



Water Plan 3

Submission

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APPENDIX A

1 Introduction

1.1 Our commitments

During this Water Plan and beyond G-MW will deliver against the following three fundamental commitments:

Create the opportunity to double food production in Northern Victoria over the next 20 years	Partnering with our customers	Build a high performing organisation across Northern Victoria
<ul style="list-style-type: none">• Deliver water at a cost in the bottom national quartile• Predictable and certainty in pricing• Fully automated gravity network• 90% water delivery efficiency	<ul style="list-style-type: none">• Deliver appropriate service levels• Listen and understand what is important to our customers• Delivery of appropriate connections• We are easy to deal with	<ul style="list-style-type: none">• Depth of capability, opportunity and leadership• Highly respected and trusted organisation serving our local communities• Processes and systems that support delivery of our fundamental commitments

These commitments will help promote viable productive irrigation and vibrant communities across Northern Victoria.

1.2 Summary overview

1.2.1 A time of major change

This Water Plan is drafted at a time of unprecedented change for our irrigation customers and our business.

- We are modernising our irrigation delivery system through a \$2 billion program - with most invested in new private connections to our newly automated supply backbone – a program that will rationalise our customer base.
- Our future access to water will be determined by the Murray-Darling Basin Plan, which will shift the balance between water for irrigation and environmental flows.
- We have integrated the NVIRP modernisation program within G-MW from 1 July 2012.
- We are transforming our business structures to reflect our new operating environment. This involves a greater focus on customers and cost efficiencies.
- We are developing a revised tariff strategy to make sure our charges support our new business environment and objectives.

These will all change the levels of service we provide, as well as our operating and capital, costs and revenues. Our Water Plan provides a structured way to address these challenges.

1.2.2 Our Programs

Our commitment is to deliver a modernised, fit for purpose irrigation network by 2019.

- We will continue to roll-out our modernisation program. Across the rest of our business we will maintain, at a minimum, our high level of service with stable costs and charges.
- Modernisation has already seen considerable sums expended during Water Plan 2. In Water Plan 3, we will spend approximately \$240 million on automating our supply system backbone and approximately \$500 million on constructing new private connections from our backbone to customers' properties. Further sums will be spent in Water Plan 4 to complete the program.
- Modernisation will transform the levels of service at the farm gate promoting productivity gains in irrigated farms across the region.
- We will also spend \$40 million on essential system capital renewal beyond the modernisation program to ensure customers can benefit from the modernised system.
- We will upgrade our business processes and systems to match this enhanced level of service.

1.2.3 Our Costs

To achieve our commitments G-MW will drive for greater efficiency and cost savings across our programs while improving levels of service.

- Modernisation provides us with a transformed delivery system in our gravity irrigation districts. This will enable us to make savings in our operating costs over time.
- In the short-term we will face higher costs as we have to run a hybrid system, retaining much of the older system until the full modernisation program is complete in 2019. We also face strong upwards pressures on costs from our increasing capital base.
- We have already driven cost savings across business activities.
- We commit to reducing staffing levels in our operational teams by 25% over the next seven years.
- We commit to becoming more efficient, generating an incremental \$1 million saving in each year of this Water Plan as a productivity dividend. That will reduce our total costs by \$6 million over the three years.

1.2.4 Our Revenues

Our commitment is to deliver a lean and predictable price pathway allowing customers to make timely and informed investment and lifestyle decisions.

- Our revenues have to provide us with financial sustainability including recovery of efficient operating and capital costs.
- G-MW intends to recover a maximum annual increase in our revenue of CPI + 1.5%.
- We will need to achieve, at a minimum, our promised productivity dividend if we are to recover a maximum revenue of CPI + 1.5%.
- This demonstrates our commitment to sharing the cost of change with our customers

1.2.5 Our Tariffs

Our customers tell us that our current tariff structure is too complex and that they want a simpler set of charges, they need to understand what their charges cover and how they can reduce the size of their bills.

Our business is also changing and faces new and different challenges. Our tariffs have to align with our new aims and objectives. So, we have launched a major tariff strategy review:

- The initial focus is on setting a strategic framework. The Chairs of our Water Services Committees have guided this work through a Tariff Strategy Advisory Group in drafting a discussion paper to promote public debate. This identified key principles and targets that could form a framework to direct future developments.
- We have also engaged our major bulk water customers (such as the Urban Water Corporations and the Environmental Water Holders) in direct discussions to take account of their specific views.
- We expect our tariff strategy to be finalised over the next nine months. We will then develop Implementation Plans to show how we will translate the principles and targets into specific tariffs. Those plans will include transition pathways to smooth any impacts on specific customer groups.

1.2.6 Our Charges

We propose to apply a standard business-wide increase to all charges for the first year of Water Plan 3. However, we are making some adjustments to our tariffs to start the process and follow the broad directions recommended by our Tariff Strategy Advisory Group and from our discussions with bulk water customers:

- **Irrigation Districts**
 - **Service Point Fee:** we propose to increase the Service Point Fee to \$300 in 2013/14 for all irrigation outlets. This reflects the real costs we incur and maintains signals to customers about our longer term direction of cost reflectivity with our modernised outlet fleet.
 - **Infrastructure Access Fee:** applying the same percentage increase to all charges would increase the difference between districts and not reflect differential changes in demand. This would move them further apart and would also be inequitable. We propose to implement the increase in a way that does not increase the difference between districts.
 - **Infrastructure Use Fee:** move towards a uniform Infrastructure Use Fee in gravity districts now that modernisation of the backbone is complete.
- **Diverter:** we propose to apply a generic top-down increase for diverters' charges and defer other changes until after the outcome of the Diverters' tariff strategy working group discussions.
- **Headworks:** we retain the current tariff structure with wholesale charges applied to bulk water customers and retail charges applied to our irrigators. This responds to the initial customer **feedback** we have received and follows common industry practice.
- **Environmental Entitlements:** we have established a working group with holders of the environmental entitlements to agree how we can work together to implement watering plans to deliver ecosystem outcomes. This will provide evidence on our costs for different services that will form the basis for a new suite of charges.

Years 2 and 3 of the Water Plan will see the staged implementation of the Tariff Strategy and greater certainty around rationalisation of the gravity irrigation system. Any proposed change will be subject to wide-spread consultation and constrained by a transition pathway to minimise price shocks.

1.2.7 Engaging customers in driving change

We have engaged our customers centrally in the development of this Water Plan. We work closely with our Water Services Committees who are the representatives of our customers at a local scale. We have briefed them and taken advice from them on all the key aspects of this plan over the last nine months.

We published discussion brochures on our draft Water Plans in May to seek wider customer engagement and comment. We produced a separate brochure for each of our four main customer segments to target the discussion and queries to relevant issues.

We supplemented the published brochures with a wide range of other approaches and tools. We built on this with targeted customer and stakeholder engagement. This included:

- Dedicated website and multiple feedback mechanisms for all customers.
- Meetings with bulk water customers.
- Breakfast meetings with key customers and stakeholders.
- A series of 12 customer information sessions across our service region.

1.3 G-MW's customers & functions

1.3.1 Our customer services

We are Australia's largest rural water authority. We provide a wide range of water services across northern Victoria across eight business functions:

Headworks management

- We manage 16 storages to harvest, store and supply water to irrigators, stock and domestic customers, the environment and urban water corporations.
- We provide services to the Murray-Darling Basin Authority where we are the appointed construction authority for Victoria.
- We provide a wide range of non-prescribed services at our dams to support amenity and recreational activities including house-boats, boat ramps, BBQs and toilets.

