



**2008–2013
WATER PLAN**

Exposure Draft

August 2007

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1 EXECUTIVE SUMMARY

1.1 Introduction

Since the commencement of the two-year period of the 2006-2008 Water Plan, GWMWater's water supply capability has deteriorated appreciably, and this has impacted significantly on the programs delivered through the first regulatory period.

Perhaps more significantly it has impacted on the imperatives of the Wimmera Mallee Pipeline Project (WMPP). In recent times, the WMPP has moved beyond a water savings project and regional development initiative to becoming part of GWMWater's strategy for drought management. The construction program for the project has been accelerated to secure further parts of the region that remain at risk from water supply scarcity.

This Water Plan reflects GWMWater's best understanding of the final cost of the WMPP, as well as the cost and outcomes of other obligations as they are presently defined and understood.

The outlook for GWMWater however is extremely uncertain and as a result GWMWater has only attempted to seek price increases for the first year of the regulatory period.

1.2 Overview of Key Outcomes Over the Regulatory Period

The most significant outcome for GWMWater over the planning period will be the completion of the WMPP.

The improved water quality that will be an outcome of the WMPP will generally improve overall compliance with the Safe Drinking Water Regulations (SDWR) under the Safe Drinking Water Act 2003 (SDWA). Towns that have been identified as potentially requiring water quality upgrades will need to be assessed in accordance with the water quality outcomes of the WMPP.

WMPP aside, through the regulatory period water quality improvements will be provided in the towns of Nhill, Underbool, Lalbert, Ultima, Manangatang, Murrayville and Natimuk.

Substantial upgrades of wastewater treatment facilities are also programmed over the regulatory period. These generally have longer lead times as any investment is considered in the context of improved beneficial use of the downstream residuals from these facilities and the quality required for any such use. Improvements programmed include the Willaura winter storage and associated use of recycled water. New sewerage schemes in Lake Bolac, Great Western and Rupanyup are also proposed.

Service Standards are generally expected to improve over time. Operational performance in certain areas will be enhanced by the programmed investment in Supervisory Control and Data Acquisition (SCADA) infrastructure that will provide a greater opportunity to identify and provide more timely response issues with the system, and therefore reduce unplanned interruptions to supply.

GWMWater's GIS and asset management system will enable better identification and collection of information in relation to assets. As the knowledge of current assets improves, capital investment to renew assets will be increasingly targeted to priority areas identified on a risk management basis, ensuring efficiency in these investments.

1.3 Overview of Wimmera Mallee Pipeline

Current supply and demand figures for the WMPP are based on the security of the system for the period from 1903 to 2000, and do not take into account any future impacts relating to climate change.

The current channel supply system has an inadequate level of security of supply to meet the needs and expectations of the region. Domestic and stock supply customers experience restrictions more frequently than one year in every five. The calculated security of supply is only 78%. An unrestricted urban supply can be provided in 83% of years, as it has a higher priority than Domestic and Stock (D&S) customers in years of drought. This level of security still means that restrictions have to be applied in at least one year in every ten. In comparison, recreational lakes in the region receive no supply at all for three years in every ten.

Modeling of low flows, representative of the last ten years of drought, demonstrate that the channel supply system would be unable to sustainably supply consumptive and environmental demands without significant reconfiguration of the existing system. The WMPP provides for this reconfiguration and is the major strategic water supply augmentation for the region.

The WMPP will provide 96% security of supply for both urban and stock & domestic customers and will also provide great flexibility in meeting projected urban needs throughout much of the region. Modeling the effect of the median climate change and low flows scenario on the WMPP will need to be considered when the project is completed and in any subsequent Urban Water Supply Demand Strategy (UWSDS) reviews.

The WMPP is an investment in regional water infrastructure. The project will provide a more reliable, higher quality water supply to farms and towns across the region. Rather than many properties and towns relying on a single channel run each year to supply their needs, the system will deliver a continuous supply of water 24 hours a day, 7 days a week.

The pipeline will result in an average of 83,000 ML/a being returned to the Wimmera and Glenelg River systems and the Murray River system. This is added to the environmental entitlement of 35,000 ML/a already generated by the Northern Mallee Pipeline (NMP), giving both the Wimmera and Glenelg Rivers and the Wimmera terminal lakes close to an extra 120,000 ML/a on average. An allocation of 1,000 ML/a of water to off-stream water bodies and wetlands, which is to be supplied through the new pipeline system, recognises the value of the range of habitats in the region.

A further 20,000 ML/a will be made available for regional development. The new system will also make available up to 3,000 ML/a of water for recreational lakes in the region.

The pipeline will replace 17,500 kilometres of open earthen channels with 8,800 kilometres of pipe. The system will reticulate water to an area of 2 Million hectares, including 33 urban towns.

Water savings resulting from the completion of the WMPP will also change the operation of the 12 reservoirs that service the existing channel distribution system. While the primary purpose of the reservoirs is to ensure security of supply, it is recognised that they play a major role in the areas of tourism, the environment, recreation and flood mitigation.

1.4 Overview of Expenditure Forecasts

Capital expenditure dominates the expenditure outlook over the regulatory period with the most significant item being the WMPP.

When reviewing the 2006-2008 Water Plan on behalf of the Essential Services Commission (ESC), Sinclair Knight Merz (SKM) suggested that the unit cost rate information to support the cost estimates for the WMPP were lower than what the current market information suggested. Based on the tenders that have since been awarded, this has been confirmed and the total cost to complete the WMPP has been reassessed to reflect the current market position.

Through the Project Control Group and Project Council, a Program Review of the WMPP has been undertaken. The WMPP Program Review has identified that the revised cost to complete the project is \$688 Million. Based on the original cost of \$440 Million reflected in the Project Development Agreement (PDA), there is an estimated shortfall of \$268 Million in the funding available for the project.

Capital Expenditure other than expenditure on the WMPP is \$75.4 Million. This is a gross figure and does not adjust for any anticipated contributions from third parties for works.

Recurrent expenditure forecasts in this 2008-2013 Water Plan are premised on the achievement of an overall 1% productivity efficiency improvement over the course of the regulatory period. Expenditure on the WMPP, combined with the investment in SCADA, will substantially change the operating cost structure of GWMWater. There will however be some additional costs incurred as a consequence of service improvements in urban water and wastewater.

1.5 Overview of Revenue Requirement and Proposed Price Change

GWMWater is seeking a price increase of 17.1% nominal in the first year of the five-year regulatory period. This will allow sufficient revenue to be recovered over the five-year regulatory period based on the existing assumption of a \$440m construction cost of the WMPP, other operating and capital costs for GWMWater and any anticipated revenue shortfalls arising from the first regulatory period.

Table 1.5.1: Specific Increases for Typical Customer Groups 2008-2009

| Customer Group | 2008/09 Price Increase % Nominal |
|---------------------------------|-------------------------------------|
| Urban Water | 18.2 |
| Urban Wastewater | 14.0 |
| Rural Supply by Agreements | 81.3 |
| Rural Domestic and Stock # | |
| NMP Domestic and Stock (Pipe) | 14.5 |
| WMPP Domestic and Stock (Pipe) | 14.5 |
| WM Domestic and Stock (Channel) | 5.0 |
| Irrigation ## | 36.0 |
| Groundwater | 6.0 |
| Diversions | 6.0 |
| Bulk Water | 12.0 |

Channel supply customers to receive a lesser increase to align the price increase with the improved service of the WMPP

Irrigation tariff will continue to be a drought tariff until water supply capability is restored. Revenue shortfalls will be recovered in subsequent years of the regulatory period.

A review conducted by GWMWater has concluded that the cost to complete the WMPP will be \$688 Million. This will produce a funding gap of \$248 Million from the initial funding formula in the PDA. GWMWater is seeking to address how these costs are to be recovered taking into consideration the impact this will have on customers and options for further state and federal funding.

If at the conclusion of the consultation period no decision has been reached on how any additional costs are to be allocated GWMWater will propose a set of principles to the ESC in its final price submission on the 8 October 2007 as to the manner in which prices are to be calculated for prices beyond the first year of the regulatory period.

1.6 Overview of Proposed Tariff Structure

The 2008-2013 Water Plan is premised on a substantial change to the rural tariff structure and a continued rationalization of the urban tariff structure.

The Rural Tariff Working Group (RTWG) has been working with GWMWater to develop a new tariff structure for rural activities. The new tariff has been developed with due regard to the possibility of extending unbundling to D&S customers. If this were to eventuate customers could then trade entitlement within the WMPP, therefore allowing the market to provide an efficient framework for the use of water.

The proposed pipeline tariff provides for a three-part tariff with an inclining block. The inclining block is aimed at rationalising demand within the capacity constraints of the WMPP. The three core elements of the charge are a capacity charge, service charge and a volumetric charge.

The rationalization of the urban tariff is to further align the charges and only provide for a differentiation where a differing level of service is provided. The water tariff will continue to be influenced by the quality of the water being provided and the size of the tapping. The wastewater tariff will be common to all customers with a volumetric and servicing component for minor trade waste customers.

A significant element of the Water Plan relates to a further refinement of the industry pricing policy. The WMPP has created capacity in the low demand periods that present mutual opportunities for GWMWater and its industrial customers to achieve pricing outcomes that will sustain and enhance opportunities for regional development.

An extensive program of customer consultation has underpinned the development of these pricing policies.

1.7 Overview of Customer Consultation

GWMWater regularly interfaces with the community in many and varied ways which is critical to its continued success. In developing the Water Plan, GWMWater has consulted widely with its customers on specific issues to be covered in the Water Plan.

Key issues recognised by customers during the Water Plan process has been in the area of pricing and water availability. To engage and consult customers on the main issues, GWMWater utilised the following special interest groups:

- Pipeline Community Reference Group
- Reservoirs Review Stakeholder Working Group
- Rural Tariff Working Group
- Urban Pricing Group
- Irrigation Development Committee
- WMPP Landowner Liaison Group
- Drought Reference Committee

Further consultation on the Water Plan will follow the lodgment of the exposure draft plan with Government. During this time the Water Plan is available on the website for review and complemented with promotion through regional media releases, advertisements and stakeholder briefings. During the period between the draft and final lodgment with Government, stakeholders and customers have the opportunity to review and submit their concerns and/or comments for GWMWater's consideration.

All customers will receive an article on the Water Plan process in newsletters that will accompany all bills issued after a draft has been publicly released. Comments on the Water Plan can be provided to GWMWater by 14 September 2007.

Consultation on specific programs has been presented to individual customer groups and stakeholders.

This exposure draft provides an opportunity to consult with all customers holistically on the implications of new obligations, service standards and the expected price and tariff outcomes for the region.

2 GLOSSARY OF TERMS

| | |
|--------|---|
| ADWG | Australian Drinking Water Guidelines |
| ALCP | Asset Life Cycle Plan |
| AMP | Asset Management Plan |
| AMS | Asset Management System |
| ANCOLD | Australian National Committee on Large Dams |
| BGA | Blue Green Algae |
| BMP | Biosolids Management Plan |
| BOOT | Build, Own, Operate and Transfer |
| BE | Bulk Entitlement |
| CAG | Customer Advisory Group |
| CCTV | Closed Circuit Television |
| CCC | Customer Consultative Committee |
| CMA | Catchment Management Authority |
| CSO | Community Service Obligation |
| CTWSSP | Country Towns Water and Sewerage Scheme Program |
| D&S | Domestic and Stock |
| DHS | Department of Human Services |
| DSE | Department of Sustainability and Environment |
| DTF | Department of Treasury and Finance |
| EC | Exceptional Circumstances |
| EPA | Environment Protection Authority |
| EMP | Emergency Management Plan |
| EMS | Environmental Management System |
| ESC | Essential Services Commission |
| EWOV | Energy and Water Ombudsman of Victoria |
| GMP | Groundwater Management Plan |
| G-MW | Goulburn-Murray Water |
| GRWA | Grampians Region Water Authority |
| IMS | Integrated Management System |
| MJA | Marsden Jacob and Associates |
| NMP | Northern Mallee Pipeline |
| NTER | National Tax Equivalent Regime |
| OCC | Operational Control Centre |
| PCV | Permissible Consumptive Volumes |
| PDA | Project Delivery Agreement |
| PPG | Project Planning Group (WMPP) |
| RAB | Regulatory Asset Base |
| ROA | Return on Assets |
| ROE | Return on Equity |
| RTWG | Rural Tariff Working Group |
| RUWA | Regional Urban Water Authority |
| RWA | Rural Water Authorities |
| SAC | Service Availability Charge |
| SBA | Supply by Agreement |

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| SCADA | Supervisory Control and Data Acquisition |
| SDWA | Safe Drinking Water Act |
| SDWR | Safe Drinking Water Regulations |
| SEPP | State Environment Protection Policy |
| SFMP | Streamflow Management Plan |
| SKM | Sinclair Knight Merz |
| SMP | Salinity Management Plan |
| SOO | Statement of Obligations |
| TCV | Treasury Corporation Victoria |
| TDS | Total Dissolved Solids |
| TER | Tax Equivalent Regime |
| THM | Trihalomethane |
| TWA | Trade Waste Agreement |
| UWSDS | Urban Water Supply Demand Strategy |
| VWIA | Victorian Water Industry Association |
| WHO | World Health Organisation |
| WIA | Wimmera Irrigation Area |
| WIRO | Water Industry Regulatory Order |
| WISP | Water Infrastructure and Services Plan (Draft) |
| WWMP | Wastewater Management Plan |
| WMPP | Wimmera Mallee Pipeline Project |
| WMW | Wimmera Mallee Water |
| WQIP | Water Quality Improvement Plan |
| WSA | Water Services Agreement |
| WSPA | Water Supply Protection Area |
| WTP | Water Treatment Plant |
| WWISP | Wastewater Infrastructure and Services Plan (Draft) |
| WWTP | Wastewater Treatment Plant |

3 INTRODUCTION

Grampians Wimmera Mallee Water Authority (trading as GWMWater) is a government-owned business established on 1 July 2004 under the Water Act 1989. GWMWater was formed from an amalgamation of the former Wimmera Mallee Water Authority (WMW) and Grampians Region Water Authority (GRWA).

The amalgamation was the consequence of a policy initiative identified in the Victorian Government White Paper 'Securing Our Water Future Together – Our Water, Our Future.' The White Paper acknowledged the extent that the two organisations covered similar geographical areas and that there was common infrastructure servicing most of the customer base. The WMPP impacts on much of this infrastructure and the White Paper acknowledged the importance of having a single Authority.

From 1 July 2007 the Water Industry (Governance) Act 2006 takes effect and as a consequence of this change GWMWater will become 'Grampians Wimmera Mallee Water Corporation' and still trading as GWMWater. Under the changed legislative framework the compliance and accountability framework will be more closely aligned to the requirements of corporations law.

3.1 Mission, Vision and Business Objectives

3.1.1 Strategic Directions

GWMWater's Strategic Plan (2005-2009) outlines the vision, mission and values of GWMWater, and identifies the strategic directions and key issues for the next five years. This is supported by the Corporate Plan that is prepared in accordance with the Corporate Planning Guidelines issued by the Department of Sustainability and Environment (DSE) and reflects the priorities of the Strategic Plan and this Water Plan.

The organisation's Vision, '*Sustainable water for regional growth and vibrant communities*', provides the strategic context in which GWMWater operate.

3.1.2 The Role of the Board

The Board set and approve the broad strategy, objectives and performance targets for the business and reviews progress towards achieving its specific goals. The Board ensure risks are managed for all key business and operational areas and review internal controls to ensure they are effective and remain current.

The Board establishes the broad strategic direction for a range of activities as they relate to operational sustainability, financial performance, organisational performance, a range and quality of service, compliance and risk management.

3.1.3 Constitution

GWMWater was constituted by Ministerial Order, with effect from 1 July 2004 under Section 98 and 100 of the *Water Act 1989* (the Act). Section 124 of the Act provides

GWMWater the powers necessary or desirable to perform its functions, however, those powers can only be exercised to perform a function given to GWMWater by an Act of Parliament. From 1 July 2007 GWMWater became 'Grampians Wimmera Mallee Water Corporation', continuing to trade as GWMWater.

3.1.4 Board Membership

Directors as at August 2007 are:

| | | |
|--------------------------|--------------|------------------|
| Barry Clugston, Chairman | Kevin Shea | Chris Hewitt |
| Max Fehring | Rob McKenzie | Frank McClelland |
| Peter Vogel | Barry Hall | |

To support the effective discharge of their governance obligations, the Board has established the following Committees within the structure of the Board:

- Audit, Governance and Risk;
- Environment and Works; and
- Remuneration.

In addition to the Committees, the following consultative and/or governance forums have been established by the Board to assist them in carrying out their duties:

- Project Control Group (WMPP);
- Pipeline Community Reference Group;
- Rural Tariff Working Group; and
- Future Use of Reservoirs Group.

The term of all Board Directors terminates at the end of September 2007. As a result the delivery and implementation of the Water Plan will be handed over to a new Board.

3.1.5 Accountability Framework

The Minister for Water, Environment and Climate Change has issued a Statement of Obligations (SOO) that outlines the expectations of Government for both urban and rural activities undertaken by GWMWater (Appendix 1). The requirements of the SOO extend to managing the relationship between the Department of Human Services (DHS), Environment Protection Authority (EPA) and DSE itself as regulator of dam safety.

The SOO is the primary instrument that underpins the Minister's expectations of GWMWater. The agreement with the State and Federal Governments relating to the implementation of the WMPP is a significant obligation that has its origins in the PDA.

The Water Plan acknowledges the role of the ESC in service regulation and the comprehensive performance monitoring and reporting regime that exists for urban services and currently under development for rural services.

The underlying service levels and the performance against these proposed by GWMWater are specifically addressed in this Water Plan.

3.2 Main Business Undertakings

Urban water supply is a significant activity of GWMWater, delivering around 10,000 ML/a of water to 31,000 customers in 74 towns/localities across the service area. Most water supplied to these towns is potable water that meets the requirements of the SDWA. Water supplied to a number of the smaller towns is non-potable and a program of consultation is being undertaken within these communities to ensure that water quality issues are understood and managed appropriately.

Wastewater services are presently supplied to 24 towns/localities within the service area with new schemes commissioned in Ouyen, Minyip and Hopetoun in 2005.

Water supply for D&S customers has previously been the predominant rural activity. D&S activity currently entails bulk water delivery to around 6,800 rural customers through an annual channel-supplied dam-fill for up to 22,000 dams. GWMWater also supplies bulk water by agreement to some 83 rural customers across the region, typically for intensive agricultural activities such as poultry farms, piggeries and commercial feedlots.

3.2.1 Service Area

GWMWater serves a region with a population of approximately 72,000 and activities covering some 62,000 square kilometres, (i.e. approximately 25% of Victoria). The service area is similar in size to Tasmania and services all, or parts of thirteen municipalities.

Figure 3.2.1: GWMWater Service Area



A significant undertaking over the next regulatory period will be the construction of the WMPP. The WMPP will convert 17,500 km of open channel to 8,800 km of pipeline infrastructure. The WMPP is expected to return 83,000 ML/a of water presently lost through expansive open channel network to Government for the environment and release a further 20,000 ML/a of water for new development.

Irrigation supply to some 3,000 hectares in the Wimmera Irrigation Area (WIA) around Horsham and Murtoa has been another significant activity for the rural part of the business. Irrigation activity, however, has been severely impacted by prolonged drought since 1998 and historically low storage levels.

GWMWater owns and operates a number of headworks reservoirs and related bulk water supply assets, details of which are summarised later in the Plan.

GWMWater operates four pump stations on the Murray River at Swan Hill, Piangil, Nyah and Liparoo. These pump stations supply bulk water to urban storages and rural customers through the NMP.

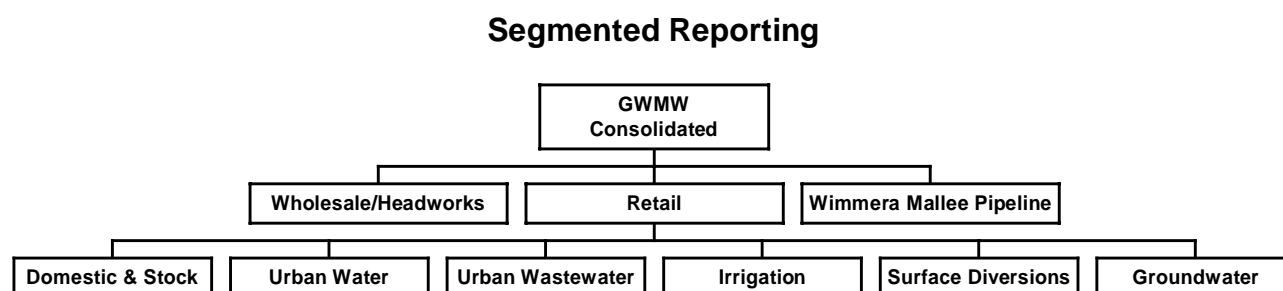
A number of groundwater bores provide water supply to thirteen towns in the south-east, south-west and west of GWMWater’s supply area.

Groundwater resource management and diversion licensing, river and catchment dam diversion licensing and support of key environmental management strategies are also functions of GWMWater.

3.2.2 Business Segments

GWMWater has a number of segments or lines of business where revenue and expenditure are recorded separately. The same levels of segmentation are also used for pricing purposes.

Figure 3.2.2: Segmented Reporting



The reporting structure effectively divides the business into two functional areas - Wholesale/Headworks and Retail/Distribution. WMPP is currently a standalone business segment that will eventually be incorporated into the other two areas.

The Wholesale/Headworks area supplies bulk water to GWMWater’s urban storages, rural and irrigation customers, two other water businesses (Coliban Water and Wannon Water) and one major bulk water Supply by Agreement (SBA) customer.

Headworks operations includes bulk water supply to a number of recreation lakes across the region, environmental releases to the Wimmera and Glenelg Rivers and compensation flows to the Glenelg River as required by the Bulk Entitlement (BE) conversion orders made on behalf of WMW and GRWA.

Within the Retail/Distribution area there are six lines of business or separate customer groups. SBA customers are incorporated within the D&S (rural) and urban water business lines while major trade waste customers are part of the urban wastewater customer base.

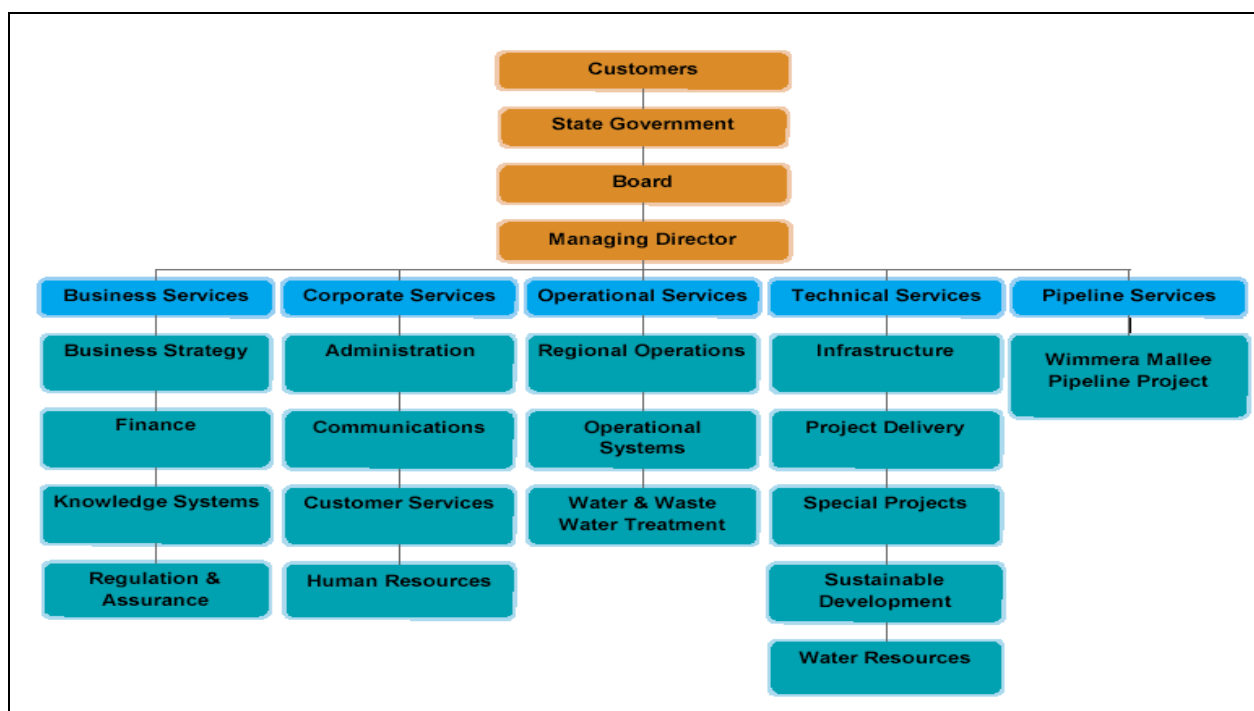
3.2.3 Service Delivery Model

GWMWater operates from headquarters in Horsham. It also maintains regional offices in Horsham, Ararat and Birchip; and has operational centres and work depots at St Arnaud, Warracknabeal, Nhill, Dimboola, Stawell, Charlton, Donald, Ouyen, Hopetoun, Sea Lake and Underbool.

3.2.4 Organisational Structure

GWMWater has been structured to provide resources to meet capital works, customer service and consultation program requirements. More recently, issues of drinking water regulations, the WMPP and the introduction of the new economic and technical regulatory environment have had a significant impact on GWMWater. Outlined below is a diagram of the organisational structure.

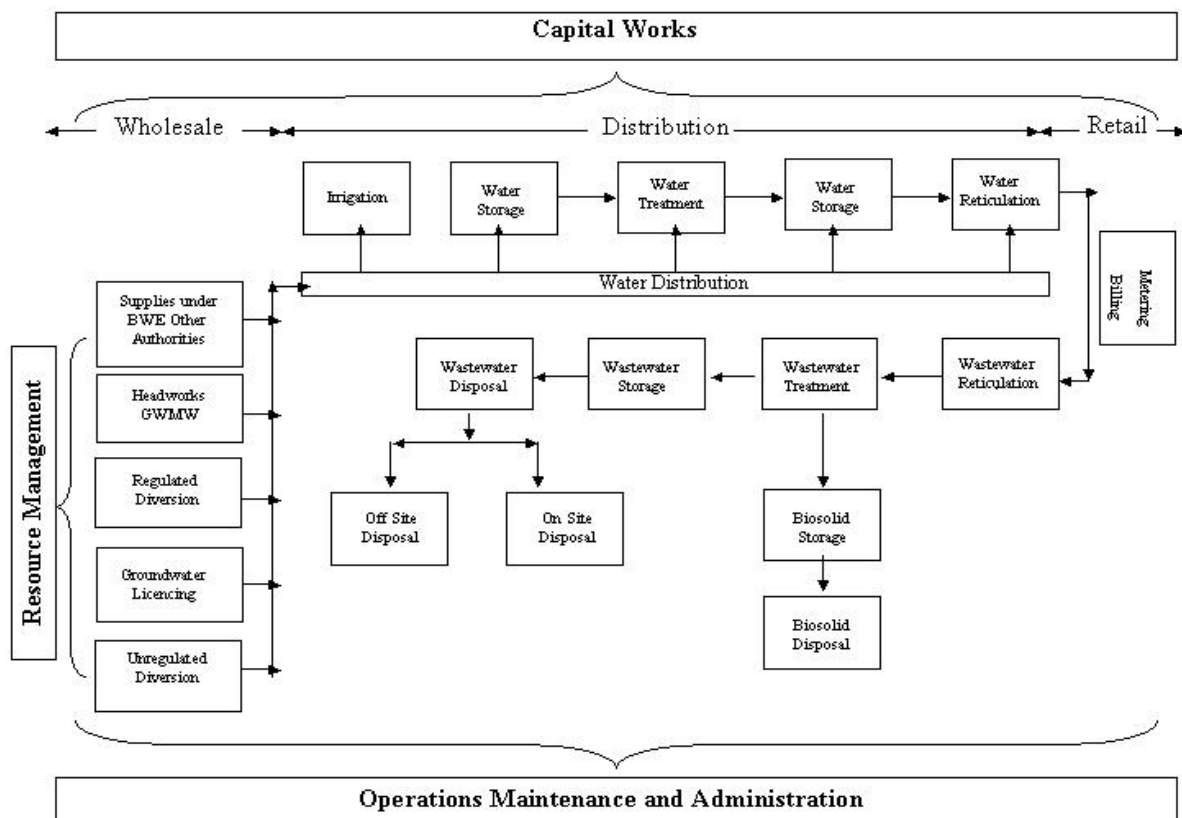
Figure 3.2.3: GWMWater Organisational Structure



3.3 Assessment Details

As a vertically integrated water corporation, GWMWater is involved in all activities associated with the provision of water and wastewater services. These services supplied by GWMWater are best summarised below:

Figure 3.3.1: Services Supply by GWMWater



Details of the rural assessments at July 2007 are as follows:

Table 3.3.2: Summary of Rural Assessments

| Service Type | Rated Customers | Rated Services | Area (Ha) | Allocation ML/a |
|---------------------|-----------------|----------------|------------------|-----------------|
| Channel | 4,831 | 10,319 | 1,700,000 | 44,500 |
| Pipeline | 1,144 | 3,009 | 820,000 | 4,920 * |
| Bore | 87 | 229 | 74,000 | 750 |
| Irrigation | 209 | 216 | 3,000 | 13,100 |
| Supply By Agreement | 82 | 83 | | 7,000 |
| Groundwater | 149 | 198 | - | 55,500 |
| Surface Water | 341 | 379 | - | 6,120 |
| TOTAL | 6,843 | 14,433 | 2,597,000 | 131,890 |

* Total capacity of current pipeline systems is 7,093 ML/a

These figures exclude non-rated services such as Division 4 D&S customers who physically cannot gain access to the water supply system.

The major groundwater supplies involve direct investment by customers in bores, pumps and other infrastructure. GWMWater's role comprises mainly resource management and licensing undertaken on behalf of the Minister.

A summary of water assessments (excluding fire services) and wastewater assessments are as follows:

Table 3.3.3: Summary of Urban Assessments

| Urban Customers | 2006/ 2007 |
|--|------------|
| Water Customers (ESC Definition) ¹ | 30,343 |
| Water Assessments (Total) ² | 31,477 |
| Wastewater Customers (ESC Definition) ¹ | 24,452 |
| Wastewater Assessments (Total) ² | 25,359 |

1. ESC Definition of 'a customer' has been applied in this month's report. ESC Definition: "Vacant land customers in growth corridor towns are not defined as customers. All customers are considered as connected to the organisations system'.

2. Assessment numbers based on total number of assessments and includes vacant land not connected.

3.4 Sources of Water

The major source of water is the extensive system of headworks in the Grampians area and is highlighted in Figure 3.4.1. Channel capacities range from 400 ML/d near the headworks to less than 2 megalitres per day for many private channels.

The Murray River supplies farms and towns in the northern area via the NMP. This system consists of 3,364 kilometres of pipeline servicing 815,000 hectares.

The Waranga Western Main Channel supplements urban and rural supplies in the east of the region and indirectly supplies the township of Quambatook via the Normanville Pipeline scheme.

Groundwater supplies irrigation and D&S customers mainly in the western part of the region. Groundwater is also used to provide a water supply to 13 towns. The Walpeup West bore area supplies a small number of customers through licensed bores in the north of the region that are part of a reticulated water delivery network.

GWMWater also manages a number of regulated and unregulated diversions for irrigation and D&S purposes from waterways in the area.

Table 3.4.1: Headworks and Catchment Overview

| Catchment Source | Catchment Area (km ²) | Mean Annual Flow (ML) | Storage name | Year commissioned | Full capacity (ML) | Full supply level (m AHD) | Description |
|--------------------------------------|-----------------------------------|-----------------------|-----------------------|-------------------|--------------------|---------------------------|--|
| Mackenzie River at Wartook Reservoir | 80 | 29,000 | Lake Wartook | 1887 | 29,300 | 441.69 | Supplies Horsham and D&S demands via the Mt Zero Channel. Also supplies water to the larger D&S system when releases are made for the purpose of maintaining a sufficient flood reserve and during drought periods. Wartook Reservoir is located in the headwaters of the Mackenzie River. |
| Mt William Creek at Lake Lonsdale | 1,026 | 52,000 | Lake Lonsdale | 1903 | 65,500 | 187.62 | Lake Lonsdale is drawn upon before water from other reservoirs because of the higher evaporation from Lonsdale. Lake Lonsdale is an on-stream reservoir on Mount William Creek. |
| Wimmera River at Glenorchy | 1,953 | 82,000 | Taylor's Lake | 1923 | 33,700 | 146.16 | Sufficient air space is maintained in Taylor's and Pine Lakes to harvest Wimmera River water when it is available. Water is diverted northwards at Glenorchy and to the south at Huddleston's Weirs and stored off-river at Taylor's and Pine Lakes. |
| | | | Pine Lake | 1923 | 62,000 | 143.89 | |
| | | | Green Lake | 1935 | 5,350 | 135.7 | Green and Dock Lakes are part of the headworks system but are used infrequently. The main reason for this is unacceptable salinity levels in Dock Lake. Green Lake has a high recreational value. |
| | | | Dock Lake | 1935 | 4,420 | 134.02 | |
| Glenelg River at Rocklands Reservoir | 1,355 | 125,000 | Rocklands Reservoir | 1953 | 348,310 | 195.47 | Rocklands and Toolondo are used to fill both Taylor's and Pine Lakes as well as supplying water demands along the way. They are also used to supply demands further north using the Rocklands Lubeck Channel. Water from Rocklands Reservoir is released in preference to releases from Toolondo Reservoir, which has lower evaporation. Toolondo is an off-river storage and, apart from a very small local catchment, can only be filled by releases from Rocklands. It is filled usually during low demand periods using the Rocklands Channel. |
| | | | Toolondo Reservoir | 1953 | 92,430 | 165.93 | |
| | | | Moora Moora Reservoir | 1933 | 6,300 | 219.95 | Moora Moora Reservoir is a small reservoir primarily used to supply the Brimpaen and Laharum areas. |
| Fyans Creek | | 35,000 | Lake Bellfield | 1966 | 78,560 | 276.5 | Bellfield is mainly used for drought reserve because of low evaporation. Bellfield is the last storage available (after Lake Lonsdale and Lake Fyans are emptied) which can supply the Main Central and Charlton Channels. Lake Bellfield is an on-stream reservoir on Fyans Creek. A small volume of water can be diverted from the upper reaches of the Wannon River (Glenelg tributary) into Lake Bellfield. |
| | | | Lake Fyans | 1916 | 18,460 | 204.3 | Lake Fyans is part of the headworks system, however its storage capacity is relatively small and its primary use is to supplement urban supplies to the townships of Stawell and Ararat. Fyans Lake is an off-stream storage supplied with water diverted from Fyans Creek. |

| Catchment Source | Catchment Area (km ²) | Mean Annual Flow (ML) | Storage name | Year commissioned | Full capacity (ML) | Full supply level (m AHD) | Description |
|---|-----------------------------------|----------------------------|------------------|-------------------|--------------------|---------------------------|--|
| Avon/Richardson River at Donald | 1,850 | 30,000 estimated | Lake Batyo Catyo | 1961 | 2,250 | 122.24 | The Richardson River's flow can be diverted to Lake Batyo-Catyo, when water is available, to reduce reliance on transfers from the Grampians storages. |
| First and Second Wannon Creeks | 23 | 7,500 | | | | | Water can be diverted from these two creeks in the upper Wannon catchment to Lake Bellfield during the winter-spring period. |
| Avoca River diversion to Waranga Western Channel | | 0 to 1,000; Average 500 | | | | | Avoca River water is diverted to Waranga Western Channel during high flow periods, then to GWMWater channel system. |
| Goulburn-Murray Water via Waranga Western Channel | | 14,000 (average) | | | | | Water supply via Waranga Western Channel is covered by the Murray-Goulburn BE Order. Yield is 2 yearly average, with 26,000 ML and 2,000 ML delivered every second year. |
| Murray River Pumping Stations | | 3,500 | | | | | Pumping Stations located at Swan Hill, Piangil and Liparoo supply rural customers in the Northern Mallee as well as the towns of Chillingollah, Chinkapook, Manangatang, Nandaly, Sea Lake, Speed, Tempy, Ultima, Underbool, Waitchie and Walpeup. Lalbert and Patchewollock are also supplied from the Preliminary stages of the WMPP). |
| Groundwater bores – Urban supplies. | | 1200 | | | | | Groundwater supplies are provided to the towns of Apsley, Cowangie, Edenhope, Goroke, Harrow, Kaniva, Kiata, Lillimur, Miram, Murrayville Nhill, Serviceton, Streatham Westmere |
| Surface and pipeline supplies – South eastern areas | | 400 | | | | | There are 3 completely independent systems that make up the East Grampians Pipeline (EGP) supply. The Elmhurst system, The Buangor System and The Willaura system, Lake Bolac, Moyston, Wickliffe and Willaura supplied via the East Grampians Pipeline (EGP). (Source is harvests from local streams and ground water) |
| Total capacity: | | | | | 746,600 | | |

Notes:

- *Bellfield, Rocklands, and Wartook, with their better evaporation and water quality characteristics, are used to hold water for drought reserve.*
- *The major part of the domestic, stock and irrigation system is supplied from the Charlton, Main Central, Rocklands, Lubeck and Taylors Lake channels and from the main channel from Pine Lake.*
- *FSL volumes shown to accord with those in BEs as operational FSL volumes.*
- *Wimmera River water can be diverted into the Main Central Channel from Glenorchy Weir or be directed to the Rocklands Lubeck Channel and to Pine and Taylors Lakes from Huddleston's Weir.*

3.5 Infrastructure Assets

The geographic distances associated with the service region, combined with the relatively low rainfall and small populations require considerable investment in infrastructure to meet GWMWater's ongoing service delivery obligations. The distribution of water and wastewater throughout the serviced area is a major exercise, with an inventory of assets required to deliver these services highlighted below.

Table 3.5.1: Infrastructure Assets 2006/2007

| ASSET GROUP | CATEGORY | QUANTITY |
|----------------------------------|--|----------|
| URBAN WATER SUPPLY SYSTEM | | |
| Water Mains | Reticulation / Trunk Mains | 1,245 km |
| Water Pump Stations | (Not including WTPs) | 94 |
| Water Treatment Plants | Dissolved Air Flootation/Flocculation # | 12 |
| | Microfiltration # | 3 |
| | Disinfection (stand alone) | 18 |
| | Strainer / Sedimentation / pH correction | 1 |
| | Desalination | 3 |
| Water Storages | Reservoirs | 117 |
| | Tanks | 34 |
| | Elevated Tanks | 37 |
| | Weirs | 4 |
| Water Bores | | 37 |
| Water Meters | | 29,790 |
| RURAL WATER SUPPLY SYSTEM | | |
| Channels | Headworks | 274 km |
| | Irrigation | 140 km |
| | Drainage | 32 km |
| | Domestic & Stock | 6,537 km |
| Pipelines | Northern Mallee Pipeline | 3364 km |
| | Rainbow West Pipeline | 63 km |
| | Headwork's | 5 km |
| Pump Stations | Domestic & Stock | 7 |
| | Drainage | 0 |
| | Northern Mallee Pipeline | 12 |
| Elevated Tanks | | 4 |
| Storages | Headworks | 12 |
| | Balancing | 2 |
| Water Bores | | 39 |
| Major Structures | | 6 |
| WASTEWATER SYSTEM | | |
| Wastewater Mains | Reticulation / Rising Mains | 635 km |
| Wastewater Plants | Trickling Filter Plants | 6 |
| | Lagoons systems | 18 |

| ASSET GROUP | CATEGORY | QUANTITY |
|---------------------|-----------------|----------|
| | Oxidation Ditch | 1 |
| Wastewater | Pump Stations | 84 |
| REUSE SYSTEM | | |
| Reuse | Mains | 34 km |
| | Tanks | 2 |

Includes plants under the control of Build, Own, Operate and Transfer (BOOT) operator

* Excludes specific assets in the channel system (bridges, regulators, syphons etc) and Desalination at Edenhope, Hopetoun and Rainbow to reduce salinity. 1 pilot plant at Nhill to evaluate the potential of improving water quality by using chemical free technology.

4 OUTCOMES OF FIRST REGULATORY PERIOD

The first regulatory period for GWMWater was truncated to two years to allow time for regulatory issues specific to the rural sector to be resolved.

The Water Industry Regulatory Order (WIRO) was adjusted to accommodate the form of regulation for rural activities in the first regulatory period (Appendix 2). This adjustment provided a framework for regulating the cost efficiency of rural activities without any specific price oversight. This meant that GWMWater effectively lodged two Water Plans in the first regulatory period.

As is the case with this current Water Plan, the WMPP dominated the planning framework for the first regulatory period. The WMPP funding model for the WMPP did not require GWMWater to expend any funds for infrastructure in the first regulatory period. Some of the benefits however were starting to be realised through avoided channel maintenance costs. To compensate for the artificially low cost structure in the first regulatory period, it was critical for GWMWater to be provided an initial Regulatory Asset Base (RAB) to sustain prices in the intervening period.

4.1 Summary of Outcomes from the 2006-2008 Price Determination

The Final Decision on the 2006-2008 GWMWater Water Plan was released by the ESC on 22 June 2006. The Final Decision generally accepted GWMWater total revenue requirements but assumed a more optimistic seasonal outlook and therefore greater levels of water supply and delivery. Overall the total revenue requirement was reduced by \$600,000 over the two-year period.

The lower revenue requirement was based on an adjustment to the operating costs and capital costs. Operating costs were adjusted to achieve greater productivity than was assumed in the GWMWater operating cost estimates. Core capital expenditure was adjusted to be more reflective of performance in delivery in previous years. In its analysis however, the ESC, on the basis of advice from SKM, considered the cost to construct the WMPP to be lower than market rates that prevailed at the time.

The specific pricing proposals for urban activities as represented in the inaugural Water Plan were generally accepted. Rural prices were adjusted down by the value of the \$600,000 revenue adjustment that was established for GWMWater.

