Water Plan 2013-2018

Final submission
October 2012

Contents

Section 1 - Executive summary

The Water Plan 2013-2018 (the Plan) has been developed in consultation with customers, community groups and stakeholders and prepared in accordance with the Water Industry Regulatory Order 2012 (WIRO) and Western Water's Statement of Obligations (SoO) dated 2 October 2012.

The 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 Plan addresses the new regulatory approaches set out by the ESC in the Water Plan Guidance Paper. The ESC must be satisfied that the prices proposed provide Western Water with sufficient revenue over the regulatory period to meet its obligations and deliver the required service levels.

1.1 Pricing

Western Water's pricing strategy is the product of detailed consultation with customers, and developed in accordance with Government objectives. Price increases are required to address the needs of strong population growth in the region whilst ensuring service standards continue to be met. The proposed price increases are capped and, should conditions improve resulting in lower costs, a commensurate reduction from these caps will be annually considered.

The main features of the pricing strategy include:

- **Smoothed price path of average customer real increase of 6.26% p.a. over the five year period.**
- **Continuation of 3 tiered Rising Block Tariffs (RBT) for residential consumers.**
- **New Customer Contributions (NCC) consistent with the recent release of ESC *New Customer Contributions Guidance Paper* (21 August 2012) will be provided in a separate submission to ESC by 7 December 2012.**
- **Optimised use of water supply from recovering local sources.**

Table 1: 2013-2018 Pricing outcomes for Western Water customers

Year	Total average customer real price outcome (smoothed % increase p.a.)	Average customer real $ impact per annum (160kl)
2013/2014	6.1%	$57.08
2014/2015	6.2%	$62.00
2015/2016	6.3%	$66.61
2016/2017	6.3%	$71.61
2017/2018	6.4%	$77.02
Overall real average annual increase	6.26%	$66.86

The following charges are proposed for all districts from 1 July 2013.

Table 2: 2013/14 tariff schedule (real $)

		1 July 2012	1 July 2013
Water volumetric tariffs (per 4 months)			
Rising block tariff			
- Tier 1	0-53kl	$1.3636	$1.5064
- Tier 2	53-106kl	$1.8358	$1.9985
- Tier 3	>106kl	$3.6717	$3.9970
Water service charge (p.a.)		$215.26	$234.33
Sewerage service charge (p.a.)		$496.33	$513.92

Notes to schedule:

- ***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 charge of $120.10 per annum is in addition to water and sewerage charges above (applies only where Class A dual pipe exists).***

1.2 Service outcomes

Customer consultation indicated current service standards largely meet customer expectations. For this reason, service standards in this Plan reflect actual average performance over the past five years.

In addition, Western Water has a Guaranteed Service Levels (GSL) payment structure whereby breaches of five key water supply and sewerage system standards will trigger a credit payment directly to affected customers. These GSLs are aimed at driving continuous customer service improvement.

Table 3: Guaranteed Service Levels payment structure

GSL	Proposed $ credit payment
Planned interruptions during peak hours (5-9am and 5-11pm)	$50
Planned water supply interruption longer than notification given	$50
No more than three sewer interruptions in 12 months	$50
Sewer spills inside a house, not contained within one hour of notification	$500
Hardship related*	$300

** Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours (as defined by the ESC) to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying.*

1.3 Moving towards a reduced carbon liability

Western Water's carbon liability will increase with the introduction of the Carbon Price Mechanism, combined with strong population growth in the region and increasingly intensive water treatment.

We will work to reduce our carbon liability through the development of energy and carbon abatement projects that provide net benefit to customers in the longer term, by decreasing costs and improving business efficiency. A capital budget of $0.5M thousand has been established to pursue investment in new technologies or processes to reduce energy, or use alternative energy.

Western Water calculates and reports energy and greenhouse gas emissions according to the National Greenhouse and Energy Reporting Scheme (NGERS) to ensure compliance with regulatory requirements.

An understanding of the likely impact of the Carbon Price Mechanism on tariff increases associated with pass through carbon costs is accounted for through a supply chain analysis. These costs are provided for within an additional operating budget of $4.2 million over the five year regulatory period, refer table 12 for details.

1.4 Water conservation

Western Water implemented an extensive water conservation program in response to long term climate change conditions in the current regulatory period. The program was based on a number of Government strategies including responses to the Living Melbourne, Living Victoria recommendations. Overarching these strategies was Western Water's Water Supply Demand Strategy (WSDS) (2006). As a result, customers have very strong commitment to water conservation. After a decade of drought, individual water consumption fell as low as 145 litres per person per day (l/p/d).

The WSDS was updated in 2012. Its focus is on how best to use the region's limited local water supplies to meet rapidly increasing demand from population growth and avoid the high costs associated with importing water from the Melbourne supply system. For this reason, encouraging efficient water usage behaviours remains a priority for the region, along with use of alternate water sources.

In the coming regulatory period, our water efficiency program will include ongoing customer education as well as an operational focus on reducing water losses through supply system improvements and replacing ageing assets, including support for the Government's Six Star ratings for new houses.

1.5 Recycled water

Close to $27 million is required to increase access to recycled water in the region to meet Environmental Protection Authority (EPA) requirements and work toward Western Water's aspirational goal of 100% beneficial reuse. This goal does not apply to wet years with above 90th percentile average rainfall in accordance with Western Water's current recycled water policy.

This expenditure is clearly linked to the actions contained in the Living Melbourne, Living Victoria Road Map, the Central Region Sustainable Water Strategy and the Water Supply Demand Strategy.

Water recycling initiatives are focussed on drinking water substitution, particularly through provision of Class A recycled water to new residential developments, as well as identifying new recycled water markets and developing schemes that have a commercial value.

In addition, more than $2 million will be spent on maintaining 100% beneficial reuse of biosolids.

1.6 Biodiversity

Biodiversity enhancement works are undertaken to comply with *Catchment Land Protection Act, Biodiversity Act*, Victorian Native Vegetation Framework and to comply with local Planning Scheme amendments.

Through spending of over $1 million, Western Water will continue to build on the positive outcomes already achieved by maintaining strong partnerships with local landcare groups to further enhance the biodiversity values at our sites and those areas set aside to offset major infrastructure projects.

1.7 Water quality

Drinking water supplied by Western Water will continue to comply with water quality standards at all times, including the updated Australian Drinking Water Guidelines.

To manage drinking water and meet Department of Health (DH) regulatory requirements, accreditation must be maintained for the Integrated Management Systems and Hazard Analysis and Critical Control Points (HACCP), as well as remaining compliant with *Safe Drinking Water Act 2003* and Safe Drinking Water Regulations 2005.

Over the Plan, Western Water will be compliant, or work towards compliance, with all clauses contained in its shareholder contract with the Minister via the Department of Sustainability & Environment (DSE) and the Statement of Obligations (SoO) including commitments to Water Supply Demand Strategy (WSDS) initiatives.

1.8 Demand forecasts

Western Water's region is one of the fastest growing areas in Victoria, with average population growth rate exceeding 3.7% per annum over the past five years. However, there is a wide variation in growth forecasts by town ranging from 0.7% to as much as 26.7% per annum over Water Plan 2013-18.

Significant growth will take place in the western growth corridor towns of Melton, Sunbury and Bacchus Marsh. Melton's population alone is forecast to increase from 60,000 to more than 263,000 by 2030.

Table 4: Population growth rate estimates for Western Water's service region

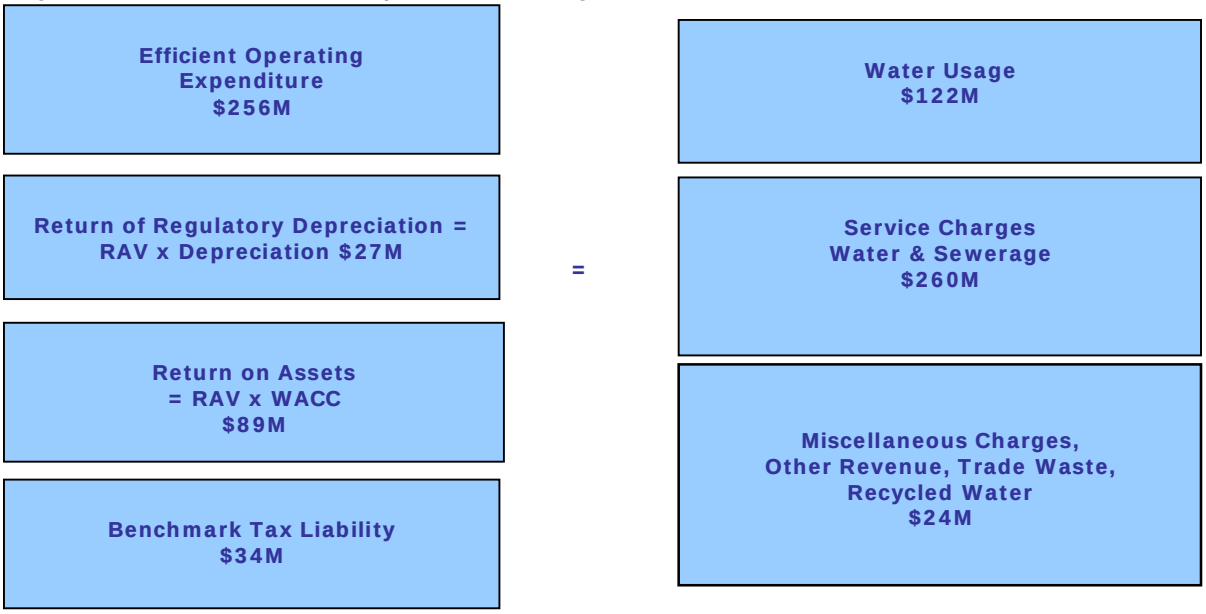
	Population	% increase on prior year
2013/2014	163,801	4.4%
2014/2015	170,210	4.8%
2015/2016	177,434	4.9%
2016/2017	185,098	5.1%
2017/2018	193,456	5.1%

Whilst access to Melbourne water supplies and upgrading recycled water plants have been the focus of the past two Plans, significant growth and the uncertain climate will now drive major investments in service infrastructure over Water Plan 2013-2018 and beyond. Western Water's focus must be on balancing water supply demand and sourcing new and sustainable alternatives.

1.9 Revenue requirements

Western Water's revenue requirement over the Plan is $406 million, which includes operational expenditure of $256 million[1]. The requirement is based on a building block approach to derive future estimates to meet expected service standards and other regulatory outcomes.

Diagram 1: 2013-2018 Revenue requirements building block



Whilst Western Water will focus on making the most of local water supplies, servicing growth will contribute to future operational costs - particularly the increasing cost of bulk water from Melbourne required to fund augmentation projects.

Despite these challenges, Western Water is committed to business efficiency gains that deliver increased revenue and cost savings. The Plan includes annual efficiency/productivity savings of 2% on controllable costs plus an additional $480,000 per annum target for increased revenue maximisation or cost minimisation opportunities which will be brought about by the multi-disciplined Business Efficiency Action Team.

[1] *All dollars in 1/1/13$*

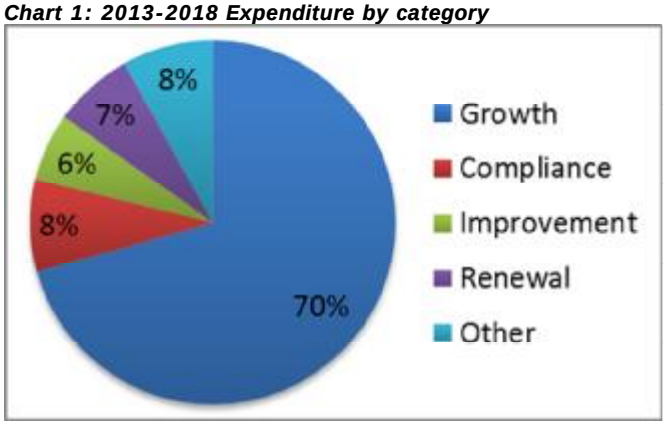
The Plan includes an allocation of $252 million for capital works over five years, principally driven by vigorous development in the region's growth areas. This allocation has been subject to extensive review and investigation to ensure optimum timing, prudence and efficiency.

Table 5: 2013-2018 Capital expenditure by year

	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Expenditure ($M)	27.5	39.3	52.9	68.1	64.2	252

The key drivers of this strong capital spend are growth, compliance, improvements and renewals. These were identified through detailed analysis of support strategies including the Growth Areas Authority Melbourne @ 5 Million; Western Water's Growth Strategy; demand forecasts from the WSDS, Western Water's Regional Action Plan and Asset Management Strategy; compliance with regulatory outcomes; and the need to meet regulatory and customer service obligations set out in this Plan and determined in consultation with customers, DH, DSE, EPA and Melbourne Water.

Chart 1: 2013-2018 Expenditure by category



Net capital expenditure for the period is added to the opening regulatory asset base (RAB) of $280 million at 1 July 2013, less regulatory depreciation and disposals, to arrive at a closing RAB of $453 million at 30 June 2018.

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 $406 million.

