GOULBURN-MURRAY WATER

Goulburn-Murray Water

Draft 2008 Water Plan

Date: 14 August 2007

Document Number: #2282408v2

Executive Summary

The purpose of the 2008 Water Plan is to clearly articulate and commit to a set of outcomes and prices to be delivered over the regulatory period.

Goulburn-Murray Water's 2008 Water Plan seeks to provide sufficient detail to satisfy key stakeholders and the Essential Services Commission (ESC) that proposed prices will provide sufficient revenue over the regulatory period to meet its obligations and deliver the level of service required by customers in an efficient manner.

Northern Victoria has been in drought for the last ten seasons, which has included years of low water availability in all G-MW's water supply systems, culminating in the record low inflows and availability experienced across all water systems during 2006/07. This has impacted on water availability and revenues and created sharp upward pressure on prices. Continuation of constrained water availability during 2007/08 appears likely.

These pressures on customers, in conjunction with water movement through trading, the aging of existing irrigation supply assets and the strong demand for water savings for the environment have increased the need to urgently reconfigure and modernise existing systems to create efficient, modern systems suited for the future needs of the irrigation industry. Detailed reconfiguration and modernisation plans are now being developed for all gravity irrigation systems, under the guidance of community based working groups.

During 2006/07 G-MW undertook a major revision of its tariffs to introduce Delivery Shares as the basis for recovering the fixed costs for maintaining and renewing irrigation delivery systems. This new tariff structure fundamentally addresses the issues of stranded assets and price pressures due to permanent water trading. This reform was also an essential foundation for the move to unbundled water entitlements which was implemented on 1 July 2007 in northern Victoria.

In June 2007 the Victorian government announced its decision to implement the Foodbowl Modernisation project which will involve expenditure of $1 billion over a five year period to upgrade and modernise irrigation infrastructure. This investment will improve levels of service in irrigation systems, underpin regional economic development based on irrigated agriculture and generate water savings. A pipeline to connect the Goulburn system to the Melbourne urban system and deliver 75 GL of the water savings for use in Melbourne will also be constructed as part of this overall program.

The project has significant implications for Goulburn-Murray Water in developing this Water Plan. Whilst the project provides significant opportunity to create a world class irrigation system, it also provides much uncertainty for the purpose of developing a 5-year Water Plan.

Depending upon the mix and location of the various work packages likely to emerge Goulburn-Murray Water must re-assess its Water Plan. Changes will be needed to the current capital works program and Advance Maintenance Program, and operating costs to take account of opportunity for productivity gains and improved occupational health and safety performance, as well as new costs to support increased reliance on technology based infrastructure.

Accordingly Goulburn-Murray Water proposes to submit this Water Plan to the ESC, for the 5-year period commencing 2008/09, based on assumptions developed prior to the announcement of the Foodbowl Modernisation Project. Further, for gravity irrigation supply services it is proposed that revenue requirements for the four year

period 2009/10 to 2012/13 be reassessed, and resubmitted to the ESC along with revised pricing proposals, when full details of the Foodbowl Modernisation Project are known. This is expected to be early to mid 2008.

Customer engagement is a key part of Goulburn-Murray Water's business with 12 peer elected Water Service Committees and ten catchment committees who represent customers in irrigation areas, surface and groundwater diversions, flood protection and water districts.

Goulburn-Murray Water remains committed to the development and implementation of plans, systems and processes having regard to the Australian/New Zealand Standard AS/NZS 4360 – Risk Management. During the second regulatory period we will continue to implement activities to address the key aspects and areas for development identified in a review of Goulburn-Murray Water's Risk Management Framework. This will include establishing a Corporate Risk Management monitoring and reporting structure and the introduction of whole of business risk management software which will allow risks across all programs to assessed and compared.

Goulburn-Murray Water will continue to manage and operate its dams according to industry best appropriate practice which Goulburn-Murray Water understands to be ANCOLD (Australian National Committee on Large Dams) Guidelines.

As the manager of Victoria's largest irrigation water resource Goulburn-Murray Water understands its responsibility for its contribution to sustainable water resource management and efficient water use. It has embraced the challenge to improve efficiency by placing water savings high on its business priority list. To support this a number of overarching programs have been established to meet this challenge; these include Loss Management, Watertight 2020 and System Reconfiguration.

Investment in applied research will continue where the aims are consistent with business objectives and there are clear and quantifiable benefits. Goulburn-Murray Water will endeavour to gain maximum leverage from its investment by liaising with relevant external bodies to influence national and state programs and develop joint projects. Priority areas for research will include Water Savings, Asset Management, Aquatic Weed Control, Catchment Management, A Healthy Environment and Facilitation of Change.

Goulburn-Murray Water plans to achieve its obligations pertaining to groundwater by continuing to incorporate the development of water sharing strategies like groundwater management plans into the Regional Catchment Strategies. Goulburn-Murray Water considers that this approach will ensure an integrated approach to catchment management with all stakeholder input, including the needs of the environment.

A Diversions Metering Program has been developed in response to Goulburn-Murray Water's obligations and the provisions of a memorandum of understanding with the Department of Sustainability and Environment.

Revenue for the first year of the current regulatory period was significantly below estimates given the extended drought conditions and the resultant lower water allocations. Goulburn-Murray Water intends to delay the recovery of this shortfall until the second regulatory period, that is, 2008/09 to 2012/13.

Revenue requirements have been developed based on forecasts of operating and capital expenditure over the five years of the next regulatory period 2008/09 - 2012/13 and adjusted for cost and revenue variations from the current Water Plan 2006/07 – 2007/08.

The expenditure forecasts are preliminary due to the very uncertain operating environment. The revenue requirement for recently announced major water savings projects including, Shepparton Modernisation, Total Channel Control-Central Goulburn Channels 1234, and Foodbowl Modernisation, has not been developed, and will be included in subsequent submissions to the ESC when more detailed information regarding these projects are received and analysed.

Significant changes to G-MW's operating expenditure over the five year period 2008-13 are forecast to include:

- Advanced Maintenance Program (AMP)
- Automation of Irrigation Systems
- Modernisation and Water Savings Projects
- Murray-Darling Basin Commission contributions
- Diversions Metering
- Other Operating Expenditure, including electricity charges, Groundwater intensive management plans, and ESC license fees and audit costs

Goulburn-Murray Water will continue its significant investment in upgrading its infrastructure. Total estimated capital investment during the second regulatory period is anticipated to be $232 million. The top ten programs, representing approximately 55% of the investment, are as follows:-

Program	Water Plan Total $M
Dam Safety Upgrade Program	27.7
Surface Water Management Program	28.7
Reconfiguration Program	17.3
Central Goulburn Irrigation Area Channel Remodelling Program	14.3
Mokoan - Return to Wetlands (Water Savings Program)	11.0
Diversions Metering Program	6.9
Torrumbarry Irrigation Area Channel Remodelling Program	7.5
Rochester Irrigation Area Channel Remodelling Program	7.4
Waranga Western Channel East & West Subway Program	4.4
Rochester Irrigation Area Regulators Program	3.4
Top Ten total	128.6

In developing the Water Plan G-MW had consulted with Water Services Committees (WSC) on the issues affecting the rural water industry and proposed prices prior to the announcement of the Foodbowl Modernisation Project (FMP).

It is inevitable that the above capital program will be significantly reviewed, but this will not be possible until the scope, timing and investment priorities for the FMP are developed.

Since the announcement, however, a high level review of the Advanced Maintenance Program (AMP) has been completed. AMP works have been kept to a minimum until the full implications of the FMP are known.

Proposed prices in this Water Plan are now lower for the key gravity irrigation services than originally discussed with WSCs in June 2007. These lower prices were

presented to all WSCs at their annual workshop help in Bendigo on 7-8 August 2007, and were generally well supported.

For 2008/09 proposed requirements versus 2007/08, in real terms, are as follows:-

Gravity Irrigation Service	**2008/09 Revenue* Requirements inc/(dec) versus 2007/08 in Real Terms**
Shepparton Gravity Irrigation Service	0.7%
Central Goulburn Gravity Irrigation Service	0.0%
Rochester Gravity Irrigation Service	0.0%
Campaspe Gravity Irrigation Service	(3.0)%
Pyramid-Boort Gravity Irrigation Service	4.5%
Murray Valley Gravity Irrigation Service	0.0%
Torrumbarry Gravity Irrigation Service	5.7%

** Note: This change represents an average across the particular service. Due to changes to components of the tariff for each service results for individual customers may vary above or below this average. Does not include CPI, which will be added as determined by the ESC for each particular year.*

It must be emphasised that the proposed 2008/09 revenue for the above services should be regarded as a “holding pattern” approach, and do not represent the long term revenue requirements for sustainable service delivery. Robust revenue requirements for the remaining 4 years of the second regulatory period will be developed once details of the $1 billion FMP are more fully known.

Goulburn-Murray Water proposes that a revenue cap approach is taken to price control for the regulatory period. Under the revenue cap approach a specified level of revenue is fixed for the term of the regulatory period. Under this approach Goulburn-Murray Water will have an incentive to minimise its costs as any benefits will be retained during this regulatory period, after which these benefits are passed on to customers in the form of lower prices.

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1 Introduction

1.1 Purpose of Water Plan

Goulburn-Murray Water's Statement of Obligations with the Minister for Water requires the delivery of a Water Plan to the Essential Services Commission, the economic regulator for the Victorian water sector.

The key role of the 2008 Water Plan is to clearly articulate and commit to a set of outcomes and prices to be delivered over the regulatory period.

The Essential Services Commission has determined that this second regulatory period shall be for a period of five years commencing 1 July 2008.

The Essential Services Commission will assess the Water Plan against the principles outlined in the Water Industry Regulatory Order and will decide whether to approve or specify the prices or the manner in which prices are to be determined for the services provided by Goulburn-Murray Water over the regulatory period.

Goulburn-Murray Water's 2008 Water Plan seeks to provide sufficient detail to satisfy the Essential Services Commission that proposed prices will provide sufficient revenue over the regulatory period to meet its obligations and deliver the level of service required by customers. The 2008 Water Plan is a key document in seeking customer input and advice on service-price tradeoffs prior to submission to the Essential Services Commission for approval of the proposed prices.

In June 2007 the State Government announced the Foodbowl Modernisation Project at a total cost of $1 billion, including $100 million to be contributed by Goulburn-Murray Water. The project aims to modernise Goulburn-Murray Water's aging infrastructure and achieve 225 gigalitres in water savings to be shared equally between Melbourne Water, the environment, and irrigators.

A Steering Committee has been appointed to determine amongst other things, the nature and priority of works packages, and institutional arrangements for delivering the project.

The project has significant implications for Goulburn-Murray Water in developing this Water Plan. Whilst the project provides significant opportunity to create a world class irrigation system, it also provides much uncertainty for the purpose of developing a 5-year Water Plan.

Depending upon the mix and location of the various work packages likely to emerge from the Steering Committee process Goulburn-Murray Water must re-assess and modify its current capital works program and Advance Maintenance Program. A modernised system will also provide much opportunity for productivity gains and improved occupational health and safety performance. New costs to support increased reliance on technology based infrastructure will need to be considered.

At the time of writing the Steering Committee process had just commenced. It is anticipated that full details of the project will not become known within the time constraints of this Water Plan process to enable a meaningful plan to be developed for the next 5-year period.

Accordingly Goulburn-Murray Water proposes to submit this Water Plan to the Essential Services Commission, for the 5-year period commencing 2008/09, based on assumptions developed prior to the announcement of the Foodbowl Modernisation Project.

For gravity irrigation supply services it is proposed that revenue requirements for the four year period 2009/10 to 2012/13 be reassessed, and resubmitted to the ESC along with revised pricing proposals, when full details of the Foodbowl Modernisation Project are known. This is expected to be early to mid 2008.

1.2 Overview of Goulburn-Murray Water

Goulburn-Murray Water is Victoria's largest rural water provider, undertaking its management functions across a region of 68,000 km2 or approximately one third of Victoria. Goulburn-Murray Water's region is bordered by the Great Dividing Range in the south and the River Murray to the north and stretches from Corryong in the east down river to Nyah. Goulburn-Murray Water 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 Murray-Darling Basin Commission.

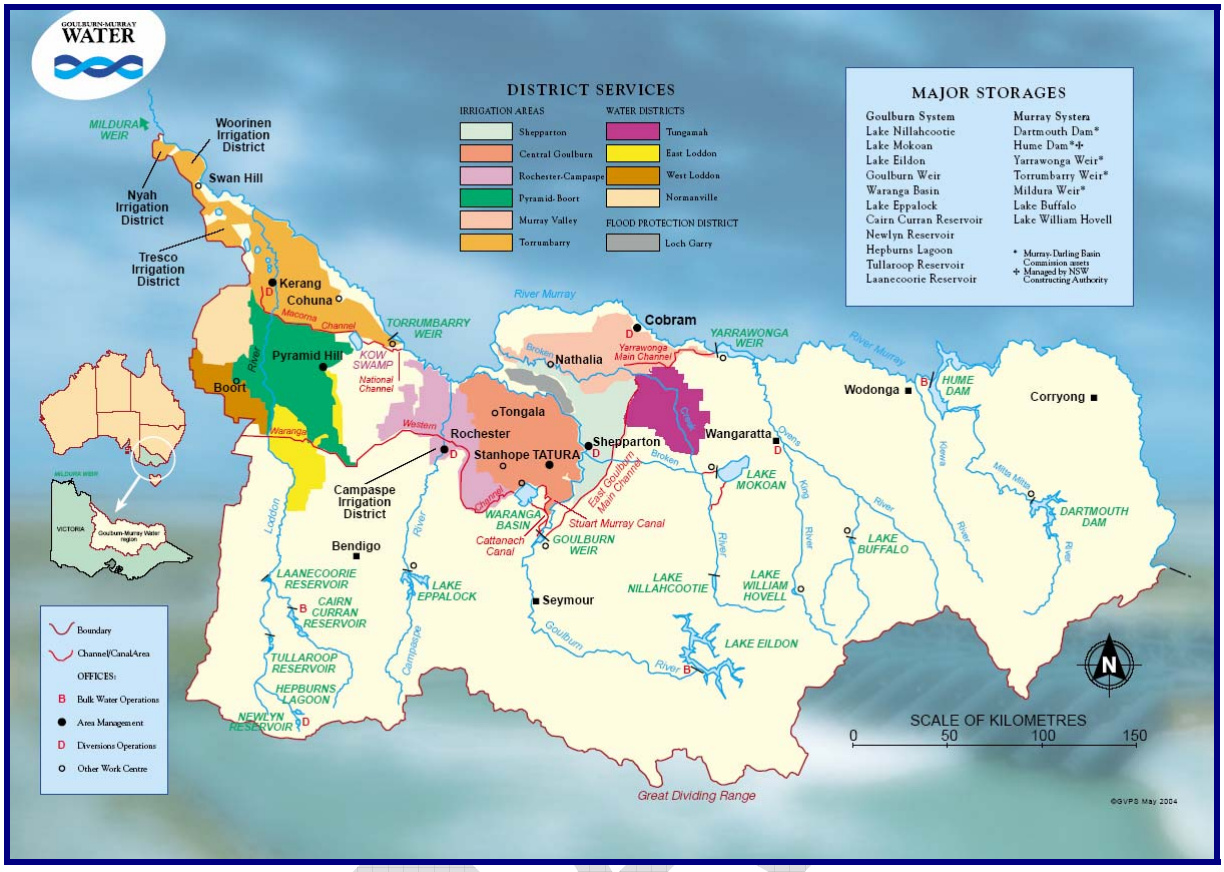
Goulburn-Murray Water has three separate business divisions. These are:

- Asset and Technical 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, land and on water management, and
    - The management of assets in irrigation, water and waterway management districts;
- Water Delivery Services, involving:
    - The delivery of water entitlements, water supply, drainage and flood protection services to customers, and
    - The licensing of surface water and groundwater diversions;
- Planning and Environment Services involving the provision of a range of services which support sustainable land and water management.

In support Goulburn-Murray Water has two supporting divisions;

- Business and Finance, supporting financial management, information technology, water administration, human resources, property and legal services.
- Strategy and Stakeholder Affairs, manages the regulatory requirements and stakeholder relationships including corporate strategy, communications and governance functions. The division also responsible for the management and development of water amenities at storages.

Figure 1 – Map of Goulburn-Murray Water



1.3 Water – Our Operating Environment

Northern Victoria has been in drought for the last ten seasons, which has included years of low water availability in all G-MW's water supply systems, culminating in the record low inflows and availability experienced across all water systems during 2006/07. This has impacted on water availability and revenues and created sharp upward pressure on prices. Continuation of constrained water availability during 2007/08 appears likely.

During 2006/07, the drought has had a significant impact on G-MW's business. A very large portion of available operational and management resources have been directed to managing and responding to drought. This has included major projects to extend water availability through pumping of "dead storage" at Waranga Basin and Lake Buffalo.

The drought has also had a major impact on the businesses of many of G-MW's customers. The last few years have seen a significant adjustment in the dairy industry. This has continued through 2006/07. In addition, the extremely low water availability in some systems (especially the Goulburn, Campaspe and Loddon systems) has placed the horticultural sector under significant pressure.

Drought has also continued to impact heavily on customers with recreation and tourism industry businesses located around Goulburn-Murray Water storages, where continuing low water levels have presented real challenges. Despite these adverse

conditions, there has been interest in further recreational development at key storages including Lake Nagambie and Lake Eildon.

These pressures on customers, in conjunction with water movement through trading, the aging of existing irrigation supply assets and the strong demand for water savings for the environment have increased the need to urgently reconfigure and modernise existing systems to create efficient, modern systems suited for the future needs of the irrigation industry. Detailed reconfiguration and modernisation plans are now being developed for all gravity irrigation systems, under the guidance of community based working groups. Additional resources have been directed to this key area to speed up the development of these plans.

During 2006/07 G-MW undertook a major revision of our tariffs to introduce Delivery Shares as the basis for recovering the fixed costs for maintaining and renewing irrigation delivery systems. This represents a major shift from the long standing past practice of recovering these costs on the basis of the water entitlements owned by each farmer. This new tariff structure fundamentally addresses the issues of stranded assets and price pressures due to permanent water trading. This reform was also an essential foundation for the move to unbundled water entitlements which was implemented on 1 July 2007 in northern Victoria.

However, the extreme drought conditions of 2006/07 raised customer concerns in relation to payment of fixed charges for infrastructure when water availability was extremely low. The Victorian government has responded to this issue in 2006/07 with the provision of a generous package of rebates and interest free payment deferrals. In order to better understand this issue and develop future management responses, G-MW undertook a Tariff Policy Review to develop and evaluate a range of options that could be applied to this issue.

