WATER PLAN

2013 to 2018

September 2012

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SUPPORTING DOCUMENTS

The following supporting documents are available to provide further detail on key aspects of the Water Plan and can be downloaded from the Goulburn Valley Water website.

Document A	**Regional Statistics & Sources of Water**
Document B	**Stakeholder Engagement Plan**
Document C	***Draft* Statement of Obligations**
Document D	**Environmental Obligations & Initiatives**
Document E	**Water Quality Obligations & Initiatives**
Document F	**Demand Forecast**
Document G	**20 Year Capital Works Program**

WATER PLAN EXECUTIVE SUMMARY

Overview

Since 1 January 2004, the Essential Services Commission (ESC) has been responsible for economic regulation for the Victorian water sector. Under the ESC regulatory framework, Goulburn Valley Water is required to establish a Water Plan, which the ESC will consider, and if appropriate, suggest amendments and ultimately approve. This Water Plan sets the proposed service levels, programs and initiatives to be achieved and prices for water services over the period from 1 July 2013 to 30 June 2018.

A key aspect of preparing the Water Plan has been to engage with customers and stakeholders through a range of forums and focus groups to inform Goulburn Valley Water's judgement on service needs and preferences. The clear priorities identified by customers are:

- To provide safe drinking water;
- To ensure that water and sewerage services are continuous with no interruptions;
- To provide bills that are affordable; and
- To protect and enhance the natural environment.

These four priorities, and the need to meet Goulburn Valley Water's regulatory obligations, have guided the development of the Water Plan.

Goulburn Valley Water provides services to approximately 130,000 people in 54 cities, towns and villages across more than 20,000 square kilometres in northern Victoria. Goulburn Valley Water also services a large and diverse food manufacturing industry in the Goulburn Valley – the food bowl of Australia. These are defining aspects of our business, requiring 37 separate water treatment plants, 26 wastewater management facilities and thousands of kilometres of buried water mains and sewers. The assets required to provide services to our customers are a major influence on our capital investment program, operational costs and customer service response times.

Goulburn Valley Water has an ongoing program to drive efficiency in service delivery, having achieved wide ranging efficiencies during the current Water Plan period. This ongoing program is a key consideration for the Water Plan and has enabled Goulburn Valley Water to limit proposed price rises to 2.4% (plus CPI) per annum for the five year period, down from 7.7% (plus CPI) per annum for the current Water Plan period. This is despite having to meet new regulatory obligations, catering for population growth throughout the region and improving services in a number of towns.

Consulting with Customers about the Water Plan

Goulburn Valley Water is committed to stakeholder engagement as an integral part of our business activities. A detailed stakeholder engagement plan was developed and implemented as part of the Water Plan preparation. The key engagement forums which have been completed are:

- Corporate Community Reference Committee (CCRC) meetings
- Customer focus groups
- Customer survey
- Customer newsletter
- Newspaper advertisements
- Website and Sharepoint site
- Water Supply Demand Strategy engagement
- Project specific engagement
- Major customer forums
- Direct stakeholder contact

Feedback from stakeholders was received for the exposure draft Water Plan and has been considered in the Final Water Plan.

Key Drivers of Service Obligations

Goulburn Valley Water is required to meet a wide range of regulatory obligations and is committed to the key role of customer service and meeting the expectations of our customers. The key drivers that influence service levels include:

- Customer needs and preferences;
- *Water Act 1989;*
- *Water (Governance) Act 2006;*
- The *draft* Water Industry Regulatory Order*;*
- The *draft* Statement of Obligations;
- The Customer Code and key performance indicators;
- The Tradewaste Customer Code and Charter;
- The *Environment Protection Act 1970*, regulations, policies and licences;
- Environment Protection Authority Water Plan 3 Guidance December 2011;
- The Public *Health & Well Being Act 2008*, *Safe Drinking Water Act 2003*, *Food Act 1984* and *Fluoride Act 1973;*
- Department of Health Guidance on Water Plan 3, December 2011;
- Bulk entitlements orders;
- *Occupational Health and Safety Act 1985,* associated legislation, regulations and codes.

This Water Plan does not include any activities undertaken by Goulburn Valley Water that are not mandated by regulatory obligations or supported by our customers.

Service Levels

Goulburn Valley Water has adopted targets for a range of core performance measures. Customer consultation undertaken in preparation of the Water Plan has confirmed that customers currently support the existing levels of service. The Water Plan reflects this preference. The following table summarises Goulburn Valley Water's historic performance and performance targets for the 2013 – 2018 Water Plan period.

CORE PERFORMANCE INDICATORS

Indicator	Average Past 5 Years	Water Plan 2 Target	Water Plan 3 Target				
			13/14	14/15	15/16	16/17	17/18
WATER							
Unplanned water supply interruption events per 100km of water main	18.7	18.1	18.7	18.7	18.7	18.7	18.7
Average time taken to attend water leaks/bursts (Priority 1) – minutes	11.3	30	30	30	30	30	30
Average time taken to attend water leaks/bursts (Priority 2) – minutes	29.6	60	60	60	60	60	60
Average time taken to attend water leaks/bursts (Priority 3) – minutes	247	300	300	300	300	300	300
Unplanned water supply interruptions restored within (5) hours - %	98	98	98	98	98	98	98
Planned water supply interruptions restored within (5) hours - %	99	99	99	99	99	99	99
Average unplanned customer minutes off water supply – minutes	13.6	13.6	13.6	13.6	13.6	13.6	13.6
Average planned customer minutes off water supply – minutes	3.8	6.0	6.0	6.0	6.0	6.0	6.0
Average unplanned frequency of water supply interruptions – No. (per customer)	0.14	0.13	0.15	0.15	0.15	0.15	0.15
Average planned frequency of water supply interruptions – No. (per customer)	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Average duration of unplanned water supply interruptions – minutes	100	100	100	100	100	100	100
Average duration of planned water supply interruptions – minutes	101	113	110	110	110	110	110
Number of customers experiencing (3) unplanned water supply interruptions in the year – No.	92	85	85	85	85	85	85
Unaccounted for water - %	9.1	9.8 to 9.0	9.1	9.1	9.1	9.1	9.1
WASTEWATER							
Sewerage blockages – per 100km of sewer	23.6	25.3	23.6	23.6	23.6	23.6	23.6
Average time to attend sewer blockages and spills - minutes	45	60	60	60	60	60	60
Average time to rectify a sewer blockage – minutes	126	150	150	150	150	150	150
Spills contained within (5) hours - %	99	100	100	100	100	100	100
Customers receiving (3) sewer blockages in the year – No.	0.3	0	0	0	0	0	0
CUSTOMER SERVICE							
Complaints to EWOV – per 1000 customers	0.68	0.43	0.68	0.68	0.68	0.68	0.68
Telephone calls answered within 30 seconds - %	98	97	97	97	97	97	97

In addition to the core performance measures, Goulburn Valley Water has identified additional customer service performance measures for the Water Plan, reflecting additional aspects of service that were identified as important by customers.

ADDITIONAL PERFORMANCE INDICATORS

Indicator	Average Past 5 Years	Water Plan 2 Target	Water Plan 3 Targets				
			13/14	14/15	15/16	16/17	17/18
WATER							
Drinking water quality compliance with Safe Drinking Water Regulations 2005							
Localities complying with E.coli standard (%)	100	100	100	100	100	100	100
Localities complying with turbidity standard (%)	100	98 increasing to 100	100	100	100	100	100
Localities complying with disinfection byproduct standard (%)	99	94 increasing to 100	100	100	100	100	100
WASTEWATER/ENVIRONMENTAL							
Wastewater Management Facilities complying with EPA Licence requirements (%)	100	100	100	100	100	100	100
Biosolids beneficially reused (dry tonnes per annum)	3,652	Varying between 4,700 and 8,900 per year	Average of 4,300 per year over the Water Plan period				

A guaranteed service level scheme will be extended in scope by Goulburn Valley Water during the 2013–2018 Water Plan period. Guaranteed service levels schemes provide monetary compensation for customers who receive services that do not meet defined performance levels. The proposed guaranteed service levels are outlined in the following table:

GUARANTEED SERVICE LEVELS

GSL	GSL Type	GSL rebate for breach ($)
All unplanned water interruptions restored within 5 hours of notification	Water Service	50
No more than 5 unplanned water interruptions within any 12 month period	Water Service	50
All sewage spills in a house contained within 1 hour of notification	Sewer Service	1,000
No more than 3 sewerage interruptions within any 12 month period	Sewer Service	50
Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours (as defined by the ESC) to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying	Customer Hardship	300

Capital Expenditure

Goulburn Valley Water currently maintains assets with a modern equivalent replacement value of over $1.1 billion. Capital works expenditure proposed in the Water Plan total $167 million (averaging $33.4 million per annum), reflecting increased expenditure for replacing ageing assets and continued expenditure to improve water quality, provide capacity for population growth and maintain existing service levels.

Infrastructure projects included in the Water Plan that are greater than $5M in value are listed as follows:

- $32 million for replacement of ageing water mains, sewers and treatment plant and pump station equipment to maintain service levels;
- $17 million for an upgrade for the Shepparton Water Treatment Plant to replace ageing assets, improve water quality and provide for population growth;
- $10 million for new fluoride plants funded by the Department of Health;
- $9 million for an upgrade for the Numurkah Water Treatment Plant to replace ageing assets, improve water quality and provide for population growth;
- $6 million for additional winter storage at the Mansfield Wastewater Management Facility to provide capacity for population growth;
- $5 million for the construction of a new water treatment plant at Marysville to improve water quality and comply with the requirements of the *Safe Drinking Water Act 2003*.

Operating Expenditure

Operating expenditure proposed in the Water Plan of $219 million (averaging $44 million per annum) generally reflects continuation of business as usual activities. A small number of new initiatives have been included, which will result in increased operating expenditure above business as usual. Examples are:

- $3.1 million to meet Goulburn Valley Water's contribution for unfunded defined benefits superannuation contributions;
- $1.7 million to rehabilitate a corroded 14 million litre (ML) tank in Shepparton to maintain service levels;
- $1.4 million per year (by year five of the Water Plan) to operate new assets that will be constructed to improve water quality and provide for population growth;
- $2.0 million to manage water main repair soil stockpiles;
- $0.5 million contribution to the Intelligent Water Networks project;
- $0.5 million to rehabilitate the filter at the Kyabram Water Treatment Plant to maintain water quality;

- $0.4 million to rehabilitate filters at the Broadford Water Treatment Plant to maintain water quality;

- $0.32 million per year (by Year five of the Water Plan) to operate new fluoride plants, which are a new water quality obligation by the Department of Health;

- $0.26 million per year for additional water treatment plant operators and training to comply with the Department of Health regulations for operator skills and qualifications.

Proposed Pricing Path

In proposing the water service prices for the 2013–2018 period Goulburn Valley Water has taken into account the costs to operate and maintain the existing water and wastewater systems and additional costs relating to new water and sewerage facilities and regulatory obligations. Partially offsetting these cost increases, Goulburn Valley Water has an ongoing innovation and efficiency program based on the Business Excellence Framework. This Framework was introduced over the past three years and has contributed to cost reductions throughout all of Goulburn Valley Water's operations.

With an ongoing commitment to the Framework for the 2013–2018 Water Plan period, Goulburn Valley Water is anticipating further efficiency improvements. Consequently the proposed price increases have been capped at the levels shown in the following table.

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Water Service Fee	CPI + 0.0%	CPI + 0.0%	CPI + 0.0%	CPI + 0.0%	CPI + 0.0%
Water volume charge	CPI + 2.4%	CPI + 2.4%	CPI + 2.4%	CPI + 2.4%	CPI + 2.4%
Wastewater charges	CPI + 3.4%	CPI + 3.4%	CPI + 3.4%	CPI + 3.4%	CPI + 3.4%

The cost of water and sewerage services in the Goulburn Valley will continue to be amongst the lowest in Victoria following the proposed price increases and provides a very competitive regional advantage for future economic development.

The tables outlined on the following pages detail approved water and wastewater tariffs for 2012/2013 in the current Water Plan, and proposed tariffs for the 2013–2018 Water Plan period. All amounts are in real dollars (1 January 2013).

Customer Impacts – Water and Wastewater Tariffs - $real 01.01.2013

The impact of price increases for a residential customer consuming 260 kilolitres of water per annum for the regulatory period is shown in the table below.

TOTAL CUSTOMER TARIFFS

District	Tariff	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts with water and wastewater services	Water Service Fee	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
	Water Volume Charge	$276.48	$283.11	$289.90	$296.87	$303.99	$311.30
	Wastewater Service Fee	$414.91	$429.02	$443.61	$458.69	$474.29	$490.42
	Total	$846.86	$867.60	$888.98	$911.03	$933.75	$957.19
	Percentage Increase		2.45%	2.46%	2.48%	2.49%	2.51%
Water Only Towns Barmah, Baxter Road, Colbinabbin, Corop, Dookie, Katamatite, Katandra West, Katunga, Kirwans Bridge, Longwood, Picola, Pyalong, Strathbogie, Toolamba, Woods Point, Wunghnu	Water Service Fee	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
	Water Volume Charge	$276.48	$283.11	$289.90	$296.87	$303.99	$311.30
	Total	$431.95	$438.58	$445.37	$452.34	$459.46	$466.77
	Percentage Increase		1.53%	1.55%	1.56%	1.57%	1.59%

Tenants, where the property is separately metered, pay the water volume charge only. Some properties are provided water services only and therefore the wastewater service fee does not apply.

Tariffs - $real 01.01.2013

Goulburn Valley Water's two part water tariff comprises a fixed service fee that covers the continuous availability of services and a volumetric charge for each kilolitre of water used. The tariff structure is designed to encourage water conservation by providing a direct incentive for customers to control the size of their bills by varying the level of water they choose to use. Customers have indicated a preference to maintain the two-part tariff indicating that it is readily understood.

WATER SERVICE FEES (RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS)

Meter Size mm	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Vacant Land - Unconnected	$77.74	$77.74	$77.74	$77.74	$77.74	$77.74
20mm	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
25mm	$242.94	$242.94	$242.94	$242.94	$242.94	$242.94

Note: The above fees apply to all towns and districts of Goulburn Valley Water. Different service charges apply for larger meter sizes.

WATER VOLUMETRIC TARIFFS (RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS)

District	Volume Charge –Residential and Non-Residential					
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	106.34c/kL	108.89c/kL	111.50c/kL	114.18c/kL	116.92c/kL	119.73c/kL
Raw Water	53.17c/kL	54.45c/kL	55.76c/kL	57.10c/kL	58.47c/kL	59.87c/kL

Note: Raw (untreated) water is available to some customers in Euroa, Mansfield, Mooroopna, Nagambie, Seymour and Tongala

WASTEWATER SERVICE FEES – (RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS)

District	Service Availability Fee					
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	$414.91	$429.02	$443.61	$458.69	$474.29	$490.42

Note: Vacant lot charges are 50% of the fees in the Table above

Non-Residential Customers – Volumetric Wastewater Charge

The volumetric wastewater charge is calculated based on water supplied to the property, as measured by the water meter. A range of discharge factors apply depending on the type of business conducted at each non-residential property. The relevant discharge factor is applied to the measured water consumption to estimate the volume of wastewater being discharged to the sewer system. An allowance of 180kL is deducted from this calculated volume and the volume in excess of this amount is charged a fee per kilolitre, as shown in the following table:

VOLUMETRIC WASTEWATER CHARGES

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	145.00c/kL	149.93c/kL	155.02c/kL	160.30c/kL	165.75c/kL	171.38c/kL

1.0 INTRODUCTION

1.1 Purpose of Water Plan

Since 1 January 2004 the Essential Services Commission (ESC) has been responsible for economic regulation for the Victorian water sector. As one of the 19 businesses supplying water, sewerage and related services within Victoria, Goulburn Valley Water's prices and service standards are regulated by the ESC.

The Water Industry Regulatory Order *draft 2012* (WIRO *draft 2012*) establishes the regulatory framework and nature of the water services to be regulated by, and the functions, of the ESC. Services relevant to Goulburn Valley Water within the scope of the WIRO *draft 2012 i*nclude: retail water, recycled water, retail sewerage, trade waste, storage operator/bulk and connection services and services to which developer charges apply.

Under the ESC regulatory framework water businesses are required to establish a Water Plan detailing the proposed services to be provided and prices for delivery of those services for the five year period commencing 1 July 2013. The ESC has the role to consider and, if appropriate, suggest amendments and ultimately approve the Water Plan.

In preparing this Water Plan, Goulburn Valley Water has given consideration to a range of cost drivers, largely falling into the categories of:

1. Costs associated with achieving customer preferences;
2. Obligations established in the *draft* Statement of Obligations;
3. Environmental Obligations and Initiatives;
4. Water Quality Obligations and Initiatives;
5. Service standard obligations;
6. Managing demand and supply;
7. Other statutory obligations.

In complying with the WIRO *draft 2012*, Goulburn Valley Water has also structured the Water Plan to reflect our continued effort towards improving efficiency in delivery of services by optimising operating and capital expenditure and ensuring an appropriate return on capital.

This Water Plan outlines the service delivery results and other initiatives that Goulburn Valley Water proposes to achieve during the 2013–2018 period. It also establishes the revenue income needed for business sustainability and the proposed prices to be charged for the various services provided.

1.2 Goulburn Valley Water – A Description of the Business

1.2.1 Introduction

Goulburn Valley Water provides water and sewerage services to approximately 130,000 people in 54 cities, towns and villages across more than 20,000 square kilometres in northern Victoria. We also provide water and sewerage services to a large and diverse food manufacturing industry in the Goulburn Valley – the food bowl of Australia. These are defining aspects of our business, requiring 37 separate water treatment plants, 26 wastewater management facilities and thousands of kilometres of buried water mains and sewers.

These 63 geographically dispersed water and wastewater systems are a defining feature of the operating environment of our business, which has a major influence on our capital investment program, operational costs and customer service response times.

Provision of high quality water and trade waste services to food processing industries is a major business focus due to their individual impact on Goulburn Valley Water's systems.

The geographic area of Goulburn Valley Water is shown in Figure 1 and comprises the local government areas of:

- Shire of Campaspe;
- City of Greater Shepparton;
- Shire of Mansfield;
- Shire of Mitchell;
- Shire of Moira;
- Shire of Murrindindi;
- Shire of Strathbogie.

FIGURE 1: Goulburn Valley Water Service Region

Locality Plan Of Towns within the Goulburn Valley Water District

1.2.2 Key Business Activities

The main activities undertaken by Goulburn Valley Water are:

- Harvesting and treatment of raw water;
- Planning and management of headworks;
- Reticulation of treated water to customers;
- Collection and transportation of wastewater including trade waste;
- Treatment and beneficial re-use of recycled water;
- Beneficial recycling of wastewater treatment by-products including biosolids and biogas;
- Development and implementation of programs for the conservation and efficient use of water;
- Planning with communities for their future water and wastewater services;
- Community education about sustainable water management.

1.2.3 Services Provided

Goulburn Valley Water provides a range of services defined as Prescribed Services and Declared Services (regulated services) in clause 6 of the *Water Industry Regulatory Order draft 2012* in respect of which the ESC has the power to regulate price standards and conditions of service and supply. The regulated services provided by Goulburn Valley Water are as follows:

- retail water services;
- retail recycled water services;
- retail sewerage services;
- storage operator and bulk water services;
- bulk sewerage services
- bulk recycled water services;
- connection services;
- services to which developer charges apply;
- trade waste services.

Water services are currently supplied to approximately 58,000 properties across 54 towns. Sewerage services are currently provided to approximately 50,700 properties across 30 towns.

Metropolitan drainage services and irrigation drainage services identified in clause 6 of the Water Industry Regulatory Order 2011 are not provided by Goulburn Valley Water.

Further detail in relation to serviced properties and the sources of water used by Goulburn Valley Water is available as Supporting Document A to this Water Plan.

1.2.4 Key Challenges Facing the Business

1.2.4.1 Strategic Scan

The key challenge for water businesses in Victoria in the first decade of the new millennium was to ensure water supply security for communities across the State. Goulburn Valley Water has addressed this challenge by undertaking extensive community engagement about water conservation, working with our major industries to conserve water, increasing raw water storage capacity for some towns and interconnecting water systems via pipelines. This work has been undertaken during many years of drought and has built great resilience into our water systems to deal with extended dry periods in the future. By contrast, the past couple of years have seen record rainfall and significant flooding events within our region, across Victoria and in many parts of the Murray Darling Basin.

In this final year of Water Plan 2 Goulburn Valley Water is on track to deliver the Infrastructure Program outlined in Water Plan 2 (around $125M), and has managed operating expenditure within Water Plan 2 targets. Revenue from water use tariffs has been below forecast due to water conservation initiatives and the extraordinary rainfall year in 2010/11 and 2011/12.

