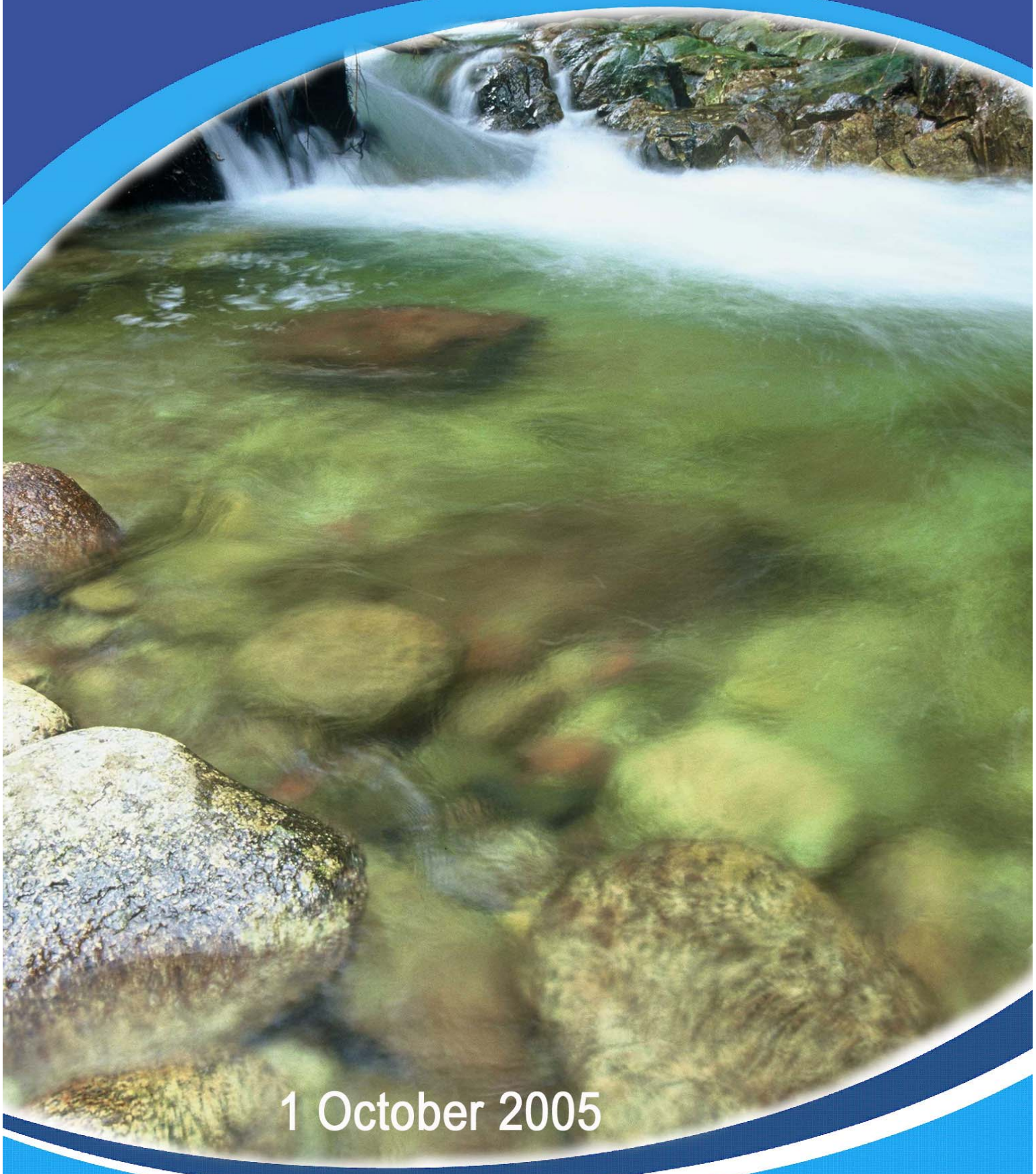
GOULBURN-MURRAY WATER

Water Plan

2006/07 - 07/08



1 October 2005

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1 Executive Summary

This is the first Water Plan developed by G-MW under this new regulatory regime and G-MW appreciates the opportunity to present this document to the Essential Services Commission, the Government, other regulators, and our customers for their scrutiny and review.

It outlines the service performance and other initiatives that G-MW is striving to achieve over the next two years. It establishes the revenue needs of G-MW to provide the water supply services that are essential to the rural communities and regional economy in Northern Victoria, and most importantly, in a sustainable manner.

Customer engagement is a key part of our business. We have 12 peer elected Water Services Committees (WSCs) and ten catchment committees who represent customers in irrigation areas, surface and groundwater diversions, flood protection and water districts.

In all, over one hundred members represent customers on these committees. This means there is a representative on a customer committee for every 250 customers. We recognise that customer participation in our business planning and decision making is essential if we are to meet the changing needs of rural and regional communities.

To facilitate the development of this Water Plan customer involvement has been extensive. It has included WSCs developing business plans for each of their Areas, contributing to the Pricing Policy Review, implementing key White Paper reforms, involvement in helping to formulate our response to recent severe drought conditions.

Other key interactions with customer groups have been numerous and these are described in detail in this document. Consultation has also been conducted with other stakeholders including: the Department of Sustainability and Environment (DSE), Department of Human Services (DHS), Environment Protection Authority (EPA) and CMAs within our regional catchments.

The operating and capital expenditure forecasts described in this plan are designed and expected to deliver the customer service outcomes proposed in this Water Plan. The Key Performance Indicators (KPIs) in relation to customer service proposed by G-MW include:-

- Bulk Water assets availability to deliver customer supply orders
- Water delivered on day ordered
- Channel leaks responded to within agreed timeframes
- Unplanned supply failures greater than 24 hours
- Supply complaints responded to within agreed timeframes
- Telephone calls answered within 30 seconds
- Responses to written correspondence
- Customer billing accuracy, and
- Processing of various license applications and renewals

G-MW's environment policy objective is, "The impact of Goulburn-Murray Water activities on the environment will be minimised and the environment will be enhanced".

Key environmental outcomes planned for the regulatory period include improving water quality, improving biodiversity and ecosystems, contributing to catchment management, promoting awareness and responsiveness, and helping to improve customer practices.

Environmental KPIs proposed for the regulatory period include complying with minimum river flow regimes, and ensuring our water use complies with the Murray-Darling Basin Commission (MDBC) Cap. Our Environmental Management System (EMS) is to be upgraded and this will include developing and achieving further environment targets into the future.

Infrastructure assets are an essential part of G-MW's operations and are the key driver of recurrent and capital expenditure in the long term. G-MW operates assets with a total current replacement cost of some $3.6 billion comprising Bulk Water Assets $1.8 billion, and Retail Distribution Assets $1.8 billion.

During 2004/05 Frontier Economics was engaged to perform a review of G-MW's pricing policies. A Pricing Policy Review Implementation Committee was appointed to oversee the implementation of the report's recommendations.

The key recommendation of the Frontier Report was that the use of renewals annuities as an asset funding method be discontinued and replaced by a Return on Regulatory Asset Base (RAB) approach to funding.

The RAB approach is based on recovering the cost of asset infrastructure works, after those works have been completed, through the use of depreciation (return ***of*** capital, recovers principal amounts) and a rate of return (return ***on*** capital, recovers interest on borrowings).

A key outcome of the Pricing Policy Review Implementation Committee's Final Report has been the introduction of an Advanced Maintenance Program (AMP). It is expected that the introduction of RAB pricing within G-MW will fund an AMP for channel assets that would result in a deferral or smoothing out of medium to long term major asset replacement expenditure.

An AMP is to be created for the sole purpose of rehabilitating irrigation assets other than dams, major carriers, and other ancillary assets. It will focus solely on works which will obviate, defer, or substantially reduce the possibility sharp price rises into the future. Its performance will be monitored and audited on a regular basis to ensure it is achieving its long term objectives.

An operating expenditure program has been developed to provide G-MW's various water related services, as well as comply with its service and legislative obligations for the regulatory period of 2006/07-07/08.

Productivity improvements are a key feature of this Water Plan. G-MW has committed to achieving costs savings of 5% within 3 years compared to 2004/05 actuals, and 12% savings within 5 years. Over the two years to which this Water Plan relates cost savings of 3.5% are targeted.

Highlights of the capital expenditure program include the delivery of projects designed to deliver water savings which can be returned to the environment and in particular to the Murray and Snowy rivers. This includes the construction of the Tungamah Pipeline and the return to wetlands of Lake Mokoan. The next stages of the DIP include works at Cairn Curran and Lake Nillahcootie. Ongoing replacement of aging retail distribution assets are planned, as are drainage works that will provide salinity benefits.

Capital Expenditure Summary - $ Millions

Category of Expenditure	2005/06	2006/07	2007/08
Infrastructure Renewals	$16.0	$13.0	$12.8
Dam Improvement Program	20.1	11.3	13.7
Tungamah Pipeline	7.0	7.2	1.3
Lake Mokoan return to wetlands	0.7	15.2	14.6
Surface Drains	6.7	8.4	7.0
Information Technology	4.2	2.6	1.9
Total Channel Control Technology	8.4	5.0	-
All Other	6.2	6.7	6.9
Total Capital Expenditure	$69.3	$69.4	$58.2

Proposed prices for the 2006/07 – 07/08 Water Plan have been consulted with customer groups and through various public forums as part of the development of 2005/06 prices.

Year on year pricing impacts, in percentage terms, of the proposed prices based on a theoretical average customer for key services are:

Irrigation Supply Service	Year over Year change – indicative Water Plan proposal @		2007/08 Including 2% environmental levy – indicative Water Plan proposal @
	2006/07	2007/08*	2007/08
Gravity Irrigation Supply Area			
Shepparton	1.9%	1.8%	3.8%
Central Goulburn	2.5%	2.5%	4.5%
Rochester	3.8%	3.0%	5.1%
Campaspe **	0.0%	0.0%	2.0%
Pyramid-Boort	2.7%	2.5%	4.5%
Murray Valley	3.2%	2.3%	4.4%
Torrumbarry	1.2%	0.0%	2.1%
Pumped Irrigation			
Woorinen	2.2%	2.1%	3.8%
Domestic & Stock			
Normanville	0.1%	0.1%	1.4%
Diversions Services			
Murray Regulated	5.6%	5.8%	7.9%
Goulburn Regulated	5.6%	5.6%	7.7%
Murray Unregulated	8.7%	8.2%	10.4%
Goulburn Unregulated	12.3%	10.8%	12.9%
Groundwater - Base	0.0%	0.0%	1.9%
Flood Protection			
Loch Garry	0.0%	0.0%	2.1%

* Excludes 2% Environmental Levy

@ Price changes are calculated using prices stated in 2005/06 dollars (ie prices need to be adjusted for CPI)

** Campaspe prices are provisional only. A working group, with customer input, is being established to address several key issues that remain outstanding.

G-MW's ongoing tariff reform program has been given added impetus by the Government's White Paper. To support the White Paper, G-MW proposes to unbundle and reform tariffs to support water entitlement unbundling by recognising separate service elements of administration, water harvesting and storage, water delivery, and water use licensing and to address issues associated with stranded assets.

Other tariff reforms are also planned. These include changes to drainage tariffs and changes to the way customers pay for water harvesting and storage, to reflect that unbundled water shares will be separated from land and will be tagged to source.

Although the timeframe for White Paper implementation is not final, it is probable that parts of the proposed G-MW tariff reform program, in particular entitlement unbundling in regulated water systems, will be implemented during the life of this Water Plan.

G-MW has engaged in extensive customer consultation as part of tariff reform undertaken to date. Future tariff reform will be similarly supported by extensive customer consultation, and this will complement the overall White Paper communication strategy.

2 Introduction

2.1 Purpose of the Water Plan

With effect from 1 January 2004 the ESC assumed an economic regulation role for the Victorian water sector. As one of the businesses supplying water related services within Victoria, G-MW's prices and service standards are regulated within the regime.

The WIRO establishes the regulatory framework and nature of the water services to be regulated by the ESC and the functions of the ESC. Services relevant to G-MW within the scope of the WIRO include retail water services, storage operator and bulk water services, irrigation drainage services and diversions services.

A key aspect of the new regulatory framework relates to pricing and requires water businesses to establish a Water Plan detailing the services to be provided and specify the prices, or the manner in which they are to be calculated, for delivery of those services for the two year period commencing 1 July 2006. The ESC has the role to consider and, if appropriate, suggest amendments and ultimately approve the Water Plan.

In preparing its Water Plan, G-MW has given consideration to a range of cost drivers, largely falling into the categories of:

- Ministerial obligations established in the SoO
- Securing Our Water Future Together (White Paper)
- Service standard obligations, including service-price tradeoffs negotiated with its WSCs
- Environmental Obligations and Initiatives
- Water Quality Obligations and Initiatives
- National water reform agenda including the Living Murray First Step decision, the National Water Initiative, and the Murray Darling Basin Inter Governmental Agreement and the Snowy Project Water Savings Program
- The Victorian River Health Strategy
- Regional Catchment Strategies
- Various Management Plan initiatives, including Statewide, Streamflow and Groundwater plans.
- Other Statutory Obligations (including OH&S)

In keeping with the WIRO, the Authority has also structured the Plan reflecting continued effort towards efficient delivery of services aiming to minimise operating and capital expenditure and ensure an appropriate return on capital.

This, the first Water Plan developed by G-MW, outlines the service delivery outcomes, the implementation of various State Government initiatives including those outlined in its White Paper *Our Water Our Future,* and other initiatives that the Authority proposes to achieve in the coming two years.

It also establishes the revenue needed to achieve sustainability of the business and the proposed prices to be charged for the various services provided by the Authority.

2.2 Overview of Goulburn-Murray Water

2.2.1 Description of Goulburn-Murray Water

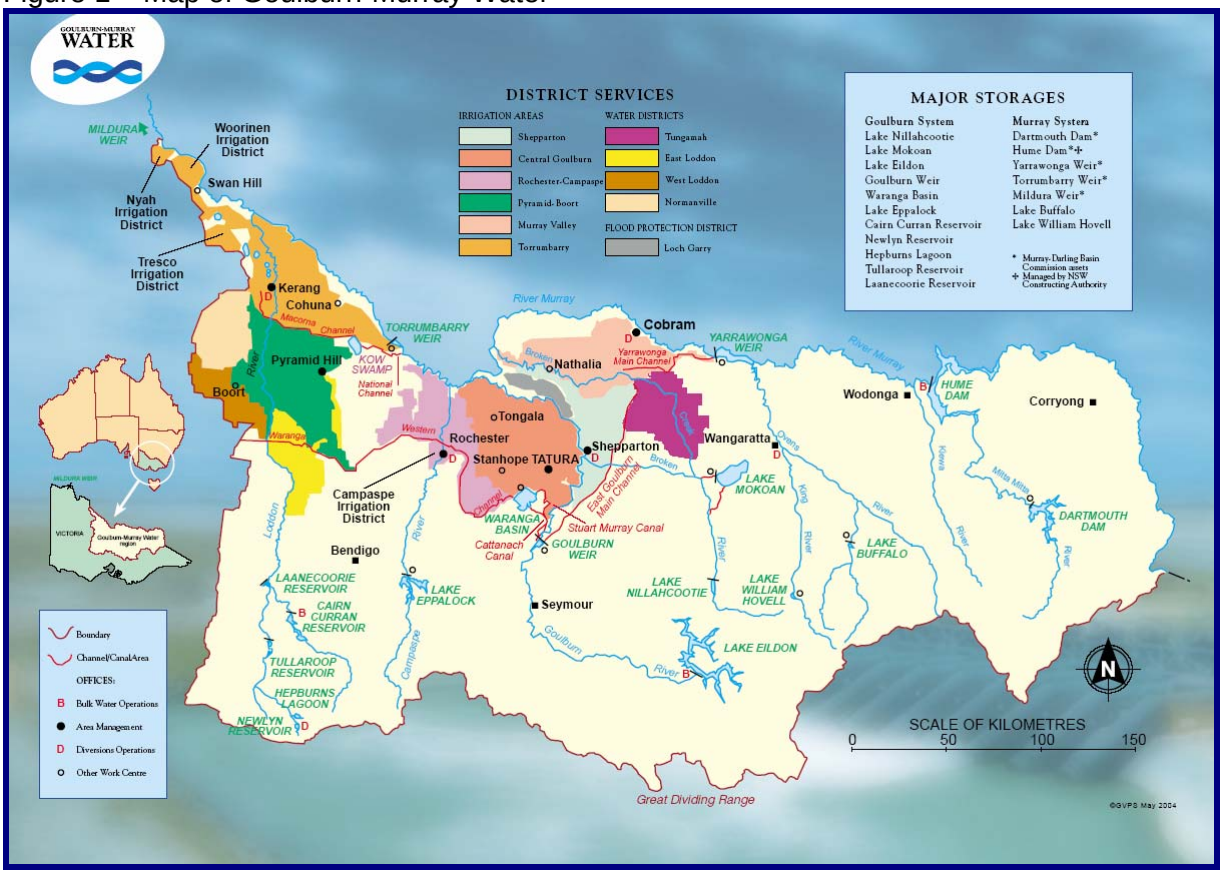
G-MW is a rural water authority established under the Water Act 1989 with a skills based Board appointed by the Minister for Water. G-MW was established in July 1994, with responsibilities for ownership and operation of irrigation, drainage and stock and domestic distribution systems across

north-central and north-east Victoria. In July 1995, ownership and operational responsibilities for 17 major storages (13 state owned and 4 MDBC storages) were transferred to G-MW from the Rural Water Corporation. G-MW has four separate business divisions. These are:

- Bulk Water Services, involving the delivery of bulk water entitlements and supplies to urban and rural water authorities and the environment, the management of headworks assets and associated water storages, hydroelectricity, recreation, and land and on water management;
- Diversion Services, which includes the licensing of surface water and groundwater diversions;
- District Services, involving the delivery of water entitlements, water supply, drainage and flood protection services to customers, and the management of assets in irrigation, water and waterway management districts; and
- Natural Resource Services involving the provision of a range of services which support sustainable land and water management.

The Authority undertakes its management functions across a region of 68,000 km^2, bordered by the Great Dividing Range in the south and the River Murray to the north and stretching from Corryong in the east down river to Nyah. G-MW also operates salinity mitigation works on the Murray downstream of Nyah, delivers bulk water to supply points outside its region, for example at Mildura Weir, and is the Victorian Constructing Authority for the MDBC.

Figure 1 – Map of Goulburn-Murray Water



2.2.2 Current Operating Environment

This period in G-MW's evolution is perhaps best categorised as the era of sustainable water management. Our strategic direction has been developed with regard for the government policy objectives and measures set out in the following strategies and initiatives:

- Securing Our Water Future Together (White Paper)
- G-MW's SoO
- The Living Murray First Step decision
- The National Water Initiative and the Murray Darling Basin Inter Governmental Agreement
- The Snowy Project Water Savings Program
- The Victorian River Health Strategy
- Regional Catchment Strategies.

In many respects the delivery of gravity irrigation supply could be considered a relatively well established, mature service. However, the prospect for new technologies like TCC to radically change the levels of service possible and the need to ensure that services continue to meet the needs of customers who are striving to boost productivity and remain competitive in world markets means that we must review what the appropriate services for these customers are.

We must also be ready to understand and meet the service needs of new and emerging customers. Customers that rely on access to G-MW storages to support recreational and tourism businesses will be the focus of the newly established Water Storage Amenity Unit and the future directions for this business segment will be identified through the development and implementation of a strategic business plan.

The environment will also be a major water entitlement holder and a significant G-MW customer in the near future. We will be working with CMAs and the DSE to determine how newly established environmental water entitlements generated from water savings projects and the White Paper Sales Package can be delivered to maximise the benefit to this new "customer group".

Implementation of key government water reforms, particularly the unbundling of water entitlements, will offer our customers more flexibility and choice in how they access G-MW's services and manage their farm businesses. This is a major element of our strategic direction that will be implemented during the period of this Water Plan. Gravity supply tariffs will also be reformed to support unbundling.

Customer, community and government expectations of G-MW are changing as a result of the drought and the increased importance of efficient water use. Efficient water use is an important issue, but it also sits within the wider picture of the community's expectations for a sustainable natural environment and health river systems. G-MW will undertake a range of strategies focussed on sustainable resource management, water savings projects, biodiversity enhancement, water quality improvement and implementing works for the delivery of environmental water.

G-MW has always sought to involve its water services customers in decision making that affects the cost and quality of services provided to them. In order to ensure that these arrangements keep pace with a changing world, we will be further developing and evolving the role and membership of WSCs to maintain them as an effective input to our future directions. In recognition of the more general interest in water management and the need to pursue triple bottom-line outcomes, we will also be undertaking comprehensive stakeholder engagement to ensure that the wider community of interest also has an effective opportunity to contribute to our water management directions.

The changing demands for water services and an understanding of the longer term trends in irrigation demand across our region will also be key inputs to the development of long term strategic

asset plans for G-MW. These plans will guide the rationalisation, upgrading and reconfiguration of our assets. The first Future Management Strategy is under development for the Pyramid-Boort Area, and we will progressively develop and implement these strategies for all irrigation areas and regulated diversions services over the next five years.

In order to deliver this significant change program, we will need a capable, committed workforce that understands and embraces the future directions for the organisation. To this end we will undertake an organisational development program to help our current and future staff meet these challenges. This program will also help ensure that we continuously improve the productivity and safety of our workplaces.

The key challenges that G-MW will work towards over the period of this Water Plan include:

- Defining future services
- Developing a new Water Service Amenity business
- Improving the safety of G-MW workplaces
- Redeveloping the G-MW EMS
- Delivering major water savings
- Contributing to the quest for healthy rivers
- Clarifying entitlements to water
- Unbundling irrigation entitlements
- Modernising and reconfiguring assets
- Building business viability
- Implementing the outcomes of the Pricing Policy Review
- Building workforce capability and diversity
- Building stakeholder partnerships, and
- Improving communications

Our strategic directions will also include actions that ensure that we can effectively meet the requirements established by the Minister for Water in the SoO.

2.2.3 Conceptual Framework and Key Issues Diagram

Our strategic directions have been developed and sit within a framework of six major strategic themes. The high level outcomes that we are seeking to achieve under each of these themes form G-MW's corporate objectives. These themes and the associated corporate objectives are:

- Responsive Customer Service
  To provide a range of responsive and innovative services with a price and delivery mix that balances existing and emerging customer needs.

- Building for the Future
  To contribute to Government water reforms, developing and adapting the appropriate assets, technology and systems that meet the future needs of our customers and communities and enable regional growth.

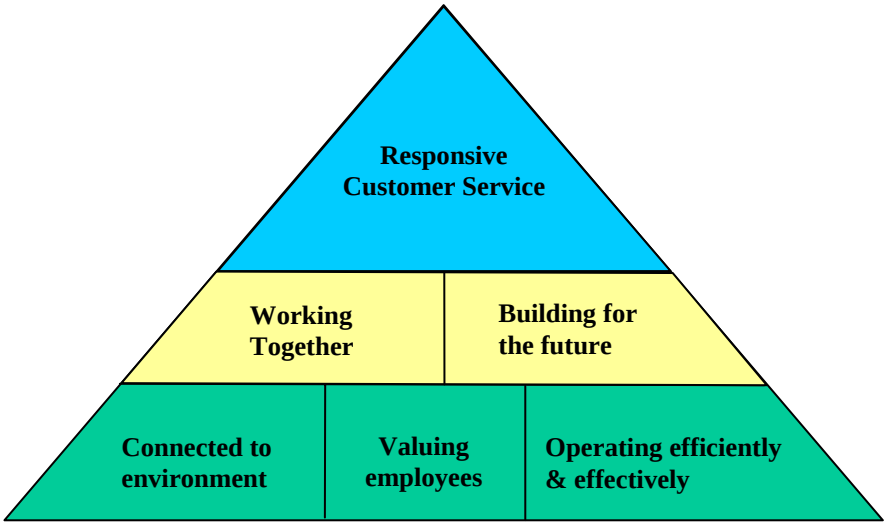
- Working Together
  To develop productive, empathetic and enduring relationships with all interested parties to achieve the best balance of economic, environmental and social outcomes.

- Operating Efficiently and Effectively
  To actively pursue new and improved ways to operate our business to achieve the most cost effective total water system management whilst meeting all our (statutory, financial and customer) obligations

- Connected to the Environment
  To be conscious that what we do has a significant and lasting effect on the environment and to seek to reduce this impact, contributing to enhanced environmental outcomes.

- Valuing our Employees
  To provide a safe, healthy and satisfying place for our people to work, because it is through a competent, committed and adaptable workforce that our long term security and success is assured in a rapidly changing world.

The relationship between these strategic themes is shown in the following diagram:



By creating a dynamic organization based on efficient operations driven by a culture of continuous improvement, coupled with a strong regard for the environment and a capable workforce G-MW will build a solid foundation ready for future challenges. If this base is combined with effective working relationships with our stakeholders and well thought through plans and responses to emerging change, then the organization will be able to offer customers innovative services that adapt to meet their changing needs.

2.2.4 Bulk Water Services

Bulk Water Services is one of four separate business divisions within G-MW. Bulk Water Services is primarily responsible for delivery of bulk water entitlements and supplies to urban and rural water authorities, and the management of headworks assets and associated water storages. G-MW's retail customers are the biggest customer group supplied by Bulk Water Services .In addition, bulk water supplies are made to seven other Water Authorities which deliver water for irrigation, stock and domestic, private diversion and urban consumption.

The Bulk Water Services business division also delivers a range of additional services that are a by-product of owning and managing large water supply storages. These include:

- Water supply services to hydro electricity generation companies at five locations. Provision of these services is subject to long-term access contracts.
- Commercial leases, where parcels of G-MW land adjacent to storages is leased to commercial operators, for purposes including caravan parks, boating marinas, commercial forestry and a range of other recreation related services.
- Boating and passive recreational facilities (eg picnic grounds etc.) at most storages.

These additional services are not proposed to be regulated by the ESC.

2.2.4.1 Physical infrastructure

Bulk Water Services operates the two main regulated bulk water supply systems from which the Authority takes its name, reflecting the dominant sources of the water resource. The Goulburn system comprises the storages, weirs and connecting channels that integrate the supply of water from the Broken, Goulburn, Campaspe and Loddon River catchments. The Murray system comprises both MDBC and state-owned headworks assets located on the River Murray, and within the Victorian tributary catchments of the Mitta Mitta, Ovens and King Rivers. A total of 17 storages make up these systems and the current replacement cost of these assets is estimated at $1.8 b, which includes $0.8 b for assets held by the Authority on behalf of the MDBC. Bulk water assets make up around half of the total asset holdings of G-MW.

2.2.4.2 Age and condition of infrastructure

The time of construction of the infrastructure managed by Bulk Water Services varies from 1871 to 1996 with a correspondingly wide variation in structural condition. The average age of these storages is 68 years.

The recent replacement of Torrumbarry Weir (1996) and upgrades to Cairn Curran Reservoir, Lake Buffalo, Yarrawonga Weir, Lake Eppalock, Hepburns Lagoon and Eildon Dam have improved the structural condition of these storages.

2.2.5 District Services

The District Services business division delivers services to customers on 14,000 serviced properties located within constituted irrigation, water, and waterway management districts and six management areas (Shepparton, Central Goulburn, Rochester-Campaspe, Pyramid-Boort, Murray Valley and Torrumbarry). The services provided to these customers include:

- gravity supply,
- pumped irrigation supply,
- primary surface drainage,
- community surface grainage,
- sub-surface drainage,
- Domestic and Stock (D&S) water supply, and
- flood protection.

2.2.5.1 Physical Infrastructure

The physical infrastructure used to deliver these services is the product of over 120 years of incremental development aimed at harnessing the water resources of northern Victoria.

This infrastructure consists of some 7,000 km of open channels, 3,000 km of irrigation drains, over 24,000 bridges and regulators and 20,000 meters.

The current replacement cost of these assets is estimated at $1.8 b.

The vast majority of services provided by the District Services Business Division are to customers located in gravity irrigation districts. These irrigation supplies are largely provided through earthen open channels which operate under gravity. Water is supplied to farms at an elevation which will generally enable flood irrigation of the farm without the requirement for pumping, however most horticultural properties utilise trickle or micro spray irrigation systems that do require pumping. The area of farmland serviced by the gravity system is approximately 500,000 ha.

G-MW's D&S supply systems are split into two main types. The older systems utilise open channels to supply water into on farm holding dams once per year. Farmers draw from these dams to meet their D&S water needs throughout the rest of the year. These systems are effective, low cost systems that were readily constructed using technologies available in the early 20th century, however they have quite low water use efficiencies. As a consequence, these open channel systems are progressively being replaced by pipelined networks. The pipelines are small diameter uPVC which supply on farm storage tanks. Pipelined systems operate year round and in addition to improved efficiency they also offer better service levels and improved water quality to consumers.

2.2.5.2 Age and condition of infrastructure

The development of irrigation infrastructure in northern Victoria commenced in the 1870s, shortly after settlement of the northern plains. The initial phase of development was undertaken by local irrigation trusts, however the trusts lacked the financial resources to construct the storages necessary to deliver reliable water supplies in dry periods. By early in the 20th century, the trusts had largely failed and the State took over the management of irrigation supplies.

Some of the channels still in use today date from the Trusts, however large sections of the network were constructed during periods of intensive development for closer settlement schemes or soldier settlement schemes instigated by various governments. The period after World War II saw an extended period of large dam construction and much of the irrigation system across northern Victoria was remodelled in the 1950s and 1960s to accommodate the addition supplies from Lake Eildon, Cairn Curran Reservoir and the enlarged Lake Hume, which was supplemented from the Snowy Scheme.

2.2.6 Diversion Services

The Diversion Services business division provides regulated and unregulated surface water and groundwater diversion services to customers on 10,500 serviced properties within G-MW's area.

Regulated diverters draw from river systems downstream of G-MW controlled storages, where flows can be "regulated" by releases from the storage to meet the water supply needs of customers.

Unregulated diverters pump supplies from natural flows in streams above the influence of G-MW storages. As the name suggests, groundwater diverters extract groundwater from aquifers across G-MW's region.

The pumps and other assets required to divert water from these streams and aquifers is provided by the water users. The Diversion Services business has very few assets, apart from the water meters attached to the diverters' works and several weirs dotted across the region. The key services provided to diversions customers are water resource management and water sharing activities.

The provision of diversions services is a function delegated to the Authority by the Minister for Water, and a range of guidelines and resource assessments issued by the Minister govern the manner in which services are provided.

2.2.7 Natural Resource Services

The Natural Resource Services business division provides a range of services which are purchased mainly by governments through programs coordinated by CMAs. The services provided include salinity management, surface and sub-surface drainage services support, water quality and land management planning and salt interception management.

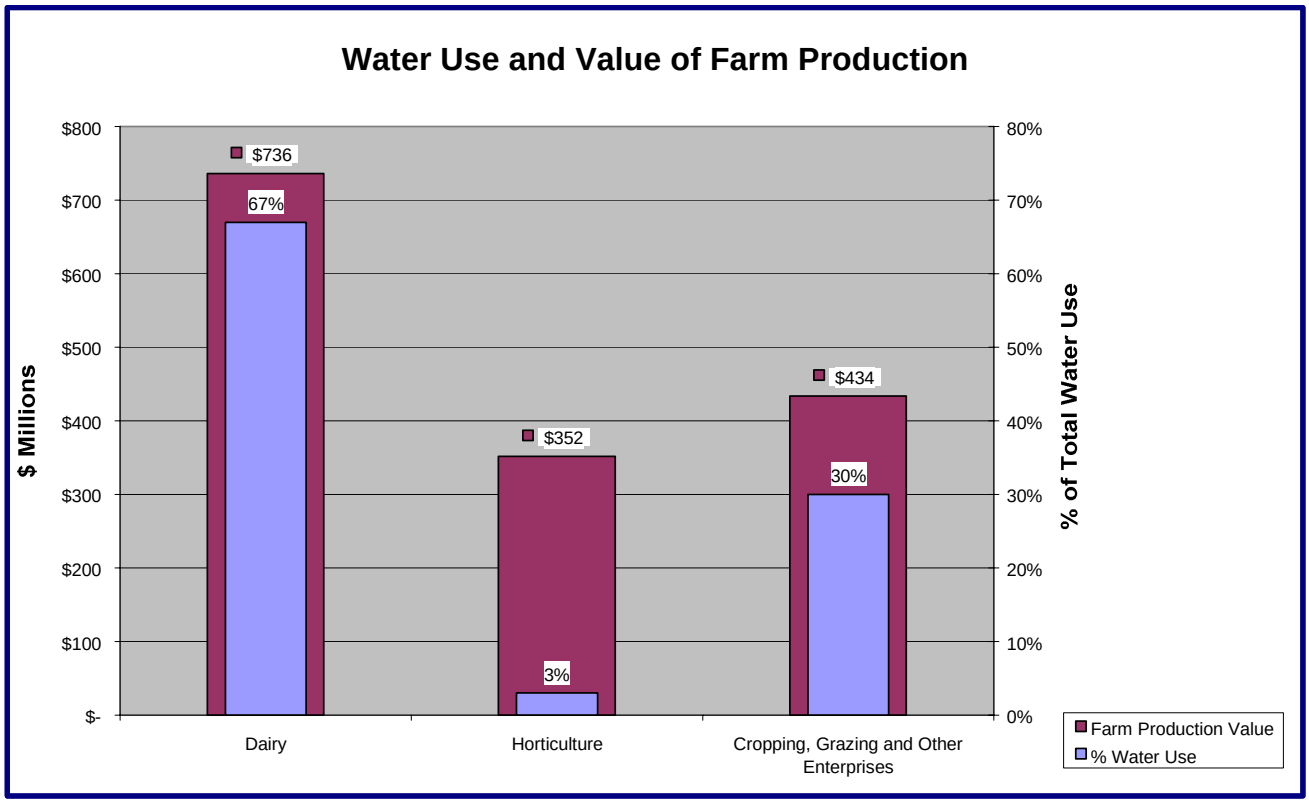
2.2.8 Corporate Services

The four business divisions are each the responsibility of a separate organisational group and are supported by other organisational groups that provide a range of corporate and support services. These services include corporate secretariat; corporate strategy, planning, coordination and communications; business and water market development; total water systems and water resource management; environmental management; water savings; financial management; information technology; water administration; and property, legal and human resource services.

