WATER PLAN 2008-2013

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APPENDICES

Section 1

Executive Summary

Section 1 Executive Summary

The Water Plan 2008-2013 has been developed in consultation with customer and community groups and prepared in accordance with the Water Industry Regulatory Order 2003 (WIRO) and Western Water's Statement of Obligations (SoO) with the Minister.

The Water Plan will be submitted to the Essential Services Commission (ESC) to be assessed against principles contained in the WIRO and for prices to be determined. The ESC must be satisfied that the prices provide Western Water with sufficient revenue over the regulatory period to meet its obligations and deliver the required service levels.

The most significant consideration in developing the Water Plan has been the uncertainty of drought and climate change. More than a decade of below average rainfall has impacted on the business in a number of critical areas, specifically a reduction in water usage income, increased costs for bulk water purchases from external sources and an emphasis on promoting community conservation and awareness campaigns. In the first regulatory period (2005-2008), the impact of drought on costs and reduced water usage revenue is approximately $9.8 million.

Pricing

Western Water's pricing strategy has been developed in consultation with customers and in accordance with Government policy objectives.

The main features include:

- continue with Rising Block Tariffs (RBT) for residential consumers, to accelerate the costs for each band while minimising increases on fixed service charges;
- New Customer Contributions (NCC) consistent with the industry submission co-ordinated by VicWater;
- the proposed Melbourne Water augmentations, which contribute to an average net impact per Western Water customer of approximately $49 or 5.7% per annum.

Pricing outcomes for Western Water customers – 2008-2013

Year	Total tariff real price outcome (smoothed % increase p.a.)	Average Customer real $ Impact per annum (250kl)
2008/09	10.87%	10.78% or $78.51
2009/10	10.87%	8.34% or $67.29
2010/11	10.87%	8.05% or $70.37
2011/12	10.87%	8.15% or $76.96
2012/13	10.87%	7.76% or $79.27
Overall real average annual increase	**10.87%**	**8.62% or $74.48**

The increases are required to augment supply systems and guarantee the continued reliability of water supplies to the region. The proposed price increases are capped and, should conditions improve resulting in lower costs, a commensurate reduction from these caps will be considered.

The following charges are proposed for all districts from 1st July 2008:

			1st July 2008 (assumes CPI 2.5%)	1st July 2007
Water volumetric tariffs (per 4 months)				
RBT	Tier 1	0-53kl	$0.98	$0.8335
	Tier 2	53-106kl	$1.30	$0.9780
	Tier 3	>106kl	$2.60	$1.4449
Water service charge (pa)			$162.28	$135.32
Sewerage service charge (pa)			$410.81	$389.12

Non-residential customers water usage charges will all be at Tier 2.
Class A recycled water usage charges will be at Tier 1.
Class A recycled water service charges commence at $60.00 (2007/08) per annum, in addition to water and sewerage charges above.

Service Outcomes

Service standards in this Plan reflect actual average performance over the past three years, with further continued improvement in several key areas. This is consistent with market research and community feedback that indicates current standards largely meet customer expectations provided Western Water strives to enhance these standards through improved efficiency. Examples of these include:

Service Standard	Target 2005-2007 Water Plan	Actual Average 2005-2007	Target by 2013 of Water Plan
Water			
Unplanned supply interruptions (per 100km)	22	22.1	20
Average duration of planned interruptions (mins)	229	235	120
Unaccounted for water	13.8%	11.4%	8%
Sewer			
Sewerage blockages (per 100km)	34.7	32.13	27
Average time to attend spills & blockages (mins)	30	32.1	30
Customers with >3 sewer blockages in a year	3	3.3	3
Customer Service			
Complaints to EWOV ('000 customers)	0.39	0.39	0.336

In addition, Western Water will introduce Guaranteed Service Level payments to drive customer service improvements. Breaches of five key water supply and sewerage system standards will trigger a credit payment directly to affected customers.

Guaranteed Service Level	Amount $
Water	
Failure to notify of planned water supply interruptions	$25
Planned interruptions during peak hours (5 – 9 am and 5 – 11 pm)	$25
Planned water supply interruption longer than notification given	$25
Sewer	
More than three sewer interruptions in 12 months	$25
Sewage spills inside a house, not stopped within one hour of notification	$100

Moving toward carbon neutrality

Western Water aims to ensure it manages its Greenhouse Gas Emissions. In pursuit of a policy of moving toward carbon neutrality, Western Water has allocated $900,000 in capital expenditure to renewable energy and energy efficiency projects. A Memorandum of Understanding has been signed with Sustainability Victoria with a commitment of having a Greenhouse Reduction Strategy in place by September 2007.

Water conservation

An extensive water conservation program as foreshadowed by Victorian Government water management strategies and in response to long-term drought conditions has been developed. The relevant strategies are:

- Securing Our Water Together, Victorian Government White Paper (2004)
- Regional Action Plan (RAP) for the Western Water Region (2005)
- Central Region Sustainable Water Strategy (CRSWS) (2006).

Western Water's Water Supply Demand Strategy (WSDS) (2006) is a 50-year planning strategy outlining key water conservation actions aimed at reducing individual water usage. Framed in consultation with DSE, the WSDS has set per capita water saving targets of 25% and 30% for 2015 and 2020, respectively.

Programs relevant to the WSDS include the continued identification of unaccounted water, replacing older assets to minimise water losses, supporting the Victorian Government's initiative of Five Star ratings for new houses and replacement of inefficient showerheads with more efficient models.

The program will require investment of $11.3 million to save 18,108 megalitres over the period of the WSDS.

Recycled Water

More than $13 million will be committed to increasing access to recycled water and achieving the target of 100% recycling by 2013. Clearly linked to the actions contained in the CRSWS and WSDS, this initiative focuses on drinking water substitution, including use of Class A recycled water in new developments, including Eynesbury and Melton South.

In addition, more than $3.3 million will be spent on targeting 100% recycling of biosolids.

Biodiversity

A $900,000 commitment to enhance the biodiversity value of Western Water's assets will include improvements to biodiversity assets at the Melton Recycled Water Plant at Surbiton Park in partnership with the Pinkerton Landcare and Environment Group.

With a pledge towards continuous improvement, internal targets have been set to reduce water, energy and waste through initiatives such as office paper reduction, water use reduction, chemical and energy use review and appropriate vehicle use.

These initiatives were strongly supported in a recent customer research survey whereby the greater majority of customers expressed a willingness to pay between $10 and $15 toward reducing emissions and recycling of biosolids. The combined average cost of these programs is less than $14 per customer per annum.

Water Quality

The Water Plan 2008-2013 proposes that drinking water supplied by Western Water will continue and always comply with the water quality standards. The continued accreditation of the Integrated Management Systems with accreditation of Hazard Analysis and Critical Control Points (HACCP) and compliance with *Safe Drinking Water Act 2003* are crucial in managing our drinking water quality and meeting Department of Human Services (DHS) regulatory requirements.

Western Water is compliant, or working toward compliance over the course of the Water Plan 2008-2013, with all clauses contained in its shareholder contract with the Minister via the Department of Sustainability & Environment (DSE), the Statement of Obligations (SoO), which includes commitments to implementing the Central Region Sustainable Water Strategy (CRSWS) and Water Supply Demand Strategy (WSDS) initiatives.

Demand Forecasts

The Western Water region is one of the fastest growing areas in Victoria, with an annual growth rate exceeding 4% over the past five years.

With growth forecasts ranging from 3.11% to 3.66% per annum over the life of the Water Plan, there are particular implications for the Western growth corridor of Sunbury, Bacchus Marsh and Melton. Melton's population, for example, is forecast to increase from 50,000 to more than 115,000 by 2030.

Population Growth Rates for Western Water Region

	Population	% increase
2008/09	139,877	3.32%
2009/10	144,415	3.24%
2010/11	149,001	3.18%
2011/12	154,450	3.66%
2012/13	159,938	3.55%

Growth combined with drought has driven water supply security projects, including interconnection with the Melbourne supply network, in recent years. Recycled water plant upgrades will be the main focus over the next five years.

Western Water will focus on delivering a range of demand management initiatives detailed in the Victorian Government's CRSWS, Regional Action Plan for the Western Water region and our own WSDS.

This will involve a strong focus on balancing water supply demand, increased conservation and sourcing new and sustainable alternatives.

While Western Water customers have responded favourably to conservation measures, such as Permanent Water Saving Rules, the challenge will be to maintain reduced usage when the current restrictions are eased.

The demand reduction and conservation program includes:

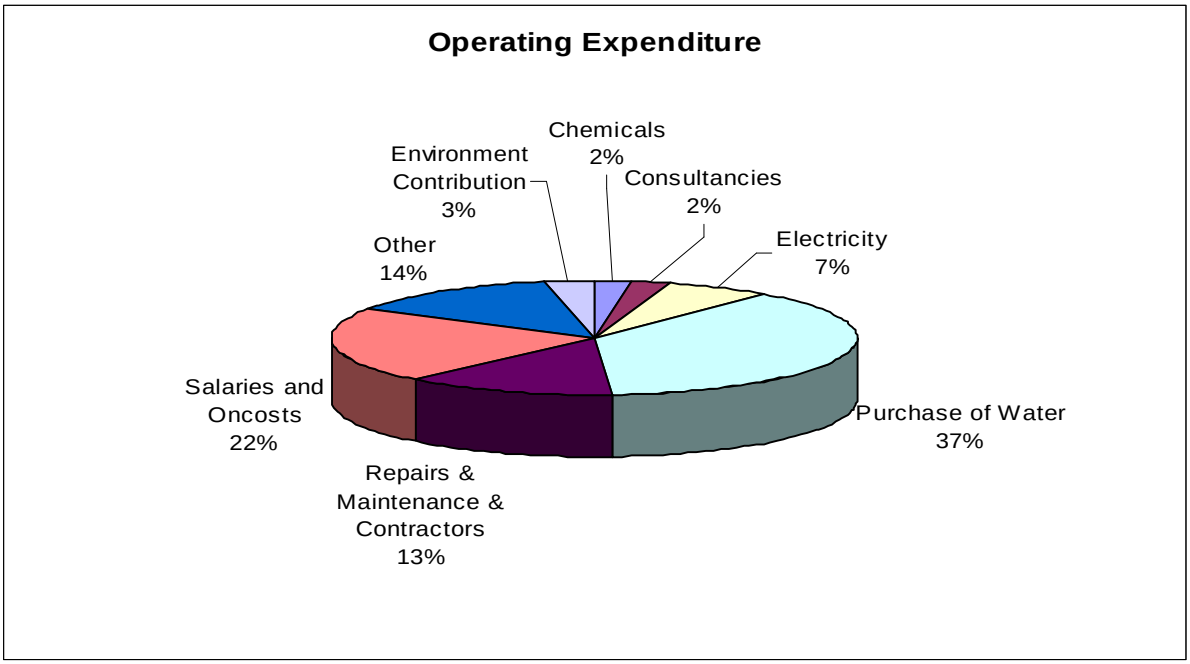
- WELS (Water Efficient Labelling Scheme)
- Permanent Water Saving Rules (PWSR)
- Inclining/Rising Block Tariff
- Community education
- Water audits
- Leakage Reduction Programs
- Appliance Retrofit Programs
- Source substitution.

The Water Plan 2008-2013 expresses a strong commitment to sustainability through a culture of continuous improvement.

The introduction of mandatory water management plans or a "waterMAP" for all non-residential customers consuming more than 10 megalitres per annum is an important feature of the water conservation initiatives.

Revenue Requirements

Western Water's revenue requirement over the 2008-2013 regulatory period is $286.45 million. This includes operational expenditure of $207.25 million (all dollars in 1/1/07$).



Based on a building block approach to derive future estimates, the revenue requirement must meet expected service standards and other regulatory outcomes.

Meeting the needs of growth and development will contribute to future operational costs. This is specifically relevant to the ongoing need to purchase water from Melbourne Water because of the region's drought-depleted supplies. The inclusion of new augmentation options in the Melbourne Water price have contributed to these costs increasing annually by 35.1% in real terms.[1]

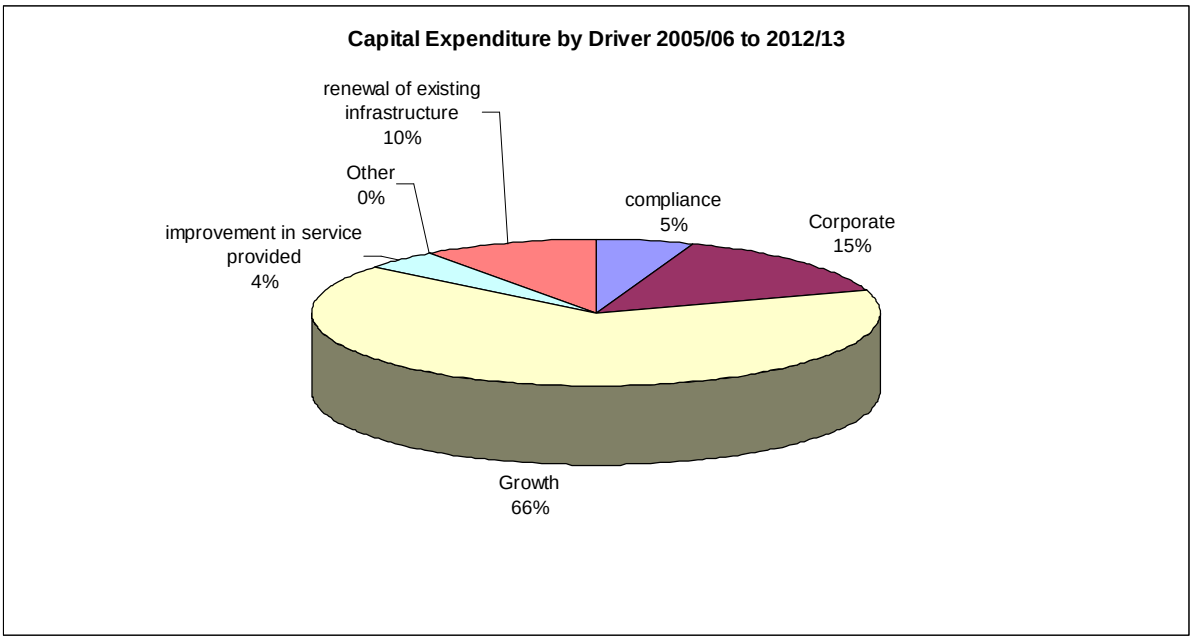
In addition, a real fixed annual charge of $1.7 million to wholesaler Southern Rural Water and significant expenditure required to communicate water restrictions and conservation initiatives to customers have meant that water prices will increase commensurately.

New environmental obligations in respect to Environment Protection Authority requirements, greenhouse gas emissions, biosolids management and *Flora and Fauna Act* requirements will also contribute to increased operational costs.

Despite these challenges, Western Water is committed to efficiency gains that deliver increased revenue and cost savings. A multi-disciplined Revenue Maximisation Team will investigate business efficiencies and review controllable costs. The Plan includes annual efficiency savings of 1.5% on controllable costs and an additional $300,000 per annum target for increased revenue maximisation or cost minimisation opportunities.

[1] This information was provided by Melbourne Water for the purposes of preparing this Water Plan. It was the best estimate provided at this time and is subject to further change. Any subsequent change will impact on the real price increases to customers contained in this document.

The Water Plan includes an allocation of $128.59 million for capital works over five years, principally driven by vigorous development in the region's growth areas. This allocation has been subject to extensive review and investigation to ensure optimum timing, prudence and efficiency.



Year	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000	Total $'000
Expenditure	*38,152*	*33,380*	*24.253*	*16,921*	*15,884*	***128,590***

The key drivers of this strong capital spend are:

- CRSWS and WSDS – Demand Forecasts
- Western Water's Regional Action Plan
- Growth (Melbourne 2030 – Extension of Urban Growth Boundary – Melton South)
- Asset Management Strategy (Asset Renewals)
- Compliance (EPA, DHS etc) – Regulatory Outcomes
- Regulatory and customer service obligations established for the 2008-2013 Water Plan in consultation with DHS, DSE, EPA and Melbourne Water.

The net capital expenditure for the period is added to the opening regulatory asset base (RAB) of $148.746 million at 1st July 2008, less regulatory depreciation and disposals, to arrive at a closing RAB of $232.242 million.

Western Water has adopted the ESC provided water industry Weighted Average Cost of Capital (WACC) of 5.1% in the building block to determine its total revenue requirement of $286.45 million.

Regulatory Performance

To date, Western Water has performed well with respect to customer service and service delivery standards in both regulatory audits. Western Water focuses not only on trends to determine issues and problems, but also comparative reporting, which is useful in assessing appropriate service levels for the future.

Capital Expenditure is forecast to exceed the original Water Plan of $68 million. This increased expenditure is largely associated with construction of a Class A Recycled Water Plant at Surbiton Park, near Melton, and escalation of prices from 2004 dollars.

The rolled forward Regulatory Asset Base (RAB) at 1st July 2008 is forecast to be $148.746 million.

Given predictions that the dry conditions will continue, at least in the short-term, the loss of revenue and increased costs associated with drought management is expected to continue.

Despite continued extreme drought conditions, Western Water has managed to meet its internal KPI. While the business assets are relatively young, many are located in highly reactive clay soils, resulting for example, in water main bursts during the extreme drought and summer months being 54% higher than previously experienced.

Western Water continues to focus on recycling. In comparing utilities, the National Performance Report 2005/06 released by the National Water Commission noted that Western Water had the highest water recycling rate among major water utilities in Australia at 81%. Our strong focus on recycled water continues in this Water Plan.

Consultation

Western Water invited public comment on the draft Plan between 15th August and 15th September 2007. This feedback, along with continued consultation with key stakeholders, was considered prior to submission of the final Plan to the ESC on the 8th October 2007.

Section 2

Introduction

Section 2 Introduction

Regulation Governing Application

The Water Plan 2008-2013 (the "Plan") is prepared in accordance with the Water Industry Regulatory Order 2003 (WIRO) and Western Water's Statement of Obligations (SoO).

The draft Plan was submitted to the Minister for Water, Environment and Climate Change, the Environmental Protection Authority (EPA), the Essential Services Commission (ESC) and the Department of Human Services (DHS) in accordance with Clause 8.4 of the SoO. The Plan will be resubmitted to the ESC by 8th October, 2007 incorporating any variations requested by the Minister and having regard to any comments from the EPA, DHS and other Stakeholders received.

Principles and Approaches

In performing its functions and providing its services, Western Water follows these guiding principles contained in Clause 6 of the SoO:

(a) manage the water resource in a sustainable manner;
(b) effectively integrate economic, environmental and social objectives into Western Water's business operations;
(c) minimise the impacts of its activities on the environment;
(d) manage risk to ensure public safety, quality and security of supply;
(e) operate as efficiently as possible consistent with sound commercial practice;
(f) manage Western Water's business operations to maintain the long-term financial viability of Western Water;
(g) undertake continuous review, innovation and improvement; and
(h) collaborate with other public authorities and Government agencies to take account of regional needs.

In accordance with Clause 7.3 of the SoO, the Plan outlines:

(a) outcomes to be delivered in the regulatory period with respect to Standards and Conditions of Service and Supply, meeting future demands on Western Water's services and complying with "any obligations specified in the SoO, a regulatory obligation and other obligations imposed by or under legislation";
(b) how Western Water proposes to achieve those outcomes;
(c) Western Water's revenue requirements in the regulatory period; and
(d) the proposed prices to be charged for each of Western Water's prescribed services.

Since Western Water developed the first Water Plan 2005-2008, a number of amendments and new obligations have been proposed to the SoO. At this time, the SoO has not been amended and this Plan is prepared in accordance with the Procedural Requirements set out in the current SoO and the Regulatory Principles contained in Clauses 13 and 14 of the WIRO.

In addition, proposed new obligations included in this Plan comprise:

- working with large non-residential water users to improve water management outcomes;
- developing a Water Supply Demand Strategy and establishing water conservation targets;
- application of a cap on owner contributions to specified sewerage schemes;
- promoting research in innovation and capability building;
- reflecting responsibilities to improve sustainability beyond water savings by applying principles for sustainable management;
- incorporating relevant outcomes of the Central Region Sustainable Water Strategy; and
- participating in the Smart Water Fund.

Regulatory Principles

In accordance with Clause 14 in the WIRO, Western Water has considered the following regulatory principles:

(a) provide for a sustainable revenue stream to the regulated entity that, nonetheless, does not reflect monopoly rents and or inefficient expenditure by the regulated entity;

(b) allow the regulated entity to recover its operational, maintenance and administrative costs;

(c) allow the regulated entity to recover its expenditure on renewing and rehabilitating existing assets;

(d) allow the regulated entity to recover a rate of return on assets as at 1st July 2004 that are valued in a manner determined by, or at an amount otherwise specified by, the Minister at any time before 1st July 2004;

(e) allow the regulated entity to recover a rate of return on investments made after 1st July 2004 to augment existing assets or construct new assets; and

(f) provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users about:

- the costs of providing services, including costs associated with future supplies and periods of peak demands and or restricted supply;
- choices regarding alternative supplies for different purposes;
- take into account the interests of customers of the regulated entity, including low income and vulnerable customers;
- provide the regulated entity with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria’s water resources; and
- enable customers or potential customers of the regulated entity to readily understand the prices charged by the regulated entity for prescribed services, or the manner in which such prices are to be calculated or otherwise determined.

Regulatory Period

In accordance with the ESC, the Plan is prepared for the regulatory period 1st July 2008 to 30th June 2013.

Structure of Document

This document is structured in accordance with ESC Guidelines to provide the reader with an understanding of Western Water's performance, history, strategic direction and constraints under which it expects to operate during 2008 to 2013. The Plan outlines demand forecasts, customer numbers, service standards and outputs developed following extensive consultation with regulators, including the EPA and DHS, as well as consultation with the Department of Sustainability and Environment (DSE) as shareholder, and customers. Also outlined is the capital program and operational expenditure needs. Using the building block approach, operating costs, regulatory depreciation as the return of assets, and the return on assets gives rise to Western Water's revenue requirements over the period of the Plan. The impact on tariffs is provided together with customer bill changes for different levels of usage and the assistance available to customers in hardship. Key assumptions used in preparing the Plan are provided as Appendix A.

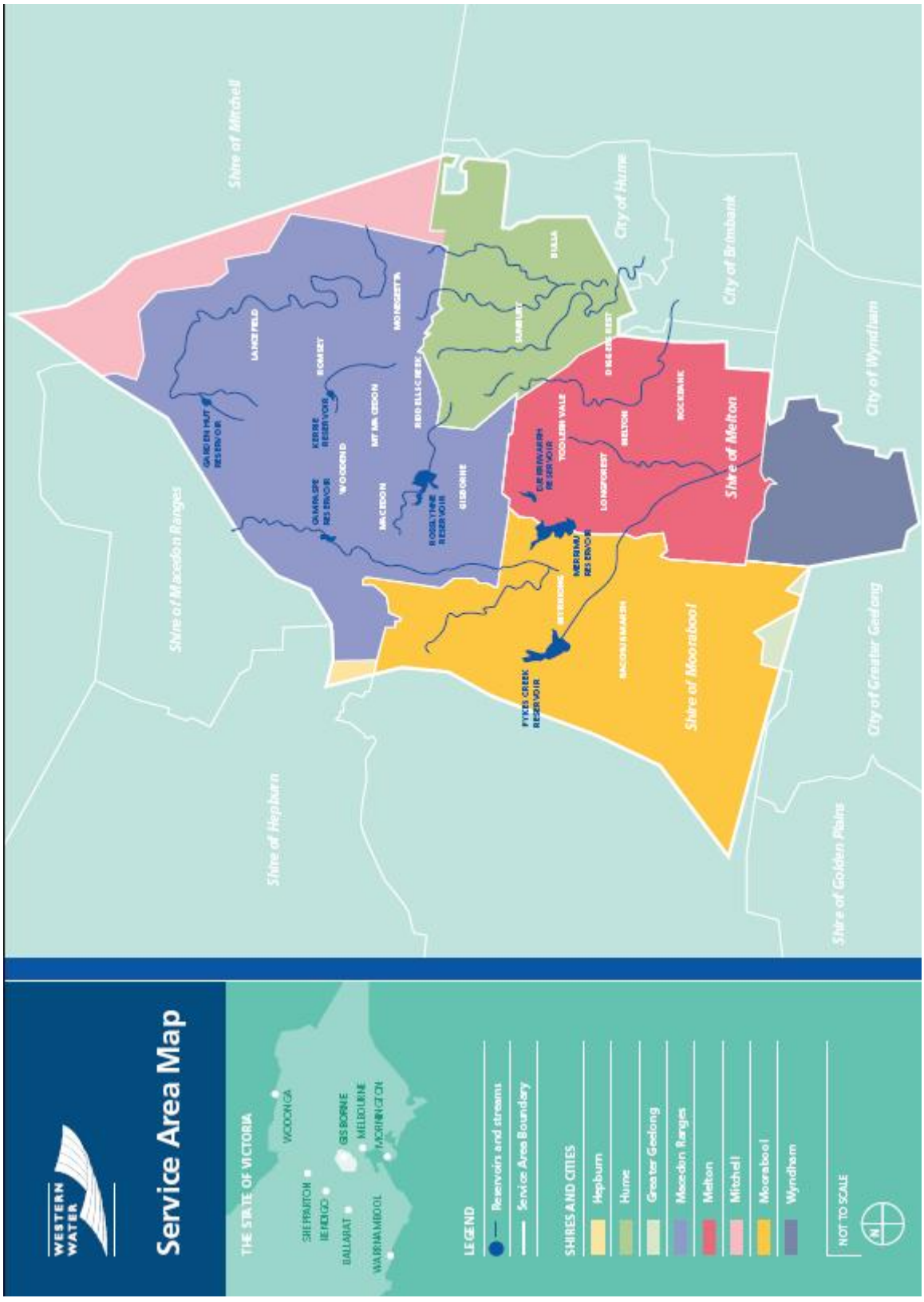
Performance, Strategic Context and Initiatives

Introduction

Western Water was formed in 1995 from the amalgamation of four water businesses. Western Water is responsible for retailing water and recycled water supplies and sewer services across an area of 3,000 square kilometres to the north-west of Melbourne. Eighty two per cent of our customers reside within the major towns of Melton, Sunbury, Bacchus Marsh and Gisborne. The remaining customers live within a further 12 towns, namely Bulla, Diggers Rest, Lancefield, Long Forest, Macedon, Mt Macedon, Myrniong, Toolern Vale, Riddells Creek, Rockbank, Romsey and Woodend. Customer assessments total 51,149 (as at April 2007), of which 95 per cent are residential, with approximately 400 trade waste customers. Western Water purchases bulk water from wholesalers Southern Rural Water (SRW) and Melbourne Water (MW) as well as managing a number of small local water storages.

A map of Western Water's service area is provided for information.

Map of Western Water's Service Area



Strategic Context

Western Water has a clear statement of what it wants to be known for (Vision), what it is here to do (Purpose), how it intends to get there (Strategic Pathways), how it monitors progress (Balanced Scorecard), and our Values. This is our Belief System which underpins all activities.

OUR VISION

"To be a leading service provider working with our community towards a sustainable future"

OUR PURPOSE

"To contribute to healthy communities by meeting their current and future water service needs"

STRATEGIC PATHWAYS

To achieve the Vision and Purpose, three strategic pathways have been developed:

- *To drive an environmentally sustainable future*
- *To proactively manage our destiny*
- *To be a leading service provider as judged by our customers and the wider community.*

Each pathway is designed to enable key issues to be addressed and to ensure that Western Water creates a distinct signature in terms of a strong local presence, with an emphasis on the customer and community, sustainability, the environment, sound financial management and innovation.

OUR VALUES

Behaviours must be aligned with our Vision and Purpose in our strive for excellence within our workforce by gaining a match between employee and employer goals. Every employee at Western Water will embrace and demonstrate each of our seven Values that are:

- Inclusiveness – At all times being consultative, involving, partnering and engaging.
- Leadership – Continually innovative, challenging, encouraging, inspiring and anticipating.
- Integrity – Being honest, transparent, open and ethical.
- Fairness – Demonstrating equity, compassion, respect and non discrimination.
- Accountability – Being acknowledged as transparent, responsible, delivering on our promises, answerable and meeting regulatory standards.
- Sustainability – Acting to safeguard and restore our environment, being knowledgeable and aware of environmental impacts when making decisions.
- Commitment – Our people demonstrating loyalty, dedication, enthusiasm and being nurturing and supportive of others at all times.

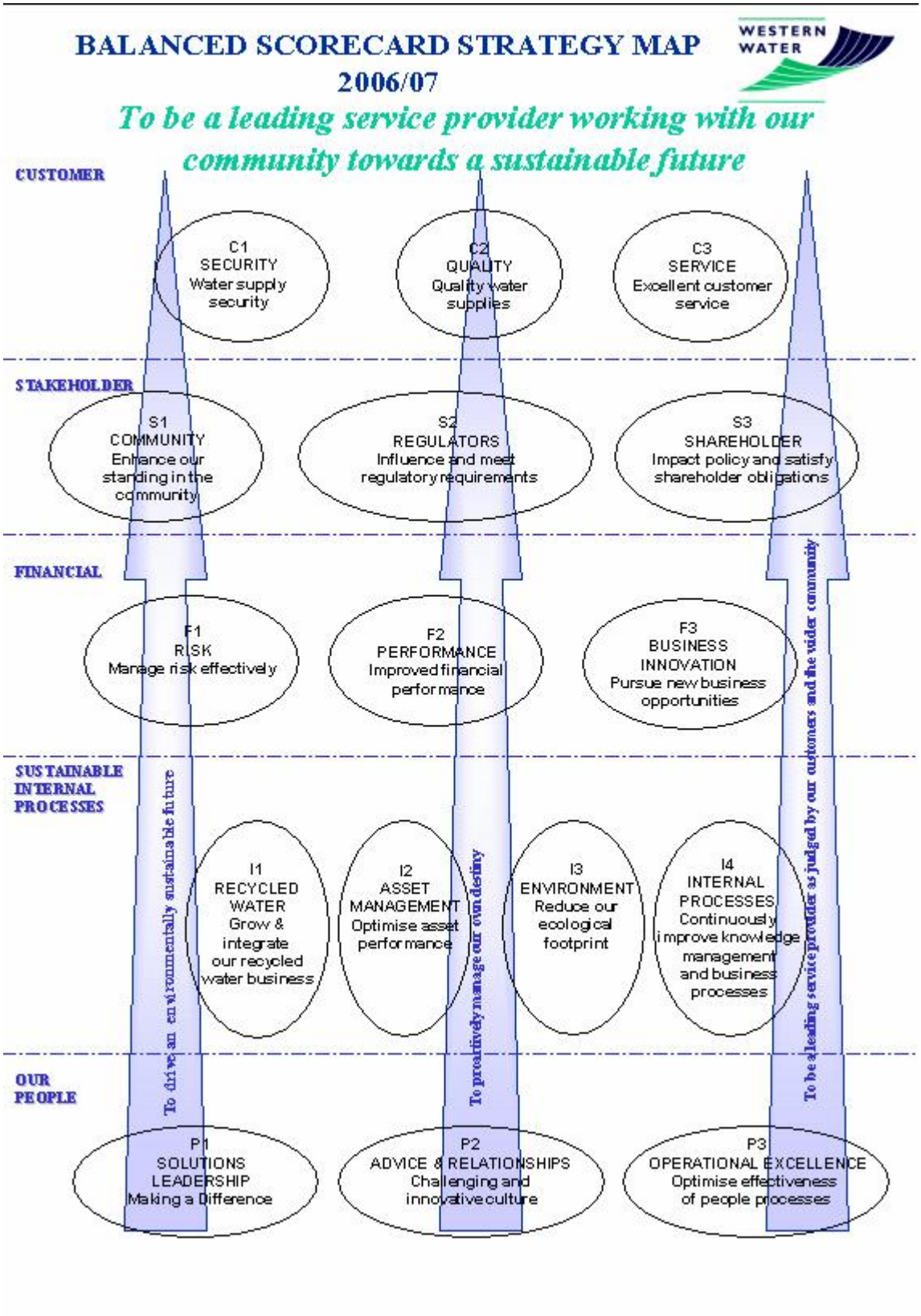
Balanced Scorecard

Since 2001, Western Water has used the Balanced Scorecard (BSC) as a management tool to monitor strategy, allocate resources and report monthly on our performance. The BSC has assisted Western Water to achieve high performance results and led to Western Water receiving national and international recognition. The BSC has ownership across the business due to its development through a multi-disciplined team and cross business reporting to all Board Members, Managers and Staff.

In 2004, Western Water received CPA Australia's Victorian and National Public Sector Organisation of the Year Award for leadership and innovation in introducing the BSC, and for its success in sustainable water resource management with the Sunbury/Melton Recycled Water Project. Western Water has also been inducted into the international Balanced Scorecard Hall of Fame for achieving breakthrough performance using the BSC. Western Water is only the second Australian organisation to receive this prestigious international award.

Reflecting Western Water's Vision and Pathways, the BSC is summarised as a Strategy Map illustrating how Western Water will achieve its Vision. Each Pathway is represented across five different perspectives, being Customers & Community, Stakeholders, Financial, Sustainable Internal Processes and Our People.

Within each perspective are a number of strategic objectives containing key measures, initiatives and targets to allow monitoring of progress towards achieving our Vision. This relationship is summarised in the current 2006/07 Strategy Map below:


BALANCED SCORECARD STRATEGY MAP
2006/07
WESTERN WATER
To be a leading service provider working with our community towards a sustainable future
CUSTOMER
C1 SECURITY Water supply security
C2 QUALITY Quality water supplies
C3 SERVICE Excellent customer service
STAKEHOLDER
S1 COMMUNITY Enhance our standing in the community
S2 REGULATORS Influence and meet regulatory requirements
S3 SHAREHOLDER Impact policy and satisfy shareholder obligations
FINANCIAL
F1 RISK Manage risk effectively
F2 PERFORMANCE Improved financial performance
F3 BUSINESS INNOVATION Pursue new business opportunities
SUSTAINABLE INTERNAL PROCESSES
I1 RECYCLED WATER Grow & integrate our recycled water business
I2 ASSET MANAGEMENT Optimise asset performance
I3 ENVIRONMENT Reduce our ecological footprint
I4 INTERNAL PROCESSES Continuously improve knowledge management and business processes
OUR PEOPLE
P1 SOLUTIONS LEADERSHIP Making a Difference
P2 ADVICE & RELATIONSHIPS Challenging and innovative culture
P3 OPERATIONAL EXCELLENCE Optimise effectiveness of people processes
To drive an environmentally sustainable future
To proactively manage our own destiny
To be a leading service provider as judged by our customers and the wider community

All strategic objectives, measures, targets and initiatives are incorporated in the BSC. Reporting organisational performance monthly to all Western Water teams promotes ownership of, and contribution toward, achieving the Vision by all staff. The BSC and Strategy Map are regularly updated to align the business with any changes in strategic direction.

Drivers (Pathways) of Water Plan 2008-2013

This Plan demonstrates how the Belief System is aligned to meet the standards and outcomes expected from Western Water by the Minister for Water, Environment and Climate Change through the SoO, EPA, DHS, DSE and customer and community preferences. Key drivers of this Plan are aligned with each strategic Pathway below:

PATHWAY 1 - To drive an environmentally sustainable future

This Plan has been prepared incorporating all EPA requirements as Western Water's environmental regulator. Western Water's strong environmental compliance performance will be further enhanced during the regulatory period by the delivery of a number of key EPA regulatory improvements. The main improvements are summarised as:

- 100% water recycling target by 2013
- 100% biosolids recycling target by 2013
- Greenhouse Gas Reduction initiatives towards goal of carbon neutrality
- Continuous improvement through the Environment Committee with an emphasis on reduction of office waste, water conservation and energy usage
- Stream flow Management/River Health improvements
- Improved biodiversity management of Western Water assets.

Western Water will continue its industry leadership initiative on maximising the beneficial use of recycled water during this regulatory period. Particular focus will be placed on achieving increased substitution, where fit for purpose recycled water can safely replace drinking water for non-consumptive uses.

The Plan includes development of dual water supply systems in high residential growth areas, and continued extension of recycled water supply systems in areas where 100% recycling of all water is yet to be achieved.

By 2013, Western Water expects to recycle 100% of all water, consistent with the notion that there is no such thing as "waste" water.

A new focus contained in this Plan is to work towards carbon neutrality during this regulatory period, and as a first step begin emissions identification and reduction tasks.

In December 2006, Western Water signed a Memorandum of Understanding with Sustainability Victoria committing to working together to develop a Greenhouse Gas Reduction Strategy for Western Water. The Strategy outlines the steps Western Waters will take towards carbon neutrality.

Future investment decisions will consider greenhouse effects as a necessary part of the analysis on various investment options.

Western Water works closely with various stakeholders including community groups and other authorities in enhancing the biodiversity values of assets. Western Water will continue partnerships with Melbourne Water, Councils and DSE in implementing various biodiversity programs. In relation to community involvement, Western Water values the services and advice specifically provided by local Landcare Groups. Western Water has recently signed a Memorandum of Understanding (MOU) with Pinkerton Landcare Group and through the MOU is committed to implement a number of programs to enhance the biodiversity value of Pinkerton Forest and assets fronting the Werribee River. Pinkerton Landcare and Environment Group also assist Western Water in noxious weed control. Western Water will aim to develop a further MOU with the Deep Creek Landcare Group to further our joint biodiversity protection and enhancement goals in Romsey and assets fronting Deep Creek.

Other key strategic environmental drivers in this Plan include participating as a stakeholder on river health improvements, better biosolids management practices, and, of course, a range of detailed water conservation and waste reduction initiatives.

PATHWAY 2 - To proactively manage our destiny

Over the past three years, the Victorian Government has prepared a number of policy statements that will guide Western Water in continuing to deliver services to the region. These are:

- Securing Our Water Together, Victorian Government White Paper (2004)
- Regional Action Plan (RAP) for the Western Water Region (2005)
- Central Region Sustainable Water Strategy (CRSWS) (2006).

In conjunction with the development of the CRSWS, Western Water has developed a 50 year Water Supply Demand Strategy (WSDS) (2006). The WSDS demonstrates how Western Water intends to manage water supply, sewerage services, and recycled water supplies to each town that forms part of our rapidly growing region. In order to meet the challenges of servicing our growing community during a period of climate change, and pressure on water resources, a key component of the WSDS is a range of measures and initiatives designed to reduce overall water consumption per capita by 25% by 2015, and 30% by 2020.

