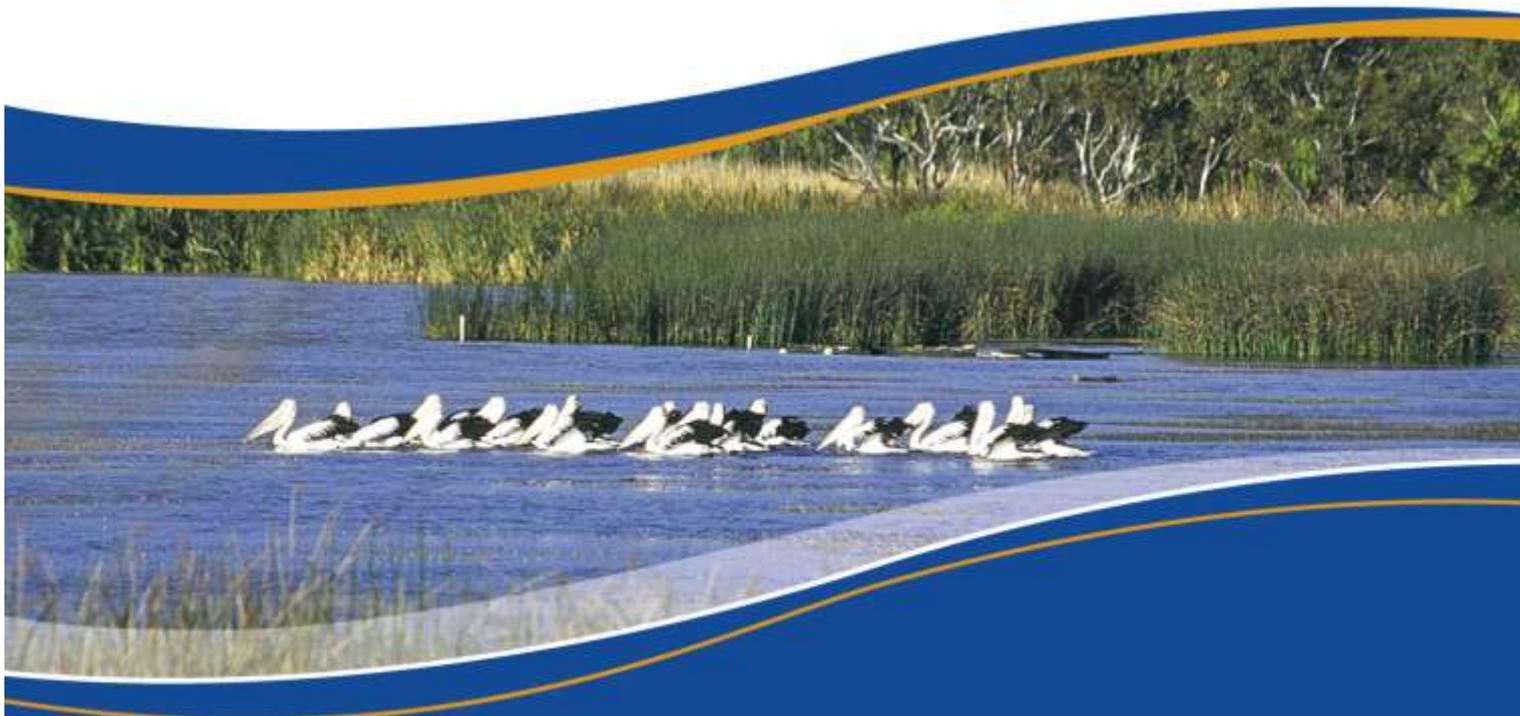




Bridge to Opportunity

The Rural City of
**MURRAY
BRIDGE**



The Rural City of Murray Bridge
**ENVIRONMENTAL
MANAGEMENT PLAN**

2013 - 2018



EXECUTIVE SUMMARY

The Rural City of Murray Bridge recognises that all Council activities have an impact on the environment. This Environmental Management Plan has been developed to guide Council in the management of its natural resources in a sustainable manner, focusing on meeting present community needs without compromising the ability of future generations to meet their needs.

The Rural City of Murray Bridge is committed to the protection and enhancement of our natural resources. The implementation of the Integrated Water Management Plan, the future development of a Roadside Vegetation Management Plan, a Biodiversity Strategy and a Tree Management Strategy will provide Council with the tools required to move forward in an environmentally sustainable manner.

The core environmental areas addressed in the Environmental Management Plan include:

Climate Change

Council needs to better understand the climate-related risks and the future impact to Council and the community and to develop adaptation strategies to create a more resilient community in the future.

Water Resources

The Rural City of Murray Bridge is a river dependant community; the sustainable use of water is one of our most critical resource challenges. Council needs to further consider alternative water supplies such as stormwater harvesting and reuse, and use of reclaimed water.

Biodiversity Management

Biodiversity of our natural ecosystems provides the resources we require to live and therefore we need to proactively protect and rehabilitate areas of high biodiversity value thereby improving the ecosystems on which all life depends. Our community must value the environment, minimise environmental impacts, use resources wisely and protect biodiversity. We as a Council must educate the community to value our environment and protect it from the effects of human activities.

