

WESTERNPORT WATER



# WATER PLAN

## (Final Submission)

### 2008 - 2013

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## 1. EXECUTIVE SUMMARY

This document is Westernport Water's final submission Water Plan for the regulatory period 2008–2013. The Water Plan is submitted to the Essential Services Commission on 8 October 2007 for review.

The Water Plan sets the pricing path for Westernport Water's prescribed services for the 2008–2013 period and has been developed to comply with the various requirements of its regulators, regulatory instruments and governing legislation.

The Water Plan also delivers the water supply security required by Westernport Water's customers. Westernport Water's Water Plan may be impacted by the Victorian Water Plan and in particular the recently announced Desalination plant at Wonthaggi. Whilst Westernport Water welcomes the recent announcement and the potential supply security it offers, assumptions contained in our Water Plan do not include significant project costs relating to the supply of desalinated water as there are insufficient details in regard to volumes and pricing.

This Water Plan comprises 9 sections and 3 Appendices. This section, [Section 1 - Executive Summary](#) provides an overview of each of the following sections contained within the plan.

### [Section 2 - Introduction](#)

An introduction to Westernport Water, the scope and scale of its operation, its strategic direction and its customers.

### [Section 3 - Outcomes from the First Regulatory Period](#)

A financial report of the outcomes from the first regulatory period, 2005–2008.

### [Section 4 - Requirements for the Next Regulatory Period](#)

This section focuses on our governmental, regulatory and environmental obligations and plans, the results from the first round of community consultation and details our customer service standards.

### [Section 5 - Service Standards](#)

Details on key performance targets for water and wastewater service standards are highlighted in this section.

### **Section 6 - Revenue Requirement**

This section details the cost of doing business, complying with new obligations imposed on Westernport Water and delivering strategic plan objectives over the next five years. The combination of operating (OPEX) and capital expenditure (CAPEX) determines the amount of revenue required to enable Westernport Water to continue providing services.

### **Section 7 - Demand**

In this section Westernport Water forecasts its population, customer and demand projections for each year of the Water Plan period.

### **Section 8 - Prices**

Section 8 outlines the tariff pricing models for water and wastewater services. This also includes pricing for miscellaneous services offered by Westernport Water.

### **Section 9 - Non-Prescribed Services**

The final section covers Westernport Waters non-prescribed services such as trade waste, recycled water, gas and farm activities.

A brief overview of each section is detailed below:

### **Section 2 - Introduction**

Westernport Water provides water and wastewater utility network services to a projected 16,000 (in 2008) properties over an area of 300 square kilometres on Phillip Island and the mainland stretching from The Gurdies to Archies Creek.

In addition, Westernport Water provides the following services:

- Sale of treated effluent for beneficial re-use,
- Removal of greasy wastes - no major industrial trade waste producers currently exist within the serviced area,
- Other utility services including reticulated gas (LPG) and specialist advice on pipeline design for new developments.

The management and Board of Westernport Water reviewed and re-established the strategic intent of Westernport Water in early 2007. The strategic intent of Westernport Water for the 2008-2013 regulatory period is:

**“To be a smart company providing quality water services and more.  
We value our community, our reputation, our people and outstanding  
performance.”**

This vision is supported by a number of objectives (Refer to [Section 2.3](#)) that are instrumental in the development of this plan and formed the basis for a program of work that have been included in the operational (OPEX) and capital expenditure (CAPEX) forecasts detailed in [Section 6](#).

Westernport Water’s 16,000 properties are supplied water via the Candowie Reservoir located in the Bass hills. Water is harvested from a number of sources including the catchment area surrounding the reservoir, the Bass River and groundwater bores.

The majority of the properties serviced are residential of which 61% are owned by non-permanent residents, normally described as holiday homeowners. In addition there are 2,000 properties classified as unconnected vacant land.

Wastewater services are provided to 14,700 properties. Wastewater is treated at two treatment plants (one located on Phillip Island and the other at Coronet Bay) that process approximately 1100 ML of domestic wastewater annually.

Westernport Water also has a small number of recycled water customers, typically in the area of recreational sports. Tankered recycled water is also available for commercial customers or community groups with relatively lower usage requirements.

### **Section 3 - Outcomes from the 2005-2008 Regulatory Period**

Westernport Water does not propose to seek any pricing or revenue requirement adjustment on the basis of the outcomes from the 2005-2008 regulatory period. This is despite a projected over expenditure in excess of \$4 million.

The variance between the first water plan targets and the over expenditure projected for the period is due to number of factors, as summarised below:

- Underestimation of the cost of new obligations and regulatory reporting requirements;
- Shift of expenditure from non-prescribed to prescribed services; and
- Impact of the current supply shortage as a result of the drought.

All of these factors have contributed to Westernport Water incurring greater than expected OPEX in relation to the prescribed services of water and sewerage ([Section 3.3](#)).

The over expenditure is partially offset by a projected underspend in CAPEX over the period. The CAPEX program for the 2005-2008 period was dominated by a proposed \$15m project to interconnect with the Melbourne Water pipeline. Incomplete negotiations with the Melbourne retailers combined with a severe water shortage required Westernport Water to postpone this project in favour of more timely projects to secure water from the Bass River and the Corinella Aquifer. The combined effect of the postponement of the Melbourne water project and the reprioritisation of projects within the first regulatory period is that the CAPEX spend for the 2005-2008 period is anticipated to be \$8.5 million below that originally projected ([Section 3](#)).

Westernport Water's service standards of this regulatory period were also affected by the severe drought conditions resulting in an increase in the number of unplanned supply interruptions in 2006-2007. However the planned interruption service standards were well below targets due the shift from preventative (or planned) maintenance to reactive maintenance. A summary of



performance detailed below with further details in [Section 3.6](#):

<b>Service Standards</b>	<b>Actual 2005-06</b>	<b>Target 2005-06</b>	<b>Actual 2006-07</b>	<b>Target 2006-07</b>	<b>Forecast 2007-08</b>	<b>Target 2007-08</b>
<b>WATER</b>						
Unplanned water supply interruptions (per 100km)	29.6	44	45.9	44	50	44
Average unplanned frequency of water supply interruptions	0.35	0.30	0.39	0.30	0.35	0.30
Average planned frequency of water supply interruptions	0.38	0.21	0.07	0.21	0.36	0.21
Average duration of unplanned water supply interruptions (mins)	154.41	93	78.15	93	110	93
Average duration of planned water supply interruptions (mins)	320.41	300	61.3	300	210	300
Avg time taken to attend bursts and leaks (hrs) priority #1	0.1	1	0.2	1	0.25	1
Avg time taken to attend bursts and leaks (hrs) priority #2	4.2	2	0.6	2	2.5	2
Avg time taken to attend bursts and leaks (hrs) priority #3	23.9	24	2.1	24	24.0	24
Unplanned water supply interruptions restored within 5 hrs (%)	97.2%	99%	93.5%	99%	99%	99%
Avg unplanned customer minutes off water supply (mins)	53.4	33	30.8	31.5	52	30
Avg planned customer minutes off water supply (minutes)	121.55	48	4.21 <sup>1</sup>	48	76.0	48
Number of customers experiencing at least 1 unplanned interruption in the year	n.p.	4500	n.p.	4500	4500	4500
Unaccounted-for Water (%)	0.013	13.9	10.3	13.8	12	13.7
<b>SEWER</b>						
Sewerage blockages (per 100km)	3.61	23	5.2	23	18	23
Avg time to attend sewer spill/block (minutes)	147	60	72	60	60	60
Average time to rectify sewer spill/block (minutes)	384	150	162	150	150	150
Customers with > than 3 sewerage spills in a yr	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Spill contained within 5 hours	100%	100%	81%	100%	100%	100%
<b>CUSTOMER</b>						
Telephone calls answered within 30 seconds	94%	90%	94%	90%	90%	90%
EWOV Complaints per 1000 customers	0.03	0.04	0.04	0.04	0.04	0.04

#### **Section 4 - Requirements for 2008-2013 Regulatory Period**

The two principal regulatory mechanisms governing Westernport Water in respect to the development of this plan are the:

- Water Industry Regulatory Order (WIRO). The WIRO establishes the regulatory principles the ESC must use when assessing the Water Plan; and

<sup>1</sup> Minimal planned maintenance during 06/07 due to drought

- Statement of Obligations (SoO). The SoO determines the procedural requirements to be followed by Westernport Water in the preparation of its water plan.

Further details of these regulatory documents, and Westernport Water's plan to meet their requirements are detailed in [Section 4](#).

In developing our Water Plan, Westernport Water has consulted with the following stakeholders:

- The Department of Sustainability and Environment (DSE);
- The Essential Services Commission (ESC);
- The Environmental Protection Agency (EPA);
- The Department of Human Services (DHS); and
- Westernport Water's customers and community.

Further details regarding the outcomes from the consultations with the EPA and DHS can be found in [Section 4.2.7](#) and [Section 4.2.8](#).

In addition to stakeholder consultation, Westernport Water has designed, and is progressively implementing, a customer and community engagement and consultation plan assisted by an external consultant .

Westernport Water's preliminary consultations with our community were conducted in two stages.

- Stage 1 consisted of a telephone interview survey of 200 randomly selected customers and an on-line feedback survey posted on Westernport Water's website.
- Stage 2 consisted of two community workshops probing issues and feedback canvassed during Stage 1 such as:
  - ◆ Water quality improvements;
  - ◆ Water supply security;
  - ◆ Pricing methods; and

- ♦ Management of environmental issues.

The feedback gained from the consultation process has been invaluable in the development of the Water Plan. Full details of the consultation process in relation to the draft water plan proposals and how the feedback has been incorporated into the final plan can be found in [Section 4.2](#) of the main document.

**Section 5 – Service Standards for the 2005-2008 Water Plan**

Completing this section is the minimum service standards for water supply and wastewater services - summary of targets detailed in table below:

<b>WATER</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Unplanned water supply interruptions (per 100km)	45	45	45	45	45
Average unplanned frequency of water supply interruptions	0.3	0.3	0.3	0.3	0.3
Average planned frequency of water supply interruptions	0.3	0.3	0.3	0.3	0.3
Average duration of unplanned water supply interruptions (mins)	100	100	100	100	100
Average duration of planned water supply interruptions (mins)	190	190	190	190	190
Avg time taken to attend bursts and leaks (hrs) priority #1	0.5	0.5	0.5	0.5	0.5
Avg time taken to attend bursts and leaks (hrs) priority #2	2	2	2	2	2
Avg time taken to attend bursts and leaks (hrs) priority #3	24	24	24	24	24
Unplanned water supply interruptions restored within 5 hrs (%)	99%	99%	99%	99%	99%
Avg unplanned customer minutes off water supply (mins)	33	33	33	33	33
Avg planned customer minutes off water supply (minutes)	210	210	210	210	210
Number of customers experiencing at least 1 unplanned interruption in the year	4500	4500	4500	4500	4500
Unaccounted-for Water (%)	13%	13%	13%	13%	13%
<b>WASTEWATER</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Sewerage blockages (per 100km)	15	15	15	15	15
Avg time to attend sewer spill/block (mins)	60	60	60	60	60
Avg time to rectify sewer spill/block (mins)	210	210	210	210	210
Spills contained within 5 hours	100%	100%	100%	100%	100%
<b>CUSTOMER</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Telephone calls answered within 30 seconds	90%	90%	90%	90%	90%
EWOV complaints	.04	.04	.04	.04	.04

**Section 6 – Revenue Requirement**

The development of expenditure forecasts (OPEX and CAPEX) to satisfy the existing and new regulatory requirements, obligations and strategic plan objectives indicate that Westernport Water requires revenue of \$62.86m (\$01/07) to sustain its operations to the required levels throughout the 2008-2013 regulatory period.

The following table outlines the building blocks of the revenue requirement for the period <sup>2</sup>.

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13	Total
<b>Revenue Requirement \$1/07m</b>						
Operating Expenditure						
* Business as Usual	8.85	8.84	8.84	8.80	8.73	8.85
* New Obligations	0.23	0.09	0.21	0.16	0.18	0.23
Total OPEX	9.07	8.94	9.05	8.97	8.91	9.07
Return on assets to 30/6/08	2.96	2.90	2.83	2.77	2.71	2.96
Regulatory depreciation of assets to 30/6/08	1.19	1.19	1.18	1.07	1.00	1.19
Return on new assets	0.06	0.19	0.65	1.11	1.20	0.06
Regulatory depreciation of new assets	0.13	0.37	0.70	1.01	1.08	0.13
Adjustments from last period	0	0	0	0	0	0
Benchmark tax liability	0	0	0	0	0	0
<b>Total revenue requirement</b>	<b>13.40</b>	<b>13.58</b>	<b>14.41</b>	<b>14.92</b>	<b>14.90</b>	<b>13.40</b>

**Business As Usual (BAU) – Operating Expenditure (OPEX)**

The cost of operating Westernport Water subject to the existing obligations and regulatory requirements is summarised in this section.

The table below summarises the total business as usual (BAU) OPEX allocated for the 2008-2013 regulatory period.

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary \$01/07</b>					
Business As Usual	8.36	8.37	8.39	8.36	8.31
License Fees	0.05	0.05	0.05	0.05	0.05
Environmental Levy	0.43	0.42	0.40	0.39	0.38
<b>Total prescribed BAU OPEX</b>	<b>8.85</b>	<b>8.84</b>	<b>8.84</b>	<b>8.80</b>	<b>8.73</b>

<sup>2</sup> These numbers have been rounded for presentation purposes, therefore sometimes appearing to sum differently.

The following table details those costs where significant increases have been included in the OPEX projections for the regulatory period.

(\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary \$01/07</b>					
Increase in OPEX for preventative maintenance	110	116	148	116	138
Electricity (Pumping Bass River & Goundwater Bores)	90	90	90	90	90
Increase in cost of Electricity	100	100	100	100	100
Senior Accountant	100	100	100	100	100
Water Quality Officer	80	80	80	80	80
Senior Engineer	100	100	100	100	100
Treatment Plant Officer	60	60	60	60	60
Air Scouring	50	50	50	50	50
Distribution main cleaning	12				

The main OPEX related proposals outlined in the Water Plan relate to implementing Westernport Waters strategic objectives to:

- Improve customer satisfaction
- Improve water quality through upgraded systems
- Raw water quality management, including a new position of Water Quality Officer
- Water treatment and resourcing of treatment process requiring a new position of Treatment Plant Officer
- Distribution system operation and maintenance
- To increase the level of water supply security
- Improve customer service and system performance
- Increase the ratio of preventative to reactive maintenance
- Implement sustainability principles and seek to reduce environmental impact.
- Improved ability to deliver capital works program and associated system improvements, including a new Senior Engineer position

Full details of the proposals can be found in [Section 6](#) of this Water Plan.

### New Obligations

Westernport Water has been advised of a number of new obligations to be

imposed on the business throughout the 2008-2013 regulatory period.

The proposed OPEX and CAPEX spend required to satisfy new obligations imposed on Westernport Water by the Statement of Obligations, EPA and DHS for the Water Plan Period are summarised in the table below:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>New Obligations Summary \$1/07m</b>					
Operating Expenditure	0.23	0.09	0.21	0.16	0.18
Gross Capital Expenditure	0.30	0.15	0.05	0.05	0.05

The new obligations to be imposed on Westernport Water by its regulators relate to the following areas:

- Investigation and Research
- Sustainable Management Plan
- Environmental Management Systems
- River & Aquifer Health
- Monitoring River Health
- Smart Water Fund
- Sewerage Management Systems
- Sewerage System Performance
- Other Audits

#### Capital Expenditure

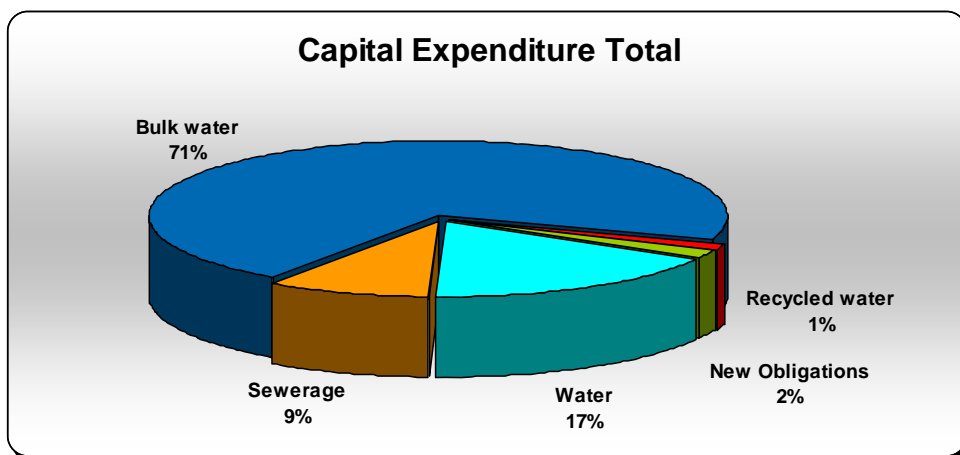
The capital expenditure (CAPEX) program for the regulatory period 2008-2013 is focused on required works to increase Westernport Water’s ability to harvest and store or develop alternative sources of water.

The following table summarises the business as usual CAPEX projects allowed throughout the regulatory period:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Capital Expenditure Summary \$1/07m</b>					
Water	1.81	0.79	0.47	1.37	0.64
Sewerage	0.49	0.60	0.39	0.77	0.49
Bulk Water	0.21	2.06	15.41	2.01	1.21
Recycled Water	-	0.35	-	-	-
<b>Total prescribed BAU CAPEX</b>	<b>2.50</b>	<b>3.80</b>	<b>16.27</b>	<b>4.14</b>	<b>2.33</b>

A major water supply augmentation project is planned for 2010-2011, which will involve increasing the capacity of our current water storage at Candowie Reservoir. In addition to the major augmentation project, further works will be undertaken to:

- Duplicate the pipeline from the bass river to double the capacity to extract from this source;
- Connect the Grantville- Bass river pipeline to the Ian Bartlett water purification plant to allow the reservoir to be bypassed;
- Restoration of Cowes basin; and
- Major upgrade to the water treatment plant.
- 
- A summary of total capital expenditure is shown below:



Full details of the proposed CAPEX program can be found in [Section 6.3](#) of the Water Plan.

**Section 7 – Demand**

Westernport Water forecasts that it will be servicing the following numbers of properties in the Water Plan period:

Property numbers	2008-09	2009-10	2010-11	2011-12	2012-13
Residential	13,321	13,496	13,766	14,041	14,322
Vacant Land	2,002	1,976	1,951	1,926	1,901
Commercial	768	774	781	788	795

The major assumptions driving the demand forecasts are:

- Growth in residential properties numbers of 2.0% per annum;
- Growth in Commercial properties 0.9%
- Growth in water consumer demand of 1.0% per annum, including assumptions regarding increase in consumption demand from ‘sea-change’ customers;
- Reduction in unconnected vacant residential land of a net 25 lots per annum;
- No significant growth in commercial or industrial customers is expected during the water plan period. Westernport Water does not expect to gain any major potable water supply customers (>100ML pa) in the foreseeable future;
- Non-revenue water is expected to be reduced by 2% providing Westernport Water with up to 50ML of “extra” water for growth.

The water demand and growth forecasts for Westernport Water are shown in the following table:

Total Demand (ML)	2008-09	2009-10	2010-11	2011-12	2012-13
	1,818	1,836	1,854	1,873	1,891
Residential (ML)	1,236	1,248	1,261	1,274	1,286
Commercial/Business (ML)	582	588	593	599	605
Total	1,818	1836	1854	1873	1891

Growth in water consumption is anticipated to be 1% less than growth in property numbers for the following reasons;

- Highly seasonal customer visitation and correspondingly low usage for holiday homes



- Ongoing water conservations programs aimed at constraining demand
- Implementation of an Inclining Block Tariff structure for domestic residents.

**New Customer Contributions**

Water businesses have the ability to require developers to make an upfront contribution to the costs of connecting to the existing water and sewerage networks in the form of New Customer Contributions (NCC) or developer charges. Westernport Water proposes to adopt the New Customer Contributions approach outlined in the Essential Service Commission’s 2008 Water Price Review Guidance Paper released in March 2007.

The NCC framework encompasses a three tier application based on lot size and timing and impact on future investment in distribution capacity.

The anticipated level of development each year is as follows;

- 330 new allotments created and connected to water
- 275 connected to sewerage.

**Section 8 – Pricing**

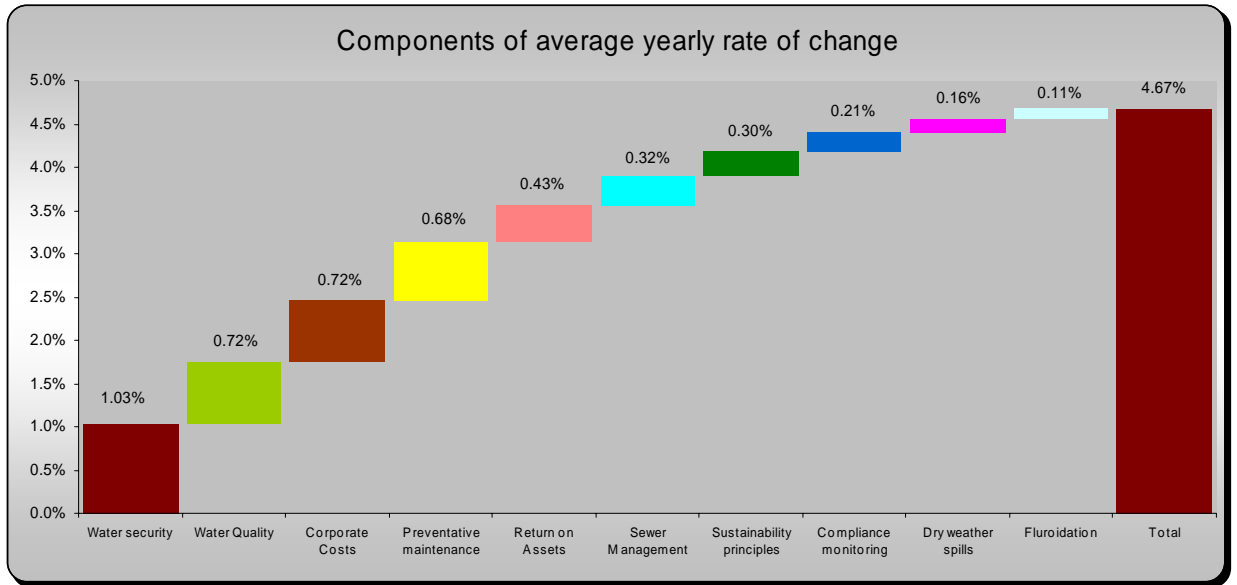
Westernport Water proposes to utilise the price cap model as a form of price control for the 2008-2013 regulatory period. This approach has the effect of setting the maximum tariffs fees and charges that Westernport Water can charge annually for its prescribed services.

The proposed pricing path (net of CPI) to be applied to Westernport Water’s tariffs after the initial year is as per the table below:

Pricing Path	2008-09	2009-10	2010-11	2011-12	2012-13
Proposed annual increase in prices	N/A	4.52%	4.52%	4.52%	4.52%

Due to the changed volumetric structure in the first year, which is in addition to the 4.52% increase, the average rate of change to the tariff structure each year is 4.67%. The following chart displays different components of the business and

how their cost increases impact the average rate of change.



Application of the pricing path will result in Westernport Water levying the following fixed service charges (expressed in January 07 dollars) throughout the regulatory period.