Western Water will continue to proactively manage our water resources, invest wisely in new sources of supply and to increase the reliability and flexibility of existing sources. Further augmentation to local supplies are planned, new bulk entitlements will be sought, and investments will continue to be made towards recycling and conserving existing water supplies.

Western Water expects to continue to work co-operatively with key stakeholders to achieve wide community aims, including working with our bulk water suppliers to secure water supplies. In addition, Western Water intends to actively participate in regional initiatives that may affect our community, such as participating in projects involving AgriWest, the Werribee Plains Vision[2], Caroline Springs Feasibility Study[3] , and the Bacchus Marsh Irrigation District[4].

PATHWAY 3 - To be a leading service provider as judged by our customers and the wider community

In 2006 Western Water adopted its Corporate Social Responsibility Policy aimed at demonstrating behaviours within the business and with external stakeholders that reflect our Values.

Western Water will continue to work with customers and the community to meet their needs. This will require the safe delivery of required services in a sustainable and efficient manner that meets our customer charter obligations. During the regulatory period, Western Water will:

- review its communication and consultation framework to ensure customers and community members are engaged in discussions on decisions that affect them;
- continue to implement its revised Hardship Policy to assist customers in need;
- deliver water conservation goals set out in the CRSWS and WSDS through community education and innovative community projects;
- accelerate communication with industrial and commercial users regarding opportunities to improve water conservation; and
- work with Melbourne Water to ensure a smooth introduction of the Waterways charge to customers in Western Water's region who will benefit from the outcomes.

In addition, Western Water aims to provide a safe workplace for our people. A skilled, motivated and committed workforce is integral to achieving Western Water's Vision. We aim to provide a safe and enjoyable work environment in which people are proud to contribute and participate. Western Water is committed to developing and implementing people management practices where people feel valued, supported and able to fully contribute to organisational goals.

[2] Western Water is a key stakeholder in the Werribee Plains Vision project, one of the aims of which is extensive sustainable use of recycled water in the region over the long term. Western Water has been assisting the Victorian Government in moving the project forward and its substantial experience in water recycling and key learnings from projects such as the innovative Sunbury/Melton project have been highly regarded.

[3] Western Water directly facilitated a study in partnership with DSE and other stakeholders participated in a study investigating the proposal for construction of alternative trunk sewerage infrastructure connecting the Caroline Springs region with the Melton Recycled Water Plant at Surbiton Park rather than a duplicate trunk sewer adding to growth in sewage flows from this region to the Werribee Treatment Plant. This study proved positive TBL benefits of such an initiative, and culminated in inclusion of the initiative for further consideration in the CRSWS. At the time of preparing the Plan, given the project size and range of possible stakeholders, the Plan does not include delivery of this project, however, investigations continue at this time.

[4] Western Water will continue to support local treatment/local recycling options for the region as well as promote regional long-term solutions to water supply needs. This will involve continued active participation in DSE-led workshops for a business case to be developed for recycled water supplies to the Bacchus Marsh Irrigation District, and other ongoing support for the regional agribusiness forum AgriWest, regional Landcare Groups and other key agribusiness stakeholders.

Western Water has consulted widely with its customers and community in development of this Plan. In particular, our Customer Advisory and Community Reference Groups have provided feedback and initiatives for consideration. Independent community surveys have also been conducted to gauge customer views on current and future service standards and issues. Specific community groups have also been consulted in relevant areas to provide further advice these include, Financial Counsellors, Local Government and Community Groups.

Following the release of the draft Plan, further consultation was undertaken (see Appendix R) and considered before the final Water Plan 2008-2013 was released, for implementation by Western Water from 1st July 2008.

Impact of Uncertainty in the Current Plan

Western Water supports the current regulatory period for the benefit of certainty in pricing for customers. Western Water recognises the benefits that pricing certainty provides to customers and stakeholders with each Water Plan. The business environments in which the water industry currently operates, however, is vastly different to that which existed when preparing the Water Plan 2005-2008.

The most significant impact for this Plan is dealing with the uncertainty of ongoing drought. To date, the impact of the drought on Western Water's financial position has resulted in a net annual loss of over $3 million in water usage income. This reduction in revenue is not matched by a net decrease in costs.[5] Given increasing levels of water restrictions, this revenue loss is expected to continue. For this Plan, Western Water will not seek to recoup past lost water usage revenue directly from customers in the form of an additional specific price increase however, the impact of this lost revenue has led to lower cash flows and higher debt levels being maintained, with the cost of servicing this increased debt being passed onto customers. Given the current uncertainties regarding the extent of climate change, the WSDS assumes dry weather continuing, and this is reflected in the Plan.

Current 2006/07 Initiatives by Perspective

As owner of Western Water, the Victorian Government requires that performance be measured in terms of achieving economic, social and environmental outcomes. Western Water further allocates its key strategic measures and initiatives from the view of five different perspectives.

The key initiatives (reviewed annually) for 2006/07 are extracted from Western Water's Balanced Scorecard and are summarised below:

[5] In some areas, costs have in fact increased due to the need to secure additional water resources, greater communication and monitoring of restriction requirements, and increased maintenance caused by dry grounds, affecting pipe infrastructure.

Perspective	Key Strategic Initiative
Customer	• Develop and implement key outcomes of the Central Region Sustainable Water Strategy. • Develop and implement Western Water's Water Supply Demand Strategy. • Implement Electronic billing • Develop and implement a communications strategy to improve perceptions of water quality. • Hardship Policy. • Monitor & continually improve our Drinking Water Risk Management Plan and HACCP enhancements to satisfy Safe Drinking Water legislation. • Develop and implement our Water Quality Improvement Plan.
Stakeholder	• Undertake community consultation programs for specific projects. • Develop and implement water education programs. • Implement a new Trade Waste Management System. • Effectively manage key regulatory processes. • Undertake bulk entitlement compliance works. • Facilitate the adoption of Catchment Planning Guidelines for the Macedon Ranges. • Implement all relevant White Paper, Regional Action Plan, CRSWS and WSDS initiatives.
Financial	• Develop and implement a new Business Continuity Plan. • Rollout and replace Financial Systems. • Implement the new Eynesbury Township dual water supply initiative. • Continue to support the Caroline Springs Sewer Mining Project feasibility study.
Sustainable Internal Processes	• Implement identified recycled water initiatives at all plants. • Investigate unaccounted for water. • Relocate corporate offices to Sunbury. • Identify and deliver projects that promote sustainability. • Prepare Greenhouse Gas Emission Reduction Policy for implementation. • Further develop biosolids reuse markets. • Develop the Melton South Growth Area servicing strategy incorporating dual water supplies. • Enhance biodiversity values at identified sites. • Implement mobile computing technology. • Implement Dataworks knowledge management system.
Our People	• Engage managers in strategic HR development. • Enable training and development of all staff. • Offer traineeships and new graduate programs. • Undertake improved performance reviews. • Workshop and engage all staff on our Values. • Compile and conduct employee survey. • Enhancement of the Recognition and Well Being Program. • Implement new HR supporting software programs. • Undertake external Job Evaluation Reviews.

Key initiatives for this Plan are summarised in Appendix C.

Summary

Western Water is an innovative leader in the water business sector as evidenced particularly by its achievements in strategic performance, customer consultation and recycled water. The organisation's Vision - *"To be a leading service provider working with our community towards a sustainable future"*" - has led to initiatives to reduce costs, minimise real price increases, provide better customer service and community engagement, increase water quality and environmental standards and to service sustainable growth.

This Plan will build further on those achievements, but recognise the challenges faced by ongoing drought, the need to manage future growth and customer and community expectations.

Above all, this Plan demonstrates how Western Water intends to response to these challenges, and make explicit what trade-offs are required to be made in order to be a leading services provider, working with our community towards a sustainable future.

Section 3

Review of First Regulatory Period

Section 3 Review of First Regulatory Period

At the time of preparing the Plan, the first regulatory period for Water Plan 2005-2008 has not been completed. The following information outlines Western Water's progress in delivering the outcomes proposed in the first regulatory period. The information is based on regulatory audits (conducted by the ESC appointed auditor) for 2005/06 and business actual and forecast results for 2006/07 and 2007/08 years.

Western Water has reviewed all clauses contained in its SoO with DSE signed in July 2004 (refer Appendix B). Western Water is compliant or working toward compliance for the obligations during the first regulatory period. The current status of Western Water's compliance with the SoO is set out below:

Clause Number	Clause in Statement of Obligations	Western Water Compliance
6	In performing its functions and providing its services, the authority must: (a) manage water resources in a sustainable manner; (b) effectively integrate economic, environmental and social benefits into its business operations; (c) minimise the impacts of its activities on the environment; (d) manage risk to protect public safety, quality and security of supply; (e) operate as efficiently as possible consistent with sound commercial practice; (f) manage its business operations to maintain the long-term financial viability of the Authority; (g) undertake continuous review, innovation and improvement; (h) collaborate with other public authorities and government agencies to take account of regional needs	Western Water manages these issues through the BSC complies with process and its pathways. Refer to Section 2 (Performance, Strategic Context and Initiatives). Key aspects that support compliance with these obligations include: • Development of Western Water's Water Supply Demand Strategy (WSDS) • Use of risk management techniques across the business to address all areas of risk. • Participation in the development of the CRSWS. • Effective governance processes with independent oversight. • Compliance with regulatory obligation. • Performance benchmarking and reporting with the water industry and across utilities. • Disclosing and reporting all material incidents or non-compliances.
9	Board Performance	The Board undertakes an annual Board Performance Review and reports to the Minister as required.
10	Customer and Community Engagement	Western Water complies and has a comprehensive customer and community consultation program. Each of the three major regions has a Community Reference Group. The Chairs of these groups are joined by customer advocacy group representatives to form the Customer Advisory Group (CAG). The CAG makes recommendations to the Board on all issues affecting customers.

11	Managing Risks	Western Water's Risk Management Framework complies and is used to identify risks on an ongoing basis. As risks are identified, so are actions and controls to mitigate and manage them. The strategy and framework is in accordance with ANZS4360:1999 and is applied to all areas across the business using a Board-developed Risk Criteria and a Risk Register database. To date Western Water has identified 143 risks with all but 3 fully treated. During the last 5 years, the Risk Management systems have been audited in various ways, and it is proposed to continue to use external audit reviews to ensure a sound Risk Management approach continues to be appropriately used. Where identified, specific contingency plans for key assets are established or enhanced.
12	Responding To Incidents and Emergencies	Western Water's Environmental Management Plans complies for its key risks and likely emergencies are complemented by certified management systems. Key aspects of the incident and emergency management process include: • incident management and escalation guidelines • specific contingency plans as required for key issues and assets • training and simulations as needed • Reporting through the BSC and in the Annual Report
13	Managing Assets	Western Water's asset management system complies and allows sustainable and optimal whole-of-life asset management. Capture and use of asset condition is now linked with the Geographical Information System (GIS). This allows quality asset performance monitoring, recording and improved decision-making - e.g. network tracing to determine customers affected by interruptions, scatter diagrams of infrastructure failures to manage repeat events and real time tools to enhance incident management and recovery.
14	Dam Safety	The security and safety of Western Water's compliance for water sources is managed together with expert consultants, through a rigorous dam safety inspection program. Security programs are also in place to protect these assets from crime and vandalism. Regular training and monitoring ensures up-to-date methods and detailed processes. As items are identified as needing improvement (e.g. spillway upgrade, leakage monitoring) they become part of a capital or operational program. Several large recycled water storages are included in dam safety surveillance.
15	Conserving And Recycling Water	Western Water has a Sustainability Policy and Recycled Water Policy and has developed a WSDS. Western Water has a target of 100% water recycling by 2013 and water conservation targets of a 25% reduction by 2015 and 30% reduction by 2020.
16	Metering	Western Water complies and meters all new water use.

17	Responding to Drought	Now in the 11th year of the worst drought on record, Western Water's compliant Drought Response Plan (DRP) has been updated during the current regulatory period to include interlinking with the Melbourne system. The DRP is published on the Western Water website for public access.
18	Sewerage Services to Unsewered Urban Areas	Western Water will continue to participate with regional councils in sewerage management plans, strengthening our partnership with new town sewerage schemes in Lancefield and Macedon. If reticulated sewerage is identified in a domestic sewerage management plan, Western Water, in consultation with the EPA and council, will develop a sewerage strategy for that area.
19	Sewerage Connections to Properties	Where a sewerage service is available, Western Water, in co-ordination with the EPA and councils, will require premises to connect to sewer.
20	Trade Waste	Western Water is implementing a detailed Trade Waste Strategy incorporating trade waste agreements, acceptance standards, risk ranking and new pricing structure. The new Strategy demonstrates transparency and applies the User Pays principle for effective cost recovery of trade waste services.
21	Regional and Local Government Planning	Western Water will participate in regional and local government planning, including: § The State Government's 2030 Strategy and associated committees § Catchment Management Strategies § Municipal Planning Schemes that affect Western Water.
22	Environmental Management System	Western Water has third party certification for Environmental Management System to ISO 14001, Quality Management to ISO 9001, HACCP and Occupational Health & Safety Management System to AS 4801,.
23	Blue-Green Algal Blooms	Western Water is reviewing the blue green algae Emergency Response Plan, which was developed in 2001 and implemented in February 2002. This document is being revised to incorporate DSE's latest directive of December 2006.
24	River Health	Western Water has managed its activities in accordance with triple bottom line objectives, including environmental impacts and risks to aquatic systems. Western Water also assists in co-ordinating an appropriate agency with waterway management powers in the region. Western Water has 10 Bulk Entitlements (BE). Associated with these is a commitment to provide environmental flows and to manage the extraction sites in an environmentally responsibly manner. Western Water has been proactive in developing metering plans and Environmental Management Plans as part of BE compliance.
25	Monitoring River Health	In addition to comments against clause 24, Western Water will make public water quality and flow data compiled in accordance with relevant bulk water entitlements.

26	Capital Contribution by Property Owners	Western Water complies.
27	Providing Concessions and Rebates	Western Water complies with these requirements and has developed its own Hardship Policy.
28	Complying With Obligations	Western Water monitors compliance with these obligations.
29/30	Compliance Audits	Western Water complies with ESC and other audit outcomes.
31	The Customer Charter	Western Water complies.
32	Drinking Water	Western Water has developed a Drinking Water Quality Management System encompassing aspects of water harvesting, treatment and distribution. Risk Assessments, HACCP plans and a corporate Water Quality Manual form the backbone of the system, applying risk management, environmental, quality, safety and HACCP principles. This process has been completed for all systems in preparation for DHS regulatory audits, as required by the Safe Drinking Water Act 2003 and Safe Drinking Water Regulations 2005.

3.1 Service Standards and Other Outcomes

Customer Service
To date Western Water has performed well with respect to Customer Service standards in ESC regulatory audits for the financial years 2004/05 and 2005/06. Improvement opportunities identified in the first audit were addressed and noted in the second. These improvements included areas of documentation and training where version control was implemented on Customer Service procedures and the team skills matrix, which was enhanced and progressed to ensure staff were equipped to deliver excellent and timely service.

Key learning's from the second audit included an improvement in procedures dealing with restricting water supply and commencing legal action for non-payment of accounts. In these instances, action by Western Water may have been taken before the latest information and status were recorded on the customer's account. While all necessary steps were taken, the delay in formally recording relevant details has been addressed. In terms of customer interactions with customer service staff, the following improvements between audits were noted:

Customer Service (Office Based) Standards ESC Regulatory Audit

Performance indicators	2005/06 rating	2004/05 rating
Calls to fault line (No dedicated fault line)	A1	N/a
Calls to Account line	A1	A3
Call connected to operator within 30 seconds	A1	A2
Call connect time to operator	A1	A2
Complaints	A1	A3
Information Statements received	A1	A1
Information Statements processed within 5 days	A1	A1
Instalment Plans	A1	A1
Legal Action for non payment of bills	Ax (*)	A1
Restrictions applied for non payment of bills	A1	D1
Restriction duration	A1	A1
Average Debt level and legal actions	A1	D5
Hardship Grant applications	A1	A1
Hardship Grants and amounts paid	A1	A1

* Legal actions were not recorded until the end of the month rather than at the actual time.

ESC Rating Legend

Grading Scale			Grading Scale
All data is based on sound information systems & records following documented policies or procedures that are consistent with ESC requirements and fully understood & followed by staff.	**A**	**1**	+/- 1% Accuracy
Most data conforms with Grade A. Data which does not has only a minor impact on overall data integrity.	**B**	**2**	+/- 5% Accuracy
In many cases, data is based on information different to ESC requirements or procedures not fully understood by staff, estimates or extrapolations of other data or reliance on unconfirmed reports.	**C**	**3**	+/- 10% Accuracy
Other data	**D**	**4**	+/- 25% Accuracy
		5	+/- 50% Accuracy
		6	+/- 100% Accuracy
		X	Accuracy cannot be calculated or error greater than 100%.

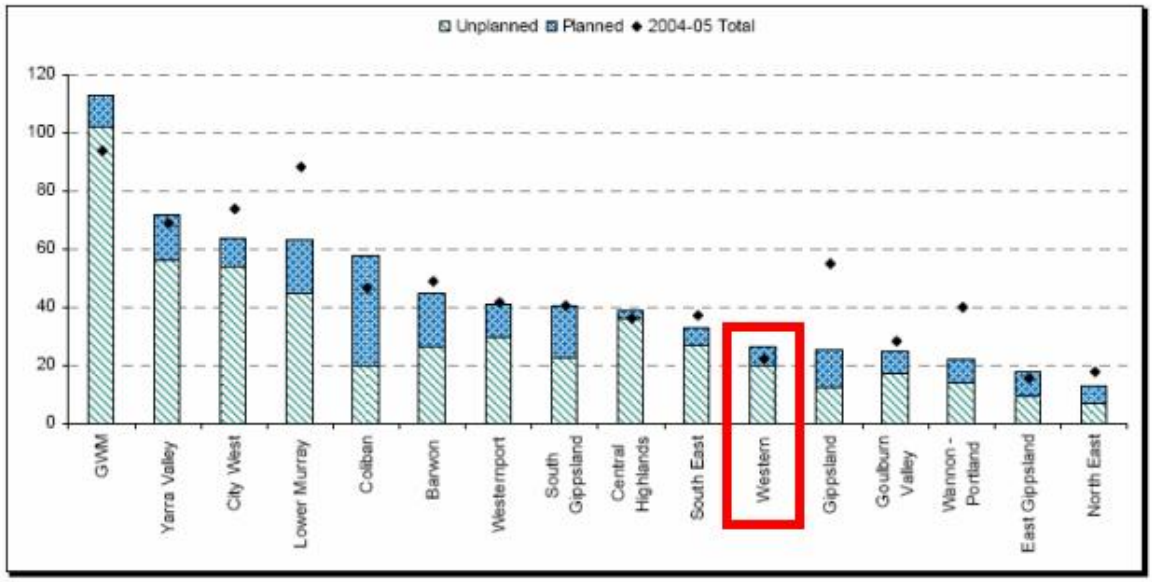
Asset Management

Water

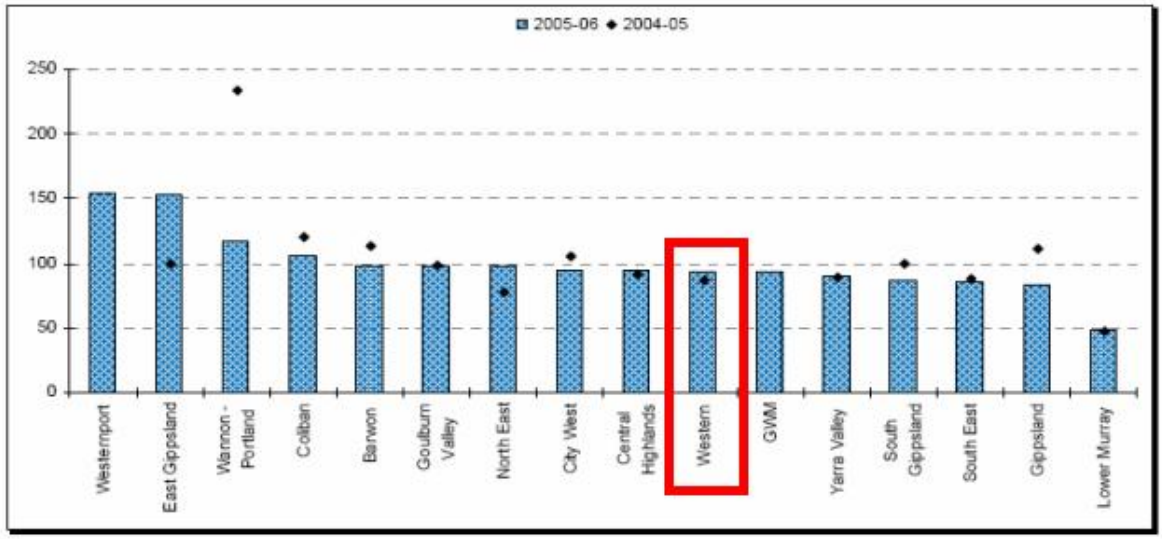
Key benefits of the ESC performance audits, reporting, and Water Plan processes for the industry has been the establishment and monitoring of a set of industry wide standard Key Performance Indicators (KPI).

For network reliability and efficiency improvement, such monitoring and reporting is essential. Western Water focuses not only on trends to determine issues and problems, but uses comparative reporting in assessing appropriate service levels. Supplied by ESC as part of their 2005/06 Water Performance Report the following charts have been used as part of the assessment of Western Water's levels of service that demonstrate a balanced approach to meeting service standards.

Water supply interruptions
(per 100 kilometres of water main)



Average interruption duration unplanned (minutes)



Water supply interruptions are one of the key measures that customers will notice. Western Water's performance is consistently better than the industry average and was within target KPI for two consecutive years. The process in managing assets to achieve service standards includes an annual review of asset performance, which leads to targeted mains renewal programs. Typically, five or more failures occur before renewal is programmed unless the risk after a lesser number of failures is considered high. In the case of critical assets, non-destructive testing is also used to program renewals.

During both unplanned interruptions and planned works, Western Water's focus is on communicating a realistic timeframe to achieve a quality outcome and avoidance of a repeat failure, or need for repeat works.
Despite continued extreme drought conditions, Western Water has managed to meet internal KPI on burst mains. While assets in the region are relatively young, many are located in highly reactive clay soils (Quaternary Basalts of the Western Plains) that are known to increase stresses on pipelines and hence increase the risk of pipe failure under dry conditions.

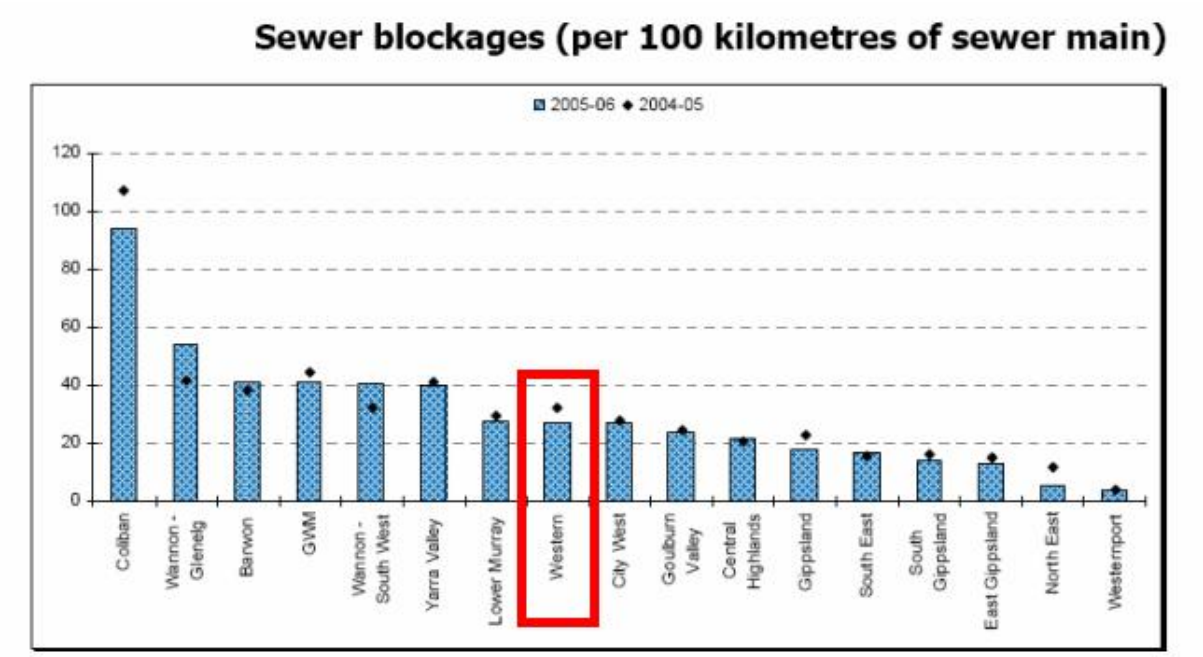
Western Water's response times to bursts and leaks is minimised by having three maintenance depot teams strategically located near customers. For unplanned interruptions, most are repaired well within five hours. The exceptions are usually incident level events. If there is a possibility an outage will extend beyond four hours, maintenance teams escalate the event and additional support is provided to minimise customer inconvenience.

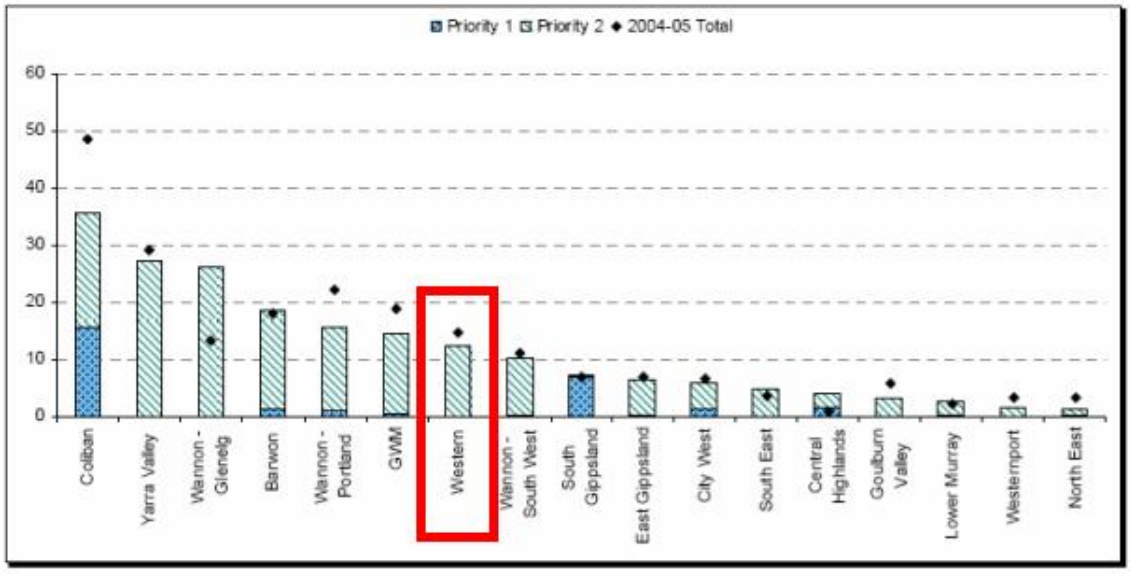
Western Water continues to focus on reducing levels of unaccounted for water. A dramatic reduction from over 20%, down to 10% has been achieved as part of a continuous effort that has included improvements to ensure accurate measurement of all water use.

Future plans to further improve the system include Pressure Management Areas (PMA), District Metering Areas (DMA) and active leak detection. These initiatives are in line with demand management targets for the planning period and will also assist in further improving the KPI of bursts and water supply interruptions.

Sewer

Western Water has paid significant attention over recent years to reducing sewer blockages, comparing well with the industry average as demonstrated on industry comparative charts. The charts reflect appropriate servicing levels according to our customer groups and good attention to asset management. This result has been achieved despite ageing infrastructure, large areas of flat terrain, expansive soils, rapid growth and extreme dry conditions. It is largely due to focussed efforts on asset management systems, effective routine maintenance programs, the introduction of Closed Circuit Television (CCTV) monitoring and root foaming for hot spots areas and individual property connections to the sewerage system.





So that risk associated with sewage escaping from the sewerage system can be appropriately managed, prompt action is required when spills and blockages are reported.

Western Water defines a spill incident as follows:

1. A “spill” is the escape of sewage from the sewerage system.
2. An “uncontained spill” is the loss of sewage escaping from the system to the environment (e.g. a stream) such that it cannot be recovered and put back into the sewerage system. Implicit in this definition is that a “contained spill” is one that can be recovered fully and put back into the sewerage system.

Western Water has found that a clear understanding of such aspects by all staff is the key to correct response, accurate monitoring and reporting, and overall improvement in the quality of service to its customers.

Recycled Water

Western Water delivered recycled water to customers at percentages slightly less than the predicted Water Plan 2005-2008 targets, as follows:

Year	Water Plan Target %	Actual Delivered %
2004/05	84%	78%
2005/06	92%	81%
2006/07	100%	87% estimated
2007/08	100%	N/A

The variations were due to a range of factors including impact of growth in population on inflows, a significant flood event in February 2005 (1 in 150 years rainfall event) that affected the peak irrigation season, and lower than anticipated demand at some plants. Whilst lower than planned recycled water percentages were recorded, Western Water still recycles (in % terms) the highest of all major urban water businesses in Australia.[6] During the peak irrigation season of 2006/07, Western Water was recycling around 100% of monthly inflows with 98% recorded for December and 96% recorded for January.

Forecasts for water recycling have been updated to better reflect recent population forecasts and changing climatic conditions.

Biosolids Reuse

Over the first regulatory period, biosolids were recycled from Western Water's Sunbury and Gisborne Recycled Water Plants.

Year	Water Plan Target %	Actual Delivered %
2004/05	45%	53%
2005/06	49%	60%
2006/07	49%	59% estimated
2007/08	96%	N/A

Due to increased demand for the product by a composting contractor, Western Water recycled biosolids at a rate higher than the Water Plan 2005-2008 target.

3.2 Delivery of key capital projects

Western Water is progressing well in the delivery of key projects identified in the Water Plan 2005-2008. The majority of these projects have either been completed or expected to be completed within regulatory period, and within budgeted expenditure. The current status of these projects is described in the table below:

[6] Refer National Water Commission's "National Performance Report 2005/06 Major Urban Water Utilities" report May 2007.

Project Title	Status
Melton Recycled Water Plant (Secondary Sedimentation Tanks, Aeration and digester)	Detailed design is progressing and is due for completion in April 2007. Business Case for the upgrade to be submitted to DSE and DTF for approval, followed by tender and construction.
Melton Blamey Drive Outfall Sewer (Melton Sewerage Upgrade)	Design consultant has been engaged and community consultation commenced. Obtained DSE and DTF Approval. Expenditure split between Water Plans 2005-2008 and 2008-2013.
Sunbury Recycled Water Plant (Tertiary tank, outfall sewer augmentation)	Construction of the tertiary tanks completed in December 2006. The construction of the outfall sewer has been deferred.
Gisborne recycled Water Plant	Tender has been awarded and construction to commence n May 2007. Due for completion in June 2008.
Woodend Recycled Water Plant	Detailed design is nearing completion. DSE and DTF approval required. Expenditure to be split between Water Plans 2005-2008 and 2008-2013 Water Plans.
Macedon Ranges Water Supply Pipeline (Sunbury Water Supply Pipeline)	Completed in February 2006.
Romsey/Lancefield Water Treatment Plant Upgrade	Contract awarded and detailed design underway. Construction commenced in April 2007. Due for completion in November 2007.
Macedon Sewer Scheme Reticulation and Outfall	Completed in April 2006.
Surbiton Park Class A Recycled Water Scheme	Timelines for this project are linked to the Surbiton Park Class A Project. Market Development and design for first stage of the distribution system to be conducted by June 2007.
Water Renewals/Replacement	Split into several packages and progressing well.
Sewer Renewals/Replacement	Ongoing.
Water Augmentation	Ongoing.
Sewer Augmentation	Projects include the following: Gisborne South Outfall Sewer (detailed design) Bacchus Marsh Avenue of Honour Sewer Outfall (to be completed November 2007) Diggers rest Rising Main (complete) Station Road Rising Main (New Gisborne) (complete)

Key Projects completed include:

- Sunbury Recycled Water Plant – completed December 2006
- Macedon Ranges Water Supply Pipeline – completed February 2006
- Macedon Sewerage Scheme Reticulation – competed April 2006
- Water Main Renewals (2006 target met and 2007 on target)

The Surbiton Park Class A Recycled Water Project was originally not included in the Water Plan 2005-2008. The inclusion of this $7M project required the deferral of the following projects:

- Melton Outfall Sewer – This project will commence construction within this regulatory period but will incur most expenditure in Water Plan 2008-2013.
- Sunbury Outfall Sewer Augmentation – This project will be deferred due to higher priority projects.

- Woodend Recycled Water Plant Upgrade – Detailed design is complete. DSE and DTF approval is being sought and construction will commence in the final year of the current regulatory period with completion due in Water Plan 2008-2013.
- Melton Recycled Water Scheme – This project has largely been superseded by the construction of the Surbiton Park Class A Treatment Plant. The extension of the Urban Growth Boundary in Melton South has substantially altered the proposed servicing strategy for this region. Due to be commissioned in early 2008 the Class A Plant will provide recycled water to development in the Melton South region.

3.3 Actual capital expenditure associated with the delivery of outcomes

The Capital Expenditure for the current Water Plan is forecast to exceed the original Water Plan 2005-2008 total of $68.3M (1/1/04$). This increased expenditure is largely associated with the addition of the Class A Plant being constructed at Surbiton Park and escalation of prices from 2004 dollars.

Year 2005/06	- Actual	$24.472M	($23.443M 1/1/04$)
Year 2006/07	- Actual	$22.469M	$20.901M 1/1/04$)
Year 2007/08	- Forecast	$34.459M	($32.054M 1/1/04$)
Total		**$81.400M**	**($76.398M 1/1/04$)**

The initial value of Western Water's RAV (Regulatory Asset Value) at 1st July 2004 was $85M, as set by the Minister for Water, Environment and Climate Change.

The RAV is now referred to as the RAB (Regulatory Asset Base). The RAB has been rolled forward by adding additions, less disposals, regulatory depreciation and capital contributions from 1st July 2004, to establish the opening balance at 1st July 2008. The forecast RAB at 1st July 2008 is calculated as follows.

In January 2004 $	**Actual 2004/05 $'000**	**Actual 2005/06 $'000**	**Actual 2006/07 $'000**	**Forecast 2007/08 $'000**
RAB at 1st July 2004	**85,000**	0	0	0
Opening RAB at 1st July	0	**88,544**	**103,013**	**113,816**
Add Gross Capital Expenditure	20,453	23,443	20,901	32,054
Less Government Contributions	0	0	3,256	0
Less Customer Contributions	10,917	2,629	1,473	1,555
Less Disposals (cash value)	737	1,580	728	867
Less Regulatory depreciation	5,254	4,765	4,641	5,081
Closing RAB at 30th June	**88,544**	**103,013**	**113,816**	**138,366**

3.4 Changes in legislative obligations

To date, no known material legislative changes have impacted on Western Water during the first regulatory period.

Water (Governance) Act 2006

The *Water (Governance) Act 2006* received royal assent on 17th October 2006. It aims to improve current water legislation to provide for a more capable, innovative and accountable water sector, which is able to deliver the Government's sustainability objectives for water. It delivers key actions from the White Paper "Our Water Our Future" by amending the *Water Act 1989* and related legislation.

All regional urban water authorities have been brought together under the *Water Governance Act 2006,* which introduces new governance arrangements for water authorities. Improved governance arrangements are critical to the performance of institutions in achieving the Government's objectives for sustainably managing water resources and delivering water services in the long-term interests of the community.

The new governance arrangements, which come into effect on 1st July 2007, should only provide minimal impact on Western Water. The key areas of change for Western Water are moving to a Corporation and the position of Chief Executive becoming Managing Director.

3.5 Over or under recovery of revenue

This section relates to the rural businesses who are being regulated under a 'revenue cap' approach for the first regulatory period and is therefore, not applicable to Western Water.

3.6 Impact of unforeseen events during first regulatory period

Drought

Western Water is currently experiencing its eleventh consecutive year of below average rainfall. Every attempt was made to predict future weather patterns and rainfall events however the magnitude of such an event continuing was not anticipated. The drought has not only impacted on lost water usage revenue, but also led to increased costs in the management of restrictions, and increased electricity costs due to greater reliance on non-local bulk water supply.

Accordingly, expenditure on several projects including major works such as the Melbourne to Melton/Bacchus Marsh pipeline and infrastructure upgrades to enable the transfer of water from Melbourne to Gisborne, Riddells Creek and Macedon, have been brought forward.

Restrictions coupled with increased operating costs in accessing Western Water's Yarra Bulk Entitlement, have resulted in decreased revenue from water usage.

There have also been considerable costs communicating restrictions to customers across the region. Many customers have experienced all stages of restrictions within one season. Despite 90% of Western Water customers being interlinked with the Melbourne system, water restrictions have been required in every year.

The DRP outlines operational guidelines to decide whether to take local or external water. The guidelines consider the extent of drought conditions as well as emergency and risk management aspects. For example an emergency buffer volume must be maintained in the Rosslynne and Merrimu Reservoirs to avoid the potential risk of major failure of a key pumping station responsible for transferring water from Melbourne. Towns supplied by any component of water from the Yarra Bulk Entitlement, are subject to at least the same level of restrictions that exist in metropolitan Melbourne. Western Water applies the water restriction curves as documented in its Drought Response Plan (DRP).

Western Water's level of service objectives are:

- restrictions should not occur more than once every 10 years on average
- Stage 4 restrictions should not occur more than once every 50 years on average
- emergency events – ie: an infringement of the emergency buffer volume - should not occur more than once every 100 years on average.

Western Water has a four stage restriction policy and "permanent water saving rules[7]" at stage zero. The restrictions are designed to protect each water supply system by:

- ensuring that the water supply system does not run out of supply by providing for a minimum level of reserve storage (appropriate to each system), referred to as the buffer volume, at the end of a prolonged drought period; and
- ensuring that a minimum period of restricted demand (appropriate to each system) can be supplied during drought.