The most significant deviation from the assumptions that underpinned the first regulatory decision relate to the supply capability. This impacted significantly on all elements of the program over the regulatory period but most particularly revenue.

4.2 Supply and Demand

The supply capability projected in the first Water Plan was adjusted by the ESC to reflect a more optimistic supply capability over the period of the first regulatory period. It subsequently transpired that the supply capability was significantly worse than the conservative supply outlook projected by GWMWater in the 2006-2008 Water Plan.

Low rainfall and associated minimum inflows into the Grampians Headworks system significantly reduced allocations from GWMWater water supply systems.

Table 4.2.1: Water Allocations and Restrictions Applied in the Wimmera-Mallee System

| Customer Group | 2003-04 Actual | 2004/05 Actual | 2005/06 Actual | 2006/07 ESC | 2006/07 Actual | 2007/08 ESC | 2007/08 Actual |
|-----------------------|-------------------|-------------------|-------------------|----------------|-------------------|----------------|-------------------|
| Winter D&S | 35% | 35% | 35% | 35% | 10% | 50% | NA |
| Summer D&S | 38% | 35% | 25% | 35% | 0% | 50% | 0% |
| Urban – General | 3-4 | 2-3 | 2-3 | 1 | 4 | 1 | 4 |
| Urban – Horsham | 3 | 3 | 3 | 1 | 4 | 1 | 4 |
| Irrigation | 0% | 2.5% | 0% | 5% | 0% | 30% | 0% |
| Irrigation Diversions | 0% | 0% | 0% | 5% | 0% | 30% | 0% |

It is anticipated that the level of water allocations and restrictions are likely to continue into 2007/08.

4.3 Revenue

As a result of the reduced water allocations and increased water restrictions, GWMWater will incur an estimated overall loss of revenue across the regulatory period of \$5.2 Million.

In accordance with the tariff principles under the rural revenue cap, GWMWater adjusted some rural tariffs to recover revenue from customers in 2007/2008. The tariffs adjusted related to SBA and minimum charge D&S customers, to skew price increases to areas that were expected to experience increases under the proposed WMPP tariffs. The proposed increases were not sufficient to meet the gap and there remains a \$1.2 Million shortfall on rural revenue. GWMWater can roll the revenue shortfall from the rural revenue cap into future regulatory periods.

The constraint of the price cap does not however provide for the recovery of urban revenue shortfalls from the first regulatory period. Based on the performance of 2006/2007 and the anticipated performance of 2007/2008, it is expected that the urban revenue shortfall will be \$4 Million.

GWMWater will be seeking to recover the full \$1.2 Million in revenue lost from the first regulatory period in this 2008-2013 Water Plan.

4.4 Operating Expenditure

The initial regulatory period operating budgets were based on water allocations and restrictions policies of previous years. As a result of the drought, consumption levels of towns reliant on the Grampians headworks system have reduced due to the escalation of water restrictions to Stage 4 from 1 October 2006. Rural D&S customers serviced by the Grampians headworks system are unlikely to receive any dam fill during the first regulatory period. These customers are entitled to receive a basic water carting service of 28,000 KL every two months to meet their domestic requirements.

As a result of this, there has been a significant shift in the composition of expenditure during this period. To a large extent, expenditure incurred on carting water to rural customers has been offset by reduced expenditure on maintaining and operating the channel system. There has also been a reduction in volumetric charges for water treated through the privately operated treatment plants due to reduced water consumption (i.e. reduced BOOT (Build, Own, Operate Transfer) toll expenditure).

Overall, expenditure during the initial period is expected to remain within the final ESC decision. Operating expenditure costs avoided during the first year, due to reduced supply, are expected to be offset by the anticipated escalation of water carting in 2007/2008 and contingency water supply arrangements for Watchem and Donald. Budgeted operating expenditure in 2007/2008 is estimated to be \$1.5 Million higher than the final decision. The following table provides a comparison of the final decision compared to forecast expenditure over the period.

Table 4.4.1: Forecast Operating Expenditure Compared to Final Decision (1/1/07\$)

| Operational Expenditure | 2006-07 (\$M) | 2007-08 (\$M) |
|--|----------------------|----------------------|
| June 2006 Final Decision Operating Expenditure | 27.078 | 26.261 |
| Forecast Operating Expenditure | 27.036 | 27.338 |
| Contingency Water Supply Expenditure (Watchem, Donald) | - | 0.412 |
| Less: Emergency Bore Works (Fully Funded) | 1.100 | - |
| Forecast Operating Expenditure | 25.936 | 27.750 |
| Variance to Decision | 1.142 | 1.489 |

The 2008-2013 Water Plan operating budgets have been developed in light of the anticipated outcome of the first regulatory period and assumptions surrounding the estimated effect of the transition from a channel, to a piped water supply system.

4.5 Delivery of Key Capital Projects

4.5.1 Wimmera Mallee Pipeline Project

The signing of the PDA in May 2006 paved the way for the mobilisation of a Project Team to deliver the WMPP. This has resulted in a short term increase in the overall staff levels for GWMWater, but was required to bring together contractors and the community to construct supply systems 1, 2, 5 and 7 within the first Water Plan period. Originally a ten-year program, the WMPP was reduced to five years as a response to the drought, with an aim to reduce completion time even further.

Supply System 2 was fast tracked in response to the drought and will provide water for the communities of Jung, Warracknabeal, Brim, Beulah, Hopetoun, Lascelles and Woomelang. Water carting points will be provided for district landowners to access stock and domestic water for farms. This will reduce the reliance on poor quality groundwater and long carting distances for as long as the drought persists.

With the assistance of the Barengi Gadjin Native Title Land Council, GWMWater and contractors have consulted on cultural heritage issues related to the planning and

construction on all stages. This includes successfully navigating through the Wimmera River corridor, which is subject to Native Title consideration. Formal agreements have been established between GWMWater and Barengi Gadjin that identify strong working relationships for the future. Construction crews now employ 15 indigenous people, providing valuable on the job training for both labouring and skilled positions.

Overall progress of the WMPP has been well received by landowners, as has the quality of rehabilitation works on individual farms.

By the end of 2007, it is expected that 46% of the water savings will have been already delivered.

4.5.2 Water Quality

The construction of the Willaura WTP was completed in 2007 and now provides high quality drinking water to the towns of Willaura and Lake Bolac.

GWMWater collaborated with the South Australian Water Corporation, United Utilities and the Australian Water Quality Centre to conduct a pilot-scale assessment of an electromagnetic field (EMF) device for scale control on desalination of brackish groundwater supply. The results of the trial showed great promise and have provided valuable data to the water industry.

The continual implementation of the water mains replacement program and development of a water quality management strategy to comply with the SDWA was complete and now being implemented.

Further water quality improvements were identified at Nhill after extensive community engagement and consultation. Providing a drinking water supply to Nhill through a new pipeline extending from Dimboola was identified as the most sustainable option and will progress in this Water Plan period.

Initial consultation relating to improved water quality was undertaken with residents and businesses in the disinfected-only towns of Beulah, Brim, Donald, Jung, Lalbert, Manangatang, Minyip, Murrayville, Nullawil, Quambatook, Rupanyup, Sea Lake, Ultima, Walpeup, Watchem, Woomelang, Natimuk and Wycheproof. The outcomes of these consultations have been considered in preparing the projects to be delivered in the 2008-2013 Water Plan period. These projects are outlined in the capital expenditure forecast section of this plan.

Blue Green Algae (BGA) outbreaks are not unexpected in the region, however the increased incidence required GWMWater to review and update its BGA response plan.

The fires in the Grampians National Park in January 2006 led to the suspension of the provision of a treated water supply to several towns for extended periods. The decision to suspend the supply of treated water was made in conjunction with DHS and communicated to the public via public broadcast. A supply of packaged water was made available to residents of Halls Gap and Pomonal. The damage bill caused by the fires was

close to \$280,000. This included the cost of packaged water, business interruption claims and numerous infrastructure replacements.

4.5.3 Wastewater

The sewerage of towns at Minyip, Ouyen and Hopetoun were essentially complete prior to the first regulatory period, with residents connected to the sewer and community consultation continuing to ensure the most viable reuse schemes are constructed and implemented for these towns.

Major upgrades to the Warracknabeal WWTP will be commenced in 2007/2008, with the remainder to be complete at the beginning of the 2008-2013 regulatory period.

Consultation with Nhill residents to improve wastewater quality at the WWTP and opportunities for improved recycled water use also occurred. Similar processes occurred at Stawell and Dimboola, with all towns currently seeking grant funding to secure viable and sustainable reclaimed water schemes.

Partial funding through the Country Towns Water and Sewerage Scheme Program (CTWSSP) allowed investigations to commence at Rupanyup, Lake Bolac and Great Western for new sewerage schemes. These have become added to the scope of the existing capital works program and the delivery of these projects are proposed in the second regulatory period.

Other significant wastewater projects delivered in the first regulatory period include the:

- Expansion and lining of the winter storages at the Halls Gap WWTP;
- Stawell sewer pump station and rising main upgrade;
- Provision of recycled water to Northern Melbourne Institute of TAFE (College of Wine) in Ararat; and
- A new offsite irrigation system at St. Arnaud and associated works on a private landowners property.

4.5.4 Groundwater/Surface/Irrigation Management

Metering obligations for all groundwater diversions were complete.

Groundwater diversions management continues through the implementation of management plans for defined Water Supply Protection Areas (WSPA).

The impact of drought and lack of readily available surface water resources has led to a substantial increase in demand for licence applications for D&S and groundwater bores and led to the re-activation of the Governments Emergency Water Supply program.

GWMWater has been responsible for coordination of approximately \$1.5 Million of Government funds used to re-establish existing drought bores and establish new bores across the region. GWMWater has also conducted significant groundwater investigations to develop drought contingency plans for supply to towns across the region. Bores that

have been proven to yield sufficient quantities of water with acceptable water quality have been developed and transferred to the relevant municipality.

The GWMWater Wimmera Irrigation Area (WIA) was also under review to determine how it might best operate in the future. The driver of this review has been the series of drought years, which has effectively left them with nil allocation. As a result of an extensive consultative process, it was considered that significant change is required to the irrigation area to enhance its viability. A key component of these changes will be the establishment of an efficient water market, where irrigation entitlements will be able to be traded into and outside of the WIA.

A formal water exchange is in the planning phase that will begin at the start of the 2008-2013 Water Plan period to stimulate trade and assist customers wishing to sell their entitlements to obtain a fair value for their entitlements.

During the secondary regulatory period, considerable reconfiguring of the irrigation area will be required to ensure that irrigation is both cost efficient and water efficient.

4.5.5 Recreational Lakes and Reservoirs

Approximately 3,000ML of the water allocated from savings that is to be generated from the WMPP have been allocated for general community benefit amongst 11 recreational lakes.

GWMWater supported strong community views for the cost of this water to be shared across the region. This commitment has been reflected in the initial charge of \$40 ML proposed in the 2005-2008 Water Plan, with an annual revenue target for recreation water of \$40,000 for the 2008-2013 Water Plan.

The future operation and management arrangements of the region's bulk water supply reservoirs following completion of the WMPP will also undergo extensive public review. The major focus is on the 12 major bulk water supply reservoirs that support the existing water supply system.

The purpose of the review has been to optimise the use of the headworks reservoirs to meet consumptive and environmental demands while recognising the recreational and tourism benefits that the reservoirs provide to the community. The operating scenarios developed will be subject to an extensive community consultation program that will both inform and assist GWMWater in arriving at a final decision.

4.6 Actual Capital Expenditure Associated with the Delivery of Outcomes

Capital expenditure forecast included in the 2006-2008 Water Plan was \$27.29 Million for the two years (2006/2007 and 2007/2008). The current assessment of actual and proposed capital expenditures for 2006/2007 and 2007/2008 forecast is \$26.58 Million. Year-on-year analysis shows an under delivery in 2006/2007 with over-delivery in 2007/2008.

The primary reasons for the under delivery in 2006/2007 results from GWMWater allocating resources to, what were considered higher priority tasks, primarily:

- Drought mitigation measures;
- Focus on assisting with the start-up of the WMPP; and
- Development of the water infrastructure, wastewater infrastructure service plans and the four Asset Life Cycle Plans (ALCPs).

Of the total 2006/2008 Water Plan capital expenditure, projects to the value of \$20.5 Million are budgeted to be worked on by the conclusion of 2007/2008 with a total spend of \$16.9 Million.

GWMWater's capital expenditure spend will be close to 2006-2008 Water Plan expenditure forecasts with some differences in the outcomes compared to those forecast in the 2006-2008 Water Plan. These differences are summarised below and detailed in more detail in Appendix 3.

Table 4.6.1: Summary of Expenditure Forecast v's Expected Delivery

| Capital Expenditure Forecast v's Delivery of 2006-2008 Water Plan | Difference (\$'000) |
|---|----------------------------|
| Expenditure deferred to the 2008 Water Plan period. | (2,319) |
| Increased expenditure resulting from projects being delivered at a cost different from that forecast in Water Plan 2005. | 4,141 |
| Increased expenditure resulting from additional compliance work | 4,304 |
| Reduction in expenditures resulting from deferral of projects based upon risk assessed priorities | (6,483) |
| Reduction in expenditures from other minor projects | (350) |
| Overall difference between 2005 Water Plan capital expenditure forecasts and planned expenditures to 30 June 2008 (excluding contributions). | (707) |

4.7 Service Standards

As part of the Water Plan for the first regulatory period, GWMWater committed to meet both approved targets for a core set of service standards related to urban services and the service attributes agreed with Customer Consultative Committees (CCC). This section outlines GWMWater's progress on the delivery of these outcomes.

4.7.1 Urban Water Standards

The basis of urban water supply has been confirmed through the development of the Urban Customer Charter. The basic standards for supply and the procedures employed in

the management of customers have been agreed and customers pay for water on the basis of the level of service provided. Unless agreed otherwise, all customers will receive the same standards of service delivery. This service is only differentiated by the size of the tapping provided at the customer service point.

Provided below is an account of GWMWater’s performance against the service standards and targets set out in the first regulatory period.

Table 4.7.1: Water Supply Service Standards

| Service Standards | 2005/06 target | 2005/06 actual | 2006-07 target | 2006/07 actual | |
|---|---------------------------|---------------------------|---------------------------|---------------------------|------|
| Water | | | | | |
| Unplanned water supply interruptions (per 100km) | 90 | 103 | 90.0 | 58.4 | |
| Avg. time to attend bursts and leaks – priority 1 (mins) | - | 54 | 30.0 | 26.3 | |
| Avg. time to attend bursts and leaks – priority 2 (mins) | - | 196 | 60.0 | 30.4 | |
| Avg. time to attend bursts and leaks – priority 3 (mins) | - | 221 | 60.0 | 42.1 | |
| Unplanned water supply interrupts restored within 5 hrs (%) | 95 | 98 | 98 | 99.3 | |
| Planned water supply interruptions restored within 5 hrs (5) | 95 | 87.5 | 95.0 | 88.4 | |
| Avg. unplanned customer minutes off water supply (mins) | 20 | 29 | 20.0 | 18.8 | |
| Avg. planned customer minutes off water supply (mins) | 10 | 16 | 12.0 | 27.2 | |
| Avg. frequency of unplanned water supply interruptions (no.) | - | 0.04 | 0.2 | 0.2 | |
| Avg. frequency of planned water supply interruptions (no.) | - | 0.004 | 0.05 | 0.12 | |
| Avg. duration of unplanned water supply interruptions (mins) | 100.0 | 93 | 100.0 | 78.9 | |
| Avg. duration of planned water supply interruptions (mins) | 240.0 | 133 | 240.0 | 219.0 | |
| Customers experiencing 5 unplanned water supply interruptions in the year (no.) | - | 0.0 | 0.0 | 0.0 | |
| Unaccounted for water (%) | 14.0 | 34.2 | 14.0 | 9.7 | |
| Minimum Flow Rates | | | | | |
| | 20mm | 25mm | 32mm | 40mm | 50mm |
| Flow rate (litres per minute) | 10 | 25 | 40 | 60 | 100 |

The targets set for the first regulatory period were based on available data at the time. The quality of the historical information to support the proposed targets was underdeveloped and subsequent performance monitoring has found that in many cases, actual performance differed markedly from that indicated by the targets, particularly in 2005-2006. This lack of adequate data has meant that several of the service standards were set at unrealistic levels and consequently were not able to be met. Significant improvements were made in 2006-2007.

To address the remaining concerns, GWMWater is implementing a significant program to improve the accuracy and reliability of data collected. Continual improvement and a more accurate account of the service levels provided to customers in the next regulatory period will allow GWMWater to track and measure performance more accurately and reliably.

Historically low pressure at the customer's service point has been GWMWater's most challenging service standard. Substantial investment has now been made to improve pressure in many of the towns.

4.7.2 Urban Wastewater Standards

A standard wastewater service is available to all 'declared properties' and a common fixed service charge applied to all wastewater services.

GWMWater responsibility for the service commences at the sewer stack with anything beyond this the responsibility of the customer. There are isolated instances where customers are permitted to pump wastewater into the sewerage system, generally where they are not directly serviced by a reticulated gravity network. For the purpose of system operation these customers are deemed to be receiving the same service as traditional gravity systems. Agreed wastewater service standards and performance are outlined below.

Table 4.7.2: Agreed wastewater service standards and performance

| Sewerage | 2005/06 target | 2005/06 actual | 2006-07 target | 2006/07 actual |
|---|---------------------------|---------------------------|---------------------------|---------------------------|
| Sewerage blockages (per 100km) | 36 | 40.9 | 36.0 | 40.3 |
| Avg. time to attend sewer spills and blockages (mins) | 30 | 31.8 | 30.0 | 26.2 |
| Avg. time to rectify a sewer blockage (mins) | 180 | 219.3 | 180.0 | 134.4 |
| Spills contained within 5 hours (%) (Priority 1) | 97.0 | 100.0 | 97.0 | 100 |
| Spills contained within 5 hours (%) (Priority 2) | 97.0 | 98.9 | 97.0 | 100 |
| Customers receiving 3 sewer blockages in the year (no.) | 0.0 | NA | 0.0 | 0.0 |

NA Not available

Wastewater service standards set for the first regulatory period suffered from similar problems as noted above for water service standards, viz poor quality of historical information. As with the water service standards, GWMWater has implemented a continual improvement program to improve its monitoring and performance in this area. The outcomes of this improvement program are already being reflected in independent audits of annual performance data. The audits recognised that the accuracy and reliability of data in the first regulatory period has significantly improved. Based upon this, the targets set for the second regulatory period will better reflect the level of service.

The majority of the water industry reported sewer blockages between 20 and 40 per 100 km in 2005/2006. Whilst at the higher end of industry average, GWMWater is developing its Asset Management System (AMS) to address these high numbers and has been a priority during the first regulatory period. Other results were comparative with industry average.

4.7.3 Customer Service Standards

Table 4.7.3: Customer Service Standards

| Customer Service | 2005/06 target | 2005/06 actual | 2006-07 target | 2006/07 actual |
|--|-------------------|-------------------|-------------------|-------------------|
| Complaints to EWOV (per 1000 customers) | 0.90 | 1.49 | 0.90 | 1.6 |
| Telephone calls answered within 30 seconds (%) | 80 | 82.3 | 80 | 83.1 |

GWMWater had undergone a process of unbundling tariffs and as a result the higher number of Energy and Water Ombudsman of Victoria (EWOV) complaints resulted from complaints regarding fees and charges, billing and service charges. Due also to the unprecedented dry conditions and economic hardship experienced by some customers, EWOV complaints continued into the 2006/2007 financial year. It is anticipated that these will reduce in the future as conditions improve and consultation on tariffs continue through to the next Water Plan.

4.7.4 Rural Water Standards

No rural water standards were reported in the first regulatory period. ESC rural performance reporting will be required for the first time from July 2007 onwards and will complement proposed National Water Commission expectations.

4.8 Changes in Legislative Obligations

There were a number of significant changes to the regulatory framework that impacted on the delivery of the first Water Plan. These new obligations impacted on the deliverability of the program and costs beyond that anticipated when the first Water Plan and prices were determined. These are summarised as follows.

- Introduction of legally enforceable drinking water quality standards through the *Safe Drinking Water Regulations 2005 (SDWR)*;
- Nomination of towns under the CTWSSP;
- Revision to the Statement of Obligations;
- The introduction of fluoride to the Horsham township water supply;
- Introduction of new obligations on the under the *Water (Governance) Act 2006*; and
- Critical Infrastructure Protection (CIP).

4.8.1 Safe Drinking Water Regulations 2005

The SDWR came into effect on 15 July 2005. The regulations establish standards for specified elements in drinking water. The most significant impact for GWMWater was the requirement to improve water quality to a number of towns such as Nhill and Natimuk. Through undertakings with DHS, water supply upgrade investigations and works will also occur at Lalbert, Ultima and Manangatang.

4.8.2 Country Towns Water Supply and Sewerage Scheme Program

With support from government GWMWater will implement priority water supply and sewerage projects as determined by the Minister for Water, Environment and Climate Change under the CTWSSP.

GWMWater has three sewerage schemes at Great Western, Lake Bolac and Rupanyup, each having approximately 136, 167 and 257 customer connections, which are planned under the CTWSSP on the assumption of full cost recovery from the beneficiaries of the scheme.

4.8.3 Fluoride Treatment for Horsham

DHS mandated the introduction of fluoride at Horsham. In September 2005 GWMWater received a direction from DHS, under Section 5(1) of the Health (Fluoridation) Act 1973, to supply fluoridated water to Horsham. Consequently, GWMWater is bound by the Health Act to supply fluoridated water in 2006. The project, which was completed in December 2006, was fully funded by DHS under the government initiative to improve health in regional Victoria. The cost of the entire project \$530,000, with project management resources provided by GWMWater staff.

4.8.4 New Obligations on the Board

The *Water (Governance) Act 2006* requires a number of changes to the governance regime for GWMWater, the main change being that the Chief Executive Officer becomes and Managing Director, thus having rights and responsibilities equivalent to other Directors of the Board. The other significant change was the conversion of GWMWater from an Authority to a Statutory Corporation. This will impose higher and more rigorous standards on the business and the Board, as well as compelling GWMWater to adopt a wider duty to have regard to sustainable management principles in carrying out its functions.

A revision to the SOO also expanded existing obligations to reflect broader changes in Government policy and focus the future management of the water industry in a more sustainable and viable manner.

It is estimated that these new obligations will not impose significant costs on GWMWater during the second regulatory period. These will however have an implication on the wider suite of obligations that determine the costs of the corporation during the second price period.

5 REGULATORY AND GOVERNMENT OBLIGATIONS

GWMWater is expected to comply with all legislative obligations, with some of these key obligations outlined in Appendix 4. Those expectations of GWMWater beyond legislative requirements are largely represented in the SOO and the responsibility or DSE. DSE is also responsible for oversight of Dam Safety requirements and the broader governance arrangements of GWMWater.

DHS and EPA are responsible for technical regulation of GWMWater and represented in the SOO. DHS is responsible for regulating water quality and EPA are responsible for regulating environmental performance.

In addition to the role of the ESC in independent pricing and monitoring performance, EWOV provide an advocacy service for customers.

5.1 Statement of Obligations

5.1.1 Preparation and Delivery of the Water Plan

“GWMWater must develop a Water Plan that complies with the requirements of this Statement for the purpose of enabling the Commission to make a decision with respect to Prices for Prescribed Services in respect of the Regulatory Period. GWMWater must deliver the Water Plan to the Commission by 8 October 2007.”

This is GWMWater’s second Water Plan and has been prepared in accordance with the expectations of GWMWater as outlined in the SOO and the Regulatory Framework established by the ESC.

The regulatory cost of preparing the Water Plan and associated regulatory licence fees has been significant. Preparation commenced in the later part of 2006, with a number of staff and Board being regularly involved in the drafting and consultation of the document.

5.1.2 Procedural Requirement

“In developing the Water Plan the Authority must undertake effective consultation”.

Extensive consultation with stakeholders and customers has been undertaken in the development of the Water Plan and has been outlined in Section 5.1.4.

5.1.3 Board Performance

“GWMWater must annually review and report to the Minister on the performance of the Board of the Authority.”

GWMWater is committed to good corporate governance with formal performance monitoring and assessment of each member an integral part of this governance framework. This is addressed by a combination of ‘in house’ and external review processes.

The assessment framework is consistent with the model established by the DSEs, 'Governance Guidelines for DSE Portfolio Statutory Authority Board Members - An Introduction to Governance and Government Stakeholders'.

5.1.4 Customer and Community Engagement

"The Authority must develop and implement open and transparent processes to engage its customers and the community in its planning processes to ensure among other matters, that the services it provides reflect the needs and expectations of customers."

GWMWater interfaces with the community in many and varied ways which is critical to its continued success. Whether it is as a supplier, employer, constructor or the facilitator of the provision of recreational water, GWMWater will continue to pursue the goal of delivering the highest practicable and efficient level of service to the community. In achieving this, GWMWater has instigated a range of different community interfaces to facilitate community engagement.

Consistent with the broader policy commitment of government to community consultation GWMWater communicates with its customers is through its extensive Customer Advisory Group (CAG) structure. Accompanying this, GWMWater also has a substantial suite of other customer consultative processes to ensure that the community is adequately informed and consulted in decision-making processes affecting the region.

Many of the processes highlighted below have used to consult with customers during the development of the 2008-2013 Water Plan.

Customer Consultative Committees

GWMWater has 10 different active CCCs, including three D&S consultative committees, three urban consultative committees and irrigators and diverters' consultative committee. Approximately 150 representatives meet three to four times a year to discuss and make recommendations about their particular service or activity to the Board. At least annually, a combined meeting is held to discuss broader issues that impact on all customers and make suggestions to the Board on their deliberations. A presentation of the Water Plan will be a key agenda item for the annual CCC meeting to be held July 2007.

Customer Reference Groups (CRG)

GWMWater relies heavily on customer input through the CRGs on specific local issues. Groups currently established represent Urban, Domestic & Stock, Irrigation, Diversion and Groundwater customers. Issues such as water quality, wastewater re-use, sewerage schemes, implementation of restricted water releases and development of pipeline options have all been investigated and evaluated by the CRGs.

The CRGs have been an effective mechanism to obtaining community input to local issues relating to water and or wastewater supply and these will be continued.

Key issues recognised by customers has been in the area of pricing and water availability. Specific issues faced by the region have resulted in the development of a number of special customer groups formed to tackle these important issues. These groups and their functions are highlighted below.

Pipeline Community Reference Group

The WMPP CRG was formed to represent community views and expectations regarding the project and the provision and quality of new services. The group meets regularly and monitors project development and implementation and make recommendations to the Board of GWMWater under the governance arrangements for the WMPP.

Reservoirs Review Stakeholder Working Group

The implementation of the WMPP will lead to a significant change to the future operation of the GWMWater reservoirs.

While significant savings in cost and water could be achieved by running reservoirs at lower levels or decommissioning some dams, social benefits such as recreation, flood mitigation and regional economic benefits from tourism need to be considered when deciding future operating arrangements.

The purpose of the Reservoirs Review is to identify the most advantageous operating arrangements for all of the headworks reservoirs and related assets following completion of the WMPP.

Rural Tariff Working Group

The RTWG was formed in order to consider and implement the observations and recommendations from a pricing review conducted by Marsden Jacobs and Associates (MJA) in August 2005 in relation to rural pricing and tariff design.

One of the biggest challenges for the RTWG has been to consider tariffs in the context of the design of the WMPP. Through the consultative processes of the RTWG, a three-part tariff was developed with this charge representing an Access (Capacity) Fee, Service (Meter / Tapping Fee) and a Volumetric Fee.

Urban Pricing Group

This Group support GWMWater in deliberations regarding urban prices. This group have met on a numerous occasions and support the current policy position of GWMWater to monitor progress on the implementation of the tariff rebalancing as it applies to urban customers. The Group also meet to discuss policy implications and positions held by the ESC in relation to urban tariffs and charges.

Irrigation Development Committee

This Committee was formed to provide advice in relation to the WIA and assist in the development of information to communicate to all relevant customers and stakeholders.

WMPP Landowner Liaison Group

WMPP Landowner Working Groups are special purpose working groups established to monitor landowner impacts and issues during the construction phase of the project. Their role is to advise on effectiveness of the landowner consultation process and represent community views and issues regarding the construction phase of the WMPP.

Drought Reference Committee

The Drought Reference Committee was established to review on a regular basis the status of all water resource systems across the region, make recommendations and ensure all relevant customer groups are appropriately represented and effectively consulted with.

The Committee comprises representatives from the rural and urban customer committees, DSE, the Victorian Farmers Federation (VFF) and the Wimmera and Glenelg-Hopkins Catchment Management Authorities.

In relation to the provision of rural water services, the Authority must establish and support the operation of customer committees, having regard to any principles endorsed by the Minister for that purpose.

GWMWater works within the framework of the 'Statement of Best Practice for the Operation of Rural Customer Service Committees'.

The role of customers in guiding the Board on key water supply issues has been valuable and these Committees have been pivotal to implementing many of the water supply efficiency initiatives that have been introduced.

The convergence of the water supply systems as a consequence of piping the water delivery system combined with the interdependence of the rural and urban communities of the region is giving rise to a review of the structure of these committees. This review is aimed at achieving appropriate representation is formed on our customer committees to ensure that GWMWater appropriately addresses the needs of all customers whether they be urban or rural.

"The Authority Must:

- a) Make available to the public, information about the water supply, sewerage and recycled water services it provides; and*
- b) Make available on request, information about the efficient and responsible use of water in respect of rural water systems; and*
- c) Make available to the public, information about water conservation and the efficient and responsible use of water in respect of urban water systems; and*
- d) Make available on request to schools in its area, educational materials about*

- i. *The efficient and responsible use of water in respect of rural systems; and*
- ii. *Water Conservation and the efficient and responsible use of water*

At no charge or, for educational material that involves a significant cost to the Authority, in respect of urban water systems, at a charge that covers the fair and reasonable costs of making the materials available."

GWMWater also provides substantial input to the regions educational institutions as well as providing educational material to the broader community. In addition to the direct input to schools other community consultation activities that GWMWater engage and educate its customers include:

- Customer Surveys;
- Customer Awareness programs;
- Field Day and Local Show Exhibits;
- Customer Newsletters;
- Website;
- National Water Week; and
- Educational Visits.

5.1.5 Managing Risks

"GWMWater must develop and implement plans, systems and processes, having regard to the Australian/New Zealand Standard AS/NZS 4360 - Risk Management to ensure that risks to the Authority's assets or services are identified, assessed, prioritised and managed."

GWMWater's risk management system forms part of the governance framework and also incorporates elements of compliance and assurance.

The process provides a robust framework for managing risks based on the Risk Management Standard AS/NZS 4360.

The risk process is outlined in great detail in the 2007 Risk Management Plan and is updated annually. The plan provides a consistent and best practice foundation on which to identify, assess, measure, manage and report risks. The aim is to generate a list of sources of risks and events that might have an impact on the achievement of each of GWMWater's objectives.

Risk management is shared across the organisation to assist in the identification and management of risks within each service group.

Risks are regularly reported to Board and the Audit Governance and Risk Committee. This risk management process assists the prioritisation of capital and operating expenditure over this proposed water plan period.

The WMPP is a response to the most significant risk that GWMWater faces with secure water supply for the region. Conversely, the dominance of the WMPP introduces many other risks that need to be actively managed by GWMWater in this Water Plan period.

Risk management will continue across the business, with greater focus placed on the integration of risk management practices in strategic planning and capital expenditure delivery.

5.1.6 Responding to Incidents and Emergencies

“GWMWater must include in any plan, system or process to manage its risks, measures to deal with emergencies and incidents, including measures to deal with:

- (a) the disruption of services; and*
- (b) incidents resulting in waste discharges to the environment; and*
- (c) a dam failure; and*
- (d) potential security risks, including but not limited to terrorist attacks.”*

Water supply and wastewater management is an essential service and, as a result, plans need to be in place to ensure the continuity of service in the event of unforeseen events.

GWMWater has an existing Emergency Management Plan (EMP) and reviews it regularly.

The EMP has been refined with experience gained and covers a wide range of operating risks. The EMP has been integrated with GWMWater’s Environmental Management System (EMS), Integrated Management System (IMS) and the procedures associated with managing emergency events at GWMWater’s major dams. The EMP was tested during the January 2006 bushfires as they swept through a large part of the Grampians National Park.

Further detailed assessment and review of the EMP occurred in November 2006, with two mock exercises testing the adequacy of a major dams safety incident and an organisation wide crisis exercise. The exercise, run by an independent crisis company ‘Jim Truscott and Associates’, reported in their close out; *‘The Victorian Government should have complete confidence in the ability of GWMWater to control and recover from major emergencies and crisis situations. Indeed GWMWater have set a benchmark for excellence’.*

Incident and emergency response requirements of the SOO were deemed compliant in an independent audit conducted as a requirement of ESC annual performance audit data in September 2006.

GWMWater has developed a robust framework for business continuity from an IT management perspective. The Knowledge Strategy, amongst other activities is aimed at providing a secure IT environment and maintaining reliability and integrity to existing systems and data. A series of projects are programmed throughout the regulatory period to improve and maintain IT systems so that information and related services are secure and provide high levels of integrity, control and reliability.

5.1.7 Managing Assets

“The Authority must develop and implement plans, systems and processes to manage its assets in ways which:

- (a) allow the Authority to supply its services sustainably; and*

- (b) *maintain the levels and standards of service;*
 - (i) *specified by the Commission in a Code issued under section 4F of the Water Industry Act; or*
 - (ii) *included in a Water Plan approved by the Commission; and*
- (d) *minimise the overall whole of life costs of assets; and*
- (e) *minimise detrimental social, economic or environmental effects of managing its assets."*

GWMWater has an Asset Management Plan (AMP) that facilitates a robust and efficient planning process. Asset systems and processes provide a basis for all future decisions and investments in asset management.

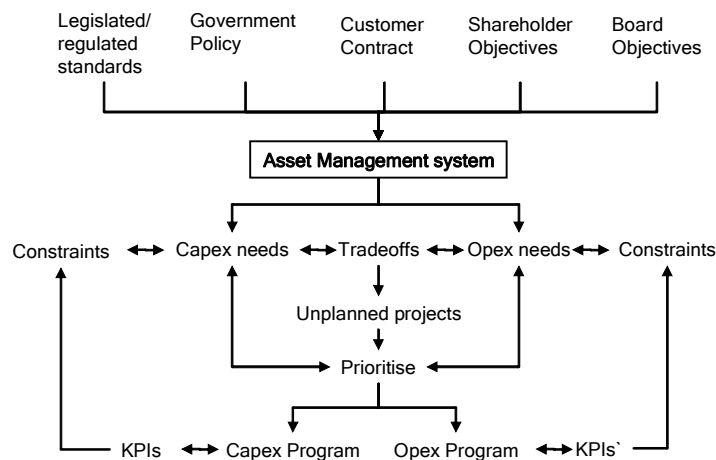
Asset Lifecycle Plans (ALCP), prepared in conjunction with an independent consultant using robust and proven methodologies, form an integral component of the asset management framework at GWMWater. ALCPs have been developed for water network assets, water and wastewater treatment plants and sewer reticulation assets. Similar plans have been developed in-house for tanks, bores and meters to identify renewals profiles for each of these asset categories.

A range of additional operational information including Closed Circuit Television (CCTV) inspection for sewer pipes, and information on specific plants and assets, augmented the ALCPs outcomes and formed the basis of appropriate capital expenditure forecasts for this Water Plan.

The development of the draft Water Infrastructure Service Plan (WISP) and the draft Wastewater Infrastructure Service Plan (WWISP) also complement the AMP, to form solid strategic documents for the management of assets at GWMWater.

The WISP and WWISP assess the current status and operational processes of GWMWater's infrastructure in each of its supply towns. In the case of the WISP the infrastructure reviewed includes town storages, WTPs, water pump stations and town reticulation. The WWISP reviews WWTPs, pump stations and reticulation. Both adopt a risk management approach to assessing future needs to ensure assets perform at a level to service standards are met. The asset investment needs identified in the plans reflect government policy, community needs as reflected in GWMWater's consultation processes and, in the case of water, the unconfirmed water quality improvements expected from the WMPP.

Figure 5.1.6: Framework used for developing capital and operating expenditure forecasts



The key challenges for asset management include the implementation of an Operational Control Centre (OCC) This will provide a hub for operational management of the GWMWater system and provide a central focus for asset performance data gathering. Asset performance data gathering will be enhanced through the ongoing rollout of SCADA systems and the implementation of a works/maintenance management system for planning, collecting and recording asset performance data.

The initiatives required to improve GWMWater’s asset management practices have been identified in the GWMWater Asset Management Improvement Plan (AMIP).

The implications of these plans on the capital expenditure forecasts are further discussed in Section 7.

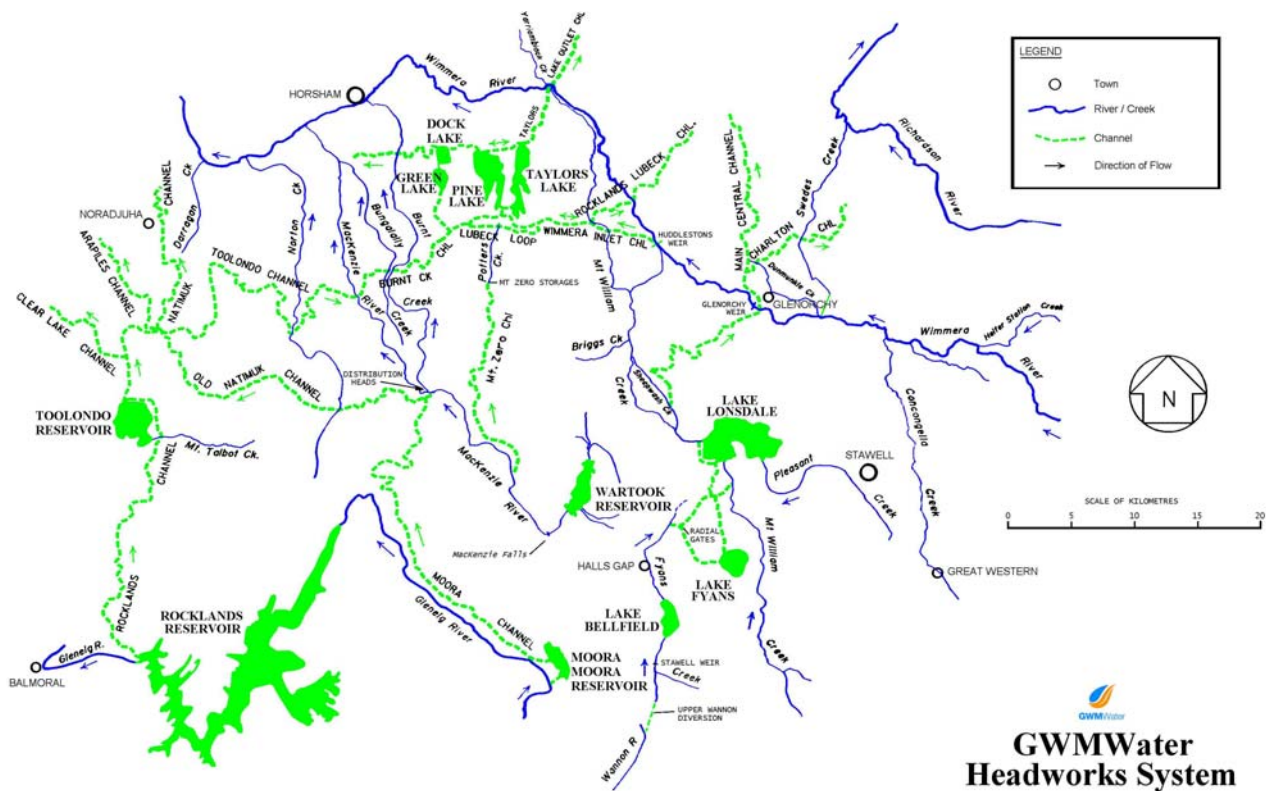
5.1.8 Dam Safety

“The Authority must develop and implement processes to identify, assess, manage, prioritise improvements to, and periodically review the safety of, dams operated by the Authority.”

GWMWater is responsible for the safe operation of 140 urban reservoirs, 12 headworks storages and some 74 wastewater earthen storages. 53 dams have been formally assessed and assigned appropriate hazard ratings. These are summarised as follows:

- 11 significant hazard dams;
- 13 high hazard dams;
- 24 low hazard dams; and
- 5 very low hazard dams.

Figure 5.1.7: GWMWater Headworks System



GWMWater has a process that monitors and manages the safety of its larger dams in accordance with the Australian National Committee on Large Dams (ANCOLD) guidelines. Reviews are regularly scheduled on a priority basis and reported to DSE.

In line with the assessment priorities, safety reviews have been completed for Taylors Lake and Rocklands Reservoirs and are being finalised for Pine, Fyans and Lonsdale. Once these are complete, safety reviews will have been undertaken for all high hazard headworks storages.

Reviews are also scheduled during the next regulatory period for Batyo Catyo, Dock, Green, Moora Moora and Toolondo. Based on initial desktop assessments, it is not expected that any significant work will be required, mainly due to the low embankment heights at each.

GWMWater has undertaken ‘consequence of failure’, ‘hazard rating assessments’ and ‘business risk assessment studies’ for all significant high risk urban water and wastewater storages. Remedial works identified at these facilities have been completed.

Progress continues with the remaining urban storages. The construction of the WMPP however will render a number of urban water storages redundant. The final impact on the urban storages will be assessed once the WMPP is complete.

5.1.9 Conserving and Recycling Water

“To develop and implement sustainable water resource management programs”:

The Government’s White Paper – ‘Our Water Our Future’ has a core theme of sustainable use of Victoria’s water resources, in which conservation plays an important role. The emphasis on water conservation reflects its relative scarcity and acknowledges that water for new uses can be facilitated by improved efficiency.

Water conservation and sustainability is a critical and immediate issue for GWMWater and has been so for much of the last decade. This has been managed through the implementation of a coherent water supply and demand management strategy and a water conservation strategy.