The drought has also highlighted the need for regional urban centres to seek additional sources of water to meet the future needs of their growing populations. The supply authorities responsible for both Bendigo and Ballarat have developed future water strategies based on accessing additional supplies from our Goulburn system. Construction is now underway on a major pipeline to link the Waranga Western Channel to Lake Eppalock.

The Victorian government has also recently announced its decision to implement the Foodbowl Modernisation project which will involve expenditure $1 billion over a five year period to upgrade and modernise irrigation infrastructure. This investment will improve levels of service in irrigation systems, underpin regional economic development based on irrigated agriculture and generate water savings. A pipeline to connect the Goulburn system to the Melbourne urban system and deliver 75 GL of the water savings for use in Melbourne will also be constructed as part of this overall program.

1.4 Statutory & Regulatory Framework

Goulburn-Murray Water is a rural water corporation established under the Water Act 1989 with a skills based Board appointed by the Minister for Water. Goulburn-Murray Water 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 four Murray Darling Basin

Commission storages) were transferred to Goulburn-Murray Water from the Rural Water Corporation.

The specific obligations on Goulburn-Murray Water relating to the preparation and delivery of the 2008 Water plan are covered under:

- Goulburn-Murray Water's Statement of Obligations; and
- The Water Industry Regulatory Order

1.4.1 Statement of Obligations

Under the provisions of the Water Industry Act 1994 obligations are imposed on Goulburn-Murray Water by the Minister for Water through the Statement of Obligations.

The Statement imposes a range of obligations on the Goulburn-Murray Water 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:

- The Water Plan
- Governance & Risk Management, including
    - Customer & Community Engagement
    - Risk Management
    - Responding to Incidents & Emergencies
    - Asset management
    - Dam safety
- Planning & Service Delivery, including
    - Conserving & Recycling Water
    - Efficient distribution systems
    - Metering
    - Responding to Drought
    - Regional & Local Government Planning
    - Research & Knowledge
    - Sustainable Management
- Environmental Management, including
    - Environmental Management System
    - Blue-Green Algal Blooms
    - River & Aquifer Health
    - Monitoring River Health
- Payment Schemes & Contributions
- Compliance
- Responding to drought
- Providing concessions and rebates

Details on the activities which Goulburn-Murray Water will undertake to ensure compliance with the Statement of Obligations are included in the Section 3.2.1 and other appropriate areas of this 2008 Water Plan.

Subsequent to the issuing of the Statement of Obligations, Mr John Brumby MP, Premier and Minister for Water (as at 31 July 2007) approved a request to extend the submission date of Goulburn-Murray Water's draft Water Plan to 14 August 2007.

In approving this request the Minister acknowledged the additional work required to take account of the consequences of the Government's recently announced Foodbowl Modernisation Project.

1.4.2 Water Industry Regulatory Order

The Water Industry Regulatory Order establishes the regulatory framework and nature of the water services to be regulated by the Essential Services Commission and the functions of the Essential Services Commission. Services relevant to Goulburn-Murray Water within the scope of the Water Industry Regulatory Order, specified as *prescribed services*, include retail water services, storage operator and bulk water services, irrigation drainage services and diversions services.

In the context of developing the 2008 Water Plan the Water Industry Regulatory Order has the following influences:

- Specifying particular matters to which the Commission must have regard in exercising its powers and functions under this Order;
- Specifying which services are to be prescribed and therefore come under the regulation of the Essential Services Commission; and
- Specifying the procedural requirements and regulatory principles to be adopted by the Essential Services Commission in regulating the price of prescribed services, including ensuring prices provide for a sustainable revenue stream, recover costs and return a rate of return, provide incentives for sustainable water use and take into account the interests of customers.

2 Outcomes for First Regulatory Period

As part of the review of rural prices in 2006, Goulburn-Murray Water developed a Water Plan which identified a set of outcomes and prices that would be delivered over the first regulatory period. This section of the 2008 Water Plan outlines Goulburn-Murray Water's progress in delivering those outcomes.

Recognising that this first regulatory period is still in progress the exposure draft 2008 Water Plan outlines the progress up to the end of the first year as at 30 June 2007

2.1 Service Standards & Other Outcomes

Goulburn-Murray Water remains focused on the delivery of the outcomes committed to for the first regulatory period. Goulburn-Murray Water remains committed to its long term objective of providing a range of responsive and innovative services with a price and delivery mix that balances existing and emerging customer needs.

Goulburn-Murray Water's operating environment through the initial stage of this first regulatory period continues to present many challenges with the extended drought conditions continuing to impose significant hardship on its rural irrigation customer base.

Resultant low water allocations and a shortened 2006/07 irrigation season have resulted in an adjustment of Goulburn-Murray Water's service targets to balance the trade off between service levels and efficiency. These adjustments have been undertaken through consultation with Water Services Committees.

A significant amount of Goulburn-Murray Water's operational and management resources have also been refocussed on drought response.

The following details Goulburn-Murray Water's progress in achieving the service key performance indicators described in the Water Plan 2006/07 – 2007/08, Section 4.6.1.

Bulk Water Services

KPI – Availability of Assets to Supply Customer Orders

Goulburn-Murray Water achieved the performance target of 100% for the availability of the bulk water assets to supply customer orders.

Table 1 – Availability of Bulk Water Assets to Supply Customer Orders

Indicator	Target	Actual	Target Achieved
Availability of Bulk Water Assets	100%	100%	✓

KPI – Capability of Storage to Hold Design Capacity

Goulburn-Murray Water has achieved the performance targets for percentage of time storages are capable of holding design capacities. Operational restrictions on Lake Mokoan due to dam safety issues remain.

Table 2 – Capability of Storage to Hold Design Capacity

Bulk Water Basin	Target	Actual	Target Achieved
Broken Basin	82%	82%	✓
Goulburn Basin	100%	100%	✓
Campaspe Basin	100%	100%	✓
Loddon Basin	100%	100%	✓
Bullarook Basin	100%	100%	✓
Ovens/King Basin	100%	100%	✓

District Services

KPI - Water Delivered on Day Ordered within Agreed Levels

With such low allocations the trade off between service levels and efficiency was recognised with the customer group electing to strive for improved efficiency, to maximise the volume of water available, understanding that this would impact on the service level they received.

In consultation with the Water Services Committees the performance indicator and associated targets were revised for the 2006/07 irrigation season. Delivery service standards where measured based on delivery of water within one day +/- of the ordered date. Goulburn-Murray Water's performance to date against these revised targets is shown in Table 3.

Table 3 - Water Delivered within One day +/- of the Ordered Date

Irrigation Area	Revised Target	Actual	Target Achieved
Shepparton	97%	99.0%	✓
Central Goulburn	98%	99.3%	✓
Rochester	95%	98.1%	✓
Pyramid-Boort	94%	97.5%	✓
Murray Valley	96%	98.9%	✓
Torrumbarry	97%	99.3%	✓

KPI - Leaks Responded to within Agreed Times per Customer Service Agreement

Only the Shepparton Irrigation Area has achieved the target for this performance indicator for the 2006/07 irrigation season; as shown in Table 4.

The extreme dry conditions have contributed significantly to Goulburn-Murray Water's underperformance in this area through a greater awareness of leaks by staff, customers and the general public. This has resulted in a greater than expected number of leaks being reported.

Table 4 – Leaks Responded to within Agreed Times per Customer Service Agreement

Irrigation Area	Target	Actual	Target Achieved
Shepparton	87%	97%	✓
Central Goulburn	96%	81%	X
Rochester	96%	90%	X
Pyramid-Boort	96%	84%	X
Murray Valley	82%	73%	X
Torrumbarry[1]	90%	-	X

1. Maintenance management system not fully functional

KPI - No Unplanned Supply Failures Longer than 24 Hours

Goulburn-Murray Water has been able to achieve this performance indicator in the Shepparton, Central Goulburn and Rochester Irrigation Areas for the 2006/07 irrigation season; as shown in Table 5.

This target has not been achieved in Pyramid-Boort, Murray Valley and Torrumbarry Irrigation Areas for the following reasons:

- Pyramid-Boort Irrigation Area – In seeking to maximise delivery efficiency at the commencement of the irrigation season the uncertainty of allocations and season start date, coupled with the sudden start to the season, resulted in a lack of available water in the Tandarra Pondage. Similarly a further shortfall in supply occurred mid season where a lack of supply level height was experienced due to low flows.
- Murray Valley Irrigation Area – Supply issues resulted from irregular operation of automatic gates.
- Torrumbarry Irrigation Area – A delay in the completion of a channel realignment project and pipeline breaks in both the Tresco and Nyah districts.

Table 5 – No Unplanned Supply Failures Longer than 24 Hours

Irrigation Area	Target	Actual	Target Achieved
Shepparton	0	0	✓
Central Goulburn	0	0	✓
Rochester	0	0	✓
Pyramid-Boort	0	3	X
Murray Valley	0	2	X
Torrumbarry	0	4	X

Diversion Services

KPI - Supply Complaints Responded to Within Customer Service Agreement Targets

Table 6 – Supply Complaints Responded to Within Customer Service Agreement Targets

Indicator	Target	Actual	Target Achieved
Supply Complaints Responded to Within Customer Service Agreement Targets	91%	99%*	✓

**Note: Estimate only as a process to better track this data is yet to be implemented*

KPI - Streams Operated at Agreed Targets or Natural Flows at Key Monitoring Sites

The specified streams, which include Goulburn, Ovens, Campaspe, Broken and Loddon, are monitored on a daily basis with compliance reporting monthly to the Goulburn-Murray Water Board and relevant Water Service Committee's. Currently Goulburn-Murray Water is achieving this performance indicator with an overall score of 97% compared with its target of 90%.

Table 7 – Streams Operate at Agreed Targets or Natural Flows at Key Monitoring Sites

Indicator	Target	Actual	Target Achieved
Streams Operate at Agreed Targets or Natural Flows at Key Monitoring Sites	90%	97%	✓

Natural Resource Services

KPI - Mildura-Merbein Salt Interception Scheme - Availability of Assets

The availability of the Mildura-Merbein Salt Interception Scheme assets achieved the target of 68.7% with five of the 16 bores remaining out of service due to blockage resulting from fouling by naturally occurring iron bacteria. There remains potential for further pumps to also be taken out of service and direct intervention is not proposed until refurbishment investigations are completed over the next 18 months.

Table 8 – Mildura-Merbein Salt Interception Scheme - Availability of Assets

Indicator	Target	Actual	Target Achieved
Mildura-Merbein Salt Interception Scheme - Availability of Assets	68.7%	68.7%	✓

Administration

Goulburn-Murray Water has achieved the performance targets set for telephone calls, billing accuracy, Energy & Water Ombudsman Victoria and processing bore construction licences.

Goulburn-Murray Water has been unable to achieve the performance targets for the remaining administration performance indicators given unprecedented numbers of drought related applications.

Despite record low allocations, similar volumes of water have traded in the Goulburn and Murray systems as at the same time last year. On the temporary trade market record volumes were processed early in the 2006/07 irrigation season as customers sought to secure their water requirements in earlier trading.

Although permanent trading has transactions were lower than the 2005/06 season for the full season there was unprecedented demand for permanent trade occurring during the January-March 2007 period.

The permanent trading 4% cap was reached for Central Goulburn, Rochester, Pyramid-Boort and Campaspe Irrigation Areas for the 2006/07 Irrigation.

Table 9 - Water Administration Business Transactions 2006/07

Transaction Type	**Number of Transactions**	
	2005/2006	**2006/2007**
Permanent Transfer of Water Entitlement	565	541
Temporary Transfer of Water Entitlement	6,340	10,189
Information Statements	2,110	2,211
Subdivisions	264	241
Amalgamations Irrigation	137	115
Bore Construction Licenses	567	1,850
Total Transactions	**9,983**	**15,147**

Collectively these circumstances, coupled with the availability of appropriately skilled staff and the increased demands on Diversions operational staff to perform field inspections, have seen delays in processing being experienced for all the processing performance indicators.

Table 10 – Administration Performance for First Regulatory Period – 2006/07

Indicator	2006/07 Target	2006/07 Actual	Target Achieved
Switchboard Telephone calls answered within 30 seconds (Customer service Tatura office during business hours)	92%	100%	✓
Accounts toll free Telephone calls answered within 30 seconds (Customer service Tatura office during business hours)	92%	100%	✓
Customer billing accuracy rate	99%	100%	✓
EWOV Billing Enquiries Per 1000 Customers	1	1	✓
EWOV – Number of complaints (excl. enquiries)	8	7	✓
Responses to written correspondence directed to Tatura Office (days)	9	9	✓
Processing of Temporary Transfer of Water Entitlement within 5 days - %	100%	90%	X
Processing of Temporary Transfer of Water Entitlement within 4 days - %	65%	82%	✓
Processing of Permanent Transfer of Water Entitlement – for applications not requiring a channel capacity and salinity assessment, or diversions inspection within 15 days	92%	80%	X
Processing of Permanent Transfer of Water Entitlement – for applications requiring a channel capacity and salinity assessment, or diversions inspection within 30 days	92%	50%	X
Processing of Permanent Transfer of Water Entitlement- Diversions License within 25 days	92%	50%	X
Process of Licensing Groundwater Bore Construction Licence within 10 days	92%	92%	✓
Processing of Information Statements within 5 days	100%	90%	X
Processing of Meter Read Statements within 5 days	100%	100%	✓

2.2 Delivery of Key Capital Projects

Capital projects to the value of $46.6 million were delivered in 2006/07. This is $26.4 million below the forecast for this period included in the 2006 Water Plan.

The significant project variances were:

- Lake Mokoan Works – Delays to confirmation of the offset package and inclusion off some recurrent items in capital program have lead to large reduction in revised forecast over all projects of $15.0 million.
- Cairn Curran Dam Improvement – Scope of the total project was reduced, and the amount planned to be spent in 2006/07 was delayed pending Treasury approval - $6.2 million
- Central Goulburn Channel Automation – underspent by $3.9 million – project was redefined deferred pending final DSE approval.

2.3 Changes in Legislative Obligations

The only material change is the Minister of Water has appointed Goulburn-Murray Water as Storage Managers under clause 122ZL of the Water Act. These new storage manager functions are closely aligned with current activities in delivering on

the Statement of Obligations and given this additional expenditure will not be incurred.

Legislation to enable the unbundling of water entitlements was passed through the Victorian parliament in November 2005. Subsequently, the Minister for Water approved and issued Conversion Orders in June 2006 under the new provisions of the Water Act 1989 to implement unbundling in the regulated water systems of northern Victoria. As the largest rural water authority in northern Victoria, unbundling of water entitlements has required significant G-MW resources to implement. Some of the key activities undertaken as part of G-MW's unbundling implementation were:

- Development and implementation of delivery shares and reformed tariffs to support unbundling (July 2006).
- Implementation of a new customer management and billing system capable of interfacing with the new state wide water register and designed to manage unbundled entitlements effectively.
- Extensive modification to G-MW's computer- based water delivery planning and scheduling system (known as IPM), to support the management of irrigation system operations in an unbundled environment.
- An extensive customer information program was undertaken to ensure that G-MW's customers had ample opportunity to understand the significant reforms being implemented.

Whilst DSE provided valuable funding in relation to data preparation and 60% of the cost for customer information programs, implementation of these reforms required significant additional expenditure by G-MW, which was not able to be accurately estimated or incorporated in G-MW's first water plan for the period 2006/07 – 2007/08

2.4 Unplanned Outcomes

In addition to those outcomes planned for the first regulatory period, the extenuating circumstances facing Goulburn-Murray Water, its customers and the wider community due to the extraordinary dry conditions has resulted in a number of additional unplanned outcomes. These have included:

- Short term redeployment of retail water operational staff;
- Regular drought communication including newsletters and industry body forums;
- Seasonal update forums for irrigators delivered in partnership with the Department of Primary Industries;
- Construction and installation of emergency pumping stations;
    - Waranga Basin – two stations comprising 15 pumps; the Major Outlet station delivered 1800 ML/d through 12 pumps and the Minor Outlet station delivered 450 ML/d through 3 pumps. The Victorian Government met the $3 million project cost.
    - Lake Buffalo – the installation of four pumps supplying 77 ML/d to meet the needs of Wangaratta and domestic and stock customers on the Buffalo and Ovens Rivers.
- Management and administration of Victorian Government drought assistance rebate to retail water customers.

2.5 Recovery of Revenue

Goulburn-Murray Water's revenue for the first year of the current regulatory period (ie 2006/07) was $7.9 million below the Water Plan forecasts due to the extreme drought conditions and the resultant lower water allocations. If dry conditions continue, there is a real risk of further revenue shortfalls in 2007/08.

Goulburn-Murray Water intends to delay the recovery of revenue shortfalls from the first regulatory period 2006/07 – 2007/08 until the second regulatory period, 2008/09 - 2012/13.

Outcomes for Second Regulatory Period

3 Service Outcomes

This section of the 2008 Water Plan specifies the service standard targets that Goulburn-Murray Water intends to achieve over the second regulatory period. These targets have been developed in consultation with Goulburn-Murray Water customers.

The prescribed services addressed are:

- Retail Water Services
- Irrigation Drainage Services
- Diversion Services
- Administration Services
- Bulk Water Services

3.1 Customer Consultation

3.1.1 Overview of Customer Consultation

The key external stakeholders for Goulburn-Murray Water include the Minister for Water and customer groups. The requirements and expectations of these stakeholders help set the direction of Goulburn-Murray Water's strategic direction.

Goulburn-Murray Water has an established process in place which sets standards through annual negotiations between service managers and the various Water Service Committees. The process adopted allows discussion and negotiation on the appropriate service standards and the corresponding trade-off between capital and operations costs and service outcomes. This approach has been followed since around 1995.

Building on these processes Goulburn-Murray Water, in consultation with the various Water Service Committees, have replaced existing Customer Service Agreements with Customer Charters that conform to Essential Services Commission guidelines.

Customer Charters define the relationship between the respective Water Services Committee which presents the views of customers and Goulburn-Murray Water, and the way that:

- services are provided to meet the needs of customers in the most cost efficient manner; and
- allow Goulburn-Murray Water to develop, operate and maintain the water systems in the most effective way.

The charters typically cover the water services provided by Goulburn-Murray Water, that is:

- Water supply for irrigation use;
- Water supply for stock and domestic use;
- Bulk supplies;
- Surface drainage; and
- Sub-surface drainage.

The issues typically covered in a charter include asset renewal and maintenance programs, tariff schedules, billing cycles, operating procedures, responsibilities for and methods of communication between Goulburn-Murray Water and the Water Service Committee and between the Water Service Committee and Goulburn-Murray Water.