The high degree of connectivity between Western Water's supply system and the Melbourne supply network dictates that Western Water's level of service objectives should mirror those of Melbourne.

The DRP is reviewed and updated as required, specifically after the implementation of restrictions, any major change in water resource availability or any changes in policy or restriction guidelines. A review was completed in 2005 with the adoption of uniform restriction categories consistent with the Melbourne these are supported by a Western Water By-Law.

Monthly updates and advice to the Minister on the status of water resources and restriction levels is provided.

Financial Impact

The financial impost of effectively managing the drought has been significant.

[7] Permanent Water Saving Rules were adopted by Western Water in October 2004 in terms of their Permanent Water Savings Plan and restrict or prohibit use of potable water for items such as garden watering, vehicle cleaning and hosing down of paved areas.

Financial Impact of Managing Drought

	2005/06 Actual $'000	2006/07 Actual $'000	2007/08 Forecast $'000
Lost Water Usage Revenue	634	3,749	3,292
Chemical savings	(88)	(225)	(330)
Electricity Cost savings	(336)	(451)	(62)
Restriction Management	95	185	299
Carting of Water	3		
Additional Bulk Water Payments		1,186	2,459
Total Actual/Forecast Cost	**308**	**4,444**	**5,060**

The Plan does not seek to recoup lost water usage revenue pertaining to the first regulatory period as Western Water is aware of the onerous financial impacts on it's customers to secure future water supplies.

Section 4

Service Outcomes – Going Forward

Section 4 Service Outcomes – Going Forward

In developing this Plan, Western Water has consulted closely with its customers and community. Western Water has been mindful of the need to engage customers in the trade off between higher service standards and price. During the past three years Western Water has conducted formal market research and informal discussions with community groups and stakeholders to determine their preferred levels of service cost trade off. Research has consistently indicated the need for Western Water to provide “value for money" to its customers whilst continually improving service standards.

Research shows that current service standards largely meet customer expectations. Western Water will continue to strive to reduce the performance gap with respect to value for money by both keeping price rises to a minimum and identifying efficiency savings wherever possible. The service standards included in this Plan incorporate efficiency savings to generate improved services without additional costs to the customer.

Recent focus group discussions (refer Appendix D) indicate that customers have a preference for a higher proportion of their account to be based on usage charges and that they are prepared to pay about $30 p.a. and $10 p.a. for improved performance by Western Water in terms of Greenhouse Gas Emissions and Biosolids reuse respectively.

4.1 Customer Consultation

4.1.1 Overview of Customer Consultation

Western Water provides water, recycled water and sewer services to more than 135,000 people and 51,000 properties over an area of 3,000 square kilometres. The majority of Western Water’s customers (approximately 95%) are residential, who use about 75% of all water supplied. With the exception of five industrial customers, the major non-residential consumers are local councils and schools.

Western Water’s residential customers include the urban areas of Sunbury and Melton and the rural towns of Gisborne, Lancefield, Romsey, Bacchus Marsh, Woodend and Myrniong.

To ensure customers’ views are heard and included in its Strategic Plan and pricing proposals, Western Water has a comprehensive community consultation program including a Customer Advisory Group and Community Reference Groups.

Customer Advisory Group

Western Water has a Customer Advisory Group (CAG) to facilitate community input into its service planning and decision-making. CAG provides a direct link between the Board, the customer base and consumer advocacy groups and is a mechanism by which Western Water can receive valuable feedback. The CAG includes at least two Western Water Board Members, the Chairs of the three Community Reference Groups (see below) and representatives from customer advocacy groups and key customer groups.

The Chief Executive and the General Manager Customer and Community Relations attend CAG meetings, which are held five times a year. The Group ensures the Board is aware of national and Statewide consumer issues as well as local priorities, issues and concerns. This results in better customer service and policy development. Western Water will engage CAG over the regulatory period to advise on yearly Corporate Plans to ensure that the Plan goals are met.

Community Reference Groups

Western Water has three regional Community Reference Groups (CRG) to gain local feedback on regional issues. The CRG allow customer representatives to become familiar with business-wide priorities and help Western Water identify emerging issues and matters of local concern. Each CRG comprises self-nominated customers and community members from the area. The Groups elect their own Chair who attends the CAG meetings on the Reference Groups behalf. The Groups meet five times per year, and meetings are attended by senior management from Western Water.

Following each CAG or CRG meeting, feedback forms are distributed to Group members. Members' satisfaction with the meeting processes and outcomes are ranked and reported in the BSC.

Strategic Planning Day

Each year, Western Water hosts a Strategic Planning Workshop where all members of the CAG and CRG's are invited to a half day seminar. Group members provide feedback on customer priorities and issues for consideration in preparing both Corporate and Water Plans. This process will continue for the duration of this Plan to ensure annual Corporate Plans are consistent with Water Plan goals. See Appendix R for outcomes of 2007 Strategic Planning Day.

Regular semi annual meetings with key community stakeholder groups

Western Water has developed regular forums to discuss topical issues with financial counsellors, real estate agents, conveyancers, solicitors, trade waste customers and developers.

Issues pertinent to this Water Plan are discussed at these forums, including the continuation of tri-semester billing rather than quarterly billing, appropriate turn around times for information statements, Hardship Policy and collection actions. The views of these groups have been reflected in Western Water's service standards, environmental initiatives such as recycled water provision, GHG emissions and biosolids reuse. Western Water will look to expand the role of stakeholder groups over the period of this Water Plan to ensure that water conservation and service delivery standards are met.

Communications with customers and stakeholders

Community breakfasts are held each year to launch the Corporate Plan, as well as a number of direct communications with customers. Newsletters are distributed to customers with their accounts every four months. All customers were sent a letter notifying them of the release of the draft Water Plan 2008-2013 and invited feedback via fax, online, email or phone. All stakeholders and regulators were also sent electronic copies of the draft Water Plan 2008-2013 inviting feedback within the consultation period.

Prominent community profile at local events

Western Water takes an active role in the community through a community support program involving major events, such as agricultural shows, festivals and health-related activities.

Western Water supports many community groups, charities and organisations through active participation and/or in-kind support. A mobile education unit is made available at these events to promote water conservation through a diverse range of interactive activities.

Annual Market Research

Western Water will continue to undertake annual research among residential and commercial customers to benchmark its performance including targeted focus groups on specific projects when required.

The research will identify and measure:

- customer perception of Western Water
- critical elements of service in order of importance to customers
- the needs of Western Water's customers
- the strengths, weaknesses, opportunities and threats facing the business

Western Water seeks a customer satisfaction rating benchmark of 80% or more.

Recycled Water User Group

Recycled water customers form part of a Recycled Water User Group that meets quarterly to exchange information and ideas and highlight any issues with the current recycled water schemes. Recycled Water newsletters also are issued quarterly to customers and other interested community and industry members.

4.1.2 Overview of key issues identified by customers

Consultation with Community Groups on the Water Plan 2008-2013

Input into this Plan was sought at the CAG and CRG Strategic Planning Day, which was held in July 2006. This generated discussion on variable sewer tariffs, Guaranteed Service Levels, quarterly billing and the need for Western Water to be a leader in delivering sustainable outcomes. A report of discussions at the workshop is attached as Appendix E. Further feedback specific to the proposals contained in the draft Water Plan 2008-2013 was captured during the 2007 Strategic Planning Day held in August (see Appendix R).

Quarterly Billing

Western Water currently issues tariff notices to water and sewerage customers three times a year. The introduction of quarterly billing has been investigated, costed and discussed with customer groups, including Customer Advisory Groups, Community Reference Groups, Industry Groups and Financial Counsellors.

Apart from increased costs (refer Appendix F), there has been strong feedback to remain with the present tri-mester billing cycle. Western Water tariff notices avoid "mainstream" quarterly billing patterns, meaning payment at different times to other service providers. This assists customers with budgeting and enables them to spread expenses and payments accordingly.

Greenhouse Gas Emissions

In February 2007, the CAG indicated its preparedness to pay extra for greenhouse reduction emissions such as renewable energy projects and energy conservation projects, such as pump efficiency, on the condition the broader community was consulted.

A willingness to pay survey, conducted in April 2007 (Appendix D), indicated that the majority of customers felt that reducing Western Water's greenhouse gas emissions was very important. Respondents to the survey indicated that they would like to see a range of options undertaken to decrease greenhouse gas emissions, making the organisation carbon neutral.

Options to be considered included Green Power purchase, energy efficiency, renewable energy options on Western Water assets and purchase of carbon offsets including investment in capital infrastructure to capture gas at local landfills. Sixty-eight percent of respondents indicated that they were willing to pay an extra $10-15 per year to assist Western Water to reduce or offset emissions by 100%. The average price that people indicated that they would be willing to pay for such activities was $30 per year.

Western Water is currently developing its GHG Strategy in partnership with Sustainability Victoria. The Strategy is well underway and will be fully developed by September 2007. This Plan allows for $900k of capital expenditure and $250k of operating expenditures over the regulatory period to deliver on the draft GHG Strategy. This translates into less than $5 per year for customers, well within the amounts indicated in the survey.

4.2 Regulatory and Government Obligations

A number of service outcomes that Western Water proposes to deliver over the regulatory period are driven by obligations placed on it by regulatory agencies and the Government.

4.2.1 Statement of Obligations

Western Water has reviewed all clauses contained in its SoO which DSE signed in July 2004 and these are reported in Section 3 of this Plan. An amended SoO was released in June 2007 (see Appendix H) that imposes a number of additional obligations on Western Water to be compliant or work towards compliance over the course of this Plan. These are set out below:

Clause Number	Clause in Statement of Obligations	Western Water Compliance
9	Board Performance	The Board will comply and undertake an annual Board Performance Review and report to the Minister and Treasurer as required.
14	Dam Safety	This Water Plan will also provide for establishment of an enhanced terrorism related component to risk management plans for Dams along with other key assets, and will include annual training exercises and audits. This is in line with all water corporations being recently declared as essential service operators under the Terrorism (Community Protection) Act 2003
15	Conserving and Recycling Water	Western Water will work with large non-residential users to improve water management outcome. Western Water has identified its 200 largest users and is developing a database including a trend of litres used per day, conservation measured, recycling and waste minimisation. Initial survey work with the top users of this group has been completed as part of contingency planning within the current drought, however, a broader and more focussed effort with individual large users is planned through water audits, account management and education programs.

19	Sewerage Services to Unsewered Urban Areas	Western Water will comply with Government caps on owner contributions to certain sewerage schemes.
16	Water Supply-Demand Strategy	Western Water submitted in March 2007 its Water Supply Demand Strategy (WSDS) to Government in line with DSE guidelines. This strategy identified 32 water resource options and 25 conservation options which were further considered under a TBL framework. For conservation, Western Water is targeting 25% and 30% reductions in l/c/d usage by 2015 and 2020 respectively, over that of the 1990's. This is the primary action of the WSDS and monitoring has shown Western Water's customers to be very water conscious and drought aware even in the early stages of that effort. The challenge for Western Water is to maintain reduced usage after restrictions are lifted and the drought is over. The WSDS has been developed in cooperation with DSE and the Central Region Water businesses. This document adds to the conservation effort the second priority of exhausting local water resource availability prior to calling on the third priority, which is access to external water resources (e.g. Yarra BE water). As part of the Water Planning process, provision has been made for the first review of the WSDS in the 2nd year of the Water Plan. This is in line with WSDS guidelines issued by DSE.
17	Responding to Drought	Further review of the DRP is provided for in this Water Plan, including expansion of contingency options beyond stage 4 restrictions.
23	Research and Knowledge	Western Water continues to invest in research and knowledge enhancement and advancement.
24	Sustainable Management	Western Water's vision is "to be a leading service provider working with our community towards a sustainable future". Western Water has a number of key actions to ensure a sustainable outcome: § Greenhouse Reduction Strategy aiming towards carbon neutrality § 100% water recycling target by 2013 § 100% biosolids recycling target per annum.
25	Sustainable Water Strategy	The Central Region Sustainable Water Strategy (CRSWS) includes Western Water among the participating businesses. The action plans of the CRSWS that relate to Western Water are consistent with and restated and elaborated on in our WSDS. Western Water supports the CRSWS outcomes and will continue to work with other water businesses in the region to achieve sustainable water management, which includes key actions to secure water supplies into the future. Planning for the 2008-2013 period includes balancing supply and demand, and sourcing of new and sustainable supplies, including recycling.
32	Smart Water Fund	Western Water is represented on the Technical Working Group by the Manager Customer Service and on the Management Committee by the General Manager, Customer and Community Relations.

For a complete copy of the new SoO refer Appendix H.

4.2.2 Environmental obligations

The EPA publication 1069 “Principles to establish EPA environmental obligations for water businesses for the 2008-2013 pricing determination” outlines requirements for water authorities to address during the regulatory period. Western Water is well advanced in developing programs in accordance with the EPA publication. These programs are outlined in the following sections and will be progressively implemented throughout this Plan.

Western Water has a certified Environmental Management System (EMS) through which it proactively manages its environmental responsibilities. The EMS is subject to external audit every six months to ensure compliance and recommend improvements.

Western Water's Environmental Policy outlines overall commitment in meeting environmental obligations required under regulations and in adopting best practices for sustainable environmental management. An Environment Committee has been specifically established to oversee the administration of the Environmental Policy.

Key strategic environmental issues are individually addressed in specific policies, including:

- Greenhouse Gas Emission Policy
- Recycled Water Policy
- Trade Waste Policy
- Biosolids Policy.

In the first regulatory period, Western Water committed more than $40 million to meet its environmental obligations. Significant improvements are planned or have been achieved in sewage treatment, recycled water use biosolids management, biodiversity management, sewer spills management, water conservation and greenhouse gas emissions. Environmental improvements include:

- Upgrading the Sunbury and Gisborne Recycled Water Plants (RWP) and commencement of Melton RWP upgrade to improve recycled water quality
- Expanding the Sunbury/Melton Recycled Water Scheme, increasing opportunities for water recycling
- Constructing a Class A RWP at Melton to enable substitution of drinking water in dual water supply areas
- Continued composting and reuse of biosolids from the Sunbury RWP
- Farm application of biosolids from the Gisborne RWP and construction of a sludge dewatering facility at the Melton RWP
- Establishment of a “Hot Spot” program to pro-actively minimise sewer spills
- Completing the Macedon Sewerage Scheme
- Implementing the new Trade Waste Management Strategy
- Upgrading the aeration system at the Melton RWP, thereby reducing expenditure on electricity and greenhouse gas emissions
- Enhancing biodiversity values of Western Water properties, particularly the grey-box grassland known as Pinkerton Forest, the Werribee River Escarpment and the Deep Creek Escarpment at Romsey
- Biological sampling of Jacksons and Five Mile Creeks

- Progressively upgrading sewer pump stations to meet the State Environment Protection Policy requirements
- Establishment of an Environmental Committee within Western Water
- Successfully maintaining the accreditation of the Environmental Management System over three years.

These initiatives are consistent with key environmental protection principles outlined in EPA publication 1069. Western Water will comply with and seek to be an industry leader in environmental protection both in current and future projects through the active engagement of environmental protection principles including:

- Integration of economic, social and environmental considerations in key decisions
- The precautionary principle to manage discharge to waterways by upgrading RWPs and aiming for 100% water recycling
- Improved valuation, pricing and incentive mechanisms for trade waste to ensure environmental factors through a "polluter pays" principle
- Shared responsibility through progressively reducing ecological degradation and resource intensity
- Waste hierarchy through water conservation initiatives, 100% water recycling target and internal targets for waste and energy reduction.
- Integrated environmental management through adoption of life cycle assessment on all key assets and projects
- Actively influencing customer behaviours who utilise recycled water and biosolids to ensure no adverse environmental impacts
- Accountability through providing an open and transparent environment reporting process for customers with opportunity to participate in environmental program and policy development.

The intention of Western Water is to be a leader in sustainability as demonstrated through the initiatives outlined under the following obligations.

Water Conservation and Resource Efficiency

Western Water has developed an extensive water conservation program in response to long-term drought conditions, and Government requirements including:

- Securing Our Water Together, Victorian Government White Paper (2004)
- Regional Action Plan (RAP) for the Western Water Region, (2005)
- Central Region Sustainable Water Strategy (CRSWS) (2006).

Using these strategies as a framework, Western Water has developed a detailed water conservation program in its 50 year Water Supply Demand Strategy (WSDS). These programs are designed to encourage reduced and efficient water use as a key part of ensuring that future generations have adequate water supplies. Details of the WSDS are provided in Section 6 of this Plan.

Programs relevant to the WSDS include the continued identification of unaccounted water, replacing older assets to minimise water losses, supporting the Victorian Government' s initiative of Five Star ratings for new houses and replacement of inefficient showerheads with more efficient models.

Western Water has allocated the following resources to implement these and other water conservation measures during the period of this Plan.

Demand Managment

DEMAND MANAGEMENT / CONSERVATION INITIATIVES - Forecast benefits

		2006	2007	2008	2009	2010	2011	2012	2013
WELS	Total Water Savings (ML/a):	0.0	22.1	42.4	61.2	78.8	95.3	111.6	127.4
PWSR	Total Water Savings (ML/a):	626.25	647.19	669.13	692.18	716.43	742.02	772.23	803.79
Education programs	Total Water Savings (ML/a):	449.2	462.3	476.2	490.7	506.1	522.4	541.8	562.1
Non-Res water audits	Total Water Savings (ML/a):	0.0	8.3	16.6	22.5	28.3	25.8	23.3	23.3
Fixture Code - New Dev	Total Water Savings (ML/a):	0.0	0.2	2.6	22.0	41.4	61.0	83.9	106.7
RBT	Total Water Savings (ML/a):	0.00	53.49	54.69	55.95	57.31	58.75	60.53	62.40
UFW reduction actions	Total Water Savings (ML/a):	0.0	0.0	0.0	14.7	22.5	30.8	39.7	49.0
Rain tanks & Dual pipe sys	Total Water Savings (ML/a):	0.00	121.90	250.15	385.38	528.26	679.63	864.12	1056.80
Showerhead exchange	Total Water Savings (ML/a):	0.0	0.0	29.4	57.1	83.1	76.2	69.9	64.1
Fixture Code - Existing	Total Water Savings (ML/a):	0.0	9.6	146.7	272.6	388.3	494.8	596.0	689.5
	TOTAL Water Savings (ML/a)	1,075	1,325	1,688	2,074	2,451	2,787	3,163	3,545
	WW Setup & Admin Costs:	$97,000	$1,098,214	$1,792,075	$1,401,840	$1,431,246	$1,578,658	$1,882,248	$2,059,784
	Total Customer Costs:	$0	$4,098,322	$4,351,520	$4,612,741	$4,888,726	$5,034,368	$5,062,201	$6,374,956

The introduction of Permanent Water Saving Rules and the State Government's Central Region Sustainable Water Strategy has enabled Western Water to enhance its water conservation program, including the development of a diverse range of outlets to promote the conservation message. The water conservation program includes:

- Continuous media coverage
- Advertising campaigns
- Information material, including brochures, fact sheets, newsletters, New Customer Kits
- Community events, utilising an interactive mobile display
- Social investment programs
- Website
- Asset tours
- Community presentations
- Western Water's 'Waterwise' Club for children aged five to eleven.

A comprehensive schools education program is another key element of the overall program. Western Water has appointment a full-time Education Advisor, who liaises closely with the teaching community to develop and promote curriculum-based resource activities.

Current education programs include:

- A Prep Starter's Program designed to educate children about the importance of drinking water for health and well-being and on how to use water wisely
- A Presentation Toolbox Kit for primary school children covering topics such as the water cycle, saving water around the home and recycled water. Western Water engages the services of experienced teachers to conduct presentations across the region.

A new secondary school program has been developed following market research involving educators and Western Water. The program has been trialled in the first term of 2007 before full-scale introduction into the curriculum. These initiatives will be further developed during the period of this Plan in order to achieve the water conservation targets in the WSDS.

Western Water has also taken advantage of its leadership in water recycling to promote conservation by keeping the community fully informed of its value as a resource through brochures, leaflets, media events and the Western Water website.

Sewage Management

In accordance with the EPA Act and the State Environmental Protection Policy (SEPP) (Waters of Victoria), Western Water is required to manage all RWP's in accordance with the waste hierarchy to avoid waste generation when practicable. Western Water undertakes this requirement through the goal to recycle 100% of water produced to minimise discharges to the environment, maximise drinking water substitution, beneficial reuse of nutrients in agriculture, and provide beneficial environmental flows to waterways. Western Water also aims to recycle 100% of biosolids produced whilst ensuring that any environmental risks identified are managed.

To assist in water and biosolids recycling Western Water has developed a trade waste management strategy, By-Law and associated management system that will be implemented to minimise volumetric input and contaminant loadings to sewer by trade waste customers.

Sewage Treatment and Disposal

Western Water will work closely with industry to assist in preparing waste management plans and carrying out waste audits to minimise contaminants in the sewer system through better segregation and cleaner production.

Western Water has completed, commenced or plan to commence upgrades to all RWP's. Sunbury, Melton and Gisborne RWP's upgrades will improve water quality and cater for growth.

Upgrades to Romsey and Riddells Creek RWP's during the first regulatory period will ensure that they are able to meet requirements.

Bacchus Marsh RWP

During the first regulatory period, aerators were installed at Bacchus Marsh RWP to extend its capacity until 2009. Accordingly, upgrades to the plant will be required during the Plan period, to ensure the plant can continue producing recycled water consistent with EPA guidelines. A budget has been allocated based on a functional design report.

Melton RWP

Based on growth predictions for Melton, the Melton RWP will require upgrades to continue meeting EPA obligations for effluent quality until 2014.

Sunbury RWP

As per EPA direction, Sunbury RWP had a substantial upgrade in the first regulatory period. That upgrade ensures the discharge from the plant complies with SEPP (Waters of Victoria) until at least the year 2015. As the plant discharges a portion of treated water to Jackson Creek, EPA amended the licence in 2005 requiring Western Water to investigate an alternative disinfection option to minimise the environmental impact of chlorine. Currently recycled water supplied to customers is disinfected with chlorine.

Western Water undertook a feasibility study of alternative disinfection measures including chlorination/de-chlorination, UV disinfection and ozone treatment. The study found that chlorination/de-chlorination and UV disinfection are alternative viable disinfection options, with UV disinfection as the most expensive alternative nominated. As nominated by EPA, the preferred option for stream discharge is to implement UV disinfection in place of chlorine. Before investing in UV technology Western Water will need to establish certainty about the frequency and quantity of recycled water that will be directed to Jacksons Creek.

Chlorination will continue as a disinfection method for recycled water schemes. Western Water's target to achieve 100% beneficial use of recycled water by 2013, will be reassessed in 2010/11, before UV disinfection measures are required.

The biosolids dewatering facility at Sunbury RWP has reached the end of its lifespan with biosolids production exceeding design capacity of the existing centrifuge which needs to be replaced. A budget has been allocated in the Plan for these upgrade works.

Woodend RWP

The design of the Woodend RWP upgrade is well advanced with construction to commence in 2008 and completion by 2009. Recycled water use at Woodend has been exceeding 80% and, therefore, discharge to Five Mile Creek has been minimal.

Gisborne RWP

Gisborne RWP was upgraded during the first regulatory period to meet EPA obligations. However, as the current biosolids management is not considered best practice, a biosolids dewatering facility consisting of a mechanical dewatering plant will be established at Gisborne RWP during this Plan. Inlet works and an associated odour control facility are also planned for the Gisborne RWP. The necessary approvals for installing these facilities have been obtained.

Capital costs associated with sewage treatment are summarised below:

Program	Year				
	2008/09 '000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Upgrade of disinfection at Sunbury RWP	100*	900*	-	-	-
Upgrade of Sunbury RWP Centrifuge	740	1,000	-	-	-
Woodend	1,800	3,454	-	-	-
Gisborne RWP	1,418	790*	-	-	-
Melton	6,625	6,300	-	-	-
Bacchus Marsh	250	750	500	1,000	

*new requirement

Until 100% reuse targets for Sunbury, Gisborne and Woodend are achieved, discharge of treated water to Jacksons and Five Mile Creeks will continue. Western Water is committed to working on reducing the environmental impact of these discharges over time.

Licence Compliance

Some EPA licences for RWP's currently contain outdated maximum limits rather than median. As indicated in consultation with the EPA, a program to remove superseded licence limits will be undertaken.

As per EPA licence requirements, Western Water will monitor inflows to the plants, and continue monitoring groundwater quality. Biosolids will be monitored for chemical and bacterial quality.

Recent amendment of the Environment Protection Act allows for streamlining all RWP licences with consistent monitoring, reporting and amendment dates. Western Water has already commenced discussions with EPA in obtaining a "Corporate Licence" which will deliver business efficiencies for Western Water as well as EPA. The efficiencies will be gained mainly through minimising administrative processes such as the maintenance of one Environment Improvement Plan (EIP) across Western Water or substituting the certified Integrated Management System for the EIP.

Plan costs for continuous EPA licence maintenance are outlined in the following table.

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Licence fee	82	+CPI	+CPI	+CPI	+CPI
Discharge and influent monitoring	50	+CPI	+CPI	+CPI	+CPI
Biosolids Monitoring	15	+CPI	+CPI	+CPI	+CPI
Groundwater monitoring	25	+CPI	+CPI	+CPI	+CPI

Recycled Water

Western Water is committed to achieving its target of 100% beneficial use of recycled water by 2013 and is currently leading major urban water utilities in Australia in this important initiative.

Western Water has been proactive in promoting recycled water as a valuable resource and as a reliable, quality water supply solution for a range of approved uses.

Key drivers for adopting a 100% target include satisfying demand for high quality water supplies to meet growth (in all sectors, including agribusiness, residential and recreational), responding to scarcity of supply due to low rainfall, reducing discharges to the environment and the high costs of augmentation of existing supplies.

Western Water's recycled water strategy is not only cost effective, but meets the demands and expectations of regional communities. Customer support for Western Water's commitment to recycling is strong, as evidenced by Expressions of Interest for recycled water supplies. Dual water supplies to service high residential growth areas are a key component of the WSDS if Western Water is to meet required water conservation targets. Appendix K provides a summary of all options required, including dual water supplies to Eynesbury and Melton South growth areas.

During 2006, the Board of Western Water reviewed the Recycled Water Policy to make it more relevant to changing Government policy, regulations, guidelines, community opinion and other external influences on the business. In a period of continuing drought, the main purpose of the policy is to maximise the beneficial use of recycled water to preserve drinking water supplies. The new policy also complements Western Water's vision "to be a leading service provider working with our community towards a sustainable future". For a copy of the Policy refer Appendix J.

Of note is Western Water's success in educating the market of the benefits of recycled water supplies. Experience shows that an educated market is willing to pay reasonable prices for recycled water supplies to obtain those benefits. This has been achieved through effective communication, marketing and education-based programs. Early market research concluded that beneficiaries of recycled water should pay a reasonable price for supplies.

Recent major recycled water achievements include:

- Six hundred and seven megalitres (ML) of recycled water was supplied to customers during 2005/06 as a substitute for drinking water, compared with the year's target of 600ML[8]
- January 2007 saw the highest recorded volume of recycled water in a month – 116ML supplied to customers along the Sunbury/Melton Scheme
- Commissioning an 8km extension of the Sunbury/Melton Scheme to service customers in Toolern Vale
- Completion of the first stage of the Romsey Recycled Water Scheme
- Awarded the 2005 Premier's Business Sustainability Award, Public Sector category, for innovation and leadership in water recycling
- Partnerships with Hume City Council and Macedon Ranges Shire Council, Salesian College and Sunbury Secondary College for $659,000 in funding for recycled water projects in Sunbury, Woodend and Gisborne, with assistance from the Stormwater and Urban Water Conservation Fund
- Continued construction by developers on the new 2,900 lot Eynesbury Township development that will incorporate Class A recycled water supplies for residential toilet flushing, garden watering, fire fighting, public open space and recreation area irrigation
- Secured $3.5M from the Victorian Government's Water Recycling and Restoration Fund for construction of a regional Class A RWP at Surbiton Park, Melton
- Recognised as the national leader in water recycling in the first National Performance Report for urban water utilities 2005/06, released in May 2007 by the National Water Commission.

In the first regulatory period, Western Water committed to achieve 100% beneficial use of all recycled water by December 2006, up to a 50th percentile wet year. This target was subsequently revised in 2005 due to changes in growth, new town sewerage schemes, drought and inflows into RWP's. Conversely, drought conditions have recently reduced inflows, requiring Western Water to review the figures and reset the target. Western Water is now aiming to achieve 100% beneficial use of all recycled water by June 2013, with a greater increase in reliability up to a 90th percentile wet year.

The following table outlines how this target will be rolled out over the regulatory period:

Year	2008/09	2009/10	2010/2011	2011/12	2012/13
% Recycled	88%	90%	92%	95%	100%

This target will be achieved by providing a dual water supply system to the new Eynesbury development and future development at Melton South, providing additional wet weather storages to hold recycled water for beneficial use, extensions to existing recycled water schemes to new areas and possible provisions for environmental flow (subject to further EPA guidelines in this area).

[8] The current forecast for 2006/07 year is well over 1,200ML of drinking water substitution with recycled water for a range of non-consumptive purposes. The target for substitution was 700ML for that year.

Recycled water schemes require construction and maintenance of infrastructure, sampling, monitoring and ongoing site management. All RWP's are capable of producing Class C recycled water, with Sunbury and Gisborne capable of producing Class B. By mid-2008, a Class A RWP will be constructed at Melton to provide fit for purpose recycled water to the Eynesbury development and the Melton South growth area.

A list of new specific programs for achieving the proposed recycled water targets are described in the following table:

Project	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Bacchus Marsh Travelling Irrigator	0	0	103	0	0
Gisborne Scheme Extension Stage 1	500	0	0	0	0
Gisborne Scheme Extension Stage 2	0	0	0	200	2,800
Melton South Scheme	200	1,000	1,100	1,475	1,200
Melton Storage Lagoon	0	50	0	1,000	0
Riddells Creek Scheme Stage 1	445	0	0	0	0
Riddells Creek Scheme Extension Stage 2	0	0	0	30	520
Romsey Scheme	205	205	0	0	0
Sunbury Class A Feasibility Study	0	0	50	0	0
Woodend Scheme Extension Stage 2	0	0	480	0	0
Network augmentation for schemes	100	100	100	100	100

New Eynesbury Township

Western Water continues to work closely with the Eynesbury Township Joint Venture partners and other stakeholders to develop a dual water supply system for the township. Approximately 8kms south of Melton, the development will showcase sustainability principles and utilise recycled water where appropriate to replace drinking water. Saving up to one billion litres of drinking water each year Class A recycled water will be used for all toilet flushing, garden watering, golf course irrigation, recreation area and public open space irrigation.

During the year, construction was completed on trunk sewerage and Class A and Class C recycled water mains. Class C recycled water is being used to establish the major recreational assets, including the championship layout golf course and polo fields. Recycled water is also used in road construction, trench compaction and dust suppression.

Necessary Health and Environmental Management Plans have been drafted in conjunction with a stakeholder group comprising representatives from Western Water, EPA, Plumbing Industry Commission, DHS, Country Fire Authority, Melton Shire Council and the developers.

Importantly, recycled water schemes such as Eynesbury are being implemented with significant contributions from the development industry and State Government grants. For example the regional Class A Plant at Surbiton Park will cost $7 million to construct, $3.5 million provided by DSE, $1.75 million by developers and $1.75 million by Western Water.

Biosolids Management

Western Water is committed to recycling 100% of its biosolids for the 2008-2013 regulatory period.

Western Water will continue composting biosolids from the Sunbury RWP at a composting facility while biosolids from the Gisborne plant will be transported for farm application. A dewatering facility has been constructed at the Melton RWP where dewatered biosolids are stockpiled or further processed on site before beneficial use. Stockpiling of biosolids will be carried out on a clay-lined area to prevent potential groundwater contamination and a hardstand area is required to protect the clay liner. Costs have also been included for de-sludging lagoon based treatment plants, as required every 10 years.

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Transport of biosolids from Sunbury for off-site composting**	200	+CPI	+CPI	+CPI	+CPI
Biosolids storage and processing facility at Melton RWP*	200	100			
Off site application of Melton RWP biosolids**	200*	+CPI*	+CPI*	+CPI*	+CPI*
Management of Gisborne RWP biosolids**	50*	+CPI*	+CPI*	+CPI*	+CPI*
Lagoon de-sludging at various RWPs**	100	200	220	240	
R&D Biosolids**	50	50	50	50	50
Biosolids storage and Treatment facility at Romsey RWP*					300*

*new requirement

These costs, along with all other expenses associated with biosolids management, have been incorporated in expenditure forecasts set out in Section 5.

Biosolids generation is actively managed through a Biosolids Management Plan approved by EPA. Western Water also aims to develop a Biosolids Strategy to investigate the development of future beneficial markets for biosolids recycling.

Biosolids reuse targets are:

Plant	Biosolids Reuse Targets				
	2008/09	2009/10	2010/11	2011/12	2012/13
Sunbury	100%	100%	100%	100%	100%
Gisborne	100%	100%	100%	100%	100%
Romsey (lagoon)	0%	0%	0%	100%	0%
Riddells Creek (lagoon)	0%	0%	0%	0%	0%
Woodend (lagoon)	0%	0%	100%	0%	0%
Melton	100%	100%	100%	100%	100%
Bacchus Marsh (lagoon)	0%	100%	0%	0%	0%

Lagoon based plants only harvest biosolids every 10 to 15 years, the table above indicates the approximate year of biosolids harvest for those plants.

Management of the Sewerage System

Western Water undertakes master planning for each of its sewerage systems. This planning covers two aspects:

1) New Systems

The standard design model uses a multiple of dry weather flows to allow the system to be designed to provide for one in five year wet weather flows to be contained. These allowances are typically 6 x Average Dry Weather Flow, and provide 50 years protection for sewerage systems. The aspects that influence the performance of a sewerage system include:

- Hydraulic capacity of the network
- Quality of construction
- Tree root ingress and management
- Development management and control to prevent illegal connections
- Extension of catchments beyond their original design boundary.

Western Water completed sewering of the Macedon Township in 2006. The majority of properties sewered have applied for connection.

2) Existing Systems

With existing systems, it is possible to complete a more sophisticated review of the level of service. This is undertaken using computer modeling software and monitoring equipment to measure rainfall frequency and sewer flows. Careful analysis of data drives required planning and upgrades to ensure that a sewerage system meets the one in five year compliance standard. Western Water has a master planning program for its water and sewerage systems, including auditing of the level of service as part of the preparation of individual master plans.
During the past 10 years of drought, rainfall monitoring associated with master planning has captured only limited events. Therefore, the value of wet weather modeling and level of service assessment is limited.

During the first regulatory period, Western Water undertook specific sewer pumping station (SPS) audits to ensure key service standards were in place to meet the one in five year event. The results were prioritised and works are continuing to meet the principles established by the EPA as part of Western Water's environmental obligations.

Remaining pump stations not capable of meeting one in five year events were identified in the previous audit. A risk-based assessment was instigated and future upgrades have been prioritised consistent with EPA publication 1069. The cost of these upgrades is provided for in this Water Plan.

Western Water will appoint a Statutory Auditor under the Environment Protection Act to carry out an independent audit of the sewerage system. It is proposed to undertake this audit in 2011/12.

Priority for the upgrade of pump stations will be based on the following criteria:

- Magnitude of the spill volume, when capacity will be reached;
- Time to spill at Peak Dry Weather Flow (PDWF);
- Location of the Sewer Pump Station (SPS); and
- Proximity of SPS to water course.

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Upgrade of Pump stations		100			790
Statutory Audit			30*	50*	

* new requirement

The Environmental Management System (EMS) has outlined the identified risk associated with potential spills from sewer systems. Sewer spills are managed as per Western Water's Emergency Management Procedures and reported in accordance with an EPA approved notification procedure.

Trade Waste Management

Western Water is reviewing its Trade Waste Strategy to ensure consistency with the 2004 "Guidelines for Best Practice Trade Waste Management by Water Businesses" prepared by the Victorian Water Industry Association and the EPA. DSE's future directions statement will require refinement before it is adopted.

Through the Victorian Trade Waste Steering Committee, DSE has initiated a review of strategic direction in managing trade waste within Victoria. It is premature to embark on any major trade waste programs until this review is finalised.

In the region, the number of trade waste customers has increased steadily. The anticipated numbers are as follows:

Trade Waste Customers	2008/09	2009/10	2010/11	2011/12	2012/13
Cat A (Minor)	320	330	340	350	360
Cat B	5	4	2	1	1
Cat C	80	85	90	95	100
Total	**405**	**419**	**432**	**446**	**461**

Western Water's Trade Waste Strategy was implemented in March 2007 and will continue to focus on the User Pays principle. Proposed initiatives will marginally impact tariffs and fees. An important emphasis of the policy and initiatives will be the education of current and potential trade waste customers on DSE's proposed direction and the EPA's waste hierarchy.

Western Water will audit major trade waste customers to assist industry in cleaner production initiatives and waste avoidance consistent with the waste hierarchy principles. Contaminants of concern are heavy metals, colour, salt, in excess of domestic loading for solids, sulphur products, Biochemical Oxygen Demand, total nitrogen and phosphorous. Whilst colour and salt can have an adverse impact on recycled water, total nitrogen, Biochemical Oxygen Demand and phosphorous can have negative implications for energy and chemical consumption during treatment. Heavy metals have a detrimental effect on the beneficial reuse of biosolids.

The new Trade Waste Management System, By-Law and charging regime reflects the need to reduce these substances entering the sewerage system. It is proposed to conduct regular audits of major trade waste customers to identify potential and known contributors of contaminants and encourage dischargers to adopt sustainable practises. This will assist in minimising the input of contaminants to sewer.

The following additional expenditure budget is allocated for trade waste audits (including contributions toward model projects in 2010 and 2012*), and additional monitoring:

	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Additional Monitoring	10	10	15	15	15
CP Audits & Model Projects Contribution	50	110	50	110	50
Administration	70	75	80	85	90
Total	**130**	**195***	**140**	**210***	**155**

Details of the proposed trade waste charges are located in Appendix L.

Greenhouse Gas Emissions Reduction

In December 2006, Western Water signed a Memorandum of Understanding (MOU) with Sustainability Victoria committing to working together to develop a Greenhouse Gas Reduction Strategy for Western Water. The Strategy will be completed by September 2007 and will outline steps that Western Water will take towards carbon neutrality and how it will meet its environmental obligations.