1.10 Regulatory performance

Western Water has performed well with respect to customer service and service delivery standards in regulatory audits with focus on ongoing improvement. Comparative reporting against other water businesses and customer feedback assists in determining appropriate service levels.

Past capital expenditure is forecast to align closely to the 2008-2013 Plan with only minor variations required to address current requirements.

Despite the variable climate, Western Water has managed to meet its internal KPIs. While business assets are relatively young, many are located in highly reactive clay soils, that are subject to water main bursts during the summer months.

Western Water's strong focus on recycled water continues in this Water Plan with additional focus on implementing new alternative water projects such as the Toolern Stormwater Harvesting project.

Section 2 - Introduction

2.1 Regulation governing application

This Water Plan 2013-2018 is prepared in accordance with the WIRO 2012 and Western Water's SoO. The Plan is submitted to the Minister for Water, the EPA, the ESC and the DH in accordance with Clause 2.2.3 of the SoO and incorporates any variations requested by the Minister and also gives regard to any comments received from the EPA, DH and other stakeholders.

2.1.1 Principles and approaches

In performing its functions, exercising its powers and carrying out its duties, Western Water follows the guiding principles detailed in Clauses 1-6 of the SoO.

2.1.2 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 1 July 2004 that are valued in a manner determined by, or at an amount otherwise specified by, the Minister at any time before 1 July 2004;

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

2.1.3 Structure of document

This document is structured in accordance with the ESC's Water Plan Guidance Paper (October 2011) to provide the reader with an understanding of the performance, history, strategic direction and constraints under which Western Water expects to operate during 2013-2018.

The Plan outlines demand forecasts, customer numbers, service standards and outputs developed following extensive consultation with customers and regulators, including the EPA and DH, and DSE as shareholder. Also outlined is the capital program and operational expenditure requirements.

The impact on tariffs is provided together with an evaluation of the impact on the customer bill. The needs of customers experiencing financial hardship has been kept at the forefront in developing this Plan.

Key assumptions used in preparing the Plan are provided as Appendix A.

2.2 Performance, strategic context and initiatives

2.2.1 Background

Western Water was formed in 1995 from the amalgamation of four former water authorities and is currently 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. A map of Western Water's service area is available on the website at www.westernwater.com.au

The majority of customers reside within the major towns of Melton and Sunbury with a range of smaller towns serviced. Customer assessments totalled 50,961 at June 2012 and 93 per cent of these are residential.

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.

2.2.2 Strategic context

There is no more important issue for the future of Western Water's service area than the secure supply of safe, quality water. This is especially important in a time of high population growth and climate variability. To ensure future success, Western Water is investing significantly in sustainable water management initiatives.

Over the next 20 years, Western Water's service area will undergo major population growth. An estimated $1.6 billion in future capital investments will be required to keep pace with this growth.

To be sustainable, Western Water must make the most of local water supplies and build on our significant achievements in recycled water, focussing on integrated water cycle management projects including water sensitive urban design in new developments.

Western Water is strongly focussed on its customers, recognising that rising water costs are a major concern to many. To ensure value for money, we have significantly expanded customer consultation and community engagement networks. The breadth and feedback of consultation undertaken for this Plan is significantly beyond any levels achieved previously. This strategic approach, combined with clear organisational values, underpins all activities.

Western Water is a leader in the use of the Balanced Scorecard, a best practice strategic management tool, to measure actions and outcomes to ensure all facets of the business are aligned and progressing towards our Vision "to be a leading service provider, working with our community towards a sustainable future".

2.2.3 Summary

Western Water takes an innovative, leadership approach to managing its business. This is particularly evidenced through its strong performance in recycled water, customer consultation and strategy management and execution.

Working towards our Vision has ensured initiatives are in place 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 past achievements, while recognising the challenges brought about by climate uncertainty, future population growth and changing community expectations. It details how Western Water will respond to these challenges, and makes explicit the trade offs required to truly be a leading services provider, working with our community towards a sustainable future.

Section 3 - Allocating and managing risk

3.1 Overview of risk management at Western Water

Western Water has given significant strategic consideration to the risks facing the organisation including their allocation and management. The governance arrangements, principles and processes by which Western Water manages risk are contained in an enterprise risk framework which has been based on the international risk management standard *ISO 31000:2009 Risk Management – Principles and Guidelines,* as required in the SoO.

Identification of strategic risks occurs during the strategic planning process and on an ongoing basis. The identification and management of risk is embedded across the organisation in areas including operations, projects, incident reviews and audits.

Risk management activities are planned and structured, focussed across the entire organisation. Risks are assessed and evaluated using established criteria ensuring consistency in decision making. All strategic risks assessed as High or Extreme result in development plans for mitigation and allocation of responsibility.

3.2 Key risks facing Western Water

A key challenge for Western Water is accommodating the uncertainty associated with the rapid growth forecast for the region over the next 20 years. Western Water has developed a Growth Strategy for the region. Identifying, measuring and allocating the risks associated with the forecast growth have been key inputs into the development of this Plan.

Growth particularly presents a significant challenge for the capability of the organisation. Western Water's recognises that its workforce will play a critical role in meeting the challenge of providing quality water, recycled water and sewerage services to the growing customer base.

While the capital program is primarily driven by growth, it also addresses other risks associated with managing assets efficiently while maintaining services standards and conforming with regulatory and compliance requirements. Section 7 provides further detail on Western Water's planned capital expenditure.

Another key risk for Western Water is climate variability and the potential for increased major emergencies in the region. Western Water has developed a Climate Change Strategy for the adaption and mitigation of climate variability. This Strategy has also contributed to the development of the Plan.

3.3 Integration of risk into the Water Plan

Consideration of risk is integrated throughout the Water Plan including in the form of price control, demand forecasting and expenditure proposals. Each section of the Plan provides further details of risks considered.

3.3.1 Form of price control

An individual price cap has been adopted to ensure price certainty for customers. Western Water will manage the risk of uncertainty associated with growth and demands.

3.3.2 Demand forecasting

Risk has been considered in development of the demand forecasts. A key uncertainty is the amount of future growth in the region and when it will actually occur. For this reason, demand forecasts are based on researched estimates of growth in the Plan with more rapid growth being estimated for future regulatory periods.

Growth forecasts are based on the best available information at the time. Scenario analysis of the water supply and demand balance has been performed to estimate financial impacts under various conditions. The demand forecasts used provide for an appropriate consideration of the associated uncertainty for both Western Water and its customers. Further details of the demand forecasts are provided in Section 9.

3.3.3 Expenditure proposals

All capital projects have been assessed and prioritised on a risk basis before inclusion in the capital program. Business cases were developed for the top 10 capital projects, including detailed assessment of the risks to these major projects with a Monte Carlo simulation model used. Section 7 provides further details on capital expenditure.

3.3.4 Significant financial risks during the Water Plan

Scenario analysis has been performed for significant financial risks related to the Plan. Analysis of the risks associated with the impacts of growth demonstrates the proposed price path is critical to ensuring the financial viability of Western Water into the future. Details of this analysis are provided in Section 6.

Uncertainty with the amount and timing of New Customer Contributions (NCC) is a significant financial risk to Western Water. The impact of this is assessed in Section 15. A further amendment to the Plan is proposed to be submitted to ESC by 7 December in relation to Plan changes as a result of implementing the new NCC Framework applicable for this Plan period.

The proposed increase in water prices over the Plan period may impact on ability to pay for some customers. All customer impacts from water prices are outlined in Section 12.

Section 4 - Length of regulatory period

The ESC have proposed a minimum five year Plan period to cover the third regulatory period, whilst all aggregate expenditure, demand, revenue and price forecasts are for at least 10 years. Longer regulatory periods will be considered where justified.

Western Water is acutely aware of the challenges it faces in the future, particularly in managing the uncertainties of growth and climate change. For this reason, this Water Plan 2013-2018 will cover the minimum five year regulatory period from 1 July 2013 to 30 June 2018.

This timeframe will ensure pricing stability for customers whilst allow for adjustments after five years in the event of unforeseen outcomes or issues.

Section 5 - Service outcomes

In developing this Plan, Western Water has addressed service outcomes that will meet Government obligations and service standards to meet the expectations of the ESC and customers. Guaranteed Service Levels have also been assessed based on customer priorities.

5.1 Customer consultation

Western Water consulted closely with its customers, community and stakeholders to ensure service outcomes match expectations for the Plan period. Details of our extensive consultation approach are contained in Section 14.

Research has consistently identified the need for Western Water to provide value for money to customers whilst maintaining acceptable service standards. Consultation outcomes have revealed that current service standards and GSLs largely meet customer expectations.

Western Water is keeping price rises to a minimum and identifying efficiency savings wherever possible to maintain a high level of service standards without passing on additional costs to the customer.

5.2 Government and regulatory obligations

Many service outcomes for the coming regulatory period are driven by obligations placed on Western Water by regulatory agencies and the Government. These include those set by the EPA, the DH and DSE.

Service outcomes being addressed to meet Government obligations are set out below. They detail how Western Water will meet requirements for its SoO as well as specific performance areas including environmental management, water quality and customer service.

5.2.1 Statement of Obligations

Western Water has reviewed all clauses contained in the SoO released in October 2012.

5.2.2 Water Supply Demand Strategy

As the region continues to recover from long term drought, Western Water's focus is on making the most of local water supplies in the context of significant population growth and uncertainty regarding future rainfall.

To ensure future generations have adequate water supply, Western Water's 50 year Water Supply Demand Strategy (WSDS) was updated in 2012, as required by DSE. The strategy reaps the benefits of reduced water consumption brought about by past water conservation programs. The focus for the Plan period will be on continuing to promote efficiency as well as reducing water losses through system monitoring and pressure management and replacing ageing assets.

Details of the new WSDS are included in Section 9.

5.2.3 Environmental obligations

In developing this Plan, extensive consultation with EPA was undertaken. Western Water is well advanced in developing programs to meet EPA obligations. These programs are outlined in detail in Appendix E and will be progressively implemented throughout the Plan period.

Western Water has a certified Environmental Management System (EMS) which is subject to external audit every six months. The Environmental Policy outlines our commitment to meeting environmental obligations and adopts best practices for sustainable environmental management. Strategic environmental issues are individually addressed through specific policies including the Greenhouse Gas Emission Policy, Recycled Water Policy, Trade Waste Policy, Biosolids Policy and Sustainability Policy.

Table 6: 2013-2018 Costs in meeting environmental obligations and initiatives

	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Sewage treatment – capital costs	6,250	6,197	11,300	22,661	8,649	55,057
EPA Corporate Licence maintenance	218	222	225	229	232	1,126
Recycled water scheme expansion	836	515	3,882	4,193	4,061	13,487
Sewer spill reduction	1,378	3,063	2,460	1,020	1,079	9,000
Trade waste management	290	245	245	245	245	290
Greenhouse gas emissions reduction	150	150	150	150	150	750
Biodiversity management	250	250	250	250	250	1,250
Groundwater management		60		60		120
Total	9,372	10,702	18,512	28,808	14,666	81,080

Sewage treatment

Western Water has obligations under the *Environmental Protection Act* regarding the transfer, treatment and reuse of wastewater. The State Environmental Planning Policy (SEPP) Waters of Victoria provides further obligations in this regard. Capital works are planned for the region's recycled water plants. The upgrades will ensure Western Water can manage increased inflows brought about by growth as well as improve water quality and comply with environmental requirements – recycling and reusing wastewater in preference to the discharge to waterways wherever practical, reducing mixing zones. Upgrades will be supported by improvements to biosolids management and trade waste practices.

Corporate Licence

To comply with its Corporate Licence with the EPA, Western Water must monitor inflows and outflows as well as groundwater quality at recycled water plants. Biosolids are monitored for chemical and bacterial quality. A particular concern in recent years has been the need for emergency discharges during wet weather events which will be addressed through storage upgrades at plants that are not licensed to discharge. Negotiations will continue with EPA on realistic licence limits for discharges considering holistic environmental outcomes.

Recycled water

Western Water will continue to meet all recycled water quality requirements and strive to achieve 100% reuse of all recycled water produced as our aspirational goal. In years with rainfall above the 90th percentile this aspirational goal does not apply. To this end, the recycled water customer base will be expanded to include households in new residential estates such as Eynesbury and Toolern (supplied with Class A through dual reticulation) as well as new customers for Class B and C recycled water through expansion of recycled water schemes.

Biosolids

Western Water is committed to achieving 100% reuse of biosolids in line with EPA requirements and this target was achieved during the current regulatory period. The aim for biosolids management is that it will be cost neutral. A composting facility at Romsey RWP is proposed as biosolids from Sunbury RWP do not meet EPA guidelines to be directly applied to farm, and a storage facility is established there. Due to increased biosolids production at Melton RWP, the existing storage facility also requires expansion.

Sewer spills

Western Water has developed a comprehensive Sewer Spill Prevention Strategy (SSPS) based on risk assessment of various asset failures. In the Plan, the SSPS requires replacement of ageing assets, CCTV monitoring of sewerage system, and provision of emergency storages at pump stations. Proposed costs also include commitments to an enforceable undertaking issued by the EPA in 2011 as a result of a spill to Toolern Creek.