Water Fixed Charges

Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Residential Water Access Charge	\$265.25	\$277.24	\$289.77	\$302.86	\$316.55
Unconnected Vacant Land Water Access Charge	\$202.26	\$202.26	\$202.26	\$202.26	\$202.26
<b>Commercial</b>					
Commercial 20mm Access Charge	\$265.25	\$277.24	\$289.77	\$302.86	\$316.55
Commercial 25mm Access Charge	\$477.45	\$499.03	\$521.58	\$545.14	\$569.78
Commercial 32mm Access Charge	\$902.06	\$942.84	\$985.45	\$1,029.95	\$1,076.51
Commercial 40mm Access Charge	\$1,644.83	\$1,719.17	\$1,796.88	\$1,878.02	\$1,962.91
Commercial 50mm Access Charge	\$2,944.80	\$3,077.91	\$3,217.03	\$3,362.29	\$3,514.27
Commercial 65mm Access Charge	\$5,863.09	\$6,128.10	\$6,405.10	\$6,694.32	\$6,996.90
Commercial 80mm Access Charge	\$10,160.99	\$10,620.27	\$11,100.31	\$11,601.54	\$12,125.93
Commercial 100mm Access Charge	\$18,279.21	\$19,105.43	\$19,969.00	\$20,870.70	\$21,814.05

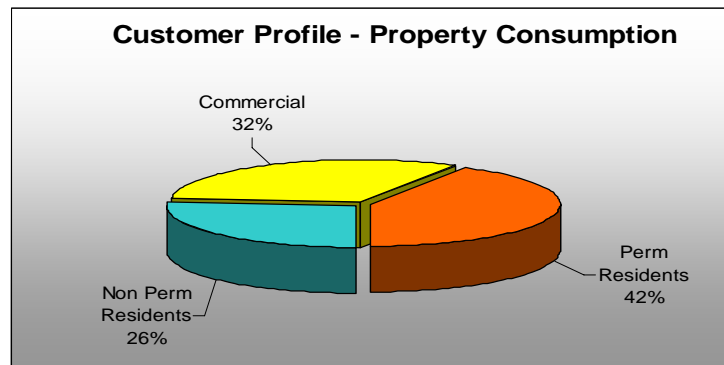
**Sewer Charges**

Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Residential Sewer Access Charge	\$403.06	\$421.28	\$440.32	\$460.21	\$481.01
Unconnected Vacant Land Sewer Access Charge	\$207.87	\$207.87	\$207.87	\$207.87	\$207.87
<b>Commercial</b>					
Commercial Sewer Access Charge (1 cistern)	\$403.06	\$421.28	\$440.32	\$460.21	\$481.01
Commercial Cistern Charge (>2 cisterns)	\$146.42	\$153.04	\$159.96	\$167.18	\$174.73

**Water Volumetric pricing**

Westernport Water is proposing to implement an Inclining Block Tariff (IBT) for water consumption from July 2008 for domestic residential customers. The change to pricing structure is designed to send pricing signals to customers to conserve water and is targeted at above average water users.

As can be seen in the graph below, residential customers consume a projected 68% of the water provided by Westernport Water.



The design of the IBT has been undertaken so as not to disadvantage average household usage. The usage blocks proposed have been modelled on winter consumption data as this is an appropriate estimate for predominately indoor non-discretionary usage.

The proposed usage blocks are as per the table below:

Inclining Block	Residential per billing period	2008 -2009 price\$(1/1/07)
Block 1	0-33kL	\$1.10
Block 2	33-108 kL	\$1.32
Block 3	Greater than 108kL	\$1.70

### Commercial Pricing

The pricing approach for Commercial water consumption is proposed to remain as a single volumetric tariff. A pricing signal to encourage water conservation is present as the single rate is set higher than the base block of the domestic IBT. Commercial customers do not have the same levels of discretionary usage as domestic residents have and therefore an inclining block approach is felt to have a greater an impact on these customers.

The implementation of an Inclining Block Tariff (IBT) approach for domestic water consumption requires a one off adjustment to the general pricing path. The table below details the annual pricing for water volumetric tariffs expressed in January 2007 (excludes CPI).

### Water Volumetric Charges

Tariffs \$ 1/1/07	kL per billing period	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>						
Residential Variable Charge - Block 1	0-33kL	\$1.10	\$1.15	\$1.20	\$1.26	\$1.31
Residential Variable Charge - Block 2	33-108kL	\$1.32	\$1.38	\$1.44	\$1.51	\$1.58
Residential Variable Charge - Block 3	108kL+	\$1.70	\$1.78	\$1.86	\$1.94	\$2.03
<b>Commercial</b>						
Commercial Variable Charge		\$1.20	\$1.25	\$1.31	\$1.37	\$1.43

### Impact on customers

#### Residential

The introduction of a residential IBT structure will have the greatest impact in year one of the regulatory period, which is mainly due to the increases associated with the revenue requirement over the five year period. The table below demonstrates the impact of changing to an inclining block structure on three different residential customers in 2008-09.

Customer Impact Analysis \$1/1/07	Existing Structure		Domestic IBT
	2007-08	2008-09	2008-09
<b>Res (200kL Avg)</b>			
Water SC	\$ 253.78	\$ 265.60	\$ 265.25
Volume	\$ 220.36	\$ 230.62	\$ 242.40
Waste SC	\$ 385.63	\$ 403.59	\$ 403.06
Total Account	\$ 859.77	\$ 899.80	\$ 910.71
<b>Percentage change in total account</b>		4.66%	5.92%
<b>Res (22kL Avg)</b>			
Water SC	\$ 253.78	\$ 265.60	\$ 265.25
Volume	\$ 24.24	\$ 25.37	\$ 24.24
Waste SC	\$ 385.63	\$ 403.59	\$ 403.06
Total Account	\$ 663.65	\$ 694.55	\$ 692.55
<b>Percentage change in total account</b>		4.66%	4.35%
<b>Res (250kL Avg)</b>			
Water SC	\$ 253.78	\$ 265.60	\$ 265.25
Volume	\$ 275.45	\$ 288.27	\$ 308.40
Waste SC	\$ 385.63	\$ 403.59	\$ 403.06
Total Account	\$ 914.86	\$ 957.46	\$ 976.71
<b>Percentage change in total account</b>		4.66%	6.76%

As can be seen from the above table, the IBT will favour the low water user with a marginal decrease in total account over the alternative of maintaining the existing tariff structure.

The impact on an average household (200kL) of adopting the IBT will be a small increase in total account of 1.27% when compared to the alternative of maintaining the status quo. The increase in total account is due to the volume consumed entering the 2nd block of the tariff structure. In total dollar terms this is an increase of \$10.91 per annum or \$3.64 per account compared to the alternative. This level of impact is viewed as marginal.

The largest impact is logically on the users that consume greater than 200kL per annum and a household with an average of 250kL a year consumption will see an

increase in total account of 2.10% over the alternative and 6.76% increase over the 07-08 charges. In total dollar terms the impact of the IBT over the alternative is an increase of \$19.26 per annum or \$6.42 per account. The increase in total account is driven by the higher volumetric charges associated with block 3.

Westernport Water believes that the IBT proposed will have the desired effect of sending appropriate pricing signals to conserve water, whilst not having a disproportionate impact on the permanent residents of the region.

### Commercial Customers

The impact of the one off first year adjustment to the Commercial volumetric tariff has been modelled across a range of existing Commercial customers. The results of the impact analysis are detailed below:

Customer Impact Analysis \$1/1/07	Volume	2007-08	Existing	New
			Structure 2008-09	Structure 2008-09
<b>Sml Non Res (20mm)</b>				
Water SC		\$253.78	\$265.60	\$265.25
Volume	400	\$440.72	\$461.24	\$480.00
Waste SC		\$385.63	\$403.59	\$403.06
Cistern charge	0	\$0.00	\$0.00	\$0.00
Total Account		\$1,080.13	\$1,130.42	\$1,148.31
<b>Percentage change in total account</b>			4.66%	6.31%
<b>Med Non Res (25mm)</b>				
Water SC		\$456.80	\$478.07	\$477.45
Volume	1300	\$1,432.34	\$1,499.03	\$1,560.00
Waste SC		\$385.63	\$403.59	\$403.06
Cistern charge	0	\$0.00	\$0.00	\$0.00
Total Account		\$2,274.77	\$2,380.68	\$2,440.51
<b>Percentage change in total account</b>			4.66%	7.29%
<b>Lge Non Res (32mm)</b>				
Water SC		\$863.05	\$903.24	\$902.06

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Volume	908	\$1,000.43	\$1,047.01	\$1,089.60
Waste SC		\$385.63	\$403.59	\$403.06
Cistern charge	43	\$6,023.78	\$6,304.24	\$6,296.06
Total Account		\$8,272.90	\$8,658.07	\$8,690.79
<b>Percentage change in total account</b>			4.66%	5.05%
<b>Lge Non Res (50mm)</b>				
Water SC		\$2,817.45	\$2,948.63	\$2,944.80
Volume	4803	\$5,291.95	\$5,538.33	\$5,763.60
Waste SC		\$385.63	\$403.59	\$403.06
Cistern charge	11	\$1,540.97	\$1,612.71	\$1,610.62
Total Account		\$10,036.00	\$10,503.25	\$10,722.08
<b>Percentage change in total account</b>			4.66%	6.84%
<b>Lge Non Res (100mm)</b>				
Water SC		\$17,488.72	\$18,302.96	\$18,279.21
Volume	3000	\$3,305.40	\$3,459.29	\$3,600.00
Waste SC		\$385.63	\$403.59	\$403.06
Cistern charge	9	\$1,260.79	\$1,319.49	\$1,317.78
Total Account		\$22,440.55	\$23,485.33	\$23,600.06
<b>Percentage change in total account</b>			4.66%	5.17%

### Vacant Land

Westernport Water commenced restructuring its approach to charging for vacant land for water and sewerage during the 2005-2008 regulatory period. It is proposed to hold water and sewer vacant land charges at nominal values (no price increases apart from CPI) for the period of this Water Plan and continue to do so until the charges approximate 50% of the 20mm connected water fixed charge. This is in line with industry practice.

### Miscellaneous Fees and Charges

Westernport Water is proposing a revised schedule of miscellaneous fees and charges for the 2008-2013 regulatory period. It is proposed to adjust the miscellaneous fees and charges by CPI annually for the regulatory period. A full schedule of miscellaneous fees and charges are detailed in [Section 8.10](#) of the Water Plan.

New Customer Contributions (NCC)

Water businesses have the ability to require developers to make an upfront contribution to the costs of connecting to the existing water and sewerage networks, and recycled water infrastructure in the form of New Customer Contributions or developer charges. The following is a summary of the NCC framework as it applies to Westernport Water:

<i>Water NCC'S</i>	<i>\$ per lot</i>
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180
<i>Wastewater NCC'S</i>	
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180
<i>Recycled Water NCC'S</i>	
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180

Section 9 – Non-Prescribed Services

Services which are classified as non-prescribed services are:

- Trade Waste
- Gas
- Recycled Water
- Farming activities

Costs associated with non-prescribed services are excluded from the calculation (or building blocks) of the revenue requirement for operating the business. Subsequently, revenue streams from these services are not prescribed by the ESC. Further details regarding the development of non-prescribed services and associated expenses and revenue are contained in [Section 9](#).



## 2. INTRODUCTION

### 2.1. About Westernport Water

Westernport Water provides water and wastewater utility network services to a projected 16,000 (in 2008) properties over an area of 300 square kilometres on Phillip Island and the mainland stretching from The Gurdies to Archies Creek (refer to diagram in [Section 2.2](#)). Westernport Water was a Statutory Authority of the Victorian Government and was constituted by order under section 98(2) of the Water Act 1989 and published in Government Gazette No. s102 on 22 December 1994.

Effective from 1 July 2007 Westernport Water became Westernport Region Water Corporation (operating as Westernport Water) as a result of the Water Governance Act 2006. Westernport Water is responsible to the Victorian State Government via the Minister for Water, The Hon. Tim Holding, MP, Minister for Water and the Treasurer The Hon John Lenders.

The Water Plan has been developed to comply with the various requirements of water industry regulators, regulatory instruments and governing legislation. The Water Plan delivers the service standards required by the regulators and its customers.

The Water Plan delivers a contribution to the environmental and other initiatives required by the State Government's White Paper "Securing our Water Future Together" and the Central Region Sustainable Water Strategy. It also delivers modest returns to the Government from past investments whilst balancing service, social and environmental outcomes required by Westernport Water's regulators and customers.

## **2.2. The Scope and Scale of the Westernport Water Business**

Core functions of Westernport Water are to provide water and wastewater services wherever economically, environmentally and socially practicable to properties and communities throughout its district.

Westernport Water has a diversified water supply with a reservoir and a single water supply system. Water is sourced from the catchment supplying the Candowie Reservoir in the Bass Hills near Glen Forbes via Tennent creek, the Bass River and via groundwater bores from the Corinella Aquifer. Westernport Water has a bulk water entitlement of 2,911 ML from Tennent Creek and is currently in the process of converting extraction licenses for the Bass River and Corinella Aquifer to Bulk Entitlements (BE). The BE application process is in progress at the time of preparing the water plan, Westernport Water will be seeking to have the BE on the Bass River and Corinella Aquifer endorsed by the Minister before the commencement of the 2008-2013 regulatory period.

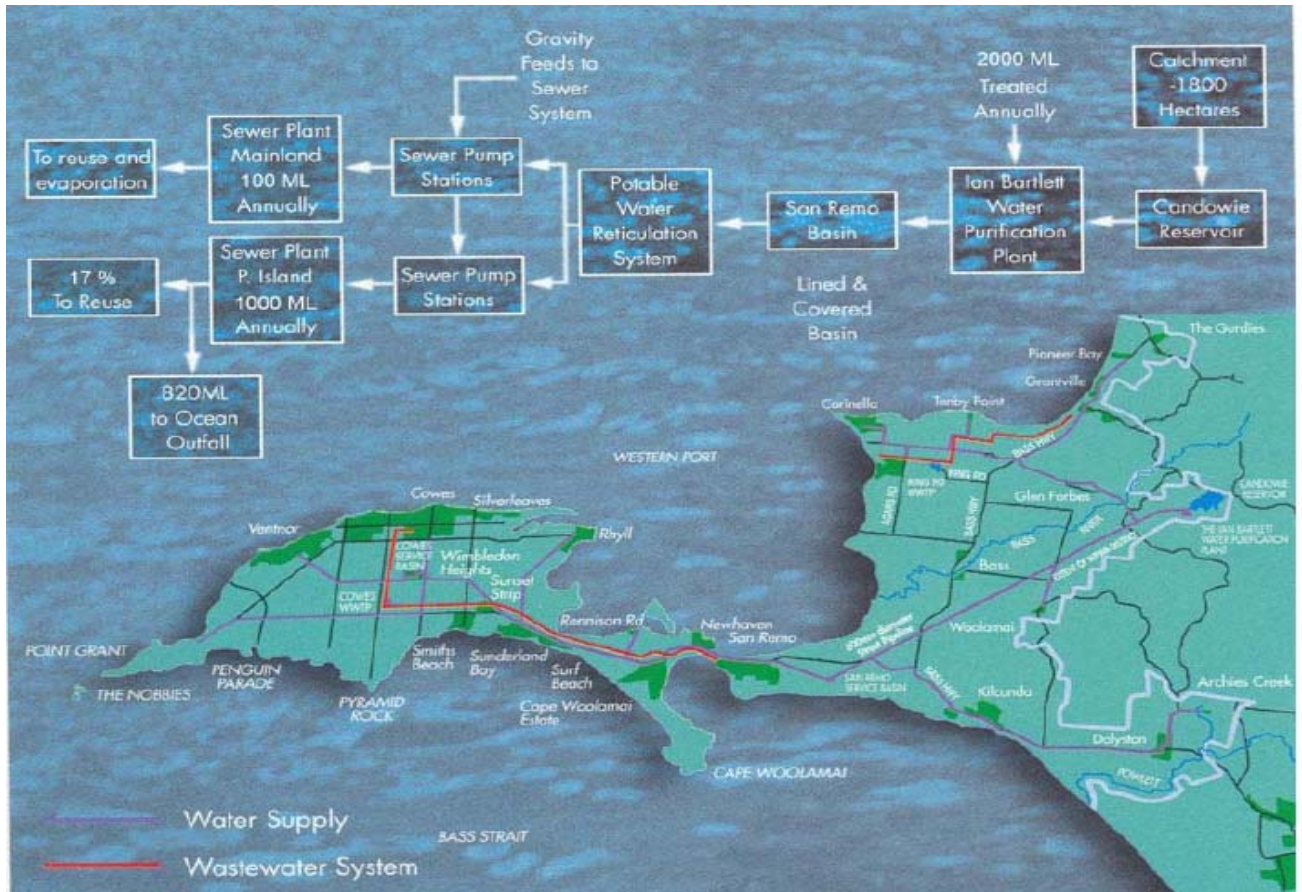
The reservoir water is treated at the Ian Bartlett Water Purification Plant at the Candowie reservoir and then pumped to the San Remo Basin for distribution to customers within Westernport Water's district, with average annual demand of approximately 2000ML (or 2GL).

Wastewater services are provided to approximately 90% of properties that receive water. Westernport Water has two wastewater treatment plants that process approximately 1100 ML of domestic wastewater annually. The principal plant, Cowes Wastewater Treatment Plant, is located on Phillip Island and services Phillip Island and the township of San Remo. The King Road Wastewater Treatment Plant is located in Coronet Bay and services the major townships of Corinella, Coronet Bay and Grantville located on the east coast of Western Port. The volume of wastewater treated at this plant is 100 ML per annum.

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Wastewater from the townships of Kilcunda and Dalyston is treated under agreement by South Gippsland Water at the Wonthaggi treatment plant.

The following diagram illustrates our system and service district:



In addition, Westernport Water provides the following services:

- Sale of treated effluent for beneficial re-use,
- Removal of greasy wastes (no major industrial trade waste producers currently exist within the serviced area),
- Other utility services including reticulated gas (LPG) and specialist advice on pipeline design for new developments.

### 2.3. Strategic Direction

The management and Board of Westernport Water reviewed and re-established the strategic intent of Westernport Water in early 2007.

The strategic intent of Westernport Water for the 2008 -2013 regulatory period is:

**“To be a smart company providing quality water services and more.  
We value our community, our reputation, our people and outstanding  
performance.”**

The expression of strategic intent or vision is supported by the following objectives:

- Focus on the core water services to continually improve the health and well being of our customers and the environment;
- Grow/develop our recycled water activities in a viable and sustainable manner. Research and implement further economically and environmentally viable reuse opportunities;
- Continually listen to our customers and provide them with outstanding service;
- Provide timely and relevant information to our customers and stakeholders;
- Build community awareness to reduce potable water consumption;
- Play a leading role in engaging with the community by assisting in the sustainable development and growth of our region and its people;
- Operate the LPG business in a sustainable manner to the benefit of our current customer base and maintain an ongoing overview of the economic viability of that business;
- Research and develop other business opportunities;
- Manage our business in such a way as to minimize our environmental impact and consumption of natural resources;
- Develop our people to the maximum of their capability;
- Recruit and retain people who will strengthen our culture; and

- Establish a reputation as an organisation with an innovative and vibrant culture.

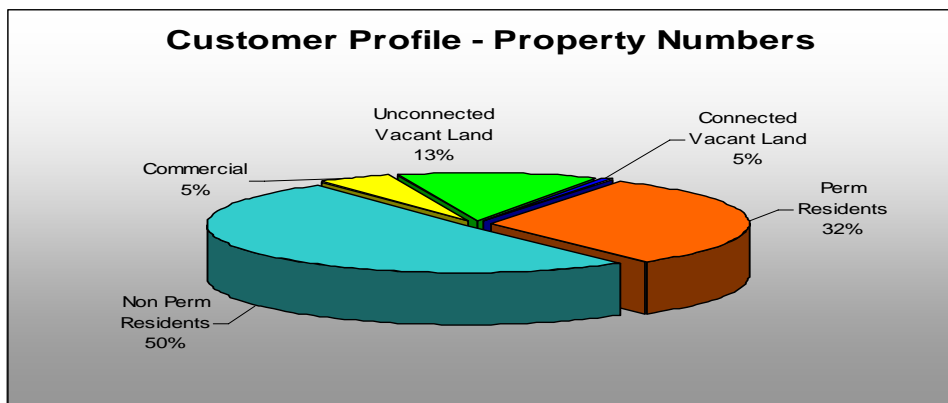
The above objectives have formed the development of this water plan in terms of programs that have been costed and included in operational or capital expenditure forecasts.

Each of these objectives is driven by a stakeholder requirement.

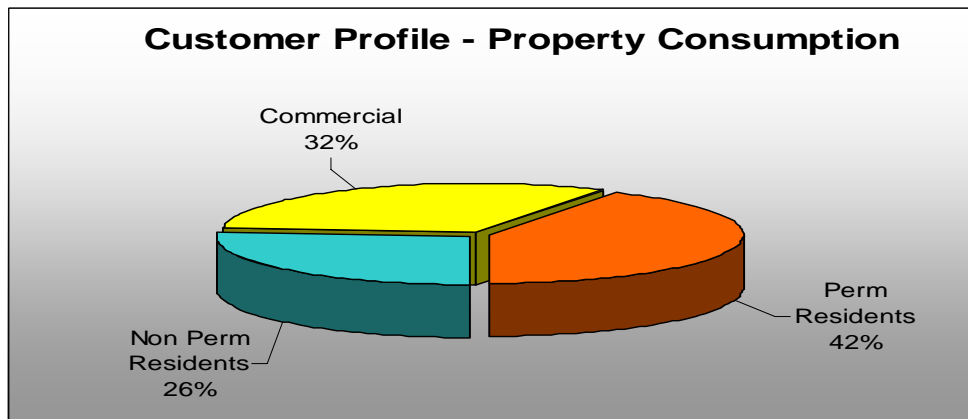
## 2.4. WPW Customer Profile

Westernport Water forecasts that 16,000 properties will be supplied with water services and 14,700 with sewerage services in 2008-09. The vast majority of properties serviced by Westernport Water are residential. The *current* profile of residential property owners (including vacant land owners) are 61% non permanent residents, who can be characterised as holiday home owners, and 39% are permanent residents. Of the permanent residential properties 17% are currently in receipt of concessional rebates on services. There are 2000 properties classified as unconnected vacant land. Commercial customers account for 5% of total property numbers, and are not projected to change over the 2008-13 period.

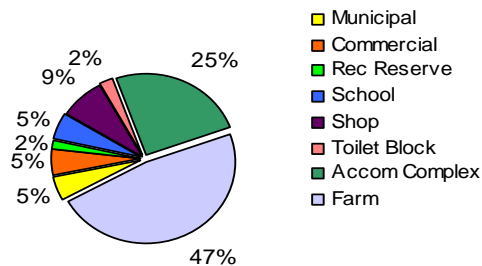
The following graphs detail the composition of Westernport Water customer base as a percentage of total properties, as forecast in 2008-09:



The total annual volume of water forecast to be supplied to Westernport Water customers in 2008-09 is 1.87 GL. The following graphs detail the composition of the projected 2008-09 total property consumption, expressed as a percentage of total consumption, with a further breakdown of commercial properties. Farms have been classified as commercial properties and represent 47% of total commercial property consumption.



**Commercial Consumption**



***Average Annual Water Consumption***

The average annual water consumption for a Westernport Water customer is approximately 113kL per property. This low figure is affected by the large percentage of non permanent residents that use comparatively little water. To assist in the revenue modelling (discussed in more detail in [Section 8 - Prices](#)), Westernport Water views its customer base in the following way:

Customer type	Average Annual usage
Permanent Resident	200kL
Non Permanent Resident	22kL
Commercial customer	756kL

### *Commercial Customers*

Westernport Water does not have any industrial or major trade waste customers and is not expecting to have this type of customer within the next regulatory period. The commercial sector is a combination of municipal sites, farms, shops and restaurants, horticultural users and a significant accommodation sector comprising motels, bed and breakfasts and caravan parks. Currently the largest commercial potable water user in the region, apart from Westernport Water itself, is an established holiday resort.

Westernport Water will be developing communication strategies to target large water users (>10ML) in line with the Government initiative 'WaterMAPs' program. This program requires large industrial or commercial users to:

- Assess their current water use
- Identify inefficiencies and potential water savings
- Prepare an action plan to implement water conservation actions
- Annually review and report on progress.

### *Recycled Water Customers*

Westernport Water produces Class B recycled water from both sewerage treatment plants. Westernport Water currently has a small number of recycled water customers which are typically sporting fields and golf clubs. The market for recycled water is developing, with potential customers now in negotiation for recycled water deliveries between 60-100 ML per annum.

Westernport Water also offers access to tankered reuse water for commercial customers or community groups with relatively low usage requirements and no alternative delivery infrastructure. Access to tankered recycled water has been primarily to maintain sporting surfaces and heritage gardens during the period of water restrictions.

### 3. OUTCOMES FROM THE FIRST REGULATORY PERIOD

Westernport Water's actual financial results for 2005-06 and 2006-07 and forecast figures for 2007-08 suggest that expenditure is expected to be \$3.9 million (\$1/1/07) in excess of the ESC 2005 - 2008 Final Determination, or approximately 11% over the determination for revenue requirement for the 2005-2008 regulatory period. The variance is due to an increase in unbudgeted operating expenditure (OPEX) for prescribed services and the shift from non-prescribed services to prescribed services over the regulatory period ending 30 June 2008. This over expenditure is offset by under expenditure of capital expenditure (CAPEX) forecasts. A detailed analysis of major variances of OPEX and CAPEX for the first regulatory period is discussed in [Section 3.3](#) and [Section 3.4](#).