2.2.9 Overview of customers and industries

Goulburn Murray Water provides irrigation and drainage services to three main industry sectors; dairy, horticulture and cropping and grazing. The irrigation water supplied to these industry groups and the value of farm production from these industries for which G-MW is a service provider in 2000/1 is illustrated below.

Key customer data: customers by irrigated agriculture



Notes:
1. Water use data from G-MW Irrigated Farm Survey, 2000/01
2. Estimates of value of farm production derived from ABS 2000/01 Water Account

Dairy

Within each industry sector there are diverse farm types and enterprises. In the dairy industry the farm size ranges from small owner/manager enterprises of about 50 hectares with as few as 100 cows, to substantial corporate enterprises more than 400 ha in size and with perhaps 1000 cows.

The main irrigated cultures are permanent pasture (irrigated throughout the period August to May) and annual pasture (irrigated in spring and autumn only). The dairy industry is dependant on a reliable supply of irrigation water for continued growth and viability. While in recent years there has been a trend toward feeding of supplements (grain and concentrated feeds) the industry will continue to require large amounts of fodder from irrigated agriculture for continued growth.

Recent low allocations of irrigation water have caused many farmers to consider sprinkler irrigation, often linked to growing of fodder crops. However, while adoption of improved irrigation practices such as laser grading and farm re-use systems have been widely adopted in the dairy industry pressurised irrigation systems have only been adopted on a few dairy farms.

There has been significant restructuring over the past 5 years due to deregulation of the industry, low milk prices and low water allocations. However, in the past 12 months there has been increased optimism and it is likely the dairy industry will continue to expand in Northern Victoria.

Horticulture
Horticulture represents a wide diversity of crops and industries such fruit growing for the cannery and fresh fruit industries, tomatoes for processing and fresh fruit, vegetables and olive oil production. Horticulture production tends to be limited to sandy freely draining soil types found in the Goulburn Valley, and the mallee fringe to the west of the region.

For tomato production, heavier soils self mulching clay soils are often preferred, often on leased areas of land. Subsurface drip irrigation has become the preferred method for irrigation. Pressurised irrigation (sprinkler and micro-irrigation systems) has also been adopted in other horticultural sectors. Consequently, irrigation efficiency has improved. While horticulture has expanded in the region, water use is relatively small proportion of the total (3%), while production has grown to represent about 23% of the total farm production.

Horticulture production tends to be limited by the availability of markets product rather than by the availability of water or suitable soils fro production. However, high reliability good quality water is required as a pre-requisite for investment. Viticulture has expanded in some regions, notably the Mount Camel ranges near Rochester, the King and Goulburn Valley, Boort and Swan Hill. While table grapes and dried fruit production is locally important, the viticulture industry is now dominated by the wine industry.

Cropping and Grazing
Cropping and grazing farms represent the most diverse industry. Typically these enterprises have focused on a range of cropping and grazing industries, according to the seasonal conditions. In drought years cropping and grazing farms can gain a greater return from temporary sale of water to the dairy and horticulture industry. Some cropping and grazing farms have diversified into higher value horticulture crops. There are many large farms in the Western part of the region that specialize in prime lamb production, grazing mainly on annual pastures. Beef production is also important, and lucerne production continues to be important in Boort, Cobram and Kerang.

2.2.10 Water entitlements and deliveries

G-MW operates its bulk water supply systems within bulk water entitlements issued by the Victorian Government. These entitlements specify for each supply system the limits on system operation (including minimum river flows to be maintained), and obligations to use the water to supply other water entitlements. These other entitlements include bulk entitlements (BEs) for towns, and D&S allowances, water rights and diversion licences for rural water users. Typical water use is described in the following table.

System entitlements, average volume supplied (regulated and unregulated)

System	Total Entitlement (ML)	*Average Usage for last 10 Years (ML)	Minimum Usage (ML)	Maximum Usage (ML)
Murray	795,413	931,188	765,072	1,103,528
Goulburn	1,113,184	1,095,769	670,562	1,548,102

System	Total Entitlement (ML)	*Average Usage for last 10 Years (ML)	Minimum Usage (ML)	Maximum Usage (ML)
Broken	33,284	19,350	13,356	31,141
Campaspe	37,821	41,114	14,700	57,420
Loddon	25,320	19,509	12,298	32,512
Ovens/King	26,356	17,055	11,273	27,019
Total	2,031,378	2,123,985		

* Average usage for the 10 year period 1994/95 – 2003/04

These data illustrate the variability of water consumption by irrigation users. Usage is governed by a combination of the demand for water supply, which is heavily reduced in wet years, and the supply of water available which depends on inflows to G-MW storages. The current extended period of drought has limited water resource availability, and the 10 year averages listed above are well below long term average usage.

2.2.11 Water availability and allocation policy (regulated systems)

In any year, entitlements represent a share of the available resource. On 1 July in each year, G-MW assesses the available resource and makes an allocation of water to all water entitlement holders in proportion to their entitlements and in accordance with the hierarchy of reliability specified in the BEs. The water resources are routinely reviewed throughout the year, and the allocations are increased if more water has become available. Within BE specifications, water allocation policy directs how allocations are made to ensure probity in the process and the protection of reliability of supply.

2.3 Uncertainties and Assumptions

G-MW's Water Plan is based on a range of assumptions, several of which have a significant degree of uncertainty associated with them.

2.3.1 Our Water Our Future - White Paper

The reforms in the Victorian government's white paper, Our Water Our Future, will continue to be implemented during the period of the water plan. G-MW is expected to be one of the first authorities to implement the irrigation reforms in Chapter 4.

Reforms such as delivery shares in irrigation districts and water shares separated from land are expected to provide significant business benefits to G-MW, including by providing a solution to the stranded asset problem.

We expect to implement Water shares, delivery shares, water use licences and the new state wide Water register within the first year of the Water Plan. These are all major reforms without reliable precedent, and the cost of implementation includes major uncertainties well outside G-MW control.

These include:

- Extent and cost of data cleansing and conversion required for the new register is not finalised
- Functionality and design of the new register will not be known for some months
- Costs to develop interfaces to existing G-MW operational and billing systems cannot yet be accurately estimated and final cost sharing between DSE and authorities has not been agreed
- The ongoing operations and maintenance cost for the new register is unclear, but authorities will have little control over this aspect as the water registrar will determine these issues. Some scenarios could also see a continuing requirement for maintenance

of all existing business systems plus a new Register, which would require some increase in recurrent revenues

- The extent of customer education and support required to assist them to understand and manage in this new unbundled environment cannot be accurately estimated, but could exceed reasonable estimates in some seasonal circumstances
- Application of unbundling to unregulated surface water and groundwater systems is not yet fully described and will probably require significant tariff reforms and possibly review of the service structure and boundaries for all diversions services.

No additional allowance has been made in the expenditure proposals contained in this plan for these issues. When the reform proposals are more clearly developed and scoped, estimated costs for these activities will be developed and pricing implications assessed.

2.3.2 Continuing drought.

The most probable outcome during the Water plan period is for somewhat below long term average water availability in the major supply systems (see below for further detail on modelled water availability).

2.3.3 National Water Initiative

The National Water Initiative will be the catalyst for continuing reform in the water sector, and will require governments and organisations like G-MW (potentially) to invest significant amounts in a range of areas including water market development, water accounting, resource sharing plans and water savings for the environment.

No additional allowance has been made in the expenditure proposals contained in this plan for these issues. When the reform proposals are more clearly developed and scoped, estimated costs for these activities will be developed and pricing implications assessed.

2.3.4 Water Savings Projects

Major water savings project announced in the white paper will be implemented during the water plan (eg Tungamah pipeline, Mokoan/Broken system reconfiguration, TCC). The exact nature of the water supply systems in the Broken valley is not yet fully decided, so there will be significant unknowns in relation to future operations and maintenance costs and therefore price in these systems for some time to come. Also the final arrangements in relation to future bulk water charges on all of the new environmental entitlements created via these projects has not been negotiated, and there is a risk that some water which currently attracts a bulk water charge may not in future, generating ripple on cost impacts for other customers.

The capital expenditure proposals in this plan include confirmed project funding for Mokoan decommissioning/Broken system reconfiguration, Tungamah pipeline construction, TCC installation for the CG 1,2,3,4 system. Operation and maintenance costs for these Tungamah and TCC are based on the expected new asset costs. No provisions have been included for other changed costs in the Broken Valley and construction timing is also unknown. Once engineering designs are prepared, operations and maintenance cost issues in the Broken system will be reviewed and pricing implications assessed.

2.3.5 Pricing Policy Review

It is proposed that the recent pricing policy review will be developed in 2005/06 and will apply to this water plan. This involves a significant amount of work which was originally proposed to be undertaken over a 3 year period. More detail is provided on this issue later in this report, however there is some uncertainty about the precise level of programs involved and their optimal cost.

2.3.6 Water availability

In unregulated streams availability of water is primarily affected by within season hydrology, and rainfall throughout the season. Access to water is restricted in the event of water shortage. Water may also be unsuitable for consumption at times due to poor water quality. The reliability of supply for these streams is dictated by weather conditions from year to year, except due to changes in management such as application of *stream flow management plans*.

The majority of G-MW's supplies are in regulated systems. In these systems water storages are used reduce the effect of hydrologic uncertainty on supply reliability. For systems with a two year planning period resources are set aside to improve the reliability of supplies in future years once the system allocation reaches 100%. In these systems additional allocations, known as Sales, are only announced after allocations in the following year will reach 100% with a reliability of 99%. For systems with a one year planning period resources are set aside to improve the reliability of supplies in future years once the system allocation reaches the maximum allowed for the system. Water may be unsuitable for consumption at times due to poor water quality. Supplies from the Broken and Bullarook Creek systems have in the past been affected by high concentrations of potentially toxic Blue-Green Algae (BGA).

Table 3.1 Planning Periods for Regulated Systems

System	Planning Period
Goulburn/Loddon*	2 Years
Broken	1 Year
Campaspe	2 Years
Bullarook Ck	1 Year
Murray	2 Years

*The Loddon system may receive a lower allocation than the Goulburn System when Loddon Valley resources are insufficient to supply the Goulburn allocation.

The storages on the Ovens system are not operated to specifically carry-over resource for future seasons. Access to water may be restricted in the event of water shortage. Sales may be made available each season until storages cease spilling.

The availability of supplies in 2006/07 and 2007/08 from unregulated streams, and from the regulated Broken, Bullarook Creek and Ovens systems is expected to be similar to the long term average for those supplies. Due to the low volumes of carry-over water currently stored in the Murray, Goulburn and Campaspe Systems the current forecast availability of supplies for these systems in 2006/07 and 2007/08 is lower than the respective long term averages. The table below summarises the 2006/07, 2007/08 and typical long term availability outlooks for these systems.

Table 3.2 Allocation Outlook for Selected Systems

Allocation Outlook for 15 February[5]				
Probability of Exceedance	2005/06	2006/07	2007/08	Long Term
Murray System				
9 Chances in 10	100%[3]	100%[1]	100%[1]	100%
5 Chances in 10	100%	103%	148%	200%
1 Chances in 10	191%	200%	200%	200%
Goulburn System				
9 Chances in 10	80%[3]	100%[2]	100%[2]	100%
5 Chances in 10	100%	123%	146%	158%
1 Chances in 10	100%	200%	200%	200%
Campaspe System[4]				
9 Chances in 10	11%[3]	100%[2]	100%[2]	100%
5 Chances in 10	28%	131%	220%	220%
1 Chances in 10	100%	220%	220%	220%

Notes:

1 as at June 2005
2 as at May 2005
3 as at 1 September 2005
4 The combination of Campaspe System storage size, supply commitments, average inflow, and inflow variability means that:
- the system has a good chance of recovery after a poor season from inflows in excess of entitlements and losses, and,
- when there is little carryover storage there is a small but real risk of failure to supply entitlements.
5 Allocation estimates based on current practice and assumptions of sales utilisation etc. Following creation of a separate sales entitlement as part of the Sales Package in Our Water Our Future, allocations will reduce to reflect increased utilisation of fully tradable entitlement and proposed rescaling of the entitlement volume to match actual water available under the Murray Darling Basin cap.

3 Consultation

3.1 Consultation - Overview

Statement of Obligation

11	Customer and Community Engagement
11.1	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.
11.2	The *Authority* must establish and support the operation of customer committees, having regard to any principles endorsed by the *Minister* for that purpose.
11.3	The *Authority* must: (a) make available to the public, information about the water supply 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 on request to schools in its area, educational material about the efficient and responsible use of water in respect of rural water systems, at no charge or, for educational material that involves a significant cost to the *Authority*, at a charge that covers the fair and reasonable costs of making the material available.

G-MW is strongly committed to effective customer involvement in decision making, particularly in relation to price and service issues. The organisation's focus on continuous improvement has also seen steady improvement in the nature and extent of WSC and the wider customer groups' involvement in these issues.

Against a background of upwards pressure on prices and lower margins in a number of irrigated farm industries, it was seen as particularly important that the irrigation community be given the opportunity to gain a good understanding of pricing proposals and to comment on these issues.

Water Services Committees

Customer engagement is a key part of our business. We have 12 peer elected WSCs and ten catchment committees who represent customers in irrigation areas, surface and groundwater diversions, flood protection and water districts. In all, over one hundred members represent customers on these committees. This means there is a representative on a customer committee for every 250 customers. We recognise that customer participation in our business planning and decision making is essential if we are to meet the changing needs of rural and regional communities.

To facilitate involvement in major business decisions, recent customer committees' participation, in addition to the development of this Water Plan, included developing business plans for each of their Areas, contributed to the Pricing Policy Review, implementation of key White Paper reforms, and were involved in helping to formulate our response to recent severe drought conditions.

Summary of Water Services Committees and membership

Water Services Committee	No. of members
Shepparton Area	8
Central Goulburn	9
Rochester-Campaspe	10
Pyramid-Boort	9
Murray Valley	8
Torrumbarry	9
Loddon Waterworks	8
Tungamah	6
Loch Garry	5
Regional Groundwater	14
Murray System (Diversions)	12
Goulburn System (Diversions)	8
	106

Bulk water and recreation customers

To engage all stakeholders we also need to work with partners and stakeholders of our Bulk Water business, including other water authorities, hydro electric power companies, recreational and tourism customers and community representatives around our storages.

In addition to our bulk water customer forum where information is shared with customer representatives, we regularly convene and participate in 14 stakeholder and community reference groups including community based panels at Mansfield, Murrindindi Shire, Lake Eildon, Eildon Dam Improvement Project, Nagambie, Lake Eppalock, Lake Mulwala and Lake Hume. These forums provide valuable opportunities to share ideas and listen to community issues, concerns and expectations so that these can be considered and addressed in how we undertake our activities as part of our broader role in water storage management.

3.1.1 Consultation with Customers about the Water Plan

The development of the Water Plan was made possible by consultation in many and varied forums over a long period of time prior to this submission.

Customers involvement through WSC involvement is extensive, and the key interactions have been as follows:

- June 2004
  WSC annual workshop. This workshop is attended by all members of all WSCs as well as senior management and directors. Key strategic issues of concern to customers are raised and discussed. Future direction to address issues raised is agreed.

- September 2004 – October 2004
  WSCs reviewed 2005/06 capital, operation and maintenance budget/program proposals

- February – March 2005
  WSC Finance Sub-Committees reviewed and scrutinised preliminary pricing models

- February – March 2005
  Full WSC meetings considered pricing recommendations

- March 2005
  Workshops were held where G-MW managers of corporate related services presented their business plans for their respective services to WSCs. Workshop discussions included the need to provide services at the lowest possible cost and provided an opportunity for scrutiny as well as an understanding of issues affecting corporate costs.

- March 2005
  WSC workshop, where WSC representatives presented their business plans to G-MW Board and to other WSCs. Workshop discussions included identification and sharing of pricing issues and pressures in each Area and wider customer consultation proposals.

- March – April 2005
  WSC consultation with customers. Area WSCs published special pricing newsletters and held a series of public meetings. Diversions WSCs sent each customer a newsletter explaining pricing issues and seeking feedback and held several public meetings.

- June 2005
  WSC annual workshop.

In conjunction with the above other forms of engagement have also helped to in the Water Plan. These include:

- Monthly WSC meetings
- Media Releases
- Bulk Water Forum – an annual forum attended by our regional urban and other rural water authority customers to improve communications; and to address common issues including service, water trading, bulk water tariffs and pricing, and proposed works programs
- Water Information Box – newspaper space purchased by G-MW on a weekly basis in regional newspapers with proven widespread customer readership
- Other issue-based public meetings
- Water Spot – weekly paid radio announcements
- Market research focus groups
- An established customer complaints system
- Customer surveys
- Customer Service Agreements negotiated annually between G-MW Board and WSCs
- WSC Leadership forums – forums on specific topics held to discuss key issues. These are attended by senior management and a leadership group of 2-3 persons from each WSC.
- Regional Forums – forums held to seek alignment of strategies with regional catchment partners including CMAs
- Recreation Users Groups – forums to report and receive feedback on matters of common interest with recreation clubs and associations regarding G-MW storages
- Commercial leaseholder forums - forums to report and receive feedback on matters of common interest with commercial leaseholders regarding G-MW storages
- Local Government groups – forums to consider emerging issues regarding G-MW storages and immediate catchments with relevant municipalities
- Dam Safety Community Reference Groups – project specific reference groups of community members formed for dam safety upgrading projects

3.1.2 Key issues identified by consultation

- A number of gravity irrigators from the dairy sector have indicated a strong desire for zero or low price increased in recognition of their reduced ability to pay as a result of lower returns and other difficulties in their sector.
- Many concerns were raised in regards to water trading and the impact on prices for customers remaining in the district, as well as social impacts.
- There was no widespread response from customers that the levels of service or asset renewals proposed were inappropriate.
- Many concerns were raised regarding the need to understand and communicate the approaching 'unbundling' reforms.
- Some concerns were raised at the lower price for 'sales water'.
- Issues were raised about the appropriateness of renewals annuities given the uncertainty of reconfiguration.
- Clear direction on service-price tradeoffs
- Input on strategic direction
- Water price affordability and customer ability to pay
- WSC role in setting of prices under an ESC regime
- That productivity savings will be achieved at the expense of service
- Government should contribute more to funding ageing asset infrastructure
- That the environment should pay for its share of water

3.1.3 How key issues are considered in the Water Plan

The key issues raised at the various forums have been included in the Water Plan in various ways. Some issues have been fed directly into the development of G-MW's Corporate Plan.

Some issues were raised in the context of the Pricing Policy Review. In response to these issues the consultant (Frontier Economics) has made specific recommendations. The Board has responded by establishing an Implementation Committee to oversee the implementation of the Pricing Policy Review report.

Other issues have been raised directly by WSCs in the context of negotiations on prices within services. Many issues have been directly resolved or agreed in this forum.

3.2 Regulators & Other Stakeholders

3.2.1 The Minister for Water

Consultation with the Minister on the preparation of the Water Plan has primarily been conducted at the officer level with the DSE's Deputy Secretary, Mr Greg Wilson, or his delegates.

Presentations were made to the department summarising the key issues contained in this Water Plan Summary by the Manager Strategy and Development and Manager Business and Finance, on 15 July 2005.

A follow up document titled was provided in early August 2005. This provided some opportunity for DSE review of many of the key issues and assumptions on the development of this Draft Water Plan. The document also confirmed the verbal and written information provided to the Department on various previous occasions.

Other interactions on specific issues have occurred at many and various occasions over the months preceding this submission.

G-MW has consulted with DSE Water Resources Policy Division on increased obligations associated with completion of the Ovens/ Broken and Loddon BEs. DSE has informed G-MW of the need for G-

MW to now prepare annual water accounts in each of these river basins, and G-MW has budgeted for increased costs accordingly.

G-MW has consulted with DSE on cost sharing arrangements for development and implementation of Diversion Services water reform objectives and they are covered later in this document.

A draft report to meet the Dam Safety requirements (Part 15) of the SoO was submitted to the Water Sector of DSE in March 2005. Informal responses to that information have been favourable and a request to finalise the report is awaited.

3.2.2 Department of Human Services

G-MW has consulted with DHS on obligations imposed by the Safe Drinking Water Act. The obligation is imposed on G-MW in its role as a water storage manager. The Act requires that water storage managers must prepare, implement, review and revise Risk Management Plans (RMPs) in relation to its supply of water to any water supplier (Regional Urban Water Authorities). RMPs are to be in place by 1 July 2005 and implementation will occur from that date.

Implementation requires substantial coordination and integrating activities, most likely under the umbrella of the Catchment Management Authority Regional Catchment Strategies. Our approach will be to incorporate the implementation of RMPs into existing G-MW catchment, land and water management processes and coordination arrangements with partners.

DHS has responded stating it is satisfied with the approach proposed by G-MW.

3.2.3 Environment Protection Authority (EPA)

G-MW has written to EPA about obligations imposed by the Environment Protection Act that have been incorporated in the document “Principles to establish EPA Environmental Obligations for Water Businesses for the 2005 Pricing Determination”. In summary G-MW proposes:

- Water storage and water delivery efficiency are being addressed through government water savings programs, asset reconfiguration strategies, and improved water delivery operational strategies.
- G-MW is a signatory to the Irrigation Drainage MOU (IDMOU) which defines the framework for the improvement of water quality across G-MW.
- G-MW reports annually on compliance with BE orders, in both G-MW’s Annual Report and in Resource Manager basin water accounts. G-MW will appoint an independent auditor to verify G-MW’s compliance with its BE obligations, and DSE will oversee these audits.
- G-MW will also work with CMA’s to explore opportunities to improve the effectiveness of the Environmental Water Reserve by adjusting water system operation.
- G-MW contributes to the Victorian Water Quality Monitoring Network. All storages are monitored as part of the Major Storages Operational Monitoring Program (MSOMP). Results of these programs are available from DSE water data warehouse and in the Annual Victorian Water Quality Monitoring Annual Report and the MSOMP Annual Report
- Since November 2002, G-MW has collaborated in a DSE Cold Water Monitoring Program at selected storages to determine the extent of any thermal effects of the dam and associated structures on the downstream thermal regimes.
- Obligations to meet groundwater and stream flow diversion requirements in Statement Environment Protection Policy (SEPP) (Water of Victoria) have been considered and it is proposed to incorporate the development of water sharing strategies like streamflow and groundwater management plans into the Regional Catchment Strategies.

- Further consideration of the SEPP requirements have been included in price submissions and proponent application fees for the issue of new groundwater and surface water licences and planning referrals.
- Monitoring, auditing and reporting activities associated with irrigation drainage are dealt with via the IDMOU.
- Activities associated with environmental flows are dealt with above.

An informal response has been received from EPA (19 August 2005)

3.2.4 Catchment Management Authorities

G-MW works closely with CMAs in its region to align our water management activities with the outcomes targeted through the Regional Catchment Strategies. In particular, we deliver a range of programs related to water quality, salinity and groundwater management in the Shepparton and Kerang regions on behalf of the Goulburn-Broken and North Central CMAs respectively.

4 Service Outcomes

4.1 Service overview

4.1.1 G-MW Service Objective

G-MW's long term objective is to provide a range of responsive and innovative services with a price and delivery mix that balances existing and emerging customer needs.

As part of understanding customer needs, G-MW actively involves its customers in identifying the services and service standards that should be provided. This is predominantly done through the elected WSCs for all the retail services provided to customers of the District Services and Diversion Services businesses. G-MW also operates a Bulk Water Forum, to offer the opportunity for bulk water services customers to scrutinise proposed services and prices.

The type of supply systems operated by G-MW can offer a range of different services, which in many cases can be adapted to best meet local needs. Usually, adopting different services or standards of service changes the cost (and therefore price) of service delivery. G-MW attempts to offer customers the flexibility to choose the most appropriate services and standards to meet their needs wherever possible.

The District Services business division has the greatest opportunity to offer this type of flexibility. Bulk water services have less scope for service flexibility through the requirement for storage operations to comply with BE provisions, which dictate key operational parameters. In addition, there are severe consequences associated with the failure of a large storage, so there is a requirement to comply with appropriate industry standards for construction, maintenance and operation of these assets which limits potential for price/service trade-offs.

In the Diversion Services business, the assets are largely provided by the customer and so most of the key service/price decisions take place within the customers own on-farm supply system. There are still a number of opportunities to influence the manner in which G-MW services are delivered and their associated costs, and Diversions Services WSCs actively scrutinise and advise on the appropriate service approach in these areas.

4.1.2 Summary of service obligations

In addition to directly negotiating with customers in relation to their service needs, there are a number of other requirements placed on G-MW that impinge on the manner in which services are delivered. The key issues of this type are:

- Water Act 1989
  The Water Act 1989 requires G-MW to provide and manage systems for water supply and for the drainage and protection of irrigated land, particularly through salinity mitigation. The Act also identifies the related functions of identifying and planning for the future community needs for these services and undertaking investigations and research in these areas.

  There are also a range of specific provisions in legislation governing the delivery of services in Districts operated by the Authority. Separate (and quite different) provisions in the Act provide a framework for the provision of services to diversions customers.

- Bulk Entitlement Orders
  BEs are Orders granted under the terms of the Water Act to that authorise the harvesting of extraction of water from the natural environment by an Authority. The BE specifies the terms and conditions that apply to the entitlement, including the volume of water available, water sharing

arrangements, water accounting, compliance and reporting requirements, environmental obligations (including environmental releases from storages and minimum river flow regimes), together with financial obligations for payments associated with providing the entitlement.

- Water resource management
  The Water Act enables obligations to be placed on Authorities to undertake monitoring and data collection to support the assessment of water resources. G-MW also becomes involved in the development and implementation of management plans for Water Supply Protection Areas. The objective of these plans is to ensure sustainable use of groundwater and surface water and they can include restrictions on the timing and volume of water use by entitlement holders. These plans, known as Groundwater Management Plans and Stream Flow Management Plans can significantly influence the nature and cost of services available to groups of diversions customers.

- Safe Drinking Water Act

  An obligation is imposed on G-MW in its role as a water storage manager. The Act requires that water storage managers must prepare, implement, review and revise RMPs in relation to its supply of water to any water supplier (Regional Urban Water Authorities). RMPs are to be in place by 1 July 2005 and implementation will occur from that date.

- Other Legislation
  A range of other legislation includes obligations on G-MW that have flow on effects in relation to the way work is performed, standards of service that can be offered or the cost for service provision. Examples include OH&S, anti-terrorism and environmental protection legislation. Activities required to ensure compliance with these legislative obligations are dealt with in more detail in Chapters 5 and 6 of this plan.

- Statement of Obligations
  The SoO for G-MW is an order issued by the Minister for Water under the provisions of the Water Industry Act 1994. The Statement imposes a range of obligations on the Authority in relation to the way it performs its functions and exercises its powers. It includes provisions in relation to the following issues, which can affect either the manner in which services can be delivered and/or the costs involved:

  - Customer & community engagement
  - Risk management
  - Responding to incidents and emergencies
  - Asset management
  - Dam safety
  - Efficient distribution systems
  - Metering
  - Responding to drought
  - Providing concessions and rebates

  Details on the activities which G-MW will undertake to ensure compliance with the SoO are included in the Chapters 5 and 6 and other appropriate areas of this plan.

4.2 Bulk Water Services

Bulk Water Services manages assets and water storages, and delivers bulk water to customers. This business also manages commercial leases and licenses, and recreation services at water storages.

4.2.1 Key Drivers for Service

The supply of bulk water to entitlement holders involves the harvesting, storage and delivery of water to river off-take points at the times and in the volumes requested by the entitlement holder. This must be achieved within the terms and conditions applying to the entitlement which are specified in the relevant BE. In addition to timely delivery of water, the other important dimension is the reliability of supply.

Reliability of supply depends on two key elements. Firstly, reliably storing and delivering water to entitlement holders requires reliable assets that can provide the designed level of service. In order to achieve this, G-MW undertakes extensive asset management, maintenance and renewal activities (refer later in this plan for details) on its water storage infrastructure. The standards that govern this work are specified in the Statement of Operations or in accepted industry practice (eg International Commission on Large Dams (ICOLD) and ANCOLD guidelines.

The second element that influences the reliability of supply is the manner in which the provisions for operation of storages specified in the BE are complied with. For example, the Eildon BE specifies targets for flood management pre-releases before the storage fills. If these target release are exceeded, then there may be less water available to meet BEs. Similarly, release of greater than specified environmental flows may reduce water availability for other users. Compliance with the storage operation provisions of BEs is therefore an important determinant in overall reliability of supply.

G-MW has maintained an excellent record of service delivery for its bulk water services. There have been no asset failure that interrupted supply and no significant BE compliance failures during the past five years

The key drivers, business influences and stakeholders affecting the Bulk Water Services business environment and service delivery are:

- Government (SoO)
- Murray Darling Basin Agreement / River Murray Water operations, which determine the overall volumes and service levels available to Murray system bulk water customers within Victoria.
- Consumptive use Customers (BEs)
- Hydro power companies operations (established under long term contracts)
- Contractual arrangements of leases etc.
- Government expectations (Victoria, South Australia, New South Wales and Federal governments and 25 local government authorities).
- Community use and expectations, including recreation and tourism demands around water storages and along rivers.
- Industry standards

4.2.2 Significant Service Strategies and Outcomes for the Regulatory Period

The following significant outcomes have been planned:

- Comply with all obligations
- Establish Water Storage Amenity business
- Strengthen Bulk Water Services Group capability
- Improve Bulk Water Services asset and business management systems
- Implement the identified Dam Improvement Program Works
- Decommission Lake Mokoan
- Consolidate Bulk Water Services Risk Management System
- Reduce risks

- Asset
- Financial
- OH&S
- Environmental
- Public liability

- Deliver productivity initiatives
- Monitor and report on performance
- Improve industry links

4.3 District Services

District Services delivers water supply, drainage and some flood protection services to customers on more than 14,000 properties. It manages six Irrigation Areas (Shepparton, Central Goulburn, Rochester-Campaspe, Pyramid-Boort, Murray Valley and Torrumbarry).

4.3.1 Key Drivers for Service

4.3.1.1 Irrigation

The key aspects that define the standard of service received by G-MW irrigators closely parallel those in bulk water services. Our overall objective is to supply water at the time it is required and in the volumes necessary to irrigate the customers' pastures and crops. Other related aspects of service quality are the provision of the requested flow rate at the appropriate elevation to enable gravity irrigation of the property (in gravity areas).

Deliveries are also conditional on the customer having sufficient unused current seasonal water allocation available to cover the requested delivery volume. Where this is not the case, the customer order will not be accepted.