Trade waste

In line with the ESC's new Trade Waste Customer Service Code, Western Water will reduce manual processing of trade waste applications and review customer pre-treatment maintenance requirements during the Plan period. A bar coding system will be implemented to follow up compliance with grease trap cleaning and Western Water will increase its focus on cleaner production with attention to industrial customers producing significant salt loading to the sewer system. The number of trade waste customers has increased steadily in line with population growth.

Greenhouse gas emissions

Western Water has developed a Climate Change Strategy for reducing Greenhouse Gas Emissions which will be implemented across the business which includes mitigation, renewable energy projects and creation or purchase of offsets. Customer support for reducing emissions is strong and is evidenced through the consultation program.

Biodiversity

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. Biodiversity enhancement work is undertaken to meet the *Flora and Fauna Guarantee Act*, Victorian Biodiversity Strategy, *Wild Life Act* and *Catchment and Land Protection Act*. During the Plan period, programs will be undertaken to maintain biodiversity across Western Water's properties. These include control of noxious weeds, tree planting, pest management, erosion control, flora and fauna assessments, fencing, stream frontage management and aquatic assessments.

Refer to Appendix E for further information on the above service outcomes as well as details of how Western Water is addressing other government obligations including management of odour, irrigation discharges, environmental flows, waterways management, releases from storages, groundwater management and environmental risk assessments. Appendix E also includes information on assessment, monitoring, auditing and reporting.

5.2.4 Water quality obligations

Western Water ensures water is safe and aesthetically acceptable by adhering to the requirements of the *Safe Drinking Water Act 2003* and Regulations 2005 at all times, as well as complying with the Australian Drinking Water Guidelines. Expenditure and initiatives identified in Water Plan 2013-2018 have been informed by the DH Guidance Note No. 14.

Key initiatives for the coming regulatory period include:

- **Application of the 12 elements framework (Australian Drinking Water Guidelines) to ensure a business wide, risk based approach to the supply of continuously safe drinking water.**
- **Focus on the ability to anticipate and manage existing and emerging risks on a continuous basis (e.g. via audits, maintenance checks, online SCADA monitoring and independent analytical testing), in order to allow prompt escalation and rectification works.**
- **Continued delivery of drinking water treatment processes through an externally certified HACCP system.**
- **Appropriate focus on the management of assets related to drinking water safety and quality, through delivery of the AMIS and supported through implementation of MARRS related projects.**

- **Well refined incident and emergency management processes, to provide a rapid and risk appropriate response in circumstances where there is the potential that the safety of drinking water is compromised (including engagement with the DH when required).**

During the Plan period, the current fluoridation system at the Merrimu WFP will be upgraded to comply with the DH Code of Practice for Fluoridation. In addition, a new fluoridation system will be installed at Rosslynne Water Filtration Plant. This will ensure provision of consistent fluoride levels to customers regardless of whether water is sourced from Melbourne (fluoridated) or Rosslynne (currently unfluoridated).

5.2.5 Other obligations

Energy and Water Industry Ombudsman

Western Water is a member of the Energy and Water Industry Ombudsman of Victoria (EWOV) scheme and works with EWOV to ensure that referrals and complaints are not escalated within the EWOV process. To date, this approach has been successful with no complaints escalated. Further information on EWOV performance is in Section 5.3.

Integrated Management System

Western Water achieved triple accreditation for OH&S, EMS and QMS during the first regulatory period. Integrated Management Systems (IMS) accreditation has been an important component in demonstrating organisation commitment to Quality, Safety and Environmental Management Systems.

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.

Education programs

Western Water considers educating young people on crucial issues such as water use, conservation and climate variability a community service obligation as it is of critical value to the community. Education programs engage with up to 80 per cent of schools in the service area and presentations are aimed at all levels; preschool, primary and secondary. Community consultation demonstrated strong support for Western Water's education program and demand is expected to increase as the region's population grows. In the coming regulatory period, Western Water will continue its current education program and explore the viability of an advisory group and/or online forum for youth to engage on water topics.

5.3 Core service standards

5.3.1 Assessing service standards

For Water Plan 2013-2018, it is proposed that service standards are generally set at the average actual performance achieved during the current regulatory period taking into account normal variability. This approach is supported by community consultation. Generally, customers feel that service standards are already at a high standard and pushing standards up would not be justified - particularly if it meant price increases. During the regulatory period, Western Water monitors performance of service standards in its BSC to ensure they remain at a high standard.

Customer Service Charter

Western Water's Customer Service Charter provides an overview of service standards and Guaranteed Service Levels (GSL), which were introduced in July 2008. The Charter is currently being reviewed with consultation planned on specific areas with customer and stakeholder groups. In line with ESC requirements, Western Water introduced a Trade Waste Customer Charter in June 2012.

5.3.2 Core service standards

Core service standards are described in table 7. Descriptions have been modified to better align with the ESC's reporting framework and definitions. The table provides approved targets for the current regulatory period and forecast targets for 2013-2018.

Key notes to the core service standards:

1. **Network reliability is monitored as part of customer service level and asset performance targets.**
2. **Response times for priority 1 and 2 bursts have both been set at 25 minutes, which is based on past performance and considered appropriate given the travel time between depots and the towns they service.**
3. **Western Water believes that performance standards for complaints to EWOV will continue to improve in the next regulatory period through improvements in internal complaints handling, including more proactive escalation of complaints.**
4. **Improved functionality of the new PABX will improve telephone call response times.**

Table 7: Core service standards for Water Plan 2013-2018

Service Standard	2013/14	2014/15	2015/16	2016/17	2017/18
Complaints to EWOV (per 1000 customers)	1	1	1	1	1
Telephone calls answered within 30	94.4%	94.4%	94.4%	94.4%	94.4%
Unplanned water supply interruptions (per 100km)	17.90	17.90	17.90	17.90	17.90
Average time taken to attend bursts and leaks (priority 1)	25.00	25.00	25.00	25.00	25.00
Average time taken to attend bursts and leaks (priority 2)	25.00	25.00	25.00	25.00	25.00
Average time taken to attend bursts and leaks (priority 3)	90	90	90	90	90
Unplanned water supply interruptions restored within 5 hours (per cent)	98.00	98.00	98.00	98.00	98.00
Planned water supply interruptions restored within 5 hours (per cent)	95	95	95	95	95
Average unplanned customer minutes off water supply	12.7	12.7	12.7	12.7	12.7
Average planned customer minutes off water supply	12.08	12.08	12.08	12.08	12.08
Average unplanned frequency of water supply interruptions	0.16	0.16	0.16	0.16	0.16
Average planned frequency of water supply interruptions	0.09	0.09	0.09	0.09	0.09
Average duration of unplanned water supply interruptions (minutes)	87.80	87.80	87.80	87.80	87.80
Average duration of planned water supply interruptions (minutes)	180	180	180	180	180
Number of customers experiencing more than 5 unplanned water supply interruptions in the year	2.00	2.00	2.00	2.00	2.00
Unaccounted for water	9.55%	9.55%	9.55%	9.55%	9.55%
Sewerage blockages (per 100km)	24.68	24.68	24.68	24.68	24.68
Average time to attend sewer spills and blockages (minutes)	24.21	24.21	24.21	24.21	24.21
Average time to rectify a sewer blockage (minutes)	92.33	92.33	92.33	92.33	92.33
Spills contained within 5 hours (per cent)	99.86	99.86	99.86	99.86	99.86
Customers receiving more than 3 sewer blockages in the year	2	2	2	2	2

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

Table 8: Minimum flow rates by meter size for Water Plan 2013-2018

Property service pipe diameter	20mm	25mm	32mm	40mm	50mm
Minimum flow rates (litres per min)	20	35	60	90	160

A detailed overview of customer service standards is contained in the Information Template in Appendix N as well as discussion of how Western Water will manage mitigation of outlier events

5.3.3 Additional service standards

Western Water is in a high growth area and turnaround times for property transfers is an important measure of performance, affecting customers and stakeholders such as real estate agents, solicitors and conveyancers. Western Water proposes an additional performance measure relating to the turnaround time for information statements. Past performance indicates that a level of 90% is a realistic service standard.

Table 9: Information statements provided within five days of request (%)

	2013/14	2014/15	2015/16	2016/17	2017/18
% Information statements turned around in 5 days	90	90	90	90	90

5.4 Guaranteed Service Levels

Western Water introduced Guaranteed Service Levels (GSL) payments during the second regulatory period, based on customer focus group ranking of which service standards should attract a GSL incentive. Customers do not need to apply for the GSL payment. Rather, it is 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.

Consultation has indicated that customers do not require any change to GSL for Water Plan 2013-2018. Whilst there appears to be low level customer and stakeholder support for the need for GSL, Western Water supports ESC's notion of an incentive based scheme to drive performance and improve key aspects of service.

Based on past performance, GSL payments are estimated to be as follows for the third Water Plan. These costs have been included as operating expenses.

Table 10: GSL payments forecast 2013-2018 ($)

GSL payment event	Proposed GSL payment	2013/14	2014/15	2015/16	2016/17	2017/18
Planned interruptions during peak hours (5-9am and 5-11pm)	$50	2	2	2	2	2
Planned water supply interruption longer than notification given	$50	10	10	10	10	10
No more than 3 sewer interruptions in 12 months	$50	1	1	1	1	1
Sewer spills inside a house, not contained within 1 hour of notification	$500	0	0	0	0	0
Hardship related*	$300	0	0	0	0	0
TOTAL		$650	$650	$650	$650	$650

Section 6 - Operating Expenditure

6.1 Operating expenditure in the current regulatory period

6.1.1 Background

Operating expenditure is a key component of Western Water's revenue requirement, representing approximately $256M[2] over the five years of the Plan. 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).

A decentralised structure exists where costs are managed by teams. Each function has a cost centre to manage expenses under the responsibility of a Team Leader or Manager. The BSC strategic management tool is used to prioritise new initiatives and controllable costs are reduced by 2% per annum as an efficiency measure. Further cost minimisation targets are set at $480,000 per annum and monitored through a Revenue Maximisation/Cost Minimisation program that is reported monthly in the BSC.

6.2 Operating expenditure in Water Plan 2013-2018

6.2.1 Overview of operating expenditure

Table 11: 2013-2018 BAU operating expenditure

	2013/14	2014/15	2015/16	2016/17	2017/18
Water	16.55	16.88	16.66	16.86	16.70
Sewerage	13.86	14.02	14.41	15.05	15.46
Recycled water	4.02	4.12	4.37	4.54	4.59
Waterways	-	-	-	-	-
Diversions	-	-	-	-	-
Bulk water	-	-	-	-	-
Rural water	-	-	-	-	-
Total BAU	-	-	-	-	-
New initiatives and obligations	0.53	0.72	0.84	0.97	1.14
External bulk water charges (excl temporary purchases)	6.52	8.23	8.91	15.34	22.70
External temporary water purchases	-	-	-	-	-
Licence fees	0.21	0.15	0.15	0.15	0.17
Environmental contribution	2.41	2.35	2.29	2.23	2.18
Total prescribed ex.	**44.10**	**46.47**	**47.63**	**55.13**	**62.94**

More detail provided in Appendix N.

Business as usual costs includes meeting customer expectations for services including delivery of quality drinking water and efficient sewerage services. Customers also expect timely repairs and maintenance on infrastructure and efficient administration operation. Operating expenditure identified on new obligations include meeting the newly imposed Price on Carbon obligations.

Table 12: Operating expenditure - new obligations ($'000)

	2013/14	2014/15	2015/16	2016/17	2017/18
Price on carbon impact	**530**	**720**	**840**	**970**	**1,140**

[2] **All dollars in 1/1/13$**

6.2.2 Key drivers of operating expenditure

In accordance with the forecasts set out in section 9, growth is assumed to range between 4.4% and 5.1% p.a. over the period of the Plan. Costs in general are also assumed to increase by CPI per annum with some also increasing in line with growth. The expansion of the asset base, in response to customer growth, is a key driver of repairs and maintenance expenditure. A summary of costs by expense type is set out below.

Table 13: Costs by expense type – 2013-2018 ($'000s)

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
a. Chemicals	1,178	1,202	1,230	1,207	1,244	1,343
b. Consultancies	1,966	1,459	1,196	1,180	1,580	1,232
c. Electricity	2,886	2,994	3,264	3,477	3,847	4,194
d. Purchase of water	14,633	6,519	8,233	8,910	15,335	22,703
e. Repairs, maintenance & contractors	10,971	11,436	11,909	11,951	11,943	12,041
f. Salaries and oncosts	12,810	13,130	13,491	13,896	14,313	14,742
g. Other	4,738	4,801	4,842	4,874	4,924	4,961
h. Environmental contribution	1,615	2,410	2,350	2,291	2,234	2,178
Total Operating Expenses	50,796	43,951	46,515	47,786	55,420	63,395

a. Chemical costs have eased over recent years due to a higher proportion of bulk water received from Melbourne Water (MW) which has already received some treatment. Due to the recovery of local supplies our reliance on the Melbourne system is reduced in the initial years of the Plan. It is expected our chemical costs will increase again and assumed current purchasing agreements will be retained.

b. Consultancies are assumed to remain relatively constant other than the next asset revaluation scheduled in June 2016.

c. 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 to Gisborne and Sunbury from Rosslynne as opposed to supply from Melbourne to these two towns that must be pumped.