Resource management

- We are the Water Resource Manager for northern Victoria which means we make seasonal determinations for all regulated river systems in the region including irrigators supplied by Lower Murray Water.
- We deliver major catchment services including maintenance of minimum passing flows for our river systems.

Irrigation districts

- We manage six major gravity irrigation districts, where we deliver water and drainage services to 14,000 customers.
- We run three pumped irrigation schemes where services are delivered by pipeline to 680 properties.

Diversion licences

- We allocate and deliver water to customers on regulated river systems.
- We license access to water resources by diverters in unregulated streams and groundwater aquifers. This ensures equitable sharing of the resource between these customers and the environment.
- In this area we act under delegated authority from the Minister.

Water Districts

- We deliver water to customers in a number of piped and channel fed stock and domestic schemes.

Flood protection

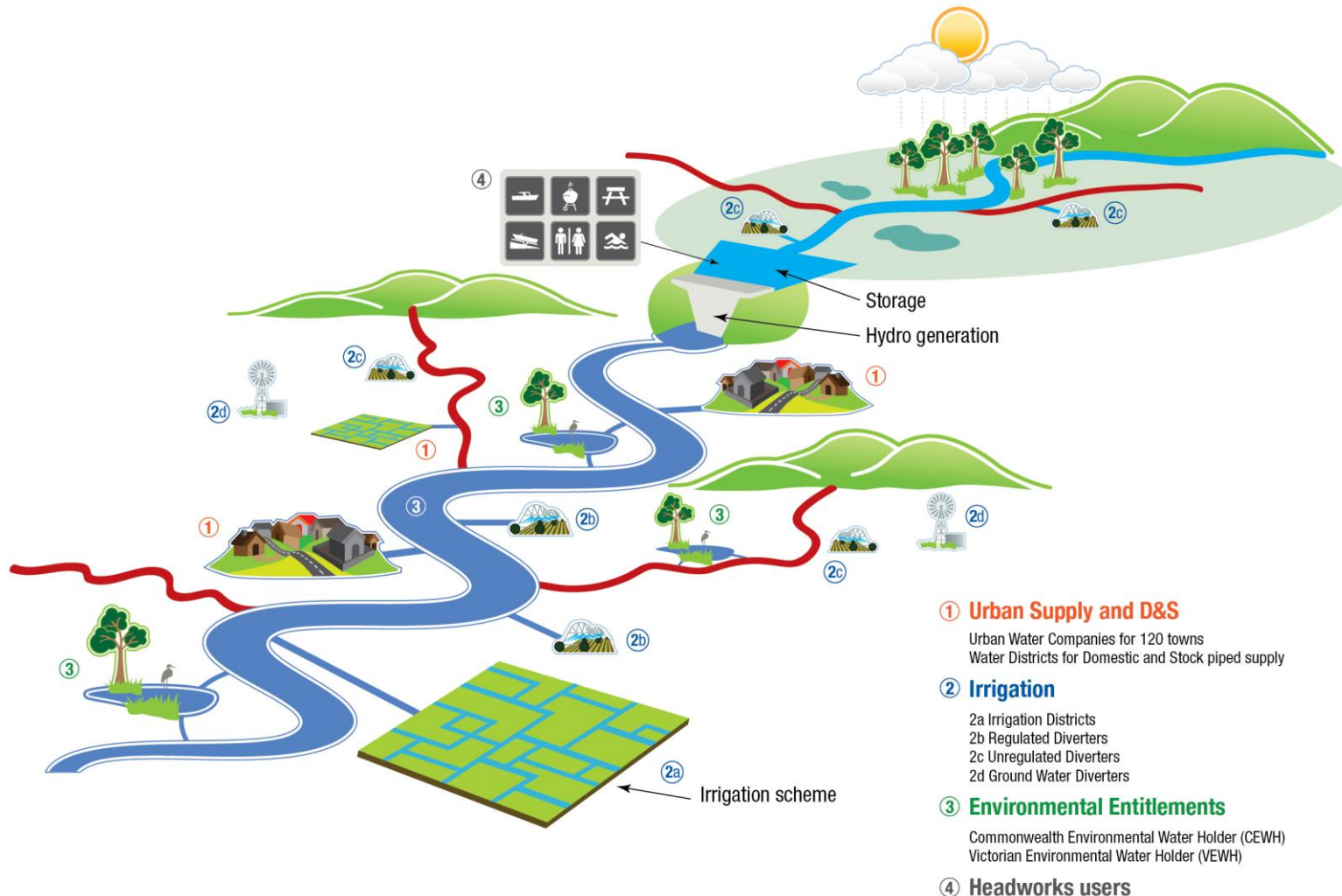
- We manage the Loch Garry regulator which provides flood protection services to farmers.

Water Registry

- We provide water registry services to holders of water entitlements including data on water trading to maintain the integrity of ownership data.

Natural resource management

- We provide natural resource management services to the state government and Catchment Management Authorities. This is a non-prescribed service.



1.3.2 Customer segmentation

The following table confirms the size of each customer type or class and the relative contribution which each makes to our overall revenue. Many customers are included in several classes as irrigators in a gravity supply district may also have a groundwater licence and benefit from drainage services.

Table 1: Overview of customer classes 2011-12

Segment	Services*
Bulk Water	6
Gravity Irrigation	14,369
Pumped Irrigation	687
Diversers	10,613
Water Districts	1,255
Flood Protection	120
Non Water Users	1,028
Total	28,078

* the term 'services' is used to refer to individual properties. A single customer may have several such 'services'.

The table confirms that our gravity irrigation customers are our largest customer group by number and also make by far the largest contribution to our annual revenue.

G-MW also provides a range of non-prescribed services most notably the construction and management of headworks owned by the MDBA, and the provision of fee-for-service in salinity mitigation and other natural resource management programs for the State Government.

In the development of our proposed Water Plan we consulted extensively with each of our customer classes. We published a separate Water Plan brochure to cover the four major clusters of customer types:

- Bulk water customers and headworks users.
- Irrigation district customers.
- Water Districts and Loch Garry.
- Licensed diversers.

1.3.3 Our bulk water customers

We supply bulk water from our storages at a wholesale level to water corporations and environmental water holders. The water corporations treat the raw water and supply it to customers in 120 towns and irrigation communities across northern and central Victoria. The corporations hold most of the water as 'bulk entitlements' under the *Water Act 1989*, but also hold entitlements from investing in water saving projects, and diversion licences to give access to groundwater resources.

A growing proportion of the water in the storages is held by environmental water holders. The two major ones are:

- The Victorian Environmental Water Holder (VEWH)
- The Commonwealth Environmental Water Holder (CEWH)

These entities hold a mix of different entitlements arising from prior environmental rights, water savings derived from investing in infrastructure and from buyback of existing irrigation entitlements. We work with these agencies and the regional Catchment Management Authorities (CMAs) to deliver the flows needed to meet specified ecosystem outcomes.