Customer engagement is a key part of Goulburn-Murray Water's business with 12 peer elected Water Service Committees 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.

3.1.2 Consultation on the 2008 Water Plan

Consultation with Water Services Committees on the 2008 Water Plan had commenced prior to the announcement of the Foodbowl Modernisation Project, with discussion including unbundling and tariff reform, asset management, including key cost drivers, replacement priorities, and operating investment estimates.

Prior to the Foodbowl Modernisation Project announcement the following consultation had taken place:-

November/December 2006	Water Service Committee Meetings – Assets and Technical Services staff provided presentation on proposed asset replacement and Advanced Maintenance programs. After detailed review by WSCs, programs were reviewed on the basis of comments and issues raised by WSCs.
April/May 2007	Water Service Committee Meetings – Operational Managers briefed Water Service Committees on Area and Diversion on final budget submissions
Late May 2007	Water Service Committee Leadership Meeting – presented and discussed key issues for 2008 Water Plan
24 May to Late June 2007	Water Service Committee consultation on 2008 Water Plan with individual committees including detailed presentations on proposed prices and explanations of cost drivers
15 June 2007	Bulk Water Forum – Consultation with bulk water customers on 2008 Water Plan pricing proposals

Consultation proposed prior to submission of the final Water Plan to the ESC is as follows:

8 August 2007	Water Services Committee Annual Workshop, attended by all WSC members. (Completed). Revised pricing approach proposed in response to Foodbowl Modernisation Project. Prices as per previous consultation except for Gravity Irrigation services in which Advanced Maintenance Program was revised.
14 August 2007	Draft 2008 Water Plan released for wider public consultation

August /September 2007	Further meetings with Water Services Committee as required prior to submission of Final Water Plan.
August /September 2007	Public comments received on Draft 2008 Water Plan
8 October 2007	Final 2008 Water Plan submitted to Essential Services Commission

3.2 Regulatory & Government Obligations

A number of the services outcomes that Goulburn-Murray Water will deliver over the second regulatory period are driven by obligations from government and regulatory authorities. These obligations are in addition to those negotiated directly with Goulburn-Murray Water customers.

Broadly the statutory obligations for Goulburn-Murray Water are covered in the Water Act 1989, Water Industry Act 1994, Occupational Health and Safety Act 2004, Victorian Terrorism (Community Protection) Act 2003, Safe Drinking Water Act and Environment Protection Act 1970. In addition Goulburn-Murray Water gives consideration to the codes and guidelines supporting these Acts.

The following sections provide an overview of Goulburn-Murray Water's proposed outcomes and programs, for the second regulatory period, that are linked to achieving its statutory obligations.

3.2.1 Statement of Obligations

Goulburn-Murray Water's Statement of Obligations (SoO) has recently been reviewed and issued by the Minister for Water. The additional obligations now formally included in the SoO were in line with expectations and the draft SoO previously provided.

Currently the activity associated with meeting the Statement of Obligations is largely funded through existing programs, from both internally and externally funding investment sources. Exceptions that will require additional funds investment to proceed are identified in the discussions relating to obligation.

In the second regulatory period Goulburn-Murray Water proposes to comply with the Statement of Obligations in the following way:

3.2.1.1 The Water Plan

Goulburn-Murray Water will continue to work in partnership with the Department of Sustainability and Environment and the Essential Services Commission to ensure the preparation, delivery and procedural requirements of the Water Plan meet with key stakeholders' expectations.

3.2.1.2 Governance & Risk Management

Customer & Community Engagement

Goulburn-Murray Water recognises the important contribution customers and their committees make in ensuring robust debate of issues affecting customers and the setting of the future direction of Goulburn-Murray Water. Goulburn-Murray Water remains strongly committed to effective customer engagement and considers it has open and transparent processes in place, as outlined in Section 3.1.

As implementation of improvements to the future direction of retail water services customer committees advances, in the second regulatory period, Goulburn-Murray

Water anticipates moving its focus to diversion services customer committees. Goulburn-Murray Water considers that in pursuit of continuous improvement there are improvement opportunities which will benefit diversion service customers through improved committee effectiveness and support arrangements. These opportunities will be explored in consultation with diversion communities.

Goulburn-Murray Water will continue to make information readily available through a range of communication modes.

Risk Management

Goulburn-Murray Water remains committed to the development and implementation of plans, systems and processes having regard to the Australian/New Zealand Standard AS/NZS 4360 – Risk Management. Goulburn-Murray Water has risk management programs in place which include Occupational Health & Safety, Environmental Management, financial risk and headworks assets, which also includes the Dam Safety Program. Overarching all of its risk management programs is a Goulburn-Murray Water Whole of Business Risk Management Framework as detailed in Figure 1.

Figure 1 – Goulburn-Murray Water's Risk Management Framework

During the second regulatory period Goulburn-Murray Water will continue to implement activities to address the key aspects and areas for development identified in a review of Goulburn-Murray Water's Risk Management Framework. This will include establishing a Corporate Risk Management monitoring and reporting structure and the introduction of whole of business risk management software which will allow risks across all programs to assessed and compared.

Responding to Incidents & Emergencies

Goulburn-Murray Water has given priority, based on risk, to dam safety and environmental management and has in place well developed systems for responding to incidents and emergencies in these areas.

Goulburn-Murray Water has a Dam Safety Emergency Business System in place to plan and monitor its dam safety emergency program. This Business System has been developed over the past five years and provides a comprehensive framework for maintaining and improving Dam Safety Emergency Plans and Goulburn-Murray Water's dam safety emergency exercise program.

Goulburn-Murray Water has been very active in conducting dam safety emergency exercises and reviewing its Dam Safety Emergency Plans over the current regulatory period. The Dam Safety Emergency Business System has been described as being "close to industry best practice".

Within the second regulatory period Goulburn-Murray Water will continue to strive for continuous improvement in its Dam Safety Emergency Business System including the continuation of the dam safety emergency exercise program and regular revision of the Dam Safety Emergency Plans.

As an integral part of Goulburn-Murray Water Environmental Management System it has developed a comprehensive framework to mange environmental incidents. Goulburn-Murray Water's Corporate Environmental Emergency Management Manual details its approach to environmental incident management and includes supporting documentation for recognising, reporting, rating, responding and reviewing incidents.

Goulburn-Murray Water's environmental incident framework will to be reviewed throughout the second regulatory period as part of the broader review of its Environmental Management System.

Asset Management

Goulburn-Murray Water is focused on the delivery of sustainable water services that meet customer and stakeholder needs and support regional economic growth, whilst balancing social, economic and environmental considerations.

Goulburn-Murray Water will continue to provide these services in the safest and most cost effective manner, delivering productivity improvements, water savings and business efficiency across the asset base. Effective management of Goulburn-Murray Water's extensive holdings of assets is essential if it is to achieve these goals.

Asset management concerns the way in which Goulburn-Murray Water looks after the asset it owns, both on a day to day basis (maintenance and operations) and on the medium to long-term basis (strategic and forward planning).

Goulburn-Murray Water's asset management process are linked directly with the current or desired levels of service for customers, the associated cost in providing those service levels and the practices and systems that assist in managing the assets in the most effective and efficient way.

Late in 2006 a comprehensive review of Goulburn-Murray Water's asset management practices against Best Appropriate Practice was completed. From this review Goulburn-Murray Water has been able to develop a prioritised program for improvements to its asset management practices, based on meeting business objectives in both the short and medium term.

The priority areas for improvement are largely process-orientated activities, which will provide the framework, policy and strategies to allow Goulburn-Murray Water to identify and derive significant benefits from the asset management investments to date and into the future. The improvements are focused on strengthening the links between asset management and Goulburn-Murray Water business objectives and build on the strong base of asset condition and attribute data.

During the second regulatory period Goulburn-Murray Water will be seeking to achieve best appropriate practice across 90% of its asset management activities with a focus on project management, maintenance management and asset management plans. Reconfiguration and modernisation programs are anticipated to significant influence the direction of these activities.

Goulburn-Murray Water will continue to benchmark against other business to assist it in establishing Best Appropriate Practices, including annual audits of its asset management processes.

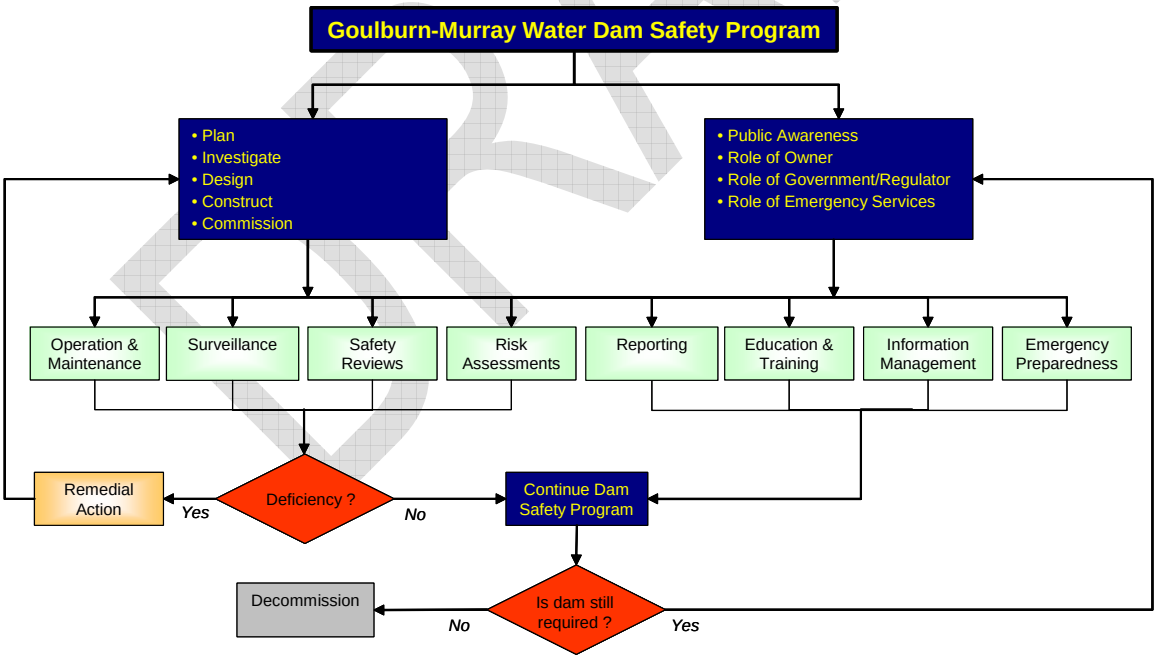
Dam Safety

Goulburn-Murray Water will continue to manage and operate its dams according to industry best appropriate practice which Goulburn-Murray Water understands to be ANCOLD (Australian National Committee on Large Dams) Guidelines.

Goulburn-Murray Water recognises the important role ANCOLD guidelines and have incorporated these in the development and implementation processes to identify, assess, manage and prioritise improvement to the dams it operates.

Goulburn-Murray Water considers it has robust processes and practices established for its Dam Safety Program with Figure 2 presenting the interaction between the elements. The program is primarily based on risk analysis and risk reduction with flexibility to ensure variability in compliance obligations are met, and to allow for various internal and external influences.

Figure 2 - G-MW Dam Safety Program



Flowchart from Figure 2.1, ANCOLD Guidelines on Dam Safety Management, August 2003

During the second regulatory period Goulburn-Murray Water will continue working in partnership with ANCOLD and its stakeholders to ensure that its dam safety practices continue to deliver the appropriate standards expected in operating these

high hazard assets. Goulburn-Murray Water will continue to develop and implement dam safety programs to ANCOLD guidelines ensuring that each element of Figure 2 is addressed in both its day to day activities (maintenance and operations) and on the medium to long-term activities (strategic and forward planning).

The capital works associated with Dam Safety Upgrade Program (formerly the Dam Improvement Program - DIP) are discussed separately, in more detail, in Section 4.3.

3.2.1.3 Planning & Service Delivery

Conserving & Recycling Water

Goulburn-Murray Water undertakes a number of activities which aids it achievement against this obligation. These are outlined in more detail within Sections 3.2.1.3 and 3.2.2. Activities include:

- Operating efficient distribution systems;
- System Reconfiguration;
- Diversion metering Program;
- Sustainable Management;
- River and Aquifer health;
- Goulburn-Murray Water's seasonal allocation process, refer to Responding to Drought; and
- Water reuse and diversion through the implementation of the Irrigation Drainage Memorandum of Understanding;

Efficient Distribution Systems

Goulburn-Murray Water understands its responsibility as the manager of Victoria's largest irrigation water resource for its contribution to sustainable water resource management and efficient water use. Goulburn-Murray Water has embraced the challenge to improve efficiency by placing ***Water Savings*** high on its business priority list.

With much of Goulburn-Murray Water's infrastructure established in the early 1900's and consequently based on older technologies the challenge to provide an efficient water supply requires some major changes and shifts in practices.

Goulburn-Murray Water currently has a number of overarching programs which have been established to meet this challenge; these are grouped under the banner of ***Water Savings*** and include, Loss Management, Watertight 2020 and System Reconfiguration.

The ***Loss Management Program*** was established to ensure compliance with service obligations and has developed into a core element of retail water service delivery. The program has been in place now since the 2003/04 irrigation season and throughout knowledge in relation to understanding water loss behaviour has continued to grow.

In addition to identifying operational improvements the program has identified a number of initiatives for asset improvements such as the strategic measurement project currently being completed.

Through the Program, drawing on knowledge gained and allowing for seasonal variations, distribution loss management stretch targets are established by the Loss

Management Project Team prior to the commencement of each irrigation season. Operational Mangers and their supporting Loss Management Officers play a pivotal role in ensuring targets are achieved.

The Loss Management Program performs a critical role in achieving the obligations for system efficiency and it planned to continue this program through out the second regulatory period.

Watertight 2020 is an exciting new initiative to identify, implement and realise water savings. Watertight 2020 is in response to the need to become more efficient and provide water for the environment. Goulburn-Murray Water has implemented the campaign to generate water savings of 400,000ML by 2020 which is slightly higher than the Statement of Obligations target. Progress toward this ambitious goal is already well underway.

It is expected that the Watertight 2020 campaign will continue in earnest throughout the second regulatory period. The investigation and planning of many initiatives is advancing and with greater awareness amongst staff and customers it is anticipated that water savings ideas will continue to be identified and implemented.

The Watertight 2020 program identified the need for a more efficient delivery system. This has also been picked up as an important theme underpinning the Foodbowl Modernisation Project (FMP). Whilst details of the FMP not yet finalised, it is likely that the objectives of Watertight 2020 will be largely incorporated in the overall FMP, and Watertight 2020 will be “rolled” into the modernisation project and not be pursued as a stand-alone program of activity.

System Reconfiguration planning is currently progressing across all Irrigation Areas under Goulburn-Murray Water’s Reconfiguration Program. Planning continues to take a whole of system approach to water delivery, utilising best practice and proven technology to enhance delivery and analysis capabilities to maximise potential water savings with selection of infrastructure.

Infrastructure needs are matched to land capabilities and future service needs and economic reviews are undertaken of whole of life costs to minimise operational and future costs balanced against optimum operation. The overarching objective remains to develop viable irrigation areas with a restructured delivery system that will ensure the irrigation industry remains sustainable into the future.

Major modernisation projects can only proceed with external investment and it is worth noting that there is currently around $2.5 billion of committed Government investment announced for water saving activities. In addition, as noted earlier in this plan, the Victorian government’s Foodbowl Modernisation Program commits $1 billion specifically to modernising irrigation systems within G-MW’s area. This program will now become the primary focus for G-MW’s modernisation efforts.

The Foodbowl Modernisation Program brings with it external investment of $900 million and a requirement for a G-MW contribution of $100 million. It is not yet been determined how (capital expenditure/operating expenditure) and over what time period this G-MW input will contributed.

By the commencement of the second regulatory period it is anticipated that high level reconfiguration Modernisation planning, including infrastructure modernisation, will be nearing completion. Pending third party funding investment implementation works will have commenced and this second period will see significant works activity in each Irrigation Area.

Collectively these programs underlie Goulburn-Murray Water's goal to achieve the system efficiency obligations detailed in the Statement of Obligations. Section 3.3.1 Core Service Standards presents the performance indictor relating to this obligation.

Metering

The obligations pertaining to metering relate directly to the provision of the Diversion Services. The Diversions Metering Program has been developed in response to this obligation and the provisions of a memorandum of understanding between Department of Sustainability and Environment and Goulburn-Murray Water in response to this matter. This program is addressed in detail in Section 2.2 Delivery of Key Capital Projects and Section 4.3.2 Key Drivers of Capital Expenditure.

Responding to Drought

Goulburn-Murray Water will continue to meet this obligation via its water allocation processes. Through this process, known as the seasonal allocation process, Goulburn-Murray Water determines the water availability to meet customer entitlements in the regulated supply systems throughout the year. Goulburn-Murray Water starts with an initial assessment which is announced on 1st July and follow up with further assessments at set times, either twice a month, if water availability is low, or monthly if availability is high.

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 Bulk Entitlement orders. Allocation announcements are made so that the volumes announced can be delivered to customers in the water season under consideration. It is Goulburn-Murray Water's 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 only when additional water resources are available, and not be reduced as resource limitations are better understood.

Goulburn-Murray Water considers its allocation process 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.

Goulburn-Murray Water 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 Goulburn-Murray Water's website and customer newsletters, including special drought newsletters as required.

The reliability of supply for each of the regulated supply systems is defined in the Bulk Entitlement orders for each system. These reliabilities have been determined based on long term system simulation models. Each of the Bulk Entitlement 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.

Goulburn-Murray Water acknowledges the requirement to prioritise water needs from a societal perspective and in times of drought will work in partnership with urban water agencies to supply water for basic urban needs. Partnership projects such as

the 2006 Buffalo pumping with North East Water and reprioritisation of Lake Eppalock environmental water to Bendigo with Coliban Water will be considered.

As a key stakeholder Goulburn-Murray Water will participate in the development of the Northern Victorian Sustainable Water Supply Strategy, a comprehensive review of all water supply arrangements and entitlement. This review will address climate and catchment change impacts and determine the impacts on water entitlements across all of Goulburn-Murray Water supply systems. It is anticipated that new obligations will result form this review however given the very early nature of the review Goulburn-Murray Water has not attempted to pre-empt these and no additional funding for implementation of review outcomes has been allowed.

Regional & Local Government Planning

Goulburn-Murray Water will continue to work in partnership with the Catchment Management Authorities and municipalities within its region to deliver outcomes that enable Goulburn-Murray Water to achieve its obligations and provide ongoing benefits to Goulburn-Murray Water and its customers. Goulburn-Murray Water will continue to consult with other stakeholders to ensure consistency and effectiveness.