During the prolonged drought and under influence of the GWMWater water restrictions by-law, GWMWater recorded a 30% reduction in water use over the summer of 2007 across the 39 regional towns currently on Stage 4 water restrictions.

Evaporation still remains the biggest user of water, with summer months evaporating up to 3 times more water from town storages than what the customers use. The WMPP will enable evaporation losses to be substantially reduced, with large amounts of the savings expected to be returned to local waterways as environmental flows.

The constraints on traditional sources of water have highlighted the benefits of recycled water as a water resource. Reclaimed water is an important ongoing water resource for enhancing regional horticulture and community and sporting facilities. GWMWater currently recycles 92% (excluding evaporation) of effluent produced in the region (Appendix 5). GWMWater will continue to utilise its ‘Reclaimed Water Strategy’, as a Triple Bottom Line framework for evaluating and implementing future reclaimed water schemes.

New recycling schemes, including infrastructure development are to be progressively implemented in the newly sewered towns of Hopetoun, Ouyen and Minyip, and at Dimboola and Nhill in conjunction with the upgrading of treatment plants. The scheme at Halls Gap will also be revised to enable more flexible management and full utilisation of available reclaimed water. These works are captured under the WWISP and several initiatives will be planned for delivering during this water plan period.

5.1.10 Water Supply Demand Strategy

“By 31 March 2007, and within each five years thereafter, the Authority must develop a water supply demand strategy to identify the best mix of demand measures and supply options for its urban supply systems”

The UWSDS has been developed and lodged with the Minister for Water, Environment and Climate Change. It provides for the sustainable use of water resources for the next 50 years across all urban towns of the GWMWater region.

The UWSDS consolidates actions to improve river health and address water shortfalls that may arise in coming years due to climate and population change and the possibility of continual lower than average inflows over the last 10 years.

GWMWater's urban supply for the majority of the Grampians and Mallee region will be met by the WMPP which will provide 96% security of supply for urban and rural customers. This will provide greater flexibility in meeting projected urban needs throughout much of the region.

The UWSDS is based on an expectation that per capita water consumption will be reduced over the regulatory period and beyond.

The UWSDS forms part of an overall strategy for managing water demand and supply in the region, which will be considered in the development of a Sustainable Water Strategy for Western Victoria. Other planning processes in place to manage the region's overall water resources include a range of Groundwater Management Plans (GMP).

5.1.11 Efficiency of Rural Distribution System

"GWMWater, in consultation with the Department, develop and implement programs to assess the efficiency of the Authority's rural distribution systems"

The WMPP will enable GWMWater to meet this compliance obligation. The WMPP will greatly improve distribution efficiency and assist customers achieve more sustainable patterns of consumption. The water savings resulting from the WMPP will enable GWMWater to exceed the 25% distribution efficiency targets.

Specifically, water savings of 103,000 ML/year are expected to be made by the WMPP. Of this volume, 20,000 ML will be made available for regional growth, and the balance to the environment.

This will substantially improve the health of the waterways of the region and improve the environmental and social amenity generally.

5.1.12 Metering

"GWMWater must meter all new:

- a) urban water supply services*
- b) water use under groundwater or surface water licences with volumes as specified in sub-clauses 18.2 and 18.3 of this Statement prior to the use of any water by the licensee."*

All new urban customers connect to GWMWater's system through a consent process. The payment of a connection fee incorporates the provision of a domestic water meter.

The White Paper sets out a requirement that all commercial diversions from farm dams and stream diversions be metered within two years for catchments with a Streamflow Management Plan (SFMP) and three years for other catchments. This represents a major program for GWMWater, as there are a large number of existing stream diversions that will need to be metered.

GWMWater has developed and implemented a metering program that addresses meter installation, accuracy testing, meter reading and replacement. This process was hampered due to the preceding period of extended drought with many diverters having had no access to water for the previous five years.

Some concerns that need to be overcome are that a number of customers do not have permanent pump installations suitable for metering and, in other cases, licences have not been active for many years. In the area managed by GWMWater there were about 50 groundwater and 100 stream or river diversion sites that required metering.

5.1.13 Responding to Drought

“In respect of each urban water supply system operated by the Authority, the Authority must:

- a) develop and implement an effective drought response plan; and*
- b) make its drought response plans available to the public.”*

Analysis of the reduced inflows that have occurred since 1996 indicates that the Wimmera-Mallee region has experienced an event which has possibly a one thousand year recurrence interval, and at this stage, there is no obvious end to this period of critical water shortfall.

Responding to drought has been a significant activity of the first regulatory period. Apart from fast tracking the delivery of the WMPP as a drought response initiative, GWMWater continues to manage the drought through a number of processes.

Drought Reference Committee

The Drought Reference Committee monitors and reviews water resource systems across the region and allocations available to each customer group. They are represented by a large range of stakeholders and recommend to the Board appropriate water management measures to ensure ongoing water supply to each customer group at equitable and appropriate levels.

Managing Limited Rural Supply

GWMWater has continued to carry out a modest maintenance program of the channel system to ensure that, under restricted supply conditions, channels operate as efficiently as possible.

In 2006, the limited water resource enabled only town storages to be supplied in the bulk of the channel system area.

No supply was provided to farm dams, with the exception of the area commanded by the Waranga channel, where GWMWater was able to supply town storages and about 30% of farm dams, on the basis of one dam per 400 ha of property.

After a significant public consultation, assisted by the Victorian Farmers Federation and Wimmera Uniting Care (providing advice on stress management and possible related

issues arising from the current situation) in October 2006, GWMWater initiated its water-carting program. This program included the provision of a basic water supply to rural customers of 28,000 litres every second month. Water was delivered directly into tanks at each eligible property and additional water was made available for carting by rural customers for crop spraying and livestock watering free of charge from selected regional storages. Rural customers were however responsible for the cartage costs associated with obtaining this additional water.

So far, the program has been estimated to cost GWMWater \$2.5 Million and will continue until GWMWater's sources of supply recover to sufficient levels. This program was not budgeted for and represents a significant change to the first Water Plan.

Restricting Urban Water Use

GWMWater has adopted the standard statewide four-stage restriction policy and the permanent water saving rules. GWMWater also maintains its urban restriction policy consistent with the overall allocation framework of water supply under the BE framework. Further details on the towns currently on restrictions are outlined in Section 6.8.

GWMWater Contingency Plans

Detailed contingency plans have now been developed for each town in the region. Investigations into groundwater resources in the Beulah, Birchip, Natimuk, Rainbow and Wycheproof areas commenced in mid February 2007 as part of its ongoing contingency water supply planning for the region. These investigations follow on from work undertaken in the Donald and Hopetoun areas during January 2007.

Investigations at these towns were aimed at providing an alternative water source to these towns, should inflows to the regions bulk water supply reservoirs prove insufficient to enable a channel supply in 2007.

This includes identifying possible sites for treatment plants and potential brine disposal locations as it is anticipated that any groundwater resource in the area utilised by GWMWater for urban water supply purposes would require desalination. GWMWater has involved the EPA in the project to ensure requirements of the State Environment Protection Policy "Groundwaters of Victoria" are appropriately considered. Contingency works have been planned at Donald at a cost of up to \$1.8 Million, but these works were subsequently deferred in July 2007 when it was confirmed that a channel supply could be made available to Donald.

Supplementary Bore Supply

During 2006, GWMWater developed an existing bore at Laharum to supplement supply to the Horsham urban water supply system, via the nearby Mt Zero water treatment plant. The system has initially provided a volume of 1.2 ML/day to the urban supply system that would have otherwise been provided from Wartook Reservoir.

Work is now in progress to upgrade this system to at least 6 ML/d to provide an alternate supply to Horsham, both to assure supply to Horsham and to supplement the volume available to other parts of the system from Wartook reservoir.

Emergency Bores

GWMWater has established, under DSEs direction, the North West Local Steering Group, comprising primarily Council representatives, to rehabilitate and implement additional emergency water supply bores throughout the region. The group was initially successful in receiving \$1.1 Million of an initial statewide budget, with a further \$0.6 Million received early in 2007. Expenditure is projected to \$1.9 Million at the end of 2006/2007.

A total of 49 emergency bores throughout the region are currently in the process of being recommissioned for rural supply (June 2007). A further 17 sites for new bores have been identified and work will commence on these in the near future.

Murray Supply System

GWMWater has been participating in a statewide program through DSE reviewing water availability for the Murray system for the 2007/2008 supply season. GWMWater has planned a range of complementary contingency supply measures for its Murray supplied systems and these include:

- Increasing water restrictions to Stage 4 in all Murray supplied towns and seeking complementary reduction in rural use;
- Carrying over some temporary entitlements acquired on the water market into 2007/2008;
- Using evaporation control initiatives aiming to reduce losses by up to 30% at town storages;
- Operating NMP storages at a lower level to further reduce evaporation and seepage; and
- Investigating the use of Walpeup West bore system to supplement the NMP if the salinity of the water is of acceptable quality.

Mt William and Streatham Bore Development

The groundwater bores in the Mt William supply region were significantly affected by the 2006 Grampians National Park bushfires and are also another causality of the drought.

The bores generally supply the towns of Willaura and Lake Bolac via three bores over summer months and convert back to surface water from the Grampians National Park in winter, when there are sufficient flows. During the drought, however, more reliance has been placed on the bores with the water table lowering and reduced yields resulting in a significant reduction in supply. As a result, two extra bores were required to ensure continuity of supply to these towns, not as a result of increased demand.

A similar exercise was required at Streatham to install an new extra bore to supplement lower yields being experienced in the southern parts of the GWMWater region.

Other Drought Actions Being Considered

GWMWater has purchased additional temporary water from the Waranga system to ensure supply to towns in that area can be achieved during the May-June 2007 channel run in that area. This has involved the purchase of 700 ML on the Watermove market, at a total cost of \$303,000.

The delivery of Supply System 2 of the WMPP has been fast tracked to supply a number of towns currently supplied from the channel system. Water piped to town centres can also be used for water carting for rural customers

The use of chemical barriers on open town storages to reduce evaporation losses has also been trialed.

5.1.14 Sewerage Services to Unsewered Urban Areas

“The Authority must participate with municipal councils in the development of domestic wastewater management plans.”

The policy framework for the introduction of sewerage schemes into small towns is aimed at improving the social and environmental health objectives that can be achieved by the construction of a reticulated sewerage system.

Local Government and the EPA currently substantiate the want and need for sewerage and secure community support for a scheme. Water authorities become the service provider once the basis for a scheme is established. Specific sewerage programs in the GWMWater region that have been identified under the \$42 Million CTWSSP include Lake Bolac, Rupanyup and Great Western.

GWMWater will continue to work with the Ararat Rural City, Northern Grampians Shire and the Yarriambiack Shire Councils’ to identify options for reticulated sewerage at these three towns. Funds from the CTWSSP will not be sufficient to fully fund these schemes, and GWMWater will provide the \$4 Million expected to be required to fulfill the obligations to Government.

5.1.15 Sewerage Connections to Properties

“The Authority must take all reasonable steps to ensure that a property provided with a sewerage service...”

A sewerage management plan developed through consultation with the Horsham Rural City Council, EPA and the local community, resulted in a sewer infill program scheduled for Horsham South at an estimated cost of \$0.8 Million. The sewerage management plan identified an unacceptable health and environmental risk to the local environment. The cost will be fully recovered through Horsham Rural City Council.

Sewer infill programs have also been scheduled at Halls Gap, Dimboola and Nhill at an expected cost of \$1 Million. The sewer infill programs are programmed for completion at

the later part of the regulatory period and will undergo further community and stakeholder consultation.

Several applications from individual residents have also demonstrated that wastewater on their blocks can be sustainably used on site in accordance with guidelines issued by the EPA and the residents have separate permits with council for its use.

5.1.16 Trade Waste

“GWMWater must develop policies and practices to manage trade waste...”

The effective management of trade waste is integral to protecting GWMWater’s sewerage infrastructure. It also ensures that the quality of waste can be effectively treated to allow its beneficial reuse. The Trade Waste By-Law and Policy regulates customers with waste loads that present a risk to GWMWater systems and/or the environment.

Trade waste is managed within two broad categories, minor and major. Minor trade waste customers are generally non-residential customers producing relatively small volumes of low strength waste compared to manufacturing plants. A comprehensive survey and inspection program commencing in 2005 targeted over 1000 non-residential businesses. The program, since being completed, has identified a total of 565 minor trade waste customers and 11 major industrial and manufacturing plants.

Agreements are now in place with all 565 customers. Non-compliant premises have been advised of their compliance obligations in relation to pre-treatment and at 31 April 2007, only 60 customers remain non-compliant. Work is continuing to allow voluntary compliance with the by-law, with the next phase to enforce pretreatment connections using GWMWater’s legislative powers.

An inspection and maintenance program now forms an integral part of minor trade waste management.

There are 11 major trade waste customers managed and monitored under separate, individual agreements.

5.1.17 Regional and Local Government Planning

“GWMWater must participate in and support the development and implementation of any Regional Catchment Management Strategy or catchment sub-strategy or Regional River Health Strategy which may affect, or be affected by, the Authority’s activities.”

GWMWater actively participates with local municipalities and catchment management authorities in relation to the future development of urban and rural planning schemes within the region to ensure that infrastructure is maintained at a level appropriate for the future needs of the community.

A collaborative planning approach, as demonstrated by the WMPP, will be central to maximising the growth opportunities from savings generated after its construction. Opportunities are expected to arise within the fringe of urban areas, with potential access to potable and non-potable supplies, and to a lesser from extent reclaimed water for niche

industrial developments. Such development will require additional water and wastewater infrastructure to be developed by proponents in consultation with GWMWater. Within this setting a logical framework for pricing is required which recognises supply security, quality and capacity constraints, and is sensitive to the demand for different water products.

Perhaps the most significant activity to be undertaken over the next few years is the development of a Sustainable Water Use Strategy. The WMPP already provides for this in part, but there are areas that are presently outside the current footprint of the channel network that need to be further considered. This will include the review of connectivity between the Goulburn/Murray system and the Grampians system in the North East corner of the GWMWater service area. GWMWater will continue to provide input as required. This will require collaboration with many local and regional stakeholders.

5.1.18 Research and Development

“The Authority must:

- a) identify the Authority’s research needs;*
- b) prioritise the research needs identified;*
- c) identify how the Authority proposes to meet its research needs.”*

GWMWater’s Research and Development (R&D) program has been specifically designed and developed to promote research in innovation and capability building.

The R&D cuts across numerous obligations and includes issues outlined in the White Paper, *Our Water Our Future*, and *Our Environment our Future – Sustainability Action Plan* and *Sustainable Management* principles in the SOO.

Each of the projects identified in the R&D program have been developed under the following framework.

- All R&D activities should be expected to deliver definable benefits to GWMWater.
- Wherever possible, proactive participation in R&D projects through collaboration with alliance partners is preferred.
- R&D is to be focussed on priority business areas/processes using an established set of criteria.
- Assets created as part of R&D activities become assets of the GWMWater.
- Where appropriate, GWMWater personnel should participate at the project management level and assist with direction of projects to assist in the transfer of knowledge through to staff.
- Actively promote and form relationships and networks with other water businesses, higher education institutions, public and private sector organisations to share knowledge and establish alliances that enhance the ability to source research funds.
- GWMWater commits funding to the R&D budget to facilitate financial contribution in research projects with other alliance partners.

GWMWater is committed to the concept of developing alliances with educational institutions, the private sector and public sector using the principle ‘that the sum of the individual partners is far greater if a unified approach is adopted’.

GWMWater has estimated that nearly 20 local, national and international partners will be involved in the delivery of the \$1.9 Million R&D program budgeted for the five years of the regulatory period. Projects focus on water quality improvements and the impact of climate change on water and energy management.

5.1.19 Sustainable Management

“The Authority must ... in performing its functions, exercising its powers and carrying out its duties, apply the Sustainable Management Principles”

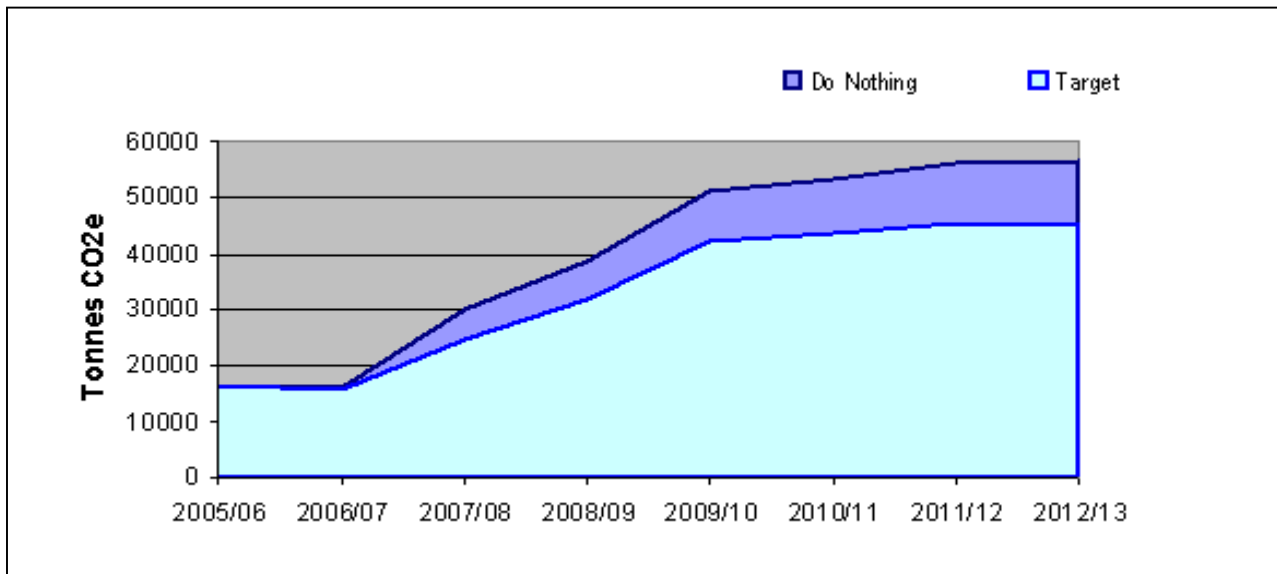
GWMWater’s Sustainability Framework and Strategy is underpinned by the sustainable management principles outlined in the SOO. The Sustainability Framework establishes the goals and objectives for integrating sustainability into every aspect of the business operations, strategies and culture. These are reported under economic, environmental, social and governance categories.

The Sustainability Strategy defines the detailed actions necessary for the business to become more sustainable, become a leader in sustainable practices and move beyond compliance.

GWMWater’s greenhouse gas emissions are predicted to more than treble in the life of the Water Plan as a result of the WMPP coming into operation.

GWMWater’s greenhouse plan includes a range of measures to reduce direct emissions from energy use and increase emissions offsets. The ultimate goal is to reach the point where GWMWater operations are carbon neutral, where the volume of greenhouse emissions is completely offset by measures to reduce emissions or store carbon somewhere else.

Table 5.1.18: Projected Greenhouse Gas Emissions.



This may be achieved through improved metering, energy efficient pumps, demand management, optimising pipeline operation and workplace awareness. Offsets may also be purchased through accredited abatement schemes and traded where appropriate.

Further energy savings may be achieved through the integration of full life-cycle assessment into detailed capital works planning. There may also be opportunities for generation of renewable energy through augmentation of existing and proposed works, most likely for export to the grid. These measures are to be further investigated during the regulatory period.

GWMWater will contribute to the maintenance of natural assets and biodiversity by returning an average, 83,000 ML/a of water to Government for the regional waterways and Murray River system once the WMPP is constructed. GWMWater will continue to work closely with CMAs to ensure the effective and practical delivery of the Environmental Water Reserve to maximise ecological benefits.

GWMWater has also effectively eliminated the majority of wastewater discharges to natural waterways and will continue to work to eliminate all during the next regulatory period.

GWMWater will further integrate environmental considerations into planning for new projects or decommissioning existing works through adoption of sustainability-based methodologies such as life cycle assessment.

GWMWater will achieve more efficient resource use through a range of initiatives such as:

- Implementation of the WMPP;
- Replacement of meters and aging distribution infrastructure;
- Energy and greenhouse emissions management;

- Implementation of SCADA systems to improve monitoring and system management; and
- Meter calibration and improved leakage detection.

The Sustainability Strategy recognises the importance of reducing the environmental impact of GWMWater's activities as well as empowering individual staff and customers to contribute to improved sustainability.

GWMWater has established a Sustainability Working Group to coordinate sustainability programs across the business. This group is supported by a network of workplace sustainability champions responsible for encouraging staff to adopt measures to improve sustainability, including energy, water, greenhouse and waste management initiatives. GWMWater will develop a range of sustainability tools, such as life cycle assessment, to enable triple bottom line analysis of projects and purchasing. A number of tools are being developed across the water industry. It is anticipated that minor funds will be required for capital expenditure, with the majority cover through operational expenditure.

Customer education programs will continue to promote efficient water use as way of conserving both water and energy.

5.1.20 Environment Management System

"The Authority must develop and implement an Environmental Management System ..."

A revised EMS is currently being developed as a primary tool for improving environmental and broader sustainability performance. The EMS will be in accordance with the AS/NZS ISO 14000 Standard series.

The EMS will be effectively delivered through integration with other business systems. The EMS will ultimately interface with the proposed OCC, enabling efficient response to incidents, environmental data acquisition, and informing the continual improvement of the system. Integration with the OCC will require the commitment of specialist resources, EMS related training and acquisition or development of appropriate software tools.

5.1.21 Blue-Green Algal

"The Authority must report any blue-green algal blooms impacting on water supply services ..."

In the region, GWMWater has been designated the convening agency for coordination of BGA outbreaks. The presence of BGA in water bodies can require a range of management actions depending on the density of organisms present and their toxicity.

A number of BGA outbreaks in water storages have occurred in the past with one notable case occurring at Wycheproof. GWMWater held an extensive investigation into the incident and as a matter of course, the monitoring program to detect the incidence of BGA and response plan have been reviewed and upgraded to respond quicker in the event of future BGA outbreaks. GWMWater's BGA response plan forms a component of the EMP and is updated regularly.

5.1.22 River and Aquifer Health

“GWMWater must manage the impact of its activities on any waterway or wetland to minimise environmental impacts on and risks to the aquatic ecosystem.”

It is recognised that the regulation of rivers and streams and associated diversions, has a detrimental impact on river health. GWMWater manages the impacts of its activities through active monitoring programs, environmental assessment of works and the delivery of environmental flows. The corporation works in close consultation with CMAs to ensure environmental flows are delivered effectively and in accordance with the ‘flora and fauna’ BEs.

The refurbishment of the Huddleston’s Weir, funded by the Wimmera CMA, has considered requirements for passage of native fish species. This weir is the most important diversion point from the Wimmera River to the GWMWater supply system. Works are also planned for the Horsham, Dimboola and Jeparit Weir structures on the Wimmera River and will be done in close consultation with relevant stakeholders.

5.1.23 Monitoring River Health

“The Authority must monitor the impact of its activities on waterways and wetlands, including the impact of dams on the thermal regime of waterways.”

An environmental monitoring program has been prepared and submitted to DSE in response to the Wimmera and Glenelg BE requirement to assess and manage the environmental effects of operating the weirs and storages. GWMWater will continue to monitor, through the existing dam safety monitoring program, bed and bank erosion downstream of all structures and where necessary carry out repairs.

Under the monitoring program GWMWater will collect regular salinity and temperature readings from the surface of all reservoirs and from released waters. Continuous temperature monitoring will be implemented for Rocklands Reservoir and Lake Bellfield in conjunction with the CMAs. The current program for algae monitoring and alert procedures will continue.

Monitoring data will be made available through the Victorian Data Warehouse.

5.1.24 Capital Contributions by Property Owners

“GWMWater must offer the owner of any property who is required to make a contribution to the present day cost of works for the provision of reticulated sewerage services under section 268(1) of the Water Act 1989 the option of paying that contribution in equal installments over 20 years as an annuity calculated by reference to the 20-year market annuity rate, as determined by the Treasury Corporation of Victoria, prevailing at the time the contribution is calculated.”

Traditionally this section has related to sewerage schemes, however in the context of the WMPP capital contributions from customers will come in the form of on-farm works. GWMWater will provide services to the customer’s farm and all ancillary works and storage requirements will be a direct expenditure by the customer. This was identified and represented in the original business case for the WMPP and will in many cases lead

into thousands of dollars. GWMWater are working with customers to minimise any negative impacts.

Sewerage schemes of Hopetoun, Minyip and Ouyen have been constructed and approximately 20% of customers have elected to contribute over a 20-year period. Other customers have elected to meet the costs upfront.

GWMWater is working with the EPA, Northern Grampians Shire Council (NGSC), Ararat Rural City Council (ARCC) and Yarriambiack Shire Council (YSC) to investigate sewerage options in Lake Bolac, Great Western and Rupanyup. Discussions will involve how property owners will contribute to the capital works of these schemes in line with this policy position.

5.1.25 Providing Concessions and Rebates

“GWMWater must administer the following Government funded programs, as applicable, in accordance with their respective requirements:

- a) Utilities Relief Grants Scheme;*
- b) Concessions for water service and usage charges and sewerage service and sewage disposal charges;*
- c) Water concession on Life Support Machines - Haemodialysis;*
- d) Hardship Relief Grant Scheme (Sewerage Connection Scheme); and*
- e) Water and Sewerage Rebate Scheme.”*

GWMWater presently delivers these Community Service Obligations (CSOs) on behalf of Government as an integral part of its customer service operations. In addition to the specific government funded programs, GWMWater provides many other CSOs not formally funded. These are embedded cross-subsidies that arise from the adoption of uniform pricing policies across the service region.

GWMWater is providing close to \$2 Million in concessions and rebates each year under CSOs. The majority of the 10,000 plus urban pensioner and concession cardholders account for this (\$1.5 Million in 2005/2006), as well as those under the Water and Sewerage Rebate scheme.

The uptake of urban water saving rebates has been reasonably received with products from 1 July 2006 to 17 May 2007 outlined below.

- Permanent grey water systems - 45
- Tank rebate - 140
- Dual flush toilet - 49
- Pressure washer - 1
- Showerhead - 21
- Large tank rebate - 43
- Basket offer - 158
- Tank to toilet connection - 2
- Water conservation audit - 0

The Government's rural tank rebates processed as at May 2007 were 1,068. The value of rebates paid was \$2.4 Million.

5.1.26 Smart Water Fund

"The Authority must participate in the Smart Water Fund."

The Smart Water Fund was established to encourage and support innovative development of water, biosolids, recycling and water saving projects within the community. GWMWater actively supports the Fund and its objectives through local promotion and community advocacy.

5.1.27 Complying with Obligations

"The Authority must monitor compliance with its obligations under Parts 4 to 7 inclusive of the Statement of Obligations."

Compliance with the SOO has been given due recognition in the resourcing of the Regulation and Assurance Division of GWMWater. This Division is responsible for monitoring organisational risk and ensuring compliance with regulatory and legislative obligations.

Many of the sections of the SOO were subject to independent audit in 2006, with acceptable audit outcomes achieved, with one exception for dam safety, where urban reporting requirements necessitated additional work being undertaken.

5.1.28 Compliance Audits

"GWMWater must, when requested by the Commission, at intervals of not more than once in twelve months, arrange for an audit of its compliance with:

- a) clause 13 of this Statement, and*
- b) such other obligation under Parts 4 to 7 of this Statement that the Commission has been requested by the Minister to audit."*

GWMWater recognises the accountability requirements of the regulatory framework and has a specific 'audit charter' with an ESC nominated and approved external auditor contracted to provide independent Regulatory Audit services. These annual audits report directly back to the ESC who benchmark GWMWater in relation to all other water businesses across Victoria for public scrutiny.

Audits were conducted in 2006 on GWMWater's performance against Dam Safety, Emergency and Incident Response, River Health, Managing Risks and Managing Assets. Only Dam Safety is required to be audited in 2007.

5.1.29 Other Audits and Reviews

"GWMWater must, when requested by the Minister, after consultation with the Treasurer, arrange for an audit or review of any matter specified by the Minister in relation to the performance of its functions and the exercise of its powers."

Both DHS and EPA are proposing performance audits on the delivery of GWMWater's capital expenditure program as it relates to water and wastewater services. Provision has been made for these costs in this Water Plan.

5.2 Environmental Obligations

EPA released their; 'Principles to Establish EPA Environmental Obligations for Water Businesses for the 2008-2013 Pricing Determination', in November 2006 to offer clarity regarding their requirements for the 2008-2013 Water Plan submission. The purpose, principles and obligations set out in the paper have been used to prepare GWMWater's Water Plan and are described in detail below.

The key documentation covering EPA requirements are the WWISP, AMP, ALCPs and the Sustainability Strategy. Ensuring compliance with key environmental legislation, policies and guidelines has been instrumental in the development of the WWISP and associated programs and have been used to assist in the development of the capital expenditure program.

The estimated cost of capital works over the Water Plan period for activities highlighted in the WWISP is estimated to be in the order of \$19.2 Million. Apart from legislative requirements, the following was considered in deriving the level of expenditure required for this Water Plan period:

- Full attainment of SEPP (Waters of Victoria (WoV)) by 2013;
- An increased focus on sustainability and resource efficiency (using the waste hierarchy as a key principle driver);
- Integrating existing policy directives, eg White Paper, Sustainability Framework, and SOO;
- Consultation with customers and community stakeholders;
- Identifying risks and issues facing the water industry; and
- Learning from the previous regulatory process.

GWMWater has been negotiating with EPA to renegotiate all 25 WWTP discharge licences. The majority of GWMWater's sites now reuse available recycled water and are subsequently being updated to better reflect its end use and risk to the environment. Where WWTPs do not currently comply with all conditions of discharge licences, upgrades or alterations have been identified in the WWISP and will be progressively implemented to achieve compliance during the regulatory period.

The White Paper Actions - Our Water Our Future, and SEPP (WoV) place a number of other environmental obligations for irrigation, environmental flows, groundwater management and waterway management, including releases from storages.

5.3 Water Quality Obligations

Thirty-three of the 74 towns serviced by GWMWater rely on a bulk supply from the Grampians headworks. The water is delivered by an open earth channel network that

generally only provides for one bulk delivery of water per year. Eight of the 33 towns receive a fully treated water supply, whilst a further 11 are supplied with water that is chlorinated (no filtration). Fourteen small towns receive untreated water supplies.

GWMWater currently provides fully treated water to 77% of its customers across 19 towns. This is a significant improvement from 1998 when only 28% of customers received fully treated water. A further 16 towns are supplied with water that is disinfected as their only source of treatment and a further 39 are classified non-potable.

Other urban centres receive their water from a combination of surface water diversions and groundwater extractions. The larger towns invariably receive a fully treated water supply or have the water supply disinfected to meet microbiological water quality standards.

The majority of D&S customers also receive water supplies from the Grampians Headworks delivered by an open channel network. Of the water supplied to D&S customers, only supplies from the NMP system receive any form of treatment and this is coarse filtration at the point of extraction from the River Murray.

Towns/Localities supplied fully treated water (Drinking Water)

| | | | |
|----------|-----------------|------------|---------------|
| Ararat | Great Western | Lake Bolac | Stawell |
| Birchip | Halls Gap | Murtoa | Warracknabeal |
| Charlton | Haven (Horsham) | Pomonal | Ouyen |
| Dimboola | Hopetoun | Rainbow | Willaura |
| Edenhope | Horsham | St. Arnaud | |

Towns Supplied Disinfected-only Water (Drinking Water)

| | | | | |
|--------|-------------|------------|---------------|------------|
| Beulah | Lalbert | Quambatook | Walpeup | Wycheproof |
| Brim | Manangatang | Rupanyup | Warracknabeal | |
| Donald | Minyip | Sea Lake | Watchem | |
| Jung | Nullawil | Ultima | Woomelang | |

Towns supplied untreated water (Regulated Water)

| | | | | |
|---------------|-----------|-------------|---------------|------------|
| Antwerp | Culgoa | Kiata | Natimuk | Tarranyurk |
| Apsley | Dooen | Lascelles | Nhill | Tempy |
| Berriwillock | Elmhurst | Lillimur | Noradjuha | Underbool |
| Buangor | Glenorchy | Marnoo | Patchewollock | Waitchie |
| Chillingollah | Goroke | Miram | Pimpinio | Westmere |
| Chinkapook | Harrow | Moyston | Serviceton | Wickliffe |
| Clear Lake | Jeparit | Murrayville | Speed | Yaapeet |
| Cowangie | Kaniva | Nandaly | Streatham | |

Water quality obligations in Victoria are regulated by DHS through the following legislation and guidelines:

- Safe Drinking Water Act 2003;
- Safe Drinking Water Regulations 2005,
- Health (Fluoridation) Act 1973;

- Food Act 1984; and
- Australian Drinking Water Guidelines 2004 (the ADWG).

The SDWA and SDWR are the main driving force for public health policy associated with drinking water quality in Victoria. The SDWA contains a comprehensive statewide regulatory framework for managing drinking water supplies. The regulatory framework advocates a risk-based approach, with standards for nine parameters to be implemented through statutory regulations. GWMWater is defined as a supplier of drinking water to the public in terms of the SDWA. A comprehensive program of analysis and sampling of water supplies underpins the SDWA.

As the SDWA distinguishes between 'drinking' water and 'regulated' water, many towns supplied by GWMWater may now require additional water treatment if they are to be classified as suitable for drinking purposes, including existing supplies that are presently disinfected.

In response to this legislative requirement and in the development of the Water Plan, GWMWater has:

- Prepared and implemented 'catchment to tap' risk management plans for drinking water supplies and some non-potable water systems;
- Incorporated the provision for the auditing of those plans by approved auditors during the regulatory period;
- Prioritised programs to meet quality standards outlined in the SDWR for drinking water;
- Disclosed to the public information concerning the quality of drinking water;
- Reported all known or suspected contamination of drinking water to the Secretary of DHS and continued to publicly disclose information through annual drinking water quality reports.

The WISP is the basis for identification, determination and planning of works for water quality improvements that covers the five-year period from 2008. In preparing the plan, due consideration has been given to expenditure required to address risks with all water supply arrangements and those outlined in the individual risk management plans. Upgrades and operations of water treatment plants, disinfection only facilities and non-potable towns have also been addressed and prioritised in the WISP.

DHS has raised the possibilities of regulating the process of collecting drinking water samples and specifying analytical methods to be used to analyse such samples. GWMWater has spent considerable time and resources to improve its water sample collection processes and any such new obligation is unlikely to have significant financial implications on the business.

Some of the other water supplies consistently fail to meet the water quality standards as set out in the SDWR. Under section 30 of the SDWA, the Secretary of DHS may accept a written undertaking in respect of a contravention of the Act, which provides protection to a water supplier against prosecution. GWMWater has either entered into, or is seeking to enter into, undertakings for most of these towns.

For further details on these undertakings and capital expenditure related to water assets, refer to Section 6.2 on Capital Expenditure.

5.4 Other Obligations

GWMWater recognises both the impact of climate change on its operations and the contribution that those operations make to greenhouse gas emissions through the use of fossil fuels. GWMWater is a member of the Sustainable Energy Use Water Industry Working Group that has established an agreed framework for reducing greenhouse emissions.

The framework commits GWMWater to:

- Setting voluntary targets for greenhouse emissions reduction and renewable energy generation; (see Sustainable Management section)
- Developing and implementing an emissions reduction plan; and
- Working closely with other water corporations to share knowledge.

As part of the EPA review of the Environment Protection (Scheduled Premises and Exemptions) Regulations 1996, a number of initiatives have been introduced or signaled that will impact on GWMWater operations.

- GWMWater will have the capacity to negotiate a single 'corporate licence', amalgamating licences for different premises;
- Uniform compliance reporting requirements will be introduced through a single annual 'performance statement'; and
- Changed definition of 'scheduled premises'.

Large industrial and commercial users of energy and water will be required to develop Environment and Resource Efficiency Plans (EREPs). GWMWater may enter into this category post-implementation of the Wimmera Mallee Pipeline. Existing initiatives to address energy use may reduce requirements under the scheme.

New Aboriginal Heritage Regulations 2007 has also been developed to support the Aboriginal Heritage Act 2006. These regulations will place additional obligations on GWMWater in relation to works assessment and liaison with indigenous and cultural heritage stakeholders.

Other changes to the external environment that have impacted on GWMWater operations include:

- Continuation of the drought and the impact on storage levels and GWMWater's ability to provide a water service;
- Acknowledgement at a political level that climate change is a real phenomenon;
- Establishment of the Office of Water;
- Introductory of the new corporations model for Regional Water Authorities;
- Proposal by the federal government that they take a greater role in the operation of the MDBC; and
- Continued escalation of construction and labour costs.

5.5 Service Standards

Service standards provide the overarching framework for the delivery of key projects and determine the level of service to customers. Standards from the Urban Customer Service Code have been in place since July 2005 and used to help determine the targets outlined in Appendix 6. A Rural Customer Service Code has also been developed for the first time to coincide with this second regulatory period Appendix 7. Both rural and urban Customer Charters required targets to be set based on best available performance data with an aim to continually improve.

Therefore there are a number of targets identified in the first regulatory period that needed to be revised to reflect the improvements made in the collection and reporting of data.

The first Rural and Urban Customer Charter service standard targets were adopted at a time where past performance was not well gauged by the business. New definitions and indicators, with limited past performance data, led to a number of inappropriate and unrealistic targets being set. With a number of years data and more reliable methods for collection and reporting, urban targets outlined in Appendix 6 now better reflect current and future expected performance. With 2005/2006 data becoming more reliable and systems improving to capture accurate data, GWMWater are in a much better position to determine more realistic and achievable targets.

With limited rural performance data to set targets (Appendix 7) limits may not be an overly accurate gauge of performance at this stage but will form a basis for improvement over the duration of the 2008-2013 Water Plan.

Both service standards for rural supply and urban have been presented to Board and CAG workshops. Customer groups endorsed and the Board of GWMWater committed to providing a level of service commensurate with the costs of delivering the service. Targets have therefore been reset based on this feedback and increased knowledge and reliability of data provided through reporting and auditing.

6 WATER SUPPLY AND DEMAND

6.1 Overview of Supply and Demand Issues

The Grampians headworks system has been recognised as being over committed since 1992 and the overall system capped. The below average rainfall and inflows that have occurred since 1997 has led to prolonged restriction on the supply of water.

For the past seven years, most of the customer base has been under some form of water supply restriction. This has been a consequence of the extended period of low inflows that has substantially reduced storage levels.

The general lack of supply capability has constrained the development of the region with the only new water being sourced from savings realised from efficiency improvements in the distribution system or improved conservation.

The construction of the WMPP will improve the security of water supplied for all existing channel supplied customers to 96% as well as releasing a further 20,000 ML for new development both inside and outside the pipeline supply area. This presents a challenge to GWMWater of realising the opportunities for new development as well as continuing to promote water use efficiency.

The White Paper acknowledged the WMPP as an integral part of the Wimmera and Glenelg Regional Sustainable Water Strategy. This has since been supplemented by the Water Supply / Demand Strategy that was lodged with the Minister for Water in March 2007.

Whilst both strategies make projections about medium to long-term outlook of demand, there needs to be overlay of these projections with the short-term recovery of the supply system to meet commensurate demands.

6.2 GWMWater Supply Capability

GWMWater supply is provided from a combination of surface water and groundwater from throughout the region. The majority of this water is sourced from headworks in and around the Grampians.

6.2.1 Bulk Water Supply

Management of water supply is regulated and hence managed at the strategic level by the BE framework. The allocation of surface water is managed by three bulk water entitlement orders; the Wimmera Mallee BE Order, Goulburn BE Order and the Murray BE Order.

Under the Wimmera Mallee BE Order, GWMWater assumes the role of Storage Operator and Resource Manager. The role of Resource Manager is performed on behalf of the Minister for Water and GWMWater is required to discharge this function independently

and in accordance with the allocation framework of the BE. During 2006-2007 GWMWater was directed by the Minister of Water not to release part of the environment's allocation.

The relative share of water available for all demands on the water system is defined under the respective BE Order that regulate the various water sources. In addition to the rights of rural and urban customers the rights to water of the environment is also clearly defined in the BE Order(s).

In the case of the Goulburn and Murray BE Orders there is no differentiation between urban and rural water use. Water available under these BEs is a global resource with allocations and restrictions being applied to optimise water use. There is a further entitlement under the Goulburn BE, which relates to water supply to Quambatook from the Normanville pipeline system.

Supply system 5 (Berriwillock – Culgoa) of the WMPP is to be sourced from the Murray River and GWMWater will be seeking to secure water from the Murray by conversion of the Goulburn BE.

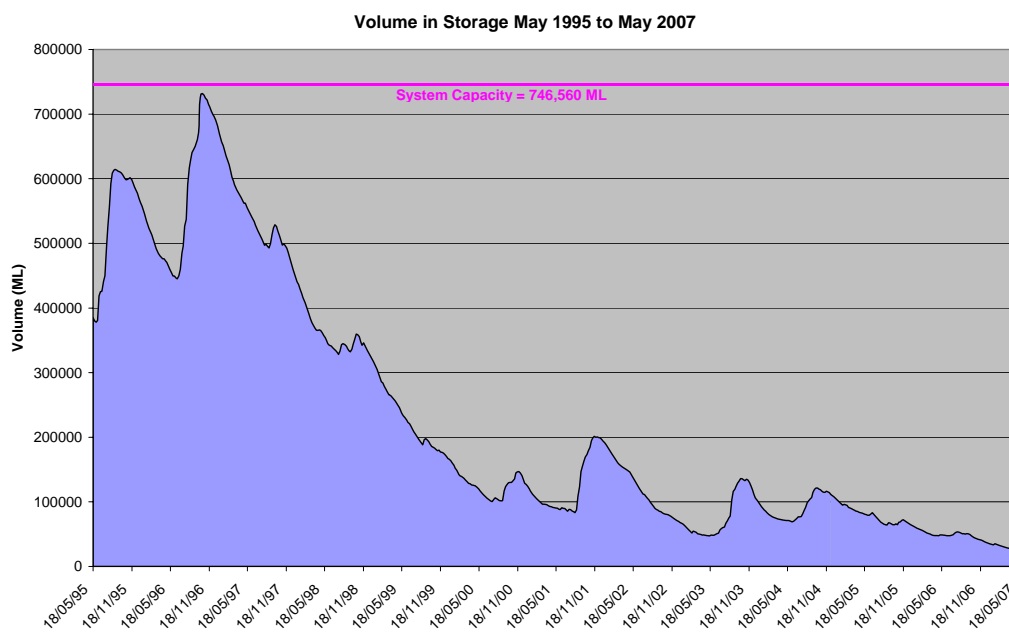
6.2.2 Grampians Headworks Supplies

The majority of water supplied to customers is sourced from the Grampians headworks system.