Western Water has developed a partnership with Sustainability Victoria to investigate potential greenhouse gas reduction projects, including a renewable energy project and an energy efficiency project. These will be based on the outcome of a business case to select the most sustainable outcome.

A program for reducing Greenhouse Gas Emissions, which will be implemented across the business have been included in the Water Plan as outlined in the following table:

Project	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Greenhouse Gas Strategy Implementation	200	200	200	200	100
Monitoring, Administration and Reporting	50	50	50	50	50

The impact of the above implementation strategy is less than $5 per customer per annum. This amount is well within customer surveys of willingness to pay for lower Greenhouse Gas Emissions (Appendix D).

Management of Odour

As RWP's can generate offensive odours if there is a malfunction, odour reduction measures will be considered in plant upgrades. Environment Improvement Plans for individual plants will also address odour management.

During the first regulatory period, Western Water implemented odour control measures at the Riddells Creek, Gisborne, Bacchus Marsh and Melton RWP's. Odour control measures to be introduced at the Woodend plant and existing odour control system upgrades at the Melton plant have been provided for in this Plan.

Catchment Waterway and Groundwater Management

Management and Auditing of Irrigation Discharges

Western Water does not provide irrigation water discharges.

To manage land use and development in water supply catchment within the Moorabool Shire, Western Water implemented a Water Catchment Protection Policy in conjunction with Barwon Water, Central Highlands Water and Southern Rural Water. A similar policy has been developed for water catchments within Macedon Ranges Shire. These policies will be implemented during this Water Plan.

Provisions and Auditing of Environmental Flows

Western Water owns a number of reservoirs and operates two groundwater bores at Lancefield for the supply of drinking water. Under established Bulk Entitlements, Western Water is required to meet extraction and environmental flow obligations.

Western Water has been working with DSE to improve available instrumentation and monitoring to ensure compliance with environmental flow requirements. Western Water also publishes in its Annual Report information on volumes extracted, passing flows and environmental flow data. Western Water does not audit the environmental flows as DSE monitors the data under the Bulk Entitlement agreements.

Waterway Management Obligations

Western Water has no direct responsibility for managing waterways.

Western Water manages a number of river frontages on its properties and is committed to maintaining land adjoining waterways through weed management, tree planting and general land care practices. This is discussed in more detail under biodiversity.

Western Water meets the required conditions specified in the Bulk Entitlements in relation to managing water intake points.

Releases from Storages

Western Water releases water from its storages for maintaining required environmental flows. This occurs at Willimigongon Reservoir, with Southern Rural Water responsible for environmental flows from Merrimu and Rosslynne Reservoirs.

Groundwater Management Provisions

In 2004, Western Water installed several new groundwater monitoring bores across its seven RWP's. The bore locations (listed below) were selected following a hydro geological study to provide an appropriate level of environmental monitoring for the area.

- Bacchus Marsh - 4 bores
- Melton - 7 bores
- Sunbury - 4 bores
- Woodend - 3 bores
- Romsey - 8 bores
- Gisborne - 3 bores
- Riddells Creek - 7 bores

Western Water has been monitoring these bores and conducts a review of the data annually.

As a result of the data review, the following works are proposed to increase bore surveillance capability to ensure EPA licence requirements are met:

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Replacement of bore at Bacchus Marsh RWP	-	12	-	-	-
Survey of bores	4		-	-	-
Updating bore locations map	5		-	-	-
Replacement of bore at Gisborne RWP	-		-	-	25

Costs associated with monitoring the bores and reviewing the data are provided under Licence Compliance.

Biodiversity Management

Biodiversity includes all living things that inhabit the Earth, including plants, animals and micro-organisms. Western Water properties have significant biodiversity attributes, for which it is required through the current Water Services Agreement, SoO and State and Federal legislation to have a Biodiversity Action Plan. Western Water, as a significant property owner within environmentally sensitive areas and as member of the community, has an obligation to protect biodiversity and lead by example.

Accordingly, the business will continue its biodiversity enhancement work across its properties to meet the Flora and Fauna Guarantee Act, Victorian Biodiversity Strategy, Wild Life Act and Catchment and Land Protection Act.

To maintain biodiversity across Western Water's properties, programs will be undertaken to control noxious weeds, tree planting, pest management, erosion control, flora and fauna assessments, fencing, stream frontage management and aquatic assessments.

The following costs are provided for biodiversity management:

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Biodiversity management	200	200	200	200	200

At the Melton RWP, liquid sewage sludge has been disposed at a 10ha site for more than 20 years. This disposal area is located between Pinkerton Forest and Melton Shire Council's Bushes Paddock, both of which have significant biodiversity values. Western Water will be ceasing discharge of liquid sludge on this area from 2009. The sludge disposal area will be rehabilitated to prevent the growth of noxious weeds in compliance with the Catchment Land Protection Act and to protect the adjoining significant native vegetation. In addition, the disposal area will be planted with native vegetation to ensure appropriate rehabilitation of the land. Western Water will establish a native vegetation corridor between Pinkerton Forest and Bushes Paddock to ensure free passage of species between the two sites.
The following budget is has been allocated for the rehabilitation:

Program	Year				
	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
Rehabilitation of former sludge disposal area with native vegetation	80	80	90	-	-

Assessment, Monitoring, Auditing and Reporting

Monitoring, Auditing and Risk Assessment

Three of Western Water's seven RWP's occasionally discharge recycled water to local creeks. As per the commitment provided in the 2005-2008 Water Plan, Western Water undertook a biological assessment of Jacksons Creek and Five Mile Creek through a protocol agreed with the EPA. The outcome of this assessment is that Western Water is required to undertake long-term monitoring of these waterways to gather reasonable data for an effective Ecological Risk Assessment (ERA). Western Water will undertake an ERA during the 2008-2013 period to complete this obligation.

Based on the results of the risk assessment, Western Water is committed to investigating any off-set projects that may be required and will report to the community any potentially affected waterways (mixing zones). The method of communication will be agreed with the EPA.

Costs associated with undertaking an ERA are:

Year				
2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000
40*	40*	-	-	-

*new requirement

Water Industry Reporting

In complying with the elements of an Environmental Management System, Western Water reports to the community and other stakeholders any impacts from activities including recycled water discharges to streams through its Annual Report. Western Water's Annual Report also includes information on RWP licence compliance, audit outcomes and water recycling. A separate Annual Recycled Water Review report is also provided to the EPA and published on the website.

Continuous Improvement

The Environment Committee has made a commitment to oversee continuous improvement by Western Water in environmental management. To undertake this commitment the Environment Committee has set or is currently developing targets in the following areas:

- Office paper reduction
- Water use reduction – both within Western Water and in a showerhead replacement program with customers
- Chemical use
- Appropriate management of hard waste and organic waste
- Reduction in Greenhouse Gas Emissions
- Improve biodiversity
- Appropriate vehicle use.

Targets in each of these key strategic areas will be reported monthly to the Board and within the business to ensure employee buy in.

4.2.3 Water Quality obligations

Drinking Water Quality - Department of Human Services (DHS)

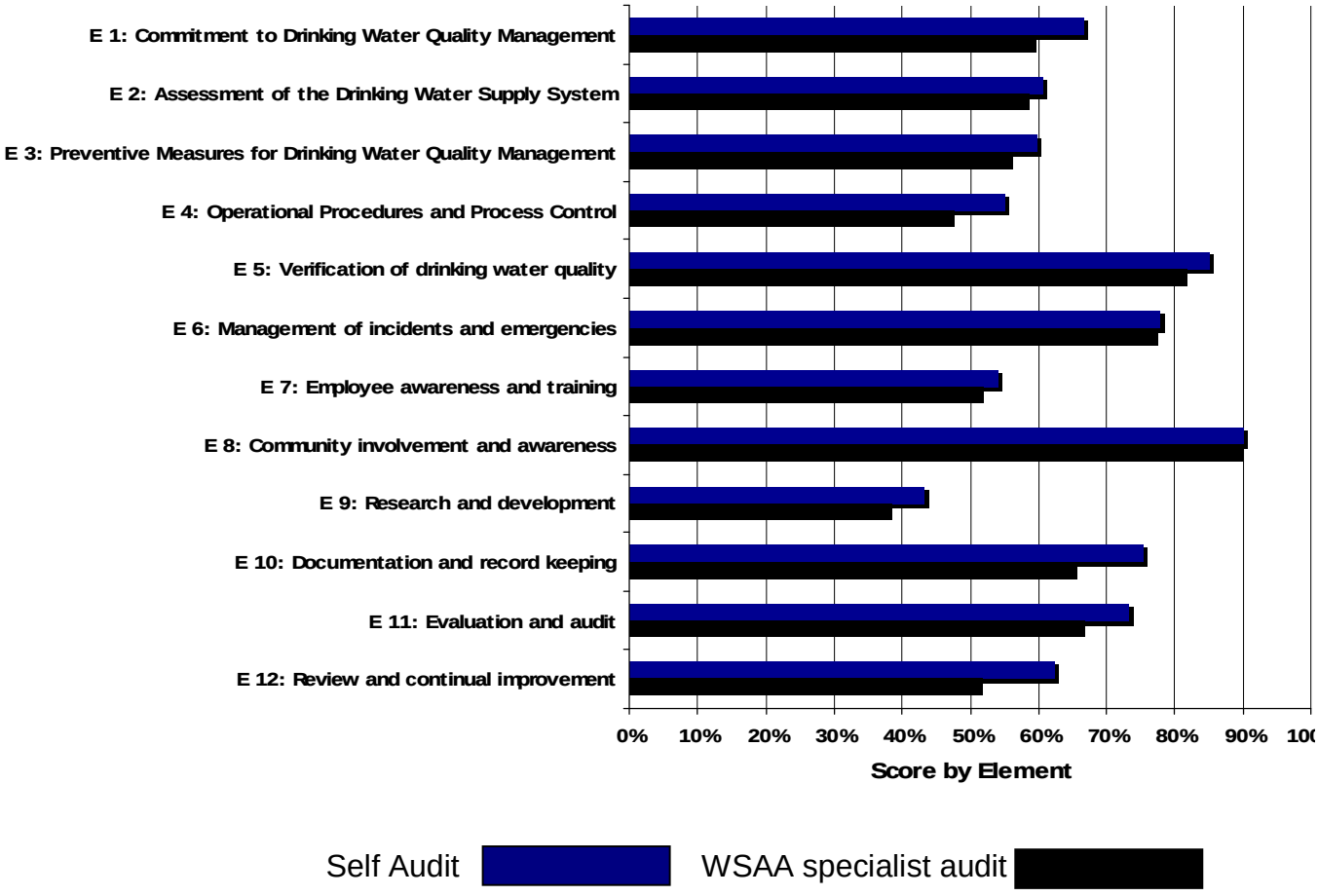
In line with our purpose "to contribute to healthy communities by meeting their current and future water needs", water quality is given the highest priority at Western Water. Western Water consults with DHS regularly and works collaboratively toward compliance with the Drinking Water Quality Framework.

The framework is a reflection of the Australian Drinking Water Guidelines (ADWG) 2004 which is currently adopted by the World Health Organisation as best practice. In 2004 Water Services Association of Australia (WSAA) invited Western Water to participate in a pilot trial for the development of its Water Quality Continuous Improvement Tool. The tool encompasses a comprehensive assessment against the framework by ADWQ.

The tool was developed with assistance from DHS and 107 of the 180 elements were strictly related to compliance with the safe drinking water legislation.

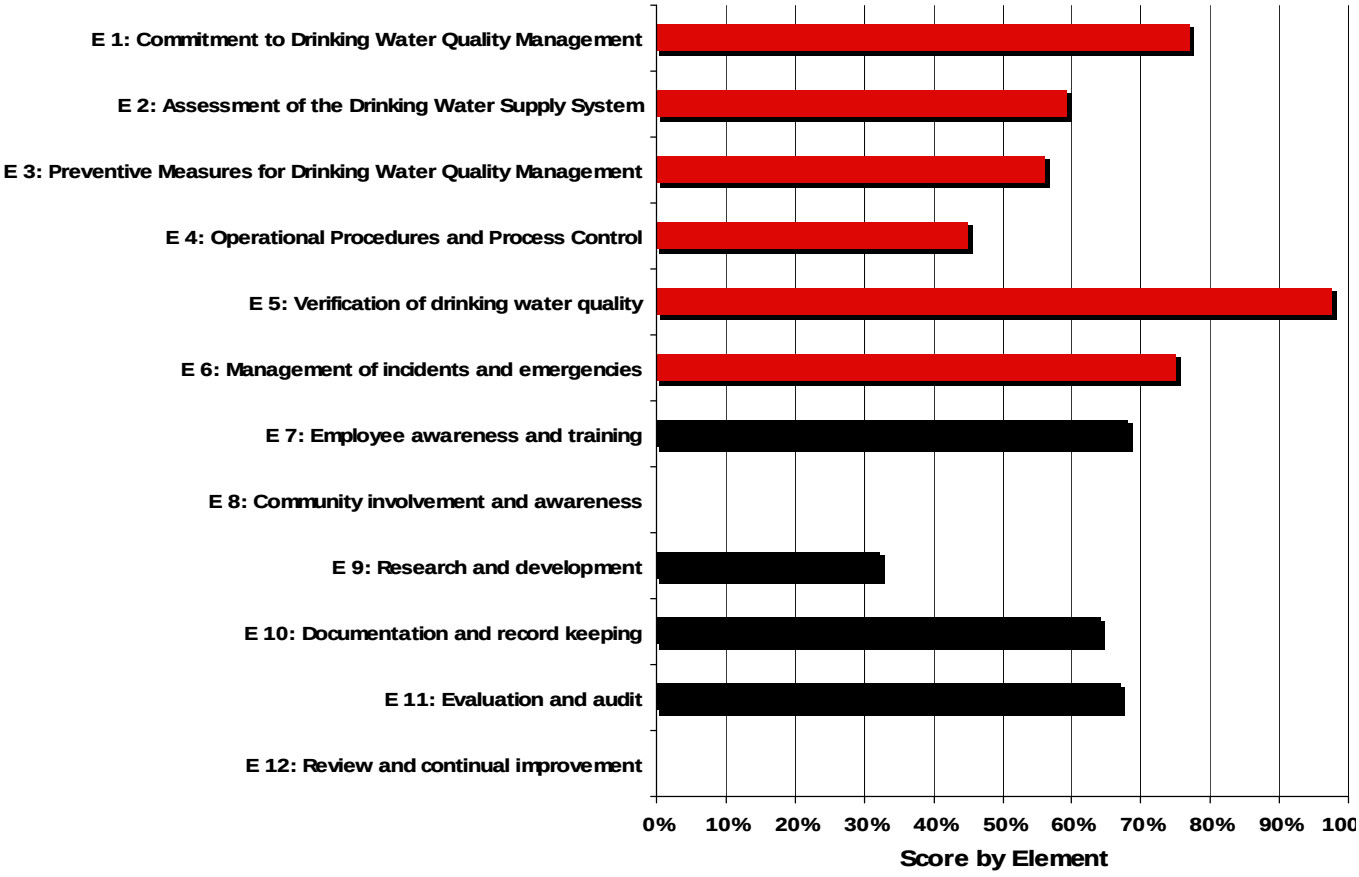
The graphic below depicts an improvement in all 180 elements of the scoring process when a self assessment using the tool was compared to the original WSAA specialists audit. The timeframe between assessments was 8 months. This process is due to be performed again in December 2007 and is expected to show further improvement.

Original WSAA Audit versus **Self Assessment (July 2006)**



The graphic below depicts the original score (performed by WSAA) for the 107 elements of the scoring process when a self assessment using the tool was compared to the original WSAA specialists audit. This process is due to be performed again in late 2007 and is expected to show further improvement.

Original WSAA Audit* for elements relative to the Victorian Safe Drinking Water legislation



** The current legislation does not have specific requirements for Elements E8 and E12. The original WSAA audit which achieved a score less than desired for E4 occurred prior to HACCP procedures development and implementation and HACCP Certification.*

The *Safe Drinking Water Act 2003* and the sub-ordinate legislation (Safe Drinking Water Regulations 2005) contain requirements for regulatory auditing, monitoring, risk control and reporting. This will necessitate investment over and above general augmentation needs.

Western Water has completed implementing a Drinking Water Quality Management System, which encompasses elements from Quality Management, Environmental Management, Occupational Health & Safety, Hazard Analysis and Critical Control Points (HACCP) and Risk Management Standards. Western Water worked with an independent consultancy to complete risk assessments for all water supply systems encompassing the DHS-gazetted Water Sampling Localities (S14, January 2007). Western Water's Drinking Water Quality Management System is ready for an independent Drinking Water Risk Management Plan audit at a date to be scheduled by the DHS.

During the first regulatory period, applications for an undertaking were lodged with DHS concerning the construction of water filtration plants to improve water quality and compliance for both Myrniong and Lancefield. The works associated with Myrniong were completed in April 2007 and works associated with the Lancefield undertaking will be completed before the Water Plan 2008-2013 period commences. These were the only localities serviced by Western Water with untreated drinking water supplies.

Appendix I outlines forecast compliance under the Safe Drinking Water legislation and estimated expenditure required over 2008-2013.

Summary of Drinking Water Quality Results

The Plan proposes that drinking water supplied by Western Water will continue and always comply with the water quality standards. This includes compliance for the bacteriological standard of E.coli and Chemical standards for Aluminium, Chloroacetic Acid, Dichloroacetic Acid, Trichloracetic Acid, Total Trihalomethanes and Physical standard of Turbidity for all existing water sampling localities as gazetted. Two additional Drinking Water sampling localities are forecast for 2008/09 and 2009/10 for Eynesbury and Toolern respectively. The planning and infrastructure to these developments will ensure compliance with the legislation is achieved.

General Works for Aesthetic Improvements

In addition to the requirements of the *Safe Drinking Water Act 2003* Western Water has independently developed a Water Quality Improvement Strategy to examine technical (diagnostic) and non-technical (perception) issues with drinking water quality and address taste and odour concerns.

A five year Water Quality Improvement Plan has been developed to deliver improved taste and odour and is supplemented by a Communications Plan to improve established brand perception issues.

4.2.4 Other obligations

Energy and Water Industry Ombudsman (EWOV)

Western Water is a member of the Energy and Water Industry Ombudsman of Victoria (EWOV) Scheme. The following table shows Western Water's performance during the first regulatory period.

Reporting Period	Market Share of all Customers	Percentage of all Cases Referred
1st July 2004 – 31st December 2004	8%	6%
1st January 2005 – 30th June 2005	8%	7%
1st July 2005 – 30th June 2006	8%	9%
1st July 2006 – 31st December 2006	8%	8%

Note market Share of customers is based on year 2000 customer base and does not reflect the significant growth in customer base over the last 6 years

Western Water continues to be a strong supporter of EWOV. All customer service staff are trained in EWOV processes regularly attending training programs and briefings, and often provide advice on best practice input on cases.

Cases referred by EWOV to a higher level within Western Water, and actual complaints, are reported monthly to the Board and staff in the BSC. To date, Western Water has not had any complaints escalated within the EWOV process.

Western Water continues to work with EWOV to ensure that referrals and complaints are not escalated within the EWOV process.

Integrated Management System

Western Water achieved triple accreditation for OH&S, EMS and QMS during the first regulatory period. The Integrated Management Systems accreditation has been necessitated to a certain extent through proposed and/or amended legislation. Recent certification of HACCP to complement the Quality Management System for Drinking Water will be extended to cater for the many requirements of delivering Class A recycled water and enhance business practices in demonstrating good corporate governance, knowledge management, sustainability and other benefits.

4.3 Service Standards

4.3.1 Assessing service standards

Western Water has proposed service standards for this Water Plan to reflect the average actual performance achieved during the three years of 2003/04 to 2005/06, unless otherwise indicated. This approach was discussed with members of the Customer Advisory Group and Community Reference Groups at the Strategic Planning session in July 2006, the outcomes shown in Appendix E.

Western Water accepted the view from Group Members that as service is already of a high standard, pushing standards up could not be justified if it meant significant price increases. Annual market research reinforced that “value for money” rather than customer service or delivery standards are a greater cause for concern amongst customers. Western Water monitors performance of service standards in its BSC.

Customer Charter

With the introduction of a revised Hardship Policy from 1st July 2007, and Guaranteed Service Levels (GSL) payments from 1st July 2008, Western Water will develop a revised Customer Charter during the 2007/08 financial year. Western Water will consult with its customer and stakeholder groups on specific items.

4.3.2 Core Service Standards

The descriptions in the tables below have been modified from those in the first regulatory period to better align with the ESC reporting framework and definitions.

Network reliability is monitored as part of customer service level and asset performance targets. The tables below list the KPI targets for the past four years, estimates for the remainder of the current Water Plan (approved) and for the forecast regulatory period 2008–2013. Response times for priority 1 and 2 bursts have both been set at 25 minutes as this represents an appropriate response time for Western Water given the demographics and past performance with a relatively low sample group for priority 1 bursts, and historical performance for priority 2 bursts.

Water

	FIRST REG PERIOD					SECOND REG PERIOD						
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	Actuals average	Forecast average
	ACTUALS				Approved	FORECAST						
ViF + UDP growth rate			2.95%	3.18%	3.11%	3.32%	3.24%	3.18%	3.66%	3.55%		
km water mains	1,518	1,566	1,621	1,645	1,696	1,752	1,809	1,867	1,935	2,004		
properties serviced	47,168	49,100	51,149	52,167	53,789	55,575	57,376	59,200	61,367	63,546		
number of bursts	309	354	376	372	373							
Unplanned water supply interruptions (per 100km)	20.4	22.6	23.2	22.6	22.0	22.0	21.5	21.0	20.5	**20.0**	22.1	21
Average time taken to attend bursts (priority 1)	Combined 1,2 & 3 81	15	16.5	0	16	15	15	15	15	15	15.8	**25**
Average time taken to attend bursts (priority 2)		23	23	21.6	23.5	23	23	23	23	23	23	**25**
Average time taken to attend bursts (priority 3)		93	105	124	99	95	95	92	92	**90**	99	93
total customers interrupted by unplanned bursts	6,989	9,457	9,166	7,646	8,675							
total customers with >5hr unplanned interuptions	256	243	173	91	205							
Unplanned interruptions restored within 5 hours (%)	96%	97%	98%	99%	98%	98%	98%	98%	98%	98%	97%	**98%**
total customers interrupted by planned bursts	1,174	2,840	2,862	1,920	2,058							
total customers with >5hr planned interuptions	36	541	510	633	272							
Planned interruptions restored within 5 hours (%)	97%	81%	82%	67%	87%	90%	90%	90%	90%	90%	87%	**90%**
total customer minutes unplanned interruption	760,661	819,562	888,310	777,635	888,565							
Avg unplanned customer minutes off water supply	16.1	16.7	17.4	14.9	16.5	16.7	16.7	16.7	16.7	16.7	16.7	**16.7**
total customer minutes planned interruption	241,595	701,272	616,638	493,287	469,826							
Avg planned customer minutes off water supply	5.1	14.3	12.1	9.5	8.7	10.5	10.5	10.5	10.5	10.5	10.5	**10.5**
No customers effected by unplanned interrutpions	3,825	9,457	9,166	7,646	9,237							
No customers effected by planned interrutpions	1,000	2,840	2,862	1,920								
Average unplanned frequency of water supply interruptions	0.08	0.19	0.18	0.15	0.17	0.15	0.15	0.15	0.15	0.15	0.15	**0.15**
Average planned frequency of water supply interruptions	0.02	0.06	0.06	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	**0.05**
Avg duration unplanned water supply interruptions (mins)	199	87	97	102	100	90	90	90	90	90	127	**90**
Avg duration planned water supply interruptions (mins)	242	247	215	257	229	220	200	180	150	**120**	235	174
No. customers >5 unplanned interruptions in the year	2	3	1	1	1	2	2	2	2	2	2	**2**
Unaccounted for water (%)	12.3%	12.2%	9.7%	10.9%	10.5%	10.0%	9.5%	9.0%	8.5%	**8.0%**	11.4%	9.0%

Western Water has forecast a target for this Water Plan consistent with the ESC's guidelines in each KPI area by using the average of the 03/04, 04/05 & 05/06 performance, and further has targeted continuous improvement specifically in the areas of unplanned interruptions per 100km, priority 3 response times, average duration of planned interruptions and Unaccounted for water %. (exceptions are where other 'more realistic' targets are set, eg: Priority 1 & 2 response times)

Sewerage

	FIRST REG PERIOD					SECOND REG PERIOD						
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	Actuals average	Forecast average
	ACTUALS				Approved	FORECAST						
km sewer mains	848	916	995	991	1,022	1,056	1,090	1,125	1,166	1,207		
number blockages	306	294	281	291	298							
Sewerage blockages (per 100km)	36.1	32.1	28.2	29.4	29.2	29	28.5	28	27.5	**27**	32.1	28
Avg time to attend sewer spills and blockages (mins)	41	33.5	27.1	26.1	32	30	30	30	30	30	34	**30**
Average time to rectify a sewer blockage (mins)	101	106	101	107	106	103	103	103	103	103	103	**103**
total uncontained spills	20	16	7	7	6							
number of uncontained spills not contained in 5 hours	0	0	0	0	0							
Spills contained within 5 hours (per cent)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	**100%**
Customers receiving >3 sewer blockages in the year	4	2	4	3	3	3	3	3	3	3	3.3	**3**

Western Water has forecast a target for this Water Plan consistent with the ESC's guidelines in each KPI area by using the average of the 03/04, 04/05 & 05/06 performance, and further has targeted continuous improvement specifically in Sewer blockages per 100km and Averge time to attend sewer spills.

Customer Service standards for complaints to EWOV and telephone calls answered within 30 seconds are listed below. Western Water believes that in the next five years the current performance standards for complaints to EWOV will be improved, through continuous improvements in internal complaints handling, including more proactive escalation of complaints internally.

Telephone response times should improve in 2011/12 and 2012/13 with improved functionality of the new PABX and ongoing implementation of staff training initiatives.

Service Standard	Actual 2005/06	Forecast 2006/07	Forecast 2007/08	Plan 2008/09	Plan 2009/10	Plan 2010/11	Plan 2011/12	Plan 2012/13
Complaints to EWOV (per 1000 customers)	0.39	0.39	0.39	0.39	0.35	0.34	0.30	0.30
Telephone calls answered within 30	89%	87%	88%	88%	89%	89%	90%	90%
Restrictor fitted removed within 3 days (#)	53	50	50	50	50	50	50	50
Restrictor fitted not removed within 14 days(#)	11	14	13	13	13	13	13	13
Hardship grant (#)	40	55	65	65	68	68	70	70
Average debt for customers subject to legal action ($)	1866	900	1000	1000	1000	850	850	850
Average debt for customers subject to restriction ($)	610	604	600	600	600	600	600	600

Western Water is committed to providing a minimum flow rate of 20 litres per minute for all 20mm residential meters. For information, the table below shows this and also typical flow rates available through larger services where the reticulation infrastructure supports such services.

Diameter of Property Service pipe	20mm	25mm	32mm	40mm	50mm
Minimum flow rates (litres per minute)	20	35	60	90	160

Customer service standards summarised above are also contained in the Information Template in Appendix N.

Managing "Outlier events"

In providing this table of KPI's and forecast targets, external factors such as weather, rate of growth and climate change are outside the control of Western Water, while other aspects associated with response, asset condition and management remains clearly our responsibility.

The table below considers the service delivery KPI's for Western Water and outlines mitigation actions taken to limit outlier events.

KPI	Mitigation actions against outliers
Unplanned Water Supply interruptions	Renewal programs for water mains based on analysis of failures.
Time taken to attend bursts	Strategically placing three Depots close to customer centres and a requirement for 24x7 callout within 30 minutes for all depot staff.
Restoration of unplanned interruptions within 5 hours	Incident escalation brings in extra support for large jobs including those that reach four hours
Planned interruptions restored within 5 hours	Customers are notified of all planned interruptions, although some may need longer than 5 hours, Western Water targets early completion of works that will have water turned off.
Planned and unplanned customer minutes off supply, and frequency of outage	As large shut-off blocks are identified, new valves are inserted to reduce customers affected by outages.
Average duration of unplanned and planned interruptions	This measure must be attended to with care. While minimum interruption time is targeted, quality repair or maintenance is essential so that the problem does not repeat. The mitigation action here is to plan jobs well, have adequate resources and consider risk and contingency management as part of the work. Finally routine maintenance of valves and other infrastructure ensures the system works as expected and minimises interruption time when it is required.
Number of customer experiencing >5 interruptions per year	Renewal programs for water mains based on analysis of failures, particularly for areas where 5 or more bursts have occurred in the previous 1 or 2 years.
Unaccounted for water %	Diligence in measurement and accounting for water is a key issue for this KPI, as is constant effort to identify and rectify illegal use, meter calibration errors and leakage from the reticulation infrastructure.
Sewer blockages	A strong routine maintenance “hotspot” program has been put in place to manage the operation of the sewerage system.
Time to attend spills	Sewage spills are considered high priority due to their health risk aspects. Proximity of Depot teams and call out response is important here. Further, a good understanding of how to manage and report spills along with an escalation procedure and EPA involvement as required, assists in managing this KPI at Western Water.
Time to rectify a blockage	Prompt response and thorough clearing of the blockage is essential. The key mitigation action here was the addition of a sewer jetting truck to Western Water’s fleet.
Spills contained within 5 hours	Strategically locating three Depots close to customer centres and a requirement for 24x7 callout within 30 minutes for all depot staff ensures prompt response to high priority sewage spills. Escalation guidelines also escalate to management and EPA, all uncontained sewage spills.
Customer receiving no more than 3 blockages per year	System reporting and actions lists have been developed and used to ensure problem areas are treated as hotspots and routinely maintained or renewed as required. Root foaming is selectively used as needed and if necessary, offending trees are removed.

4.3.3 Additional service standards

Western Water proposes to include an additional performance measure relating to the turn around time for information statements. Given that Western Water is in a high growth area the turn around times for property transfers is an important measure of performance, affecting customers and stakeholders such as real estate agents, solicitors and conveyancers.

Percentage of Information Statements provided within 5 days of request

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
% Information statements turned around in 5 days	86	79	85	86	87	88	90	90	90

4.4 Guaranteed Service Levels

Western Water will introduce Guaranteed Service Levels (GSL) payments for the first time in this Water Plan.

Discussions with customer and stakeholder groups, including Financial Counsellors, indicate there is not strong support for GSL payments. Western Water, however, will introduce these payments for service events after 1st July 2008 to accommodate the ESC's clear preference for such a scheme.

Focus groups conducted in April 2007 and reported in Appendix D, asked customers to rank possible service standards that could attract a GSL incentive.

The groups ranked their preferences for possible GSL as follow:

Water Supply System GSL

- More than 5 unplanned interruptions in 12 months 5th
- Failure to notify of planned interruptions 1st
- Planned interruption longer than advised 3rd
- Planned interruptions during peak hours (5 – 9 am and 5 – 11 pm) 2nd
- Planned interruption longer than 5 hours 4th
- Repair of leaking service pipes within 5 days 6th

Sewerage System GSL

- More than 3 interruptions in 12 months 3rd
- Spills inside a house not stopped within one hour of notification 1st
- Spills not contained within a specified time 2nd

Based on this research Western Water proposes GSL payments for five key performance indicators, including:

Water Supply System GSL

- Failure to notify of planned water supply interruptions $25
- Planned interruptions during peak hours (5 – 9 am and 5 – 11 pm) $25
- Planned water supply interruption longer than notification given. $25

Sewerage System GSL

- More than three sewer interruptions in 12 months $25
- Sewage spills inside a house, not stopped within one hour of notification $100

These service standards that are subject to GSL payments are defined for the purpose of payments in the same way as they are defined by the ESC for performance measurement

Western Water did not adopt the customers' second preference for sewer system GSL payment (Spills not contained within a specified time), since Western Water's KPI in this area is targeting an "average" time to resolve blockage and spill issues as the key performance measure that impacts on customers. Western Water's 3 response teams, located close to our customers enable most spills to be contained quickly and well within the specified 5 hour time set. Also the number of uncontained spills is quite small and often not linked to any particular customer but rather an environmental concern that Western Water would liaise with the EPA to resolve.

Customers ranked "spills inside a house not stopped within one hour of notification" as the most important GSL and therefore the one that should attract the highest payment of $100.

The customers surveyed in the focus groups considered the dollar values associated with each GSL as a fair payment.

Customers will not need to apply for the payment. Rather, the GSL payment will be made as an automatic rebate to the customer's account within seven days of Western Water being aware of the event leading to the rebate.

Based on past performance GSL payments are estimated to be as follows for the period of the Water Plan. These cost have been included as operating expenses

GSL payment Event	2008/09	2009/10	2010/11	2011/12	2012/13
Failure to notify of planned water supply interruptions	4,500	4,250	4,000	3,500	2,500
Planned interruptions during peak hours (5 – 9 am and 5 – 11 pm)	200	150	150	150	150
Planned water supply interruption longer than notification given.	1000	500	500	300	200
More than three sewer interruptions in 12 months	300	300	300	100	100
Sewage spills inside a house, not stopped within one hour of notification	500	400	300	300	300
TOTAL	6500	5600	5250	4350	3250

The set up costs to introduce the GSL payment system are incorporated in the Water Plan. These changes largely involve system and reporting changes estimated to be an upfront cost of $10,000.

Section 5

Revenue Requirement

Section 5 Revenue Requirement

5.1 Overview of Revenue Requirement

The building block approach has been used to derive future estimates of revenue required to deliver Western Water's proposed service standards and other outcomes over the regulatory period. The revenue requirement reflects the operating expenditure and return on and of the regulatory asset base.

The building block approach contained in the Financial Template (refer Appendix N) has been populated and the following is a summary of contributors to the total revenue requirement of $286.45 million (1/1/07$) or NPV $250.81 million. This table brings together Western Water's assumptions about its expenditure requirements, demand and capital financing assumptions. All dollars are expressed in 1/1/07 real terms.

Revenue Requirement Detail

Revenue requirement detail

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		FIRST REG PERIOD			SECOND REG PERIOD				
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue requirement and RAV outputs									
Revenue requirement									
Operating expenditure					32.99	36.44	40.10	45.70	52.02
Return on assets to 30/6/08					7.49	7.30	7.10	6.91	6.71
Regulatory depreciation of assets to 30/6/08					3.02	3.02	3.02	3.02	3.02
Return on new assets					0.87	2.47	3.68	4.45	4.98
Regulatory depreciation of new assets					0.36	1.04	1.56	1.92	2.18
Adjustments from last period					-	-	-	-	-
Benchmark tax liability					0.37	0.72	1.02	1.35	1.60
Total revenue requirement		*36.49*	*38.41*	*38.48*	**45.11**	**50.99**	**56.49**	**63.35**	**70.52**
Rolled forward RAV									
Opening asset base	91.38	95.19	110.74	122.35	148.75	179.14	203.95	219.01	226.35
plus capital expenditure	21.99	25.20	22.47	34.46	38.15	33.38	24.25	16.92	15.88
less customer contributions	11.74	2.83	1.58	1.67	3.60	3.73	3.83	3.88	4.01
less government contributions	-	-	3.50	-	-	-	-	-	-
less regulatory depreciation	5.65	5.12	4.99	5.46	3.39	4.06	4.59	4.94	5.20
less disposals	0.79	1.70	0.78	0.93	0.77	0.77	0.77	0.77	0.77
Rolled forward RAV	**95.19**	**110.74**	**122.35**	**148.75**	**179.14**	**203.95**	**219.01**	**226.35**	**232.24**
Taxation calculation									
$m, 1/1/07									
Revenue requirement					44.74	50.27	55.47	62.00	68.92
Customer contributions					3.60	3.73	3.83	3.88	4.01
Government contributions					-	-	-	-	-
Gifted assets					10.33	10.47	10.57	10.69	10.73
Operating & maintenance expenditure					32.99	36.44	40.10	45.70	52.02
Average RAV					163.94	191.54	211.48	222.68	229.29
Debt (60% of ARAV)					98.36	114.93	126.89	133.61	137.58
$m (MOD)									
Revenue requirement					47.27	54.79	62.37	71.90	82.44
Customer contributions					3.81	4.06	4.31	4.49	4.80
Government contributions					-	-	-	-	-
Gifted assets					10.91	11.41	11.88	12.40	12.83
Operating & maintenance expenditure					34.86	39.71	45.08	53.00	62.23
Tax depreciation (new)					1.00	2.70	3.90	4.84	5.20
Tax depreciation (existing)					16.65	14.65	13.12	11.28	10.31
Interest					7.26	8.75	9.97	10.83	11.50
Tax losses brought forward					-	-	-	-	-
Before tax net income					2.22	4.45	6.48	8.84	10.83
Benchmark gross tax liability					0.78	1.57	2.29	3.12	3.82
Franking benefit					0.39	0.79	1.14	1.56	1.91
Benchmark tax liability (MOD)					0.39	0.79	1.14	1.56	1.91
Benchmark tax liability (real)					**0.37**	**0.72**	**1.02**	**1.35**	**1.60**

Growth predictions used were based on "Victorian in the Future" (VIF) and DSE's 'Urban Development Program 2006 – Annual Report (UDP)'.

The key drivers of the revenue requirement are operating expenditure and capital. The return for capital appears as a return on the Weighted Average Cost of Capital (WACC) and a return of regulatory depreciation.

There are several key drivers that cross over both operating and capital expenditure, including the CRSWS and EPA requirements. Some CRSWS initiatives requiring operating expenditure funding include $100,000 annually to undertake Water Conservation Programs and $31,000 for a School Education Program. To reduce environmental impacts, meet EPA licence policies and further develop a biosolids market, $1 million over the period of the Plan has been proposed. Other costs to meet EPA requirements include $80,000 each for the undertaking of an ecological risk assessment, an audit to cover a one in five year rainfall event, and compliance to the State Environment Protection Policy.

5.2 Operating Expenditure

Background

Operating expenditure is a key component of Western Water's revenue requirement representing approximately $207.25 million (1/1/07$) over the five years. All expenditure is included in the year in which it is incurred. Costs are categorised in two ways: by cost type (chemicals, salaries, etc) and by functional group (marketing, depots, treatment plants). Each function has a cost centre to manage expenses under the responsibility of a Team Leader or Manager. A decentralised structure exists where costs are managed by teams. The BSC strategic management tool is used to prioritise new initiatives. Controllable costs are reduced by 1.5% per annum as an efficiency measure. Cost minimisation targets are monitored through a 'Revenue Maximisation/Cost Minimisation' program that is reported monthly in the BSC.