Care is taken when evaluating future capital projects to ensure that long term efficiency of operations is considered. All elements of the business that are high consumers of electricity (eg. pumping, aeration, filtering and processing) are also greatly affected by weather.

Predictions for Water Plan 2013-2018 are based on a review conducted by SKM on behalf of WSAA. Western Water has assumed a mid-point between low and mid retail indices scenario for commercial customers in determining the assumed electricity rates going forward. This includes the expected impact on electricity prices of the price on carbon.

d. Purchase of water is the largest cost at the commencement of the Water Plan period. It includes bulk water purchases from both MW and SRW. Water is purchased from MW at a largely variable price and from SRW at a fixed annual fee regardless of volume of water drawn. The Plan reflects the impact of climate variability and the need to allow local reservoirs to recover.

e. Repairs and maintenance cost include engagement of contractors and purchase of supplies. The cost remains relatively constant throughout the Plan period, with allowance to meet growth in customer numbers.

f. Salaries and oncosts are in line with the current Enterprise Agreement which proposes annual increases of 4%. Overall, a net 1.5% real increase per annum has been incorporated assuming CPI of 2.5% p.a. Staffing levels have been frozen at June 2013 numbers. This action is required to ensure Western Water achieves maximum

productivity and efficiency targets. Western Water acknowledges the value of having the right people doing the right jobs, supported by appropriate training, technologies and equipment.

g. Information technology is a key enabler supporting delivery of strategic priorities to enhance customer value. The Plan will deliver some significant technology changes including e-billing solutions, social media platforms, mobile technology, real-time telemetry, improved spatial geographical information systems (GIS) and Intelligent Water Network technologies.

The use of technology in the context of a fast growing customer base will drive innovative solutions to deliver efficiencies, streamline processes, mitigate business risk, and enable real time reporting. All of which will add value to customers.

The capital investment of $17.3M in major IT projects will be prioritised and delivered, including the focus on delivering customer value and improving the customer experience in line with the IT Strategy.

h. 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. Insurance costs have increased by 6% p.a. on advice from our broker and computer software is expected to increase by 10% p.a. Increases in analysis are a direct result of DH regulation.

6.2.3 Justification of forecast expenditure levels

Climate variability has had a major impact on costs – both in the past and current regulatory periods - specifically in the area of augmentation to the Melbourne supply system and ongoing water purchases. In recent years, supplies from the Melbourne system were needed to keep the region alive as local reservoirs dried up. Even in the past year, as local reservoirs recovered, MW supplied close to half of the region's water supply (compared to 74% in 2010/11 and virtually all the region's water in prior years).

Increased security of water supply for customers has come at an increasing cost. Whilst Western Water pays MW a variable fee, it pays SRW a fixed fee for water purchases regardless of water volume used. Bulk water costs are set to increase further as MW charges grow to reflect major augmentation in their supplies including the desalinisation plant.

Forecast expenditure levels address customer demand, regulation costs, environmental contribution and functional group expenditure – discussed in detail below.

Demand forecasts

Western Water services some of Victoria's fastest growing precincts including Melton, Rockbank, Toolern, Eynesbury and Sunbury. Demand will increase as population numbers swell.

However, this Plan assumes costs can be kept down by making greater use of local water supplies. This has been made possible through return to full capacity in local reservoirs, brought about by significant rainfall in recent years. To this end, Western Water has developed a water optimisation tool to inform decision making and reduce purchasing more expensive water from MW.
In addition, the easing of water restrictions has not resulted in any major bounce back of consumption to levels before the drought. This supports our expectation that there will be long lasting impacts from water conservation initiatives on customer behaviour.

Table 14: Population forecasts 2013-2018

	2013/14	2014/15	2015/16	2016/17	2017/18
Annual growth	4.4%	4.8%	4.9%	5.1%	5.1%
Population	163,801	170,210	177,434	185,098	193,456

Regulation costs

The cost of regulation is summarised in the following table. It considers DH levy and audit as well as consultation costs, regulatory costs and EPA Licence fee.

Table 15: Regulation costs 2013-2018 ($'000)

Regulation costs	2013/14	2014/15	2015/16	2016/17	2017/18
DH Levy	22	22	22	22	22
Customer consultation	5	5	5	20	10
Regulatory consultancy	10	10	10	30	10
Regulatory audit	60	60	60	60	60
ESC regulatory cost est.	100	53	53	53	80
EPA Licence fee	70	70	70	70	70
Total	267	220	220	240	252

Environmental contribution

The environmental contribution is a levy paid to DSE based on 5% of water, sewer and trade waste income in the year 2011/12. The levy is held constant for five years, effectively meaning it will decrease in real terms over the Plan period.

Table 16: Environmental contribution 2013-2018 ($'000 – 1/1/13 $)

	2013/14	2014/15	2015/16	2016/17	2017/18
Environmental contribution	2,410	2,350	2,290	2,230	2,180

Functional group expenditure

Table 17: Functional group expenditure 2013-2018 ($'000 – 1/1/13 $)

	2013/14	2014/15	2015/16	2016/17	2017/18
Water expenditure	22,360	15,060	16,920	17,290	23,570
Sewer costs	6,970	6,900	6,910	7,230	7,560
Recycled water	3,220	3,280	3,360	3,600	3,730
Retail	5,380	5,340	5,420	5,520	5,620
Corporate	10,160	10,380	10,640	10,730	11,310
Unregulated expenses	0	0	0	0	0
Total expenditure	48,090	40,950	43,260	44,360	51,780

Details of expenditure by functional group are contained below.

a. Water expenditure includes bulk water purchases from MW and SRW.

The graph below shows water costs, which includes a share of retail and corporate costs, but excludes bulk water charges, indicates some increase in expenditure over the period of the Plan. The graph also looks at bulk water charges, with the increase not anticipating any additional demand from Melbourne Water in volumes due to the outcomes from the bulk water supply optimisation tool.

b. 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 graph below also looks at costs going forward for sewerage, including a share of retail and corporate costs.

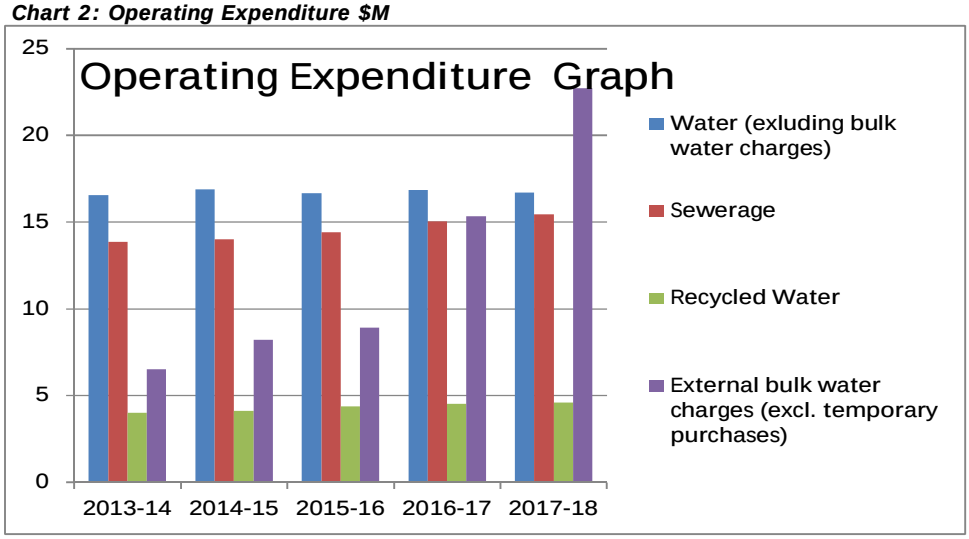
c. Recycled water expenditure is predicted to continue to grow in line with the expansion of this function of the business. Opportunities are being investigated to identify areas of greater utilisation, and to deliver substitution targets set in the WSDS.

d. Retail costs capture those activities directly associated with customers and revenue collection. No real changes are proposed within this cost category.

e. Corporate costs include all costs which cannot be directly attributable to any of the above but that relate to regulated activities.

f. Unregulated expenses. Western Water does not have any non regulatory expenditure.

Chart 2: Operating Expenditure $M



The Information Template for these costs is provided as Appendix N.

5.2.4 Productivity improvements over the period

Western Water has a cross functional team dedicated to identifying and addressing cost minimisation targets. Revenue Maximisation forms part of the Enterprise Agreement, with annual wage increases dependant on achieving KPIs. As a result, 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.

For this Plan an annual $480k target has been set for productivity improvements. This is in addition to the expected 2% efficiency target on controllable operating expenditure.

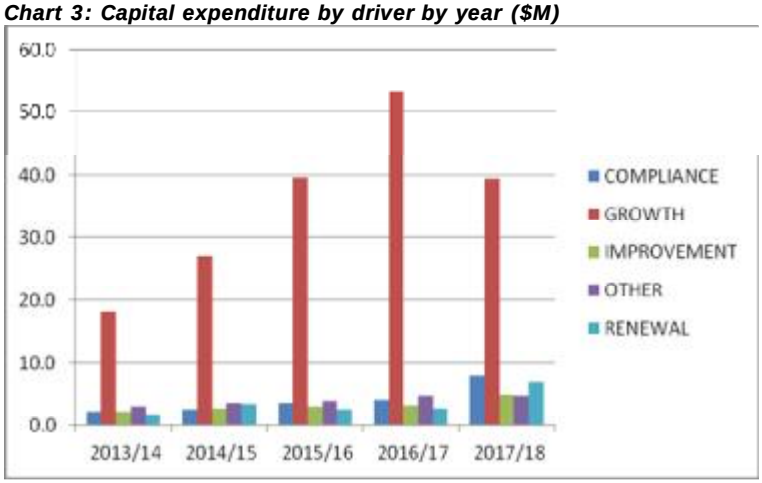
Section 7 - Capital Expenditure

7.1 Capital expenditure

Western Water's capital expenditure in the current regulatory period is approximately $150 million. More than 50% of this is attributed to growth in the region, with growth rates of up to 4% being realised over the five years.

Capital expenditure for the Plan will be driven by population growth to an even greater extent. The State Government's Melbourne @ 5 Million policy has seen significant areas of land in the region included in the Urban Growth Zone. As a result, Western Water's service population is forecast to grow from 155,000 to 450,000 by 2030. The Growth Strategy (Appendix G) is the key document which provides the basis for assumptions on the variables which influence capital expenditure.

Chart 3: Capital expenditure by driver by year ($M)



7.1.1 Overview of capital expenditure

Western Water plans to deliver capital projects totalling $252 million[3] during Water Plan 2013-2018. This expenditure will largely deliver growth outcomes for sewerage, water and recycled water infrastructure. Capital expenditure will be split according to the table below[4].

Table 18: Capital expenditure by year 2013-2018 ($M)

	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Expenditure ($M)	27.5	39.3	52.9	68.1	64.2	252
% Growth	67%	69%	75%	78%	61%	70%

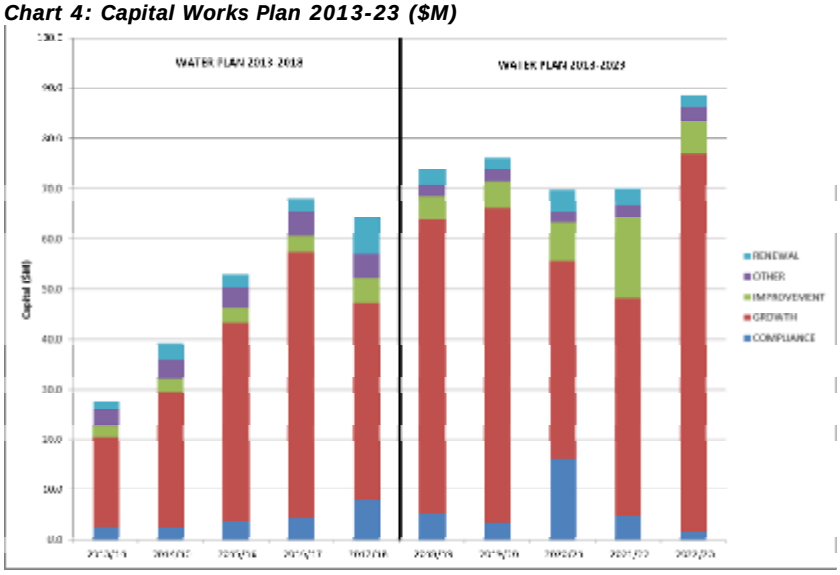
A capital project evaluation summary is developed for each item on the capital program. This process combines risk-based assessments together with TBL principles to ensure justification of all capital expenditure.