Goulburn-Murray Water will continue to work with the Catchment Management Authorities within its region, namely North East, Goulburn-Broken, North Central and Mallee, to provide both strategic and technical input to the development and implementation of the Catchment Management Authorities' Regional Catchment Strategies.

Goulburn-Murray Water anticipates that it will also continue to be a service provider for both strategic and technical natural resource management programs for the North East, Goulburn Broken and North Central Catchment Management Authorities.

Goulburn-Murray Water has 24 municipalities within its region and as a rural water authority its focus will remain on ensuring developments avoid negative impacts on water system infrastructure and on the quality and quantity of surface and ground water resources.

Goulburn-Murray Water recognises its role as a statutory referral authority, under the Planning & Environment Act, for developments in proclaimed water supply catchments, irrigation supply districts, and in some municipalities, under specific planning scheme overlays. Goulburn-Murray Water is aware that it is also a potentially affected or interested party for any developments along waterways in its operational region. Goulburn-Murray Water have been effectively fulfilling these roles for some time now and are not anticipating significant changes within the second regulatory period.

Research & Knowledge

Goulburn-Murray Water will continue to invest in applied research where the aims are consistent with its business objectives and there are clear and quantifiable benefits. Goulburn-Murray Water will endeavour to gain maximum leverage from its investment by liaising with relevant external bodies to influence national and state programs and develop joint projects.

Goulburn-Murray Water will continue with the implementation of its Research and Development plan which comprises internal, joint and externally funded projects as well as investment in partnership programs.

Goulburn-Murray Water's priority areas for research will include Water Savings, Asset Management, Aquatic Weed Control, Catchment Management, A Healthy Environment and Facilitation of Change.

Goulburn-Murray Water anticipates partnering arrangements will include the national programs of CRC Irrigation Futures, CRC eWater, CRC Water Quality and treatment and the National Program for Sustainable Irrigation.

Goulburn-Murray Water will ensure the research program and outcomes of research are appropriately communicated to all stakeholders and research outcomes are adopted where appropriate.

Sustainable Management

Goulburn-Murray Water will continue to apply the Sustainable Management Principles in performing its functions, exercise its powers and carryout its duties. Goulburn-Murray Water will utilise a number of mechanisms to apply these principles and these are outlined below.

Goulburn-Murray Water's commitment to environmental sustainability is outlined within its Environment Policy Statement via a number of environmental objectives and delivered through its Environmental Management System. Goulburn-Murray Water will continue to consult with Water Service Committees where relevant on environmental risk reductions or improvements. Consultation with key stakeholders will continue to occur via participation in external initiatives.

Goulburn-Murray Water will continue to set and revise, on an annual basis, environmental targets and improvement actions to reflect corporate environmental objectives through its Environmental Management Program. Performance monitoring will continue to be tracked via our Environmental Monitoring and Reporting Program.

Goulburn-Murray Water is engaged in a joint project with the Cooperative Research Centre for Irrigation Futures to review Goulburn-Murray Water's sustainability reporting. The objective is to deliver a Global Reporting Initiative compliant triple bottom line report for Goulburn-Murray Water that is harmonised with other reporting. It is anticipated that Goulburn-Murray Water will implement, where appropriate, the findings from this review in the second regulatory period by improving on current content and the process for developing a sustainability report (which may be incorporated with existing statutory reporting).

Goulburn-Murray Water will respond to climate change by taking into account the impacts of prolonged drought into water resource management decision making process and as discussed earlier participate in the Northern Victorian Sustainability Water Strategy.

Goulburn-Murray Water will also continue with the implementation of its greenhouse gas strategy and participation in the Victorian Water Businesses Greenhouse Emissions Reduction Program. Goulburn-Murray Water's program is outlined in Section 3.2.2.

Sustainability is also taken into consideration in delivering Goulburn-Murray Water programs associated with the environment and river health, such as The Living Murray Initiative, as outlined in Section 3.2.1.4.

Additional expenditure associated with Goulburn-Murray Water's environmental management program improvement tasks identified in its Risk Management Plans and investigation program have been included in operational and capital estimated investments.

3.2.1.4 Environmental Management

Environmental Management System

Within the first regulatory period Goulburn-Murray Water has completed a substantial redevelopment of its Environmental Management System to achieve compatibility with the international standard AS/ISO14001:2004.

Goulburn-Murray Water's Environmental Management System has also achieved external certification to the international standard. This provides assurance that Goulburn-Murray Water has in place systems and procedures to identify and manage its environmental risks, meets its legal and other obligations, and improves business practices.

During the second regulatory period Goulburn-Murray Water will continue to strive for continuous improvement in environmental performance, undertaking annual surveillance audits to assure that Goulburn-Murray Water maintains its certification and environmental commitment.

Blue-Green Algal Blooms

Goulburn-Murray Water seeks to deliver the obligations pertaining to blue-green algal blooms through its established processes. These programs are seen as ongoing with benefits to Goulburn-Murray Water, its customers and stakeholders including the community.

Goulburn-Murray Water will continue to provide blue-green algal bloom response management as required by a Regional Convening Agency listed in Circular No 288.

Goulburn-Murray Water has developed regional BGA contingency plans for each of the six major catchments within its operational region. In addition Goulburn-Murray Water has local contingency plans prepared for its water storages, weirs, and irrigation supply systems. These plans set out monitoring, reporting and notification procedures (including notification of Department of Human Services), so that customers, community and other interested parties are notified of any BGA blooms and the associated risks for water users. Goulburn-Murray Water will continue to regularly update these plans.

Goulburn-Murray Water will continue to liaise with lead agencies, including the Department of Sustainability and Environment and the Department of Human Services, research groups and other interested parties about appropriate levels of management to address the risks associated with BGA blooms. Goulburn-Murray Water will also continue to liaise with NSW Authorities about blue green algal management in the River Murray.

River & Aquifer Health

Goulburn-Murray Water's commitment to river and aquifer health is reinforced through its Environment Policy Statement which includes striving towards developing and implementing plans to improve river system health and water quality, with catchment communities and other stakeholders.

Goulburn-Murray Water will continue to deliver projects using its established guidelines for management of environmental impact for Goulburn-Murray Water projects and one-off activities. This guideline seeks to ensure that Goulburn-Murray Water complies with all relevant statutory requirements that are linked with its Environmental Management System. This process identifies all environmental matters that have to be addressed in the project planning and may involve the development of a works plan to avoid, minimize or mitigate the environmental

impacts associated with the project. This process is robust enough to identify the requirement for appropriate monitoring to confirm that critical levels have not been exceeded.

Goulburn-Murray Water understands that provision of works to improve fish movement, the minimisation of environmental risks from water releases and offtakes for environmental flows will be guided by priorities established by Department of Sustainability and Environment and the Catchment Management Authorities. It is anticipated that the investment for these priority works will be provided by the Catchment Management Authorities.

Goulburn-Murray Water will continue to work with catchment partners, primarily the Catchment Management Authorities, to ensure that flows are managed to efficiently supply our domestic and stock and irrigation customers as well as maintaining environmental values.

Recognising that waterways and wetlands forming part of the Goulburn-Murray Water supply and distribution system are not always under it direct management Goulburn-Murray Water will continue to closely liaise with Catchment Management Authorities who have the statutory waterway management responsibilities. Through these relationships Goulburn-Murray Water will seek to ensure that waterway and wetland management plans and Regional River Health Strategies take into account issues listed in the Statement of Obligations while at the same time acknowledging the economic and social values of these natural assets.

As the designated storage manager Goulburn-Murray Water will continue to implement and refine its Storage Management Plans - Water Quality and Biodiversity. Where practical Goulburn-Murray Water will continue to take into account the plans and strategies of Catchment Management Authorities in achieving this activity.

Goulburn-Murray Water will continue to work with its catchment partners the Murray Darling Basin Commission, Department of Sustainability and Environment, Catchment Management Authorities and other relevant stakeholders to implement actions associated with The Living Murray Initiative.

Monitoring River Health

Goulburn-Murray Water intends to remain a member of the North East and North West regional surface water monitoring partnerships. This includes continuing 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 Department of Sustainability and Environment's data warehouse.

Goulburn-Murray Water will continue to monitor all storages as part of its Major Storages Operational Monitoring Program (MSOMP), including drawing on the VWQMN stations located on streams below storages and, hence, monitoring the impacts of storage releases.

Results of MSOP will continue to be made available to the Department of Sustainability and Environment's water data warehouse, and reported in the Victorian Water Quality Monitoring Annual Report and the MSOMP Annual Report.

Goulburn-Murray Water anticipates continued participation in Department of Sustainability and Environment'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.

More broadly Goulburn-Murray Water anticipates continuing to contribute to the Catchment Management Authorities development and implementation of Regional River Health Strategies and other relevant components of Regional Catchment Strategies.

Together with its catchment partners Goulburn-Murray Water will continue to develop an effective monitoring or benchmarking process for wetlands that form part of its Irrigation Areas. In the second regulatory period Goulburn-Murray Water anticipates being part of the monitoring process for these wetlands.

Goulburn-Murray Water will also 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. These works will be coordinated and implemented under the umbrella of the Irrigation Drainage Memorandum of Understanding as discussed in Section 3.2.2

Goulburn-Murray Water will continue to monitor the nutrient and algal status of its storages to provide information that can be used to detect trends in parameters and aid process understanding. Goulburn-Murray Water will use this information to advise recreational groups and downstream customers of the presence of any significant algal blooms.

The data and information collected will continue to be widely available from the Data Waterhouse (which is linked from G-MW's web site), available on request and often reported at public or Catchment Management Authority forums.

These river health monitoring programs will be funded out of internal and some external sources and it is proposed that this monitoring work will continue to be undertaken as required to improve current operational arrangements. Activities will be monitored on the basis of the associated environmental risk and therefore only high environmental risk activities will be monitored. Goulburn-Murray Water anticipates that it will tackle these high risks progressively in conjunction with its catchment partners.

3.2.1.5 Payment Schemes & Contributions

Goulburn-Murray Water anticipates continuing to administer the Government funded programs providing concessions and rebates as defined within the Statement of Obligations.

3.2.2 Environmental Obligations

This section outlines Goulburn-Murray Water intentions with regard to the obligations imposed on Goulburn-Murray Water by EPA Victoria by way of the Environmental Protection Act 1970. These Obligations are outlined in EPA Victoria guidance document "Draft Principles to Establish Environmental Obligations for Water Businesses for the 2008-2013 Pricing Determination" which forms the basis of Goulburn-Murray Water's response.

A number of the obligations discussed in EPA Victoria's guidance document are linked directly to Goulburn-Murray Water responsibilities under the Statement of Obligations and response to these is covered in Section 3.2.1. Those obligations already covered are:

- Water Conservation & Resource Efficiency;
- Releases from Storages; and
- Monitoring, Auditing & Risk Assessment.

The remaining obligations are addressed in the following discussion.

Management of Greenhouse Gas Emissions

Goulburn-Murray Water acknowledges the Victorian Government's policy position on green house gas emissions. Together with Sustainability Victoria, the Department of Sustainability and Environment, EPA Victoria and other Victorian water industry representatives Goulburn-Murray Water has participated in the development of an agreed Water Industry Greenhouse Gas Management Framework.

In recognition of Goulburn-Murray Water's commitment it is currently developing a strategy to reduce our emissions drawing on the Water Industry Framework. In support of the Strategy Goulburn-Murray Water will be developing a separate Greenhouse Action Plan to provide implementation guidance and details for further testing and refinement.

Goulburn-Murray Water's objectives under its draft Greenhouse Strategy are expected to see a cap on greenhouse emissions at 75% of the 2005/06 level by 2013 and for Goulburn-Murray Water to becoming carbon neutral by 2050.

Goulburn-Murray Water understands its greenhouse emissions are primarily due to use of hydrocarbon fuel to power vehicles, plant and equipment; the use of electricity to pump water; and use of electricity inside offices and depots. Goulburn-Murray Water has developed preliminary action plans to reduce, avoid or offset these omissions.

During the second regulatory period Goulburn-Murray Water will looking to achieve its objectives through reductions in hydrocarbon fuel use and electricity used to pump water and supply offices and depots. Goulburn-Murray Water also anticipates purchasing green power to meet part of our electricity needs and will be giving consideration to potentially generating its own green power through hydro and wind powered assets. Goulburn-Murray Water recognises the important role of growing trees as a carbon offset and will be giving consideration to establishing tree plantings, either directly or by a commercial provider on our behalf, to achieve further offsets if needed.

Goulburn-Murray Water will continue to work with EPA Victoria and Sustainability Victoria to reduce its greenhouse emissions.

Management & Auditing Irrigation Discharges

To meet this obligation Goulburn-Murray Water will continue to progress along the path defined in the Irrigation Drainage Memorandum of Understanding (IDMoU) for improved water quality in its waterways.

In conjunction with EPA Victoria, Catchment Management Authorities and Department of Sustainability and Environment, and as a signatory to the IDMoU, Goulburn-Murray Water will continue to take a lead role in the improvement of water quality from surface water management systems within its operating region.

The IDMoU defines the framework for improvement and includes a requirement for continued communications on decision making and actions by all signatories.

Regular steering committee meetings 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. Goulburn-Murray Water will continue to take a lead role in ensuring the deliverables set under the IDMoU are completed.

Goulburn-Murray Water's commitment to the IDMoU is limited to implementation within the boundaries of its current responsibilities and additional investment has not been allowed in its investment estimates. Goulburn-Murray Water understands that full implementation is dependent on external investment being available and Goulburn-Murray Water will continue to work with the signatories to the IDMoU to secure these.

Provisions & Auditing of Environmental Flows

Goulburn-Murray Water will remain committed to operating its water supply systems to meet the requirements of the bulk entitlements orders for environmental flows, principally the minimum and contingent flows, as they are progressively developed by Department of Sustainability and Environment.

Goulburn-Murray Water will continue to report annually on its compliance with bulk entitlement orders, in both its Annual Report and in Resource Manager Basin Water accounts. In support Goulburn-Murray Water will appoint an independent auditor to verify its compliance with its bulk entitlement obligations, and anticipate that the Department of Sustainability and Environment will oversee these audits.

Goulburn-Murray Water will also continue to work with the Department of Sustainability and Environment and Catchment Management Authorities to explore opportunities to measure and improve the effectiveness of the Environmental Water Reserve by adjusting water system operation. Goulburn-Murray Water anticipates these will be incorporated into Stream Flow Management Plans or local management rules.

Goulburn-Murray Water understands that its obligation to environmental flows excludes the requirement to assess the effectiveness of environmental flows in protecting ecology.

Goulburn-Murray Water has included an allowance for the State Environment Protection Policy requirements in proponent application fees for the issue of new surface water licences and planning referrals.

Groundwater Management Provisions

Goulburn-Murray Water plans to achieve its obligations pertaining to groundwater by continuing to incorporate the development of water sharing strategies like groundwater management plans into the Regional Catchment Strategies. Goulburn-Murray Water considers that this approach will ensure an integrated approach to catchment management with all stakeholder input, including the needs of the environment.

Goulburn-Murray Water will continue to work in partnership with the Department of Sustainability and Environment, the Catchment Management Authorities and its other catchment partners to achieve the specified targets and timelines.

The development of these water sharing plans is understood to be driven from Victorian Government investment and the implementation and ongoing costs within the boundaries of its responsibilities have been included in pricing submissions to be met by customers.

Goulburn-Murray Water has included an allowance for the State Environment Protection Policy requirements in proponent application fees for the issue of new groundwater licences and planning referrals.

Saline Discharges

Goulburn-Murray Water will continue to deliver its saline discharges obligations within the explicit guidelines set by the Victorian Government and the Murray Darling Basin Commission (MDBC).

In consultation its catchment partners, the Catchment Management Authorities, Department of Primary Industries, Department of Sustainability and Environment and EPA Victoria, Goulburn-Murray Water will continue to develop additional rules, guidelines and considerations for saline discharges to channels, drains and waterways.

Goulburn-Murray Water will endeavour to ensure that all saline discharges from its works are in accordance with government approved salinity plans and strategies and the MDB Agreement.

Goulburn-Murray Water understands that all discharges to the River Murray from its works post January 1988 (such as installation of groundwater pumps, surface drainage and salt interception schemes) which are included in state and regional management plans are subject to the requirements of Schedule C of the Murray Darling Basin Salinity Management Strategy and are included on the Victorian and MDBC Salt Disposal Registers. It also Goulburn-Murray Water's understanding that works prior to January 1988 are included in the benchmark period and do not require Salt Disposal Entitlements and are not accounted for on the registers.

Within its Irrigation Areas Goulburn-Murray Water preferred discharge method will remain the regional redistribution of saline discharge via disposal of groundwater to channels and drains and drainage water to drains. These discharges will continue to be managed within specific safe usage limits where irrigation supply and drainage diversion from the conveyance systems recycle the water within the region.

3.2.3 Water Quality Obligations

This section outlines our intentions with regard to the obligations imposed on Goulburn-Murray Water by the Department of Human Services by way of the Safe Drinking Water Act 2003. This Obligation relates to Goulburn-Murray Water's role as Water Storage Manager under the provisions of the Act and the provisions for the supply of safe drinking water.

As a Water Storage Manager Goulburn-Murray Water has in place Risk Management Plans for the Murray, Goulburn and Loddon systems that recognise that water is supplied to Regional Urban Water Authorities that then treat the water to drinking water standards for supply to urban customers.

Goulburn-Murray Water's intention within the second regulatory period is to continue with progressively implementing these Plans by incorporating actions into its existing catchment, land and water management processes and coordination arrangements with partners, primarily the Department of Human Services Safe Drinking Water Regulatory Unit.

Goulburn-Murray Water understands that implementation requires substantial coordination and integrating activities, most likely under the umbrella of the Catchment Management Authority Regional Catchment Strategies.

Goulburn-Murray Water also intends to regularly review and update the Plans and audit the Plans three times throughout the second regulatory period. These activities will require additional operating investment which has been included within expenditure projections.

3.2.4 Other Obligations

Whilst Goulburn-Murray Water has implemented unbundling of water entitlements in regulated systems on 1 July 2007, unregulated surface water and groundwater systems have not yet been unbundled.

Regulated systems represent the significant majority of water entitlements in Goulburn-Murray Water by volume, but unregulated and groundwater systems encompass a large number of individual customers.