The above bulk water services are 'prescribed' under the Act and therefore subject to oversight by the Essential Services Commission. Our headworks also provide 'non-prescribed' services to communities across rural Victoria from their use for recreation and production. These additional uses include:

- **Houseboats:** 716 houseboats operate on Lake Eildon.
- **Leases and licences:** We lease much of the land and buildings on land surrounding our storages for agriculture and forestry. There are 812 licences and leases.
- **Recreation:** The public also use our headworks for tourism and recreation through facilities such as picnic areas, boat ramps, BBQs and toilet blocks.
- **Hydro-electric power:** Four of our storages are also used to generate hydro electricity. This is undertaken by power companies in return for a fee.

These non-prescribed services are not included in this Water Plan.

1.4 Risk Management

1.4.1 Revenue risk

G-MW has high fixed costs from managing its extensive asset base. We also face an extensive suite of statutory obligations set out directly in legislation and in our *Statement of Obligations* issued by the Minister for Water.

However, we operate in a business environment with considerable variability in both supply and demand influenced by climate, policy reform, international commodity prices, the exchange rate and infrastructure contraction. These factors can drive significant uncertainty in the level of metered water delivered.

This combination would create significant risks to the business if we faced continuing obligations with major fixed costs but uncertainty in our revenue stream.

We manage this risk through two main routes:

- **Tariffs:** Our tariff structure is heavily weighted towards fixed charges. This provides continuity of revenue in the face of variable demand.
- **Price Control:** Our charges are set within a 'constrained revenue cap'. This sets a ceiling on the maximum revenue we can recover in any year. That provides a measure of protection for customers. However, where we under recover in one season, the approach also allows us to increase charges in the following seasons to recoup the earlier under-recovery, subject to a maximum allowable increase between years to avoid price shocks.

1.4.2 Risk management policy

We also have well structured risk management protocols in place to identify and mitigate any potential risks to the business in terms of financial, operational, public safety, regulatory and reputational risks.

The Board has endorsed a *Risk Management Policy* which guides the risk management approach of the organisation.

"Goulburn-Murray Water is committed to a risk management culture - considering risk throughout all levels of the organisation and our decision making and business processes.

Goulburn-Murray Water's Whole of Business Risk Management Process will be guided by AS/NZ ISO31000-2009 "Risk Management Principles and Guidelines."

G-MW analyses the effects of a risk event on its objectives by assessing the impact of an event against several impact categories including:

- Service Delivery
- Business Financial Loss
- Safety
- People
- Reputation and
- Environment.

The probability of an event occurring is assessed against five possible categories ranging from less than a 5% probability (over a 12 month timeframe) to a greater than 75% probability of occurrence. The resultant level of risk is calculated as the combination of the probability of the event and the maximum impact severity obtained from analysis of each of the impact categories.

Figure 1: G-MW - Risk assessment framework

Likelihood	Consequence				
	minor (1)	moderate (2)	major (3)	severe (4)	extreme (5)
very likely (5)	Medium	Medium	High	High	High
likely (4)	Low	Medium	High	High	High
possible (3)	Low	Medium	Medium	High	High
unlikely (2)	Low	Low	Medium	High	High
very unlikely (1)	Low	Low	Low	Medium	High

There are three possible risk level classifications, Low, Medium and High. G-MW's Board has determined that the company policy for the tolerance of risks should be based on the concept of ALARP (As Low As Reasonably Practical). G-MW therefore treats every risk until it is no longer practical or cost effective to respond further.

G-MW maintains a register of potential events that is focused on strategic risks which have the potential to stop G-MW from achieving its corporate objectives, and an operational register of risks that is focused on business unit events dealing with day to day issues.

Senior Management report on a regular basis to a Board Committee on any changes in the company's risk profile and progress against treatment plans for all strategic and operational risks.

1.4.3 Capital works prioritisation

We also employ a risk based approach to the prioritisation of our future capital works program (See Section 6.8 on page 57). All proposals are subject to a rigorous risk assessment in line with the Corporate Risk Management Framework and ISO 31000:2009. This scores each project against a scale for both likelihood of occurrence and severity of outcome with the consequence scored against multiple factors including:

- Service delivery
- Financial
- Individual safety
- People
- Credibility

The outcome is to cull projects that are of low risk and/or consequence. This means that the final capital works program is well founded and generates best value for money.

2 Customer Consultation and Feedback

2.1 Overview

Our customers are the centre of our business. This Chapter confirms how we engaged our customers in developing this Water Plan and how we took account of their feedback on our earlier draft proposals in finalising our plans.

2.2 Retail Customers: Consultation and Feedback

2.2.1 Consultation

We implemented a comprehensive consultation exercise covering all of our retail customers through a range of different channels and media:

- Draft Water Plan brochures
- Water Services Committee consultation and engagement
- Customer newsletters
- Website articles and feedback forms
- Wider community communications
- Customer information sessions
- Customer surveys

2.2.2 Draft Water Plan Brochures

We serve a range of retail customers. In developing our proposed Water Plan we clustered our customers into three broad groupings:

- 1. Irrigation district customers**
 - Gravity irrigation
 - Pumped irrigation
- 2. Water Districts and Loch Garry**
 - Stock and domestic customers
 - Loch Garry flood protection
- 3. Licensed Diverters**
 - Regulated surface water diverters
 - Unregulated surface water diverters
 - Groundwater diverters

We published separate Draft Water Plan discussion brochures for each of these three groups, as the priority issues and proposals differed between them. However, the remainder of the process of engagement and consultation was based on a coordinated program.

2.2.3 Water Services Committees

Our Water Services Committees (WSC) are a major route by which we ensure that we understand the needs and views of customers across the region. Through our regular meetings with the WSCs we are kept informed on a wide range of issues relevant to our customers and operations in the region.

The WSCs are created and governed by the G-MW Board as formal committees established under Section 122C of *the Water Act 1989*. Members of WSCs are appointed by the Board from individuals nominated by customers in the local areas. Where there are more nominations than positions available on any committee, an election process is used to match the number of nominations to the positions available.

We run thirteen WSCs, six are based around our major gravity irrigation districts, four regional WSCs cover diverters, two represent our Water Districts and the last represents customers serviced by the Loch Gary Flood protection scheme.

- Central Goulburn WSC
- Loddon Valley WSC
- Murray Valley WSC
- Rochester-Campaspe WSC
- Shepparton WSC
- Torrumbarry WSC
- Kiewa/Mitta Mitta/Upper Murray Regional WSC
- Ovens/King/Mid Murray Regional WSC
- Goulburn Broken Regional WSC
- Loddon and Campaspe Regional WSC
- Loddon Water Districts WSC
- Tungamah Water District WSC
- Loch Garry Flood Protection District WSC

Therefore all of our retail customers have a direct route of communication through their local WSC up to the Board.

The Committees meet on a regular basis with G-MW representation both from the regional G-MW operational staff and from Tatura. G-MW has made presentations on the draft Water Plan to each WSC meeting since October 2011 as each “building block” of the process has been developed. This has covered:

- Service outcomes – i.e. the outcomes to be delivered.
- Capital works – the approach to the prioritisation of works and their implications for specific regions.
- Operating expenditure – how we will seek to drive efficiencies and maintain improved levels of service.
- Revenue – what the above package of measures will mean for future revenue requirements.
- Pricing - the approach to setting prices in the light of the tariff strategy discussions.