A large portion of the capital program is dependent on forecast growth in the region which, as with all growth, has a high level of uncertainty. Consequently, while the capital plan has been prepared based on the best available knowledge at this time, it has been developed with some flexibility in mind. This includes development and analysis of a number of different growth scenarios, particularly within the new growth areas.

As requested by ESC, Western Water has provided capital expenditure projections for 10 years. The breakdown of the total capital works plan for the current and upcoming regulatory periods is shown in the following graph. It highlights the large percentage of the capital plan which is growth based.

[3] *All dollars in 1/1/13$*
[4] *As above.*

Chart 4: Capital Works Plan 2013-23 ($M)



7.1.2 Top 10 capital projects

The top 10 capital projects planned for the Plan, with associated costs and strategic drivers are shown below. A detailed document for each of the projects, including project justification and cost estimates are provided in Appendix H.

Table 19: Top 10 capital projects 2013-2018

Town	Project	Description	Budget ($M)	Strategy reference
Sunbury	Sunbury RWP Upgrade	Current plant is at capacity and requires major upgrade to cater for future sewer flows. The upgrade will increase the hydraulic capacity of the plant by 5ML, with further upgrades over 20 years.	33.1	Growth Strategy, Melbourne @ 5 Million Servicing Strategy, Sunbury RWP Master Plan
Melton	Toolern Stormwater Infrastructure	Harvesting stormwater from Toolern with transfer to Melton Reservoir. Scheme has potential to capture 2.5GL in dry years. Federal funding received on dollar for dollar basis.	18.7	Ministerial Advisory Council Living Melbourne Living Victoria Roadmap
Region	Sewer Spills Prevention Strategy	Sewage Spill Prevention Strategy includes a rolling 5 year program to CCTV survey all sewer mains (>300mm) and all problematic reticulation sewers to identify where and when renewals are required.	9.0	Sewage Spill Prevention Strategy
Melton	Surbiton Park RWP Upgrade	Upgrade of the Surbiton Park RWP to cater for future flows. The plant will ultimately require a capacity of 42ML/day, with increases of sludge treatment capacity to 18.6ML/d. Includes construction of additional digestion capacity and belt press.	8.8	Growth Strategy, Melbourne @ 5 Million Servicing Strategy, Surbiton Park RWP Master Plan
Bacchus Marsh	Bacchus Marsh RWP winter storage lagoon	Expansion of winter storage capacity to facilitate reuse strategy. Involves construction of a new storage facility.	5.3	URS Land Capability Assessment Recycled Water Strategy
Melton	Class A RWP Upgrade	Plant upgrade will increase capacity of the plant to 7.5ML to cater for additional demand from Toolern, Eynesbury and Rockbank.	5.2	Growth Strategy, Melbourne @ 5 Million Servicing Strategy, Class A Strategy Board Report (Dec 2011) MAC Living Victoria
Sunbury	Sunbury Additional Water Storage	Additional 10ML water storage for Sunbury 10ML to be built on Bald Hill to supply Diggers Rest and surrounding growth areas. An additional 22ML will be required in future as further growth occurs.	4.8	Growth Strategy, Melbourne @ 5 Million Servicing Strategy, Sunbury Water Supply Master Plan

Bacchus Marsh	Bacchus Marsh Rising Main (Ave of Honour Pump Station to RWP)	Augmentation of the Bacchus Marsh rising main from the Avenue of Honour Pump Station. This pump station delivers sewer flows from Bacchus Marsh catchment to the Bacchus Marsh RWP.	4.4	Bacchus Marsh Sewer Master Plan
Melton	Rockbank Outfall Sewer (Rising Main)	Staged rising main to cater for future growth in Rockbank Nth PSP. First stage will be a 300mm diameter rising main by end 2013 to initially transfer flows from the Temporary (Developer) PS servicing area 1 (Rockbank Nth PSP), and eventually from Rockbank South.	4.1	Growth Strategy, Melbourne @ 5 Million Servicing Strategy
Bacchus Marsh	Sewer Rising Main, Geelong Rd	Constructino of a 375mm diameter sewer rising main from Grant Street pump station to Avenue of Honour rising main.	4.1	Bacchus Marsh Sewer Master Plan

7.1.3 Key strategies

The key driver for capital expenditure is to provide reliable service to the meet demands from forecast growth in the region, whilst maintaining and improving existing areas. Western Water has a strong customer focus and is committed to servicing the region in both a sustainable and efficient manner.

A number of strategies approved by the Western Water Board form the foundation for the capital works plan. The key strategies are listed below:

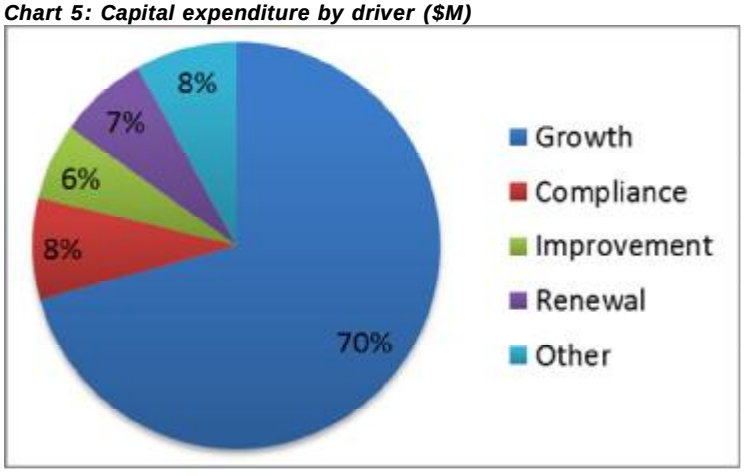
- **Western Water Growth Strategy**
- **Class A Strategy Water Plan 2013-2018 (Board Report)**
- **Surbiton Park Recycled Water Plant Master Plan**
- **Sunbury Recycled Water Plant Strategy and Master Plan**
- **Melbourne @ 5 Million Servicing Strategy**
- **Western Water Biosolids Strategy**
- **IT Strategy**
- **Sewage Spill Prevention Strategy**
- **Water Supply Demand Strategy**

These strategies set the direction for Western Water and are the strategic basis for the Capital Works Plan.

7.1.4 Key drivers

As indicated in Table 18, the key drivers for expenditure through the Plan period are growth and compliance. These two drivers make up 79% of the overall capital spend.

Chart 5: Capital expenditure by driver ($M)



7.1.4.1 Growth

Western Water's Growth Strategy details the forecast population growth, densities and locations across the service region over the Plan period. The growth metrics which form the basis of demand and usage patterns for the existing and new growth areas have been incorporated into the Strategy. Due to their significant influence on the Capital Works Plan, extensive work has been conducted to determine and confirm these metrics. In addition, the Growth Strategy focus is on monitoring of systems across 2013-2018 to better understand changes in growth metrics.

During the Water Plan 2008-2013, the region has experienced dramatic climate conditions, with extreme drought conditions in 2008/09 through to record rainfall in recent years. For this reason, it is difficult to predict future water usage and the extent to which historical demands may return.

Over the past decade, Western Water has developed Master Plans, and associated hydraulic models, for towns in the service region. These forecast growth within each town and assess infrastructure requirements to meet both current and future demands.

An iterative process is carried out to review options to address infrastructure shortcomings and obtain the least community cost solution. Reviews consider capital and operating costs as well as associated environmental and social issues.

7.1.4.2 Compliance

a. Treatment and reuse

Western Water has obligations under the *Environmental Protection Act* regarding the transfer, treatment and reuse of wastewater. The State Environmental Planning Policy (SEPP) Waters of Victoria provides further obligations in this regard. Further investment in the treatment process is necessary to meet increasing flows due to growth and the increases in quality of treated effluent to meet EPA obligations.

b. Ecological

Whilst concerted efforts are made during design phases of projects to minimise or avoid damaging the environment during construction, impacts are often inevitable and construction of infrastructure can result in removal of native vegetation. Under Planning Schemes and Native Vegetation Framework regulations, offsets for this removal must be provided and Western Water has and will continue to invest strategically in biodiversity actions to ensure these obligations are satisfied.

c. Water quality

The *Safe Drinking Water Act* requires water quality parameters to be met. Increased regulation around drinking water quality requirements under this Act may be likely in the next regulatory period. If this is the case, further investment will be necessary.

7.1.4.3 Corporate

The IT Strategy is the fundamental strategic document that underpins and outlines how technology is to be used as a business enabler and as a method of creating efficiencies over this Plan.

7.1.5 Risk

Population growth forms the basis for a large portion of the Capital Works Plan but, as with any forecast, there is uncertainty as to the timing of development. Variables such as population growth rates, location of development, densities and occupancy rates could vary from the current strategy. Adopted metrics of potable and recycled water demands and sewerage flows could also differ from the assumed rates.

The Growth Strategy looked in detail at these variables and, using the best information available, provided the adopted estimates. Continual monitoring of these estimates against the actual growth will be necessary to ensure that the capital plan is delivered in a way that provides lowest community cost to the customer.

The likelihood and consequences of risks associated with each individual project have been considered and a risk rating given to each project, which also addresses the cost of the project and the number of customers benefiting from it. This rating provides assistance in prioritising projects within the capital works plan. In particular, the top 10 projects have undergone a P50 analysis using the Monte Carlo method to obtain a greater understanding of the cost estimates and associated risks.

7.1.6 Assumptions

The Growth Strategy includes a number of assumptions. In particular, the logical inclusions process initiated by the Minister for Planning has been assumed to have no impact on the capital works program. Western Water has contributed to this process and any areas which are expensive to service have been highlighted to the committee carrying out the process.

Assuming no impact to the Capital Plan is a low risk approach given the long lead time associated with land being included within the Urban Growth Zone, and then ultimately developed. If this assumption proves incorrect the Capital Works Plan has the necessary level of flexibility to include infrastructure for logically included areas through deferring of other projects.

7.1.7 Prudent and efficient capital expenditure

Western Water maintains a small professional workforce, which allows in-house input and control of critical asset decisions. Detailed design is outsourced, and project management is shared between in house engineers and 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.

The Board's Capital Works Committee 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 its progress including over expenditures if they occur.

7.2 Asset management

Western Water manages an asset base of $643 million in order to provide water, sewerage and recycled water services to its 155,000 customers. The challenges for Western Water in delivering these services in perpetuity are centred around the rapid growth and development in the region, the dry climate that is expected to return to service area, and the consequent scarcity of adequate local water resources which has necessitated importing extra supply from remote Melbourne Headworks catchments.

Western Water uses a mix of in house and outsourced resources to manage its infrastructure assets across 12 towns. A feature of this model is the three field depots located close to our customers to provide rapid response to customer asset related problems, 24 hours a day, seven days a week. Along with three depot teams, two water and two sewage treatment teams manage the 14 treatment plants. The combined total of 22,000 essential service assets managed by these teams are key means by which Western Water provides customer and community value.

Asset management improvement has been a focus at Western Water and currently we are implementing a new AMIS with advanced features. Along with this key action, Western Water is also participating in the WSAA Aquamark3 asset management improvement project and improves asset performance monitoring.

7.2.1 Replacement and renewal expenditure

Asset replacement is based on detailed monitoring and analysis of asset condition and performance. 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. A focus is to extend asset life for greatest return as well as ensure optimal asset utilisation.

7.3 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. Western Water closely monitors compliance for headworks and tailworks assets including the structural stability of our dams to meet ANCOLD requirements. Compliance at RWPs is measured through effluent monitoring to meet EPA licence requirements, while water quality monitoring at water treatment plants and in the reticulation system is undertaken to meet DH requirements. Key compliance related activities and programs are outlined in Section 5.

7.4 Total capital expenditure requirements

The average annual capital expenditure for the first regulatory period was $32 million. The proposed average annual capital expenditure during the Plan is over $50 million, which illustrates a significant increase above current average.

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 on 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 10 years. Given the timeframe for the information request and the difficulty in determining long term capital programs, accuracy beyond 10 years is limited.

Section 8 - Revenue requirement

8.1 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 (RAB) updated each year to reflect any additional capital expenditure net of contributions, asset disposals and regulatory depreciation.

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 $406 million[5] or NPV $355 million. The following table brings together Western Water's assumptions about its expenditure requirements, demand and capital financing assumptions[6].

Table 20: 2013-2018 Revenue requirement summary $M

	2013/14	2014/15	2015/16	2016/17	2017/18
Operating expenditure	44.10	46.47	47.63	55.13	62.94
Return on assets 30/6/13	14.13	13.88	13.62	13.37	13.11
Regulatory depreciation of assets 30/6/13	4.19	4.19	4.19	4.19	4.19
Return on new assets	0.50	1.72	3.51	5.99	8.74
Regulatory depreciation of new assets	0.15	0.51	1.05	1.80	2.64
Tax liability	-	5.67	9.85	9.93	8.44
Total revenue requirement	**62.92**	**72.82**	**80.06**	**90.70**	**100.26**

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. More detail on the revenue requirement is contained in Appendix N.

