



GOULBURN MULWAREE WATERWAYS PLAN

A plan to rehabilitate and protect Goulburn Mulwaree's waterways



Table of Contents

EXECUTIVE SUMMARY	4
1 INTRODUCTION	5
1.1 WHAT IS A WATERWAY?	5
1.2 GOULBURN MULWAREE'S WATERWAYS	5
1.3 THE VALUE OF GOULBURN MULWAREE'S WATERWAYS	8
1.4 THE CURRENT STATE OF GOULBURN MULWAREE'S WATERWAYS	8
1.5 COUNCIL'S VISION	12
1.6 KEY VALUES OF GOULBURN MULWAREE WATERWAYS	12
1.7 COUNCIL'S OBJECTIVES	12
1.8 PLAN CONTEXT	13
2 ACTION PLANS	14
2.1 Key value: Riparian Zones	14
2.2 Key value: Water Quality	16
2.2 Key value: Biodiversity	18
2.3 Key value: Flood mitigation	20
2.4 Key value: Community Engagement and Enjoyment	21
2.5 Key value: Economic Opportunities	23
REFERENCES	26

Adopted Date	Resolution	Effective From
19 August 2014	14/327	28 September 2014

EXECUTIVE SUMMARY

The Goulburn Mulwaree Local Government Area contains two significant river catchments. Both the Hawkesbury-Nepean and Shoalhaven Catchments serve the drinking water needs of the Sydney metropolitan area.

The drinking water needs of Goulburn and Marulan are served by an integrated network of water supply from Pejar Dam, Sooley Dam, Highland Source Pipeline and Wollondilly River. In addition to serving the local and Sydney drinking water needs, the Wollondilly River and its tributaries have extrinsic value in terms of fishing, recreational and tourism opportunities.

Goulburn Mulwaree's waterways provide intrinsic value in terms of habitat for aquatic and terrestrial flora and fauna, some vulnerable, threatened or endangered. For continued enjoyment of the extrinsic values of our waterways the intrinsic values must be protected.

The River catchments are not controlled by Goulburn Mulwaree Council. That is, Council is not the regulatory authority for all activities undertaken on our rivers and foreshores. Other Government Agencies that play a role in the management of our waterways include Sydney Catchment Authority (SCA), the former Hawkesbury- Nepean Catchment Management Authority (H-N CMA) and former Southern Rivers Catchment Management Authority (SR CMA), NSW Office of Water (NOW) and the Environment Protection Authority (EPA). The H-N CMA and SR CMA now form part of Local Land Services.

Legislation imposed by State Government requires Council compliance with environmental standards. For instance, Council must comply with environmental flow and effluent disposal standards. Certain legislated activities carried out on river foreshores by Council require the prior approval from State Agencies. Council also has restrictions placed upon its planning assessment powers whereby concurrence is required from SCA before consent can be issued for certain development.

The Goulburn Mulwaree Waterways Plan has been completed with assistance from Council's Sustainability Committee. The Waterways Plan recognises the benefit of healthy, attractive and sustainably managed waterways. Action Plans have been developed which details Council's management response to protect the key values of our waterways. The restoration of riparian zones has been nominated as a priority in terms of Council's role in the overall management of our waterways.

1 INTRODUCTION

1.1 WHAT IS A WATERWAY?

A **waterway** is any route travelled by water across land between the upper reaches of the catchment and a large body of water such as a sea or ocean. A waterway can include a river, creek, stream, rivulet, canal and other such watercourse. A waterway can also include aquatic features along that route including lakes, lagoons, ponds, waterholes, estuaries and wetlands.

1.2 GOULBURN MULWAREE'S WATERWAYS

The waterways within the Goulburn Mulwaree Local Government Area (LGA) are dominated by two rivers – the **Wollondilly River** and the **Shoalhaven River**. The catchments of the two Rivers are illustrated by Figure 1 below.

The Wollondilly River forms part of the Hawkesbury- Nepean Catchment which flows to the north. The Shoalhaven River defines the LGA boundary to the east. Nearly half of the LGA waterways flow east to the Shoalhaven River.

Both the Wollondilly and Shoalhaven River Catchments form part of the **Sydney Drinking Water Catchment**. Consequently almost all of Goulburn Mulwaree is within the Sydney Drinking Water Catchment, as illustrated in Figure 2.

A small part of the Goulburn Mulwaree LGA falls west of the Great Dividing Range and is within the **Lachlan River Catchment**, which forms part of the Murray-Darling Basin. That area is represented by the non-shaded area south west of the Parkesbourne locality (see Figure 2).

In terms of catchment management, the Wollondilly Catchment is managed by the Hawkesbury-Nepean Catchment Management Authority (H-N CMA), the Shoalhaven Catchment is managed by the Southern Rivers Catchment Management Authority (SR CMA), and Lachlan River Catchment is managed by the Lachlan Catchment Management Authority. All of these CMAs now form part of the NSW Local Lands Service.