The Goulburn Valley Water Board's preparation for Water Plan 3 has considered strategic developments including the Victorian Government's response to the *Living Melbourne, Living Victoria Roadmap,* the Victorian water sector's Intelligent Water Networks Project, and closer to home, the need for Goulburn Valley Water to be responsive to developments amongst our food processing customers.

The Board has also considered the impact of utility bills on household budgets, and the key affordability message coming from both the Government and the ESC. In respect

to affordability, the ESC's 2010/11 Performance Report notes that Goulburn Valley Water has the lowest average water bills in Victoria, and the Board has a very keen focus on achieving efficiencies in administration, operational activities and capital delivery to ensure continued affordability of services.

The Board's strategic input to development of the Water Plan, informed by a broad customer engagement and research, focussed on four key themes identified as being of value and priority to customers:

- Safety – in respect to drinking water supply;
- Reliability – of both water supply and sewerage services;
- Affordability – the impact of water bills on household budgets;
- Environment – customers continue to value environmental stewardship.

These four themes have guided the development of the Water Plan as we continue to provide safe, reliable services to our customers with a constant focus on the impact of water bills on household budgets, and undertake our core functions in a way that protects and enhances our regional environment.

1.2.4.2 Challenges for Goulburn Valley Water

In the context of the four themes identified in Section 1.2.4.1, there are two key elements to understanding the challenges which are inherent to the characteristics of Goulburn Valley Water's operating environment.

Firstly, what sets Goulburn Valley Water apart from most Victorian water businesses is that it manages 37 separate water supply systems incorporating a range of different treatment technologies, treating different raw water quality from town to town that can also vary from day to day.

In relation to sewerage, Goulburn Valley Water has 26 separate wastewater systems with varying challenges that depend on the location, wastewater flows and treatment loads.

The geographic spread of facilities brings additional challenges of covering many kilometres to operate and maintain them all.

The second element that defines Goulburn Valley Water is large food processing customers that require very large quantities of quality water and produce very large trade waste flows and loads. This necessitates large and complex treatment systems in several towns to provide critical services to the companies that process the range of foods produced from irrigated agriculture in our region.

Consequently the challenges for Goulburn Valley Water revolve around the operation, maintenance, replacement and augmentation of a large portfolio of assets across the region, in the most efficient and effective manner with a constant focus on the impact of water bills on household budgets.

Another challenge includes the attraction, development and retention of skilled employees, particularly in key technical and operational roles, which have a big impact on the delivery of safe and reliable water and wastewater services. It is also paramount that Goulburn Valley Water has an influence on the implementation of proposed updated drinking water quality regulations to ensure that the cost/risk equation balances the impact of water bills on customers.

A further key challenge for Goulburn Valley Water in the preparation of Water Plan 3 is the reduction in customer demand over recent years, variable weather patterns, future climate change scenarios. These issues influence the accuracy of water demand forecasts and business financial sustainability through risks to revenue, operating expenses and the infrastructure investment program.

1.2.5 Corporate Vision, Values and Business Objectives

The Corporate Vision, Values and Business Objectives for Goulburn Valley Water are outlined in the following section.

Vision

To be a leader in sustainable water management, providing quality water services and improved liveability to our regional communities.

Our Core Purpose

Our core purpose is to deliver safe, reliable and affordable water services to our residential, commercial and industrial customers.

Key Themes

To deliver on our core purpose and achieve our vision we have four key areas of focus:

Customer Service:

We will strive for excellence in the delivery of water and wastewater services, and in our business and operational interactions with customers.

Corporate Performance:

We will responsibly manage our assets, risks and financial performance in line with government and regulator expectations.

Capability:

We will enhance our strategic, operational and business capability through innovation and continuous improvement.

Communities:

We will be a responsible steward of land, water and corporate resources to enhance environmental, social and economic outcomes for our communities.

What We Value

Our behaviours and actions in pursuing our vision and core purpose are underpinned and guided by our values:

Service Excellence:

Delivering quality service to our internal and external customers, within a culture of excellence.

Our People:

Developing our people's capacity, resourcefulness and creativity, and encouraging life-balance.

Safety:

A total commitment to health and safety

Teamwork:

Working together positively, respecting individual contributions and having some fun along the way.

Open Communication:

Sharing information and knowledge while fostering trusting relationships that encourage honest conversations.

2.0 BUSINESS IMPROVEMENTS

The ESC 'Guidance on Water Plans' document states "Businesses should be disciplined by a desire to improve efficiency and manage controllable costs".

In order to improve efficiencies, Goulburn Valley Water implemented a formal continuous improvement framework during the 2007/08 financial year. This initiative is based on the Business Excellence Framework and is referred to by Corporation staff as "sustainable excellence".

At the forefront of the sustainable excellence framework is Goulburn Valley Water's strategic vision, "to be a leader in sustainable water management, providing quality water services and improved liveability to our regional communities". Sustainable excellence is best described as the conduit or tool which Goulburn Valley Water uses to encourage business and cultural improvements, promoting the shift from "good to great".

A 2011/12 review of business wide improvements verified a vast range of efficiency improvements that have contributed to cost reduction and service improvements. The review identified over 250 improvements throughout the business, resulting in approximately $740,000 in operational cost savings. This notable outcome and continued commitment to sustainable excellence is enabling Goulburn Valley Water to absorb costs attributable to tightening regulatory requirements and changing servicing challenges.

Key efficiency improvement initiatives introduced during Water Plan 2 include:

- *Mooroopna to Shepparton Wastewater Transfer Pipeline* - Utilisation of the transfer pipe between the Shepparton and Mooroopna WMF's has allowed treated waste water from the Shepparton WMF to be sent to the Mooroopna WMF irrigation area reducing the load on the Shepparton tertiary treatment plant.

- *Asset/Project Delivery* – Several improvements relate to the aggregation of contracts to simplify contractual arrangements whilst reducing the overall cost to Goulburn Valley Water. Examples of recently implemented term contracts include; renewal and rehabilitation of water and sewer mains, cleaning and gardening programs.

- *Customer Service* – Several processes within the customer service area have been automated, replacing previously manual processes. These include; Centrepay File process, Concessions verifications and integration of Trade Waste billing data with AquaRate.

- *Environmental and Safety Management System* – Certification of the Environmental and Safety Management systems requires regular audits to provide evidence of compliance. Due to the maturity of Goulburn Valley Water's management systems, audits are now only required on an annual basis in lieu of every 6 months.

- *Fleet Management* – Implementation of new fleet management software, My Data Premium, allows more efficient management of fleet purchasing, servicing and monitoring.

- *Major Customers* – Regular sampling of trade waste parameters is now undertaken by eighteen major customers with the results provided to Goulburn Valley Water for review. Sampling was previously duplicated by Goulburn Valley Water staff.

- *Alexandra to Eildon Pipeline* – The commissioning of the Alexandra to Eildon pipeline has eliminated the need to construct a new water treatment plant to meet both supply and quality requirements. A similar pipeline from Numurkah to Nathalia is currently being investigated.

- *Drinking Water Quality Management System* (DWQMS) – The DWQMS has been updated for compliance with the Australian Drinking Water Guidelines Framework in lieu of HACCP. The new system has been developed specifically for the water industry and has and will continue to provide Goulburn Valley Water with efficiencies via improved data capture, monitoring and management.

This list is not exhaustive but demonstrates a focus on providing systems, processes or projects that improve the operational and functional efficiency of Goulburn Valley Water's business.

3.0 MANAGING RISK

Goulburn Valley Water's Risk Management Framework aligns with AS/NZS 31000: 2009, together with the *draft* Statement of Obligations 2011 (clause 5-1 Managing Risks) and the Victorian Government Risk Management Framework. The Risk Management Framework establishes processes for identifying, assessing, evaluating and treating corporate and operational risks.

3.1 Risk Measurement

Corporate Risks are assessed using quantitative techniques which characterise risk in terms of likelihood and consequences. Goulburn Valley Water's risk capacity and appetite is established and reviewed by the Board in consultation with the Managing Director and General Managers. Risk capacity is identified having regard to an upper level of risk at which Goulburn Valley Water has the ability to recover physically and financially from a significant risk event.

For 2011 – 2012 Goulburn Valley Water's risk appetite was based on a single risk event of $2 million with a 20% likelihood of occurrence in the next five year period (risk quotient of $0.4 million) or likelihood of Loss of Life or serious injury (LOL) of no greater than a frequency of 0.0001 per annum (this level is based on the Australian National Committee on Large Dams guidelines).

Operational risks (risks that have not been identified by Goulburn Valley Water as Corporate level risks and are below the risk appetite thresholds) – are assessed using a qualitative risk assessment framework. This involves identifying consequences with the aid of a consequence criteria table and likelihood using a likelihood guide. This is then translated into a risk level from A – E using a ranking matrix.

3.2 Risk Categorisation and Allocation

Goulburn Valley Water's Risk Registers provide a record of all individual risks that are used as a platform to monitor, review and report to senior managers and the Board. Risks are classified into one of a number of risk types which accord with the DSE's risk classification system for common Risk Groups and Clusters (developed for Statewide risk reporting across the water industry in 2010).

3.3 Monitoring and Review of Risks

It has been Goulburn Valley Water's practice to complete a full reassessment of corporate risks every three years with provision for regular review based on exception and emerging risks. Provision has been made within the Water Plan for the detailed reassessment to be repeated again in 2013–2014 and 2016-2017 along with annual and exception reviews.

Further detail regarding risk identification and risk management is provided in section 10.2.

4.0 OUTCOMES FOR SECOND REGULATORY PERIOD

4.1 Service Standards

Table 1 details Goulburn Valley Water's historic performance to the end of 2010/11 against the service standard targets established for the 2008–2013 regulatory period (Water Plan 2).

TABLE 1 –
CORE PERFORMANCE INDICATORS 2008-2013

Indicator	*Average Performance*	*Actual Performance*					*Average Past 5 Years*	*Average Water Plan 2*	*Water Plan 2 Target*
	03/04 – 05/06	*06/07*	*07/08*	*08/09*	*09/10*	*10/11*			
WATER				***Water Plan 2***					
Unplanned water supply interruption events per 100km of water main	*18.2*	*21.1*	*19.0*	*22.2*	*18.8*	*12.4*	*18.7*	*17.8*	*18.1*
Average time taken to attend water leaks/bursts (Priority 1) – minutes	*NA*	*20*	*1*	*0*	*13*	*0*	*11.3*	*4.3*	*30*
Average time taken to attend water leaks/bursts (Priority 2) – minutes	*65*	*19*	*11*	*0*	*59*	*59*	*29.6*	*39.3*	*60*
Average time taken to attend water leaks/bursts (Priority 3) – minutes	*302*	*214*	*107*	*201*	*314*	*400*	*247*	*305*	*300*
Unplanned water supply interruptions restored within (5) hours - %	*98*	*97.2*	*98.4*	*98.7*	*98.8*	*99.5*	*98.5*	*99*	*98*
Planned water supply interruptions restored within (5) hours - %	*96.0*	*96.8*	*100.0*	*97.0*	*100.0*	*99.1*	*99*	*99*	*99*
Average unplanned customer minutes off water supply – minutes	*13.6*	*21.7*	*16.1*	*15.4*	*11.9*	*2.7*	*13.6*	*10.0*	*13.6*
Average planned customer minutes off water supply – minutes	*6.2*	*5.8*	*5.3*	*5.3*	*1.7*	*0.8*	*3.8*	*2.6*	*6.0*
Average unplanned frequency of water supply interruptions – No. (per customer)	*0.15*	*0.18*	*0.15*	*0.16*	*0.13*	*0.08*	*0.14*	*0.12*	*0.13*
Average planned frequency of water supply interruptions – No. (per customer)	*0.06*	*0.06*	*0.05*	*0.04*	*0.02*	*0.06*	*0.05*	*0.04*	*0.05*
Average duration of unplanned water supply interruptions – minutes	*94.7*	*121.4*	*109.6*	*96.2*	*93.2*	*104.1*	*104.9*	*97.8*	*100.0*
Average duration of planned water supply interruptions – minutes	*108.7*	*106*	*101*	*119*	*73*	*104*	*100.6*	*98.7*	*113.0*
Number of customers experiencing (3) unplanned water supply interruptions in the year – No.	*29*	*243*	*217*	*0*	*0*	*0*	*92*	*0*	*85*
Unaccounted for water - %	*9.4*	*9.0*	*9.9*	*8.5*	*8.4*	*9.5*	*9.1*	*8.8*	*9.8 reducing to 9.0*

Indicator	*Average Performance*	*Actual Performance*					*Average Past 5 Years*	*Average Water Plan 2*	*Water Plan 2 Target*
	03/04 – 05/06	*06/07*	*07/08*	*08/09*	*09/10*	*10/11*			
SEWERAGE									
Sewerage blockages – per 100km of sewer	*26.0*	*27*	*21*	*25*	*24.5*	*20.5*	*23.6*	*23.3*	*25.3*
Average time to attend sewer blockages and spills – minutes	*69.5*	*37*	*32*	*43*	*53*	*58*	*44.6*	*51.3*	*60*
Average time to rectify a sewer blockage – minutes	*213*	*117*	*100*	*121*	*152*	*138*	*125.6*	*137.0*	*150.0*
Spills contained within (5) hours - %	*99.7*	*100*	*100*	*100*	*95*	*100*	*99*	*98*	*100*
Customers receiving (3) sewer blockages in the year – No.	*0*(1)	*13*(1)	*0*(1)	*1*	*0*	*0*	*0.3*	*0.3*	*0*
CUSTOMER SERVICE									
Complaints to EWOV – per 1000 customers	*0.44*	*0.3*	*0.7*	*0.8*	*1.0*	*0.6*	*0.68*	*0.8*	*0.43*
Telephone calls answered within 30 seconds - %	*97*	*97.8*	*98.2*	*98.4*	*97.6*	*98.0*	*98*	*98*	*97*

(1) *Data is for customers receiving two blockages in a year.*

In addition to the core performance indicators, Goulburn Valley Water established a number of additional performance indicators for Water Plan 2. Table 2 details historic performance to the end of 2010/11 against these service standard targets.

TABLE 2 –
ADDITIONAL PERFORMANCE INDICATORS 2008-2013

Indicator	*Average Performance*	*Actual Performance*					*Average Past 5 Years*	*Average Water Plan 2*	*Water Plan 2 Target*
	03/04 – 05/06	*06/07*	*07/08*	*08/09*	*09/10*	*10/11*			
WATER				*Water Plan 2*					
Drinking water quality complaints:									
Total per 1000 customers	6.4	6.8	4.3	4.1	5.0	6.6	5.4	5.2	5.8 reducing to 5.2
Turbidity-colour per 1000 customers	4.5	5.3	2.9	3.2	4.1	5.4	4.2	4.2	4.0 reducing to 3.6
Taste-odour per 1000 customers	0.83	0.8	1.2	0.7	0.77	0.97	0.89	0.8	0.91 reducing to 0.78
Drinking water quality compliance with Safe Drinking Water Regulations 2005									
Localities complying with E.coli standard (%)	99	100	100	100	100	100	100	100	100
Localities complying with turbidity standard (%)	98	100	100	100	100	100.0	100	100	98 increasing to 100
Localities complying with disinfection byproduct standard (%)	91	99	97	100	100	100	99	100	94 increasing to 100
Water pressure complaints per 1000 customers	3.6	2.8	2.2	1.2	1.1	0.6	1.6	1.0	3.6 reducing to 3.4

Indicator	*Average Performance*	*Actual Performance*					*Average Past 5 Years*	*Average Water Plan 2*	*Water Plan 2 Target*
	03/04 – 05/06	*06/07*	*07/08*	*08/09*	*09/10*	*10/11*			
WASTEWATER/ENVIRONMENTAL									
Wastewater odour complaints per 1000 customers	1.4	1.3	1.0	1.1	1.0	0.6	1.0	0.9	1.2 reducing to 1.0
Wastewater Management Facilities complying with EPA Licence requirements (%)	91	100	100	100	100	100	100	100	100
Reclaimed water recycled (%)	73	86	93	97	92	40	82	76	73 increasing to 76
Biosolids beneficially reused (dry tonnes per annum)	3130	3460	2934	1875	9690	300	3652	3955	Varying between 4700 and 8900
Small town scheme developed properties not connected to sewer (%)	76					>95		>95	91 increasing to 95
Greenhouse Emissions (tonnes C02e per annum)	62400	35586	29983	32707	29742	24122	30184	28857	Between 33500 and 33700

For the majority of performance indicators, the average performance has met the approved performance targets reflecting the service excellence values within the business. A few exceptions where service levels have been impacted are:

- The average time taken to attend Priority 3 leaks/bursts has been marginally above the target reflecting natural variability in the operating environment. Longer term average performance (past 5 years) is below the target;

- The percentage of sewage spills contained within 5 hours was less than the target of 100% in 2009/2010. The target has been achieved in 4 out of the last 5 years. The target is expected to be achieved in the remaining years of Water Plan 2;

- The target for complaints to EWOV for Water Plan 2 was established based on a relatively small dataset. The target has been exceeded in each year of Water Plan 2 to date;

- Drinking water quality complaints relating to turbidity increased significantly in 2010/2011 due to high summer rainfall and 'black water' in raw water sources. Performance for the first two years of Water Plan 2 was consistent with the target. Performance in 2010/2011 is considered an outlier;

- Biosolids re-use has been less than the Water Plan 2 target on average. The unusually high rainfall during summer over the past two years has limited the opportunity to beneficially apply biosolids.

4.2 Operating Expenditure

Operating expenditure to meet regulatory requirements and agreed levels of customer service for the first four years of the Water Plan 2 regulatory period is in line with expenditure budgets in Water Plan 2.

The expenditure forecast for 2012/13 exceeds expenditure for the Water Plan 2 budget due to power cost increases (including carbon tax impacts from 1 July 2012), $0.8 million and water main repair soil stockpile management, $1.0 million. These items were not anticipated when completing Water Plan 2 in 2007.

The forecast operating expenditure over run in 2012/13 will be partly offset by underspends in the first four years of Water Plan 2.

4.3 Capital Expenditure

4.3.1 Delivery of Key Capital Projects Identified by the ESC

This section outlines Goulburn Valley Water's progress in the delivery of key capital projects identified by the ESC for Water Plan 2.

- Bonnie Doon Water Treatment Plant

  Output – construction of a new water treatment plant

  Status – construction works have been completed and the facility is operational.

- Broadford Pipeline

  Output – to provide a raw water supply pipeline to the Broadford Water Treatment Plant from the Goulburn River.

  Status – Construction works have been completed and the system is operational.

- Above Ground Asset Replacement.

  Output – to replace assets approaching the end of their service life

  Status – These works are part of an ongoing annual program. Works are continuing and are progressing to schedule and within budget.

- **Alexandra – Eildon Pipeline**

  Output – construction of pipelines from Alexandra to Eildon and Thornton to Rubicon Village

  Status – The construction works have been completed and the system is operational.

- **Unlined Cast Iron Asset Replacement**

  Output – replacement of unlined cast iron water mains

  Status – This project is part of a 5 year program. Works are on schedule and within budget.

Projects added to Water Plan

Since the development of Water Plan 2 a number of projects have been added to the Infrastructure Program and a number of projects have been deferred The decision to defer projects and include additional projects within the Water Plan 2 period related to meeting the Goulburn Valley Water's strategic objectives.

4.3.2 Actual capital expenditure associated with the delivery of outcomes

The net change in proposed expenditures (excluding externally funded projects) between the 2012/2013 Infrastructure Program and the Water Plan 2 Infrastructure Program is summarised in the following table.

TABLE 5
NET CHANGE IN CAPITAL EXPENDITURE FOR WATER PLAN 2

Plan	2008/2009 $,000	2009/2010 $,000	2010/2011 $,000	2011/2012 $,000	2012/2013 $,000	Total $,000
2012/2013 Infrastructure Program (January 2013 Dollars)	31,840	33,250	19,960	24,987	20,163	130,200
2008/2009 – 2012/2013 Water Plan (January 2007 Dollars)[1]	38,900	25,840	18,250	17,070	13,060	113,120
2008/2009 – 2012/2013 Water Plan (January 2013 Dollars)[2]	41,523	28,264	20,539	19,850	15,427	125,602
Change (January 2013 Dollars)	**(9,683)**	**4,986**	**(579)**	**5,137**	**4,736**	**4,598**
External Funding Sources		Department of Health funding for fluoride plants				1,837
		Insurance Payment for Kilmore WTP Control Building				900
		Insurance Payment for Bushfire Damaged Security Fencing				712
Change (January 2013 Dollars) with adjustments for external funding sources						**1,149**

Notes:

1. January 2007 values are the values from the final approved Water Plan.
2. January 2013 values are January 2007 values indexed for CPI (2.44% March 2007, 4.20% March 2008, 2.47% March 2009, 2.89% March 2010, 3.33% March 2011 and 1.58% March 2012).
   - 2008/2009 values have been indexed to January 2009
   - 2009/2010 values have been indexed to January 2010
   - 2010/2011 values have been indexed to January 2011
   - 2011/2012 values have been indexed to January 2012
   - 2012/2013 values have been indexed to January 2013

The total program **increase** over what was allocated in Water Plan 2 is **$4.6M** (2013 dollars), which includes the construction of fluoride plants at Cobram, Kyabram and Seymour and the replacement of February 2009 bushfire damaged assets.