#### 3.1. Over and Under Recovery of Revenue

Analysis of the OPEX actual results for 2005 and 2006 financial years and latest forecasts up to 30 June 2008 is expected to result in over expenditure (or an under recovery of revenue requirement) of approximately \$4 million (\$1/1/07), as highlighted in the table below:

(\$m)	2005-06	2006-07	2007-08	Total
<b>Revenue requirement</b>				
Operating expenditure	7.46	8.38	8.34	24.18
Return on assets to 30/6/08	2.76	2.89	3.25	8.90
Regulatory depreciation of assets to 30/6/08	1.38	1.38	1.38	4.13
Regulatory depreciation of new assets	0.13	0.25	0.46	0.84
Adjustments from last period	-	-	-	-
Benchmark tax liability	-	-	-	-
<b>Total revenue requirement ( Actual &amp; projected)</b>	<b>11.73</b>	<b>12.90</b>	<b>13.43</b>	<b>38.05</b>
<b>ESC Final Determination</b>	<b>11.10</b>	<b>11.10</b>	<b>11.77</b>	<b>33.97</b>
<b>Variance (Actual &amp; projected)</b>	<b>0.63</b>	<b>1.80</b>	<b>1.66</b>	<b>4.09</b>

The major cause of variances between the ESC's final determination and the forecasts is the result of increased expenditure on prescribed services over the 2005-2008 regulatory period (refer to [Section 3.3.1](#)), however the impact is slightly offset by an under spend on capital projects (CAPEX) over the regulatory period.



The increase in OPEX combined with a reduction in CAPEX of \$8.5 million (\$1/1/07) due to the deferral of the Melbourne Water Pipeline project, is expected to result in a *net* over expenditure (or under recovery of revenue) of approximately \$3.4 million (\$1/1/07). An analysis of variances from original Water Plan assumptions is detailed in [Section 3.3 OPEX](#) and Section [3.4 CAPEX](#).

### **3.2. Pricing Adjustment**

Westernport Water recognises that the actual results for 2005-06 and 2006-07 and the forecasts for 2007-08 suggest that the operational expenditure is expected to be above the ESC's threshold limit of dealing with unforeseen and catastrophic events, which is a cost change greater of 2.5% of total revenue or \$1 million. Whilst the expenditure projected for the first regulatory period is within this thresholds set by ESC to request revenue relief, Westernport Water believes that the increase in costs can not be attributed to any particular unforeseen or catastrophic event, apart from the extra costs incurred due to drought conditions.

The impact of the drought on the OPEX forecasts is anticipated to be approximately \$0.9 million. Given that the OPEX base has increased to satisfy the business as usual requirements, Westernport Water believes that this level of expenditure represents an efficient use of resources over the first regulatory period. Detailed analysis of the cost shifts is contained in [Section 3.3](#).

Westernport Water will not be making an application to ESC for pricing adjustments or for any pass through of increased regulatory costs, or pricing adjustment from the 2005-2008 regulatory period.

### **3.3. 2005-2008 Operating Expenditure (OPEX)**

Analysis of the operating expenditure (OPEX) actual results and latest forecasts for the first regulatory period up to 30 June 2008 is expected to result in a \$3.9 million (or 11%) excess above the OPEX allowed in the ESC's Final Determination (\$1/1/07).

Variances from original Water Plan assumptions are discussed below:

### *Non-prescribed Expenditure*

The shift from non-prescribed expenditure (mainly the gas business) to prescribed expenditure is the major change in expenditure for Westernport Water. Total non-prescribed expenditure in the 2005 Water Plan was expected to be \$2.62 million (\$1/1/07) but is now forecast to be only \$0.60 million at the end of the first regulatory period. The gas business was primarily set up as a pilot project. Westernport Water has assessed the future of the gas business and has made a strategic decision to only advance the business if it is economically viable.

The impact of the shift from non-prescribed expenditure (not included in revenue requirement of water plan) to prescribed expenditure will contribute to the over expenditure on prescribed services of \$2 million (or approximately 50% of the total over expenditure of \$4 million) over the first regulatory period ending 30 June 2008.

### *Cost of New Obligations*

Westernport Water has experienced higher than anticipated costs in relation to regulatory compliance and costs of new obligations in the 2005-2008 regulatory period (refer to [Section 3.3.1](#) – Reconciliation).

The initial ESC regulatory audit undertaken in 2005 detailed a range of areas that Westernport Water was not compliant. These areas related to:

- Reporting data quality
- Risk management - including incident and emergency response.

In order to address these issues and ensure ongoing compliance with the Statement of Obligations (SoO) and ESC reporting requirements, Westernport Water reassessed the previous OPEX assumptions for new obligations and has made a greater investment in these areas. This has led to increased costs relating

to the new regulatory environment, increased risk focus, and development and integration of risk management principles and systems.

Westernport Water initially underestimated the costs of compliance with the ESC's reporting requirements in terms of available systems and data quality, resulting in higher than expected costs relating to software enhancements and data maintenance. The ongoing costs associated with Management Information System (MIS) including licence fees and maintenance costs, continued development and enhancement of the system, and the data integrity project for billing database has also contributed to the higher than expected corporate costs in the 2005 Water Plan.

### *Water Quality Issues*

Water quality issues experienced in 2005 due to manganese problems encountered in the reticulation system and an additional algal bloom outbreak in 2005-06 have contributed to the variances from Water Plan assumptions. The OPEX costs associated with a single manganese event in 2005-06 are in excess of \$200k. The ongoing issue of managing the manganese levels within the raw water reserves and the associated treatment processes has also lead to incurring higher operational costs in terms of professional support, process changes and chemical usage.

### *Effects of Drought*

Westernport Water has incurred higher than projected OPEX in relation to the ongoing drought and associated water supply shortage. The following costs were not included in the OPEX projections incorporated in the 2005-2008 Water Plan:

- Restriction notices and implementation of exemption application process including ongoing investigation and enforcement;
- Water Savings and conservation campaigns;
- Community education – advertising, road signs & media releases. Facilitating community awareness and increasing Westernport Water profile within

community via education programs, and participation in conservation projects/meetings;

- Water conservation and bylaw enforcement officer \$0.04 million per annum (2006-2008);
- Recycled water deliveries to drought affected community groups and businesses;
- Administration costs associated with establishing a tankered recycled water management plan and system
- Increased levels of operations and maintenance costs associated with repairs to infrastructure due to tree roots and ground movement.

### **3.3.1. Reconciliation of 2005 Water Plan OPEX**

A summary of the reconciliation of the 2005 Water Plan OPEX, actual results for 2005-06 and 2006-07 and projected figures for 2007-08 are detailed below:

WATER PLAN RECONCILIATION	05/06	06/07	07/08
<i>ESC Final Determination (Jan 07 \$m)</i>	6.81	6.57	6.69
<i>Additional costs specifically associated with Drought</i>			
Advertising / Public Relations		0.05	0.03
* Water Conservation Officer		0.04	0.04
* Recycled Water deliveries		0.03	
* Bulk Water purchases (not included in Water Plan)		0.20	0.01
* Electricity (pumping)		0.03	0.09
* Communications Officer		0.03	
* Non Capital works		0.36	
<i>Additional costs associated with New Obligations</i>			
* Regulation unbudgeted costs		0.10	0.10
* Risk unbudgeted incremental costs		0.04	0.06
* Risk unbudgeted contractor costs		0.05	0.06
* Sustainable Water Planning unbudgeted costs			0.01
* Data requirements/software enhancements	0.04	0.03	0.04
* IFRS unbudgeted costs	0.01		
* Compliance Audit costs			0.05
* Additional Licence Fees	0.02	0.06	0.03
* Contractors Assets		0.06	
<i>Additional Corporate Costs</i>			
* Investigation & Research - alternative supply source		0.05	0.07
* Salaries & Wages (including Contractors & Board costs)	0.15	0.52	0.88
* Training costs	0.04	0.07	0.08
* Legal costs	0.04	0.02	
* Redundancy costs	0.15		
* Recruitment costs	0.04	0.02	
* Vehicle costs		0.02	0.02
<i>Extra Maintenance Costs</i>			
* Salaries & Wages			
* Contractors	0.15	0.04	0.10
	7.46	8.38	8.34
<i>Actual Results (Jan 07 \$'s) - as per ESC Template</i>			
BAU	7.40	8.36	8.29
Licence Fees	0.06	0.02	0.05
<b>Total OPEX</b>	7.46	8.38	8.34

### 3.4. 2005-2008 Capital Expenditure (CAPEX)

The 2005-06 and 2006-07 actual capital expenditure and the projected capital expenditure for 2007-08 are expected to result in a reduced Regulatory Asset Value (RAV) below the ESC's Final Determination, resulting in a reduction of the return of capital and regulatory depreciation.

A comparison of CAPEX spend against the ESC determination is provided below:

Prescribed CAPEX \$1/1/07m	2005-06	2006-07	2007-08	Total
ESC Final Determination	4.23	4.87	12.99	22.09
Actual & forecast	2.84	5.52	5.23	13.85

The projected reduction in the RAV is primarily due to the deferral of the

Melbourne Water Pipeline Project which was included the 2005 – 2008 Water Plan with an estimated cost of \$14.95 million.

Throughout the 2005-2008 regulatory period Westernport Water has pursued the staged development of the Melbourne Water project, from functional design through to commencement of the detailed design. Westernport Water has expended \$0.1 million in 2005-06 and \$0.2 million in 2006-07 on consultants to assist with the detailed design and impact analysis of the Melbourne Water project. These costs have now been expensed, which is contributing to the over expenditure discussed in [Section 3.3](#).

Ongoing negotiations with the pool of retailers have been held over the access to Melbourne Water system. During these negotiations Westernport Water became aware that the pool of retailers would charge a fee for the purchase of a source entitlement. The proposal (dated Nov 2006) was for an upfront payment of \$7 million over and above the purchase price of water and any construction costs. These costs were not included in the original project costing.

At the most recent meeting (Feb 2007) and at the time that Melbourne Water was introducing Stage 3A water restrictions, discussions were focused on what drought recovery conditions would be appropriate prior to any agreement to the sale of a source entitlement and corresponding water allocation outside of the metropolitan area.

A combination of factors has lead Westernport Water to reprioritising the CAPEX spend to address the region's short term water supply security in favour of continuing with the Melbourne Water connection. These factors included:

The ongoing drought

The associated constraint of Melbourne's available water supply for allocation

Ongoing issues with securing a source entitlement and the associated commercial arrangements

The recent announcement of the Victorian Water Plan and the associated Wonthaggi desalination plant.

Alternative options for securing long term security of water supply have been identified through Westernport Water's participation in the Central Region Sustainable Water Strategy (CRSWS) and associated Water Supply Demand Strategy (WSDS). The extent and severity of the current drought meant that medium to long-term options in the CRSWS and WSDS had to be bought forward and developed as short term solutions to secure water supply.

Westernport Water has subsequently moved to develop the Bass River and Corinella Aquifer as priority short term water supply augmentation projects. Westernport Water has been granted short term licences over the Bass River and Corinella Aquifer and is seeking to have the qualified licences converted to Bulk Entitlements prior to the commencement of the 2008-2013 regulatory period.

The suitability of these short term projects as long-term sustainable sources representing a secure water supply for the region will be assessed over the next 12 months. Further augmentation projects may be required depending on the outcomes of the proposed sustainability investigations.

These priority short term water supply augmentation projects were not anticipated in the 2005 Water Plan. They have however been essential in addressing the consequences of the current drought. The cost of these projects will partly offset the impact of the reduced RAV from the deferral of Melbourne Water connection project.

The net impact of the deferral of Melbourne Water Pipeline project and the additional water supply works undertaken on the revenue requirement is a reduction in the RAV (projected to be \$6.4 million), resulting in a reduction of the return on assets (\$0.16 million), and the regulatory depreciation of approximately

(\$0.06 million) over the regulatory period, which equates to a reduction of approximately \$0.23 million in revenue requirement over the regulatory period. Figures are based on the weighted average cost of capital (WACC) of 5.2% and regulatory depreciation rate of 2%.

### 3.5. Service Standards

Additional Service Standards requested by the ESC are detailed in Section 5.1.3.

#### 3.5.1. Water Services

Westernport Water recognises the importance of maintaining a reliable water supply to its customers, and has invested more resources into driving efficiencies into the whole of life asset management process, from the development of an asset replacement program and on-going maintenance program. Westernport Water is focused on improving unplanned water supply interruptions, and improving customer satisfaction with the implementation of proactive maintenance programs.

The table below summarises the actual water supply reliability key performance indicators (KPIs) for 2005-06 and 2006-07 financial years and expected outcomes for 2007-08.

Service Standards	Actual 2005-06	Target 2005-06	Actual 2006-07	Target 2006-07	Forecast 2007-08	Target 2007-08
<b>WATER</b>						
Unplanned water supply interruptions (per 100km)	29.6	44	45.9	44	50	44
Average unplanned frequency of water supply interruptions	0.35	0.30	0.39	0.30	0.35	0.30
Average planned frequency of water supply interruptions	0.38	0.21	0.07	0.21	0.36	0.21
Average duration of unplanned water supply interruptions (mins)	154.41	93	78.15	93	110	93
Average duration of planned water supply interruptions (mins)	320.41	300	61.3	300	210	300
Avg time taken to attend bursts and leaks (hrs) priority #1	0.1	1	0.2	1	0.25	1
Avg time taken to attend bursts and leaks (hrs) priority #2	4.2	2	0.6	2	2.5	2



Service Standards	Actual 2005-06	Target 2005-06	Actual 2006-07	Target 2006-07	Forecast 2007-08	Target 2007-08
Avg time taken to attend bursts and leaks (hrs) priority #3	23.9	24	2.1	24	24.0	24
Unplanned water supply interruptions restored within 5 hrs (%)	97.2%	99%	93.5%	99%	99%	99%
Avg unplanned customer minutes off water supply (mins)	53.4	33	30.8	31.5	52	30
Avg planned customer minutes off water supply (minutes)	121.55	48	4.21 <sup>3</sup>	48	76.0	48
Number of customers experiencing at least 1 unplanned interruption in the year	n.p.	4500	n.p.	4500	4500	4500
Unaccounted-for Water (%)	0.013	13.9	10.3	13.8	12	13.7

Westernport Water has undergone a major shift in weather conditions over the first regulatory period, which has impacted on many of the KPIs relating to water supply interruptions. The change in conditions has required more resources to be utilised to attend to the high number of reactive (unplanned) maintenance calls attributable to drought conditions, including the increased use of external contractors. Planned works such as mains cleaning and flushing have been deferred due to the lack of available water, the result being favourable variances reported for planned interruptions in 2006-07.

The focus on stop valve and fireplug preventative maintenance programs will enhance our ability to identify potential problems and continue to reduce both the customer interruption times and the number of unplanned interruptions in the remainder of the regulatory period.

The higher than expected result for 2005-06 in relation to planned interruptions was due to water quality issues associated with 2 manganese events. The result of dirty water and subsequent customer complaints was the requirement of wide spread system flushing and air scouring.

Westernport Water has continued to work on and improve its focus and capabilities on major asset preventative maintenance programs which is expected to assist with reducing the number of unplanned interruptions.

<sup>3</sup> Minimal planned maintenance during 06/07 due to drought

Westernport Water has also placed emphasis on increasing the skills of its field maintenance workforce, with improved on-job training and certification to level Cert 2 and 3 for the Water Industry.

The efficiency improvements on reducing interruptions have been negated by the impact of the drought on reticulation assets (2006-07), increasing the number of mains breakages. However, response times and asset identification have been greatly assisted by the introduction of a new asset management system (Asset Life) and a more efficient on-call program, the benefits of which will be seen in 2007-08 results.

#### *Unaccounted-for water*

Assumptions for unaccounted for water forecasts have been based on data from previous years obtained from existing flow measuring devices. The data obtained for 2005-06 unaccounted for water is not consistent with previous recordings. The data integrity on metered flows from both the Candowie water treatment plant and a high number of property meters has been addressed with the implementation of a meter replacement program. The new meters will help eliminate error in bulk metering and provide more accurate data on which to base the calculations of unaccounted water for 2006-07 and 2007-08 financial years, in line with the expected losses of approximately 13%.

### **3.6. Sewerage Services**

Westernport Water has a sewer system that is under utilised for the majority of the year due to the seasonality of our customer base associated with our holiday population. When combined with a relatively new sewer network the number of blockages per 100km of systems is by industry standards very low. The impact of the drought on our service standards is that Westernport Water is now experiencing increased tree roots extending into the sewer mains from damaged property sewer points. Ground movement due to the drought conditions has also caused an increase in the number of breaks in the reticulation system.

Westernport Water will be implementing a GIS in 2007-2008 that will allow the reporting of customers experiencing greater than 3 sewerage spills per year, which is currently unable to be reported.

The table below summarises Westernport Water’s actual and forecast sewerage service reliability performance for the 2005-2008 regulatory period.

Sewerage Service Reliability	Actual 2005-06	Target 2005-06	Forecast 2006-07	Target 2006-07	Forecast 2007-08	Target 2007-08
<b>SEWER</b>						
Sewerage blockages (per 100km)	3.61	23	5.2	23	18	6.4
Avg time to attend sewer spill/block (minutes)	147	60	72	60	60	60
Average time to rectify sewer spill/block (minutes)	384	150	162	150	150	150
Customers with > than 3 sewerage spills in a yr	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Spill contained within 5 hours	100%	100%	81%	100%	100%	100%

Westernport Water provides a ‘24/7’ Operations Response Team to ensure all customer requests are dealt with in a timely manner, however the variability in respect of the average time to attend and to repair compared to the targets set is due to the higher than anticipated workload associated with the drought conditions.

The vast majority of sewer maintenance works undertaken by Westernport Water is in respect of house branch connections that require repair or rebuild due to either poor initial construction, root ingress or ground movement. The complexity of these works has lead to longer than anticipated repair times.

Westernport Water has also implemented new performance recording systems, which has lead to a number of reporting anomalies in respect of completion dates and times. Westernport Water has resolved the data anomalies and is confident of higher data reliability for reporting 2007-2008 performance data.

### 3.7. Customer Service Standards

Westernport Water is committed to delivering service excellence to its customers and either met or exceeded the customer service standards for the first two years of the first regulatory period. The results year to date for 2007-08 are 0.007% for EWOV complaints and 93% of all telephone calls answered within 30 seconds.

Customer Service Standards	Actual 2005-06	Target 2005-06	Actual 2006-07	Target 2006-07	Forecast 2007-08	Target 2007-08
Telephone calls answered within 30 seconds	94%	90%	94%	90%	90%	90%
EWOV Complaints per 1000 customers	0.03	0.04	0.04	0.04	0.04	0.04

#### 4. REQUIREMENTS FOR 2008 - 2013 REGULATORY PERIOD

This section discusses the regulatory and key requirements used to develop the programs contained within the Water Plan for the 2008 to 2013 regulatory period.

##### 4.1. Regulatory and Government Obligations

The principal regulatory instruments governing Westernport Water for the 2008-13 regulatory period are:

- *Water Industry Regulatory Order (WIRO)* which sets out the regulatory principles the Commission must use in assessing the business' Water Plan; and
- *Statement of Obligations (SoO)*, which sets out procedural requirements that must be followed by the business in preparing its Water Plan.

Westernport Water has developed water plan strategies and procedures with planned outcomes and targets in line with the guiding principles contained within these two documents. Further details of Westernport Water's proposed service levels and targets for the 2008-13 regulatory period are contained in [Section 5](#) of this Water Plan.

##### *Water Industry Regulation Order (WIRO)*

In terms of the regulatory principles, the WIRO requires that the prices (or pricing principles) contained in the Water Plan must:

- Provide for a sustainable revenue stream to Westernport Water that nonetheless does not reflect monopoly rents and or inefficient expenditure by Westernport Water.
- Allow Westernport Water to recover its operational, maintenance and administrative costs.
- Allow Westernport Water to recover its expenditure on renewing and rehabilitating existing assets
- Allow Westernport Water to recover a rate of return on assets to augment

existing assets or construct new assets.

- Provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users regarding:
  - ♦ 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;
  - ♦ 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; and
  - ♦ outline the expenditure forecasts, which must reflect the efficient delivery of the proposed outcomes contained in the Water Plan and take into account a planning horizon that extends beyond the term of the Water Plan.

Further discussion regarding the development of the Westernport Water tariffs and pricing structure is in [Section 8](#).

### *Statement of Obligations (SoO)*

The Statement of Obligations (SoO) requires that Westernport Water's Water Plan should cover:

- outcomes to be delivered in the regulatory period with respect to meeting future demands and complying with its obligations specified in the SoO, regulatory obligations, and any other obligations imposed by or under legislation;
- how Westernport Water proposes to achieve those outcomes;

- Westernport Water's revenue requirements; and
- the proposed prices to be charged for each of the Company's prescribed services.

Westernport Water's Water Plan has been structured around achieving these four requirements, as well as encompassing the guiding principles contained in Part 2 of the SoO which require Westernport Water in performing its functions and providing its services to:

- Manage water resources in a sustainable manner;
- Effectively integrate economic, environmental and social objectives into business operations;
- Minimise the impacts of activities on the environment;
- Manage risk to protect public safety, quality and security of supply;
- Operate as efficiently as possible with sound commercial practices;
- Manage business operations to maintain long-term viability;
- Undertake continuous review, innovation and improvement; and
- Collaborate with other public authorities and government agencies to take account of regional needs.

The Water Plan is subject to consultation with:

- The Environment Protection Authority in relation to obligations imposed by or under the Environment Protection Act 1970.
- The Essential Services Commission in relation to obligations imposed by or under a Code made under Section 4f of the Water Industry Act 1994, and standards and conditions of service and supply for declared services.
- The Department of Human Services in relation to obligations imposed by or under the Safe Drinking Water Act 2003, the Food Act 1984 and the Health (Fluoridation) Act 1973.
- The Department of Sustainability and Environment on matters in the Water Plan relating to the performance of the Company's functions and the

obligations in the SoO.

- The Department of Treasury and Finance in relation to the performance of the Company's functions and obligations in the SoO, and any required funding for capital expenditure not covered by the Water Plan projected cash flows.
- Westernport Water's customers on matters of concern to them which are included in the Water Plan.

Further details on the specific consultations undertaken to this point and the ongoing process as well as feedback from the above agencies are contained in [Section 4.2](#).

A review of Westernport Water's SoO for the 2008-13 planning period has highlighted eight (8) new obligations which have been included in the preparation of the operating expenditure (OPEX) and capital expenditure (CAPEX), and are detailed below:

- [Clause 23 – Investigation and Research](#)
- [Clause 24 – Sustainable Management Plan](#)
- [Clause 26 – Environmental Management Systems](#)
- [Clause 28 – River & Aquifer Health](#)
- [Clause 29 – Monitoring River Health](#)
- [Clause 32 – Smart Water Fund](#)
- [Part 8 – Statement of Obligations](#)
- [Clause 35 – Other Audits](#)

### **4.1.1. Investigation and Research**

The Statement of Obligations requires water businesses to continuously strive to implement innovative water practices, which has led to the inclusion of the new obligation of *Clause 23 – Investigation and Research* in Westernport Water's SoO. Westernport Water is planning to undertake an investigation into the impact and feasibility of incorporating desalinated water into its drinking water system



within the regulatory period.

#### **4.1.2. Sustainability Management Plans**

The fundamental building block of Westernport Water's strategic intent is what we consider necessary to be a 'smart water business supplying quality water services and more'. This vision statement encompasses the practices of sustainability as a "smart" business and is in line with the new requirement of the *SoO Clause 24 – Sustainable Management*. Westernport Water believes in sustainable practices such as:

- reduction in greenhouse gas emissions;
- water conservation education programs to reduce the extraction of water from the environment for consumption by customers;
- reduction in discharges from operating a sewerage system, which can include spillage, treated wastewater and bio solids;
- increase the utilisation of reuse water; and
- increasing biodiversity – net gain from ongoing cooperation and support of local land care and catchment groups to undertake on ground works.

Westernport Water has identified a number of targets, the achievement of which would enable Westernport Water to provide its services in line with the new Sustainable Management Principles contained in the SoO. These targets are as follows:

- Quantify and aim to minimise the organisation's environmental footprint or impact
- Per capita water consumption should be reduced by 25% by 2015 in line with the Government initiatives of the Central Region Sustainable Water Strategy;
- Quantifiable targets to ensure that there are no detrimental impacts to the environment from operation of our sewerage system;
- Increased utilisation of reuse water.

Westernport Water considers that achievement of these targets would be in the

long term interests of its customers, and the community more generally. This Water Plan is a key step towards the achievement of its sustainability goals.

### **4.1.3. Environmental Management**

Westernport Water has developed an Environmental Management System (EMS) enabling the identification of operational activities that cause significant environmental impact. It proposes to review the management systems within the planning period to achieve greater integration of the EMS with other risk based systems.

Westernport Water has also developed controls for these impacts and monitoring systems that assess the effectiveness of these controls. The ongoing review of Westernport Water's Environmental Management Systems is included in the operational costs for the regulatory period and has been included as a new obligation under *Clause 26 – Environmental Management*.

As detailed earlier Westernport Water also plans to develop a range of measures that describes its environmental footprint and develops a set of specific targets to help limit the impacts of our services on the environment.