1.2.1 The Wollondilly River Catchment

The Wollondilly River Catchment has a number of tributaries include Bob's Creek, Boxers Creek, Bumana Creek, Cady Creek, Evandale Creek, Fenwick Creek, Green Gully Creek, Jaoromin Creek, Kenmore Creek, Lockyersleigh Creek, Mount Wayo Creek, Narambulla Creek, Osborns Creek, Ryans Creek, Sandy Creek, Schoolhouse Creek, Sooley Creek, Stilwells Creek, Stony Creek, Tallowa Creek, the Tarlo River and Whiteheads Creek.

The Wollondilly River Catchment contains two water storage facilities, **Pejar Dam** and **Sooley Dam**. It also contains the most intensively developed and settled area of the LGA.

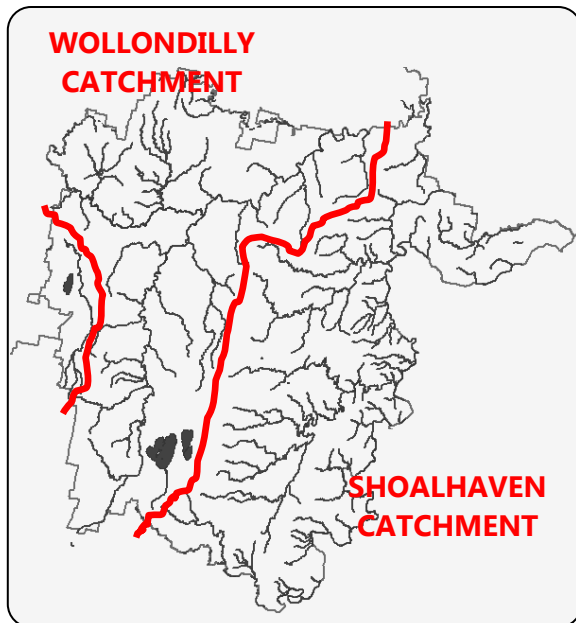


Figure 1 Goulburn Mulwaree's waterways, and chief catchments.



Figure 2 As the yellow shading shows, Goulburn Mulwaree is almost entirely within the Sydney Drinking Water Catchment
Source: Sydney Catchment Authority

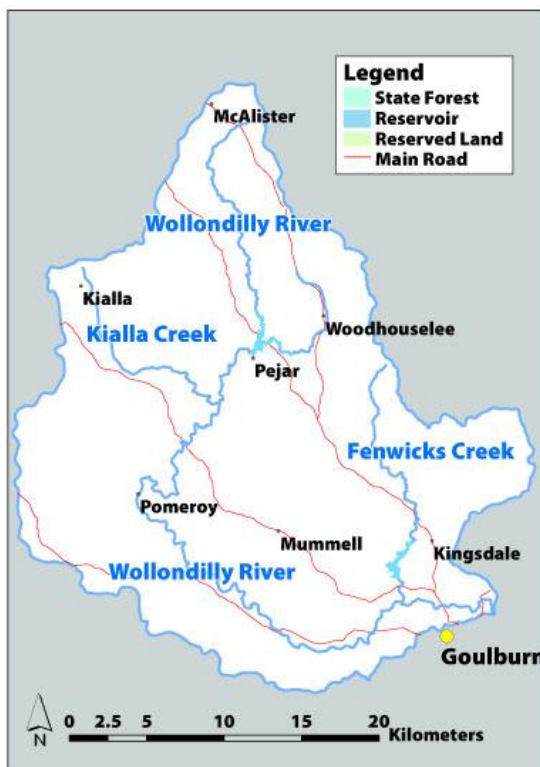


Figure 3 The Upper Wollondilly catchment
Source: HNCMA



Figure 4 The Wollondilly catchment downstream from Goulburn
Source: HNCMA

The **Mulwaree River** is also a major tributary of the Wollondilly Catchment. The Mulwaree River starts just east of the Lake George escarpment below Mount Fairy and flows 66km to Goulburn, where it joins the Wollondilly River.

Tributaries of the Mulwaree River include Bangalore Creek, Bongaralaby Creek; Bulamalito Creek, Mulwaree Chain of Ponds Creek, Covan Creek, Crisps Creek, Gordons Creek, Gundry Creek, Long Gully, Quialigo Creek, Reedy Creek, Run O'Waters Creek and Saltpetre Creek.

Lake Bathurst is within the Mulwaree River catchment. Approximately 30km south of Goulburn, Lake Bathurst is a shallow lake with a surface area that can vary from 2km² to 10km² depending on inflow and evaporation rates. The lake, and nearby wetlands, including **The Morass**, are considered an important breeding ground and drought refuge for many bird species.

1.2.2 The Shoalhaven River Catchment

The Shoalhaven River Catchment occupies the more remote and sparsely populated eastern half of the Goulburn Mulwaree LGA. Its many tributaries include Bogungra Creek, Boro Creek, Budjong Creek, Bungonia Creek, Cartroad Creek, Conners Creek, Inverary Creek, Jacqua Creek, Jerralong Creek, Jerrara Creek, Lumley Creek, Little Nadgigomar Creek, Little Timberlight Creek, Mulwaree Creek, Nadgigomar Creek, Nerrimunga Creek, Oallen Creek, Paddys Creek, Paradise Creek, Pophams Creek, Reedy Creek, Spring Creek, Springponds Creek, Stony Creek, Washedaway Creek and Windellama Creek.