Sustainable Development

The Murray Bridge Region will have significant growth in coming decades. Council has been undertaking a series of studies to ensure development occurs in a sustainable manner and that appropriate infrastructure is in place to provide for this growth. Council will place greater emphasis on energy saving and Water Sensitive Urban Design (WSUD) principles associated with future developments.

Waste Management

In dealing with waste management, Council seeks to use the most effective technologies and methods available while also striving to protect the environmental and public health. Council aims to provide an environmentally sustainable waste management system whilst encouraging reduction in waste generation to landfill and increasing recycling of resources.

INTRODUCTION

The Rural City of Murray Bridge is located approximately 80 kilometres to the east of metropolitan Adelaide. The Council area covers an area of 1,832 square kilometres and includes the urban centre of Murray Bridge, the river towns of Jervois, Mypolonga, Wellington, Monteith, Woodlane and Woods Point, and the rural towns of Callington and Monarto.

The Rural City of Murray Bridge has one of the fastest growing centres in regional South Australia. It is anticipated that population will increase from 18,400 in 2011 to at least 30,000 people by 2025.

As the city grows, so do pressures on the environment. There is the challenge of balancing urban and rural development, economic growth and protection of the environment. The community needs to be educated about respecting and appreciating the environment.

Council is to be proactive in implementing the following objectives:

- Effective water and waste water recycling and waste management practices;
- Introduce innovative energy efficient practices;
- Reduce greenhouse gas emissions;
- Protect biodiversity and endangered species; and
- Respond to climate change impacts.



The Rural City of Murray Bridge recognises that all Council activities have an impact on the environment. This Environmental Management Plan has been developed to guide Council in the management of its natural resources in a sustainable manner, focusing on meeting present needs without compromising the ability of future generations to meet their needs.

Environmental sustainable development requires a change on how we currently view the nature of development and that whatever we do within the economy and society is ultimately bounded or limited by the capacity of the environment to sustain these activities.

This traditional approach to environmental sustainability uses the triple bottom line economic, social and environment. Sustainability recognises the relationship between all three dimensions of the triple bottom line.

In the Rural City of Murray Bridge however, we believe that governance is equally important. Our own quadruple bottom line framework has been adopted by Council as the key management tool to ensure environmental sustainability in all Council operations. The quadruple bottom line comprises of economic, social and environment as per the triple bottom line principles, but also includes governance to guide these principles.

Council undertakes a range of environmental management projects, both in its own right and in partnership with various agencies, developers and the community. Community involvement is both as individual volunteers and groups, carrying out on ground works. Council recognises the importance of this work as an asset to the community and will continue to support such volunteers and groups.

The preparation of the Environmental Management Plan has involved referral to a number of external and internal plans and strategies. Where appropriate, aspects of these documents have been incorporated to ensure consistency. In particular this document has been guided by the objectives of the 30 Year Plan for Greater Adelaide, the Murray Mallee Regional Plan, Council's Strategic Management Plan and the South Australian Murray-Darling Basin Natural Resources Management Board Regional NRM Plan.