The centre of our consultation with the WSCs and our retail customers for Water Plan 3 was the publication of our Draft Water Plan brochures published at the end of May 2012. These set out our broad proposals for programs, costs and revenues for Water Plans 3 and 4. The brochures were publicised through multiple channels including our routine customer newsletters, on line and in the media.

We undertook modelling of the impact and affordability of our water charges for the viability of different users sectors. This included the dairy, horticulture and mixed farming sectors with a variety of farm sizes and types within each sector. This suggested that average water charges represented less than 5% of total input costs for the horticultural sector, between 5% and 8% for most dairy producers and around 10% for irrigated cropping. However, it was also clear that many properties made little return on the capital employed and were operating with very tight margins so even a small increase in charges could have an impact on commercial viability.

We have also engaged the Chairs of the WSCs to lead a *Tariff Strategy Advisory Group* (TSAG) helping guide a review of our future tariff strategy. This is a critical building block for our future business success. The group met 5 times between June and August and oversaw the publication of a tariff strategy brochure setting out an agreed set of principles and possible targets for our longer-term tariff structure. The recommendations of that group will also feed into our Water Plan 3 and our medium-term tariff developments.

2.2.4 Community wide communication

The WSCs play a central role in our customer engagement. However, some of our customers are not actively engaged through this route. This is particularly true of our smaller customers who may be life-style irrigators or have off-farm income.

We therefore supplemented our consultation with the WSCs with a comprehensive community focussed communication program. This has seen:

- Updates in 13 editions of our irrigator e-news with invitations to provide feedback.
- Articles in regional newspapers, such as the *WaterTalk 'Planning for the Future'* – full page ads in Country News, Bendigo Advertiser, Wangaratta Chronicle, and Swan Hill Guardian explaining Water Plan 3 and how to contribute. (144 views of online version)
- Customer meetings at 37 locations across the region in April. (Total attendance 257)
- Newsletters mailed to 30,000 customers in June, with a link to our Water Plan 3 brochures and feedback forms.
- Launch of our Water Plan 3 webpage to provide on-line information to the general public.
- Media releases – 5 media releases have been published including one in June on the launch of the draft Water Plan 3 brochures with a reminder call in July for feedback.
- Online surveys – 3 surveys; May, June and with Water Plan 3 discussion brochures in July. (185 views, approximately 20 surveys submitted)

The Managing Director and other senior staff have also held meetings over the last six months with customers and stakeholders as part of their on-going engagement with the regional community. For example, Gavin Hanlon, Managing Director spoke at a breakfast workshop on the Water Plan in Shepparton on 14 August 2012, which was attended by a range of regional stakeholders including:

- Murray Dairy: the regional arm of Dairy Australia that represents the interests of the dairy sector across northern Victoria.
- Fruit Growers Victoria Ltd and the Northern Victoria Fruit Growers Association, who represent the interests of fruit growers in the Goulburn Valley and North East of Victoria.
- Large food processors.
- Local councils.

We rounded off this community wide communication program with an invitation to all customers to local information sessions arranged alongside the August WSC meetings. G-MW promoted this final engagement route by mailing an invitation to each customer with a summary of the Draft Tariff Strategy and a personalised letter from the relevant WSC chair.

The meetings covered the full breadth of the core programs being implemented including the Water Plan, Tariff Strategy and Connections Program. WSC representatives presented the draft Tariff Strategy and G-MW staff were available to discuss our proposals in the draft Water Plan 3 brochures and our proposed pricing approach.

These sessions were highly successful in attracting a wide spectrum of our customer base with 500 customers attending.

This means that over the last three months we have consulted our customers and stakeholders through a well structured and targeted process of engagement and communication. This has used our Water Services Committees which are a formal route of communication between our retail customers and the Board. But we have extended that approach to include a wide range of other channels and approaches to ensure that we can be confident that all customers have been engaged at an appropriate level and provided with the chance to be briefed about our proposals and provide feedback.

2.3 Consultation with Bulk Water customers

We have continuing dialogue with our bulk customers given the scale of their purchases and the importance of our bulk supplies for their businesses. Our bulk water customers are key recipients of our routine electronic newsletters and so received updates on our Water Planning process and proposals in February, April and June 2012.

For the formal water planning exercise, we drafted a stand-alone brochure for bulk water customers in May 2012 setting out our priorities, plans and proposals for our headworks business over the next 10 years. We sent copies of this brochure to each of our major customers with a covering letter from our Managing Director inviting discussions and comment.

We then invited each of our bulk water customers to consultation sessions targeting their specific areas of interest:

- **Urban Water customers:** we held a workshop for the urban water corporations. We made a presentation on our outline proposals and also explained about our tariff strategy review. We invited comments and feedback about the brochure and about the form of their preferred continuing engagement in the process.
- **Environmental Water Holders:** we held a workshop for the Victorian Environmental Water Holder, the Commonwealth Environmental Water Holder, DSE and the regional CMAs. Once again the discussion included both our proposed plans and priorities for the Water Plan and also our longer-term proposals for tariff reform.

Where customers could not attend the workshops we followed up with direct consultation on a face-to-face basis.

2.4 Feedback from Bulk Water customers

Our bulk water charges represent only a small proportion of total input costs for urban water corporation customers (for example, around 2% for Goulburn-Valley Water). Therefore the stable forward operating and capital expenditure programs proposed in the draft Water Plan were generally supported.

These customers stressed that the most important issue was for G-MW to maintain its close and effective communication on the day-to-day delivery of the bulk water service. In particular, to give good advance notice of any possible interruption or change to supply characteristics that might affect delivery to their own customers.

The Environmental Water Holders confirmed that they are still at an early stage in developing and implementing formal *Environmental Watering Plans* to make full use of their portfolios of water products. G-MW gave a commitment to work closely with them and the CMAs (who are their regional delivery agents) to help develop operational arrangements to deliver the best environmental outcomes from their entitlements. The process would then help define a future suite of environmental products and services with a tariff structure that sent appropriate signals about the relative costs involved.

The one issue that was raised consistently by our bulk customers (and later by retail customers as well) was the basis for charging members of the public for recreational use of our headworks facilities. There are two groups of these headworks users:

- **Full-cost recovery:** most users pay a commercially set fee that covers the costs incurred in providing the relevant service. This covers land leases, houseboat licences and caravan parks.
- **Public access:** we also service a range of facilities used by the general public at our headworks such as toilet blocks, BBQs, boat ramps etc. Some of the costs of these services are recovered through a charge levied on Urban Water Corporations which they recover through their retail water charges. This is a proxy charge on the local community

for the benefit of being able to use these facilities. DSE is currently finalising a state-wide policy on the preferred approach to recover these costs.

The proposed programs and priorities set out in our draft Water Brochure for our bulk water customers are therefore confirmed in this final submission.

2.5 Feedback from Retail customers

The draft Water Plan Brochures asked a series of targeted questions covering a range of issues from:

- The priority of our plans.
- The overall level of revenue required.
- Our commitment to a productivity dividend.
- Our approach to customer hardship.
- Future forms of price control and adjustment constraints.

We invited feedback through multiple channels including online, by phone, mail and via G-MW offices. We have established a new web-page specifically to record the verbatim remarks and comments received and recorded during the public meetings and from other routes. That gives confidence to our customers that we have listened.