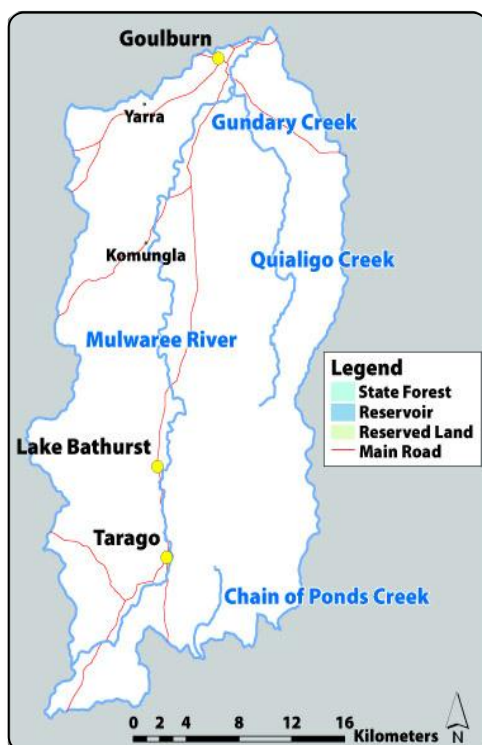


Figure 5 The Mulwaree River catchment
Source: HNCMA

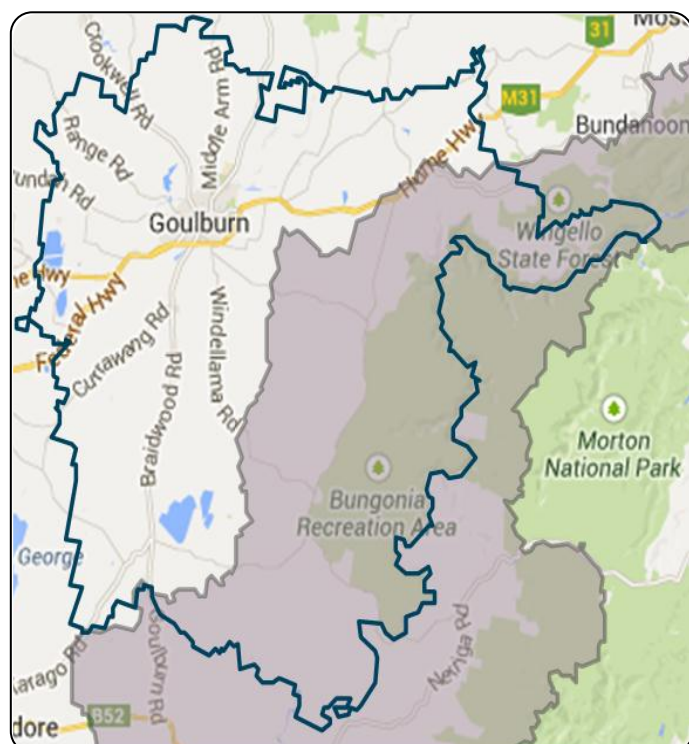


Figure 6 The Shoalhaven catchment (shaded grey) within the Goulburn Mulwaree LGA (within blue line)
Source: SCA

1.3 THE VALUE OF GOULBURN MULWAREE'S WATERWAYS

Goulburn Mulwaree's waterways are of considerable **environmental, economic, social and cultural value**. They play a crucial role in many aspects of daily life both within Goulburn Mulwaree and beyond.

Environmentally, Goulburn Mulwaree's waterways provide habitat for aquatic and terrestrial flora and fauna, some vulnerable, threatened or endangered. They also supply the water needed to support the residents, businesses and industries within Goulburn Mulwaree's towns and villages, and are part of the water supply catchment for the greater Sydney metropolitan area.

Economically, the Wollondilly, Mulwaree and Shoalhaven Rivers and their tributaries support many elements of the region's economy. They also provide an array of opportunities for greater productivity and economic growth.

Socially, Goulburn Mulwaree's waterways are places for active and passive recreation, gathering, adventure and relaxation. They are a precious resource which, in many ways, enhance the liveability of Goulburn Mulwaree and improve the health and wellbeing of residents and visitors to the region.

Culturally, Goulburn Mulwaree's waterways are strongly linked to the region's history (both pre and post European settlement), its development and identity.

1.4 THE CURRENT STATE OF GOULBURN MULWAREE'S WATERWAYS

Many of Goulburn Mulwaree's waterways are suffering from the on-going impacts of human actions and natural events such as native vegetation clearance for agriculture resulting in excessive overland runoff, the introduction of exotic plants and animals and periods of prolonged drought.

Certain agricultural practices, mining and quarry activities, new rural residential development, increased urban development and area of impervious infrastructure, water extraction, sewage overflows and discharges also impact adversely on Goulburn Mulwaree's waterways.