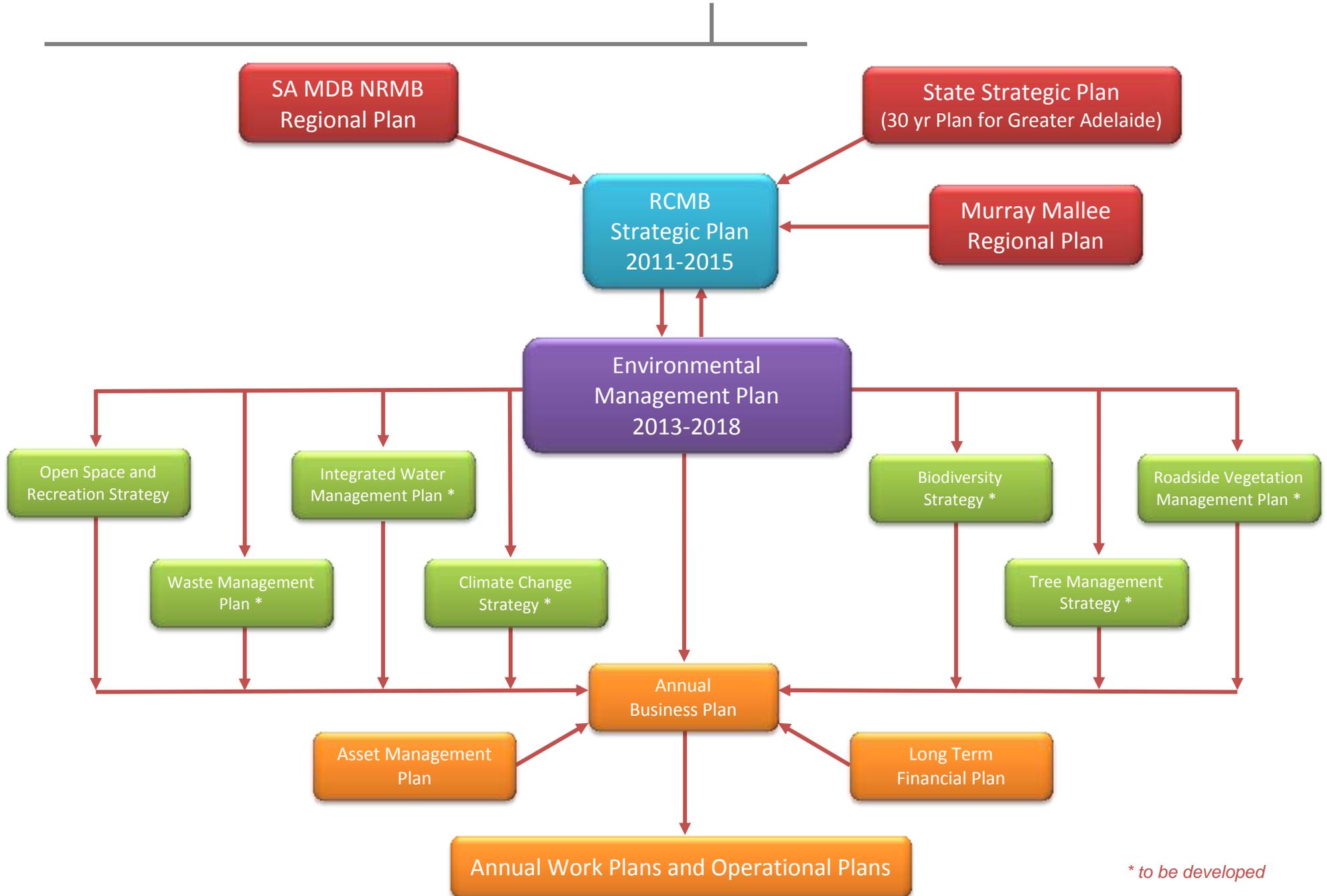
Table 1 illustrates the linkages between these plans and the Rural City of Murray Bridge's Strategic Plan Objectives. These objectives have given rise to the core areas of environmental initiatives encapsulated in the Environmental Management Plan, and include Climate Change, Water Resources, Biodiversity Management, Sustainable Development and Waste Management.

The Environmental Management Plan will be reviewed annually as part of formulating new annual departmental business plans. Significant new actions will be proposed as part of Councils annual budget setting process.

A complete review of the Environmental Management Plan will be undertaken every five years.

The development of this Environmental Management Plan is a key step toward implementation of a range of environmental initiatives which will help to achieve continuous improvement towards environmental sustainable development within the Rural City of Murray Bridge.

Table 1. Linkages between key strategic documents and the Environmental Management Plan



* to be developed

Table 2: ENVIRONMENTAL OBJECTIVES

RCMB Strategic Plan 2012-2015	30-Year Plan for Greater Adelaide Principles	SAMDBNRMB Regional NRM Plan
<p>2.1 Improve conservation and enhancement of the natural environment</p> <p>2.1.1 Enhance and protect the River Murray Environment.</p> <p>2.1.2 Partner with key stakeholders for the redevelopment and implementation of regional and local natural resource management plans and initiatives.</p> <p>2.1.3 Partner with key stakeholders to monitor, mitigate and adapt for the impacts of climate change.</p>	<p>11 Climate change resilience.</p> <p>12 Environmental protection, restoration and enhancement.</p> <p>13 Natural resources management.</p>	<p>B1 Improve native ecosystem extent and condition to sustain ecosystem function.</p> <p>B2 Healthy water-dependent ecosystems in priority areas that maintain ecological function, resilience and biodiversity.</p>
<p>2.2 Improve the quality and diversity of the built environment and public realm</p> <p>2.2.1 Develop strategies, policies and plans to encourage appropriate forms of development.</p> <p>2.2.2 Support sustainable urban development through best practice urban design.</p> <p>2.2.3 Plan for, manage and facilitate transport and traffic management initiatives within urban and rural areas.</p> <p>2.2.4 Facilitate opportunities for the sustainable development of the Murray River environment.</p> <p>2.2.5 Preserve integrity and character of significant heritage places.</p>	<p>13 Natural resources management</p> <p>14 Community engagement.</p>	
<p>2.3 Facilitate sustainable opportunities for waste water and water use and reuse</p> <p>2.3.1 Facilitate water independence through development of Integrated Water Management plans including identifying, addressing and implementing water harvesting/balancing re-use and recycling opportunities.</p> <p>2.3.2 Promote opportunities for innovative water sensitive design principles in all developments.</p> <p>2.3.3 Investigate and implement innovative water sensitive management practices through key partnerships.</p>	<p>11 Climate change resilience.</p>	<p>W2.3 Increase reuse of treated water.</p> <p>W2.7 Maximise sustainable fit-for-purpose water use.</p>
<p>2.4 Facilitate sustainable opportunities for energy use and reuse</p> <p>2.4.1 Promote opportunities for the development of renewable energy within our community.</p> <p>2.4.2 Investigate and implement renewable energy management practices through key partnerships.</p>	<p>11 Climate change resilience.</p>	<p>A1 Reduce net greenhouse gas emissions.</p> <p>A1.1 Promote the uptake of renewable energy by the Region's community and businesses.</p>
<p>2.5 Minimise the environmental impact of waste</p> <p>2.5.1 Promote opportunities for the minimisation of waste within our community.</p> <p>2.5.2 Investigate and implement sustainable waste management practices through key partnerships.</p>		

ENVIRONMENTAL MANAGEMENT PLAN STRUCTURE

It is acknowledged that the natural environmental issues are complex and interconnected.