8.2 Opening value of the opening RAB at 1 July 2013

The regulatory asset base at 1 July 2004 was prepared by DSE in an independent process prior to the first 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.

Table 21: Forecast regulatory asset base (at 30 June 2013 in 1 January 2013 $M)

	2008/09	2009/10	2010/11	2011/12	2012/13
RAB at 1 July 2008	171.707	204.920	234.251	258.012	272.593
Opening RAB at 1 July	41.783	38.876	33.531	26.444	18.859
Add Gross capital expenditure	-	-	-	-	-
Less Government contributions					
Less Customer contributions	3.887	3.906	3.790	5.204	4.742
Less Disposals (cash value)	0.682	0.839	0.547	0.800	0.913
Less Regulatory depreciation	4.002	4.800	5.433	5.859	6.169
Closing RAB at 30 June	204.920	234.251	258.012	272.593	279.627

In determining the value of the Regulatory Asset Base proposed for this Plan it is necessary to establish the basis for the key components: growth is the key driver for the components of the regulatory revenue model.

[5] *All dollars in 1/1/13$*
[6] *As above*

8.3 Capital expenditure

Capital expenditure is covered in Section 7. All proposed capital expenditure has been subject to extensive review to ensure optimum timing, prudence and efficiency.

8.4 Government and customer contributions

No Government contributions are proposed for the Plan period other than the known grant of $9.2M anticipated to be received for the Toolern Stormwater project. All customer contributions are included based on current determined NCC pricing ($1,217 per lot per service). Further modelling is currently being conducted to ensure the recent ESC guidance paper on NCCs is adopted. An amendment to this Plan will be provided to ESC by 7 December 2012 on changes required as a result of the new NCC framework. Further detail is provided in Section 15.

8.5 Disposals

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

8.6 Regulatory depreciation

Western Water revalued some assets for accounting purposes at 31 December 2011 to concur with the Board approved five year valuation policy. This exercise is separate to the regulatory asset values. The next revaluation is expected by 31 December 2016.

An average straight line depreciation rate has been adopted for all assets based on effective average lives of 1.5% per annum. This reflects the long term nature of existing assets and improvements to materials used in newly constructed assets.

8.7 Western Water's RAB roll forward

The forecast Regulatory Asset Base (RAB) at 30 June 2013 is then added to the forecast movements for this Plan to determine the closing RAB at 30 June 2018. The actual movements for 2012/13 are not yet known so the determination figure for 2012/13 has been applied. However, it should be noted the current forecast capital expenditure is predicted to be an efficient forecast figure of $26.3 million which is approximately $8 million greater than the determination figure.

Table 22: Proposed RAB going forward into the second regulatory period (January 2013 $M)

	2013/14	2014/15	2015/16	2016/17	2017/18
RAB at 1 July 2013	279.627				
Opening RAB at 1 July		294.216	317.455	354.726	405.096
Add Gross capital expenditure	27.470	39.267	52.929	68.104	64.169
Less Government contributions	1.254	3.179	1.935	2.868	-
Less Customer contributions	6.500	7.402	7.819	8.237	8.960
Less Disposals (cash value)	0.800	0.800	0.800	0.800	0.800
Less Regulatory depreciation	4.328	4.647	5.104	5.828	6.695
Closing RAB at 30 June	294.216	317.455	354.726	405.096	452.810

The opening RAB for this Water Plan is derived from the regulatory asset value determined for 1 July 2004 rolled forward to reflect actual and forecast net regulatory movements in assets to 30 June 2018.

8.8 Weighted average cost of capital

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

Table 23: WACC as per ESC financial template

Parameter	Suggested WACC
Real risk free rate	2.10%
Equity Beta	65%
Market Risk Premium	6.0%
Debt Margin	2.35%
Financing structure	60%
Forecast Inflation	2.75%
Franking credit value	50%
Post Tax Real WACC	5.1%

8.9 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. Western Water is forecasting tax payments each year of the Plan. However, due to the timing, the first payment will not actually occur until early in 2014/15. 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.

Table 24: Tax payable estimates (Jan 2013 $M)

	2013/14	2014/15	2015/16	2016/17	2017/18
Tax instalments payable	-	$5.67	$9.85	$9.93	$8.44

Section 9 - Demand

9.1 Overview of demand forecasts

As Western Water uses the Price-Cap form of price control, the rigour behind demand forecasts is extremely important to reduce pricing volatility on customers. This section of the Plan addresses the aspect of demand for services. It is a key driver for the cost of operating the business, and vital in determination of business income.

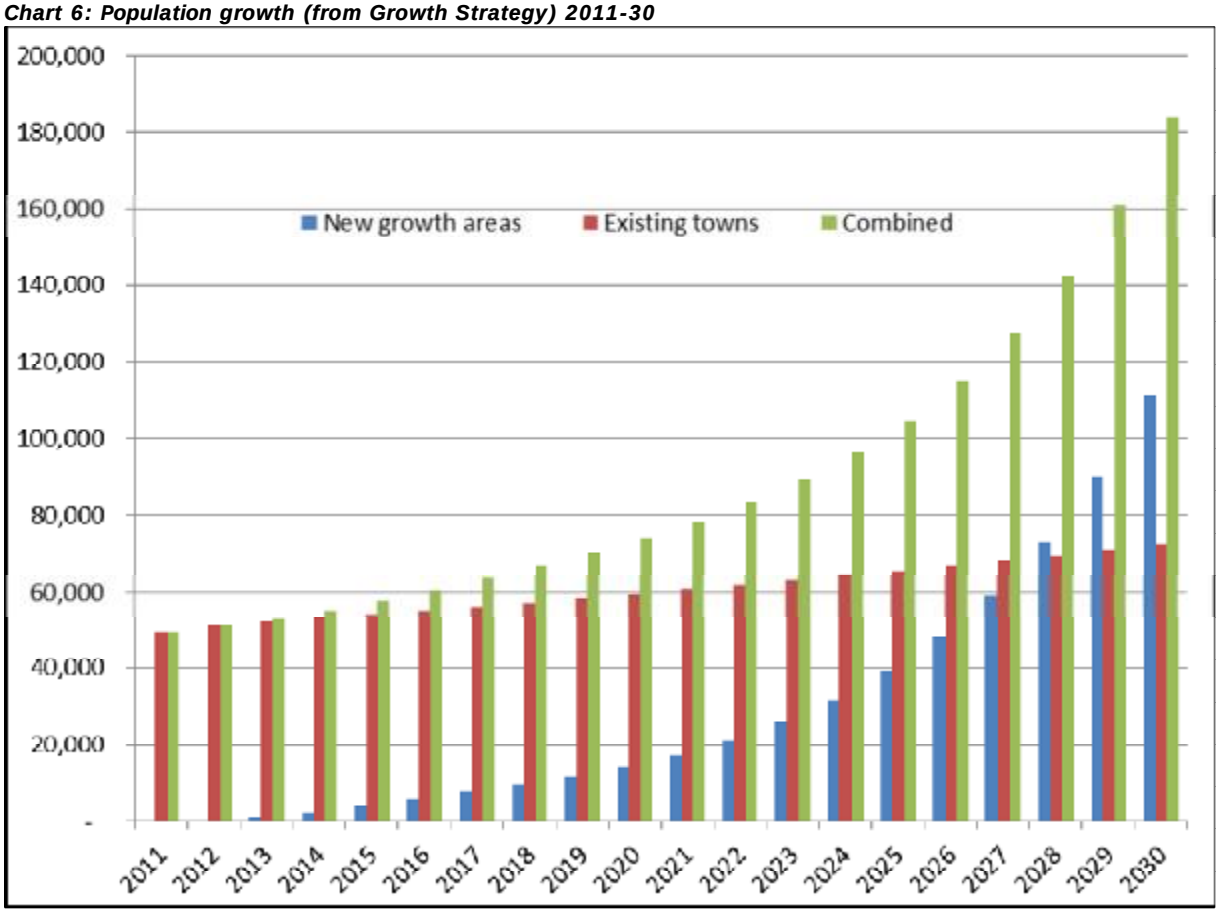
Western Water has developed a water optimisation model to maximise its use of local supply over more expensive purchases from Melbourne Water. This model incorporates the key metrics from the Growth Strategy (attached as Appendix G) and the assumptions surrounding average daily consumption. These assumptions are also incorporated into the Demand Study prepared for the WSDS (summary attached as Appendix F), which includes detailed analysis of the supply and demand drivers on the business in a period of focussed conservation effort.

9.1.1 Growth forecasting and demand

Past annual growth in residential assessments has been as high as 4-5% in some areas. However, growth forecasts anticipate over 130,000 residential properties will be built in Western Water's service area over the next 20 years. Western Water engaged expert Consultants to conduct an extensive detailed review of growth predictions and identify impacts and timing on demand and infrastructure. This work has been the basis for demand forecasting adopted in this Plan.

Western Water's derived population figures were determined from individual water supply systems and, hence, provide individual growth rates per system. Appendix H provides a copy of the Growth Strategy which support growth rates used for this Plan.

Chart 6: Population growth (from Growth Strategy) 2011-30



Western Water's current available water supply has been determined at 16,414ML based on a seven year average of Return to Dry. 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.

In addition, the formation of the Growth Areas Authority provides a focus on sustainable communities - specifically employment and prosperity - consistent with Melbourne 2030. This 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.

9.1.3 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. Many different scenarios have been modelled to meet the demand requirements of the growing customer base.

A major method of substitution within this Plan include expansion of the Class A recycled water third pipe system currently implemented at Eynesbury township into Toolern and Rockbank growth areas. Opportunities are also being assessed for stormwater harvesting at Toolern.

Western Water's demand management approach also includes the supporting Water Efficient Labelling Scheme, Permanent Water Saving Rules, Rising Block Tariffs as well as community education, water audits, leakage reduction programs, appliance retrofit programs and source substitution. Western Water will continue to closely monitor per capita usage with the view to achieving better targets over time. The challenge for Water Plan 2013-2018 is to maintain current water conservation commitment demonstrated by our customers.

9.1.4 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 Plan includes the fixed cost of $1.5 million for bulk water in 2013/14 increasing to in excess of $2 million by 2017/18 payable to SRW, as well as the significantly increasing cost of purchasing water from MW. The total cost of MW has been reduced significantly due to use of the Water Optimisation model discussed below and included in Appendix J.

9.2 Summary of demand forecasts

9.2.1 Water usage during the Water Plan period

The Plan has been based on the customer number forecasts from the Growth Strategy. The resulting customer numbers are summarised below.

9.2.2 Customers

Forecast property and population numbers are contained in Table 25 below. The customer base is expected to grow by 30,000 during Water Plan 2013-2018.

Table 25: Population and properties serviced 2013-2018

	2013/14	2014/15	2015/16	2016/17	2017/18
Population serviced	163,801	170,210	177,434	185,098	193,456
Serviced properties*	54,013	56,488	59,209	62,152	65,317

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

9.3 Individual demand forecasts

An important aspect of the preceding data is the two key drivers which are impacting on the forecast figures, including high population growth rate in Western Water's service region and lack of "bounce back" for water consumption due to success of long term conservation messages and installation of water efficient household appliances.

Future demand will be impacted by further uptake of water efficient appliances and other conservation measures. Climate, demographic, socio-economic and water efficiency trends have a critical role to play in determining future infrastructure needs.

9.3.1 Climate

Climate is the driver of the water cycle. It determines how much water is available (supply) and how much water we need (demand) in the short and long term. In Western Water's region, the average long term rainfall is less than 600mm per year. Another major consideration is variability in rainfall. Its erratic nature is most visible in extreme events such as floods and droughts. Climate, normal seasonal variations, droughts and floods can all contribute to local extreme conditions. For this reason Western Water has considered local water supply optimisation over Water Plan 2013-2018 to be a key planning task.

9.3.2 Local water sources and inflows

Western Water owns bulk entitlements and purchases water in catchments and storages owned and operated by Southern Rural Water (SRW) and Melbourne Water (MW). In addition, Western Water has 18 local storages. These are relatively small, but supply vital drinking water to some of our smaller towns.

Realm modelling was undertaken on long term inflows and yield as required by the DSE WSDS guidelines 2011, applying a climate change scenario to these inflow series. The range of possible climate futures include wet, median, dry and a return to dry scenario. Businesses are expected to test these scenarios and select based on a risk management approach.

Western Water has obtained climate expertise from the Bureau of Meteorology and CSIRO. Current literature and modelling suggests a shift in the climate for the south-eastern region of Australia resulting in reduced rainfall from the historical median.

Western Water's region is currently a low rainfall area averaging between 500-600mm (Western Plains) and 700-900mm (Macedon Ranges) annually. If the predicted drier climate occurs, this will have an even greater effect in the Western Water region as reduced runoff will result in a low or no stream flow scenario. This will constrict inflows into local water storages. Modelling also indicates droughts, such as the one recently experienced, will occur more frequently in the future (SEACI 2011).