Recent environmental assessments of our waterways suggest they are in moderate to poor health.

The **State of the Environment (SoE) Reports** undertaken by the ACT Commissioner for Sustainability and Environment (CoSE) in 2004, 2008 and 2009 have found that water quality in a number of the Goulburn Mulwaree's waterways to be poor. SoE reporting also suggests that the riparian zones of most of area's waterways are highly disturbed, have high to medium stress ratings, and face several threatening processes. Some of the key findings of recent SoE reporting which relate to Goulburn Mulwaree's waterways are highlighted in Table 1.

The **River Reach Assessment** H-N CMA in 2007 found the health of waterways in the Wollondilly Catchment to be either moderate or poor. Some of the main findings of the River Reach Assessment are contained in Table 2.

**Table 1 KEY FINDINGS OF RECENT STATE OF THE ENVIRONMENT
REPORTING RELATING TO GOULBURN MULWAREE'S WATERWAYS**

- high salt levels in the Mulwaree River
- median values for total nitrogen in the Mulwaree River (at Towers Weir) nearly six times default values
- median values for total phosphorous, pH and electrical conductivity in the Mulwaree River exceeding relevant default values
- highly disturbed riparian vegetation along all of Goulburn Mulwaree's major rivers
- 97% of riparian zones infested, to some degree, by exotic weeds - including 19 weed species declared noxious, and 8 poisonous or harmful to livestock
- only 3% of rivers with native riparian vegetation, and only 2% with 'good quality' native riparian vegetation
- severe gully erosion in most of the Bungonia Creek sub-catchment
- areas of extreme gully erosion in the Upper Wollindilly, Boxers Creek and Lake Bathurst sub-catchments
- areas of severe to extreme rill erosion, extreme gully erosion and sheet erosion within the Shoalhaven catchment, predominantly in the sub-catchments of Budjong, Jacqua, Jerralong and Spring Creeks
- poor overall rating for habitat

Table 2 **SOME OF THE FINDINGS OF THE H-N CMA'S RIVER REACH ASSESSMENT OF THE WOLLONDILLY CATCHMENT**

- high salt levels in the Mulwaree River
- degraded water quality in the Wollondilly River adjacent to the Goulburn urban area – particularly in the section from Rossi Weir down to the Mulwaree River
- high nutrient levels in the Mulwaree River near Tarago from sewage
- salinity in some of the tributaries of the Mulwaree River
- changes to the hydrology of the reaches of the Wollondilly River downstream from Goulburn due to the water extraction activities associated with Pejar and Sooley Dams, and the Rossi and Marsden Weirs – with those changes detrimentally affecting the river's ability to recover from past damaging activities
- little or no riparian vegetation on the banks of the Wollondilly River upstream from Goulburn, the Mulwaree River upstream from Tarago, Chain of Ponds Creek and the Tarlo River, with those assessed as being in a degraded condition
- little or no riparian vegetation along the banks of the Mulwaree River from Goulburn to Tarago, Quialigo Creek, and the Wollondilly River downstream from Goulburn, with those reaches assessed as being in only moderate condition
- severe woody weed/willow infestation and increasing serrated tussock invasion along parts of the upper Wollondilly River and its tributaries, particularly between Rossi Weir and its confluence with Mulwaree River, and along Sooley Creek and Fenwick Creek
- significant damage being done to the riparian zones of many of Goulburn Mulwaree's waterways by cattle and exotic pests such as wild deer and feral goats
- artificial barriers, such as weirs, are completely blocking native fish passage along the both the Wollondilly and Mulwaree Rivers upstream from Goulburn
- artificial barriers, such as weirs, are potentially interfering with fish passage along the Wollondilly River and its tributaries downstream from Goulburn



Figure 7 The Wollondilly River at Pomeroy. As is evident, there is little riparian vegetation along the river upstream from Goulburn



Figure 8 Willow infestation along the Wollondilly River at Rossi Weir, west of Goulburn



Figure 9 Creek bank erosion near Marulan
Source: HNMCA, 2007a

1.5 COUNCIL'S VISION

Council's vision for Goulburn Mulwaree's waterways is:

To have healthy, attractive, sustainably-managed waterways, which provide an important habitat for native flora and fauna, enhance the rural landscape and urban amenity, and benefit the lives of all in the community through improved recreational, leisure and economic opportunities and greater engagement with the natural environment

1.6 KEY VALUES OF GOULBURN MULWAREE WATERWAYS

The key values of the Goulburn Mulwaree waterways are:

- **Riparian Zones**
- **Water Quality**
- **Biodiversity**
- **Flood mitigation**
- **Community Engagement and Enjoyment**
- **Economic Opportunities**

The Action Plans aim to identify management actions most likely to deliver improvement in the key values.