Westernport Water's new environmental impact targets will be reported in an annual Sustainability Report, proposed for 2008-09. The sustainability report will help identify and develop benchmarks within the water industry against a reportable and auditable set of targets.

### **4.1.4. Aquifer and River Health Monitoring**

The requirement to have established Aquifer and River health monitoring systems is not a new obligation in the SoO, however it does newly apply to Westernport Water. In order to supplement its available water supply Westernport Water as previously detailed has developed water extraction points from the Corinella Aquifer and the Bass River.

In light of these recent changes Westernport Water is now in the process of agreeing monitoring processes with the relevant authorities such that the SoO requirements of *Clauses 28 River & Aquifer Health and Clause 29 – Monitoring River Health* will be satisfied. The ongoing nature of the monitoring process is anticipated to be developed and ratified in the process of securing Bulk Entitlements for extraction of water from these sources.

#### **4.1.5. Smart Water Fund**

The participation in industry workshops such as the Smart Water Fund is a new obligation placed on all water authorities under *Clause 32* of the SoO. Commitment to participating in the Smart Water Fund will ensure continued communication on issues facing the water industry now and into the future. Although there may not be any initial direct costs involved in participating in the Smart Water Fund, there will be a commitment of Executive Management involvement to ensure that Westernport Water maintains an active participation in any project and/or programs for the water industry developed through the Smart Water Fund.

#### **4.1.6. Compliance Audits**

Following consultation with Environmental Protection Authority (EPA) and Department of Human Services (DHS), Westernport Water has been advised that both departments will be conducting performance/compliance audit reviews within the water planning period. The impact of new audit requirements for Westernport Water has been included as additional costs as new obligations under *Part 8 – Compliance of the SoO*.

#### **4.1.7. Other Audits & Reviews**

The EPA has identified a new target of no dry weather spills over the planning period. Westernport Water has previously conducted a review of sewer treatment plants and associated collection and pumping systems in relation to capacity and the current target was set at one dry weather spill every five years.

To comply with EPA's new requirement of no dry weather spills Westernport Water will need to again review the sewer treatment plant performance and capacity to ensure that the EPA target can be achieved. The additional costs involved in the review, as well as minimal increased monitoring costs, have been identified under *SoO Clause 35 – Other Audits and Reviews*.

Further discussion regarding OPEX and CAPEX is included in [Section 6 – Revenue Requirement](#).

## **4.2. Feedback from Stakeholder Consultation**

### *Background*

Westernport Water has designed and implemented a customer and community engagement and consultation plan associated with the development of this Water Plan. The consultation process undertaken included engaging the community prior to the development of the exposure draft and subsequent to the release of the Draft Water Plan.

#### **4.2.1. Pre Draft Process and Outcomes**

To assist in the pre draft consultation process Westernport Water engaged a consultant to conduct the initial customer consultation program and report on the findings.

Westernport Water's preliminary consultations were conducted in two stages.

- Stage 1 consisted of:
  - ♦ a telephone interview survey of a random sample of Westernport Water's customers (100 permanent residents and 100 non-permanent residents) conducted in early March 2007
  - ♦ an on-line feedback survey posted on Westernport Water's website from mid-March to Mid-April 2007;
- Stage 2 which included two customer workshops held in late March 2007.

In support of the overarching Community Engagement Plan a communication plan was developed and implemented to alert customers and the broader community to the process that Westernport Water was undertaking.

The Communication Plan consisted of:

- Advertising for registrations of interest via local papers online survey and community workshops.
- Advertising an online survey and community workshops on Westernport Water's website.
- Customer service phone calls – customer services informing customers about the workshop and online survey.
- Advertising in the November Account Newsletter of the online survey and community workshops.
- Engaging Westernport Water's Community Consultative Panel.
- Letters sent to the community members who registered for workshops inviting them to attend.
- Issued media release after workshops were complete.
- Water conservation education within the community via public speaking forums.

### **4.2.2. Results of Consultation**

#### *Water Quality*

Taste is the most important aspect of water quality that should be improved. There was a reluctance to pay for water quality improvements, however there was some interest in providing user pays improvements, in particular a water filter connected to the customer's property that would be maintained by Westernport Water.

Water quality improvements were further explored during the customer workshops, in particular improved treatment of the water, flushing and pipe cleaning and a water filter supplied and maintained by Westernport Water.

Most customers expressed a preference for improved treatment and/or greater emphasis on flushing and pipe cleaning, although a number of customers were concerned about potential water wastage from Option 2 (refer [Section 4.2.3 - Options](#)).

Most customers could not see the value in filtering the water for purposes other than drinking and cooking, and therefore they questioned the value of Westernport Water providing this service. However they agreed that if the option was purely on a user pays basis then it was a solution to some customers' concerns.

### Integration of feedback into Draft Water Plan

The customer feedback reinforced the strategic objective of improving the quality of water delivered to customers and in particular to address the aesthetic issues of taste and odour. Details of the associated programs that support the customer feedback are contained in [Section 6.3.3](#).

### *Water Supply*

The survey results highlighted a number of impacts of the water restrictions on customers, particularly on their gardens and general increased care with their water use, but also on customers' specific usage within their homes such as shorter showers and less frequent clothes washing.

Although most customers reported that the restrictions had significant impacts inside and outside their home, only one third of customers were willing to pay for guaranteed lower water restrictions. Those customers who were willing to pay were more likely to be on higher incomes.

The survey also established that nearly half of Westernport Water's customers surveyed (44%) are currently supplementing their supply with tank water

particularly for watering their gardens and for drinking/cooking water.

A number of customers were planning to increase their tank water capacity (26%) in the next 12 months (the capacity of most customers' tanks is currently less than 3,000 litres). A significant proportion of customers had only recently bought a water tank (15%) in the last 12 months.

The survey results showed that customers thought it was some what or very important that Westernport Water was independent in relation to its supply (59%). Customer feedback during the workshops confirmed this finding.

The customer workshops further explored the issues associated with securing the water supply and options available to Westernport Water.

### **4.2.3. Options considered at pre draft consultation workshops**

The workshop participants were asked to consider four (4) options namely:

1. Maintaining the current supply arrangements ( Candowie reservoir supplemented by bore water from the Corinella Aquifer and Bass River)
2. Option 1 plus a small augmentation to Candowie to increase capacity by 500ML
3. Option 1 plus doubling the size of Candowie reservoir to 4,400 ML
4. Option 1 plus proceeding with the Melbourne interconnection 2,200 ML

The feedback from the workshops was that customers generally preferred Options 2 (Option 1 plus extend Candowie reservoir to increase its capacity by 500ML) or Option 3 (extend Candowie Reservoir to double its capacity) or a combination of these over time. Customers generally thought that these options were the most cost effective, most sustainable in the long term and had the least impact on the environment (particularly Option 2). It was acknowledged that all of the options were reliant on rainfall and that this was an issue given the current supply shortage.

### *Integration of feedback into Draft Water Plan*

The impact of water tanks on ongoing demand has led Westernport Water to be conservative as to the projected levels of demand for potable water.

The feedback in relation to supply security was taken into account in the development of the forward CAPEX plan for the 2008-2013 regulatory period in that a major water supply augmentation is planned for 2010-2011. While the current expectation is that Westernport Water will be raising the Candowie Reservoir wall, some amount of research is required in the interim to determine which augmentation option will be the most efficient and reliable in terms of delivery of water into the system.

#### **4.2.4. Consultation on Methods of Pricing**

The pricing of water and using price as a mechanism to influence and change consumer behaviour and reduce consumption was one of the issues explored throughout the consultation process.

The issue of water pricing was considered in the customer workshops. The options canvassed included continuing with the current method of pricing (a single volumetric charge), a stepped tariff structure with an affordable first tariff block, and lower the service charge and raise volumetric charges.

The majority of workshop participants preferred a stepped tariff structure with an affordable first tariff block. Their feedback was that:

- They generally considered that this option was fairer
- It encouraged users to pay for their water use
- It encouraged water conservation.

However there were concerns that the stepped tariff option put forward was not applying to commercial customers. There was general feedback from the workshops that commercial customers should also be covered by this option.



### Integration of feedback into Draft Water Plan

This feedback has been integrated into the tariffs proposed in Section 8 of this Water Plan. Westernport Water has designed and is proposes to introduce an Inclining Block Tariff (IBT) structure to apply to residential customers. Whilst acknowledging the feedback in regard to an IBT for commercial properties modelling of the options demonstrated a large impact (up to 20% increase) on the commercial sector. Westernport Water has elected to apply a higher single volumetric rate for this sector. The commercial sector is not perceived to have a high level of discretionary use of water. The influencing of behaviour of commercial customers is to be addressed through the proposed water conservation program.

### **4.2.5. Management of Environmental Issues**

Westernport Water's Annual Customer Satisfaction Surveys have continued to show that Westernport Water's management of the environment is an important issue for customers.

The survey undertaken as part of the Water Plan consultation process provided a forum for Westernport Water to gain a better understanding as to the aspects of the environment that are important to customers, both in terms of Westernport Water's role in educating and informing the community about ways to save water and other issues related to the environment and their management of its own impact on the environment.

The results of the survey showed that:

- Customers clearly believed that Westernport Water has an important role in educating and informing the community about ways to save water;
- However it was less important for Westernport Water to provide information on broader environmental issues; and
- Most customers thought that it was important for Westernport Water to undertake catchment works to improve raw water quality through plantings

and fencing of creek and river banks, as well as reducing its impact on the environment, and reducing CO2 emissions from vehicles and electricity usage.

### *Integration of feedback into Draft Water Plan*

The results of this consultation when combined with the Statement of Obligations has lead Westernport Water to invest in a water conservation program. This program will commence in 2007-08 and will continue into the 2008-2013 regulatory period. In addition as detailed in [Section 6.2.4 - New Obligations](#), Westernport Water is in the process of establishing environmental targets and developing a sustainability report.

### **4.2.6. Post Draft Water Plan Consultation Plan**

The draft Water plan was released on 31 July as an exposure draft for the purposes of consultation with regulators, customers and the broader community.

Copies of the draft Water Plan were provided to

- The Minister for Water, via the Department of Sustainability and Environment , Office for Water
- The Treasurer
- The Essential Services Commission
- The Department Of Human Services
- The Environment Protection Agency

Feedback has been received from the Regulators and the Water Plan has been updated.

In addition to the regulatory consultation, Westernport Water undertook a program of customer and community consultation to highlight the proposed outcomes included in the Water Plan .

The exposure draft consultation plan undertaken is detailed in the table below:

Action	Communication Tool	Timeline
Inform community and stakeholders that the draft is complete and available	Media Release Local Paper adverts Fliers Westernport Water Website Letters to stakeholders and customers who attended previous workshop	31 July 30 July & 6 August 31 July 31 July 15 June 1 July
Make copy of Water Plan draft available	Hard copy at Westernport Water reception Soft copy download via website Executive summary available Fact sheets prepared and available in hard and soft copy	31 July 2007
Advertise a series of public meetings to present draft and gather further feedback	Local paper adverts Westernport Water website	23, 31 July & 6 Aug
Hold public meetings issuing feedback forms that can be later collected	Grantville Hall Cowes Cultural Centre Newhaven Office	7, 9, 11 & 22 August
Address Local Council meeting	Presentation and hand outs	8 August
Address Tourism Association	Presentation and hand outs	3 September
Seek feedback from Community Consultative Panel	Monthly meeting	4 July
Finalise out come of public meetings and feedback - drafting process before final draft is submitted	Media Release Westernport Water website Media release Account Newsletter Website	September November account newsletter 16 July

Westernport Water completed four, 2.5 hour public consultation forums at a range of times and places throughout the district over a two week period in mid August. The forums were not as well patronised as the pre draft consultations undertaken earlier in the year. The forums detailed and sought feedback in respect of the outcomes included in the plan associated with:

- Price and pricing structures particularly the proposed implementation of the Inclining Block Tariff structure for domestic customers;
- Water supply security; and
- Water quality.

In addition to the public forums briefings on the contents of the Water Plan were delivered to the local Council and Tourism Association to gain a broader community and commercial view on the proposals.

Integration of feedback into Water Plan final submission

In response to the feedback received following the release of the draft Water Plan

Westernport Water has:

- Reviewed the property growth projections and associated water demand forecasts to account for large scale non residential developments;
- Reviewed the relativity between the proposed domestic volumetric tariff and the commercial tariff;
- Reviewed the capital works program associated with water supply security;
- Revised the projected CAPEX associated with the integration of desalinated water into Westernport Water's drinking water system; and
- Reviewed the planning associated with a small town sewerage scheme for Silverleaves.

In concluding the reviews the Water Plan has been amended to reflect the consultation feedback in the following areas:

- The commercial volumetric tariff has been adjusted from the proposed \$1.15 in 2008/09 to \$1.20;
- The Capex program associated with water supply security has been amended:
  - Lance Creek pipeline extension \$0.5m has been removed
  - Recommissioning of the Cowes supply basin has been included \$0.68m
- The capex program has been amended to include an allowance for a feasibility study and concept design for sewerage of Silverleaves. \$0.25m over 3 years; and
- An allowance of \$0.2m for sewer reticulation works has been added to address sewer odour.

#### **4.2.7. Consultation with Environmental Protection Authority (EPA)**

In developing the Water Plan Westernport Water has consulted with the relevant officers of the Environment Protection agency in order to determine the ongoing and revised expectations of the EPA.

Westernport Water has progressively addressed its environmental obligations through a range of projects including:

- Pressure zone reductions and leakage investigations
- Updated management of Trade Waste agreements
- Increased understanding of the performance of its sewerage transfer and reticulation system
- Implementation of a staged program of upgrades for the treatment processes, and
- Energy usage audits.

Westernport Water has hydraulic models of its entire water and sewer transfer and reticulation networks. The entire sewer network as it currently stands is hydraulically capable of containing a 1 in 5 year rain event. Peak summer periods that see population numbers increase from 12,000 to over 55,000 are accommodated. Long term master plans have been prepared for staged upgrades for the two major treatment facilities (Cowes WWTP and King Rd WWTP). Level 2 energy audits have been completed at the major facilities and action plans are being implemented.

Westernport Water envisages that over the next five years it will continue its capital works program of staged upgrades to the Cowes and King Rd sewerage treatment facilities. Operational allowances have been made to undertake targeted infiltration studies, complete the Biosolids Management Plans and review the master plans for Cowes and King Rd as business as usual. No major augmentations of the sewer transfer and reticulation network are forecast.

### *Sewer Management Plan*

Under new obligations Westernport Water proposes to progress its compliance with two key EPA obligations; addressing dry weather spills and preparing a plan to consolidate its management of the environmental risks of the sewerage

system including an allowance for external audit.

Westernport Water proposes to implement a new program of CCTV inspections and root foaming to systematically and proactively reduce blockages in sewer mains, identified as a major source of dry weather spills. In addition an accelerated program of pump upgrades is proposed for Westernport Water's numerous sewer pump stations also identified as contributing to dry weather spills. These new and accelerated programs are aimed at achieving improved service levels and reduced dry weather spills.

Westernport Water proposes to prepare a sewerage system management plan that incorporates management, incident response, maintenance and reporting procedures. The sewerage plan will be integrated with Westernport Water's corporate systems including the Environmental Management System and Risk Management System. An allowance has been made for external audit of the sewerage plan.

A summary of Westernport Water's response to the EPA Environmental Obligations for the 2008-2013 Water Plan is presented in the following sections.

### *Water Conservation and Resource Efficiency*

The current drought has assisted Westernport Water in raising the community's awareness of the need to conserve water. Maintaining and extending this awareness will be a key challenge over the Water Plan period. Westernport Water has developed a Water Supply Demand Strategy (WSDS) and participated in developing the Central Region Sustainable Water Strategy (CRSWS). A number of actions and targets have been set for the medium term planning period to 2015 and the longer term strategic planning period to 2055.

The key water conservation target is to achieve a 25% reduction in per capita water consumption by 2015 as compared against the average consumption for

1990.

The WSDS outlines the actions to achieve this target, some of which have already been introduced;

- Permanent Water Saving Measures
- Improved system efficiency and leakage detection
- Education and public awareness
- Water efficiency a home
- Pricing charges
- Improved Commercial / Industrial Water Usage.

Westernport Water has liaised with Bass Coast Shire and confirmed that after April 2007 all new developments in the region will have either a rainwater tank or a solar hot water system. In addition Westernport Water has reviewed the need for a dedicated Water Conversation Officer to undertake water audits for local businesses.

Westernport Water has many elements of a Whole of Life cycle approach to the creation, maintenance and disposal of its assets. An allowance has been made in the Water Plan for consultancy assistance to consolidate and extend this approach to cover a wider range of resources.

### *Sewage Management*

Westernport Water will continue to apply the waste hierarchy and influence residential consumption to minimise discharges to sewage treatment plants. Discussions have already commenced with developers over the installation of a dual pipe reticulation system to use recycled water. Legislation passed in October 2006 allows Westernport Water to mandate a dual pipe. To facilitate this approach Westernport Water has allowed for the development of a Class A Management Framework in line with DHS requirements and development specific EIP's. This framework is anticipated to be available during the first year

(2008-09) of the regulatory period.

Capital works have been approved to upgrade the current recycled water sand filtration treatment process available at Westernport Water's Cowes Wastewater Treatment Plant and add in a UV treatment stage as additional disinfection.

Westernport Water believes that the additional UV process, along with other disinfection upgrades recently completed, will achieve a consistent level of recycled water quality compliant with a Class A product.

The cost of managing, monitoring, reporting and auditing recycled water will be incorporated in the fixed and variable tariffs to be applied to the product.

### *Sewage Treatment and Disposal*

Westernport Water's treatment plants and disposal processes are compliant with licence requirements with the exception of pH at King Rd WWTP and occasionally exceeding the average and peak daily volumes at the Cowes WWTP.

Capital works are underway and will continue over the Water Plan for staged upgrades of these facilities to optimise the treatment processes and reduce environmental impacts including greenhouse gases. Westernport Water will liaise with the EPA over a review of the Cowes WWTP licence conditions relating to volumes.

### *Ecological Risk Assessment*

As a new obligation Westernport Water will conduct an ecological risk assessment of the Cowes WWTP discharges to coastal waters.

Westernport Water will continue to assess mechanisms for reducing discharges to coastal waters including further community consultation on value added farming practises using recycled water.



### *Sludge and Biosolids Management*

Westernport Water will complete Biosolids Management Plans (BMP) for the Cowes and King Rd WWTP in 2008/2009. As the stockpiles of biosolid volumes are not significant Westernport Water will assess the need to develop and implement plans for 100% biosolids recycling by 2013.

### *Sewerage Planning*

Westernport Water will continue to liaise with the Bass Coast Shire as it develops Domestic Wastewater Management Plans.

### *Management of the sewerage system*

Westernport Water's sewerage system is compliant with the 1 in 5 year design requirement for wet weather. As part of the preparation of this Water Plan Westernport Water will undertake an audit of the sewerage system including management, incident response, maintenance and reporting and develop an Implementation Plan.

As a new obligation Westernport Water proposes to progress its compliance with the no dry weather spills outcome by a new program of closed circuit television (CCTV) inspections, root foaming and an accelerated program of pump upgrades. Allowance has been made for a statutory audit of the implementation of the Sewerage System Management Plan in 2011/2012. Westernport Water believes this will be of more value in assessing our progress towards the no dry weather spills outcome than the EPA's suggestion for the audit to be undertaken in 2008/2009.

### *Trade Waste*

Westernport Water does not have any defined industrial trade waste customers. Trade waste is limited to a greasy waste service. In line with the SoO and undertakings made in the 2005-2008 Water Plan Westernport Water has

completed an upgrade of its Trade Waste Management System, minor and major trade waste policies have been adopted by the Board.

A review of all trade waste (greasy waste) customers has been completed, new agreements have been signed and a rolling program of inspections has commenced.

No new industrial or major trade waste customers are anticipated over the period of the Water Plan. Management of trade waste will mostly consist of maintenance of the existing system.

### *Management of Odour, Greenhouse Gas Emissions and Noise*

Due to the very long lengths of rising main servicing the Phillip Island and mainland areas and the increasing encroachment of residential properties odours at some pump stations have lead to complaints.

Westernport Water continues to investigate available products that may help mitigate these odours. In addition, the sewer hydraulic models are being used to assess the potential to bypass particular problem sites. A combination of minor capital works and an ongoing allowance for odour controlling chemicals have been incorporated into the Water Plan as business as usual.

Over recent years Westernport Water has investigated a number of renewable energy projects to help mitigate greenhouse gases. These projects have ranged from micro-hydro through to solar and wind energy options. Small scale solar and wind generators are now a common feature reducing Westernport Water's environmental footprint. While investigations will continue it is not proposed to invest in any significant renewable energy project unless an appropriate business case is presented for Board approval.

Westernport Water will focus on optimisation projects at its major energy

consuming sites as its preferred mechanism for reducing greenhouse gases as well as embedding operational efficiencies into its business.

### *Catchment, Waterway and Groundwater Management*

Due to the current drought Westernport Water has invested in water supply augmentation projects that will access groundwater from the Corinella Aquifer and surface water from the Bass River. As such management of environmental flows, undertaking environmental impact studies and ongoing monitoring of river and aquifer health are now new obligations for Westernport Water. Allowance has been made for the cost of ongoing monitoring and sampling of water quality from these new sources.

In line with its WSDS Westernport Water will also be seeking to obtain Bulk Entitlements from these new sources of water.

Westernport Water proposes to continue its associating and funding of local Landcare groups. Under a Memorandum of Understanding funding is provided for agreed Landcare projects that make significant contributions to improving the local environment.

### *Monitoring, Auditing and Reporting*

Westernport Water has been developing a Management Information System that will deliver consistency and improve availability of corporate KPI's and Regulatory reporting requirements.

This system will be progressively developed with the intent of allowing Westernport Water to move to a more proactive model of corporate and regulatory reporting including the environmental impacts of its water industry functions.

#### **4.2.8. Consultation with Department of Human Services (DHS)**

From July 2004 Westernport Water has been operating its water quality systems

under the Safe Drinking Water Act 2003 and the subsequent Safe Drinking Water Regulations 2005.

A risk based Water Quality Management System (WQMS) provides the framework for sampling and monitoring of pre-determined critical control points in the water supply system. In 2006/2007 Westernport Water gazetted its water sampling localities. By the end of the 2005 – 2008 Water Plan Westernport Water will make its water sampling data available via the web site.

Westernport Water regularly delivers drinking water that satisfies the requirements of the Safe Drinking Water Act. Notwithstanding, community consultation regularly provides feedback that one of the key issue for our customers is the taste and odour of the water.

Occasional water quality guidelines are exceeded and this relates to parameters such as;

- Trihalomethane (Total THM's) a disinfection by-product
- Iron which is measured based on aesthetic considerations
- Manganese which is measured based on health and aesthetic considerations.

THM's is the name given to the group of chlorination by-products that may be found in treated water and there is a limit set for Total THM's by the Australian Drinking Water Guidelines (ADWG).

High iron and manganese is naturally occurring within the catchment and water supply source. Work has already commenced on optimizing the treatment process. During the current drought manganese levels within the water stored at Candowie increased fourfold to over 2mg/L (ADWG requires 0.1mg/L). However improvements to the treatment process have trended these levels down to a desirable of less than 0.05mg/L in potable water distributed from Candowie.

The strategic intent for the 2008–2013 Water Plan is to move beyond compliance and provide quality water services. With respect to the water supply system this will require a holistic approach involving the catchment, storage, treatment and transfer of water to our customers. The WQMS is currently being updated with a “catchment to tap” perspective to reflect this approach.

Over the 2008–2013 Water Plan Westernport Water will be undertaking the following major activities in accordance with the Safe Drinking Water Act:

- Reviewing land uses and planning permit applications within the catchment and seeking zoning changes and management practices that will improve the catchment water quality where practicable.
- Continuing to work with Land Care on improvements to the catchment and where appropriate undertake strategic land purchases. The construction of a wetland system at the entrance to the reservoir will provide further filtration of catchment water prior to storage.
- Adopting a comprehensive framework of procedures. The existing Water Quality Management System is under review. A Water Quality Risk Management Plan (refer to Appendix 6) has been prepared in draft form and has identified that considerable work is required to document and implement the associated control measures, operational procedures, monitoring requirements, corrective action procedures, records, notifications, audits and reviews. These costs have been included in the operating expenditure forecasts.
- Progressing a program of optimization, monitoring, recording and auditing of results to consistently achieve the required quality of potable water out of the water treatment plant
- Major water quality related capital works projects are described in detail elsewhere in this plan. In summary they propose to increase the storage capacity of Candowie Reservoir, undertake further, tertiary, treatment of water, and extend the pipework from the Bass River and Corinella Aquifer water sources directly to the water treatment plant, bypassing Candowie.