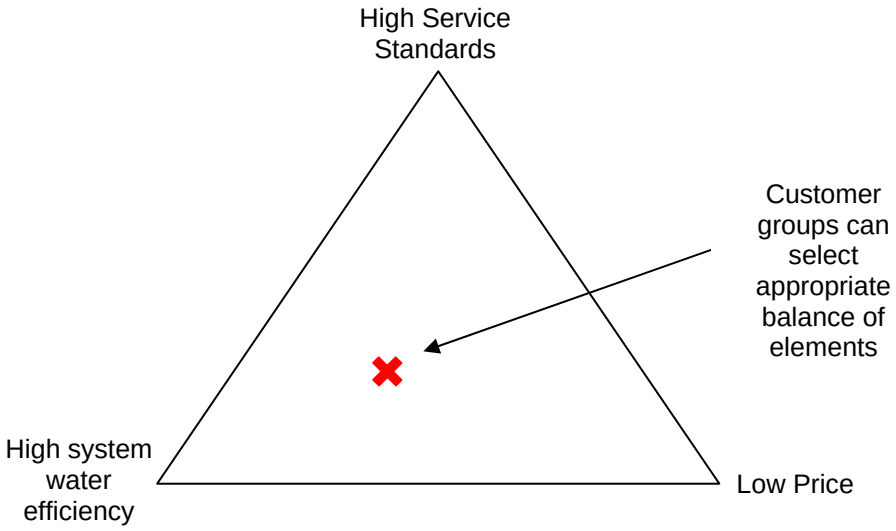
WSCs act as a forum for agreeing on service standards, as there is a much greater range of service/price trade-offs possible in rural water supply than in other utility services like urban water or electricity and gas supply. Also, customers are actively involved in service delivery in a unique manner, as they must order each individual irrigation delivery and then open the outlet to their property in accordance with the delivery timings scheduled by the authority. Each year G-MW receives and schedules delivery of approximately 350,000 individual orders from customers for service delivery.

This unique involvement of customers in service delivery makes it essential that customer representatives are involved in establishing service standards, which will create obligations for both the supplier and the customer in achieving service targets. Also, actions of one customer can "ripple down" the supply system and affect service to other customers. Service standards and targets are reviewed annually with WSCs and documented in a Customer Service Agreement negotiated between each WSC and G-MW.

Service standards for rural water supplies can also be dynamically influenced by seasonal conditions which affect demand for water and its distribution between reservoirs in the large, inter connected systems G-MW operates.

The continuing drought and wide spread community focus on the efficient utilisation of water has also highlighted a further efficiency dimension to the traditional service/price trade-off. It is generally accepted that higher standards of service are associated with higher prices. In gravity irrigation systems it has also become apparent that high standards of service and greater customer flexibility often result in greater system outfalls and therefore lower water efficiency. Operating to achieve

higher efficiency results in lower service standards, but also incurs higher prices associated with closer system monitoring and regulation. This is illustrated in the following diagram.



Price/Service/Water Efficiency Trade-off

Higher system efficiencies and levels of service can be achieved concurrently through fundamental change in the approach to service delivery, for example through pipelining of a system, but this requires significant capital inputs and higher operating costs in terms of energy for pumping etc.

The agreed balance between services and price are quantified in individual Customer Service Agreements for each Area. These agreements are the end product of a business planning process where local Area Management and WSCs develop an annual business plan for their Area which sets out the objectives and targets for service delivery, the action proposed to achieve these targets. Part of the plan includes the development of capital and operating expenditure estimates required to deliver various service standards. This results in a business plan, with an associated cost to deliver and the consequent prices proposed for each service within the Area. WSCs then consult on this proposal with customers before making a pricing recommendation to the Board.

A typical cycle for this process is documented in Chapter 3.

Drought Response
One of the major factors currently affecting G-MW's service delivery is the continuing drought in northern Victoria. In the Goulburn system, allocations in 2004/05 reached 100% of Water Rights. This represents the eighth year of drought in this system, with no Sales allocations available during the last seven years. This period has also included the record low allocation of water in this system, just 57% of Water Right, which was experienced in 2002/03.

The Murray system also experienced a seasonal allocation of 100% of Water Rights in 2004/05, which is the equal lowest on record. This follows on from Water Right only availability in 2003/04 and Water Rights plus 29% Sales in 2002/03.

In the Campaspe system, a continuation of severe drought has resulted in a seasonal allocation of only 39% of Water Rights in 2004/05, a record low allocation for this system. This represents a water

availability 75% lower than the average seasonal allocation experienced in this system over the preceding ten years.
In recognition of the difficulties that customers have faced as a result of drought G-MW has implemented a range of response measures in recent years. The key elements include:

- Deferral of discretionary expenditure and adjustments to capital and maintenance programs to keep costs and therefore prices as low as possible. Given the extended nature of this drought, there may be fewer opportunities for expenditure deferral or adjustment in future.
- Improved system loss management (refer to Chapter 6 for further details). This has the benefit of reducing losses and maximising water available for use, but requires more intensive monitoring and regulation of the channel system. The other impact of this mode of operation is less flexibility to respond to changes in customer requirements at short notice, so service levels are somewhat lower, whilst operational costs are higher.
- More frequent water resource assessments and seasonal allocation reviews. Under normal seasonal conditions, allocations would be reviewed monthly, but under drought conditions they are review at least twice monthly to ensure that if additional resources become available they are allocated to water users as early as soon as possible. Coupled with this activity is the associated communications to customers of water availability and drought related issues through special newsletters which are sent monthly to customers in major water supply systems throughout spring/early summer or until maximum probable allocations are reached.

It is expected that these or similar measures will be instigated in the event that drought conditions occur during the period of this water plan.

Improving System Efficiency
A second major service driver is the need to reduce system losses. G-MW is the largest water supply authority in Victoria, in terms of volumes delivered to customers. This also translates into the largest volume of unaccounted for water (losses) of any water authority. In order to better manage finite resources the government requires authorities like G-MW to improve the efficiency of their supply systems. Chapter 6 identifies the approach G-MW will take in this area. Whilst drought has created the driver in recent years to improve system efficiency, it is not an option to revert to less efficient operations once the drought has passed, so G-MW will need to continue efforts (and associated costs) to reduce system losses. Providing acceptable customer service levels whilst continuing to reduce losses is expected to become more difficult once general water availability improves post-drought.

Reconfiguring Assets
Drought has also had a heavy financial impact on many irrigators' businesses. These pressures on customers, when combined with water movement resulting from irrigation industry adjustment and the aging of existing irrigation supply assets, have generated a strong focus on the need to reconfigure existing systems for the future. During this Water Plan, G-MW will be undertaking the development of reconfiguration plans in each Area identifying future service needs and the assets required to deliver these services. These plans will provide a framework to guide future investment by both G-MW and customers, and will also bring greater certainty to the nature of services to be provided in each Area. Implementation of these plans is expected to reduce the total assets required in future, which will help contain costs, as well as providing opportunities to reconfigure assets and generate water savings for the environment. The development of these reconfiguration plans will be funded through the financial assistance provided by government as part of the Sales Package initiative in Our Water, Our Future, which will provide 145 GL of water for the environment. The funding package also includes $50m over five years to undertake asset reconfiguration and rationalisation works that will generate 25 GL of water savings as part of this package. It is anticipated that additional G-MW capital will also need to be directed to these projects. Reconfiguration plans will enable estimates of this capital requirement to be developed, however it has been assumed that no significant G-MW capital inputs will be required during this Water Plan.

4.3.2 Significant Service Strategies and Outcomes for the Regulatory Period

4.3.2.1 Irrigation

During the regulatory period, the following significant service strategies will be delivered:

- Water Reform Program – Our Water Our Future
  The government has identified significant reforms that will affect the manner in which irrigation entitlements are managed in future in Chapter 4 of the White Paper – Our Water Our Future. The key changes will cover:
  - Unbundling of irrigation entitlements – water entitlements will be fully separated form land and a new statewide water entitlement register to be developed by DSE will be implemented to record and manage these entitlements. The target date for this aspect is 1 November 2006.for G-MW's gravity irrigation districts (and major regulated river systems). Implementation of this new statewide register will provide significant functionality for water entitlement management and trading that is currently incorporated in G-MW's Billing Information and Customer Care System. This important business software system currently manages customer entitlement information, water trading transaction and billing. It is likely that moving to a new water register and entitlement framework will require substantial redevelopment or replacement of this software, however insufficient detail is available at this time to make any reliable estimate of the costs that may be involved.
  - Delivery Shares – entitlements to access distribution networks have traditionally been based on the water entitlements attached to the land. This approach does not manage the impacts that arise from water trading farm restructuring. In future, access to infrastructure will be managed through the assignment of delivery shares in the network to each service property, and the obligation to contribute to the fixed costs of infrastructure provision will be based on the delivery shares held.
  - Water Use Licences – an explicit water use licence will be issued to each property, to confirm the rights to apply irrigation water and to put in place appropriate standards to protect the environment.

    DSE is still developing details of how these proposals are to be implemented. It is anticipated that most of the authority costs will be incurred in 2005/06. No additional expenditure has been included in this Water Plan for implementation costs, however this will be reviewed once detailed proposals and timelines have been confirmed.

- Enhance customer involvement & increased effectiveness of WSCs
  WSCs are an essential part of customer involvement in G-MW's business. In order to continue to fulfil this role effectively, WSCs will need to continue to develop and adapt to reflect the changing environment in which they operate. A review of WSCs has recently been undertaken, and the recommendations of this review will be implemented during the regulatory period.

- Appropriate future asset management strategies.
  Implementation of the recent Pricing Policy Review outcomes will require some significant changes to asset planning. It is proposed that strategic asset management procedures will be developed and the Advanced Maintenance Programs further developed and refined. Funds are included in this plan to undertake this work.

- Reconfiguration planning
  As discussed above, G-MW will develop reconfiguration plans for each Area setting out the future service needs and assets required to deliver services, which will enable targeted reconfiguration and rationalisation of assets. Upgrading and renewal of assets in areas of increasing demand is also a likely outcome. These Area plans will be developed over the next 3 years, with the bulk of

the implementation activity occurring in the next regulatory period.

- Development of next generation of Irrigation Planning Module software (IPMG2)
  The IPM software is used to receive and schedule customer orders for water deliveries. This is an essential component of service delivery and without this software effective, cost efficient planning of deliveries, system operation, water usage recording and subsequent billing would not be possible. It is a critical business application which is approaching the end of its economic life. This software will be redeveloped to meet current needs, and will also enable improved staff productivity and will be designed to interface with the new statewide Water Register. Funds for this work are included in the capital expenditure estimates.

- Achievement of Water Savings
  The government is funding a number of water savings projects to deliver improved environmental flows to the Snowy and Murray rivers. The major projects identified in the District Services business are:
    - Improved Measurement of Small Volume Supplies in Irrigation Districts (IMSVSID) – this project involves better measurement of supplies via metering and deeming of use. The costs of this program are being met by the government. This project will achieve an estimated 21,600 ML of water savings, of which 16,400 ML per year will be used for environmental flows. The balance of the water savings will go to restore reliability of entitlements for irrigators.
    - Tungamah Pipelining Project – this open channel domestic and stock supply system will be pipelined at a cost of $20.7 m, of which $17 m will come from government and the balance will be funded by customers. The project will deliver approximately 4,800 ML of water savings and offer improved service levels and year round water supply to customers. Customers have been extensively consulted on the project and the new system is expected to be in operation by mid 2007.
    - CG 1,2,3,4 TCC – Total Channel Control technology has been installed to automate the operation of regulators on the Central Goulburn Nos. 1, 2, 3, and 4 channel systems and reduce outfalls and water loss. Further work will be undertaken during the regulatory period using data collected by this technology to identify areas of high loss for application of channel linings etc. to generate further water savings. It is expected that this project will generate in the order of 18,000 ML of water savings. This project is fully funded by the government.

4.3.2.2 Drainage

Drainage services require little active operation for service delivery. The primary influence of drainage system performance is ensuring drain waterway area is effectively maintained, which requires a systematic, well planned weed control program. Costs for these programs are included in the maintenance estimates in this Plan.

The key strategy that will affect the manner in which drainage services are provided and their cost is the commitment flowing from the Regional Catchment Strategies to reduce the nutrient loads from irrigation drains into streams. This is being achieved by improved management of discharges into drains, by encouraging on-farm reuse systems to reduce drain flows and through an active program to encourage the harvesting and reuse of irrigation drainage flows to reduce outfalls to streams.

The management and monitoring of this strategy and overall drainage performance and impacts is subject to the Irrigation Drainage Memorandum Of Understanding (IDMOU) between the CMAs, G-MW, DSE and the EPA. Details on the actions required under this agreement and the costs are provided in Chapter 5.

4.4 Diversion Services

Diversions Services provides regulated and unregulated surface water and groundwater diversions services to customers on some 14,000 serviced properties. This includes recently licensed registrations of new farm dam services.

4.4.1 Key Drivers for Service

Diversion services customers fall into three major groupings:

- Regulated surface water diverters:
  These customers take supplies from rivers downstream of G-MW/MDBC controlled storages. They receive a seasonal allocation based on their Licensed Volume and the amount of resource available in storage, in a similar fashion to customers who hold Water Rights in irrigation areas.

  The water required to meet customer needs is released from storages and diverters use their own pumps to extract the water from the stream and irrigate their properties. The key dimension of service is the availability of water at each pump site at the time required. Whilst the onus for managing use within available entitlements rest with the diverter in the first instance, authority staff monitor usage customers to ensure compliance with water entitlements.

- Unregulated surface water diverters:
  Unregulated diverters extract water from streams above the influence of G-MW storages. Reliability of supply depends totally on seasonal conditions and the natural flows occurring in the stream. G-MW staff monitor stream flow and customer usage. When flows decline to a level where all user demands and minimum environmental flows cannot be met, rationing of supplies between users is implemented. This water sharing service ensures that whatever water is available is shared equitably between all entitlement holders on a stream and the environment is protected via maintenance of minimum flows. Rationing supplies and management of stream flow regimes is highly dependant on seasonal conditions, but when it is required it is quite labour intensive. When rationing is required, it is important to customers that they receive prior warning that restrictions are going to be imposed, and then are regularly informed of the status of and expected duration of rationing.

Groundwater diverters
Groundwater diverters install bores and pump water from aquifers across the G-MW region. These assets are provided by the diverter and the standard of their construction will influence performance significantly. The reliability of supply is also dependant on the permeability and size of the aquifer and the amount of recharge reaching the aquifer from season to season. None of these attributes can be influenced by G-MW, however it is important when issuing licences to ensure that bores are sited far enough apart so that, as far as possible, extraction by one licence holder does not significantly affect the ability of others to extract their licensed volumes.

G-MW staff also monitor usage and seek to ensure that licence holders comply with their licence conditions.

Sustainable Resource Management
Traditionally, usage of water by unregulated diverters and groundwater users has been well below their entitlement volumes. With little competition between users, management inputs were quite low and costs minimal. There was also little need for metering and estimates of use based on the area irrigated were usually sufficient for management purposes.

As farmers have looked to boost farm returns, they have begun to utilise their water entitlements more. With the introduction of a cap on water usage within the Murray-Darling Basin in 1994/95, irrigators also turned to alternative sources of water like groundwater, unregulated diversion licences and farm dams. Increasing utilisation of these water sources stressed many aquifers and unregulated streams and increasing demands for water were clearly unsustainable. The need to

implement water sharing plans for these stressed aquifers and streams has been recognised and a program of Groundwater Management Plan and Stream Flow Management Plan development and implementation has been under way for some time.

The government's White Paper – Securing Our Water Future Together sets out targets for the development and implementation of these plans. Implementation of sustainable water sharing arrangements under these plans will generally result in rationing of available water between users and increased monitoring and compliance management. This will in turn require higher prices.

Compliance Management
One of the important elements in implementing sustainable water sharing plans is ensuring diverters comply with their licence conditions. The highest priority is installation of meters to ensure usage is within licensed volumes. Meters have already been installed in most groundwater management areas where plans have been developed or are proposed.

Outside stressed aquifers and streams, metering has also taken on greater importance to prevent over use or to identify water use trends and support the development of water sharing plans before the sustainable limits for the water system are reached or exceeded.

The costs associated with new activities of installation, reading and maintenance of meters will flow through into prices, both within this Water Plan and the subsequent one.

The White paper and Statement of Obligations have set out the requirements in relation metering of water use. Details of G-MW's metering program and expenditures are included in Chapter 6.

Customers are extensively involved in providing advice, input and scrutiny into decisions on how these compliance, water sharing and water delivery services received by diverters can best be delivered, and in particular the appropriate balance between G-MW and diverter obligations. This is achieved through WSCs which prepare annual business plans and pricing proposal in conjunction with management, as occurs in the District Service business.

Other Drivers of Service
Other requirements that will influence both the manner and cost of service delivery are:

- Compliance with the Water Act
- Statement of Obligations provisions
- Ministerial Delegations and Guidelines to Authorities undertaking licensing functions
- Memorandum of Understandings with DSE for metering
- Our Water Our Future policies relating to diversions
- Customer Service agreements
- Groundwater Management Plans and Stream Flow Management Plans.

Details of how these obligations will be met are set out in Chapters 5 and 6 in more detail

4.5 Customer Service and Administration

The Water Administration unit is responsible for the provision of a broad range of administration functions related to water entitlements and management across the entire region of G-MW. The administrative functions can be broadly categorised as property water entitlements (gravity, pumped and river diversions), water entitlement transfers, drainage, groundwater, leasing and licensing, service data, data base management, records management, billing, revenue collection and debt management. The Unit also provides the essential service of reception and switchboard.

4.5.1 Key Drivers for Service

The Water Administration function aims to be customer service driven and responsive to customer needs. Key drivers for service include:-

- Providing accurate and timely processing of all licensing, water trading and other water entitlement management activities.
- Responding to seasonal variability in the number water transaction activities.
- Providing accurate and timely responses to customer enquiries.
- Accurately and timely billing, and subsequent processing of customer payments
- Maintaining a professional yet empathetic approach to debt management with overdue customers, many of whom are struggling to cope with the current drought
- Providing a professional, approachable, and knowledgeable first point of contact for customers and other parties who contact G-MW through reception or by phone.

4.5.2 Significant Service Strategies and Outcomes for the Regulatory Period

Service strategies planned for the Water Administration function include:

- Further e-commerce opportunities identified and pursued, including more flexile bill paying options
- Playing a key role in the establishment of a Statewide Water Register
- Further expansion of Watermove including increasing water trading options

4.5.3 Key Drivers for Service

4.5.4 Significant Service Strategies and Outcomes for the Regulatory Period

4.6 Service Key Performance Indicators and Targets

4.6.1 Key Performance Indicators

The proposed service outcomes have been summarised in a table of Service Key Performance Indicators (KPIs).

G-MW will strive to achieve continuous improvement in all its service levels.

It should be acknowledged however that due to G-MW's service/price trade-off model with its WSCs some service indicators are agreed and set by the relevant WSC. In some cases improvements in service levels can be achieved through increased resources and associated price impacts. In these cases the service levels are agreed to ensure price outcomes are maintained.

Some indicators shown here have been used to guide management practices in the past, but data has not been captured to enable historical reporting. In these cases KPIs has been targeted based on best guesses and intentions, but without basis for comparison.

The operating and capital expenditure forecasts described in this plan are designed and expected to deliver the customer service outcomes described in this chapter.

Key Performance Indicator	2002/03 Actual	2003/04 Actual	2004/05 Actual	3-Year Historical Average	2005/06 F'cast	2006/07 F'cast	2007/08 F'cast
Bulk Water Services							
Availability of assets to supply customer orders:							
▪ Broken Basin	100%	100%	100%	100%	100%	100%	100%
▪ Goulburn Basin	100%	100%	100%	100%	100%	100%	100%
▪ Campaspe Basin	100%	100%	100%	100%	100%	100%	100%
▪ Loddon Basin	100%	100%	100%	100%	100%	100%	100%
▪ Bullarook Basin	100%	100%	100%	100%	100%	100%	100%
▪ Ovens/King Basin	100%	100%	100%	100%	100%	100%	100%
Capability of storage to hold design capacity (% of time)							
▪ Broken Basin [(1)]	82%	82%	82%	82%	82%	82%	82%
▪ Goulburn Basin	100%	100%	100%	100%	100%	100%	100%
▪ Campaspe Basin	100%	100%	100%	100%	100%	100%	100%
▪ Loddon Basin	100%	100%	100%	100%	100%	100%	100%
▪ Bullarook Basin	100%	100%	100%	100%	100%	100%	100%
▪ Ovens/King Basin	91%	100%	100%	97%	100%	100%	100%
District Services							
Water delivered on day ordered – all orders:							
▪ Shepparton	89.7%	90.7%	89.9%	90.1%	87%	90%	91%
▪ Central Goulburn	90.6%	91.2%	91.0%	90.9%	90%	91%	92%
▪ Rochester	83.2%	81.3%	80.4%	81.6%	80%	82%	83%
▪ Pyramid-Boort	80.0%	81.0%	80.0%	80.0%	80%	81%	82%
▪ Murray Valley	85.3%	86.3%	86.8%	86.0%	85%	86%	87%
▪ Torrumbarry	92.8%	92.5%	91.3%	92.2%	90%	92%	94%
Leaks responded to within agreed times per Customer Service Agreement targets:							
▪ Shepparton	85%	80%	72%	80%	85%	87%	90%
▪ Central Goulburn	96%	95%	96%	95%	95%	96%	97%
▪ Rochester	91%	92%	96%	94%	95%	96%	97%
▪ Pyramid-Boort	95%	96%	94%	95%	95%	96%	98%
▪ Murray Valley	87%	75%	70%	77%	80%	82%	84%
▪ Torrumbarry [4]	*	*	*	*	85%	90%	93%
Number of unplanned supply failures longer than 24 hours:							
▪ Shepparton	0	0	0	0	0	0	0
▪ Central Goulburn	0	0	0	0	0	0	0
▪ Rochester	0	0	0	0	0	0	0
▪ Pyramid-Boort	0	0	0	0	0	0	0
▪ Murray Valley	0	0	0	0	0	0	0
▪ Torrumbarry	0	1	0	0	0	0	0
Diversions Services							
Supply complaints responded to within Customer Service Agreement targets:				New	90%	91%	92%
▪ Unregulated – Goulburn					90%	91%	92%
▪ Unregulated – Murray					90%	91%	92%
▪ Regulated – Goulburn					90%	91%	92%
▪ Regulated – Murray							
Streams operated at agreed targets or natural flows at key				New	90%	90%	90%

Key Performance Indicator	2002/03 Actual	2003/04 Actual	2004/05 Actual	3-Year Historical Average	2005/06 F'cast	2006/07 F'cast	2007/08 F'cast
monitoring sites							
Natural Resource Services							
Mildura-Merbein Salt Interception Scheme – availability of assets[5]	75%	75%	75%	75%	68.7%	68.7%	68.7%
Administration							
Telephone calls (%) ❖ Switchboard answered within 30 seconds ❖ Accounts toll free answered within 30 seconds (Customer service Tatura office during business hours)				New New	90% 90%	92% 92%	95% 95%
Customer billing accuracy rate				New	99%	99%	99%
EWOV Billing enquiries per 1000 customers				New	1	1	1
EWOV – Number of complaints (excl. enquiries)	10	9	9	9	9	8	7
Responses to written correspondence directed to Tatura Office (days[2])				New	10	9	8
Processing of Temporary Transfer of Water Entitlement within 5 days[2,3] - %				New	100%	100%	100%
Processing of Temporary Transfer of Water Entitlement within 4 days[2,3] - %				New	60%	65%	70%
Processing of Permanent Transfer of Water Entitlement – for applications not requiring a channel capacity and salinity assessment, or diversions inspection within 15 days[2]				New	90%	92%	95%
Processing of Permanent Transfer of Water Entitlement – for applications requiring a channel capacity and salinity assessment, or diversions inspection within 30 days[2]				New	90%	92%	95%
Processing of Permanent Transfer of Water Entitlement-Diversions License within 25 days[2]				New	90%	92%	95%
Process of Licensing Groundwater Bore Construction Licence within 10 days[2]				New	90%	92%	95%
Processing of Information Statements within 5 days[2]				New	100%	100%	100%
Processing of Meter Read Statements within 5 days[2]				New	100%	100%	100%

Footnotes:

1. Operational restrictions on Lake Mokoan exist due to a dam safety issues. Targeted storage capability without lake Mokoan included is 100%.
2. All days shown are business days

3. The change to a “Statewide Water Register” scheduled for 2006 may provide opportunities to improve this indicator.
4. Prior year data unavailable
5. Five out of 16 bores in the scheme are blocked due to fouling from naturally occurring iron bacteria.

4.6.2 Other Performance Measures and Targets

Performance Aspect	Performance Targets (From 2005/06)
Responsive Customer Service	
Customer satisfaction	• At least 80 % of respondents to customer surveys satisfied with G-MW services
Operating Efficiently and Effectively	
A Delivery system efficiency	• Losses in delivery systems compliant with BE provisions
B Emergency Management	• 50% of plans reviewed and tested every year.
Financial	
C Strategic debt management	• Operating debt less than 90% of water right revenue
D Tariff reform	• Fixed revenue base is greater than 85% of total recurrent cost.
Connected to the Environment	
A Minimum river flow regimes	• Actual flows greater than or equal to specified minimum flows 100% of the time
B Water Use	• Water use compliant with seasonally adjusted MDB cap
C Environmental management	• 100% compliance with G-MW environmental management targets
Valuing our Employees	
A Job satisfaction	• At least 75% of respondents to employee surveys satisfied with G-MW as an employer
B Occupational Health and Safety	• Frequency – less than 8 lost time injuries per million hours worked • Severity – less than 4 days lost per lost time injury
C Employee health	• Personal leave reduced by 5% compared to 2004/2005

4.6.3 Summary of Key Strategies and Outcomes

The key strategies to be delivered or significantly progressed during the regulatory period are set out in the following table.

Water Plan Section	Strategy	Outcome
	Defining Services	
	• Identify and engage all customers and agree appropriate services and standards for gravity irrigation supply.	• Services delivered to meet customer needs.
	• Implement strategic development program for Water Storage Amenity business.	• Water storage amenity services delivered to meet community and wider stakeholder needs, with clear funding mechanisms. • Improved recreational and economic outcomes for communities.
	• Manage severe drought impacts on services.	• Risks understood and communicated to stakeholders. • Service delivery adapted to climate

Water Plan Section	Strategy	Outcome
		conditions
	Clarifying Entitlements to Water	
	• Unbundle water entitlements (Our Water, Our Future Program)	• Clear entitlements and improved business flexibility for regulated water users
	• Establish "sales" as an independent entitlement	• Clarified, robust entitlements with increased flexibility and choice for water users
	• Develop water trading and trading mechanisms including enhancing Watermove services.	• Effective, transparent water trading services provided.
	• Develop stream flow management plans for five priority unregulated streams	• Clear entitlements for licensees and environment
	• Implement Phase 2 Statewide Management Rules for unregulated streams.	• Clear water sharing arrangements for consumptive use and the environment.
	• Develop and implement groundwater management plans for Mid-Loddon and Upper-Loddon WSPAs	• Clear entitlements for licensees supporting sustainable resource management
	• Implement metering program for unregulated and groundwater systems (Our Water Our Future program)	• All significant diversions water use accurately measured
	Modernising Assets	

	• Implement Dam Improvement Program Phase 2 priority works
	  • Cairn Curran
	  • Goulburn Weir
		• Risks reduced

	• Implement improved tactical and strategic asset management procedures.	• Accurate asset data and enhanced asset decision making
	• Appropriate future asset management strategies developed and implemented	• Assets provided at lowest lifecycle cost
	• Implement Total Channel Control on CG 1,2,3,4	• Improved customer service • Efficient channel operations • Water savings captured for the environment
	Reconfiguring assets	
	• Identify future irrigation water service requirements and supporting asset needs. • Pyramid Hill and Kerang infrastructure plans • Develop and asset reconfiguration plans.	• Future asset needs understood. • Regional development supported • Asset base reconfigured to deliver appropriate service levels. • Water saved

Water Plan Section	Strategy	Outcome
	R & D	
	• Research and Development program developed and implemented to support future business needs	• Best use of new technology and opportunity incorporated business activities
	Building Stakeholder partnerships	
	• Implement comprehensive stakeholder engagement program	• Improved decision making and service delivery through effective input from diverse stakeholder interests.
	• Review Water Services Committee future role and membership.	• Clear roles and improved effectiveness of Water Services Committees
	Improving communications	
	• Enhance and coordinate corporate and local communications programs.	• Community, customer and staff awareness and understanding of key issues increased.
	Improving Water Systems	
	• Complete investigations and implement review of Irrigation Planning Module Generation 2	• Improved customer service • Improved system delivery efficiency
	• Implement approved future arrangements for Lake Mokoan	• Sustainable water resource management and water savings
	• Tungamah pipeline scheme designed and implemented.	• Improved customer service • Water saved
	Improving work practices	
	• Review operational work practices and implement improvements.	• Effective practices aligned to future needs.
	• Implement priority information technology strategic plan initiatives	• Systems and procedures implemented to deliver better service and improve productivity
	Building business viability	
	• Develop and implement productivity improvement plan.	• Costs of functions effectively managed.
	• Implement pricing policy review	• Agreed cost sharing and pricing for asset replacement obligations
	Reforming Tariffs	
	• Develop and implement new tariffs or fees for water supply services to support unbundling of entitlements.	• Improved signals to customers about type and costs of service provided • Acceptable third party impacts
	• Review bulk water cost sharing arrangements for G-MW customer groups.	• Cost reflective, equitable tariffs for bulk water charges to G-MW customer groups.
	Reducing environmental impacts	
	• Reduce high priority environmental risks.	• Environmental risks and impacts progressively reduced
	• Redevelop Environmental	• Environmental Management System

Water Plan Section	Strategy	Outcome
	Management System	understood and used by all staff. • Environmental risks and impacts progressively reduced
	• Develop and implement strategies for improved drainage management under ID MoU	• Water quality impacts from drains within catchment strategy targets
	Managing natural resources sustainably	
	• Implement G-MW Biodiversity Strategy	• Enhanced biodiversity within G-MW assets and area of influence
	Contributing to quest for healthy rivers	
	• Contribute to implementation of relevant aspects of the Victorian River Health Strategy	• Improved river health
	• Actively contribute to investigation consultation and construction work for Living Murray project	• All relevant issues identified • Future implementation and management strategies negotiated with key stakeholders
	Building organisational capability and diversity	
	• Develop and implement long term G-MW organisational development strategy and integrated culture change program	• Improved human safety, environmental management and customer service performance
	Improving occupational health and safety	
	• Develop and implement OH&S action plans based on analysis and risk assessment for all work units	• Safer work environment with fewer injuries • Maintain SafetyMap initial level certification.

5 Environmental Outcomes

5.1 Environmental objectives

G-MW has recently updated its Environment Policy and this sets the basis for G-MW's environment performance and objectives. KPIs for each element of the Policy are being developed and will be used as the basis for reporting G-MW's environmental performance.

G-MW Environment Policy (adopted by the Board April 2005):
The impact of Goulburn-Murray Water activities on the environment will be minimised and the environment will be enhanced. Goulburn-Murray Water will:
Utilise resources efficiently - Maximise efficient use of resources, especially regional water resources, and minimise environmental impacts arising from use of these resources
Improve water quality – Manage activities to maintain or improve water quality.
Improve biodiversity and ecosystems - Maintain, and where appropriate, enhance the sustainability of the natural resources and ecosystems used and administered in business activities.
1. **Contribute to catchment management** - Contribute towards developing and implementing plans to improve land and water management, river system health and water quality, with catchment communities and other stakeholders.
2. **Set targets** – Develop and set environmental targets. Regional Catchment Strategy Resource Condition Targets will be used as the basis for these targets.
3. **Compliance** - Comply with all relevant environmental legislation, standards, codes of practice and agreements.
4. **Implement management systems** – Achieve consistent environmental management by developing and implementing an Environmental Management System, based on AS/NZ ISO 14001.
5. **Promote awareness and responsiveness –** Promote awareness of, and appropriate response to, relevant environmental issues.
6. **Help improve customer practices** - Work with appropriate organisations to ensure that the practices of customers enhance G-MW's environmental performance.
7. **Reporting** – Develop and publish an external environment report documenting progress in implementing this policy.

5.2 Overview of environmental obligations

There are a broad range of environmental obligations imposed on G-MW. These include:

- Commonwealth legislation (eg Environment Protection and Biodiversity Conservation Act)
- Murray Darling Basin Act and associated strategies and plans (eg Basin Salinity Management Strategy)
- Victorian State Government legislation (eg Water Act, Environment Protection Act), strategies and policies
- SoO and
- Regional Catchment Strategies and associated Plans.

In addition to these, G-MW's Environment Policy, EMS, Corporate Plan and internal planning processes identify various activities that, when implemented, or undertaken, will improve environmental performance.