Preliminary planning has commenced to identify the tasks and possible timing for this reform program. The exact timing will be dependent on both resources available within Goulburn-Murray Water and DSE and priorities for unbundling activities in southern Victoria, but it is anticipated that implementation will occur by 1 July 2009 at the latest. It is also possible that unbundling of these systems may occur progressively in a staged program, perhaps commencing with unregulated streams and major groundwater management areas, followed by progressive implementation in other groundwater aquifers in subsequent years.

Reasonable budget provisions have been included in this water plan for this unbundling implementation. These estimates are based on experience from unbundling regulated systems, and it may be necessary to review these provisions once the final policy requirements to meet the particular challenges in unregulated and groundwater have been determined by DSE.

Metering Retail Water Services

Goulburn-Murray Water recognises measurement of water supplied and accounting for water use against entitlement is a key aspect of its business. Goulburn-Murray Water's Metering Policy seeks to ensure that the meters selected for customer billing purposes will be appropriate for the application, the most cost effective option and meet any requirements of National or State regulatory standards.

Goulburn-Murray Water will continue to participate in the metering aspects of the National Water Initiative and Trade Measurement legislation at both a National and State level. Goulburn-Murray Water anticipates continuing to assist both Standards Australia and the National Measurement Institute to develop pattern approved standards, product specification standards and uniform testing procedures that will when finalised underpin the National Water Initiative water accounting framework.

Goulburn-Murray Water notes that there is a degree of uncertainty surrounding the implementation of national metering standards and trade measurement legislation, in this light, within the second regulatory period it has adopted a program of replacing meters when they have reached the end of their life expectancy. Goulburn-Murray Water anticipates adopting the basic manually controlled flow meter technology of the day for replacements. Goulburn-Murray Water will also be continuing with its programmed maintenance of meters.

Under its Metering Policy Goulburn-Murray Water remains committed to the development of practical and economic outcomes for measurement that will combine the best aspects of Trade Measurement legislation with industry best practice approach. Goulburn-Murray Water will strive to achieve continuous improvement through the introduction of new metering technologies in consultation with its customers and other key stakeholders.

3.3 Service Standards

3.3.1 Core Service Standards

Goulburn-Murray Water measures success in delivering service outcomes by monitoring its performance against key performance indicators. Goulburn-Murray Water has established a system which balances performance reporting between internal and external reporting

Table 11 presents the key performance indictors for the prescribed services outcomes proposed for the second regulatory period. These indictors are based on “average” seasonal conditions and have been aligned with other corporate reporting documents, namely the Annual Report and Corporate Report.

Table 11 – Key Performance Indicators – Second Regulatory Period

Key Performance Indicator	Actual			Targets for First Regulatory Period		Targets for Second Regulatory Period				
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Economic Sustainability										
Retail Water System overall efficiency achieved as a % of delivered	68%	72%	73%	63.8%[1]	74%	74%	76%	76%	76%	77%
Bulk water assets availability of storage capacity as a % of design storage capacity[2]	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Retail Water assets number of unplanned service failures greater than 12 hours	6	0	33	10	0	0	0	0	0	0
Retail Water assets reported channel leaks responded to within agreed times[3]	Achieved	Achieved	Achieved	100%	100%	100%	100%	100%	100%	100%
Social Sustainability										
Bulk water assets availability to deliver water on demand to customers as a % of time	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Retail Water Area water delivered on day ordered within agreed %[3]	Achieved	Achieved	Majority Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved
Complaints to EWOV (excluding enquiries)	9	9	9	8	7	7	7	6	6	6
Telephone calls answered within 30 seconds[4]	New indicator	New indicator		92%	95%	95%	95%	95%	95%	95%
Processing of Temporary Transfer of water entitlement within	New indicator	New indicator		100%	100%	100%	100%	100%	100%	100%

Key Performance Indicator	Actual			Targets for First Regulatory Period		Targets for Second Regulatory Period				
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
5 business days[5]										
Processing of Permanent Transfer of water entitlement[6] within 15 business days[5]	New indicator	New indicator		92%	95%	95%	95%	95%	95%	95%
Environmental Sustainability										
Regulated rivers minimum river flow regimes > or equal to specified minimum flows 100% of the time	New indicator	New indicator	90%	100%	100%	100%	100%	100%	100%	100%
Unregulated rivers meet agreed targets or natural flow 90% of the time	New indicator	New indicator	90%	90%	90%	90%	90%	90%	90%	90%

1. Actual figure for 2006/07. Lower than previous years due to extremely low allocations for the year.
2. Excluding Lake Mokoan which has a target of 82%
3. Customer Charter
4. Customer Service Tatura Office during business hours
5. Performance indicator targets to be developed once State-wide Water Register and Goulburn-Murray Water's Stakeholder Account Management System are implemented
6. For applications not requiring a channel capacity & salinity assessment, diversions inspection or involve interstate

3.4 Guaranteed Service Levels

The Essential Services Commission maintains the view that there is merit in all urban businesses adopting a Guaranteed Service Levels (GSL) scheme for the 2008 regulatory period. A GSL scheme is where businesses provide rebates to customers who receive a level of service that is significantly worse than the average level of performance expected by most customers.

During the first regulatory period (2006/07-07/08) the Essential Services Commission recognised that in the absence of a robust performance monitoring framework and extensive customer consultation it would be difficult to introduce a GSL scheme for rural water businesses.

Goulburn-Murray Water agrees with this assessment, and is of the view that the costs, including administration, of a GSL scheme would outweigh the benefits. Accordingly Goulburn-Murray Water does not propose to introduce such a scheme in the second regulatory period.

4 Revenue Requirement

4.1 Overview of Revenue Requirement

Goulburn-Murray Water's revenue requirement is based on forecasts of operating and capital expenditure over the five years of the next regulatory period 2008/09 - 2012/13, and adjustments for cost and revenue variations from the current Water Plan 2006/07 – 2007/08.

The expenditure forecasts have been classified as preliminary due to the very uncertain operating environment. The revenue requirement for the recently announced water savings projects, ie Shepparton Modernisation, Total Channel Control-Central Goulburn Channels 134 stage 3 and Foodbowl Modernisation, has not been developed, and will be included in subsequent submissions to the ESC when more detailed information regarding these projects are received and analysed.

(Note : A revenue requirement summary table will be included in G-MW's final Water Plan.)

4.2 Operating Expenditure

4.2.1 Overview of Operating Expenditure

The forecast of operating expenditure takes into consideration:

- Customer service standards required by customers
- Service obligations imposed by the Minister, other regulators, and Bulk Entitlement Orders.
- Environmental obligations
- Implementation of approved water savings projects from the current Water Plan 2006-08
- Productivity initiatives.

Due to the very uncertain operating environment as a result of implementing significant Government reforms and water savings projects, comparisons between current year on year expenditure levels to historical expenditure levels are problematic.

A table summarising operating expenditure by business segment by expenditure category will be included in G-MW's final Water Plan.

4.2.2 Key Drivers of Operating Expenditure

The delivery of customer service to agreed standards, the compliance with service and environmental obligations and the implementation of water savings projects are the key drivers of G-MW's operating expenditure.

Significant changes to G-MW's operating expenditure over the five year period 2008-13 are forecast to be:

- Advanced Maintenance Program (AMP)

  The AMP was introduced in the current regulatory period 2006-08 and reflects a new direction in asset management policy. The AMP aims to extend asset

life and delay significant asset replacement and provide greater flexibility in future asset decision making.

As a result of the uncertainty with the implementation of the Foodbowl Modernisation water savings project, the scope of AMP works is being reduced until more information is received that will provide a greater understanding of its implementation. It is expected that a revised AMP will be developed in 2008 that will compliment the Foodbowl Modernisation project.

As the Foodbowl Modernisation project will more than likely seek to automate regulators in major irrigation channels and rationalise/reconfigure minor channels, the AMP scope of works has been reduced to undertaking a minimum level of advanced maintenance on major channels.

The reduced AMP scope of works until a revised plan can be developed that allows for the Foodbowl Modernisation project is:

2007/08 (07/08$mils)	**2008/09** (07/08$mils)	**2009/10** (07/08$mils)	**2010/11** (07/08$mils)	**2011/12** (07/08$mils)	**2012/13** (07/08$mils)
13.2	8.7	8.5	8.6	8.4	8.5

As noted above the program originally proposed, and discussed with Water Services Committee in June 2007, was higher than that now proposed pending further details of the Foodbowl Modernisation Project (FMP).

Refer 8.3 Appendix C for a comparison with the AMP originally proposed for 2008/09-12/13 had the FMP not been announced.

- Automation of Irrigation Systems

G-MW is a leading stakeholder in researching and developing the automation of channel irrigation systems to assist with achieving water savings. Automated channel system technology was first researched with the joint Research & Development project, Total Channel Control (TCC) – Central Goulburn Channel 2 with Rubicon Australia and Government in 2001.

From 2001 G-MW has installed 841 automated gates and 65 water level monitoring sites under the TCC-CG2, TCC-CG 134 and Strategic Measurement Program (SMP) water savings projects. 374 of these automated gates and monitoring sites have been installed since 2006 under the SMP project.

The SMP project also includes the implementation of a canopy radio system that relays real-time information to and from automated sites and G-MW's computerised water management system that enables automated management and monitoring of irrigation channels.

Support and maintenance of this sophisticated technology is forecast to increase as the technology installed under the SMP project comes out of warranty.

2007/08 (07/08$mils)	**2008/09** (07/08$mils)	**2009/10** (07/08$mils)	**2010/11** (07/08$mils)	**2011/12** (07/08$mils)	**2012/13** (07/08$mils)
0.8	1.4	1.4	1.4	1.4	1.4

- Water Savings Projects

  Provision has been made to complete existing water savings projects from the current Water Plan 2006-08, ie Mokoan-Return to wetlands and the Infrastructure reconfiguration projects.

  The operating expenditure relating to these projects includes:

Project	08/09 07/08$M	09/10 07/08$M	10/11 07/08$M	11/12 07/08$M	12/13 07/08$M
Mokoan–return to wetlands					
Decommissioning	-	7.6	-	-	-
Other	0.5	-	-	-	-
Infrastructure Reconfiguration					
Reconfiguration Planning	1.0	-	-	-	-
Reconfiguration Rationalisation	7.6	7.6	2.2	0.9	0.4

  The Mokoan-return to wetlands project is fully funded by Government and $56 Million of the Infrastructure Reconfiguration project is being funded by Government.

  No provision has been made at this time for the Shepparton Modernisation, TCC-CG 1234 stage 3 and Foodbowl Modernisation water savings projects.

- MDBC Contributions

  MDBC contributions represent G-MW's negotiated cost share of the Victorian Government's share of the Murray Darling Basin Commission's annual operating and capital expenditure.

  The forecast MDBC contributions are based on current cost share arrangements and the MDBC's current budget. Forward estimates out to 2012/13 are not available from the MDBC. As G-MW has no control over MDBC contributions, any changes to contribution levels will result in amendments to this Water Plan.

  Forecast MDBC contributions:

2007/08 (07/08$mils)	2008/09 (07/08$mils)	2009/10 (07/08$mils)	2010/11 (07/08$mils)	2011/12 (07/08$mils)	2012/13 (07/08$mils)
10.7	10.6	10.6	10.6	10.6	10.6

- Diversions Metering

  G-MW and Government entered into a Memorandum of Understanding (MoU) on the metering of existing groundwater and unregulated surface water diversion licenses in 2006. The MoU included metering thresholds of greater than 20 ML for groundwater and 10 ML for unregulated surface water.

  This MoU results in the installation of approximately 2,300 meters progressively over a four year period 2005/06 to 2008/09.

  This significant increase in meters in these services results in increased meter maintenance expenditure in these relatively small services.

A program of maintenance works has also commenced to ensure metered sites in regulated surface water diversions services comply with the working from heights OH&S legislation.

Service / Operating Expenditure	08/09 07/08$M	09/10 07/08$M	10/11 07/08$M	11/12 07/08$M	12/13 07/08$M
Groundwater Diversions Maintenance	0.4	0.4	0.4	0.7	0.8
Unregulated Diversions Maintenance	0.1	0.1	0.2	0.5	0.6
Regulated Diversions Maintenance	0.5	0.5	0.5	0.8	0.9

- Other Operating Expenditure

  Other relatively minor changes to operating expenditure include:

  - Electricity charges – Current electricity variable charges are significantly higher than G-MW's current contract rates. G-MW's electricity contracts for variable charges will expire in 2007/08 which will result in significant increases in the variable component of electricity costs. On average variable charges represent about 35% of the total electricity charge. Increases will be absorbed where possible but for high usage sites such as pressurised pipeline services, there will be a price impact.
  - Pyramid-Boort Gravity Irrigation – In response to the prolonged drought over the past 10 years, the Pyramid-Boort district management with the support of the local Water Services Committee (WSC) has deferred non-essential works to reduce the burden on irrigation customers. With the understanding of the WSC and assuming a 100% high reliability allocation, operating resources need to increase to more sustainable levels to ensure customer service standards, asset management and environmental obligations are met.
  - Groundwater intensive management – Intensive management plans are being developed for the Ovens, Mid Goulburn and Kinglake stressed aquifers. These plans schedule the implementation of intensive management practices in 2008/09 to ensure fair and equitable access to the limited water resources.
  - ESC license fees and audit costs – G-MW is required to contribute to the costs of economic regulation. Annual ESC license fees forecast by the ESC and the cost of annual audits are higher than the provision included in the current Water Plan 2006-08.

4.2.3 Productivity Improvements

Goulburn-Murray Water will continue to implement its productivity plan to achieve cumulative productivity improvements of 12% based on 2004/05 expenditure and performance levels.

Productivity improvements are being progressively implemented and Goulburn-Murray Water remains on target to achieve the 5% target for the first regulatory

period. The remaining 7% of productivity savings have been factored into the 2008 Water Plan.

Major initiatives for the second regulatory period include:

- Capitalising on system improvements from strategic procurement, and the streamlined water planning IPM G2, replacement of the financial management system and customer billing and administration system upgrade projects;
- Implementation of Green house gas management strategy; and
- Enhancement of Information Technology systems; telephony system, document management system upgrade, high speed communications; that will support further productivity saving initiatives.

4.2.4 30 June 2006 Service Bank Balance Adjustment

The ESC decided in its 2006 Water Price Determination for G-MW that adjustments to required revenue should be made for service bank balances as at 30 June 2006.

Forecast 30 June 2006 service bank balances were used to calculate required revenue in the current Water Plan 2006-08. Actual service 30 June 2006 bank balances have been used to calculate required revenue for the next Water Plan 2008-13.

Summary of service bank balances as at 30 June 06:

Service Bank Balances	**Forecast 30 June 06**	**Actual 30 June 06**
	$M's	$M's
Surplus bank balances *	52.2	57.3
Debt bank balances	(44.2)	(40.9)
Net bank balance	**8.0**	**16.4**

* Excludes Tungamah D&S bank balance

4.2.5 Expenditure Adjustments to the Current Water Plan 2006-08

G-MW has incurred additional expenditure to the current Water Plan 2006-08 forecasts that have been outside its control:

- ESC license fees – Based on actual charges and forecasts provided by the ESC, forecast license fees for the regulatory period are $0.2M higher than the amount allowed for in the current Water Plan 2006-08.
- Pumping Lake Buffalo – In response to the severe drought in 2006/07, G-MW pumped dead water from Lake Buffalo primarily to supply water to Wangaratta. The pumping cost was $0.3M.
- Customer account administration for unbundling – G-MW incurred additional administration costs of $0.3M to prepare irrigation customer details for unbundling and the Victorian water register.
- Building Regulations 2006 – The change in legislation requires G-MW to report annually on essential safety measures. The cost to provide a compliant audited annual building report is $0.1M.
- MDBC contributions – MDBC contributions are $1.0M higher than forecast in the current Water Plan 2006-08:

Year	Water Plan 06-08 Forecast	Revised Forecast	Variance
	$M's	$M's	$M's
2006/07 MDBC contribution	9.9	10.3	0.4
2007/08 MDBC contribution	10.1	10.7	0.6
Total	**20.0**	**21.0**	**1.0**

- Reduction in 2007/08 AMP – In response to the uncertainty due to the lack of detailed information relating to the Shepparton Modernisation and Foodbowl Modernisation water savings projects, G-MW is significantly reducing its AMP plans as discussed in section 4.2.2 AMP.

  Accordingly the current Water Plan 2006-08 forecast of 2007/08 AMP has been reduced by $3.0M.

4.2.6 Revenue Adjustment to the Current Water Plan 2006-08

In approving 2007/08 water prices, the ESC approved a revenue adjustment of a shortfall of $7.9 M. This revenue shortfall is largely due to the significant reduction in water availability due to the severe drought experienced in 2006/07.

The ESC's pricing determination allows for the recovery of this $7.9M shortfall in 2007/08. However G-MW is planning to recover the shortfall in the next regulatory period, ie the 5 years 2008/09 to 2012/13.

The revenue shortfall estimate assumes 100% high reliability allocations and no low reliability allocation in 2007/08. Lower water allocations in 2007/08 will result in additional revenue shortfall that will need to be recovered in future years.

At the time of writing allocations for the 2007/08 stood at 0% for all systems within Goulburn-Murray Water. The risk of revenue shortfalls again in 2007/08 therefore remain a real possibility.

4.2.7 Foodbowl Modernisation project – likely implications for revenue requirements

The Foodbowl Modernisation Project will have a significant impact on both Goulburn-Murray Water's capital and operating cost base into the future. Modelling of this impact however is problematic until the priorities, nature and location of the works package become clearer. This is not expected before late 2007 to early 2008.

Implications of the project are likely to include the following:-

- Capital Contribution - Goulburn-Murray Water is required to contribute $100 million to the project. This is likely to be in the form of a cash contribution and will likely be funded through long term borrowings. Future revenue requirements will need to fund principal and interest repayments on such borrowings.
- Reduced/avoided capital renewal expenditure – The project will likely include new infrastructure, such as low pressure pipelines in some areas, which will replace existing earthern channels. Accordingly it is expected that future capital expenditure to refurbish existing assets will be reduced. Further, reconfiguration planning currently in progress in all areas will likely identify opportunities for asset reduction, and therefore cost savings in the future.
- Reduced/avoided advanced maintenance and routine maintenance – Similar to capital expenditure the modernisation project should result in further

savings in both advanced and routine maintenance, over and above those already identified elsewhere in this Water Plan.

- Productivity savings are expected through the increased automation of regulators expected to flow from the project. Additionally the replacement of ageing wooden drop bar regulators with automated regulators will also provide occupational health and safety benefits.
- New technology support and maintenance costs – with automation will also come new costs associated with such technology. Such costs will include the need to maintain and replace solar panels, batteries and electronic circuit boards, and increased supplier support costs. Water savings techniques will also include plastic lining of channels which will need to be replaced every 20 year to 25 years.