This interconnection is recognised in the implementation of the actions contained within this Environmental Management Plan, and, where possible, actions will address multiple environmental outcomes. However, in order to focus our actions and reduce complexity of the document, the plan focuses around five discrete issues:

1 Climate Change

2 Water Resources

3 Biodiversity Management

4 Sustainable Development

5 Waste Management



1 CLIMATE CHANGE

The earth's climate is changing. This is evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising sea levels. Greenhouse gas concentrations are increasing at an alarming rate and most of the human caused greenhouse gas emissions come from the combustion of fossil fuels.

South Australia is becoming warmer. In the last century the global surface temperature has increased by a 0.89°C in Australia and 0.96°C in South Australia, this is higher than the global increase of 0.7°C. South Australia has also experienced a long term reduction in autumn rainfall, particularly over southern agricultural areas that result in an overall reduction of inflows into dams and water storages. Although these changes are small, they can have a significant impact on already vulnerable ecological systems.

CSIRO climate projections for South Australia for 2030 and 2070 predict:

- higher temperatures including more extreme hot days, with spring and summer warming more than winter and autumn;
- associated health and mortality impacts on an ageing population, and increasing energy demand for air-conditioning;
- decreased rainfall in agricultural regions, especially in winter and spring;
- greater frequency and severity of drought with decreased flows in water supply catchments;
- increased flood risk despite drier average conditions;
- shifts in conditions affecting our food production and biodiversity;
- increased incidence and severity of bushfires; and
- damage to infrastructure from flooding and extreme heat.

These predicted changes will have ramifications on the South Australian economy and the environment at national, state and regional levels.

Climate change is a global issue that affects us all. In Australia, we have already seen evidence of extreme weather events such as the recent drought in the Murray-Darling Basin, devastating bushfires in Victoria and recent severe flooding throughout regional Queensland and New South Wales.



The combined effects of higher temperature, lower rainfall and higher evaporation may threaten our water security challenging the management of our water resources and impacting on our river and wetland ecosystems.

In order for South Australia to adapt to climate change, sustainable water management measures must be incorporated into planning and infrastructure decisions, integrated water management will be imperative for diversifying water sources, reducing reliance on traditional sources of water and maximising water reuse.

Local government has a significant leadership role in responding to the anticipated challenges of climate change. The Local Government Association (LGA) Climate Change Strategy sets out a strategic approach to climate change in pursuit of the following long term goals:

- Adaptation: Identify and adapt to the long term physical impact of climate change in this State;
- Mitigation: Reduce greenhouse gas emissions and carbon footprint of the local government sector and community; and
- Leadership: Provide leadership and build capacity of local government and the community to manage climate risk.



Climate change is inevitable regardless of how fast global greenhouse gas emissions can be reduced. Therefore we need to adapt to climate change as well as reduce emissions. Planning and adaptation to climate change is a relatively new concept. South Australia has been the first State to legislate targets to reduce greenhouse gas emissions. In adapting to climate change there is a need to develop strategies to increase the understanding of risks, vulnerabilities and

opportunities and to improve hazard management and minimise risk to Council.

South Australia is the most vulnerable State with regard to impacts of climate change. However there are economic opportunities from adapting to climate change such the cost savings in developing energy efficient products and the development of clean technology and low carbon products.

Climate change is a reality and the resilience of communities will be challenged by shifting rainfall patterns, extreme weather events and changing climatic zones. Climate adaptation will continue to gather momentum as a priority for all levels of government in Australia in particular from Local Government which has a significant leadership role in helping communities understand and adapt to climate change.

Table 3 refers to the Council strategies that will be implemented to minimise risk and address adaptations to tackle climate change within our region.

Table 3: **CLIMATE CHANGE**

STRATEGY	ACTIONS	STRATEGIC PLAN OBJECTIVE	PARTNERS	MEASURE	TIMEFRAME
Strategy: 1.1	Develop the Rural City of Murray Bridge Climate Change Adaptation Strategy.	2.1.2	LGA.	Council adoption of strategy.	July 2013 – July 2014.
Strategy: 1.2	Address measures to reduce greenhouse gas emissions and investigate opportunities to improve energy efficiency for Council operations.	2.4	LGA.	Establish baseline data and monitor annually.	Ongoing.
Strategy: 1.3	Monitor Council’s ecological footprint with regard to climate change.	2.2	LGA.	Establish baseline data and monitor annually.	2013 – 2014.
Strategy: 1.4	Raise awareness of climate change and the future impact to Council and the community.	2.4	Community groups.	Risks identified and adaptation strategies developed.	Ongoing.