2.5.1 Initial feedback

G-MW's initial Water Plan communication and consultation efforts resulted in more than 2,500 visits to the G-MW website and nearly 700 online views of the brochures. However this interest failed to translate into significant customer and community feedback with only 14 responses received through to mid September.

The limited feedback reflected a number of common themes:

- Customers are concerned by the continuing increase in service costs, particularly compared with static, and at times declining, commodity returns. This was reflected in calls for greater transparency and accountability from G-MW regarding current and future service costs.
- Customers questioned whether they currently receive value for money. Some customers questioned whether G-MW was delivering the services as efficiently as possible.
- Customers sought greater explanation of the environment's contribution to storage and delivery costs.

2.5.2 Public meetings

During late August and early September we ran 12 customer information sessions across our region. The meetings were held to promote further feedback on G-MW's Water Plan proposals. The meetings also provided an opportunity to outline key aspects of G-MW's Tariff Strategy and some of the longer term water reform issues that are of concern to our customers.

The meetings were well supported, with 500 customers attending the sessions. The meetings were also valuable because they attracted a broader demographic of G-MW customers than normally attend a G-MW 'irrigator' meeting and allowed us to engage with a number of small water users as well as larger scale irrigation customers.

The meetings were structured to allow for one-on-one discussions with customers following a general presentation. This structure gave customers greater opportunity to raise issues than is generally available in a large public meeting. The predominant concerns raised were:

- Desire for greater understanding of G-MW's costs and what G-MW is doing to contain/reduce its costs for customers.
- Request for further explanation of the environment's entitlements and its financial contribution to storage and delivery costs.

- Potential impact and implications of G-MW tariff proposals for outlets and delivery shares (infrastructure access fees) as well as the flow on implications for termination fees.
- Underlying concern for the future viability of irrigated agriculture within the region and a desire for the region to be competitive with other irrigation regions.

Water Plan 3 Pricing Proposals

We outlined our proposals for Water Plan 3 and our approach for pricing in the first year of the Water Plan. Overall customers appeared comfortable with the proposals on the understanding that this approach was part of a more comprehensive strategy to review and revise G-MW's underlying costs and tariff structure by 2020.

Key feedback included:

- a) Revenue requirement increased by 1.5% plus CPI:**
- Some customers proposed G-MW should aim for CPI only, and others expressed the view G-MW fee changes should be linked to customers' commodity prices.
 - Customers want greater cost transparency from G-MW;
 - A majority of customers expressed concern for the future viability of their farm operations if service costs are not contained, and these concerns are heightened by declining commodity returns, increasing costs for other farm inputs and the expectation that there will be fewer customers to share the cost burden in the future;
 - Customers, particularly those with unregulated diversions services, expressed concern that the increase will apply to an existing high base price.
- b) Irrigation Districts – Service Point Fees**
- G-MW's proposal to increase irrigation *Service Point Fees* to \$300 per outlet for 2013/14 attracted limited discussion. However, *Service Point Fees* were a controversial point within the broader tariff strategy discussion:
- In general, customers supported a more cost reflective approach but wanted greater clarity on the costs associated with the new electronic meters.
 - A small minority of customers expressed a desire for G-MW to immediately increase service point fees considerably higher than the current proposal. The customers felt this was a vital step in sending a clear signal to current system users to rationalise outlets as part of the modernisation program.
 - A large proportion of small user customers felt the longer term direction for service point fees would make their service too expensive and their small operations would be unviable.
 - A number of customers expressed concern because their farm layout prevented them from further rationalising outlets or that the previous modernisation approach had failed to enable more aggressive rationalisation of outlets.
- c) Water Storage (Bulk Water Charges)**
- In general customers felt the current hybrid system (with separate wholesale and retail charges) was the preferred approach. A minority of customers:
- expressed a desire for more cost reflective pricing, and
 - felt the averaging of prices at a regional level would set a precedent for the pricing of other services particularly water delivery services.
- d) Drainage services**
- A number of customers expressed concern with the application of the charges and in particular the link to delivery share and water use.

2.5.3 How has G-MW responded to the feedback?

We see customer feedback as a valuable source of information to help direct business improvement. G-MW has published summaries of the feedback received on its website and will progressively address these matters in Water Plan, the forthcoming Tariff Strategy and across its wider business.

Storage charges paid by G-MW Retail customers Customers questioned the benefit of a move to a single regional retail storage charge as it may minimise price signals. At a retail level customers were generally supportive of two retail prices to recover storage costs.

G-MW has therefore maintained its approach to pricing for storage services in line with the existing hybrid wholesale/retail model.

Greater cost transparency

G-MW is developing pricing models to provide more robust cost and pricing scenarios. This information will be shared with customers through the development of the Draft Tariff Strategy.

Irrigation Service Point Fees in GMID

There was strong support for cost reflective pricing to drive appropriate rationalisation and reduce risks of over-servicing.

G-MW has therefore proposed to increase the GMID Irrigation Service Point Fee by \$50 to \$300 per outlet. The increase ensures the irrigation service point fee more accurately matches the average cost of operating and maintaining all the irrigation meters currently 'in the ground' across the irrigation districts and therefore meets customers calls for our fees to reflect actual cost.

Any increase in service point fee revenue will trigger an equivalent offsetting reduction in the revenue generated by the Infrastructure Access Fee.

As modernisation continues, the total number of meters will reduce but the cost per meter will increase because of the costs for the new meter and the costs of the technology that link the meter to the communications network. G-MW is developing a future tariff that will reflect its real long-term costs.

Groundwater and surface water diversions

Customers identified a range of specific pricing issues and anomalies within and between the diversion services.

G-MW has responded by establishing a dedicated working group to consider a future tariff strategy for diverters. G-MW has sought to minimise any price increases and tariff changes while this process is underway.

3 Service Outcomes

Service delivery is the core of our business. This chapter validates the basis for the breadth of our services and the drivers of expenditure in Water Plan 3.

3.1 Validating our service obligations

G-MW has substantial obligations and duties under legislation and the terms of the *Statement of Obligation* issued by the Minister for Water. These are significant in driving our on-going business service standards and costs.

3.1.1 Water Act Obligations

G-MW has significant statutory duties under the *Water Act 1989*:

Table 2: Water Act 1989 – key duties

Part & Section	Obligation
Part 4	Allocation of water
S43A	Appointment as resource manager
S51 et al	Diversion licences managed on behalf of Minister (delegation under S306)
S64GA & 64GB	Authorities to be responsible for seasonal determinations
S64L et al	Power to grant water-use licences
Part 5A	Victorian Water Registry
S84W	Authority must record in water register
Part 6	Water Corporations
Part 6B	Duties of Water Corporations
Part 6C: S122ZL	Functions of storage managers
Part 8	Water Districts
S163	Duty to provide, manage, operate and protect water supply systems
Part 11	Irrigation Districts
S221	Duty to provide, manage and operate irrigation systems
S222	Duty to deliver water to each serviced property in its district

3.1.2 Statement of Obligations

We also deliver a wide range of services and functions to ensure compliance with our *Statement of Obligations* issued by the Minister for Water under Section 8 of the *Water Industry Act 1994*. The following table confirms some of the key obligations.