The fluoride project has received $1.8M of funding from the DH and insurance payments of approximately $1.6M have been received for the replacement of fire damaged assets. After these external sources of funding are taken into account, the total program increase requiring funding by Goulburn Valley Water is **$1.1M**. This represents a 1.0% increase above the funding included in the Water Plan in real terms (January 2013).

4.4 Changes in Legislative Obligations

There were no changes to legislative obligations allowed for in the second regulatory period. There was however additional capital and operating expenditure in the second regulatory period as a result of new initiatives required to meet existing legislative obligations.

4.5 Over or Under Recovery of Revenue

The Water Plan for the second regulatory period did not make any allowance for revenue over or under recovered in the first regulatory period. Goulburn Valley Water does not propose to recover revenue shortfalls in the second regulatory period (caused predominantly by the very wet 2010/11 year) in Water Plan 3. Secure bulk water entitlements and revision of long term water demand forecasts will reduce the risk of revenue under recovery in Water Plan 3.

5.0 CONSULTATION ON THE WATER PLAN

5.1 Stakeholder Engagement Plan

A detailed stakeholder engagement plan for the Water Plan is available as Supporting Document B to this Water Plan.

5.2 Consulting with Customers about the Water Plan

Goulburn Valley Water is committed to stakeholder engagement as an integral part of Goulburn Valley Water's business activities. The key stakeholder groups engaged for Water Plan 3 were as follows:

- Residential Customers;
- Non-Residential Customers;
- Major Customers;
- Local Government;
- Regulators (eg. DSE, EPA, DH);
- Other Stakeholders (eg. G-MW, GBCMA);
- Customer Advocacy Groups;
- Internal Staff;
- Executive Management Team;
- Board.

Stakeholder engagement for the Water Plan comprised a wide range of forums and channels associated with all of Goulburn Valley Water's planning, administrative and operational activities. The key stakeholder engagement methods which were undertaken for Water Plan 3 are as follows:

- Corporate Community Reference Committee (CCRC) meetings;
- Customer survey;
- Customer newsletter;
- Newspaper advertisements and media releases;
- Website and Sharepoint site;
- Water Supply Demand Strategy engagement;
- Project specific engagement;
- Internal Water Plan working group meetings;

- Major customer forums;
- Board reports;
- Board strategic workshop;
- Direct contact;

A Draft Water Plan was released for customer and stakeholder consultation on 08 June 2012 and was available on the Goulburn Valley Water website in addition to copies being sent directly to key stakeholders.

Media releases in relation to the Draft Water Plan were issued to media outlets across Goulburn Valley Water's Region. The largest newspaper in the Region, the Shepparton News, featured a front page headline and two related articles, providing excellent coverage for the community.

The Draft Water Plan consultation period closed on 10 August 2012 and feedback received has been considered in producing the Final Water Plan. Specific feedback provided by key stakeholders is addressed in Section 5.3.

5.3 Consultation with Regulators and Stakeholders

As part of developing the Water Plan, Goulburn Valley Water met with regulators to discuss expectations for the regulatory period and beyond.

5.3.1 EPA Consultation

Goulburn Valley Water has a proactive relationship with EPA and this has resulted in innovative outcomes, such as the first water industry EPA Corporate Licence being issued to Goulburn Valley Water. This relationship has continued during Water Plan 2 and the preparation of Water Plan 3.

Over 2011 in particular, Goulburn Valley Water held specific meetings and attended many forums where EPA presented on Water Plan related topics. An example is a meeting with representatives of EPA in July 2011 conducted at Goulburn Valley Water's office. Discussions centred on emerging issues and those relating to planning for Water Plan 3, including:

- Sewerage System Management Plans;
- Mixing zones;
- Odours;
- WMF soil and groundwater monitoring programs;
- Biosolids management;
- Sustainability culture;
- Future EPA corporate focus;
- EPA Corporate Licence review;

- WMF emergency discharge management;
- Greenhouse Action Plan review;
- Environmental Stewardship Framework development;
- Septic tank management;
- Catchment water quality management;
- Small town sewerage schemes.

Goulburn Valley Water also participated in a number of workshops and meetings where EPA presented on Water Plan requirements including those held in March, July and November 2011. It is noteworthy that during the Water Plan 2 regulatory period Goulburn Valley Water has also participated in various EPA related working groups as follows:

- Environmental Offsets Framework for the Water industry;
- Wet Weather Wastewater Discharges (30A's);
- Potable Water Supply Catchment Areas Management;
- Statutory Policy Review.

Participation in these forums facilitates enhanced stakeholder understanding and strengthened relationships moving forward to Water Plan 3.

Goulburn Valley Water has reviewed the December 2011 publication *EPA Water Plan 3 Guidance* and considered this guidance document in preparing the Water Plan. A detailed review of the requirements of the guidance document and their impact on Goulburn Valley Water is outlined in detail in Supporting Document D.

The Water Plan was referred to the EPA for review, with comments received in August 2012. The comments confirmed EPA's general support of the relevant sections of the plan and have been taken into account in the preparation of the Final Water Plan.

5.3.2 DH Consultation

Goulburn Valley Water has a proactive relationship with the DH and is committed to maintaining this relationship. Goulburn Valley Water is in regular contact with the DH and as a minimum meets formally twice per year to consider specific issues. In addition, the DH facilitates regular forums involving all Victorian water corporations to encourage a consistent water quality management throughout the State.

Goulburn Valley Water has held regular discussions with the DH regarding the preparation of Water Plan 3. In particular forums were held discussing:

- Action plans to ensure continuing compliance with the *Safe Drinking Water Act 2003;*
- Strategies and capital works planned to improve water quality and to address existing 'undertakings';
- Impending regulation changes, expected 2015;
- Fluoridation of water supply systems;
- Proposed strategies for management of total dissolved solids and water quality standards;
- Implementation of Goulburn Valley Water's Drinking Water Quality Management System and changes to the Risk Management Plan;
- Strategic management of catchment activities to improve water quality at the source.

Participation in these forums has enabled both parties to gain a greater understanding of expectations during Water Plan 3. To assist in this process, the DH has issued "Guidance on Water Plan 3", to address priorities in water quality management.

In addition, Goulburn Valley Water has addressed a number of further water quality commitments established by the *draft* Statement of Obligations in the preparation of the Water Plan. A detailed review of the requirements of the guidance document and their impact on Goulburn Valley Water is outlined in Supporting Document E.

The Water Plan was referred to DH for review, with comments received in July 2012. The comments confirmed DH's general support of the relevant sections of the plan and have been taken into account in the preparation of this final version.

Of note, DH has stated that they do not provide funding for the provision of non fluoridated water supplies to large food processing customers. With reference to Supporting Document E, Section 1.3, while the Corporation has included initiatives to provide this in the capital program, it expects the related capital costs will be met by others.

5.3.3 DSE Consultation

Consultation with the Minister for Water (the Minister) on the preparation of the Water Plan has primarily been through direct discussions with the Executive Director and officers of the Urban Water Group within the DSE and through the regular regional Managing Director's meetings. Significant engagement has also occurred in the development of supporting strategies for the Plan, including the Water Supply Demand Strategy.

In addition, Goulburn Valley Water and DSE officers met on the following occasions to specifically engage on the development of the Water Plan:

- 10 December 2010 WIRO and SoO Review Workshop;
- 3 November 2011 at the Water Plan 3 Stakeholder Workshop;
- 3 October 2011 letter to the Minister commenting on the *draft* Statement of Obligations;
- 1 July 2011 email to DSE commenting on an early draft of the Statement of Obligations.

In particular, issues canvassed at the November Stakeholder Workshop included:

- Views relating to the variable component of water bills;
- Expected changes to the Environmental Contribution;
- Changes to the WIRO;
- Implications of the Governance Bill;
- Small Town servicing arrangements;
- River health expectations.

In developing the Water Plan, Goulburn Valley Water has comprehensively addressed these and other obligations established through the *draft* Statement of Obligations. A detailed review of the requirements of the *draft* Statement of Obligations and their impact on Goulburn Valley Water is outlined in Supporting Document C.

5.3.4 Goulburn Broken Catchment Management Authority Consultation

Goulburn Valley Water has a proactive relationship with Goulburn Broken Catchment Management Authority (GBCMA) and this has contributed to positive catchment outcomes via such mechanisms as the formation of catchment level working groups. This relationship has continued during Water Plan 2 and the preparation of Water Plan 3.

The Water Plan was referred to GBCMA for review, with comments received in August 2012. The comments confirmed GBCMA's general support of the relevant sections of the plan and have been taken into account in the preparation of this final version.

Of note, GBCMA has flagged a collaboration opportunity to reduce catchment risk at the Corporation's water supply offtakes. While not specifically included in this Water Plan, investigation of this is continuing.

6.0 KEY DRIVERS OF SERVICE OBLIGATIONS

6.1 Customer Engagement

The range of customer engagement initiatives are listed in Section 5.2 of the Water Plan.

6.1.1 Key Issues Identified by Customers

The key issues identified by customers during a range of forums including specific consultation on the Water Plan are as follows:

6.1.1.1 Water Quality Taste/Odour

The 2011 customer survey has identified opportunities for improvement based on the difference between how important an area of service is to customers and how well they believe that Goulburn Valley Water currently performs.

Water quality taste and odour has been identified as an aspect of service for improvement. This improvement will be addressed during Water Plan 3 through the following initiatives.

- An increased focus on optimisation of water treatment plants. This significant commitment, to be completed over the five year regulatory period for all 37 treated systems, will be undertaken using existing resources made available from other operational efficiency improvements. Consequently it will be funded from business as usual expenditure.

- Continued capital works expenditure to improve water treatment plant performance, replace water treatment assets at the end of their service lives and provide capacity for future growth. Proposed capital expenditure relating to water treatment and water quality for Water Plan 3 is $59M and represents 35% of the capital works program across the five years.

- Completion of water treatment plant master plans. Master plans will be completed on a programmed basis for towns with forecast growth or where there are identified capability shortfalls.

Water treatment master plans will be funded from business as usual consultancy expenditure.

6.1.1.2 Wastewater Odour

The 2012 customer survey has identified wastewater odour as an aspect of service for improvement.

Initiatives are proposed for the Water Plan 3 period to address odour attributable to sewer networks and at wastewater management facilities (WMF's).

SEWER NETWORKS

A sewer network odour management strategy was adopted by the Board during 2011. A number of odour control projects and programs have been instigated as a result of this strategy.

Capital works projects to address sewer network odours on a priority basis have been included in the Infrastructure Program.

WASTEWATER MANAGEMENT FACILITIES

The WMF Capacity Review was last updated in 2012 identifying sites that need preparation of detailed master plans. Detailed master plans consider sources of odour at WMF's and identify works to address any odour issues. Refer to Supporting Document D for further discussion on sewer system odour management.

A number of WMF master plans are programmed for the Water Plan 3 period. WMF master plans will be funded from business as usual consultancy expenditure.

6.1.1.3 Service Delivery

The 2012 customer survey confirms that customers are satisfied with service delivery, only identifying minor opportunities for improvement.

The Corporate Community Reference Committee has been consulted in relation to service delivery standards such as service continuity and response times. Existing service delivery performance is valued by customers and future targets reflect existing performance. This feedback is consistent with the results for the customer survey.

Priority has been given to addressing improvement opportunities related to sewer odour and water taste and odour performance for Water Plan 3. This has been reflected in Section 6.8 of the Water Plan where proposed service standards are outlined.

6.2 Regulatory Obligations

In delivering its services, Goulburn Valley Water must meet a wide range of regulatory obligations in addition to the key role of customer service and meeting the reasonable expectation of our customers. From a regulatory perspective, the key drivers that influence the services and level of service include:

- *Water Act 1989;*
- *Water Industry Act 1994;*
- *Water (Governance) Act 2006;*
- The Water Industry Regulatory Order *draft 2012;*
- The *draft* Statement of Obligations;
- The Customer Code and key performance indicators;
- The Trade Waste Customer Service Code;
- The *Environment Protection Act 1970*, associated regulations, policies and licences;
- EPA Water Plan 3 Guidance December 2011;
- The Public *Health & Well Being Act 2008*, *Safe Drinking Water Act 2003*, *Food Act 1984* and *Fluoride Act 1973;*
- DH Guidance on Water Plan 3, December 2011;
- Bulk entitlements orders;
- *Occupational Health and Safety Act 1985* and other associated legislation, regulations and codes.

Through consulting with our customers via a wide range of methods, Goulburn Valley Water can effectively target the allocation of resources to best meet customer needs and expectations. In so doing, our customers gain a greater understanding of the many issues that must be balanced by Goulburn Valley Water in the delivery of all services. Customers also have the opportunity to contribute to important issues such as water conservation and sustainability.

A range of stakeholders have a role to play in the success of Goulburn Valley Water's business.

The DSE is the administrative arm for the Minister for Water, having primary responsibility for water resources, corporate governance of water authorities, dam management and industry policy direction. Legislative powers available

to DSE to undertake these functions exist in the *Water Act 1989* and the *Water Industry Act 1994*.

The ESC has been the economic regulator for the water industry including Goulburn Valley Water since 1 January 2004. The ESC's powers are established by the *Essential Services Act 2001*, the *Water Industry Act 1994* and the *Water Legislation (ESC and Other Amendments) Act 2003*. A more detailed framework guiding the ESC's role is established through the Water Industry Regulatory Order *draft 2012* and Goulburn Valley Water's *draft* Statement of Obligations. In summary, the ESC has the function of regulating prices, service standards and conditions of service for Goulburn Valley Water.

The Environment Protection Authority (EPA) is the environmental regulator, administering the *Environment Protection Act 1970*. Through its powers, the EPA has established state environmental protection policies for water and air with which Goulburn Valley Water must comply. In addition, the EPA is responsible for issuing works approvals and wastewater management facility licences. These instruments establish legal compliance measures for Goulburn Valley Water such as wastewater management conditions, monitoring, audit and reporting requirements.

The DH is responsible for administering the Public *Health and Wellbeing Act 2008*, *Safe Drinking Water Act 2003*, *Food Act 1984* and *Fluoride Act 1973*. In particular, the *Safe Drinking Water Act 2003* became the driving legislation for water businesses from 1 July 2004. Through its conferred powers, the DH ensures that Goulburn Valley Water establishes and maintains processes and systems to consistently deliver 'fit for purpose' water quality in its drinking water systems. Similarly, the legislation establishes legal compliance measures for Goulburn Valley Water such as development of risk management plans and monitoring, audit and reporting requirements.

6.3 *Draft* Statement of Obligations

The Minister for Water issued a *draft* Statement of Obligations (*draft* SoO) under Section 4I(5) of the *Water Industry Act 1994*. The *draft* SoO sets obligations for Goulburn Valley Water in relation to the performance of its functions and exercise of powers.

The *draft* SoO establishes specific obligations which have been considered in developing this Water Plan. A detailed review of the requirements of the *draft* SoO and their impact on Goulburn Valley Water is outlined in Supporting Document C to this Water Plan.

6.4 Environmental Obligations and Initiatives

In developing the Water Plan, Goulburn Valley Water has given consideration to the EPA Information Bulletin *"EPA Water Plan 3 Guidance, December 2011"*. This document was developed in partnership by the EPA and Victorian Water Industry and clarifies the obligations for the water industry stemming from the *Environment Protection Act 1970* and associated policies. Obligations detailed in the Joint EPA/Water Industry Paper, the *draft* SoO and Goulburn Valley Water's standard licence conditions (EPA Corporate Licence) are addressed in detail in Supporting Document D to this Water Plan.

Operating costs associated with initiatives to meet environmental obligations are funded from existing business as usual expenditure. Key initiatives include:

- Future updating and implementation of actions from a greenhouse action plan;
- Future updating and implementation of actions from a water conservation strategy;
- Future updating, implementation of actions, and auditing of a sewerage management plan;
- Monitoring of mixing zones associated with discharge to waterways and updating of ecological risk assessments;
- Future updating and implementation of a sludge management strategy;
- Monitoring and modelling of sewer networks to assess flow containment compliance;
- Future review and management of wastewater management facility planning buffer zones;
- Active participation in catchment, waterway and groundwater management groups;
- Developing and implementing land management plans;
- Updating and implementing existing biodiversity plans;
- Implementing groundwater monitoring programs;
- EPA licence monitoring and annual performance reporting.

Capital works to improve sewer network flow containment compliance at Kilmore, Seymour and Wandong have been included in the Water Plan.

Capital works to improve compliance with 90th percentile flow containment obligations at wastewater management facilities and provide capacity for growth have been included in the Water Plan for Kilmore and Mansfield.

6.5 Water Quality Obligations and Initiatives

Goulburn Valley Water faces a number of obligations relating to water quality. The key legislative drivers are the *Safe Drinking Water Act 2003* (SDWA) and the associated regulations, which are due for review and renewal in 2015. In addition several provisions of the *Food Act 1984*, the *Health (Fluoridation) Act 1973* and the *Fluoridation - Code of Practice (2009)* establish obligations for Goulburn Valley Water.

In May 2011, the DH released Guidance Note No. 14 "Guidance to Water Corporations on the Regulatory Requirements with Regard to Water Plan 3". The development of the Water Plan has also been guided by this document. A detailed review of water quality obligations and their impact on Goulburn Valley Water is outlined in Supporting Document E to this Water Plan. In particular Goulburn Valley Water notes the following obligations by DH:

- Compliance with Schedule 2 of the *Safe Drinking Water Regulations (2005)* is achieved;
- Water supplies with elevated levels of TDS should be addressed;
- All operators meet the minimum competency requirements detailed within the Victorian Framework for Water Treatment Operator Competencies – Best Practice Guidelines;
- All Critical Control Points should be remotely monitored and alarmed;
- Individual turbidimeters installed on all water treatment filters.

These expectations represent increased obligations for Goulburn Valley Water and come at a cost to implement. New costs associated with this obligation are outlined in section 6.7. Other key initiatives included in the Water Plan which will require new expenditure to address water quality obligations include:

- Construction of a new filtration system, disinfection system and treated water storage to improve the water quality risk profile at Marysville;
- Upgrading of the Tongala Water Treatment Plant fluoridation system to comply with the *Code of Practice for Fluoridation of Drinking Water Supplies 2009*;
- Operating costs for fluoride plants constructed during the Water Plan 2 period;
- Additional staff, training and allowances to meet the intent of the Victorian Framework for Water Treatment Operator Competencies – Best Practice Guidelines.

In addition, subject to State Government funding, it is expected that DH will direct Goulburn Valley Water to construct new fluoridation plants for towns with populations greater than 2,000 during Water Plan 3. It is currently assumed that DH will fund the capital cost of new plants. However Goulburn Valley Water will need to fund the operation of these plants and provision has been made for this in the Water Plan.

6.6 Other Statutory Obligations and Requirements

6.6.1 Occupational Health and Safety (WorkSafe)

Goulburn Valley Water continues to dedicate considerable resources to complying with OH&S Regulations, Codes and Standards.

An OH&S management plan which includes specific objectives and targets for a range of activities is revised in consultation with key personnel annually. The plan includes strategies to address the following core areas:

- Developing and maintaining effective OH&S management systems;
- Reducing workplace risks;
- Promoting OH&S awareness;
- Maintaining effective consultative structures;
- Reducing workplace injury and illness;
- Effectively returning injured workers to work.

Sub-objectives are identified in the OH&S Management Plan for each core area along with a range of strategies which aim to address key performance indicators set by the Executive and Board.

Identifying health and safety hazards, assessing risks and implementing safety controls is an ongoing process undertaken across all of Goulburn Valley Water's operations. Employees receive training in the use of risk assessment tools including the implementation of effective safety control measures meeting industry leading practice and the hierarchy of control. Once hazards are identified, risks are assessed and controls recommended, which are actioned by the relevant supervisor or manager.

A major OH&S initiative in the Water Plan 2 period was the installation of fixed or modular guard railing at sewer pump stations across the region to reduce the risk of operators falling into pump station pits when carrying out maintenance activities.

Implementing improved controls to reduce manual handling risks will continue to be a major focus for Water Plan 3. Assessment of manual handling activities will continue to be undertaken and effective controls recommended. Goulburn Valley Water aims to find engineering solutions to manual handling hazards where it is possible to do so.

Goulburn Valley Water will continue to develop strong links with other water corporations through the Vic Water OH&S Network. It will also continue to take an active role in industry as well as public discussions on new OH&S legislative developments.