9.3.3 Return to dry scenario

Western Water believes it is prudent to suggest that the most likely scenario to occur will be at least dry (CSIRO 2010). For this reason, water resource planning is catering for a drier climate where water availability is reduced from historical levels. The extreme drought experienced in the west over the last 12 years means Western Water understands the potential impact from a return to dry.

In this context, Western Water must be prepared and adaptive, able to use both local and imported water depending on the spatial rainfall and inflow distribution. Our aim is to maximise local storage harvest by minimising spills while ensuring a safe buffer volume is maintained for to meet emergency water such as supply interruption from Melbourne.

The Return to Dry scenario for Merrimu and Rosslynne Reservoirs uses average inflows from 1997-2009 as the basis for assessment and optimisation of source water to meet the demand across our region in 2013-2018.

Western Water notes that selection of a specific hydrological scenario for short term planning (5-7 years) is a key business risk and further details of our risk analysis are contained in Appendix O.

9.3.4 Demand forecasts

Western Water undertook a strategic Growth Forecasting Review in order to ensure its preparedness to meet the Melbourne @ 5 Million, where some 130,000 additional serviced lots could be required in the region over the next 20 years. The majority of these will be in new growth areas although growth in existing towns is also forecast to increase from 47,403 serviced lots in 2010 to 72,890 serviced lots by 2030.

Correctly forecasting growth is critical to Western Water's planning in several areas including investment in service infrastructure, providing value for money water, sewage and recycled water services, and assessing demand and ensuring water supply security.

Both compound and linear growth models were used to evaluate the range and forecasts over the period to 2030 with the compound growth model the most likely scenario. Western Water has implemented a number of controls through its corporate risk management framework to facilitate continual review of these growth forecasts.

9.3.5 Water Supply Demand Strategy (WSDS)

Western Water has completed its WSDS update and this has provided key input into this Plan.

9.3.6 Water supply optimisation

Optimisation of costs to provide water to customers is a vital component of efficient and effective delivery of water to customers. The optimisations task is a key for several reasons including:

- **Dual water supply sources (local & imported) both contribute significantly to Western Water's ability to meet demand, annually and during peak demand scenarios.**
- **The cost difference between local and imported water resources has a high impact on Western Water's supply and operational costs.**
- **The climate scenario and local source water inflow assumptions will have the most significant impact on business costs.**
- **Rapid growth rates in our region must be serviced. Optimisation must therefore also consider population density and water use demand trends.**

Western Water has internally developed a water optimisation model (WOM) which carefully analyses a number of key factors involved in determining the optimum water source choice and timing. The WOM incorporates local reservoir levels, safe buffer levels, flows based on historical climatic conditions, treatment plant capacity, growth forecasts, consumption predictions, total net demands from Melbourne Water and water loss factors. The WOM can be viewed in Appendix J.

9.3.7 Western Water storages and future supply

Western Water owns small dams on and surrounding Mt Macedon servicing the towns of Romsey, Lancefield and Woodend. These storages are annual storages and require annual wet seasons to ensure adequate supply. Other towns serviced by Western Water rely on bulk entitlements held in Southern Rural Water storages of Rosslynne Reservoir, Lake Merrimu and Pykes Reservoir.

During the dry years, these storages struggled to meet demand. For this reason, Western Water sought and obtained a bulk entitlement (BE) from the Melbourne Headworks System which is supplied via Melbourne Water infrastructure to Western Water pumping stations at Bulla and Hillside. This Melbourne Headworks BE of 18,250ML per annum is now vital to security of supply during the drought and climate change. It also provides a strategic dual supply for customers should either supply ever become unavailable.

Despite the period of extremely low inflows into the local storages, significant recovery has occurred in recent years. This highlights the climate variability that Western Water must deal with in determining actions and management of future inflows and risks as a consequence. After years of drought, a single wet year can restore local storages, but there is no assurance for futures years if there is a repeat of past close to zero inflows.

9.3.8 Summary water demand management issues

- prolonged climate change has resulted in need for careful management of water resources, and increasing use of external Yarra BE resources;
- cost of external water is higher with associated operational costs (i.e. pumping) a significant extra cost in terms of power usage and greenhouse gas emissions;
- extensive infrastructure is required to be built and maintained to provide water supply security to the 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 Melbourne Headworks BE.

9.3.9 Key water supply management options

In summary, the key actions from the 2011 WSDS to provide secure water supplies to Western Water's customers over the next 50 years are:

Demand side actions

- Community education and behaviour change including ongoing implementation of WaterTight,
- Future implementation of the Permanent Water Saving Rules,
- Continuation of water loss (leakage) reduction program,
- Expand availability of recycled water from Surbiton Park to new developments,
- Investigate the use of Aquifer Storage and Recovery (ASR) to improve the availability of recycled water.

- *Supply side actions*
- Negotiate to increase the Melbourne Headworks Bulk Entitlement, together with planning for a major upgrade of the transfer infrastructure to accommodate increased average and peak transfer volumes from the Melbourne system. Capital works for the upgrade are expected to occur within the subsequent 5 years of this Plan.
- Increase the Merrimu Reservoir Bulk Entitlement from the unallocated share.

- **Interconnect the Romsey and Lancefield systems, together with full development of the Romsey groundwater borefield and upgrade of the Romsey WTP.**
- **Complete planning for an augmentation of the Woodend system, by either increasing storage capacity of Campaspe Reservoir or upgrading the transfer capacity from the Macedon and Mt Macedon system, by duplication of the existing main.**

9.4 Issues for specific forecasting parameters

9.4.1 Urban water use

Climate variability is a key factor influencing predicted urban water usage estimates. At the commencement of the first regulatory period, Western Water introduced Rising Block Tariffs (RBT) for residential consumption. There is strong customer support for the RBT and its ability to encourage water conservation and Western Water proposes to continue with RBT during the next regulatory period.

Non-residential customers, however, are charged water usage 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 voluntary water management plans.

9.4.2 Customer (fixed charge) numbers

As previously discussed, customer numbers are derived from growth predictions from Osborne Growth Strategy. The numbers and forecasts are provided below.

Table 26: 2013-2018 Customer numbers for fixed charges

	2013/14	2014/15	2015/16	2016/17	2017/18
Water					
Residential	54,013	56,488	59,209	62,152	65,317
Non-residential	3,207	3,330	3,472	3,627	3,794
Sewer -					
Residential	53,473	55,923	58,617	61,531	64,664
Non-residential	2,661	2,764	2,882	3,010	3,149

9.4.3 Customer (volume) numbers

Through combining the water optimisation and Growth Strategy numbers, a set of usage predictions are provided below.

Table 27: 2013-2018 Consumption (ML)

	2013/14	2014/15	2015/16	2016/17	2017/18
Residential	9,279	9,466	9,688	9,928	10,183
Non-Residential	1,725	1,748	1,772	1,795	1,819
Water Losses	957	975	996	1,019	1,044
Total ML	11,962	12,190	12,456	12,743	13,046

9.4.4 Miscellaneous services

Miscellaneous charges relate to a variety of services. As the growth of most of these services has a direct correlation with development (e.g. 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 totals less than $1 million.

9.4.5 Major customer water and sewer forecasts

The large majority of Western Water's customer base (approximately 95%) is residential. With the exception of five industrial customers, the major non-residential consumers are local councils and schools. Western Water works closely with its major customers 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.

9.4.6 Trade waste forecasts

The Trade Waste Management System protects sewer maintenance personnel, infrastructure, plant and equipment and the environment. The strategy focuses 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 is an emphasis on educating current and potential trade waste customers on the EPA's waste hierarchy. Trade waste customers are expected to grow from 499 to 575 over Water Plan 2013-2018.

Table 28: Trade waste customers forecast 2013-2018

Trade Waste Customers	2013/14	2014/15	2015/16	2016/17	2017/18
Category A (minor)	352	365	378	391	400
Category B	38	41	44	47	50
Category C	109	113	117	121	125
Total	499	519	539	559	575

Trade waste charges are shown in detail in Appendix L.

9.4.7 Recycled water

Western Water has created its recycled water function as a separate business unit from water and sewer. It 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. The beneficiaries of recycled water pay for the costs of distribution, storage and transfer, plus costs of any additional treatment required by customers.

Despite significant climate variability over the second regulatory period, there has been an increase in the number of recycled water customers. Significant annual variations are being observed in the amount of recycled water available at each of the RWPs due to the impact of water restrictions and wet weather events.

Western Water currently has more than 550 recycled water customers, the majority of whom are residential customers on dual reticulation. During 2011/12, 56% of recycled water was reused by customers. This was lower than anticipated due to high rainfall reducing demand for recycled water.

Recycled water schemes (Class B & C)

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 contract quantity. The Sunbury/Melton Recycled Water scheme was commissioned in September 2002 and provides high quality Class B water. Other recycled water schemes operated emanate from the Gisborne, Woodend, Riddells Creek, Bacchus Marsh and Romsey Plants. These schemes supply Class B or C recycled water to various sectors including agriculture, golf courses, bowling clubs and sporting grounds. The new Gisborne Recycled Water Scheme is under construction to provide a secure supply to a significant agribusiness region south of Gisborne. Class B and C recycled water tariffs are applied consistent with ESC pricing principles for these products.

Standpipes

Recycled water is supplied to users from standpipes located at Gisborne, Melton, Romsey and Sunbury. Typical uses include street tree watering, road maintenance and construction, dust suppression and compaction, stock drinking water (Sunbury recycled water only) and landscape irrigation.

Irrigation farm properties

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

Dual water supply schemes (Class A)

Dual water supply schemes incorporate class A recycled water into residential developments, which are connected to all properties for toilet flushing, fire fighting, garden watering, public open space and recreation area irrigation.

Western Water has an established dual water supply system in Eynesbury and has laid the infrastructure for dual supply for the new suburb of Toolern. Discussions are underway for the integration of dual water supply to Rockbank new growth areas.

Western Water will continue to assess the viability of class A dual water supply schemes and alternative recycled water markets on a catchment by catchment basis throughout the growth areas subject to cost effectiveness and customer support to create a liveable, sustainable and productive region.

Class A recycled water tariffs are shown in Appendix L.

Section 10 - Incentive mechanisms

Incentive mechanisms are yet to be determined by ESC.

Western Water supports an agreed incentive mechanism. However, the parameters need to be determined and agreed prior to commencement of the Plan period. They should not be provided retrospectively.

Section 11 - Form of price control

Western Water has chosen to use the individual price cap form of price control whereby prices are approved by the regulator at the start of the regulatory period and escalated annually by the price determination percentage (plus CPI) to each price component.

Prices are not rebalanced within the regulatory period to match changes in circumstances or variations from assumptions made. This provides customers with a high degree of certainty over pricing while the business bears the risk of uncertainty due to lost flexibility.

The need for certainty over pricing has been driven by customer feedback drawn from the customer consultation forums conducted. See Appendix D.

Section 12 - Tariff levels and structures

12.1 Tariff structure

Prices in this Plan will rise by 6.17% per annum. The average customer will be impacted by a 6.2% p.a. real price increase. The following section covers the reasoning underlying the proposed pricing for the regulatory period. 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.

12.1.1 Underlying cost justification

Western Water's pricing strategy has been developed through detailed consultation with customers and in accordance with Government policy objectives. The strategy and this Plan reflects customer preference. Signals are provided via tariff structures that have an increased emphasis on variable (i.e. usage based) charges, through the continued application of rising block tariffs. Customers are incentivised to conserve water.

Over the longer term, Western Water expects that these price signals will lead to a lower level of demand than that which would have otherwise prevailed. The expected impacts of the proposed tariffs on demand forecasts and capital expenditure have been incorporated into this Plan. Western Water has measures in place to deal with large families and others experiencing hardship.

12.1.2 Rising block tariff

During customer consultation for this Plan, customers were asked for their feedback on the current rising block tariffs (RBT). Options provided including move back to a simple single tier tariff. However, strong customer feedback indicated that Western Water should retain RBT. For the most part, the RBT will be retained at current volumetric levels and pricing principles - except for Tier 3 which is proposed to freeze in real dollar terms. The outcomes of this feedback can be viewed in Section 14.

Customer consultation informed Western Water's position 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.

12.1.3 Increasing variable component and customer hardship

Western Water explored the opportunity to increase the variable component of the total bill. Customer feedback was mixed about this option as they realised there were financial impacts for lower income water users. Western Water has been mindful of the impact of this strategy on some customer groups and the split of fixed to variable has consequently not shifted dramatically.

The Hardship Policy in Appendix C focusses on customers in hardship to reduce, as far as possible, the water usage component of their water account. In addition, Western Water will continue working closely with concession customers, large families and pension groups with dedicated resources to ensure the impact of price increases is minimised.

Importantly, the first step of the RBT is provided at a minimum cost to ensure that the water needed to maintain health and wellbeing is being provided at a minimal cost.

12.2 Tariff proposals

12.2.1 Background

The first regulatory period commenced on 1 July 2005. This was a three year maximum price path set by the ESC.

In the second regulatory period, tariffs rose annually by 8.8% in real terms to fund substantial increases in costs associated with providing the infrastructure to address water shortages and upgrades necessitated by population growth in the region.