An understanding of the current water resource status and inflows in recent years is required to provide context to the current and projected allocations.

The graph below shows the volume in storage over recent years. The total volume in storage was last close to full in late 1996. Since then the volume in storage has declined, and since 2000 has been hovering at critically low levels.

Figure 6.2.1: GWMWater Grampians Headworks – Total Volume in Storage



This sequence of low storage volumes has been due to extremely low inflows over the period since 1997. The graph below shows the annual inflows since the commencement of records in 1903 through to 2007. Since records have been collected, there has been no comparable extended period of extremely low inflows.

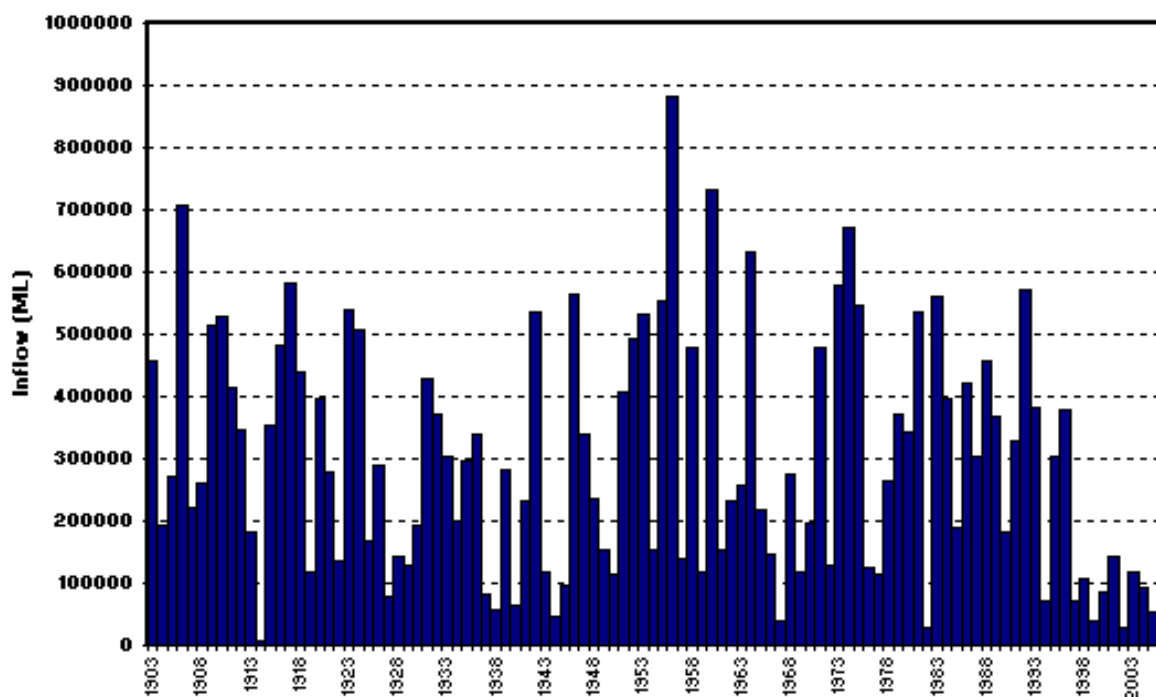
Weather sensitive demand brought about by median climate change is expected to increase demand by approximately 1,200 ML in 50 years.

The Wimmera-Mallee D&S channel system currently supplies water to 33 urban towns across the channel system area. Typically these towns are supplied once per year.

The current average annual urban demand from this system is 4,261 ML. Water restrictions in these towns have been required since 1999.

In the initial years of drought, from 1997 to 1999, full allocations could be provided for most services owing to the reserve volume in storage. As the reserve volume has diminished, however, progressively increased restrictions have been required.

Figure 6.2.2: GWMWater headworks system – annual inflow 1903-2007



Inflows in the 2006 year were critically low, being the second lowest since the period of record commencing in 1903. A channel run started in August 2006 for town storages and was completed during November with carting to rural customers commencing in October 2006. The 2006 channel run was delayed as long as possible in anticipation of inflows that may have enabled a supply to farm dams as well as town storages. These inflows did not eventuate, with only very low inflows occurring in the early part of the 2006 winter.

Table 6.2.3 below summarises the way water allocations have translated to restrictions applied in the Wimmera-Mallee system. Irrigation supplies were also restricted in the 2000-2001 season to 33% - other supplies were not restricted in that season.

Table 6.2.3: Water Allocations V's Restrictions Applied in the Wimmera-Mallee System

| Customer Group | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|-----------------------|---------|---------|---------|---------|---------|---------|
| Winter D&S | 50% | 18% | 35% | 35% | 35% | 10% |
| Summer D&S | 50% | 18% | 38% | 35% | 25% | 0% |
| Urban - General | 1-3 | 3-4 | 3-4 | 2-3 | 2-3 | 4 |
| Urban - Horsham | 1 | 1-3 | 3 | 3 | 3 | 4 |
| Irrigation | 25% | 0% | 0% | 2.5% | 0% | 0% |
| Environment | 50% | 3% | 13% | 13% | 1.8%* | 0%** |
| Recreation Lakes | 0% | 0% | 0% | 0% | 0% | 0% |
| Irrigation Diversions | 0% | 0% | 0% | 0% | 0% | 0% |

* Directive from minister to withhold environmental flows in the Wimmera River reduced this figure from 10.3%.

** Directive from minister still current, actual allocation to May is 0.5%.

Throughout this period, supply to urban storages has been provided in full. Urban storages are generally larger and hence more efficient in terms of minimising evaporation losses. This supply ensures urban supplies and an important regional resource for the water-carting program during 2006-2007.

Weather sensitive demand increases are not sufficient to offset population decreases. Overall urban demand is expected to fall by approximately 1330 ML/annum under a median climate change scenario.

6.2.3 Eastern Grampians Supply System

Supply from independent storages

Elmhurst and Buangor have independent supply systems. Water for Elmhurst is diverted from Hickman Creek, whilst water for Buangor it is harvested from McLeods Creek. Both creeks are tributaries of the Wimmera River. Elmhurst and Buangor are small towns with populations of 234 and 49 persons respectively.

The average annual demands for Elmhurst and Buangor are 22 ML and 12 ML per annum respectively. Based on data available, both of these towns have historically shown responsive catchments that enable reasonable levels of water harvesting even in the most dry winter conditions. A BE for these towns is currently being determined.

East Grampians Pipeline supply

The East Grampians Pipeline supply (also known as the Willaura system) is adjacent to the southeast corner of the Grampians range and is supplied by six weirs on small streams, with two each located on Stoney Creek, Mt. William Creek and Masons Creek. The supply is supplemented during the summer months by a groundwater supply comprising three bores.

The East Grampians Pipeline supply system services the townships of Willaura, Moyston, Lake Bolac and Wickliffe and provides bulk water to the Wannon Region Water Corporation township of Glenthompson under a supply agreement. The Moyston supply also has a groundwater allocation of 140 ML/annum. The system also supplies a number of rural connections, which draw water from the pipelines, between the various towns. Altogether the system provides approximately 1,000 GWMWater connections. The average annual total demand for these towns is 189 ML/annum and services approximately 1,400 persons.

The system has proven to be a very reliable in the past due to the availability of the backup groundwater bores.

Willaura is the largest of the towns in this system with just over 300 people. All four towns are located within rural communities in the Rural City of Ararat. A BE for the Eastern Grampians Pipeline Supply System is currently being determined.

Local Groundwater Supply

A single bore, located to the north west of Streatham, supplies Streatham and Westmere. The average annual demand for the towns is approximately 15 ML/annum.

Existing concerns about the condition of the Streatham bore and declining yield have led to it being included on the 2006-2007 GWMWater capital works program for upgrade.

6.2.4 Murray River Supply System

Supplies to the NMP are sourced from the Murray River at various points from Swan Hill to Piangil.

GWMWater currently has a BE for supply to the NMP from the Murray River for a volume of 2,500 ML/a issued in 1999. Owing to increasing demands, GWMWater purchased additional entitlements totaling 1,092 ML/a in 2003. This volume has not been fully utilised, enabling the selling of unused entitlement on the temporary water market.

When GWMWater's BE was established it foreshadowed an "indicative volume" of 592 ML as a BE volume for towns in the eastern part of the NMP area. However, the creation of the merged GWMWater has avoided any priority for separate urban and rural BEs in the NMP area.

A volume of 106.16 ML/a has recently been the subject of an application to convert to an urban security entitlement on the Goulburn system of 100 ML/a for Quambatook. Hence the remaining Murray system entitlement is 3485.84 ML/a.

Goulburn-Murray Water (G-MW) sets water allocations for the Murray River system based on Victoria's share of water resource availability in that system. Allocations are announced on a monthly basis commencing in July each year. The allocations are expressed as a percentage of entitlement, with individual entitlement holders being responsible for managing their system usage within the available allocation.

Allocations typically increase during Spring if inflows are above planned levels. In addition to advising of the current allocation level, G-MW provides advice of likely subsequent levels based on analysis of inflow scenarios.

While in the long-term Murray system allocations have proven to be very secure, inflows in 2006-2007 were the lowest on record for the Murray system. By February 2008 the projection is that even in an average year the allocation would be 100%, but only 29% for a 1 in 10 dry year. Initial forecasts for the 2007-2008 season are for a nil allocation.

DSE has coordinated a program to plan contingency supply measures in northern Victoria to manage low allocations on the Murray, and the similarly low allocations on other northern Victorian systems.

Looking forward, a series of average years would lead to 100% allocations being available in 2007-2008 and in subsequent years. Although there is some probability of lower allocations

Consideration of the past 10 year inflows on the Murray system, as represented by seasonal allocations, suggests that planning on the basis of 100% allocations is reasonable for GWMWater. Measures such as temporary entitlement purchases will enable GWMWater to achieve these levels of supply should allocations less than 100% are available. The assessment of implementation of these measures would be made on an annual basis.

During the Water Plan period GWMWater is seeking to convert existing entitlement from the Waranga channel to a Murray entitlement for supply to SS5.

6.2.5 Waranga Western Channel System

The Waranga Western Channel is a point source for water on the North Eastern corner of the Wimmera Mallee Channel network.

GWMWater entitlement to water from the Waranga Western Channel is listed as a delivery obligation under the Goulburn BE. The underlying security of water under the entitlement is unclear but the volume is constrained every second year to provide for periodic maintenance on the channel.

The volumes nominally available under the agreement are 24,000 ML and 2,000 ML in alternate years. The area commanded by the Waranga channel is the area Berriwillock / Culgoa area or System 5 under the WMPP design area. 'Lifting water' and pumping can extend the range of the Waranga Channel extended to Wycheproof, Birchip and Hopetoun when there are constraints on supply from the Grampians headworks.

The town of Quambatook is also supplied from the Waranga via the Normanville pipeline system and the underlying security of water for water supplied to Quambatook is 99%.

It is intended that the volume converted from the GWMWater Murray entitlement be credited back to GWMWater when the Goulburn BE is adjusted on completion of the WMPP.

6.2.6 Groundwater Supply System

Groundwater supplies do not have a nominal level of security but there is recognition that there are potential issues in relation to the sustainability of these reserves.

Groundwater areas that are at risk are generally the subject of a groundwater protection zone. In such circumstances however these supplies are not the subject of restriction and as such groundwater towns have not been the subject of water supply restriction other than the introduction of permanent water savings measures.

Groundwater systems are managed based on the level of utilisation of the aquifer system compared to the sustainable yield of that system. Within the Murray Group Limestone Aquifer system, specific management areas have been set up and are as follows:

- Apsley
- Neuarcurr
- Gymbowen
- Kaniva
- Balrootan
- Telopea Downs and
- Murrayville

Within these areas, formal Permissible Consumptive Volumes (PCV) have been declared by the Minister for Water. GWMWater is required to manage utilisation of irrigation and commercial extractions within the PCV limits. These are detailed in the Table below.

In addition, a strip of land extending 20km east from the South Australian border is managed according to the Victorian-South Australian Border Groundwater Act. The provisions of this Act are essentially similar to the management arrangements in the above listed groundwater management areas.

Generally underlying the same area, a deeper aquifer, the Tertiary Confined Sands Aquifer has also been segmented into management areas, with PCVs set in some cases. Usage of water from this aquifer is virtually zero, as the greater depth makes utilisation of water from this aquifer largely un-economic.

The Walpeup West bore system is an adjunct to the Wimmera-Mallee D&S system and is also sourced from the Murray Group Limestone Aquifer.

Table 6.2.4. Urban allocation in groundwater supplied towns

| Area Name | PCV (ML) | Town | Licence Allocations | Demand (ML) |
|--------------------|------------------------------------|-------------|---------------------|-------------|
| Apsley WSPA | New PCV currently being determined | Apsley | 40 | 42 |
| | | Edenhope | 150 | 191 |
| Nhill GMA | 998 | Nhill | 1,000 | 463 |
| Gymbowen GMA | 10,330* | Goroke | 86 | 62 |
| | | Harrow | 29 | 36 |
| Kaniva WSPA | 6,950 | Kaniva | 600 | 217 |
| | | Lillimur | 32 | 9 |
| | | Miram | 7 | 2 |
| | | Serviceton | 25 | 31 |
| Neuarpuurr WSPA | 10,307 | | | |
| Murrayville WSPA | 10,883 | Cowangie | 40 | 4 |
| | | Murrayville | 475 | 128 |
| Teloepa Downs WSPA | 13,435 | | | |
| Other | | Kiata | 40 | 7 |
| TOTAL | | | 2524 | 1192 |

* - PCV not gazetted yet.

Edenhope is a special case within this grouping. Until recently Edenhope has been supplied from Lake Wallace. Since about 2001, Lake Wallace has been empty or nearly so, and the town's supply is now reliant on some marginal bores incorporating desalination. GWMWater is no longer able to consider Lake Wallace a secure resource, and accordingly are undertaking a program to provide a secure supply to Edenhope. This program is expected to be complete in the 2007/2008 financial year.

Water allocations in groundwater systems in the GWMWater area are not set annually as the systems respond, typically, in periods greater than one year.

GMPs in the Water Supply Protection Areas (WSPA) are reviewed formally every five years to determine, amongst other things, the appropriateness of the PCV and whether it needs to be changed.

Reviews of the Murrayville and Neuarpuurr WSPAs are currently underway. These reviews are highlighting issues associated with trends in groundwater levels that could lead to reductions in the PCVs in these areas. However, it is premature to reach a conclusion in this regard.

No existing WSPAs have provision for implementation of restrictions based on water availability, however there are other WSPAs within Victoria where the management plans for the WSPA allow for the introduction of restrictions based on observed water levels or other factors.

6.3 Climate Change

There has been general acceptance that changes in weather patterns over the past fifty-years have altered the landscape and this has become particularly topical over the last decade.

At a local level the studies that have been undertaken to date suggest that there will be a continued trend toward extreme weather events. Rainfall will generally trend to decline in western Victoria and this rain will become more intense in the east.

Declining rainfall combined with the increases in temperature suggests an overall decline of the sustainable yield of water supply in the region.

6.4 Supply Forecasts

The UWSD strategy attempts to provide a strategic context to supply and demand over the medium to longer term. The strategy is underpinned by an assumption that yields will decline over the medium to longer term and that underlying demand/consumption should be modified accordingly.

In order to meet the overall expected impact of climate change it is anticipated that urban use will be required to fall by approximately 40ML per annum under a median climate change scenario.

6.5 Summary of Urban Demand Forecasts

In preparing demand forecasts for the region GWMWater has three strategic dimensions to the demand forecasts, population and related demographic projections, water consumption and the overall improvements in water use efficiency and the additional water to be secured by the WMPP.

6.6 Population Projections

The population projections are based on information supplied by the Australian Bureau of Statistics (2006) and the Department of Infrastructure. This is supplemented by municipal planning data where it provides more intuitive insight into population projections.

The Wimmera Mallee region has generally experienced a decline in population over the past two decades. A decline in fertility rates and an increase in the average age of the population have contributed to this decline.

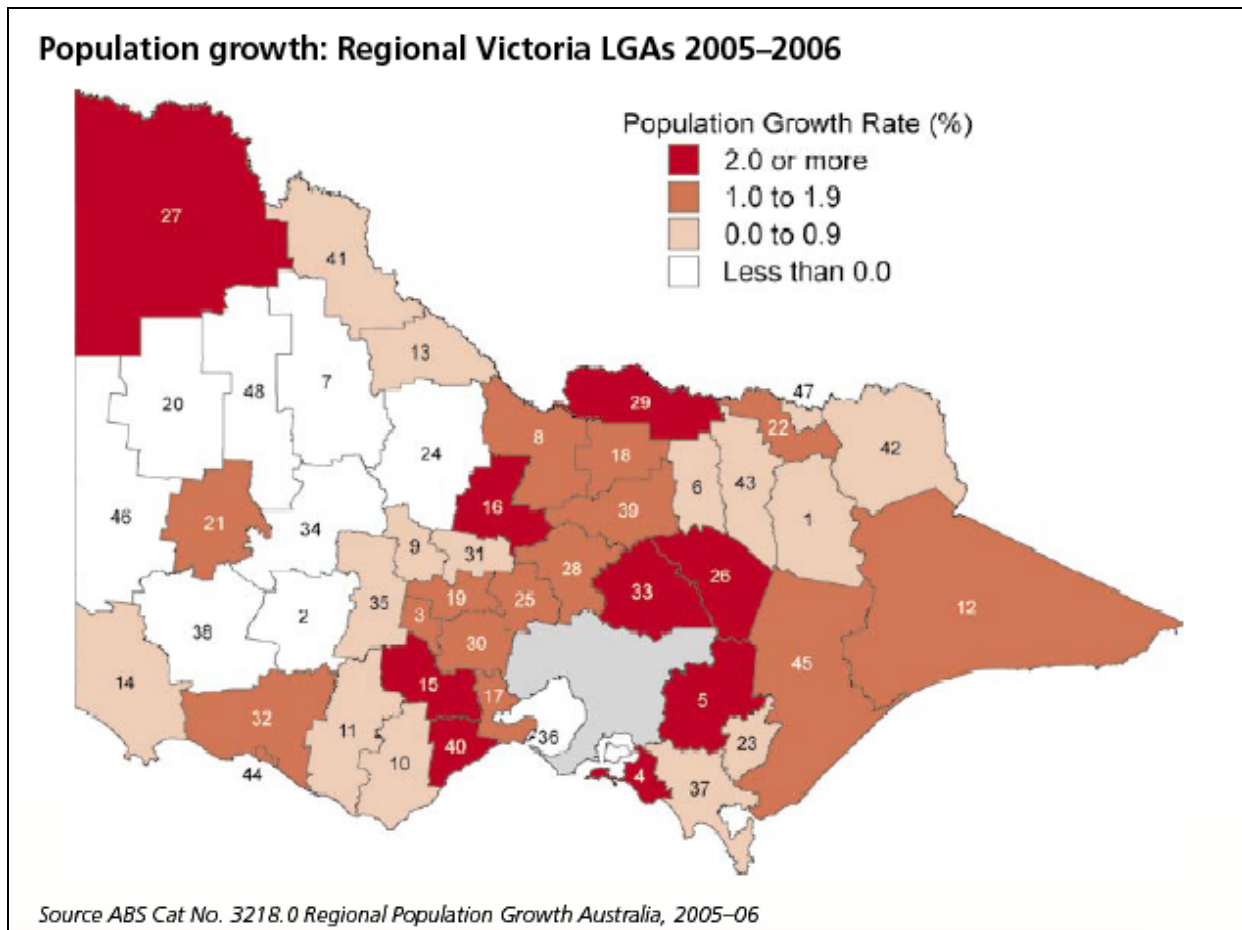
Of the thirteen municipalities represented in the GWMWater region, Horsham was the only town that has exhibited a positive annual growth in population from 2001 to 2006 at 1.0 % per annum.¹ The two most northern municipalities of Mildura Rural City and Swan Hill Rural City had growing populations in their major centres, however, in the small towns that fall within the GWMWater service area, populations were also declining.

¹ ABS, 3218.0 Regional Population Growth, Australian, 2007.

The average decline across the region was 0.6%/annum from 2001-2006 and 2.0% in 2005-2006. Population was estimated to increase by only 52 people across the GWMWater region in 2005-2006. Since 2001, a loss of 1,157 people from the region has been recorded.

The only positive growth expect outside Horsham is at the popular tourist town of Halls Gap. Stable or minor increases may also be expected in the towns of Stawell and Ararat in the future.

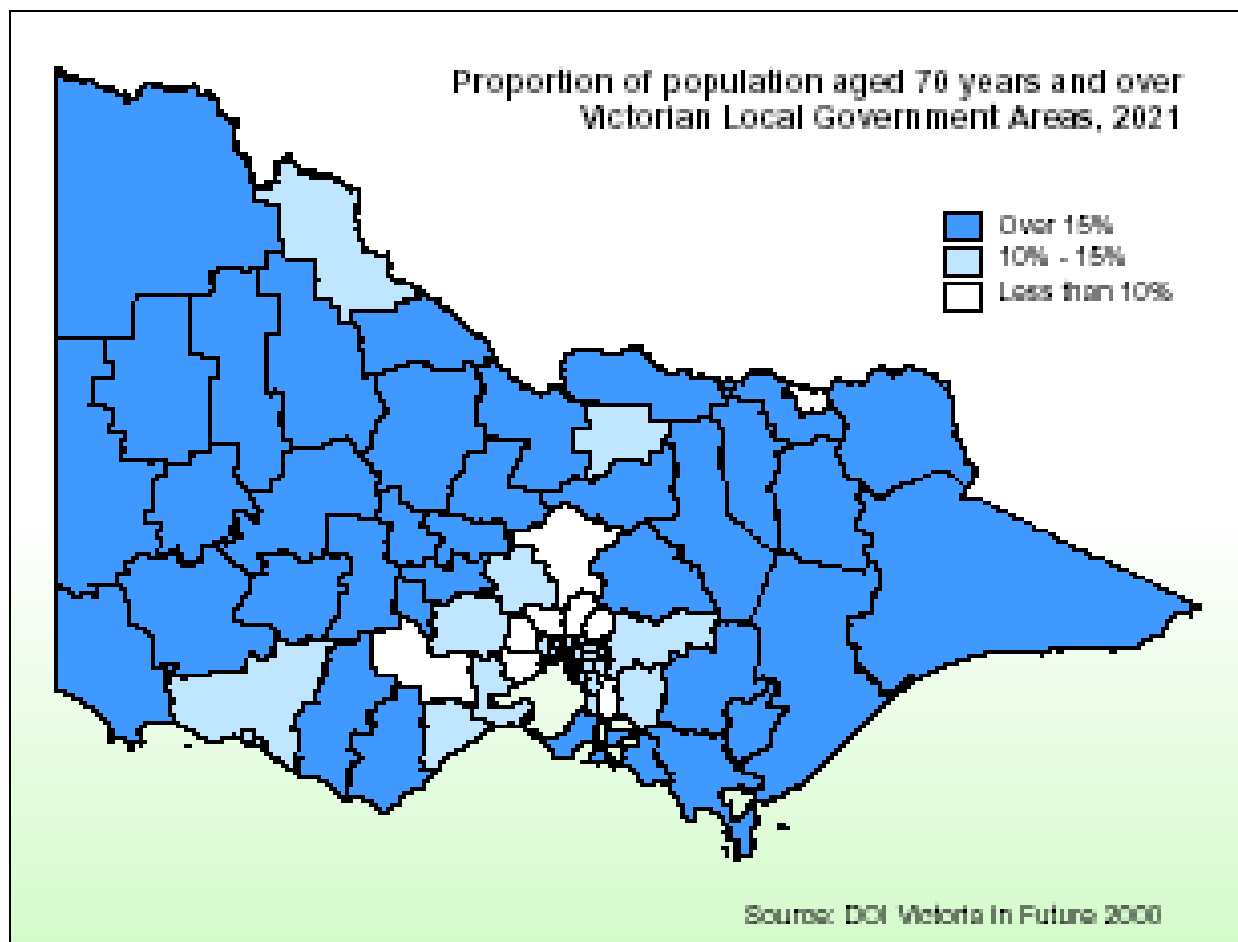
Figure 6.6.1: Average Population Loss – Victoria



A common thread of all municipalities, irrespective of whether they are in decline or stabilising, is the increase in older age groups and the decline of younger age groups. The median age for the state of Victoria is 36.8. Ages for local government areas in the GWMWater region range from 38.9 in Horsham through to 45.4 in the Buloke shire. The average age for the Wimmera region is 42.8, six years above the state average. ²

² Ibid.

Figure 6.6.2: Victoria Ageing Profile 2021³



Projections made by the DSE in *'Victoria in Future'* suggests that this trend will continue.⁴ This was reinforced in a more recent study titled *'Ageing in the Bush - A perspective from Victoria'* that showed the current trends projecting an increase in the number of persons aged 60 and over, and a decline in people aged 20 and under.⁵

6.7 Socio Economic Status

The drought and significant changes in agricultural practice have reduced the need for people in the region. This has translated to less employment in towns that service the region. Horsham and other southeastern towns in the region experienced net migration from the smaller towns in the north and west. The introduction of a reliable water supply via the WMPP will create opportunities for industries to be established that will value add to the agricultural outputs of the region.

In translating this information to households there has also been a decline in average persons per household. This means that the number of households remains relatively constant despite the overall reduction in people.

³ Department of Infrastructure 'Regional Matters' - 2002

⁴ DSE, *Victoria in the Future* 2004.

⁵ DSE, *Ageing in the Bush - A perspective from Victoria*

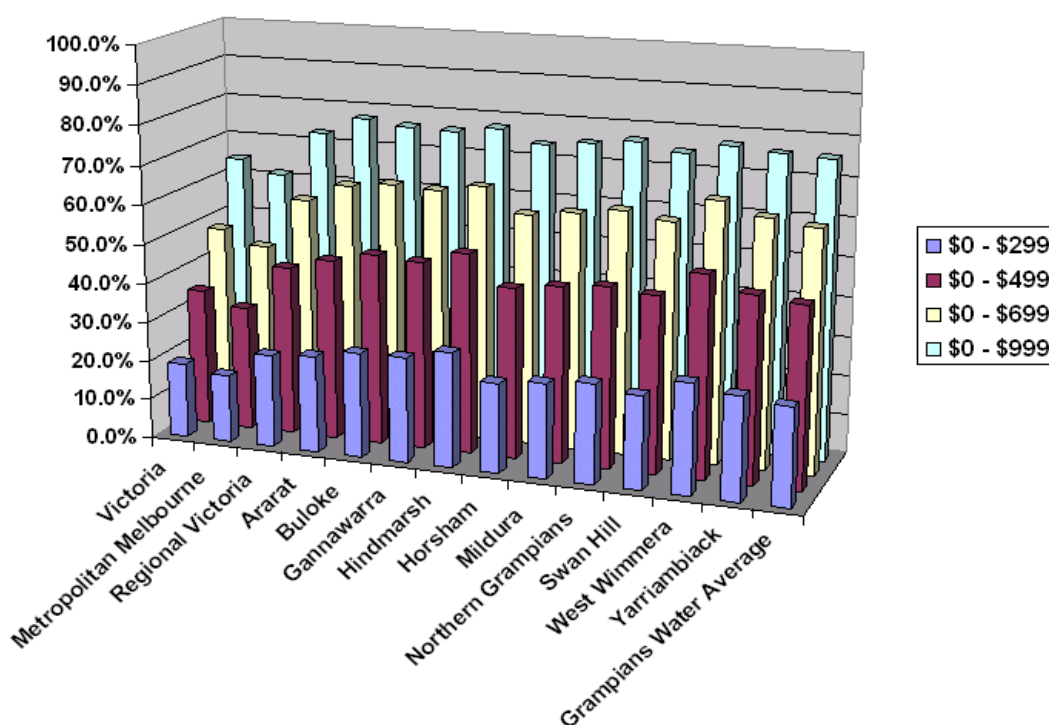
Average water consumption per household will therefore decline and in projecting forward average consumption per household will reduce over and above any targets associated with improved efficiency in water use.

Reduced employment opportunities for young people in the increasingly efficient rural sector have also resulted in a population drift to major urban centres outside the GWMWater supply area. As a result, there is a major concern by customers in respect to affordability of infrastructure services, including water and wastewater.

GWMWater has over 10,000 urban customers who are in receipt of pensioner or health care cards. This represents over 40% of the total residential customer base. An additional 244 rural customers are in receipt of a pensioner concession.

The income profile shown below is for the various Local Government areas within the GWMWater region.

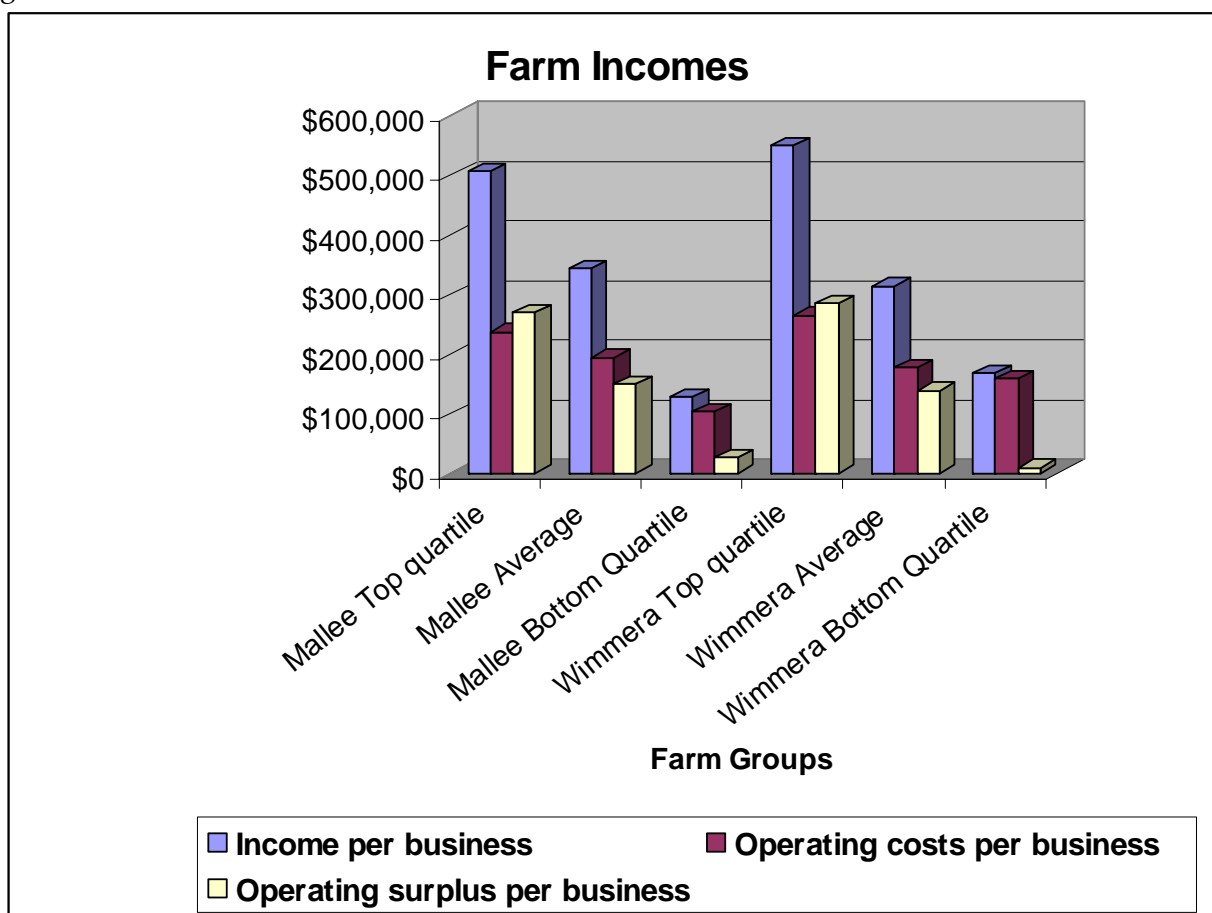
Figure 6.7.1: Income Profile of the GWMWater Area ⁶



The income levels of farmers in the Wimmera/Eastern South Australia and Mallee/Eastern South Australia have been the subject of studies undertaken by the Australian Bureau of Agriculture and Resource Economics (ABARE). The findings of this research for grains farm profitability in the period 2000/2001 to 2002/2003 is summarised in the following charts.

⁶ Department of Infrastructure 'Regional Matters' - 2002.

Figure 6.7.2: Farm Incomes



Increasing debt levels are expected as a result of further increased costs because of drought conditions. The average debt level for the region has increased by \$200,000 over five years. In 200/2001 the average debt levels was \$250,000 and by 2004/2005 this had increased to \$450,000.⁷

Regional affordability is an issue, a declining population presents a significant challenge to GWMWater where there is a smaller population base in an environment of increasing technical regulation and customer expectation as represented in the customer service standards. Perhaps the most critical factor affecting regional affordability is the impact of the current drought. More than 90% of the area serviced by GWMWater has been declared drought affected. As a result, rural customers in drought-affected areas qualify for interim Exceptional Circumstances (EC) funding.

The drought in 2006 resulted in an 80% reduction in grain production and 40% reduction in livestock production in the region.⁸ Economic modelling of the loss of income from the agricultural sector showed that there was a loss of \$1.047 Billion of regional output with a further indirect loss of \$130 Million from other sectors. In the Wimmera, crop production

⁷ Victorian Farmers Federation, Submission to the Victorian Ministerial Drought Taskforce, Melbourne, VFF, October 2006.

⁸ RMCG, 'Wimmera Southern Mallee Drought Report 2007', Feb 2007, pg 1.

was estimated to be only 30% of the 2005 season. This equates to approximately \$300 Million of lost farm income.⁹

Figure 6.7.3: Farm Viability

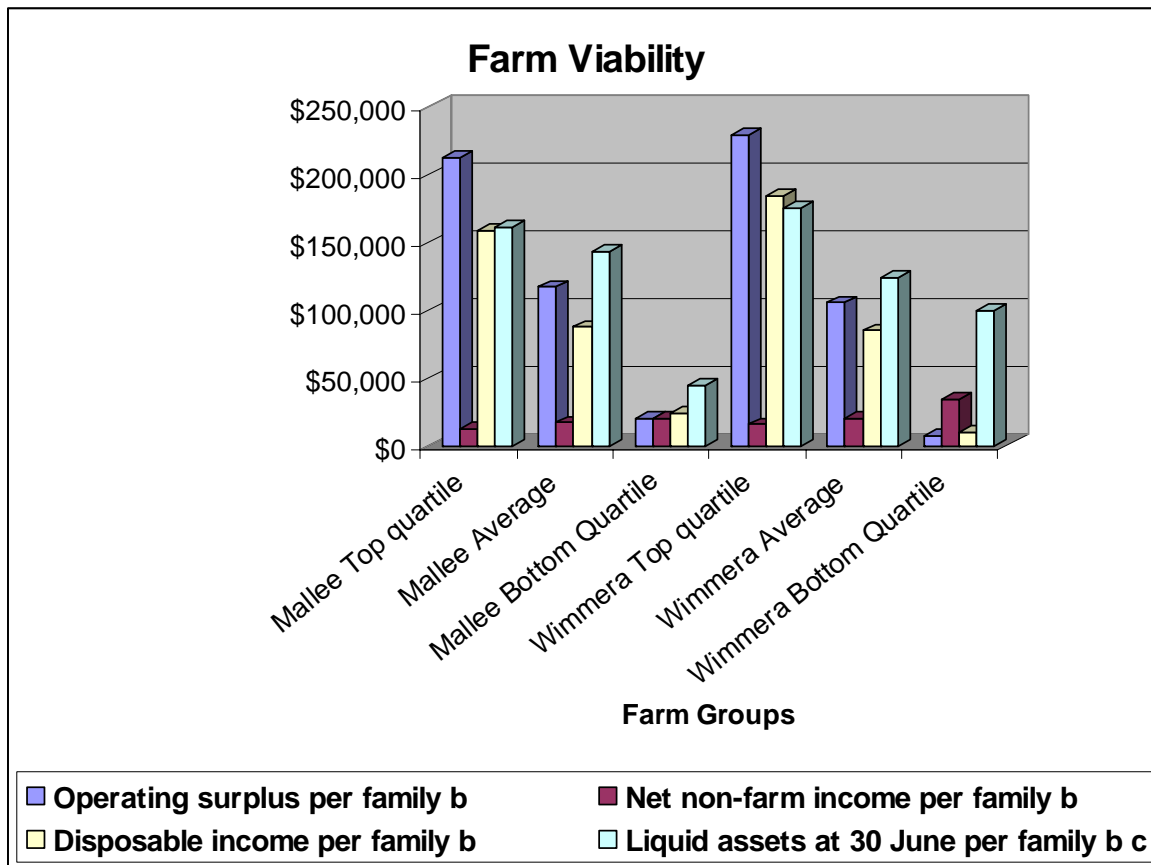


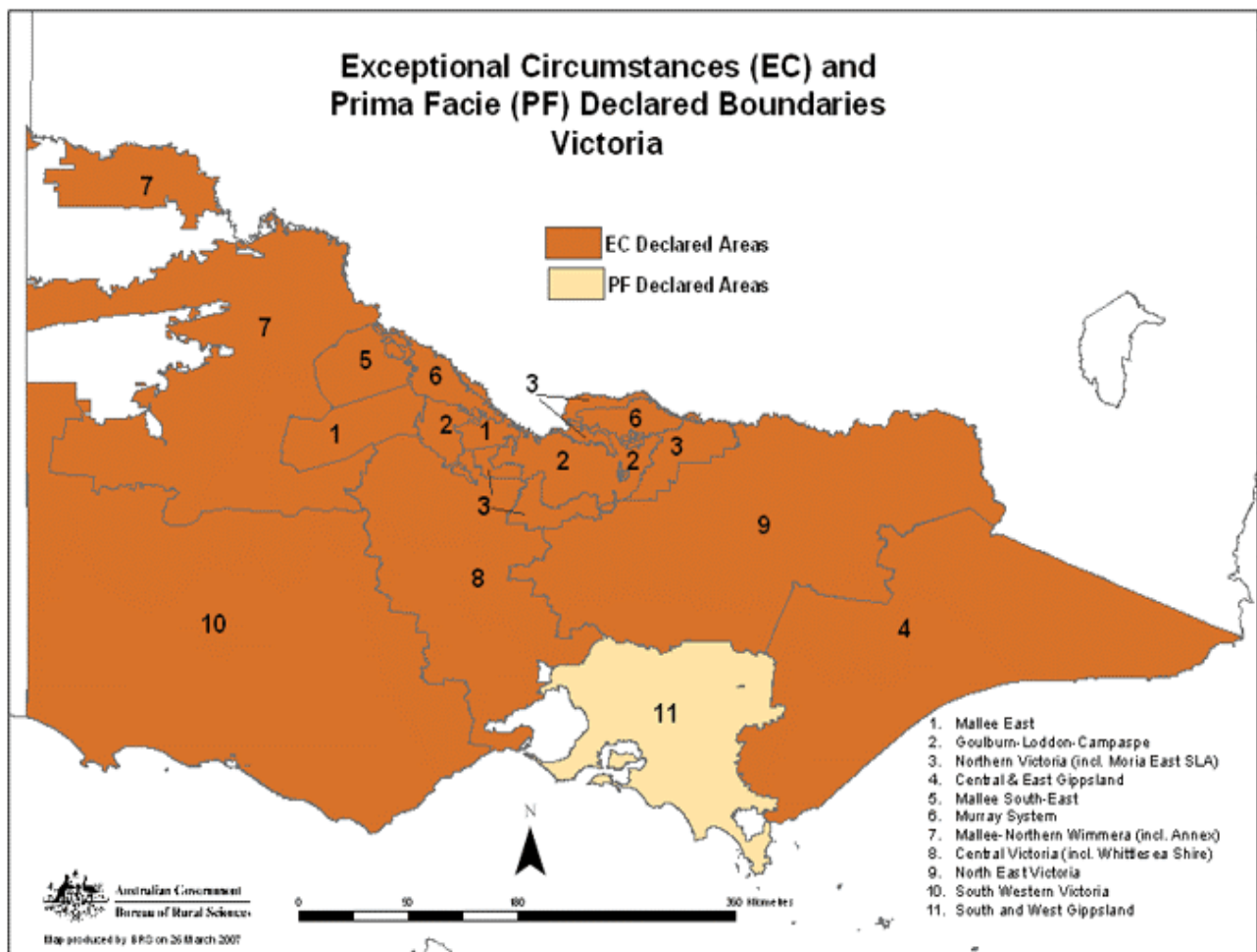
Table 6.7.4: Wimmera Crop Production in 2005 in Comparison to 2006 Estimates

| Crop | 2005 | | | 2006 | | | |
|-------------------------|----------------|------------|-------------------------------|------------------------|------------|-------------------------------|-------------|
| | Tonnes (,000) | Unit Price | Gross Value of Production \$M | Tonnes estimate (,000) | Unit Price | Gross Value of Production \$M | GV% of 2005 |
| Wheat | 1,100 | 142 | 156.20 | 250 | 210 | 52.50 | 34 |
| Barley | 900 | 140 | 126.00 | 200 | 190 | 38.00 | 30 |
| Oats | 120 | 125 | 15.00 | 30 | 140 | 4.20 | 28 |
| Triticale | 80 | 134 | 10.72 | 20 | 160 | 3.20 | 30 |
| Canola | 100 | 294 | 29.40 | 20 | 400 | 8.00 | 27 |
| Field Peas | 110 | 186 | 20.46 | 25 | 220 | 5.50 | 27 |
| Lentils | 90 | 420 | 37.80 | 10 | 490 | 4.90 | 13 |
| Chickpeas | 10 | 370 | 3.70 | 2 | 600 | 1.20 | 32 |
| Faba beans | 70 | 190 | 13.30 | 10 | 200 | 2.00 | 15 |
| Vetch | 1.5 | 240 | 0.36 | 0.4 | 240 | 0.10 | 27 |
| Lupins | 15 | 140 | 2.10 | 4 | 240 | 0.96 | 46 |
| Grain Production | 2,596.5 | | 415.04 | 571.4 | | 120.56 | 29 |

⁹ Department of Primary Industries, Horsham (2006) *Grain and Rainfall Update September 2006*.