Currency Creek prior to and during recent drought conditions

2 WATER RESOURCES

The River Murray is the principle water resource for South Australia and is a major feature defining the character of the urban centre of Murray Bridge and the river towns within the Rural City of Murray Bridge. The Rural City of Murray Bridge is a river dependant community using its water for urban supplies. It also acts as a regional centre for a wide range of agricultural enterprises which are dependent on the River Murray. The river is a highly valued resource which also supports recreational activities within the region.

Within the Lower Murray, below Lock 1 to Lake Alexandrina, the River Murray travels through an alluvial floodplain. Most of the area consists of reclaimed irrigation swamps on the river floodplain. This environment has been highly modified by the irrigation activities that occur on the reclaimed swampland.

A series of barrages separate the freshwater lakes Alexandrina and Albert from the sea. The construction of the barrages has changed the river into a series of weir pools which regulate water levels. The barrages maintain a higher water level than what would occur naturally within the river system from the Murray mouth to Blanchetown resulting in permanent inundation of many wetlands.



Within South Australia we have very little inflow from tributaries into the River Murray system. The volume of water available for domestic and the health of our river system are reliant on the volume of water made available from our upstream states. The Murray-Darling Basin Agreement provides South Australia an entitlement flow of 1,850 GL per annum and for over 100 years SA has received a much greater flow to sustain our environment.

The River Murray provides a finite water supply that has to be shared between domestic, industrial and agricultural users as well as the environment. The river is also a major source of water for other parts of South Australia. On average 40% of Adelaide's mains water is supplied from the river, this can rise up to 90% in times of drought. Other major extractions include the Clare and Barossa Valleys, Port Pirie, Port Augusta and Whyalla, Keith in the South East of the state, and the Langhorne Creek, Finniss and Currency Creek irrigation districts.

The recent drought within the last decade resulted in reduced river flows into South Australia. Water levels in the lower Murray and the Lower Lakes were at unprecedented low levels with the water levels below Lock 1 at Blanchetown falling to below sea level with the barrages holding back the sea water.

In November 2011 the Murray-Darling Basin Authority released the draft Basin Plan to manage the water resources of the Murray-Darling Basin. The draft Basin Plan is guided by

the Commonwealth Water Act and will be reviewed in 2015 and implemented in 2019. The draft Basin Plan proposed to limit the volumes of water that can be taken for human use (domestic, urban and agricultural) whilst returning 2750 GL to the environment; a water salinity target of 800 Ec (approx. 500mg/L) at Morgan and Murray Bridge for 95% of the time and increased environmental flows will keep the Murray Mouth open for 90% of the time. Council supports the draft Basin Plan and will review its performance in 2015 taking account of the environmental, economic and social impact.



There is a need for the Rural City of Murray Bridge to further consider alternative water supplies such as stormwater harvesting and reuse, and use of reclaimed water. These alternative sources of water from both domestic and industrial sources, represent guaranteed and are at present an under-utilised water source.

The recent drought and lower river levels resulted in the drying of the swamps and exposure of the lake beds resulting in the exposure of acid sulphate soils. The largest bioremediation project in the southern hemisphere resulted in the planting of over 1.2 million seedlings on the lake shores to alleviate the problem prior to water levels returning to normal.

Within the Rural City of Murray Bridge there are two significant wetlands that support a diverse range of flora and fauna. Rocky Gully Wetland and Swanport Wetland are both cared for by enthusiastic volunteer groups with the assistance and support of Council.

Pollutant sources along the river include stormwater runoff, irrigation drainage and septic tank discharges from shacks. Irrigation drainage from Lower Murray Reclaimed Irrigation Areas is no longer a major cause as it now has to be retained on farm.

Native fish populations can provide an environmental indicator to the health of the river system. It is estimated that native fish populations are approximately 10% of their levels before European settlement due to habitat degradation and introduction of exotic species such as carp.



Table 4 refers to the Council strategies that will be implemented to proactively protect and enhance our water resources.