1.7 COUNCIL'S OBJECTIVES

To ensure that Council's vision for Goulburn Mulwaree's waterways is realised, this Waterways Plan has the following objectives:

- **Improve the quality of water in Goulburn Mulwaree's waterways**
- **Restore and better manage the riparian zones along Goulburn Mulwaree's waterways**
- **Encourage the better management of soils along the waterways**
- **Provide better habitats and enhance and protect biodiversity along and within Goulburn Mulwaree's waterways**
- **Better manage flooding and flows along Goulburn Mulwaree's waterways**
- **Increase opportunities for recreational use of Goulburn Mulwaree's waterways and the communities' capacity to contribute towards management of the catchment's natural resources**
- **Identify and encourage appropriate, sustainable economic uses of Goulburn Mulwaree's waterways**

Through a broad range of initiatives Council will endeavour to realise the vision and objectives of this Waterways Plan. These initiatives are outlined in the Action Plans.

1.8 PLAN CONTEXT

Sydney Catchment Authority and the local Catchment Management Authorities play a considerable role in the management of our waterways and natural resources. The Draft Healthy Waterways Strategy 2012-2016 and Hawkesbury – Nepean Catchment Action Plan 2013 - 2023 produced by these agencies are testament to the collaborative responsibility for management of our river catchment.

The Waterways Plan details Council's management response to improve the quality of our waterways. The document will guide Council in terms of future decision making, setting of priorities and allocation of organisational resources. The Plan will also assist Council when seeking Federal and State Government funding for projects associated with our waterways.

Completion of the various initiatives in the Action Plans is subject to resource allocation approval either through the Operational Budget and / or grant funding processes.

2 ACTION PLANS

2.1 Key value: Riparian Zones

Objective: Restore and better manage the riparian zones along Goulburn Mulwaree's waterways. Through a range of initiatives Council aims to:

- Establish a River corridor
- Increase the length of River banks being actively rehabilitated
- Reduce the prevalence of noxious weeds
- Minimise soil erosion

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of adopted Strategies and Policies	Implement, review and update the following:	Community, Staff and Councillors	Council allocation: utilisation of existing resources
	▪ Integrated Weed Management Policy		
	▪ Noxious Weeds Policy		
Direct works / Asset Renewal	Maintain 50m buffer around Sooley dam in terms of weed control	N/A	Council allocation: within current budget
	Continue Gross Pollutant Trap cleaning program (approximately 100 GPTs per annum)	N/A	Council allocation: \$200,000 pa
	Include control of invasive species, willow removal and erosion as an integral part of all funding applications for River rehabilitation	N/A	Council allocation: within current budget#
	By 2015 complete the grant funded rehabilitation works to the Albert Street section of the Wollondilly River	H-N CMA,	Grant funded: \$50,000 Council allocation: \$54,000
	By 2016 complete the design and costing work for integration of the Riverside Park with the Wollondilly River	N/A	Council allocation: within current budget
Legislative obligations	Continue to acquire River foreshore land under the GM LEP 2009	N/A	Council allocation: within current budget
	Ensure new development has adequate buffer and control measures to reduce adverse impact upon waterways	SCA, EPA	Council allocation: within current budget
Compliance Action / Audits	Investigate and commence compliance action for any significant clearing / disturbance of native vegetation	EPA	Council allocation: within current budget

Advocacy	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and foreshores that benefit riparian zones including installation of additional Gross Pollutant Traps	Various	Council allocation: within current budget#
	Seeking funding from Local Land Services under the Local Government Partnership Program to support natural resource management initiatives		Council allocation: within current budget#
Reporting of Outcomes	Completed initiatives and proposed initiatives not currently funded shall be detailed in SoE Reporting	CoSE	Council allocation: within current budget

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

2.2 Key value: Water Quality

Objective: Improve the quality of water in Goulburn Mulwaree's waterways. Through a range of initiatives Council aims to:

- Manage River flows
- Appropriately manage waste (liquid and solid) treatment and disposal
- Control urban stormwater flows in new and existing developments
- Control urban stormwater pollution

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of adopted Strategies and Policies	Implement, review and update the following:	Community, Staff and Councillors	Council allocation: utilisation of existing resources
	▪ Waste Management: Waste and Resource Recovery Strategy		
	▪ Integrated Water Cycle Management Plan		
	▪ On site Stormwater Management Policy		
	▪ Onsite Sewage Management Policy		
	▪ Private Pumping of Sewage Policy		
	▪ Septic Tank, Chemical Toilet & Pan Waste Disposal Policy		
	▪ Septic Tank Treatment Facilities on Council Property Policy		
Direct works / Asset renewal	▪ Liquid Trade Waste Policy		
	▪ Rainwater Tank for New Development Policy		
	Maintain 50m buffer around Sooley Dam in terms of stock proof fencing and vegetative cover.	N/A	Council allocation: \$20,000 pa
	By 2015 complete the grant funded upgrade the Bradley Street Sewer Pump Station to prevent overflow during heavy rainfall events	SCA	Grant Funded: \$825,000 Council allocation: \$825,000
	By 2015 upgrade the Water Treatment Plant to integrate the Highlands Source Pipeline	NOW, EWH&A	Grant funded: \$2.9M Council allocation: \$2.6M
	By 2015 upgrade the Goulburn Waste Management Facility to dispose of leachate by evaporation (rather than via the sewer) during warmer months	N/A	Council allocation: \$22,000
	By 2015 replace Towrang, Landsdowne and Oallen Ford Bridges	RMS	Council allocation: \$360,000