5.3 Statement of Obligations

Many of the requirements listed in the Section above have been incorporated in the SoO. Relevant sections of the SoO are listed below along with the G-MW strategy for satisfying the obligation.

5.3.1 Regional and Local Government Planning

Statement of Obligation

19	Regional and Local Government Planning
19.1	The *Authority* 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.
19.2	The *Authority* must participate in and support the development and implementation of any municipal planning scheme, local planning policy framework or municipal strategic *Statement* which may affect, or be affected by, the *Authority*'s activities.
19.3	A principal objective of the *Authority*'s participation will be to promote consistency of any strategy or any scheme with its planning and programs for sustainable water management.

G-MW operates within the boundaries of four CMAs:
- North East
- Goulburn-Broken
- North Central and
- Mallee.

G-MW continues to work with the CMAs to provide both strategic and technical input to the development and implementation of the CMAs' Regional Catchment Strategies and associated sub strategies, including Regional River Health Strategies. G-MW is also a service provider for both strategic and technical natural resource management programs for the North East, Goulburn Broken and North Central CMAs.

There are 24 municipalities within G-MW's region. As a rural water authority, G-MW is concerned about the impacts of developments on water system infrastructure and on the quality and quantity of surface and ground water resources. Under the Planning & Environment Act, G-MW is a statutory referral authority for developments in proclaimed water supply catchments, irrigation supply districts, and in some municipalities, under specific planning scheme overlays and is also a potentially affected or interested party for any developments along waterways in our area of operation. This role has been in place for some time and our internal assessment procedures are continually being reviewed and updated. We also consult with other stakeholders to ensure consistency and effectiveness.

This work is ongoing and benefits G-MW, our customers, our stakeholders including the CMAs and the community. These activities form part of G-MW's existing works program. No additional expenditure is required to address these activities.

5.3.2 Responding to Incidents and Emergencies

Statement of Obligation

12	Responding To Incidents And Emergencies
12.1	The *Authority* 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.
12.2	The *Authority* must undertake such periodic training and exercises as may be necessary to ensure that an emergency management plan can be implemented effectively.

G-MW is involved in a range of environmental incidents, a small number of which are classified as environmental emergencies. The prevention of, preparation for, response to and recovery from environmental emergencies are important parts of our environmental management and an integral part of our EMS.

The Corporate Environmental Emergency Control Organisation (CEECO) is an alternative management structure that is only activated when an environmental emergency is declared. It has the following functions:-

- Command and control;
- Communications;
- Emergency Services liaison, and
- Emergency field response operations.

The CEECO also utilises the EMS 24/7 Environmental Duty Officer incident notification function.

The Environmental Emergency Steering Committee oversees all aspects of environmental emergency management, with special reference to reviewing the outcomes of emergency and exercise debriefs.

These activities form part of G-MW's existing works program. No additional expenditure is required to address the normal activities associated with emergency management preparedness. No budget provision is made for emergency incident response.

5.3.3 Environmental Management System

Statement of Obligation

20	Environmental Management System
	The *Authority* must develop and implement an Environmental Management System which; (a) must be in accordance with the following standards from the Standards Australia AS/NZS ISO 14000 Series of Environmental Management Systems Standards: (i) AZ/NZS ISO 14001: 1996 – Environmental Management Systems – Specification with Guidance for Use; and (ii) AZ/NZS ISO 14004: 1996 – Environmental Management Systems – General Guidelines on Principles, Systems and Supporting Techniques; but (b) need not be accredited under those standards.

G-MW has had an EMS since late 1999. In 2003, the first external EMS audit was conducted. While this found many valuable EMS elements in place, it also found numerous inadequacies and incompatibilities with ISO 14001. The auditor recommended a substantial redevelopment of the EMS.

G-MW agrees that an ISO 14001 compatible EMS will enable management of its extensive environmental legal liability and risks. This includes coordination of environmental incident and emergency management, also required under the Statement of Obligation. EMS redevelopment therefore has a high priority. Accreditation of the EMS in accordance with ISO 14001 is planned to be achieved by December 2006.

Actions to accelerate implementation of EMS redevelopment on 1 July 2005 have begun. Some components of redevelopment work commenced in August 2004. This work does not include EMS implementation in individual Units. It is expected that Units will fund implementation on an as required basis in the same way as OH&S is funded.

Cost of the redevelopment project is $1,187,400 with the following budget spread:

2005/06 - $441,300;
2006/07 - $551,300;
2007/08 - $194,800.

5.3.4 Blue-Green Algal Blooms

Statement of Obligation

21	Blue-Green Algal Blooms
21.1	The *Authority* must report any blue-green algal blooms impacting on water supply services to: (a) the Department of Human Services; and (b) the relevant *Convening Agency*.
21.2	If the *Authority* is a *Convening Agency*, the *Authority* must: (a) develop and maintain on an annual basis a contingency plan for regional blue-green algal blooms; and (b) undertake its duties as a *Convening Agency* in accordance with that contingency plan.

G-MW is listed in Circular No 287 as a Regional Convening Agency for blue-green algal bloom response management and will continue to carry out the requirements of that Circular. G-MW has developed and regularly updated regional BGA contingency plans for each of the six major catchments within its area of operation. In addition, local contingency plans have been prepared for G-MW water storages, weirs, and irrigation supply systems. These plans set out monitoring, reporting and notification procedures, so that customers, community and other interested parties are notified of any BGA blooms and the associated risks for water users.

G-MW will continue to liaise with DSE, DHS, research groups and other interested parties about appropriate levels of management to address the risks associated with BGA blooms. G-MW will also continue to liaise with New South Wales Authorities about blue green algal management in the River Murray.

These activities form part of G-MW's existing work program. No additional expenditure is required to address these activities.

5.3.5 River Health

Statement of Obligation

22	River Health
22.1	The *Authority* must manage the impact of its activities on any waterway or wetland to minimise environmental impacts on and risks to the aquatic ecosystem.
22.2	When the *Authority* renews or carries out major works on a dam or existing structure on a waterway, or constructs a new structure on a waterway, the *Authority* must ensure that (a) it is renewed or constructed so that: (i) the dam or structure does not pose a barrier to native fish movement; and (ii) environmental risks from water releases through variations of temperature, dissolved oxygen, sediment, nutrients or other substances are minimised; and (iii) adequate offtakes are provided for environmental flows, or (b) it is renewed or constructed in accordance with a plan of works developed in consultation with the *Department* and approved by the *Secretary*.
22.3	The *Authority* must liaise with Catchment Management Authorities to ensure that environmental flow regimes are managed to maximise ecological benefits.
22.4	Where waterways and wetlands form part of an *Authority*'s system for the supply of water, the *Authority* must develop and implement plans or programs to manage the system that: (a) have regard to the environmental values of the waterways and wetlands dependent on the hydrological regime; and (b) where practical, maximise ecological benefits; and (c) are approved by the *Secretary*.

G-MW has a project management process (G-MW Guideline for Management of Environmental Impact for G-MW Projects and One – off Activities (CEOG03 and associated procedure)) for any new projects to ensure compliance with all relevant statutory requirements.

This process identifies all environmental matters that have to be addressed in the project planning process. These may involve the development of a works plan to avoid, minimize or mitigate the environmental impacts associated with the project. This has often required appropriate monitoring to confirm that critical levels have not been exceeded.

G-MW will liaise and work with CMAs to help manage and deliver environmental flow regimes required by Bulk water Entitlements and the soon to be established environmental water reserve.

Under drought conditions, G-MW works with catchment partners to ensure that flows are managed to efficiently supply our D&S and irrigation customers as well as maintaining environmental values.

Wetlands management is a key project involving our catchment partners. There is a process currently underway to develop an effective monitoring or benchmarking program for the wetlands, especially those in the Kerang area. G-MW will be part of this program as wetlands form part of the Torrumbarry irrigation and drainage system, and as a result experience significantly modified watering regimes. This information will then guide the development of the management plans that address the environmental, social and economic values of these wetlands.

Currently this work is largely funded through existing programs, both internally and externally funded sources. No additional expenditure is required at this stage. Future projects will incorporate this requirement into the costs for their works program.

5.3.6 Monitoring River Health

Statement of Obligation

23	Monitoring River Health
23.1	The *Authority* must monitor the impact of its activities on waterways and wetlands, including the impact of dams on the thermal regime of waterways.
23.2	The *Authority* must make available to the public: (a) water quality and flow data compiled by the *Authority* relating to waterways; or (b) if the data is available from a central data agency, relevant contact details for that agency.

G-MW is a member of the North East and North West regional surface water monitoring partnerships. This means that we continue to financially support the Victorian Water Quality Monitoring Network (VWQMN) as well as providing additional information from our storages and irrigation areas to other partners and the public through the Victorian Data Warehouse (http://vicwaterdata.net/).

Since November 2002, G-MW has also participated in DSE's Cold Water Monitoring Program at selected storages to determine the extent of any thermal effects of the dam and associated structures on the downstream thermal regimes. This information will be used to help determine appropriate targets, operating regimes or mitigating management actions.

More detailed monitoring of Lake Eildon, Goulburn Weir and Tullaroop Reservoir is currently being undertaken, with the long term aim of constructing storage models that will provide insights to the hydrodynamic behaviour of storages and aid long term management.

G-MW has been working with our catchment partners to develop an effective monitoring or benchmarking process for wetlands. The Kerang wetlands are used as part of the Torrumbarry irrigation and drainage system, and as a result experience significantly modified watering regimes. Once the Loddon-Murray wetland group have determined appropriate measures for the wetlands, G-MW will be part of the monitoring process for the wetlands that form part of the irrigation area.

G-MW will continue to work with catchment partners to minimize the impact of irrigation drainage on waterways, improve drainage management and monitor drainage water quality as well as downstream aquatic health conditions.

G-MW will continue to monitor the nutrient and algal status of our storages. This information is used to advise recreational groups and downstream customers of the presence of any significant algal blooms.

Data and information collected is generally available from the Victorian Data Warehouse (http://www.vicwaterdata.net/).

These programs are currently funded out of internal and some external sources.

5.4 Safe Drinking Water Act

The *Safe Drinking Water Act 2003* (Vic) objective is to make provision for the supply of safe drinking water.

Water storage managers must prepare, implement, review and revise RMPs in relation to its supply of water to any water supplier (in the Victorian context these are Regional Urban Water Authorities). This was done by 1 July 2005.

G-MW manages the bulk water delivery and transfer for around 70% of Victoria. G-MW operates 17 bulk water storages and an extensive network of water distribution channels and pipelines. Water from G-MW's storages and supply systems is used to supply over 170 towns scattered across northern Victoria and along the River Murray as far downstream as Merbein.

Water is supplied to Regional Urban Water Authorities that treat the water to drinking water standards for supply to customers. Water from G-MW systems is not supplied as drinking water. Implementation requires substantial coordination and integrating activities, most likely under the umbrella of the Catchment Management Authority Regional Catchment Strategies.

The strategy will be to incorporate implementation of RMPs into existing G-MW catchment, land and water management processes and coordination arranges with partners.

By incorporating implementation of RMPs into existing programs, no additional short term expenditure is planned.

5.5 EPA Principles

The EPA has prepared a document titled "Principles to Establish EPA Environmental Obligations for Water Businesses for the 2005 Pricing Determination". The document sets out EPA expectations of the environmental issues that should be addressed in pricing submissions.

Listed below are relevant extracts from this document along with a brief outline of how G-MW intends addressing the obligation. Many of these overlap with information provided in Sections above.

- Water conservation and resource efficiency

Water conservation and resource efficiency for rural water industries is driven by using market and regulatory mechanisms. The Government's White Paper outlines government reforms of improving water markets and unbundling rights to water to drive efficient water use. G-MW will support improved water use by supporting the development and implementation of the government's reform program.

Water storage and water delivery efficiency are being addressed through government water savings programs, asset reconfiguration strategies, and improved water delivery operational strategies.

- Catchment, waterway and groundwater management - management of irrigation drainage

G-MW is a signatory to the IDMOU which defines the framework for the improvement of water quality across G-MW. This includes a requirement for continued communications on decision making and actions by all signatories to the IDMOU. In conjunction with EPA, CMA's and DSE, G-MW will continue to progress along the path defined in the IDMOU for improved water quality in our waterways.

Regular steering committee meetings involving all signatories ensure that the targets identified within the IDMOU are achieved and reviewed. They also ensure that open communication of progress under the IDMOU between signatories continues.

- Environmental flows provision and auditing

Environmental flows are specified as minimum and contingent flows in BE orders (and in future streamflow management plans). Progressively, government is providing specific BEs for environmental purposes. G-MW's role is to operate the water supply systems to meet the requirements of the BEs orders and streamflow management plans.

G-MW reports annually on compliance with BE orders, in both G-MW's Annual Report and in Resource Manager basin water accounts. G-MW will appoint an independent auditor to verify G-MW's compliance with its BE obligations, and DSE will oversee these audits.

G-MW will also work with CMA's to explore opportunities to improve the effectiveness of the Environmental Water Reserve by adjusting water system operation.

- Waterway management provisions

This is not relevant to G-MW, however we will continue to liaise with CMAs on mutually relevant issues.

- Releases from storages

G-MW contributes to the Victorian Water Quality Monitoring Network. Many of this network's stations are located on streams below storages and hence the impacts of storage releases are being monitored. As well, all storages are monitored as part of the MSOMP. Results of these programs are available from Victorian Data Waterhouse and in the Annual Victorian Water Quality Monitoring Annual Report and the MSOMP Annual Report

Since November 2002, G-MW has collaborated in a DSE Cold Water Monitoring Program at selected storages to determine the extent of any thermal effects of the dam and associated structures on the downstream thermal regimes. This information will be used to determine appropriate targets or operating regimes.

More detailed monitoring of Lake Eildon, Goulburn Weir and Tullaroop Reservoir is currently being undertaken, with the long term aim of constructing storage models that will provide insights to the hydrodynamic behaviour of storages and aid long term management.

- Groundwater management provisions

Obligations to meet groundwater and stream flow diversion requirements in SEPP have been considered and it is proposed to incorporate the development of water sharing strategies like streamflow and groundwater management plans into the Regional Catchment Strategies. This will ensure an integrated approach to catchment management with all stakeholder input, including the needs of the environment. Funding for the development of these water sharing plans will be from Government and the implementation and ongoing costs have been included in pricing submissions to be met by customers.

Further consideration of the SEPP requirements have been included in price submissions and proponent application fees for the issue of new groundwater and surface water licences and planning referrals.

- Monitoring, auditing and reporting of the environmental impacts of water industry functions; eg monitoring of discharges to surface waters;

Activities associated with irrigation drainage are dealt with via the IDMOU.

Activities associated with environmental flows are dealt with above. Other obligations mentioned in this section appear to be related to Urban Water Authorities.

5.6 Irrigation Drainage Memorandum of Understanding

The Memorandum Of Understanding for Irrigation Drainage was signed in 2004 and provides for improved management and accountability for surface drainage including clearer definition of roles and responsibilities of agencies involved. Signatories to the IDMoU are the Department of

Sustainability and Environment, EPA Vic, Goulburn Broken Catchment Management Authority, North Central Catchment Management Authority and G-MW. A steering committee comprising all these stakeholders will oversee the implementation of the IDMoU.

When the IDMoU is fully implemented in 2009, monitoring requirements and water quality targets will be established for drainage catchments at the point of outfall to streams as well as some key instream targets. Furthermore, targets will also be established for Management Action Performance Indicators within the drainage catchment including implementation of whole farm plans, reuse systems, drainage diversion plans and offline treatment wetlands. Asset Operational Plans will be written for each drainage catchment.

An important aspect of the IDMoU is monitoring, reporting and review. Auditing of processes such as sampling, analysis, target setting and reporting will be undertaken by DSE. Although estimates are still being established, costs for G-MW in implementing the IDMoU over the next two years relate to additional monitoring and reporting requirements at drain outfalls. Additional costs to implement the agreement are included in this Plan.

5.7 Environmental outcomes planned for the regulatory period

G-MW will aim to achieve the environmental outcomes listed in its Environment Policy by implementing the strategies listed in the Table below. Some work has been undertaken to develop meaningful indicators of performance but this still has some way to go.

It is intended determine appropriate objectives and targets and to release the first external environmental reporting information by the end of September 2006.

Outcome	Strategy
Utilise resources efficiently	Maximise efficient use of resources, especially regional water resources, and minimise environmental impacts arising from use of these resources.
Improve water quality	Manage activities to maintain or improve water quality.
Improve biodiversity and ecosystems	Maintain, and where appropriate, enhance the sustainability of the natural resources and ecosystems used and administered in business activities.
Contribute to catchment management	Contribute towards developing and implementing plans to improve land and water management, river system health and water quality, with catchment communities and other stakeholders.
Set targets	Develop and set environmental targets. Regional Catchment Strategy Resource Condition Targets will be used as the basis for these targets.
Compliance	Comply with all relevant environmental legislation, standards, codes of practice and agreements.
Implement management systems	Achieve consistent environmental management by developing and implementing an EMS, based on AS/NZ

Outcome	Strategy
	ISO 14001.
Promote awareness and responsiveness	Promote awareness of, and appropriate response to, relevant environmental issues.
Help improve customer practices	Work with appropriate organisations to ensure that the practices of customers enhance G-MW's environmental performance.
Reporting	Develop and publish an external environment report documenting progress in implementing this policy.

5.8 Environmental Key Performance Indicators and Targets

It is expected that further work will be done in conjunction with the ESC is to develop environmental KPIs. However, G-MW, as part of implementing its Environment Policy, is attempting to develop meaningful environmental performance reporting measures. This includes environmental KPIs.

G-MW is intending to participate in a Cooperative Research Centre (CRC) for Irrigation Futures project which aims to develop irrigation industry sustainability indicators that drive continuous improvement and enhanced sustainability.

Performance Aspect	Performance Targets (From 2005/06)
A Minimum river flow regimes	• Actual flows greater than or equal to specified minimum flows 100% of the time
B Water Use	• Water use compliant with seasonally adjusted Murray Darling Basin cap
C Environmental management	• 100% compliance with G-MW environmental management targets

6 Other Compliance Issues

6.1 Managing Risks

Statement of Obligation

12	Managing Risks
	The *Authority* must develop and implement plans, systems and process, 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.

6.1.1 Overview

G-MW has various risk management programs in place to manage its risks.

Risks are an unavoidable part of any business. The role of our risk management programs is to understand our risks and adequately manage them.

A Corporate Risk Management Program, based Australian Standard AS4360, overarches the various risk management systems. Systems are in place to address the key risk categories of:

- Environmental Management
- Bulk Water assets, including DIP Risk Profile
- OH&S
- Other corporate risks including financial risks

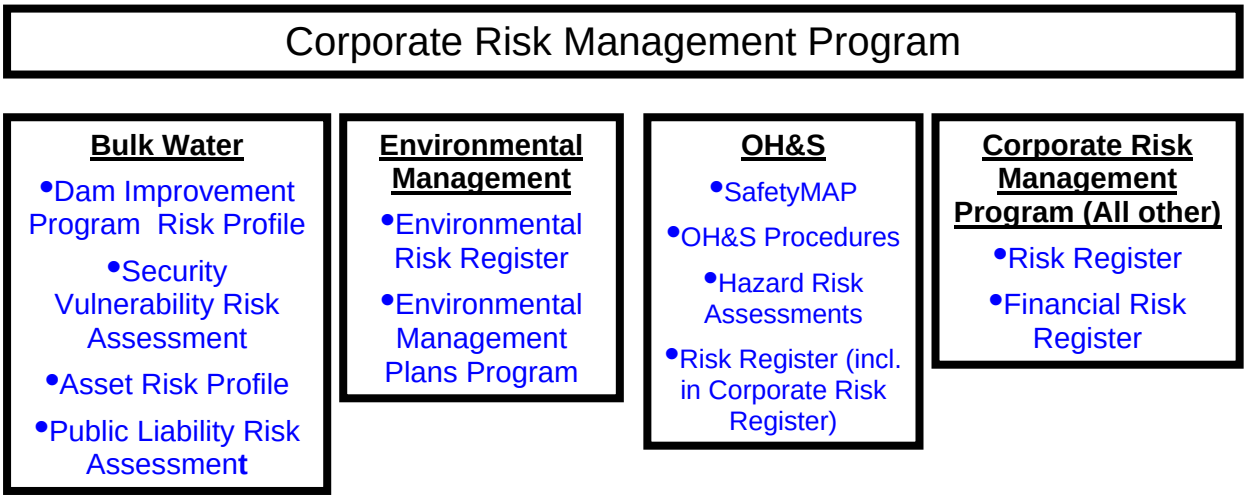
A review of G-MW's Whole of Business Risk Management Framework has recently been completed which will significantly upgrade its approach to risk management

Its objective is to improve the coordination of the various risk management programs currently in place to provide a more holistic approach. It is envisaged that implementation of key aspects of the review will commence in 2005/06 and carryover into 2006/07. These include:

- Developing a decision support system that considers compliance, risk and value
- Creating a new dedicated Risk Manager position
- Improvement to the corporate planning cycle to better integrate risk assessment, both pessimistic and opportunistic, in the planning cycle

6.1.2 Risk Management Framework

G-MW's various risk management programs can be represented by the following diagram.



6.1.3 Current Status of Programs

The following table summarises the current status of the G-MW's ongoing program of risk assessment.

Whilst the key areas of dam safety, financial risks, and key risks to G-MW achieving its Corporate Objectives are all current, it is acknowledged that more work is needed in upgrading our EMS. This is addressed elsewhere in this document.

In regards to OH&S G-MW has recently achieved SafetyMAP Initial Level accreditation. We continually strive to improve our management and understanding of our OH&S risks. We have a diverse workforce, often working alone, and covering a large geographic area, in many uncontrolled environments. For this reason it would be inappropriate to believe our understanding of all OH&S risks is ever complete.

Program	Status
Risk Management Program (All Other)	Financial Risks Current
	Key Risks in Corporate Plan current
	All Other Needs Update
Environmental Management System	Some Update Needed
Occupational Health & Safety	Some Update Needed
Dam Improvement Program Risk Profile	Current
Bulk Water Security Vulnerability Assessment Risk	Current
Bulk Water Asset Risk Profile	Current
Bulk Water Public Liability Risk Assessment	Current

6.1.4 Business Risks currently identified

Major business risks identified for each of G-MW's business divisions are summarised below, together with mitigating measures which have been adopted to minimise each risk. In this context, business risks are defined as issues which could act on corporate objectives and that have the ability

to prevent or reduce the achievement of our mission or objectives. Risks are quantified in accordance with G-MW's Risk Management Program Procedures.

Bulk Water Services Business Division Risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Recreation/public liability	Major	Likely	High	• Public use management program • Communications program and public awareness • Insurance
Adverse environmental impacts	Major	Moderate	High	• Environmental management program
Failure to supply	Major	Likely (drought)	High	• Corporate drought management planning • Asset management Program
Dam failure	Catastrophic	Rare	Significant	• DIP • Dam safety program
Water quality • General • Salinity • BGA • Pollutants • Drought • Fire	Moderate	Moderate	Significant	• Corporate coordination through Natural Resource Services Business Division • Environmental management program • Public use management programs • Perimeter land management programs • Salinity management programs • BGA management plans • Regional partnerships and emergency planning • Water quality monitoring programs • Safe drinking water RMPs
Terrorism threat	Major	Unlikely	Significant	• Dam safety program

Diversion Services Business Division Risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Water sharing (drought and bushfire)	Major	Likely	High	• Streamflow management plans • Groundwater management plans • Seasonal allocation policy • Drought response plans • Communications program • Assessment of catchment yield risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Adverse environmental impacts	Major	Moderate	High	• Environmental Management Program
Water quality • General • Salinity • BGA • Pollutants • Drought • Fire	Moderate	Moderate	Significant	• Corporate coordination through Natural Resource Services Business Division • Environmental management program • Salinity management programs • BGA management plans • Regional partnerships and emergency planning • Water quality monitoring • Implement drinking water quality guidelines
Loss of customer support	Moderate	Unlikely	Moderate	• WSC development • Customer consultation and communications

Natural Resource Service Business Division Risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Salt interception schemes	Major	Unlikely	Significant	• Natural Resource Services Business Division function and funding negotiated with government • Environmental management program
Breakdown of partnerships	Major	Unlikely	Significant	• Maintenance of regional and basin cooperative partnerships and relationships • Stakeholder engagement program
Lack of funding for natural resource management	Moderate	Unlikely	Moderate	• Partnerships with CMAs • Government services contract renewal
Adverse impacts on biodiversity	Moderate	Unlikely	Moderate	• G-MW biodiversity strategy • Lake Nagambie ecology project • Water quality and biodiversity component of storage Management plans • Kerang wetlands project
Loss of access to appropriate technical skills and knowledge	Major	Unlikely	Significant	• Consultancy panel agreements • CRC and other research project involvements • Peer networks • Documentation of internal procedures

District Services Business Division Risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Water availability (drought and bushfire)	Major	Likely	High	• Corporate drought management planning • Allocation policy • Communications program • Distribution system loss management program • Catchment yield risk assessment project
Adverse environmental impacts	Major	Moderate	High	• Environmental management program • G-MW operating procedures
Irrigation drainage	Moderate	Likely	Significant	• Implementation of IDMOU • Implementation of G-MW Drain Management Strategy
Water quality • General • Salinity • BGA • Pollutants • Drought • Fire	Moderate	Moderate	Significant	• Corporate coordination through Natural Resource Services Business Division • Environmental management program • Salinity management programs • BGA management plans • Drain management plans • Groundwater management plans • Regional partnerships and emergency planning • Water quality monitoring • Implementation of safe drinking water RMPs
Public liability	Moderate	Moderate	Significant	• Insurance • Communications and public awareness programs • Risk reduction programs
Loss of customer support	Moderate	Unlikely	Moderate	• Strengthening WSC process • Customer consultation and communications
Failure to supply	Moderate	Unlikely	Moderate	• Asset management program
Terrorism threat	Moderate	Unlikely	Moderate	• Water quality monitoring program •
Long-term asset deterioration	Moderate	Unlikely	Moderate	• Asset management plans

Corporate Risks

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Workforce safety	Catastrophic	Unlikely	High	• OH&S policies • OH&S audits • SafetyMAP compliance program • Staff, consultant and contractor management

Issue	Consequence	Likelihood	Risk	Mitigating Measure
Workforce skills	Major	Likely	High	• Organisational development project • Board performance Improvement program
Adverse environmental impacts	Major	Moderate	High	• Environmental management program
Drought	Major	Likely	High	• Corporate drought management planning • Communications program
Sustainability of Irrigation	Major	Moderate	High	• Goulburn-Broken Irrigation Futures R&D project • CRC for Irrigation Futures • Reconfiguration planning
Loss of customer support	Moderate	Unlikely	Moderate	• Strengthening WSC process • Customer consultation and communications • Pricing policy review • Productivity plan
Fractured government relationships	Moderate	Unlikely	Moderate	• Ongoing communication and liaison with department and Minister • Customer consultation and communications • Stakeholder engagement program
Lack of community support	Moderate	Unlikely	Moderate	• Corporate communications program
Terrorism threat	Moderate	Unlikely	Moderate	• Office security review • Water quality monitoring program • State terrorism task force programs
Reduced revenue (drought)	Moderate	Unlikely	Moderate	• Customer consultation program • Communications program • Revised bill payment schedules • Expenditure deferrals
Reduced workforce morale /motivation (drought)	Moderate	Unlikely	Moderate	• Internal communications program • Staff support program • Leadership development and culture change • Central Consultative Committee

6.2 Efficiency of Rural Distribution Systems

Statement of Obligation

17	Efficiency of Rural Distribution Systems
17.1	The *Authority*, in consultation with the *Department*, must: (a) develop and implement programs to assess the efficiency of the *Authority*'s distribution systems; (b) develop interim targets for reducing losses from the *Authority*'s distribution systems having regard to the Government's objective of reducing the total losses from rural distribution systems by 25% by 2020; and (c) develop programs to reduce losses from the *Authority*'s distribution systems that: (i) identify costs and funding options; and establish priorities for implementation.
17.2	The *Authority* must obtain the approval of the Secretary to arrangements for assessing and monitoring the efficiency of components of its distribution systems.
17.3	The *Authority* must report to the Secretary, as requested by the Secretary, on: (a) the efficiency of its distribution systems; and (b) progress in implementing the targets developed under sub-clause 17.1.

G-MW has a strong operational management focus on delivery efficiency. Some $500,000/yr is spent on loss management officers understand system loss behaviour, and modifying operational practices and systems to reduce losses. At the start of each irrigation season, week-by-week and annual loss targets are set for each Area. These targets have regard for forecast water deliveries, which influences loss behaviour, and are set to include an element of "stretch" to ensure continuous improvement in system water efficiency. Loss management staff monitor system performance and identify corrective actions to ensure that targets are achieved. Each Areas capital budget also includes funds for a program of to improve flow measurement at outfalls and key control points within the system to support improved loss management and water accounting.

The TCC system is being used to investigate channel system losses in part of Central Goulburn and the potential to reduce losses economically. The high density of monitoring provided by this control system allows detailed evaluation of the performance of the channel network. Analysis of this data will enable the development of targeted cost effective loss reduction projects.

The emphasis in meeting this obligation in this Water Plan period will be the development of programs to assess the efficiency of the distribution channel systems at smaller management units than is currently available. A monitoring program will be developed and field measurement facilities upgraded and expanded. Data collection and analysis will be progressively undertaken to develop targets for reducing losses and programs to achieve these targets.

G-MW will be working closely with the DSE to integrate this program with the government funded Water Savings Program to reduce system losses and improve distribution efficiency. Work is underway to develop future water savings projects and targets.

Reconfiguration planning has started to identify options to potentially withdraw channels which will also increase distribution efficiency. Some efficiency gains are also to be achieved by small scale rationalisation/pipelining activities.

A bulk efficiency monitoring and reporting systems will be developed to systematically monitor water delivery volume and system performance, and record losses in new pipelined systems.

The Tungamah pipeline is to be built in the next 3 years reducing losses by 80% in that system.

6.3 Responding to Drought

Statement of Obligation

19	Response to Drought
19.1	The *Authority* must have a drought response strategy to ensure: (a) it meets its obligations to supply in accordance with security of supply and restriction policies specified in a bulk entitlement held by the *Authority*; and (b) that the holders of water entitlements covered by a bulk entitlement held by the *Authority* receive timely advice and information regarding the status of, and outlook for, their entitlements; and (c) regular communication with customers regarding how available water will be restricted and shared between entitlement holders during periods of water shortage.
19.2	The *Authority* must review, and if necessary amend, its drought response strategy: (a) at intervals of no more than five years; and (b) within twelve months of any major change occurring to works or arrangements for conserving water for, or supplying water to, any water supply system operated by the *Authority.*
19.3	In times of actual or anticipated shortage, the *Authority* must provide information requested by the Secretary regarding the implementation of the drought response strategy in the form and manner requested.

G-MW determines the water availability to meet customer entitlements in the regulated supply systems throughout the year, starting with an initial assessment which is announced on 1 July and followed up with further assessments, either twice a month, if water availability is low, or monthly if availability is high. This process is known as the water allocation process or allocation process.

The allocation process is a consideration of the water balance in the supply system. The objective of the process is to announce the availability of water to meet the customers entitlements in accordance with the supply commitments defined in the BE orders. Allocation announcements are made so that the volumes announced can be delivered to customers in the water season under consideration. It is G-MW policy that water allocations, once announced, are not reduced.

This continuous restriction policy differs from the approach used by urban water authorities because water allocations will increase when additional water resources are available, and not be reduced as resource limitations are better understood.

G-MW's allocation provides an effective drought response because the allocation policy, being a continuous restriction policy, allows relaxation when circumstances improve rather than requiring increased restrictions in response to worsening drought conditions.

The reliability of supply for each of the regulated supply systems is defined in the BE orders for each system. The reliabilities have been determined based on long term system simulation models. Each of the BE conversion processes has involved significant customer consultation. This consultation, together with regular communication with customers on allocation and reliability matters, means that customers have been provided with many opportunities to understand the reliabilities of their water entitlements.

G-MW's allocation policy defines the minimum requirements for communication of allocation announcements. This includes the widespread dissemination of the announcement throughout regional and local media. In addition, the details of the announcement are made available on Waterline (the water ordering system) and through our website and customer newsletters.

6.4 Bulk Entitlements

Two new BEs have recently been issued, for the Ovens and Broken basins. New BEs are expected to be issued for the Loddon basin and the Bullarook Creek system in late 2005. Implementation of these BEs will result in increased monitoring, operation and reporting obligations and costs.