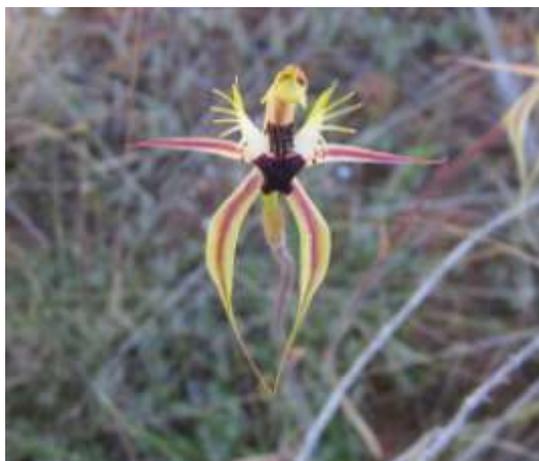
Table 4: **WATER RESOURCES**

STRATEGY	ACTIONS	STRATEGIC PLAN OBJECTIVE	PARTNERS	MEASURE	TIMEFRAME
Strategy: 2.1	Implement the Integrated Water Management Plan for the Rural City of Murray Bridge.	2.3.1	SAMDBNRMB, Federal Govt, Burke Urban.	Council adoption of plan.	2013 – 2023.
Strategy: 2.2	Reduce the dependence on traditional water supplies and move progressively to more sustainable practices and sources of water such as stormwater harvesting and reuse.	2.3	SA Water.	Reduction of traditional SA water usage.	2013 – 2016.
Strategy: 2.3	Minimise pollution discharge to watercourses and water dependent ecosystems.	2.3.3	SAMDBNRMB Dept for Water.	Annual monitoring of water quality at key sites.	Ongoing.
Strategy: 2.4	Integrate Water Sensitive Urban Design principles to promote better integrated water management.	2.3.2	SAMDBNRMB Developers.	Maintain or improvement in water quality.	Ongoing.
Strategy: 2.5	Assess the feasibility of the use of reclaimed water.	2.3.1	SA Water, EPA.	N/A.	Ongoing.
Strategy: 2.6	Develop community awareness of water usage and water conservation.	2.3	SAMDBNRMB, local schools, community.	Annual monitoring of water usage.	Ongoing.
Strategy: 2.7	Monitor and manage Community Waste Water Management Systems (CWMS) at the Woodlane and River Glenn schemes.	2.5.1	ESCOSA, EPA.	Monitoring water quality.	Ongoing.

3 BIODIVERSITY MANAGEMENT

Our natural environment has been degraded over many decades due to the clearance of land, pollution and inappropriate development. The results have been the loss of species and loss of natural habitats for plants and animals and the degradation of agricultural land and our natural water resources.

Biodiversity is the term used to describe the interaction between all living things. This includes plants, animals and micro-organisms and the ecosystems of which they form a part. A healthy, biologically diverse ecosystem is dependent on the variety of animals, plants and soil biota that exist within the ecosystem. Biological diversity is the genetic, species and ecosystem diversity that exist within an ecosystem.



Biodiversity of our natural ecosystems provides the resources we require to live and therefore we need to proactively protect and rehabilitate areas of high biodiversity value thereby improving the ecosystems on which all life depends. Our community needs to value the environment, minimise environmental impacts, use resources wisely and protect biodiversity. We as a Council should educate the community to value our environment and protect it from the effects of human activities.

Soil and soil organisms such as bacteria, insects, worms and fungi make up a large portion of the earth's terrestrial biodiversity. These soil organisms break down wastes from dead organisms and play a crucial role in the biodiversity life cycle. All species within the biodiversity life cycle contribute holistically; the disturbance or removal of just one species can have detrimental results not only to one or more other species but to an entire ecosystem.

Over 90% of original vegetation has been cleared within the Rural City of Murray Bridge for agricultural purposes. Small pockets of native vegetation and roadside reserves are the only remaining areas of remnant native vegetation which has become highly fragmented and isolated. These remnants are highly valued for their biological diversity serving as important wildlife corridors, a seed source for revegetation and areas of species



habitat. The progressive degradation of native vegetation and increase in exotic plants and animals continues to have a devastating impact on our natural biodiversity within the Rural City of Murray Bridge.

The most significant areas of remnant vegetation within the Rural City of Murray Bridge include Monarto Conservation Park, Ferries McDonald Conservation Park, Monarto Zoo, Murray Park, Morphett Reserve, Dorset Street Reserve; Rocky Gully, Swanport, and Murrundi Reserve Wetlands and Callington Hill Grassland; as well as our many roadside reserves. Flora of national conservation significance include: *Acacia rhetinocarpa*, *Acacia menzeli*, *Olearia pannosa*, *Prostanthera eurybioides*, *Caladenia colorata*, *Caladenia tensa*, *Thelymitra epipactoides*, *Pterostylis arenicola* and *Senecio macrocarpus*.



Council maintains a system of Roadside Vegetation Markers identifying areas with significant and endangered roadside vegetation.

Council, in partnership with various volunteer groups, manages a number of significant biodiversity sites. These include Council reserves, wetlands and roadside vegetation sites including three Bush for Life sites: Palmer Road Reserve, Murray Park and Morphett Reserve.

Table 5 refers to the Council strategies that will be implemented to protect our existing native vegetation and enhance biodiversity within our region.