	By 2017 complete the Sewer Rehabilitation Project (i.e. smoke testing; cleaning, re-lining and upsizing of sewer pipes)	N/A	Council allocation: \$936,000 in 2013/14 \$936,000 in 2014/15
	By 2018 upgrade the Goulburn Sewer Treatment Plant to produce effluent quality suitable for reuse		Unsecured (approx \$40M)
Legislative obligations	Comply with Licence requirements for water extraction rates, environmental flows and effluent disposal	NOW EPA	Council allocation: within current budget
	Staff and contractors employed for pesticide / herbicide application must be trained and certified. Recommended products and application method must be followed when applied near River foreshores	N/A	Council allocation: within current budget
	Consider key planning documents including the Drinking Water Catchment SEPP when assessing application for new development and gain Sydney Catchment Authority concurrence when required	SCA	Council allocation: within current budget
Compliance Action / Audits	Ensure adequate sedimentation control measures are incorporated and maintained for new development	EPA	Council allocation: within current budget
	Continue the Audit program for On Site Effluent Management Systems (approximately 200 per annum)		
	Continue the Audit program for Poultry Farms (approximately 9 per annum)		
	Continue the Audit program for Extractive Industries (approximately 16 per annum)		
	Continue the Audit program for Fuel Service Stations (approximately 22 per annum)		
Advocacy	Seek continued funding for the Drum Muster Program and advocate for more frequent collections	Various	Council allocation: within current budget#
	Seeking funding from SCA under the Priority Pollutants Program to improve the management of sewage and stormwater	SCA	
	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and foreshores that benefit water quality	Various	
Reporting of outcomes	Carry out and report monitoring results required under EPA Licence Agreements for the STP and Landfills sites.	EPA	Council allocation: within current budget

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

2.2 Key value: Biodiversity

Objective: Provide better habitats to enhance and protect biodiversity along Goulburn Mulwaree's waterways. Through a range of initiatives Council aims to:

- **Improve native vegetation connectivity (rehabilitate corridor habitat to connect important remnant vegetation and reserved land)**
- **Control spread of invasive species**
- **Conserve native vegetation**
- **Control of feral animals (i.e. cats, rabbits, foxes, pigs and deer)**
- **Improve knowledge of terrestrial and aquatic habitats and species**

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of adopted Strategies and Policies	Implement, review and update the following: <ul style="list-style-type: none"> ▪ Goulburn Mulwaree Biodiversity Strategy 	Community, Staff and Councillors	Council allocation: utilisation of existing resources
Direct Works / Asset Renewal	By 2015 complete biodiversity mapping in the peri-urban area surrounding Goulburn	OEH	Council allocation: within current budget
	Collate flora and fauna baseline data for comparative analysis	OEH	Council allocation: within current budget
	Include control of invasive species, willow removal and erosion as an integral part of all funding programs and applications for River rehabilitation	N/A	Council allocation: within current budget
	Support the grant funded rehabilitation project at the May Street Wetlands	FROGS	Council allocation: within current budget#
Legislative obligations	Ensure new development conserve native vegetation to improve habitat	OEH, NPWS	Council allocation: within current budget
	Consider key planning documents including the South Goulburn Threatened Species Management Plan when assessing application for new development	N/A	Council allocation: within current budget

Compliance Action / Audits	Investigate and commence compliance action for any significant clearing / disturbance of native vegetation	EPA	Council allocation: within current budget
Advocacy	Seek State Agency collaborate for an effective feral animal control program	Various	Council allocation: within current budget#
	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and foreshores that benefit biodiversity	Various	Council allocation: within current budget#
Reporting of Outcomes	SoE Reporting	CoSE	Council allocation: within current budget

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

2.3 Key value: Flood mitigation

Objective: Better manage the impacts of flooding along Goulburn Mulwaree's waterways. Through a range of initiatives Council aims to:

- Improve knowledge of flood behaviour
- Recognise and document the natural attributes of the Riverine and floodplain environment
- Ensure flood mitigation works and measures are compatible with relevant environmental issues

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of Strategies and Policies	Implement, review and update the following: <ul style="list-style-type: none"> Wollondilly River and Mulwaree Ponds Floodplain Risk Management Study & Plan 	Community, Staff and Councillors	Council allocation: utilisation of existing resources
Direct works / Asset Renewal	By 2015 commence implementation of a Flood Warning System (i.e. installation of rain gauges)	OEH, BoM, SES	Council allocation: \$30,000
	By 2016 complete the grant funded review of the Floodplain Study and Plan. Examine whether the tree removal in certain sections of the River is warranted	OEH	Grant funded: \$120,000 Council allocation: \$68,000
Legislative obligations	Consider key planning documents including the NSW Floodplain Development Manual when assessing application for new development	N/A	Council allocation: within current budget
Compliant Action / Audits	Investigate and commence compliance action for any illegal works carried out within the floodplain	N/A	Council allocation: within current budget
Advocacy	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and foreshores that benefit flood management / mitigation	Various	Council allocation: within current budget#
	Seeking funding from OEH to complete implementation of a Flood Warning System	OEH	Unsecured
Reporting of outcomes	SoE reporting	CoSE	Council allocation: within current budget