Table 3: Statement of obligations: key obligations

Obligation	Description
10 - Customer and Community Engagement	Transparent process to engage customers and community in planning processes.
13 - Managing Assets	Plans, systems and processes to manage its assets to meet standards of service.
14 - Dam Safety	Identify, assess, manage, prioritise improvements to, and periodically review dam safety
15 - Conserving and Recycling Water	Develop and implement programs for assessing and monitoring available water supplies
16 - Efficiency Of Rural Distribution Systems	Develop and implement programs to assess the efficiency of the Authority's distribution systems
17 - Metering	Meter new and existing licences to use groundwater and unregulated surface water
19 - Regional Planning	Participate in and support the development and implementation of any Regional Strategy

Obligation	Description
24 - River and Aquifer Health	Manage the impact of its activities on any waterway, aquifer or wetland to minimise environmental impacts on and risks to the aquatic ecosystem
25 - Monitoring River Health	Monitor activity impact on waterways and wetlands

3.1.3 Other legislative requirements

G-MW's core activities are also determined by ensuring compliance with other legislative obligations, including, for example:

- Safe Drinking Water Act 2003
- Environment Protection Act 1970
- Aboriginal Heritage Act 2006
- Equal Opportunity Act 1995
- Occupational Health and Safety Act 2004
- Accident Compensation Act 1995
- Terrorism (Community Protection) Act 2003

3.1.4 Applications to G-MW Business Units

Each of our core activities must comply with statutory duties specified in the Act and the relevant clauses in the Statement of Obligations. Key duties by business function are confirmed below.

Headworks

- Storage manager under Part 6C and S 122ZL of the *Water Act 1989*
- Clause 14 – Dam Safety
- Clause 15 - Conserving and Recycling Water
- Safe Drinking Water Act 2003
- Environment Protection Act 1970

Resource management

- Resource manager under S43a of the *Water Act 1989*
- Responsibility for seasonal determinations - S64GA & GB of the *Water Act 1989*
- Clause 24 – River and aquifer health
- Clause 25 – Monitoring River health
- Clause 19 - Regional Planning

Irrigation Districts

- Duty to supply serviced properties under S 221 & 222 of the *Water Act 1989*
- Granting Water use Licences under S64L of the *Water Act 1989*
- Provision of water registry functions under S84W of the *Water Act 1989*
- Clause 10 - Customer and Community Engagement
- Clause 13 - Managing Assets
- Clause 16 - Efficiency Of Rural Distribution Systems

Diverters

- Issuing, monitoring and renewing licences issued under S51 of the *Water Act 1989*, on behalf of the Minister (delegated under Section 306 of the Act)
- Clause 17 - Metering

Water Districts

- Duty to manage systems and supply water under S163 of the *Water Act 1989*

3.2 What we delivered in Water Plan 2

This section sets out the major outcomes we delivered during the second Water Plan. This was a period of unprecedented drought followed by severe floods. This created extremely difficult business conditions for our customers and challenged our service delivery infrastructure.

3.2.1 Service delivery

We continued to run and deliver services to our customers over this very difficult operating period. The key services included:

Figure 2: Services delivered to irrigation districts over Water Plan 2

	Irrigation Area Deliveries	Total Water Orders	Orders per Day (average)	Water orders on the Web	Business Transactions
2008/09	578 GL	106,579	400	33%	16,677
2009/10	770 GL	131,851	490	43%	15,243
2010/11	497 GL	65,759	250	51%	9,916
2011/12	1,268 GL	158,173	585	51%	15,527

3.2.2 Service standards

Despite the challenges of the drought and floods, we generally met the key service standards set out in our Customer Charter (which reflects the ESC's *Rural Water Customer Service Code*).

Table 4 below provides a comprehensive listing of our performance against the full suite of service standards, while Table 5 confirms our performance against four of the most significant standards.

The following are an explanation for the material variances between the targets in the tables and the results achieved:

- **Efficiency in delivery:** the relative level of efficiency is higher when we face a stable operating environment. A higher level of water use results in better efficiency as losses are fairly standard irrespective of the level of flow as there is less fluctuation, fewer rain events and so less erratic start/stopping irrigations.
- **Drought impacts:**
 - We missed our efficiency targets during the earlier part of Water Plan 2 as drought conditions or low usage meant smaller, less frequent irrigations. This leads to higher losses per unit of water delivered.
 - We missed 'delivery on the day' as we moved customer orders to make more efficient use of limited water resources. Customers generally understood and supported this approach.
 - One key learning from the drought was to place a higher priority on fixing leaks and maintenance issues to ensure optimal service delivery with a limited resource.

Table 4: Water Plan 2: performance against targets

Water Plan 2 - 2008-2013 Key Performance Indicator		Water Plan 2							
		2008/09		2009/10		2010/11		2011/12	
Description		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
G-MW Corporate Key Performance Indicators									
Economic Sustainability	Retail Water System overall efficiency achieved as a % of delivered	74%	60%	76%	69%	76%	75%	76%	76.5%
	Bulk water assets availability of storage capacity as a % of design storage capacity	100%	100%	100%	100%	100%	100%	100%	100%
	Retail Water assets number of unplanned service failures greater than 12 hours	0	Data not measured	0	0	0	5	0	5
	Retail Water assets reported channel leaks responded to within agreed times	85%	94.6%	85%	97%	85%	90%	85%	87.6%
	Bulk water assets availability to deliver water on demand to customers as a % of time	100%	100%	100%	100%	100%	100%	100%	100%
Social Sustainability	Complaints to EWOV (excluding enquiries) C3-C6	0	0	0	17	6	19	6	13
	Telephone calls answered within 30 seconds	95%	95%	95%	95%	95%	95%	95%	
	Processing of Temporary Transfer of water entitlement within 5 business days	100%		100%	91%	100%	97%	100%	99%
	Processing of Permanent Transfer of water entitlement within 15 business days	95%	Not available	95%	96%	95%	94%	95%	96%
	Regulated rivers minimum river flow regimes > or equal to specified minimum flows 100% time	100%	99.6%	100%	99.8%	100%	100%	100%	100%
Environmental Sustainability	Unregulated rivers meet agreed targets or natural flow 90% of the time	90%	100%	90%	100%	90%	100%	90%	100%
Irrigation Areas Key Performance Indicators									
Shepparton									
Gravity Supply	Irrigation water orders delivered on day requested	91%	90%	91.5%	98.8%	91.5%	97%	92.0%	96.9%
	Unaccounted for water	27%	24%	26.5%	15.7%	26%	11%	25%	11.1%
Pumped Supply (369 km of pipeline in pumped districts)									
	Unavailability of stock and domestic supply systems for continuous periods in excess of 96 hours	2	0	2	0	2	0	2	0
	Number of pipeline bursts and leaks (per 100 km of pipeline)	60	0	60	2	50	0	50	5
	Unaccounted for water	20%	10%	20%	0%	19%	12%	18%	18.6%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
	Availability of sub-surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
Central Goulburn									
Gravity Supply	Irrigation water orders delivered on day requested	92%	93%	92.5%	95.7%	92.5%	93%	93%	93%
	Unaccounted for water	27%	34%	26.5%	27.7%	26%	26%	25%	19.7%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
	Availability of sub-surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
Rochester - Campaspe									
Gravity Supply	Irrigation water orders delivered on day requested	83%	73%	83.5%	81%	83.5%	80%	84%	80.7%
	Unaccounted for water	28%	34%	27%	27.9%	27%	24%	26%	24.4%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
	Availability of sub-surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
Loddon Valley (Pyramid-Boort)									
Gravity Supply	Irrigation water orders delivered on day requested	82%	80	82%	84.4%	82.5%	86%	83%	82.8%
	Unaccounted for water	21%	36.0%	21%	25.1%	21%	29%	21%	19.1%
Pumped Supply (308 km of pipeline in pumped districts)									
	Unavailability of stock and domestic supply systems for continuous periods in excess of 96 hours	1	0	1	0	1	0	1	0
	Number of pipeline bursts and leaks (per 100 km of pipeline)	75	3.6	75	7.6	75	4	75	8
	Unaccounted for water	15%	14%	15%	20%	15%	39%	15%	11%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
Murray Valley									
	Irrigation water orders delivered on day requested	88%	80	88.5%	85.6%	89%	86%	90%	83.2%
	Unaccounted for water	27.5%	39.0%	27%	34.0%	26.5%	34%	26%	25.2%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
	Availability of sub-surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
Torrumbarry									
Gravity Supply	Irrigation water orders delivered on day requested	93.5%	86.0%	93.5%	97.3%	94%	89%	94.5%	92.5%
	Unaccounted for water	29%	53.0%	28%	39.9%	27.5%	23%	27%	29.9%
Pumped Supply (143.5 km of pipeline in pumped districts)									
	Irrigation water order delivered on day requested	98%	98.5%	98%	100%	98%	100%	98%	99.6%
	Number of pipeline bursts and leaks (per 100 km of pipeline)	50	16.2	50	65	50	5	50	11.1
	Unaccounted for water	8%	6.9%	8%	6.3%	8%	5.9%	8%	12.5%
Irrigation Drainage	Availability of surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%
	Availability of sub-surface drainage schemes	98%	100%	98%	100%	98%	100%	98%	100%