6.6.2 Management of Septic Tanks and Urban Storm Water

Goulburn Valley Water understands that the EPA and DSE are undertaking a review of catchment management issues and their potential impacts on the water industry, including septic tank and urban storm water management.

Goulburn Valley Water is firmly of the view that management responsibility for septic tank and urban storm water management should continue to reside with municipal authorities given the direct nexus with planning responsibilities. To that end, policies and regulatory resources should be focussed towards improved municipal controls and action to address any existing gaps in management performance. Goulburn Valley Water has made no provision to assume either of these management responsibilities in the Water Plan and would seek retrospective recovery of any costs if a shift in responsibilities from local government to Goulburn Valley Water occurred.

Goulburn Valley Water is also aware that there may be a future need to produce whole of catchment management plans to better understand potential catchment based issues, such as water quality aspects, and aid catchment development decisions. Goulburn Valley Water believes that the relevant catchment management authorities should continue to manage this process and again Goulburn Valley Water has made no provision to assume this management responsibility in the Water Plan.

6.6.3 Living Victoria

The Victorian Government Ministerial Advisory Council released the *Living Melbourne, Living Victoria* initiative in April 2011, which has high level reform priorities to deliver better water services, improve local environments and increase liveability in Melbourne and Victoria's regional cities. The Victorian Government subsequently released its response to the *Living Melbourne, Living Victoria Roadmap* in 2012, supporting the vision and objectives of the related implementation plan.

The Government committed to a range of initiatives including:

- The establishment of the Office of Living Victoria to drive the initiatives in the implementation plan;
- To make changes to the Water Industry Regulatory Order to facilitate greater tariff choice for water customers and to ensure developer charges are cost-reflective
- To develop investment guidelines and decision-making tools that better reflect the value that the community places on urban amenity and the environment

- To work with local government and the water authorities on approaches to extend Melbourne Water's stormwater licensing arrangements to cover all government-owned stormwater infrastructure
- To facilitate investment in wastewater reuse, guided by the release of sewer mining guidelines
- To deliver improved regulatory arrangements to facilitate the use of alternative water sources to reduce pressure on catchment and desalinated water

Goulburn Valley Water has already achieved significant progress in delivering against the eight areas of reform, having embraced the related concepts as part of an overarching management philosophy for many years. As an in-land water business, Goulburn Valley Water has the unique natural advantage of sourcing the majority of water resources from the fully regulated Murray and Goulburn systems, which already account for and utilise stormwater resources. With this in mind, Goulburn Valley Water has historically given priority to beneficially recycling wastewater for irrigation of regional parks, gardens and sporting facilities that contribute so significantly to the liveability of our cities and towns. A few examples are the:

- The Mansfield Golf Club irrigation scheme;
- The Yea Racing Club irrigation scheme;
- The Euroa Golf Club irrigation scheme;
- Potable water substitution for wash down by large food processing customers;
- Potable substitution for road making and dust suppression associated with regional construction projects.

In addition to these examples, Goulburn Valley Water has been actively involved in riparian fencing and vegetation management, tree planting and establishing Land for Wildlife precincts that all contribute to the liveability of our region. More recently, Goulburn Valley Water collaborated with the Australian Water Association to host a regional Integrated Water Management forum, which brought together key municipal, catchment management, developer and rural water supply partners to progress the delivery of the liveability aspects of the Hume Regional Strategy. In addition, the recently completed Water Supply Demand Strategy "*GVW 2060 A Sustainable Urban Water Future*" has identified an alternative water atlas for all towns serviced by Goulburn Valley Water.

Through these intiatives and partnerships, Goulburn Valley Water is well placed to embrace the *Living Melbourne, Living Victoria* reforms and leverage from the many existing achievements already contributing to the liveability of our region. .

It is envisaged that further water product innovation requirements, including customisation and urban integration, will evolve over the Water Plan 3 period. Budgetary provision has been made in the Water Plan to deliver the scheduled projects identified in the Water Supply Demand, Water Conservation and Water Recycling strategies. Further opportunities to integrate water cycle management will remain a key focus during the regulatory period with associated costs accommodated through existing programs.

6.6.4 Intelligent Water Networks

The Victorian Water Industry is working collaboratively on an Intelligent Water Networks (IWN) Program. The intent of the Program is to capitalise on existing information and performance data and embrace new and innovative technologies to improve the efficient operation of networks that are central to customer water services. Through the collaborative efforts and knowledge sharing of the water industry, Stages 1 and 2 have already been completed involving design of technology trials and understanding what customers value.

The outcomes of the initial stages of the project are expected to lead to large scale trials of IWN initiatives to be completed during the Water Plan 3 regulatory period. The outcomes from the trials will support decision making on how to progress IWN more broadly in the future. At this stage, the role of Goulburn Valley Water in the trials of IWN initiatives is not firmly established. However it is expected that Goulburn Valley Water will be required to make a financial contribution towards the Program. The Chair of the IWN Program has advised that a $100K per annum allowance would be an appropriate allocation from Goulburn Valley Water and provision has been made for this annual contribution in the Water Plan.

6.6.5 Environmental Contributions

Legislation requires the payment of environmental contributions by water corporations to Government since 1 October 2004. The annual environmental contribution payable by Goulburn Valley Water is $1.9 million per year to 30 June 2013. The environmental contributions cost has been increased by Government to $2.4 million per year to June 2018 and this amount is reflected in the tariffs contained in the Water Plan.

6.7 New Obligations and Impacts for the Water Plan

6.7.1 New Obligations

The additional operating costs for the Water Plan 3 period that are associated with new obligations are outlined in the following table.

TABLE 6
OPERATING COSTS FROM NEW OBLIGATIONS

Water Plan Section	Description	Operating Costs from New Obligations ($,000)				
		2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018
6.5	Operating costs for fluoride plants constructed in Water Plan 2. This was an obligation placed on Goulburn Valley Water after the commencement of Water Plan 2. The operating costs for these plants have been temporarily accommodated by deferring other business as usual activities which is not sustainable. The Kyabram and Seymour plants are currently operating. The Cobram plant is expected to commence operation in 2015/16 following the completion of a pipeline project.	64	64	96	96	96
6.5	Additional operating costs for the Tongala fluoride plant following an upgrade to comply with the Fluoride Code of Practice		9	9	9	9
6.5	Additional staff, training and allowances will be required to comply with the Victorian Framework for Water Treatment Operator Competencies – Best Practice Guidelines	262	262	262	262	262
6.5	Operating costs for new fluoride plants to be constructed in Water Plan 3. It is assumed that operating costs commence as follows - Alexandra & Mansfield Jan 2014, Numurkah July 2015, Broadford & Kilmore Jan 2016, Euroa Jan 2017, Nagambie July 2017, Tatura July 2018.		31	125	172	219
6.6.4	Intelligent Water Networks Project	100	100	100	100	100
Total		**426**	**466**	**592**	**639**	**686**

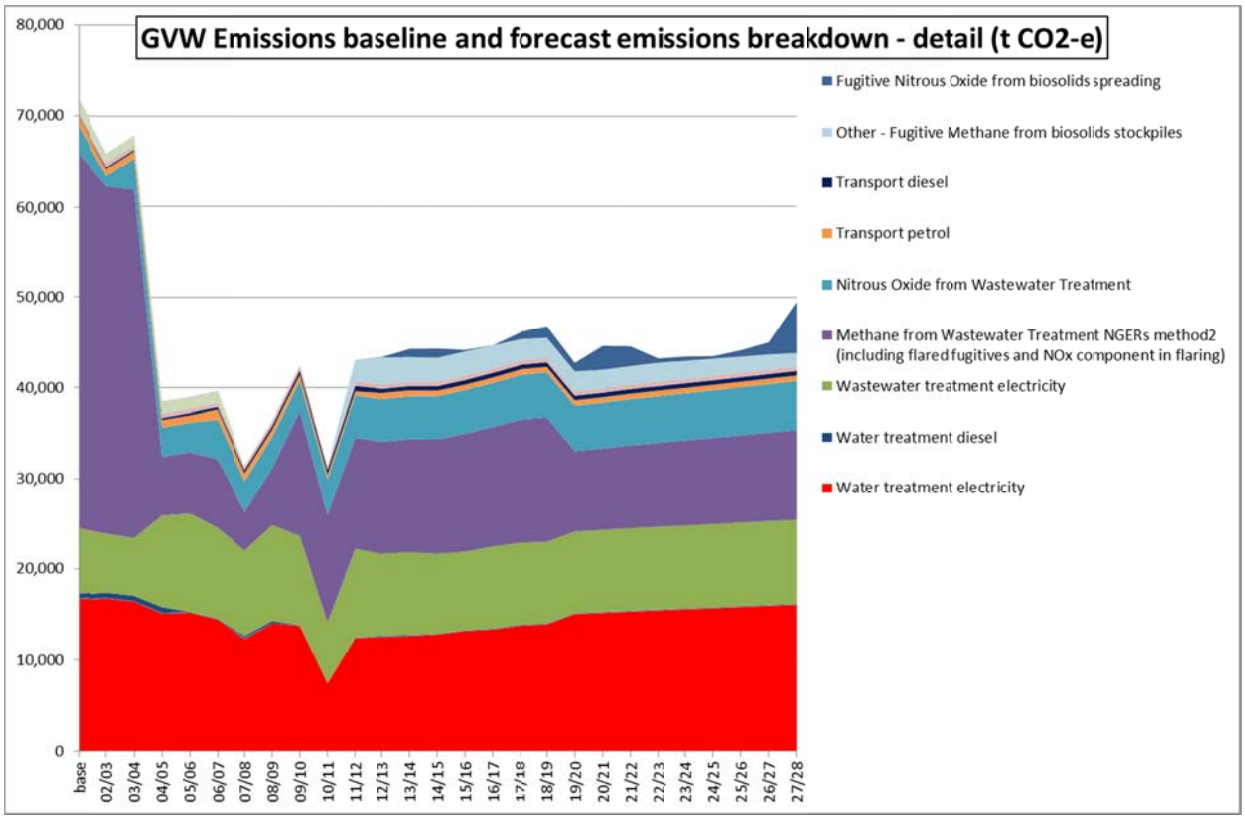
6.7.2 Carbon Pricing Impacts

6.7.2.1 General

Goulburn Valley Water undertakes greenhouse gas reporting in accordance with the National Greenhouse and Energy Reporting (NGER) framework. Annual emission figures are reported to various entities including ESC, DSE, WSAA and VicWater and also included in Goulburn Valley Water's Annual Report.

A summary of Goulburn Valley Water's emissions profile from 2001/02 to 2010/11 and forecast from 2011/12 to 2027/28 follows in Figure 2. Some of the totals vary from that previously calculated due to a review and update in 2012 to reflect evolving fugitive emissions calculation methodology. Forecast emissions include estimated increases due to future water demand growth and also new infrastructure.

FIGURE 2 –
TOTALISED GREENHOUSE EMISSIONS BY SOURCE 2001-2028



Goulburn Valley Water has a Greenhouse Action Plan aimed at minimising any increases in future emissions attributable to population growth by completing cost effective initiatives aimed at improving efficiency.

In July 2011, the Federal Government announced a Climate Change Plan that includes a carbon price commencing in July 2012. Application of the carbon price is currently proposed for businesses that have NGER Scope 1 (direct) emissions greater than 25,000 t CO_2-e per facility. Goulburn Valley Water's total Scope 1 emission in 2010/11 was around 17,000 t CO_2-e and is forecast to remain relatively constant over the period to 2028. In keeping with WSAA guidance, Goulburn Valley Water has designated all water and wastewater systems as separate facilities for the purposes of inventory reporting. While this total is well under the current facility threshold, WSAA is seeking clarity in relation to the definition of 'facility' and its application to the water industry.

To further this issue as it applies to Goulburn Valley Water, consultant SKM was engaged in 2012 to provide advice for the 2013 to 2018 Water Plan and also in anticipation that the threshold may tighten in the future. In summary, SKM advice is consistent with past WSAA publications *(WSAA NGERS Guidelines for the Water Industry – May 2011)* on the matter that note:

- Water supply, wastewater and stormwater services are considered three distinct production processes;

- A water supply, wastewater or stormwater system boundary is determined by its physical independence and operational control.

With this in mind, Goulburn Valley Water services mostly independent towns via separate water and wastewater systems and each represents a separate "facility".

WSAA guidelines on NGERS indicate for the water industry, Scope 1 emissions are mainly applicable to anaerobic wastewater processes and by-products and do not include sewer network emissions. Goulburn Valley Water's Scope 1 emissions can be summarised as those from wastewater management facilities that utilise anaerobic treatment, the combustion of fuels for operational purposes and emissions attributable to sludge management.

As noted, the Corporation's current and forecast Scope 1 emissions is around 17,000 t CO_2-e and this is well below the current carbon pricing threshold limit of 25,000 t CO_2e per facility. While this is the case, due to market immaturity there is uncertainty surrounding elements of carbon pricing and the market in general, including:

- It is possible that the current threshold will decrease with carbon market maturity and this may occur over the 2013 to 2018 Water Plan period and beyond;
- Reporting and associated calculation methods may change resulting in values different to those currently adopted;
- The inclusion of emissions beyond Scope 1 may be included in the carbon pricing threshold;
- The initial carbon price of $23 t CO_2-e may increase after the three year fixed increase period (2.5% real terms annual rise) ending 1 July 2015.

As Goulburn Valley Water's facility emissions are well below the current carbon pricing thresholds no direct financial liability on Goulburn Valley Water due to carbon pricing has been included in Water Plan 3.

6.7.2.2 Electricity Pricing Forecast

In 2011, WSAA engaged consultant SKM MMA to undertake electricity price forecasting in preparation for general water industry forward planning. The review *(WSAA Energy Price Forecasts 2012 to 2032 – October 2011)* highlighted the following main points:

- Many factors influence electricity price forecasting including carbon market pricing, new electricity infrastructure costs, supply and demand balance and the various government support schemes applicable to the electricity, gas and carbon markets;
- Carbon pricing is intended to have a major impact on wholesale electricity prices, particulary electricity produced by fossil fuelled generators. The WSAA report describes three modelled price path scenarios (Low, Medium, High) based on possible carbon market reaction to future political and carbon reduction aims;

- Individual customer power demand and usage characteristics influence pricing elements (such as retail energy and network charges). The report included consideration of typical profiles for Industrial, Commercial, Residential and Intensive energy users;

- The report lists projected retail pricing indices for the various scenarios and usage profiles.

Goulburn Valley Water has reviewed the report and with additional advice from consultant Marsden Jacobs Associates (MJA), has selected the most applicable scenario and usage profile as being the report's 'medium' scenario for forward planning. This is considered a reasonable assumption as it considers the Federal Government's current Clean Energy Future (CEF) aims and assumes global response to carbon reduction will be moderate.

The other scenarios are considered less likely as the 'high' scenario models an aggressive global cut of emissions and the low scenario assumes a very slow uptake of carbon reduction. The first of these would require far more cooperation by the international community than is evident at present and the second is inconsistent with observed outcomes to date. For example, the Federal Government is reporting clear action by Energy Efficiency Opportunity participants and the Australian Energy Market Operator is reporting the most sustained decline in energy consumption since the start of the National Electricity Market.

Goulburn Valley Water's 20 highest electricity usage sites use around 70% of the total electricity consumed by Goulburn Valley Water. Electricity price comprises energy charges (variable) and network charges (fixed) that typically have a 40:60 split.

With reference to the SKM MMA report, while not precise, the split for the industrial category can vary, but is typically around 60:40 and the commercial profile is around 30:70. Goulburn Valley Water's retail split for 70% of sites is typically between these two profiles. However, when also considering the smaller pumping station and treatment sites that comprise the remaining 30% of Goulburn Valley Water's electricity consumption, it is most reasonable to adopt a commercial usage profile for the entire Corporation (30:70). Consequently a 'medium' future carbon price path scenario combined with a 'commercial' electricity usage profile categorisation has been adopted as the most reasonable scenario.

With regard to the adopted scenario and usage profile, the SKM MMA report details the applicable forward look retail electricity pricing indices as noted in Table 8.

TABLE 8 –
RETAIL ELECTRICITY PRICING INDICES 2011-2023

	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23
Retail Pricing Indices (Comm)	1.000	1.204	1.226	1.327	1.371	1.435	1.515	1.556	1.589	1.609	1.658	1.669

The indices indicate forecast retail energy price increases in real terms. This information is the basis for the electricity price forecasts in the Water Plan.

Goulburn Valley Water is aware that there has been recent media speculation about a softening of wholesale electricity prices linked to falling electricity consumption reported by the Australian Energy Market Operator.

As illustrated in Table 8 above, the WSAA Electricity Forecast report forecasts sharp price rises.

Wholesale Spot Market prices have softened in the last few years because of continued falls in both the rate of growth in (instantaneous) peak demand and energy consumption.

In its advice to Goublurn Valley Water, MJA confirmed that the Australian Energy Market Operator's observations were correct. Energy consumption in Victoria peaked in late 2007 and has been falling more or less consistently for several years. MJA also expressed a view that there is no compelling reason to assume either peak demand or energy consumption will begin to rise strongly again in the next Water Plan period. Not only is there evidence of declining manufacturing activity in Australia (due to the high Australian dollar and lower cost, higher productivity performers across Asia), but the proliferation of ever increasing energy efficiency measures and reducing cost of Solar PV are likely to maintain downward pressure on peak demand growth and consumption for at least the next decade.

However, softening wholesale spot prices and falling consumption/demand growth will not necessarily mean reduced retail energy prices. Peak demand volatility (the difference between peak demand on one day and another day is still increasing as more and more Victorians take up

and use air conditioning and more "intermittent" and/or "variable" renewable generation capacity is added to the electricity system. This volatility will continue to create a "reliability challenge" for the electricity supply system that can only be met by rapid start, high capacity generation plant. While operation of this rarely used generation capacity does impact on wholesale market spot price, the revenue that these generators earn is largely underwritten by "off-market" contracts – and the cost of these contracts is reflected in the "variable retail margin" not the wholesale market spot price.

The resulting increase in the retail cost component of delivered electricity price has increased much faster than the average wholesale cost has fallen. In addition, MJA confirm that network costs will continue to rise because of the need for investment in peak network capacity and because a substantial portion of network revenue is recovered through variable charges (including demand and capacity charges) that will be allowed to rise (by the regulatory system) as consumption volumes fall.

6.7.2.3 Materials Pricing Forecast

In 2011, Goulburn Valley Water engaged consultant SKM MMA to undertake a review of the potential price impacts from carbon pricing on the materials typically utilised by Goulburn Valley Water.

The report predicts minimal pass through materials cost increases and as such Goulburn Valley Water considers these increases will be accommodated through future CPI changes. Accordingly, no direct allowance for material price increases from carbon pricing has been included in the Water Plan.

The report also investigated the potential carbon impacts on chemical costs and a minor adjustment to costs has been included in year one of the Water Plan.

6.8 Service Standards

6.8.1 Core Performance Indicators

The ESC Guidance Paper for Water Plan 3 includes the same core service standards that were adopted for Water Plan 2.

The starting point for establishing targets for Water Plan 3 has been to review performance over the past 5 years. The approach to establishing service standards was discussed with the Corporate Community Reference Committee with feedback that existing

performance should be maintained. This preference is also supported by the Customer Survey.

Table 9 details the proposed core customer service performance indicators for the 2013–2018 regulatory period.

TABLE 9 –
CORE PERFORMANCE INDICATORS

Indicator	Actual Performance					Ave. Past 5 Years	Water Plan 2 Target	Proposed Water Plan 3 Target	Comments for Setting Water Plan 3 Target
	06/07	07/08	08/09	09/10	10/11				
WATER									
Unplanned water supply interruption events per 100km of water main	21.1	19.0	22.2	18.8	12.4	18.7	18.1	18.7	The average for the past 5 years is higher than the Water Plan 2 target. Performance in 10/11 is considered to be an outlier due to high rainfall reducing soil movement and consequential water main failures. The long term average excluding 10/11 data is 19.4. The 5 year average of 18.7 has been adopted on the basis that increased water main renewal expenditure will result in improved performance in comparison to the long term average of 19.4.
Average time taken to attend water leaks/bursts (Priority 1) – minutes	20	1	0	13	0	11.3	30	30	Goulburn Valley Water has recorded very few Priority 1 bursts. Due to the limited data available, the existing target will be retained.
Average time taken to attend water leaks/bursts (Priority 2) – minutes	19	11	0	59	59	29.6	60	60	The classification of Priority 2 bursts has been improved over the past 5 years. The last two years are considered the most representative of current performance.