- Capital works will be also be undertaken to allow the transfer main built in 1982 to be cleared of any deposits, manganese in particular. This will then allow Westernport to systematically air scour the reticulation mains with a reduced likelihood of additional deposits being introduced from either the treatment process or the transfer mains.
- Modifications to the booster chlorination plants allowing for flow paced chlorination and real time monitoring of pH, turbidity and chlorine residual will ensure appropriate disinfection levels are maintained.
- Supporting these operational improvements is an enhanced program (\$50,000/annum) of air-scouring throughout the reticulation system.

This four stage approach (collection, storage, treatment and distribution) is a fundamental part of Westernport Water's strategic intent of providing quality water services. The outcome by the end of the 2008–2013 Water Plan is intended to be a potable water system capable of consistently delivering a safe and aesthetically suitable water product to our customers.

A summary of Westernport's response to the DHS regulatory obligations for the 2008-2013 Water Plan follows:

Drinking water satisfies defined quality standards

The proposed actions over the Water Plan will help ensure that quality standards are consistently met. The disinfection by-products (THM's) will be reduced via the combination of an improved treatment process and better control of booster chlorination plants.

The iron and manganese issues will be addressed via a combination of improved treatment processes, cleaning of the branch transfer main and associated air scouring of the reticulation mains.

Westernport Water has tabled a number of projects to improve the treatment

process at IBWPP. Some examples include the recently completed automation (SCADA) project providing enhanced monitoring and control; turbidity meters on individual filters; variable speed drives on the low lift pumps and chlorine residual analysers. Further works currently underway or proposed include the filter media upgrade; enclosing the filter cells, relocating and separating the chemical dosing points to allow for better mixing prior to filtration.

Further details on the major water quality projects are described in Section 6.3.3.

### Water from multi-use or unprotected surface water catchments

As a result of the current drought Westernport has accessed water from non-Candowie catchment areas. These include surface water from the Bass River and groundwater from the Corinella Aquifer. As such, additional expense is being incurred in operating these additional and independent water supply sources. Westernport Water has adopted the strategic position to transfer these secondary water supply sources to Candowie for storage and centralized treatment. It is not intended at this stage to introduce these secondary sources directly into the water supply distribution system.

An allowance of \$10,000 per annum has been made for investigation and research and for additional testing required for the Bass River and Corinella aquifer water supply sources. These are considered new obligations by Westernport Water as water has not been previously accessed from these sources.

### *Audit of risk management plans*

Westernport Water has allowed for DHS audits of the WQMS in 2009/2010 and 2011/2012. In addition an allowance has been made for consultant assistance to review the WQMS in 2010/2011.

### *Regulation of water sample collection process*

Westernport Water has not made any allowances for additional costs that may arise out of any DHS review of the process of collecting drinking water samples

and specifying analytical methods. There is no indication in DHS's Regulatory Obligations as to when the proposed regulatory Impact Statement is to be prepared or when the regulations would be amended or a Code of Practice developed.

### *Standards based on "Australian Drinking Water Guidelines"*

Westernport Water notes DHS's comment that there are no plans at this time to change the standards set out in Schedule 2 of the Regulations. No allowance has been made for any changes to the guideline values.

In discussing DHS's expectations over the 2008–2013 regulatory period the issue of fluoridation was raised with DHS's representatives. In the 2005–2008 Water Plan Westernport Water intended, after consultation with its customers, to introduce fluoridated water via the connection to the Melbourne Water system. For reasons discussed elsewhere in this plan Westernport Water plans a major augmentation of Candowie Reservoir as its long-term option for water supply security.

As such, in accordance with the Health (Fluoridation) Act, a dedicated fluoridation facility based at the Ian Bartlett Water Treatment Plant will be investigated. Westernport is proceeding on the basis that this facility will be funded via a grant from the DHS. An allowance has been made over the Water Plan period for increased operational costs associated with chemicals.



## 5. SERVICE STANDARDS

The following table outlines the minimum service standards that Westernport Water aims to deliver throughout the regulatory period in respect to water supply services.

WATER	2008-09	2009-10	2010-11	2011-12	2012-13
Unplanned water supply interruptions (per 100km)	45	45	45	45	45
Average unplanned frequency of water supply interruptions	0.3	0.3	0.3	0.3	0.3
Average planned frequency of water supply interruptions	0.3	0.3	0.3	0.3	0.3
Average duration of unplanned water supply interruptions (mins)	100	100	100	100	100
Average duration of planned water supply interruptions (mins)	190	190	190	190	190
Avg time taken to attend bursts and leaks (hrs) priority #1	0.5	0.5	0.5	0.5	0.5
Avg time taken to attend bursts and leaks (hrs) priority #2	2	2	2	2	2
Avg time taken to attend bursts and leaks (hrs) priority #3	24	24	24	24	24
Unplanned water supply interruptions restored within 5 hrs (%)	99%	99%	99%	99%	99%
Avg unplanned customer minutes off water supply (mins)	33	33	33	33	33
Avg planned customer minutes off water supply (minutes)	210	210	210	210	210
Number of customers experiencing at least 1 unplanned interruption in the year	4500	4500	4500	4500	4500
Unaccounted-for Water (%)	13%	13%	13%	13%	13%

### 5.1.1. Water Supply Service Standards

Westernport Water has invested in infrastructure required to meet the water quality and service obligations. The major service issues to be addressed in the regulatory period are water quality, high pressure zones, taste and odour. The taste and odour and quality issues were highlighted by customers in a recent customer survey (refer to [Section 4 – Community Consultation](#)).

Addressing the issue of high pressure zones will reduce system losses due to leakages from burst mains. Increased preventative and pro-active maintenance programs will increase the life of assets owned by Westernport Water and its

customers, as well as reduce the number of unplanned service interruptions.

Westernport Water has continued to work on and improve its focus and capabilities on major asset preventative maintenance programs. Westernport Water has also placed emphasis on increasing the skills of its field maintenance workforce, with improved on-job training and certification to level Certificate 2 and 3 for the Water Industry.

Westernport Water is investing in increased preventative maintenance of water assets throughout the regulatory period in particular stop valves. This combined with the implementation of a GIS will allow for improved identification of the areas and customers affected by supply interruptions. The focus on stop valve maintenance is anticipated to improve the ability of Westernport Water to minimise the number of customers impacted by a particular shut down.

Westernport Water is also increasing mains maintenance activities, flushing and air scouring, in order to address water quality issues associated with long detention times due to low flows over the non-peak population periods. This will have an impact on the number of customer interruptions with an equivalent of one additional planned interruption every three years.

### **5.1.2. Wastewater Service Levels**

The following table outlines the minimum service standards that Westernport Water aims to deliver throughout the 2008-13 regulatory period in respect to sewerage services.

<b>WASTEWATER</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Sewerage blockages (per 100km)	15	15	15	15	15
Avg time to attend sewer spill/block (mins)	60	60	60	60	60
Avg time to rectify sewer spill/block (mins)	210	210	210	210	210
Spills contained within 5 hours	100%	100%	100%	100%	100%

Westernport Water has invested in infrastructure required to meet its environmental licences, waste treatment and disposal service obligations. The major service issues to be addressed in the regulatory period are the security of treatment plant sites, pipeline and facility augmentations and renewals. Westernport Water has planned for continued upgrades of the Cowes and King Road Wastewater Treatment Plant facilities during the regulatory period.

Westernport Water continues to increase its ability to identify and understand problematic gravity mains and pump station issues and has added further preventative maintenance activities to its program to proactively improve sewer system performance. The program will focus on the two critical issues of identification and repair of faulty services and increased pre-acceptance supervision of inherited assets.

**5.1.3. Customer Service Standards**

The following table outlines the proposed minimum Customer Service Standards for the 2008-2013 regulatory period.

<b>CUSTOMER</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Telephone calls answered within 30 seconds	90%	90%	90%	90%	90%
EWOV complaints per 1000 customers	0.04	0.04	0.04	0.04	0.04

Westernport Water is not proposing to increase these standards from the 2005-2008 regulatory period as given the size of our customer base and customer service operation, these standards are already of a high calibre, i.e. the 0.04 standard for EWOV complaints equates to 6 complaints per annum from a customer base of nearly 14,000.

With respect to the call answering standard, to guarantee an increase in this target would necessitate an increase in staffing levels and thereby in operating costs. For example a 5% increase to the telephone standard (95% within 30 seconds) would require an additional full time equivalent (FTE) staff member

and based on current call volumes would result in only 255 calls per annum being answered faster.

### 5.1.4. Additional Service Standards

#### CO2

Westernport has reviewed its total CO2 emissions by activity. The outcomes from the last few years are detailed below;

CO2 Equivalent emissions	2003-2004	2004-2005	2005-2006	2006-2007
Water Treatment & Supply	2230	1477	1388	1818
Sewerage Treatment & Management	2459	2852	2845	2259
Transport	Not reported	Not reported	232	202
Other	74	153	196	231
	4763	4482	4661	4510

In assessing this service standard Westernport has recognized that there are a considerable number of variables that impact on CO2 emissions. Westernport’s preference is to use a ratio related to water and wastewater production rather than the total CO2 value.

As such it is proposed to report on the following parameters over the Water Plan period but not adopt any targets until further investigation has been completed on the relationship between treatment process and demand.

The proposed parameters for monitoring and reporting are as follows;

Indicator	Actuals		Forecast				
	2005/2006	2006/2007	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
CO2/ML Treated Water	0.69	0.78	TBA	TBA	TBA	TBA	TBA
CO2/ML Treated Effluent (Cowes)	1.4	1.71	TBA	TBA	TBA	TBA	TBA
CO2/ML Treated Effluent (King Rd)	1.48	1.74	TBA	TBA	TBA	TBA	TBA

*Recycled Water*

The Corporation has detailed in this Water Plan its activities to develop and extend the use of recycled water within the region. The outcomes from the last few years are detailed below;

Facility	Actual Volumes (ML)			
	2003/2004	2004/2005	2005/2006	2006/2007
Cowes WWTP Reuse	92	78	81	111
King Rd WWTP Reuse	131	117	100	109
Total Reuse	223	195	181	220
Total Treated Effluent	1207	1273	1215	901
% Reuse	18%	15%	15%	24%

As described in Section 9 the Corporation has adopted a pricing principles approach. As such growth in the use of recycled is determined by the willingness of customers and developers to pay for the infrastructure required and the operational cost of production. Any forecasts may therefore be subject to considerable variation.

The forecast volumes below are a mixture of internal use by the Corporation and external on sold use consistent with the revenue forecasts in Section 9. The King Rd WWTP is almost entirely discharged to land as per the EPA licence and/or used as part of the value added primary production activities at the King Rd plant.

Facility	Forecast Volumes (ML)				
	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Cowes WWTP - Internal Reuse	40	45	50	55	55
Cowes WWTP - External Reuse	110	110	155	155	155
King Rd WWTP Reuse	100	100	100	100	100
Woolamai Package Plant	60	60	60	60	60
Total Forecast Reuse	210	215	265	270	270
Total Forecast Treated Effluent	1150	1160	1170	1180	1190
% Reuse	18%	18%	22%	23%	23%

### *Biosolids*

Refer to Section 4.2.7 Sludge and Biosolids Management

### *Sewerage Backlog*

In response to feedback from the Bass Coast Shire the Corporation has made a capital allowance in this Water Plan period to investigate the possible future sewerage of the Silveleaves area. This development has in excess of 400 unconnected properties and is subject to development pressure.

Bass Coast Shire has completed their Domestic Wastewater Management Plan in accordance with the requirements of the SEPP (Waters Of Victoria). This management plan has recommended the future sewerage of Silverleaves. The Corporation will assist the Bass Coast Shire and the EPA in determining the overall environmental and health issues associated with the area as well as undertake feasibility studies and assess sewerage options. Depending on community attitude and the outcomes of the Bass Coast and EPA studies it is possible that sewerage of the Silverleaves area may be included in the next Water Plan period.

If circumstances determine that Silverleaves requires sewerage in this Water Plan period and there is majority community support then Westernport will seek to have its tariffs and revenue stream reviewed by the ESC to accommodate the additional capital costs.

### *Environmental Discharge Indicator*

The Corporation will adopt a target of 100% compliance with EPA licence requirements for its wastewater treatment plants.

### *Drinking Water Quality Indicator*

The Corporation will adopt a target of 100% compliance with DHS drinking water requirements with reference to the Australian Drinking Water Guidelines as appropriate.

## **5.2. Guaranteed Service Levels**

Westernport Water is not proposing to develop or implement guaranteed service levels within the 2008-2013 regulatory period. Westernport Water will not be reporting on the full range of service standards until the end of year one of the 2008-13 water plan period as all of the required system enhancements will not be in place until this time to allow for data capture and analysis.

Westernport Water proposes that a more productive strategy for the 2008-2013 period is to continue to develop, refine and understand the actual performance of Westernport Water.

## 6. REVENUE REQUIREMENT

### 6.1. Overview of Revenue Requirement

The purpose of this section is to detail the projected quantum of the building blocks used to determine Westernport Water's revenue requirement for the Water Plan regulatory period (2008-2013).

The building blocks used to calculate the revenue requirements are:

- Operating Cost (OPEX) – [Section 6.2](#)
- Capital cost (CAPEX) – [Section 6.3](#)
- Return on investment – [Section 6.4.2](#)
- Regulatory depreciation – [Section 6.4.3](#)

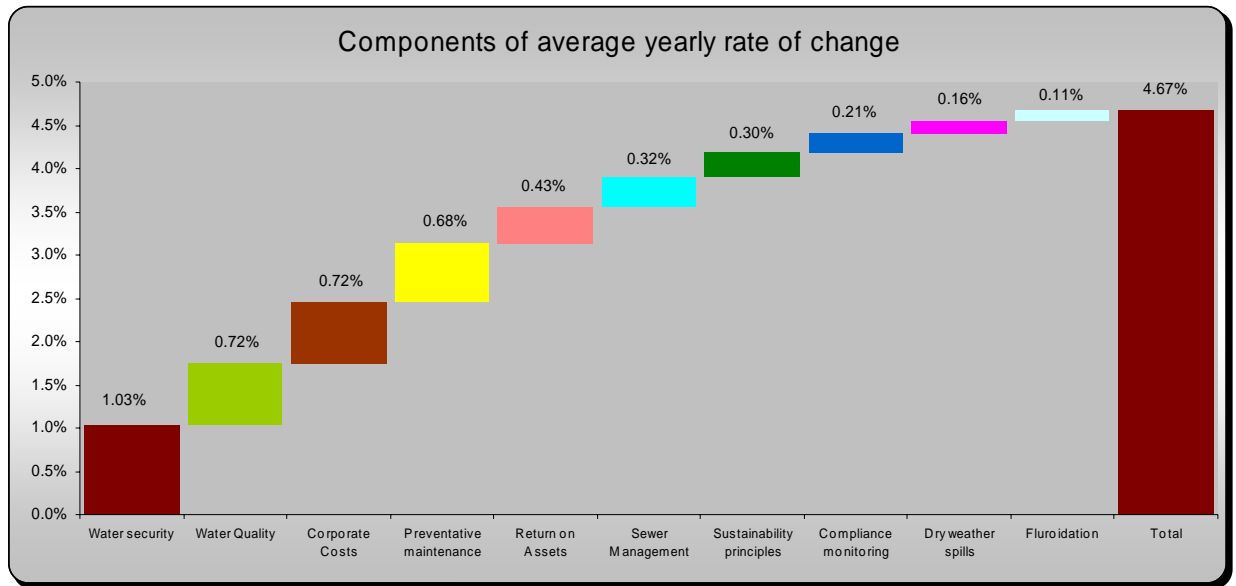
The analysis contained in this section details the revenue requirement for the regulatory period, as per the table below:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Revenue Requirement \$1/07m</b>					
Total Operating Expenditure	9.07	8.94	9.05	8.97	8.91
Return on assets to 30/6/08	2.96	2.90	2.83	2.77	2.71
Regulatory depreciation of assets to 30/6/08	1.19	1.19	1.18	1.07	1.00
Return on new assets	0.06	0.19	0.65	1.11	1.20
Regulatory depreciation of new assets	0.13	0.37	0.70	1.01	1.08
Adjustments from last period	-	-	-	-	-
Benchmark tax liability	-	-	-	-	-
<b>Total revenue requirement</b>	<b>13.40</b>	<b>13.58</b>	<b>14.41</b>	<b>14.92</b>	<b>14.90</b>

#### 6.1.1. Deliverables for Pricing Increases

The following graph outlines the drivers of the average rate of change in pricing, discussed in the following sections.





### 6.1.2. Pricing Path for 2008 to 2013

Based on the revenue requirement listed above, Westernport Water is proposing a generic pricing path as per the table below to be applied to prescribed water and sewer tariffs and charges.

	2008-09	2009-10	2010-11	2011-12	2012-13
Pricing Path for Regulated Tariffs and Charges	N/A	4.52%	4.52%	4.52%	4.52%

There is a one off adjustment to volumetric tariffs in Year 1 (2008-09) associated with the implementation of a residential inclining block tariff (IBT) and a one off initial adjustment to the commercial volumetric charge. Due to these changes the average yearly rate of change throughout the water plan period is 4.67%, slightly higher than the pricing path of 4.52%. The proposed pricing path equates to an average 24.73% price increase for fixed charges over the regulatory period. Further details regarding the implementation of the inclining block tariff is discussed in [Section 8.5](#).

Westernport Water proposes a smoothed increase to tariffs to reduce the incidence of price shocks, whilst maintaining the required revenue requirement for the regulatory period.

Details of new tariffs fees and charges are contained in [Section 8](#).

## 6.2. Operating Expenditure (OPEX)

### 6.2.1. Cost Drivers

The purpose of this section is to detail the operating expenditure base upon which Westernport Water's revenue requirement is proposed. This incorporates

- Business as usual ([Section 6.2.2](#))
- New Obligations ([Section 6.2.4](#))

OPEX has been built up on the basis of efficient spend required to support the business as usual and new obligations activities required of Westernport Water. As detailed in previous chapters the cost base of Westernport Water is driven by:

- Westernport Water's strategic plan ([Section 1.3](#))
- Statement of Obligations ([Section 4.1](#))
- EPA and DHS ([Section 4.2.4](#))

### 6.2.2. Business as Usual (OPEX)

The table below summarises the total business as usual OPEX allowed throughout the regulatory period:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary \$1/07 m</b>					
Business as Usual	8.36	8.37	8.39	8.36	8.31
Licence fees	0.05	0.05	0.05	0.05	0.05
Environmental Levy	0.43	0.42	0.40	0.39	0.38
<b>Total prescribed BAU OPEX</b>	<b>8.85</b>	<b>8.84</b>	<b>8.84</b>	<b>8.80</b>	<b>8.73</b>

Westernport Water's cost base has been influenced by the following cost drivers:

### *Westernport Water Strategic Plan*

Westernport Water has adopted a strategic intent for 2008-2013 regulatory period to be “A smart company delivering quality water services and more. We value our community, our reputation, our people and outstanding performance”.

The outcomes for the regulatory period in support of this strategic intent are to:

- Improve customer satisfaction;
- Improve water quality through upgraded:
  - ♦ Raw water quality management
  - ♦ Treatment
  - ♦ Distribution system operation and maintenance;
- To increase the level of water supply security;
- Improve customer service and system performance;
- Increase the ratio of preventative to reactive maintenance; and
- Implement Sustainability principles and seek to reduce environmental impact.

### *Customer Satisfaction*

Customers of Westernport Water, whilst on the whole satisfied with the performance of Westernport Water, are generally concerned with the taste and odour and periodically with the turbidity of the water supplied. This is a consistent result from customer satisfaction surveys (2002–2006) and the community consultation undertaken as part of the preparation of this plan ([Appendix 1](#)). The issue of water quality has driven the development of the strategic intent and associated action plans to ensure that addressing this issue is a high priority throughout the regulatory period. Addressing this issue is anticipated to improve the level of customer satisfaction.

### *Improved Water quality*

The water supplied to Westernport Water customers meets the requirements of the Safe Drinking Water Act 2003, however due to the unprotected nature of the catchment, the base chemical composition of the water, and the usage patterns

associated with seasonal customer visitation, Westernport Water experiences periodic issues of taste, odour and turbidity in its delivered potable supply. The consultation undertaken in preparation of this Water Plan clearly indicated that the customers expected Westernport Water to address the issues taste, odour and dirty water. Delivering improved water quality in terms of consistency and taste and odour will impact positively on the customer perception of Westernport Water and its products. The customer feedback has informed both the CAPEX and OPEX planning for this Water Plan. The cost of this alternative supply in terms of OPEX are explored in [Section 6](#).

### *Water supply security*

The security of Westernport Water's supply is dependant on two factors:

- Available water supply; and
- Level of customer demand for water.

### *Available supply*

The sources of supply available to Westernport Water throughout this regulatory period are primarily the Candowie Reservoir and the natural run off from Tennent Creek, and supplemented by Bass River, Corinella Aquifer and Grantville Bore as necessary. It is planned during the regulatory period to further augment the available supply with additional ground water extractions from the Corinella Aquifer. The cost of each of these alternative supplies in terms of OPEX are detailed in [Section 6.2](#).

The requirement to secure water supplies is also driving the CAPEX program which in turn impacts the OPEX due to increased electricity consumption (refer to [Section 6.3](#)). The proposed CAPEX program assumes a major supply augmentation of \$14 million with majority of spend in 2010-2011.

### *Customer Demand*

The Government initiative 'Central Region Sustainable Water Strategy' imposed a target on all associated water businesses to undertake demand management initiatives with the aim of reducing per capita consumption by 25% by 2015 on 1990 consumption levels. This is reinforced by the requirements of the Statement of Obligations (SoO).

In this regulatory period Westernport Water has allowed for a water conservation program, the costs associated with this program are detailed as a new obligation in [Section 6.2.4](#).

### **6.2.3. BAU OPEX Cost Detail**

The strategic focus on customer satisfaction, water quality improvements and security of supply has driven the business as usual cost base in the following ways:

#### *Increased focus on preventative maintenance*

Westernport Water has progressively implemented its Asset Management System since 2002. The maintenance activity undertaken to date has been primarily reactive in nature due to the prior lack of development of predictive capability and systems. The preventative maintenance undertaken has been limited to sewerage pump stations. Within the 2008-2013 regulatory period it is planned to increase the level of preventative maintenance undertaken on both the water and wastewater infrastructure in order to improve both systems' performance, in terms of reduction in interruptions through breakages and blockages, but also to positively impact on system operability and delivered water quality. The driver for this change in approach is the level of customer satisfaction and the strategic intent of the business to deliver a quality service.

In addition Westernport Water has an increasing reliance on pumping infrastructure to deliver the recently supplemented water supply, therefore the

requirement for this increased preventative maintenance is also driven by a risk management perspective. Westernport Water is reliant on a small number of critical pumps to deliver water to its water treatment plant, and therefore the requirement to periodically maintain pumps to ensure continued performance.

These extra maintenance activities are in addition to the established reactive maintenance cost base. It is not anticipated that the level of reactive maintenance activity will significantly decrease in the short to medium term. In order to maintain the current service levels associated with break fix maintenance on water and sewer infrastructure and deliver an increased preventative maintenance program additional internal labour has been added along with contractor resources to the OPEX cost base. The associated increases are summarised below:

\$1/1/07 (\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary</b>					
Preventative maintenance Water and Sewer:					
Salaries	45.00	45.00	45.00	45.00	45.00
Vehicle	8.00	8.00	8.00	8.00	8.00
Contractors	3.50	3.50	41.50	3.50	31.50
Materials	50.00	56.00	50.50	56.00	50.50
Plant Hire	3.00	3.00	3.00	3.00	3.00
<b>Total increase in OPEX for Preventative maintenance</b>	<b>109.50</b>	<b>115.50</b>	<b>148.00</b>	<b>115.50</b>	<b>138.00</b>

The investment in preventative maintenance is consistent throughout the regulatory period and is expected to return dividends in terms of lower levels of supply risk, unplanned supply interruptions, improved water quality and higher sewer system reliability towards the end of the water plan period and into the next period. It is anticipated that the level of reactive maintenance and the associated costs will not continue at the current levels into the next regulatory period.

***Water supply security***

Prior to the commencement of the 2008-2013 regulatory period Westernport Water will have augmented its available supply to include extractions from the

Bass River and various ground water sources throughout the Corinella Aquifer. The additional sources of supply will lead to additional pumping costs in the form of electricity being forecast for the second regulatory period. Westernport Water is required to renegotiate its electricity supply contract in 2007-2008 and indications from investigations to date are that commercial pricings have risen substantially. In addition Westernport Water will be utilising increased megawatt hours over and above those utilised in 2006-2007 in the forecast period. The estimated impact on OPEX is detailed in the table below

Westernport Water plans to develop a major supply augmentation in 2010-2011. A new Senior Engineer position will enable Westernport Water with an improved ability to deliver the capital expenditure program and associated system improvements.