Social and subsequent economic impacts of the drought include unemployment, reduced access to education, increase in rural poverty, reduction in access to health and welfare, population decline, loss of social capital, loss of institutional capital, reduced agricultural workforce and stress in farm families and communities. In addition, the health impacts of drought have been identified and relate to continuous stress, increased workload and reduced income. There is also substantial economic inter-dependency between rural and urban communities in the GWMWater region.

Figure 6.7.5: Drought Affected Areas Within Victoria ¹⁰



A key objective of the WMPP however is to secure water supply for the region and with this improved security, enhance the opportunity for economic development in the region. This has been a key element of the WMPP and the economic justification for the WMPP is based on the need to realise this opportunity.

The WMPP presents substantial opportunities to enhance regional development and reverse these population trends. A secure water supply will provide certainty to industries

¹⁰ Australian Government, Department of Agriculture, Fisheries and Forestry, 2007.

looking to establish in the region leveraging off the strong agricultural base in the area. The water returned to the environment will also enhance the regional amenity and enhance the opportunities for recreational and eco-tourism in the region. It is assumed that any significant reversal of population projections as a consequence of the WMPP will not be realised until the next regulatory period.

6.8 Water Consumption Projections

The medium to long-term demand for urban water supply has been projected in the UWSDS. In the short term, however, the demand forecasts need to consider the extent that GWMWater supply systems will recover from the drought and the demand response that arises from this scenario.

All towns in the GWMWater region are presently on PWSR and on varying levels of water restriction. The level of restrictions for GWMWater towns a 9 July 2007 are outlined below:

Permanent Water Saving Rules Only

| | | | |
|--------|------------|--------|-------------|
| Apsley | Cowangie | Goroke | Kaniva |
| Kiata | Lillimur | Miram | Murrayville |
| Nhill | Serviceton | | |

Stage 1 Restrictions

| | |
|----------|--------|
| Edenhope | Harrow |
|----------|--------|

Stage 2 Restrictions

| | |
|---------|----------|
| Buangor | Elmhurst |
|---------|----------|

Stage 4 Restrictions

| | | | |
|---------------|-------------|--------------|---------------|
| Antwerp | Ararat | Berriwillock | Beulah |
| Birchip | Brim | Charlton | Chillingollah |
| Chinkapook | Clear Lake | Culgoa | Dimboola |
| Donald | Dooen | Glenorchy | Great Western |
| Halls Gap | Haven | Hopetoun | Horsham |
| Jeparit | Jung | Lake Bolac | Lalbert |
| Lascelles | Manangatang | Marnoo | Minyip |
| Moyston | Murtoa | Nandaly | Natimuk |
| Noradjuah | Nullawil | Ouyen | Patchewollock |
| Pimpinio | Pomonal | Quambatook | Rainbow |
| Rupanyup | Sea Lake | Speed | St Arnaud |
| Stawell | Streatham | Tarranyurk | Tempy |
| Ultima | Underbool | Waitchie | Walpeup |
| Warracknabeal | Watchem | Westmere | Wickliffe |
| Willaura | Woomelang | Wycheproof | Yaapeet |

In implementing urban water restrictions GWMWater has worked closely with local government to identify key public reserves and assets for possible preservation to sustain

as best as possible the amenity of the region. Many sporting and recreational facilities are the fabric of the community, which hold GWMWater's region together. Any exemptions from water supply restriction are subject to an approved water conservation plan that will ensure minimum overall water usage.

GWMWater has also worked closely with local businesses to minimise the impact of Stage Four water restrictions on their day-to-day operations where possible.

The anticipated impact of escalated water restrictions in 2006/2007 has been an overall reduction in consumption of 2,000 ML. This figure is over and above the 1,000 ML previously anticipated under a combination of Stage 1 and Stage 2 restrictions.

Consistent with the overall targets inherent in the UWSDS, the demand projections have been underpinned by a reduction in average consumption of 2% per year over the regulatory period.

6.9 Individual Demand Forecasts

The GWMWater Urban Water Supply Demand Strategy has been prepared on the basis of the growth and water supply outlook that would prevail in normal seasons.

This Water Plan has been prepared in the context of the projections of population and assessments that are prepared by the Department of Infrastructure with reference to municipal plans consistent with the urban water supply / demand strategy. The Water Plan acknowledges the likelihood that we will be entering the regulatory period on the basis of a restricted water supply and the consumption / urban demand forecasts are based on this assumption.

Rural consumption forecasts are more closely aligned to the water allocation principles in the BE. The WMPP however is based on demand assumptions and water supply principles that were included in the WMPP Interim Business Case.

6.9.1 Urban Assessments and Volumes

Urban assessments over the regulatory period are expected to steadily increase with almost all the increase to occur in the major centres. Any benefits of the WMPP that are likely to stimulate in growth outside the major centres are assumed to occur beyond the regulatory period.

Figure 6.9.1: Urban Water Assessments

| Town | Residential Assessments | | | | | | | Total Assessments | | | | | | |
|---------------------|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| Antwerp | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| Apsley | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| Ararat | 3387 | 3414 | 3441 | 3468 | 3496 | 3524 | 3552 | 3998 | 4027 | 4056 | 4085 | 4115 | 4145 | 4175 |
| Berrillock | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| Beulah | 142 | 141 | 140 | 139 | 138 | 137 | 136 | 188 | 187 | 186 | 185 | 184 | 183 | 182 |
| Birchip | 355 | 353 | 351 | 349 | 347 | 345 | 343 | 461 | 459 | 457 | 455 | 453 | 451 | 449 |
| Brim | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| Buangor | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| Charlton | 546 | 546 | 546 | 546 | 546 | 546 | 546 | 711 | 711 | 711 | 711 | 711 | 711 | 711 |
| Chillingollah | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| Chinapkook | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| Cowangie | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| Culgoa | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 79 | 78 | 77 | 76 | 75 | 74 | 73 |
| Dimboola | 755 | 755 | 755 | 755 | 755 | 755 | 755 | 883 | 883 | 883 | 883 | 883 | 883 | 883 |
| Donald | 690 | 690 | 690 | 690 | 690 | 690 | 690 | 887 | 887 | 887 | 887 | 887 | 887 | 887 |
| Dooen | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| Edenhope | 442 | 442 | 442 | 442 | 442 | 442 | 442 | 551 | 551 | 551 | 551 | 551 | 551 | 551 |
| Elmhurst | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| Glenorchy | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| Goroke | 137 | 136 | 135 | 134 | 133 | 132 | 131 | 184 | 183 | 182 | 181 | 180 | 179 | 178 |
| Great_Western | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 142 | 143 | 144 | 145 | 146 | 147 | 148 |
| Halls_Gap | 386 | 401 | 417 | 434 | 451 | 469 | 488 | 606 | 628 | 651 | 675 | 699 | 724 | 750 |
| Harrow | 66 | 69 | 72 | 75 | 78 | 81 | 84 | 97 | 101 | 105 | 109 | 113 | 117 | 121 |
| Hopetoun | 306 | 306 | 306 | 306 | 306 | 306 | 306 | 398 | 398 | 398 | 398 | 398 | 398 | 398 |
| Horsham | 6681 | 6765 | 6850 | 6936 | 7023 | 7111 | 7200 | 8371 | 8472 | 8574 | 8679 | 8785 | 8892 | 9000 |
| Jeppit | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 318 | 318 | 318 | 318 | 318 | 318 | 318 |
| Jung | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| Kaniva | 410 | 410 | 410 | 410 | 410 | 410 | 410 | 547 | 547 | 547 | 547 | 547 | 547 | 547 |
| Kiata | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Lake_Bolac | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 172 | 172 | 172 | 172 | 172 | 172 | 172 |
| Lalbert | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| Lascelles | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Lillimur | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Manangatang | 129 | 128 | 127 | 126 | 125 | 124 | 123 | 175 | 174 | 173 | 172 | 171 | 170 | 169 |
| Marnoo | 51 | 50 | 50 | 50 | 50 | 50 | 50 | 76 | 75 | 75 | 75 | 75 | 75 | 75 |
| Minyip | 236 | 234 | 232 | 230 | 228 | 226 | 224 | 289 | 287 | 285 | 283 | 281 | 279 | 277 |
| Miram | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Moyston | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Murrayville | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 187 | 186 | 185 | 184 | 183 | 182 | 181 |
| Murtoa | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 501 | 501 | 501 | 501 | 501 | 501 | 501 |
| Nandaly | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Natimuk | 217 | 217 | 217 | 217 | 217 | 217 | 217 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |
| Nhill | 968 | 968 | 968 | 968 | 968 | 968 | 968 | 1193 | 1193 | 1193 | 1193 | 1193 | 1193 | 1193 |
| Noradjuha_ClearLake | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Nullawil | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Ouyen | 551 | 551 | 551 | 551 | 551 | 551 | 551 | 692 | 692 | 692 | 692 | 692 | 692 | 692 |
| Patchewollock | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| Pimpinio | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| Pomonal | 106 | 110 | 114 | 119 | 124 | 129 | 134 | 124 | 128 | 132 | 137 | 142 | 147 | 152 |
| Quambatook | 132 | 131 | 130 | 129 | 128 | 127 | 126 | 171 | 170 | 169 | 168 | 167 | 166 | 165 |
| Rainbow | 303 | 303 | 303 | 303 | 303 | 303 | 303 | 389 | 389 | 389 | 389 | 389 | 389 | 389 |
| Rupanyup | 201 | 200 | 199 | 198 | 197 | 196 | 195 | 261 | 260 | 259 | 258 | 257 | 256 | 255 |
| SeaLake | 339 | 337 | 335 | 333 | 331 | 329 | 327 | 426 | 424 | 422 | 420 | 418 | 416 | 414 |
| Serviceton | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| Speed | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| St.Arnaud | 1156 | 1156 | 1156 | 1156 | 1156 | 1156 | 1156 | 1412 | 1412 | 1412 | 1412 | 1412 | 1412 | 1412 |
| Stawell | 2815 | 2836 | 2857 | 2878 | 2899 | 2921 | 2943 | 3379 | 3403 | 3427 | 3451 | 3475 | 3500 | 3525 |
| Streatham | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| Tarranyurk | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Tempy | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Ultima | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| Underbool | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 138 | 137 | 136 | 135 | 134 | 133 | 132 |
| Waltchie | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Walpeup | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 79 | 78 | 77 | 76 | 75 | 74 | 73 |
| Warracknabeal | 1227 | 1227 | 1227 | 1227 | 1227 | 1227 | 1227 | 1474 | 1474 | 1474 | 1474 | 1474 | 1474 | 1474 |
| Watchem | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| Westmere | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Wickliffe | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| Willaura | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 255 | 255 | 255 | 255 | 255 | 255 | 255 |
| Woomelang | 113 | 112 | 111 | 110 | 109 | 108 | 107 | 152 | 151 | 150 | 149 | 148 | 147 | 146 |
| Wycheproof | 344 | 342 | 340 | 338 | 336 | 334 | 332 | 440 | 438 | 436 | 434 | 432 | 430 | 428 |
| Yaapeet | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| Total | 25794 | 25930 | 26069 | 26211 | 26355 | 26502 | 26651 | 32206 | 32372 | 32541 | 32715 | 32891 | 33070 | 33251 |

Urban volumes are expected to progressively increase as supply capability is restored but this is in the context of an overall saving of 2% per year.

Figure 6.9.2: Urban Volumetric Water Consumption

| Town | Residential Volumes ML | | | | | | | Total Volumes ML | | | | | | |
|---------------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|-------------|-------------|--------------|--------------|--------------|--------------|
| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| Antwerp | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| Apsley | 32 | 32 | 34 | 33 | 32 | 32 | 31 | 41 | 41 | 43 | 42 | 41 | 40 | 39 |
| Ararat | 418 | 407 | 523 | 636 | 706 | 737 | 728 | 728 | 718 | 877 | 1034 | 1133 | 1176 | 1164 |
| Berrivillcock | 12 | 12 | 15 | 19 | 20 | 21 | 21 | 17 | 17 | 21 | 25 | 28 | 29 | 28 |
| Beulah | 33 | 32 | 41 | 49 | 54 | 55 | 54 | 42 | 42 | 53 | 63 | 69 | 71 | 69 |
| Birchip | 57 | 55 | 70 | 83 | 91 | 94 | 92 | 69 | 67 | 85 | 102 | 112 | 116 | 113 |
| Brim | 11 | 11 | 14 | 17 | 18 | 19 | 19 | 14 | 14 | 17 | 21 | 23 | 24 | 23 |
| Buangor | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 10 | 10 | 11 | 11 | 11 | 11 | 11 |
| Charton | 87 | 87 | 111 | 134 | 148 | 153 | 150 | 134 | 134 | 170 | 205 | 227 | 235 | 231 |
| Chillingollah | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Chinkapook | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Cowangie | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 6 | 6 | 7 | 6 | 6 | 6 | 6 |
| Culgoa | 10 | 10 | 12 | 15 | 16 | 16 | 16 | 13 | 13 | 16 | 18 | 20 | 20 | 20 |
| Dimboola | 113 | 113 | 144 | 174 | 192 | 199 | 195 | 144 | 144 | 183 | 221 | 244 | 253 | 248 |
| Donald | 145 | 145 | 185 | 223 | 246 | 255 | 250 | 193 | 193 | 246 | 297 | 328 | 340 | 334 |
| Dooen | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 6 | 6 | 6 | 6 |
| Edenhope | 117 | 117 | 121 | 119 | 116 | 114 | 112 | 148 | 148 | 153 | 150 | 147 | 144 | 142 |
| Elmhurst | 15 | 15 | 16 | 17 | 17 | 16 | 16 | 19 | 19 | 21 | 21 | 21 | 21 | 20 |
| Glenorchy | 4 | 4 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 9 | 10 | 10 | 10 |
| Goroke | 62 | 61 | 63 | 61 | 59 | 58 | 56 | 79 | 79 | 81 | 79 | 77 | 75 | 73 |
| Great_Western | 16 | 16 | 20 | 24 | 27 | 28 | 28 | 61 | 60 | 66 | 71 | 74 | 76 | 75 |
| Halls_Gap | 27 | 28 | 37 | 47 | 54 | 58 | 59 | 84 | 86 | 113 | 140 | 158 | 169 | 170 |
| Harrow | 23 | 24 | 25 | 26 | 27 | 27 | 27 | 34 | 35 | 38 | 39 | 39 | 40 | 41 |
| Hopetoun | 55 | 55 | 70 | 85 | 94 | 97 | 95 | 77 | 77 | 98 | 118 | 130 | 135 | 132 |
| Horsham | 1107 | 1083 | 1397 | 1706 | 1905 | 1995 | 1980 | 1509 | 1489 | 1903 | 2314 | 2579 | 2703 | 2686 |
| Jeparit | 38 | 38 | 48 | 58 | 64 | 66 | 65 | 46 | 46 | 59 | 71 | 78 | 81 | 79 |
| Jung | 8 | 8 | 10 | 12 | 14 | 14 | 14 | 9 | 9 | 12 | 14 | 15 | 16 | 15 |
| Kaniva | 159 | 159 | 165 | 162 | 158 | 155 | 152 | 232 | 232 | 240 | 236 | 233 | 229 | 225 |
| Kiata | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 5 | 5 |
| Lake_Bolac | 20 | 20 | 25 | 30 | 34 | 35 | 34 | 33 | 33 | 42 | 51 | 56 | 58 | 57 |
| Lalbert | 17 | 17 | 17 | 17 | 17 | 16 | 16 | 20 | 20 | 21 | 20 | 20 | 20 | 19 |
| Lascelles | 4 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 6 | 8 | 9 | 10 | 10 | 10 |
| Lillimur | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 8 | 8 | 8 |
| Manangatang | 58 | 58 | 59 | 58 | 56 | 55 | 53 | 82 | 82 | 84 | 82 | 81 | 79 | 77 |
| Marnoo | 7 | 7 | 9 | 11 | 12 | 12 | 12 | 10 | 10 | 13 | 15 | 17 | 17 | 17 |
| Minyip | 52 | 51 | 65 | 78 | 85 | 87 | 85 | 64 | 63 | 80 | 96 | 105 | 108 | 105 |
| Miram | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Moyston | 9 | 9 | 12 | 14 | 15 | 16 | 16 | 11 | 11 | 13 | 16 | 18 | 18 | 18 |
| Murrayville | 76 | 76 | 78 | 76 | 73 | 72 | 70 | 105 | 105 | 108 | 105 | 103 | 100 | 98 |
| Murtoa | 62 | 62 | 79 | 95 | 105 | 108 | 106 | 74 | 74 | 95 | 114 | 126 | 130 | 128 |
| Nandaly | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 10 | 10 | 10 | 10 | 10 | 10 | 9 |
| Natimuk | 36 | 36 | 46 | 55 | 61 | 63 | 62 | 48 | 48 | 61 | 74 | 81 | 84 | 83 |
| Nhill | 373 | 373 | 386 | 378 | 371 | 363 | 327 | 468 | 468 | 484 | 475 | 466 | 458 | 420 |
| Noradjuha_ClearLake | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 6 | 6 | 6 |
| Nullawil | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 11 | 13 | 14 | 15 | 14 |
| Ouyen | 208 | 208 | 216 | 211 | 207 | 203 | 199 | 297 | 336 | 347 | 341 | 335 | 329 | 324 |
| Patchewollock | 6 | 6 | 8 | 10 | 11 | 11 | 11 | 9 | 9 | 11 | 13 | 15 | 15 | 15 |
| Pimpinio | 5 | 5 | 6 | 8 | 8 | 9 | 9 | 7 | 7 | 8 | 10 | 11 | 11 | 11 |
| Pomonal | 13 | 14 | 18 | 23 | 26 | 28 | 29 | 16 | 17 | 21 | 27 | 30 | 32 | 33 |
| Quambatook | 46 | 45 | 49 | 51 | 49 | 48 | 47 | 65 | 65 | 71 | 73 | 72 | 70 | 69 |
| Rainbow | 45 | 45 | 58 | 70 | 77 | 80 | 78 | 61 | 61 | 78 | 94 | 104 | 108 | 106 |
| Rupanyup | 44 | 44 | 56 | 67 | 73 | 76 | 74 | 55 | 55 | 70 | 84 | 92 | 95 | 93 |
| SeaLake | 122 | 122 | 125 | 122 | 119 | 116 | 113 | 164 | 164 | 168 | 165 | 161 | 157 | 154 |
| Serviceton | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Speed | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 11 | 11 | 12 | 12 | 11 | 11 | 11 |
| St.Arnaud | 174 | 174 | 221 | 267 | 294 | 304 | 298 | 296 | 296 | 364 | 429 | 468 | 483 | 476 |
| Stawell | 389 | 379 | 486 | 591 | 656 | 684 | 675 | 1105 | 1111 | 1255 | 1395 | 1483 | 1521 | 1510 |
| Streatham | 6 | 6 | 8 | 9 | 10 | 11 | 10 | 8 | 8 | 10 | 12 | 13 | 14 | 14 |
| Tarranyurk | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| Tempy | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Ultima | 31 | 31 | 32 | 32 | 31 | 30 | 30 | 38 | 38 | 39 | 39 | 38 | 37 | 37 |
| Underbool | 58 | 58 | 59 | 57 | 56 | 54 | 53 | 83 | 83 | 85 | 83 | 81 | 79 | 77 |
| Waitchie | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Walpeup | 21 | 21 | 21 | 20 | 19 | 19 | 18 | 31 | 30 | 31 | 30 | 29 | 28 | 28 |
| Warracknabeal | 215 | 208 | 265 | 319 | 352 | 364 | 357 | 324 | 317 | 404 | 489 | 540 | 561 | 552 |
| Watchem | 14 | 14 | 18 | 22 | 24 | 25 | 24 | 17 | 17 | 21 | 25 | 28 | 28 | 28 |
| Westmere | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 6 | 6 | 6 |
| Wickliffe | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 11 | 12 | 12 | 12 |
| Willaura | 33 | 33 | 42 | 51 | 56 | 58 | 57 | 44 | 44 | 55 | 67 | 73 | 76 | 75 |
| Woomelang | 23 | 23 | 28 | 34 | 37 | 38 | 37 | 31 | 31 | 39 | 47 | 51 | 53 | 51 |
| Wycheproof | 77 | 77 | 98 | 117 | 128 | 132 | 128 | 99 | 99 | 125 | 150 | 165 | 171 | 167 |
| Yaapeet | 5 | 5 | 6 | 7 | 8 | 8 | 8 | 7 | 7 | 8 | 10 | 10 | 11 | 11 |
| Total | 4884 | 4828 | 5822 | 6707 | 7241 | 7444 | 7299 | 7505 | 7510 | 8856 | 10071 | 10814 | 11108 | 10941 |

Figure 6.9.3: Urban Wastewater Assessments

| Town | Residential Assessments | | | | | | | Total Assessments | | | | | | |
|---------------|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| Ararat | 3106 | 3115 | 3124 | 3133 | 3142 | 3151 | 3160 | 3519 | 3529 | 3539 | 3549 | 3559 | 3569 | 3579 |
| Birchip | 337 | 335 | 333 | 331 | 329 | 327 | 325 | 417 | 415 | 413 | 411 | 409 | 407 | 405 |
| Charlton | 519 | 519 | 519 | 519 | 519 | 519 | 519 | 623 | 623 | 623 | 623 | 623 | 623 | 623 |
| Dimboola | 660 | 660 | 660 | 660 | 660 | 660 | 660 | 753 | 753 | 753 | 753 | 753 | 753 | 753 |
| Donald | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 795 | 795 | 795 | 795 | 795 | 795 | 795 |
| Edenhope | 423 | 423 | 423 | 423 | 423 | 423 | 423 | 503 | 503 | 503 | 503 | 503 | 503 | 503 |
| Great_Western | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| Halls_Gap | 353 | 367 | 382 | 397 | 413 | 430 | 447 | 509 | 529 | 550 | 572 | 595 | 619 | 643 |
| Hopetoun | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 375 | 375 | 375 | 375 | 375 | 375 | 375 |
| Horsham | 6362 | 6442 | 6523 | 6605 | 6688 | 6772 | 6857 | 7535 | 7630 | 7726 | 7823 | 7922 | 8022 | 8123 |
| Jeparit | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 280 | 280 | 280 | 280 | 280 | 280 | 280 |
| Kaniva | 388 | 388 | 388 | 388 | 388 | 388 | 388 | 472 | 472 | 472 | 472 | 472 | 472 | 472 |
| Lake_Bolac | 0 | 0 | 0 | 0 | 110 | 110 | 110 | 0 | 0 | 0 | 0 | 130 | 130 | 130 |
| Minyip | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 276 | 276 | 276 | 276 | 276 | 276 | 276 |
| Murtoa | 388 | 388 | 388 | 388 | 388 | 388 | 388 | 440 | 440 | 440 | 440 | 440 | 440 | 440 |
| Natimuk | 198 | 198 | 198 | 198 | 198 | 198 | 198 | 232 | 232 | 232 | 232 | 232 | 232 | 232 |
| Nhill | 925 | 925 | 925 | 925 | 925 | 925 | 925 | 1086 | 1086 | 1086 | 1086 | 1086 | 1086 | 1086 |
| Ouyen | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 646 | 646 | 646 | 646 | 646 | 646 | 646 |
| Rainbow | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 347 | 347 | 347 | 347 | 347 | 347 | 347 |
| Rupanyup | 0 | 0 | 0 | 0 | 0 | 0 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 195 |
| SeaLake | 323 | 323 | 323 | 323 | 323 | 323 | 323 | 398 | 398 | 398 | 398 | 398 | 398 | 398 |
| Serviceton | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| St.Arnaud | 1080 | 1080 | 1080 | 1080 | 1080 | 1080 | 1080 | 1273 | 1273 | 1273 | 1273 | 1273 | 1273 | 1273 |
| Stawell | 2563 | 2582 | 2601 | 2621 | 2641 | 2661 | 2681 | 2959 | 2980 | 3001 | 3023 | 3045 | 3067 | 3089 |
| Warracknabeal | 1141 | 1141 | 1141 | 1141 | 1141 | 1141 | 1141 | 1316 | 1316 | 1316 | 1316 | 1316 | 1316 | 1316 |
| Willaura | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 196 | 196 | 196 | 196 | 196 | 196 | 196 |
| Wycheproof | 321 | 321 | 321 | 321 | 321 | 321 | 321 | 380 | 380 | 380 | 380 | 380 | 380 | 380 |
| Total | 21505 | 21625 | 21747 | 21871 | 22107 | 22235 | 22634 | 25359 | 25503 | 25649 | 25798 | 26080 | 26234 | 26684 |

6.10 Issues for Specific Forecasting Parameters

6.10.1 Trade Waste Forecasts

Any increase in the number of minor trade waste customers over the next regulatory period is expected to be minimal. This is due mainly to the stability of the region's population and consequent low rate of development. Apart from a regular number of transfers in ownership, on average only 15 new trade waste customers connect to the GWMWater's sewer system annually. It is expected that this trend will continue throughout the next regulatory period.

A combination of polluter pays trade waste charging and a supportive education program has resulted in a change of water consumption behaviour in major trade waste customers. As the value of water becomes more appreciated by a region in drought, customers have become more conscious of their water usage patterns and the impact it has on their business. The trend in trade waste usage is expected to continue into the next water plan period.

6.10.2 Bulk Water Allocations to Other Water Corporations

In addition to direct supplies to customers, bulk water is provided to Wannon Water and Coliban Water as described below.

Wannon Water

Balmoral township is supplied by direct pumping from Rocklands Reservoir. The entitlement and allocations for Balmoral are defined in the Wimmera-Glenelg BEs.

Glenthompson township is supplied from the Willaura system which, as outlined above, has not been subject to restrictions to date.

Coliban Water

Coliban Water is supplied water from the Wimmera-Mallee channel system to storages at Borung, Wychitella and Korong Vale. The storages at Korong Vale are the major source of water for the township of Wedderburn, water for which is piped from Coliban Water's treatment plant at Korong Vale. The Coliban Water entitlement for these towns and seasonal allocations are defined in the Wimmera-Glenelg BEs.

The Table below shows projected allocations for Coliban and Wannon supply (Balmoral only) based on the Wimmera - Glenelg BE and different inflow levels.

Table 6.10.1: Urban (Non GWMWater) Allocations 2005-2008 (ML)

| Allocations based on projected inflows | 2005-2006 | | 2006-2007 | | 2007-2008 | |
|--|-----------|--------|-----------|--------|-----------|--------|
| | Coliban | Wannon | Coliban | Wannon | Coliban | Wannon |
| 0% | 382 | 92 | 382 | 92 | 382 | 92 |
| 10% | 397 | 98 | 389 | 95 | 389 | 95 |
| 25% | 400 | 99 | 404 | 101 | 404 | 101 |
| 50% | 424 | 109 | 430 | 112 | 430 | 112 |

Recommend use of 25% inflow level.

The water supply to Glenthompson is part of the Mt William headworks system and is yet to be converted under a BE order. Supplies to Glenthompson are expected to reflect recent delivered volumes of water that have averaged 43 ML of water over the past seven years.

7 EXPENDITURE PROGRAM

The WIRO requires the ESC to be satisfied that the businesses' proposed prices do not reflect inefficient expenditure and, in fact provide, continuing incentives to pursue efficiency improvements.

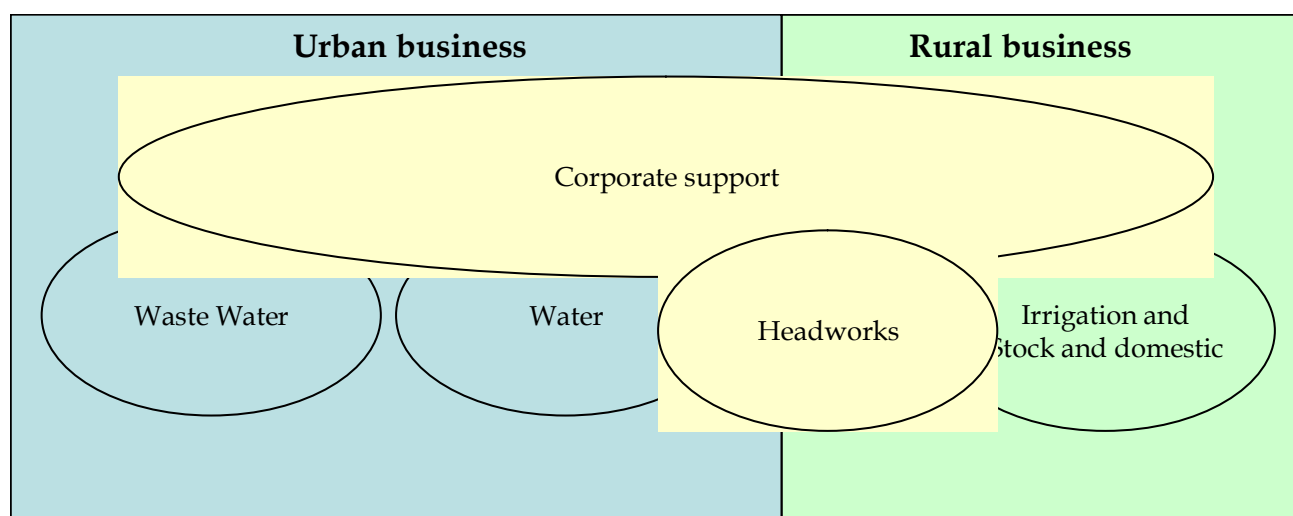
Whilst the capital expenditure program is dominated by the WMPP, there remains a substantial capital program that is dominated by compliance and improvements.

The key organisational objective relating to operations is "the continual delivery of services", as specified in the GWMWater Strategic Plan 2005-2009. The primary role of Operational Services in meeting this objective is to operate and maintain the assets that deliver water and wastewater services to the customer.

7.1 Capital Expenditure

GWMWater operates in a complex regulatory and legislative environment much of which has direct impact on the business' capital expenditure needs. A summary of the primary legislative and regulatory instruments impacting the business and need for capital investment is highlighted in Appendix 4. Capital expenditure is a key component of GWMWater's revenue requirement and is categorised in the following groups:

Figure 7.1.1: Groupings of Capital Expenditure Forecasts



The key drivers of capital expenditure forecasts are categorised into one of four expenditures drivers.

Improved Services

Improved services are where GWMWater provides a service that meets currently mandated service standards but are to be improved.

GWMWater has a range of projects in its capital forecasts that are driven by the desire to operate as an efficient business and accordingly are covered by this driver.

Compliance

Compliance drivers required expenditure to ensure that mandated service levels are provided. There are a number of mandated compliance requirements driven by DHS and EPA to improve water quality and wastewater services respectively. Accordingly, GWMWater is obliged to comply with these government directives and a number of other requirements.

There are also programs continually identifying areas that require upgrades to comply, or maintain compliance with existing performance and regulated standards. Aging infrastructure, ongoing changes to the water industry and decentralised assets across large areas requires ongoing capital investment to maintain compliance and implement Government policy as it affects the services it provides. There are projects, particularly water re-use projects that are focused on complying with government policy and water and wastewater plants focusing on maintaining regulatory compliance requirements.

Renewals

Renewal projects require expenditure to replace/refurbish assets to ensure that the risks of non-compliance with service standards is minimised. This is driven by the need to minimise the risk of failure of assets or asset components, which have an unacceptable probability of future non-compliance with, regulated and/or legislated service standards.

Growth/Augmentation

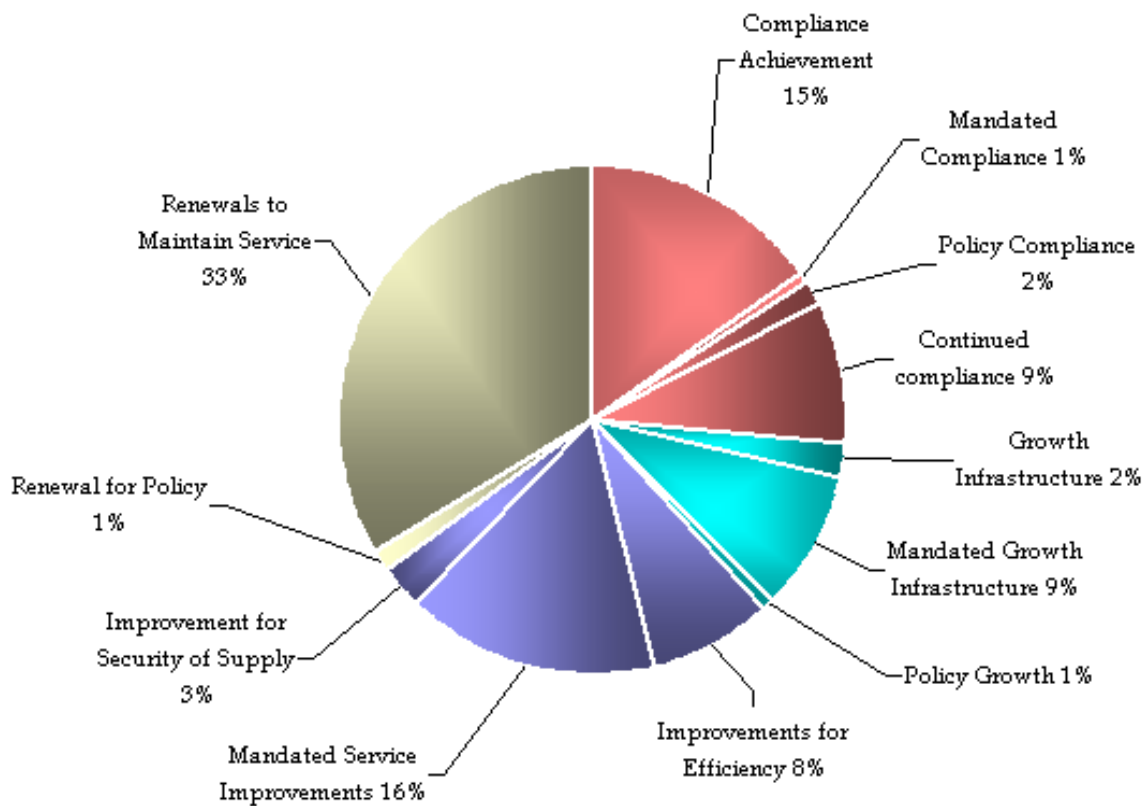
Growth and augmentation projects require expenditure to meet either increased demand or provide services to customers not currently provided. GWMWater operate in an area of very limited population growth and there are only a minor number of projects driven solely by growth. These projects are developer driven and the capital expenditure forecasts have included an estimate of the work to be contributed by GWMWater. Government has also expressed a desire to provide drinking quality water to a number of communities and these have been included to investigate this requirement.

Overall Capital Expenditure Summary

Many capital expenditure projects are driven by more than one of the above expenditure drivers. In such cases GWMWater has classified its forecast capital expenditures under the most relevant single driver. There are also a number of projects receiving customer and/or government contributions, which are separately identified.

An overview of the proportion of the capital expenditure forecasts for the Water Plan period for each of these drivers are provided below and individual projects identified under each of the organisational groupings.

Figure 7.1.2: GWMWater’s Forecast Total Capital Expenditure by Driver.



The total gross capital expenditure forecasts by driver for the period 2008/2009 to 2012-2013 (in \$ 2007) is presented below.

Table 7.1.3: Total Capital Expenditure Forecasts for the Period 2008/2009 to 2012/2013

| ESC Driver | Component | Water Plan Total Costs (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|--------------|------------------|---------------------------------|------------------|------------------|------------------|------------------|------------------|
| Improvement | Corporate | 5,900 | 3,160 | 1,430 | 470 | 420 | 420 |
| | Water | 2,450 | 1,100 | 1,100 | - | 250 | - |
| | <i>Sub-Total</i> | 8,350 | 4,260 | 2,509 | 470 | 670 | 420 |
| Compliance | Headworks | 10,230 | 530 | 2,850 | 4,450 | 2,400 | - |
| | Wastewater | 14,112 | 2,805 | 4,243 | 2,199 | 403 | 4,463 |
| | Water | 14,113 | 1,199 | 15 | 515 | 6,469 | 5,915 |
| | <i>Sub-Total</i> | 38,455 | 4,534 | 7,108 | 7,164 | 9,272 | 10,378 |
| Renewal | Corporate | 12,595 | 3,097 | 2,227 | 2,770 | 2,410 | 2,090 |
| | Headworks | 1,345 | 125 | 540 | 240 | 225 | 215 |
| | ID&S | 553 | 153 | 40 | 90 | 180 | 90 |
| | Wastewater | 3,285 | 350 | 575 | 1,060 | 700 | 600 |
| | Water | 8,630 | 1,541 | 1,811 | 1,766 | 1,716 | 1,791 |
| | <i>Sub-Total</i> | 26,407 | 5,266 | 5,193 | 5,926 | 5,231 | 4,791 |
| Growth | Wastewater | 1,803 | 179 | 79 | 1,387 | 79 | 79 |
| | Water | 445 | 79 | 129 | 79 | 79 | 79 |
| | <i>Sub-Total</i> | 2,248 | 258 | 208 | 1,466 | 158 | 158 |
| Total | | 75,460 | 14,317 | 15,039 | 15,026 | 15,330 | 15,747 |

A summary of the anticipated level of contributions from Government and customer is provided below.

Table 7.1.4: GWMWater's Contributions to Capital Expenditure

| ESC Driver | Component | Water Plan Total Costs (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|--------------------------------------|------------------|---------------------------------|------------------|------------------|------------------|------------------|------------------|
| Compliance | Headworks | 380 | 380 | 0 | 0 | 0 | 0 |
| | Wastewater | 1,763 | 0 | 546 | 0 | 0 | 1,217 |
| | Water | 475 | 250 | - | 25 | 200 | - |
| | <i>Sub-Total</i> | 2,618 | 630 | 546 | 25 | 200 | 1,217 |
| Growth | Wastewater | 968 | 17.5 | 17.5 | 897 | 17.5 | 17.5 |
| | Water | 88 | 18 | 18 | 18 | 18 | 18 |
| | <i>Sub-Total</i> | 1,055 | 35 | 35 | 915 | 35 | 35 |
| Total Water Plan Contribution | | 3,673 | 665 | 581 | 940 | 235 | 1,252 |

Further details on specific programs are located in Appendix 8 and summarised below.

7.2 Water

The capital expenditure forecasts relating to water services included in this section reflect the need to ensure that GWMWater can continue to meet its regulatory and legislative compliance obligations and reflect future demand.

GWMWater does not anticipate any change in expenditure drivers during the period of the Water Plan in the regulatory and legislative service standards for water. Expenditure forecasts included in this Water plan can therefore be assumed to meet "business as usual" needs.

Water service related projects include 4 of the 10 largest projects in the overall program forecast.

Improved Services

The current drought has resulted in a number of critical projects to enhance the security of water supply being identified. In the short term, these have been identified to provide an alternative, contingency supply for some towns as the traditional source of water for these has become unavailable or unreliable.

The WMPP provides major improvement to water quality throughout the region. The project will prevent the deterioration of water quality and permit more flexible arrangements in water harvesting. The project will also significantly improve the reliability of supply, as the huge losses associated with the existing channel network will be avoided. Through the Project Control Group and Project Council, a WMPP Program Review has been conducted and the outcome established that the revised cost to complete the project is \$687 Million.

Another major project is to provide security of supply to Edenhope by extracting groundwater via bores. This project is required because Edenhope has historically relied on Lake Wallace for its supply and this has proven unreliable in the current drought, with the lake being dry for a prolonged period. An interim groundwater source has required desalination, with the EPA consent for disposal of brine to the sewerage system having expired. The preferred option moving forward is to obtain groundwater from a lower salinity source probably to the west of the town. An expenditure of \$2.3 Million had been forecast to complete the project, with \$2.2 Million scheduled within the 2006/2008 Water Plan period.

Compliance

A key focus of capital expenditure for the 2008-2013 Water Plan period is water quality. The SDWA draws a quality distinction between 'drinking' and 'regulated' water.

GWMWater has 17 water supplies that receive disinfection as the only form of treatment. Some of these supplies consistently fail to meet the water quality standards as set out in the SDWR.

Under section 30 of the SDWA, the Secretary of DHS may accept a written undertaking in respect of a contravention of the Act, which provides protection to a water supplier against action being taken by the regulator.

The parameters that cause concern in the disinfected-only towns are total Trihalomethanes (THMs) and turbidity.

GWMWater has either entered into, or is seeking to enter into, undertakings under section 30 of the SDWA for most of these towns. The undertaking must be to undertake some definitive action designed to address the particular water quality parameter that is not being met.

The undertakings accepted by the DHS Secretary to be completed in the 2008-2009 financial year include:

- Manangatang: to provide tankage to replace the existing earthen storage;
- Lalbert: to line the existing earthen storages to overcome the clay dispersion problem; and
- Ultima: to line the existing earthen storages to overcome the clay dispersion problem.

All three of these Northern Mallee towns fail the turbidity standard (<5 NTU 95%-ile UCL).

Brim and Donald both fail the THM parameter (0.25 mg/L) occasionally. GWMWater has undertaken to provide the WMPP as a solution to Brim's water quality problems, and to do this by December 2008.

Beulah, Wycheproof and Woomelang consistently exceed the THM standard. Nullawil, Minyip and Jung consistently exceed the THM standard and occasionally exceed the turbidity standard.

Rupanyup exceeds both the THM and turbidity standard from time to time.

The undertakings proposed in each of these cases is to build the WMPP. None of these undertakings have been formally approved by DHS.