5.2.1 Overview of operating expenditure

Operating Expenditure forecast

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	FIRST REG PERIOD				SECOND REG PERIOD				
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Operating Expenditure Summary									
Business as Usual	22.23	21.80	25.35	26.34	31.30	34.73	38.44	44.05	50.35
Licence fees	0.18	0.22	0.12	0.18	0.13	0.13	0.13	0.13	0.14
Environment Levy	1.02	1.34	1.30	1.27	1.27	1.27	1.27	1.27	1.27
Total prescribed BAU opex	23.43	23.35	26.77	27.78	32.70	36.13	39.84	45.44	51.76
June 2005 Final decision		*25.80*	*24.17*	*23.96*					
Total BAU operating expenditure	$m, 1H/07								
Water									
Operations & Maintenance	2.93	2.90	3.52	3.66	4.22	4.33	4.46	4.76	4.87
Bulk charges	6.97	6.07	6.48	6.68	8.61	11.05	14.35	18.80	24.81
Treatment	1.88	1.80	1.79	1.94	2.24	2.63	2.82	3.24	3.42
Customer Service and billing	0.51	0.82	0.84	1.14	1.15	1.16	1.17	1.18	1.19
GSL Payments	-	-	-	-	-	-	-	-	-
Licence Fees	-	-		-	-	-	-	-	-
Corporate	2.81	2.86	3.96	3.83	4.38	4.51	4.58	4.69	4.74
Other operating expenditure	-	-	-	-	-	-	-	-	-
Total Water	15.10	14.45	16.59	17.24	20.60	23.68	27.38	32.66	39.03
Sewerage									
Operations & Maintenance	1.78	1.70	1.94	1.99	2.24	2.23	2.27	2.30	2.28
Bulk charges	-	-	-	-	-	-	-	-	-
Treatment	2.15	2.12	2.39	2.32	2.70	2.87	2.93	3.04	2.87
Customer Service and billing	0.41	0.67	0.69	0.93	0.94	0.95	0.95	0.96	0.97
GSL Payments	-	-	-	-	-	-	-	-	-
Licence Fees	-	-							
Corporate	2.30	2.34	3.24	3.10	3.55	3.65	3.72	3.81	3.85
Other operating expenditure									
Total Sewerage	6.65	6.82	8.25	8.35	9.43	9.70	9.87	10.11	9.97
Bulk water									
Operations & Maintenance	-	-	-	-	-	-	-	-	-
Bulk charges	-	-	-	-	-	-	-	-	-
Treatment	-	-	-	-	-	-	-	-	-
Customer Service and billing	-	-	-	-	-	-	-	-	-
GSL Payments	-	-	-	-	-	-	-	-	-
Licence Fees	-	-	-	-	-	-	-	-	-
Corporate	-	-	-	-	-	-	-	-	-
Other operating expenditure	-	-	-	-	-	-	-	-	-
Total Bulk water	-	-	-	-	-	-	-	-	-
Recycled water	0.48	0.53	0.50	0.75	1.27	1.34	1.19	1.28	1.35
Rural water	-	-	-	-	-	-	-	-	-
Licence fees									
Essential Services Commission	0.05	0.12	0.03	0.08	0.04	0.04	0.04	0.04	0.05
Department of Human Services	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Environment Protection Authority	0.12	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Total Licence fees	0.18	0.22	0.12	0.18	0.13	0.13	0.13	0.13	0.14
Environment Levy	1.02	1.34	1.30	1.27	1.27	1.27	1.27	1.27	1.27

Business as usual costs includes meeting customer expectations for delivery of services including delivery of quality drinking water and efficient wastewater services. Also, customers expect timely repairs and maintenance on infrastructure and an efficient administrative operation.

Operating expenditure identified on new obligations include meeting EPA requirements under the Flora & Fauna Act and new Carbon Emissions requirements.

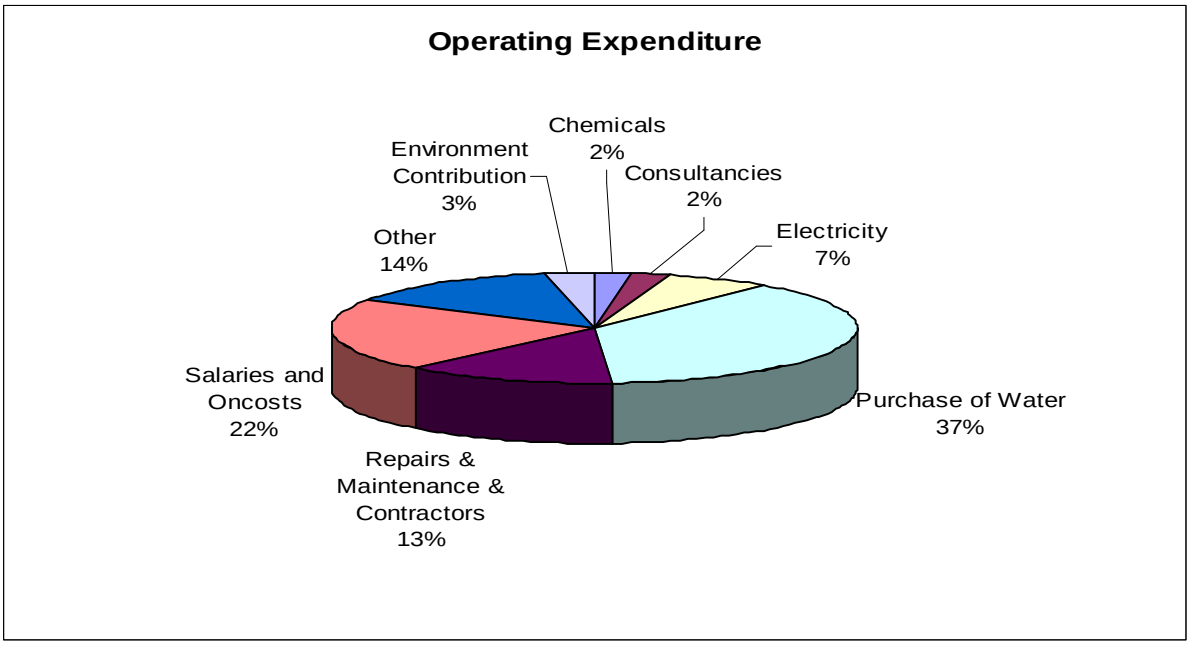
New obligations ($'000)

	2008/09	2009/10	2010/11	2011/12	2012/13
Flora & Fauna Act	200	200	200	200	200
Greenhouse Gas Reduction Strategy	50	50	50	50	50
DRP Review	30				
WSDS – restriction review		50			
Terrorism Act	10	10	10	10	10

5.2.2 Key drivers of operating expenditure

A summary of costs by expense type is set out below (1/1/07$):

	Actual	Actual	Plan	Plan	Plan	Plan	Plan	Plan
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Expenses								
Chemicals	518	481	494	633	821	916	1,121	1,208
Consultancies	591	738	915	1,048	994	935	991	917
Electricity	1,493	1,491	1,515	1,849	2,363	2,623	3,181	3,418
Purchase of Water	6,072	6,478	6,809	8,614	11,052	14,346	18,796	24,808
Repairs & Maintenance & Contractors	3,694	4,068	4,334	5,450	5,430	5,209	5,232	5,037
Salaries and Oncost	6,593	7,082	7,551	8,194	8,567	8,907	9,177	9,402
Other	4,551	5,735	5,089	5,940	5,949	5,902	5,944	5,970
Environmental Contribution	1,339	1,300	1,268	1,268	1,268	1,268	1,268	1,268
Total Operating Expenses	**23,355**	**27,373**	**27,976**	**32,994**	**36,444**	**40,106**	**45,709**	**52,029**



In accordance with the forecasts set out in section 6, growth is assumed to range between 3.11% and 3.66% p.a over the period of the Plan. Costs are also assumed to increase by CPI per annum. The expansion of the company's asset base, in response to customer growth, is a key driver of repairs and maintenance expenditure. Additional staffing resources are required at each of our maintenance depots to service an increasing customer base, and also meet higher demands on work crews due to larger than average breaks as a result of dry conditions.

Chemical costs have eased over recent years due to a higher portion of bulk water being received from Melbourne Water (MW), which has already received some treatment. As restrictions are eased and the Lancefield and Myrniong Plants are commissioned, chemical costs will rise again. It is assumed current purchasing agreements (under the MAPS contract) will be retained.

Consultancies are assumed to remain relatively constant with an asset revaluation scheduled in 2011/12.

Electricity costs are influenced by water consumption, source of supply of water, weather and installation of new infrastructure. The source of supply can largely influence whether gravity reticulation is possible, for example gravity supply of Gisborne and Sunbury from Rosslynne as opposed to supply from Melbourne whereby it must be all pumped. Care is taken when evaluating future capital projects to ensure that long term efficiency of operations is considered. All elements of the business are high consumers of electricity in pumping, aeration, filtering and processing and are greatly affected by weather.

Purchase of Water is the largest cost at the commencement of the Water Plan period. It includes bulk water purchases from both MW and Southern Rural Water (SRW). The impact of the drought and the need to allow local reservoirs to recover is reflected in the Plan, whereby water is purchased from both MW, at a largely variable price, and SRW, which is a fixed annual fee regardless of volume of water drawn.

Repairs and Maintenance including engagement of contractors and purchase of supplies remains relatively constant throughout this period, with an allowance to meet growth in customer numbers.

Salaries and Oncost in line with the current Enterprise Bargaining Agreement (EBA) proposed annual increases of 4% have been applied (assuming CPI of 2.5%pa - an additional 1.5% real per annum).

Other expenditure is a significant component of Western Water's expenditure. It includes items such as insurance, motor vehicle running costs, printing & stationery, loss on sale of assets, telephone, analysis charges, audit & legal fees, postage, licence fees and computer related costs. Items such as insurance have been increased by 6% per annum on advice from our insurance broker and computer software is expected to increase by 10% per annum. Increases in analysis are a direct result of DHS regulation.

5.2.3 Justification of forecast expenditure levels

Historical expenditure levels

Costs have historically been incurred in providing a quality service to customers. The drought has had an impact on costs in recent years, specifically in the area of water purchases. Due to reducing levels in Southern Rural Water's Reservoirs accessed by Western Water (namely Merrimu and Rosslynne), an alternative source of water was sought from the Melbourne system. Whilst this has come at a cost by way of infrastructure investment, it has meant Western Water is still required to pay SRW a fixed fee, regardless of water volumes used, and a variable fee to Melbourne Water which currently supplies approximately 90% of the region's water. Customers have as a result an increased security of water supply. It is proposed by MW that bulk water costs will rise by 35.1% (real) each year. This increase is primarily due to planned major augmentation(s) of the metropolitan system (such as a desalinisation plant). This has significantly increased the price of bulk water from MW and without substantial recovery rains into local storages, such augmentations will be required.

Demand forecasts

Western Water's services some of the states fastest growing corridors due to close proximity to Melbourne. Areas include Melton, specifically Melton South, Eynesbury, and Sunbury. Accordingly, growth has been forecast between 3.18% and 3.66% during the Water Plan.

Population numbers are expected to be:

	2008/09	2009/10	2010/11	2011/12	2012/13
Annual growth	3.32%	3.24%	3.18%	3.66%	3.55%
Population ('000)	139	144	149	154	160

During the period of this Plan, it is assumed that as the level of water restrictions ease, assisted by major augmentation(s) to MW supplies, revenue will increase with additional water consumption. Also taken into consideration are the water conservation initiatives that will have an impact on longer term consumption.

Regulation Costs

The cost of regulation on the business is summarised as follows:

	Plan	Plan	Plan	Plan	Plan
Regulation Costs	**2008/09 $'000**	**2009/10 $'000**	**2010/11 $'000**	**2011/12 $'000**	**2012/13 $'000**
DHS Levy	30	31	32	32	33
DHS audit	40	15	40	15	40
Customer consultation	10	10	10	10	10
Regulatory consultancy	35	20	20	35	35
Regulatory Audit	80	80	80	80	80
ESC regulatory cost est.	35	35	35	35	49
EPA License Fee	74	76	78	80	82
Total	**304**	**367**	**295**	**287**	**329**

Environmental Contribution

In accordance with the White Paper, the following costs for the Environmental Contribution payable to DSE, which commenced on the 1st October 2004, have been included in the Water Plan. These figures are as advised by DSE, based on 5% of water, sewer and trade waste income for the year 2002/03 with CPI indexing commencing 1st July 2008.

	Plan 2008/09 $'000	Plan 2009/10 $'000	Plan 2010/11 $'000	Plan 2011/12 $'000	Plan 2012/13 $'000
Environmental contribution	1,268	1,268	1,268	1,268	1,268
Total	**1,268**	**1,268**	**1,268**	**1,268**	**1,268**

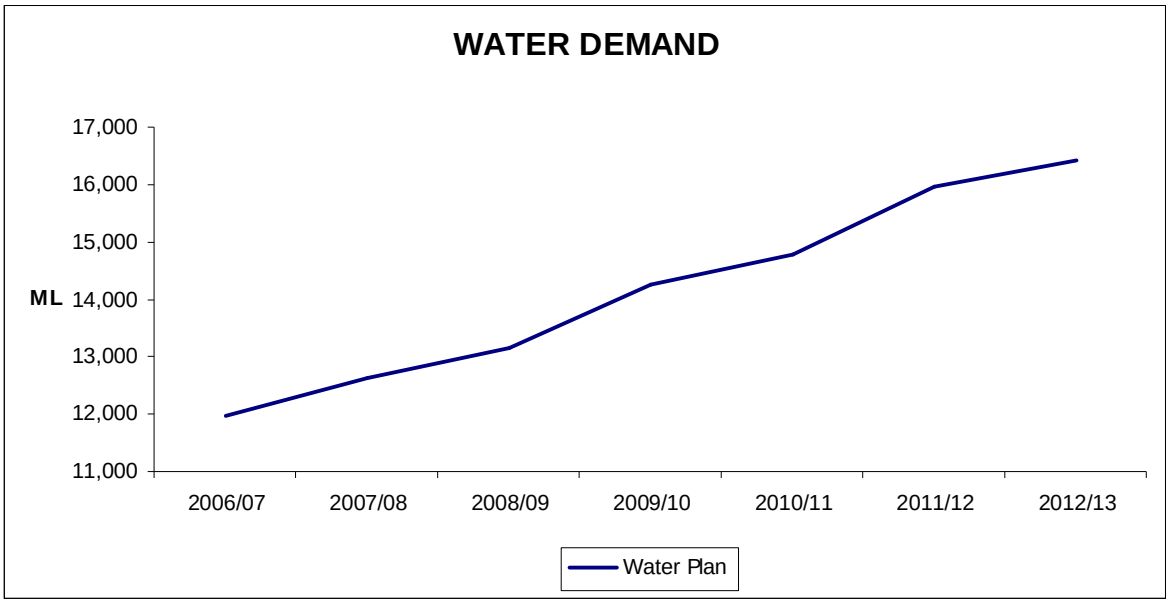
Functional Group Expenditure

1/1/07 $	Actual	Actual	Forecast	Plan	Plan	Plan	Plan	Plan
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	$'000		$'000	$'000	$'000	$'000	$'000	$'000
Water Headworks/Bulk Treatment /Quality Network	10,767	11,848	12,036	15,497	18,464	22,006	27,159	33,443
Wastewater (including Trade Waste) Treatment Network	3,809	4,395	4,499	5,126	5,294	5,388	5,526	5,334
Recycled Water	529	579	752	1,320	1,394	1,243	1,326	1,401
Retail	1,484	1,476	2,075	2,088	2,104	2,122	2,140	2,160
Corporate	5,428	7,775	7,346	7,695	7,920	8,079	8,289	8,422
Unregulated expenses	-		-	-	-	-	-	-
Environmental Contribution	1,339	1,300	1,268	1,268	1,268	1,268	1,268	1,268
Total Expenditure	**23,355**	**27,373**	**27,976**	**32,994**	**36,444**	**40,106**	**45,709**	**52,029**

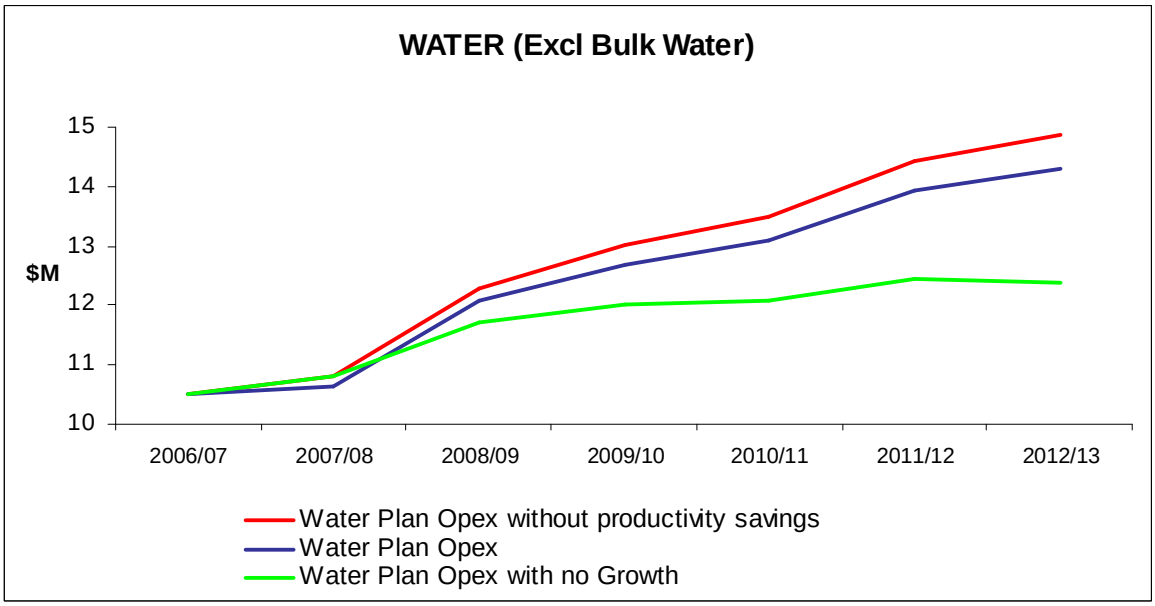
Water expenditure includes bulk water purchases from MW and SRW. It was expected that local reservoirs will have recovered, however with the prolonged drought, the majority of water is still sourced from MW at significant additional costs, whilst still paying SRW fixed charges for little volume. Based on indications from MW of their need to spend considerably more on infrastructure, real bulk water prices are anticipated to increase in real terms by 35.1% for each year of the Plan.[9] This will add approximately $44 million in water purchase costs over the period of the Plan. Also included is the additional cost of new Water Quality regulations and eventual recommencement of air scouring.

The graph below shows how water demand looks over the next regulatory period taking into account strong growth and easing of water restrictions.

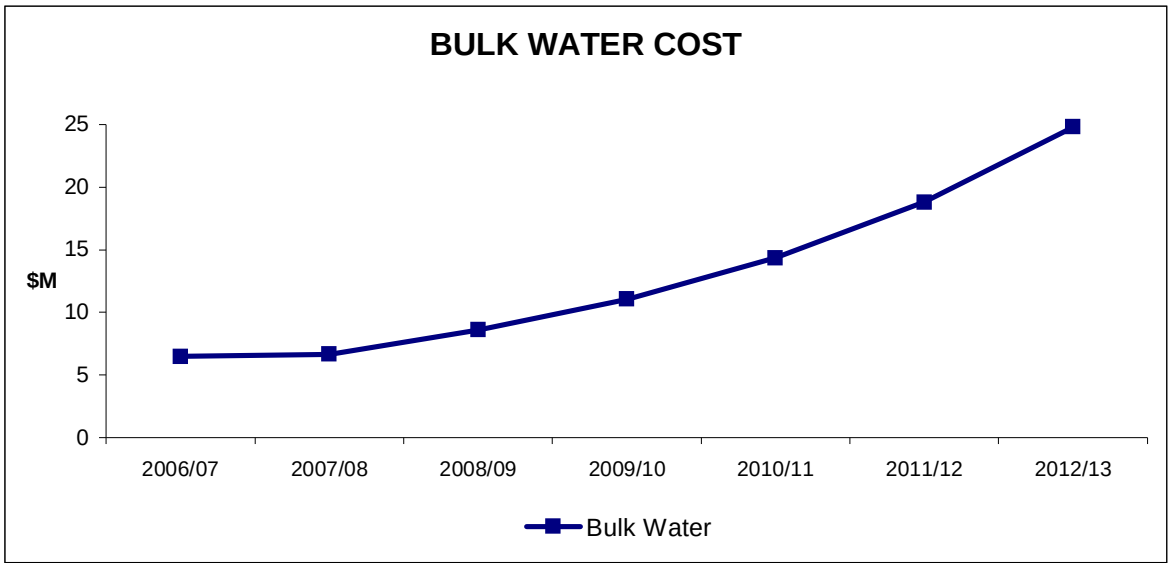
[9] This information was provided by Melbourne Water for the purposes of preparing this Water Plan. It was the best estimate provided at this time and is subject to further change. Any subsequent change will impact on the real price increases to customers contained in this document.



The following graph of water costs, which includes a share of retail and corporate costs, but excludes Bulk Water charges, indicate some increase in expenditure with reference to 2006/07. Progressively over two years, (2007/08-2008/09) additional staffing has been programmed, with remaining increases over time relating to additional water demand due to population growth, and anticipated easing of water restrictions. The graph highlights where expenditure levels would be without the 1.5% productivity savings on controllable costs (see 5.2.4), and also how the population growth affects costs going forward.

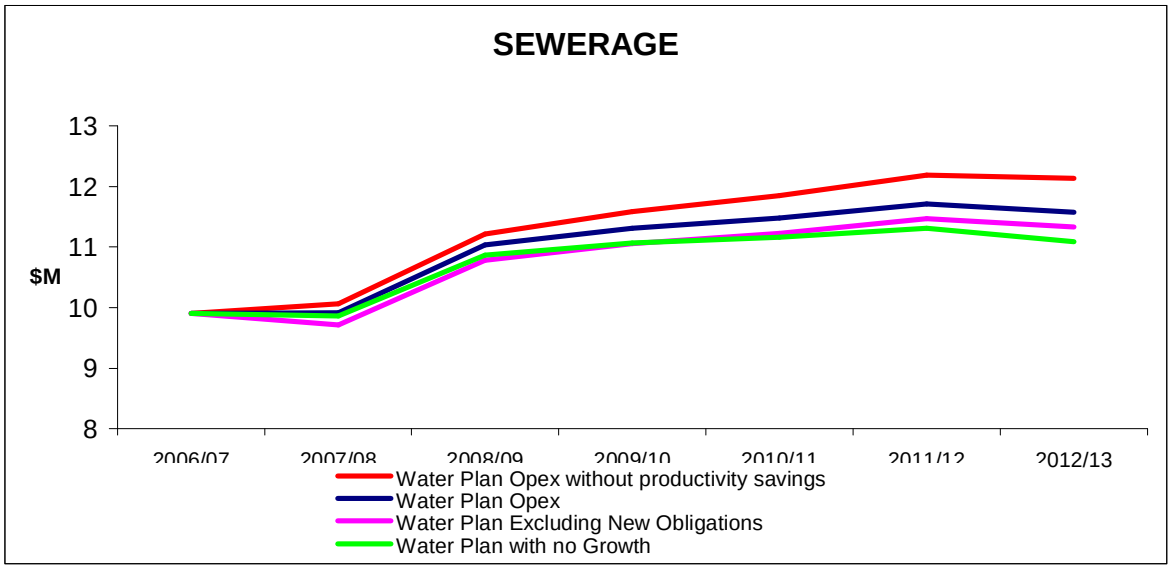


The following graph looks at Bulk Water charges only, with the increase not anticipating any additional demand from Melbourne Water in volumes as there is an assumption growth will be sources from local supplies from Southern Rural Water, which is a fixed charge.



Sewer costs include provision of both collection and treatment of sewage and Trade Waste. Additional costs are incurred during this period in achieving new EPA standards and Biosolids management, as discussed in section 5.2.

The following graph looks at costs going forward against 2006/07 for sewerage, including a share of retail and corporate costs. There is an increase in 2008/09 as additional staff are programmed to start, together with costs for Biosolids management. After the first year of the new regulatory period, costs only marginally increase in real terms.



Recycled Water expenditure is predicted to continue to grow in line with the expansion of this function of the business. Opportunities are being investigated to identify areas of greater utilisation, and to deliver a substitution targets set as part of the WSDS.

Retail costs capture those activities directly associated with customers and revenue collection. With the introduction of water restrictions, additional staff resources were required to take a higher level of customer enquiries and process exemption applications. During the Plan period it is anticipated water restriction levels will reduce, marginally easing the immediate demands on the 'water conservation team'.

Corporate costs include all costs which cannot be directly attributable to any of the above, however, relate to regulated activities.

Western Water does not have any non regulatory expenditure.

The Information Template is provided as Appendix N.

5.2.4 Productivity improvements over the period

In addition to a 1.5% efficiency reduction per annum on controllable costs, Western Water was set additional cost minimisation targets through a dedicated team. Revenue maximisation/cost minimisation has been a key initiative since 2001, involving the investigation of business efficiencies and review of controllable business costs and revenue. It is managed by a multi-disciplined team across the business and has been very successful.

Examples of successful projects include; review of contiguous accounts, meter replacement program, electricity review, telephone review, intranet savings, bulk purchasing, data extracts, SCADA introduction, and unaccounted water.

A summary of past performance is set out below:

Year	Target $'000	Additional revenue/ decreased costs $'000	Productivity Savings $'000	Total as % Operating Costs before depreciation
2001/02	250	306	101	2.3%
2002/03	300	582	85	3.7%
2003/04	300	527	43	2.9%
2004/05	300	405	106	2.2%
2005/06	300	342	196	2.2%
2006/07	300	301	12	1%

Projects that have been continuous for 12 months are considered business as usual (BAU), and are therefore not carried forward into the following years savings. This makes future year's target more difficult, requiring identification of new initiatives.

At the commencement of each financial year, a proportion of the annual target is allocated against each initiative. This ensures progress is monitored during the year and some rectification action can be initiated to ensure the target is reached. The importance of the team is recognised, allowing budget for overtime payments if a project requires additional staff resources.

The Revenue Maximisation Team meets monthly to discuss year to date progress, and report on new initiatives. The Revenue Maximisation initiative forms part of the Enterprise Bargaining Agreement (EBA), and with annual wage increases dependant on achieving Key Performance Indicators (KPI), all employees have a vested interest in the outcome of the team. Progress is reported in the BSC as well as provided to the Staff Consultative Committee on a quarterly basis, and annually to the Audit Committee.

The team in now looking to rotate staff on the committee in order to maintain the interest levels and cultivate new ideas, and will be targeting recently recruited staff. For this Plan an annual $300k target has been set. This is in addition to the expected 1.5% efficiency target on controllable operating expenditure.

5.3 Capital Expenditure

Capital expenditure is a key component of Western Water's revenue requirement. Net capital expenditure is recovered and reflected in prices. All proposed capital expenditure has been subject to extensive review to ensure optimum timing, prudence and efficiency.

Western Water's region is experiencing continued strong growth particularly in Melton. The recent extension of the urban growth boundary particularly to the south of Melton requires significant capital investment. The upgrade of the Melton RWP and the construction of the Melton Outfall Sewer are to service this growth.

Further, the Surbiton Park Class A RWP will deliver recycled water to this new urban development. It is expected that by 2030 the population of Melton will be 115,000.

Provision for sewer, water and recycled water assets to service this growth has been made in this Water Plan.

5.3.1 Overview of Capital Expenditure

Western Water plans to deliver a total of approximately $128.59 million (1/1/07$) of capital projects during the Plan period. This expenditure will be largely to deliver growth outcomes for sewerage assets, followed by growth related water assets and further developing Western Water's recycled water business. The charts below demonstrate the substantial investment in sewerage assets and growth.

Capital Expenditure forecast by Cost Driver - from 1/7/8

[illegible]

Western Water

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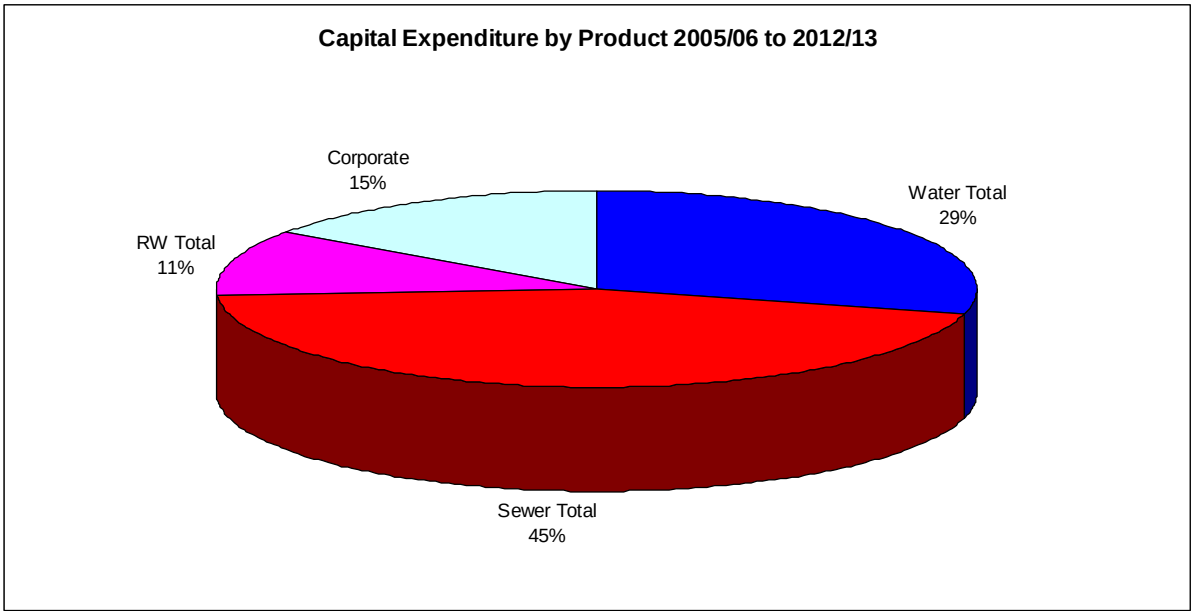
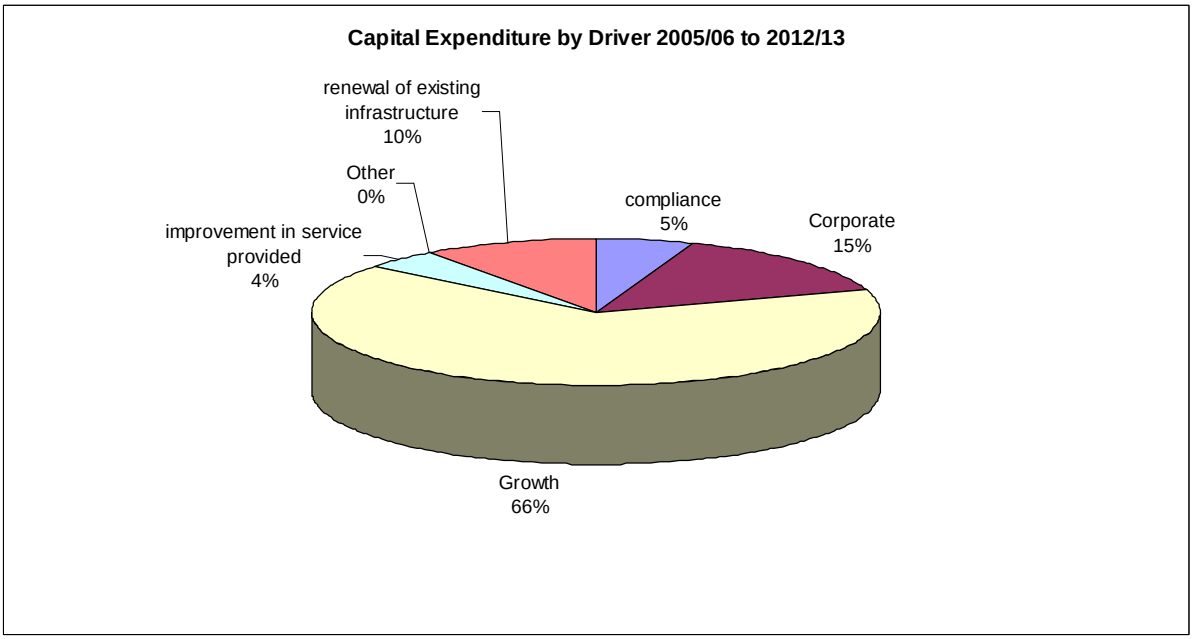
	FIRST REG PERIOD				SECOND REG PERIOD					FUTURE ASSUMPTIONS				
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Capital Expenditure Summary														
Net capital expenditure - renewals					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Net capital expenditure - growth					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Net capital expenditure - improved service					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
Net capital expenditure - compliance					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
Government contributions														
Customer contributions					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
Total prescribed BAU capex					38.15	33.31	24.25	16.92	15.38	-	-	-	-	-
Regulatory Depreciation					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RAB - return on assets					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Gifted Assets		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Proceeds from disposals					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-

Total BAU capital expenditure [illegible]

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Renewal of existing infrastructure														
Total														
Gross capital expenditure					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Government contributions					-	-	-	-	-	-	-	-	-	-
Customer contributions					-	-	-	-	-	-	-	-	-	-
Net capital expenditure					7.66	7.03	6.45	5.30	6.55	-	-	-	-	-
Regulatory Depreciation					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Return on assets					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Growth														
Total														
Gross capital expenditure					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Government contributions					-	-	-	-	-	-	-	-	-	-
Customer contributions					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Net capital expenditure					26.04	16.74	12.34	7.88	2.38					
Regulatory Depreciation					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Return on assets					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Improvement in service														
Total														
Gross capital expenditure					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Government contributions					-	-	-	-	-	-	-	-	-	-
Customer contributions					-	-	-	-	-	-	-	-	-	-
Net capital expenditure					0.18	1.27	0.58	0.60	1.52	-	-	-	-	-
Regulatory Depreciation					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Return on assets					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Compliance														
Total														
Gross capital expenditure					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
Government contributions														
Customer contributions														
Net capital expenditure					0.67	1.62	0.60	0.41	0.43	-	-	-	-	-
Regulatory Depreciation					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Return on assets					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Gifted Assets	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Asset disposals														
Proceeds from disposals					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
Written down value of asset disposals					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-





The Capital expenditure for the period of 2008/09 to 2012/13 is an approximate total of $128.59 million split accordingly in the table below (1/1/07$):

Year	2008/09 $'000	2009/10 $'000	2010/11 $'000	2011/12 $'000	2012/13 $'000	Total $'000
Expenditure	38,152	33,380	24.253	16,921	15,884	**128,590**

The capital expenditure is consistent with the Water Supply Demand Strategy prepared by the business.

The top ten projects planned for the Water Plan, with associated drivers, delivery expectations and costs are identified below.

Item	Project	Town	Service	Driver	Outcomes	Delivery Date	Cost ($M)
1	Merrimu - New 10 ML Tank	Melton	Water	Growth	To improve reliability of the Melton (HLZ) and Bacchus Marsh Water Supply Systems with additional capacity.	2010/2011	3.0
2	Northern Tank 4 ML	Sunbury	Water	Growth	Construction of a 4ML storage to service the northern part of the Sunbury water supply system and to supplement peak day demand.	2011/2012	2.5
3	Bacchus Marsh RWP - Aeration of primary lagoon	Bacchus Marsh	Sewer	Growth	The current (1990 built) treatment plant is near capacity and requires augmentation to accommodate future growth in Bacchus Marsh.	2011/2012	2.5
4	Recycled Water Scheme (Melton)	Melton	Recycled Water	Growth	To provide recycled water to Melton South. The recently extended growth boundary of Melton provides and opportunity to provide Class A recycled water. Delivery will be largely dependent on rate of development.	2012/13 - beyond	5.3
5	Melton RWP Secondary Sedimentation Tanks	Melton	Sewer	Growth	New Secondary Sedimentation works required due to increase in flows due to growth	2009/10	8.6
6	Melton RWP Aeration Works	Melton	Sewer	Growth	New aeration tanks required due to increase in flows due to growth	2009/10	4.6
7	Melton RWP Digestion Works	Melton	Sewer	Growth	New digestion works required due to increase in flows due to growth	2009/10	4.6
8	Melton Outfall Sewer	Melton	Sewer	Growth	Gravity outfall sewer to be constructed to replace rising main to cater for growth	2009/10	8.5
9	Woodend RWP Upgrade	Wooden d	Sewer	Complia nce	Upgrade the RWP to meet EPA water quality requirements. Changing from lagoon base treatment to activated sludge	2009/10	5.2
10	Melton South Sewer (UGB)	Melton	Sewer	Growth	To provide sewerage services to Melton South. Delivery will be largely dependent on rate of development.	2012/13 - beyond	2.9

Unlike the metropolitan water retailers Western Water must manage a complete range of water assets from the 'wholesale' area to 'retail' delivery. Western Water also purchases water from other third party suppliers MW and SRW. This requirement impacts on the quality and flexibility required in the assets created to meet the needs of our customers.

Western Water's methods to achieve optimal asset management goals are still in their infancy, however considerable progress has been made and is planned in the coming five year regulatory period.

Data capture has been a focus for this Plan. Key aspects include upgrade of the GIS system, improved accuracy in capture of service events such as bursts and blockages, a widening of risk based planning approach across the company, ongoing and significant IT systems development, commissioning of further stages of our SCADA system and ongoing asset condition assessment and criticality.

5.3.2 Key drivers of capital expenditure

The key driver for capital expenditure is to service the sustained growth in this region particularly of sewerage assets. The past 10 years of drought has strongly focussed on water supply security projects including the Melbourne to Sunbury Pipeline, the Melbourne to Melton/Bacchus Marsh Pipeline and the Macedon Ranges Water Supply Pipeline. The total investment of these projects is approximately $25 million. Sewerage asset upgrades are now the key focus looking forward over the next five years.