G-MW has been appointed as Resource Manager for the Broken and Ovens basins by the Minister and expects to be appointed as Resource Manager for the Loddon and Bullarook basins following the issue of the relevant BE orders. The new Resource Manager functions increase costs by $45,000 to cover preparation of basin water accounts and to fulfil other related Resource Manager Obligations.

6.5 Diversion Services Metering

Statement of Obligation

18	Metering
18.1	The *Authority* must meter all new water licences to take and use groundwater or unregulated surface water, for commercial and irrigation use, prior to the use of any water by the licensee.
18.2	The *Authority* must develop within six months and implement within 12 months of the commencement of this *Statement* a program to maintain and replace faulty meters.
18.3	The *Authority* must ensure that all meters: (a) are read at appropriate frequencies to ensure compliance with a licence; and (b) in water supply protection areas (i) with a management plan are read in accordance with that plan; and (ii) without a management plan are read at appropriate frequencies to assist with the development of a management plan.
18.4	The *Authority* must periodically review metering data to monitor and assess the water resource.

The obligation for metering of water use in the unregulated catchments and aquifers has been established and documented in the SoO and a MoU signed with DSE in November 2004. Following discussion with DSE on the most appropriate metering thresholds, it has been announced that metering thresholds have been established at 20 Ml groundwater and 10 Ml for surface water entitlement holders. (Unless otherwise stipulated in a management plan) These thresholds would deliver 97% of current unmetered water entitlement. It is planned to deliver the program over the life of this plan.

Metering Threshold Analysis

Groundwater

Option	Meter Volumes (ML)	Meters Required (No.)	Cost (Million $)	Volume to be metered (ML)	Cost/ML metered	Total Volume unmetered (ML)	Relative Cost/ML unmetered	% Volume Unmetered
0	ALL	1833	$ 5.7	145805	$ 39	0		0%
1	>5	1533	$ 4.8	145079	$ 33	726	$ 1,288	0%
2	>10	1419	$ 4.4	144191	$ 31	1614	$ 401	1%
3	>15	1283	$ 4.0	142553	$ 28	3251	$ 261	2%
3A	>20	1196	$ 3.7	141071	$ 27	4734	$ 224	3%
4	>10MP,>20N gmpa's	1301	$ 4.1	141650	$ 29	4089	$ 149	3%

Goulburn & Murray Unregulated Surface Water

Option	Meter Volumes (ML)	Meters Required (No.)	Cost (Million $)	Volume to be metered (ML)	Cost/ML metered	Total Volume unmetered (ML)	Relative Cost/ML unmetered	% Volume Unmetered
0	ALL	1998	$ 5.5	71067	$ 77	0		0%
1	>5	1660	$ 4.6	70253	$ 65	814	$ 1,142	1%
2	>10	1471	$ 4.0	69013	$ 59	2054	$ 418	3%
3	>15	1229	$ 3.4	66369	$ 51	4698	$ 252	7%
4	>20	1121	$ 3.1	64687	$ 48	6380	$ 176	9%
5	>5WSPA >10n	1596	$ 4.4	68252	$ 64	1575	$ 229	4%

Extensive negotiations with Water Service Committees on the most appropriate method of metering program delivery and cost sharing arrangements resulted in the following method being adopted. Communication of this arrangement will be undertaken over the next 2 months.

Diversions Cost Sharing Arrangements for Water Plan

Activity	Obligation	Government Funded	G-MW Funded
Provision of meter Meter reading, O & M & replacement (Licensee installation contribution)	SoO	✓($400)	✓ ✓

- G-MW to supply meter and project management, landowner to install.

6.6 Innovation

Statement of Obligation

20A	Innovation
	The *Authority* must: (a) develop a research plan that (i) identifies the *Authority*'s research needs; (ii) prioritises the research needs identified;

	(iii)	identifies how the *Authority* proposes to meet its research needs; and
	(b)	share within the water sector, knowledge generated through research to support sustainable water resource management and service delivery.

A coordinated research and development program is developed each year to increase knowledge and stimulate innovation in the provision of irrigation and drainage services. The program includes investment in internal projects, external projects relevant to G-MW business interests and partnership programs. Over the Water Plan period the investment in R&D is projected to be $1.8 m.

Research projects are selected to target seven key priority areas: water use efficiency; service improvement; river and environmental health; drain management; asset management; water trading and restructuring; risk management; and business development for research projects.

Key projects that will be directly managed by G-MW over the Water Plan period include:

- Arrowhead Biology Control: Investigating chemical control methods for the aquatic weed arrowhead, (benefit – reduced weed control costs and improved service with a potential cost saving of $256,000 per year).
- Improved Monitoring of Channel Pesticides in Channels (benefit - reduced risk associated with contamination of water supplies).
- Decision Support System For Flow Meter Selection (benefit - reduced expenditure in flow meters of $2m to $7m over seven years).
- Major Storages Water Quality Study: Development and implementation of improved water quality management practices in storages.

Significant external projects that G-MW will invest in include:

- Economic Benefits Through Smarter Irrigation – A significant Melbourne University project to demonstrate and promote improved irrigation practices and on-farm water use efficiency opportunities in conjunction with the G-MW investment in Total Channel Control technology.
- Irrigation Futures Goulburn-Broken Catchment – Development of a future vision for irrigation, and management options in conjunction with rural communities.

Investment in partnership programs in areas relevant to G-MW, results in significant benefit from the limited funds available for Research and Development, avoids duplication of research and facilitates sharing of research outcomes and knowledge. G-MW is a major partner in the CRC Irrigation Futures and CRC eWater, and influences the partnership program content through membership of Boards and Partner Forums.

CRC Irrigation Future has program themes: Planning for change, including capacity building and policy; Sustainability, including identifying indicators of irrigation system and region sustainability; and new technologies. The CRC has a total budget of $70 m over 7 years. There are significant benefits to G-MW in planning for change and a national focus on improving water use efficiency in farm and water distribution systems.

CRC eWater commenced in July 2005 and has a total budget of $143 m over seven years. There are two key products relevant to G-MW. The first is the development of a decision support tool for river operation and management. As more environmental and flow constraints and risks become associated with river operation, more sophisticated tools are required to optimise day-to-day decision making. The second product is in water and pollution accounting. This involves careful accounting for water and for assessing risks such as catchment yield changes from plantations. The potential benefits to G-MW are improved water system planning and operation and improved management of risks associated with water harvesting and pollution.

G-MW communicates the R&D program regularly to customers and invites participation in development of priority areas for research through Water Services Committees. Details of the research program, fact sheets on current project and research outcomes from past projects, are made available through the G-MW web site.

The proposed program for the next three years is presented in the summary table below, subject to changes identified by ongoing stakeholder review of research priorities.

Summary of G-MW investment in Research and Development

Program	2005/06 $000s	2006/07 $000s	2007/08 $000s
Contributions to CRC eWater	260	260	260
Contributions to CRC Irrigation Futures	250	250	250
Decision Support System for Flow Meter Selection	99	80	
Channel Pesticides	70	50	
Major Storages Water Quality Study	55		
Arrowhead Control – Pilot Project	50	50	
Contribution Economic and Regional Benefits through Smarter Irrigation	30	60	60
Contribution Irrigation Futures Goulburn Broken Catchment	20	20	
Contribution to Sustainable Irrigation Management Systems	20	20	
Communication and Coordination	35	35	35
Other Programs	20	84	304
Total Investment	**909**	**909**	**909**

6.7 Farm Dams

The licensing of farm dams has been required since the change to the Water Act in 2002. G-MW is nearing completion of the assessment of the 4,300 applications received and most landowners have requested a registration license that does not attract ongoing annual fees. The licensing of existing farm dams has been funded by government.

Water Service Committees expressed a view that existing G-MW customers should not fund ongoing service to this group of new customers and that government funds should be made available to support them. An amount of $80k has been included in the Water Plan for the provision of a basic service to this customer group and the service levels are yet to be determined.

Diversions Cost Sharing Arrangements for Water Plan

Activity	Obligation	Government Funded	G-MW Funded
Existing Dams Licence Registration Minimal Ongoing servicing costs Operating Licenses for existing dams (Operating Licenses for new dams funded by proponent)	Water Act	✓ ✓	 ✓

- Minimal service provided to farm dam registration licence holders that do not attract ongoing funding

6.8 Streamflow Management Plans

The obligation for the development and implementation of stream flow management plans is a commitment established through the Our Water Our Future document and is primarily about enhancing the environmental water reserve in priority stressed rivers.

Cost sharing principals have been established with DSE and the program for development of the plans is nearing completion. Development costs will be funded by government over the next three years and implementation costs of the plans have been included in price forecasts.

Extensive community consultation will be required by the appointed Ministerial Consultative Committee to develop the plans

Activity	Obligation	Government Funded	G-MW Funded
Development	Our Water Our Future	✓	
Implementation			✓
Compliance & Reporting			✓

- Government funding commitment for plan development over a three year period. This arrangement to be renegotiated after this time if the development of the plans has not been completed.

6.9 Groundwater Management Plans

The obligation for the development and implementation of groundwater management plans is a commitment established through the Our Water Our Future document and is primarily about enhancing the environmental water reserve in stressed aquifers.

Cost sharing principals have been established with DSE and the program for development of the plans is nearing completion. Development costs will be funded by government over the next three years and implementation costs of the plans have been included in price forecasts.

Extensive community consultation will be required by the appointed Ministerial Consultative Committee to develop the plans

Activity	Obligation	Government Funded	G-MW Funded
Development	Our Water Our Future	✓	
Implementation			✓
Compliance & reporting			✓

- Plan development to be funded through government funds or funds held by G-MW on behalf of government.

6.10 Statewide Management Rules

The obligation for the development and implementation of statewide management rules for unregulated rivers and streams is a commitment established through the Our Water Our Future document and is primarily about enhancing the environmental water reserve through improved water management.

State Management Rules which are a compilation of existing legislative requirements, ministerial guidelines and government policy will provide the strategic framework for management of surface water diversions for those unregulated waterways where Streamflow Management Plans have not been approved.

Phase 1 of the management rules has been established and it is expected that development of phase 2 management rules will be completed some time in 2005/06.

Cost sharing principals have been proposed to DSE and the program for development of the management rules but have not been agreed at this stage.

The costs of implementation of phase 1 management rules have been included in 2005/06 pricing and a further ongoing $100k has been included in 2006/07 price projections. It is not possible to predict exact cost of phase 2 implementation costs until the completion of the rules development.

Activity	Obligation	Government Funded	G-MW Funded
Development Implementation funds of $100k commencing in 06/07	Our Water Our Future	✓	✓

- Development funds of $180k over a 3 year period requested but not agreed to as yet.

6.11 Occupational Health and Safety

The primary focus for G-MW is to ensure employee safety so that employees return home each day in the same condition in which they came to work.

Compliance with regulations and standards is one way in which concentration on our prime focus is retained. Key compliance issues relate to Regulated Hazards, for example, Manual Handling, Prevention of Falls and Plant Regulations.

Conformance to Prevention of Falls legislation has been achieved in all particularly high risk work sites such as outlet towers and access ladders at reservoirs and Diversion Services planning to relocate meters. However, much attention needs to be given to the more numerous (but not as high risk) structures that are used for water storage and delivery and are required to be accessed for operational and maintenance purposes above or adjacent to water.

One of G-MW's largest risks is safe access to the numerous structures operated to regulate and control water flow, which are spread throughout the total length of our channel network system. G-MW must provide better field access for their employees such as wider access tracks for vehicles accessing along channel banks/dam walls, personnel access gates through fences, handrailing on regulator footwalks which will ensure a safe working platform for our employees. Maintaining assets throughout Bulk Water Services and District Services to enable our employees to manage and regulate water safely to our customers is a high priority.

In most instances regulation of water is completed manually (pulling drop bars and opening doors) which has resulted in manual handling being one of the highest injury causes in G-MW. Diversions Services are identifying controls to assist its staff to safely handle, install and maintain meters throughout G-MW.

Public safety has also been an ongoing priority for G-MW and attention will be given to public safety signage across the districts. Public safety issues relate to unauthorised access to our structures and lands, boating on storages, camping, swimming and other similar recreational activities on G-MW storages and channels.

Attention will also be given to maintaining and improving on our SafetyMAP Initial Level accreditation. One of the many strategies to assist with accreditation is to develop a Business Management System to assist with remote access to critical OH&S documentation, especially to remote Bulk Water Sites.

Whilst OH&S costs are not separately identified in this Water Plan, they remain a key driver of our operating costs and will continue to place cost pressures into the future.

6.12 Roads Management Act 2004

The Road Management Act became law in July 2004 and is supported by a number of Regulations and Codes of Practice. The objective of the Act is to establish a coordinated management system for public roads that will provide safe and efficient road networks and the responsible use of road reserves including the provision of utility services.

Currently there exists some uncertainty regarding the ownership of road structures over irrigation channels and drains owned by G-MW. It is G-MW's understanding that under the new Act, road authorities are responsible for the road structures supporting the roadway and for all road-related infrastructure. Road infrastructure is defined as including both structures forming part of the roadway, pathway or shoulder (with the examples provided of bridges and culverts being stated as being "structures forming part of a roadway") and the road-related infrastructure. Hence the Act, as assented to, clearly places all responsibility for the road structures supporting the roadway and for all road-related infrastructure on the applicable road authority. This now includes the bridges and culverts used by G-MW as part of its irrigation and drainage network.

G-MW have sought clarification of this matter with VicRoads who is currently in discussions with VicWater, DSE and the Municipal Association of Victoria. It is unclear of what the outcome of these discussions will be or when it will be finalised. Any change to the current wording of the Act if required, may not occur until 2006. It is difficult to predict the implications for G-MW in terms of costs until the outcome is known.

6.13 National Measurement Act

Trade measurement in Australia is controlled by complementary Commonwealth (the National Measurement Act) and State (the Uniform Trade Measurement Legislation) laws. The National Measurement Act was amended in March 1999 and became law on October 1 of that year. These amendments allowed for exceptions where the necessary standards, processes and documentation were not in place at the time of the amendment. This exception applies to utility meters and will remain in place until the required standards, processes and documentation are developed and implemented.

All utility meters in the ground at the time of lifting the exception will remain exempt from the new standards, but all new meters installed by G-MW will be required to obtain Pattern Approval. The standards are currently being developed by the National Measurement Institute in conjunction with Trade Measurement Victoria, but are unlikely to be in place during the current Water Plan. However, if they are developed earlier than anticipated, additional costs for pattern approval and installation of meters will be incurred.

7 Managing Assets

7.1 Managing Assets – Overview

Statement of Obligation

14	Managing Assets
14.1	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 (c) minimise the overall whole of life costs of assets; and (d) minimise detrimental social, economic or environmental effects of managing its assets.
14.2	The *Authority* must develop and maintain a comprehensive database of all relevant asset information, including the condition and performance of its assets

Goulburn-Murray Water Assets Statistics

Bulk Water Assets

Current Replacement Cost	$1.8 billion*
17 large dams	
Ancillary Assets	

* includes $0.8 billion of MDBC assets

Distribution Assets

Current Replacement Cost	$1.8 billion

Irrigation and Drainage Assets

Open Channels	6,529	km
Pipelines	240	km
Drains	3,126	km
Structures	23,647	No.
Meters	20,056	No.
Drain Inlets	8,267	No.

Domestic and Stock Assets

Open Channels	517	km
Pipelines	293	km
Structures	753	No.
Meters	373	No.

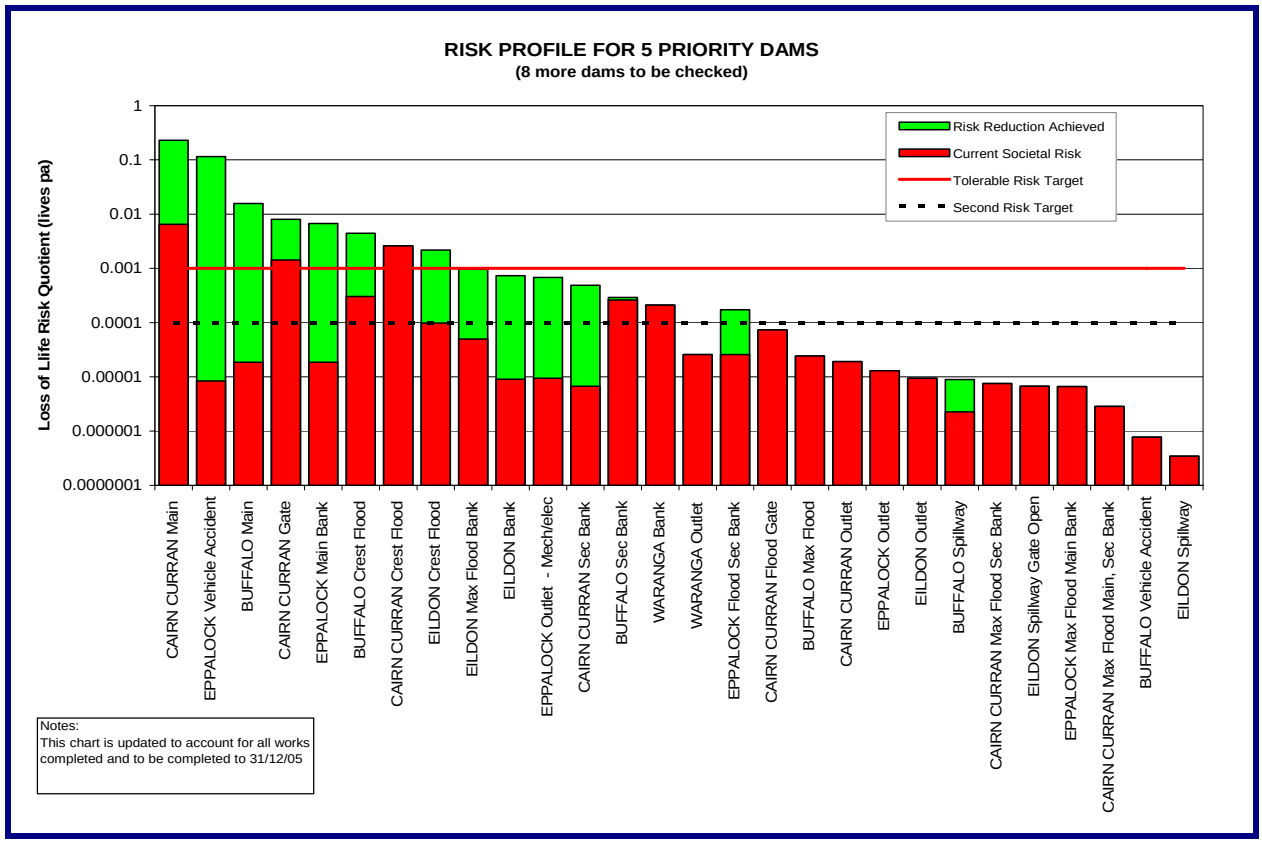
7.1.1 Asset management & capital planning processes

7.1.1.1 Bulk Water Services

Bulk Water Services has adopted a Business Risk Process as part of its overall business planning and plays an active role in the ANCOLD and other professional bodies. Since July 1998 Bulk Water Services has been undertaking a DIP on the state owned storages, funded by the Victorian Government and customers. Upgrading works are also being undertaken on MDBC assets. The objective of Bulk Water Services is to ensure the sustainability and integrity of its assets, consistent with adopted standards of service delivery, structural and total business risk.

The key driver of capital expenditure is the DIP. The purpose of the DIP is to upgrade G-MW's dams to meet contemporary safety requirements in the long term. Dam safety reviews are necessary given that standards change with time, materials may degrade with time, understanding of natural events such as flood and earthquake increases over time, and the science behind dam engineering continually improves. In addition, increased development may occur over time downstream of dams, which could impact the hazard rating of the dam if consequences of failure significantly increase. In most cases safety reviews have identified deficiencies in existing structures. Work to remedy these deficiencies is prioritised on a risk basis, and can involve remedial works, upgraded surveillance and/or operating restrictions.

The Loss of Life risk profile which forms the basis of DIP prioritisation for the five priority dams, and the risk reduction achieved to date for these assets, is illustrated in the Figure below.



Dam Safety

15	Dam Safety
15.1	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*.
15.2	In developing processes under sub-clause 15.1, the *Authority* must have regard to the *ANCOLD Guidelines* and have particular regard to: (a) prioritising risks posed by the *Authority*'s dams over all dams, components of dams and the types of failure; and (b) giving priority to reducing risks to life above other risks; and (c) basing the urgency of reducing the risk posed by a dam on the relativity of risks to the tolerability limits as defined in the *ANCOLD Guidelines*; and (d) basing programs for 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 for the available resources.
15.3	The *Authority* must develop and implement a dam safety monitoring and surveillance program for each dam operated by the *Authority*, consistent with the *ANCOLD Guidelines*.
15.4	The *Authority* must develop and maintain a comprehensive database of all relevant dam safety information.
15.5	The *Authority* must prepare and give to the *Secretary* by 30 June each year a report that contains: (a) a prioritised list of proposed dam safety works identified under clause 15.1 and the dates by which the *Authority* proposes to complete each of those works; and (b) a summary of the risk profile of: (i) each dam operated by the *Authority*, at the date of the report; and (ii) each dam on which the *Authority* proposes to undertake safety works, after those works are complete; and (c) a summary of the overall risk reduction profile of the *Authority*'s dams.
15.6	If for any reason the *Authority* is unable to undertake any proposed dam safety works identified under sub-clause 15.1 within the time advised, it must promptly prepare and give to the *Minister* a report which explains why the *Authority* is unable to undertake those works and includes any other information requested by the *Secretary*.

G-MW's Dam Safety and DIP are in place to meet requirements contained in Section 15 of the SoO.

The Dam Safety Program provides ongoing monitoring of the operational safety of dams, providing dam safety emergency planning, ensuring the appropriate maintenance and replacement of key assets and that a comprehensive data base of information is maintained in relation to each dam.

The DIP uses quantitative risk assessment, with stakeholder input and expert oversight to evaluate the life safety and financial risk posed by the dams. The risk reduction program is developed based on priorities according to the magnitude of risk in relation to tolerable risk criteria. The extent of risk reduction and expenditure are optimised by firstly seeking to achieve a residual risk level a moderate margin below tolerable risk guidelines and secondly by considering whether the residual risk meets an As Low As Reasonably Practicable (ALARP) condition.

The DIP program has been verified through stakeholder review, expert review and independent peer review. The program aims to reduce intolerable risks in a logical, structured way to minimise expenditure on dam safety. Only those components contributing to risk are upgraded as part of dam safety works. Future obligations under the environmental obligations of the SoO will need to be considered.

The following table indicates the alignment of the Dam Safety and Improvement Programs with the Statement of Obligation

Statement of Obligation

Statement of Obligations		Program
15.1	Process to review safety and prioritise improvements	DIP process is in place and has been used for seven years
15.2	Have regard to ANCOLD Guidelines;- • Prioritise over dams • Reduce life risk priority • Base urgency on tolerable risk • Use ALARP • Progressive risk reduction	ANCOLD guidelines used as basis • Yes • Yes • Yes • Yes • Yes
15.3	Dam safety monitoring and surveillance program	Dam safety program
15.4	Comprehensive data base	Dam safety progam
15.5	Annual report on proposed works and risks	Draft submitted in March 2005

The following table gives the proposed budget provisions for the DIP to complete dam safety reviews, update risk assessments and undertake priority works over the current financial year and for the two-year Water Plan:-

Project	Current Year	Water Plan	
	2005/2006	2006/2007	2007/2008
Complete Eildon	15,200,000		
Cairn Curran	1,540,000	11,275,000	12,500,000
Goulburn Weir	3,400,000		
Complete Dam Safety Reviews	885,000		
Update Risk Assessment	1,200,000		
Nillahcootie			1,200,000
TOTAL	22,225,000	11,275,000	13,700,000

Whilst provisions have been made for the above projects, achievement of full outcomes is subject to agreement on funding sources for each project.

7.1.1.2 District Services

One of G-MW's fundamental goals is to provide irrigation and drainage services that accord with the needs and preferences of its customers in an environmentally sustainable manner, at the lowest total life cycle cost.

In simple terms G-MW must manage the capital works and maintenance programs to minimise life cycle costs and to execute these programs efficiently utilising the most cost effective services that are available.

G-MW undertakes field inspections of assets on a rolling basis every five to six years collecting data that includes structure type, material of construction, size and an assessment of condition rating. Data from these inspections which first commenced in 1989 is then loaded into a data base, software product called AssetLife. Life cycle decay curves are established in AssetLife for each type of asset within each operational Area and the various condition ratings can be allocated a remaining life. Unit rates for replacement assets are applied and replacement profiles are generated and used to prepare the five year forward look program and the annual Capital budget and works programs for the various services managed by G-MW.

Importantly, maintenance histories available in the Maintenance Management System are also used when preparing the Capital works program.

As part of the Pricing Policy Review the consultants Frontier recognised G-MW's strength in operational knowledge of its assets and availability of asset data in AssetLife by stating that '*Operational asset management activities are considered broadly as best appropriate practise among comparable businesses. This provides G-MW with a sound basis on which to build its Asset Management Strategy.'*

Recently, to advance G-MW's competency in terms of its asset management capability, G-MW embarked on an asset management benchmarking process that was established by the Water Services Association of Australia. (WSAA) G-MW is the first rural water authority in Australia to utilise this process and has now completed the self assessment of seven functions comprising of over 900 water measures. G-MW will now give consideration to proceeding with an independent audit of its assessment before addressing any gaps identified by the process. It is also G-MW's intention to raise the awareness of the importance of asset management with other rural water authorities and to promote the adoption of the WSAA process.

G-MW is currently reviewing Asset Management Plans for all the key services with the intention of elevating their status to the 'advanced' level as described in the 'International Infrastructure Management Manual' by the Institute of Public Works Engineering of Australia, during the regulatory period.

7.1.1.2.2 Efficiency in Delivery of Capital Works

Each Irrigation Area develops its own Capital expenditure budgets and works programs generally utilising the AssetLife replacement profile. It is important that these programs are executed in the most cost effective manner to ensure that the overall value is maximised.

Various competitive mechanisms are utilised by G-MW to ensure that capital works are delivered in the most efficient manner:

- A panel of engineering consultants is used to provide irrigation infrastructure survey/ design services for District Services since 1995. The current panel is the third panel established and improves G-MW's efficiency of the procurement of these services;
- Competitive tendering of many capital works activities and in particular major projects;
- Use of annual or longer term contracts for ongoing supply of plant and materials to capture economies of scale where appropriate;
- Establishment of a Contract Procedures Manual to standardise contract preparation and administration across G-MW; and
- Improved work practises and engineering standards in the delivery of Capital works program.

Prior to gaining approval for asset replacement a process of preliminary/ detailed design occurs, the extent of the process depending on the significance and complexity of the asset. An assessment of the future requirement of the asset is undertaken as part of the initial design process and opportunities for asset rationalised are assessed.

7.1.1.2.3 Capability to Deliver Planned Capital Works Program

Besides executing the forecast capital in the most efficient manner, G-MW must have the capability to deliver the proposed capital works. In recent years the Capital program for District Services has been increasing with a 2005/06 budget of approximately $42 million. The Capital budget has been strongly influenced in recent years by large government funded programs under the banners of Water Savings, Reconfiguration, Salinity and Salt Interception. Due to the complexities of many of the projects under these programs plus an extensive array of stakeholders, negotiations can be protracted and approvals delayed. This further emphasises the need to have a capable work force and flexibility in the delivery of projects.

In delivery of the Capital program for District Services G-MW is confident that an optimum blend of internal and external resources is being utilised to deliver a cost effective and efficient service to our customers. In recent years approximately 60% of our survey/ design program is outsourced to the consultants' panel and up to 70% of our construction program is allocated to contractors. It is envisaged that during the regulatory period an increased amount of work will be outsourced as major projects under the various government programs identified above move closer to implementation.

G-MW has been continually reviewing its capability to deliver capital works projects for District Services. This has included a stronger working relationship with our panel of consultants, engaging additional in-house project management resources, extending supply and plant hire contacts to multi-year rather than annual and working more closely with contractors. Furthermore, G-MW has improved in-house procedures by developing a contract procedures manual and design procedures and guidelines.

In recent years District Services delivered a number of major Capital projects, often at short notice, well within the budget target. These include the Total Channel Control Project for the CG 1,2,3,4 Channels, the Waranga Main Channel Enlargement and the Normanville Pipeline Project. These projects utilising extensive external resources demonstrates the proven capability of G-MW to deliver the significant number of Capital projects over the regulatory period.

It is of importance to note that over the regulatory period, G-MW is anticipating a buoyant market for infrastructure works particularly given the significant level of civil construction activity that is occurring around projects such as the Mitcham-Frankston freeway project and the Wimmera Mallee Pipeline project. This high level of activity may have significant impact on civil contracting rates, material costs and availability of contractors over the regulatory period.

7.2 Pricing Policy Review Report

The Board appointed a Pricing Policy Review Implementation Committee (PPRIC) to plan the implementation of the report of Frontier Economics and make recommendations to the Board.

The Frontier report made recommendations relating to the pricing policy of G-MW.

The key recommendation of the Frontier Report was that the use of renewals annuities as an asset funding method be discontinued and replaced by a Return on Regulatory Asset Base (RAB) approach to funding.

The RAB approach is based on recovering the cost of asset infrastructure works, after those works have been completed, through the use of depreciation (return ***of*** capital, recovers principal amounts) and a rate of return (return ***on*** capital, recovers interest on borrowings).

The Committee has now finalised its report after consultation with its WSCs. The key recommendations of the committee are as follows:

- The use of the renewals annuity method of funding future asset replacement be discontinued
- The principal mode of funding asset replacements be based on a RAB approach.
- The RAB should start from a zero opening balance as at 1 July 2004.
- Works on irrigation channels shall generally be classified as maintenance, the exceptions being works that improve or re-model a substantial section of channel.
- The RAB approach should commence in 2006/7.
- Prices generally should not reduce when the RAB commences.
- An Advanced Maintenance Program (AMP) be established for the sole purpose of undertaking works which will reduce the size of, or to defer, the current projected asset replacement expenditure (ie reduce asset expenditure peak).
- Using innovative engineering techniques the AMP will very significantly reduce the extent of future price rises by maintaining most channels and their structures for much longer periods of time, if not in perpetuity.
- Renewals and operating bank accounts should be amalgamated. Where after account amalgamation, services have debts, these should be repaid. Services with a surplus after amalgamation should retain that surplus. In the case of dam improvement costs, and services with recently completed significant infrastructure works such as Woorinen and Normanville, provision be made in prices to ensure repayment of existing borrowings
- Management actions recommended by Frontier will be referred to the Chief Executive for implementation.
- The integrity of the AMP be protected by an amendment to the WIRO to ensure its acceptance by the ESC
- The committee believes that these recommendations have the potential to ensure long term relative price stability and predictability, and will encourage investment in our region.

The proposed transition to a RAB approach has received widespread support from customers and DSE, and is expected to be the preferred approach of the ESC.

A key benefit of the RAB approach is that it provides improved incentives for efficiency and regulatory effectiveness.

Frontier Economics have been invited to review the committee's draft report and were asked, *"Is the high level approach proposed in the draft report of the PPRIC consistent with meeting the broad objectives of the Frontier report in transitioning to the RAB approach?"*

The key conclusion of the Frontier review was an endorsement of the Committee's proposal to implement a RAB approach, and that the proposed approach, "is not inconsistent with the Frontier recommendations".

The recommendations of the committee's report fundamentally changes the basis of pricing for water in the future, and had a significant impact preparations for the 2006/07 – 07/08 Water Plan.

7.3 Advanced Maintenance Program

A key outcome of the PPRIC's Final Report has been the introduction of an AMP.

An AMP will be created for the sole purpose of rehabilitating irrigation assets other than dams, ancillary assets and major carriers.

The AMP will be focus solely on works which will obviate, defer, or substantially reduce the need for steep future price rises.

The performance of the AMP will need to be monitored and audited on a regular basis to ensure it is achieving its long term objectives.

An initial assessment undertaking by District Technical Services on the feasibility of introducing an AMP has demonstrated that given further refinement, that this strategy could be used by G-MW to defer/ smooth out medium to long term major asset replacement expenditure.