The capital expenditure program includes works at a number of these locations to improve or restore water quality. A more detailed analysis of water quality requirements and projects is included in the WISP.

The communities in GWMWater's business area impacted by the changes included in the SDWA are as follows.

Communities mandated to be supplied with drinking water during the 2008-2013 period:

Nhill Lalbert Manangatang Ultima

Communities with a high priority for capital investment for supply of drinking water:

Natimuk Edenhope (Water Security)

Communities where capital investment will be considered after commissioning of the WMPP:

| | | | |
|---------|-----------|------------|----------|
| Beulah | Brim | Donald | Jeparit |
| Jung | Minyip | Nullawil | Rupanyup |
| Watchem | Woomelang | Wycheproof | |

Communities where capital investment action will be considered in the future:

| | | | |
|---------------|---------------|--------------|------------|
| Antwerp | Apsley | Berriwillock | Buangor |
| Chillingollah | Chinkapook | Clear Lake | Cowangie |
| Culgoa | Dooen | Elmhurst | Glenorchy |
| Goroke | Harrow | Kaniva | Kiata |
| Lascelles | Lillimur | Marnoo | Miram |
| Moyston | Murrayville * | Nandaly | Noradjuha |
| Patchewollock | Pimpinio | Quambatook | Sea Lake |
| Serviceton | Speed | Streatham | Tarranyurk |
| Tempy | Underbool | Walpeup | Westmere |
| Yaapeet | | | |

* *Planned to be completed by December 2007*

Consultation is a key part of the decision-making process in addressing water quality. The communities of Kaniva, Apsley, Harrow, Goroke and Moyston have each indicated through community consultation that their preference is to retain non-potable water supplies. Communities at Natimuk and Nhill have each indicated through consultation a preference for improving their water supply to a drinking standard and appropriate capital allocations have been included in the capital forecasts.

The provision of drinking water for Natimuk is expected to cost \$1.5 Million. The provision of treated water for Nhill is forecast to cost somewhat more at \$10.9 Million. Nhill is the largest town in GWMWater's service area not currently receiving drinking quality water under the SDWA. DHS requires GWMWater to provide drinking quality water to Nhill, with the preferred solution identified as an upgrade to the WTP at Dimboola and to pipe the treated water to Nhill. The outcome of this project will be compliance with Government's mandate to supply drinking quality water to the Nhill community. This is being achieved in an overall optimum manner, which includes the opportunity to improve water quality to the community at Kiata, which is on the proposed pipeline route between the treatment plant at Dimboola and Nhill.

The community at Jeparit also indicated a preference for potable water quality however, on a risk-based assessment, the investment required to implement this has been deferred until after 2013 pending improvements in quality associated with WMPP.

There are a number of projects identified to address the renewal of linear assets to manage the number of bursts. GWMWater has historically contracted out much of this work and the costs of the projects are based upon robust historical costs. These projects are prioritised based on the need to achieve compliance in areas where there is current non-compliance against established service standards.

There also remains several projects that are required to ensure continual compliance. These are identified in the areas ongoing operations of WTPs and other water supply assets to minimise the risk of GWMWater failing to provide customers with water of an appropriate quality as required by legislation.

A major outcome for water related compliance requirements for the Water Plan period is the provision of water to drinking water standards under the SDWA, at the four communities nominated by Government. A combined expenditure of \$1.3 Million has been forecast for these mandated projects. Murrayville is expected to be complete prior to the commencement of the 2008-2013 Water Plan period (\$0.25 Million) and an estimated \$0.1 Million has also been spent on investigations for the other towns of Ultima, Lalbert and Manangatang.

Renewals

Expenditure spent on urban pipeline system renewals is to minimise the risk of future non-compliance with mandated service standards. The ALCP for water assets analysed the age profile of GWMWater’s water assets. This is summarised as follows:

| | |
|-------------------------|---|
| Water treatment plants: | all GWMWater’s plants except one are less than 15 yrs old |
| Water reticulation: | approx 35% of reticulation assets older than 40 yrs |
| Water distribution: | approx 42% of distribution assets older than 40 yrs |

The ALCPs estimated the future 100-year expenditure profiles for each of the water mains and WTPs. GWMWater recognises that, in some respects, the quality of asset information is, at this stage, insufficiently robust to accurately quantify its investment needs either to achieve or maintain compliance. To date GWMWater has offset this through the development of annual replacement programs that utilise up-to-date asset performance information to target the specific assets that are priorities for replacement.

The average annual expenditure over the Water Plan period for water main assets is \$0.83 Million and an average of \$0.45 Million for WTPs.

A main driver for water main replacements is due partially to the short fall in achieving industry standards in relation to a number of water supply interruptions. The level of expenditure forecast in the Water Plan is conservative and designed to maintain the current service delivery standards, reduce the number of main breaks based on priority needs and mitigate the risks of service level deterioration caused by aging assets.

GWMWater has a strategy to upgrade its asset information and processes to support the development of programs relating to the replacement and renewal of infrastructure.

Growth/Augmentation

There is a small level of investment that relates to augmentation of works that are to be constructed by GWMWater and mostly funded by developers. There is some level of

expenditure that concentrates on investigative works for potential water supply to currently untreated towns.

Government/Customer Contributions

GWMWater anticipates receiving contributions to the above capital expenditure forecasts from Government and/or customers. Major infrastructure contributions are to be in the form of water supply to Nhill under the CTWSSP (\$0.225 Million) for year 2010/11 and supply upgrades for Manangatang from DHS (\$0.25 Million) for 2008/2009.

Developer works and planning contributions to water assets have been forecast at \$88,000, equally shared across the five-year period, based on predicted demand and historical figures.

Summary

The total gross capital expenditure forecast for water during the period 2008/2009 to 2012-2013 is as follows:

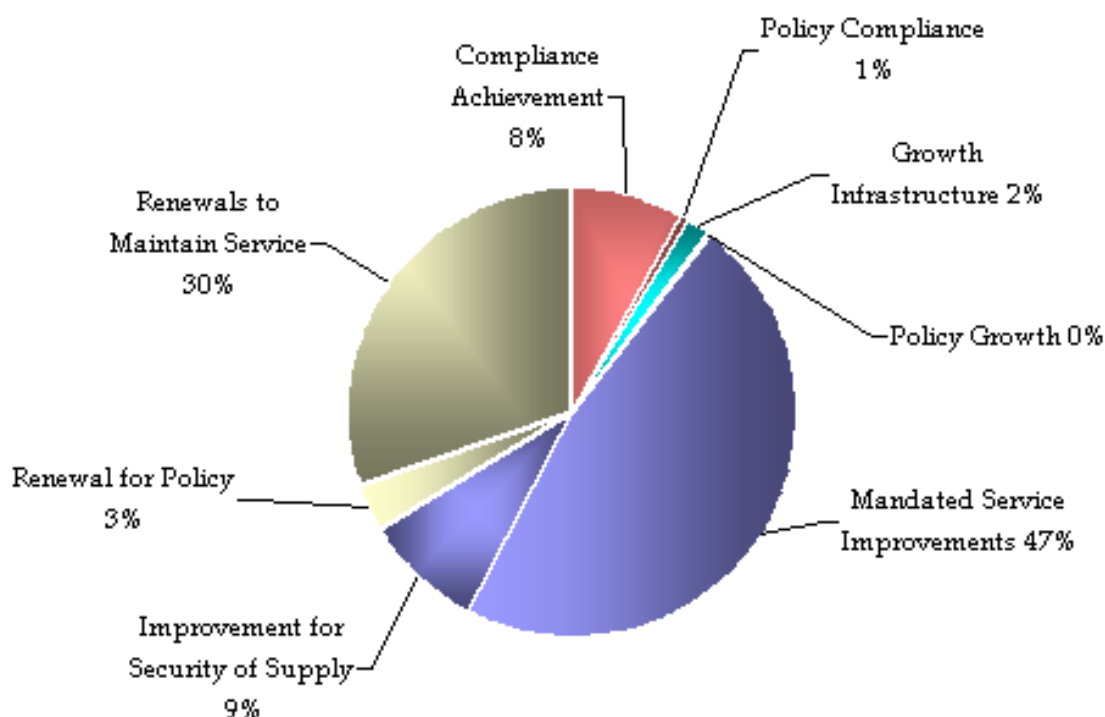
Table 7.2.1: Water Services Capital Expenditure Forecasts

| ESC Driver | Component | Total Costs 2006/07 * (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|--------------------|------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Compliance | Achievement | 2,089 | 75 | 15 | 115 | 1,469 | 415 |
| | Mandated | 11,874 | 974 | - | 400 | 5,000 | 5,500 |
| | Policy | 150 | 150 | - | - | - | - |
| | <i>Sub-Total</i> | <i>14,133</i> | <i>1,199</i> | <i>15</i> | <i>515</i> | <i>6,469</i> | <i>5,915</i> |
| Growth | Infrastructure | 395 | 79 | 79 | 79 | 79 | 79 |
| | Policy | 50 | - | 50 | - | - | - |
| | <i>Sub-Total</i> | <i>445</i> | <i>79</i> | <i>129</i> | <i>79</i> | <i>79</i> | <i>79</i> |
| Improvement | Mandated | 250 | - | - | - | 250 | - |
| | Supply | 2,200 | 1,100 | 1,100 | - | - | - |
| | <i>Sub-Total</i> | <i>2,450</i> | <i>1,100</i> | <i>1,100</i> | <i>-</i> | <i>250</i> | <i>-</i> |
| Renewal | Policy | 880 | 176 | 176 | 176 | 176 | 176 |
| | Service | 7,750 | 1,635 | 1,635 | 1,590 | 1,540 | 1,620 |
| | <i>Sub-Total</i> | <i>8,630</i> | <i>1,811</i> | <i>1,811</i> | <i>1,766</i> | <i>1,716</i> | <i>1,796</i> |
| Water Total | | 25,638 | 3,055 | 3,055 | 2,360 | 8514 | 7790 |

* At June 2007

The analysis of this expenditure by driver is as follows:

Figure 7.2.2: Total Capital Expenditure Forecasts for Water Services by Expenditure Driver



7.3 Wastewater

The capital expenditure forecasts relating to wastewater services included in this section reflect the need to ensure GWMWater can continue to meet its regulatory and legislative compliance obligations as well as reflect future demand.

GWMWater does not anticipate any key changes during the period of the water plan in the regulatory or legislative standards that govern wastewater services. Capital expenditure forecasts included in this Water Plan are therefore assumed to meet 'business as usual' needs.

Wastewater services forecast projects include 4 of the 10 largest projects in the forecast.

Improved Services

Under the CTWSSP, GWMWater is to provide town sewerage services to the communities of Lake Bolac, Rupanyup and Great Western within the Water Plan 2008-2013 period. The forecast expenditure is \$2.1 Million, \$2.6 Million and \$1.2 Million respectively.

DSE has also advised that it requires GWMWater to undertake sewer infill programs in Halls Gap, Dimboola and Nhill within the Water Plan period. Accordingly the capital expenditure forecast is \$0.33 Million for each town.

Compliance

EPA has identified a number of treatment plants where there are deficiencies in retention times for effluent water due to insufficient winter storage facilities. Stawell WWTP is expected to be refurbished at a total forecast cost of \$2.2 Million. The technology of the Stawell WWTP is a 49-year-old trickling treatment process. A number of issues have been identified with the plant's performance including:

- The open sludge digester is close to the property boundary and hence to neighbours;
- There are no secondary clarifiers;
- The inlet and grit removal structure is located above the plant control room. The plant inlet structure is known to overflow at times of heavy rainfall and subsequently floods the control room. The elevated grit chamber and manually raked screen create manual handling and OHS issues;
- The maturation lagoon needs both rock beaching to prevent scouring and internal baffling to promote longer retention and treatment time.

GWMWater has assessed that this treatment plant presents a risk to the continuing compliance with the EPA discharge licence, and it is therefore proposed to refurbish the plant.

In line with EPA and government objectives, there are a number of projects identified to maximise the use of treated effluent. A number of potential reuse schemes have been identified for the next regulatory period such as Murtoa, Willaura, Birchip and Nhill. Capital investments to bring reuse schemes to fruition and meet EPA licence requirements have been allocated to Murtoa (\$0.12 Million), Willaura (\$0.52 Million) and Nhill (0.43 Million). Forecast expenditure has also been allocated to Birchip and Halls Gap to promote governments' commitments to increase recycled water use. There are a number of other sites that have identified reuse schemes but any investment in infrastructure will be incurred in the next (2014) regulatory period unless externally funded is sort.

Growth/Augmentation

There is a single project for sewer infill in South Horsham. The cost of this project is forecast to be \$0.88 Million and will be funded by Horsham Council.

Renewals

As noted above GWMWater makes investments to renew infrastructure to achieve continued compliance with wastewater service standards. GWMWater's WWTPs range in age from 3 years to over 50 years old. EPA has identified a number of issues with some of the older plants. In addition, GWMWater wishes to mitigate the risk of WWTPs failing to comply with EPA discharge licences through asset failures. The Water Plan 2008-2013 includes capital expenditures to upgrade WWTPs at Stawell (as mentioned above) and St Arnaud at the cost of \$2.2 Million and \$1.9 Million respectively.

Major upgrades also commenced in 2007/2008 at Nhill and Warracknabeal and have a forecast expenditure for the Water Plan period of \$1.4 Million and \$1.0 Million

respectively. St Arnaud, Nhill and Warracknabeal also require major upgrades to ensure compliance.

The ALCPs developed for WWTP infrastructure estimated the future 100-year expenditure profiles for each asset type and also identified an ageing asset base summarised as follows:

Sewer mains: 56% of sewer mains are older than 40 years
Manholes: 55% of manholes are older than 40 years

There were also 41 blockages recorded per 100 km in 2005-2006. The water industry average is 29 blockages per 100 km, indicating that investments are required in asset renewals, particularly in linear assets.

GWMWater recognises that the quality of asset information requires further development to accurately quantify investment and priorities needed to achieve a higher level of compliance. Sewer main replacement costs over the Water Plan period have been forecast to be \$1.4 Million, sewer pump station replacements \$1.3 Million and other sewer stack and minor improvements expected to cost \$1.1 Million (includes improvement works at Ararat WWTP).

Accordingly GWMWater has proposed a level of capital expenditure in this Water Plan to maintain a 'holding pattern' while improvements in asset management processes and supporting data occur. GWMWater, however, foreshadows that this investment will increase beyond 2013.

Government/Customer Contributions

GWMWater anticipates receiving contributions to the above capital expenditure forecasts from Government and/or customers.

Under the CTWSSP, GWMWater expects to receive Government contributions for sewerage schemes Lake Bolac for \$0.55 Million for in 2009/2010, and \$0.99 Million for Rupanyup and \$0.23 Million for Great Western in 2012/13. The program scheduled for Horsham sewer infill that will be fully funded by Horsham Rural City Council at an estimated cost of \$0.88 Million, which is expected to be delivered in 2010/11. Further contributions from developers are estimated at \$18,000 for each year of the Water Plan.

Summary

The total gross capital expenditure forecast for the period 2008/209 to 2012/2013 is as follows:

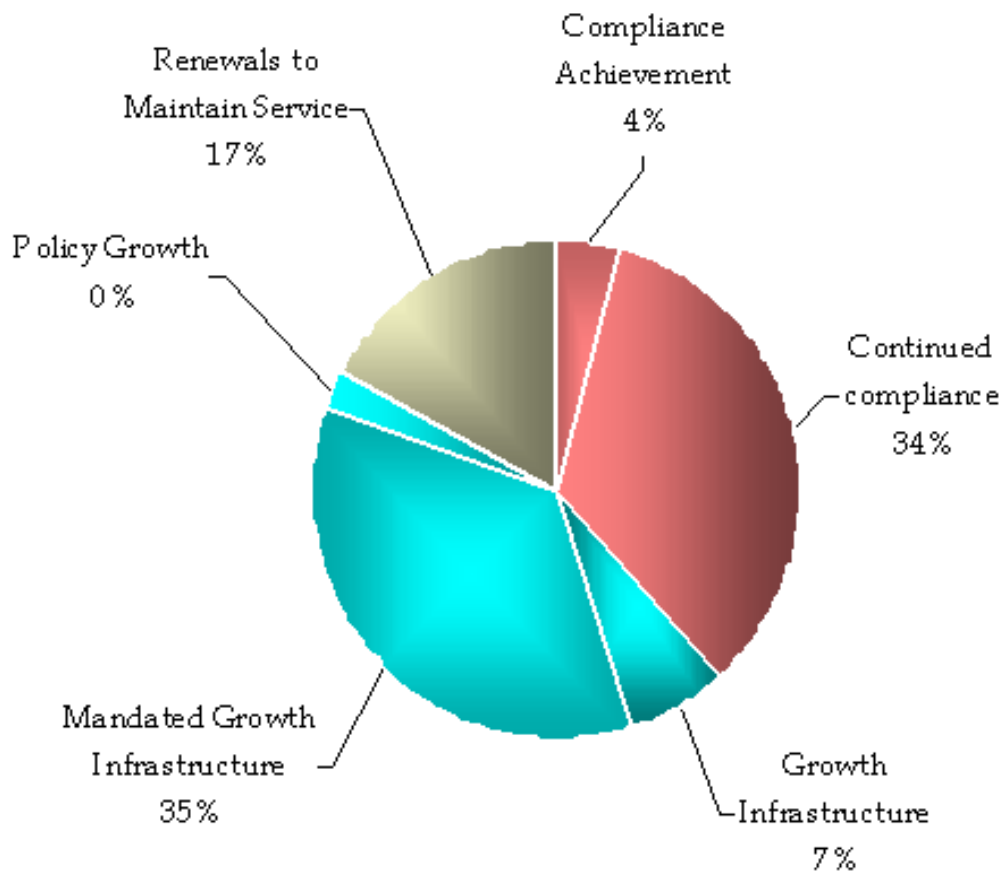
Table 7.3.1: Wastewater Services Capital Expenditure Forecasts (\$,000)

| ESC Driver | Component | Total Costs 2006/07 * | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
|-------------------------|------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| Compliance | Achievement | 781 | 125 | 468 | 15 | 15 | 158 |
| | Mandated | 6,752 | 160 | 1,900 | - | 388 | 4,305 |
| | Policy | 6,579 | 2,520 | 1,875 | 2,184 | - | - |
| | <i>Sub-Total</i> | <i>14,112</i> | <i>2,805</i> | <i>4,243</i> | <i>2,199</i> | <i>403</i> | <i>4,463</i> |
| Growth | Infrastructure | 1,275 | 79 | 79 | 959 | 79 | 79 |
| | Policy | 528 | 100 | - | 428 | - | - |
| | <i>Sub-Total</i> | <i>1,803</i> | <i>179</i> | <i>79</i> | <i>1,387</i> | <i>79</i> | <i>79</i> |
| Renewal | Service | 3,285 | 350 | 575 | 1,060 | 700 | 600 |
| | <i>Sub-Total</i> | <i>3,285</i> | <i>350</i> | <i>575</i> | <i>1,060</i> | <i>700</i> | <i>600</i> |
| Wastewater Total | | 19,200 | 3,334 | 4,897 | 4,646 | 1,182 | 5,142 |

* At June 2007

The analysis of this expenditure by driver is as follows:

Figure 7.3.2: Capital Expenditure Forecasts for Wastewater Services by Expenditure Driver



7.4 Headworks

The capital expenditure forecasts relating to headworks assets included in this section reflect the need to ensure that GWMWater can continue to meet its regulatory and legislative compliance obligations as well as reflect future demand.

GWMWater does not anticipate any changes during the period of this Water Plan in the regulatory and legislative standards that govern headworks services. Expenditure forecasts included in this Water Plan can therefore be assumed to meet 'business as usual' needs.

GWMWater has a wide range of headworks assets. Risk mitigation to the community is the overarching driver of capital expenditure on these assets. GWMWater's SOO requires that GWMWater has regard to the guidance promulgated by ANCOLD namely:

- a) Prioritising risks posed by all dams under the management of water utilities;
- b) Giving currency to reducing risks to lives above other risks;
- c) Basing the urgency of reducing the risk posed by a dam on the relativity of risks to the tolerability limit as defined in the ANCOLD guidelines;
- d) Basing programs to reducing risk on the concept "as low as reasonably practicable" as defined in the ANCOLD guidelines; and
- e) Where feasible, progressively implementing risk reduction measures to achieve the best outcomes to the available resources.

Improved Services

The single project for improved services is to be a project funded by the Wimmera CMA to upgrade Huddleston's Weir. This was estimated to cost \$0.4 Million and expected to be delivered before 2008/2009.

Compliance

GWMWater has a program to upgrade its headworks assets to ensure compliance with ANCOLD guidelines. GWMWater has already completed work at Wartook and Bellfield reservoirs. Lake Fyans and Taylors Lake are the next highest priority headworks to be addressed. The capital expenditure forecasts for Lake Fyans dam safety works is \$0.7 Million and Taylors Lake embankment works \$1.7 Million. A further estimated \$1.2 Million will be spent on Taylors Lake dam safety works prior to the commencement of the 2008/2013 Water Plan.

The capital expenditure forecasts include a project to assess the safety requirements of GWMWater's low hazard storages (\$0.3 Million). The outcomes of this review may result in capital expenditures for compliance beyond this Water Plan.

There are other headworks assets where risks have been identified, however the continual usage of these by GWMWater is uncertain given the construction of the WMPP. Any additional requirements for expenditure to comply with ANCOLD guidelines will be assessed after the WMPP is commissioned.

Government policy also requires water businesses to minimise water losses. GWMWater's capital expenditure forecasts include \$1.4 Million shared equally across both Rocklands and Toolondo channels to rehabilitate them to minimise water losses. These channels will continue to be used after commissioning of the WMPP.

Renewals

Minor expenditure has been included for the replacement of headworks related assets, primarily ageing access bridges that serve to provide access across GWMWater's channels and for replacements of asset components at reservoirs.

Growth/Augmentation

There are no projects forecast for growth or augmentation on headworks storages.

Government/Customer Contributions

There are no projects expecting Government or customer contributions for the 2008/2013 Water Plan period. Huddleston weir is expected to be complete prior and will be funded by the Wimmera CMA.

Summary

The total gross capital expenditure forecast for headworks during the period 2008/2009 to 2012/2013 period is as follows:

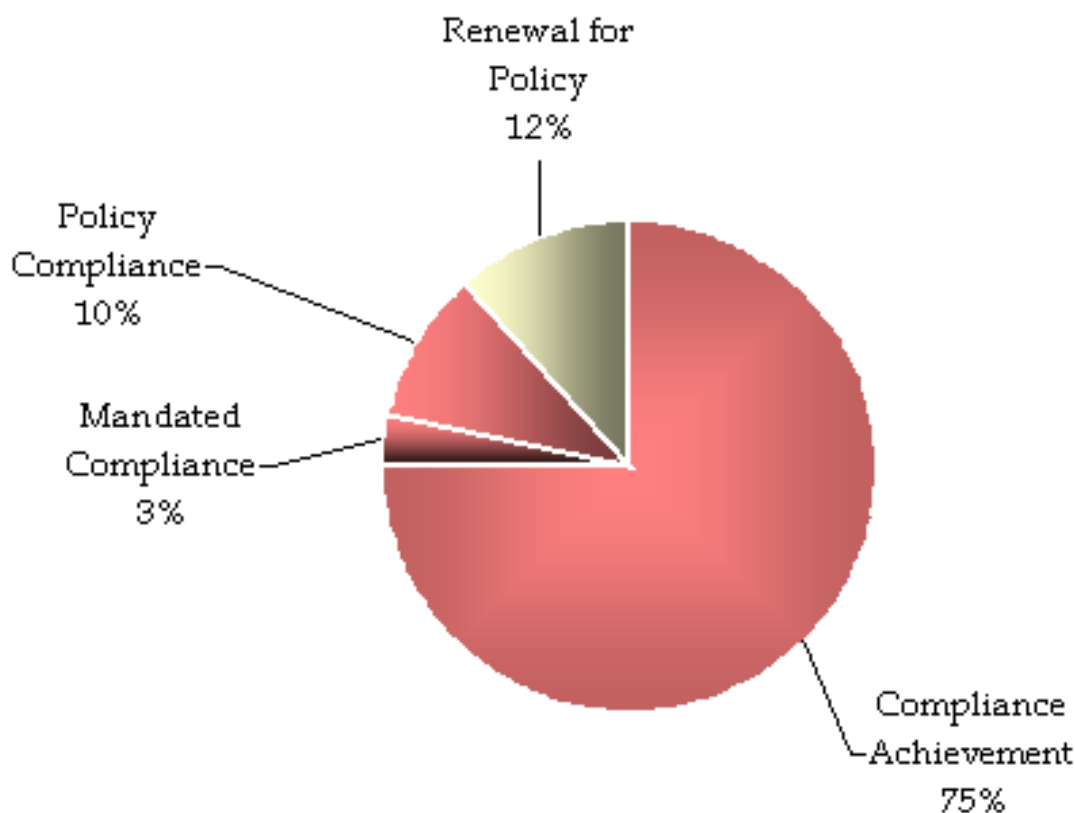
Table 7.4.1: Headworks Capital Expenditure Forecasts for the Period 2008/2009 to 2012/2013

| ESC Driver | Component | Total Costs 2006/07 * (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|------------------------|------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Compliance | Achievement | 8,700 | 150 | 1,700 | 4,450 | 2,400 | - |
| | Mandated | 380 | 380 | - | - | - | - |
| | Policy | 1,150 | - | 1,150 | - | - | - |
| | <i>Sub-Total</i> | <i>10,230</i> | <i>530</i> | <i>2,850</i> | <i>4,450</i> | <i>2,400</i> | <i>-</i> |
| Renewal | Service | 1,345 | 125 | 540 | 240 | 225 | 215 |
| | <i>Sub-Total</i> | <i>1,345</i> | <i>125</i> | <i>540</i> | <i>240</i> | <i>225</i> | <i>215</i> |
| Headworks Total | | 11,575 | 655 | 3,390 | 4,690 | 2,625 | 215 |

* At June 2007

The analysis of this expenditure by driver is as follows:

Figure 7.4.2: Total Capital Expenditure Forecasts for Headworks by Expenditure Driver



7.5 Irrigation, Stock and Domestic Supply

Minor irrigation expenditure has been included, however these will only be expended if there is adequate water to provide an irrigation supply.

Included in this group of expenditure is capital expenditure associated with the replacement or installation of groundwater and surface diversion meters, which are either compliance requirements or part of an ongoing renewal program. Forecast expenditure for rural meter replacement (including groundwater meter replacement) is \$0.32 Million and surface water diversion metering estimated at \$0.68 Million. Government contributions are expected to account for \$380,000 of this program, which is to be finalised in the first year of the 2008-2013 Water Plan period.

There are also small amounts of expenditure provided for groundwater bore rehabilitation, replacement and monitoring.

Summary

The total gross capital expenditure forecast for irrigation and stock and domestic supply during the period 2008/2009 to 2012/2013 is highlighted below.

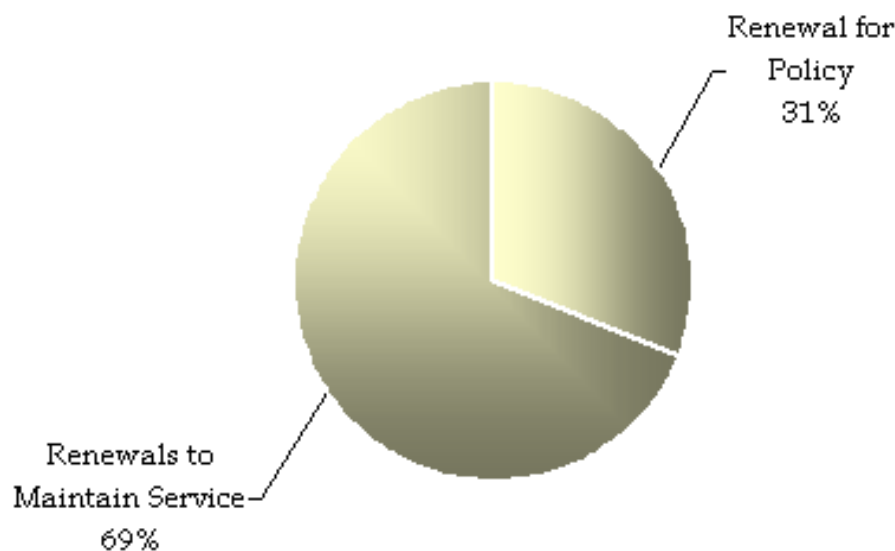
Table 7.5.1: Irrigation and Stock and Domestic Capital Expenditure Forecasts

| ESC Driver | Component | Total Costs 2006/07 * (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|-----------------------|------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Renewal | Policy | 173 | 113 | - | - | 60 | - |
| | Service | 380 | 40 | 40 | 90 | 120 | 90 |
| | <i>Sub-Total</i> | 553 | 153 | 40 | 90 | 180 | 90 |
| ID&S Total | | 553 | 153 | 40 | 90 | 180 | 90 |

* at June 2007

The analysis of this expenditure by driver is as follows:

Figure 7.5.2: Capital Expenditure Forecasts for Irrigation and Stock and Domestic by Driver



7.6 Corporate Support

Expenditure on corporate support comprises a range of activities relating to 'across the business' support infrastructure. Corporate forecast projects include 2 of the 10 largest projects in the forecast.

Whilst SCADA is an infrastructure asset, it is included as an efficiency driver under the corporate group as it provides functionality across GWMWater's operational business. As noted in the asset management section, GWMWater is developing a robust information system concerning the performance and condition of assets. SCADA will provide GWMWater with the processes to both assess performance and to systematise the outcomes as part of the asset management improvement strategies. SCADA will also allow GWMWater to optimise its staffing levels by automating what are now manually

intensive processes. Implementation of SCADA across the business is forecast at \$4.05 Million of which \$0.9 Million will be incurred in 2007/2008.

There are also a number of projects that do not easily fit into the ESC driver definitions. These projects are necessary for the continued operations of GWMWater and have therefore been included under renewals. The second major project in the top 10 largest projects are motor vehicles replacement that will occur in line with the motor vehicle fleet policy at a total forecast of \$11.4 Million.

Expenditure of \$1.3 Million is also included for mobile plant and machinery replacement and \$1.9 Million to upgrade software systems and hardware. Software and hardware expenditure is primarily related to asset management and financial management to increase operational efficiencies.

GWMWater has also worked on the consolidation of its operations into one location in Horsham. The capital expenditure anticipated in the current regulatory period has been carried forward into the 2008-2013 Water Plan period and will address inefficiencies and improve communication from a staff perspective. Expenditure forecast for this project is estimated at \$0.54 Million.

There are a number of other minor projects relating to occupational health and safety and other cross-functional projects. GWMWater do not anticipate receiving any contributions to the above capital expenditure forecasts.

Summary

The total gross capital expenditure forecast for the period 2008/2009 to 2012/2013 is as follows:

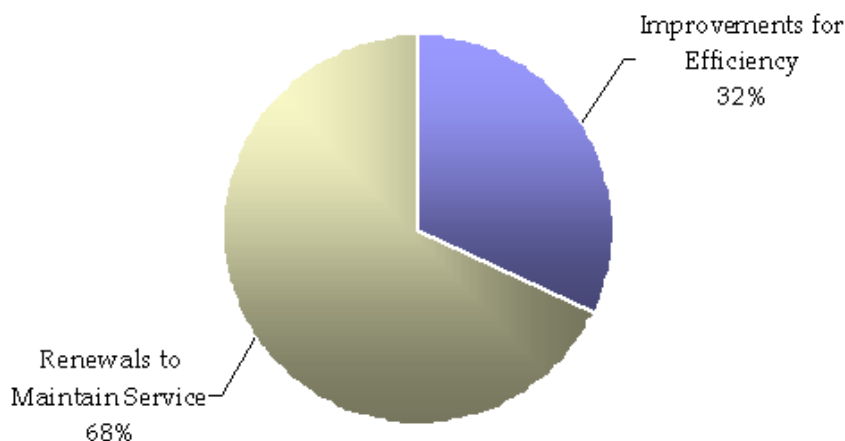
Table 7.6.1: Corporate Support Capital Expenditure Forecasts

| ESC Driver | Component | Total Costs 2006/07 * (\$,000) | 2008/09 (\$,000) | 2009/10 (\$,000) | 2010/11 (\$,000) | 2011/12 (\$,000) | 2012/13 (\$,000) |
|------------------------|------------------|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Improvement | Efficiency | 5,900 | 3,160 | 1,430 | 470 | 420 | 420 |
| | <i>Sub-Total</i> | 5,900 | 3,160 | 1,430 | 470 | 420 | 420 |
| Renewal | Service | 12,595 | 3,097 | 2,227 | 2,770 | 2,410 | 2,090 |
| | <i>Sub-Total</i> | 12,595 | 3,097 | 2,227 | 2,770 | 2,410 | 2,090 |
| Corporate Total | | 18,495 | 6,257 | 3,657 | 3,240 | 2,830 | 2,510 |

* at June 2007

The analysis of this expenditure by driver is as follows:

Figure 7.6.2: Total Capital Forecasts for Corporate Support by Expenditure Driver



7.7 Deliverability

In preparing this Water Plan a significant focus has been on the deliverability of the capital program.

GWMWater is developing a strategy for improving the delivery of its capital expenditure forecasts. The WMPP is separately resourced and delivered under the PDA with the State Government. For the remaining business, it is imperative in determining the most appropriate projects to be delivered that considerable time and resource is spent on the initial scoping, planning, governance and approval processes. The average size of a project within the capital expenditure forecast for this Water Plan is \$1.1 Million (dollar 2007), which is significantly greater than the last Water Plan period. Whilst large projects are generally more complex to deliver than smaller projects the extent of planning and governance processes are proportionally smaller than for the larger projects.

The capital expenditure forecasts includes 21 projects, each with a forecast cost in the Water Plan period of in excess of \$1 Million and combined they make up in excess of 80% of the total forecast capital expenditure. Delivering 21 projects over the five-year Water Plan period is achievable, however, given the size of these projects there is also a risk that any unforeseen challenges to the deliverability of any of these projects could prevent the delivery of the forecast level of capital expenditure.

GWMWater has already commenced laying the groundwork for a number of projects scheduled for delivery in the Water Plan period and include SCADA at \$3.2 Million. It is planned to have a preferred supplier selected before 2008. \$0.9 Million of the contract is planned for delivery in the current water plan period.

The forecast expenditure for Nhill and Warracknabeal is \$2 Million, with work expected to commence in early 2008. It is anticipated that these upgrades will be procured under a single contract resulting in less administration and management resources from GWMWater.

7.8 Prudent and Efficient Capital Expenditure Levels

GWMWater sources the majority of its capital expenditure projects via competitive tender. Tenders are assessed using the whole of life costs as a benchmark. For larger complex projects and those seeking strategic assessment, external consultants are generally engaged to propose solutions to meet the needs of a particular project. The solutions proposed are then subjected to rigorous internal review usually in conjunction with the consultant and, if appropriate, amended to provide the optimum solution. For smaller projects and projects where there is clearly only one solution, GWMWater uses its internal resources to define the solution.

GWMWater's resources are used to develop proposals for approval, procurement and to manage project delivery.

Historically the cost of internal resources used in the capital program represents approximately 5% of the total costs. This strategy of procuring solutions to capital works needs is one that a prudent business operator in GWMWater's environment would adopt.

Project costs included in this Water Plan have been developed from the following sources:

- Costs incurred by GWMWater in providing similar solutions adopting the methodology detailed above; and
- Independent consultant's advice.

Where appropriate, historical costs have been adjusted or escalated for time differences.

The costing of the capital expenditure program included in the Water Plan is based upon a strategy adopted by a prudent operator. However, the current market is demonstrating significant increases in costs above that forecast using the above information sources. What is unclear is whether this significant jump in and costs is temporary or permanent, and, if permanent, it is probable that the forecast costs of the capital expenditure program will be underestimated.

7.9 Financing Capital Investments

Capital investments are generally financed from GWMWater operating revenue. Where GWMWater is investing in new services or service upgrades these investments can be supplemented by contributions from customers and/or government contributions.

A number of water quality and new town sewerage investments are assumed to be funded through a combination of customer contributions and government contributions.

Funding for water quality improvements in Manangatang, Murrayville, Nhill, Underbool, Lalbert and Ultima will be partly met by contributions under the CTWSSP. Price increases

will also be passed on to match the level of water quality being provided in accordance with the pricing principles established in Section 9.

Funding for new town sewerage schemes is also being met from government contributions. Schemes included in the plan in the towns of Lake Bolac, Great Western and Rupanyup are at various stages of development and are being funded to the extent that the communities and GWMWater support the introduction of sewerage at the various stages of development.

The most significant investment in the planning period however remains the WMPP. The commitments to fund the WMPP were made on the back of estimates that were prepared in 2004. In the interim the cost of construction projects and associated materials have escalated beyond general price movements as reflected in the Consumer Price Index.

The extent of the cost increase and how it is to be managed is being addressed through the WMPP Program Review. The WMPP Program Review is to be progressed through the DTF Gateway process in September 2007. An integral part of the Program Review is to reach agreement on the way the anticipated \$248 Million funding gap is to be managed. Under the current wording of the PDA GWMWater is expected to meet all cost overruns associated with the WMPP to the extent that these can be reasonably passed through to customers without compromising the viability of GWMWater.

7.10 Operating Expenditure

The key productivity improvements proposed by Operational Services is an adaptive long-term statement, outlining solutions to the operational needs of the organisation with completion of the WMPP. These include evaluation of the following:

- Required staff numbers for operations, post-WMPP;
- Future skills requirements for operational staff, post-WMPP;
- Role of technology and legislation in dictating operational tactics;
- Provision of customer service and rationale for retaining regional offices;
- Organisational requirements for delivering services (number of regions, structure of group); and
- Provision of support services, including store and workshop.

The future needs of GWMWater will be met by taking into consideration:

- The evolving needs of the organisation with the staged construction and handover of the WMPP;
- The demise of the Wimmera Mallee channel system and the changed skill requirements once the WMPP is complete;
- New technological advances; and
- Changed legislative environment.

The changes the WMPP will bring about include:

- Service delivery – continuous instead of periodic;
- Quality – from relatively low to relatively high;

- Service provision – from proactive to reactive;
- Automation – from manual to fully automatic;
- Technology – from low to high; and
- Relationships – personal to impersonal.

7.10.1 Key Drivers of Operating Expenditure

GWMWater was formed on 1 July 2004, from the merger of the Rural Urban Water Authority, GRWA, and the Rural Water Authority, WMW.

Among the specified criteria for the creation of the new organisation was that there would be no forced redundancies and no forced office closures.

The organisational structure and operating environment that derived from the merger was, to some extent at least, an interim arrangement. It was designed to ensure the continued delivery of services to customers with minimal impact, until such time as sufficient experience had been gained to allow a more extensive revamp of the organisation.

Despite the large geographic range, the region has a relatively small population. Resourcing the physical provision of services to remote locations is a major challenge, as is managing the cost to operate, maintain and replace the infrastructure.

The WMPP is presently in the planning and development stage. The WMPP includes provision of over 8,000km of pipes and associated pump stations, storages and appurtenant works. The new infrastructure will also necessitate significant changes in operation, as it will completely replace the existing channel system.

The WMPP will transform the way in which GWMWater delivers its services. It represents a profound change in both the type of skills that will be required and the assets utilised in delivery of the services.

The WMPP, along with new technology, the imposition of greater legislative and stakeholder requirements, presents challenges and opportunities in the way GWMWater will operate.

The key strategies identified to achieve operational efficiency in the second regulatory period include; staffing levels required under a piped system, resources and skills required, improving service provision including the use of SCADA and reform regional operations.

7.10.2 Justification of Forecast Expenditure Levels

The progress and completion of the WMPP over this Water Plan period should negate the need for any significant water-carting program beyond 2007/2008. Operating expenditure levels are therefore expected to return to levels consistent with the previous ESC determination. It has been assumed that the increase in energy costs related to a piped system will be largely offset by reductions in staffing levels required. The WMPP will

transform the way in which GWMWater delivers its services. It represents a profound change in both the type of skills that will be required and the assets utilised in delivery of the services.

The new obligations identified in the capital program, have increased operations and maintenance expenditure by \$0.8 Million as a result of new or improved services in a number of towns. These include: water supply upgrades for Manangatang, Lalbert and Ultima; new wastewater services in Rupanyup, Lake Bolac and Great Western; improved storage and reuse of wastewater at Willaura; and a new treated water supply for Natimuk. Some of these capital projects are being undertaken as part of the CTWSSP. The corresponding increase in demand and revenue as a result of these projects has been included in the Water Plan. A detailed breakdown of additional operating expenditure is provided in Table 7.10.1.

In order to ensure that GWMWater operates efficiently and continues to capitalise on the efficiency gains from the merger, savings targets of 1% per annum, have been applied to operations, maintenance and administration budgets over the Water Plan period. The key strategies identified to achieve operational efficiency in the second regulatory period include; staffing levels required under a piped system, resources and skills required, improving service provision including the use of SCADA and reform of regional operations.

Table 7.10.1: Additional Operating Expenditure - New Obligations (at 1/1/07 \$,000)

| Additional Operating Expenditure (\$,000) | 2008/09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|---|----------------|----------------|----------------|----------------|----------------|
| New Wastewater Services (Rupanyup, Lake Bolac, Great Western) | - | - | 30 | 30 | 30 |
| New Treated Water Supply (Natimuk) | - | - | - | - | 53 |
| Improved Wastewater storage & reuse (Willaura) | - | - | 35 | 35 | 35 |
| Water Supply Upgrades (Lalbert, Manangatang, Ultima) | - | 140 | 140 | 140 | 140 |
| Total Operating expenditure | - | 140 | 205 | 205 | 258 |

7.10.3 Productivity Improvements Over the Period

The WMPP is expected to deliver the productivity improvements required for water supply and economic efficiency. GWMWater will be a predominately piped system after construction of the WMPP. This will minimise the need to duplicate resources and skills in channel maintenance and piped system. Staff will predominately be pipeline operators and as a consequence of this movement, staffing levels are set to be rationalised to achieve a total complement of approximately 85 FTE operational employees. Post WMPP it is expected this will be a reduction from 108 FTE.