Key drivers:

- Central Region Sustainable Water Strategy and Water Supply Demand Strategy – Demand Forecasts
- Regional Action Plan
- Growth (Melbourne 2030 – Extension of Urban Growth Boundary – Melton South)
- Asset Management Strategy (Asset Renewals)
- Compliance (EPA, DHS etc) - Regulatory Outcomes
- Regulatory and customer service obligations established for the Water Plan 2008 in consultation with DHS, DSE, EPA and MWC.

5.3.3 Prudent and efficient capital expenditure

Western Water maintains a small professional workforce, which allows in-house input and control of the critical asset decisions that must be made associated with asset creation and capital programs. Detailed design is out-sourced to the consulting industry, and project management is shared between in-house engineers and the consultants.

Consultants and contractors are procured in accordance with Tender and Contract Policy and threshold approval requirements. Consultants are assessed using industry guidelines and benchmark rates, supplies and service tenders are assessed using comparative market rates.

These processes ensure that supplies and services are obtained at the lowest price consistent with satisfactory quality and delivery.

A Capital Works Committee of the Board is responsible for reviewing and developing recommendations to the Board to ensure good governance of Western Water's Capital Works Program. The Committee provides strategic input into the development of the Capital Works Plan and reviews the progress of the Plan including any over expenditures if they occur.

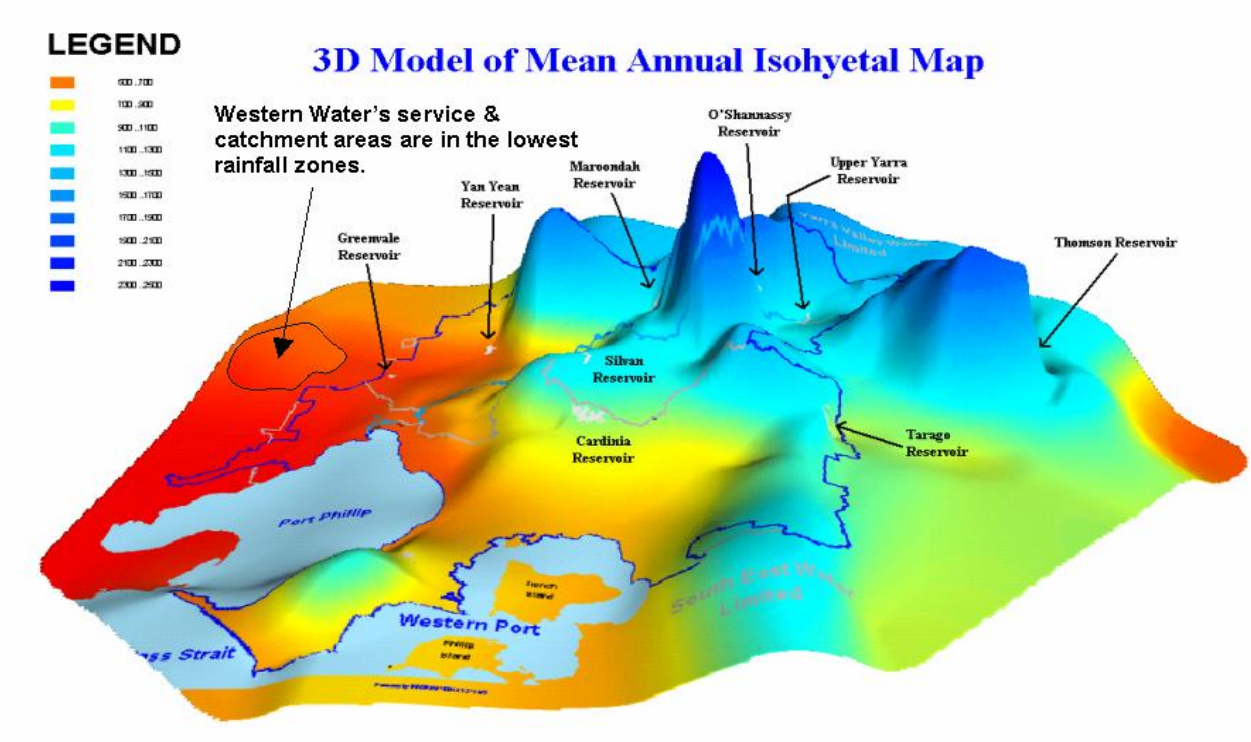
Future Demand Requirements and Development Expenditure

Creation of assets is a key aspect of residential development. Project Managers are responsible for the management of conditions required of developers who construct extensions to the water and sewerage systems. Project Managers use industry standard guidelines developed by Water Services Association of Australia (WSAA) with additional Western Water requirements to manage and control assets created to meet local needs.
In order to optimise planning for growth, Western Water uses specific catchment models for its sewerage systems and network models for its water supply systems. These hydraulic modelling systems are calibrated to current system performance and also include growth data and knowledge regarding future development and land availability.

Master plans, that outline optimal growth servicing strategies for pump stations, trunk water and sewer mains and their upsizing, are then developed.

Detailed records are kept of water supply volumes remaining in storages, along with consumption rates from each town. These records used by internal and external parties to forecast future trends.

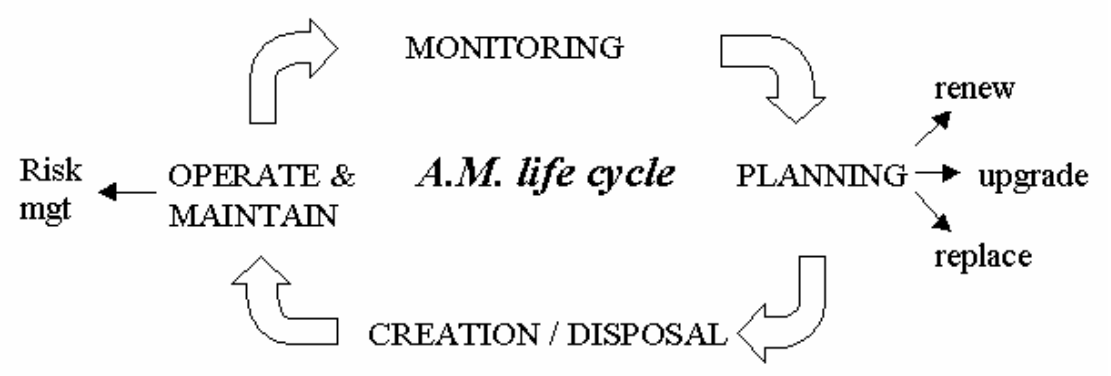
To demonstrate the extreme conditions faced in Western Water's areas to the North and West of Melbourne, the following 3D rainfall diagram shows the limited natural water supply resource in our area compared with the good catchments to the north east of Melbourne. Western Water's Yarra Bulk Entitlement has been essential to meet growth in our region.



Approaches to Assessing Capital Expenditure Requirements

Capital investment decisions consider the whole of life view of the assets and systems that are created. The Asset Management Life Cycle includes both capital and operational expenditure. In each aspect of the cycle, key capital investments ensure delivery of appropriate assets, capable of providing water, sewer and recycled water services to meet the needs of a rapidly growing customer base at the lowest total life cycle cost.

Our approach to meeting asset needs of the business from creation through operation, maintaining, monitoring, planning and then renewal is best expressed as the cycle shown in the diagram below.



Assets are managed to provide an ongoing service to our customers, delivered at a specified service standard at an optimised cost.

The condition of these assets and the standard at which they are delivered are measured and monitored to enable renewal, upgrade or replacement as needed.

At 31st January 2007 the asset base has a current written down value of $358 million. Key components of our assets include:

- Headworks & Tailworks
- Dams & Basins
- Water Treatment Plants
- Recycled Water Plants
- Chlorinators
- Bores
- Reticulation
- Sewer Mains
- Water Mains
- Sewer Pumping Stations
- Water Pumping Stations
- Tanks
- Recycled Water Mains

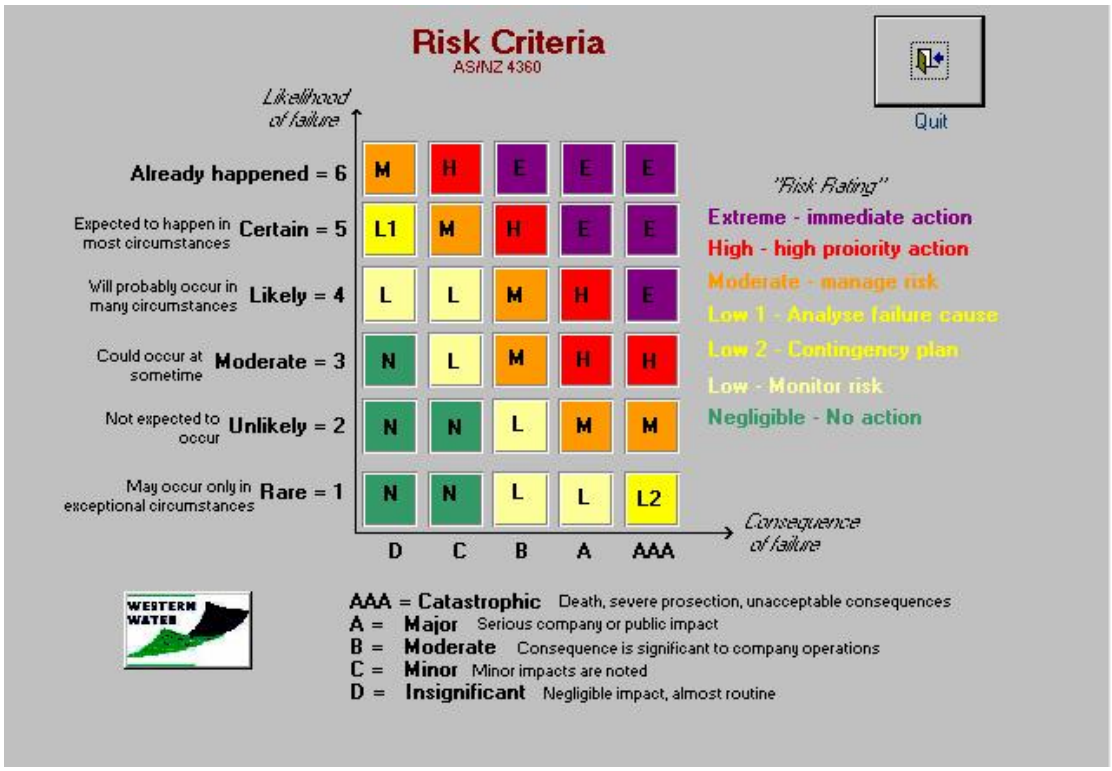
The asset base is relatively young and serves several towns of relatively small yet rapidly growing populations. Managing the creation step in the asset management cycle over the past five years has required a significant focus on two key factors:

- Growth
- Drought

The impact of these factors is expected to continue for at least 3 to 5 years into the future and will present an ongoing need for pro-active and well planned investment programs.

A Board generated Risk Criteria is used to establish the risk ranking for every project, and verify the appropriate investment, by giving attention to risk mitigation and other triple bottom line benefits for each project.

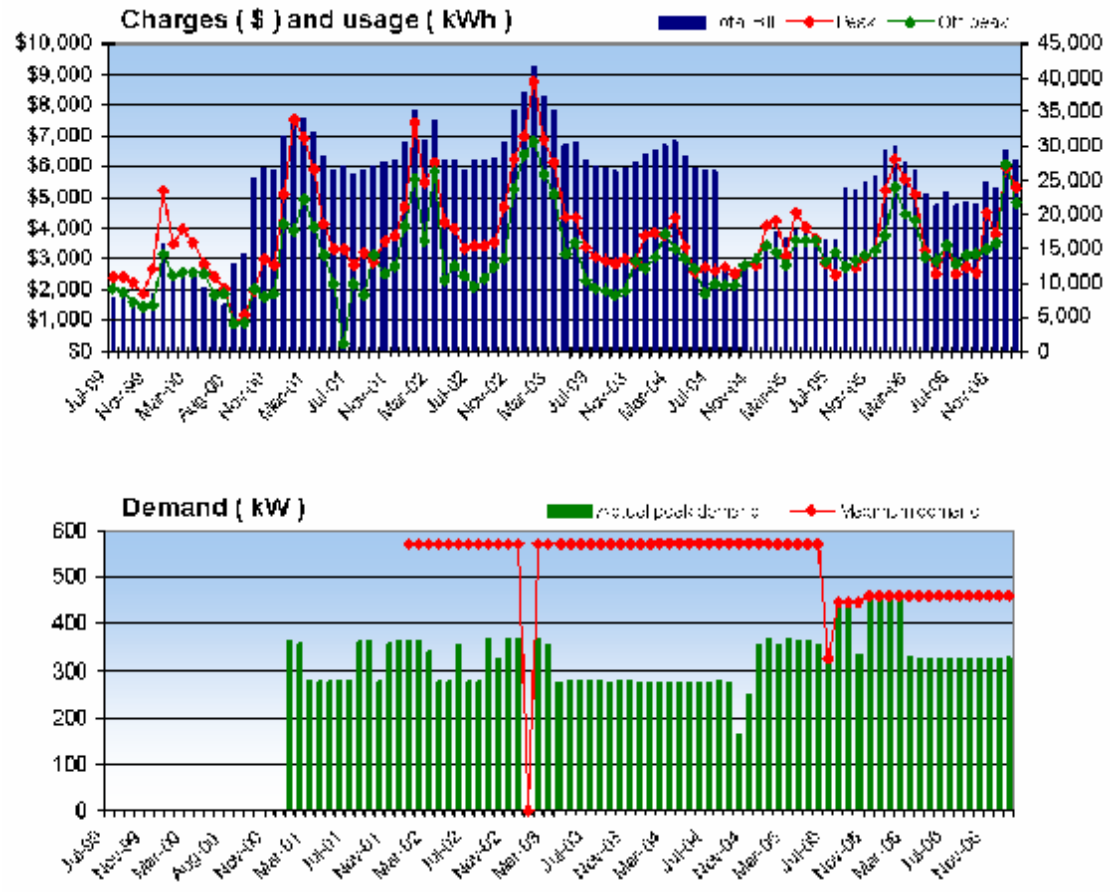
The Risk Management standard AS/NZ4360 is the basis for risk management at Western Water and an extract from our risk register is shown below:



The use of this classification tool enables focus on the highest risk assets and projects with all capital and operational expenditure. This approach is used in many areas of the business including: auditing, incident escalation, OH&S management for example.

Once projects are risk ranked as valid to be on the capital program, they are assessed via option analysis and whole life costing review, including non-asset options as part of a Triple Bottom Line assessment.

Risk of failure is only one dimension of a project delivery decision. The Assetlife system allows capture of all costs against the asset responsible for that cost. This in turn allows individual asset efficiency analysis and trending, another key tool in decision making.



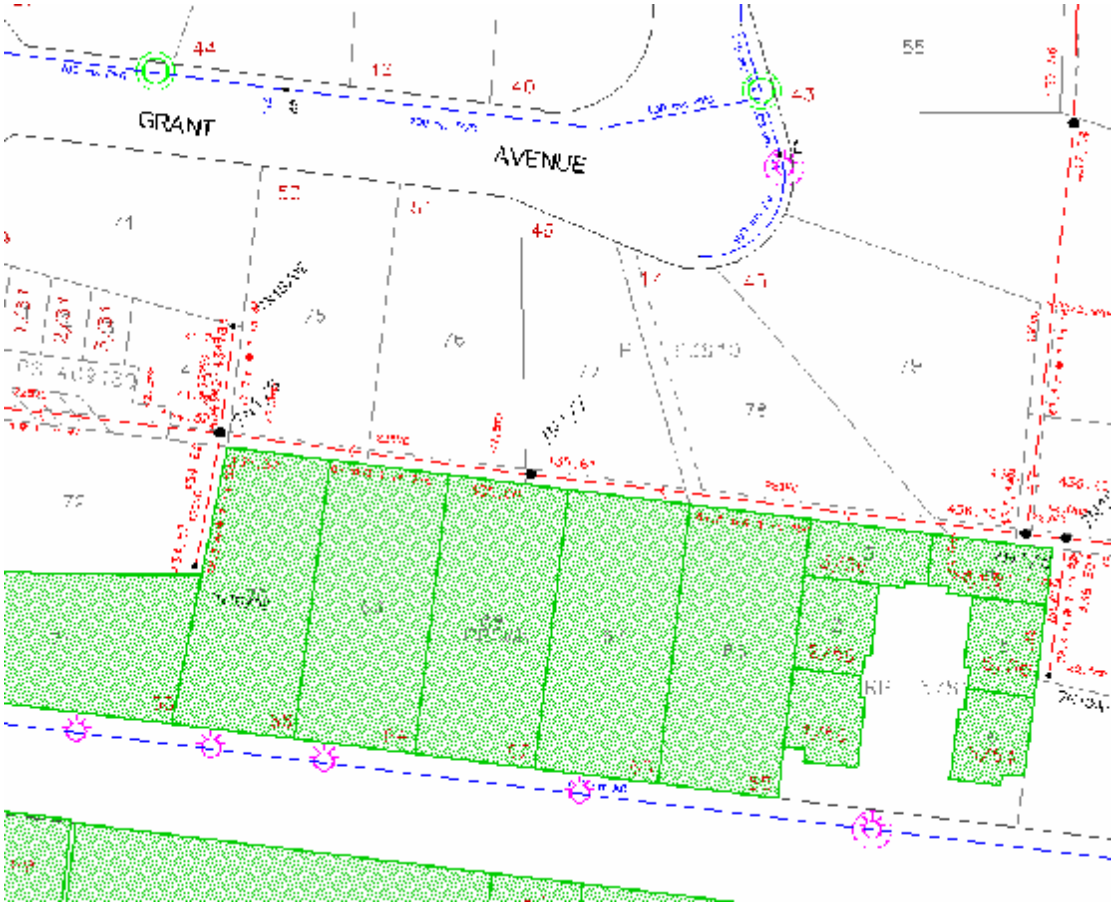
The charts above show examples of power usage monitoring at Western Water. These trends are kept for all powered sites accounting for over $1 million in operational expenditure. This chart above for Aitken Street Water Pumping Station demonstrates tracking of peak and off-peak usage and demand, thereby assisting in decisions to make process and demand modifications. For example, as evidenced over the past seven years, during the worst periods of drought, pumping costs are greatly affected if local water resources are available to service customers by gravity supply or if water from the Yarra BE is required.

Other considerations for capital project evaluation that are part of the final determination of expenditure are environmental and social impacts. These Triple Bottom Line elements are equally important as risk and operational costs and are given due attention in the capital planning process by way of environmental checklists and community consultation.

One example of note is the three maintenance depots operated by Western Water that are in close proximity to our customers to ensure quality and promptness of response to customer service requests.

Replacement and Renewal Expenditure

Asset replacement is largely based on asset performance, and the key measures of performance are known as its Key Performance Indicators (KPI). Measures, targets and initiatives associated with these KPI form the basis of BSC report on the quality and standard of assets, systems, resources and services. This approach has also allowed appropriate assessment to be applied to asset renewal decisions. For example: the water main replacement program is based around an industry measure of no more that five water interruptions per customer per year. KPI monitoring systems and annual review for the following year's program uses this along with staff knowledge of asset performance, to ensure that optimal renewals are planned. The extract from our GIS system below shows capture of asset failures which are classified to assist asset management decision making. Purple circles are actual mains failures which drive renewal programs, while green circles are locations of fitting failures only. Double circles indicate that the event also caused customer interruptions shaded property capability allows exact determination of interruption impacts.



To ensure optimal decisions are made in all areas of asset renewal, replacement and upgrade, Western Water's Asset Management Information systems are continuously upgraded, improved and interlinked.

Extension of an assets life is desirable for greatest return, as is optimal asset utilisation. In determining the remaining asset life and indeed the appropriate and optimal replacement time, Western Water considers several factors.

They are:

- Asset structural condition
- Asset service condition
- Asset age
- Risk associated with the asset and/or its failure (ie: criticality)
- Growth and service demand predictions
- Compatibility with other assets and systems
- Cost (whole life).

In order to achieve this a set of standard ratings and gradings are used as outlined below:

STRUCTURAL CONDITION

	Rating	Description	% Life Remaining
Usually depends on age	0	Unknown	Unknown
	1	New or as new	81-100%
	2	In good order	51-80%
	3	Fair	21-50%
	4	Poor (plan for rehabilitation)	6-20%
	5	About to fail (rehabilitate ASAP)	1-5%
	6	Failed (incident, rehabilitate now)	0%

SERVICE CONDITION

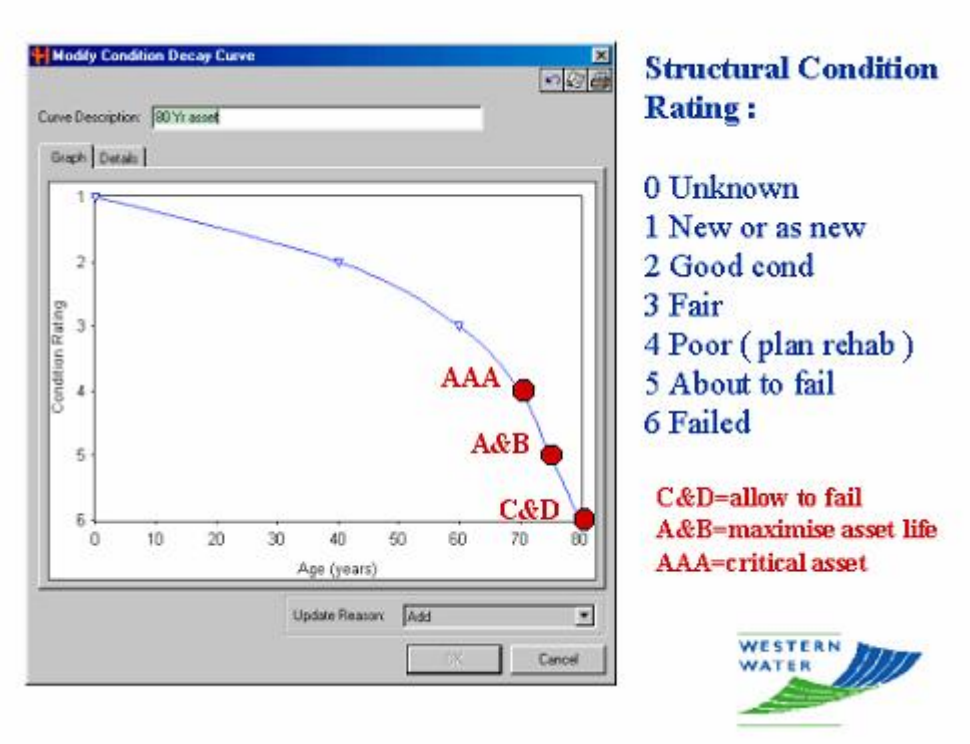
	Rating	Description	%meeting service requirements
an depend on design, demand or maintenance	0	Unknown	Unknown
	1	Usually meets all needs	96-100%
	2	Meets most needs	91-95%
	3	Falls short at times, monitor	71-90%
	4	Struggles to meet requirements	51-70%
	5	Significantly below requirements	1-50%
	6	Failed/totally inadequate	0%

CRITICALITY RATING

Rating		Description
AAA	Catastrophic	Serious or fatal injury, widespread community illness, unacceptable consequences, class action against WW, petition to parliament, major media campaign, long term supply failure, critical asset loss due to fire, directors prosecuted, continuing uncontained spill, loss >$20 million.
A	Major	Serious or multiple injury, major loss of services, recovery is complex, > 200 customers affected, > 24 hour interruption, sustained media criticism, major industrial dispute, uncontained spills <48 hours, widespread complaints, boil water notices issued, breach regulatory requirements, potential EPA prosecution, loss of $500k-$20 million
B	Moderate	Medical treatment required, external assistance needed, local press campaign, , industrial action by staff, interrupting < 200 properties, interruption for 5-24 hours, single chemical /sewer spill, loss of $150k - $500k
C	Minor	No serious injuries, only a few complaints, interruption for 1-5 hours, <50 customers interrupted, loss of $50k - $150k
D	Insignificant	No injuries, no criticism as a result, impacts are trivial, low financial loss, routine process to recover, interruption < 1 hour loss of < $50k

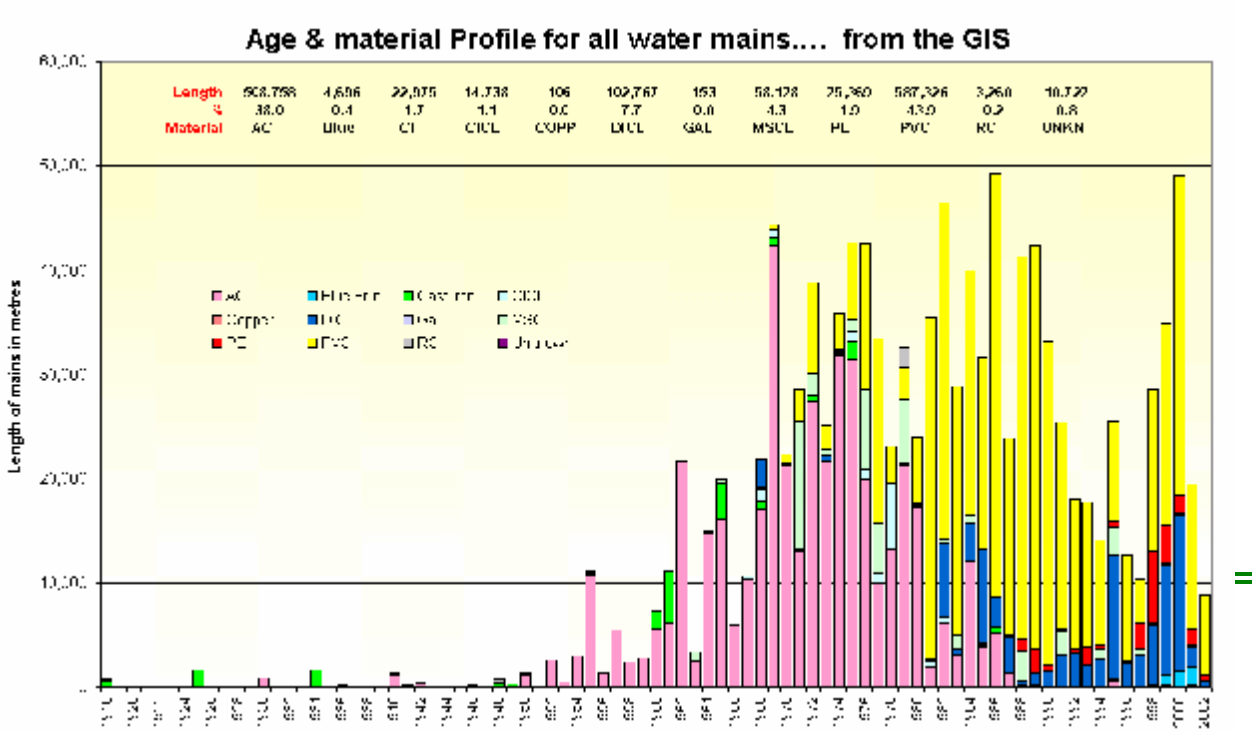
By using these rating methods, Western Water obtains expert feedback on asset performance, which over time indicates trends showing reduced asset life or recovered asset life after rehabilitation.

This diagram below shows the asset condition impact on asset age and remaining life which is applied to all Western Water's assets.



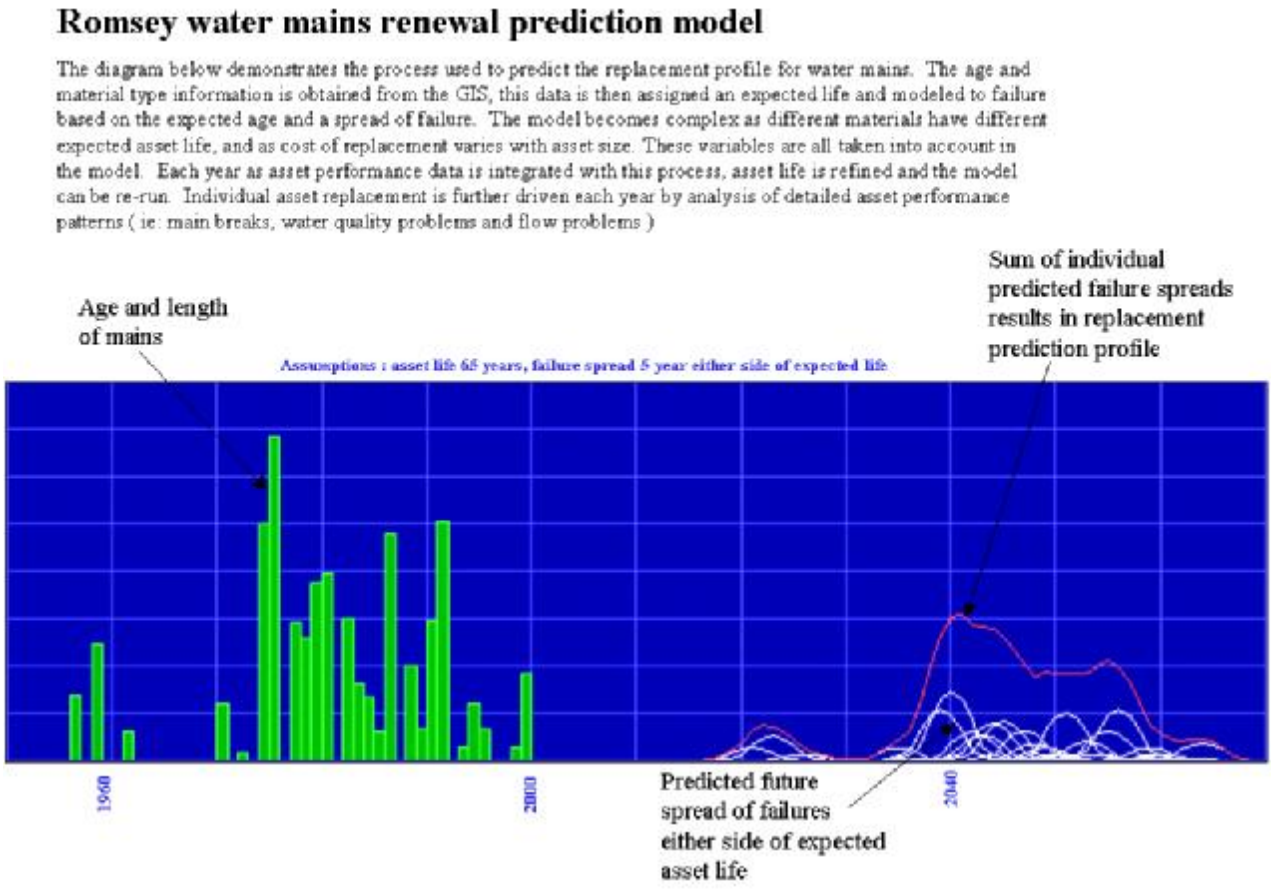
The other key method used to assess renewal of linear assets such as pipelines are demonstrated with the following diagrams:

The age and material profile of our water mains, allows the application of expected asset life to provide an estimated renewal profile by modelling a failure spread based on year of asset construction.



The renewal profile is then established for the long term capital plan, and is reviewed annually to ensure that the predicted program is reflecting actual asset performance, ie: that five or more failures are occurring in the linear assets that are programmed for replacement. If they are not, then extension of asset life is possible, and model refinements can occur.

The chart below clearly demonstrates the concept.



Compliance Expenditure

Hydraulic models for water and sewerage systems are used to assess asset performance and service level, to determine any compliance requirements in the reticulation system.

For headworks and tailworks assets, Western Water monitors closely the following key elements;

- its compliance, from the structural stability of our dams to meet ANCOLD requirements,
- the effluent monitoring of our RWP's to meet EPA licence requirements, and
- the water quality monitoring at our water treatment plants and reticulation system to meet DHS requirements.

Key compliance related activities and programs are outlined in Sections 4.2.

Total Capital Expenditure Requirements

A capital project evaluation summary is developed for each item on the capital program. Western Water's capital evaluation process uses risk assessment and TBL principles to ensure all capital expenditure proposals are fully justified and all options are considered before capital investments are made.

While the capital plan has been prepared based on the best available knowledge at this time, the flexibility to interchange projects will be considered in the context of the overall capital program given uncertainties including drought and growth.

The average annual capital expenditure for the first regulatory period is expected to be $23.4 million. The proposed average Capital Expenditure for the Water Plan is $24.6 million per annum.

Western Water has in the past concentrated on water supply security and water quality improvement for the region. Approximately $25 million capital expenditure has been spent on connection to Melbourne Water supplies and further investment in interconnections within the region. The focus will now shift in the capital program to upgrading sewerage assets to service growth and to continue to meet EPA requirements.

As requested by ESC Western Water has provided capital expenditure projections for 30 years. Given the timeframe for the information request and the difficulty in determining long term capital programs, accuracy beyond 20 years is limited.

5.4 Financing Capital Expenditure

Applying the provisions of the WIRO, Western Water may recover the cost of financing existing and new investments through earning a return *on* the value of the RAB plus a return *of* the value of the RAB. The following section identifies the assumptions Western Water has applied to this process.

5.4.1 Updating the regulatory asset base

Introduction

The regulatory asset base at 1st July 2004 was prepared by DSE in an independent process prior to the regulatory period to establish a sustainable revenue stream for the business. The opening Regulatory Asset Value (RAV) for Western Water at this date was $85 million.

The forecast regulatory asset base as at the 30th June 2008 is as follows (in 1st January 2007 dollars):

In January 2007 $	Actual 2004/05 $'000	Actual 2005/06 $'000	Actual 2006/07 $'000	Forecast 2007/08 $'000
RAB at 1 July 2004	**91,377**			
Opening RAB at 1 July		**95,187**	**110,741**	**122,354**
Add Gross Capital Expenditure	21,987	25,202	22,469	34,459
Less Government Contributions			3,500	
Less Customer Contributions	11,736	2,826	1,584	1,672
Less Disposals (cash value)	793	1,698	783	932
Less Regulatory depreciation	5,648	5,123	4,990	5,462
Closing RAB at 30th June	**95,187**	**110,741**	**122,354**	**148,746**

In determining the value of the Regulatory Asset Base proposed for this Plan it is necessary to establish the basis for the key components:

Capital Expenditure

Capital expenditure is covered in Section 5.3. All proposed capital expenditure has been subject to extensive review to ensure optimum timing, prudence and efficiency.

Government and Customer Contributions

No Government contributions are proposed for the Water Plan period. All Customer Contributions are included based on assumptions covered in section 6.4.5 and are based on $1,100 per lot per service.

Disposals

All disposals are assumed to be at arms length and are included at their cash value.

Regulatory Depreciation

Western Water revalued some of its assets for accounting purposes at 31st December 2004 to concur with the Board approved five year valuation policy. This exercise is separate to the regulatory asset values. Land and Buildings will be revalued as at 30th June 2007.

An average straight line depreciation rate has been adopted for all assets based on effective average lives of 2.07% per annum. This is in line with the average accounting life of assets of 48 years. This reflects the long term nature of existing assets and improvements to materials used in newly constructed assets.

5.4.2 Western Water's RAB roll forward

The initial Regulatory Asset Value (RAV) was determined by the Minister for Water, Environment and Climate Change at $85 million. The RAV has been rolled forward by adding additions, less disposals, regulatory depreciation and capital contributions from 1st July 2004 to establish the opening balance at 1st July 2008. This is then converted into 1st January 2007 dollars.

As the actual movements for 2006/07 through to 2008/09 are not yet known efficient forecast figures have been used.

The proposed RAB going forward into the second regulatory period is as follows:

In January 2007 $	Plan 2008/09 $'000	Plan 2009/10 $'000	Plan 2010/11 $'000	Plan 2011/12 $'000	Plan 2012/13 $'000
Opening RAB at 1st July (1/1/07 $)	**148,746**	**179,136**	**203,953**	**219.011**	**226,346**
Add Gross Capital Expenditure	38,152	33,380	24,253	16,921	15,884
Less Government Contributions	-	-	-	-	-
Less Customer Contributions	3,603	3,728	3,833	3,875	4,013
Less Disposals (cash)	773	773	773	772	773
Less Regulated depreciation	3,387	4,062	4,588	4,939	5,202
Closing RAB at 30th June	**179,136**	**203,953**	**219,011**	**226,346**	**232,242**

Summary

The opening RAB for this Water Plan is derived from the regulatory asset value determined for 1st July 2004 rolled forward to reflect actual and forecast net regulatory movements in assets.

5.4.3 Weighted average cost of capital

Introduction

Western Water has not sought expert advice on the factors that make up the Weighted Average Cost of Capital (WACC), and are instead relying on the water industry specific rate proposed by the ESC, which is still yet to be released.

The current ESC recommended WACC used is 5.1% real after tax.

Approach

Western Water has modelled the following WACC in accordance with the ESC financial template:

Parameter	Suggested WACC
Real risk free rate	2.61%
Equity Beta	75%
Market Risk Premium	6.0%
Debt Margin	1.11%
Financing structure	60%
Forecast Inflation	3.15%
Franking credit value	50%
Post Tax Real WACC	**5.1%**

5.4.4 Renewals Annuity

The renewals annuity approach for financing the renewal and rehabilitation of existing assets does not apply to Western Water.

5.5 Treatment of Taxation

Western Water is taxed under the National Tax Equivalent Regime (NTER). Due to strong growth in developer income over recent years, Western Water is currently the only regional urban water business required to make actual tax payments. During 2004/05 Western Water utilised all its tax losses and was required to pay $1.53 million in income tax. The following year 2005/06 resulted in a further $1.5 million being paid. Due to the impact of water restrictions on revenue, it is forecast that no tax instalments will be payable for 2006/07 results. As part of the building block approach tax expense has been calculated and is included in the Financial Template (Appendix N). Estimates of actual tax instalments payable going forward have been calculated in the table below:

	2008/09	2009/10	2010/11	2011/12	2012/13
Tax Instalments Payable $'000	95	,1,626	2,577	3,130	4,142

Section 6

Demand

Section 6 Demand

6.1 Overview of demand forecasts

As Western Water uses the Price-Cap form of price control, the rigor behind demand forecasts is extremely important to reduce pricing volatility on customers.

This section of the Plan addresses the key aspect of demand for services. It is a key driver for the cost of operating the business, and vital in determination of business income.

The Demand Study prepared for the WSDS, (summary attached as Appendix K), includes detailed analysis of the supply and demand drivers on the business in a period of focussed conservation effort.