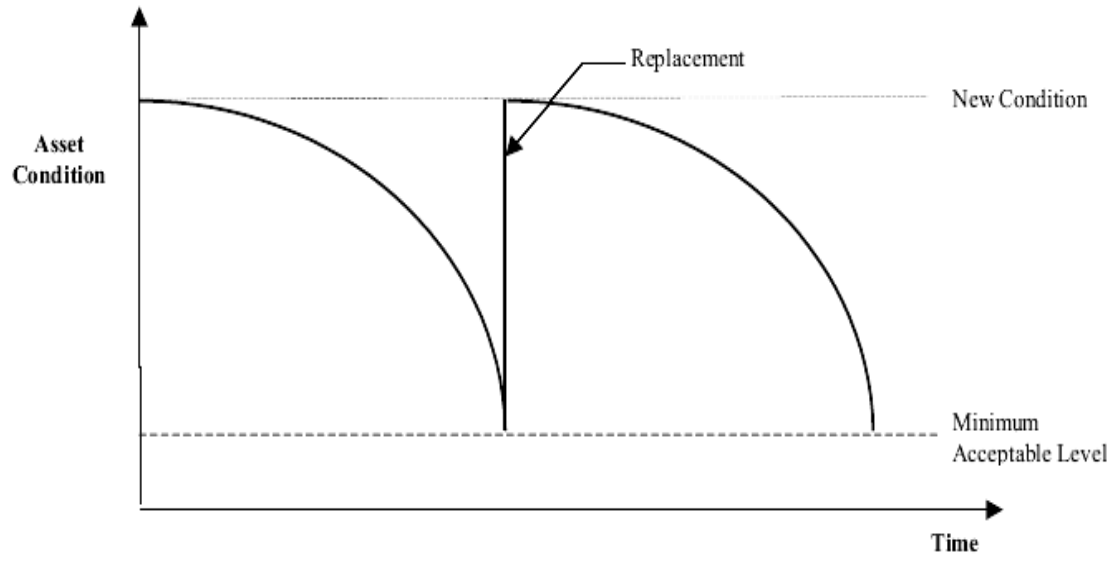
7.3.1 Background

A financial model developed by DSE and checked by the Finance Section of G-MW has been used by District Technical Services as a guide to the amount of funding that would be available for an AMP.

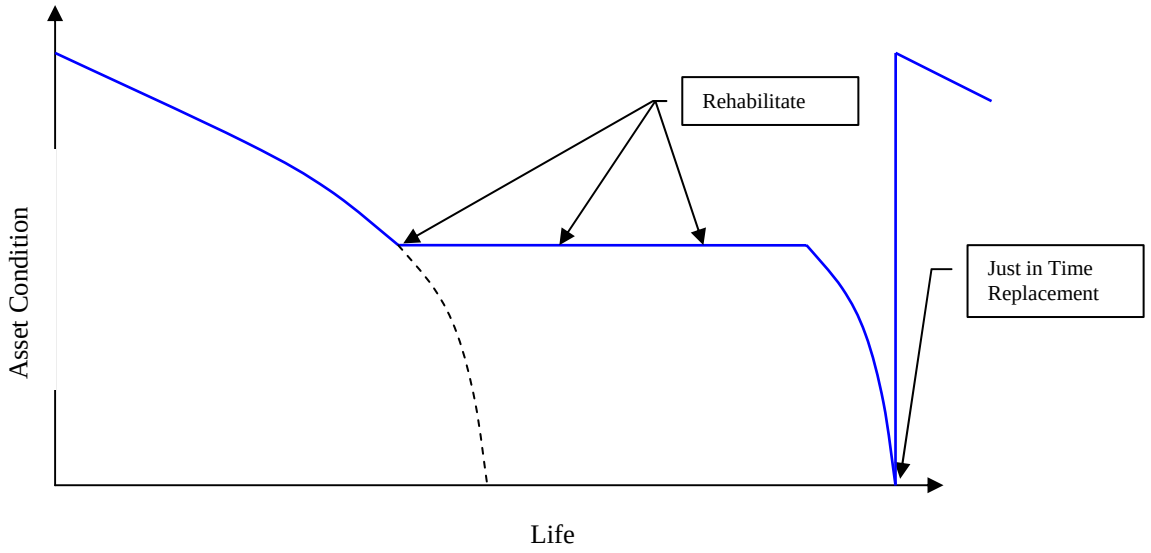
Various asset rehabilitation techniques have been initially considered for the review and their application has been discussed with representatives from the Areas, the Asset Projects sections at Tatura and Kerang and the Asset Planning section. Importantly, these techniques should not be viewed as exhaustive or definitive, and given time it is anticipated that they will be more extensively reviewed and other new techniques assessed.

In addition to internal discussions, a publication by the National Program for Irrigation Research and Development called ‘Guidelines to Good Practice for the Construction and Refurbishment of Earthen Irrigation Channel Banks (August 2002)’ has been used. Initial discussions have also been held with SunWater from Queensland who are also considering a similar strategy and will be undertaking a review of their maintenance practices over the next year. G-MW has been invited to participate in this review.

Previously under renewals funding, a level of maintenance expenditure consistent with that necessary to achieve an asset’s projected life was applied. As the asset neared the end of its useful life it was replaced or renewed with funding made available from the renewals reserve fund. No rehabilitation occurred and replacement occurred just in time to ensure service continuity.



It is now proposed to avoid or defer major expenditure associated with asset replacement by rehabilitating the asset using advanced maintenance techniques. Rehabilitation techniques may be applied several times to maintain an asset in its current condition before replacement eventually occurs. Importantly a percentage of assets will still need to be replaced as the AMP techniques may not be applicable or the asset has reached an advanced stage in its life cycle.



The extent of the AMP in any one Area will vary depending on the age of assets, type of asset and suitability of the rehabilitation techniques.

7.3.2 Proposal

The asset rehabilitation techniques considered have largely focused on Asset Condition Rating (ACR) 3 and 4 banks and ACR 4 and 5 structures. The techniques are:

- Rock armour consisting of a relatively thin layer of lightly crushed rock or coarse gravel placed on the inside batter of channel banks immediately above and below the channel operating range at an estimated cost of $12,500/km for ACR 3 banks and $35,000/km for ACR 4 banks;
- Replace eroded bank material (EBM) that has settled to the bed of the channel onto the inside batter for ACR 3 and 4 banks at an estimated cost of $6,000/km. This technique can only be applied during the non irrigation season;
- Structural rehabilitation of degraded concrete structures in ACR 4 and 5 using epoxy products for crack injection and epoxy coating (as trialled in Shepparton and Murray Valley Areas) at an estimated cost of $10,000/structure. For culverts and offtakes this technique is only suitable on structures with pipe barrels greater than one metre in diameter. This technique can only be applied during the non irrigation season;
- Beaching of channel structures to control erosion/ undermining at an estimated cost of $3,300/ structure. This technique can only be applied during the non irrigation season;
- Fencing of a further 30% of channel banks at an estimated cost of $7,000/km.

Each of these techniques has been allocated a life extension and assessed for its suitability for re-application. Trials within G-MW particularly for rock armouring and concrete rehabilitation and the document ‘Guidelines to Good Practice for the Construction and Refurbishment of Earthen Irrigation Channel Banks (August 2002)’ have been used to assist in this assessment. The application of these techniques to the various Irrigation Areas is shown in the Tables at the end of this section.

Importantly, all channel banks in ACR 5, up to 50% of those in ACR 4 and up to 20% of those in ACR 3 have been assessed as having reached a stage in their life cycle where additional maintenance is

not an option and that they will need to be replaced. Similarly, it has been assumed that 50% of structures in ACR 5 and 20% of structures in ACR 4 will need to be replaced. These assets are not considered as part of the AMP.

A further assessment of assets in ACR 1 and 2 will be undertaken to determine the best time to apply these techniques or any new options to optimise the most effective long term management of these assets.

7.3.3 Outcomes

The estimated cost of the works program has been reviewed against available funding for the AMP (as provided by DSE) based on price increases of CPI plus 2%. Initial indications over a thirty year period are that enough funding would be available from the RAB pricing model to implement the works program although further refinement will need to occur to see if it is possible to smooth out AMP expenditure and to evaluate any requirement for pooling of AMP funding.

Importantly, the AMP of applying advanced maintenance/ rehabilitation techniques could defer significant expenditure and significantly lower the height and smooth out the renewals/ replacement profile for all gravity Irrigation Services.

7.3.4 Surface Drainage Assets

An initial AMP has been developed for Surface Drainage Services in all Irrigation Areas. The focus has been on improving water quality in drains and applying advanced maintenance techniques to extend the lives of drainage assets. The AMP for surface drainage will include:

- Retrofitting drains to allow reuse of excess irrigation waters thereby reducing outfalls to streams in accordance with current drainage design principles;
- Replacement/ installation of longitudinal fencing to exclude stock from the drainage system;
- Refurbishment of drainage inlets, either by modifying the existing works with beaching or doors where the standard is suitable or installing an inlet with a door to replace any existing open cut inlets;
- Modification of access tracks to restrict the use of G-MW drainage access tracks by farmers for regular stock transfer;
- Drain batter and bed rehabilitation including desilting where required, beaching or hydro-mulching of batters to restrict the amount of drain waterway erosion;
- Structure rehabilitation including beaching and concrete refurbishment of Condition Rating 4 and 5 structures to maintain the current ACR;
- Dairy shed effluent exclusion including the relocation of any potential discharge points from Dairy sheds.

7.3.5 Challenges

- Further refinement of the AMP;
- Ongoing investigation and trialling of new maintenance/ rehabilitation techniques;
- A number of the asset rehabilitation techniques (EBM, structural rehabilitation, beaching) are restricted to the non irrigation period;
- Availability of contractor base for undertaking works;
- Ongoing availability of quantities of rock from quarries;
- Several Areas are currently in the process of having their asset conditions assessed for the first time for 5 – 7 years and the existing asset data used for this assessment may change;
- Some of the older structures being rehabilitated will also need to be assessed for OH&S upgrades (particularly regulators);

- Alignment of the Asset Reconfiguration Program with the AMP;
- The development of supporting systems policies, procedures and computer tools;
- Establishment of internal resources for development and implementation of the AMP:
- For the AMP program to be a success there will need to be a commitment to ongoing review including regular inspections and monitoring of programs, audits of maintenance standards and assessment of maintenance techniques and costs.

7.3.6 Other Options to be Assessed for Asset Management Techniques

Techniques that could be considered further include:

- Headwalless culverts (used at Kerang);
- Sleeving old culverts with Polyethylene pipe (capacity issues);
- Lining of culvert barrels (capacity issues)
- Lining of channel bed (SunWater have been recently trialling this);
- Further rationalisation/ pipelining of spur channels less than 20ML/D (part of Asset Rationalisation and Reconfiguration Programs);
- Differing risk/ maintenance approach for larger, higher risk channels.

7.3.7 Conclusions

The initial review has concluded that:

- further refinement of proposed asset maintenance techniques and development of new strategies will require additional time to develop;
- given the above, the introduction of RAB pricing within G-MW could fund an AMP for channel assets that would result in a deferral/ smoothing out of medium to long term major asset replacement expenditure.

Summary of expected applicability of AMP Techniques for Irrigation Services

Channels

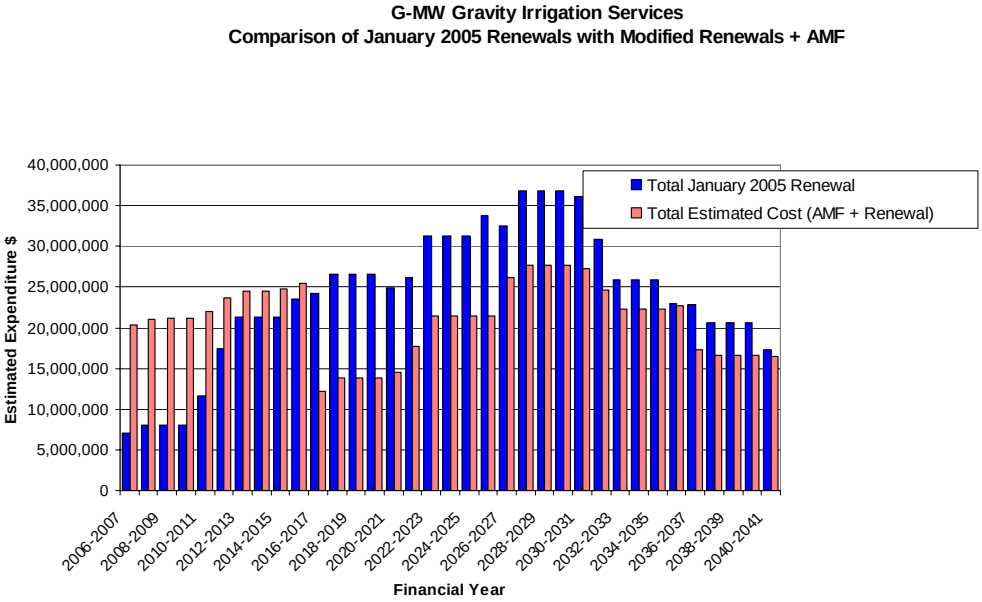
Asset Condition Rating	Rehabilitation Technique	Life Extension (yrs)	Cycles	SP Irr	CG Irr	ROC Irr	P-B Irr	MV Irr	TR Irr
ACR 3	Batter beaching	60 (20yrx3)	3	80%	80%	80%	50%	80%	80%
	Eroded Bank Material (EMB)	30 (10yrx3)	3	-	-	-	40%	-	-
	Just in Time Remodelling	Nil	Nil	20%	20%	20%	10%	20%	20%
ACR 4	Batter beaching	30 (15yrx2)	2	50%	50%	40%	50%	50%	-
	Eroded Bank Material (EMB)	20 (10yrx2)	2	10%	10%	20%	20%	-	50%
	Just in Time Remodelling	Nil	Nil	40%	40%	40%	30%	50%	50%
ACR 5 & 6	Just in Time Remodelling	Nil	Nil	100%	100%	100%	100%	100%	100%
ACR 1 to 4	Fencing			+30%	+30%	+30%	+30%	+30%	+30%

Structures – Regulators, Offtakes, Syphons and Culverts

Asset Condition Rating	Rehabilitation Technique	Life Extension (yrs)	Cycles	%
ACR 4	Structure Rehab[1]	50 (25yr2)	2	50%
	Beaching Rehabilitation[2]	45 (15yrx3)	3	80%
	Just in Time Replacement	Nil	Nil	20%
ACR 5	Structure Rehab[1]	20	1	50%
	Beaching Rehabilitation[2]	20 (10yrx2)	2	50%
	Just in Time Replacement	Nil	Nil	50%
ACR 6	Just in Time Replacement	Nil	Nil	100%

1. This technique is not applied to culverts less than 1000 mm diameter.
2. Assume structures are beached when Structure Rehabilitation occurs.

7.3.8 Resultant Asset Replacement Profile for G-MW Irrigation Services



8 Operating Expenditure

8.1 Overview of Operating Expenditure

Goulburn-Murray Waters' operating expenditure has been forecast after taking into consideration:

- Customer service standards negotiated with customers each year and articulated in annual customer service agreements. Refer chapter 4 Service Outcomes.
- Service obligations such as the Water Act, Bulk Entitlement Orders, Safe Drinking Water Act and Statement of Obligations. Refer chapters 4 Service Outcomes and 6 Other Compliance Issues.
- Environmental obligations as discussed in chapter 5 Environmental Outcomes.
- The investigation and management of water savings strategies and initiatives.
- Productivity initiatives:
    - G-MW has implemented a five year productivity plan commencing in 2005 which aims to achieve 5% cost reductions compared to 2004/05 over the first three years of the plan. Overall, 12% cost reductions compared to 2004/05 are targeted over the five years of the plan.

      3.5% of cost reductions have been included in operating expenditure forecasts for the two year regulatory period 2006/07 to 2007/08.

    - A major review of G-MW's costs commenced in 2005/06 with the objective of identifying opportunities to achieve the 12% cost reduction productivity plan target. This review may also identify opportunities to achieve greater than the 3.5% cost reductions included in the Water Plan 2006/07 – 2007/08.

      This review is being undertaken by MWH Australia, a leading engineering, construction, technology, and management consulting organisation.

Summary of G-MW operating expenditure by activity:

Activity	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Operations	27,314.8	27,941.9	32,442.3	28,499.8	29,195.6
Maintenance	18,527.4	19,999.5	25,055.2	36,910.2	38,501.8
Management & Administration	9,117.6	10,171.9	12,071.0	12,588.8	11,788.4
Other	28,279.4	29,046.3	31,328.9	30,374.5	31,250.9
Total Operating Expenditure	**83,239.2**	**87,159.6**	**100,897.4**	**108,373.3**	**110736.7**

8.2 Operations Activity Expenditure

Analysis of operations activity expenditure:

Activity	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
General Operations Expenditure	20,905.4	21,809.5	21,668.0	22,166.9	22,128.9
Dam Safety Reviews & Investigations	934.8	2164.2	2085.0	-	-
Catchment Management	978.4	1040.5	1382.0	1560.5	1674.4
Reconfiguration Planning	-	-	500.0	1,600.0	1,900.0
Water Savings Projects					
Investigations	828.2	275.8	226.6	226.6	226.6
Total Channel Control – CG 1234	-	15.9	1,360.0	-	-
Lake Mokoan – return to wetlands	-	378.6	4,900.0	1,000.0	-
Tungamah Pipeline	403.8	186.5	-	1,900.0	1,610.0
Normanville Pipeline	1,058.6	64.0	-	-	-
Woorinen Pipeline	901.2	-	-	-	-
Farm Dams Registration	307.6	754.5	275.0	-	-
Recoverable Works	996.8	1252.4	45.7	45.8	45.8
Environmental Levy	-	-	-	-	1,609.9
Total Operations Expenditure	**27,314.8**	**27,941.9**	**32,442.3**	**28,499.8**	**29,195.6**

Dam Safety Reviews and Investigations

Dam safety reviews and investigations are an integral part of G-MW's Dam Improvement Program (DIP). The DIP was established to review the safety of G-MW's dams and depending on the level of risk posed by each dam; undertake upgrading works to reduce risk.

Dam safety reviews and investigations and risk assessments of all thirteen state owned dams are scheduled to be completed in 2005/06 that will enable a program of risk reduction works that considers all dams to be finalised.

Catchment Management

G-MW manages 35,000 hectares of perimeter land around storages. Land management practices are being reviewed and enhanced where necessary to comply with all relevant legislation. eg:

- Environment Protection Act,
- CFA Act – fire hazard protection.
- Conservation Forests and Lands Act
- Catchment and Land Protection Act.

Reconfiguration Planning

The Victorian Government believes that distribution systems need to be upgraded and rationalised to ensure a financially viable system and sustainable irrigation industry. (Victorian Government's Securing Our Water Future Together white paper)

As part of the agreement with G-MW irrigators to release 20% of 'sales' water to the environment, the Government is providing $6 million towards developing overviews of infrastructure in irrigation areas and developing pilot reconfiguration plans.

Reconfiguration plans will be developed for the six irrigation districts and regulated diversions. An overall G-MW reconfiguration strategy that links the individual reconfiguration plans will also be developed.

Water Savings Projects

Approved recurrent expenditure components of water savings projects to either deliver or investigate opportunities to return water to the environment. The Victorian Government is strongly committed to the joint Government objectives to restore the health of the Snowy and Murray Rivers by returning 21% of the original flow to the Snowy River and 70,000 ML of water to the River Murray over 10 years.

These water savings projects are either part or fully funded by Government.

Farm Dams Registration

Under the Farm Dams legislation G-MW is required to register or license approximately 4,300 farm dams. The cost of this process is fully funded by the Government.

Recoverable Works

Ad-hoc works carried out for external customers that are funded entirely by those customers.

Environmental Levy

The Government has implemented a requirement for water authorities to make an environmental contribution. Rural water authorities are required to pay an environmental contribution based on 2% of revenue from rural customers.

Government has deferred the implementation of the Environmental Levy for G-MW customers until 1 July 2007 in recognition of the "sales' deal with G-MW irrigators and the drought.

8.3 Maintenance Activity Expenditure

Analysis of maintenance activity expenditure:

Activity	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
General Maintenance Expenditure	17,295.5	18,663.5	20,423.4	20,101.6	19,352.1
Advanced Maintenance Program	-	-	-	12,046.9	16,361.3
Water Savings Projects: Metering of Small Volume Outlets	382.5	498.0	1,800.9	1,800.9	-
Diversions Metering MoU	-	-	1,182.1	1,183.9	1,184.8
Increased Maintenance – OH&S	-	-	473.7	430.7	426.4
Asset Rationalisation	849.4	838.0	1,175.1	1,346.3	1,177.2
Total Maintenance Expenditure	**18,527.4**	**19,999.5**	**25,055.2**	**36,910.2**	**38,501.8**

Advanced Maintenance Program

The Advanced Maintenance Program (AMP) is a key outcome of the Pricing Policy Review Implementation Committee and has been enabled through the introduction of the RAB pricing approach.

The objective of the AMP is to apply advanced maintenance and rehabilitation techniques to defer for as long as possible significant future asset replacement expenditure and to substantially reduce asset related sharp year on year increases in prices from future expenditure on assets.

Water Savings Projects

Metering of small volume irrigation outlets is an approved water savings project that delivered 16,400 ML to the environment. G-MW received total funding of $11 million dollars from the Government, with the final payment of $10 million received in 2003/04.

The project funding is intended to cover further investigations into specific metering requirements, the initial cost of meters and the ongoing operations, maintenance and meter replacement costs.

Diversions Metering MoU

The White Paper and Statement of Obligations sets out the Government's requirements in respect to the metering of significant water use in unregulated catchments and from aquifers.

G-MW has entered into a Memorandum of Understanding (MoU) with Government to meter all significant water use over the next three years.

The Government will assist by contributing approximately $400 per meter towards the metering program.

Increased Maintenance – OH&S

Increased OH&S works are planned to reduce risks associated with operating the distribution network. The works focus on modifying infrastructure to improve regulator access and comply with fall from heights legislation. The infrastructure works relate to walkways, handrails, foot bridges and access gates.

Additionally there will be some expenditure that deals with asbestos pipes and removing underground fuel tanks.

Asset Rationalisation

The costs associated with reconfiguring specific components of G-MW's infrastructure. Asset rationalisation projects proceed if they provide a net benefit to the business, ie ongoing benefits from reduced operating and asset management costs offset the cost to reconfigure the infrastructure.

8.4 Management & Administration Activity Expenditure

Analysis of management & administration activity expenditure:

Activity	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
General Mgmt & Admin Expenditure	6,742.3	7,469.8	8,140.5	8,760.0	8,230.6
Amenity Business Management	-	-	297.1	294.0	291.0
Environmental Mgmt System	-	-	441.3	551.3	194.8
OH&S Technical Support	-	153.7	228.7	228.7	228.7
Diversions Resource Management	912.7	867.1	1,346.5	1,029.2	1,112.0
Fee For Service	1,462.6	1,681.3	1,616.9	1,620.6	1,571.3
ESC License Fees & Audit Costs	-	-	-	105.0	160.0
Total Mgmt & Admin Expenditure	**9,117.6**	**10,171.9**	**12,071.0**	**12,588.8**	**11,788.4**

Amenity Business Management

A new Water Storage Amenity business unit commenced in 2005/06, which has the objective of managing storage recreation facilities to ensure that community expectations are met and to develop a self-funding business unit over the medium term. The business unit manages significant recreation and tourism facilities spread over 12,500 hectares of land.

Environmental Management System (EMS)

G-MW has operated an EMS from 1999. The Statement of Obligations requires G-MW to have an EMS that is in accordance with the Australian Standard ISO 14000 series on environmental management. A recent audit of G-MW's EMS revealed non-conformance to the Australian standard.

A four year phased redevelopment of the EMS has been planned.

OH&S Technical Support

G-MW is required, so far as practicable, to provide and maintain for employees a working environment that is safe and without risk to health, in accordance with the OH&S Act 1985. Health and safety of employees is stated as one of G-MW's highest priorities.

G-MW has increased the level of staffing in its OH&S support team to improve its OH&S performance. The current rate of accidents is much higher than best practice in other like organisations.

Further OH&S support is planned through improved documentation and communication, improved systems, regular inspections and increased training.

Diversions Resource Management

A key objective of the Government's Our Water Our Future White Paper is to achieve healthy rivers and aquifers, equitable water sharing, improved water efficiency and accountable water use.

G-MW is committed to these water reform initiatives through closer management, increased presence, and ensuring equitable sharing of available water.

A recent audit of groundwater resource management and compliance initiated by DSE recommended increased levels of management and compliance. Groundwater management plans for Katunga, Mid-Loddon and Upper-Loddon are planned to be completed implemented during the regulatory period.

The development and implementation of Stream Flow Management Plans (SFMP) and the implementation of the Government's state-wide management rules for unregulated streams (not managed by SFMPs) during the regulatory period will greatly improve the management of unregulated catchments.

Improved levels of resource management will be delivered through increased resource assessments (including surface water-groundwater interaction), monitoring/reporting, compliance management and management of passing flows.

Fee For Service

The delivery of miscellaneous water administration services for set transaction related fees.

ESC License Fees and Audit Costs

Estimated direct costs relating to the economic regulation of prices and services in the Victorian water industry by the Essential Services Commission.

8.5 Other Activity Expenditure

Analysis of other activity expenditure:

Activity	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Research & Development	1,108.9	846.0	813.0	814.0	813.5
MDBC Contributions	9,199.6	10,354.5	9,535.1	9,581.5	9,628.2
MDBC Contract Expenditure	12,266.4	11,800.8	15,105.0	13,510.3	12,833.0
Gov't Services Contract Expenditure	4,908.2	4,854.2	4,716.3	4,847.2	4,861.9
Finance Charges	796.3	1,190.8	1,073.1	1,498.6	2865.1
Financial Accommodation Levy			86.4	122.9	249.2
Total Other Expenditure	**28,279.4**	**29,046.3**	**31,328.9**	**30,374.5**	**31,250.9**

Research and Development (R&D)

G-MW's R&D program is targeted to support future business needs by investigating new technologies and water management practices and incorporated the knowledge gained back into its business activities. The R&D program includes partnerships with external R&D organisations such as the Cooperative Research Centre (CRC) eWater and CRC Irrigation Futures.

MDBC Contributions

MDBC contributions represent G-MW's negotiated cost share of the Victorian Governments share of River Murray Water's (RMW) annual operating and capital costs. These contributions are recovered through the Murray system bulk water price.

The estimated MDBC contributions are based on current negotiated cost share arrangements and RMW's 2004/05 budget. Actual MDBC contributions are outside the control of G-MW and may result in changes to G-MW's Water Plan.

MDBC Contract

G-MW provides services under contract to the MDBC as the appointed Victorian Constructing Authority. Services such as storage operation, Hume dam perimeter land management, operation of salt interception schemes.

G-MW's MDBC contract expenditure is controlled by MDBC / RMW. MDBC contract expenditure plus an allowance for G-MW's corporate overhead costs are recovered from RMW as the costs are incurred.

Government Services Contracts (GSC)

G-MW receives funding from State and Federal Governments as part of North Central and Goulburn Broken CMA programs to undertake works associated with salinity plan management in irrigation areas.

GSC expenditure is controlled by the CMA's and is reliant on Government funding.

Finance Charges

Forecast borrowings costs, bank charges and discount expense.

G-MW's revenue collections, external funding receipts and expenditure patterns are not evenly distributed over a year. Significant rate revenue is collected in the first half of the year, the timing of external funding receipts is ad-hoc and significant asset expenditure is incurred during May to August, outside of the irrigation season.

This variability in cash flow places pressures on G-MW's cash flow.

Borrowing costs are based on an estimated average bank position each year.

Financial Accommodation Levy (FAL)

The Victorian Government is introducing a Financial Accommodation levy, under national competition policy, from 1 July 2005 for rural water authorities. The levy attempts to place government businesses on the same basis as private businesses in regard to borrowing costs.

From 1 July 2005 G-MW will be charged a levy on borrowings based on its credit rating. G-MW's has been assessed an 'A' rating and the current FAL levy is 0.6%.

9 Capital Expenditure

9.1 Overview of capital expenditure

Goulburn-Murray manages assets with a current replacement value of $3.6 billion. A well targeted, strategic asset management program is essential in order to ensure continuity of services to customers.

G-MW uses a computer based asset management system to plan its asset renewal program. This system contains data on over 70,000 separate assets. Each asset is assessed to determine its current condition and remaining life. This life cycle data, in combination with estimates of the current replacement cost for each type and size of asset enables G-MW to estimate the future capital expenditure (quantum and timing) required to maintain sustainable services. In order to ensure that the asset management system accurately reflects the expenditure required to renew assets when they reach the end of their economic lives, the condition of each asset is reviewed on a five-yearly cycle, with 20% of the assets being assessed in each financial year.

This data is also used to determine appropriate customer contributions for inclusion in pricing (via a renewals annuity) to meet the cost of future asset renewals, in accordance with the 1994 Council of Australian Governments (COAG) Water Agreement. Goulburn -Murray Water is currently investigating alternative arrangements to renewals for the funding of capital expenditure for the replacement of assets.

The other major area of planned capital expenditure is investments to upgrade assets or to improve the extent or standard of services to customers. A significant investment program is underway to upgrade G-MW's major storages to meet contemporary safety standards. It is planned that $47 m will be invested in the DIP over the next three years as part of an estimated $94 m that will be invested over the next ten years.

Generating water savings for the environment will also be an area of major future capital expenditure for G-MW, in partnership with Government. The major projects currently identified include TCC for the Central Goulburn No. 1, 2, 3 and 4 channels ($23 M total project cost); the decommissioning of Lake Mokoan and associated works ($45.5 m total project estimate, excluding Tungamah) and pipelining of the Tungamah D&S supply system ($ 20.7 m total project cost). These projects are all included in the 10 year capital program.

The "Sales Package" announced by the government in its white paper "Securing our Water Future Together" will establish sales as a clearly specified independent entitlement, with 20% of this entitlement being allocated to the environment. The financial assistance measures that form part of the "Sales Package" will provide funds for the development of reconfiguration plans in irrigation districts together with a further $50 m to implement these plans and create water savings for the environment. The nature and timing of this $50 m expenditure will not be known until reconfiguration plans are further advanced, so it has not been included in the capital program. Additionally, there could be some changes to currently proposed levels of asset replacement expenditure as a result of reconfiguration planning. Once these issues are better understood, the capital program will be revised accordingly.

Although the timeframe for White Paper implementation is not final, it is probable that parts of the proposed G-MW tariff reform program, in particular entitlement unbundling in regulated water systems, will be implemented during the life of this Water Plan. It is possible that further capital investment will be required to G-MW's systems to support an interface with the planned Statewide Register. Details of this are still not clear and no provision has been made in the capital forecasts.

Summary of G-MW capital expenditure by division:

Division	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Bulk Water Services	10,558.0	28,221.0	24,807.1	15,034.9	16,425.3
District Services	22,193.1	25,589.9	41,097.1	37,292.5	25,683.1
Diversions Services	0.0	0.0	400.6	273.6	245.7
Corporate Services	294.7	4,404.6	3,004.7	16,829.3	15,814.7
Total Capital Expenditure	**33,045.8**	**58,215.5**	**69,309.6**	**69,430.2**	**58,168.8**

Summary of G-MW capital expenditure by category:

Category	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Replacement – Existing Infrastructure	9,637.4	11,780.3	15,988.5	13,047.2	12,793.8
Infrastructure Investment	5,258.8	2,785.2	3,115.0	3,423.3	4,351.6
Water Savings	4,216.2	8,953.2	16,125.0	27,392.0	15,813.0
Compliance	520.4	533.9	1,764.0	2,554.0	1,957.0
Dam Improvement Program	9,012.6	26,132.0	20,140.0	11,275.0	13,700.0
Surface Drain Construction	3,981.8	3,396.6	7,538.9	9,149.3	7,676.3
Technology	366.8	1,071.9	4,247.8	2,589.4	1,877.0
Buildings	51.8	3,562.4	390.4	-	-
Total Capital Expenditure	**33,045.8**	**58,215.5**	**69,309.6**	**69,430.2**	**58,168.8**

9.2 Bulk Water Services Capital Expenditure

Summary of Bulk Water Services capital expenditure by category by major projects:

Category / Projects >$200k	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Replacement - Existing infrastructure	**431.7**	**606.2**	**1,708.6**	**1,417.4**	**917.6**
Infrastructure Investment					
Jerusalem Ck caravan park			505.1		
Other	770.3	1,379.3	1,583.5	1,852.5	1,502.7
Total	**770.3**	**1,379.3**	**2,088.5**	**1,852.5**	**1,502.7**
Water Savings					
Total Channel Control	**-**	**-**	**589.0**	**-**	**-**
Compliance					
OH&S	343.4	103.5	192.0	106.0	123.0
Asset Security (Terrorism)			89.0	384.0	182.0
Total	**343.4**	**103.5**	**281.1**	**490.0**	**305.0**
Dam Improvement Program					
Eildon	8,566.0	25,898.6	15,200.0		
Goulburn Weir	105.7	118.9	3,400.0		
Cairn Curran	124.6	3.7	1,540.0	11,275.0	12,500.0
Nillahcootie					1,200.0
Other	216.3	110.8			
Total	**9,012.6**	**26,132.0**	**20,140.0**	**11,275.0**	**13,700.0**
Total Capital Expenditure	**10,558.0**	**28,221.0**	**24,807.1**	**15,034.9**	**16,425.3**

Jerusalem Creek Caravan Park

Improving sewerage disposal assets at the Jerusalem Creek caravan park to comply with EPA requirements.