The following table confirms our performance against four of the standard most significant for our irrigation customer base.

Table 5: Service standards delivery in WATER PLAN2

Standard	2008-09		2009-10		2010-11		2011-12	
	Target	Result	Target	Result	Target	Result	Target	Result
Delivery efficiency	74%	60%	76%	69%	76%	75%	76%	76.5%
Gravity supply orders delivered on the day requested (%)	91%	88%	92%	91%	92%	90%	91%	87.1%
Pumped supply orders delivered on day requested (%)	98%	99%	98%	89%	98%	99%	98%	99.6%
Channel leaks responded to within agreed times	85%	94.6%	85%	97%	85%	90%	85%	87.6%

- **Delivery Efficiency:** this records the relative losses incurred in delivering water to the farm gate. Our performance was challenged in the early part of the Water Plan due to the drought as we had to run channels outside normal operating parameters. However, we have met targets over the last season as more ‘normal’ operating conditions prevailed.
- **Orders delivered on day requested:** once again our ability to meet this standard was heavily compromised by the severe drought during the early years of Water Plan 2. We had to coordinate orders and deliveries to minimise losses and optimise limited resources. This meant rescheduling orders outside customer preferences.
- **Channel Leaks:** we met the service standard in all years. We attended to channel leaks as a higher priority during the drought due to the scarcity of the water allocation.

3.3 Water Plan 3 business drivers overview

Our different business functions involve different issues and challenges. For this Water Plan the drivers of activity and cost can usefully be analysed against four main headings:

- Business as usual
- Modernisation and Connections Program
- New obligations
- Demand changes

3.3.1 Business as usual

The proposed expenditure in Water Plan 3 is dominated by maintaining services to deliver 'business-as-usual'. The sections above confirm the breadth of the statutory functions we deliver and the obligations imposed on G-MW under its Statement of Obligations.

We welcome these duties and obligations. They are the basis for our commitment to our customers and the wider regional community. Our challenge is to deliver these duties with greater efficiency and a higher level of customer focus. That is the focus of our fundamental commitments.

Particular priorities for Water Plan 3 include:

- Continuing to roll out our dam safety program. We have reassessed the triggers and targets to ensure a focus on high priority areas that deliver value for money. In Water Plan 3 the major costs will be to respond to safety issues at Tullaroop Reservoir.
- Our pumped irrigation districts and our piped water districts are relatively modern and little additional expenditure is proposed beyond completion of an asset review for the pump stations for Nyah and Tresco.
- Our diverter program will see completion of our local management plans.

3.3.2 Modernisation and Connections Program

The biggest change to our service outcomes in Water Plans 3 and 4 will be the transformation of our gravity irrigation delivery systems, through the implementation of our *Modernisation and Connections Program*. This is a \$2 billion investment of public funds by the State and Commonwealth Governments to transform the strategic and operational functionality of our gravity channel delivery system.

This program will enhance levels of service, increase reliability and promote productivity across the region. It will generate water savings that will enhance environmental flows. The investment will transform the level of service delivered at the farm gate. The main benefits of system modernisation for irrigators will be:

- Reduced order notice for delivery
- More consistent flow rates
- Increased flow rates
- Increased functionality of outlets
- Increased accuracy of outlets
- Instant confirmation of deliveries
- Increased customer access to G-MW staff
- 24/7 system monitoring
- Improved maintenance response

These improvements will promote enhanced productivity on-farm as irrigators will be able to implement best practice irrigation systems with major improvements in application efficiency and labour cost savings. That will provide both private benefits and wider regional economic activity.

Customers will make no contribution to the up-front capital costs of the program but will carry the ongoing operational costs. The investment will drive greater efficiency and lower costs than customers would have incurred in the absence of the modernisation program with the continuation of the historic delivery system.

3.3.3 New Obligations

Little expenditure in Water Plan 3 will be driven by the imposition of new external obligations. We have identified three examples.

- *Harmonisation of OH&S legislation.* A federal government initiative will require works to ensure the Corporation meets due diligence requirements and is compliant with any proposed changes. To meet this requirement, we believe we will incur an extra \$7,000 per year in training, travel and accommodation costs.
- *Safe Drinking Water Act 2003* – As a water storage manager G-MW has obligations under the Act as we supply raw water to urban water suppliers who subsequently treat and supply as potable water. Department of Health guidance on Water Plan 3 indicated a requirement for the following additional activity:
 - Two audits during Water Plan 3. Only one had been previously budgeted for.
 - Developing and implementing works to improve water quality from water supply catchments. Our efforts will focus on limiting stock access at key storages and channels.
 - We have costed the operating expenditure for implementation at \$340,000 over the three years of Water Plan 3 and a likely ongoing expenditure of \$50,000 pa into Water Plan 4.
- *Data cleansing for Licensees:* We face expanded obligations to cleanse and upgrade the data we hold on diversion licences to establish authoritative title. This work is required by DSE to meet our obligations under the *Northern Region SWS*, the annual reporting requirements in the *National Water Initiative* and the forthcoming *Murray-Darling Basin Plan*.

3.3.4 Demand changes

We face uncertainty about our short, medium to longer-term demand projections from the Murray-Darling Basin Plan, climate change and the roll out of the *Connections Program*. All of these reinforce the longer-term trend of a reduction in the scale of our customer numbers and volume.

There is sufficient certainty to roll-forward a planning horizon for Water Plan 3 but the scale of the changes may trigger requirements for adjustments to tariffs during the period of the determination.