4.3 Capital Expenditure

4.3.1 Overview of Capital Expenditure

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

Asset replacement and refurbishment programs remain a major component of Goulburn-Murray Water's proposed capital investment. These programs represent assets that will be at the end of their useful life during the second regulatory period or pose an unacceptable business risk.

These asset replacement and refurbishment programs make allowance for other known programs, such as Reconfiguration and the Advanced Maintenance Program, but will require adjustment for modernisation project.

The Dam Safety Upgrade Program is being implemented to achieve the best risk reduction outcomes as required by the Statement of Obligations for the available resources. The Surface Water Management program is being implemented with Goulburn-Murray Water's Catchment Management Authority partners.

Water Savings remains at the forefront of Goulburn-Murray Water's thinking with several projects well advanced or nearing completion. The recently announced Shepparton Modernisation, TCC-CG 1234 stage 3 and Foodbowl Modernisation have not been included in the capital expenditure forecast due to insufficient detailed project implementation information. It is proposed that a revised capital expenditure forecast will be developed in 2008 after more specific information about these significant water savings projects are known.

The Goulburn-Murray Water Whole of Business Risk Framework is used to prioritising capital investment. Every effort has been taken to defer the replacement as long as reasonably practical without compromising Goulburn-Murray Water's ability to provide services, deliver the works or exposure to unacceptable risks.

4.3.2 Key Drivers of Capital Expenditure

The Capital Total Estimated Investment during the second regulatory period is anticipated to be $232 million. As outlined above this investment is being driven by a range of programs with the Top Ten, at $129 million, representing approximately 55% of the investment.

Table 12 - Capital Total Estimated Investment – Prescribed & Non-prescribed

Program	Financial Year					Water Plan Total $000s
	2008-09 $000s	2009-10 $000s	2010-11 $000s	2011-12 $000s	2012-13 $000s	
Top Ten (see below)	39,711	20,039	18,714	25,018	25,135	128,617
Balance	21,904	21,045	19,925	20,547	19,996	103,417
Capital Total Estimated Investment	61,615	41,084	38,639	45,565	45,131	232,034

Refer G-MW Doc ref: #2153358

The Top Ten programs have been determined by aggregating individual projects with commonality, such as dam safety upgrade or an individual irrigation area's channel remodelling. The individual programs are outlined in discussion in the following section with presenting the yearly distribution of capital investment for the Top Ten programs.

Table 13 - Capital Total Estimated Investment – Top Ten Programs

Program	Financial Year					Water Plan Total $000s
	2008-09 $000s	2009-10 $000s	2010-11 $000s	2011-12 $000s	2012-13 $000s	
Dam Safety Upgrade Program	10,900	2,900	1,350	6,300	6,200	27,650
Surface Water Management Program	5,649	5,607	4,990	6,015	6,443	28,704
Reconfiguration Program	3,467	3,467	3,467	3,467	3,467	17,335
Central Goulburn Irrigation Area Channel Remodelling Program	2,866	2,866	2,866	2,866	2,866	14,330
Mokoan - Return to Wetlands (Water Savings Program)	10,968	-	-	-	-	10,968
Diversions Metering Program	1,688	1,004	1,386	1,386	1,386	6,850
Torrumbarry Irrigation Area Channel Remodelling Program	1,519	1,519	1,519	1,519	1,519	7,595
Rochester Irrigation Area Channel Remodelling Program	1,455	1,477	1,477	1,477	1,477	7,363
Waranga Western Channel East & West Subway Program	739	739	832	1,161	950	4,421
Rochester Irrigation Area Regulators Program	460	460	827	827	827	3,401
Top Ten total	39,711	20,039	18,714	25,018	25,135	128,617

Dam Safety Upgrade Program

This program of works is aimed at meeting Goulburn-Murray Water's obligations (as defined in the Statement of Obligations) pertaining to Dam Safety. This program previously known as the Dam Improvement Program, or DIP, was renamed following incorporation of dam safety into Goulburn-Murray Water's Whole-of-Business Risk Management Framework.

In accordance with Goulburn-Murray Water's obligations, the program for dam safety projects has been based on calculations of life-safety risks posed by the dams, with the urgency of risk reduction being determined by comparison with life-safety tolerability limits defined in ANCOLD Guidelines.

Goulburn-Murray Water will continue to give priority to reducing risks to life above other risks, and once the safety of all dams is below the ANCOLD limit of tolerability it is proposed to then consider remaining risk targets. The investment program put forward in this 2008 Water Plan is based on priorities determined by applying this methodology.

It is important to reinforce that as part of the Goulburn-Murray Water whole of business risk program the dam safety projects will continue to be reassessed and reprioritised as business risks are reviewed. It should also be noted that the dam safety projects are staged to reduce risks in line with Goulburn-Murray Water risk targets, rather than addressing all dam safety deficiencies at each dam as part a single project.

Goulburn-Murray Water's methodology to determine works priorities for upgrading its dams has been endorsed by a stakeholder reference panel and an expert panel of national and international dam practitioners.

As discussed earlier, Goulburn-Murray Water understands that provision of works to improve fish movement, the minimisation of environmental risks from water releases and offtakes for environmental flows will occur through external investment. In this light, the total estimated investment for the dam safety upgrade program presented in does not include allowances for these types of works. Goulburn-Murray Water will continue to seek external investment for these types of works or Department of Sustainability and Environment's exemption.

Surface Water Management Program

The Shepparton Irrigation Region and the Loddon Murray Surface Water Management Programs are implemented in partnership with Goulburn Broken and North Central Catchment Management Authority's, Department of Sustainability and Environment, the Department of Primary Industries, Goulburn-Murray Water's customers and other catchment stakeholders.

This well established Program aims to improve the health of natural resources and improve productivity in irrigation regions by providing appropriate surface water management services.

The implementation of the Program is significantly influenced by changes in both water and natural resources management with Program Managers working within, and adapting the program to meet, current, revised and new initiatives and available external investment.

Goulburn-Murray Water is the implementing authority for the Catchment Management Authorities for the Program and is responsible for investigation, design and construction of the surface drains.

The Program is entirely funded externally with the final investment levels determined by the Program managers in line with implementation priorities. The total estimated investment detailed in is as advised from the Program managers for Goulburn-Murray Water to achieve Program responsibilities.

Reconfiguration Program

The Reconfiguration Program is being undertaken to fulfil obligations on Goulburn-Murray Water outlined in Victorian's water reform package (Actions 4.7 & 4.8), *Securing Our Water Future Together* and as part of Goulburn-Murray Water's Water Recovery Savings package, to deliver 25GL of water savings to the environment by 2009.

The overarching objective remains to develop viable irrigation areas with a restructured delivery system that will ensure the irrigation industry remains sustainable into the future.

Planning for the Reconfiguration Program has to date been based on Victorian Government investment within Goulburn-Murray Water of $6 million for planning system reconfiguration and a further $50 million for plan implementation. Under this program water savings will be returned to the environment as part of the Living Murray Initiative through allocating 20% per annum of the new low reliability entitlement (this occurred on 1 July 2007) and 25GL of high reliability entitlement.

System reconfiguration planning is currently progressing across all Irrigation Areas under Goulburn-Murray Water's Reconfiguration Program. Planning continues to take a whole of system approach to water delivery, utilising best practice and proven technology to enhance delivery and analysis capabilities to maximise potential water savings with selection of infrastructure. Infrastructure is matched to land capabilities and economic reviews are undertaken of whole of life costs to minimise operational and future costs balanced against optimum operation.

The Foodbowl Modernisation Program will now become the major vehicle for investment in system modernisation and reconfiguration. Initial discussions are currently underway with DSE in relation to the potential integration of other reconfiguration activities with the wider Foodbowl Modernisation Program. Final decisions on a range of issues such as this will not be known for some time, and the final outcome will be incorporated into reviews of pricing for 2009/10 and beyond. More details on this issue are covered in the pricing proposals included in Chapter 6.

Mokoan – Return to Wetland

The Mokoan – Return to Wetlands project is being undertaken in partnership with the Department of Sustainability and Environment, Goulburn Broken Catchment Management Authority and Goulburn-Murray Water.

This Project is an integral part of the Victorian's water reform package (Action 3.9), *Securing Our Water Future Together*, to allow the recovery of 44,000 ML as water savings for return as environmental flow to the Broken River, Goulburn River, River Murray and Snowy River.

Before rehabilitation of the wetlands can commence a series of studies and programs need to be completed including infrastructure design to provide alternative water supply to current users, supply reliability offset measures, reintroduction of Lake Boga as part of a Mid Murray Storage system (to secure the Snowy River flows), the decommissioning of the lakes existing infrastructure and a final plan to guide future land use.

The project, as it relates to water savings is required to be completed by the end of 2008/09 with Goulburn-Murray Water responsible for the delivery of asset decommissioning, new water supply systems and other irrigation delivery infrastructure.

The project will be well advanced by the end of the first regulatory period and the total estimated investment for the second regulatory period, is associated with the delivery of the offset measures and decommissioning works.

Diversions Metering

The Diversions Metering project is being undertaken in partnership with Department of Sustainability and Environment and is an integral part of the Victorian's water reform package (Action 2.14), *Securing Our Water Future Together*.

The project aims to improve metering and compliance to sustain a fair and equitable system of water allocation by metering groundwater and unregulated stream diversions. Goulburn-Murray Water has elected to include the metering of regulated stream diversions into the project noting opportunities for efficiency gains given the similarity of works.

Goulburn-Murray Water in consultation with the Department of Sustainability and Environment and customers has established metering thresholds of 20ML of entitlement for groundwater and 10 ML for surface water. The result will be approximately 40% of groundwater sites and 30% of unregulated surface water sites being metered. These thresholds are seen as providing the greatest opportunity to minimise costs and price impacts and minimise inequities between customers.

The initial timescale was for the project to be completed in 2007, however the severe drought conditions has placed significant pressures on customers which has resulted in delivery delays. The 2008 Water Plan total estimated investment.

Irrigation Area Programs

The programs outlined in for Central Goulburn, Torrumbarry and Rochester Irrigation Areas represent the replacement programs developed for similar type assets. These programs represent assets that will be at the end of their useful life during the second regulatory period. Replacement has been deferred as long as reasonably practical without compromising Goulburn-Murray Water's ability to provide services, deliver the works or exposure to unacceptable risks.

Using established asset management processes, and drawing on Goulburn-Murray Water's extensive asset data base, for each asset, remaining life is combined with current replacement cost to estimate replacement timing and cost. Resource levelling is then undertaken to aid program deliverability. The program makes allowance for other known programs, such as Reconfiguration and the Advance Maintenance Program, and will require adjustment as external investment is secured for modernisation projects.

Waranga Western Main Channel Subways

As with the Irrigation Area programs this program is associated with replacement of assets nearing the end of their useful life – in this case a number of subways along the Waranga Western Main Channel.

Under Goulburn-Murray Water Whole of Business Risk Management Framework this program has a business priority score of 2 – High Priority. The program has been developed in recognition of winter water transfer demands on the Waranga Western Main Channel.

4.4 Financing Capital Investments

Goulburn-Murray Water proposes to finance capital investment by:

- Government contributions towards water savings projects, drainage programs, and dam safety upgrades. Government contributions forecast to be received over the five year period 2008/09 – 2012/13 amounts to $52.0 million.
- Customer contributions from the return of bank surpluses as at 30 June 2006. $14.2 million is forecast to be returned over the five year period 2008/09 – 2012/13
- A return of net capital expenditure over the useful life of assets, ie depreciation.
- A return on net capital based on the Weighted Average Cost of Capital (WACC), ie interest on borrowings.

A table that shows the calculation of the value of G-MW's Regulated Asset Base (RAB) will be provided in the final Water Plan submission.

4.4.1 Weighted Average Cost of Capital

Goulburn-Murray Water proposes to accept the Essential Services Commission's current estimate of the Weighted Average Cost of Capital (WACC) which is currently 5.1 per cent (*ESC's 2008 Water Price Review Guidance Paper, March 2007*) but notes that the WACC may change.

4.5 Taxation

From the 2002/03 financial year Goulburn-Murray Water has been subject to the National Tax Equivalence Regime (NTER). The NTER is administered by the Australian Taxation Office. Goulburn-Murray Water expects to be in a tax loss position, and therefore not pay income tax, for the foreseeable future. Accordingly no provision has been made for taxation in this Water Plan.

4.6 Uncertainties

Whilst Goulburn-Murray Water's 2008 Water Plan is based on the best available information, there are matters that have a significant degree of uncertainty associated with them and therefore could affect services and customer price. These uncertainties are outlined in the following section.

Operating Environment

The impact of many factors, including weather patterns, the possible existence of climate change and the socio-economic circumstances affecting the irrigation industry in the wake of extended drought, cannot be fully understood or accurately predicted. It is recognised that there may be substantial reorganisation in the irrigation industry or change irrigation practices following several years of hardship and marginal economic return. It is anticipated that social adjustment and reorganisation will be facilitated through government investment.

Water Reform

The current volatility and extent of reform occurring in the water industry whilst presenting many exciting opportunities or also includes much uncertainty. There is currently around $2.5 billion of committed Government investment announced for the implementation of water infrastructure activities in the short term. Add to this the National Plan for Water Security investment of a further $10 billion for future water projects.

It is noted that there are many who are competing for these investments, some in direct competition with, or overlapping, Goulburn-Murray Water. Either way there is anticipated to be an affect on Goulburn-Murray Water's activities the extent of which is unknown.

Victorian's water reform package, *Securing Our Water Future Together*, remains key to reform and as implementation continues it is anticipated that new opportunities and initiatives will present. Again these also include uncertainties.

Water Availability

Goulburn-Murray Water's methodology for predicting water availability is outlined in Section 5 which includes discussion on the uncertainties. The reliability of supply for each of the regulated supply systems is defined in the Bulk Entitlement orders for each system and these reliabilities have been determined based on long term system simulation models. The possibility remains for continuing below long term average water availability in the major supply systems during the second regulatory period.

Bulk Water Transfers Out of Catchments

The extreme shortages of water brought on by prolonged drought have introduced greater willingness to transfer water out of catchments to highest priority needs. This is already occurring with the transfer of Goulburn river water to urban use in Bendigo and Ballarat, and potentially with the Bunna Walsh Canal to transfer Murray River water into the Goulburn irrigation system. It is noted that other projects, such as the North-South pipeline which transfer of Goulburn river water to urban use in Melbourne, are being considered.

Reconfiguration Program

Goulburn-Murray Water's Reconfiguration Program is identifying opportunities for external investment primarily through modernisation and water savings projects. The extent to which these projects proceed will be determined by the level of external investment secured.

The Shepparton Irrigation Area Modernisation Project has been listed as a water savings measure under The Living Murray Initiative and the Victorian Government has committed investment to commence the project. Significant additional external investment will be required to complete the project.

Delivery of Water Savings

Opportunities for water savings will present, through continued water reform and system reconfiguration including modernisation of infrastructure, however the prolonged drought and depleted water resources may necessitate the delay in delivering these savings to the environment.

Statement of Obligations

Statement of Obligations is anticipated to be revisited as water reform and Goulburn-Murray Water's operating environment undergoes change. The Minister for Water's future expectations are unclear.

Unbundling Implementation

Changes in customer behaviour resulting from the opportunities presented through unbundling are unknown. Equally the 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.

Goulburn-Murray Water Whole of Business Risk Framework

The continued implementation of Goulburn-Murray Water's Whole of Business Risk Framework could result in the identification/reprioritisation of intervention works.

Irrigation Drainage Memorandum of Understanding

Implementation of activities under the Irrigation Drainage Memorandum of Understanding is dependant on the extent of external funding.

Surface Water Management Program

The priorities and level of investment on Surface Water Management Program is determined by external Program Managers.

Retail Water Services Metering

Goulburn-Murray Water has a large portfolio of meter outlets, the majority of which are due for replacement beyond the second regulatory period. The development of national metering standards and trade measurement legislation is continuing to evolve and water reform continues to promote discussion on future expectations, customer equity, water savings and the need for modernisation. The future direction of metering is uncertain.

Diversions Services Metering

The metering thresholds of 20ML of entitlement for groundwater and 10 ML for surface water established for the Diversions Metering Program will result in a significant percentage of groundwater and surface water entitlements remaining un-metered. The continued acceptance of this proposal in the light of serve water shortages is uncertain and consideration may need to be given to reducing the threshold to achieve greater metering percentages. Goulburn-Murray Water maintains the view that the extension of the existing program could only proceed with additional external funding.

Environmental Obligations

From Goulburn-Murray Water's discussions with EPA Victoria and the supporting document, *Draft Principles to Establish EPA Environmental Obligations for Water Businesses for the 2008-20013 Pricing Determination,* Goulburn-Murray Water is lead to understand that environmental obligations will not significantly alter within the second regulatory period.

EPA Victoria has advised that *"Some policies will be reviewed within the next regulatory period (2008-2013), however, where possible, any new obligation that*

arises as part of a policy review will be incorporated into the next water plan (that is post 2013). For any unforeseen new obligation that arises during the 2008-2013 period, EPA will consult with Essential Services Commission and water businesses as soon as possible to enable adequate time to implement obligations."

Goulburn-Murray Water has not been informed of the specific policy changes proposed and has not attempted to anticipate these in any manner, including the provision of investment allowances. Goulburn-Murray Water will continue to work in partnership with EPA Victoria and its other catchment partners to ensure that policy changes benefit its customers with minimal pricing impacts.

5 Demand

This section of the 2008 Water Plan provides an overview of Goulburn-Murray Water demand forecasts and the key assumptions adopted in arriving at those forecasts. The section includes discussion on the methodology Goulburn-Murray Water has adopted and summaries the forecasts in tabular form.

5.1 Overview of Demand Forecasts

5.1.1 Water Entitlements and Deliveries

Goulburn-Murray Water operates its bulk water supply systems within Bulk Entitlement orders issued by the Victorian Government. The Bulk Entitlement for a system defines the limits on system operation and the obligations to use available water to supply other entitlements held within the same system. These other entitlements typically comprise the Bulk Entitlement orders for urban areas held by regional water authorities, and the Water Shares held by rural water users as customers of Goulburn-Murray Water.

Typical water use in the systems Goulburn-Murray Water controlled is presented in the following table.