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

2.4 Key value: Community Engagement and Enjoyment

Objective: Increase opportunities for recreational use of Goulburn Mulwaree's waterways and the communities' capacity to contribute towards management of the catchment's natural resources. Through a range of initiatives Council aims to:

- Foster an understanding within the community (particularly land managers) of their rights and responsibilities
- Promote a connection and sense of belonging to the catchment
- Enforce current legislative requirements to protect our waterways
- Seek positive behavioural change through awareness raising, events and recreational use
- Increase the length of river banks being actively cared for by the Landcare / Bushcare Program or community groups
- Employ best practice for new public recreational facilities
- Promote appropriate recreational use of Council's waterways
- Provide interactive opportunities along the River foreshore areas

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of Strategies and Policies	Implement, review and update the following:	Community, Staff and Councillors	Council allocation: utilisation of existing resources
	<ul style="list-style-type: none"> Recreational Use of Council Dams Policy 		
Direct works / Asset renewal	Continue to host the Water Week initiatives including 'Get Wet at the Weir' and the 'Water Week Fishing Competition'	N/A	Council allocation: \$3,000 pa
	By 2015 complete the risk assessment of the advisory signs and access provisions along the Wollondilly and Mulwaree River	N/A	Council allocation: \$2,500
	By 2016 complete the risk assessment of the play equipment and recreational furniture along the Wollondilly and Mulwaree River	N/A	Council allocation: \$2,500
	Support the grant funded interpretive / educational project at the May Street and McDermott Drive Wetlands	FROGS, Mulwaree High School	Council allocation: within current budget#

	Include engagement with Schools / volunteers and formation of local Landcare / Bushcare groups as an integral part of all funding programs and applications for River rehabilitation	N/A	Council allocation: within current budget
	Continue to circulate copies of the Rural Living Handbook to new residents	N/A	Council allocation: within current budget
	Maintain existing facilities at key points (i.e. Waterworks Museum, etc) including improved accessibility	N/A	Council allocation: within current budget
	Encourage passive uses that may have synergies with the aesthetic, recreational attributes of the waterways (i.e. art displays, film nights, music concerts)	Chamber of Commerce, Art community	Council allocation: within current budget#
Legislative obligations	Consider key planning documents including the Drinking Water SEPP when assessing application for new development	SCA	Council allocation: within current budget
Advocacy	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and significant landmarks (i.e. Waterworks Museum, Boathouse etc) that facilitate community engagement and enjoyment	Various	Council allocation: within current budget#
Reporting of Outcomes	Community Survey to gauge satisfaction levels	N/A	Unsecured

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

2.5 Key value: Economic Opportunities

Objective: Following implementation of River restoration initiatives the appropriate use of Goulburn Mulwaree's waterways shall be identified and encouraged. Through a range of initiatives Council aims to:

- Promote Goulburn as a "City with Water"
- Support eco friendly tourism opportunities which utilise the recreational potential of the Goulburn Mulwaree's waterways and promote its enjoyment
- Assist the local economy by encouraging visitation to significant landmarks along Goulburn Mulwaree's waterways as a destination and gathering place for community activities (i.e. Goulburn Wetlands, Waterworks Museum etc)

Management Response	Action / expected outcome/ target	Project Partners	Source of Funding
Implementation of Strategies and Policies	Implement, review and update the following:	Community, Staff and Councillors	Council allocation: utilisation of existing resources
	<ul style="list-style-type: none"> Community Strategic Plan 		
Direct works / Asset Renewal	Continue to promote Goulburn as a 'City with Water' during Water Week	N/A	Council allocation: within current budget
	Continue to promote visitation and use of the Waterworks Museum including the café and function facilities via social media (i.e. Facebook)	N/A	Council allocation: within current budget
	Utilise images of Goulburn's waterways in promotional brochures, tourism / marketing campaigns, website graphics, media opportunities etc	N/A	Council allocation: within current budget
	Utilise Goulburn's waterways for skill development of the local workforce (i.e. Green Corps Program)	Various	Council allocation: within current budget#
	Encourage local businesses to sponsor projects, events and recreational use of Goulburn's waterways	Chamber of Commerce	Council allocation: within current budget
	Encourage business enterprises that may have synergies with the aesthetic, recreational attributes of the waterways (i.e. functions, fitness classes etc)	Chamber of Commerce	Council allocation: within current budget

Advocacy	Pursue funding opportunities when they arise to continue rehabilitation of the Rivers and foreshores that facilitate business opportunities	Various	Council allocation: within current budget
Reporting of Outcomes	Community Survey to gauge satisfaction levels	N/A	Unsecured

Support of a financial nature requires the prior approval of Council and budget allocation in Council's Operational Plan