Indicator	Actual Performance					Ave. Past 5 Years	Water Plan 2 Target	Proposed Water Plan 3 Target	Comments for Setting Water Plan 3 Target
	06/07	07/08	08/09	09/10	10/11				
Average time taken to attend water leaks/bursts (Priority 3) – minutes	214	107	201	314	400	247	300	300	Performance in 07/08 is considered to be an outlier in the historical data and does not reflect current practices for recording performance against this indicator. The long term average is similar to the existing Water Plan 2 target if 07/08 data is excluded. The existing target has been retained.
Unplanned water supply interruptions restored within (5) hours - %	97.2	98.4	98.7	98.8	99.5	98	98	98	Average for the past 5 years adopted.
Planned water supply interruptions restored within (5) hours - %	96.8	100.0	97.0	100.0	99.1	99	99	99	Average for the past 5 years adopted.
Average unplanned customer minutes off water supply – minutes	21.7	16.1	15.4	11.9	2.7	13.6	13.6	13.6	Performance over the past 5 years has improved due to changes in practices. Performance in 10/11 is considered an outlier due to high rainfall reducing soil movement and consequential water main failures.. Data from 08/09 and 09/10 is considered the most representative of current practices. The average from 08/09 and 09/10 is similar to the existing Water Plan 2 target. The existing target has been retained.

Indicator	Actual Performance					Ave. Past 5 Years	Water Plan 2 Target	Proposed Water Plan 3 Target	Comments for Setting Water Plan 3 Target
	06/07	07/08	08/09	09/10	10/11				
Average planned customer minutes off water supply – minutes	5.8	5.3	5.3	1.7	0.8	3.8	6.0	6.0	The number of planned interruptions is influenced by the level of property development which declined over the past two years. The period from 03/04 to 08/09 is considered most representative of future development conditions. Average performance from 03/04 to 08/09 is similar to the Water Plan 2 target. The existing target has been retained.
Average unplanned frequency of water supply interruptions – No. (per customer)	0.18	0.15	0.16	0.13	0.08	0.14	0.13	0.15	Performance in 10/11 is considered to be an outlier due to high rainfall reducing soil movement and consequential water main failures. The long term average excluding 10/11 data is 0.15 and has been adopted as the target.
Average planned frequency of water supply interruptions – No. (per customer)	0.06	0.05	0.04	0.02	0.06	0.05	0.05	0.05	The number of planned interruptions is influenced by the level of development which has declined over the past two years. The period from 03/04 to 08/09 is considered most representative of future development conditions. Average performance from 03/04 to 08/09 is similar to the Water Plan 2 target. The existing target has been retained.
Average duration of unplanned water supply interruptions – minutes	121.4	109.6	96.2	93.2	104.1	105	100	100	The average over the past 5 years is similar to the Water Plan 2 target. The existing target has been retained.

Indicator	Actual Performance					Ave. Past 5 Years	Water Plan 2 Target	Proposed Water Plan 3 Target	Comments for Setting Water Plan 3 Target
	06/07	07/08	08/09	09/10	10/11				
Average duration of planned water supply interruptions – minutes	106	101	119	73	104	101	113	110	The number of planned interruptions is influenced by the level of development which has declined over the past two years. The period from 03/04 to 08/09 is considered most representative of future development conditions. Average performance from 03/04 to 08/09 is 109 minutes. A target of 110 minutes has been adopted.
Number of customers experiencing (3) unplanned water supply interruptions in the year – No.	243	217	0	0	0	92	85	85	The average for the past 5 years is similar to the Water Plan 2 target. The existing target has been retained.
Unaccounted for water - %	9.0	9.9	8.5	8.4	9.5	9.1	9.8 reducing to 9.0	9.1	Average for the past 5 years adopted.
SEWERAGE									
Sewerage blockages – per 100km of sewer	27	21	25	24.5	20.5	23.6	25.3	23.6	Average for the past 5 years adopted.
Average time to attend sewer blockages and spills – minutes	37	32	43	53	58	44.6	60	60	The average for the past 5 years has been less than the Water Plan 2 target. The longer term average (8 years) is 54 minutes. Due to the travel distances between Goulburn Valley Water towns the existing target of 60 minutes remains appropriate and has been retained.

Indicator	Actual Performance					Ave. Past 5 Years	Water Plan 2 Target	Proposed Water Plan 3 Target	Comments for Setting Water Plan 3 Target
	06/07	07/08	08/09	09/10	10/11				
Average time to rectify a sewer blockage – minutes	117	100	121	152	138	125.6	150.0	150	The average for the past 5 years has been less than the Water Plan 2 target. The longer term average (8 years) is 158 minutes. Due to the travel distances between Goulburn Valley Water towns, the existing target of 150 minutes remains appropriate and has been retained.
Spills contained within (5) hours - %	100	100	100	95	100	99	100	100	The existing target has been retained.
Customers receiving (3) sewer blockages in the year – No.	13*	0*	1	0	0	0.33	0	0	The existing target has been retained.
CUSTOMER SERVICE									
Complaints to EWOV – per 1000 customers	0.3	0.7	0.8	1.0	0.6	0.68	0.43	0.68	Average for the past 5 years adopted. Goulburn Valley Water represents 8% of the regional urban customer base in Victoria. The Water Plan 3 target is consistent with the number of cases that would be expected from 8% of the regional urban customer base.
Telephone calls answered within 30 seconds - %	97.8	98.2	98.4	97.6	98.0	98	97	97	A target of 97% remains an appropriate level of service for Goulburn Valley Water.

* *Customers receiving 2 blockages*

6.8.2 Additional Performance Indicators

Goulburn Valley Water nominated a number of additional service performance indicators for the Water Plan 2 period. The additional performance indicators reflected areas where direct improvement was targeted through programs included in Water Plan 2. The targeted level of performance improvement has substantially been achieved during Water Plan 2 and is displayed in Section 4.1 of the Water Plan.

The ESC Guidance Paper for Water Plan 3 states that targets for outcomes in the following areas are expected to be outlined in Water Plan 3:

- Biosolids reuse;
- Sewer backlog connections;
- Environmental discharge licence requirements;
- Drinking water quality compliance with standards.

Goulburn Valley Water has achieved its Water Plan 2 target for backlog sewer connections and did not implement any new schemes during Water Plan 2. As there are no new schemes proposed for Water Plan 3, a target for sewer backlog connections has not been included.

The following performance indicators and targets for biosolids reuse, environmental discharge licence requirements and drinking water quality compliance with standards are proposed for Water Plan 3.

TABLE 10 –
ADDITIONAL PERFORMANCE INDICATORS

Indicator	Average Past 5 Years	Water Plan 2 Target	Water Plan 3 Targets				
			13/14	14/15	15/16	16/17	17/18
WATER							
Drinking water quality compliance with Safe Drinking Water Regulations 2005							
Localities complying with E.coli standard (%)	100	100	100	100	100	100	100
Localities complying with turbidity standard (%)	100	98 increasing to 100	100	100	100	100	100
Localities complying with disinfection byproduct standard (%)	99	94 increasing to 100	100	100	100	100	100
WASTEWATER/ENVIRONMENTAL							
Wastewater Management Facilities complying with EPA Licence requirements (%)	100	100	100	100	100	100	100
Biosolids beneficially reused (dry tonnes per annum)	3,652	Varying between 4,700 and 8,900 per year	Average of 4,300 per year over the Water Plan period				

6.9 Guaranteed Service Levels

Guaranteed Service Level (GSL) schemes have two main objectives:

- they provide compensation for customers who receive services that do not meet defined performance levels; and

- they provide incentives for businesses to meet agreed levels of performance.

Goulburn Valley Water currently has one specified GSL which relates to customer hardship.

The ESC Guidance Paper for Water Plan 3 proposes a GSL scheme for all urban water businesses for the Water Plan 3 period. The guidance paper outlines a set of GSL's that could be adopted as a core set. It is stated in the guidance paper that a core set of GSL's for all water businesses is desirable but will not be mandated.

The Goulburn Valley Water Corporate Community Reference Committee (CCRC) was consulted on the introduction of additional GSL's at a meeting in February 2012.

The following feedback was provided:

- The introduction of a water service response GSL and a water service reliability GSL is supported. The water service response and water service reliability GSL's presented in the possible core set in the guidance paper are both important to Goulburn Valley Water customers.

- The introduction of a sewer service response GSL and a sewer service reliability GSL is supported. The possible core set of GSL's in the guidance paper includes two sewer service response GSL's and does not include a sewer service reliability GSL. The sewer service response GSL presented in the possible core set that is most important to Goulburn Valley Water customers is - All sewage spills within a house contained within 1 hour of notification. A sewer service reliability GSL that is important to Goulburn Valley Water customers is – No more than 3 sewerage interruptions within any 12 month period. This GSL is currently adopted by 6 other businesses. Note that this GSL is not included in the possible core set in the guidance paper.

- The existing customer hardship GSL should be retained.

- Rebates for breaches of GSL's should be similar to amounts currently adopted by other water businesses.

Based on the feedback received, the GSL's shown in the following table are proposed to be introduced by Goulburn Valley Water for the Water Plan 3 period.

TABLE 11 – PROPOSED GSL SCHEME FOR WATER PLAN 3

GSL	GSL Type	GSL rebate for breach ($)
All unplanned water interruptions restored within 5 hours of notification	Water Service	50
No more than 5 unplanned water interruptions within any 12 month period	Water Service	50
All sewage spills in a house contained within 1 hour of notification	Sewer Service	1,000
No more than 3 sewerage interruptions within any 12 month period	Sewer Service	50
Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours (as defined by the ESC) to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying	Customer Hardship	300

Based on recent performance for each of the proposed GSL's, total GSL payments to customers per year are expected to be less than $20,000. This is reflective of the high level of service that Goulburn valley Water is currently providing to customers.

7.0 DEMAND

7.1 Overview of Demand Forecasts

Goulburn Valley Water recently updated its Water Supply Demand Strategy, GVW2060 – A Sustainable Urban Water Future, March 2012. The Strategy considers a planning horizon from 2012 to 2060 to balance available water resources with demand having regard to issues such as population and commercial growth and impacts of climate change.

A Water Conservation Strategy has been updated in the preparation of GVW2060 and the demand forecasts reflect the related forecast reductions in water usage per capita.

The water demand forecast developed for GVW2060 is consistent with the requirements of "Guidelines for the Development of a Water Supply Demand Strategy, DSE August 2011" and has been the basis for preparation of the Water Plan.

In addition, a forecast for wastewater receival at wastewater management facilities, comprising volume, trade waste parameter loads and reclaimed water volumes to 2060 has been prepared, consistent with the discussion paper "Economic Regulation of the Victorian Water Sector Demand Forecasting, ESC 2004".

Further detail in relation to the methodology used to develop the demand forecasts is available in Supporting Document F to this Water Plan.

7.2 Summary of Demand Forecasts

7.2.1 Water Demand Forecast

Table 12 summarises historical demand and the forecast for the Water Plan 3 period.

TABLE 12 –
WATER DEMAND FORECAST

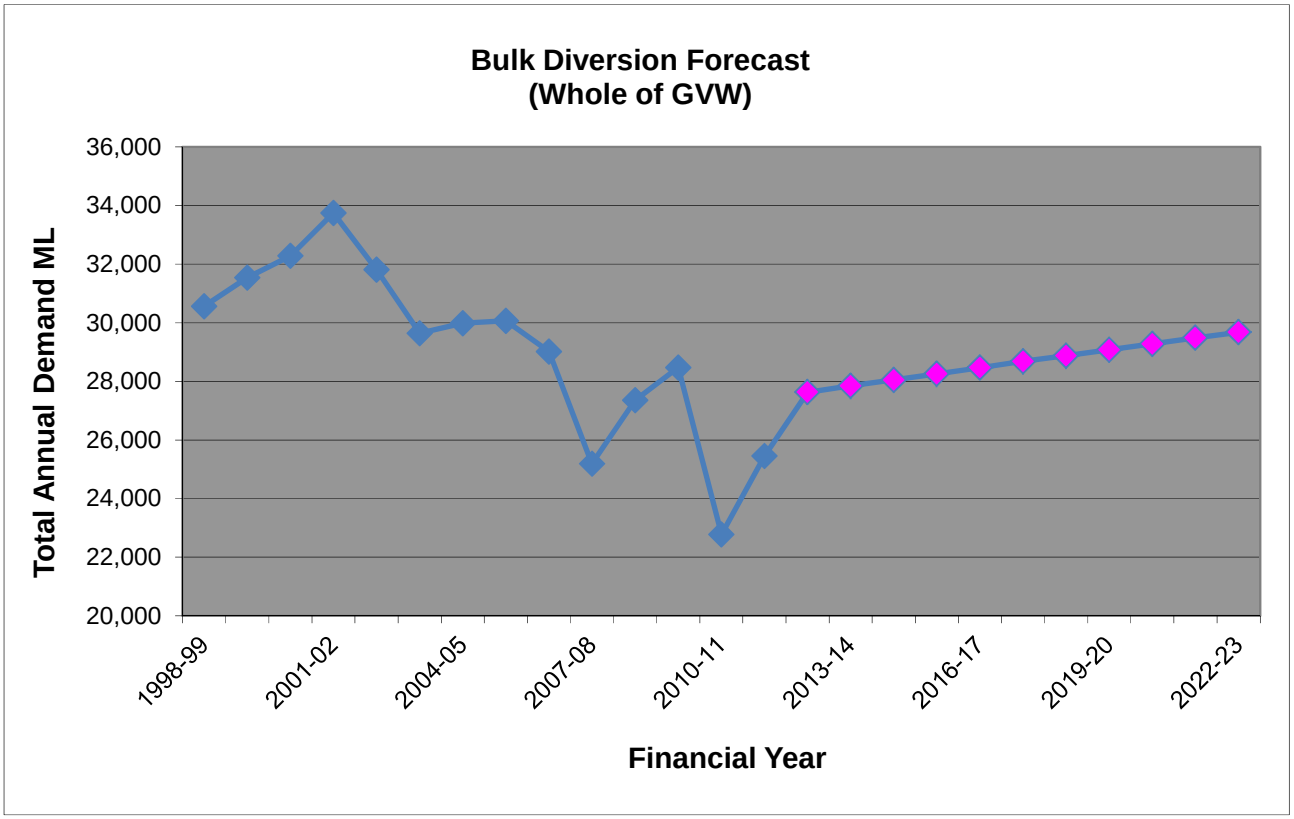
FINANCIAL YEAR	RESID (ML)	NON-RESID (ML)	MAJOR CUSTOMER (ML)	DISTRIBUTION SYSTEM NON-REVENUE WATER (ML)	TOTAL PRODUCED (ML)	HEADWORKS NON-REVENUE WATER (ML)	BULK DIVERSION (ML)
1998/99	12812	4526	6099	3005	26442	4118	30560
1999/00	13480	4335	6517	3464	27797	3743	31540
2000/01	13621	4202	7451	3985	29259	3028	32287
2001/02	14273	3903	7648	3766	29591	4154	33745
2002/03	14643	4214	7175	2849	28881	2932	31813
2003/04	13198	4270	6677	2474	26619	3526	30145
2004/05	13480	4092	7041	3139	27752	2290	30042
2005/06	14595	4625	6585	1862	27667	2796	30463

FINANCIAL YEAR	RESID (ML)	NON-RESID (ML)	MAJOR CUSTOMER (ML)	DISTRIBUTION SYSTEM NON-REVENUE WATER (ML)	TOTAL PRODUCED (ML)	HEADWORKS NON-REVENUE WATER (ML)	BULK DIVERSION (ML)
2006/07	14015	5828	4413	1596	25852	3163	29015
2007/08	11499	3667	5547	2267	22980	2210	25190
2008/09	12786	4175	5816	2210	24987	2370	27357
2009/10	12226	3706	6362	2045	24339	4130	28469
2010/11	9461	2771	5944	1920	20096	2680	22776
2011/12	11316	3676	6078	1840	22910	2543	25453
2012/13	12831	3733	6056	2267	24886	2742	27628
2013/14	12978	3766	6056	2285	25085	2764	27848
2014/15	13115	3793	6056	2302	25266	2783	28049
2015/16	13256	3821	6056	2319	25452	2802	28254
2016/17	13400	3849	6056	2337	25642	2823	28465
2017/18	13548	3878	6056	2356	25838	2844	28681

Note: Data in black are actuals and data in magenta are forecasts

Figure 3 details the historic and forecast demand trend for water bulk diversions.

FIGURE 3



Bulk diversions have varied greatly over the past 14 years and have been impacted by varying weather, periods of water restrictions, the introduction of permanent water saving measures and behavioural changes in water use by customers.

Bulk diversions experienced in 2008/09 and 2009/10 are considered the most representative of recent years for unrestricted demand under average climatic conditions. Bulk diversions for 2010/11 and 2011/12 have been heavily impacted by high rainfall experienced during summer.

For the future forecast period average climatic conditions are assumed.

7.2.2 Wastewater Demand Forecast

Table 13 summarises the historical demand and forecast demand for the Water Plan 3 period.

TABLE 13 –
WASTEWATER DEMAND FORECAST

Financial Year	Residential (ML)	Non - Residential (ML)	Industrial (ML)	Infiltration (ML)	WTP Process Water (ML)	Total WMF Inflow (ML)
2001/02	6,081	1,889	4,828	1,466	1,231	15,495
2002/03	6,206	1,901	4,559	1,308	926	14,900
2003/04	6,129	1,927	4,382	1,490	1,283	15,211
2004/05	5,929	1,963	4,333	1,451	1,467	15,143
2005/06	5,810	2,294	4,210	1,318	1,403	15,035
2006/07	5,786	1,630	3,946	917	1,272	13,550
2007/08	6,005	1,697	3,321	965	899	12,886
2008/09	6,163	1,672	3,274	960	803	12,872
2009/10	6,381	1,670	3,581	1099	782	13,513
2010/11	6,198	1,560	3,216	2,187	1,278	14,439
2011/12	5,784	1,677	3,459	1,708	1,341	13,969
2012/13	6,119	1,715	3,216	1,451	1,674	14,174
2013/14	6,232	1,734	3,051	1,451	1,687	14,154
2014/15	6,338	1,750	3,051	1,451	1,698	14,288
2015/16	6,447	1,766	3,051	1,451	1,710	14,425
2016/17	6,558	1,782	3,051	1,451	1,722	14,565
2017/18	6,672	1,798	3,051	1,451	1,735	14,707

Figure 4 details the historic and forecast aggregated wastewater demand.

FIGURE 4

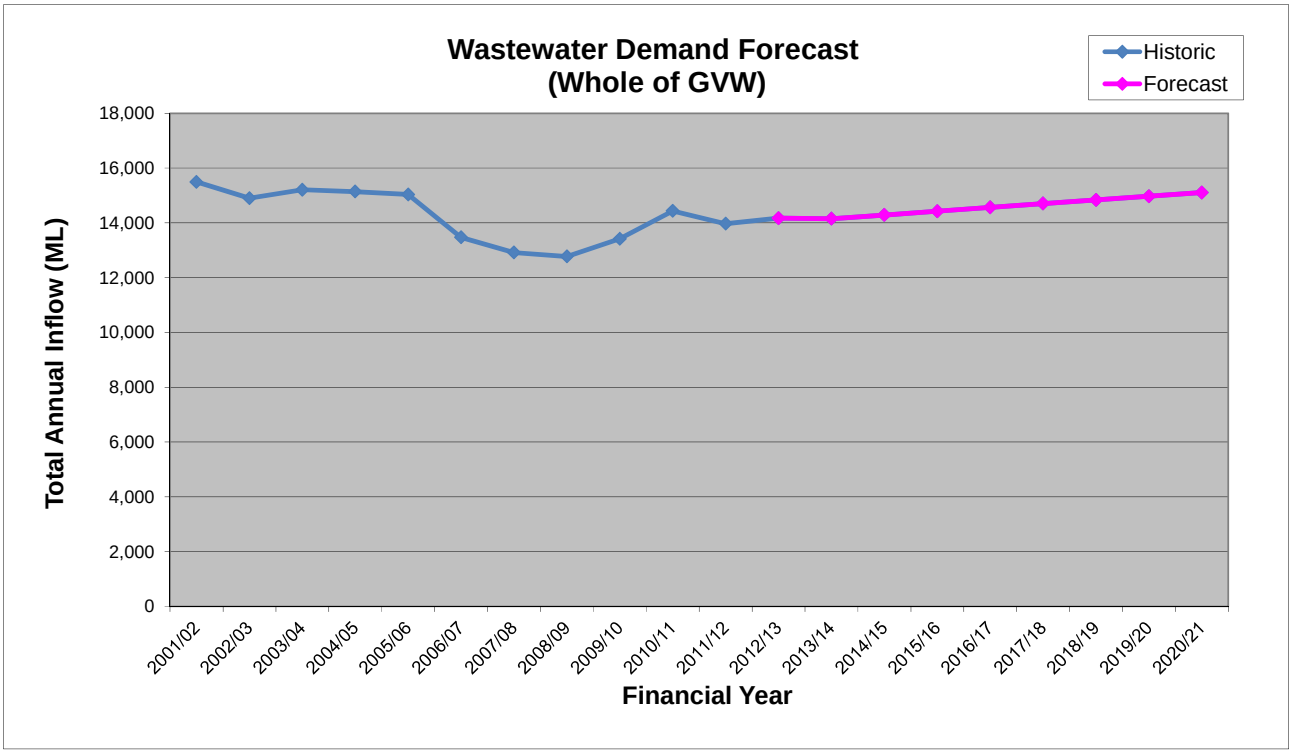


Table 14 summarises the forecast aggregated wastewater discharge from Wandong Heathcote Junction to the Yarra Valley Water (YVW) system at Wallan for the Water Plan 3 period.