Table 5: **BIODIVERSITY MANAGEMENT**

STRATEGY	ACTIONS	STRATEGIC PLAN OBJECTIVE	PARTNERS	MEASURE	TIMEFRAME
Strategy: 3.1	Develop and implement a Biodiversity Strategy for the Rural City of Murray Bridge.	2.1	SAMDBNRMB, NVC.	Council adoption of strategies.	August 2013 – August 2014.
Strategy: 3.2	Develop and implement a Roadside Vegetation Management Plan for the Rural City of Murray Bridge.	2.1	Native Vegetation Council.	Council adoption of plan.	December 2013.
Strategy: 3.3	Develop and implement a Tree Management Strategy for the Rural City of Murray Bridge.	2.1	NVC.	Council adoption of strategy.	2013 – 2014.
Strategy: 3.4	Develop and update Management Plans for all Council reserves.	2.1	SAMDBNRMB, NVC.	Prioritise reserves and implement strategy to develop plans.	Ongoing.
Strategy: 3.5	Develop programs that support biodiversity protection and enhancement.	2.1	SAMDBNRMB, Non-government agencies; eg, EHMPCG, LAP,s.	Council uptake of programs.	Ongoing.
Strategy: 3.6	Survey key roadside native vegetation sites, including unused road reserves and maintain roadside vegetation markers.	2.1	SAMDBNRMB NVC.	Survey 10 key sites.	2014 – 2015.
Strategy: 3.7	Develop strategies to link key remnant vegetation sites to increase biodiversity.	2.1	SAMDBNRMB, Non-government agencies; eg, EHMPCG, LAPs.	Council adoption of strategies.	2014 – 2015.
Strategy: 3.8	Continue to develop links with and support SAMDBNRMB, LAP's, local catchment groups and volunteer groups to enhance Council's environmental objectives.	2.1.2	SAMDBNRMB, Non-government agencies; eg, LAP's, EHMPCG.	Continue liaison.	Ongoing.
Strategy: 3.9	Develop programs to educate the community on the importance of biodiversity and biodiversity conservation.	2.1	SAMDBNRMB.	Uptake of programs by community.	Ongoing.
Strategy: 3.10	Develop a Significant Environmental Benefit (SEB) offset program.	2.1	NVC.	Determine areas of revegetation.	Ongoing.
Strategy: 3.11	Develop management plans for water dependent ecosystems.	2.1	SAMDBNRMB, NVC.	Implement strategy to develop plans.	Ongoing.

4 SUSTAINABLE DEVELOPMENT

The Murray Bridge Region is poised for significant growth in coming decades. The State Government has identified the Rural City of Murray Bridge as a growth area in its 30-Year Plan for Greater Adelaide.

The 30-Year Plan for Greater Adelaide states the Murray Bridge Township as being able to cater for an additional 6,000 dwellings. A significant portion of this growth is expected at Gifford Hill on the southern side of the South-Eastern freeway which has been rezoned to accommodate residential, retail, recreation community centres and public open space.

In order to manage the goals established within the 30-Year Plan for Greater Adelaide and other strategic documents, Council has been undertaking an extensive series of studies to ensure this growth occurs in a sustainable and economic manner and that the appropriate infrastructure is in place to provide for this growth. Amongst these studies are:



The Murray Bridge Structure Plan maps out a long term direction of how our Rural City should grow and develop in line with the 30-Year Plan for Greater Adelaide and the Murray Mallee Regional Plan. The Structure Plan is Council's primary strategic planning document. The Plan presents an opportunity to promote an integrated and cohesive guide to the management of growth by identifying key growth areas and the infrastructure required to support this growth.

The Murray Bridge Rural Communities Study seeks to ensure regional communities remain functional and vibrant. The Rural Communities Study has reviewed Callington, Jervois, Monarto, Wellington, Woodlane, Monteith, Mypolonga and Woods Point to identify what actions Council can undertake to support their ongoing sustainability.

The Murray Bridge Town Centre Master Plan provides a guide for the revitalisation and promotion of the Murray Bridge Town Centre by outlining desired land uses and zoning, providing a range of urban design principles to guide suitable development and recommending a number of strategic key projects to facilitate the vision for the Town Centre. The Plan provides a comprehensive document which emphasises the high standards that Council requires for all new development in and around the Town Centre, which will ensure a vibrant and functioning Regional Centre.

These documents will help feed Council's review of the Development Plan as required under the Development Act, to ensure it better reflects both the Council's and community's wishes. The Development Plan is the strategic mechanism which provides the guidelines for

development within the Rural City of Murray Bridge. It establishes the types of development considered appropriate within the Rural City of Murray Bridge and locations where this development should occur.

Council is currently in the process of undertaking an Integrated Water Management Development Plan Amendment with a number of other regional councils in the immediate locality, including the District Council of Mount Barker and Alexandrina Council. This will provide consistency across councils and establishes stronger provisions for the protection and management of existing water systems in the region and place greater emphasis on Water Sensitive Urban Design (WSUD) principles associated with development.

Table 6 refers to the Council strategies that will be implemented to attain sustainable development within our region.



Table 6: **SUSTAINABLE DEVELOPMENT**

STRATEGY	ACTIONS	STRATEGIC PLAN OBJECTIVE	PARTNERS	MEASURE	TIMEFRAME
Strategy: 4.1	Initiate sustainable policies and practices to reduce Council's ecological footprint.	2.2.2	LGA.	Establish base line and monitor annually.	2013 – 2014.
Strategy: 4.2	Introduce Water Sensitive Urban Design principles into Council's Development Plan.	2.3.2	Dept. Planning, Transport & Infrastructure. SAMDBNRMB.	WSUD principles in Development Plan.	2015 – 2016.
Strategy: 4.3	Ensure areas of biodiversity conservational value, recreational and open space are protected.	2.1.1	Dept. Planning, Transport & Infrastructure. SAMDBNRMB	Sites of significance identified in Open Space and Recreation Strategy.	Ongoing.
Strategy: 4.4	Develop programs to educate the community on sustainable development, energy efficiency and alternative energy systems.	2.4.1	SAMDBNRMB, Local schools, community.	Uptake of energy efficiency and alternative energy systems by Council and the community.	Ongoing.
Strategy: 4.5	Incorporate climate change considerations within the planning and assessment process and asset management plans.	2.2.2	Dept. Planning, Transport & Infrastructure.	Ensure inclusion in Council Development Plans and Strategic documents.	Ongoing.