Growth forecasting and demand

Post annual growth in residential assessments has been as high as 4-5% in some areas. Under the State Government's metropolitan growth strategy Melbourne 2030, it is anticipated that over the next 20 years more than 200,000 residential properties will be built in the Western sector of Melbourne.

While Western Water has a relatively small commercial/industrial customer base, the State Government's vision for the region sees a significant increase in service industries, tourism and agribusiness. As a consequence of the region being close to Melbourne with good transport links, residential growth will continue to be a major cost driver for the business.

In summary, growth drivers in our regions include:

- proximity to the CBD
- young families attracted to the area
- medium cost of goods and services including housing
- road, freeway, and public transport systems
- urban development program support.

An important aspect of both the CRSWS and the WSDS was to determine realistic current population estimates and provide reasonable growth forecasts. The detail of this work is found in two reports namely:
(i) The WSDS 20 Year Demand Forecast – May 2006
(ii) The WSDS – February 2007 (summary provided as Appendix K).

The outcomes of the first report (i) have been included in the second (ii). Importantly, the basis of determination of population for Western Water is tied to an earlier study used for the first regulatory period and has been consistently used in the 50-year planning effort associated with the CRSWS and the WSDS.

The Western Water region includes some of the highest growth areas in the State, notably Melton. For planning purposes and with DSE support, two population forecast trends were used to show the sensitivity of growth on potential programs, timing and expenditure needed to provide water services for customers. The two growth rates form a forecast 'band' rather than a single prediction. This is considered a more realistic representation of growth expectation and is compatible with the adaptive planning approach and seven-year water supply buffer used in the industry under the CRSWS and WSDS planning frameworks.

The two growth rates are:

- Victoria in Future (VIF) 2004 forecast.
- HIGH growth forecast (based on recent actual trends in company records, along with the other methods outlined in the Water Plan 2005-2008).

The Western Water-derived population figures were determined from individual water supply systems and, hence, have individual growth rates per system. The June 2005 population estimate in the first regulatory period was audited in the second ESC audit and has been used as the starting or base population.

Appendix O provides further details and relevant extracts to support growth rates used for this Plan.

Figure 1: Town Population– using High Growth forecasts

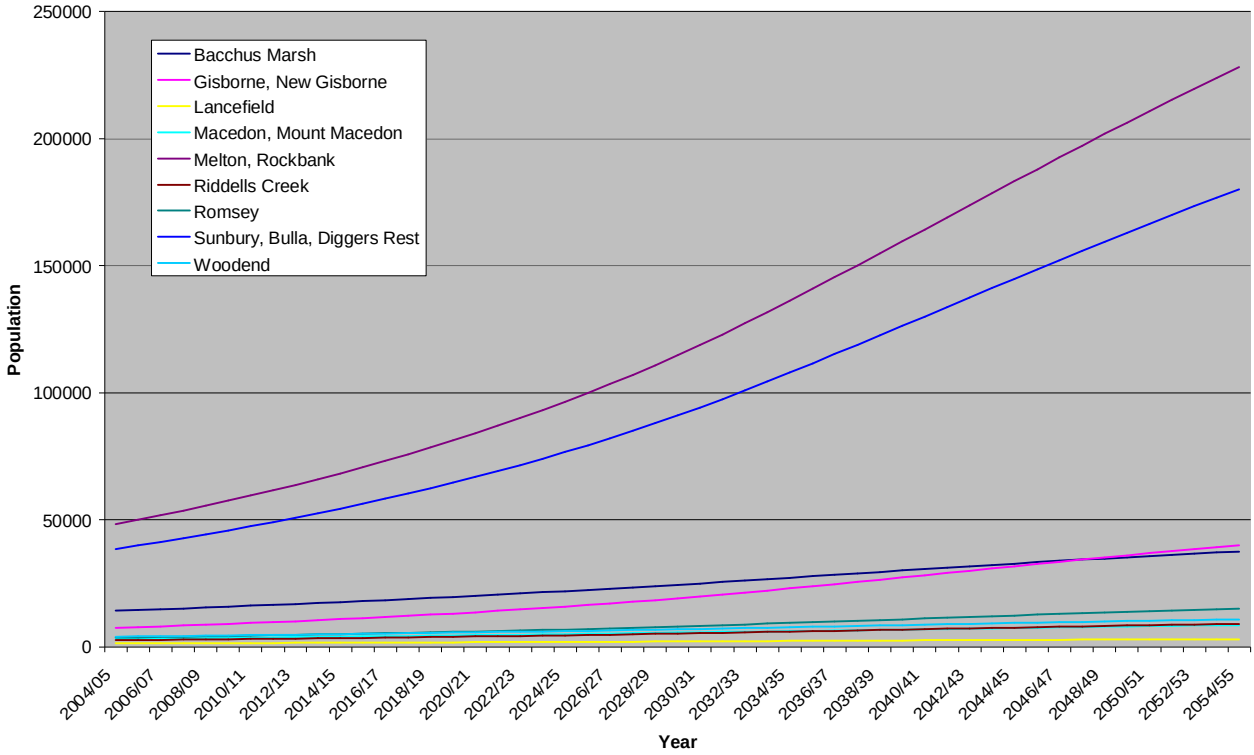


Figure 2: Town Population – using VIF forecasts

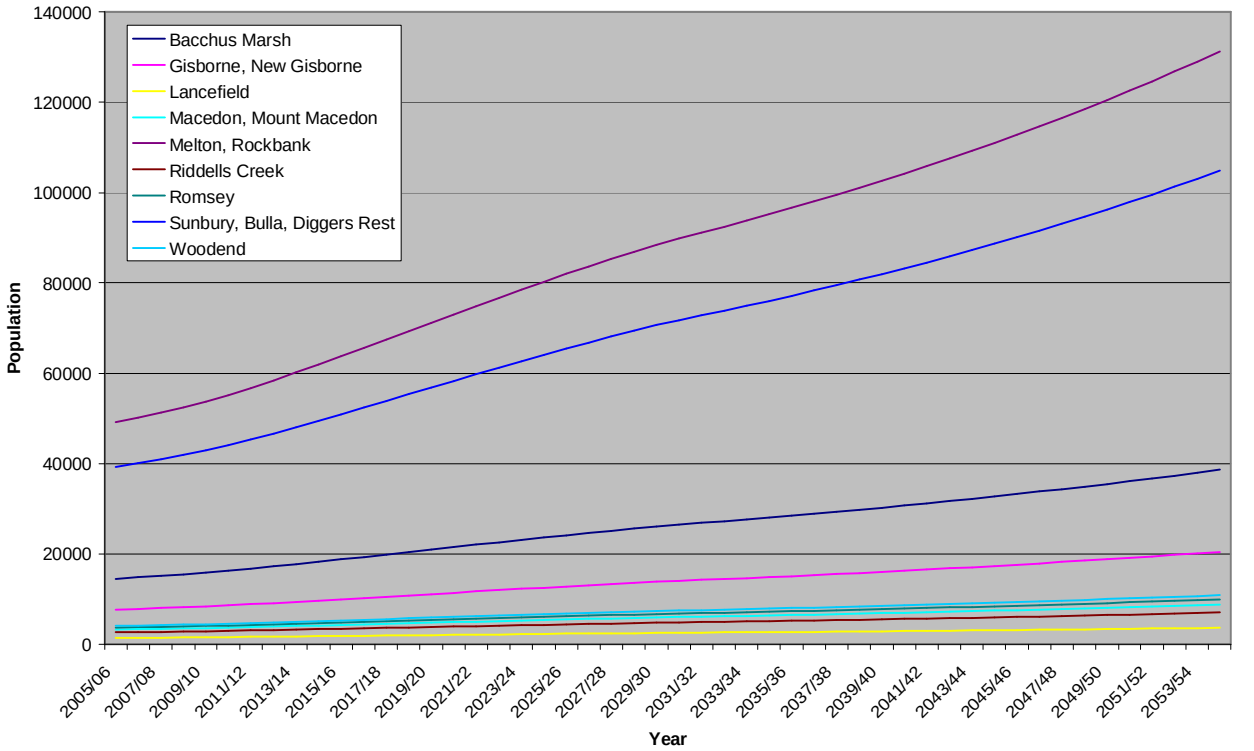


Table 1: Town Population – using High growth forecast

Scenario	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Bacchus Marsh	14551	16213	18065	20129	22428	24990	27805	30610	33293	35776	37565
Gisborne, New Gisborne	7825	9428	11359	13686	16489	19867	23877	28181	32579	36889	40137
Lancefield	1374	1504	1646	1802	1973	2159	2360	2558	2743	2913	3034
Macedon, Mt Macedon	3310	3693	4120	4598	5130	5724	6377	7029	7654	8232	8649
Melton, Rockbank	50058	59503	70731	84077	99941	118798	140890	164298	187948	210893	228048
Riddells Creek	2667	3069	3532	4065	4678	5383	6183	7006	7814	8580	9143
Romsey	3775	4423	5182	6072	7115	8336	9747	11222	12694	14107	15155
Sunbury, Bulla, Diggers Rest	39976	47456	56335	66876	79389	94244	111623	130015	148575	166565	180006
Woodend	4090	4573	5113	5718	6393	7148	7981	8814	9613	10354	10889
TOTAL	127625	149862	176084	207021	243535	286650	336845	389732	442913	494310	532626

Table 2: Town Population – using VIF forecasts

Scenario	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Bacchus Marsh	14474	16217	18780	21484	24142	26447	28439	30682	33218	36090	39337
Gisborne, New Gisborne	7662	8585	9942	11374	12781	14001	15056	16243	17586	19106	20825
Lancefield	1372	1537	1780	2036	2288	2507	2696	2908	3149	3421	3729
Macedon, Mt Macedon	3291	3688	4270	4885	5490	6014	6467	6977	7553	8206	8945
Melton, Rockbank	49152	55072	63775	72958	81984	89813	96577	104193	112807	122560	133587
Riddells Creek	2636	2953	3420	3912	4396	4816	5178	5587	6049	6572	7163
Romsey	3717	4165	4823	5517	6200	6792	7303	7879	8531	9268	10102
Sunbury, Bulla, Diggers Rest	39263	43992	50944	58279	65489	71743	77146	83230	90111	97901	106710
Woodend	4065	4555	5275	6034	6781	7428	7988	8618	9330	10137	11049
TOTAL	125631	140764	163009	186480	209549	229562	246850	266315	288333	313261	341447

These population growth tables convert to a non-demand managed water consumption forecast as follows:

Table 3: Annual Demand Forecasts by Town (ML) – using High growth forecasts

Scenario	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051	2056
Bacchus Marsh	2,160	2,202	2,324	2,584	2,874	3,197	3,557	3,926	4,290	4,640	4,966
Gisborne, New Gisborne	939	1,035	1,183	1,418	1,703	2,046	2,456	2,904	3,370	3,837	4,287
Sunbury, Bulla, Diggers Rest	4,329	4,719	5,318	6,240	7,058	8,021	9,148	10,263	11,039	11,795	12,503
Macedon, Mt Macedon	505	516	545	609	679	757	844	933	1,021	1,106	1,185
Melton, Rockbank	5,280	5,421	5,750	6,512	7,675	9,053	10,672	12,499	14,741	16,966	19,094
Riddells Creek	348	367	400	461	531	611	703	800	897	992	1,082
Romsey	441	474	527	618	724	848	993	1,147	1,304	1,460	1,608
Lancefield	209	209	217	237	259	283	309	336	362	386	410
Woodend	550	563	597	664	740	825	920	1,018	1,115	1,207	1,294
TOTAL	14,760	15,506	16,861	19,344	22,243	25,642	29,603	33,826	38,140	42,390	46,432

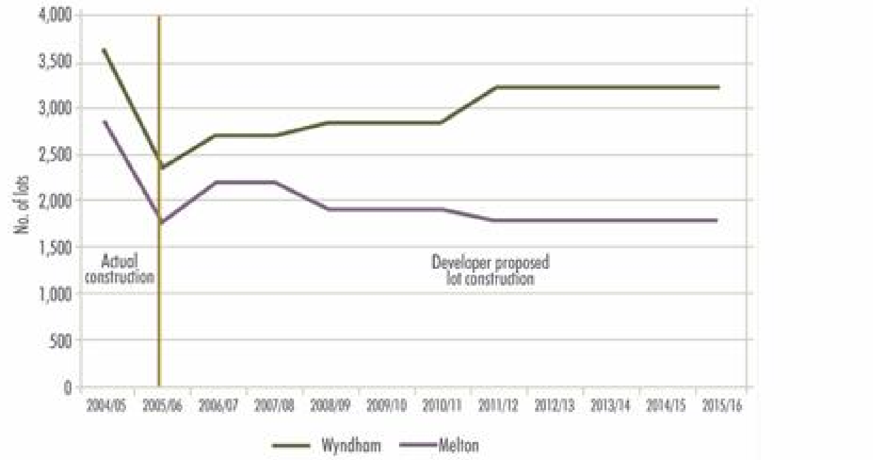
Table 4: Annual Demand Forecasts by Town (ML) – using VIF forecasts

Scenario	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051	2055
Bacchus Marsh	2,127	2,196	2,402	2,743	3,083	3,388	3,661	3,965	4,309	4,698	5,046
Gisborne, New Gisborne	924	954	1,044	1,190	1,335	1,465	1,582	1,712	1,859	2,026	2,175
Sunbury, Bulla, Diggers Rest	4,261	4,414	4,841	5,492	5,971	6,394	6,770	7,184	7,648	8,168	8,631
Macedon, Mt Macedon	497	514	562	644	725	797	862	935	1,017	1,109	1,192
Melton, Rockbank	5,196	5,127	5,276	5,743	6,362	6,910	7,395	7,933	8,535	9,211	9,814
Riddells Creek	342	354	388	444	501	551	596	647	704	768	825
Romsey	434	449	492	564	635	699	756	820	891	973	1,045
Lancefield	206	212	232	265	298	327	354	383	416	454	487
Woodend	542	560	613	698	783	860	928	1004	1090	1,188	1,276
TOTAL	14,530	14,781	15,850	17,783	19,693	21,392	22,904	24,583	26,469	28,594	30,491

Western Water's current available water supply has been determined at 16,414ML based on continuing dry climate conditions. This indicates a shortfall of between 15,000 and 30,000ML per year by 2055, depending on the actual growth in the region. During the period of this Plan, however, this shortfall is much smaller - about 1,000ML.

Further to the 2004 VIF growth forecasts and Western Water's consideration of the high growth position, the release of DSE's the Urban Development Program 2006 - Annual Report (UDP) provides the latest available data on which to base Western Water's growth figure adopted for the Water Plan (Appendix O).

The 2006 UDP report identifies growth that was foreshadowed in the Melbourne 2030 Strategic Plan and changes to metropolitan Melbourne and surrounding areas. The urban growth boundary outlined in Melbourne 2030 limits urban development and identifies where future urban growth will occur. In the next 30 years, it is predicted Melbourne will grow by up to one million people. This 2030 strategic review is further supported by the UDP and shows that Melbourne's growth will have a significant impact on areas such as Melton, Bacchus Marsh and Sunbury where significant development will occur. The chart below from the UDP report indicated the continuation of strong growth for example in the Melton area.



Source: Department of Sustainability and Environment. Internal database, 2006.

To consider the impact of the UDP 2006 report Western Water used the 2004 VIF growth figures and overlaid the UDP changes to those figures in the towns of Melton and Sunbury. This resulted in the growth forecast shown below.

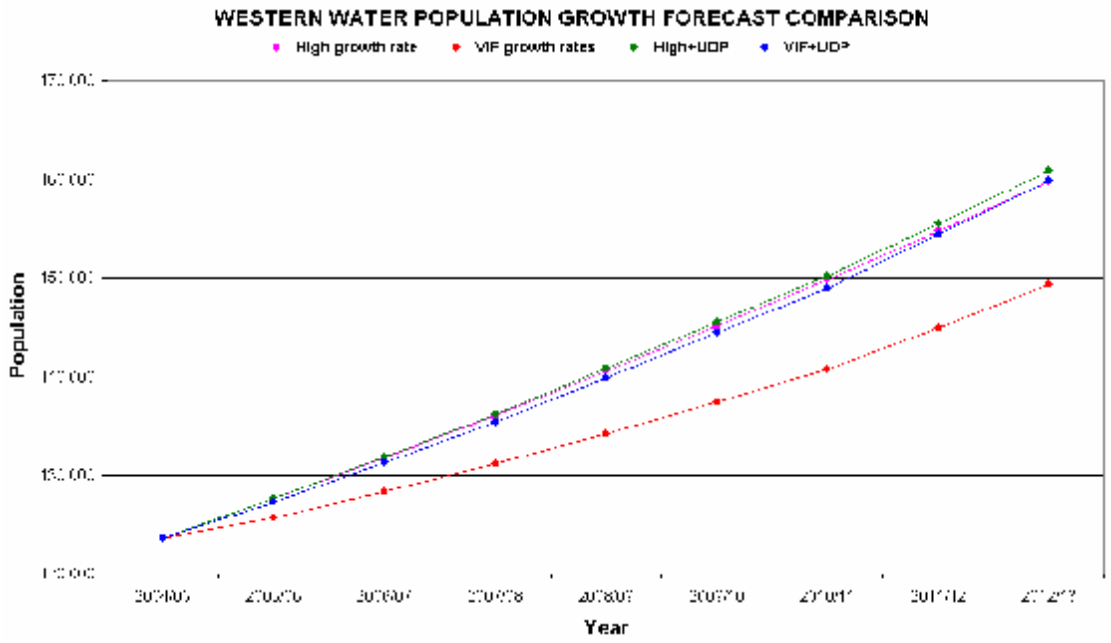
Population growth rates with VIF and UDP predictions Breakdown of % growth

Year	Bacchus Marsh	Gisborne, New Gisborne	Lancefield	Macedon, Mount Macedon	Melton, Brookfield	Riddells Creek	Romsey	Sunbury, Bulla, Diggers Rest	Woodend	TOTAL	%
2004/05	[illegible]	7,533	1,350	3,238	48,357	2,593	3,257	38,628	[illegible]	123,600	
2005/06	14,474	7,002	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2006/07	14,785	7,827	1,40	[illegible]	[illegible]	2,693	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2007/08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2008/09	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2009/10	15,827	[illegible]	1,500	[illegible]	59,757	[illegible]	4,261	[illegible]	[illegible]	[illegible]	[illegible]
2010/11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2011/12	16,703	8,811	1,583	[illegible]	[illegible]	[illegible]	4,289	[illegible]	[illegible]	[illegible]	[illegible]
2012/13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					Predicted by UDP (Broadhectare)			Predicted by UDP (Broadhectare)		AVE	[illegible]

Breakdown of % growth Rates with VIF and UDP predictions

Year	Bacchus Marsh	Gisborne, New Gisborne	Lancefield	Macedon, Mount Macedon	Melton, Rockbank	Hacketts Creek	Romsey	Sunbury, Dulka, Diggers Rest	Woodend
2004-05									
2005-06	1.0%	1.0%	1.0%	1.0%	0.52%	6%	5%	2.49%	1.0%
2006-07	2.1%	2.1%	2.1%	2.1%	1.71%	2.1%	2.1%	2.80%	2.1%
2007-08	2.1%	2.1%	2.1%	2.1%	1.71%	2.1%	2.1%	2.80%	2.1%
2008-09	2.1%	2.1%	2.1%	2.1%	1.71%	2.1%	2.1%	2.80%	2.1%
2009/10	2.4%	2.4%	2.4%	2.4%	1.92%	2.4%	2.4%	3.01%	2.4%
2010/11	2.5%	2.5%	2.5%	2.5%	4.62%	2.5%	2.5%	2.17%	2.5%
2011/12	3.0%	3.0%	3.0%	3.0%	5.62%	3.0%	3.0%	2.82%	3.0%
2012/13	3.0%	3.0%	3.0%	3.0%	6.12%	3.0%	3.0%	2.79%	3.0%

The chart below provides a comparison of the VIF 2004, Western Water and UDP 2006 revisions of those growth forecasts, and demonstrates the alignment of three of the models.



While adoption of the higher growth rate is an important decision for planning to ensure supply meets demand with the seven year buffer target, the different population growth rates (VIF and High Growth) over the 50-year period create a very significant variation in the final population figures and future demand and savings. In the early years in which the demand reduction targets are to be met, however, there is only a difference of 12,099 people in 2015, increasing to 18,596 in 2020. Planned reviews of the WSDS and its growth forecasts will ensure supply meets demand.

The 2004 VIF forecast growth rate revised by 2006 UDP growth rate, is used throughout this Plan as the basis for forecasting.

In addition the formation of the Governments Growth Areas Authority provides a focus on sustainable communities specifically employment and prosperity consistent with Melbourne 2030 which will provide additional focus on commercial and industrial development in the region. Given this focus and the low non-residential base Western Water has assumed non-residential customers will also increase in line with predicted growth figures.

Demand Management

There is a significant opportunity in Western Water's region to implement demand conservation measures and use source substitution via recycled water to reduce future potable consumption.

As part of Western Water's 2006 demand management study, many different scenarios have been modelled to meet the required demand reductions set out in the CRSWS. The following reductions from the 1990s average consumption of 375 l/c/d are targeted:

- 25 per cent (ie: down to 281 l/c/d) by 2015
- 30 per cent (ie: down to 262 l/c/d) by 2020.

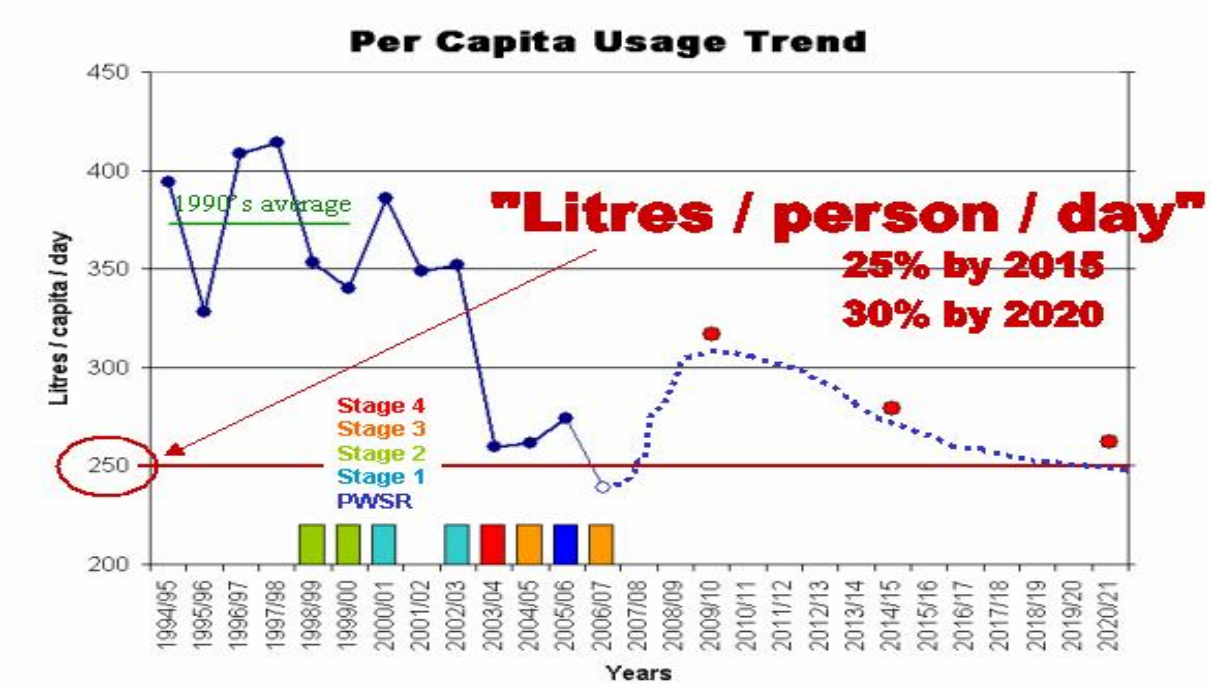
Note that this refers to TOTAL usage, some l/c/d figures refer only to residential usage targets.

The preferred demand reduction forecast scenario engages a range of measures, from the current education program to source substitution, rain water tanks and third pipe systems for new developments. Initially, the third pipe system (substitution) would be implemented at the Eynesbury Township development, then Melton South, followed by Sunbury.

The preferred demand reduction and conservation program includes:

- WELS (Water Efficient Labelling Scheme)
- Permanent Water Saving Rules (PWSR)
- Inclining/Rising Block Tariffs
- Community Education
- Water Audits
- Leakage Reduction Programs
- Appliance Retrofit Programs
- Source Substitution.

These programs are budgeted for in this Plan, and are required to be implemented in order to deliver demand reduction targets.



Western Water is closely monitoring per capita usage and believes that, over time, better targets can be achieved. At the same time, Western Water considers that targets currently adopted across the Victorian water industry are realistic and achievable. This chart shows the historical trend, influenced by restrictions, and the key per capita usage targets that have been set.

The chart shows increases in usage once current heavy restrictions are lifted, which is known as "bounce back". The challenge is to maintain current water conservation measures being demonstrated by our customers. Western Water believes that it will be in the homes of individual families that the effort to entrench a "conservation/water aware culture" will be achieved. Therefore a significant component of this effort will be in community education.

Bulk Water

Bulk water represents a higher proportion of Western Water's cost base than any other water business. Western Water has two wholesale suppliers of water - Southern Rural Water (SRW) and Melbourne Water (MW). The Water Plan includes the fixed cost of $1.76 million (annually increased by CPI) payable to SRW, as well as the significantly increasing cost of purchasing water from MW to supply Sunbury, Gisborne, Macedon, Melton and Bacchus Marsh.

6.2 Summary of demand forecasts

Water usage during the Water Plan period

The Plan has been based on the customer number forecasts in the table, which were developed as part of the WSDS using the VIF 2004 forecasts, and revised to include the UDP annual report 2006. The resulting customer numbers are summarised as follows:

Customers

	Actual	Forecast	Planned				
	June 2007	June 2008	June 2009	June 2010	June 2011	June 2012	June 2013
Population serviced	131,299	135,381	139,877	144,415	149,001	154,450	159,938
Serviced properties*	52,167	54,417	56,223	58,045	59,891	62,083	64,287

* Serviced properties includes all properties provided with a water service, including residential, non-residential and vacant land.

The assessment below has been used to show usage to date in the first regulatory period and predict expected water demand for 2008-2013. This assessment takes into account restriction likelihood and their expected impacts and anticipated demand management usage savings. (Restriction impacts have been co-ordinated with Melbourne Water and the three metropolitan retailers. As Western Water's supply will be largely from its Yarra BE, restrictions imposed in metropolitan Melbourne will be mirrored for most of Western Water's customers).

WATER PLAN DEMAND FORECAST INCLUDING DEMAND MANAGEMENT & RESTRICTIONS

	Historical period (actual)				Approved		Forecast period			
			1	2	3	1	2	3	4	5
	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Growth rate (VIF revised by UDP)			2.95%	3.18%	3.11%	3.32%	3.24%	3.18%	3.66%	3.55%
Populations serviced	119,775	123,600	127,246	131,293	135,376	139,870	144,402	148,994	154,447	159,930
Unrestricted usage per capita (l/c/day)		342	342	342	342	342	342	342	342	342
Unrestricted demand (total ML)		15,429	15,884	16,389	16,899	17,460	18,026	18,599	19,280	19,964
Targeted savings for Demand Mgt program		0	1075	1325	1688	2074	2451	2787	3163	3545
Usage after demand mgt savings		15,429	14,809	15,064	15,211	15,386	15,575	15,812	16,117	16,419
Likely/planned restrictions level (1 2 3 or 4)		2	PWSR	3	3a	3	2	2	1	PWSR
Expected "industry average" % reduction		5.5	0	9.5	10	9.5	5.5	5.5	0	0
Additional "local effect" % reduction		18	12.5	13.49	7	5	3	1	1	0
Actual usage after restrictions/savings		11,803	12,958	11,601	12,625	13,155	14,251	14,784	15,955	16,419
Actual & forecast demand (Total ML)	11,351	11,813	12,891	11,601	12,625	13,155	14,251	14,784	15,955	16,419
1990's equivalent average demand		16,918	17,417	17,971	18,530	19,145	19,765	20,394	21,140	21,890
% reduction from 1990's average l/c/day		30%	26%	35%	32%	31%	28%	28%	25%	25%

Demand Management

		2006	2007	2008	2009	2010	2011	2012	2013
WELS	Total Water Savings (ML/a):	0.0	22.1	42.4	61.2	78.8	95.3	111.8	127.4
PWSR	Total Water Savings (ML/a):	626.26	647.19	669.13	692.18	716.43	742.02	772.23	803.79
Education programs	Total Water Savings (ML/a):	449.2	462.3	476.2	490.7	506.1	522.4	541.8	562.1
Non-Res water audits	Total Water Savings (ML/a):	0.0	8.3	16.6	22.5	28.3	25.8	23.3	23.3
Fixture Code - New Dev	Total Water Savings (ML/a):	0.0	0.2	2.6	22.0	41.4	61.0	83.9	106.7
RBT	Total Water Savings (ML/a):	0.00	53.49	54.69	55.95	57.31	58.75	60.53	62.40
UFW reduction actions	Total Water Savings (ML/a):	0.0	0.0	0.0	14.7	22.5	30.8	39.7	49.0
Rain tanks & Dual pipe sys	Total Water Savings (ML/a):	0.00	121.90	250.15	385.38	528.26	679.63	864.12	1056.80
Showerhead exchange	Total Water Savings (ML/a):	0.0	0.0	29.4	57.1	83.1	76.2	69.9	64.1
Fixture Code - Existing	Total Water Savings (ML/a):	0.0	9.6	146.7	272.6	388.3	494.8	596.0	689.5
	TOTAL Water Savings (ML/a)	1,075	1,325	1,688	2,074	2,451	2,787	3,163	3,545
	WW Setup & Admin Costs:	$97,000	$1,036,214	$1,792,075	$1,401,840	$1,431,246	$1,578,658	$1,887,248	$2,059,784
	Total Customer Costs:	$0	$4,096,322	$4,351,520	$4,612,741	$4,888,728	$5,034,368	$6,067,201	$6,374,956

Key aspects of this table include:

- VIF+UDP growth forecasts are used throughout;
- yellow cells show actual measured data or audited estimates of data used as a base for forecasting, specifically the 2004/05 population of 123,600;
- demand management savings have been included at the level planned for in Western Water's WSDS;
- Western Water's customers have demonstrated a strong awareness of the severity of the drought and consumption reflects good conservation efforts across all towns. This is expressed in the table as the Additional "local effect" % reduction, which has been substantial to date. Western Water expects that as demand management measures are implemented, including customer uptake of water efficient options during the Water Plan period to reduce litres/capita/day usage toward targets, this "customer factor" will reduce, and business-as-usual water conservation will take over as the norm; and
- the demand management table shows the component of customer costs as well as Western Water's costs to deliver the desired savings, demonstrating an understanding that the community is fully involved in the conservation culture change that we are targeting.

Demand summary extrapolated using VIF + UDP growth rate

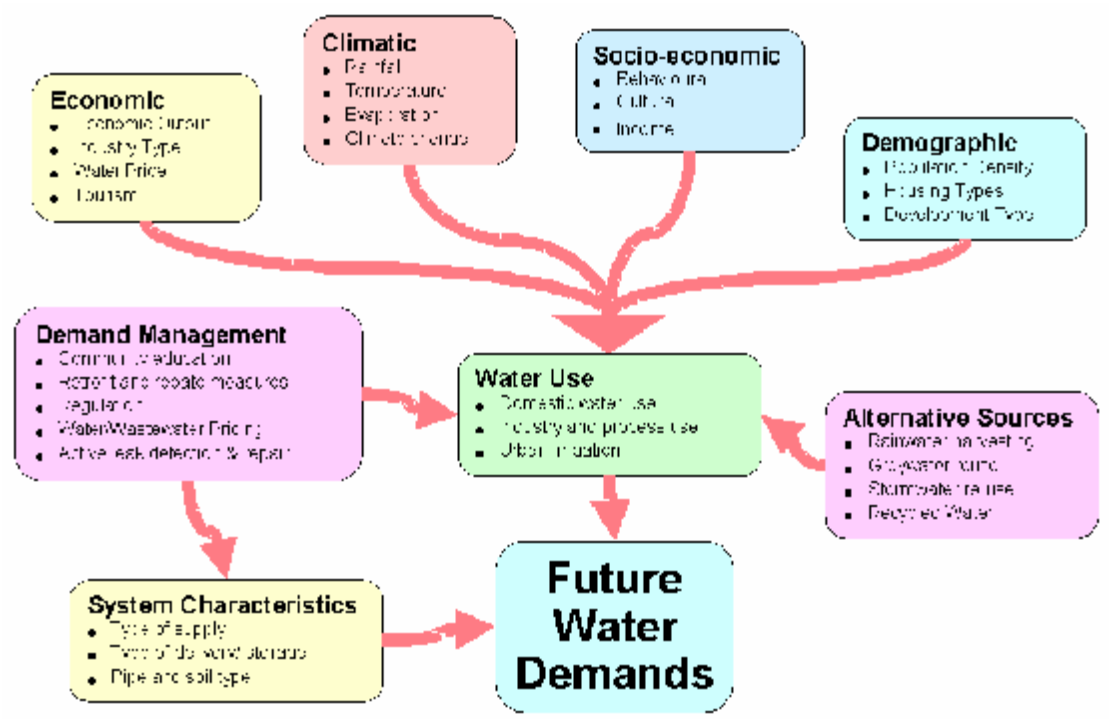
	Historical period (actual)				Approved	Forecast period				
			1	2	3	1	2	3	4	5
WATER	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Properties serviced (WATER)	47,168	49,100	51,149	52,167	53,789	55,575	57,376	59,200	61,367	63,546
Length of water mains (incl recycled water)			1675	1,728	1,782	1,841	1,901	1,961	2,033	2,105
Megalitres of water supplied	11,351	11,813	12,891	11,601	12,625	13,155	14,251	14,784	15,955	16,419
Number of Water Filtration Plants	5	5	5	6	7	7	7	7	7	7
SEWER										
Properties serviced (SEWER)	38,888	40,243	43,050	44,368	45,748	47,267	48,798	50,350	52,193	54,046
Length of sewer mains			995	991	1,022	1,056	1,090	1,125	1,166	1,207
Megalitres of sewage received	7,244	7,490	7,452	6,698	6,906	7,136	7,367	7,601	7,879	8,159
Number of Water Recycling Plants	7	7	7	7	7	7	7	7	7	7

6.3 Individual demand forecasts

An important aspect of the preceding data is the two key drivers which are impacting on the forecast figures, including:

- high growth rate in Western Water's areas particularly Melton and Sunbury, and
- drought or climate change conditions which are persisting.

There are a number of other factors influencing water demand, best outlined by the diagram below. Future demand will involve uptake of water efficiency appliances and other conservation measures. Western Water has required an understanding of these influencing factors on its customer base. Climate, demographic, socio-economic and water efficiency trends have a critical role to play in determining future infrastructure needs.



Climate Change, drought and usage trends

The WSDS integrates a medium climate change scenario into its strategy, which continues to be the greatest unpredictable influencer on demand. Therefore it is important to review progress to date in forecasts for the first regulatory period. The following table clearly shows significant reduction in forecast water demand due to drought, and more recently the reduced sewage volumes received consequent to the uptake of "grey-water" systems. "Grey-water" use is becoming increasingly widespread as restrictions become more severe and awareness of products expands.

Year	Water demand (ML)		Sewage received (ML)	
	Forecast	Actual	Forecast	Actual
2004/05	14,000	10,372	7,700	7,490
2005/06	15,000	11,641	8,310	7,452
2006/07	15,500	11,601	8,635	6,698

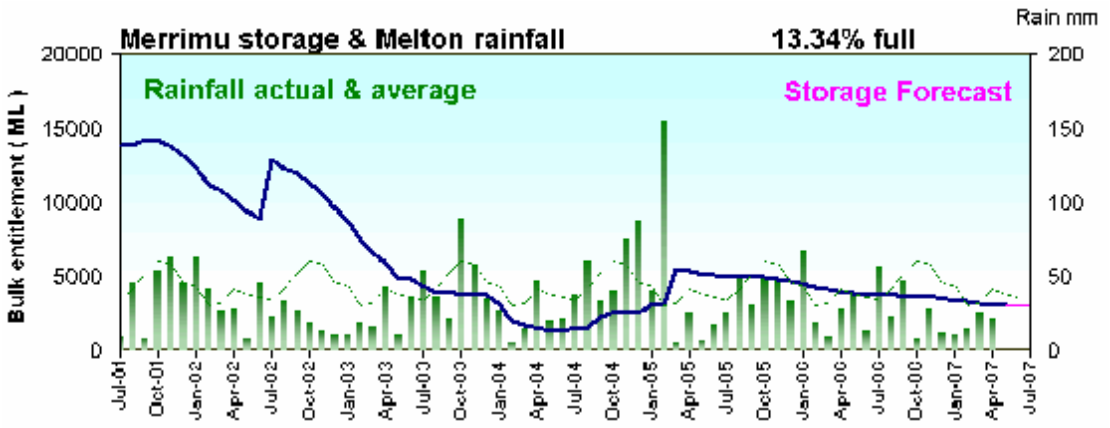
Western Water Storages and future supply

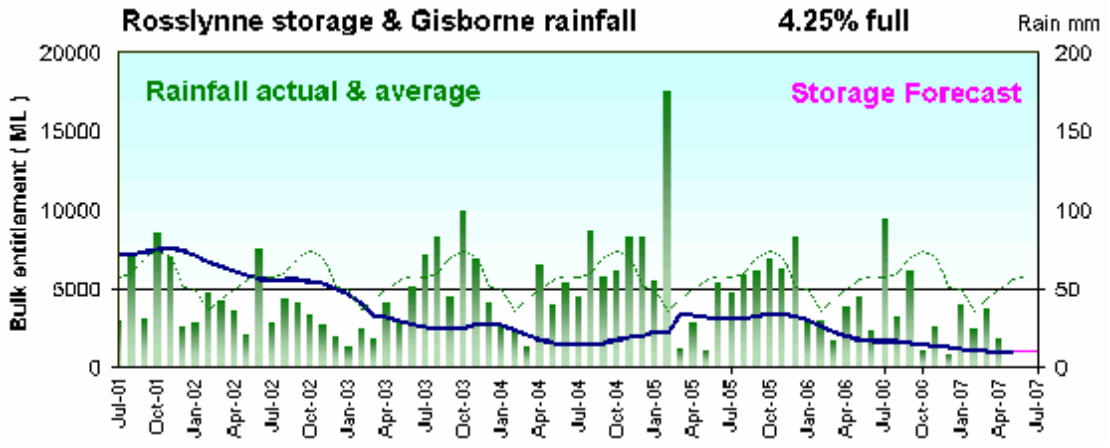
Western Water owns 17 small dams on and surrounding Mt Macedon servicing the towns of Romsey, Lancefield and Woodend. The storages are annual storages and require annual wet seasons to ensure adequate supply.