TABLE 14 –
WANDONG/HEATHCOTE JUNCTION WASTEWATER FORECAST

Year	Outflow to YVW (ML pa)
2008/09	97
2009/10	93
2010/11	124
2011/12	103
2012/13	98
2013/14	99
2014/15	100
2015/16	101
2016/17	102
2017/18	103

The 2010/11 outflow reflects the impact of above average rainfall on wastewater flows.

The forecast outflow assumes average climatic conditions and increasing flow is primarily due to residential growth.

Table 15 summarises the reclaimed water forecast.

TABLE 15 – RECLAIMED WATER FORECAST

Financial Year	Inflow (ML)	Nett Evap (ML)	Total Recycled Water (ML)	Corporation Irrigated (ML)	3rd Party Irrigated (ML)	Returned to Stream (ML)	Percentage Recycled for Irrigation
2001/02	15,495	4,406	11,089	5,920	1,616	3,553	68%
2002/03	14,900	4,557	10,342	6,034	2,461	1,847	82%
2003/04	15,211	4,304	10,906	5,808	2,128	2,970	73%
2004/05	15,143	4,941	10,202	5,498	2,247	2,457	76%
2005/06	15,035	4,981	10,054	5,472	1,855	2,727	73%
2006/07	13,550	5,799	7,751	4,800	1,884	1,118	86%
2007/08	12,886	5,074	7,811	4,366	1,947	480	81%
2008/09	12,871	5,684	7,187	4,790	2,203	194	97%
2009/10	13,513	6,282	7,231	3,705	2,944	582	92%
2010/11	14,439	3,256	11,183	2,112	2,515	6,557	41%
2011/12	13,969	5,317	8,652	4,089	2,734	1,828	79%
2012/13	14,174	5,354	8,820	4,298	2,989	1,436	83%
2013/14	14,154	5,355	8,800	4,599	2,665	1,436	83%
2014/15	14,288	5,355	8,933	4,692	2,704	1,437	83%
2015/16	14,425	5,355	9,070	4,787	2,743	1,438	83%
2016/17	14,565	5,356	9,209	4,884	2,784	1,438	83%
2017/18	14,707	5,356	9,351	4,983	2,825	1,439	84%

Note: Third party recycling agreements have been established on a voluntary commercial basis.

The volume of reclaimed water returned to stream has been high during 2010/11 and 2011/12 due to above average rainfall, particularly during summer which has limited opportunities for irrigation. The forecast assumes average climatic conditions, which will result in increased irrigation in comparison to the past two years.

Table 16 summarises the trade waste forecast.

TABLE 16 – TRADE WASTE FORECAST

Year	Volume (ML)	BOD (tonne)	Sodium (tonne)	Nitrogen (tonne)	Phosphorus (tonne)
2006/2007	3,407	7,354	1,330	212	59
2007/2008	3,324	6,854	1,131	214	52
2008/2009	3,250	6,024	905	169	49
2009/2010	3,357	7,199	1,123	196	47
2010/2011	3,216	6,024	976	178	43
2011/2012	3,459	6,853	1,044	192	53
2012/2013	3,216	6,006	971	179	43
2013/2014	3,051	5,925	747	168	43
2014/2015	3,051	5,925	747	168	43
2015/2016	3,051	5,925	747	168	43
2016/2017	3,051	5,925	747	168	43
2017/2018	3,051	5,925	747	168	43

8.0 REVENUE REQUIREMENT AND EXPENDITURE LEVELS

Regional Urban Water Authorities (RUWAs) experienced seven years of Government directed tariff reductions (18% reductions were imposed effective 1 January, 1998), tariff freezes (from 1 January, 1998 to 30 June, 2001) and tariff caps (tariffs from 1 July, 2001 to 30 June, 2004 were capped for Goulburn Valley Water at CPI plus 1% for the year ended June, 2002, and then CPI only for the two years ended June 2004).

During this same seven year period, operating costs increased enormously as Goulburn Valley Water embarked on an extensive capital expenditure program to meet the obligations and service levels encompassed in Licences with EPA, the Water Service Agreement with DSE, and drinking water obligations issued by DH.

Over this seven year period rates of return and other key measures of financial performance including profitability and cash flows have been adversely impacted. Revenues were at absolute lower bound levels, and returns by way of dividends to the Shareholder ceased with Goulburn Valley Water's last dividend payment made in May, 2001.

For the year ended 30 June 2005, price increases of CPI plus 3.1% were approved by Government. Independent price regulation of the Victorian water industry by the ESC commenced from 1 July 2005. Water Plan 1 was for the three years ended 30 June 2008. The approved price increase for Goulburn Valley Water was CPI plus 3% per annum. Water Plan 2 was for the five years ended 30 June 2013. Price increases approved for this period averaged CPI plus 7.7%.

8.1 Revenue Levels

Goulburn Valley Water's forecast revenue levels in real 2012/2013 terms, excluding gifted assets, new customer contributions and interest income incorporated in Water Plan 3 are as follows:

2012/13	$63.13M	2015/16	$70.06M
2013/14	$65.39M	2016/17	$72.61M
2014/15	$67.74M	2017/18	$75.25M

The Water Plan incorporates price increases of CPI+0% real for water service fees, CPI+2.4% real for water volume charges and CPI+3.4% for wastewater services and trade waste services each year for the five years to the period ending 30 June 2018. Long term projections propose price increases of CPI +1.7% real post 30 June 2018, but this is subject to any differences in customer demand and any new obligations imposed on Goulburn Valley Water by regulators in future.

The above revenue levels will allow Goulburn Valley Water to gradually increase cash flows from operations. Rates of return on the depreciated replacement cost of assets will remain at very low levels, but cash flows return to commercially viable levels that could allow dividend payments to Government in later years.

Price increases are necessary in order for Goulburn Valley Water to be able to maintain service levels and meet regulatory requirements at efficient cost levels, including a commercial return of and on capital invested after 1 July 2005. The Water Plan is based on promoting water as a valuable and scarce resource, while at the same time minimising the impact of increasing prices on Goulburn Valley Water's residential and non-residential customers.

8.2 Return on Assets

The Water Industry Regulatory Order *draft 2012* (WIRO *draft 2012*), requires that the Commission must be satisfied that prices contained in the Water Plan allow for a return on assets as provided in clause 14 (iv) and (v):

> *"(iv) allow the regulated entity to recover a rate of return on assets as at 1 July, 2004 that are valued in a manner determined by, or at an amount otherwise specified by, the Minister at any time before 1 July, 2004;*
>
> *(v) allow the regulated entity to recover a rate of return on investments made after 1 July 2004 to augment existing assets or construct new assets"*

The base financial rate of return for Goulburn Valley Water has reduced over the years as a result of:

- Price freezes or price caps minimising increases in revenue stream;
- Heavy capital expenditure program in order to meet Government, EPA and DH obligations;
- Increasing operating costs in order to meet regulatory obligations and improved service levels.

Actual and anticipated return on written down replacement cost of operating assets employed for a sample of years from 2011 to 2017 is set out in Table 17:

TABLE 17 –
ACTUAL AND ANTICIPATED RETURN ON WRITTEN DOWN REPLACEMENT COST OF OPERATING ASSETS – 2011-2017

Fiscal Year	Asset book value (Written down replacement cost, $ nominal)	Annual Return ($ nominal)	Return on book asset value (%)
2011	811,262,000	6,248,000	0.8%
2013	792,622,000	6,992,000	0.9%
2015	819,656,000	14,011,000	1.7%
2017	960,059,000	13,351,000	1.4%

The above rates of return are based on assets that are recorded in the accounts at written down replacement cost. Rates of return also need to be considered in light of the role and objectives of Goulburn Valley Water as a provider of essential social infrastructure in regional Victoria.

Goulburn Valley Water clearly focuses on triple bottom line outcomes. Government has not set profitability or financial returns as key business objectives for regional water corporations in recent years. Goulburn Valley Water recognises that the ESC regulatory regime will improve profitability and financial returns.

For the purposes of determining revenues in the ESC's financial information templates, Goulburn Valley Water has adopted a value of real, post-tax weighted average cost of capital (WACC) of 5.1%. This is the WACC that has been provided by the ESC for use when preparing Water Plans. It is noted the ESC may release an updated WACC for use in the final price determination (per 2013 Water Price Review, Guidance on Water Plans October 2011).

8.3 Components of Required Revenue

8.3.1 Regulatory Asset Base (RAB)

The RAB is forecast to roll forward from the second regulatory period to the third regulatory period as summarised in Table 18.

TABLE 18 – FORECAST REGULATORY ASSET BASE

$'s Million 1 January 2013									
Regulatory Period	Water Plan 2				Water Plan 3				
Year	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Opening RAB	198.71	222.43	231.37	245.18	253.84	274.48	293.67	311.27	328.42
Plus forecast gross Capital Expenditure	33.25	19.96	24.99	20.16	35.94	33.49	32.71	33.28	31.34
Less customer and Government Contributions	1.15	1.99	1.56	1.50	5.68	3.68	3.50	3.53	4.00
Less proceeds from disposal of assets	0.79	0.71	0.74	0.65	0.65	0.66	0.66	0.66	0.66
Less regulatory depreciation	7.60	8.32	8.88	9.35	8.97	9.97	10.95	11.93	12.88
Closing RAB	222.43	231.37	245.18	253.84	274.48	293.67	311.27	328.42	342.21

Note: Data in black are actuals and data in magenta are forecasts

Years 2009/10, 2010/11 and 2011/12 are actual results. 2012/13 is an estimate for the final year of the second regulatory period. The critical driver of RAB is capital expenditure and Goulburn Valley Water is confident that estimates for the balance of the second regulatory period and forecasts for the third regulatory period are reasonable.

8.3.1.1 Integrated Financial Model

The ESC has provided a financial information template that incorporates a financial model that integrates the proposed economic regulatory approach with financial information provided by Goulburn Valley Water and produces the revenue determination for the Water Plan period.

The integrated model provides Goulburn Valley Water with an ability to assess the impact of changes in important variables on key financial parameters of the business.

8.3.1.2 Important Model Variables

Variables of particular interest and importance include:

- **Capital Works Program** – its magnitude and timing;
- **Demand Assumptions** - particularly in light of:
  - seasonal, and longer-term variability in rainfall and customer preferences;
  - revenue risk due to the already high (62.4%) of residential water revenue sourced from volumetric charges.
- **Dividend Policy** - this is a matter for "negotiation" between the Board and Government. However, the financial forecasts in this Water Plan are made on the basis that the current dividend policy, as it is applied to regional urban water corporations, will continue unchanged.

The Board of Goulburn Valley Water supports the retention of the current dividend policy as it applies to regional urban water corporations for the duration of the third regulatory period.

8.3.1.3 Financial Outcomes Sought

Key financial outcomes sought by Goulburn Valley Water through this Water Plan, in terms of a sustainable revenue level, include:

- **a minimum interest cover** defined as being Funds Flow from Operations (FFO) divided by effective net interest. A minimum FFO/interest cover of 3 times is considered appropriate given Goulburn Valley Water's forecast future need to access debt and the desire to maintain investment grade rating of at least BBB+;
- **annual tariff revenues** determined by a methodology that is consistent with the provisions of sections 259, 268 and 269 of the *Water Act 1989,* which, *inter alia*, incorporates "*recovering efficient capital costs associated with existing and future assets (not recovered through developer charges) and efficient operating, maintenance and administration costs".*

These pricing methodologies are consistent with achievement of the Regulatory Principles specified in clause 14 of the *draft Water Industry Regulatory Order 2012.* They take into account the interests of customers, including low income and vulnerable customers, while ensuring a sustainable revenue stream that does not reflect monopoly rents and/or inefficient expenditure.

Other principles, which focus on achieving efficient outcomes, are achieved through Goulburn Valley Water's:

- asset management and planning processes that ensure only works necessary to deliver services required by customers and meet obligations imposed on the business are undertaken, and that all such works incur the lowest expected long-run average cost; and

- tariff and pricing policies that aim to ensure a reasonable level of cost reflectivity and "user-pays" outcomes (consistent with equity outcomes acceptable to customers).

8.3.1.4 Major underlying assumptions

The purpose of this section is to summarise the main assumptions underlying the financial projections. The main assumptions include:

- The projection of sustainable revenue is based on average consumption per property decreasing over the next five years. The long term forecast is for new residential properties (on average) to use less water per property than existing properties because of smaller lot sizes, and greater incidence of water efficient appliances and gardens;

- **Capital program**: The proposed capital works program expressed in real dollars as summarised in Section 8.3.3.1 and the attached templates;

- **Operating costs:** The proposed Operations, Maintenance and Administration costs expressed in real dollars as summarised in Section 8.3.4 and the attached templates;

- **Cost of debt**: The modelling demonstrates that Goulburn Valley Water will be required to borrow significantly in order to fund its capital program. A debt cost of 7.70% has been adopted for the preparation of this Water Plan, which is in line with our average borrowing costs;

- **Economic depreciation**: In assessing revenues derived under the ESC regulatory approach, an economic depreciation rate consistent with the percentage rate for accounting treatment of 3.1% has been adopted i.e., an average asset life of around 33 years;

- **Dividends and tax**: A dividend rate of 65% of pre-tax adjusted profit is assumed together with a 30% tax rate in accordance with current Government policy;

- **Inflation**: Consistent with the proposed approach to be adopted by the ESC, an annual inflation rate of 2.75% has been adopted across all years;

- **WACC**: A Weighted Average Cost of Capital of 5.1% real post tax has been adopted.

8.3.2 Regulatory Depreciation

Regulatory depreciation (rather than accounting depreciation) is calculated on the regulatory asset base discussed above, and forms part of the building block approach to determine total revenue required. Regulatory depreciation is calculated using the straight line method. The rate of depreciation is the average depreciation rate calculated for accounting depreciation.

8.3.3 New Asset Capital Expenditure

The Water Plan has been prepared on the basis of identifying all projects that are likely to be required within the next 20 year planning horizon. These projects not only address likely works arising from the *Safe Drinking Water Act 2003*, the revised SEPP – Waters of Victoria and the *draft* Statement of Obligations with DSE, but also set the basis for compliance with other instruments, such as Occupational Health and Safety legislation and infrastructure augmentation and replacement.

The significant investment in infrastructure by Goulburn Valley Water will ensure a continuing high level of reliability and quality of service to Goulburn Valley Water's customers, continuing capability to meet environmental and statutory obligations and achieve efficiencies. It does, however, place significant demands on Goulburn Valley Water's financial resources.

8.3.3.1 Key Drivers and Projects for 2013–2018

Capital works expenditure included in the Water Plan totals $167 million and reflects increased expenditure for replacing ageing assets and continued expenditure to improve water quality, provide capacity for growth and maintain existing service levels. Infrastructure projects

included in the Water Plan that are greater than $5M in value are listed as follows:

- $18 million for replacement of water mains to maintain service levels.
- $17.2 million for an upgrade for the Shepparton Water Treatment Plant to replace ageing assets and provide capacity for growth.
- $9.9 million for new fluoride plants which are expected to be funded by the DH.
- $8.9 million for an upgrade for the Numurkah Water Treatment Plant to replace ageing assets, improve water quality and provide capacity for growth.
- $7.5 million for relining or replacement of sewer mains to maintain service levels.
- $6.6 million for replacing above ground assets to maintain service levels.
- $5.7 million for additional winter storage at the Mansfield Wastewater Management Facility to provide capacity for growth.
- $5.2 million for the construction of a new Water Treatment Plant at Marysville to improve water quality compliance.

The final version of the program is included in Supporting Document G to this Water Plan.

8.3.3.2 Comparison with Historic Levels of Expenditure

The significant capital expenditure that has occurred over the period 2008–2013 will continue for at least the next five years. The estimated investment over the period 2013–2018 is $166.7 million (01.01.2013 $real) which excludes externally financed works.

The levels of expenditure since 2008/09 have been predominantly driven by the *draft* Statement of Obligations (*draft* SoO) with the State Government. Under the *draft* SoO the objectives for Goulburn Valley Water are:

- That all drinking water quality meet health related parameters of the *Safe Drinking Water Act 2003*;
- That all sewerage treatment plants discharge effluent to standards consistent with SEPP;

- That dam safety be assessed and improvement works be carried out to meet new dam safety requirements.

TABLE 19 –
LEVELS OF CAPITAL EXPENDITURE SINCE 2007/08

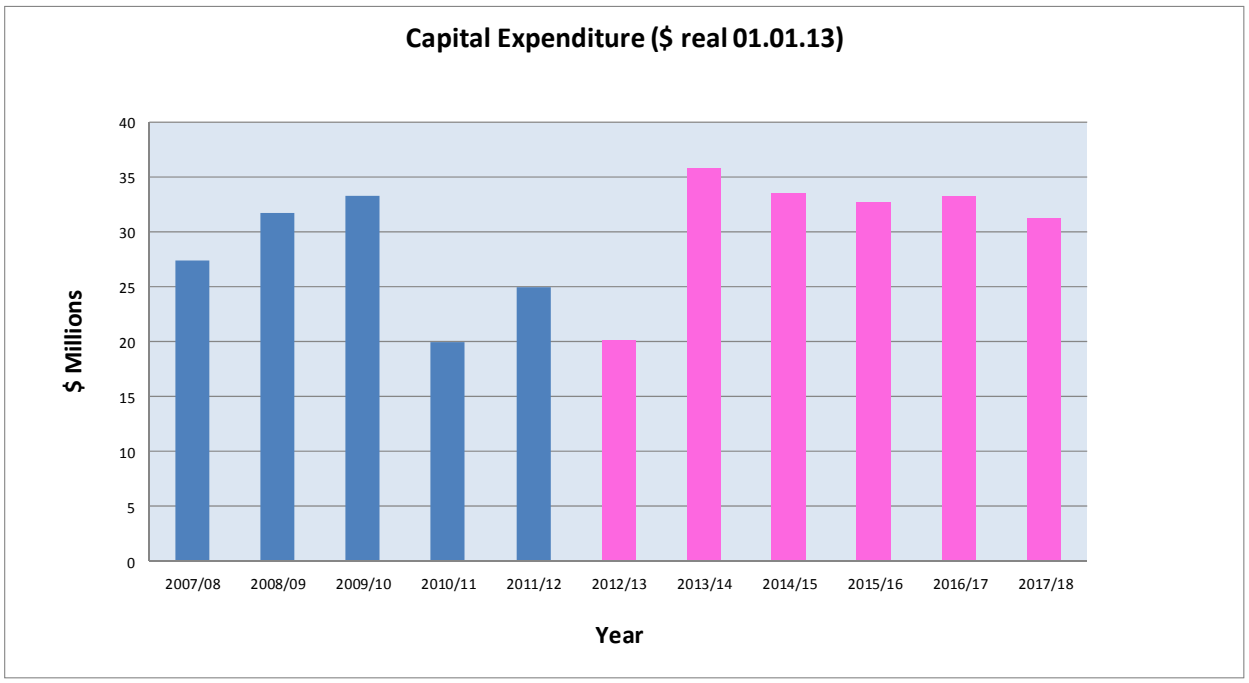
Total Expenditure ($real 01.01.2013)					
2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
$27.4M	$31.8M	$33.3M	$20.0M	$25.0M	$20.2M

TABLE 20–
ESTIMATED LEVELS OF CAPITAL EXPENDITURE – 2013/14 TO 2017/18

Total Expenditure ($real 01.01.2013)				
2013/14	2014/15	2015/16	2016/17	2017/18
$35.9M	$33.5M	$32.7M	$33.3M	$31.3M

Note: Data in black are actuals and data in magenta are forecasts

FIGURE 5



8.3.3.3 *Key Capital Expenditure Plans*

The programmed expenditure for the next 20 years is $514 million (real, January 2013) which can be summarised in the following groups:

• Shared Assets	$32M	(6.2%)
• Water Resources	$32M	(6.2%)
• Water Treatment Plants / Water Quality	$103M	(20.0%)
• Water Pipelines / Storages / Pump Stations	$120M	(23.4%)
• Sewer Pipelines / Pump Stations	$80M	(15.6%)
• Wastewater Management Facilities	$38M	(7.4%)
• Above Ground Asset Replacement	$26M	(5.1%)
• Miscellaneous (Vehicles, Plant, Buildings etc.)	$83M	(16.1%)
	$514M	

8.3.3.4 New Operating Costs from Capital Works

New operating costs which will result from the implementation of capital works projects during Water Plan 3 have been determined based on the following approaches:

- For new projects, where a detailed review of consequential operating costs has been undertaken, the outcomes of the detailed review have informed the determination of additional costs.