Table 14 - System Entitlements and Average Volumes Supplied, ML

System	Total Entitlement	Average Use for Last 10 Years	Minimum Use	Maximum Use
Murray	698,222	937,126	768,590	1,114,877
Goulburn	995,351	1,073,317	670,563	1,548,102
Broken	26,102	20,624	13,857	31,141
Campaspe	37,119	37,810	12,880	57,420
Loddon	21,391	22,083	12,298	36,659
Ovens/King	26,449	18,356	11,439	27,019
Total	1,804,634	2,109,316	1,707,260	2,793,366

1 Data in Table 14 is for irrigation Water Shares.

2. Data is for the 10 years to 2005/06

The data in illustrates the variability of water consumption by irrigation and other users. Use is affected by the availability of water and the demand for water supply. Water availability is dependent on the inflows to Goulburn-Murray Water storages, which are governed by weather conditions. Demand is also strongly influenced by weather conditions, and is heavily reduced in wet years but very strong during periods of drought.

5.1.2 Allocation Policy

In any year, entitlements represent a share of the available resource. On 1 July each year, Goulburn-Murray Water assess resource availability and make an allocation of water to all entitlement holders in proportion to their entitlements and in accordance with the hierarchy of reliability specified in the relevant Bulk Entitlement orders. The water resources are regularly reviewed during the water year (1 July until 30 June the following year) and the allocations are increased if more water becomes available.

This water allocation policy operates within Bulk Entitlement specifications, and ensures probity in the process and the protection of the reliability of supply.

5.1.3 Water Availability

Goulburn-Murray Water operates both unregulated and regulated supply systems. The availability of water in unregulated systems is primarily affected by in-season hydrology and rainfall during the season. User access to water is restricted in the event of water shortages; the very low rainfall during 2006/07 saw access banned in many unregulated systems across Goulburn-Murray Water's operational region. The reliability of these systems is primarily dictated by weather conditions, and in some locations, the implementation of changed management processes such as stream flow management plans.

The majority of Goulburn-Murray Water's water systems are regulated. In these systems, water storages are used to reduce the effects of hydrological uncertainty on the reliability of supply. 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 for High Reliability Water Shares (HRWS) reaches 100% of entitlement. In these systems, additional allocations – formerly known as Sales, but now Low Reliability Water Shares – are announced only after there is a 99% probability that allocations for HRWS in the final year will reach 100%.

Table 15 - Planning Periods for Regulated Systems

System	Planning Period
Murray	2 years
Goulburn/Loddon	2 years
Broken	1 year
Campaspe	2 years
Bullarook Creek	1 year

Systems with a one year planning period have resources set aside to improve the reliability of supplies in future years once the allocation reaches the maximum allowed for the system. However, water may not be available for consumption despite being allocated because of poor water quality. Supplies from the Broken and Bullarook Creek systems have sometimes been affected by high concentrations of potentially toxic blue-green algae.

The storages on the Ovens/King system are not operated to carry over resource for future seasons. Access to water is restricted if there is a supply shortage. Allocations are available under Low Reliability Water Shares each season until storages cease spilling.

5.2 Demand Forecasts

5.2.1 Unregulated Systems

Water availability for the 2007/08 season and beyond for unregulated streams is for planning purposes is anticipated to be similar to the long term average.

5.2.2 Regulated Systems

The depletion of resources from all Goulburn-Murray Water storages during 2006/07 is expected to minimise initial allocations in regulated systems in 2007/08. The most likely opening allocations are zero or near zero in most systems.

The extent of recovery through 2007/08 will depend on rainfall and inflows. The smaller Campaspe, Broken and Ovens/King systems should recover relatively quickly due to the relatively small volumes needed to meet entitlements. Much larger inflows are needed for the Goulburn and Murray systems to improve to the same extent.

With uncertainty affecting the 2007/08 system demands, Goulburn-Murray Water has used modelling based on historical data to forecast demand for the 2008/09 to 2012/13 regulatory period. The impact of past droughts – although not as extreme as 2006/07, is captured in the statistical analysis conducted with the modelling.

5.3 Summary of Demand Forecasts

Historical delivery data and modelled system behaviour provides the basis for demand forecasts. The year to year operations of the unregulated systems are adequately described by long-term average consumption.

The expectation of reliability in regulated systems requires closer scrutiny of forecast assumptions and analysis.

5.3.1 The First Regulatory Period

The forecast 5 in 10 chances allocations from the first regulatory period are compared against available actual allocations in the following table.

Table 16 - Allocations for Selected Systems in the First Regulatory Period

Item	2005/06	Actual	2006/07	Actual	Revised 2007/08 Forecast[1]
Murray	100%	141%	103%	95%	67%
Goulburn	100%	100%	123%	26%	100%
Campaspe	28%	31%	131%	0%	62%

1 Forecast 15 February 2008 allocations as at 1 August 2007 using seasonal adjusted inflow statistics.

Despite good agreement the previous year, 2006/07 differed markedly from the initial forecasts. The forecast allocation is based on average conditions and the impact of extremely dry seasonal conditions which resulted in new minimums inflows throughout all systems did not allow the 2006/07 allocations to rise to levels predicted for average conditions. The lower allocations now being forecast for February 2008 are a result of the drought conditions in 2006/07 and the depletion of stored reserves to maintain supplies.

5.3.2 Second Regulatory Period

As discussed in Section 1, the preparation of demand forecasts for the second regulatory period is strongly influenced by the uncertainty of the 2007/08 season. The impact of many factors, including weather patterns, the possible existence of climate change and the socio-economic circumstances affecting the irrigation industry in the wake of the 2006/07 drought, cannot be fully understood or accurately predicted.

Goulburn-Murray Water has relied on system models and historical data to forecast demand over the next five years. This approach applies the best available knowledge of system hydrological behaviour and customer attitudes towards seasonal conditions. The statistical analysis of outcomes derived from over 100 years of data provides a measure of the uncertainty that comes from projecting so far into the future.

The demand forecasts for this regulatory period use the 50% probability of exceedance scenario or 5 in 10 chances. These statistics were considered to be more representative of possible system operations than those with higher exceedance probabilities, which skew demand towards lower volumes. Historical data indicates systems can recover from serious drought – similar to that observed in 2006/07 – very quickly.

Table 17 - Forecast Total System Demand for the Second Regulatory Period

System	2008/09 (GL)	2009/10 (GL)	2010/11 (GL)	2011/12 (GL)	2012/13 (GL)
Murray	687	687	718	910	997
Goulburn	1,023	1,166	1,219	1,256	1256
Campaspe	47	48	48	48	48

1. The system demand estimates for 2008/09 are subject to review given the declining outlook for the Murray and Campaspe systems early in the 2007/08 season.

The demand forecasts in are the total estimated deliveries under High Reliability Water Shares and Low Reliability Water Shares.

The data in was prepared from modelling conducted by Goulburn-Murray Water internal staff, and by River Murray Water on Goulburn-Murray Water's behalf. These models are based on water sharing rules operating in April 2007, and will not accurately represent extraordinary operating rules that will be implemented if severe drought conditions continue into 2007/08.

The system models are unable to predict customer behaviour in the aftermath of the 2006/07 drought. It is recognised that there may be substantial reorganisation in the irrigation industry or change irrigation practices following several years of hardship and marginal economic return.

The following table details the converts the demand forecasts in to an allocation forecast. These allocation forecasts use the 50% probability of exceedance scenario or 5 in 10 chances.

Table 18 - Allocations for Selected Systems in the Second Regulatory Period

1. The system allocation estimates for 2008/09 are subject to review given the declining outlook for the Murray and Campaspe systems early in the 2007/08 season.

System & Water Shares	2008/09	2009/10	2010/11	2011/12	2012/13
Murray High Reliability Water Shares	100%	100%	100%	100%	100%
Murray Low Reliability Water Shares	0%	0%	10%	72%	100%
Goulburn High Reliability Water Shares	100%	100%	100%	100%	100%
Goulburn Low Reliability Water Shares	0%	45%	60%	69%	69%
Campaspe High Reliability Water Shares	100%	100%	100%	100%	100%
Campaspe Low Reliability Water Shares	100%	100%	100%	100%	100%

5.4 Individual Demand Forecasts for Rural Water Delivery Volumes

Goulburn-Murray Water rural water entitlements were separated into High Reliability and Low Reliability entitlements on 1 July 2007.

5.4.1 High Reliability Entitlement

Goulburn-Murray Water high reliability entitlements are called High Reliability Water Shares (HRWS). The HRWS replaces the former Water Right, Licensed Volume and Domestic and Stock entitlements.

The HRWS demand forecasts for the five seasons starting 2008/09 are presented in the following table.

Table 19 - Forecast High Reliability Demand for the Second Regulatory Period

System	2008/09 (GL)	2009/10 (GL)	2010/11 (GL)	2011/12 (GL)	2012/13 (GL)
Murray	687	687	687	687	687
Goulburn	1023	956	940	935	935
Campaspe	27	27	28	28	28

The demands were obtained from resource allocation models operated by Goulburn-Murray Water (Goulburn, Campaspe) and River Murray Water (Murray). The models allocate water to end users on the basis of operating rules, water sharing rules and simulated water requirements. Statistical analysis was used to present the likely demands for 50% probability of exceedance conditions.

The impact of permanent trade out of Goulburn-Murray Water systems (predominantly towards the Sunraysia region under the management of Lower Murray Water) has been included in the assessments conducted for this analysis.

No model functions were amended despite the record low inflows recorded during 2006/07 across the Murray, Goulburn and Campaspe systems. It was assumed that past operating procedures would be adopted once systems began recovering from the low resource position created by drought.

5.4.2 Low Reliability Entitlement

The Low Reliability Water Share (LRWS) replaced the Sales entitlements as Goulburn-Murray Water's low reliability entitlement after unbundling. The demands presented in Table 20 imply the likely consumption of water that is available in excess of the high reliability entitlement.

Table 20 - Forecast Low Reliability Demand for the Second Regulatory Period

System	2008/09 (GL)	2009/10 (GL)	2010/11 (GL)	2011/12 (GL)	2012/13 (GL)
Murray	0	0	31	223	310
Goulburn	0	209	279	321	321
Campaspe	20	20	20	20	20

The data is derived from the same models used to forecast demand for HRWS, and all volumes have been adjusted for the "80:20" rule where 20% of available low reliability entitlement is offered to the environment. As with the high reliability entitlements (Section 4.1), the 50% probability of exceedance statistics have been used to populate the demand data.

The data suggests LRWS will be available in the Goulburn and Campaspe systems much sooner than the Murray system. The bulk entitlement for the Murray system provides for 96% reliability of high reliability entitlements, compared to 97% in the Goulburn system and 99% in the Campaspe system. Under these management requirements, the Murray system is likely to have less access to LRWS.

In recent years (and prior to the first regulatory period), the Murray system has provided more regular access to low reliability entitlements than either the Goulburn

or Campaspe. However, with all major storages nearly emptied during 2006/07, the Murray will take longer to recover.

6 Prices

6.1 Tariff Structures

During 2006/07 G-MW undertook a major revision of its tariffs to introduce Delivery Shares as the basis for recovering the fixed costs for maintaining and renewing irrigation delivery systems. This represents a major shift from the long standing past practice of recovering these costs on the basis of the water entitlements owned by each farmer.

In 2000, Goulburn-Murray Water initiated a program of tariff reform for its key water supply services in irrigation areas. These services account for the significant majority of Goulburn-Murray Water's total revenues. In 2006/07 the final element of this program was put in place with the implementation of an access regime based on delivery shares in irrigation areas as the basis for recovering the fixed costs of water delivery services.

The irrigation tariff regime now in place includes the following elements:

Tariff Element	Service/cost addressed by tariff	Basis for application of tariff element
Service Fee	Recovers entitlement administration costs	per property
Entitlement Storage Fee	Recovers water harvesting and storage costs	per ML water entitlement
Infrastructure Access Fee	Recovers fixed costs of maintaining and renewing channel system	per ML/day delivery share
Infrastructure Use Fee	Recovers variable costs of operating channel system	per ML delivered up to annual delivery allowance
Casual Infrastructure Use Fee	Recovers variable costs of operating the channel system and a contribution towards the fixed costs of maintaining and renewing channel system	per ML delivered above annual delivery allowance

This new tariff structure fundamentally addresses the issues of stranded assets and price pressures due to permanent water trading. This reform was also an essential foundation for the move to unbundled water entitlements which was implemented on 1 July 2007 in northern Victoria. It provides a cost reflective tariff system which provides the correct signals to water users about the real cost of the various services they access and allows individuals to manage their own costs as they take

advantage of the flexibility offered by unbundling, whilst minimising the chances of unreasonable cross subsidies.

During 2006, the Australian Competition and Consumer Commission (ACCC) was asked to review the issue of managing stranded asset costs in relation to water trade and to make recommendations on the suitability of exit fees to manage these impacts. The proposed regime that the ACCC recommended was essentially identical to the reforms G-MW has implemented, involving unbundling of water rights and delivery rights, establishing access fees to recover costs associated with delivery entitlements and providing for the transferability and termination of delivery entitlements. This independent review further confirms the suitability of Goulburn-Murray Water's current tariff structure and this will continue to be applied during the second regulatory period.

Some limited essential changes were made in 2007 to the tariffs covering regulated diversions to support unbundling of entitlements. During 2007/08, Stage 2 of regulated tariff reforms will be developed in consultation with diversions customers. Stage 2 will more fundamentally identify the range of unbundled services in diversions and the relevant costs for each service. It is currently intended that the revised tariff proposals will be implemented in regulated diversion services for the 2008/09 financial year.

It is also anticipated that the tariff model developed for regulated diversions will have strong applicability to unregulated and groundwater diversion services. Tariff reforms in these services will be implemented to coincide with the unbundling of these services over the second regulatory period.

There are two other key areas targeted for tariff reform over the second regulatory period. These are:

1. Bulk water pricing for Goulburn-Murray Water retail customers. Following the development of Bulk Water Entitlements all water authorities (including G-MW) incur costs for bulk water services based on the cost of the assets used to provide these services in each separate river basin. Goulburn-Murray Water has inherited a system where these separate costs are pooled and averaged into two system prices for the Murray and Goulburn systems before being charged to G-MW's retail customers.

   A number of independent reviews have recommended that Goulburn-Murray Water move to basin pricing at a retail level in order to support effective decision making on asset investments and customer water trading activities. Unbundling of water entitlements and the expansion of trade interstate further reinforces the need to clearly identify the real costs of bulk water services for different water entitlements.

   Goulburn-Murray Water's Board has taken the decision to implement basin pricing, and during 2007/08 implementation and transition plans will be developed in consultation with customers. It is proposed that implementation of these changes will commence in 2008/09, however reaching full basin prices may require a transition period of a number of years in some basins to manage customer impacts.

2. Tariffs for surface drainage services in irrigation areas have been identified as needing review. A review of these tariffs will be include consultation with both customers and Catchment Management Authorities to ensure that any proposed changes have due regard for the effective management of irrigation drainage from financial, salinity and water quality management perspectives.

It is planned that any changes to drainage tariffs will be implemented in 2008/09.

The extreme drought conditions of 2006/07 raised customer concerns in relation to payment of fixed charges for infrastructure when water availability was extremely low. The Victorian government responded to this issue in 2006/07 with the provision of a generous package of rebates and interest free payment deferrals. In order to better understand this issue and develop future management responses, Goulburn-Murray Water undertook a Tariff Policy Review to develop and evaluate a range of options that could be applied to this issue should there be a future re-occurrence of extremely low water availability.

A wide range of possible options were identified and evaluated, however following consultation with Water Services Committees, the recommended option was to offer interest free deferrals of fixed charges to customers in systems affected by extremely low water allocations. It was recognised that as G-MW operates at lower bound pricing with no “profit” margin, offering drought rebates or deferrals merely shifts the cost burden in time, and customers will ultimately be required to meet these costs and the associated interest charges where they are deferred. It was recognised, however, that in extreme drought situations there was both an expectation of and some merit in offering a general ability to defer fixed payments.

Further analysis and consultation will be undertaken to establish the trigger points for offering this drought response measure and the detailed conditions surrounding it, particularly in the scenario of successive years of very low allocation. Initial estimates suggested that the annual interest costs for a deferral of fixed charges could be of the order of $2.5 m per year. Assuming that a reasonable period for deferral of payments may be five years (e.g. no payment required in the trigger year and then 25% of the deferred amount repaid in each of the subsequent four years) the cumulative interest costs for a single deferral event could be approximately $6.25 m.

Given the uncertainty of seasonal conditions, the other pressures on price and the relatively low likelihood that conditions extreme enough to trigger deferral of fixed payments will occur during the second regulatory period, no inclusion has been made in prices to cover such an event. If future conditions are severe enough to trigger deferrals, a submission would be made to the ESC to have the associated interest costs treated as an “unforeseen” event and approval would be sought to recover these increased costs, if and when the event actually occurred.

6.2 Pricing Proposals

As a result of the uncertainty relating to the Foodbowl Modernisation Project and other significant modernisation projects it is proposed to submit prices for key gravity irrigation services for the 2008/09 year only, and to resubmit in 2008 a revised Water Plan to the ESC when full details of these significant projects are known.

In developing the Water Plan G-MW had consulted with Water Services Committees (WSC) on the issues affecting the rural water industry and proposed prices prior to the announcement of the Foodbowl Modernisation Project.

Since the announcement a high level review of the Advanced Maintenance Program (AMP) has been completed. AMP works have been kept to a minimum until the full implications of the Foodbowl Modernisation Projects are known.

Proposed prices in this Water Plan are now lower for the key gravity irrigation services than originally discussed with WSCs in June 2007. These lower prices were

presented to all WSCs at their annual workshop help in Bendigo on 7-8 August 2007, and were generally well supported.

For the 2008/09 year the following adjustments to revenue requirements versus 2007/08, in real terms, are proposed:-

Gravity Irrigation Service	2008/09 Revenue* Requirements inc/(dec) versus 2007/08 in Real Terms
Shepparton Gravity Irrigation Service	0.7%
Central Goulburn Gravity Irrigation Service	0.0%
Rochester Gravity Irrigation Service	0.0%
Campaspe Gravity Irrigation Service	(3.0)%
Pyramid-Boort Gravity Irrigation Service	4.5%
Murray Valley Gravity Irrigation Service	0.0%
Torrumbarry Gravity Irrigation Service	5.7%

** Note: This change represents an average across the particular service. Due to changes to components of the tariff for each service results for individual customers may vary above or below this average. Does not include CPI, which will be added as determined by the ESC for each particular year.*

Note also that the proposed 2008/09 revenue for the above services should be regarded as a "holding pattern" approach, and do not represent the long term revenue requirements for sustainable service delivery. Robust revenue requirements for the remaining 4 years of the second regulatory period will be developed once details of the $1 billion FMP are more fully known.

As noted above prices originally proposed, and discussed with Water Services Committee in June 2007, were higher than those now proposed had the AMP not been reduced pending further details of the Foodbowl Modernisation Project (FMP). Refer 8.2 Appendix B for a comparison between the two. In effect these earlier prices represent the price path Goulburn-Murray Water would have proposed for period 2008/09-12/13 had the FMP not been announced.