Whilst addressing water shortages is no longer a significant driver of capital expenditure, this Plan requires an annual average tariff increase of 6.2% in real terms. For the most part, this revenue is required to address strong population growth forecast for the region as well as upgrades to comply with new environmental obligations.

Western Water has kept tariff increases to a minimum, fully aware that customer satisfaction with value for money of services has been declining over the current regulatory period. The increases proposed are considered the bare necessity and will be introduced with increasing focus on programs addressing financial hardship.

Table 29: Historic and future price paths for Western Water region under economic regulation

Year	Regulator	Annual Price path (cap)
2005/06- 2007/08	ESC determination	CPI + 0.5%
2008/09 -2012/13	ESC determination	CPI + 8.8% per annum
2013/14 – 2017/18	ESC to determine	Proposed CPI + 6.17% per annum

The full schedule of tariffs for the period of the Water Plan is contained in Appendix L.

12.2.2 Retail sewer tariffs

Western Water acknowledges the current level of its sewer tariffs in comparison to the industry and is proposing a lower increase (3.5% for the period of this Plan) above CPI per annum on all sewer tariffs. This proposal will also better reflect costs.

12.2.3 Retail water tariffs

Fixed service charge

Western Water proposes to increase the standard fixed service charge for water by 8.86% plus CPI for the period of the Water Plan. The revenue raised from these increases will go towards securing future quality water supplies.

The majority of Western Water's residential and non-residential customers have standard 20mm meters. Larger meters (known as 'oversized meters') 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, resulting in higher maintenance costs and earlier supply augmentation and infrastructure works. The following multiplier is used to calculate the tariff applicable to oversized meters:

Table 30: Water service charge multiplier by meter size

Meter size	Charge multiplier
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

Water usage charge

Customers strongly supported retaining the RBT for residential consumption and, as a result, Western Water is proposing an 8.86% plus CPI increase on all tiers for year 1. Thereafter, an annual increase of 8.86% plus CPI on tier 1, increase of 10.86% plus CPI pa on tier 2 with a freeze on tier 3 in real terms. These proposed increases will provide sufficient income to meet the revenue requirement while also providing customers with incentives to reduce their household consumption. For more information on feedback from customers refer to Appendix D.

Set out below is a summary of the nominal impact of tariff changes from 2013/14 to 2017/18 on a typical customer. Appendix M provides more detail on customer impact at different consumption levels.

Table 31: 2013/14 Average customer impacts of tariff changes (based on average consumption 160kl p.a.)

	% Increase	$ Increase in 2013/14
All areas - residential	8.7%	$82.06
All areas - commercial	8.9%	$89.39
Tenants	11.6%	$26.69
Vacant Land	7.8%	$55.37

12.2.4 Trade waste tariffs

As covered in Section 9, Western Water's Trade Waste Strategy 'user pays' principle was implemented in March 2007. There is a flat fee tariff for applications and minor trade waste. 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.

In Water Plan 2013-2018, it is proposed to freeze trade waste charges in real terms, except for Volumetric B & C charges which will increase by 15.55% and 12.35% respectively in Year 1 only, then remain frozen in real terms for the remainder of the Plan. This is to ensure alignment with the ESC price determination for 2012/13 prior to the "desal price freeze". A complete list of trade waste tariffs can be found in Appendix L.

Western Water will continue to conduct audits of major trade waste customers to identify potential and known contributors of contaminants and encourage dischargers to adopt sustainable practises.

12.2.5 New Customer Contributions

Western Water plans to adopt the standard schedule of charges proposed by the ESC until further work can determine appropriate charges which reflect cost recovery under the recently released ESC NCC guidance paper. This is proposed to be finalised by 7 December 2012 and an amendment to this Plan will be submitted to ESC by the due date) (Appendix P).

12.2.5 Developer financed works

Western Water also recovers fees from developers or prospective developers for work completed on their behalf, such as feasibility studies. This work is proposed to be recovered based on historical modelling of actual costs on a per lot basis. See Appendix R.

12.2.6 Recycled water

As discussed in Section 9, 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 temporary 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, investigations, power, retailing and repairs and maintenance. Capital costs include design, construction, tappings, metering, pump stations, storages, Class A treatment plants, farm irrigation infrastructure and scheme extensions. Revenues can be basically separated into NCC, fixed charges, volumetric tariffs and other (including lease payments).

Well developed pricing structures are in place that follow ESC pricing principles for Class B and C recycled water supplies.

Recycled water pipeline schemes (Class B and C)

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 10 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. For this Plan, it is proposed to annually increase charges in line with CPI increases (subject to electricity price outcomes).

Western Water is working with customers toward standardising contracts upon renewal, in accordance with the prices below:

- **$600/ML once off NCC to purchase the recycled water entitlement (subject to the capital cost and scheme capacity rather than lot numbers)**
- **$567.79 annual fixed charge per connection (regardless of volume)**
- **Seasonal volumetric charges of:**
  - **$350.4/ML peak season (November to March inclusive), and**
  - **$222/ML off-peak.**

Standpipes

Recycled water sourced via any standpipes is priced at the peak season price (currently $350.4/ML) plus a fixed daily access charge of $5.72. 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 15-20 years, with lease rentals reset on an annual basis in accordance with CPI movements.

Class A dual water supply

Class A supplies are 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 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 8.86% plus CPI for the period of the Plan.

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 and C) recycled water charges by CPI per annum over the period of the Plan and adopt price caps for Class A supplies.

12.3 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 has been consolidated to capture the key tariffs with all others being covered via a cost plus methodology, which is detailed in the Appendix L.

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

- Assumed current volume adjusted for growth. This applies to information statements, tapping and metering requests.
- Charges are frozen in real dollar terms for each year of the Plan.

12.4 Adjusting prices

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

12.4.1 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.

12.4.2 Impact of a Price on Carbon

The price on carbon will indirectly impact on Western Water through increased costs for electricity, reduced fuel rebates, bulk water supply and supply chain cost increases. In 2010/11, 50% of Western Water's total carbon footprint stemmed from supply chain expenditure, 38% from Scope 1 and 2 emissions and 12% from capital expenditure associated with gifted assets.

Based on 2010/11 figures, Western Water will be exposed to BAU indirect cost increases of an estimated $915,000 per annum as a result of the carbon price mechanism. Of this increase, rising energy costs amount to $407,000 operational expenditure and bulk water supply costs increase $282,000 and capital expenditure will rise $225,000 per annum. In line with forecast capital expenditure growth and increasing population demands, Western Water's carbon price costs will increase to $1.43 million by 2017/18.

Investigation into carbon reduction projects aimed at cost effectively reducing Western Water's reliance on grid electricity will minimise the impact of a carbon price from energy retailers. Procurement practices aimed at reducing the energy intensity of Western Water's supply chain will also reduce exposure to the impact of the carbon price.

12.4.3 Unforeseen events

Whilst all reasonable efforts have been made to identify and assess major risks and plan for major events, experience of extreme climate change conditions has significantly impacted Western Water and its customers. Commitment to a five year regulatory period further increases the material risk from unforeseen events.

Western Water's risk exposure due to growth will need to be closely monitored. We are developing some lead indicators which will align the capital expenditure with segmented growth outcomes to ensure we are aligned.

In the circumstance of a major unforeseen event, Western Water will 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. Western Water considers unforeseen events to be material if the event exceeds the threshold of $1 million.

Managing future uncertainty around desalination water

The Melbourne Water bulk water price path is based on a 0GL desalinated water order over the Plan period. If desalinated water is ordered within the Plan period this would result in additional costs.

Melbourne Water is proposing an annual adjustment whereby the variable portion of the desalination costs (linked to the desalinated water order) will be passed on to water corporations each year. This will ensure customers will only pay for the desalinated water ordered and required, promoting cost reflective pricing.

While an annual adjustment mechanism enables Melbourne Water and the water retailers to manage cost variability, it potentially results in modest annual price variability.

This Plan includes no additional costs for desalination water above a nil order.

Section 13 - Tariff choice

13.1 Customer choice of tariffs

During the extensive customer consultation adopted by Western Water for this Plan, the provision of choice of tariffs was floated with customers. A number of examples were provided and can be read in detail in section 14.

Some customers were interested in having choice of tariff, particularly in considering between the options of an upfront increase or a smoothed approach. However, support wasn't strong when the difficulties surrounding part adoption of upfront compared to smoothed was understood- and, in particular, the cost impost of doing so. Such a proposal didn't address the ideal of the tariff choice methodology and wasn't considered further.

Section 14 - Customer consultation

14.1 Background

In keeping with ESC directions, Western Water undertook much broader and more in depth consultation with customers to develop and review the draft Water Plan 2013-2018. Clear consultation objectives were set established - to obtain in depth, informed feedback from a wide, representative community base - and a multi-stage approach was enlisted, specifically designed to inform, engage and reflect the most representative range of opinions from across the community.

There were three main stages to the Water Plan consultation program: deliberative forums informed the drafting of the Plan; a large online panel reviewed the draft in the form of a consultation paper; and community forums received and refined feedback on the draft Plan. As a result, well over 500 customers and community members participated in the Plan's consultation program providing a robust, statistically relevant view of customer opinions.

Table 32: Water Plan consultation participation by stage

1	Input for drafting	Deliberative Forums	Jul-Dec 2011	110*
2	Draft Water Plan – General feedback	Online consultation paper, websites, newspapers and direct mail	Jun-Jul 2012	400
3	Draft Water Plan - Detailed consideration of options	Community forums	Jul-Aug 2012	56*

**** Customer advisory members included in Stage 1 and 2 total but included only once in overall tally.***

To ensure the best possible level of understanding and response, communications were written in simple, plain language in formats that were user friendly and delivered through channels that would encourage participation.

14.2.1 New consultation methods

Research has found that traditional communication channels are becoming less effective at gaining customer attention and generating feedback and that websites are useful for those seeking information as opposed to sending out messages. As a result, Western Water explored new options for informing and engaging customers to ensure we obtained the best input possible for developing and reviewing the new Water Plan. These were enlisted alongside traditional methods to ensure the best level of awareness and consultation was achieved.

14.2.2 Strong community input

As a result of our staged, innovative and customer oriented consultation approach, customer input into this Plan has been significantly broader and more detailed than achieved ever before.

Customer feedback was clear that customers are concerned about:

i. **rising costs, particularly those on lower and fixed incomes and ensuring Western Water does its best to help customers manage their bills;**
ii. **rewarding customers for reducing and continuing to use low levels of water, and conversely, retaining a penalty system for people who use large amounts of water;**
iii. **not paying for infrastructure that does not benefit them or, rather, having to pay infrastructure development costs again (as many paid up front connection fees for their own services many years ago; and**
iv. **ensuring that Western Water plans for secure, sustainable services for the long term and communicates effectively about its services, charges and decision making and educates the community regarding efficient water use.**

In response to customer input, Western Water has:

a. **shifted away from an upfront price increase of 19.9% to a smoothed average customer price path of an average 6.26% per annum real price increase over the five years of the Plan;**
b. **reduced the overall size of the price increase (which should have increased well beyond the original increase of 19.9% as a result of the 2012/13 price freeze) by deferring some planned capital spending and freezing staff numbers;**
c. **retained the three tiered rising block tariff for water usage charges;**
d. **elected to maintain existing service standards and Guaranteed Service Levels;**
e. **committed to spending in the areas of community education and support, biodiversity, water efficiency, reducing greenhouse gas emissions, water recycling and biosolids.**

A detailed report describing the different stages of Water Plan consultation as well as customer feedback and subsequent impact on the draft Plan is contained in Appendix D.

Section 15 - New Customer Contributions

15.1 New Customer Contributions (developer charges)

Western Water charges customers for the provision of infrastructure to service land. It is generally required that customers make an upfront contribution to the costs of connecting to the existing water, sewerage and recycled water networks. Existing property owners may also contribute to the cost of new infrastructure when they connect to additional services.

As a direct result of the high growth within the region, predictions for New Customer Contributions (NCC) remain high as development continues. Estimates of NCC are based on previous year actuals and growth estimates for the period of the Plan (in line with those applied to customer numbers). The overall predictions are summarised below:

Table 33: Forecast NCCs for 2013-2018 (number of lots)

	2013/14	2014/15	2015/16	2016/17	2017/18
Water	869	890	1,011	1,182	1,454
Sewer	1,025	1,425	1,625	1,625	1,625
Dual water supply schemes	1,894	2,315	2,636	2,807	3,079

Western Water plans to adopt the standard schedule of charges proposed by the ESC until further work can determine appropriate charges which reflect cost recovery under the recently released ESC NCC guidance paper (proposed to be finalised by 7 December 2012) (Appendix P).

Western Water is currently conducting extensive modelling based on its interpretation of the ESC Guidance Paper released in August 2012 of the potential impacts of future NCC. A staged implementation approach has been proposed and agreed by the Board.

Customer consultation has strongly supported most if not full recovery of development costs from the new customer base via NCC.

NCC charges used to prepare this Plan (based on current charges and methodology) will be amended, and changes to this Plan will be submitted to ESC by 7 December 2012.