- For new projects, where a detailed review of consequential costs is not available, the percentage of current operating costs in relation to the overall replacement cost for a particular asset type has been applied. For example, yearly operating costs for water pipelines currently represent 0.8% of the total replacement value of water pipelines. For new water pipeline projects a yearly operating cost of 0.8% of the capital cost of the project has been applied.

- For new projects which result in replacement of existing assets, additional operating costs have not been included if there is no consequential increase.

- For new projects that reduce operating costs, the reduced costs have been reflected in operating costs.

The new operating costs from capital works expenditure for Water Plan 3 are shown in the following table:

TABLE 21
NEW OPERATING COSTS FROM CAPITAL WORKS

Item	New Operating Costs ($'000 real 01.01.13)				
	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018
New operating costs from capital works not related to growth (excluding fluoride projects)	141	286	560	895	956
New operating costs from capital works related to growth (excluding fluoride projects)	57	143	232	404	460
New operating costs from fluoride projects	64	104	230	277	324
Total	**262**	**533**	**1,022**	**1,576**	**1,740**

8.3.3.5 New Customer Contributions (NCC)

Water Corporations levy NCC when new connections are made to their networks. Currently NCC are set at uniform levels across Victoria.

The ESC has released a guidance paper in August 2012 outlining a new principles based NCC pricing framework that is to commence on 1 July 2013.

The new principles based NCC pricing framework will require each Water Corporation to calculate NCC that are specific to their service area.

The revenue from NCC currently included in this Water Plan is based on the existing uniform pricing that exists across Victoria.

The guidance paper has identified that water corporations may submit supplementary information on revenue from NCC based on the new pricing framework to the ESC by 7 December 2012. This may result in a change to the revenue from NCC included in the Water Plan.

Goulburn Valley Water will be making a submission to the ESC on revenue from NCC for the Water Plan by 7 December 2012.

8.3.3.6 Major Industry Expansion

A major industrial customer has provided preliminary advice to Goulburn Valley Water that it may be seeking a significant increase in water usage and trade waste discharge volumes in the Water Plan 3 period. The exact details of required water and sewer volumes have not

been clarified at this time. The expansion by the major customer will potentially require a number of large capital investments to be brought forward.

The capital works program and demand forecasts used for the preparation of the Water Plan do not currently reflect the expansion plans of the major customer. If the expansion plans for the major customer are clarified prior to the final ESC determination for the Water Plan, Goulburn Valley Water will be seeking to update the Water Plan and include related revenues and costs (capital and operating) associated with the expansion.

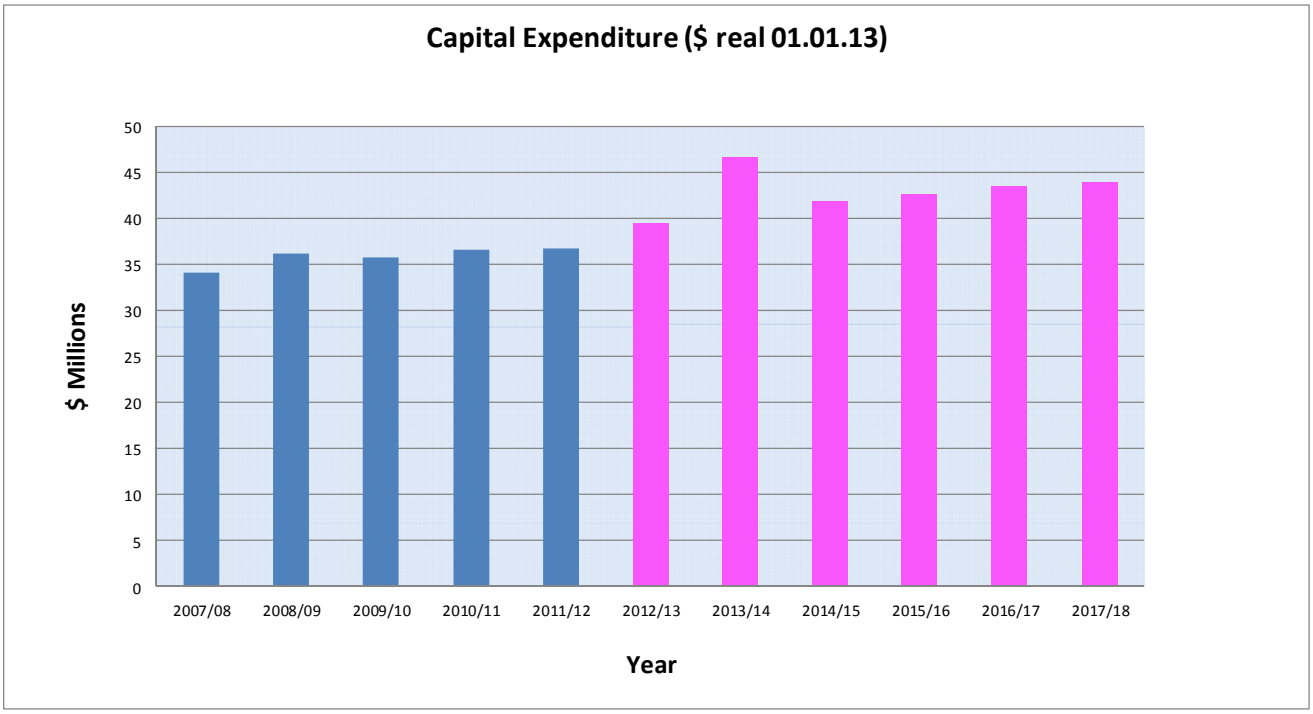
8.3.4 Operating Expenditure ($'000 real January 2013)

Operating expenditure has increased significantly in recent years to meet obligations and service levels specified in the *draft* Statement of Obligations, EPA Licences and drinking water legislation. Actual and forecast operating expenses, excluding depreciation, written down value of assets sold, borrowing expenses and non-prescribed expenses are as follows and as depicted in Figure 6:

2007/08	$34,120	2012/13	$39,530
2008/09	$36,280	2013/14	$46,700
2009/10	$35,800	2014/15	$41,910
2010/11	$36,680	2015/16	$42,650
2011/12	$36,800	2016/17	$43,630
		2017/18	$44,010

Note: Data in black are actuals and data in magenta are forecasts

FIGURE 6



Operating costs for all years are real January 2013 dollars. Operating costs in real terms have increased from $34.1 million in 2007/08 to $36.8 million in 2011/12 – an increase of 7.9%. During this period, Goulburn Valley Water invested $137.5 million (real January 2013) in capital expenditure, rehabilitating run down infrastructure, extending existing infrastructure capacity and developing new infrastructure to meet our obligations and service levels. Examples of this capital expenditure include:

- Alexandra to Eildon Pipeline;
- New water filtration plants for seven small towns where water was previously not meeting Australian Drinking Water Guidelines;
- Tongala Water Treatment Plant filter replacement;
- Augmentation of Mansfield raw water storage;
- Bonnie Doon Water Treatment Plant filtration;
- Kilmore Water Treatment Plant improvement works;
- Augmentation of Kyabram raw water storage.

All of the above projects resulted in new or signficantly increased operating costs. Other significant cost increases in recent years include:

- Tertiary treatment of wastewater before return to stream - $500,000 per annum;
- Biosolids removal from lagoons and management - $300,000 per annum;
- Environmental contribution paid to Government - $1,915,000 per annum;
- Improved treatment and odour control at wastewater management facilities - $1,500,000 per annum;
- Groundwater monitoring, soil monitoring, river monitoring and wastewater monitoring and reporting to meet EPA Licence requirements - $530,000 per annum;
- Increased levels of water sampling, testing and reporting to meet the *Safe Drinking Water Act 2003* requirements - $680,000 per annum;
- Purchase of bulk raw water $1,000,000.

All operating expenditure in the ESC templates that form part of this Water Plan has been shown as business as usual costs. Goulburn Valley Water does not have any (material) new statutory obligations or requests for different service levels post 1 July 2013. Refer 8.3.6 for costs relating to new obligations.

8.3.5 Income Tax

Goulburn Valley Water will not pay any income tax during the Water Plan period. Goulburn Valley Water has carried forward tax losses at June 2011 and these losses will increase for several years because of accelerated tax depreciation rates.

8.3.6 New Obligations for the Water Plan

According to the strict definition of New Obligations established by the ESC (principally legislation that introduces new obligations effective from 1 July 2013) Goulburn Valley Water has not identified any New Obligations for the Water Plan 3 regulatory period. However, since setting prices for the 2008-13 regulatory period, Goulburn Valley Water has faced a significant number of unplanned one-off and ongoing obligations. These costs have largely been accommodated through productivity improvements or deferring planned initiatives. Table 22 summarises a range of new costs (not exhaustive) as examples of costs to be absorbed by the business.

TABLE 22 –
NEW UNBUDGETED COSTS INTRODUCED SINCE 2008 ($real 01.01.2013)

Description	*New Requirement or Initiative*	*Incremental Increase by 2017/18 ($,000's pa)*
New Opex from Capex (operating costs from new assets, excluding growth assets and fluoride projects)	New requirements	956
New Opex from Capex (operating costs for new fluoride plants)	New requirements	324
SDWA – WTP Operator Competency and Certificate IV Qualified Staff	New requirements	262
Intelligent Water Networks project contribution	New Cost	100
Electricity price increases above CPI – Carbon Tax and Transmission Costs	New Cost	700
Superannuation Guarantee Levy – increase from 9% to 11%	New Cost	325
Environmental Stewardship Framework – Consultancy	New Cost	25
ADWG Certification Audits	New Cost	30
Unfunded Defined Benefits Superannuation Contributions	New Cost	150
Biosolids management costs (increase above the 12/13 baseline)	New Cost	250
Total New Requirements and Initiatives		$3,122

The above increased costs have been driven by an incremental change in regulation and risk management during the Water Plan 2 and Water Plan 3 periods. Our cost estimates for the Water Plan 2 were understated for tasks such as data capture, recording and reporting, additional water sampling requirements, dealing with customers experiencing financial hardship and carbon tax impacts on costs.

Goulburn Valley Water does not propose to recover the additional costs incurred during the second regulatory period as they have been absorbed through the mechanisms described.

Table 23 details the productivity efficiency gains expected over the regulatory period that are embedded in the Water Plan. After adjusting the 2012/13 business as usual cost for the new costs in Table 22, and comparing to change in cost per assessment in 2012/13 and 2017/18, Goulburn Valley Water expects to achieve a productivity saving of 4.5% by 2017/18.

TABLE 23 –
PRODUCTIVITY ASSESSMENT ($real 01.01.2013)

	($000's)
2012-2013 Business as Usual Budget	39,530
Less Uncontrollable costs (Environment Contribution $1.915 million, Raw Water Purchase $1.040 million, soil spoil clean up $1.00 million).	-3,955
	$35,575
Adjustment for cost of new requirements – Table 22	3,122
Efficiency Initiative Savings absorbed by new requirements without the need for further staff (Section 2)	740
Adjusted 2012/13 Business as Usual Cost	39,437
Water Plan Budget 2017/2018 (Controllable Costs)	40,560
2012/13 Assessments	55,778
2017/18 Assessments	60,094
2012/13 Adjusted Cost per Assessment	0.707
2017/18 Cost per Assessment	0.675
% Change in Business as Usual Cost per Assessment	4.5%

The embedded productivity savings in the Water Plan reflect a range of productivity measures. Apart from new operational cost associated

with new capital works, it is proposed to keep input cost increases to a minimum despite expected growth of over 7.7% in new customers over the period. As an example, the Water Plan recognises the significant increase in the unit cost of electricity over the period and real reductions in power consumption per customer served as a result of initiatives associated with the Water Conservation and Greenhouse strategies. Overall Goulburn Valley Water believes this is a positive outcome in an environment of increasing regulation.

Further potential operating cost risks that have not been included in the Water Plan are as follows:

- Chemical costs – assumed no increases above CPI in Water Plan 3;
- No allowance for other new initiatives or obligations from regulators or Government between now and June 2018;
- Weather conditions – a return to average weather conditions is assumed;
- Carbon neutrality – no cost has been included for the purchase of greenhouse credits;
- Pressure on contractor rates due to short supply and extensive infrastructure and mining projects planned throughout Victoria and Australia during the next decade;
- Pressure on consultants' rates because of demand/supply imbalance;
- Potential price increase for plastic and steel pipes and fittings due to cost increases for raw materials (iron ore, oil) and demand/supply pressures.

Also, refer Section 10.2 for further operating cost risks that have not been priced into the Water Plan.

8.3.7 Efficiency Initiatives Proposed by Goulburn Valley Water

The continuous improvement framework introduced by Goulburn Valley Water in 2007/08 has been explained in Section 2.0 of this Water Plan. Efficiency initiatives proposed during Water Plan 3 and beyond include:

- Upgrade of SCADA and telemetry technology to improve efficiencies associated with the remote control and monitoring of facilities;
- Ongoing development and updating of water and sewer network models using internal staff resources rather than consultants. A number of the water and sewer network models, which were

originally developed by consultants during Water Plan 2, will be updated by internal staff during Water Plan 3 at a significantly lower cost;

- Water and wastewater treatment master plans have been primarily prepared by consultants in the past. A number of master plans for the Water Plan 3 period will be completed using internal staff resources at a significantly lower cost in comparison to using consultants;

- Direct management of statutory terrorism exercises by internal staff at lower cost that has historically been outsourced;

- Implementation of a new performance appraisal system (PeopleStreme), improving efficiencies associated with employee development and performance management;

- Upgrade of the asset management software to improve data management, relevance and ease of use. This will result in more efficient input of data as well as increased utilisation;

- Optimisation of power consumption by undertaking initiatives identified within the Greenhouse Action Plan;

- Electronic billing from our electricity provider – 450+ individual sites billed monthly or quarterly that are currently manually rekeyed;

- Finalisation of electronic operations manuals for all individual facilities and sites;

- Electronic capability for operators to access information and operate plants while in the field;

- Implementation of video teleconferencing for internal meetings avoiding travel for remotely located staff;

- Combining the two existing customer contact databases into a single CRM system, facilitating more efficient data management, reporting and improved customer experience;

- Establishing regional water and sewer districts to avoid ongoing update of the existing 74 disparate districts.

9.0 TARIFFS

The previous Chapters of the Water Plan identify the outcomes which Goulburn Valley Water proposes to deliver through the third regulatory period, the obligations which Goulburn Valley Water is required to comply with and the implications for future capital and operating expenditure over the five year period of the Water Plan.

Section 8.3 reviews the impact of this expenditure program on the overall revenue requirement of the business and outlines the modelling used to determine the aggregate cashflow needed to ensure commercial viability in the longer term. The financial modelling requires an increase in pricing of 2.4% real on average for water and wastewater services each year over the five year period of the Water Plan.

The next stage is to translate that overall requirement into a tariff structure to recover that revenue. The following sections outline the key elements of the proposed approach.

9.1 Pricing Objectives

Tariffs seek to achieve a number of potentially conflicting objectives. Most of these are covered in the Regulatory Principles at clause 14(a) of the *draft Water Industry Regulatory Order 2012*, ie:

- to generate sufficient revenue to allow the business to finance its functions – this would be most easily achieved by a high percentage of the tariff being recovered through fixed charges;
- to provide incentives for the sustainable use of water resources – this would be most effectively achieved by a high percentage of the tariff being recovered through the variable charge and would be further promoted using a rising-block tariff;
- to allow customers to control the size of their bills – this would place the emphasis on the variable element of the tariff;
- to minimise the long-term costs of the business – this would support variable charges based on long-run marginal costs that would tend to send signals to customers about the cost of system augmentation;
- to take account of the interests of low income and vulnerable customers – this would support an emphasis on staged payment schemes, Government rebates and the design of rising block tariffs that seek to achieve socially equitable outcomes;
- to be cost reflective - this ensures that customers are aware of the full costs incurred in delivering services – and would be most transparent by applying multiple and disaggregated charges at a local level;
- to achieve social policy objectives – this would often lead to averaged costs and charges over a wider area to promote public health, development and environmental outcomes;

- to ensure equity between classes of customer – with equal charges for equal services, but also possibly some measure of the charge being allocated on the ability to pay; and

- to be readily understandable and stable over time – this would be best achieved with simple tariff structures and averaged charges over a wider area and over time, and provides customers with certainty.

Resolution of the inherent conflicts in these pricing objectives strongly influences the development of Goulburn Valley Water's pricing policies. The pricing proposals in this Water Plan achieve an appropriate balance between these objectives.

The primary focus of Goulburn Valley Water's pricing policies is to achieve a reasonable level of cost reflectivity and "user-pays" outcomes that reflect equity for customers without compromising recovery of efficient long-run costs.

Goulburn Valley Water is aware of the ESC's interest in how pricing policies deal with long-run incremental costs. As noted above, signalling long-run marginal costs in tariffs is a pricing strategy that promotes minimisation of long-term costs to the business and achieves inter-generational equity.

As noted elsewhere in the Water Plan, the investment profile in the recent past will continue through the Water Plan 3 regulatory period and beyond. This investment profile reflects increasing service standards and refurbishment of aged assets. Both have the effect of increasing average costs, which cannot be avoided by Goulburn Valley Water unless consumers are denied (or deny themselves) the standards of service required by Government. This is contrary to the established social contract.

Within past constraints imposed by Government, Goulburn Valley Water has sought to achieve equitable tariff structures that have the effect of muting long-run marginal cost signals. That is, consumers in small towns, are not being required to bear the full cost of providing these services.

This policy of "sharing the burden of cost between large and small communities" is clearly supported by our customers. Accordingly, the equity principles of the WIRO *draft 2012* are given most weight in Goulburn Valley Water's general tariff policies, but this does not diminish our focus on seeking the most efficient (lowest cost) means of providing the services we are required to deliver.

9.2 Background to Tariff Policy

In 1994/95, Goulburn Valley Water abolished water and sewerage charges based on property valuations and introduced two part user pays water tariffs and a cistern based charge for both residential and non-residential customers. Under the cistern based pricing methodology, customers were charged an additional service fee for each toilet connection within the building over two cisterns.

As further authorities were abolished and merged with Goulburn Valley Water a tariff reform program was implemented. Water and sewerage tariffs varied enormously across the region due to the costs and pricing policies of the former bodies. To address this issue, Goulburn Valley Water embarked on a program of price harmonisation to rationalise the multiplicity of charges and moved to a simplified regional tariff approach.

This program of reform was halted by the Government's decision in late 1997 to cut tariffs by 18% coupled with a tariff freeze for the next 3½ years. Subsequent Government water policy meant that no single tariff could increase by more than the CPI approved tariff increase across the board.

This constraint on further pricing reform continued until Water Plan 1 and contributed to the differences in wastewater tariffs that existed. Goulburn Valley Water instigated further price harmonisation during the first and second regulatory periods to eliminate the difference in wastewater tariffs across the region. The water volumetric price was also harmonised from two different prices to one price for all customers in all towns.

A two part wastewater tariff for non-residential customers was introduced from July 2002 across the region following extensive customer consultation.

9.2.1 Principles of Pay-for-Use Pricing

9.2.1.1 Water Tariffs

Goulburn Valley Water's pay for use water policy is designed:

- To encourage water conservation;
- To give customers the greatest practical means of influencing the size of their water bill;
- To promote equitable sharing of costs between customer groups;
- To recover the costs of providing water services from customers receiving those services;
- To ensure customers readily understand how they are billed for water services;
- A fixed service charge based on meter/connection size and volumetric charge for all water consumed, with the different service charges reflective of the cost of providing different sized metering and connection assets;
- A single district price for all water supplied irrespective of customer type. A standard fixed

service fee and volumetric charge has been adopted across all systems;

- In all cases, the actual tariff prices lie between a lower bound of the short-run marginal cost (i.e the cost of adding a small increment of demand that does not require major asset augmentation) and an upper-bound cost representing the by-pass cost (i.e. adding a separate system that would deliver the same service to a group of customers);

- In 2012/13, 70% of water revenue will be generated from usage charges and 30% from fixed charges. This remains relatively constant out to 2017/18.

The structure of water service charges, particularly the variable tariff component, provides a direct incentive for consumers to control the size of their bills by varying the level of consumption. Feedback from customers demonstrates a clear preference not to introduce step pricing.

There is no clear evidence at this stage that step pricing introduced by others in Australia has significantly influenced customer behaviour. In addition, positive consumer response to meaningful information on sustainable water use (including restrictions) demonstrates an alternative and preferable means to promote the same outcomes.