This will require suitable skills to be identified to operate and maintain the WMPP, including the costs and benefits of providing SCADA and/or electrical maintenance through internal resources. This will partly determine the future recruitment and training strategy required to employ and retain skilled staff for water treatment, maintenance and ensuring standby and emergency maintenance requirements can be met.

Further productivity improvements are expected to occur through an improved data collection process to minimise time spent collecting data. This is likely to include preventative maintenance scheduling and the simplification and centralisation of the provision of information services to plumbers and developers. Implementing a dedicated 24-hour control centre and reviewing the costs and benefits of outsourcing water treatment to improve compliance with regulations and quality of water delivered to customers could occur during the regulatory period.

Further productivity improvements will occur through the progressive implementation of local SCADA systems to complement the WMPP SCADA. This will occur on a priority basis, with disinfection facilities having the highest priority.

To better accommodate a piped system, restructuring of the Operational Services Group is expected to see a move away from the traditional geographic based divisions to a service delivery model. This is expected to provide cross-functional skill sets and provide efficiencies through an owner/manager/service provider model for asset management.

8 REVENUE REQUIREMENT

The most significant driver of the revenue requirement of GWMWater remains the WMPP. The revenue requirement however is also strongly influenced by regulatory obligations and/or Ministerial Directives that are aimed at either improving services to rural communities or meeting increasing regulatory standards.

Adjustments to the WIRO for the first price determination required the ESC to regulate differentially for urban and rural activities. The oversight of rural activities was a general assessment of cost efficiency that provided for a revenue cap. Urban oversight related to specific price control as well as cost efficiency. This effectively meant that GWMWater was required to lodge two Water Plans within the one Water Plan with determinations issued for rural activities and urban activities.

The WIRO has reverted to its original form and as a result will be responsible for full price and service oversight of both rural and urban activities. The construction of the WMPP gives rise to a blurring of rural and urban activities with the key distinction relating to any differing customer service levels.

There is a need however to ring fence the irrigation, diversion and groundwater activities as these customers do not directly benefit from the WMPP.

This is not such an issue for the diversion and groundwater sector, as they generally do not utilise the infrastructure of GWMWater to receive a service. The irrigation sector will be commercially 'ring fenced' to ensure that costs are appropriately allocated. More particularly, as the irrigation sector is not an intended beneficiary of the WMPP, the irrigation sector should not be disadvantaged as a result of any unintended consequences of changed shares of consumptive uses of water arising from the WMPP.

8.1 Overview of Revenue Requirement

The overall revenue requirement for the full five years of the second regulatory period is yet to be fully determined.

GWMWater is seeking a price increase of 17.1% nominal in the first year of the five-year regulatory period. This will allow sufficient revenue to be recovered over the five-year regulatory period based on the existing assumption of a \$440m construction cost of the WMPP, other operating and capital costs for GWMWater and any anticipated revenue shortfalls arising from the first regulatory period.

A review conducted by GWMWater has concluded that the cost to complete the WMPP will be \$688 Million. This will produce a funding gap of \$248 Million from the initial funding formula as reflected in the PDA. GWMWater is seeking to address how these costs are to be recovered taking into consideration the impact this will have on customers and options for further state and federal funding.

If at the conclusion of the consultation period no decision has been reached on how any additional costs are to be allocated GWMWater will propose a set of principles to the ESC

in its final price submission on the 8 October 2007 as to the manner in which prices are to be calculated for prices beyond the first year of the regulatory period.

8.2 Updating the Regulatory Asset Base

In developing the inaugural 2006/2008 Water Plan, the Minister for Water approved an initial RAB of \$76.7 Million.

For Urban and Domestic and Stock prices these will be influenced by the allocation rules that apply to the funding of the WMPP. Only GWMWater funded investments feed into the RAB under the Building Block model.

This RAB was part of the urban price determination but was aimed at maintaining existing revenue capacity to meet future obligations for the WMPP. Whilst the RAB was attributed to GWMWater's urban activities the overall level of revenue accommodation provided reflected the total revenue requirement that was anticipated for GWMWater.

8.3 Rolling Forward the RAB

The initial RAB was set at 1 July 2004 and this coincided with the timing of the merger.

Investments through the regulatory period have been recorded and adjusted where these investments have been funded from government and/or customer contributions. The projected Regulatory Asset Base over the regulatory period is summarized below.

Table 8.3.1: Rolled Forward Asset Base

| | Rolled forward asset base | | \$m, 1/1/07 | | | | | | | |
|---------------------------|---------------------------|--------------|------------------|---------------|---------------|---------------|-------------------|---------------|---------------|--|
| | | | FIRST REG PERIOD | | | | SECOND REG PERIOD | | | |
| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | |
| Opening asset base | 78.99 | 91.69 | 95.71 | 63.49 | 197.76 | 407.78 | 481.71 | 480.96 | 481.29 | |
| Gross capex | 18.03 | 15.33 | 127.08 | 310.80 | 220.87 | 87.74 | 15.03 | 15.33 | 15.75 | |
| Government contributions | 0.85 | 7.20 | 154.52 | 169.31 | 0.25 | 0.43 | 1.11 | 0.14 | 0.88 | |
| Customer contributions | 1.25 | 0.62 | 0.50 | 2.50 | 1.64 | 1.38 | 1.26 | 1.26 | 1.46 | |
| Proceeds from disposals | 1.83 | 1.47 | 1.65 | 1.50 | 1.85 | 1.55 | 1.81 | 1.58 | 1.90 | |
| Regulatory depreciation | 1.41 | 2.01 | 2.64 | 3.21 | 7.12 | 10.45 | 11.60 | 12.02 | 12.44 | |
| Closing asset base | 91.69 | 95.71 | 63.49 | 197.76 | 407.78 | 481.71 | 480.96 | 481.29 | 480.37 | |

8.4 Weighted Average Cost of Capital

The Weighted Average Cost of Capital (WACC) for the water industry has been determined by the ESC and published in the ESC Guideline paper.

The benchmark water industry WACC has been applied to support the pricing proposals of GWMWater. Perhaps the most significant issue that GWMWater has in relation to the WACC relates to the application of Financial Accommodation Levy (FAL) to any borrowings that apply to the WMPP.

The initial modeling undertaken in relation to the WMPP assumed that GWMWater finances would be maintained within a range that did not deteriorate beyond a BBB credit rating. By applying this principle, however, it was assumed that GWMWater could continue to borrow at rates that apply to general government borrowings sourced through TCV. In doing so, it was assumed that FAL would not apply to WMPP borrowings.

The recent assessment by Fitch Ratings of GWMWater has given rise to an assessed rating of BB. At the time of preparing the plan GWMWater was seeking greater clarity on the basis of the assessment from Fitch Ratings.

GWMWater also considers that a primary beneficiary of the WMPP is the environment that any borrowings for the WMPP should be quarantined from any FAL obligations.

8.5 Renewals Annuity

Through its first determination GWMWater formally departed from the Renewals Annuity as the basis of 'asset consumption' to support pricing decisions.

For most of GWMWater rural infrastructure, this did not present a significant issue. Much of the distribution infrastructure was to be replaced by the WMPP. In the case of headworks, the application of Renewals Annuity was very problematic given the significant time between investments.

In transitioning to the 'building block' approach, however, there were some residual issues to deal with in relation to irrigation services. Upon transition to economic regulation (which coincided with the merger), the cash and renewals accounts were closed. The combined debt as at 1 July 2004 was \$1.07 Million and when the irrigators forwent their entitlement to water and in light of this credited the value of the forgone water to the debt to the value of \$70,000 leaving an adjusted balance of \$1 Million.

As a consequence of the shared strategy developed by GWMWater and the Wimmera Irrigation Sector for the Wimmera Irrigation District, GWMWater has forgiven the debt and associated cost of debt that has been associated with the Wimmera Irrigation Area.

The irrigation prices developed in this Water Plan reflect the anticipated revenue requirement from the irrigation sector when GWMWater is in a position to restore water supply to the irrigation customer base.

8.6 Taxation

GWMWater is subject to the National Tax Equivalents Regime (NTER) in accordance with the broader commitments of state governments through COAG to the application of National Competition Policy.

On transition to the NTER, both GRWA and WMW had significant fixed assets for tax purposes. In light of the substantial assets and the application of accelerated depreciation rates, GWMWater has substantial carry forward NTER losses. These losses continue to be

accrued and as a result it is not anticipated that GWMWater will incur any NTER expense for the foreseeable future.

9 PRICES

A consequence of the drought has been the implementation of aggressive demand side measures. These measures have been implemented to manage consumption in response to the reduced water allocations. This creates considerable uncertainty over the revenue streams that are based on the quantity of water delivered or consumed.

Considerable uncertainty exists in relation to the underlying demand for urban water. Water restrictions were escalated to Stage 4 for the majority of GWMWater urban systems in 2006/2007 and it is assumed that these will need to be maintained into the immediate future. In affected towns this has produced up to 50% reduction in water consumption in towns subjected to Stage 4 restrictions and 45% reduction across these towns. This was achieved through the introduction of aggressive conservation and supplementary water supply initiatives that will have a sustained impact on future urban demand and to a lesser extent rural demand.

In rural areas the reduced allocations have led to further destocking and in some cases the development of alternative water supplies that may become permanent sources of water. The level of future demand will, in the short to medium term, be influenced by the extent that water storages recover and this will also be influenced by the timetable for delivery of the WMPP.

The WMPP will not only change the delivery arrangements for water but will also provide a more reliable system for the measurement of water consumption. The WMPP has been designed on assumptions about stocking levels and other on farm applications for water. These have not been measured in the past and, as a result, some uncertainty remains in relation to accuracy of demand being assumed for the existing rural customers serviced by the WMPP. In addition to the existing demands the WMPP has been underpinned by assumptions relating to growth that will need to be realised. The timeframes for this growth will be contingent upon the extent that water storages recover and the priorities given to consumptive users and/or the environment for water saved as a consequence of piping.

This uncertainty makes it imperative that GWMWater have a flexible form of price control moving forward that allows it to adjust to meet a revenue target that ensures that the WMPP can be delivered and other service and compliance obligations met.

9.1 Tariff Structure

The Board of GWMWater following consultation with its customer committees, supported a deferral of the implementation of the proposed initiatives of Inclining Block Tariffs, Residential Volumetric Wastewater Charges and Guaranteed Service Levels.

Whilst it is not envisaged that this be formally reviewed until the next regulatory period, the adoption of a tariff basket will provide GWMWater with the opportunity to consider such initiatives through the regulatory period.

9.1.1 Urban Tariff Policy

The Urban Pricing Subgroup of the Urban CAGs convened in early 2007 to review urban tariffs for the 2008-2013 Water Plan. The meeting was aimed at providing an understanding of the current policy position of GWMWater and an update progress in implementing tariff rebalancing as it applies to urban customers. The meeting considered the policy foreshadowed by the ESC in relation to tariff design arising from the first regulatory determination. These included;

- Inclining Block Tariffs,
- Residential Volumetric Wastewater Charges,
- New Customer Contributions,
- Miscellaneous Charges, and
- Guaranteed Service Levels.

Based on the outcomes of discussions with the Urban Customer Advisory Committee - Pricing Sub Group, consensus was reached that priority should be given to a continuation of the tariff rebalancing in the 2008-2013 regulatory period.

Concentration on tariff rebalancing will provide a sound basis for the continued rationalisation of tariffs. It will avoid the confusion that will arise from the many variations that will arise in the event an early introduction of the extended tariff principles. The preferred form of price control of a 'tariff basket' within a 'revenue cap' will provide the flexibility for issues associated with cost allocation between different customer groups as these become better understood and as the WMPP is progressively implemented.

Any consideration of the implementation of GSLs, Inclining Block Tariffs and residential volumetric wastewater charges has been deferred. By rolling any consideration of these initiatives into the next regulatory period, GWMWater will have a more robust knowledge base to support their implementation including a better understanding of the likely impact of any such changes.

Urban tariffs will therefore continue to be a two-part tariff that is only differentiated in accordance with a varying level of service.

9.1.2 Uniform Policy Based on Level of Service

The current urban tariff policy has been in place since 2003 and has been underpinned by the progress transition to a uniform pricing policy. Differentiation under the policy is based on varying service standards or where there is markedly different cost structures based on water source. In order to meet the objectives of the policy a program of progressive rebalancing has been undertaken since 2003.

Water

The current policy framework for the provision of water provides the following principles:

- Fully Treated Water Supplies
- Disinfected Water Supplies
- Non Potable Water Supplies
 - o Channel / Pipeline
 - o Groundwater
 - o Eastern Grampians

Under the water pricing policy there is no differentiation between residential and non-residential customers. The only exception being where different services are being provided and this typically centres upon tapping sizes or provision of a fire service.

Wastewater

In the case of wastewater, the following framework has generally been applied to the tariffs for wastewater services:

- Large Town
- Small Town
- New Town

The grouping of large and small towns has been a convenient grouping of towns through the transition phase. The objective of the policy is to achieve a uniform wastewater tariff in all towns where a common service is provided. In this first regulatory period, GWMWater will achieve convergence with large and small town tariffs.

As a result of the tariff rebalancing arising from the first regulatory period, the delineation between a small and large town has been eliminated. In moving forward the only difference relates to towns that have been recently seweraged that attract the New Town Sewerage Rate.

New town sewerage schemes will, however, continue to be assessed differentially and will be considered in the context of the adequacy of customer and other third party contributions to meet the cost of any new schemes.

9.1.3 Vacant Land

These charges presently only apply to towns that are designated 'growth' towns. These are typically associated with new subdivisions awaiting full development and the charge reflects their interim servicing status. The inconsistent application with non-growth corridor towns was identified as an issue from an equity perspective. This issue was raised with the Urban CAG - Pricing Subgroup and they supported the retention of this policy.

9.1.4 Recreational and Concessional Water Users

Under current pricing arrangements recreational and concessional water users have a differential charge applied to service charges and volumetric 'off peak' water consumption. This will be charged at 85% of the price of volumetric water.

The service charge concession provides for a common water service charge independent of tapping size. The same principle applies to the standard wastewater charge for recreational and concessional customers.

By application to GWMWater, these customers can access an off peak (night watering) discount. Customers accessing the off peak watering service must invest in appropriate metering to ensure water taken under this arrangement can be separately measured.

9.2 Customer Impact Issues

9.2.1 Tariff Rebalancing

Urban tariff rebalancing has been substantially addressed during the first regulatory period. There remain however some outliers from the current policy framework that will roll into the next regulatory period. The most notable outlier relates to the town of Kaniva, Kaniva has come off a low base in terms of both water and wastewater charges and these will be addressed in the next regulatory period. Water charges in Cowangie and Murrayville will also be brought into line with other groundwater towns. In the case of Murrayville, there remain some disparity between residential and non-residential service charges for both water and wastewater services and these will be addressed through the regulatory period.

9.2.2 Service Related Price Adjustments - Water

Undertakings have been entered into with DHS to introduce water quality improvements through the regulatory period. When these improvements are delivered, the relevant tariff will be adjusted to reflect the service being provided. GWMWater has committed to improving water quality in the following towns and the list contains the tariff to be adopted.

Table 9.2.2.1: Water quality undertakings by town

| Town | Level of Service | Year of Change |
|-------------|--------------------------|----------------|
| Nhill | Potable (Full Treatment) | 2012-2013 |
| Manangatang | Potable (Full Treatment) | 2008-2009 |
| Murrayville | Potable (Full Treatment) | 2006-2007 |
| Ultima | Potable (Full Treatment) | 2008-2009 |
| Lalbert | Potable (Full Treatment) | 2008-2009 |
| Natimuk | Potable (Full Treatment) | 2011-2012 |

9.3 Urban Tariff Principles

9.3.1 Bulk Water

Bulk Water is generally governed by the principles of the bulk water entitlement(s) at the headwork's level. The cost of distribution and reticulation is then added in the event that the water is delivered using GWMWater distribution and reticulation infrastructure.

The Wimmera Mallee BE Orders did not prescribe a framework for cost sharing by the respective consumptive water users. The relative share has been based on the underlying security adjusted cost share among consumptive users.

The prices reflect the current headworks operating model but this will be the subject of review as the WMPP is constructed.

The proposed tariff basket approach will provide GWMWater with the flexibility to resolve issues that relate to the relative sharing of bulk water costs and headworks use over the term of the regulatory period.

9.3.2 Retail Water

Retail water services are charged under a two-part tariff and, as identified in the tariff rebalancing section, the differential between residential and residential is being progressively eliminated.

The standard volumetric charge is \$1.006 and \$291.74 for the service charge for fully treated water. Differential prices apply for water products of lesser quality. In the earlier years of the regulatory period, it is envisaged that price increases will be loaded to the residential service charge to achieve consistency with the non-residential charge. Once achieved in the outward years of the regulatory period price increases will be biased toward the volumetric charge.

This approach will assist with achieving revenue certainty in the earlier years of WMPP financing. The proposed tariff basket will allow these principles to be refined throughout the regulatory period as water supply is restored

9.3.3 Retail Sewerage

The differential between residential and non-residential charges has been substantially dealt with in the first regulatory period.

Non-residential customers that are not the subject of a trade waste agreement will transition to a fixed charge only as is the case with standard residential customers. Customers that are the subject of a minor trade waste service will continue to attract a volumetric charge. It is envisaged, however, that the volumetric rate will be aligned to the volumetric rate that applies to major trade waste customers.

9.3.4 Trade Waste

The principles of trade waste have been discussed in some detail in Section 5.1.16 that deal with the specific obligations of the SOO.

The introduction of the minor trade waste program will be complete on transition to the second regulatory period. The fixed charges associated with minor trade waste reflect the cost of administering the minor trade waste agreements. The volumetric rate that applies

to these customers will be consistent with major trade waste customers with no charges to be levied for other elements of the waste stream.

Major industrial and commercial customers are all managed by agreement. Whilst there are only 11 major trade waste customers, two thirds of the total trade waste revenue is collected from this customer group.

Major trade waste customer charges are based on a user-pays principle. The current volume-based charge is \$0.25/KL. Major trade waste parameter charges also provide incentives to reduce the concentration of waste discharged to sewer. This is done by monitoring the concentration of waste for a number of key parameters. The threshold limits provided below indicate the concentration at which no charges apply. Above these threshold concentrations, the specific fees rate applies.

Table 9.7.1: Major trade waste charges

| Parameter | Concentration Threshold | \$/Kg |
|--------------------------|-------------------------|-------|
| Biological Oxygen Demand | > 600 mg/l | 0.80 |
| Suspended Solids | > 600 mg/l | 0.30 |
| Nitrogen | >150 mg/l | 0.10 |
| Phosphorus | >30 mg/l | 0.20 |
| Total Dissolved Solids | >200 Kg/day | 0.30 |

Since the move from flat volumetric charges to the introduction of incentive-based charges for quality and quantity in 2004, significant changes have been made by the majority of major trade waste customers. For example, Stawell and Ararat Abattoirs' are working towards on-site pre-treatment to reduce the volume and concentration of discharge to GWMWater's sewer.

The abattoirs at Stawell and Ararat are working towards discharging excess trade waste to sewer in winter months, where their on-site storage is insufficient. The Ararat sausage casing factory is trialing an evaporation system which reduces the amount of its extremely large salt discharge from entering the sewer system and being charged the \$0.30/Kg.

Trade waste demand by major customers may increase slightly over the next regulatory period as the agricultural sector recovers after the drought. However, with the level of pre-treatment installed, customers' increased understanding of the impact of the drought and the consequent need for water savings is expected to negate any increase in demand.

As a result of the WMPP there is potential for new major industry to establish in the region. New industries generally take a number of years to establish and if new niche markets are feasible, these industries are likely to connect towards the later part of the 2008-2013 regulatory period, or within the next period.

At present the only new major trade waste customer on the horizon is a food processor in Warracknabeal. They are an existing trade waste customer, but have recently expanded. Their waste strength and salinity level now exceed the By-Law requirements for minor

customers. Work is continuing to encourage this customer to reduce their load on-site with appropriate pre-treatment and have them sign a major trade waste agreement.

Whilst there has been a reduction in trade waste revenue in the last couple of years, some of this can be offset by the improvement of quality and reduction of quantity discharged to GWMWater's sewers. This is expected to delay replacement and upgrade costs at Ararat as reflected in the capital expenditure plan proposed. Less odour and blockages have also been observed as a result of improved trade waste management across the whole region.

There is unlikely to be any significant change in the trade waste volumes or strengths during the 2008-2013 regulatory period, nor any marked effect on GWMWater's overall revenue requirement.

9.4 Rural Tariff Principles

9.4.1 Stock and Domestic

Stock and Domestic customers will transition into the next regulatory period with the proposed new pipeline tariff. This tariff will apply to all existing NMP customers and customers that have converted to the new pipeline system delivered under the WMPP. The existing hectare, dam fill and associated minimum charge will continue to apply until such time as channel supply customers are converted across to the WMPP.

For pipeline supply customers the proposed three-tiered charge will be applied. This will be based on:

- A primary service charge and a supplementary service charge for subsequent tapping points.
- A capacity charge based on the nominal allocation of water applying the rate of 2.5 ML per hectare.
- A volumetric charge applying the principles of an inclining block to manage demand in the early stages of the WMPP.

The tariff has been designed to accommodate water trading within the pipeline should the government policy of unbundling extend to D&S customers.

9.4.2 Lalbert Pipeline

The Lalbert pipeline system is a small (1,200 ha) pipeline system which is serviced from the urban supply system at Lalbert, which is supplied from the NMP system, and hence is required to comply with allocations for the BEs from the Murray River system. The supply to Lalbert was from the channel system up until 2004 when it was converted to supply from the Cannie Reidge extension of the NMP.

Usage in the pipeline system is metered. Note that while restrictions have been in place since 1999-2000, the move to supply from the NMP is not considered to have a major impact on demands given total typical consumption of about 2-3 ML per year.

9.4.3 Private Pipeline Schemes

There are also three private pipeline schemes supplied from the Murray system under GWMWater's Murray River BE.

GWMWater has supply agreements with these customers in relation to licensing costs for diversions from the Murray River, but all operational costs are met directly by the members of the schemes.

9.4.4 Supply by Agreement

Supply by Agreement customers are non-D&S customers that are located within the general rural waterworks district.

These customers are large water users that are part of the stock and domestic water supply system. In transitioning to a pipeline supply, there are some significant price increases for customers that have been serviced by the channel network.

The level of water security required by these customers is such that they need to maintain their existing storage capability.

9.4.5 Irrigation

The WIA is not a prescribed irrigation district in accordance with section 230, and as outlined in schedule 12, of the Water Act 1989. The irrigation area covers approximately 3,000 ha and provides services in and around Horsham, Quantong, Murtoa and Drung. There are presently 216 irrigators supplied from the system.

Within the irrigation area there are also 23 corporate bodies and residential subdivisions supplied by the irrigation system. The Wimmera River Weir Pool is treated as part of the irrigation system and entitlement holders receive the irrigation area allocation. All water entitlements in WIA are currently bundled with land.

Almost all of the properties with an irrigation supply are within the Wimmera Mallee Waterworks District and also receive a stock and domestic supply.

The normal irrigation season runs from 1 October to 30 May. Irrigators may access allocations of up to 200% of entitlement if sufficient water is available. Orders are placed for irrigation and meters read up to four to five times a season assuming monthly meter reads once irrigators receive sales water.

9.4.6 Irrigation Drainage

GWMWater presently maintains irrigation drainage infrastructure in the WIA.

Following consultation with irrigators, it was agreed that the cost of providing irrigation drainage service be recovered as part of the overall irrigation service and that an irrigation drainage charge not be charged.

9.4.7 Diversions

All diversion licences issued by GWMWater are for unregulated waterways. The relevant waterways for which licences are issued include the Wimmera, Avoca, Richardson and Glenelg rivers.

The metering of diversions is the key cost driver for diversion services and the proposed pricing reflects the cost of licencing and metering diversions.

9.4.8 Groundwater

Groundwater services provided by GWMWater relate to the licencing of groundwater activities.

The extent of oversight is more intensive in areas where the sustainability of the groundwater resource is considered and, in these areas, there is a differential price to reflect the extent of this oversight.

The metering of diversions is the key cost driver for diversion services and the proposed pricing reflects the cost of metering diversions.

9.4.9 Recycled Water

All recycled water services provided by GWMWater involve the provision of Class C effluent. The uses of recycled water centre upon the provision of water for irrigation in agricultural and recreational activities and are typically serviced by dedicated infrastructure.

The provision of recycled water services is governed by recycled water agreement that also outlines the commercial basis of supply. The price also reflects any contribution by individual customers on a scheme-by-scheme basis.

9.5 Customer Contributions

GWMWater supports the approach to Customer contributions as they apply to urban water and wastewater services based on the model developed for the water industry by Vicwater.

There remain, however, a number of issues that relate to the servicing of new customers for the WMPP that remains under consideration. The level of contribution needs to be considered in the context of the adequacy of the overall funding for the WMPP. These issues are presently the subject of discussion with the ESC.

9.6 Miscellaneous Charges

The number and extent of miscellaneous charges for GWMWater have been rationalized significantly.

Where possible, these have been brought into line with the proposal recently developed by Vicwater for miscellaneous charges to achieve greater consistency across the water industry.

9.7 Form of Price Control

The considerable uncertainty faced by GWMWater over the regulatory period is such that the form of Price Control being sought is a tariff basket in the context of an overall Revenue Cap.

This uncertainty relates to a number of different factors that will impact differently on the costs and revenues for GWMWater. These include but are not necessarily limited to the:

- extent that water storages will receive any reasonable rainfall;
- extent that if water storage levels recover there will be a significant demand response;
- ultimate cost of delivering the Wimmera Mallee Pipeline;
- extent that growth water sales are realised following completion of the WMPP; and
- cost of operating and maintaining the Wimmera Mallee Pipeline.

The combined effect of one or all of these scenarios could potentially have a material impact on the financial outlook of GWMWater, sufficient to give rise to a reopening of the price determination. This uncertainty may be effectively managed by the adoption of a 'revenue cap' that provides for a 'tariff basket' approach to price control and thus mitigating against the need of any reopening of the determination.

A tariff basket will allow GWMWater to progressively review the underlying costs of servicing individual customer groups throughout the regulatory period. This will be assessed as it progressively refines the operating model and realizes opportunities arising from the merger, WMPP and the introduction of SCADA.

9.8 Adjusting Prices

GWMWater is seeking a tariff basket inside a revenue cap as the basis of price control. There will need to be an annual reset of prices and underlying tariffs to reflect the level of accommodation afforded by the revenue cap. This mechanism can adequately deal with the significant volumetric price risk that confronts GWMWater.

GWMWater would only seek adjustment to the revenue cap if there were a material variance in its capital planning assumptions. This is only likely to occur if the scope of the capital program changes materially and this risk rests primarily with the cost of delivering the WMPP.

9.9 Changes in Legislative Obligations

In preparing this Water Plan, GWMWater has not foreshadowed any legislative changes over and above those already identified.

Whilst not necessarily a legislative change, GWMWater has predicted changes in the bulk entitlement that will require a Ministerial Order. The current bulk water entitlement will

require amendment to reflect the changed water allocation rules as the WMPP is progressively implemented.

As a consequence of the reassessment of the estimated cost to complete the WMPP, GWMWater is seeking to have the funding for the project reviewed. GWMWater has undertaken a WMPP Program Review and the outcome of this review will be processed through the DTF Gateway Review process. The outcomes of this review will be used as the basis of any renegotiation of the WMPP PDA.

10 NON PRESCRIBED SERVICES

10.1 Classification of Services as Non-Prescribed

The only non-prescribed service of GWMWater relates to the purchase and sale of bulk water entitlement.

The sale and purchase of water takes place in an open market. The market will influence the price of water and water will be sold and purchased in accordance with its appropriate value. GWMWater will only hold sufficient water to meet expected consumptive requirements for water.

10.2 Expenditure and Revenue Associated with Non-Prescribed Services

GWMWater's investment in the WMPP is realising 103,000 ML of water that is presently lost through the distribution network, and 20,000 ML of this water is to be made available for new development in the region. This is creating an asset that will progressively become available for new development.

This water is to be traded in the market at an appropriate value that is to be realized in the market.

11 TARIFF PROPOSALS

11.1 Overall Level of Increase 2008-2009

The level of increase across GWMWater will vary and will be targeted toward beneficiaries of the WMPP within the framework of the overall pricing policies. There is also a loading of increases to customers who have previously been the recipient of discounting.

Table 11.1.1: Specific Increases for Typical Customer Groups 2008-2009

| Customer Group | Price Increase % Nominal |
|---------------------------------|-----------------------------|
| Urban Water | 18.2 |
| Urban Wastewater | 14.0 |
| Rural Supply by Agreements | 81.3 |
| Rural Domestic and Stock # | |
| NMP Domestic and Stock (Pipe) | 14.5 |
| WMPP Domestic and Stock (Pipe) | 14.5 |
| WM Domestic and Stock (Channel) | 5.0 |
| Irrigation ## | 36.0 |
| Groundwater | 6.0 |
| Diversions | 6.0 |
| Bulk Water | 12.0 |

Channel supply customers to receive a lesser increase to align the price increase with the improved service of the WMPP

Irrigation tariff will continue to be a drought tariff until water supply capability is restored. Revenue shortfalls will be recovered in subsequent years of the regulatory period.

This level of price increase and tariff proposals applies to the underlying demand assumptions outlined below.

11.2 Urban Tariffs

Urban tariffs continue to be developed in the context of the quality of the service being provided with some differentiation on water source where this presents a different underlying cost structure.

11.2.1 Water Service Levels

The uniform tariff structure is based on the two parameters of water quality and capacity of service.

Water Quality

The level of treatment received underpins water services and pricing for these services. The services and the relevant towns are summarised below:

Group 1 – Treated Water

Common ‘treated water tariff’ for all towns supplied with fully treated water, regardless of source of supply:

| | | | |
|----------|------------|---------------|---------------|
| Birchip | Ouyen | Great Western | Warracknabeal |
| Charlton | Rainbow | Halls Gap | Murtoa |
| Dimboola | St Arnaud | Pomonal | Ararat |
| Hopetoun | Edenhope | Stawell | Horsham |
| Willaura | Lake Bolac | Underbool | Murrayville # |

Murrayville is going to a treated water charge as a result of transition to a fully treated water supply [assuming that arsenic removal is introduced and the supply moves from a regulated water supply to a drinking water supply].

Group 2 – Partially Treated Water

Common ‘disinfected water tariff’ for all towns supplied with partially treated water, regardless of source of supply:

| | | | |
|---------|-------------|------------|----------|
| Beulah | Minyip | Watchem | Lalbert |
| Brim | Manangatang | Woomelang | Ultima |
| Walpeup | Nullawil | Wycheproof | Rupanyup |
| Donald | Quambatook | Sea Lake | Jung |

Group 3 – Untreated Supplies

Common tariff for all towns supplied with non-potable/untreated water via channel/WMPP or NMP:

| | | | |
|--------------|---------------|------------|---------------|
| Antwerp | Marnoo | Pimpinio | Culgoa |
| Berriwillock | Nandaly | Speed | Lascelles |
| Clear Lake | Chillingollah | Tarranyurk | Patchewollock |
| Dooen | Underbool | Tempy | Chinkapook |
| Glenorchy | Natimuk | Waitchie | Yaapeet |
| Jeparit | Noradjuha | | |

Group 4 – Eastern Grampians Pipeline

Non-potable water supplied by Eastern Grampians Pipeline:

| | | | |
|---------|----------|-----------|---------|
| Buangor | Elmhurst | Wickliffe | Moyston |
|---------|----------|-----------|---------|

Group 5 – Groundwater

A common tariff has been applied for all towns supplied with non-potable/untreated water via groundwater supply:

| | | | |
|----------|----------|------------|--------|
| Apsley | Kiata | Serviceton | Kaniva |
| Cowangie | Lillimur | Streatham | Nhill |
| Goroke | Miram | Westmere | Harrow |

Capacity of Service

Table 11.3.1: Capacity of Service

| Meter Size | Service Charge Multiplier |
|------------|---------------------------|
| 20 | 1 |
| 25 | 1.6 |
| 32 | 2.6 |
| 40 | 4 |
| 50 | 6.25 |
| 65 | 10 |
| 70 | 16 |
| 75 | 16 |
| 80 | 25 |
| 100 | 25 |
| 150 | 56.25 |
| 200 | 100 |

The Service Availability Charge (SAC) multiplier attempts to reflect the incremental capacity required for large users.

11.2.2 Urban Water and Wastewater Tariffs 2008-2009

The urban water and wastewater tariffs are underpinned by a philosophy of the underlying level of service differentiated by the underlying water resource.

Water

Water charges are underpinned by the product quality philosophy identified above with all values expressed in nominal dollars.

Table 11.2.2.1 2008-2009 Tariffs Proposed for Water Services

| | Full Treatment | | Partial Treatment | | Untreated | |
|-------------------|----------------|--------|-------------------|--------|-----------|--------|
| | SAC | Vol | SAC | Vol | SAC | Vol |
| Pipeline/Channel | \$310.00 | \$1.20 | \$290.00 | \$1.10 | \$260.00 | \$1.05 |
| Groundwater | N/A | N/A | N/A | N/A | \$260.00 | \$0.65 |
| Eastern Grampians | N/A | N/A | N/A | N/A | \$260.00 | \$0.85 |
| Kaniva | | | | | \$235.00 | \$0.65 |

Wastewater

The differential between residential and non-residential service charges has been removed, the disposal charge for non-residential customers reduced and a trade waste service fee introduced.

Table 11.2.2.2: Wastewater Charges for Small and Large Towns 2008-2009

| Towns on Higher Level Tariff \$320.00 Disposal Charge \$0.50 (Non Residential) Trade Waste Fee \$110 | New Town Sewerage Tariff \$330 Disposal Charge \$0.50 (Non Residential) Trade Waste Fee \$110 |
|--|---|
| Ararat | Ouyen |
| Charlton | Minyip |
| Dimboola | Hopetoun |
| Donald | Edenhope |
| Horsham | Halls Gap |
| Murtoa | |
| Rainbow | |
| St Arnaud | |
| Stawell | |
| Warracknabeal | |
| Birchip | |
| Jeparit | |
| Natimuk | |
| Sea Lake | |
| Willaura | |
| Serviceton | |
| Wycheproof | |
| Nhill | |

Tariff rebalancing in Kaniva will continue to be transitioned. A rate of \$280 will be applied to wastewater in 2008/2009.

The reference tariff for the New Town Sewerage Scheme towns of Hopetoun, Minyip and Ouyen will provide modest increases to produce tariffs of \$330 in 2008/2009. Special tariffs apply to Edenhope and Halls Gap to reflect the compliance obligations associated with servicing these two towns.

As was the case with water, the relativity between residential and non-residential wastewater tariffs will be narrowed.

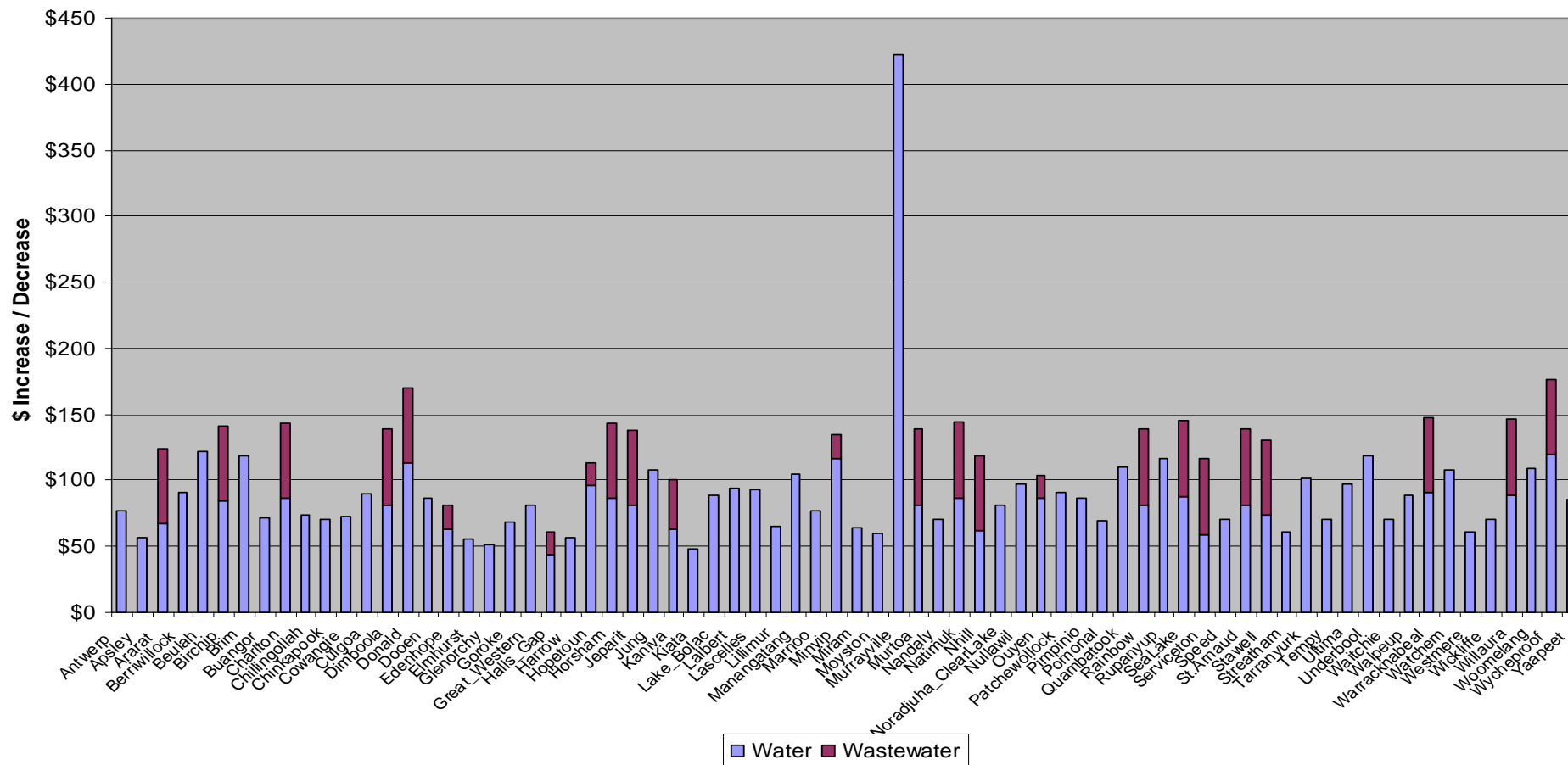
11.2.3 Common Water and Wastewater Charges

It has also been assumed that all concessional customers will continue to attract a lesser service charge for both water and wastewater services but this charge has been increased to \$205 for water and \$195 for waste in 2008/2009.

The development rate for newly subdivided land is \$150 for both water and wastewater services in 2008/2009.

Figure 11.3.5: Town-by-Town Impact on Customer Charges

Town by Town Impact on Customer Charges 2008/09



The above figures are based also assume the revenue effects of a progressive relaxing of water restrictions.

11.3 Rural Water Services

There is an expectation that rural water service prices will increase in accordance with the global increase established by the global revenue requirement.

The outcome of the consultative processes of the MJA Pricing Review identified substantial concerns about the equity of the current tariff structures for rural water services of GWMWater. This centred primarily on the inequity of the hectare charge in the domestic and stock tariff. The equity and efficiency issues of the WMPP tariff have been under consideration by the RTWG for the past eighteen months.

The tariffs and the underlying level of increase inherent in them are aligned to the improved service afforded by the WMPP. The alignment of the pipeline tariff to a more immediate increase is consistent with the general policy already established that price increases be aligned to the improved service. D&S Channel Supply increases are therefore more modest.

SBA to industry will be receiving a significant price increase. This reflects an attempt to start addressing the level of subsidy provided to these customers under existing supply arrangements.

In the case of irrigators, the level of increase has been set at a level that addresses the changed headworks cost allocation formula inherent in the Wimmera Mallee Bulk Water Entitlement Order. In striking this tariff however it has been assumed that the existing 'special drought' tariff would continue to apply until reasonable supply capability was achieved for the irrigation sector.

11.3.1 Nominal Impact of Rural Tariff Changes

An analysis was done on the impact of this proposed one off tariff change. The results are as follows:

Figure 11.4.1: Percentage increase experienced by Domestic and Stock Customers

| Assessment Impacts | Number of assessments | Assessment Bill Impact | | | | | | Maximum Increase (\$) | Maximum Decrease (\$) |
|--------------------|-----------------------|------------------------|---------------------|-----------------|---------------------|-------------------|------------------|-----------------------|-----------------------|
| | | Number Increase | Proportion Increase | Number Decrease | Proportion Decrease | Average \$ Change | Average % Change | | |
| WMP CUSTOMERS | 11,925 | 7,176 | 60.2% | 3356 | 28.1% | \$ 67.39 | 13.69% | \$ 4,278 | \$ 736 |
| NMP CUSTOMERS | 3,237 | 2,426 | 74.9% | 588 | 18.2% | \$ 120.83 | 14.51% | \$ 25,332 | \$ 721 |
| TOTAL | 15,162 | 9,602 | 63.3% | 3,944 | 26.0% | \$ 78.80 | 13.86% | \$ 25,332 | \$ 736 |

Although WMP tariffs also increased by 14.5% this tariff increase will take a few years to flow through as customers connect to the pipeline. The existing channel tariffs are increasing nominally at 5.0% have to have the price impact coincide with the improved level of service. Within the first year of the regulatory period it is estimated over 50% of the customers will be on the new pipeline tariff and 100% by the third year. The maximum assessment increase is just over \$4,000 and this is a large consumer on a relatively small land holding.

The average percentage change for Wimmera customers (channel and pipeline) is influenced by the improved supply capability and the associated demand response.

The NMP achieves the 14.5% increase but with one customer's bill increasing by over \$25,000. This customer has been identified and is a large manufacturing operation and although this is still a 14.5% increase on their bill they will also have the potential to look at an off peak tariff.