The Table below summarises the increase in OPEX from this requirement:

\$1/1/07 (\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary</b>					
Electricity ( Pumping Bass River and Grantville Bore)	90.00	90.00	90.00	90.00	90.00
Senior Engineer	100.00	100.00	100.00	100.00	100.00
<b>Total additional OPEX</b>	<b>190.00</b>	<b>190.00</b>	<b>190.00</b>	<b>190.00</b>	<b>190.00</b>

***Water Quality***

As outlined in the key cost drivers in [Section 6.2.2](#) improving water quality delivered to the customer is a prime focus for the 2008-13 regulatory period. This is a stated strategic objective to address the areas of customer dissatisfaction and to fulfil Westernport Water’s strategic intent.

In order to improve delivered water quality additional OPEX has been included throughout the regulatory period to compliment capital investments undertaken to improve the treatment processes. Delivered water quality is impacted by the configuration, performance and condition of the water distribution system.

Improvements to water quality include targeted programs for mains flushing, cleaning and air scouring activities to improve the condition and performance of the water distribution and reticulation systems through removal of stale water, accumulated bio-films that contribute to chlorine demand and subsequent taste and odour complains.

Delivered water quality is also impacted by the level of developed knowledge and data analysis undertaken in terms of raw water quality, water treatment plant and distribution system performance. Westernport Water has not had a dedicated resource previously to monitor research and manage the associated water quality data. A new position of Water Quality Officer has been created to improve our performance in this area. The ability of Westernport Water to effectively target the maintenance programs required and optimise the water treatment and distribution process will depend on the organisation’s ability to manage and interpret water quality related information.

The increase in costs associated with this program are summarised below:

\$1/1/07 (\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary</b>					
Air Scouring	50.00	50.00	50.00	50.00	50.00
Distribution main cleaning	12.00				
Water Quality Officer	80.00	80.00	80.00	80.00	80.00
<b>Total additional OPEX</b>	<b>142.00</b>	<b>130.00</b>	<b>130.00</b>	<b>130.00</b>	<b>130.00</b>

*Sewage Management*

A new position of Treatment Plant Officer within the wastewater area has been included in this water plan. This additional resource will help implement and monitor a range of environmental outcomes proposed by Westernport Water. These outcomes include the proposed Sewerage Management Plan and the development of a Class A Management Framework.

\$1/1/07 (\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary</b>					
Treatment Plant Officer	60.00	60.00	60.00	60.00	60.00
<b>Total additional OPEX</b>	<b>60.00</b>	<b>60.00</b>	<b>60.00</b>	<b>60.00</b>	<b>60.00</b>



**Corporate Costs**

Westernport Water is forecasting significant electricity tariff increases for the plan period based on recent renewal of some contracts which have seen tariff increases of around 100%. The renewal of other electricity contracts will occur in the plan period thus giving rise to a \$100,000 a year increase in these costs for business as usual. These are on top of the increased needs for electricity forecast for pumping from Bass river and Grantville Bores for our augmentation program.

\$1/1/07 (\$'000)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Operating Expenditure Summary</b>					
Senior Accountant	100.00	100.00	100.00	100.00	100.00
Increased electricity charges	100.00	100.00	100.00	100.00	100.00
<b>Total additional OPEX</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>	<b>200.00</b>

The new position of Senior Accountant will take over the operational demands of legislative compliance, regulatory and annual accounts, quality control and taxation, within the finance group. The Chief Financial Officer is required to commit a greater proportion of time and emphasis on Strategic Financial matters related to the Water Plan implementation and control as well as providing an increase in the financial support and advice to other operating Managers. These changes will increase in the financial management capability of the business overall.

**6.2.4. New Obligations - OPEX and CAPEX**

The total proposed OPEX and CAPEX spend on new obligations for the Water Plan Period is summarised in the table below:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>New Obligations Summary \$m 1/1/07</b>					
Operating expenditure	0.23	0.09	0.21	0.16	0.18
Gross capital expenditure	0.30	0.15	0.05	0.05	0.05
Government contributions	-	-	-	-	-
Customer contributions	-	-	-	-	-
<b>Net capital expenditure on new obligations</b>	<b>0.30</b>	<b>0.15</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>

The breakdown of expenditure is detailed in the following pages.

### 6.2.5. Environmental Protection Authority (EPA)

#### *Sewer Management System*

In order to meet the requirement of the EPA to develop and audit a sewerage management system Westernport Water has included the following items as new obligation expenditure:

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
EPA: Sewer management system					
Operating expenditure			0.05		

Westernport Water will be utilising in-house resources already costed to the business as usual cost base for the development of various aspects of the sewer management system in the years 2008 to 2010. It is proposed to undertake a review and external audit of the system in 2010-11 utilising external consultant resources at an estimated cost of \$0.05 million.

#### *No Dry Weather Spills*

In order to meet the requirement of the EPA to achieve the target of no dry weather spills from Westernport Water sewerage collection and pumping system, the following OPEX and CAPEX has been included to enable the achievement of the new obligation.

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
EPA: No Dry Weather Spills					
Operating expenditure	0.03	0.03	0.03	0.03	0.03
Capital expenditure					
Asset life (years)	15.00				
Depreciation method	Straight Line				
Gross capital expenditure	0.05	0.05	0.05	0.05	0.05
Government contributions	-	-	-	-	-
Customer contributions	-	-	-	-	-
<b>Net capital expenditure</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>

Achievement of a no dry weather spill target will require Westernport Water to increase the level of proactive monitoring and preventative maintenance of its sewer network and in particular the sewer pump stations.

In order to achieve this target an increased program of regular monitoring of sewer trunk mains through close circuit television has been included in the OPEX base with an anticipated 20-30 kilometres of pipe being inspected annually with documented condition assessment at an estimated cost of \$0.03 million per annum .

The increased CAPEX is due to an acceleration of Westernport Water’s sewer pump replacement program. The CAPEX program will ensure that the sewerage pumping infrastructure is less prone to breakdown and reduced chance of dry weather spills. The replacement philosophy remains at ‘Just in Time’ however many of Westernport Water’s pump stations are reaching the critical 15 year age. Capital costs associated with pump replacement program of \$50k included in each year of the regulatory period.

*Ecological Review of Water Ways discharge*

EPA has advised Westernport Water that they require an ecological review of the impact of operations on the receiving water ways, as Westernport Water discharges to the ocean from Phillip Island. In order for Westernport Water to meet this new obligation, the table below details the OPEX allowed to undertake this activity.

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
EPA: Ecological review of water ways discharge					
Operating expenditure				0.02	

**6.2.6. Statement of Obligations (SoO)**

The Statement of Obligations imposes a number of new obligations on Westernport Water not all of which will result in an increase in costs to Westernport Water. The obligations that have resulted in increased cost are detailed in the following sections.

*Research and Knowledge*

Section 23 of the Statement of Obligations – Research and Knowledge costs relate

to consultants regarding the possible implementation of Desalination:

\$m 1/1/07		2008-09	2009-10	2010-11	2011-12	2012-13
SoO Research and Knowledge						
Capital expenditure						
Asset life (years)	50.00					
Depreciation method	Straight Line					
Gross capital expenditure		-	0.10			
Government contributions		-	-	-	-	-
Customer contributions		-	-	-	-	-
<b>Net capital expenditure</b>		-	<b>0.10</b>	-	-	-

**Sustainability Principles**

The Statement of Obligations section 24 imposes a new obligation on Westernport Water in that “Westernport Water must:

- a) in performing its functions, exercising its powers and carrying out its duties, apply the Sustainable Management Principles; and
- b) demonstrate in its Water Plan how Westernport Water proposes to apply those principles.”

In order to meet this obligation Westernport Water has included the following OPEX and CAPEX in its Water Plan, which includes the costs of producing a sustainability report and development of wetland areas:

\$m 1/1/07		2008-09	2009-10	2010-11	2011-12	2012-13
SoO: Sustainability Principles						
Operating expenditure						
		0.10	0.01	0.08	0.01	0.08
Capital expenditure						
Asset life (years)	50.00					
Depreciation method	Straight Line					
Gross capital expenditure		0.25	-	-	-	-
Government contributions		-	-	-	-	-
Customer contributions		-	-	-	-	-
<b>Net capital expenditure</b>		<b>0.25</b>	-	-	-	-

**OPEX attributed to Sustainability Principles**

In order to achieve this obligation Westernport Water will have developed by 2008 a series of indicators/measures that collectively describe Westernport Water’s impact on the environment, or environmental footprint. The strategic

intent is then to set targets that will reduce Westernport Water's impact through application of the sustainability principles. Firm action plans are not yet developed as the indicators are yet to be finalized. It is not anticipated that the measures will incur any additional OPEX.

An annual allowance of \$0.01 million for the regulatory period OPEX has been included for the preparation of a sustainability report.

Additional OPEX has been allowed in support of water conservation programs. This includes an allowance for a 0.5 EFT Water Conservation Officer in 2008-09 and associated overhead costs. In addition an annual allowance for a water conservation public relations campaign at a cost of \$0.022 million per annum plus allowance for water conservation products every 2nd year at a cost of \$0.044 million has been included.

### *CAPEX attributed to Sustainability Principles.*

CAPEX is proposed in support of this obligation to fund the development of a wet land (\$0.25 million) to assist in nutrient removal from raw water and improved biodiversity.

The proposed construction of a wetland area at the head of the Candowie Reservoir was originally linked to the treatment of sludge from the IBWPP. For this project it is proposed to construct a wetland area that will assist in silt and nutrient removal prior to flows from Tennent Creek entering the reservoir. This natural process has been widely recognised as being effective and cost-efficient.

### *River and Aquifer Health*

The requirements of Sections 28 and 29 of the Statement of Obligations are not new obligations however they have not been relevant to Westernport Water in the past.

Westernport Water now has a more diverse raw water supply with extractions from the Corinella Aquifer and the Bass River, hence this obligation now has particular application to Westernport Water.

The following costs have been included in the Water Plan to ensure that obligations under these sections are met:

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
SoO: River and Aquifer Health					
Operating expenditure	0.03	0.03	0.03	0.03	0.05

The program of works that these costs support are as follows:

Studies and testing associated with:

- ground water impact through monitoring ground water levels within observation bores.
- Ground water quality
- Monitoring of river health, impact on fish and macro invertebrates
- Monitoring of impact on riparian zone of works.

### 6.2.7. Department of Human Services

#### *Fluoridisation*

The Department of Human Services has expressed a policy position of increasing the level of fluoridisation of potable water supplies throughout Victoria. The increase in costs associated with fulfilling DHS requirement are summarized in the table below:

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
DHS Fluoridisation					
Operating expenditure	0.02	0.02	0.02	0.02	0.02

Westernport Water has included additional OPEX of \$0.02 million per annum from 2008-2009 in support of the inclusion of fluoride in the drinking water. This

expenditure represents the increased cost of chemicals associated with fulfilling this obligation.

The CAPEX for this obligation is anticipated to be provided by DHS and there fore has not been included in the forward CAPEX projections.

***Audit of Drinking Water Quality Management System (DWQS)***

DHS has advised Westernport Water that the Drinking Water Quality Management system will be subject to an audit throughout the regulatory period. This is a new obligation in that costs associated with this requirement have not been previously included in Westernport Water BAU cost base. Details of costs associated with new obligation are provided in the table below:

\$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
DHS: Audit DWQS					
Operating expenditure	0.06	0.01	0.01	0.06	0.01

The additional OPEX consist of audit costs of \$0.05 million in 2008-09 and 2011-12 and \$0.01 million per annum in additional testing costs.

**6.3. Capital Expenditure (CAPEX)**

The following table details the Business as Usual CAPEX projects classified as per the ESC requirements:

Capital Expenditure Summary \$m 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
Water	1.81	0.79	0.47	0.68	0.64
Sewerage	0.39	0.45	0.39	0.67	0.39
Bulk water	0.21	2.06	15.41	2.51	1.21
Recycled water	-	0.35	-	-	-
Rural water	-	-	-	-	-
<b>Total prescribed BAU CAPEX</b>	<b>2.40</b>	<b>3.65</b>	<b>16.27</b>	<b>3.86</b>	<b>2.23</b>

The following section outlines key projects contained in the Water Plan assumptions in excess of \$0.025 million.

**6.3.1. Water Supply Projects**

The drought currently being experienced has significantly impacted on

Westernport Water's operations and its long-term water supply planning. The annual cyclic fill/empty nature of Westernport Water's sole reservoir at Candowie has long been recognised as a risk to the security of supply. Attempts to address this matter extend back to the early 1990's and the assessment of options as to whether to build an additional storage or maximise the benefit from the under-utilised Lance Creek storage in the South Gippsland Water region. The eventual construction of an inter-connecting pipeline provided, until recently, an adequate mechanism for managing any shortfalls within the Candowie system.

At the start of the 2005-2008 Water Plan further analysis of available options and community expectations lead Westernport Water to pursue the Melbourne Water connection. The urgency of the drought has resulted in Westernport Water pursuing other water supply augmentation options with shorter delivery timetables. These options include accessing surface water from the Bass River, ground water from aquifers and the recently announced desalination plant to be constructed at Wonthaggi. The long-term sustainability of these drought driven augmentations will be further investigated over the 2008/2009 period. The commercial and supply arrangements associated with accessing volumes from the desalination plant are yet to be negotiated and have not been included in any of the forward cost projections.

The ramifications of the drought and associated focus on water security, quality and the supply/demand balance provided the major influence in the development of Westernport Water's capital works program over the 2008-2013 period.

The key water supply projects are described below;

***Bass River Augmentation (\$1.1million in 2009/2010)***

Key Drivers- growth, water supply security

Westernport Water has examined the flow characteristics of the Bass River in



some detail. A typical flow regime consists of extended periods of minimal flow (< 1ML per day) and short periods of high flows (> 1000ML per day).

To maximise Westernport Water's capacity to extract water during the periods of high flow it is proposed to duplicate the 300mm x 2.5km pipeline from Bass River to Candowie. This, in conjunction with pump upgrades, will allow up to 25ML per day to be extracted and transferred.

### **6.3.2. Water Security Projects**

#### ***Major Augmentation Project (\$14 million over 2009/2010 and 2010/2011)***

Westernport Water has made an allowance for a major augmentation project during the 2008–2013 Water Plan. The project would be to raise Candowie dam by an additional 3m to increase the full supply level, which will increase the stored volume from 2207ML to 4497ML and the yield from 1839ML to 3654ML

This project would have significant approval and environmental requirements. The level of water supply security provided by the Candowie raising will be subject to future rainfall patterns but the increased storage volume would be augmented by the Bass River pump station and the Corinella bores. This project will impose minimal additional operational costs on the business.

#### ***Feasibility study into Desalination (\$0.5million over 2009/2010 and 2010/2011)***

Key Drivers – growth, water security

A detailed investigation into the provision of emergency water via desalination has been included in the capital expenditure assumptions.

#### ***Cowes Basin Reactivation (\$0.7million in 2011/12)***

Key Drivers – growth, water security

The Cowes basin located on Phillip Island was removed from service over 7 years ago as it is an unlined, uncovered basin and could not supply high quality water to our customers. The basin needs to be refurbished to allow a significant volume of stored water on the Island, for security in case of major break downs in the

water supply system. Cowes and neighbouring Ventnor are the major centres of demand within the system and sit at the end of the long supply main. This will allow a continuing water supply to these townships in the event of breakdowns of the supply main or other major assets.

### *Under Channel Pipeline (\$0.8 million in 2008/2009)*

Key Drivers – infrastructure security

Risk assessments undertaken on Westernport Water's infrastructure have consistently identified the pipes across the San Remo bridge as the critical point in the water supply system. Failure of these pipes or the bridge will effectively and immediately isolate Phillip Island from a water supply source. Telstra recently completed an under channel bore for its optic fibre network and Westernport Water took the opportunity to review the suitability of a similar water supply bore.

A 280mm x 1km long pipeline would provide sufficient capacity to meet an average demand of approx 5ML per day. The technology and capability to construct this bore has been proven by Telstra. The project would address the most significant infrastructure risk to the business and ensure that an independent water supply would always be available to Phillip Island.

### **6.3.3. Water Quality Projects**

#### *Bass River Pipeline Extension to IBWPP (\$0.5 million in 2009/2010)*

Key Drivers – growth, water quality

This project allows for a 300mm x 2km extension of the Bass River to Candowie pipeline to bypass Candowie Reservoir. Any flows from Bass River or aquifers could be directly pumped and treated at the Ian Bartlett Water Purification Plant. The impact of any blue-green algal blooms on Westernport Water's ability to provide potable water would be avoided.

### *Water Quality improvement (Ozone/GAC) (\$3.75 million over 2009/2010 to 2011/2012)*

Key Drivers – water quality improvement

To continue Westernport Water's focus on improving its potable water quality this project is designed to introduce a tertiary treatment process to deliver water of a quality that is expected by our customers.

As well as algal taste, odour and toxin control the potential benefits of providing an advanced treatment step include;

- Reduced chlorine demand
- Improved primary disinfection
- Reduced trihalomethanes (THM's)
- Improved Dissolved Organic Carbon removal

### *Strategic Land Purchases (\$1.2 million in 2012/2013)*

Key Drivers – growth, water quality

As the Candowie catchment is not a closed catchment there will continue to be a conflict between the land uses (horticultural, agriculture) and Westernport Water's intent to improve the quality of the potable water provided to its customers. This project allows for the purchase of strategic parcels of land within the catchment as they become available. This capital intensive project will be complemented by Westernport Water's ongoing program of working with Landcare and property owners to improve and rehabilitate the Candowie catchment. Westernport Water will also explore opportunities with the Bass Coast Shire to manage and mitigate the existing uses within the catchment.

## **6.4. Financing Capital Investments**

### **6.4.1. Financing assumptions**

Westernport Water obtains finance under the Borrowing and Investment Powers Act 1987. Debt financing is coordinated by the Commercial and Infrastructure Risk Management Group (CIRM) of the Department of Treasury and Finance

(DTF) and managed within the DTF Treasury Management Guidelines issued in March 2000. Westernport Water operates under the debt and financial management objectives and risk tolerances specified in the guidelines.

Additional borrowings for projects detailed in the Water Plan will be obtained via CIRM and the Treasury Corporation of Victoria on the basis of a fixed term loan over 15 years at an assumed rate of 6.2486%, with monthly payments. Westernport Water has assumed that borrowings of \$13.5 million will be required in 2010/11, with the draw down of the loan assumed for only six months in 2011. The costs of these borrowings, however, are not included in the OPEX program for tariff pricing purposes.

**6.4.2. Weighted Average Cost of Capital (WACC)**

In developing the revenue requirement for our Water Plan, Westernport Water has utilised a WACC of 5.10% as per the provided Essential Services Commission model and templates.

The table below details the proposed composition of the WACC:

<b>WACC assumptions</b>	
Risk Free Rate (Real)	2.61%
Debt Premium	1.11%
Equity Premium	6.00%
Equity Beta	75%
Gearing (Debt/ Assets)	60.00%
Forecast Inflation	3.15%
Franking credit value	0.5
<b>'Vanilla' After Tax WACC (Real)</b>	<b>5.10%</b>

**6.4.3. Regulatory Asset Base (RAB)**

The Regulatory Asset base utilised in the development of the revenue requirement assumes an opening Regulatory Asset Value based on the projected closing Regulatory Asset Value as at June 2008 being \$58.67 million (\$1/1/07).

The following table details the roll forward of the Regulatory Asset Base

throughout the regulatory period:

(\$m)	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Rolled forward asset base \$m1/1/07</b>					
Opening asset base	58.67	59.60	61.44	75.28	76.84
Closing asset base	59.60	61.44	75.28	76.84	76.59
Regulatory depreciation - Existing	1.19	1.19	1.18	1.07	1.00
Regulatory depreciation - New Assets	0.13	0.37	0.70	1.01	1.08
Regulatory depreciation - Total	1.31	1.56	1.87	2.08	2.07

#### 6.4.4. Taxation

Westernport Water became subject to the National Tax Equivalent Regime (NTER) from 1 July 2002. The NTER is administered by the Australian Taxation Office (ATO). For the 2005-06 year, Westernport Water had a taxation loss of \$3.05 million with total carried forward losses of \$5.3 million. Based on the projected financial position to 2012-2013 Westernport Water will not incur a taxation liability within the Water Plan period.

## 7. DEMAND

Westernport Water has used past trends on consumption, Australian Bureau of Statistics (Census data) on population growth, council planning information and growth trends from the Bass Coast Shire Council, and the Department of Infrastructure to estimate growth in property numbers and water demand.

The following sections provide projections and detailed assumptions in relation to:

- Water supply demand;
- Customer numbers and composition;
- Water Consumption;
- Subdivision development forecasts;
- Trade waste; and
- Recycled water.

### 7.1. Water Supply Demand

Westernport Water participated in the State Governments Sustainable Water Strategy and the demand forecast figures in this Water Plan are based on the forecasts from the Central Region Sustainable Water Strategy (CRSWS) released in October 2006 (a copy can be downloaded from the DSE website [www.dse.vic.gov.au](http://www.dse.vic.gov.au)). Water demand forecasts were also used in Westernport Water's Water Supply Demand Strategy (WSDS) that is currently under submission for approval by the Department of Sustainability and Environment (DSE) before approval by the Minister.

The water demand and growth forecasts for Westernport Water is summarised in the following table:

	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Total Demand (ML)<sup>4</sup></b>	<b>1,818</b>	<b>1,836</b>	<b>1,854</b>	<b>1,873</b>	<b>1,891</b>
Residential (ML)	1,236	1,248	1,261	1,274	1,286
Commercial/Business (ML)	582	588	593	599	605

## 7.2. Demand Forecast Assumptions

The major assumptions behind the demand forecasts are:

- Growth in water consumer demand of 1% per annum, including assumptions regarding consumption demand from ‘sea-change’ customers;
- Growth in residential property numbers of 2% per annum;
- Reduction in unconnected vacant residential land of a net 25 lots per annum;
- No significant growth in commercial or industrial customers during the regulatory period and Westernport Water does not expect to realise any major potable water supply customers (>100ML pa) in the foreseeable future;
- Non-revenue water is expected to reduce by 2% providing Westernport Water with up to 50ML of “extra” water for growth. Refer discussion on unaccounted for water service standard in Section 5;
- Impacts of water restrictions<sup>5</sup>, community education and implementation of water saving products is reflected in the forward demand projections over the water planning period; and
- Actual consumption demand figures up to the end of March 07 and average monthly demands patterns since 1990/91. Actual consumption for the whole 2006-07 financial year will be updated in the Final Water Plan submission following completion of June 2007 readings which, if significantly different from Water Plan forecasts may alter demand forecasts for the regulatory period.

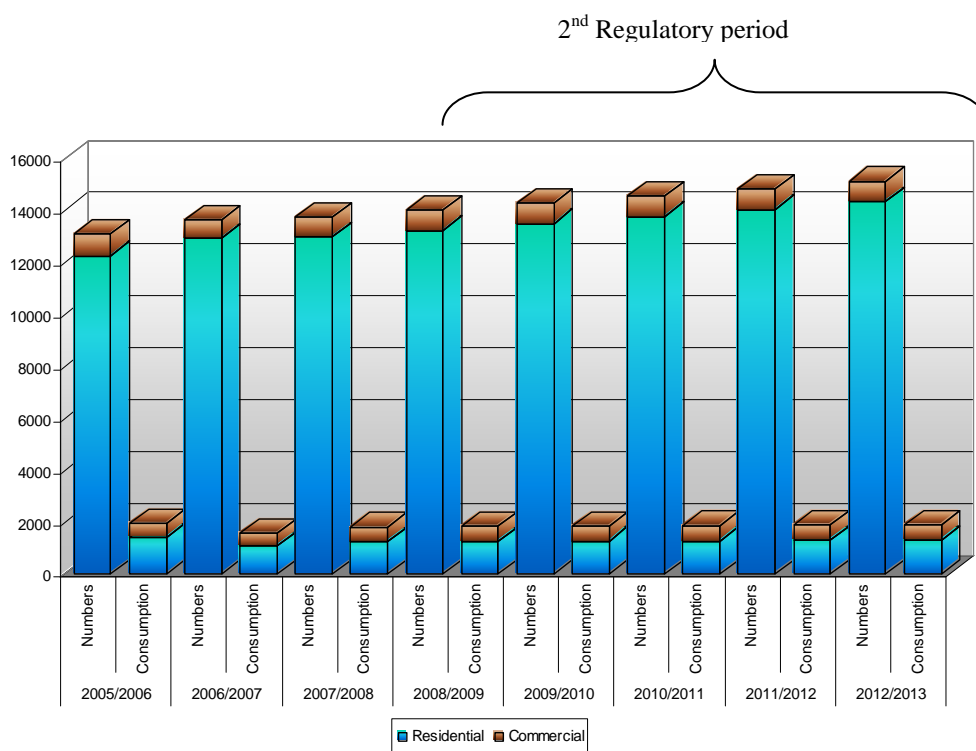
<sup>4</sup> Exclusive of recycled water

<sup>5</sup> The low rain fall, drought conditions and subsequent Stage 4 water restrictions during 2006 and 2007 has resulted in the lowest monthly demand for water between November 2006 and March 2007 since 1990/91

The numbers of residential properties are forecast to grow by 2% over the regulatory period and historically the growth in water volumes does match residential numbers, however Westernport Water is predicting that the combined effects of the following will have the affect of limiting water consumption growth to 1% per annum throughout the 2008-13 regulatory period:

- Changing customer’s water consuming habits due to the drought;
- Westernport Water’s water conservation program;
- Greater community awareness; and
- Increased substitution of recycled water

The following graph illustrates the assumptions regarding property numbers and consumption levels over the regulatory period:



Westernport Water revenue collected from volumetric water has not varied significantly over the past few years. Westernport Water’s volumetric water sales account for 16% of revenue. Westernport Water considers that the estimates for water demand in the regulatory period, in the light of the historical variation in consumption, to be robust. However, the effects of a moderate reduction in



volumetric sales for Westernport Water can have a significant impact on revenue collected, and this has been factored into the revenue modelling sensitivity analysis. The affect of a 10% reduction in sales assuming a uniform reduction over a year could potentially result in a loss of revenue of up to \$0.160 million out of \$10 million.