Accordingly, Goulburn Valley Water has introduced a consumer education program and implemented Permanent Water Saving Rules as the most effective means of achieving longer-term changes in consumer behaviour. Goulburn Valley Water has undertaken further examination of different pricing structures and other measures during the second regulatory period and will maintain existing measures for Water Plan 3.

9.2.1.2 Wastewater Tariffs

Goulburn Valley Water's residential and non-residential wastewater tariffs have been structured:

- Recognising the difference between residential and non-residential customer loadings and achieving equitable sharing of costs between customer groups;

- Recognising that much of the cost of providing wastewater services are fixed costs;

- To recover the costs of providing wastewater services from customers receiving those services;

- To ensure customers readily understand how they are billed for wastewater services;
- A fixed service fee applies to residential properties.

A two part pricing policy for non-residential customers was implemented in July 2002, which provides a fairer and more equitable pricing system for business as well as direct incentives for on-site treatment and minimising wastewater treatment load.

This charging arrangement comprises an access/service fee together with a volumetric charge for water discharged to sewer based on a range of discharge factors for particular types of businesses.

Sixty-eight percent (68%) of non-residential wastewater revenue is derived from volumetric charges with 32% derived from service fees.

Goulburn Valley Water has further consulted with customers regarding the introduction of a two part wastewater tariff for residential customers. There is a strong preference not to introduce a two part tariff on the basis that discharges to sewer are not measured, and water entering a property via the water meter may not be an accurate indication of water discharged to sewer. Goulburn Valley Water will further examine alternative wastewater pricing structures, and further consult with customers, during the third regulatory period.

9.2.2 Miscellaneous Fees and Charges

9.2.2.1 New Customer Contributions (NCC)

The ESC is working with stakeholder groups to develop a New Customer Contributions framework to clarify the application and interpretation of scheduled charges and pricing principles for customers in new developments. Goulburn Valley Water has contributed to this process via participation on a VicWater NCC working group.

Given the ongoing development of the NCC guidelines, Goulburn Valley Water has estimated revenues from NCC's for this Water Plan 3 based on the approach in the current price determination. Refer 8.3.3.5 for further information.

9.2.2.2 Other Fees and Charges

Goulburn Valley Water's pricing policy in regard to other Miscellaneous Fees and Charges is based on:

- recovery of the direct costs of providing the service, including a reasonable estimate and allocation of overhead costs attributable to the activity. For example:
  - ♦ labour costs are based on estimates of time taken to perform the service times the applicable hourly rates;
  - ♦ overhead costs include a reasonable proportion of the costs of plant, equipment, tools and motor vehicles required to support staff undertaking the activity;
- contract and material costs directly attributed to the activity;

This pricing policy relates to the services listed (and described) in Section 9.5.

9.3 Approach to Pricing – Tariff Structures

9.3.1 Promoting Sustainability

Goulburn Valley Water's two part water tariff is designed to encourage water conservation. However, at a cost of 95.60c/kL water could be perceived as undervalued and pricing therefore has to be supported by an extensive community education campaign promoting the responsible use of water.

Seasonal pricing is not supported by Goulburn Valley Water and feedback from customers is that they are strongly opposed to such a system.

Goulburn Valley Water is of the view that the two part tariff policy provides incentive to conserve water. Goulburn Valley Water has consulted with residential customers about further tariff reform and the possibility of introducing rising block tariffs. This has been strongly opposed by customers, and as yet there is no evidence that rising block tariffs introduced by Victorian water businesses in the first and second water plans has significantly changed customers' behaviour.

Goulburn Valley Water therefore plans to carry forward the existing tariff structures, which have been in place for a number of years and are readily understood by customers.

Goulburn Valley Water has a proactive approach to water conservation. In 2003, Goulburn Valley Water developed a comprehensive water conservation strategy incorporating permanent water saving initiatives (restrictions on use), community education and tariff structures. These strategies have been further developed through the first two water plan periods. Refer Sections 6.4 and 7.1.

9.3.2 Social Equity Outcomes

Equity objectives were considered as part of consultation with customers. Customers felt strongly that if average prices were to increase by greater than CPI, then it is very important that the concession rebate available to pension and health care card holders also increase comparably in order for the concession to remain relevant.

The concession rebate for pension and health care card holders did increase comparably with water price increases during Water Plan 2, and it is hoped Government enables this to continue during Water Plan 3.

9.4 Schedule of Tariffs

Tables 24 to 27 detail water and wastewater tariffs for the two years 2011/12 and 2012/13, and proposed tariffs for the five year regulatory period 2013–2018. All amounts are in 1.1.2013 real dollars.

9.4.1 Water Service Fees - Residential and Non-Residential Customers

TABLE 24

Meter Size mm	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
20mm	$151.24	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
25mm	$236.32	$242.94	$242.94	$242.94	$242.94	$242.94	$242.94
32mm	$387.22	$398.06	$398.06	$398.06	$398.06	$398.06	$398.06
40mm	$605.04	$621.98	$621.98	$621.98	$621.98	$621.98	$621.98
50mm	$945.36	$971.83	$971.83	$971.83	$971.83	$971.83	$971.83
80mm	$2,420.16	$2,487.92	$2,487.92	$2,487.92	$2,487.92	$2,487.92	$2,487.92
100mm	$3,781.50	$3,887.38	$3,887.38	$3,887.38	$3,887.38	$3,887.38	$3,887.38
150mm	$8,508.39	$8,746.62	$8,746.62	$8,746.62	$8,746.62	$8,746.62	$8,746.62
200mm	$15,126.03	$15,549.56	$15,549.56	$15,549.56	$15,549.56	$15,549.56	$15,549.56
250mm	$23,634.43	$24,296.19	$24,296.19	$24,296.19	$24,296.19	$24,296.19	$24,296.19
Vacant Land - Unconnected	$75.62	$77.74	$77.74	$77.74	$77.74	$77.74	$77.74

** All towns and districts of Goulburn Valley Water*

Water service fee prices remain constant in real terms for Water Plan 3.

9.4.2 Water Volumetric Tariffs - Residential and Non-Residential Customers

TABLE 25

District	Volume Charge – Residential and Non-Residential						
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	97.11c/kL	106.34c/kL	108.89c/kL	111.50c/kL	114.18c/kL	116.92c/kL	119.73c/kL
Raw Water (1)	48.56c/kL	53.17c/kL	54.45c/kL	55.76c/kL	57.10c/kL	58.47c/kL	59.87c/kL

(1) Raw water is available to some customers in Euroa, Mansfield, Mooroopna, Nagambie, Seymour and Tongala.

Water volumetric prices increase by 2.4% p.a. for Water Plan 3.

9.4.3 Wastewater Tariffs – Residential and Non-Residential Customers – Service Fees

TABLE 26

District	Service Availability Fee						
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	$392.54	$414.91	$429.02	$443.61	$458.69	$474.29	$490.42

Note: Vacant lot charges are 50% of the fees in the Table above.

Wastewater service fees increase by 3.4% p.a. for Water Plan 3.

9.4.4 Non-Residential Customers – Volumetric Wastewater Charge

The volumetric sewerage charge is calculated based on water supplied to the property, as measured by the water meter. A range of discharge factors apply depending on the type of business conducted at each property. The relevant discharge factor is applied to the measured water consumption to estimate the volume of wastewater being discharged to the sewerage system.

An allowance of 180 kL is deducted from this calculated volume and the volume in excess of this amount is charged a volumetric fee per kilolitre, as shown in Table 27.

TABLE 27

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts	137.14c/kL	145.00c/kL	149.93c/kL	155.02c/kL	160.30c/kL	165.75c/kL	171.38c/kL

Non-residential volumetric wastewater charges increase by 3.4% p.a. for Water Plan 3.

9.4.5 Non-Residential Customers – Trade Waste Charges

Minor Trade Waste Customers (category 1 and 2) pay a service fee only. The fee for 2012/13 (1.1.2013 real dollars) is $207.44 per annum and this fee will increase by 3.4% real per annum for Water Plan 3 – in line with other wastewater service price increases per Section 9.0.

Major Trade Waste Customers (category 3 and 4) pay variable charges based on the volume of waste and the waste loads discharged to the respective wastewater management facility. Goulburn Valley Water has long term contracts with each of the major Trade Waste Customers specifying volume and quality parameters. Prices for category 3 Major Trade Waste Customers will also increase by 3.4% per annum in line with other wastewater service price increases. Prices for category 4 Major Trade Waste Customers will increase by 5.4% per annum as category 4 prices transition to the same as category 3 prices.

9.4.6 Non-Residential Customers – Recycled Water Charges

Goulburn Valley Water provides recycled water to customers under contract to irrigate golf courses, racecourses, pasture, trees or crops for agricultural purposes. Contracts stipulate terms and conditions of delivery and use of the water, including soil testing and monitoring as required. Recycled water prices are regulated based on pricing principles rather than price caps.

Recycled water is provided to third parties for reuse where this is the least cost option for Goulburn Valley Water to comply with the EPA licence. The licence requires land-based reuse or tertiary treatment prior to return to stream. As Goulburn Valley Water is located in the irrigation area of central Victoria, land based irrigation represents an efficient means of beneficially recycling water.

The price Goulburn Valley Water can attract for recycled water is in part determined by the price of irrigation water supplied to agricultural enterprises by Goulburn-Murray Water. Recycled water pricing is totally variable and Goulburn Valley Water aims to maximise revenue earned and recover the full cost of providing the service, but having regard to the price of alternative irrigation water and customers' willingness to pay.

9.5 Table of Miscellaneous Fees and Charges

Miscellaneous Fees and Charges applying across Goulburn Valley Water's service area are listed in Table 28.

TABLE 28

Details of Service or Transaction	Price 1 July 2012
Miscellaneous Fees and Charges	
Water sales via standpipes – per kL.	2.2800
Information Statements – per item	45.30
Special meter read fee – per read	24.70
Meter Fee - per 20mm meter	148.00
Sewer connection fee - per connection	139.00
Septic tank waste receival fee (per litre)	0.0586
Grease trap waste receival fee (per litre)	0.1570
Non-Core Miscellaneous Fees and Charges	
Access to personal information	24.50
Meter Accuracy Test – per test	174.00
Fire Service Tests – per test	174.00
Water Quality test – per test	148.80
Replacement of galvanised iron property service pipe*	At cost
Maximum charge*	500.00
Emergency Standpipe Charge	At cost
Water Tapping Fee:	
20mm service – per tapping	52.00
25mm service – per tapping	60.80
32mm service – per tapping	69.40
40mm service – per tapping	78.10
50mm service – per tapping	86.90
80mm, 100mm, 150mm, 225mm services – per tapping	435.50
Water consent to connect:	
20mm service – per connection	86.90
25mm, 32mm, 40mm, or 50mm service – per connection	130.60
80mm, 100mm, 150mm or 225mm service – per connection	261.30
Water shutdown fee to enable connection (if required)	86.90
Fire Service Charges:	
50mm service – per annum	97.18
80mm service – per annum	248.77
100mm service – per annum	388.71
150mm – per annum	874.62
Water Meter Fee – new connection or damaged meter – per meter:	
25mm service	261.30
32mm service	522.70
40mm service	740.60
50mm service	1,742.70

Details of Service or Transaction	Price 1 July 2012
80mm service	2,265.50
100mm service	2,919.00
150mm service	3,137.00
225mm service	5,010.00
Meter box to protect meter if required (per meter box)	55.70
Sewer Connection Fees – per connection:	
Residential connection other than standard (eg unit development)	182.60
Small commercial/industrial connection	182.60
Alterations to existing connections	113.00
Sewer plan and build-over fee (application fee for building over Authority works) – per plan	86.90
Cut in sewer point/manhole fee – per cut in	435.50
Water backflow prevention application fee – per application	121.70
Water backflow prevention annual test fee – per annum	51.80
Recoverable works and fire plug maintenance *	At cost
Legal cost recovery – debt recovery charges and legal costs incurred *	Recovery / Legal costs
Water reconnection fee (following disconnection as part of debt collection procedures) – per reconnection	30.40
Water reconnection fee After Hours in addition to the Water reconnection fee (following disconnection as part of debt collection procedures) – per reconnection	85.00
Damage to restrictor cap and/or lock (following restriction as part of the debt collection procedures) - per damaged item	At cost
Dishonour cheque fee *	Bank charge
Dishonour electronic fund transfer fee *	Bank charge
EasyWay Payment Card (to assist customers with periodic payments) – per card	6.00
Freedom of Information – provision of documents via Freedom of Information request	24.50
Trade Waste Application Fee	87.00
Trade Waste Sample Testing Fees	At Cost
Developer and Landowner	
Works Fees and Charges	
District Extension Fee	
Application Fee	933.50
Further costs to extend districts.*	At Cost
Landowner or developer works review and administration charge *	At Cost
Feasibility report fee	61.80
Design, supervision and Administration Charge *	At Cost

** GST applies to these fees and charges*

It is planned that the majority of the above miscellaneous fees and charges will increase by a maximum of CPI during the third regulatory period. The balance will increase by the same percentage movement as water service or volumetric fees, or wastewater service or volumetric charges.

9.6 Customer Impacts – Water and Wastewater Tariffs

Revenue from water and wastewater tariffs will increase on average by 2.4% real for each year of the third regulatory period. Water service fees will remain constant (in real terms) for the 5 years. Water volumetric fees are proposed to increase by 2.4% and wastewater services are proposed to increase by 3.4% real each year. The impact of price increases for a residential customer consuming 260 kLs of water per annum for the regulatory period is shown in Table 29. All amounts are 1.1.2013 real dollars.

TABLE 29

District	Tariff	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
All Towns and Districts with water and wastewater services	Water Service Fee	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
	Water Volume Charge	$276.48	$283.11	$289.90	$296.87	$303.99	$311.30
	Wastewater Service Fee	$414.91	$429.02	$443.61	$458.69	$474.29	$490.42
	Total	$846.86	$867.60	$888.98	$911.03	$933.75	$957.19
	Percentage Increase		2.45%	2.46%	2.48%	2.49%	2.51%
Water Only Towns Barmah, Baxter Road, Colbinabbin, Corop, Dookie, Katamatite, Katandra West, Katunga, Kirwan's Bridge, Longwood, Picola, Pyalong, Strathbogie, Toolamba, Woods Point, Wunghnu	Water Service Fee	$155.47	$155.47	$155.47	$155.47	$155.47	$155.47
	Water Volume Charge	$276.48	$283.11	$289.90	$296.87	$303.99	$311.30
	Total	$431.95	$438.58	$445.37	$452.34	$459.46	$466.77
	Percentage Increase		1.53%	1.55%	1.56%	1.57%	1.59%

Tenants, where the property is separately metered, pay the water volumetric charge only. The landlord is responsible for the payment of water service fees and wastewater service fees. The water volumetric fee increases by 2.4% real each year. Therefore tenant's water bills will increase by 2.4% real each year at varying consumption levels.

Goulburn Valley Water prices in 2012/13 are among the lowest in Victoria. The percentage increases proposed for the price determination period 2013–2018 are also among the lowest in the State. Goulburn Valley Water has a Hardship Policy and Procedure to assist any customers who may experience financial hardship or difficulty paying their water accounts from time to time. Details of the Hardship Policy are included in the Customer Charter available on the Goulburn Valley Water website.

10.0 OTHER PRICING ISSUES

10.1 Form of Price Control

The overall revenue requirement of the business can be controlled through a number of different regulatory mechanisms. The three main approaches are:

- a Price Cap: which controls the prices which can be charged, but which leaves the demand side un-regulated. This creates incentives for the business to operate efficiently but places it at risk from demand side uncertainty. There are two main options here:
  - ♦ a tariff basket approach which allows for flexibility in the allocation of costs and charges between services and customer classes; and
  - ♦ individual price caps for specified services;
- a Revenue Yield: where a cap is placed on the average revenue per unit of service delivery. This creates considerable risk from volume volatility; and
- a Revenue Cap: which controls the aggregate revenue allowed to be charged, but which then requires adjustment to tariffs to balance any over or under recovery.

Goulburn Valley Water's preference is for a Price Cap with individual price caps for specified services as this provides incentives for efficiency, is relatively easy to implement, and provides price certainty for customers for the five year period. The Revenue Cap does not provide similarly clear incentives for efficiency and is more administratively cumbersome to operate in practice.

Revenue adequacy is dealt with through a combination of mechanisms including tariff design, forward planning regarding resource and demand variables, and risk management.

Goulburn Valley Water's support for this approach is predicated on an approach to risk management which takes adequate account of the considerable demand and supply side uncertainty which the business faces. These are dealt with in the following section.

10.2 Risk Management and the Water Plan

Goulburn Valley Water believes that the water sector is exposed to considerable risks that are at least as severe and material as those faced by other utilities.

This Water Plan, the outputs identified and related expenditure proposed, have been developed with a full appreciation of risks which can be managed by the business. The costs in the plan are based on prudent assumptions and are supported by a structured, rational and quantified approach to risk management and mitigation.

The cost of risk management is priced into regulated revenues through a number of mechanisms including:

- a Market Risk Premium in the estimation of the weighted average cost of capital proposed, in recognition that investors require a commercial incentive to invest in other than "risk-free" investments;
- an allowance for specific industry (or entity) risk in the estimation of WACC through the value of Equity Beta in recognition that different industries (or entities) face differing risks to the investment market as a whole;
- an allowance for the cost of insurance against foreseeable, but uncommon events, that are not accounted for in the Market Risk Premium or Equity Beta; and
- an allowance in OM&A expenditure or capital expenditure for the efficient cost of mitigating specific operational or asset risks that are not accounted for in the Market Risk Premium or Equity Beta or in insurance costs.

However, there are additional non-diversifiable risks which are outside the reasonable bounds of management or shareholder action. In particular, there are risks associated with climate variability and government initiatives to promote water conservation, which create asymmetric material risks that cannot be countered by any action that Goulburn Valley Water is able to take. Other significant risks which have not been priced into the Water Plan include:

- Dam burst or major structural failure;
- Widespread drought leading to loss of water resources (as has occurred in the first two regulatory periods);
- Collapse of major sewers (most others could be managed);
- Significant chemical spill into storages or river systems where treatment facilities are not capable of treating the effects;
- Destruction of main office by fire or other disaster;
- Widespread and constant loss of power;
- Loss of major customers;
- Widespread sabotage or terrorism; or
- Significant changes to Government or other regulatory policies or procedures including asset valuations, changes to quality standards, changes to legal requirements.

Should any such event occur with material consequences to costs or revenue, Goulburn Valley Water would seek either:

- the re-opening of the price determination; or
- the logging-up of additional, unbudgeted costs or loss of revenue for consideration at the next determination.

11.0 NON-PRESCRIBED SERVICES

11.1 Classification of Services as Non-Prescribed

Goulburn Valley Water does not provide any services to customers that are non-prescribed services. Interest income, rental income and farm income received has been classified as non-prescribed revenue in this Water Plan. The expenditure associated with non-prescribed revenue has been classified as non-prescribed expenditure in the Water Plan.

GLOSSARY

ADWG	Australian Drinking Water Guidelines
AS/NZS	Australian Standard / New Zealand Standard
CAPEX	Capital Expenditure
CCRC	Corporate Community Reference Committee
CEF	Clean Energy Future
CPI	Consumer Price Index
CRM	Customer Relationship Management
DH	Department of Health
DSE	Department of Sustainability and Environment
DWQMS	Drinking Water Quality Management System
EPA	Environment Protection Authority
ESC	Essential Services Commission
EWOV	Energy and Water Ombudsman, Victoria
FFO	Funds Flow from Operations
GBCMA	Goulburn Broken Catchment Management Authority
G-MW	Goulburn-Murray Water
GSL	Guaranteed Service Levels
GVW2060	Goulburn Valley Water Supply Demand Strategy
HACCP	Hazard Analysis Critical Control Point
HRAL	High Rate Anaerobic Lagoons
IWN	Intelligent Water Networks
kL	kilolitre
L	litre
ML	megalitre
NCC	New Customer Contributions
NGER	National Greenhouse & Energy Reporting
OH&S	Occupational Health & Safety
OM&A	Operations, Maintenance & Administration
OPEX	Operational Expenditure
RAB	Regulated Asset Base
RUWA	Regional Urban Water Authorities
SCADA	Supervisory Control and Data Acquisition
SDWA	Safe Drinking Water Act
SEPP	State Environmental Protection Policy
SKM	Sinclair Knight Merz

SoO	Statement of Obligations
TDS	Total Dissolved Solids
t CO_2-e	Tonnes Carbon Dioxide Equivalent
WACC	Weighted Average Cost Capital
WIRO	Water Industry Regulatory Order
WMF	Wastewater Management Facility
WSAA	Water Services Association of Australia
WTP	Water Treatment Plant
YVW	Yarra Valley Water