rural shire such as Moyne.

Resources:	Short Term:	Medium Term:	Long Term:	TOTAL:
Green (<\$5k)	43	12	7	62/107 or 58%
Orange (\$5-10k)	12	7	4	23/107 or 21%
Red (>\$10k)	10	2	10	22/107 or 21%

59% of all Actions listed within this document should be able to be implemented within existing Council budgets. Council would need to increase funding to achieve a further 18% of Actions, while a mix of Council and external funds would be required to complete the remaining 23% of Actions.

Resources:	# Short Term:	# Medium Term:	# Long Term:	TOTAL:
Existing	47	11	5	63/107 or 59%
Increase	7	6	6	19/107 or 18%
Mix	12	3	10	25/107 or 23%

Closer analysis of the 19 Actions requiring an increase in Council funding shows that the resources required are fairly evenly spread between the three resourcing categories.

Resources:	Short Term:	Medium Term:	Long Term:	TOTAL:
Green (<\$5k)	2	1	1	4/19
Orange (\$5-10k)	1	4	3	8/19
Red (>\$10k)	4	1	2	7/19

If each green and orange action cost the maximum in its category (\$5k and \$10k respectively) this would mean Council would need to allocate a maximum of an additional \$65k above existing budgets to complete all eight Short and Medium Term Actions within the next 5 years.

With regards to the five red actions in the Short and Medium term, more detailed analysis (as shown in the table below) reveals that for the five year life of this plan implementing these five actions would cost Council approximately \$225k.

#:	Action:	Comment:
1.1.2	Allocate resources to implement ESS actions through the Conservation and Environment Committee on an annual basis	Not an action that itself requires funds, rather a reflection of the allocation of funds by Council for worthwhile ESS projects
3.2.2	Retrofit five key outdoor public amenities buildings with solar powered lighting	Assuming an average price of \$3k per building = \$15k
3.2.6	Retrofit all 80W Mercury Vapour street lighting lamps with more energy efficient models	An acceptable starting point would be \$20k/year over 5 years = \$100k. However, significant cost savings from reduced electricity consumption would offset this figure somewhat
5.1.1	Establish a community grants program to support protection and enhancement of biodiversity and habitat values on Council or community managed land	An acceptable starting point would be \$10k/year over 5 years = \$50k
5.2.2*	Develop a street tree management and replacement program for towns including Port Fairy, Mortlake, Macarthur, Hawkesdale, Peterborough, Panmure, Yambuk and Caramut	An acceptable starting point would be \$20k/year over 3 years = \$60k

* = Medium Term Action

Of the 25 Actions that require a mix of funding, it is recommended that Council seek funding from external sources in order to achieve their implementation. External funding opportunities usually require a contribution – often in-kind but increasingly financial – from Council. Therefore Council will most likely have to consider supplying additional funding for worthwhile Actions/projects within its own future capital works budgets should external funding become available. No attempt has been made to exactly quantify the exact cost of these Actions because without the availability external funds Council will simply be unable to implement them.

Addendum (May 2015)

Action 6.3.1 of the Environmental Sustainability Strategy (ESS) requires Council's Conservation and Environment Committee to "*review the ESS on a bi-yearly basis to ensure listed objectives and actions are in line with any significant changes in the attitudes of the community or priorities of the environment*".

The Conservation and Environment Committee duly completed a bi-yearly review of the 107 actions within the ESS across two meetings in May and August 2014. This resulted in 27 changes to actions from within the document being recommended to Council in December 2014. Following a month long public consultation period in March 2015 Council resolved in May 2015 to accept the Committee's 27 recommended modifications to actions.

The 27 changes have since been applied to the content of this version of the ESS. They are represented by the ~~double-strikethrough~~ within the tables of actions within each section. Further specific details on the background and rationale can be found in reports within official Council agendas from December 2014 and May 2015, but a short summary of the 27 changes that were recommended and endorsed is included in the table below.

Action:	Recommended Change to ESS Document:
1.1.2	Delete
1.1.3	NA
1.1.5	NA
1.2.2	Delete
1.2.3	NA
2.1.3	Timeframe to Medium Term
2.2.3	Resources to Mix; Timeframe to Long Term
2.3.4	Timeframe to Medium Term
2.5.2	Timeframe to Medium Term
2.5.4	Delete
3.1.1	Timeframe to Long Term
3.1.5	Delete
3.2.5	Delete
3.4.7	NA
3.4.4	NA
3.5.1	Delete
3.7.2	NA
3.7.4	Delete
4.1.7	Delete
4.3.5	Delete
4.4.1	Change wording from 'the Ecobuy and green' to 'a local'
4.4.2	Delete
4.4.3	Timeframe to Long Term
4.5.1	Change wording from 'Council and community waste' to 'important'
4.5.3	Timeframe to Long Term; Impact to Medium
4.5.4	Timeframe to Long Term; Impact to Medium
4.5.5	Delete
4.6.1	Delete
5.2.2	Change wording from 'including Port Fairy, Mortlake, Macarthur, Hawkesdale, Peterborough, Panmure, Yambuk and Caramut' to 'commencing with Port Fairy'; Timeframe to Long Term
5.2.3	Timeframe to Medium Term
5.2.5	Impact to Medium
5.3.4	NA
6.1.1	NA
6.1.2	Timeframe to Medium Term
6.2.1	Delete
6.3.1	NA