Table 11.4.2 – Wimmera Mallee Assessments

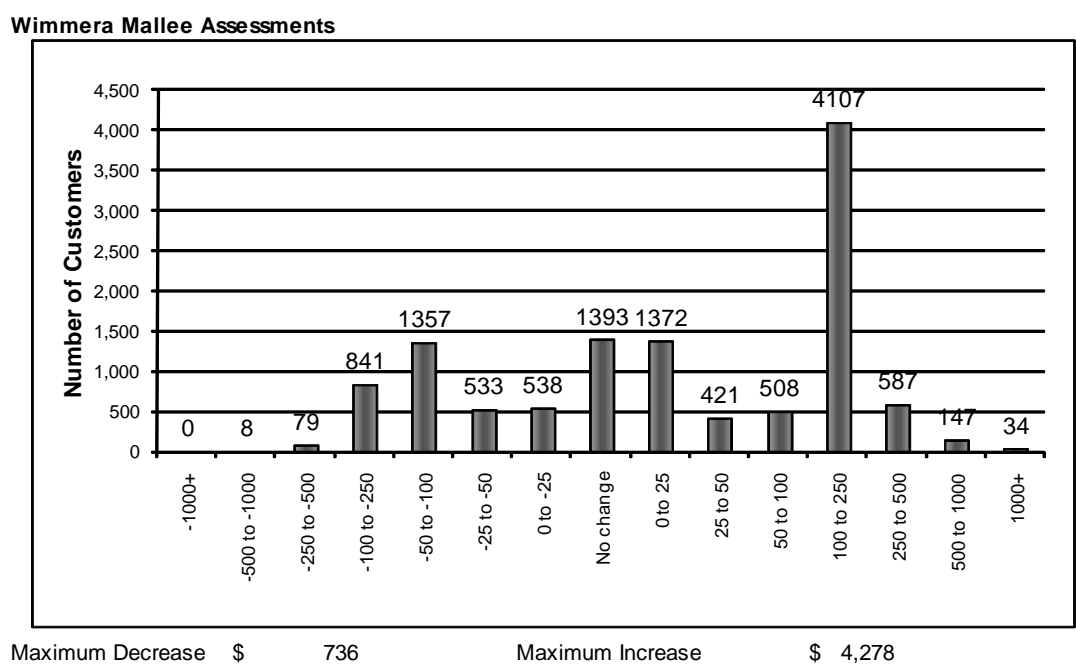
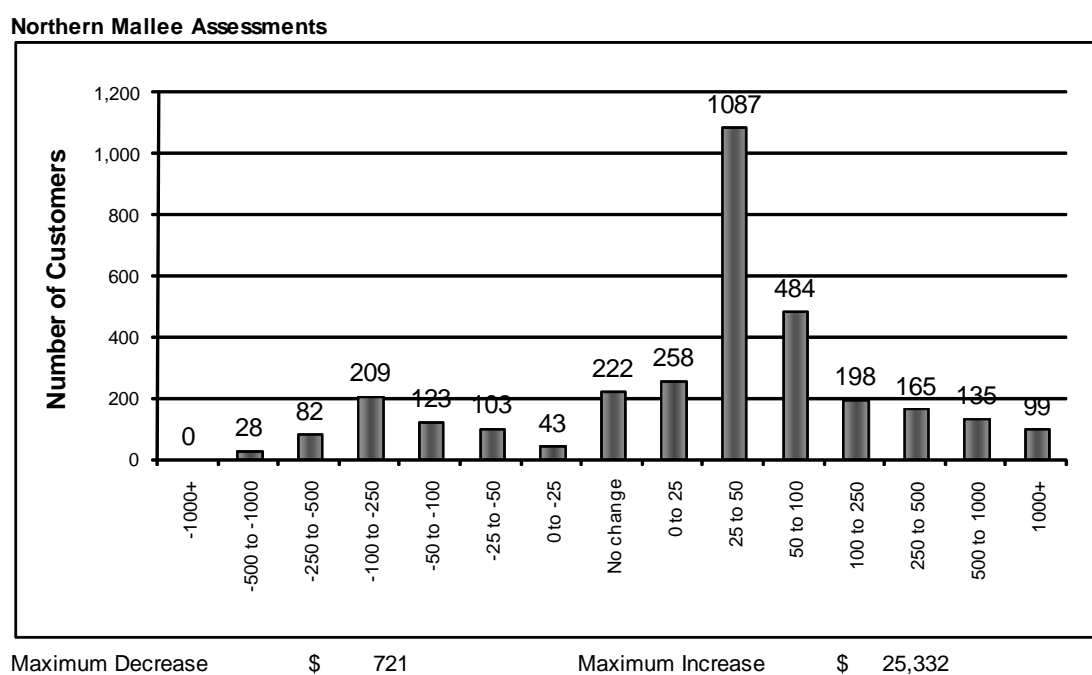


Table 11.4.3 – Northern Mallee Assessments



For rural pricing, the specific tariff detail is to be the subject of further consultation with the community.

11.4 Proposed Tariffs

GWMWater tariff proposals are being progressed in the context of a total revenue requirement for the Corporation.

11.4.1 Urban Tariffs

Urban tariffs are being expressed in terms of a total revenue requirement within a framework of tariff rebalancing. The urban tariffs being proposed expressed in nominal dollars are summarised in Tables 11.5.1.

Table 11.5.1 – Urban Water and Sewerage Charges - Schedule of Tariffs 2008-2009 (Nominal)

| Town | Water | | | | | | Sewerage | | | | | |
|---------------------|------------|-----------------|---------------------|--------------|-------------|--------------------------|------------|-----------------|---------------------|--------------|-------------|-------------|
| | Volumetric | Residential SAC | Non Residential SAC | Concessional | Vacant Land | Fire Service / Standpipe | Volumetric | Residential SAC | Non Residential SAC | Concessional | Vacant Land | Trade Waste |
| Antwerp | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Apsley | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Ararat | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ 150.00 | \$ 110.00 |
| Berrinlock | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Beulah | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Birchip | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Brim | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Buangor | \$ 0.8500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Charlton | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Chillingollah | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Chinkapook | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Cowangie | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Culgoa | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Dimboola | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Donald | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Dooen | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Edenhope | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 330.00 | \$ 330.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Elmhurst | \$ 0.8500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Glenorchy | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Goroke | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Great_Western | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Halls_Gap | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ 0.50 | \$ 330.00 | \$ 330.00 | \$ 195.00 | \$ 150.00 | \$ 110.00 |
| Harrow | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Hopetoun | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 330.00 | \$ 330.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Horsham | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ 150.00 | \$ 110.00 |
| Jeparit | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Jung | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Kaniva | \$ 0.6500 | \$ 235.00 | \$ 275.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 280.00 | \$ 280.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Kiata | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Lake_Bolac | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Laibert | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Lascelles | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Lillimur | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Manangatang | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Marnoo | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Minyip | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 330.00 | \$ 330.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Miram | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Moyston | \$ 0.8500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Murrayville | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Murtoa | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Nandaly | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Natimuk | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Nhill | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Noradjuha_ClearLake | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Nullawil | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Ouyen | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 330.00 | \$ 330.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Patchewollock | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Pimpinio | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Pomonal | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Quambatook | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Rainbow | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Rupanyup | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| SeaLake | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Serviceton | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Speed | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| St.Arnaud | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Stawell | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ 150.00 | \$ 110.00 |
| Streatham | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Taits_Lane | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ 150.00 | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Tarranyurk | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Tempy | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Ultima | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Underbool | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Waitchie | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Walpeup | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Warracknabeal | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Watchem | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Westmere | \$ 0.6500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Wickliffe | \$ 0.8500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Willaura | \$ 1.2000 | \$ 310.00 | \$ 322.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Woomelang | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Wycheproof | \$ 1.1000 | \$ 290.00 | \$ 305.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ 0.50 | \$ 320.00 | \$ 320.00 | \$ 195.00 | \$ - | \$ 110.00 |
| Yaapeet | \$ 1.0500 | \$ 260.00 | \$ 285.00 | \$ 205.00 | \$ - | \$ 315.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

11.4.2 Rural Tariffs

Table 11.5.2. Rural Tariffs

| 2008-2009 Rural Water Tariffs | |
|---|------------|
| Channel Supplied | |
| Area charge (per ha) | \$3.12 |
| Minimum Area charge | \$370.00 |
| Damfill Fee (per fill) | \$89.25 |
| Channel Diversion Fee | \$89.25 |
| Excess Water Fee (per ML) | \$300.00 |
| Channel Commercial SBA Rate (Per ML) | \$315.00 |
| Channel Recreation SBA Rate (Per ML) | \$42.00 |
| Pipeline Supplied | |
| Capacity Charge (per ML) | \$652.55 |
| Minimum Capacity Charge | \$230.00 |
| Usage charge - first step within allocation & allowance (per kL) | \$0.7557 |
| Usage charge - second step over 1 st Step and within 125% of allocation & allowance (per kL) | \$1.0305 |
| Usage charge - Excess Rate over 125% of allocation & allowance (per kL) | \$2.6335 |
| Primary Meter Charge (per Meter) | \$229.00 |
| Standard Meter Charge (per Meter) | \$114.50 |
| Staged Commercial SBA Capacity Charge (Per ML) | \$300.00 |
| Staged Commercial SBA Volumetric Rate (Per ML) | \$300.00 |
| Staged Recreational SBA Capacity Charge (Per ML) | \$0.00 |
| Staged Recreational SBA Volumetric Rate (Per ML) | \$114.50 |
| Commercial SBA Offpeak Capacity Charge (Per ML) | \$229.00 |
| Walpeup West Bores | |
| Area charge (per ha) - Division 2 | \$1.98 |
| Area charge (per ha) - Division 2 Special | \$0.59 |
| Area charge (per ha) - Division 3 | \$0.99 |
| Area charge (per ha) - Division 3 Special | \$0.30 |
| Minimum Area charge | \$370.00 |
| Irrigation Area - Wimmera | |
| Drought Tariff Levied Up Until First Irrigation Supply Period | |
| Temporary Drought Supply Charge (<50ML entitlement) | \$600.00 |
| Temporary Drought Supply Charge (>50ML entitlement) | \$1,000.00 |
| Standard Irrigation Tariff - Supply And Non Supply Years | |
| Supply Charge | \$1,000.00 |
| Capacity Charge per ML entitlement | \$56.00 |

| | |
|--|-----------------|
| Minimum Capacity Charge per ML entitlement | \$8.50 |
| Sales Water Usage charge (per ML) | \$35.00 |
| Drainage Charge (per benefiting customer) | \$200.00 |
| Wimmera River Weir Pool (per ML) | \$136.00 |
| Groundwater (Private Diverters) | |
| Licence Fee | \$79.50 |
| Volumetric charge (per ML) - Neuarpuir Area | \$3.08 |
| - Murrayville Area | \$7.14 |
| - Telopea Downs Area | \$4.98 |
| - All other Areas (incl. Apsley & Kaniva) | \$2.15 |
| Surface Water | |
| Regulated Streams, Weir Pools and Storages (per ML) | \$12.60 |
| Minimum charge (15 ML) | \$189.00 |
| | |
| Unregulated Waterways - On-stream storages (per ML) | \$5.97 |
| Minimum charge (15 ML) | \$89.68 |
| | |
| Unregulated Waterways - Off-stream storages (per ML) | \$2.97 |
| Minimum charge (15 ML) | \$44.52 |
| | |
| Domestic & Stock etc. 12 Month Licences | |
| Streams & Lakes | |
| (1) Single unit, farm use* | \$81.30 |
| (2) Each additional unit** | \$40.65 |
| (3) Guest Houses, Hotels, Motels, Caravan Parks etc. | \$121.90 |
| | |
| Storages & Weir Pools | |
| (1) Single unit, farm use* | \$121.90 |
| (2) Each additional unit** | \$60.95 |
| (3) Guest Houses, Hotels, Motels, Caravan Parks etc. | \$182.85 |

* Each of the following comprises a single unit of use: Domestic (on house), Dairy, Piggery, Nursery (Maximum 2.2 ML /pa), Domestic & Stock, Poultry.

** Where same pump is used for irrigation supply this fee applies for D&S allocation.

11.5.3 Developer Contributions

The AMS has now evolved sufficiently to provide information to support the hydraulic modeling that is used to determine the pricing framework for developer contributions. This will be supported by the completion of the Bulk Water Entitlement conversion process that will clearly establish the yield of the Grampians storage system.

The ESC in its 2008 Water Price Review Guidance Paper has developed a model for new customer contributions. GWMWater accepts this as the approach to the development of urban services. However, GWMWater does not necessarily accept this approach to

funding rural developments and more particularly the WMPP and will be progressing the issues for new customers in rural developments with the ESC during the period of the Exposure Draft.

11.5.4 Trade Waste

The Trade Waste pricing of GWMWater has been developed for Category 3 and 4 customers and is presently part of a two-year implementation process.

The minor trade waste audit is presently being completed to determine the number of Category 1 or Category 2 Trade Waste customers and the information collected will be used as the basis of any future rebalancing of urban charges.

11.5.5 Miscellaneous Charges

Many of the miscellaneous charges of GWMWater are prescribed as a multiple of charge units under the Water Act.

GWMWater will generally comply with the principles developed jointly by the ESC and Vicwater relating to the provision of miscellaneous services. These will more generally be underpinned by reference to a clearer definition of cost plus as the basis of miscellaneous charges.

APPENDIX 1. STATEMENT OF OBLIGATIONS

Available at www.gwmwater.org.au

APPENDIX 2. WATER INDUSTRY REGULATORY ORDER

Available at www.gwmwater.org.au

APPENDIX 3: CAPITAL EXPENDITURE FORECAST AND DELIVERY

| Projects and costs that now will be incurred in the 2008-2013 period | Overall difference (\$'000) |
|---|-----------------------------|
| Forecast expenditures on water quality improvements included in the 2006-2008 Water Plan will be less than that incurred. Planning, investigations and consultation for a number of the forecast projects has been concluded and added to this Water Plan. This includes major expenditures on both completing water quality improvements and undertaking further investigations particularly focusing on water to be supplied by the WMPP. | (891) |
| Investigation and scoping of Willaura wastewater treatment plant will be completed in 2008/2009 with construction being undertaken in 2009/2010 rather than in the current Water Plan period. | (433) |
| Sewer infill in Sth Horsham has been deferred into the 2008 Water Plan period primarily as a result of ongoing discussions with the Horsham Rural City Council. | (200) |
| Corporate capital expenditure relating to communication and remote access infrastructure and the associated consolidation of GWMWater's office accommodation has not been able to be achieved primarily because of the difficulty in securing an appropriate solution. This matter will be addressed in the 2008 Water Plan period. | (595) |
| Other minor projects with costs deferred to the 2008 Water Plan period. | (200) |
| Expenditure deferred to the 2008 Water Plan period. | (2,319) |

Budgeted differences

Budgeted differences, where the budget is in excess of actual/planned expenditure or expenditure is in excess of budget can be construed in both positive and negative ways. These relate to where the planned outcome has been achieved at a cost different to that forecast in the 2006-2008 Water Plan. These are provided below.

| Budgeted differences | Overall difference (\$'000) |
|---|-----------------------------|
| Dam safety work at Taylors Lake and projects to address identified OH&S issues have advanced due to a risk mitigation assessment. | 440 |

| Projects and costs that now will be incurred in the 2008-2013 period | Overall difference (\$'000) |
|--|--|
| A number of projects were inadvertently omitted from the 2005 water plan, the major one being GWMWater's contribution towards the upgrading of Nhill WWTP. | 3,283 |
| There were a number of projects where budget and forecast levels differed as a result of change in scope. The primary projects in this group comprised of: | |
| <ul style="list-style-type: none"> • increased expenditure on water main replacements (13%) to improve performance against service standard targets; • increased cost for water meter replacements to ensure compliance; • completion of Willaura WTP was delayed from 2005/2006 to 2006/2007; • implementation of the Supervisory Control and Data Acquisition (SCADA) network has been accelerated to improve asset information; • change in scope to provide solutions for Halls Gap WWTP and the Alfred Street outfall augmentation; and • increased scope of work through more thorough risk assessments. | 203 111 1,098 (231) (742) 229 |
| Other minor projects where the projected outcome has been achieved at a cost different to that forecast in the 2006-2008 Water Plan. | (40) |
| Minor levels of forecast expenditures when incurred were assessed to be operating expenditures. The overall outcomes of the identified projects were achieved. | (210) |
| Increased expenditure resulting from projects being delivered at a cost different from that forecast in Water Plan 2005. | 4,411 |

Compliance with regulatory requirements

Based on a risk management framework, GWMWater identified a number of projects either to ensure compliance or to mitigate the risk of non-compliance since the Water Plan 2005 was written. These include:

| Compliance with regulatory requirements | Overall difference (\$'000) |
|--|------------------------------------|
| Water quality upgrades for compliance | 1,265 |

| Projects and costs that now will be incurred in the 2008-2013 period | Overall difference (\$'000) |
|---|------------------------------------|
| Renewal of sewer stacks | 360 |
| Drought related projects (Horsham and Donald) | 1,000 |
| Upgrading of Huddleston Weir (funded by the Wimmera Catchment Management Authority (CMA)) | 300 |
| Scoping projects for compliance work to be completed in 2008 Water Plan period | 200 |
| Other minor compliance projects. | 1,179 |
| Increased expenditure resulting from additional compliance work | 4,304 |
| | |
| Projects deferred based upon risk assessed priorities | Overall difference (\$'000) |
| Various projects for delivery of irrigation/rural water deferred as a result of the limited water available for delivery. | (1,312) |
| Water reuse related projects deferred as a result of limited sustainable end use customers identified to fund the expenditures. | (393) |
| Minor renewals to two reservoirs deferred pending completion of the WMPP. | (241) |
| Deferral of WWTP upgrades based upon reassessed risk assessments (Dimboola and Ararat). | (1,797) |
| Replacement of Mount Cole pipeline pending reconsideration of optimal solution. | (1,088) |
| Other projects | (1,652) |
| Reduction in expenditures resulting from deferral of projects | (6,483) |
| | |
| Reduction in expenditures from other minor projects | (350) |
| | |
| Overall difference between 2005 Water Plan capital expenditure forecasts and planned expenditures to 30 June 2008 (excluding contributions). | (707) |

APPENDIX 4 KEY LEGISLATION, REGULATION AND POLICY

| Legislation/regulation/policy | Key implications relevant to capital expenditure |
|--|---|
| SOO | <ul style="list-style-type: none"> The overarching objectives that govern the operations of GWMWater are set out in the SOO, as set out earlier (as required by the Water Industry Act). |
| Water Industry Regulatory Order (WIRO) | <ul style="list-style-type: none"> To provide a framework for economic regulation by the ESC for services provided by the regulated water industry. |
| Water Act 1989 | <ul style="list-style-type: none"> Act under which GWMWater has been established Set out functions of water and sewerage service providers Requires preparation of Statement of Corporate Intent Water services agreement |
| Water (Governance) Act 2006 | <ul style="list-style-type: none"> Requirement to become a corporation Sets out accountability and responsibilities Introduces sustainable management principles |
| Safe Drinking Water Act 2003 | <ul style="list-style-type: none"> Require water suppliers and storage managers to prepare and implement plans to manage risks in relation to drinking water and some types of non-potable water; Provide for the auditing of those plans Require water suppliers to ensure that the drinking water they supply meets quality standards specified by the regulations Requires water suppliers to report and disclose information concerning the quality of drinking water |
| Environmental Protection Act 1970 | <ul style="list-style-type: none"> Establishes principles of environmental protection Statement of environment protection policy (SEPP) - air, water, groundwater, noise Licences and works approval for “prescribed activities” |
| Essential Services Commission Act 2001 | <ul style="list-style-type: none"> Basis of economic regulation Requires establishment of Customer Charter (see below) Requires ESC to approve water plan Service standards for water and waste water services Level of capital expenditure included in the price |
| Water Industry Act 1994 | <ul style="list-style-type: none"> Water Industry Regulatory Order (WIRO) SOO (see above) |
| Health Act 1958 | <ul style="list-style-type: none"> Ensure equity in health Help people live as long as possible |
| Safe Drinking Water Act 2005 | <ul style="list-style-type: none"> Establishes the requirement for the supply of drinking water |
| Food Act 1984 | <ul style="list-style-type: none"> Requirements for the supply of potable water for food businesses |
| Fluoride Act 1973 | <ul style="list-style-type: none"> Power to add fluoride to water supplies |
| OH&S Act 2004 | <ul style="list-style-type: none"> Establishes the five key principles of Occupational Health & Safety that GWMWater is required to reflect in its work place |
| Road Management Act 2004 | <ul style="list-style-type: none"> Reform the law relating to road management in Victoria |
| White Paper Our Water Our Future (June 2004) | <ul style="list-style-type: none"> Government’s policy for the water sector in Victoria. Various performance targets required to achieve the policy |
| ANCOLD Guidelines | <ul style="list-style-type: none"> Whilst these guidelines have no legislative backing they are |

| Legislation/regulation/policy | Key implications relevant to capital expenditure |
|---|---|
| | accepted by the industry and Governments as requirements of dam management |
| Corporate plan including Statement of corporate intent (both prepared annually) | <ul style="list-style-type: none"> • Vision & mission • Key result areas • Forecast capex and opex • Forecast price levels • Forecast financial performance |
| DSE Policy Objectives recycled water | <ul style="list-style-type: none"> • Policy outlining objectives for recycled water use. • Currently in draft |
| State government's environmental white paper; Our Environment Our Future | <ul style="list-style-type: none"> • Policy to be adopted in managing the environment |
| Strategic Plan 2006-2011 | <ul style="list-style-type: none"> • Board approved Key Result Areas for GWMWater |
| Customer Charter (Urban) | <ul style="list-style-type: none"> • Standards of service GWMWater is obliged to be delivered to customers • Conditions of service provision • GWMWater's rights • Customer consultation obligations • Dispute resolution provisions |
| Customer Charter (Rural) | <ul style="list-style-type: none"> • Conditions of service provision • GWMWater's rights • Customer consultation obligations • Dispute resolution provisions |
| Bulk Entitlement Orders | <ul style="list-style-type: none"> • Documents the operating rules and water sharing arrangements that exist for storages |
| Catchment and Land Protection Act | <ul style="list-style-type: none"> • Control of weeds |

APPENDIX 5 RECYCLED WATER USE

| TOWN | Influent | On-Site Irrigation | Off-site Irrigation | Evaporation | Discharge to waterways | Volume of Reuse |
|---------------|-------------|--------------------|---------------------|-------------|------------------------|-----------------|
| Ararat | 832 | 427 | 405 | 0 | 0 | 832 |
| Birchip | 52 | 52 | 0 | 0 | 0 | 52 |
| Charlton | 37 | 37 | 0 | 0 | 0 | 37 |
| Dimboola | 89 | 89 | 0 | 0 | 0 | 89 |
| Donald | 113 | 113 | 0 | 0 | 0 | 113 |
| Edenhope | 188 | 0 | 188 | 0 | 0 | 188 |
| Halls Gap | 137 | 135 | 2 | 0 | 0 | 137 |
| Horsham | 1130 | 255 | 875 | 0 | 0 | 1130 |
| Jeparit | 42 | 0 | 0 | 42 | 0 | 0 |
| Kaniva North | 90 | 0 | 0 | 90 | 0 | 0 |
| Kaniva South | 90 | 0 | 0 | 90 | 0 | 0 |
| Murtoa | 88 | 88 | 0 | 0 | 0 | 88 |
| Natimuk | 23 | 0 | 0 | 23 | 0 | 0 |
| Nhill | 165 | 164 | 1 | 0 | 0 | 165 |
| Rainbow | 36 | 0 | 0 | 36 | 0 | 0 |
| Sea Lake | 55 | 55 | 0 | 0 | 0 | 55 |
| Serviceton | 5 | 0 | 0 | 5 | 0 | 0 |
| St Arnaud | 171 | 170 | 1 | 0 | 0 | 171 |
| Stawell | 444 | 279 | 165 | 0 | 0 | 444 |
| Warracknabeal | 109 | 0 | 109 | 0 | 0 | 109 |
| Willaura | 26 | 0 | 0 | 12 | 14 | 0 |
| Wycheproof | 41 | 41 | 0 | 0 | 0 | 41 |
| Total | 3963 | 1905 | 1746 | 298 | 14 | 3651 |

APPENDIX 6. CORE SERVICE STANDARDS - URBAN SERVICES

| Service Standards | Water Plan Targets 2006-08 | | Water Plan Targets 2008-013 | | | | |
|--|----------------------------|-------|-----------------------------|-------|-------|-------|-------|
| | 06/08 | 07/08 | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 |
| Water | | | | | | | |
| Rate of unplanned water supply interruptions (per 100 km) ¹ | 90 | 90 | 40 | 40 | 40 | 40 | 40 |
| Avg. time to attend bursts and leaks - Priority 1 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Avg. time to attend bursts and leaks - Priority 2 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Avg. time to attend bursts and leaks - Priority 3 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Proportion of water supply interruptions restored within 5 hrs - Unplanned | 97.5 | 97.5 | 97.5 | 97.5 | 97.5 | 97.5 | 97.5 |
| Proportion of water supply interruptions restored within 5 hrs - Planned | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Average customer minutes off supply - Unplanned | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Average customer minutes off supply - Planned | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Average frequency of water supply interruptions - Unplanned | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Average frequency of water supply interruptions - Planned | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| Average duration of water supply interruptions - Unplanned | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Average duration of water supply interruptions - Planned | 240 | 240 | 180 | 180 | 180 | 180 | 180 |
| Number of customers experiencing five (5) unplanned water supply interruptions % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Level of unaccounted for water % ² | 14.00 | 14.00 | 14.0 | 12.0 | 12.0 | 10.0 | 10.0 |
| Sewerage | | | | | | | |
| Rate of sewerage blockages (blockage per 100km main) | 36.00 | 36.00 | 36 | 36 | 36 | 36 | 36 |
| Average time to attend sewer spills and blockages (min) | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Average time to rectify a sewer blockage (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| Proportion of spills contained within a specified time - 3 hrs Priority 1 (%) | 97.00 | 97.00 | 98 | 98 | 98 | 98 | 98 |
| Proportion of spills contained within a specified time - 3 hrs Priority 2 (%) | 97.00 | 97.00 | 98 | 98 | 98 | 98 | 98 |
| Number of customers experiencing three (3) sewer blockages | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Odour complaints as a % of customers | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| Customer Service | | | | | | | |
| Complaints to EWOV (per 1000 customers) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Frequency of telephone calls answered within 30 seconds - Account line (%) | 80 | 80 | 80 | 80 | 80 | 80 | 80 |

| Service Standards | Water Plan Targets 2006-08 | | Water Plan Targets 2008-013 | | | | |
|--|----------------------------|----|-----------------------------|----|----|----|----|
| | | | | | | | |
| Frequency of telephone calls answered within 30 seconds – Fault line (%) | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Minimum flow rate | | | | | | | |
| 20 mm – 10 l/m 25mm – 25 l/m, 32 mm – 40 l/m, 40 mm – 60 l/m, 50mm – 100 l/m | | | | | | | |

1. Target is based on the latest six months of data as previous figures were over reported.
2. There is a plan currently being developed to reduce unaccounted water. This will be progressively implemented over the Water Plan period.

APPENDIX 7. CORE SERVICE STANDARDS - RURAL SERVICES

| Service Standards | Water Plan Targets 2008-013 | | | | |
|--|-----------------------------|--------|--------|--------|--------|
| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 |
| Gravity Supply (by district/supply system) ^{1,2} | N/A | N/A | N/A | N/A | N/A |
| Pumped Supply (by district/supply system) | | | | | |
| Unavailability of stock and domestic supply systems for continuous periods in excess of 8 hours (%) ⁴ | 2 | 2 | 2 | 2 | 2 |
| Number of pipeline bursts and leaks (per 100 km of pipeline) ⁴ | 10 | 10 | 10 | 10 | 10 |
| Unaccounted for water (per cent) ⁴ | 10 | 8 | 8 | 8 | 8 |
| Irrigation Drainage (by district/supply system) ¹ | N/A | N/A | N/A | N/A | N/A |
| Bulk Water | | | | | |
| Annual compliance with storage operator obligations (per cent) | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Licensing/administration | | | | | |
| Applications for new groundwater & supply-by-agreement licences determined within [60] days (%) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Applications for renewal of groundwater licences determined within [40] days (%) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Applications for new surface diversion determined within [22] days (%) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Appl for renewal of surface diver & supply-by-agreement licences determined within [22] days (%) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Processing permanent transfer or surface diversion or groundwater licences within [60] days (%) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Processing temporary transfer of water entitlement volumes within [15] days (per cent) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Processing permanent transfer of water entitlement volumes within [60] days (per cent) | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |
| Number of diversion licences metered or assess for metering at 30 June (per cent) | 90.00 | 90.00 | 90.00 | 90.00 | 90.00 |
| Volume of total surface water and groundwater entitlements metered at 30 June (per cent) | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 |
| Customer Service | | | | | |
| Complaints to EWOV (number) | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Telephone calls answered within 30 seconds (per cent) | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 |

1. The current irrigation district has not received allocations for over eight years and is currently undergoing reconfiguration. Hence no targets have been set at this particular time.
2. Due to the introduction of the WMPP and phasing out of channel systems in GWMWater no targets are being proposed for this indicator and GWMWater are not proposing to develop a system for the collection and reporting of this data.
3. There is no proposal to provide piped irrigation service at this point in time and therefore there is no requirement for this to be reported.
4. Little historical information is available to accurately predict a target for this indicator but best judgement and the condition of assets have been taken into consideration.

APPENDIX 8. CAPITAL EXPENDITURE PROGRAM - SUMMARY

| Project Overview | Funding Water Plan Period | Total cost 07/08 to 12/13 6 Years | 2007/08 | Water Plan Period | | | | |
|--------------------------|---------------------------|-----------------------------------|-------------|-------------------|------------|------------|------------|------------|
| | | | | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| OVERALL TOTAL | 331,673,000 | 658,941,430 | 312,261,960 | 215,259,460 | 85,316,282 | 15,026,242 | 15,330,486 | 15,747,000 |
| Corporate program | | 19,888,930 | 4,853,960 | 4,057,460 | 2,597,282 | 3,140,242 | 2,779,986 | 2,460,000 |
| Infrastructure | | 639,052,500 | 307,408,000 | 211,202,000 | 82,719,000 | 11,886,000 | 12,550,500 | 13,287,000 |
| Excluding WMPP | 3,673,000 | 90,478,430 | 15,017,960 | 14,317,460 | 15,039,282 | - | - | - |

Specific Projects

| Towns | Line of Business | Project Description | Funding Water Plan Period | Total cost 07/08 to 12/13 6 Years | 2007/08 | Water Plan Period | | | | |
|---------------|------------------|---|---------------------------|-----------------------------------|-------------|-------------------|------------|-----------|---------|-----------|
| | | | | | | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| Various | WW Treat | Investigation of Desludging | | 50,000 | | | | 50,000 | | |
| Murtoa | WW Disposal | Flood irrigation tail water system | | 123,000 | | | | | | 123,000 |
| Halls Gap | WW Disposal | Additional Reuse for golf club | | 120,000 | 20,000 | 100,000 | | | | |
| Horsham | Wastewater | Horsham South Sewer Infill | 880,000 | 880,000 | | | | 880,000 | | |
| Halls Gap | Wastewater | DSE Directed Sewer Infill | | 330,000 | | | | | | 330,000 |
| Dimboola | Wastewater | DSE Directed Sewer Infill | | 330,000 | | | | | | 330,000 |
| Nhill | Wastewater | DSE Directed Sewer Infill | | 330,000 | | | | | | 330,000 |
| Jeparit | Wastewater | No 1 SPS Upgrade | | 150,000 | 150,000 | | | | | |
| Willaura | WW Disposal | Winter Storage and Reuse | | 523,000 | 20,000 | 50,000 | 453,000 | | | |
| Birchip | WW Treat | Additional Winter Storage -Review | | 20,000 | | | | | | 20,000 |
| Stawell | WW Treat | WWTP Upgrade | | 2,234,000 | | 50,000 | 50,000 | 2,134,000 | | |
| St Arnaud | WW Treat | WWTP Upgrade | | 1,925,000 | | 100,000 | 1,825,000 | | | |
| Nhill | WW Treat | WWTP Upgrade and Winter storage | | 2,170,000 | 800,000 | 1,370,000 | | | | |
| Warracknabeal | WW Treat | WWTP Upgrade | | 1,600,000 | 600,000 | 1,000,000 | | | | |
| Nhill | WW Disposal | Reuse project pipes & pumps | | 428,000 | | | | 428,000 | | |
| Various | Wastewater | Sewer main replacement costs | | 1,650,000 | 250,000 | 200,000 | 300,000 | 300,000 | 300,000 | 300,000 |
| Various | Wastewater | SPS replacement costs | | 1,350,000 | 100,000 | 100,000 | 250,000 | 300,000 | 300,000 | 300,000 |
| Various | Wastewater | Sewer Stacks Replacement prog | | 450,000 | 300,000 | 50,000 | | | 100,000 | |
| Various | WW Treat | STP Major infrast replacement | | 585,000 | 100,000 | | 25,000 | 460,000 | | |
| Ararat | Wastewater | Outfall Sewer Augmentation | | 25,000 | 25,000 | | | | | |
| Rupanyup | Wastewater | New Sewerage Scheme | 985,000 | 2,595,000 | 80,000 | | | | 200,000 | 2,315,000 |
| Lake Bolac | Wastewater | New Sewerage Scheme | 546,000 | 2,062,000 | 2,500 | 159,500 | 1,900,000 | | | |
| Great Western | Wastewater | New Sewerage Scheme | 232,000 | 1,190,000 | 2,500 | | | | 187,500 | 1,000,000 |
| Horsham | WW Treat | Horsham WWTP Inlet Works | | 130,000 | 130,000 | | | | | |
| Various | Water | Wimmera Mallee Pipe | 328M | 568,463,000 | 297,244,000 | 200,942,000 | 70,277,000 | | | |
| Various | Water Treat | Investigation of WMPP Centralised Plant | | 250,000 | | | | | 250,000 | |
| Various | Water | Investigation of Potential Supply | | 50,000 | | | 50,000 | | | |

| Towns | Line of Business | Project Description | Funding Water Plan Period | Total cost 07/08 to 12/13 6 Years | 2007/08 | Water Plan Period | | | | |
|-------------|------------------|---|---------------------------|-----------------------------------|-----------|-------------------|-----------|---------|-----------|-----------|
| | | | | | | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| | | New Towns | | | | | | | | |
| Horsham | Water Storage | Horsham Low Level Storage Water Quality Improvement | | 430,000 | | | | | 30,000 | 400,000 |
| Horsham | Water Storage | Morson Pump Station Non Return Valve Replacement (deep valve) | | 150,000 | | | | | | 150,000 |
| Edenhope | Water | Water supply security | | 2,300,000 | 100,000 | 1,100,000 | 1,100,000 | | | |
| Nhill | Water Treat | Treated water supply | 225,000 | 10,900,000 | | | | 400,000 | 5,000,000 | 5,500,000 |
| Ultima | Water Treat | Water Supply Upgrade | | 340,000 | 35,000 | 305,000 | | | | |
| Laibert | Water Treat | Water Supply Upgrade | | 340,000 | 35,000 | 305,000 | | | | |
| Manangatang | Water Treat | Water Supply Upgrade | 250,000 | 399,000 | 35,000 | 364,000 | | | | |
| Murrayville | Water Treat | Treatment for Arsenic investigation | | 250,000 | 250,000 | | | | | |
| Underbool | Water Treat | Stage Treatment Plant construction | | 340,000 | 340,000 | | | | | |
| Natimuk | Water Treat | Treated Water Supply | | 1,524,000 | | | | 100,000 | 1,424,000 | |
| Various | Water Retic | Water main replacements | | 5,150,000 | 1,000,000 | 830,000 | 830,000 | 830,000 | 830,000 | 830,000 |
| Various | Water Treatment | WTP major infrastructure replacement costs | | 2,315,000 | | 400,000 | 525,000 | 500,000 | 440,000 | 450,000 |
| Various | Water Retic | WPS replacement costs | | 500,000 | | 60,000 | 80,000 | 100,000 | 120,000 | 140,000 |
| Various | Water Storage | Water Storage Tanks Rehabilitation and Replacement | | 250,000 | | 50,000 | 200,000 | | | |
| Various | Groundwater | Urban Bores Rehabilitation and Replacement | | 100,000 | | | | 50,000 | 50,000 | |
| Various | Water | Water Meters Rehab and Replacement Urban Bulk | | 125,000 | | 25,000 | | 50,000 | | 50,000 |
| Various | Water | Urban Bores Rehabilitation and Replacement | | 60,000 | | | | 60,000 | | |
| Donald | Water | Donald Drought groundwater & desalination | | 500,000 | 500,000 | | | | | |
| Ouyen | Water Treat | Ouyen WTP Membrane Replacement | | 250,000 | 250,000 | | | | | |
| Halls Gap | Water | Augmentation of Headwork Capacity | | 117,000 | 117,000 | | | | | |
| Horsham | Water Treat | Mt.Zero Lime System Upgrade | | 100,000 | 100,000 | | | | | |
| Horsham | Water | Horsham Wellfield Development | | 100,000 | 100,000 | | | | | |

| Towns | Line of Business | Project Description | Funding Water Plan Period | Total cost 07/08 to 12/13 6 Years | 2007/08 | Water Plan Period | | | | |
|------------|------------------|---|---------------------------|-----------------------------------|-----------|-------------------|-----------|-----------|-----------|---------|
| | | | | | | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| Various | Water Retic | Urban Meter Replacement | | 1,110,000 | 230,000 | 176,000 | 176,000 | 176,000 | 176,000 | 176,000 |
| Various | D&S Pipeline | Rural Meter Replacements | | 236,500 | 64,000 | 112,500 | | | 60,000 | |
| Various | Corp Infrac | SCADA (additional cost in WMPP) | | 4,050,000 | 900,000 | 2,000,000 | 1,000,000 | 50,000 | 50,000 | 50,000 |
| Various | Water | Mt Cole Pipeline | | 100,000 | | | | | 100,000 | |
| Irrigation | Irrigation | Irrigation Network Replacements (Contingent on Irrigation run) | | 180,000 | | | | 50,000 | 80,000 | 50,000 |
| Headworks | Headworks | Dam Safety Works Lake Fyans | | 7,000,000 | | | 150,000 | 4,450,000 | 2,400,000 | |
| Headworks | Headworks | Dam Safety Review review of low hazard and urban | | 300,000 | 300,000 | | | | | |
| Headworks | Headworks | Reservoir minor renewals | | 1,045,000 | | 125,000 | 240,000 | 240,000 | 225,000 | 215,000 |
| Headworks | Headworks | Rocklands channel seepage & rehabilitation | | 700,000 | | | 700,000 | | | |
| Headworks | Headworks | Toolondo Channel Seepage & rehabilitation | | 700,000 | 250,000 | | 450,000 | | | |
| Headworks | Headworks | Taylor's Lake Dam Safety | | 1,180,000 | 1,180,000 | | | | | |
| Headworks | Headworks | Taylor's Lake Embankment works | | 1,700,000 | | 150,000 | 1,550,000 | | | |
| Headworks | Headworks | Huddleston's Weir Upgrade (funded by CMA) | | 400,000 | 400,000 | | | | | |
| Headworks | Headworks | Headwork Channel Bridge Replacements Item | | 600,000 | 300,000 | | 300,000 | | | |
| Headworks | Headworks | Rocklands sector valves reconditioning | | 80,000 | 80,000 | | | | | |
| DS | D&S Channels | Northern windmills - replacement | | 270,000 | 70,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| Various | Groundwater | Groundwater Meter Replacement Program | | 80,000 | 80,000 | | | | | |
| Various | Headworks | Surface Water Diversion Metering (100 locations) | 380,000 | 680,000 | 300,000 | 380,000 | | | | |
| Various | Groundwater | Groundwater Monitoring Program - Observation Bore Construction and Monitoring Equipment | | 200,000 | 50,000 | 150,000 | | | | |
| Developer | Water | Developer Works Planning and | 87,500 | 399,000 | 66,500 | 66,500 | 66,500 | 66,500 | 66,500 | 66,500 |

| Towns | Line of Business | Project Description | Funding Water Plan Period | Total cost 07/08 to 12/13 6 Years | 2007/08 | Water Plan Period | | | | |
|-----------|------------------|---|---------------------------|-----------------------------------|-----------|-------------------|-----------|-----------|-----------|-----------|
| | | | | | | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 |
| | | Supervision | | | | | | | | |
| Various | Wastewater | Developer Works Planning and Supervision | 87,500 | 399,000 | 66,500 | 66,500 | 66,500 | 66,500 | 66,500 | 66,500 |
| Various | Water | Contribution towards Developer Works | | 75,000 | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 |
| Developer | Wastewater | Contribution towards Developer Works | | 75,000 | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 | 12,500 |
| Corporate | Corporate | Motor Vehicle Replacement | | 13,698,230 | 2,309,260 | 2,762,460 | 2,193,282 | 2,438,242 | 2,104,986 | 1,890,000 |
| Corporate | Corporate | Plant & Machinery Repl - Wide area review and Purchase (incl minor equipment) | | 1,340,700 | 134,700 | 335,000 | 34,000 | 332,000 | 305,000 | 200,000 |
| Corporate | Corporate | Office Fit-out & Redevelopment | | 540,000 | | 500,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| OHS | Water | OH&S Review & Priority Works | | 225,000 | 90,000 | 75,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| OHS | Wastewater | OH&S Review & Priority Works | | 225,000 | 90,000 | 75,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Corporate | Corporate | Infrastructure - Software | | 1,100,000 | 500,000 | 200,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Corporate | Corporate | Infrastructure - Hardware | | 1,250,000 | 250,000 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 |
| Corporate | Corporate | IT Communications (incl remote access) | | 360,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| Nhill | Corporate | Contribution to WMPP for Increased capacity for Nhill Supply | | 1,600,000 | 1,600,000 | | | | | |
| Corporate | Infrastructure | GIS | | 220,000 | 50,000 | 120,000 | | 50,000 | | |
| Corporate | Infrastructure | Asset Management Plan & system upgrades/development | | 270,000 | 130,000 | 80,000 | 60,000 | | | |