Total Channel Control

Automating structures on the Stuart Murray canal as part of the Total Channel Control – CG 1234 water savings project. This project is fully funded by Government.

Compliance - OH&S

Upgrading infrastructure to improve the working environment from a safety perspective, including compliance with working from heights legislation and confined space legislation. The works are focused on installing new OH&S compliant access to facilities.

Compliance – Asset Security (Terrorism)

G-MW has identified security capital works based on the Victorian water industry's security vulnerability risk assessment guideline that will enable compliance with the Victorian Terrorism (Community Protection) Act and the principles for a national counter-terrorism strategy for critical infrastructure protection (national counter terrorism committee, January 2003).

Security works are planned for Eildon, Goulburn Weir, Cairn Curran and Lake Buffalo.

Dam Improvement Program (DIP)

A DIP has been developed based on ANCOLD guidelines and on the currently completed dam safety reviews and investigations that complies with G-MW's Statement of Obligations.

The capital component of the program includes completion of dam safety upgrade works at Eildon and Goulburn Weir during the regulatory period, and the commencement of works at Cairn Curran and Nillahcootie. Commencement of Goulburn Weir, Cairn Curran and Nillahcootie projects are subject to agreement on funding arrangements.

9.3 District Services Capital Expenditure

Summary of District Services capital expenditure by category by major projects:

Category / Projects > $200k	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Replacement - Existing infrastructure	**9,205.7**	**11,174.1**	**14,079.9**	**11,599.8**	**11,876.3**
Infrastructure Investment					
Waranga West Main Channel	2,719.0	578.0	100.0		
Nyah Pump Station Upgrade				81.2	1,585.5
Tresco Pump Station Upgrade				500.0	
Katandra Channel Design				235.0	415.0
Other	1,769.5	827.9	926.5	754.6	848.4
Total	**4,488.5**	**1,405.9**	**1,026.5**	**1,570.8**	**2,848.9**
Water Savings					
Woorinen Pipeline	344.0	200.3	10.0		
Normanville Pipeline	3,723.0	79.1			
Total Channel Control	47.2	8,216.0	7,788.0	5,000.0	
Tungamah Pipeline		457.8	7,038.0	7,192.0	1,263.0
Other	102.0				
Total	**4,216.2**	**8,953.2**	**14,836.0**	**12,192.0**	**1,263.0**
Compliance					
OH&S	**177.0**	**430.4**	**1,483.0**	**2,064.0**	**1,652.0**
Technology					
Water Management System	6.5	3.4	1,816.3	335.1	39.9
Other	117.4	226.3	316.5	381.5	326.7
Total	**123.9**	**229.7**	**2,132.8**	**716.6**	**366.6**
Surface Drain Construction					
Primary Surface Drains - Salinity	3,521.3	3,354.5	6,670.3	8,374.3	7,001.3
Community Surface Drains	460.5	42.1	868.6	775.0	675.0
Total	**3,981.8**	**3,396.6**	**7,538.9**	**9,149.3**	**7,676.3**
Total Capital Expenditure	**22,193.1**	**25,589.9**	**41,097.1**	**37,292.5**	**25,683.1**

Waranga West Main Channel

Works to increase the capacity of the Waranga West Main Channel to meet customer needs are scheduled to be complete in 2005/06. This project was jointly funded by G-MW, Loddon shire and Olive Corp.

Nyah Pump Station

The Nyah pump station is planned to be upgraded during the regulatory period to address security of supply issues. A back up facility will be installed that will improve the security of supply for 80% of the district and the capacity of the pump station will be increased from its current capacity of 125 kl/day to the customer commitment of 138 kl/day

Tresco Pump Station

The installation of a back-up pump to address capacity issues and a major overhaul of the pump station electrics are planned.

Katandra Channel Design

Detailed design of the EG22 and EG 24 concrete lined channels are planned prior to construction commencing in 2008/09.

Water Savings

Woorinen pipeline and Normanville pipeline water savings projects that returned 5,500 ML to the environment have been successfully completed.

Total Channel Control is a $23 million (recurrent and capital) Government funded project that investigates the potential for water savings from the automation of open channel systems. Channel infrastructure on four of Central Goulburn's main channels (CG 1, 2, 3 & 4) will be automated. This project builds on the channel automation R&D project that was conducted in partnership with the Government and Rubicon in 2001/02 and 2002/03.

The Tungamah pipeline project is a water reliability offset project of the Lake Mokoan return to wetlands project. The project involves the replacement of the current channel stock and domestic scheme with a piped system originating from a pump station at the East Goulburn Main channel. The total project cost is $20.7 million with $17 million provided by Government and $0.3 million from Moira shire.

Compliance OH&S

OH&S works will focus on safety risk reduction strategies related to channel regulation. A planned program of works is in place to upgrade drop bar regulators with mechanical gates and where appropriate automate these gates. Provision has also been made to improve regulator access to comply with OH&S legislation including the working from heights legislation.

Water Management System

G-MW plans to upgrade its key water management systems, the Irrigation Planning Module (IPM) and the System Planning Module (SPM). IPM assists staff to plan, schedule and deliver water to customers that fit within operational constraints and guidelines. SPM is primarily used for the storage and retrieval of data.

The systems are ten years old and supplier support for both the hardware and software are becoming a significant issue.

Upgrading of the systems will remove a significant business risk, enable G-MW to efficiently meet its mandatory reporting on water system operations and enable the reengineering of water planning processes that may lead to productivity gains after implementation of the project (during the second Water Plan)

Surface Drain Construction

The construction of primary surface drains is a salinity strategy entirely funded by State and Federal Governments. The rate of implementation of this salinity strategy is controlled by Government and can vary significantly.

Community Surface Drains (CSD) are constructed to provide outfall in the lower catchments into the Government funded primary surface drains. Government and customers share the construction cost on a 50/50 arrangement. The construction of CSDs is dependent on local community support prior to commencement which generally results in significant start-up delays.

9.4 Diversions Services Capital Expenditure

Summary of Diversion Services capital expenditure by category by project:

Category / Projects >$200k	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Replacement - Existing Infrastructure			**200.0**	**30.0**	**-**
Technology					
Groundwater Data Base			160.0	203.0	200.0
Other			40.6	40.6	45.7
Total	**-**	**-**	**200.6**	**243.6**	**245.7**
Total Capital Expenditure	**-**	**-**	**400.3**	**273.6**	**245.7**

Groundwater Data Base

The increasing intensity of groundwater use and requirements for improved groundwater management is placing significant demands on information systems for improved storage, retrieval, analysis and reporting of data.

The development of a groundwater resource information system is planned that provides for the storage of groundwater use data, interfaces with complimentary information systems including G-MWs business systems, the State's groundwater management system and DPI's geographic information system, and for the improved reporting of groundwater bore, license and use data.

9.5 Corporate Services Capital Expenditure

Summary of Corporate Services capital expenditure by category by project:

Category / Project >$200k	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Water Savings Lake Mokoan – return to wetlands	**-**	**-**	**700.0**	**15,200.0**	**14,550.0**
Buildings					
39 Casey St.		298.3			
Kerang Office	51.8	3264.1	390.4		
Total	**51.8**	**3562.4**	**390.4**	**-**	**-**
Technology					
Asset Mgmt/Maintenance Mgmt			250.0	80.0	
Disaster Recovery		372.7			
Remote Communications			500.0		
Financial Mgmt System			300.0		
Business Mgmt System			102.0	318.0	100.0
Geographic Information System			15.0	270.0	425.0
Telephone-Voice Mail Messaging			15.0	200.0	
Other	242.9	469.5	732.3	761.3	739.7
Total	**242.9**	**842.2**	**1,914.3**	**1,629.3**	**1,264.7**
Total Capital Expenditure	**294.7**	**4,404.6**	**3,004.7**	**16,829.3**	**15,814.7**

Lake Mokoan – return to wetlands

Lake Mokoan is to be decommissioned and returned to a series of wetlands. The decommissioning aims to achieve 44,000 ML of water savings that will be used to improve the river health in the Goulburn, Broken, Murray and Snowy rivers.

Removal of Lake Mokoan from the Broken system will reduce the reliability of supply to entitlement holders in the Broken system. The Government has given an undertaking to maintain the reliability of diverters supply by providing a pool of funds for projects that will provide reliability offsets.

The Tungamah pipeline project is one of the reliability offset projects. There are a number of other projects being considered and investigated. The above forecast is the current estimate for reliability offset projects other than the Tungamah pipeline project. A package of reliability offset projects is targeted to be finalised by June 2006 which may result in a revision to the above forecast of capital expenditure.

The decommissioning of Lake Mokoan is not planned until all the offset projects have been commissioned. This is not forecast to occur until the 2008/09 year. Decommissioning costs are not a capital item and as it is not planned to occur until 2008/09, no costs for decommissioning have been included in this Water Plan.

Technology Projects

An upgrade to the asset management and maintenance systems is planned that provides improved integration of data between the two systems and also incorporates the asset management needs of Bulk Water Services, Electrical/Mechanical Services and Diversions Services.

The disaster recovery and business continuity systems were upgraded as result of gaps identified from the development of the disaster recovery and business continuity plan.

G-MW undertakes its management functions across a large region of Victoria, approximately 68,000 km^2. Effective communication systems are vital for G-MW to perform its responsibilities. An upgrading of remote communication systems is planned.

The financial system is ten years old and is several versions behind the current version. An upgrade of the financial system is planned to better meet the needs of the organisation, address system deficiencies and to bring the system into line with corporate architectural standards.

A business management system is planned that will integrate the key G-MW business systems and provide electronic workflow processes. The project will provide improved access to information and enable improved performance reporting as well as provide efficiencies through automated work flow processes.

A geographic information system will be used for water planning, improved service provision from a greater capability to monitor system performance and to assist with asset management planning.

An integrated telephony messaging system is planned that will provide cost and service benefits.

It is possible that further capital investment will be required to G-MW's systems to support an interface with the planned Statewide Water Register. Details of this are still not clear and no provision has been made in the capital forecasts.

9.6 Capital Contributions

The following capital contributions have been or are planned to be received. Capital contributions received from government are generally classified after confirmation as equity contributions and all other contributions are classified as revenue.

	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Capital Contributions in Revenue					
Waranga West Main Channel Upgrade	900.0	1,300.0	1,660.0	-	-
Murray Valley Channel No.1	-	-	1,325.0	130.9	300.0
Tungamah pipeline	-	-	-	300.0	-
Woorinen pipeline	-	-	283.5	-	-
Community Surface Drains – customer contributions	248.1	278.4	434.3	387.5	337.5
Recoverable Works	212.0	273.7	29.0	29.0	29.0
Total Capital Contributions – Revenue	**1,360.1**	**1,852.1**	**3,731.8**	**847.4**	**666.5**
Capital Contributions in Equity					
Government Services Contract – Primary Surface Drains	3,837.1	3,354.5	6,650.3	8,349.3	6,976.3
Community Surface Drains – Government contributions	6.2	39.0	434.3	387.5	337.5
Murray System share of $30M "Sales Deal" – White Paper	-	-	9,098.0	-	-
Eildon Dam Safety Upgrade	-	17,290.0	11,612.0	-	-
Total Channel Control CG 1,2,3,4	-	8,593.1	8,000.0	5,000.0	-
Lake Mokoan return to wetlands	-	-	700.0	15,200.0	14,550.0
Tungamah pipeline	-	7,950.0	-	4,250.0	-
Normanville pipeline	500.0	-	-	-	-
Total Capital Contributions - Equity	**4,343.3**	**37,226.6**	**36,494.6**	**33,186.8**	**21,863.8**
Total Capital Contributions	**5,703.4**	**39,078.7**	**40,226.4**	**34,034.2**	**22,530.3**

Both revenue and equity capital contributions received or planned to be received from 1 July 2004 have been used to calculate the Regulated Asset Base used for developing G-MW's Service revenue requirements.

10 Revenue

10.1 Revenue Overview

During 2004/05 G-MW contracted Frontier Economics to review its pricing policies. Frontier's key recommendation from this review was to replace the renewals asset funding approach with a regulatory asset base (RAB) asset funding approach.

The RAB approach recovers the net cost of capital works (net of external capital contributions), after the works have been completed, through a depreciation charge (return of capital – recovers principal amounts) and a rate of return (return on capital – recovers the cost of financing the works).

The ESC uses the RAB approach in its building block approach for determining a business' revenue requirement and the approach is consistent with the Water Industry Regulatory Order (WIRO) pricing principles.

The building block components that determine a business' total revenue requirement consist of the sum of:

- Operating expenditure – The cost of operating the assets and providing services, maintaining the assets and managing and administering the business.
- Return of capital – The depreciation charge on the RAB value of assets. The RAB asset value is reduced by any external contributions.
- Return on capital – The return on the RAB value of assets. The rate of return is based on the weighted average cost of capital (WACC) and is applied to the written down RAB value of assets.

G-MW has used the renewals approach for determining its revenue requirements for the years up to and including the 2005/06 year and has used the RAB building block approach for determining its revenue needs for the regulatory period 2006/07 to 2007/08.

In order to develop prices for each Service, revenue needs for each Service have been calculated using the RAB building block approach. G-MW's total revenue needs are determined by the sum of each Service's revenue needs.

Each Service's revenue needs over the regulatory period minus the environmental levy have been evenly spread over the two years 2006/07 and 2007/08. The environmental levy will be applied to G-MW in 2007/08 and has been included in the Service revenue requirement for the same year.

10.2 RAB Asset Value

The Victorian Government's cost recovery principles, articulated in its White Paper "Securing Our Water Future Together", does not require rural water authorities to generate a return on past investments, in recognition of the fact that the costs associated with constructing the existing rural infrastructure many years ago are largely sunk and have either already been recovered or were not required to be recovered by Government

Consistent with this cost recovery principle for existing rural infrastructure, G-MW's RAB asset value for existing assets as at 1 July 2004 has been set at zero. As a result revenue requirements for the regulatory period 2006/07 to 2007/08 do not include a depreciation charge or a rate of return on existing assets.

G-MW's RAB value has been calculated each year from 1 July 2004 by taking the value of the previous year's RAB value (zero for the 2004/05 year) and:

- Adding new capital expenditure net of external capital contributions for the current year;
- Subtracting regulatory depreciation (return of capital);
- Subtracting any disposal of assets at their regulatory book value.

10.3 G-MW's Revenue Building Block Components

G-MW has included two additional items to the revenue building block;

- Service Debt Contribution – Due to the RAB asset value as at 1 July 2004 being set at zero, Service revenue needs to allow for the repayment of any existing Service bank debt.

- Amortisation of Diversions Meters – The obligation to meter water use in unregulated catchments and aquifers over the next three years will result in significant expenditure that is expected to provide benefits for twenty years. As a result a principle and interest amount has been in included in revenue needs that evenly spread the metering cost over a twenty year period.

G-MW's Building block components consist of:

10.3.1 Operating Expenditure

Operating expenditure includes the costs to operate and maintain assets and provide services, management and administration of the business, ESC license fees and the environmental levy, net of other revenue and interest receivable.

10.3.2 Service Debt Contribution

With the conversion to the RAB building block approach, all bank accounts in a Service will be consolidated on 1 July 2006 into one bank account in each Service, ie operating, renewals and dam improvement program bank accounts.

A principle and interest debt repayment has been included in the revenue needs of any Service with a consolidated bank debt balance as at 1 July 2006. This debt contribution only applies to Service consolidated debt as at 1 July 2006.

10.3.3 Amortisation of Diversion Meter Expenditure

The net cost to meter water use in the unregulated catchments and aquifers is forecast to be:

Net Meter Cost	2005/06 $000s	2006/07 $000s	2007/08 $000s
Meter Expenditure	989.6	991.4	991.4
Government subsidy - $400 / meter	356.8	357.6	357.6
Net Meter Cost	**632.8**	**633.8**	**633.8**

Amortisation of net meter cost commences the year after expenditure:

Amortisation	2005/06 $000s	2006/07 $000s	2007/08 $000s	2008/09 $000s
Total Diversions Meter Amortisation	-	55.3	107.1	158.7

10.3.4 Return of Capital

Regulatory depreciation (return of capital) has been calculated on a straight-line basis and is a function of capital expenditure from 1 July 2004, net of any external contributions, and the average economic useful life of the acquired assets. There is no depreciation charge on existing assets as at 1 July 2004.

50% of the depreciation charge on each year's capital expenditure is included in total depreciation for that year.

Forecast regulatory depreciation for the regulatory period 2006/07 to 2007/08 by division:

Regulatory Depreciation	2006/07 $000s	2007/08 $000s
Bulk Water Services	325.9	488.1
District Services	470.2	757.9
Diversions Services	68.8	118.0
Corporate Services	1,307.3	1,651.5
Total Regulatory Depreciation	**2,172.1**	**3,015.5**

Regulatory depreciation rates by asset category:

Asset Category	Depreciation Rate %
Channel Infrastructure	1.00%
Surface Drain Infrastructure	1.00%
Storage Infrastructure	1.00%
Amenities Infrastructure	2.00%
Precast Factory Plant & Equipment	10.00%
Administration & Technology Assets	20.00%
Pipe Networks	1.33%
Pump Stations	3.33%
Loch Garry Regulator Infrastructure	5.00%
Buildings	2.50%

10.3.5 Return on Capital

The return on capital (capital expenditure financing costs) is a function of the RAB written down asset value and the WACC. There is no return on existing assets as at 1 July 2004.

50% of the rate of return on each year's capital expenditure net of regulatory depreciation is included in the total return on capital for that year.

The WACC is an estimated weighted average cost of debt and equity for a commercial business. G-MW has used the WACC recommended by the ESC for the regional urban water authorities:

WACC Component	WACC Parameter
Risk Free Component	2.67%
Debt Premium	1.16%
Equity Premium	6.00%
Equity Beta	0.75
Gearing (Debt / Assets)	60.00%
Forecast Inflation	2.55%
Franking Credit Value	50.00%
'Vanilla' After Tax WACC (Real)	**5.20%**

11 Statement of Financial Performance

	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
Revenue					
Rates – water and drainage	51,361.1	59,201.0	62,472.8	64,016.9	67,539.8
Consumptive charges	17,060.6	14,649.7	14,555.2	14,685.7	14,546.0
Bulk Supplies – external	5,162.2	5,646.2	5,646.3	6,300.3	6,440.9
MDBC Contract	12,951.8	12,348.1	15,883.4	14,161.8	13,451.8
Government Services Contract	5,521.5	6,843.3	4,941.6	5,076.0	5,087.4
Government Grants Water Savings	11,459.8	797.8	6,767.6	2,826.6	2,126.6
Other	552.6	1,194.8	931.8	465.5	210.0
Interest Customers	366.7	393.6	359.4	358.9	350.4
Investments	272.3	452.5	1,492.3	784.4	311.3
Other Revenue	10,034.3	9,067.3	9,817.5	6,886.1	6,521.0
Sale of Assets	564.0	166.7	116.0	48.0	51.0
Total Revenue	**115,306.9**	**110,761.0**	**122,983.9**	**115,610.2**	**116,636.2**
Less Expenses					
Operating (excl. Dam Safety)	23,188.2	24,856.9	23,370.7	23,773.2	23,849.1
Environmental Levy	-	-	-	-	1,609.9
Water Savings Projects	3,574.3	1,418.8	8,787.5	6,527.4	3,736.6
Maintenance (excl. amortised meters)	17,295.5	18,663.5	21,089.6	20,724.8	19,971.9
Advanced Maintenance Program	-	-	-	12,046.9	16,361.3
Asset rationalisation	-	-	-	1,346.3	1,177.2
Management and administration	9,117.6	10,171.9	12,071.0	12,483.8	11,628.4
Research and development	1,108.9	846.0	813.0	814.0	813.5
MDBC contributions	9,199.6	10,354.5	9,535.1	9,581.5	9,628.2
MDBC contract	12,266.4	11,800.8	15,105.0	13,510.3	12,833.0
Government services contract	4,908.2	4,854.2	4,716.3	4,847.2	4,861.9
Finance charges (including Financial Accommodation Levy)	796.3	1,190.8	1,159.5	1,621.5	3,114.3
ESC audit and licence fees	-	-	-	105.0	160.0
WDV of disposed assets	564.0	166.7	116.0	48.0	51.0
WDV of rationalised assets	1,935.3	3,654.2	2,000.0	2,000.0	2,000.0
Renewals Annuity	18,273.0	20,165.2	19,740.0	-	-
Dam Improvement Program contribution	1,390.4	795.3	873.8	-	-
Amortisation	-	-	-	55.3	107.1
Regulatory depreciation	-	-	-	2,172.1	3,015.5
Total Expenses	**103,617.7**	**108,938.8**	**119,377.5**	**111,657.3**	**114,918.9**
Profit / (Loss) before Rural Dividend	**11,689.2**	**1,822.2**	**3,606.4**	**3,952.9**	**1,717.3**
Rural Dividend	385.0	385.0	**-**	**-**	**-**
Profit / (Loss)	**11,304.2**	**1,437.2**	**3,606.4**	**3,952.9**	**1,717.3**
Add back renewals annuity	18,273.0	20,165.2	19,740.0	-	-
Add back Dam Improvement Program Contribution	1,390.4	795.3	873.8	-	-
Add back meter amortisation	-	-	-	55.3	107.1
Add back regulatory depreciation	-	-	-	2,172.1	3,015.5
Deduct Dam Safety expenditure funded by DIP contribution	934.8	2,164.2	2,085.0	-	-
Deduct statutory depreciation	26,991.6	30,805.9	28,400.0	30,300.0	30,300.0
Deduct asset rationalisation funded from renewals annuity	849.4	838.0	1,175.1	-	-
Deduct metering installations funded by amortisation	-	-	989.6	991.4	991.4
Statutory Profit / (Loss)	**2,191.8**	**(11,410.4)**	**(8,429.5)**	**(25,111.1)**	**(26,451.5)**

Revenue

Water and drainage rate revenue, consumption charges and bulk supplies external revenue have been calculated using the RAB building block approach discussed in chapter 10 Revenue. The recovery of the environmental levy has been factored entirely into the revenue requirement for 2007/08.

MDBC contract and GSC contract revenue recovers direct contract expenditure plus an allowance for corporate overheads.

Government grants received relates to the recurrent components of water savings projects and other Government initiatives such as the development of Stream Flow Management Plans and the Diversions metering subsidy.

Interest revenue is received from customer collections and from cash at bank.

Other revenue relates to recreation and boating activities, hydro electricity, recoverable works, fee for service functions, customer capital contributions and miscellaneous revenue.

Sale of assets refers to the proceeds from the disposal of unwanted assets.

Expenses

Expenses include operating expenditure discussed in chapter 8 Operating Expenditure plus non-cash items and exclude any operating expenditure relating to these non-cash items:

Non-Cash Item	Related Expenditure deducted from P&L Expenses
WDV of disposed and rationalised assets	-
Renewals annuity	Asset rationalisation. Asset rationalisation has been excluded from Expenses only in the years that the renewals annuity has been charged, ie 2003/04, 2004/05, 2005/06.
Dam Improvement Program contribution	Dam safety reviews and investigations.
Amortisation	Metering of unregulated catchments and aquifers.
Regulatory depreciation	-

A reconciliation of the Statement of Financial Performance -Total Expenses to the chapter 8 Operating Expenditure is shown below:

Item	2003/04 $000s	2004/05 $000s	2005/06 $000s	2006/07 $000s	2007/08 $000s
P&L – Total Expenses	**103,617.7**	**108,938.8**	**119,377.5**	**111,657.3**	**114,918.9**
Deduct:					
WDV of disposed assets	564.0	166.7	116.0	48.0	51.0
WDV of rationalised assets	1,935.3	3,654.2	2,000.0	2,000.0	2,000.0
Renewals Annuity	18,273.0	20165.2	19,740.0	-	-
Dam Improvement Program Contribution	1,390.4	795.3	873.8	-	-
Amortisation	-	-	-	55.3	107.1
Regulatory Depreciation	-	-	-	2172.1	3,015.5
Add:					
Dam safety expenditure funded by DIP contribution	934.8	2,164.2	2,085.0	-	-
Asset rationalisation expenditure funded by renewals annuity	849.4	838.0	1,175.1	-	-
Meter expenditure funded by amortisation	-	-	989.6	991.4	991.4
Total Operating Expenditure	**83,239.2**	**87,159.6**	**100,897.4**	**108,373.3**	**110,736.7**

Rural Dividend

In line with the Government's white paper, Securing Our Water Future Together, the rural dividend has been discontinued due to the removal of the regional urban 4% rate of return charge.

Profit / (Loss)

The Profit/(Loss) amount in the Statement of Financial Performance has been adjusted to calculate a forecast Statutory Profit/(Loss). The largest adjustment is the inclusion of the non-cash item, statutory depreciation. Statutory depreciation is the book depreciation calculated in accordance with Australian Accounting Standards.

12 Tariff & Prices

12.1 Tariff policy

Upon creation, G-MW inherited tariffs covering the range of services that it provides. In the case of irrigation water supply the tariff structure had been in places for many years, whereas for some drainage services the tariff was an outcome of the implementation of salinity management plans.

After achieving the COAG requirement of full cost recovery pricing in 2000/01, G-MW initiated a program to reform its tariffs. The objectives of this program are to:

- provide customers with appropriate and clear price signals about the nature and cost of the elements of service being provided
- reduce cross-subsidies between individual customers and between customer groups
- facilitate better investment decisions by customers and G-MW
- provide incentives for customers and the G-MW to be efficient in their use of resources
- generate sufficient revenue to allow the authority to meet the sustainable cash flow requirements of the business and in a way that matches revenue with expenditure.

These objectives are consistent with the Regulatory Principles described in the WIRO.

The achievement of these multiple objectives requires trade-offs to be made. A two-part, or multi-part, tariff provides a mechanism for doing this and provides the framework for all G-MW's tariffs.

G-MW has some 40 customer groups, receiving bulk water, irrigation, drainage, water supply, and surface and groundwater diversion services. The number of tariff elements, the way they are apportioned and the mix of fixed and variable prices may vary depending on the individual circumstances in each.

A further consideration in tariff formulation is the existence of an active water market. Opportunity cost provides a significant incentive for customers to be efficient in their water use, with typical traded prices for annual allocation in the range of $50 - $90/ML, compared to total G-MW charges in the order of $10 – 40/ML.

12.2 Tariff reforms

Tariff reform has focused initially on water supply, which makes up the majority of most customers' bill, with drainage to follow. The tariff reform program has been given added impetus by the Government's White Paper.

The existence of the water market has had important implications for G-MW and its customers. It can cause seasonal demand fluctuations unrelated to weather patterns with consequences for variable revenue, and it can lead to longer term changes in demand with implications for the recovery of fixed costs. Generally speaking, G-MW has experienced declining demand since the inception of the water market and this is expected to continue. This has price and viability implications for G-MW and its customers, and also has potential wider social implications. These have been recognized as issues of significance in the White Paper.

To support the White Paper, G-MW proposes to:

- unbundle and reform tariffs to support water entitlement unbundling by recognising separate service elements of administration, water harvesting and storage, water delivery, and water use licensing and to address issues associated with stranded assets
- reform the service and tariff structure for the Diversion Services business, to support the greater focus on water resource management

- reform the way customers pay for water harvesting and storage, to reflect that unbundled water shares will be separated from land and will be tagged to source
- implement a new tariff as part of the Tungamah pipeline water savings project
- ensure that drainage tariff reform is sympathetic to and supports the introduction of water use licences
- leverage off the new statewide water register to consolidate customer administration and thereby reduce customer costs associated with the duplication of effort required under the current arrangements.

The Government's timeframe for White Paper implementation is not final. However, it is probable that parts of the proposed G-MW tariff reform program, in particular entitlement unbundling in regulated water systems, will be implemented during the life of the 2006/07 to 2007/08 Water Plan.

G-MW has engaged in extensive customer consultation as part of tariff reform undertaken to date. Future tariff reform will be similarly supported by extensive customer consultation, and this will complement the overall White Paper communication strategy. The White Paper direction is very consistent with that previously enunciated to customers by G-MW, and is being endorsed in detailed community consultation on White Paper reform currently being undertaken by DSE and G-MW.

12.3 Prices

12.3.1 Prices Overview

G-MW aims to keep water prices affordable to customers whilst ensuring the financial viability of the business by endeavouring to smooth out any price changes and, where-ever possible, keep any price increase to below CPI plus 3%.

Prices for the regulatory period 2006/07 to 2007/08 were consulted with customers in March/April 2005 at the same time as the consultation for 2005/06 prices. The prices were also based on the renewals approach. Subsequent to this consultation the pricing methodology was changed from the renewals approach to the RAB approach. This change in methodology was discussed with Water Services Committees. Generally the prices for the regulatory period are at or below the prices consulted with customers in March/April 2005.

Water prices for each Service have been calculated to generate the required revenue over the regulatory period 2006/07 to 2007/08 for the applicable Service based on assumed water volumes.

The required revenue for each Service has been calculated using the RAB building block approach discussed in chapter 10 Revenue.

Irrigation water entitlement volumes have been forecast to the 30 June 2006. It has been assumed that the unbundling tariff reforms discussed in section 11.2 Tariff Reforms will be introduced from 1 July 2006 which will have the affect of stabilising prices calculated under the reformed tariff.

Gravity irrigation water consumption volumes which are used to calculate the infrastructure use fee are based on historical average consumptions that have been agreed to by Water Services Committees. The historical average consumption volumes have been adjusted for the environment's 20% share of future water allocations.

Due to the prolonged drought impacting the Goulburn system, a ten year average of historical water right deliveries has been used for gravity irrigation Services on the Goulburn system and a five year historical average of total water delivered has been used for the Campaspe district and Services on the Murray system.

12.3.2 Schedule of Prices

Refer Appendix 14.1 for a schedule of Service Prices and Miscellaneous Fees and Charges. The prices are stated in 2005/06 dollars and should be adjusted for the movement in the CPI for the twelve months to 31 March each year.

The Bullarook basin bulk entitlement order which will set the bulk entitlement volumes for the basin has not been finalised. The bulk water prices for the basin over the regulatory period have been based on assumed bulk entitlement volumes of 850 ML for G-MW and 750 ML for Central Highland Water.

A VicWater working group consisting of regional urban and rural water authority representatives recommended the introduction of a recreation and dam safety charge from 1 July 2005 to replace the regional urban 4% rate of return charge that has been discontinued by the Victorian Government. As a result G-MW has introduced a Regional Urban Storage Ancillary Fee from 1 July 2005.

Campaspe irrigation prices remain steady over the regulatory period. In response to the severe drought being experienced in the Campaspe district and a request from the customer Water Services Committee to review water prices, a working group has been established to consider and review the pricing issues relating to the transition to the RAB approach, advanced maintenance program opportunities, replacement of the weir, disposition of the surplus bank balance and basin prices for bulk water charges. Outcomes from this working group may result in amendments to G-MW's Water Plan.

The Tungamah water district's tariff is planned to change in 2007/08 due to the planned commissioning of a new pipeline distribution network to replace their inefficient channel system. The tariff is based on the existing pipeline tariffs of the Normanville water district and the pumped irrigation Services in the Torrumbarry district.

In response to the Katunga groundwater customer group, the calculation of Katunga groundwater prices was changed for 2005/06 to be based largely on management plan volumes instead of license volumes. A management plan is being developed in consultation with Katunga customers for the stressed Katunga aquifer. The finalised management plan may change the basis on which prices are calculated and therefore result in different prices to those shown in the attached schedule.

The Fee for Service schedule is being amended for an upgrading of the Irrigation Development Guidelines approval process. The approval process is being significantly enhanced to ensure irrigation developments do not pose significant risks to environmental, cultural or infrastructure assets. The approval process has been broken down into steps and the fees charged will depend on the potential impact of the proposed irrigation development on the environment, other stakeholders or key infrastructure.