Other towns serviced by Western Water (Gisborne, Sunbury, Riddells Creek, Macedon, Mt Macedon, Digger Rest, Bulla, Rockbank, Toolern Vale, Melton, Bacchus Marsh and Myrniong) rely on Bulk Entitlements held in Southern Rural Water storages of Rosslynne Reservoir, Lake Merrimu and Pykes Reservoir.

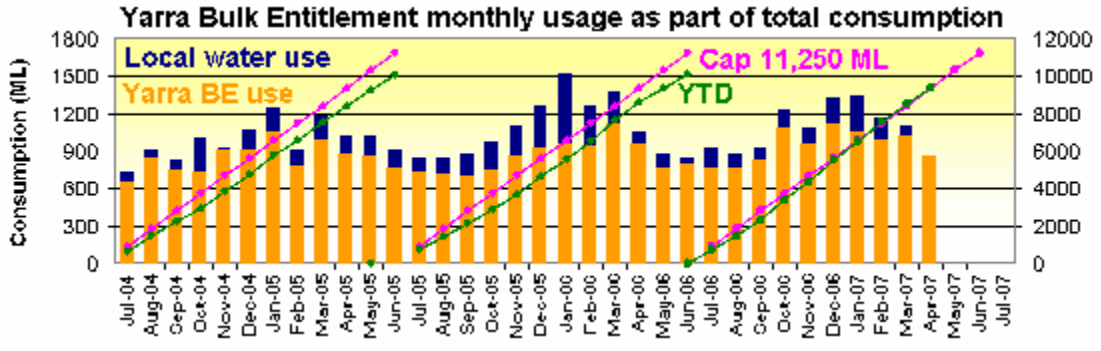
During the drought years, these storages have struggled to meet demand. Western Water has sought and obtained a Bulk Entitlement (BE) from the Yarra System which is supplied via Melbourne Water infrastructure to Western Water pumping stations at Bulla and Hillside. This key Yarra BE totalling 11,250ML per annum has been vital to security of supply during the drought. It provides both security of supply and a strategic "dual" supply for Western Water customers should either supply ever become unavailable.

The following charts show the continually reducing levels in Lake Merrimu and Rosslynne Reservoir as a consequence of extreme drought since 2001. Rainfall "shortfall" from average can be readily seen where monthly rainfall "bars" remain regularly below the long term average rainfall "line", with only a few months greater than average and one large storm in February 2005.



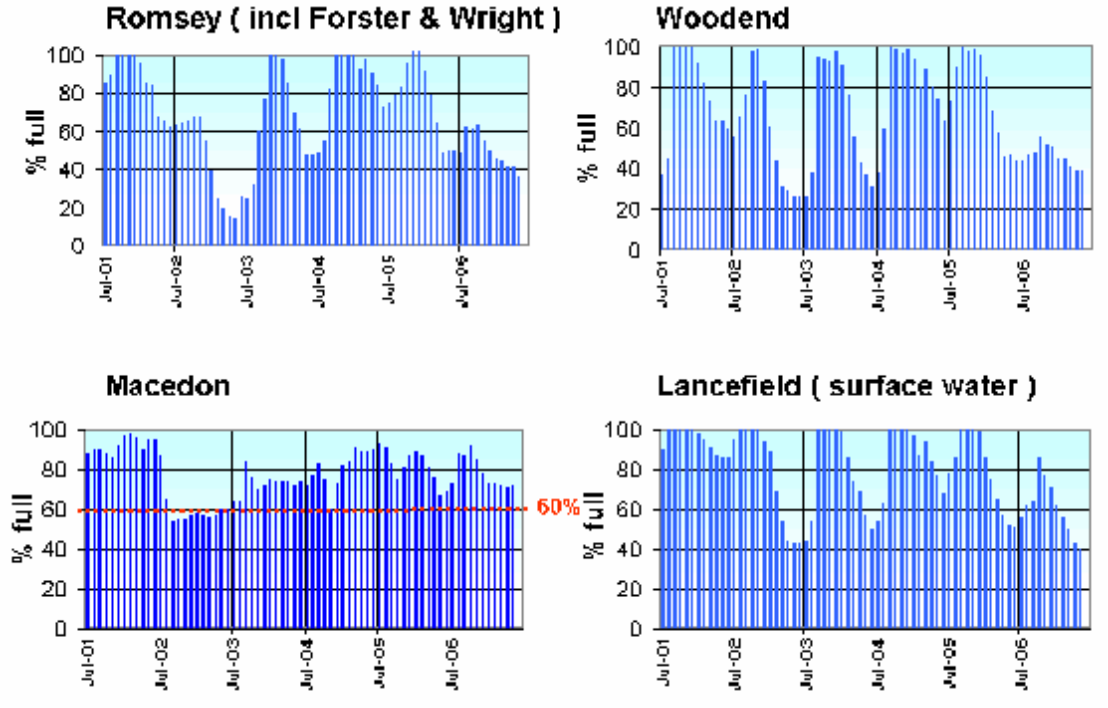


The usage of Yarra BE water can be seen in the following chart, which shows annual usage of Yarra water compared to available local water, and illustrates the monitoring of the "cap" of 11,250ML each year. In the last 12 months 93% of water supplied needed to be sourced from Melbourne.



Western Water's smaller local storages generally fill each year, however, during 2006/07 these too have struggled and Yarra BE water has been needed to supplement supplies to Woodend and Romsey.

The charts below show the annual nature of filling of these smaller storages, and the extreme low inflows during the last 12 months. It is of note that Western Water maintains the Macedon storages above 60% at all times to provide for emergency fire fighting water if ever needed in the higher fire risk areas of the Macedon Ranges.



The key points to the above charts are:

- the prolonged drought has resulted in need for careful management of water resources, and increasing use of external Yarra BE resources;
- cost of external water is higher and operational costs (ie: pumping) is an extra significant cost in terms of power usage charges and greenhouse gas emissions;

- extensive infrastructure is required to be built and maintained to provide water supply security to a growing service area;
- for the Plan period, it is assumed that the townships of Romsey and Woodend supplied by small storages will require only limited support from the Yarra BE, while due to the extreme low levels in Rosslynne Reservoir and Lake Merrimu, the five years of the Plan period will require full use of the 11,250ML from Melbourne Water to allow recovery of key larger local storages.

Key options identified

The table below lists the key options identified to provide secure water supplies to Western Water's customers over the next 50 years. The table shows target volumes in ML for each option over the next 50 years, along with the corresponding CRSWS action reference number.

Conservation and efficiency	2007	2008	2009	2010	2011	2012	2013	2014	2015	2030	2055
Water demand management (CRSWS Action 4.19) Western Water will implement a range of conservation and efficiency measures within the residential sector (homes) and non residential sector in order to meet its new conservation targets.[1]	400	800	1,000	1,500	1,900	2,300	2,600	3,100	3,500	6,500	9,600
Alternative supplies	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2030**	**2055**
Option WR1 (CRSWS Action 4.20) Western Water will develop opportunities for substitution of treated recycled water from Surbiton Park for non-potable uses in new residential and commercial developments in Eynesbury and Melton South.	240	260	450	630	800	970	1,150	1,330	1,510	4,070	4,220
Option WR2 (Action 4.21) Western Water will increase the use of recycled water from local treatment plants in the Inner West for non-consumptive purposes.				120	120	120	240	240	240	420	800
CRWSWS Action 4.22 The Government will work with Melbourne Water and Southern Rural Water to continue to investigate technological advances and opportunities for substituting water requirements with recycled water in irrigation areas in the Werribee catchment.										8,500	15,000
Interconnections	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2030**	**2055**
Option WA3 (CRSWS Action 4.23) Western Water will upgrade the existing infrastructure connecting the Inner West to the Melbourne supply system and purchase additional water rights from the Melbourne pool. (The implementation date shown of 2009 allows for persistence of the current low inflows)			5,000	5,000	5,000	5,000	7,000	7,000	7,000	7,000	10,000
Augmentations	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2030**	**2055**
Option WA4 (CRSWS Action 4.24) The Government will transfer 50 per cent of the unallocated inflows in Lake Merrimu to Western water for supply to Bacchus Marsh and Melton urban water needs	600	600	600	600	600	600	600	600	600	600	600
Option WA16 (CRSWS Action 4.25) Western Water, Southern Rural Water and the Department of Sustainability and Environment will develop a wellfield between Romsey and Lancefield.			180	180	180	180	180	180	180	180	180
Option WA23 (CRSWS Action 4.26) Western Water will purchase additional entitlements through the water market from Pykes Creek Reservoir to ensure sufficient supply for Myrniong.			40	40	40	40	40	40	40	40	40
Option WA12a (CRSWS Action 4.27) Western Water will provide increased storage capacity in the Romsey/Lancefield system.			30	30	30	30	30	30	30	30	30
Total	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2030**	**2055**
Total volume provided by options	1,200	1,700	7,400	8,100	8,700	9,200	11,800	12,500	13,100	27,400	40,500
FURTHER OPTIONS IDENTIFIED											
Options WA19 and WA20 Western Water will interconnect the Macedon, Rosslynne and Woodend systems to increase supplies to Woodend.[2]	12	12	412	412	412	412	412	412	412	412	412
Option WA13 Western Water will interconnect the water supply systems of Romsey and Lancefield via a staged program.[2]	180	180	180	180	180	180	180	180	180	180	180
Option WA18 Western Water will investigate raising the Campaspe Reservoir in order to increase supplies to Woodend.											

[1] If population growth is different from what has been assumed, the volumes of water savings resulting from meeting Western Water's conservation targets will differ.

[2] Volume supplied involves internal transfer between towns and hence is not included in the total volume.

Note: Action 4.23 This additional water right for Western Water will be provided by Government allocation associated with system augmentations that have been accounted for, and will not require separate purchase, of the water right, by Western Water.

6.4 Issues for specific forecasting parameters

6.4.1 Urban Water Use

Amongst other things, the ongoing drought is a key factor influencing the predicted urban water usage estimates. At the commencement of the first regulatory period, Western Water introduced Rising Block Tariffs (RBT) for residential consumption. It is proposed to continue with RBT during the Plan as it provides an extra incentive for water conservation. The impost of varying restriction levels since implementation has made assessment of the impact of RBT on consumption difficult to undertake.

Prior to its introduction, Western Water reviewed the impact of RBT. The following major conclusions drawn on this issue are summarised as follows:

- there is substantial variation in the price elasticity of demand for residential water with most falls within the range of -0.1 to -0.7. That is, for an increase in price of 10%, demand could be expected to fall by 1% to 7%. In other words, water is said to be price inelastic, meaning that price is not a very effective influence on demand;
- the response of water use to changes in price is more inelastic in the short run. Intuitively this can be expected as people take time to adjust to the higher price and make changes to their behaviour, e.g. have shorter showers or invest in water saving appliances (e.g. water efficient washing machines) and watering systems (e.g. controlled sprinkler systems, soil moisture meters etc); and
- summer water demand is more elastic than winter demand and single family homes more price elastic than apartments.

The first tier was set at 53kl (per billing cycle) as this represents in-house usage. The Price Elasticity of Demand (PED) for the first tier was seen as relatively inelastic and less responsive than for external use.

Price elasticity of demand (PED) for residential water consumption generally vary between –0.1 and –0.7, i.e. 10% increase in price, results in decease in demand between 1% and 7%. However, such estimates generally apply to situations of unrestricted demand.

Western Water examined the impacts of a range of PED's applied to each of the three tariff blocks. Given that restrictions are still in force and based on current customer feedback, Western Water has adopted for the period of the Water Plan, PED's of -0.1 for the second and third tariff blocks with no change in consumption assumed for the initial block, i.e. for consumptions less than 53kl in any billing cycle. The parameters underlying these estimates are summarised below:

Consumption Blocks (kl)	% Price Change	Price Elasticity	% Change in Demand
0 to 53	-2.6	0	0
53 to 106	14.3	-0.1	-1.4
>106	68.8	-0.1	-6.9

As Western Water's customer base is predominantly residential with only five major industrial customers. The non-residential sector usage remains on a flat tier positioned at the same price as the second residential tier. Western Water continues to work closely with its major users such as Councils and Schools to reduce consumption via permanent water saving measures and actions such as through the introduction of mandatory water management plans or a "waterMAP".

6.4.2 Customer (fixed charge) numbers

As already discussed in the demand section customer numbers are derived from growth predictions from two sources, VIF 2004 & UDP 2006. The numbers and forecasts are provided in Section 6.2.

6.4.3 Volumetric sewerage forecasts

Western Water addressed the issue of introducing a volumetric sewer disposal charge at the CAG/CRG Strategic Planning Day in July 2006, and in focus group discussions held in April 2007.

Although a variable sewer disposal charge may introduce valuable water conservation signals, an assessment was made not to introduce such a charge for the following reasons.

- metering actual discharge to the sewer system is not undertaken and the surrogate of water consumption is not equitable across all user groups;
- significant difficulties in assessing the actual discharge and seasonal factors due to different usage patterns; and
- impact of water conservation messages and greater use of grey water on discharge factors could lead to unforseen inequities.

The results of modelling customer impacts based on charges in place for neighbouring water authorities is provided as Appendix P.

6.4.4 Miscellaneous Services

Miscellaneous charges relate to a variety of services. As the growth of most of these services have a direct correlation with development ie: information statements, tapping and metering requests, they have all been increased in line with predicted growth figures. Individual estimates are not provided as miscellaneous services revenue combined total less than $1 million.

6.4.5 Developer Charges

New Customer Contributions

As a direct result of the high growth within the region, predictions for New Customer Contributions (NCC) also remain high as development continues. Estimates of NCC are based on current year 2006/07 actuals increased by growth estimates for the period of the Plan (in line with those applied to customer numbers). Additionally of dual water supply developments also provide an additional 700 lots during this time. The overall predictions are summarised below:

Number of Lots	2008/09	2009/10	2010/11	2011/12	2012/13
Water	1,609	1,661	1,714	1,785	1,840
Sewer	1,515	1,564	1,614	1,673	1,732
Dual Water Supply Schemes	175	185	175	85	85

Charges adopted for this Plan are consistent with the industry and the approach is shown in Appendix Q.

6.4.6 Major customer water and sewer forecasts

The large majority of Western Water's customer base (approximately 95%) are residential. With the exception of five industrial customers, the major non-residential consumers are local councils and schools. Western Water works closely with its five industrial customers, local Councils and schools to ensure water conservation and trade waste management are at the forefront of their practices and that use of recycled water is considered where appropriate.

6.4.7 Trade Waste forecasts

The existing Trade Waste Management System has been reviewed to protect sewer maintenance personnel, infrastructure, plant and equipment and the environment. The revised strategy will focus on the User Pays principle, from lodgement of trade waste applications through to the introduction of quality and quantity load-based charges. An overriding feature of the new policy is an emphasis on educating current and potential trade waste customers on the EPA's waste hierarchy. This review was completed by June 2007 affecting approximately 80 minor and four major customers.

Revenue from applications and tariffs for minor trade waste is simple to estimate. Revenue from Category B and C trade waste clients, however, is variable due to the application of consumption and load-based tariffs. This consumption formula caters for quantity and quality components structured to offer financial based incentives/disincentives based on the volume and contaminant loadings of the discharge.

Trade Waste Customers	2008/09	2009/10	2010/11	2011/12	2012/13
Cat A (Minor)	320	330	340	350	360
Cat B	5	4	2	1	1
Cat C	80	85	90	95	100
Total	**405**	**419**	**432**	**446**	**461**

Trade waste charges are shown in detail in Appendix L.

6.4.8 Rural Water Rights

Not applicable to Western Water.

6.4.9 Recycled Water

Western Water has created its recycled water function as a separate business unit from water and sewer. The recycled water function aims to recover all costs over time, plus a return of and on capital invested in the storage, distribution and retailing of recycled water to customers. Consistent with ESC principles, the costs of treating sewage to comply with environmental discharge requirements (polluter-pays) are met from sewerage tariffs and charges. Recycled water users pay for the costs of distribution, storage and transfer, plus costs in any additional treatment required by users.

The recycled water business experienced a significant increase in the number of customers in 2006/07 due to the impact of water restrictions, increased trucking demand and sales in the existing supply system. Western Water currently has more than 100 customers and during the peak summer months of December and January 2006/07 recycled a record 97% of all inflows.

Recycled Water (Class B & C) Schemes

All users are supplied under generic contracts, which are “take or pay” in nature. Additional recycled water, if available, can be purchased at seasonal volumetric charges above. The Sunbury/Melton Recycled Water scheme was commissioned in September 2002 and provides high quality Class B water. Other recycled water schemes operated by Western Water emanate from the Gisborne, Woodend and Riddells Creek plants. These schemes supply Class B or C recycled water to various sectors including golf courses, bowling clubs and sporting grounds.

Standpipes

Recycled water is supplied to users from three standpipes located at Gisborne, Melton and Sunbury as a part of the Drought Relief Protocol established by the EPA.

Typical uses include street tree watering, road maintenance and construction, dust suppression and compaction, stock drinking water (Sunbury Plant only) and landscape irrigation.

Irrigation Farm Properties

The third main source of recycled water supply is via public lease of Western Water-owned irrigated properties. These farms are typically adjacent to RWP's and have in place the necessary irrigation infrastructure to utilise all Class C water produced at each plant. These farms are located at Parwan (Bacchus Marsh), Surbiton Park (Melton) and Romsey.

Dual Water Supply Schemes

Western Water is working with developers towards a dual water supply system for the proposed new Eynesbury Township and other developments in Melton South as part of our WSDS implementation actions. Incorporated into these developments are Class A recycled water, which will be connected to all properties for toilet flushing, fire fighting, garden watering, public open space and recreation area irrigation. Class A recycled water tariffs are shown in Appendix L.

Actual and forecast volumes of water recycled for all uses are as follows:

RWP(ML)	Actual 2005/06	Forecast 2006/07	Plan 2007/08	Plan 2008/09	Plan 2009/10	Plan 2010/11	Plan 2011/12	Plan 2012/13
Melton	2,955	3,030	3,810	4,237	4,665	5,092	5,520	5,947
Bacchus Marsh	899	900	946	970	994	1,017	1,041	1,065
Sunbury	663	870	1,245	1,516	1,787	2,158	2,529	3,300
Romsey	347	225	314	418	442	466	489	513
Gisborne	291	215	430	439	449	458	468	477
Riddells Creek	91	120	100	105	109	114	119	124
Woodend	143	175	242	247	252	257	261	266
Total	**5,388**	**5,535**	**7,167**	**7,932**	**8,697**	**9,562**	**10,427**	**11,692**

Section 7

Prices

Section 7 Prices

7.1 Tariff Structure

The following section covers the reasoning underlying proposed pricing for the regulatory periods. Whilst no major changes are proposed in tariff structures, the ability of the tariff structure to influence and change customer behaviour is clearly a focus. Customers will be more empowered to influence their bills, and encouraged to better use water resources in response to price signals.

7.1.1 Underlying cost justification

Long Run Marginal Cost

The main focus of recent water policy announcements has been water conservation, and the refinement of pricing signals to provide greater incentives to consumers to conserve water. Given this major industry and Government focus, Western Water has not invested in a study on long run marginal costs as a business specific foundation for tariff policy.

Western Water's pricing strategy has been developed in consultation with our customers and in accordance with Government policy objectives. The strategy provides stronger incentives to customers to conserve water. These strengthened conservation signals are provided via tariff structures that have an increased emphasis on variable (that is, usage-based) charges, through the continued application of rising block tariffs.

Over the longer term, Western Water expects that these price signals will lead to a lower level of demand than that which would have prevailed.

The expected impacts of the proposed tariffs on demand forecasts and capital expenditure have been incorporated into this Plan.

As a result of the CRSWS and WSDS, most key capital expenditure projects were evaluated based on a Long Run Marginal Cost impact analysis. This analysis was considered in determining the optimum path to achieve both CRSWS and WSDS outcomes.

7.1.2 Changes in customer behaviour

In April 2007, Western Water conducted market research into customer's understanding of our current Rising Block Tariffs (RBT). The research (reported as Appendix D) indicated that customers strongly supported a 'pay for use' system, but believed that the price signal in the variable charge was ineffective as it is relatively low when compared to service charges. Customers advised that their water conservation habits were influenced more by water restrictions and a social obligation to conserve, rather than pricing.

The research indicated that there was little awareness of the how much water customers actually used or of the Rising Block Tariffs.
The surveyed customers recommended a greater price differential in RBT, to provide incentives for conservation.

The research reinforced Western Water's strategy to continue with RBT for residential consumers, to increase the costs between each band and to initiate an education plan to facilitate a better understanding of water charges, and other benefits, such as the greenhouse impact of water conservation.

7.1.3 Customer impact issues

Although customer feedback has clearly driven the move to increase the component of the water bill that is controllable by the customer, Western Water has been mindful of the impact of this strategy on some customer groups. The new Hardship Policy in Appendix G addresses customers in hardship to reduce, as far as possible, the water usage component of the water account.

The policy includes the opportunity for large families to be provided with a free water audit, be supported in the adoption of water saving devices and appliances, and to be charged the commercial tariff if that leads to a beneficial outcome for the customer. The policy also includes a range of measures and initiatives designed to assist customers in genuine hardship. Western Water will be working closely with concession customers, large families and pension groups through a newly appointed dedicated staff member to ensure the impact of these increases is minimised.

Importantly, the fist step of the RBT has been minimised to ensure that the water needed to maintain health and well-being is being provided at a minimal cost.

7.1.4 Tariff proposals

Background

The first regulatory period commenced on the 1st July 2005. This was a three year maximum price path set by the ESC. Prior to this process the following price paths were adopted:

Year	Maximum	Western Water
1997/98	Reduce tariffs by 18%	Dropped 18% on 1 Jan 1998
1998/99	Frozen	Unchanged
1999/20	Frozen	Unchanged
2000/01	Frozen	Unchanged
2001/02	CPI + 2%	Dropped by average of CPI - 6.9% or average 4.6%. Fixed decrease offset by variable tariff increase from 65c to 68c.
2002/03	CPI (3.1%) +1 %	CPI – 2.1% or average 1%. Fixed unchanged and variable increased from 68c to 70c
2003/04	CPI (3.1%)	CPI on variable and fixed service charges
2004/05	CPI (2.3%)	Proposed CPI for fixed sewer charge (plus uniformity) CPI+1% for fixed water charge Both fixed charges incur a $5.33 increase each from 1 November 2004 Variable increasing CPI+4% & introduction of RBT from 1 November 2004
2005/06- 2007/08	ESC determination	CPI + 0.5%
2008/09 -2012/13	ESC to determine	Proposed CPI + 10.87% per annum

The schedule of tariffs for the period of the Water Plan is contained in Appendix L. Total Net Prescribed Revenue for the 2008-2013 period is $286.91M (or NPV $250.81M).

Retail Sewer tariffs

A key focus during the first regulatory period was to achieve uniformity of sewer fixed service charges across all residential and non-residential areas of the business. These variations were inherent from pre-amalgamation pricing. A common tariff for sewer was strongly supported by customer feedback via customer focus group sessions. This will be achieved at the conclusion of the first regulatory period.

Western Water acknowledges the current level of its sewer tariffs in comparison to the industry and wishes to address this by proposing a lower increase (3%) above CPI per annum on all sewer tariffs. Western Water believes this proposal will also represent greater cost reflectivity.

Retail Water tariffs

Fixed service charge
The majority of Western Water's residential and non-residential customers have standard 20mm meters. Larger meters (known as 'oversized meters') installed attract a proportionately greater fee.

The escalation of the water service charge in proportion to the size of the meter is based on the greater volume of water that can be supplied through the meter. Larger meters allow access to a greater volume of water, resulting in higher maintenance costs for the infrastructure and earlier supply augmentation and infrastructure works. The escalation factor in water access charges is based on past experience in the water sector.

The following multiplier is used to calculate the tariff applicable to oversized meters:

Water service charges for meters 25mm and above

Size	Charge
20mm	Base Charge (as per Appendix L)
25mm	Base Charge x 1.5625
32mm	Base Charge x 2.56
40mm	Base Charge x 4
50mm	Base Charge x 6.25
80mm	Base Charge x 16
100mm	Base Charge x 25
150mm	Base Charge x 56.25

Western Water proposes to increase the standard fixed service charge for water by 17% plus CPI, 14% plus CPI in year 2, 13% plus CPI in year 3, 12.5% plus CPI in year 4 and 11.5% plus CPI in year 5. This revenue raised from these increases will go towards securing future quality water supplies.

Water Usage Charge

Current customer feedback suggests there is insufficient weighting of the current tariffs towards usage charges. In response to this, Western Water is proposing to increase the component of customer bills relative to water usage. This increased emphasis on usage will also provide customers with greater control over their water bill charges. Western Water will continue to adopt the RBT on residential consumption and proposes an upfront increase of approximately 34.6%. It is proposed increases of 13%, 12%, 12% and 11% plus CPI per annum thereafter on all tiers. This will provide sufficient revenue to meet the Revenue Requirement but also provide customers with incentives to reduce their household consumption. Feedback from customers demonstrated support for this approach (see Appendix R)

Summary of Tariff Changes

Set out below is a summary of the impact of tariff changes from 2007/08 to 2008/09. Refer Appendix M for detailed customer impact for 200kl, 250kl and 300kl consumption.

Customer Impacts for 2008/09 at 250Kl Consumption (assume CPI of 2.5%pa)

250Kl Consumption	% Increase	$ Increase in 2008/09	% Increase	$ Increase in 2008/09
All areas	13.6%	$101.25	18.9%	$143.03
Tenants	23.7%	$52.60		
Vacant Land	9.3%	$48.66		

Trade Waste

As covered in section 4.2.2, Western Water's Trade Waste Strategy was implemented in March 2007. The proposed initiatives will marginally affect tariffs and fees. The revised strategy will focus on the 'User Pays' principle, from lodgement of trade waste applications through to the introduction of quality and quantity load-based charges.

Through conducting audits of major trade waste customers Western Water will identify potential and known contributors of contaminants and encourage discharges to adopt sustainable practises. Contaminants of concern are heavy metals, colour, salt, in excess of domestic loading for solids, sulphur products, biochemical oxygen demand, total nitrogen and phosphorous. The new Trade Waste Management System, By-Law and charging regime reflects the need to reduce these substances entering the sewerage system.

Tariffs for applications and minor trade waste is a flat fee. However, the revenue from Category B and C trade waste clients is variable due to the application of consumption and load-based tariffs. This consumption formula caters for quantity and quality components structured to offer financial based incentives/disincentives based on the volume and contaminant loadings of the discharge.

Overall Trade Waste charges are anticipated to annually increase by 4% + CPI. A complete list of trade waste tariffs can be found in Appendix L.

New Customer Contributions

Western Water plans to adopt the standard schedule of charges as proposed by the Victorian Water Industry, whereby, new customer contributions are scaled according to the water-sensitivity of particular developments and the demand for future infrastructure (Appendix S). NCC are forecast to increase annually by CPI.

Essentially there are three different levels of new customer contribution:

1. a minimum $550 per lot per service for water, sewerage and dual pipe water where applicable (total $1,650 per lot) for developments which are designed in a manner that will have minimal impact on future water resource demands and can be catered for without additional investment to upgrade the medium-term distribution capacity.
2. $1,100 per lot per service for water, sewerage and dual pipe water where applicable (total $3,300 per lot) for water sensitive urban developments which will require further investment in infrastructure within a six year period to serve these developments. Or, where shared assets must be constructed ahead of schedule to service a new "property or development and the calculated 'bring-forward' costs are greater" than $1,100 per lot for water and sewerage the calculated charge shall apply.
3. $2,200 per lot per service for water, sewerage and dual pipe water where applicable (total $6,600 per lot) — for developments designed in such a way that properties will create demand for water resources over and above high-density, water efficient homes.

Developer Financed Works

Western Water also recovers fees from developers or prospective developers for work completed on their behalf, such as feasibility studies, etc. This work is recovered based on a full cost recovery methodology.

Recycled Water

As previously mentioned in Section 6.4.10, Western Water aims to recover all costs over time, plus a return of and on capital invested in the storage, distribution and retailing of recycled water to customers. Recycled water users pay for the costs of distribution, storage and transfer, plus costs in any additional treatment required by users. At this time, any revenue shortfalls will be met from the broader customer base. This reliance is expected to decrease over time as the recycled water market matures.

Typical operating costs include marketing, education, auditing, sampling, monitoring, power, retailing and repairs and maintenance. Capital costs include construction, tappings, metering, pump stations, storages, Class A treatment plants, farm irrigation infrastructure and scheme extensions. Revenues can be basically separated into New Customer Charges, fixed charges, volumetric tariffs and other (including lease payments).

Well developed pricing structures are in place in accordance with the principles above. For example, the following pricing structure applies in 2006/07:

- $300/ML once off NCC to purchase the recycled water entitlement (based on capital costs and scheme capacity rather than lot numbers)
- $500 annual fixed charge per connection (regardless of volume)
- Seasonal volumetric charges of:
  - $280/ML peak season (November to March inclusive), and
  - $200/ML off-peak.

Sunbury/Melton Scheme

All users are supplied under generic contracts, which are “take or pay” in nature. Additional recycled water, if available, can be purchased at the seasonal volumetric charges above. Contracts are for 15 years and include provision for annual price increases in line with CPI, with additional increases allowed should power costs exceed CPI by more than 5% in any year. With spare capacity still available, plus the impact of negotiated recycled water price outcomes for Class A water to vegetable growers in Werribee South, annual charges remained the same for 2006/07. However, the peak volumetric charge will be increased during the 2007/08 season to allow for CPI. For this Plan, it is proposed to annually increase charges in line with CPI increases (subject to electricity price outcomes).

Increases in the $300/ML NCC are applicable as required, particularly where increased costs are increased for connections that do not abut existing services.

Gisborne, Woodend and Riddells Creek Schemes

These schemes supply Class C recycled water ranging in price from $40 to $300 per ML, depending on the plant and time the supply contract was entered into. Most users pay $280 per ML based on volume used and/or entitlement to water. These supply contracts vary in term from five to ten years and usually incorporate a price reset at the end of the term, based on the cumulative CPI increases for the past five years. Western Water is working with customers toward standardising these contracts upon renewal in accordance with the prices above.

Standpipes

Recycled water sourced via any of the three standpipes located at Gisborne, Melton and Sunbury is priced at the peak season price (currently $280ML) plus a fixed daily access charge of $5. Prices will rise annually by CPI during the Plan period.

Irrigated Farm Properties

The lease price for Western Water owned irrigated properties are set as part of the selection process in response to public advertisement for lease of an irrigated farm property with a minimum recycled water entitlement. Lease terms vary from 15 to 20 years, with lease rentals reset on an annual basis in accordance with CPI movements.

Class A Dual Water Supply

Recycled water prices are part of the overall suite of applicable tariffs and charges, with Class A supplies to be set at the equivalent of the first tier of the volumetric RBT for drinking water, providing both a signal to encourage its use and to discourage over watering. Fixed service charges will also apply, at a lower level than fixed water service charges, recognising both the increase in fixed costs with dual water supply systems, but realising some efficiencies prevalent in dual meter installation, and dual meter reading fees and similar fixed expenses. The fixed service charge will also increase by 17% plus CPI, 14% plus CPI in year 2, 13% plus CPI in year 3, 12.5% plus CPI in year 4 and 11.5% plus CPI in year 5. A Class A recycled water NCC will also apply, consistent in price with NCC for water and sewerage services.

It is proposed to increase all principle based (Class B & C) Recycled water charges by CPI per annum over the period of the Plan and adopt price caps for Class A supplies.

7.2 Miscellaneous Charges

The schedule of miscellaneous tariffs for the period of this Plan is contained in Appendix L. In proposing miscellaneous tariffs, Western Water has incorporated the results of recent research to evaluate the costs associated with providing each service. The schedule of miscellaneous tariffs has been consolidated to capture the key tariffs with all others being covered via a cost plus methodology.

The method used is based on cost recovery.

- Where the service is provided by a third party, and administration costs in relation to providing a miscellaneous service are small or can be absorbed in other business practices, charges reflect a straight pass through of third party costs, (eg dishonoured cheque fees, dishonoured direct debit fees and legal costs). These charges will change over the business planning period in accordance with changes in third party charges.
- Where the service is provided by a third party and the process requires Western Water's oversight and approval, an administration charge of $64.46 in 2006/07 is added to the Contractor cost. This charge is based on an average of the direct staff costs associated with providing the services (e.g. large meter installations, large meter tests and significant water main tappings). This administration charge will be increased by CPI + 4% for each year of the Plan.
- Charges for some other services are based on the historic cost of providing those services. These services do not involve third parties. Review of the labour costs associated with these charges has identified the need to provide a charge for processing of an Urgent Water and Sewer Tapping Application. The charge for an Urgent application is 2 charge units. By paying the "Urgent" fee the application is to be processed within 48 hrs of receipt of payment. This fee is consistent with the Urgent Information Statement. All charges in this category will increase by CPI + 4% for each year of the Plan.
- Charges levied under Western Water's Administration By-Law 97/2 are based on charge units. The charge for each of these services is specified in the By-Law. It is proposed to increase the value of the charge unit, $10.77 for 2007/08, by CPI + 4% for each year of the Plan. Definition of these charges is contained in the By-Law 97/2.

Revenue from miscellaneous charges that appears in the information template is based on:

- Assumed current volume adjusted for growth, (see growth assumptions). This applies to information statements, tapping and metering requests.
- Charges are adjusted by CPI + 4% each year of the Plan.

7.3 Form of Price Control

Western Water has chosen to use the individual price cap form of price control. This is one of two ESC preferred forms of price control for use in Water Plans. This form of price control encourages prices to align with cost, deals with uncertainty in demand, provides certainty for our customers and is consistent with the WIRO and water conservation measures.

The form of price control and pricing structures have been supported by customer consultation in Appendix D and Appendix E.

7.4 Adjusting prices

Western Water supports the flexibility to adjust prices both during and after a regulatory period for certain events outside its control. However, Western Water acknowledges this flexibility must be managed to ensure the administrative costs do not outweigh the benefits.

7.4.1 Changes in legislative obligations

At the time of preparing the Plan, the impacts of the following key areas are still unknown but considered to be areas that may significantly affect the business.

Water (Governance) Act 2006

New governance arrangements for water authorities come into effect on 1st July 2007. The implications of this legislation on Western Water are expected to be minimal such as a move to being a Corporation and the position of Chief Executive replaced with the position of Managing Director. Western Water supports the new governance arrangements as improved governance arrangements are critical to achieving the Government's objectives for sustainably managing water resources and delivering water services in the long-term interests of the community.

Carbon Trading

The National Emissions Trading Taskforce released a Discussion Paper "Possible Design for a National Greenhouse Gas Emissions Trading Scheme" August 2006, which outlines that the introduction of a National Carbon Emissions Trading scheme will occur by the end of 2010. This was substantiated by an announcement on 9 February 2007 by the Council for the Australian Federation that the States and Territories would introduce an emissions trading scheme by the end of 2010, if the Commonwealth Government did not commit to a scheme following the report of the Prime Minister's Task Group on Emissions Trading.

The scheme is proposed to initially have a "soft start" before ramping up by 2030 with Carbon Trading in Australia to follow the model used by the European Union, which includes a cap of Greenhouse Gas Emissions for the stationary energy sector.

Cost impact for Victoria is predicted to include an additional $1 per week on the average electricity bill, which would equate to an extra $25,000 per year cost impact for Western Water (calculation based on average electricity bill being $500 per quarter and Western Water electricity bill being $1 million per annum).

Due to the "soft start" of the scheme, Western Water does not expect there to be a cost impact on current carbon emissions from the business, and therefore has not costed this in the Plan.

However it is expected that if Western Water has not made a demonstrated effort to reduce carbon emissions then there could be an additional cost impact for carbon emissions by the next Water Plan. Based on current predictions, the resultant carbon price emerging from the trading scheme may be in the range $6 per tonne in 2010 rising to $28 per tonne in 2030.

Based on current emissions levels of 30,000 tonnes CO2e remaining constant over this period of time this could have a significant impact on the business of between $180,000 to $840,000 per year by 2030.

The overall recovery of costs such as these should be considered on a case-by-case basis. The materiality and timing of such imposts would also be a key consideration.

7.4.2 Unforeseen events

Western Water seeks further guidance from customers and ESC in relation to unforseen events. Whilst all reasonable efforts have been made to identify and assess major risks, and plan for major events, recent experience in Water Plan 2005-2008, particularly in relation to climate change and continuation of extreme drought conditions, has significantly impacted Western Water and our customers. The increase to a 5 year regulatory period further increases the risk of material unforseen events occurring.

The most likely unforeseen events occurring include significant worsening of drought conditions necessitating action beyond current 4 step restriction levels, or required implementation of major regional capital projects, such as Caroline Springs Sewer Mining project.

Western Water expects that should unforeseen events occur, to re-prioritise capital projects and other programs in consultation with customers, provided that no adjustment to prices is necessary. Should the unforeseen event be materially significant, Western Water will consult directly with ESC. In order to define materiality, Western Water considers unforseen events to be material if the event exceeds the threshold of $1 million.

Section 8

Non-Prescribed Services

Section 8 Non-Prescribed Services

8.1 Classification of services as non-prescribed

Waterway Tariff

Melbourne Water proposes to extend the customer base liable for the drainage and waterway charge to all customers living in the area of the boundary extension agreed to in December 2005. It is proposed by Melbourne Water that Western Water will be the collection agency for the drainage and waterway charge for customers within our region. This will increase Western Water's customer base by approximately 11,000 customers. Negotiations with Melbourne Water are proceeding and it is expected that the collection services will not lead to additional costs that are not recouped through the collection commission to be paid by Melbourne Water.

8.2 Expenditure and revenue associated with non-prescribed services

Further clarification will be provided once negotiations with Melbourne Water are complete however, it is envisaged that the collection service will be recouped via collection commission to be paid by Melbourne Water.