### **7.2.1. Other Factors Influencing Demand Forecasts**

Westernport Water has provided water supply services to all of its towns and subdivisions with the exception of the township of The Gurdies. This is a small northern rural subdivision on the fringes of our Water District. The Gurdies customers have previously rejected attempts by Westernport Water to supply potable water, however the owners have recently requested estimates of costs to enable them to connect to Westernport Water reticulated system. Details of connections are still in the planning stages, however the costs of connecting will be borne by the customer, and the impact on consumption forecasts will be marginal.

The other possible source of increased demand for water and customer growth is from sewerage and water supply private schemes. Westernport Water has previously undertaken the majority of the investment required to provide water and sewerage services to the region. The planned future investment and consequently additional customer growth from sewerage or water schemes will be undertaken in accordance with the Statement of Obligations and the various State Environmental Planning policies, and Council requirements.

Furthermore, Westernport Water has historically taken a conservative approach to forecasting demand as a wet and mild summer can potentially reduce consumer consumption by 200ML, as seen in previous years, which is considered a significant impact on revenue.

### 7.3. Customer Numbers and Composition

#### 7.3.1. Water and Wastewater Customers

Westernport Water has used historical data combined with available planning requests to determine the projected growth in residential customer numbers during the regulatory period. It is predicted that growth will continue at slightly less than the current average growth rate of 3%. The growth rate used for the regulatory period is 2% consistent with growth in property numbers, as shown in the graph and table in [Section 7.3.2](#). Marginal growth in commercial customers (0.9%) is also forecast for the regulatory period. The percentage of commercial customers is less than 6% of the total customer base for each year of the regulatory period.

Westernport Water does not expect that there will be any growth in wastewater service customers from new schemes during the regulatory period. The towns or subdivisions that do not have a reticulated wastewater service are Silverleaves, Bass, The Gurdies and Archies Creek.

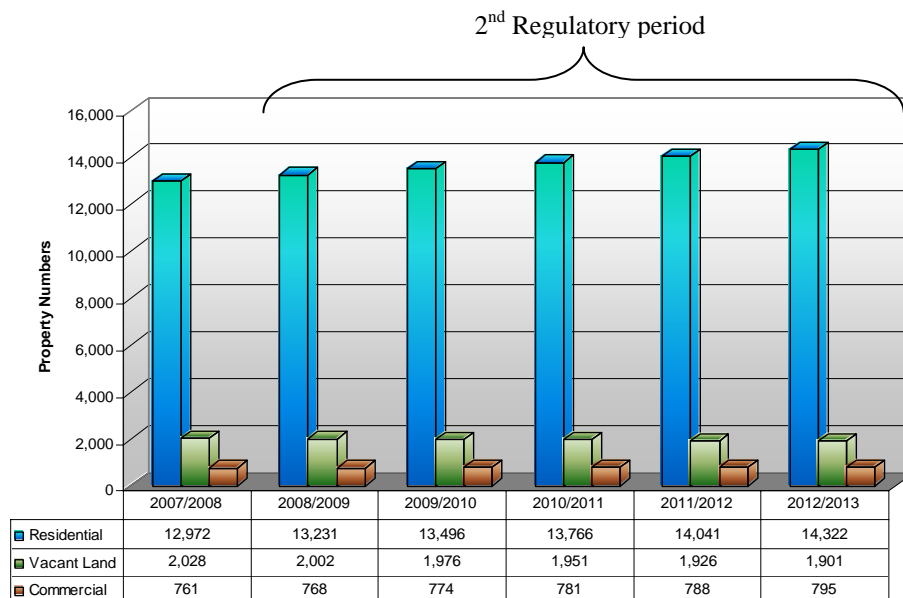
In accordance with the Waters of Victoria State Environment Protection Policy (SEPP), the Western Port SEPP and the Statement of Obligations, Westernport Water is awaiting advice from the Bass Coast Shire Council and the EPA for the commencement of a wastewater scheme at Silverleaves. Westernport Water will, in accordance with the Statement of Obligations, prepare a sewerage management plan in conjunction with the EPA and the Bass Coast Shire Council and in consultation with the local community to identify the preferred types and levels of sewerage services to be provided.

Westernport Water acknowledges that the domestic wastewater management plan has been prepared by the Council and presented to EPA. A reticulated sewerage system will be investigated over the current regulatory period following community support of the scheme to sewerage Silverleaves.

Westernport Water notes that the White Paper has a program for the provision of innovative sewerage systems and it is prepared to participate in any program that can improve the whole of life delivery costs of sewerage services.

### 7.3.2. Property Growth Forecasts

Westernport Water’s growth in properties is primarily driven by increases in residential properties (as per the below graph) and these forecasts have been built into the Water Plan assumptions.



Small scale service and tourist industry facilities will provide Westernport Water with some growth in commercial properties however it is marginal in comparison to residential growth. The recent developments in commercial properties within the region have been large tourist facilities, such as resort and/or accommodation developments with up to 200 individual units, and convention centres. These developments typically place short term demand constraints on current infrastructure over short peak periods in December and January.

### 7.3.3. Customer Composition

Whilst there has been sustained property growth in the past years, water demand has remained relatively stable, indicating that growth in properties numbers has not driven a relative increase in demand. This can be attributed to growth in the number of residential properties used for holiday accommodation (non permanent residents), with a lesser demand for water. Also, Westernport Water has dedicated resources to implementing water conservation education programs due to drought conditions. The impact of a more educated and water conscious community, as well as the promotion of water saving initiatives, is assumed to have a continuing impact on consumption into the future.

The sea change phenomenon in the Bass Coast region, whilst apparent in the changing ratio of permanent to non permanent residents, has yet to impact on the water demand of Westernport Water customers, and it is not anticipated to during the regulatory period. In 2004-2005 the ratio of permanent residents to non permanent residents was 34:66%; in 2006-07 the ratio had changed to 39:61%. This shift has as yet had no appreciable impact on total water demand which has remained within a range of 1.8 to 2.0 GL per annum depending on prevailing weather conditions and restriction levels.

### 7.4. Forecast Developer Contributions for Subdivisions

Westernport Water has used historical information combined with known development applications to estimate that there will be an average of 330 new allotments created and connected to water per annum and 275 connected to waste throughout the regulatory period, from which capital contributions will be received.

Westernport Water has adopted the New Customer Contributions (NCC) framework (refer attached [Appendix 3](#)) outlined in the ESC guidance paper as

developed by the Victorian Water Industry Association Ltd after consultation with the ESC and representatives of the Victorian Water Authorities. Further details on pricing and projections are contained in [Section 8.9](#).

The projected subdivisions (below) have been based on development that has occurred in the past few prior years combined with information from recent discussions with local Council and developers. It is expected that the number of subdivisions will be evenly split between tier one and two charging structures (refer to [Section 8.9](#)) of the NCC framework:

	2008-09	2009-10	2010-11	2011-12	2012-13
Water Customers	330	330	330	330	330
Wastewater Customers	275	275	275	275	275

## 7.5. Forecast Trade Waste Customer Numbers

Westernport Water does not have any major trade waste customers and the number of greasy waste customers is not expected to increase over the regulatory period.

## 7.6. Recycled Water

Westernport Water has completed a review of the fixed and operating costs associated with the provision of recycled water from the King Rd, Woolamai and Cowes WWTP. The cost efficiency of these operations in respect to recycled water is sensitive to demand volumes.

Assumptions for the development of recycled water demand forecasts for the regulatory period have been based on the likely demand volumes of recycled water in order to establish a per unit of recycled water rate for each site. Each site has a different operating regime and associated infrastructure and the per unit price varies from site to site. In addition some existing sites have historical

agreements that apply a fixed volumetric charge for ranges of usage. It is intended to transfer all recycled water customers to updated agreements before the commencement of the 2008-13 regulatory period.

Westernport Water expects to increase its recycled water supply to 23% by the end of this regulatory period. It expects to do this through existing facilities at King Road, Cape Woolamai and Cowes, via dual pipe infrastructure and tankered recycled water. A proposal to deliver recycled water to a new golf club development in San Remo, provision of recycled water to other developments from the Cape Woolamai facility and an extension to the Cowes facility, is under discussion.

Due to the drought and Stage 4 restrictions there has been increased interest in recycled water and Westernport Water is actively pursuing the use of recycled water, advertising for expressions of interest for the use of recycled water either on our larger properties or on the customers own property. Westernport Water and has recently signed up the local council to use recycled water on the Cowes recreation reserve, and expects to increase the number of recycled water agreements.

### *Tankered Recycled Water*

During 06-07 Westernport Water developed and implemented a management framework for the provision of recycled water via a tankered arrangement. An administration fee and a standardised volumetric charge are applicable to such arrangements.

## 8. PRICES

### 8.1. Form of Price Control

Westernport Water proposes to utilise the price cap model as a form of price control, which limits or caps prices to those approved by the Essential Services Commission for the five year regulatory period 2008-13.

### 8.2. Tariff Structures

#### *Background*

In developing the proposed tariff structures Westernport Water modelled a range of options. This including the rebalancing of vacant land charges and the development of an inclining block tariff (IBT) structure for variable water charges aimed at delivering the required revenue to provide service standards detailed in [Section 5](#), whilst sending pricing signals to promote water conservation practices.

The tariffs and charges detailed later in this section have been derived in order to achieve the modelled net present value revenue requirement of \$62.86 million. The pricing path has been smoothed so as to apply a relative consistent pricing path (excluding CPI) over the regulatory period, as detailed in table below:

Pricing Path (excl CPI)	NPV	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Proposed pricing path (from 07-08)		4.52%	4.52%	4.52%	4.52%	4.52%
Resulting Revenue from tariff model	61,349,273	12,406,571	13,124,893	13,889,724	14,703,185	15,569,371
Actual Revenue Requirement (from ESC Building Block model)	61,349,273	13,075,311	13,249,126	14,069,883	14,576,916	14,542,890

### 8.3. Rebalancing of Vacant land

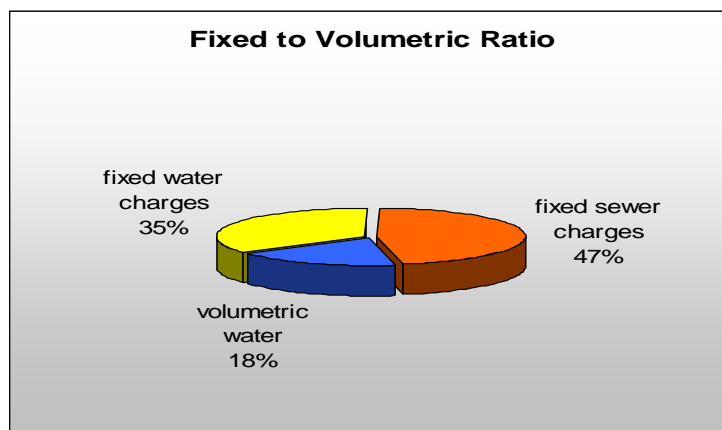
Westernport Water commenced a program to rebalance the unconnected water and sewer vacant land charges in the 2005-2008 regulatory period with a re-set of these charges and maintaining these prices in nominal terms over the first regulatory period. It is proposed to continue this process throughout the 2008 -

2013 regulatory period with the aim of establishing a position where the vacant land charges are equivalent of 50% of the connected domestic water charge.

### 8.4. Fixed to Volumetric Charge Ratio

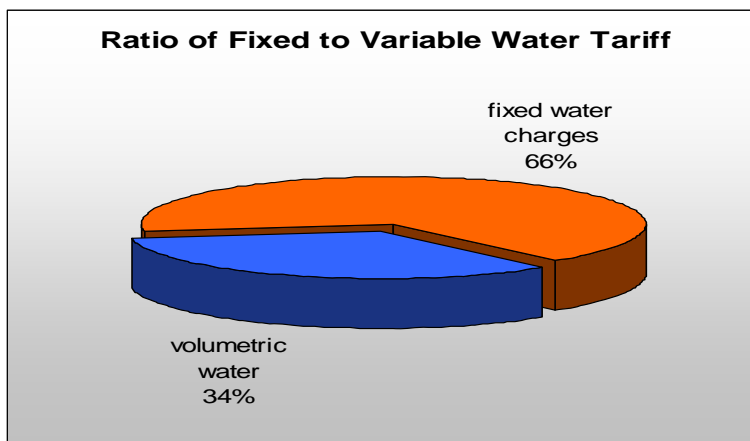
Westernport Water has a highly seasonal customer base and associated demand on water and sewerage services. The characteristics of this demand pattern are not projected to change significantly despite the trend towards sea change. The current ratio of permanent resident to non permanent resident is 39:61.

In light of this customer profile Westernport Water intends to maintain the ratio of fixed to variable water charges throughout the 2008-2013 regulatory period. The ratio of revenue recovered from fixed versus variable across water and sewer charges for the regulatory period is 82:18.



The ratio of fixed to variable for water charges only is 67:33% in 2007-2008. The implementation of a residential IBT structure will have the effect of changing this ratio marginally to 66:34% fixed to variable.





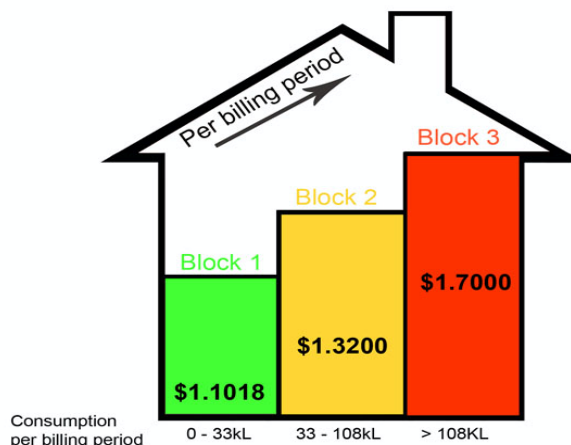
### 8.5. Volumetric Charges

#### Water

The requirement of Water Industry Regulatory Order (WIRO) and the Statement of Obligations to send pricing signals around the efficient use of water has been addressed in this Water Plan through the proposed implementation of an inclining block tariff (IBT) for volumetric charges. The IBT proposed will only apply to residential customers. Consultants were engaged to assist Westernport Water to establish the proposed consumption levels associated with each block. The analysis undertaken as part of this process has led to the development of the following consumption blocks based on Westernport Water’s 4 monthly billing frequency:

Inclining Block	Domestic Consumption per billing period	2008 -2009 price \$1/1/07
Block 1	0-33kL	\$1.1018
Block 2	33-108kL	\$1.3200
Block 3	Greater than 108kL	\$1.7000

The inclining block structure has been modelled using historical winter consumption and applying it to an average permanent residential water consumer. The first block represents non-discretionary household usage. The remaining blocks were



developed using historical consumption patterns applying to large water users, whilst being sensitive to pricing shocks but maintaining pricing structures to promote water conservation using prices as an incentive.

Westernport Water believes the implementation of the domestic inclining block structure will send price signals of greater than 1.5% increase in total account to customers whose consumption accounts are greater than 200kL per annum.

Westernport Water's community consultations both pre and post draft have clearly supported an increase in the volumetric price of water. The option of establishing an inclining block was communicated with the community at several focus groups and in the attitude survey that was completed has been an input into the development of the tariff structures in the Water Plan.

It is not proposed to establish an inclining block volumetric charge for commercial customers. A differential tariff set at a point mid way between the Block 1 and 2 tariffs.

The Single volumetric charge for commercial customers is proposed on the basis that commercial users do not have the same level of discretionary water usage in their processes as residential customers. Westernport Water's commercial customer base has little industry and is largely based around the farming and accommodation sectors in the form of holiday rental accommodation, bed and breakfast, motel and caravan parks. Whilst this sector is acknowledged as a target for more efficient water use it is not proposed to use an inclining block approach to target efficient water use. It is proposed to target the usage of this sector particularly through Westernport Water's water conservation campaign, community education and water audits.

*Sewer*

It is not proposed to implement a volumetric sewerage tariff in the 2008–2013 regulatory period. Westernport Water proposes to maintain the current fixed charge regime and the associated cistern charges for the commercial sector.

**8.6. Proposed Tariffs and Charges**

**8.6.1. Proposed Pricing Path**

The following section details the proposed pricing path (excluding CPI) to be applied to the prescribed tariffs and charges to be levied by Westernport Water throughout the regulatory period.

*Water Fixed Charges*

Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Water Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Unconnected Vacant Land Water Access Charge	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Commercial</b>					
Commercial 20mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 25mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 32mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 40mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 50mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 65mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 80mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial 100mm Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%

*Water Volumetric Charges*

Tariffs \$ 1/1/07	kL per bill period	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>						
Variable Charge - Block 1	0-33kL	0.00%	4.52%	4.52%	4.52%	4.52%
Variable Charge - Block 2	33-108kL	19.80%	4.52%	4.52%	4.52%	4.52%
Variable Charge - Block 3	108kL+	54.29%	4.52%	4.52%	4.52%	4.52%
<b>Commercial</b>						
Variable Charge		8.91%	4.52%	4.52%	4.52%	4.52%

*Sewer Charges*

Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Residential Sewer Access Charge	4.52%	4.52%	4.52%	4.52%	4.52%
Unconnected Vacant Land Sewer Access Charge	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Commercial</b>					
Commercial Sewer Access Charge (1 cistern)	4.52%	4.52%	4.52%	4.52%	4.52%
Commercial Cistern Charge (>2 cisterns)	4.52%	4.52%	4.52%	4.52%	4.52%

**8.7. Proposed Prices**

The following section details the impact of the proposed pricing path (excluding CPI) in respect of charges to be levied by Westernport Water throughout the regulatory period expressed in January 07 dollars.

*Water Fixed Charges*

Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Residential Water Access Charge	\$265.25	\$277.24	\$289.77	\$302.86	\$316.55
Unconnected Vacant Land Water Access Charge	\$202.26	\$202.26	\$202.26	\$202.26	\$202.26
<b>Commercial</b>					
Commercial 20mm Access Charge	\$265.25	\$277.24	\$289.77	\$302.86	\$316.55
Commercial 25mm Access Charge	\$477.45	\$499.03	\$521.58	\$545.14	\$569.78
Commercial 32mm Access Charge	\$902.06	\$942.84	\$985.45	\$1,029.95	\$1,076.51
Commercial 40mm Access Charge	\$1,644.83	\$1,719.17	\$1,796.88	\$1,878.02	\$1,962.91
Commercial 50mm Access Charge	\$2,944.80	\$3,077.91	\$3,217.03	\$3,362.29	\$3,514.27
Commercial 65mm Access Charge	\$5,863.09	\$6,128.10	\$6,405.10	\$6,694.32	\$6,996.90
Commercial 80mm Access Charge	\$10,160.99	\$10,620.27	\$11,100.31	\$11,601.54	\$12,125.93
Commercial 100mm Access Charge	\$18,279.21	\$19,105.43	\$19,969.00	\$20,870.70	\$21,814.05

*Water Volumetric Charges*

Tariffs \$ 1/1/07	kL per bill period	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>						
Variable Charge - Block 1	0-33kL	\$1.10	\$1.15	\$1.20	\$1.26	\$1.31
Variable Charge - Block 2	33-108kL	\$1.32	\$1.38	\$1.44	\$1.51	\$1.58
Variable Charge - Block 3	108kL+	\$1.70	\$1.78	\$1.86	\$1.94	\$2.03

<b>Commercial</b>					
Variable Charge	\$1.20	\$1.25	\$1.31	\$1.37	\$1.43

**Sewer Charges**

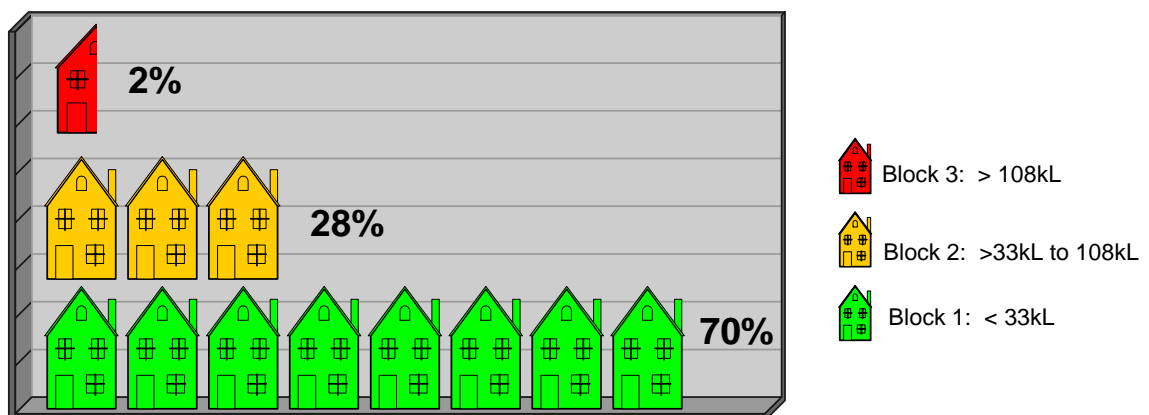
Tariffs \$ 1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
<b>Residential</b>					
Sewer Access Charge	\$403.06	\$421.28	\$440.32	\$460.21	\$481.01
Unconnected Vacant Land Sewer Access Charge	\$207.87	\$207.87	\$207.87	\$207.87	\$207.87
<b>Commercial</b>					
Sewer Access Charge (1 cistern)	\$403.06	\$421.28	\$440.32	\$460.21	\$481.01
Commercial Cistern Charge (>2 cisterns)	\$146.42	\$153.04	\$159.96	\$167.18	\$174.73

**8.8. Impact Analysis**

**8.8.1. Residential IBT**

In order to ensure that the proposed IBT structure did not disproportionately affect a particular customer group the following analysis was undertaken to compare the impact across differing customer types compared to maintaining the 2007-08 tariff structure.

The following graph show the percentage of residential customers that could have been impacted by the block charging process if it had been implemented in March 06.



Percentage of Residential Customers per IBT Block

The above chart demonstrates that in the traditional peak usage period (Nov - Feb) 28% of residential customers would be impacted by Block 2 charges and 2% by Block 3.

The introduction of an IBT structure has the greatest impact in year one of the regulatory period due to the relative price change associated with transition. The table below demonstrates the impact of changing to an inclining block structure on three different customers<sup>6</sup>.

Customer Impact Analysis \$1/1/07	2007-08	Existing Structure 2008-09	Domestic IBT 2008-09
<b>Res (200kL Avg)</b>			
Water SC	\$253.78	\$265.60	\$265.25
Volume	\$220.36	\$230.62	\$242.40
Waste SC	\$385.63	\$403.59	\$403.06
<b>Total Account</b>	<b>\$859.77</b>	<b>\$899.80</b>	<b>\$910.71</b>
<b>Percentage change in total account</b>		4.66%	5.92%
<b>Res (22kL Avg)</b>			
Water SC	\$253.78	\$265.60	\$265.25
Volume	\$24.24	\$25.37	\$24.24
Waste SC	\$385.63	\$403.59	\$403.06
<b>Total Account</b>	<b>\$663.65</b>	<b>\$694.55</b>	<b>\$692.55</b>
<b>Percentage change in total account</b>		4.66%	4.35%
<b>Res (250kL Avg)</b>			
Water SC	\$253.78	\$265.60	\$265.25
Volume	\$275.45	\$288.27	\$308.40
Waste SC	\$385.63	\$403.59	\$403.06
<b>Total Account</b>	<b>\$914.86</b>	<b>\$957.46</b>	<b>\$976.71</b>
<b>Percentage change in total account</b>		4.66%	6.76%

As can be seen from the above table, the IBT will favour the low water user with a marginal decrease in total account over the alternative of maintaining the existing tariff structure.