5 WASTE MANAGEMENT

Waste management encompasses all activities and services that revolve around collecting, disposing and reducing waste. In dealing with waste management, Council seeks to use the most effective technologies and methods available while also striving to protect environmental and public health.

Council aims to provide an environmentally sustainable waste management system including:

- Strategic direction of waste management services;
- Domestic and commercial waste collection;
- Provision of landfill & transfer station sites; and
- Education and information.

The Rural City of Murray Bridge provides a three bin service to its residents, which consists of the following:

- One 140 Litre blue lidded waste bin is provided to all occupied properties for the weekly collection of domestic waste;
- One 240 litre yellow lidded recycling bin is provided to all occupied properties for the fortnightly collection of recyclables; and
- One 240 litre green lidded green organics bin is provided to occupied properties within townships for the fortnightly collection of green organics.

The waste and recycling service is provided to approximately 8,800 properties, while the green organics service is provided to approximately 7,560 properties within townships.



The Rural City of Murray Bridge's kerbside waste service is collected by two private contractors, one for recycling and green organics, and the other for domestic waste. All domestic waste is disposed at the Brinkley Landfill located at Brinkley and operated by the Adelaide Hills Regional Waste Management Authority.

The Rural City of Murray Bridge is a member of the Adelaide Hills Region Waste Management Authority (AHRWMA), which is a subsidiary of four Councils, being Adelaide Hills, Mount Barker, Alexandrina and Murray Bridge. The Authority operates the Brinkley Landfill to receive waste from its member councils and commercial customers in the region. In 2010 AHRWMA also began operating the Brinkley Transfer

Station on behalf of the Rural City of Murray Bridge.

Council's waste management focus into the future will involve;

- Meeting EPA expectations in regards to historic landfills and Brinkley Landfill;
- In conjunction with AHRWMA establish the Brinkley Transfer Station as a key resource recovery facility;
- Investigate and implement options as they become available to increase recycling and reduce waste to landfill;
- Manage waste contracts effectively and investigate options to improve the efficiency of these contracts into the future;
- Implement a waste policy to ensure services are being managed accordingly, with an aim to improve efficiency of those services and reduce costs to Council;
- Utilise the services of AHRWMA as and when available to improve efficiencies by achieving economies of scale and collaborate regionally;
- Participate in programs and obtain funding as and when available to offer residents improved and/or additional services; and
- Ensure Council is compliant with the EPA's Environment Protection Waste to Resources Policy, including meeting requirements for landfill bans, when they are initiated under this policy.

Waste management costs for Council are likely to increase into the future, as a result of increasing costs for disposal due to the waste disposal levy and increasing legislative requirements.

Table 7 refers to the Council strategies that will be implemented to provide an environmentally

sustainable waste management system which will protect environmental and public health within our region.



Table 7: **WASTE MANAGEMENT**

STRATEGY	ACTIONS	STRATEGIC PLAN OBJECTIVE	PARTNERS	MEASURE	TIMEFRAME
Strategy: 5.1	Develop a RCMB Waste Management Plan that aligns with the South Australian State Waste Strategy (2011-15) and implement key strategies within that plan.	2.5	SAMDBNRMB, AHRWMA.	Council adoption of strategies.	2013 – 2014.
Strategy: 5.2	Develop a waste management policy.	2.5	SITA, SOLO.	Council adoption of policy.	2013 – 2014.
Strategy: 5.3	Continue to implement projects to meet EPA requirements for historic landfills and the Brinkley Landfill.	2.5	EPA.	Meet EPA requirements	Ongoing.
Strategy: 5.4	Manage waste contracts.	2.5.1	SOLO, SITA, AHRWMA.	Meet budget, community satisfaction.	Ongoing.
Strategy: 5.5	Continue to investigate options for increasing efficiency, rationalising services and regional services.	2.5.1	LGA, EPA, AHRWMA.	Budget savings.	Ongoing.
Strategy: 5.6	Develop and implement educational activities to encourage best practice waste management for our community, industry and council.	2.5.1	EPA, ZWSA, AHRWMA. SAMDBNRMB	Improved community involvement in programs.	Ongoing.

REFERENCES

City of Burnside Biodiversity Strategy.

City of Burnside Environment Action Plan 2008.

City of Charles Sturt Towards One Planet Living 2008-2013.

City of Greater Geelong Environment Management Strategy 2006-2011.

City of Salisbury Environmental and Climate Change Strategy 2008.

Local Government Association of South Australia Climate Change Strategy. 2008-2012.

Murray Mallee Regional Plan.

Rural City of Murray Bridge Strategic Plan 2010-2014.

South Australian Murray-Darling Basin Natural Resources Management Board Regional NRM Plan 2009-2019.

South Australia's Strategic Plan 2011.

Tackling Climate Change South Australia's Greenhouse Strategy 2007-2020.

The 30 Year Plan for Greater Adelaide.

Victor Harbour Environmental Management Plan 2010-2014.

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