12.3.3 Customer Pricing Impacts for Key Services.

Year on year pricing impacts, in percentage terms, on a theoretical average customer for key Services have been calculated. The analysis assumes constant volumes in each year. The actual impact on a customer will vary depending on each customer's unique characteristics, changes in water entitlements and water consumed.

Irrigation Supply Service	Year over year price change consulted with customers #		Year over Year change – indicative Water Plan proposal @		2007/08 Including 2% environmental levy – indicative Water Plan proposal @
	2006/07	2007/08*	2006/07	2007/08*	2007/08
Gravity Irrigation Supply Area					
Shepparton	4.1%	5.6%	1.9%	1.8%	3.8%
Central Goulburn	4.6%	4.8%	2.5%	2.5%	4.5%
Rochester	10.8%	1.4%	3.8%	3.0%	5.1%
Campaspe **	7.8%	5.0%	0.0%	0.0%	2.0%
Pyramid-Boort	4.7%	4.6%	2.7%	2.5%	4.5%
Murray Valley	7.0%	7.0%	3.2%	2.3%	4.4%
Torrumbarry	3.4%	3.2%	1.2%	0.0%	2.1%
Pumped Irrigation					
Woorinen	2.8%	2.2%	2.2%	2.1%	3.8%
Domestic & Stock					
Normanville	1.6%	1.5%	0.1%	0.1%	1.4%
Diversions Services					
Murray Regulated	8.8%	3.1%	5.6%	5.8%	7.9%
Goulburn Regulated	10.0%	4.0%	5.6%	5.6%	7.7%
Murray Unregulated	14.2%	6.6%	8.7%	8.2%	10.4%
Goulburn Unregulated	18.5%	7.8%	12.3%	10.8%	12.9%
Groundwater - Base	9.5%	16.7%	0.0%	0.0%	1.9%
Flood Protection					
Loch Garry	3.5%	2.0%	0.0%	0.0%	2.1%

* Excludes 2% Environmental Levy

Price changes are calculated using nominal prices

@Price changes are calculated using prices stated in 2005/06 dollars (in other words they are real increases and do not include CPI)

** Campaspe prices are provisional only. A working group, with customer input, is being established to address several key issues that remain outstanding.

13 Index of Acronyms

The following table summarises acronyms used in the Water Plan:

Acronym	Full Description
ACR	Asset Condition Rating
ALARP	As Low As Reasonably Practicable
AMP	Advanced Maintenance Program
ANCOLD	Australian National Committee on Large Dams
BE	Bulk Entitlement
BGA	Blue-Green Algae
COAG	Council of Australian Governments
CEECO	Corporate Environmental Emergency Control Organisation
CMA	Catchment Management Authorities
CRC	Cooperative Research Centre
D&S	Domestic and Stock
DHS	Department of Human Services
DIP	Dam Improvement Program
DSE	Department of Sustainability and Environment
EBM	Eroded Bank Material
EMS	Environmental Management System
EPA	Environment Protection Authority
ESC	Essential Services Commission
G-MW	Goulburn-Murray Water
ICOLD	International Commission on Large Dams
IDMOU	Irrigation Drainage Memorandum of Understanding
KPI	Key Performance Indicator
MDBC	Murray-Darling Basin Commission
MSOMP	Major Storages Operational Monitoring Program
NTER	National Taxation Equivalent Regime
OH&S	Occupational Health and Safety
PPRIC	Pricing Policy Review Implementation Committee
RAB	Return on Regulatory Asset Base
RMP	Risk Management Plan
SEPP	State Environmental Protection Policy (Water of Victoria)
SoO	Statement of Obligations
TCC	Total Channel Control
WACC	Weighted Average Cost of Capital
WIRO	Water Industry Regulatory Order 2003
WSC	Water Services Committee

14 Appendices*

Reference	Attachment
14.1*	Schedule of Service Prices and Miscellaneous Fees & Charges
14.2	G-MW 2005/06 – 2009/10 Corporate Plan
14.3	Customer Service Agreement – Central Goulburn WSC
14.4	Pricing Policy Review Implementation committee – Final Report
14.5	Presentation to Department of Human Services Letter (#1649208)
14.6	Presentation to Environment Protection Authority (1650423)
14.7	Presentations to Water Services Committees and Public Meetings
14.8	Letter from EPA – Comments on Draft Water Plan (#1691220)
14.9	Letter from DHS – Comments on Draft Water Plan (#1668053)
14.10	Letter from DSE – Comments on Draft Water Plan

*Please note: For practical reasons only 14.1 is attached to this document. The remaining documents have been provided separately to the ESC. Copies are available upon request by contacting either the ESC or G-MW.

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Shepparton

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Shepparton Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.55	6.02	6.32	6.83
Distribution					
Infrastructure Access Fee	ML	28.70	31.00	31.50	32.89
Infrastructure Use Fee	ML	6.37	7.98	8.05	7.92
Regional Urban Distribution Fee	ML	35.07	38.98	39.55	39.86
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Shepparton Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Shepparton Primary Surface Drainage					
Service Fee	EACH	100.00	100.00	100.00	100.00
Area Fee	HA	6.14	6.51	6.54	6.57
Water Use Fee	ML	4.30	4.56	4.58	4.60
Drainage Diversion Agreement Fee	ML	10.41	11.25	11.47	11.91
Shepparton Sub Surface Drainage					
Subsurface Drainage Fee	ML	0.57	0.57	0.62	0.69

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Loch Garry

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Loch Garry Flood Protection					
Flood Protection Fee	HA	4.10	4.26	4.26	4.35
Minimum Fee	EACH	328.17	341.30	341.30	348.13

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Tungamah

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Tungamah - Channel System					
Service Fee	Holding	100.00	100.00	100.00	N/A
General Fee (NAV)	NAV	0.0927	0.0971	0.1000	N/A
Minimum Fee	Each	291.00	305.00	314.00	N/A
Pump Fee	Each	361.00	378.00	389.00	N/A
Tungamah - Pipeline System					
Service Fee	Holding	N/A	N/A	N/A	100.00
Additional Service Point Fee	Service Point	N/A	N/A	N/A	50.00
Water Allowance Storage Fee	ML	N/A	N/A	N/A	5.34
Distribution					
Infrastructure Access Fee	ML	N/A	N/A	N/A	88.68
Infrastructure Use Fee	ML	N/A	N/A	N/A	30.00
Overuse Fee	ML	N/A	N/A	N/A	1,000.00

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Central Goulburn

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Central Goulburn Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.55	6.02	6.32	6.83
Distribution					
Infrastructure Access Fee	ML	23.74	26.54	27.26	28.69
Infrastructure Use Fee	ML	7.52	6.17	6.15	6.05
Regional Urban Distribution Fee	ML	31.26	32.71	33.41	33.90
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Central Goulburn Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Central Goulburn Primary Surface Drainage					
Service Fee	EACH	100.00	100.00	100.00	100.00
Area Fee	HA	3.50	3.50	3.51	3.80
Water Use Fee	ML	2.99	2.99	3.00	3.00
Drainage Diversion Agreement Fee	ML	9.45	9.68	9.93	10.39
Central Goulburn Sub Surface Drainage					
Service Fee	ML	0.71	0.75	0.91	0.93
Local Benefit Area Fee	HA	2.54	2.54	2.45	2.42
Local Benefit Water Use Fee	ML	0.59	0.59	0.57	0.56
Municipal Local Benefit Area Fee	HA	10.16	10.16	9.80	9.68

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Rochester - Campaspe

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Rochester Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.55	6.02	6.32	6.83
Distribution					
Infrastructure Access Fee	ML	21.77	23.93	25.15	26.73
Infrastructure Use Fee	ML	7.13	6.58	6.48	6.38
Regional Urban Distribution Fee	ML	28.85	30.51	31.63	32.30
Debt/Investment Surcharge	ML Sales	10.00	10.00	N/A	N/A
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Rochester-Campaspe Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Rochester-Campaspe Primary Surface Drainage					
Service Fee	EACH	100.00	100.00	100.00	100.00
Area Fee	HA	3.61	3.70	3.70	3.94
Water Use Fee	ML	2.61	2.68	2.68	2.68
Drainage Diversion Agreement Fee	ML	8.86	9.13	9.49	9.99
Rochester Sub Surface Drainage					
Service Fee	ML	0.22	0.26	0.31	0.32
Local Benefit Area Fee	HA	12.72	11.06	10.69	11.03
Local Benefit Water Use Fee	ML	3.52	3.12	3.02	3.12
Municipal Local Benefit Area Fee	HA	50.88	44.24	42.75	44.12
Campaspe Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.55	6.02	6.32	6.83
Distribution					
Infrastructure Access Fee	ML	31.55	33.65	32.69	33.27
Infrastructure Use Fee	ML	8.66	7.09	7.71	7.59
Regional Urban Distribution Fee	ML	40.21	40.74	40.40	39.90
Debt/Investment Surcharge	ML Sales	10.00	10.00	N/A	N/A
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Campaspe West Sub Surface Drainage					
Minimum Fee	Holding	15.00	15.00	15.00	15.30
Subsurface Drainage Fee	ML	1.80	1.94	2.08	2.27

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Pyramid - Boort

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Pyramid-Boort Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.55	6.02	6.32	6.83
Distribution					
Infrastructure Access Fee	ML	16.42	17.96	18.44	19.40
Infrastructure Use Fee	ML	5.81	6.22	6.29	6.26
Regional Urban Distribution Fee	ML	22.23	24.18	24.73	25.02
Debt/Investment Surcharge	ML Sales	10.00	10.00	N/A	N/A
D&S Supplied Outside Irrigation Period	Service	300.00	300.00	300.00	300.00
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Pyramid-Boort Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Pyramid-Boort Primary Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Area Fee	HA	2.35	2.41	2.43	2.58
Water Use Fee	ML	1.87	1.92	1.93	1.95
Drainage Diversion Agreement Fee	ML	7.20	7.55	7.76	8.12

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Loddon Waterworks

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Normanville Domestic & Stock					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Water Allowance Storage Fee	ML	4.99	4.56	4.94	5.34
Infrastructure Access Fee	Kl/Day	95.00	95.00	94.93	97.47
Infrastructure Use Fee	ML	104.00	104.00	104.00	104.00
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
East Loddon Domestic & Stock					
Service Fee	Holding	50.00	50.00	50.00	50.00
Water Allowance Storage Fee	ML	4.99	4.56	4.94	5.34
Infrastructure Access Fee	HA	2.33	2.77	2.95	3.22
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
West Loddon Domestic & Stock					
Service Fee	Holding	50.00	50.00	50.00	50.00
Water Allowance Storage Fee	ML	4.99	4.56	4.94	5.34
Infrastructure Access Fee	HA	1.13	1.25	1.36	1.50
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Murray Valley

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Murray Valley Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	7.53	7.89	8.01	8.00
Distribution					
Infrastructure Access Fee	ML	21.19	22.97	24.37	26.25
Infrastructure Use Fee	ML	6.97	7.37	7.10	6.99
Regional Urban Distribution Fee	ML	28.16	30.34	31.47	32.41
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Murray Valley Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Murray Valley Primary Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Area Fee	HA	6.42	6.55	6.57	6.99
Water Use Fee	ML	3.55	3.62	3.63	3.64
Drainage Diversion Agreement Fee	ML	8.92	9.56	9.87	10.31
Murray Valley Sub Surface Drainage					
Service Fee	ML	0.32	0.34	0.46	0.44
Local Benefit Area Fee	HA	2.81	2.81	2.62	2.27
Local Benefit Water Use Fee	ML	0.52	0.52	0.49	0.42
Municipal Local Benefit Area Fee	HA	11.24	11.24	10.48	9.08

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Torrumbarry - Gravity

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Torrumbarry Gravity Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	7.53	7.89	8.01	8.00
Delivery					
Infrastructure Access Fee	ML	19.46	20.99	21.44	22.34
Infrastructure Use Fee	ML	6.99	6.89	6.74	6.63
Regional Urban Distribution Fee	ML	26.45	27.88	28.18	28.20
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Torrumbarry Community Surface Drainage					
Community Surface Drainage Fee	KM	450.00	450.00	450.00	450.00
Torrumbarry Primary Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Area Fee	HA	2.16	2.50	2.50	2.67
Water Use Fee	ML	1.72	1.77	1.77	1.77
Drainage Diversion Agreement Fee	ML	8.50	8.94	9.05	9.24
Tyntynder Primary Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Area Fee	HA	10.40	15.00	15.00	15.78
Water Use Fee	ML	5.50	5.67	5.67	5.67
Drainage Diversion Agreement Fee	ML	8.50	8.94	9.05	9.24

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Torrumbarry - Pumped

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Woorinen Pumped Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	7.53	7.89	8.01	8.00
Distribution					
Infrastructure Access Fee	ML/Day	2,531.00	2,644.90	2,733.40	2,908.16
Infrastructure Use Fee	ML	20.00	20.00	20.00	20.00
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Woorinen Sub Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Area Fee	HA	10.38	10.38	8.75	7.93
Water Use Fee	ML	5.49	5.49	4.63	3.88
Drainage Diversion Agreement Fee	ML	2.95	2.95	2.95	3.01
Nyah Pumped Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.66	6.96	6.98	6.98
Distribution					
Infrastructure Access Fee - WR, D&S	ML/Day	2,697.00	2,831.85	2,861.96	2,981.71
Infrastructure Use Fee	ML Used	14.89	14.89	14.89	14.89
Overuse of Annual Entitlement Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Nyah Sub Surface Drainage					
Service Fee	Holding	100.00	100.00	100.00	100.00
Water Use Fee	ML	17.51	17.51	17.64	18.20
Drainage Diversion Agreement Fee	ML	2.56	2.56	2.58	2.66
Tresco Pumped Irrigation					
Service Fee	Holding	100.00	100.00	100.00	100.00
Additional Service Point Fee	Service Point	50.00	50.00	50.00	50.00
Entitlement Storage Fee	ML	6.66	6.96	6.98	6.98
Distribution					
Infrastructure Access Fee	ML/Day	4,168.00	4,376.40	4,374.14	4,490.69
Infrastructure Use Fee	ML Used	10.00	10.00	10.00	10.00
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Tresco Sub Surface Drainage					
Subsurface Drainage Fee	ML	7.90	7.90	7.90	8.06
Drainage Diversion Agreement Fee	ML	2.55	2.55	2.55	2.60

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Surface Water Diversions

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Murray Regulated					
Service Fee	Licence	120.00	130.00	150.00	150.00
Entitlement Storage Fee	ML	7.53	7.89	8.01	8.00
Water Delivery Fee	ML	2.73	3.10	3.42	4.49
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Goulburn Regulated					
Service Fee	Licence	110.00	120.00	150.00	150.00
Entitlement Storage Fee	ML	6.55	6.55	6.32	6.83
Water Delivery Fee	ML	1.70	2.68	3.03	3.44
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Murray Unregulated					
Service Fee	Licence	120.00	130.00	150.00	150.00
Water Delivery Fee	ML	5.71	9.51	9.97	11.65
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Goulburn Unregulated					
Service Fee	Licence	110.00	120.00	150.00	150.00
Water Delivery Fee	ML	4.30	7.72	7.72	9.93
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Exceptions:					
(i) Pental Island Lands					
Service Fee	Licence	120.00	130.00	150.00	150.00
Entitlement Storage Fee	ML	7.53	7.89	8.01	8.00
Water Delivery Fee	ML	19.84	20.91	21.13	21.75
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
(ii) Fish Farming					
Service Fee					
Murray	Licence	120.00	130.00	150.00	150.00
Goulburn	Licence	110.00	120.00	150.00	150.00
Water Delivery Fee					
Goulburn Regulated	ML	25.60	25.60	25.60	26.11
Goulburn Unregulated	ML	25.60	25.60	25.60	26.11
Murray Unregulated	ML	25.60	25.60	25.60	26.11

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Groundwater Diversions

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Groundwater Supply Area - Shepparton IRSWPA					
Service Fee	Licence	150.00	150.00	150.00	150.00
Additional Service Point Fee	Bore	75.00	75.00	75.00	75.00
Groundwater Entitlement Fee	ML	1.63	1.96	1.96	2.02
Intensive Management Fee	ML	1.16	1.16	1.17	1.20
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Groundwater Supply Areas - Spring Hill, Campaspe					
Service Fee	Licence	150.00	150.00	150.00	150.00
Additional Service Point Fee	Bore	75.00	75.00	75.00	75.00
Groundwater Entitlement Fee	ML	1.63	1.96	1.96	2.02
Intensive Management Fee	ML	1.40	1.76	2.00	2.30
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Groundwater Supply Areas - Katunga					
Service Fee	Licence	150.00	150.00	150.00	150.00
Additional Service Point Fee	Bore	75.00	75.00	75.00	75.00
Groundwater Entitlement Fee	ML (MPV)	1.63	3.95	3.95	4.08
Intensive Management Fee	ML (MPV)	1.40	3.55	4.04	4.65
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00
Other Groundwater Supply Areas					
Service Fee	Licence	150.00	150.00	150.00	150.00
Additional Service Point Fee	Bore	75.00	75.00	75.00	75.00
Groundwater Entitlement Fee	ML	1.63	1.96	1.96	2.02
Overuse Fee	ML	1,000.00	1,000.00	1,000.00	1,000.00

Goulburn-Murray Water
Service Prices and Miscellaneous Fees and Charges
Regional Urban Distribution Charge

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05 $	2005/06 $	2006/07 $	2007/08 $
Goulburn System					
Shepparton Gravity Irrigation	ML	35.07	38.98	39.55	39.86
Central Goulburn Gravity Irrigation	ML	31.26	32.71	33.41	33.90
Rochester Gravity Irrigation	ML	28.85	30.51	31.63	32.30
Campaspe Gravity Irrigation	ML	40.21	40.74	40.40	39.90
Pyramid-Boort Gravity Irrigation	ML	22.23	24.18	24.73	25.02
Murray System					
Murray Valley Gravity Irrigation	ML	28.16	30.34	31.47	32.41
Torrumbarry Gravity Irrigation	ML	26.45	27.88	28.18	28.20

Goulburn-Murray Water
Pricing Schedule
Bulk Water

#1702801 v2 27-Sep-05

Charge	Unit	Price (Values expressed in real dollars)			
		2004/05	**2005/06**	2006/07	2007/08
		$	**$**	$	$
Murray System - Entitlement					
Business Cost	ML	6.63	N/A	N/A	N/A
Regional Urban 4% Rate of Return	ML	9.29	N/A	N/A	N/A
Murray Basin - Entitlement	ML	N/A	6.37	6.49	6.56
Ovens Basin - Entitlement	ML	N/A	32.22	28.12	24.54
Goulburn System - Usage					
Usage	ML	5.89	N/A	N/A	N/A
Regional Urban 4% Rate of Return	ML	12.94	N/A	N/A	N/A
Goulburn Supplemented Basin - Entitlement					
Source	ML	6.70	6.27	6.96	7.56
Delivery	ML	0.14	0.15	0.14	0.14
Regional Urban 4% Rate of Return	ML	14.94	N/A	N/A	N/A
Broken Basin - Entitlement					
Source	ML	N/A	24.42	22.12	20.03
Goulburn Basin - Entitlement					
Source	ML	3.89	3.66	4.07	4.53
Delivery	ML	0.15	0.15	0.14	0.14
Regional Urban 4% Rate of Return	ML	12.21	N/A	N/A	N/A
Campaspe Basin - Entitlement					
G-MW Capacity Share					
Source	ML	12.58	13.74	13.58	13.42
Regional Urban 4% Rate of Return	ML	24.02	N/A	N/A	N/A
Coliban Capacity Share					
Source	ML	14.69	15.94	15.75	15.57
Regional Urban 4% Rate of Return	ML	22.99	N/A	N/A	N/A
Loddon Basin - Entitlement					
Source	ML	N/A	23.47	27.02	31.1
Bullarook - Entitlement					
Source	ML	N/A	164.98	191.61	222.54
Regional Urban Storage Ancillary Fee	ML	N/A	7.81	7.81	7.81

Appendix 14.1
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GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	2004/05	2005/06	2006/07	2007/08
Private Works:				
Security Deposit	25% Job	25% Job	25% Job	25% Job
Supervision Fee	5% Job	5% Job	5% Job	5% Job
Issue Fee	$60.00	$62.00	$62.00	$62.00
Toll Gate Charges:				
Per Vehicle	N/A	$2.00	$2.00	$2.00
Application Fee for Amalgamation of Lands:				
Gravity Irrigation	$310.00	$310.00	$310.00	$310.00
Waterworks:				
Reclassification Fee	$110.00	$113.00	$113.00	$113.00
Subdivision Fees (Irrigation):				
Category A	$480.00	$480.00	$480.00	$480.00
Category A1	$690.00	$690.00	$690.00	$690.00
Diversion Works on Crown Land:				
Issue Fee	$60.00	$62.00	$62.00	$62.00
Drainage Agreement:				
Issue Fee	$60.00	$62.00	$62.00	$62.00
Investigation Fee	$110.00	$114.00	$114.00	$114.00
High Flow Annual Fee	$51.00	$52.00	$52.00	$52.00
Small Pipe Outlet Fee				
Issue Fee	$100.00	$103.00	$103.00	$103.00
Purchase of Additional Entitlement for Residential Water Use:				
Administration Fee	$65.00	$65.00	$65.00	$65.00
Amend District Boundaries:				
Extension to G-MW Districts	$400.00	$410.00	$410.00	$410.00
Excision from G-MW Districts	$400.00	$410.00	$410.00	$410.00
By Laws Tariff Criteria:				
Copies	$4.00	$4.20	$4.20	$4.20
Special Meter Reading:				
Meter Reading Fee	$30.00	$31.00	$31.00	$31.00
Jetties & Slipways:				
Application for a License	$210.00	$215.00	$215.00	$215.00
Application for a License Transfer	$100.00	$103.00	$103.00	$103.00
Grazing & General Occupation:				
Application for a License	$210.00	$215.00	$215.00	$215.00
Application for a License Transfer	$100.00	$103.00	$103.00	$103.00
Application to Amend/Subdivide/Amalgamate the License	$150.00	$155.00	$155.00	$155.00
Regatta Fees:				
First Day	$154.00	$158.00	$158.00	$158.00
Each Consecutive Day	$85.00	$87.00	$87.00	$87.00
Bore Monitoring Fee:				
Monitoring Fee	$66.00	$66.00	$66.00	$66.00
Normanville Pipeline Scheme:				
Capacity Adjustment Request				
Application Fee	N/A	$150.00	$150.00	$150.00
Connection Fee:				
Administration Fee	N/A	$65.00	$65.00	$65.00
Tapping/Meter Installation	N/A	$550.00	$550.00	$550.00
Entitlement Acquisition	N/A	$1,220 ML	$1,220 ML	$1,220 ML
Update Models/Plans	N/A	$150.00	$150.00	$150.00

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	2004/05	2005/06	2006/07	2007/08
New Irrigation Development:				
Application Fee	$120.00	$124.00	N/A	N/A
Irrigation Development Assessment	N/A	N/A	$1,000.00	$1,000.00
Detailed Hydrological Assessment	N/A	N/A	$2,500.00	$2,500.00
Complex Hydrological Assessment	N/A	N/A	$3000 to $5000	$3000 to $5000
Large Development Assessment	N/A	N/A	Negotiated on application	Negotiated on Application
Permanent Water Right Transfer Reservation:				
Application Fee	$120.00	$124.00	$124.00	$124.00
Annual Fee (per ML)				
Shepparton	$23.22	$31.00	$31.50	$32.89
Central Goulburn	$19.71	$26.54	$27.26	$28.69
Rochester	$17.91	$24.89	$25.15	$26.73
Campaspe	$22.20	$33.65	$32.69	$33.27
Pyramid-Boort	$13.10	$17.96	$18.44	$19.40
Murray Valley	$15.96	$22.97	$24.37	
Torrumbarry	$16.26	$20.99	$21.44	$22.34
Woorinen (ML/day)	$2,180.00	$2,644.90	$2,733.40	$2,908.16
Nyah (ML/day)	$2,568.35	$2,831.85	$2,861.96	$2,981.71
Tresco (ML/day)	$3,785.39	$4,376.40	$4,374.14	$4,490.69
Emergency Domestic & Stock Supply				
per Kilolitre	$0.30	$0.31	$0.31	$0.31
per Megalitre	$300.00	$310.00	$310.00	$310.00
Information Statement:				
Application for Information Statement under Section 158 of the Act.	$40.00	$40.00	$40.00	$40.00
Dams on Waterway Fee:				
Application Fee				
i) Dams or other works less than 5 ML capacity not requiring qualified engineering input or design and specifications by G-MW	$445.00	$456.00	$456.00	$456.00
ii) Dams less than 5 ML capacity IR, CO and D&S with engineering design review, consultancy and assessments by G-MW	$1,750.00	$1,794.00	$1,794.00	$1,794.00
iii) Dams less than 5 ML capacity IR, CO and D&S without engineering design review, consultancy and assessments by G-MW	$720.00	$738.00	$738.00	$738.00
iv)-(a) Dams greater than 5 ML capacity or 7m embankment height with engineering design review, consultancy and assessments by G-MW	$2,185.00	$2,240.00	$2,240.00	$2,240.00
iv)-(b) Resubmission of revised proposals with G-MW assessment	$1,465.00	$1,500.00	$1,500.00	$1,500.00
v) Dams greater than 5 ML capacity or 7m embankment height without engineering consultancy and assessments by other than G-MW	$720.00	$738.00	$738.00	$738.00
Private Dams not on a Waterway Fee:				
Application Fee				
i) Dams requiring a licence to construct with engineering consultancy and assessment by other than G-MW	$720.00	$738.00	$738.00	$738.00
ii)-(a) Dams requiring a licence to construct with engineering design review, consultancy and assessments by G-MW	$2,185.00	$2,240.00	$2,240.00	$2,240.00
ii)-(b) Resubmission of revised proposals with G-MW assessment	$1,465.00	$1,500.00	$1,500.00	$1,500.00
Waterway Determination Fee:				
Waterway determination inspection and report	$200.00	$205.00	$205.00	$205.00

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	2004/05	2005/06	2006/07	2007/08
Surface Water License Fees:				
Diversion & Groundwater License:				
1. Application for a License	$320.00	$330.00	$330.00	$330.00
2. Application for RENEWAL/AMALGAMATION of a License (refer item 3 below)	$250.00	$330.00	$330.00	$330.00
- for each additional license renewed (refer item 3 below).	$70.00	$72.00	$72.00	$72.00
3. Application for RENEWAL of an irrigation License in the Shepparton Irrigation Re	$320.00	$330.00	$330.00	$330.00
- for each additional irrigation License renewal in the Shepparton Irrigation Region.	$135.00	$140.00	$140.00	$140.00
4. Application for TRANSFER of a License, where the license will be used in relation to the same property.	$100.00	$103.00	$103.00	$103.00
5. Application for REPLACEMENT UPON ALTERATION of a License.				
- Category 2	$50.00	$52.00	$52.00	$52.00
- Category 3	$100.00	$103.00	$103.00	$103.00
- Category 4	$250.00	$330.00	$330.00	$330.00
6. Private Rights to Water assessment fee	$100.00	$103.00	$103.00	$103.00
7. Title Search Fee	$25.00	$25.00	$25.00	$25.00
8. Application for Domestic & Stock Bore Registration	$65.00	$67.00	$67.00	$67.00
9. Capital Charge for New Groundwater Entitlements (per license megalitre)	$120.00	$120.00	$120.00	$120.00
Transfer of Water Entitlement - Diversion License:				
1. Application for Permanent Transfer	$275.00	$275.00	$275.00	$275.00
2. Application for Temporary Transfer	$65.00	$65.00	$65.00	$65.00
License Subdivision Application				
1. Application for part assignment of License other than for Domestic and/or Stock and Commercial use-				
- for the first two License issued resulting from the application	$320.00	$330.00	$330.00	$330.00
- for each additional assignment of License issued (third and subsequent licenses)	$70.00	$72.00	$72.00	$72.00
Groundwater License Fees:				
Bore Construction License & Bore Alteration License Fees:				
1. Application for a License to CONSTRUCT, ALTER or REPLACE a Bore -				
- for the First Bore if use is D&S only (also investigation and monitoring use where project not managed by a suitably qualified consultant)	$400.00	$410.00	$410.00	$410.00
- for the First Bore if use is other than D&S only (Note: includes application fee for a Groundwater Licence)	$550.00	$565.00	$565.00	$565.00
- for the First Bore if use is for investigation or monitoring use only and project is managed by a suitably qualified consultant	$300.00	$310.00	$310.00	$310.00
- for each Additional Bore at the site	$50.00	$52.00	$52.00	$52.00
- for each Additional Bore at the site if the bore use is investigation or monitoring and project is managed by a suitably qualified consultant	$25.00	$26.00	$26.00	$26.00
2. Application for RENEWAL/TRANSFER of a License to CONSTRUCT, ALTER or REPLACE a Bore.	$100.00	$103.00	$103.00	$103.00
3. Partial Refund of License Application Fee (non construciton only)	$160.00	$160.00	$160.00	$160.00

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	2004/05	2005/06	2006/07	2007/08
Mallee CMA Salinity Mitigation Charge				
For every megalitre of "new water" transferred in from all selling authorities outside the Mallee CMA boundaries:				
Annual payment ($/ML) for Operations & Maintenance	$3.38	$3.41	$3.41	$3.41
Upfront payment ($/ML) for permanent transfer of water to salinity zone:				
L1	$27.40	$27.50	$27.50	$27.50
L2	$68.50	$68.50	$68.50	$68.50
L3	$137.00	$137.50	$137.50	$137.50
L4	$274.00	$275.00	$275.00	$275.00
Annual payment ($/ML) over 10 years for permanent transfer of water to salinity zone:				
L1	$3.39	$3.40	$3.40	$3.40
L2	$8.44	$8.46	$8.46	$8.46
L3	$16.88	$16.90	$16.90	$16.90
L4	$33.76	$33.80	$33.80	$33.80
Annual payment ($/ML) for temporary transfer of water to salinity zone:				
L1	$2.74	$2.75	$2.75	$2.75
L2	$6.85	$6.85	$6.85	$6.85
L3	$13.70	$13.75	$13.75	$13.75
L4	$27.40	$27.50	$27.50	$27.50

For transfer of water between zones within the Mallee CMA boundary refer to the Mallee CMA document *High Impact Zone and Low Impact Zone Mark II*

Refer Doc File No. 2002/1459/1

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL
AND SUBJECT TO ENACTMENT BY REGULATION

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	2004/05	2005/06	2006/07	2007/08
Transfer of Water Entitlement:				
Permanent Transfer -				
- Application	$275.00	$275.00	$275.00	$275.00
- Certificate	$16.00	$16.00	$16.00	$16.00

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL
AND ENACTED UNDER BY LAW

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	REMARKS	2004/05	2005/06	2006/07	2007/08
Transfer of Water Entitlement (Temporary):					
Per Application	By Law 6195	$65.00	$65.00	$65.00	$65.00

GOULBURN-MURRAY WATER
SERVICE PRICES AND MISCELLANEOUS FEES AND CHARGES
REQUIRING BOARD APPROVAL
EXTERNAL PROVISION OF INFORMATION

#1702801 v2

MISCELLANEOUS FEE/CHARGE:	REMARKS	2004/05	2005/06	2006/07	2007/08
Contour Plans & General Line Drawing:					
Retrieval Time	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Print - Plotter	Cost per Copy	$20.00	$20.00	$20.00	$20.00
Field Note and Plan of Subdivision:					
Retrieval Time	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Photocopy A3/A4 Size		$4.00	$4.00	$4.00	$4.00
Benchmark Information:					
Enquiry -					
- Telephone or Visit					
- Benchmark number supplied	per benchmark	$20.00	$20.00	$20.00	$20.00
Faxed Information -					
- Fax	per A4 sheet	$4.00	$4.00	$4.00	$4.00
Survey Control Information:					
Retrieval Time	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Information Supplied -					
- Co-ordinates	per A4 sheet	$4.00	$4.00	$4.00	$4.00
- Location Sketches	per A3 sheet	$4.00	$4.00	$4.00	$4.00
Digital Information:					
Retrieval Time	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Conversion PLT to DXF -					
- Automatic conversion of plot	per plot file	$20.00	$20.00	$20.00	$20.00
- Manual conversion of plot	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Plotting Time	per plot file	$20.00	$20.00	$20.00	$20.00
Supply Level Information					
Retrieval Time	For the first 15 minutes	$35.00	$35.00	$35.00	$35.00
	then part thereof	$20.00	$20.00	$20.00	$20.00
Faxed Information	Per meter outlet supply level	$4.00	$4.00	$4.00	$4.00
	Location sketch per A4 sheet	$4.00	$4.00	$4.00	$4.00