The impact on an average household (200kL) of adopting the IBT will be a small increase in total account of 1.27% when compared to the alternative of

<sup>6</sup> The percentage changes are from the 2007/08 charges

maintaining the status quo. The increase in total account is due to the volume consumed entering the 2nd block of the tariff structure. In total dollar terms this is an increase of \$10.91 per annum or \$3.64 per account compared to the alternative. This level of impact is viewed as marginal.

The largest impact is logically on the users that consume greater than 200kL per annum and a household with an average of 250kL a year consumption will see an increase in total account of 2.10% over the alternative and 6.76% increase over the 07-08 charges. In total dollar terms the impact of the IBT over the alternatives is an increase of \$19.26 per annum or \$6.42 per account. The increase in total account is driven by the higher volumetric charges associated with Block 3.

The impact of the IBT large households with low discretionary use of water was an issue raised through the consultation processes. Westernport Water is developing a water conservation campaign to be implemented throughout the regulatory period. The program is currently being designed and will incorporate assistance to these households through the provision of advice and in proven cases of hardship provision of water saving devices. In addition Westernport Water has examined options put forward by other water corporations for dealing with people in these circumstances. It is proposed that the Westernport Water's hardship policy be reviewed and amended to specifically cater for families in these circumstances.

Westernport Water believes that the IBT proposed will have the desired effect of sending appropriate pricing signals whilst not having a disproportionate impact on the permanent residents of the region.

### **8.8.2. Commercial Tariff**

The impact of the one off first year adjustment to the Commercial volumetric tariff has been modelled across a range of existing commercial customers. The results of the impact analysis are detailed below:

Customer \$/1/07	Impact	Analysis Volume	Existing Structure		New Structure
			2007-08	2008-09	2008-09
<b>Sml Non Res (20mm)</b>					
Water SC			\$253.78	\$265.60	\$265.25
Volume		400	\$440.72	\$461.24	\$480.00
Waste SC			\$385.63	\$403.59	\$403.06
Cistern charge		0	\$0.00	\$0.00	\$0.00
Total Account			\$1,080.13	\$1,130.42	\$1,148.31
<b>Percentage change in total account</b>				4.66%	6.31%
<b>Med Non Res (25mm)</b>					
Water SC			\$456.80	\$478.07	\$477.45
Volume		1300	\$1,432.34	\$1,499.03	\$1,560.00
Waste SC			\$385.63	\$403.59	\$403.06
Cistern charge		0	\$0.00	\$0.00	\$0.00
Total Account			\$2,274.77	\$2,380.68	\$2,440.51
<b>Percentage change in total account</b>				4.66%	7.29%
<b>Lge Non Res (32mm)</b>					
Water SC			\$863.05	\$903.24	\$902.06
Volume		908	\$1,000.43	\$1,047.01	\$1,089.60
Waste SC			\$385.63	\$403.59	\$403.06
Cistern charge		43	\$6,023.78	\$6,304.24	\$6,296.06
Total Account			\$8,272.90	\$8,658.07	\$8,690.79
<b>Percentage change in total account</b>				4.66%	5.05%
<b>Lge Non Res (50mm)</b>					
Water SC			\$2,817.45	\$2,948.63	\$2,944.80
Volume		4803	\$5,291.95	\$5,538.33	\$5,763.60
Waste SC			\$385.63	\$403.59	\$403.06
Cistern charge		11	\$1,540.97	\$1,612.71	\$1,610.62
Total Account			\$10,036.00	\$10,503.25	\$10,722.08
<b>Percentage change in total account</b>				4.66%	6.84%
<b>Lge Non Res (100mm)</b>					
Water SC			\$17,488.72	\$18,302.96	\$18,279.21
Volume		3000	\$3,305.40	\$3,459.29	\$3,600.00
Waste SC			\$385.63	\$403.59	\$403.06
Cistern charge		9	\$1,260.79	\$1,319.49	\$1,317.78
Total Account			\$22,440.55	\$23,485.33	\$23,600.06
<b>Percentage change in total account</b>				4.66%	5.17%



As can be seen from the modelling the one off adjustment to the Commercial tariff increases the total account in a range from 0.40% to 2.63% when compared to the option of maintaining the tariff structure. The increases in total account in year one across the customers modelled ranges from 5.05% to 7.29% largely dependant on usage.

## **8.9. New Customer Contributions**

Westernport Water proposes to adopt the New Customer Contributions approach outlined in the Essential Service Commissions 2008 Water Price Review Guidance Paper released in March 2007.

The approach outlined is consistent with the industry submission facilitated by the Victorian Water Industry Association.

### **8.9.1. NCC Framework**

The NCC framework proposed encompasses a three tier application based on lot size and timing and impact on future investment in distribution system capacity. The following is a summary of the NCC framework as it applies to Westernport Water:

- 1a) A charge of \$550.00 per lot per new service for water, sewerage and dual pipe water (total for the three services is \$1,650.00 per lot) for developments which are designed in a manner that will have minimal impact on future water resource demands, and can be catered for without additional investment within the medium-term distribution capacity.

These developments are typically:

- A lot with an area no greater than 450 square meters (sqm) per lot with a small demand on the system.
- Unit developments, even where there are not separate titles – i.e. \$550.00 per unit.
- Apartment lots with separate titles – i.e. \$550.00 per apartment.
- 2-lot sub-divisions with each lot not exceeding 450sqm.

- The charge is for each new lot created of a sub-division (i.e. a two lot subdivision only creates one new lot).

1b) A charge of \$1,100.00 per lot per service for water and sewerage and dual pipe (total \$3,300.00 per lot) applies to urban developments which will require further investment in infrastructure to serve these developments.

These developments are typically:

- Traditional Greenfield urban developments with lot sizes between 450sqm and 1350sqm.

1c) A charge of \$2,200.00 per lot per service for water, sewerage and dual pipe (total \$6,600.00 per lot) for developments designed in such a way that properties will create demand for water resources over and above high-density developments and will require further investment in infrastructure to service these developments.

These developments are typically:

- Greenfield developments with lots sizes exceeding 1,350sqm e.g. lots with potentially large outside water-use, no recycled water and which will influence near term investment in infrastructure decisions.

Note: Where shared assets must be constructed ahead of schedule to service a new property or development, and the calculated 'bring-forward' costs are greater than standard fees outlined in the NCC framework (per lot for water, sewerage and dual pipe), the calculated charge shall apply. This effectively applies to all sub-divisions except for the small 2-lot sub-division with a small demand on the system and requires no further infrastructure to be developed.

***Further Points on the NCC framework:***

2. The reference to \$550, \$1,100 and \$2,200 are the recommended amounts for 2008/2009. It is expected that all NCC's will be increased by CPI each year.
3. The intent is for these guidelines to easily cover 95% of applications. More complex applications will require additional investigation and assessment.
4. Westernport Water would have the discretion to charge zero if it is believed that the short and long term incremental costs were negligible.
5. The schedule should not apply to developments where the application

- would result in a higher contribution than that which is allowed under the provisions of the current water legislation.
6. Proceeds from developer charges are to be offset from future revenue in a manner that does not impact on the compliance of usage tariffs within the requirements of the WIRO (i.e. not to distort usage charges such that they no longer provide appropriate incentives for sustainable water use to end customers).
  7. In the event of disputes over the categorisation of a particular development or the substantiation of particular costs where the schedule does not apply, the relevant developer can lodge a dispute with the Commission, which will make a binding decision on the matter. i.e. In all situations where brought forward costs are calculated and charged the applicant has a right to appeal to the ESC.
  8. NCC's are maximums (i.e. caps) except for a) where a minimum charge has been set, and b) where the calculated 'bring-forward' costs as per the current developer contribution guideline is greater than \$1,100 (per lot for water and sewerage), the calculated charge shall apply.
  9. Current arrangements to apply with respect to applying forecast contributions to the overall revenue requirement of Westernport Water (as an offset to capital expenditure).
  10. The Westernport Water and Water Industry proposal is dependant on new customers/developers continuing to be responsible for providing reticulated assets to be installed specifically to service their property or development. The definition of reticulated assets should continue to include the 150mm water main, dual pipe water mains and 225mm diameter sewer main (and associated infrastructure) on the basis that this criterion provides a clear process to ensure developers and water businesses know when a main of this size must be funded by the developer and not by the water business. In line with the current definition, water businesses reserve the right to treat some assets above this size as reticulation assets, in particular, when they are specifically required to service a single development. The following table

details the assumptions regarding number of lots and prices per lots developed in calculating new customer contribution revenue:

<i>Water NCC'S</i>	<i>\$ per lot</i>
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180
<i>Wastewater NCC'S</i>	
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180
<i>Recycled Water NCC'S</i>	
2 Lots	\$ 545
Standard Lot	\$ 1,090
Large Lot	\$ 2,180

### **8.9.2. Revenue From New Customer Contributions**

The number of subdivisions expected to be developed over the regulatory period has been based on historical growth and is assumed to be 330 water connections and 275 waste connections per annum.

### **8.10. Miscellaneous Charges**

Westernport Water has reviewed its schedule of miscellaneous fees and charges and proposes the following consolidated schedule. The schedule has been simplified for presentation purposes. Three new charges have been added to the schedule and these are explored in greater detail in the following sections.

It is proposed to *not* apply a prescribed price movement throughout the regulatory period to the schedule of miscellaneous fees and charges therefore only applying CPI increases on an annual basis.

The Table below details the proposed schedule of miscellaneous fees and charges for the 2008-13 Regulatory period:

<b>MISCELLANEOUS CHARGES</b>	<b>2008-09 \$1/1/07</b>	<b>Prescribed pricing Path % 2008-13</b>
<b>WATER CONNECTION FEES</b>		
Standard 20mm (Dry)	\$203.95	0
Standard 20mm (Wet)	\$257.15	0

MISCELLANEOUS CHARGES	2008-09 \$/1/07	Prescribed pricing Path % 2008-13
25mm	\$372.45	0
32mm	\$842.50	0
40mm	\$1,108.60	0
50mm*	\$1,773.80	0
80mm*	\$2,305.95	0
100mm*	\$2,971.10	0
150mm*	\$3,192.85	0
225mm*	\$5,009.70	0
*Plus cost of fittings		
<b>Disconnection/Plug Up/ Abandonment</b>		
20mm to 50mm	\$88.65	0
> 50mm	Actual Cost	0
<b>WASTEWATER CONNECTION FEES</b>		
Plan of sewer connection per A4 page	\$26.60	0
Consent to connect - standard residential	\$88.65	0
Consent to connect - residential other	\$133.00	0
Consent to connect - industrial / commercial	\$133.00	0
Consent to connect - industrial / commercial other	\$266.05	0
As Constructed Drawing per A4 page	\$26.60	0
Pan dumping (per pan)	\$53.20	0
<b>OTHER FEES</b>		
<b>Backflow Preventer</b>		
Assessment of Application (per assessment)	\$124.15	0
Annual agreement renewal fee	\$53.20	0
<b>Private Fire Service</b>		
Information fee	\$177.35	0
Annual Inspection fee	\$44.30	0
Sealing fire hose tap	\$44.30	0
Resealing fire hose tap	\$177.35	0
Per additional tap fee	\$4.40	0
<b>Testing</b>		
Water Quality	Actual cost	0
Water Meters less than 32mm	\$62.05	0
Water Meters greater than 32mm	Actual cost	0
<b>Statements</b>		
Information Statement (each) - Standard	\$39.20	0
Information Statement (each) - Priority (NEW)	\$78.40	0
Pressure Flow Statement (each) - per Test	\$134.35	0
Account and Usage History (held in excess of 3 years)	\$59.10	0
Special Meter Reading	\$ 44.75	0
Restrictor removal (each)	\$48.85	0
Galvanised iron property service pipe replacement	Actual cost	0
Build over permit (per application)	\$87.05	0
Dishonoured payment charge (per cheque)	Bank charge	0
Fees for Cutting into Sewers	Actual cost	0
<b>Developer Charges</b>		
Assessment of Application (NEW)	\$124.15	0
Works Agreement - Engineering, Administration and Supervision Fees	Actual Cost	0
Easyway payment replacement card fee	\$5.00	

## 8.11. Definition of Terms For Pricing

It is proposed to continue to apply the definitions as per the 2005-2008 Final determination Schedule 4 - Pricing Principles as they apply to the schedule of

miscellaneous fees and charges throughout the 2008-2013 regulatory period

‘Actual Cost’ means

- The cost paid by Westernport Water to a third party for a service or product, plus 10 per cent
- Plus Westernport labour at the rates set out in the Westernport Water 2007 Enterprise Agreement , as varied from time to time , plus oncosts.

‘Bank Charge’ means the charge levied on Westernport Water by a financial institution or billing agent where payment has been dishonoured.

### 8.12. New Charges

It is proposed to introduce several new charges to the schedule of miscellaneous fees and charges:

Charge	2008-09 \$1/1/07	Prescribed pricing Path 2008-13
Information Statement (each) - Priority	\$78.40	0
<b><i>Developer Charges</i></b>		
Assessment of Application	\$124.15	0
Works Agreement - Engineering, Administration and Supervision Fees	Actual Cost	0
Easyway payment replacement card fee	\$5.00	

#### ***Priority Information statement***

The new priority information statement charge is designed to cover a higher level of service delivery than the current service standard requires. A priority information statement will be available within 24 hours from receipt of application. The service standard does not apply on Fridays and public holidays, and in these cases the service standard will be the next working day. As such this attracts a premium over the standard charge of \$39.20 and will be activated at the Customers request.

#### ***Developer Charges***

##### ***Application Assessment fee***

Westernport Water has determined that there are significant overheads not

recovered in dealing with developer applications, property development agreements for prepared works in particular where developments do not proceed. It is therefore proposed that a charge be levied to assess and process an application by a developer for a subdivision. The introduction of a new charge will also facilitate the ESC reporting requirement for Westernport Water to provide details on proposed property developments.

### *Works Agreement fee*

This proposed charge is currently levied utilising Schedule 4.2 of the 2005-2008 Water Price Determination "Pricing principles where scheduled prices do not apply". The charge is to cover the situation where Westernport Water undertakes works on behalf of the developer in terms of constructing sewer and or water extensions. The charge is designed to recover the actual costs of Westernport Water plus a 10% overhead.

### *Easyway payment replacement card fee*

Westernport Water has introduced a new Easyway payment card format, replacing the previous laminated cards with plastic cards. Customers are issued with an Easyway payment card when a payment arrangement is entered into. Should the card be lost or damaged, the customer may be charged a minimal cost of \$5.00 to replace the card. The replacement fee covers the cost of duplicating the card, printing and postage costs.

## 9. NON PRESCRIBED SERVICES

### 9.1. Trade Waste

The 2005-2008 Water price determination did not include trade waste as a prescribed service primarily because Westernport Water does not have any trade waste customers as they are traditionally defined in the water industry.

Trade waste is restricted to a greasy waste service which entails the scheduling of greasy waste contractors, on behalf of the customer, to pump out grease traps at shops and restaurants. Customers are charged for the cost of the pump out plus a contract administration fee. In addition Westernport Water allows tankered domestic sewerage waste to be discharged directly into Treatment plants

Westernport Water has developed policies and practises to manage trade waste as required by the Statement of Obligations. The policies cover both major and minor (greasy waste) situations. There is no indication however that there will be any demand for the implementation of the major trade waste (> 1 ML/year) policy over the 2008 -2103 regulatory period.

#### 9.1.1. Pricing of Tankered Domestic and Greasy Waste Service

The pricing of this service is proposed to continue utilising the same approach as the previous regulatory period. The proposed prices at the commencement of the 2008 - 2013 regulatory period are as follows:

Charge (\$1/1/07)	Price 2008-09	Proposed Price Movement % Net of CPI
Tankered waste per kilolitre	\$31.60	0
Trade(Greasy) Waste Per kilolitre	\$31.60	0
Minimum Charge	\$52.70	0
Cartage fee	\$150.00 + 10%+\$10 environmental fee	0
Per Litre Charge	15c per L with min 1000L charge	0



Westernport engages a specialist licensed operator under a commercial contract for the provision of greasy waste collection services. These services are then provided to customers who have entered into formal agreements with Westernport. The actual contract cost plus the cost of administering the agreements is incorporated in the following pricing principles.

It is proposed to continue to apply the definitions as per the 2005-2008 Final determination Schedule 4 - Pricing Principles as they apply to the schedule of miscellaneous fees and charges throughout the 2008-2013 Regulatory Period

*'Actual Cost'* means

- The cost paid by Westernport Water to a third party for a service or product, plus 10 per cent
- Plus Westernport Labour at the rates set out in the Westernport Water 2007 enterprise agreement, as varied from time to time, plus oncosts.

The following table details the expenditure and revenue for trade waste included in the ESC model for the 2008-13 regulatory period:

\$m1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue	0.04	0.04	0.04	0.04	0.04
Direct costs	0.03	0.03	0.03	0.03	0.03
Admin allocation	0.003	0.003	0.003	0.003	0.003
Operating Profit/Loss	0.01	0.01	0.01	0.002	0.002

## 9.2. Recycled Water

The pricing of recycled water in the previous 2005-2008 regulatory period was developed utilising pricing principles contained in the Water Industry Regulatory Order.

In respect of the provision of bulk recycled water under contract the same approach is proposed to continue to be utilised throughout the 2008-13 regulatory period.

The 2005-2008 regulatory period encompassed the worst drought in over 100 years. As a result there has been a growing willingness for customers to recognise the commercial value and security of supply provided by recycled water. While the majority of applications involve sporting grounds or similar a number of developers have also incorporated recycled water into their infrastructure planning and marketing. The growth in customers has led to Westernport Water reviewing the reliability of its current recycled supply systems. Upgrades have been undertaken that will allow the recycled water system on Phillip Island to apply service reliability standards common to water supply systems.

It is anticipated that recycled water performance and customer service measures akin to water supply metrics (number of bursts or interruptions per 100 customers, pressure available, supply available) will be progressively developed over the 2008-13 regulatory period.

This requirement will become more relevant as new residential and commercial estates incorporate dual pipe systems. The commencement of the *Water (Resource Management) Act 2005* and the introduction of Clause 56 new residential subdivision provisions into the Victorian Planning Provision in October 2006 has enabled water Corporations to mandate recycled water (dual pipe) infrastructure. In 2007 Westernport mandated a dual pipe system for a new development in Cowes. In circumstances where the existing infrastructure is extended to new developments Westernport Water proposes to adopt the same funding principles with respect to pipe sizes for recycled water as have been established for water supply. That is, pipes less than or equal to 150 mm in diameter will be fully funded by the developer.

In the period up to 2008/2009 Westernport Water is providing a Class B recycled water product. Recognising the changing needs of its recycled customer base Westernport Water is planning to establish, over 2008/2009, the capability to

produce Class A recycled water and as such will have the capacity to provide this product to domestic residents via dual pipe infrastructure. To deliver a Class A product capital upgrades are underway in 2007 which will be supported by a comprehensive management framework based on critical control points.

In the past few years requirements placed on water corporations supplying Class A recycled water to external customers have increased. Suppliers are now required to develop a Health and Environmental Management Plan (HEMP) for all sites from which it is proposed to supply Class A recycled water.

A HEMP must incorporate a Hazard and Critical Control Point (HACCP) analysis of the treatment processes and supply infrastructure, with the onus now placed on the Corporation to demonstrate that their treatment system/s provide a minimum level of pathogen (viral and protozoa) removal. Westernport's HEMP will demonstrate how the treatment processes will be monitored to ensure that they are operating satisfactorily and include a Recycled Water Quality Management Plan (RWQMP) which has been 'signed off' by Department of Human Services (DHS). This is in addition to the EPA's requirements for an Environmental Improvement Plan (EIP) for the end use application.

Pricing for Class A recycled water provided to domestic residents will be based on pricing principles. This approach is necessary as the full extent of the testing and monitoring regime for Class A, as described above, will be clarified in conjunction with the DHS over the period to 2008/2009. As the Corporation will have a singular delivery system all recycled water customers will receive and be required to pay for Class A recycled water.

The following table details the expenditure and revenue for recycled water included in the ESC model for the 2008-13 regulatory period:

\$m1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue	0.04	0.05	0.05	0.06	0.06
Direct costs	0.103	0.110	0.115	0.124	0.182
Admin allocation	0.049	0.050	0.055	0.056	0.078
Operating Profit/Loss	(0.11)	(0.11)	(0.12)	(0.12)	(0.19)

Following table details the prices for Class B recycled water each year of the regulatory period net of CPI:

Site	Price per ML \$1/1/07
King Rd	\$250
Woolamai	\$320
Cowes	\$215

The prices are based on threshold recycled water production volumes established for each site. Variations in the volumes produced and used may lead to increases or decreases in the price per ML. This is consistent with pricing principles.

As the recycled water business is still in an embryonic stage with respect to customer acceptance and take up it is proposed to remain on full volumetric charges at this time. In the future Westernport Water will need to review this approach and determine whether to remain on full volumetric charges, apply a mixture of fixed and variable charges, introduce a “take or pay” arrangement or some combination of all of the above depending on the circumstances.

A “take or pay” arrangement is currently being included in the supply agreement for customers utilising recycled water out of the Woolamai Packaged Treatment Plant. This is reflective of the need to establish a minimum return on the operation of the Woolamai Treatment Plant.

### 9.3. Gas

Westernport Water has successfully established a pilot LPG reticulation network. Over 2.5km of pipework has been installed and commissioned in the San Remo area. The LPG network and associated gas tank site has been designed to allow

for future growth. A comprehensive suite of procedures, the 'Gas Safety Case', has been developed in support of the LPG operation. All costs associated with the investment in, operation and maintenance of this business are 'ring fenced' from the water and sewerage business.

Detailed financial models have been developed to set prices and to assess the economic viability of future expansions in a competitive market. LPG is purchased under a competitive tender arrangement. Fixed and variable tariffs are applied to residential and commercial customers under contract conditions. The variable tariffs move on a monthly basis in accordance with the Saudi prices.

Westernport Water has positioned itself to be able to reticulate LPG to the growing resort, commercial and recreational facilities being developed on the outskirts of San Remo. Further growth in this area is expected as the resorts and sporting facilities are established and other developments occur. The compact nature of the developments in this area means investment in infrastructure has been minimised.

The operating philosophy behind further expansion of the gas business is that it must provide a suitable return. Internal benchmarks have been set and will continue to be reviewed over the Water Plan period.

The following table details the expenditure and revenue for gas included in the ESC model for the 2008-13 regulatory period:

\$m1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue	0.10	0.136	0.155	0.173	0.192
Direct costs	0.096	0.129	0.132	0.146	0.150
Admin allocation	0.01	0.001	0.013	0.015	0.014
Operating Profit/Loss	(0.01)	(0.006)	0.009	0.012	0.027

#### **9.4. Farm Activities**

Westernport Water has over several years developed its primary production

enterprises. The initial driver, at the King Rd WWTP, was the need to discharge treated effluent to land as per our licence with the EPA. The discharge systems were refined with travelling irrigators and then supplemented with improved land and pasture management practises.

Several studies, most recently in May 2007, have reviewed the opportunities presented to Westernport in primary production. The challenge is to address the increasing complexity and cost of operation while undertaking Westernport’s core function of treating effluent.

The concept of using the King Rd WWTP and Cowes WWTP sites as demonstrations of viable primary production activities using recycled water is complementary to the Sustainability Principles in the Statement of Obligations as well as the requirement for conserving and recycling water.

The following table details the expenditure and revenue for primary production included in the ESC model for the 2008-13 regulatory period:

\$m1/1/07	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue	0.07	0.07	0.07	0.07	0.07
Direct costs	0.104	0.105	0.105	0.106	0.106
Admin allocation	0.01	0.01	0.11	0.11	0.11
Operating Profit/Loss	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)

A conservative forecast of revenue has been factored into the Water Plan based on current farming operations only. Westernport is determining the appropriate mix of strategies to improve the return on its primary production enterprise.

**APPENDIX 1 - COMMUNITY CONSULTATION REPORT**

**APPENDIX 2 - COMMUNITY CONSULTATION WORKSHOPS**



**WESTERNPORT WATER (DRAFT) WATER PLAN  
2008-13**

**APPENDIX 3 - NEW CUSTOMER CONTRIBUTIONS (NCC)**

**WESTERNPORT WATER (DRAFT) WATER PLAN  
2008-13**

**APPENDIX 4 - SOUTHER RURAL WATER GROUND MONITORING  
GUIDELINE**

**WESTERNPORT WATER (DRAFT) WATER PLAN  
2008-13**

**APPENDIX 5 - ASSET MANAGEMENT PLAN**

**WESTERNPORT WATER (DRAFT) WATER PLAN  
2008-13**

**APPENDIX 6 - WATER QUALITY RISK MANAGEMENT PLAN**