GLOSSARY

LIST OF ABBREVIATIONS & ACRONYMS

ACT	Australian Capital Territory
CoSE	ACT Commissioner for Sustainability and Environment
DCP	Development Control Plan
DoPI	Department of Planning & Infrastructure (NSW Government)
DPI	Department of Primary Industries (NSW Government)
EPA	Environment Protection Authority (NSW Government)
EP&A	Environmental Planning & Assessment – as in <i>Environmental Planning & Assessment Act 1979</i>
EWHA	Department of Environment, Water, Heritage and the Arts
GMC	Goulburn Mulwaree Council
HNCMA	Hawkesbury-Nepean Catchment Management Authority
LEP	Local Environmental Plan
LGA	Local Government Area
NoW	NSW Office of Water
NPWS	National Parks & Wildlife Service (NSW Government)
NSW	New South Wales
OEH	Office of Environment and Heritage (NSW Government)
PoM	Plan of Management
RFS	Rural Fire Service
RMS	Roads and Maritime Service (NSW Government)
SEPP	State Environmental Planning Policy
SEROC	South-East Regional Organisation of Councils
SES	State Emergency Service
SCA	Sydney Catchment Authority
SoE	State of the Environment – as in State of the Environment Report
STP	Sewage Treatment Plant
WSUD	Water Sensitive Urban Design

REFERENCES

- CRAWFORD, C. & LEWIS, B., 2002, *Riparian Management Guidelines for the Wollondilly and Wingecarribee Rivers*, Wollondilly Catchment Management Committee, Goulburn
- DEPARTMENT OF INFRASTRUCTURE, PLANNING & NATURAL RESOURCES (DIPNR), 2005, *Floodplain Development Manual: the management of flood liable land*
- DEPARTMENT OF PLANNING, 2008, *Sydney to Canberra Corridor Regional Strategy*
- DEPARTMENT OF PREMIER AND CABINET, 2012, *Southern Highlands & Tablelands Regional Action Plan*
- ENVIRONMENTAL PROTECTION AUTHORITY, 2012, *NSW State of the Environment 2012*
- GOULBURN CITY COUNCIL, 2000, *Urban Stormwater Management Plan*
- GOULBURN CITY COUNCIL, 1997, *Urban Drainage Study*
- GOULBURN CITY COUNCIL (GCC), 1989, *Stormwater Drainage Strategy*, GCC Engineering Department
- GOULBURN CITY COUNCIL, 1988(a), *Woodlots and Wetlands: Goulburn Waterways Study 1988 – A Resource Inventory and Action Plan*
- GOULBURN CITY COUNCIL, 1988(b), *Goulburn City Riverways Wollondilly River and Mulwaree Ponds (Landscape and Ecological Study) Draft Plan of Management*
- GOULBURN MULWAREE COUNCIL, 2013(a), *Goulburn Mulwaree Community Strategic Plan 2030*
- GOULBURN MULWAREE COUNCIL, 2013(b), *Recreational Use of Council Dams Policy*
- GOULBURN MULWAREE COUNCIL, *Goulburn Mulwaree Local Environmental Plan 2009 and Goulburn Mulwaree Development Control Plan 2009 (Amendment No. 2)*
- GOULBURN MULWAREE COUNCIL, 2007(a), *The Rural Living Handbook 2007-2009*
- GOULBURN MULWAREE COUNCIL, 2007(b), *Goulburn Mulwaree Biodiversity Strategy – Final Draft*
- GOULBURN MULWAREE COUNCIL, 2005, *Draft Willow Eradication Strategy*
- HAWKESBURY-NEPEAN CATCHMENT MANAGEMENT AUTHORITY, 2013, *Hawkesbury-Nepean Catchment Action Plan 2013-2023*
- HAWKESBURY-NEPEAN CATCHMENT MANAGEMENT AUTHORITY, 2008, *Hawkesbury-Nepean Catchment Action Plan 2007-2016*
- HAWKESBURY-NEPEAN CATCHMENT MANAGEMENT AUTHORITY, 2007, *River Health Strategy (Volume One and Two)*
- OFFICE OF THE COMMISSIONER FOR THE ENVIRONMENT (ACT), 2004, *Australian Capital Region State of the Environment Report 2004*
- SHIRE OF MULWAREE, 2002, *Marulan Urban Stormwater Management Plan*
- SMEC, 2003, *Wollondilly River and Mulwaree Ponds Floodplain Risk Management Study and Plan*
- SOUTHERN RIVERS CATCHMENT MANAGEMENT AUTHORITY, 2013, *Southern Rivers Catchment Action Plan 2013-2023*
- SOUTHERN RIVERS CATCHMENT MANAGEMENT AUTHORITY, 2011, *Regional Weed Management Strategy*
- SOUTHERN RIVERS CATCHMENT MANAGEMENT AUTHORITY, 2010, *Southern Rivers Catchment Action Plan*
- SYDNEY CATCHMENT AUTHORITY, 2012, *Healthy Catchments Strategy 2012-16 (Draft for Public Exhibition)*