For all other services proposed prices are similar to those previously discussed with WSCs throughout June 2007. The full list of annual percentage changes in service revenue (as an indication of individual price changes) is attached. Refer 8.1 Appendix A - Proposed Annual Percentage Changes in Revenue.

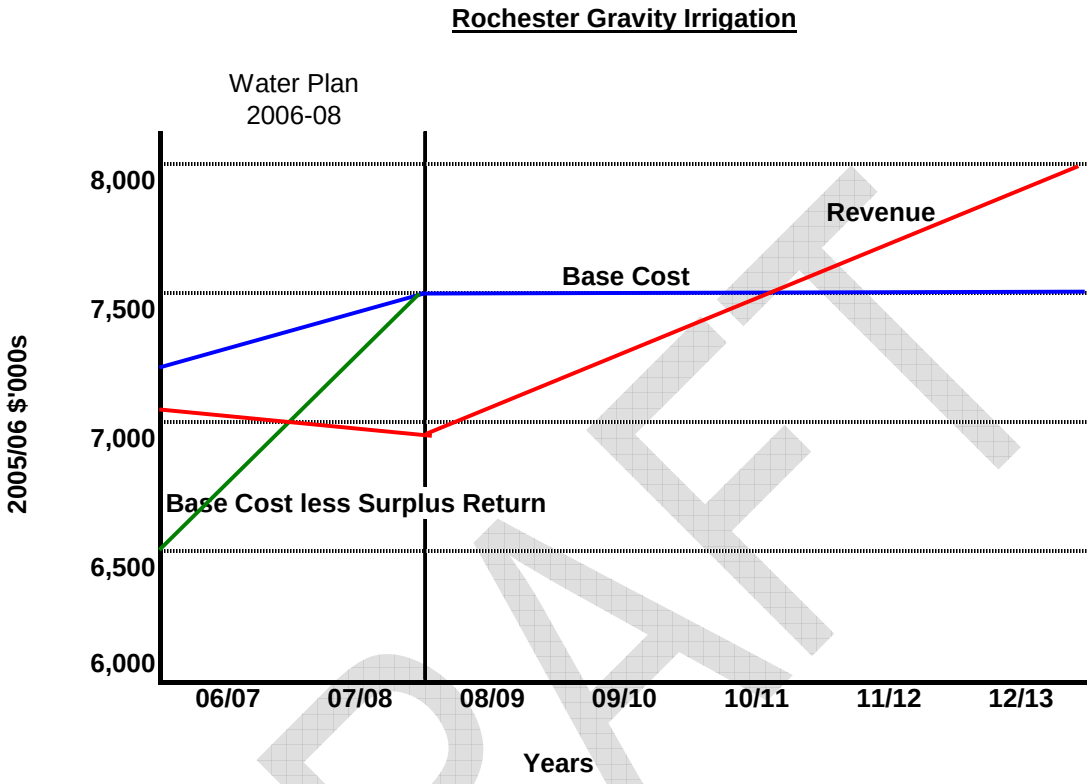
6.2.1 Price Smoothing

G-MW discussed the objective of price smoothing with customers and how this assists with providing price certainty.

G-MW generally supports the objective of smooth year on year changes in prices over time. In applying the ESC's price smoothing calculation however G-MW has noted that price changes are smoothed year on year within the regulatory period, but there can be volatile changes in prices between regulatory periods which has proven to be disconcerting to WSCs.

The return of bank surpluses, which has the effect of temporarily lowering the service revenue requirement until the surplus has been returned, can exaggerate the price volatility between regulatory periods.

A good example of this is the Rochester gravity irrigation revenue calculation developed under G-MW's approved current Water Plan 2006-08:



Rochester's approved base cost (blue line) was reduced in 2006/07 by a $710,000 bank surplus return (green line). Smoothed revenue (red line) is calculated for 2006/07 and 2007/08 using the ESC methodology that, in total for the two years, equates to Rochester's base cost adjusted for the surplus return (green line). Note that a $600,000 loss is planned for 2007/08 (red line less blue line).

Assuming no change to Rochester's base cost for the next five years 2008/09 – 2012/13 (blue line), revenue would need to increase by 2.9% per annum for five years (red line) to break even with the base cost. Losses are expected in the first two years and profits are expected in the last two years. In total revenue equals base cost over the five year period 2008/09 – 2012/13.

The reverse (ie revenue reductions) would occur over the next five years 2013/14 – 2017/18 continuing the price volatility between regulatory periods resulting from this smoothing methodology.

6.3 Form of Price Control

Goulburn-Murray Water proposes that a revenue cap approach is taken to price control for the regulatory period.

Under the revenue cap approach a specified level of revenue is fixed for the term of the regulatory period. Under this approach Goulburn-Murray Water will have an incentive to minimise its costs as any benefits will be retained during this regulatory

period, after which these benefits are passed on to customers in the form of lower prices.

Revenue cap approach proposed in preference to individual price caps because:

- Continuing uncertainty regarding how costs are to be shared between customer groups; and
- The continuation of tariff reform.

6.4 Adjusting Prices

Although every effort has been made to allow and adjust for known circumstances in this Water Plan, and in managing within our revenue cap, there will remain instances where it may be appropriate account for certain events that are outside of our control of the business. This is acknowledged by the Essential Services Commission.

In these cases Goulburn-Murray Water intends to make application to the Essential Services Commission to adjust its prices within this regulatory period accordingly.

6.4.1 Changes in Legislative Obligations

Where appropriate Goulburn-Murray Water will seek to recover material increases in expenditure incurred during this regulatory period due to changes in legislative requirements.

Such a request for a pass through of costs may be due to increased expenditure resulting from:

- Changes to all primary Acts and legislative instruments, including regulations;
- Changes in taxes (or fees or similar charges) excluding income tax, penalties and interest on taxes, stamp duty, financial institution duty or similar taxes and levies;
- Changes to EPA Victoria license requirements;
- Changes that may result from revised institutional arrangements, such as may arise from the state transferring any of its responsibilities to the federal government as part of the National Water Plan;
- Changes arising from a Ministerial Directive or similar Government directive; and
- Changes to the Statement of Obligations.

6.4.2 Unforeseen Events

Goulburn-Murray Water will seek to recover material increases in expenditure incurred due to other unforeseen events.

In all cases Goulburn-Murray Water commits to taking all appropriate steps to minimise the impact of a major event, to ensure that expenditure to manage the event is efficient, and to consult with affected stakeholders, where possible, in advance of such expenditure.

An example of such an event could include a decision to pump Waranga Basin, at a cost of several million dollars, in the event of low water allocations in the Goulburn System, after consultation in advance with the direct beneficiaries of such a pumping event.

Goulburn-Murray Water proposes that such a request would be subject to $250,000 “minimum”, and believes if the “minimum” amount was set any higher the occurrence

of such an event, if it occurred in a lower cost service, could threaten financial viability of that service.

7 Non-Prescribed Services

7.1 Classification of Services as Non-Prescribed

The Water Industry Regulatory Order declares a range of services supplied by Goulburn-Murray Water in respect of which the Essential Services Commission has the power to regulate prices. These services generally include retail water, storage operator and bulk water; drainage, and diversions services. These are known as "prescribed services".

Goulburn-Murray Water also provide a number of "non-prescribed services" some of which are of contribute a material proportion of our total revenue.

For the purpose of developing the 2008 Water Plan the following services have been treated as non-prescribed services and accordingly have not been submitted for determination by the Essential Services Commission:-

- Water Amenity Business, including:
  - Commercial Leases
  - Houseboats
  - Regional Urban Storage Amenity Fee
- Hydro-electricity contracts
- Salinity management undertaken under government services contracts
- Storage operation and land management services provided under contract to the Murray Darling Basin Commission
- Watermove business
- Tatura Training Centre
- Recoverable works
- Grazing licenses

Goulburn-Murray Water has well established processes and practices to ensure that the cost of non-prescribed services are accurately identified and excluded from the prescribed services cost base.

8 Appendices

8.1 Appendix A – Proposed Annual Percentage Changes in Revenue

Table 21 – Proposed Annual Percentage Change in Revenue

Service	Proposed Annual Percentage Change in Revenue* Increase/(Decrease) *(plus CPI)*
Shepparton	
Gravity Irrigation #	0.7%
Surface Drainage	(1.2)%
Sub-Surface Drainage	23.0%
Central Goulburn	
Gravity Irrigation #	0.0%
Surface Drainage	0.5%
Sub-Surface Drainage	5.2%
Rochester	
Gravity Irrigation #	0.0%
Surface Drainage	1.0%
Sub-Surface Drainage	3.1%
Campaspe	
Gravity Irrigation #	(3.0)%
Sub-Surface Drainage	3.6%
Pyramid-Boort	
Gravity Irrigation #	4.5%
Surface Drainage	18.7%
Murray Valley	
Gravity Irrigation #	0.0%
Surface Drainage	0.9%
Sub-Surface Drainage	5.1%
Torrumbarry	
Gravity Irrigation #	5.7%
Surface Drainage	2.6%
Tyntynder Surface Drainage	(10.2)%
Pumped Irrigation	
Woorinen Pumped Irrigation	3.1%
Nyah Pumped Irrigation	1.3%
Tresco Pumped Irrigation	(6.6)%
Woorinen S-Surface Drainage	2.1%
Nyah S-Surface Drainage	(16.4)%
Tresco S-Surface Drainage	(0.4)%
Water Works Districts	
Tungamah D&S	4.3%
Normanville D&S	5.5%
East Loddon D&S	(2.6)%
West Loddon D&S	15.0%
Surface Water Diversions	
Goulburn Regulated	12.2%
Murray Regulated	13.5%
Goulburn Unregulated	11.0%
Murray Unregulated	11.4%

Service	Proposed Annual Percentage Change in Revenue* Increase/(Decrease) *(plus CPI)*
Groundwater Diversions	
Entitlement Management	14.7%
Shepparton Intensive Mgmt	3.0%
Other Intensive Mgmt	7.0%
Flood Protection	
Loch Garry	(5.5)%
Bulk Water	
Goulburn System	
Goulburn basin	8.4%
Broken basin	11.0%
Campaspe basin	5.6%
Loddon basin	5.3%
Bullarook basin	18.7%
Murray System	
Murray basin	3.4%
Ovens/King basin	22.2%

** Note: This change represents an average across the particular service. Due to changes to components of the tariff for each service results for individual customers may vary above or below this average. Does not include CPI, which will be added as determined by the ESC for each particular year.*

These proposed percentage changes in revenue do not allow for the Shepparton Modernisation, TCC-CG 1234 stage 3 and Foodbowl Modernisation water savings projects. It must be emphasised that the proposed 2008/09 revenue for these services should be regarded as a "holding pattern" approach, and do not represent the long term revenue requirements for sustainable service delivery. Robust revenue requirements for the remaining 4 years of the second regulatory period will be developed and resubmitted to the ESC once details of the $1 billion FMP are more fully known.

8.2 Appendix B – Proposed Annual Percentage Changes in Revenue compared with original consultation with Water Services Committees prior to Foodbowl Modernisation Project announcement

Table 22 – 2008/09 Proposed Annual Percentage Change in Revenue compared with original consultation with WSCs prior to Foodbowl Modernisation Project announcement

Service	Average Annual Percentage Change in Revenue *(plus CPI)**	
	Originally consulted with WSCs#	Revised post Foodbowl Modernisation Project announcement
Shepparton Gravity Irrigation	5.4%	0.7%
Central Gravity Irrigation	1.1%	0.0%
Rochester Gravity Irrigation	4.6%	0.0%
Campaspe Gravity Irrigation	(4.2)%	(3.0)%
Pyramid-Boort Gravity Irrigation	9.4%	4.5%
Murray Valley Gravity Irrigation	3.4%	0.0%
Torrumbarry Gravity Irrigation	7.7%	5.7%

** Note: This change represents an average across the particular service. Due to changes to components of the tariff for each service results for individual customers may vary above or below this average. Does not include CPI, which will be added as determined by the ESC for each particular year.*

#Represents the price path Goulburn-Murray Water would have proposed for period 2008/09-12/13 had the Foodbowl Modernisation Project not been announced.

8.3 Appendix C– Advanced Maintenance Program proposed compared with original consultation with Water Services Committees prior to Foodbowl Modernisation Project announcement

Table 23 – Advanced Maintenance Program prior to Foodbowl Modernisation Project announcement

Service	07/08 07/08$M	08/09 07/08$M	09/10 07/08$M	10/11 07/08$M	11/12 07/08$M	12/13 07/08$M
Shepparton Gravity Irrigation	1.5	1.1	1.1	1.1	1.7	1.5
Central Goulburn Gravity Irrigation	4.4	3.5	3.5	2.6	2.4	2.6
Rochester Gravity Irrigation	2.2	2.5	2.5	2.6	1.6	1.6
Campaspe Gravity Irrigation	0.2	0.2	-	-	-	-
Pyramid-Boort Gravity Irrigation	0.7	0.8	0.8	1.6	1.6	1.8
Murray Valley Gravity Irrigation	2.8	2.8	2.8	2.8	2.8	2.0
Torrumbarry Gravity Irrigation	1.9	2.7	2.7	2.3	2.3	1.6
All Other Services	2.5	1.4	1.4	1.2	1.1	1.3
Total Goulburn-Murray Water	**16.2**	**15.0**	**14.8**	**14.2**	**13.5**	**12.4**

Table 24 – Advanced Maintenance Program post Foodbowl Modernisation Project announcement

Service	07/08 07/08$M	08/09 07/08$M	09/10 07/08$M	10/11 07/08$M	11/12 07/08$M	12/13 07/08$M
Shepparton Gravity Irrigation	1.2	0.3	0.3	0.3	0.3	0.3
Central Goulburn Gravity Irrigation	2.8	2.7	2.7	2.6	2.4	2.6
Rochester Gravity Irrigation	1.4	1.4	1.4	1.4	1.4	1.4
Campaspe Gravity Irrigation	0.2	0.2	-	-	-	-
Pyramid-Boort Gravity Irrigation	0.6	0.2	0.2	0.2	0.2	0.2
Murray Valley Gravity Irrigation	2.6	1.3	1.3	1.6	1.6	1.6
Torrumbarry Gravity Irrigation	1.9	1.3	1.3	1.3	1.3	1.3
All Other Services	2.5	1.3	1.3	1.2	1.2	1.1
Total Goulburn-Murray Water	**13.2**	**8.7**	**8.5**	**8.6**	**8.4**	**8.5**

8.4 Foodbowl Modernisation Project – Fact Sheet

Food Bowl Modernisation Project
Fact Sheet

The Goulburn Murray region is Australia's most important irrigation area, with the Goulburn Valley accounting for well over one quarter of Victoria's agricultural output.

As part of the next stage of the Government's *Our Water Our Future* plan, the Food Bowl Modernisation Project provides a once-off historic opportunity to ensure the future prosperity of the region through significant new investment in modernising ageing infrastructure to create a genuinely world class irrigation system – a one-in-a-hundred years reform.

Modernising the Food Bowl will take up to eight years to complete and will involve a total investment of up to $2 billion.

The Victorian Government is now commencing the first stage of Modernising Victoria's Food Bowl through a $1 billion project that will save up to 225 billion litres per year.

Stage One

Up to 900 billion litres of water in the Goulburn and Murray irrigation systems is currently lost through leaks, evaporation and other inefficiencies. This translates to around one quarter of Lake Eildon's capacity.

It is estimated that around half this water – 450 billion litres – can be captured through modernising infrastructure.

The first stage of the project will secure savings of up to 225 billion litres annually, with the second stage to capture the remaining 225 billion litres.

Investing in the Food Bowl

$1 billion has been committed for the first stage of the project, with $600 million coming from the State Government. Water authorities associated with this project will fund the balance of the first stage.

This $1 billion upgrade to generate up to 225 billion litres which includes the delivery of water for Melbourne is not subject to Commonwealth funding.

Further modernisation of irrigation infrastructure in the Goulburn Murray region provides a unique opportunity for the State and Commonwealth to combine resources to deliver water savings beyond the first 225 billion litres.

Find out more

For further information on the Food Bowl Modernisation Project or other projects in the next stage of the Government's *Our Water Our Future* plan please visit www.ourwater.vic.gov.au or call 136 186.

Community information sessions will be held at a range of locations shortly. Visit the above website for details.

Food Bowl Modernisation Project

Our Water Our Future – The next stage of the Government's water plan

Water scarcity is a key challenge of climate change – which is why the Victorian Government is continuing to deliver a secure, reliable and affordable water supply to meet current and future water needs.

The next stage of the Victorian Government's *Our Water Our Future* plan will see $4.0 billion spent on major water infrastructure projects to provide the biggest boost to Victoria's water supplies in 25 years.

The Government is building a diverse suite of water sources for Victoria to ensure we can continue to grow our economy and population across the State.

Our Water Our Future
A Victorian Government Initiative

Food Bowl Modernisation Project Fact Sheet

Sharing the water

Water savings will be shared equally between the irrigation systems, environment and Melbourne households and businesses, with each party receiving one third.

The first available savings from the project will be made available for Melbourne from 2010 via the new 70 kilometre Sugarloaf Pipeline which will link Melbourne to the Goulburn River.

Murray-Goulburn Interconnector

As part of this significant investment, the Government will also finalise the feasibility study currently underway for the Murray-Goulburn Interconnector to link the Murray Valley irrigation areas to the Goulburn Valley.

This would increase the reliability of irrigation water supplies and expand the water market.

First steps

The Government will now work closely in partnership with the community to finalise key elements of the project, including:

- Governance arrangements to involve local government and community groups in key issues such as the work program and sharing of water savings
- Safeguards for Northern Victoria concerning water savings destined for Melbourne
- How the water savings destined for irrigation and the environment will be delivered and managed

The Government will immediately establish a Steering Committee comprising local councils, interested groups, the Food Bowl Alliance and the broader community to guide the further development of the project.

Consideration will also be given to setting up a purpose built body to oversee the delivery of the project.

Top and Above inefficient irrigation system compared to **Right** 'modernised' system (total channel control)

Our Water Our Future
A Victorian Government Initiative

9 Glossary

This section defines the terms used throughout the document.

Term/Acronym	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
GL	1 Gigalitre which is equal to 1,000 Megalitres
ICOLD	International Commission on Large Dams
IDMOU	Irrigation Drainage Memorandum of Understanding
KPI	Key Performance Indicator
MDBC	Murray-Darling Basin Commission
ML	1 Megalitre, equal to 1,000 Kilolitres, or 1 million litres
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

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