3.4 Services Standards - Core

3.4.1 Service standards overview

Service Standards are the foundation stones of the services we provide to our customers as they specify the quality of the service that our customer will receive. Our current approved service standards are articulated in Water Plan 2, the ESC's *Rural Water Customer Service Code* and included in our *Customer Charter*. The ESC has advised that the service standards in Water Plan 3 should be:

- Maintained at current levels, without deterioration
- Increased only with strong customer support
- Linked to increased performance where there are increases in expenditure
- Positively impacted by the benefits of the NVIRP investment
- Included in a revised Customer Charter

Our proposed Service Standards for Water Plan 3 are, therefore, based on achieving 'business as usual' service outcomes with implementation of improvements, where possible, through efficiency and modernisation programs.

3.4.2 Approach to setting standards

In Water Plan 2 we identified and reported against performance standards at the scale of the individual irrigation district. That was appropriate given the previous approach to operational management and investment decisions.

Our system *Modernisation and Connections Program* is now reducing our footprint to around 50% of our prior channel length and automating the remaining backbone. This will establish an enhanced and standardised level of service across the region.

In Water Plan 3 and 4 we propose to set service standards at a whole of region scale to reflect this unitary level of service.

3.4.3 Proposed Service Standards for Water Plan 3

Our proposed service standards for Water Plan 3 follow the principles set out above, i.e. they maintain our current high levels of service and implement improvement where these will flow out of investment in transformation and efficiency gains.

We report these standards below by reference to the main customer classes.

General customer base

We propose to maintain existing service standards for licensing and customer service:

Licensing and Administration	2013-14	2014-15	2015-16
Processing allocation trade applications within 5 business days	90%	90%	90%
Processing water share applications within 10 business days	95%	95%	95%
Processing of Licence transfers within 10 business days	95%	95%	95%
Customer service			
Complaints to EWOV ¹ (per 1,000 customers)	0.17	0.17	0.17
Customer complaints to G-MW (per 1,000 customers)	2.00	1.90	1.80
Telephone calls answered within 30 seconds	95%	95%	95%

Bulk Water customers

The existing high levels of service will be maintained as in Water Plan 2. We have discussed these standard both with our retail and bulk water customers to ensure that the standards meet their requirements:

¹ EWOV stands for *The Energy and Water Ombudsman Victoria*

- Urban water corporations stressed the importance of maintaining our existing good communications around any changes in the quality or reliability of the supply.
- Holders of environmental entitlements are at an early stage in developing and implementing Environmental Watering Plans. We have established a working group with the Holders to help see how we can best help implement their needs.

Bulk Water	2013-14	2014-15	2015-16
Availability of Storage Capacity as a % of design storage capacity	100%	100%	100%
Availability of storages to deliver water on demand to customers as a % of time.	100%	100%	100%
Regulated Rivers minimum river flow regimes > or equal to specified minimum flows as a % of time.	98%	98%	98%
Unregulated rivers meet agreed targets or natural flow 90% of the time.	90%	90%	90%

Gravity Irrigation Districts

We will roll out improvements in service standards over Water Plan 3 and 4 as the delivery system modernisation is completed. These standards have been subject to extensive discussions with the Water Services Committees in each of the irrigation districts.

Gravity irrigation	2013-14	2014-15	2015-16
Water Delivery			
Efficiency achieved as a % of delivered	78%	78.5%	79%
% of orders delivered on day requested	91%	92%	93%
% of orders within +/- 10% of flow rate for 90% of time	80%	80%	80%
% of orders within +/- 40mm of supply level 90% of time	80%	80%	80%
Maintenance			
Maintenance requests responded within target (% Priority 1-2)	90%	90%	90%
Unplanned service interruptions (> 12 hours)	5	5	5
Irrigation drainage			
Availability of surface drainage	98%	98%	98%
Availability of sub-surface drainage	98%	98%	98%

Pumped Irrigation Districts

Levels of service are maintained as before except for a commitment to reduce the number of bursts and leaks over time. These standards were the subject of extensive discussions with the WSCs. We have planned an asset review and options analysis for the pump stations for Nyah and Tresco during Water Plan 3 that are likely to trigger works in Water Plan 4.

Pumped irrigation	2013-14	2014-15	2015-16
Irrigation water orders delivered on day requested	98%	98%	98%
Number of pipeline bursts and leaks (per 100km of pipeline)	17.5	17.0	16.5
Efficiency achieved as a % of delivered	92%	92%	92%

Water Districts

Our Water Districts supply non-potable water to domestic and stock customers. The piped systems are generally of recent construction so are stable in terms of levels of service. Of greater importance is our commitment to review how we can move the remaining D&S customers who are still serviced off older earthen channels on to new piped schemes as these customers currently receive a poor standard of service.

Water Districts	2013-14	2014-15	2015-16
Number of pipeline bursts and leaks (per 100km of pipeline)	5	5	5
Unavailability of stock and domestic supply systems for continuous periods in excess of 96 hours	1.5%	1.5%	1.5%
Efficiency achieved as a % of delivered	85%	85%	85%

Diverter

Our primary role in regard to our diverters is to manage licensed access to the surface and groundwater resource in a way that protects the rights of all parties including the environment.

We do not operate any assets in this area and only own the meter. The service standards therefore refer to management of licences and responses to customer or other contacts. Once again, there is no change from the standards in Water Plan 2. However, we are setting up a working group with representatives of the diverters to discuss wider issues related to tariffs and charges that may lead to changes in service standards.

Diversions	2013-14	2014-15	2015-16
Groundwater levels managed to agreed minimum targets in management plan.	90%	90%	90%
Groundwater seasonal allocation announcements to be announced in accordance with relevant management plan.	100%	100%	100%
Response to access or supply queries within one business day.	90%	90%	90%

3.5 Guaranteed Service Levels

G-MW does not propose to introduce a GSL scheme in this Water Plan.

The role of Guaranteed Service Levels is to provide an incentive for the business to improve service levels for those customers who receive the poorest service. While G-MW agrees with the objective, it is unlikely to provide a benefit to G-MW customers. G-MW customers already receive a high level of service (notably a large number of existing standards are around 90-100%) and the introduction of a Guaranteed Service Level is unlikely to produce meaningful increases in the services provided to customers. The cost of establishing and administering the Guaranteed Service Level is expected to be far greater than any actual payments made, or the general benefits derived by the broader customer base.

Consultation

Our WSCs were asked their opinion on the value of introducing a Guaranteed Service Level scheme. Most WSCs and their members did not support the introduction of Guaranteed Service Levels at this time, particularly as we are in a transition stage with modernisation roll out. However it has not been discounted as an option in the future.

3.6 Hardship Policy

We recognise that some of our customers may occasionally find it difficult to pay their water charges. The G-MW *Hardship Guidelines* developed in 2003, have recently been updated and incorporated into our current *Debt Management Guidelines 2012*.

This document is available to customers via the G-MW website and outlines the current policy and procedures for customers experiencing hardship in meeting outstanding amounts owed to G-MW.

Current Policy

The updated *Debt Management Guidelines* include information relating to:

- Rights of Customers under debt management or a Flexible Payment plan
- Protocols for entering into a Flexible Payment plan or debt management process
- The debt management process
- Interest Charges
- Accounting for Part Payments received

Customer Charter

The relevant extract from the current G-MW Customer Charter relating to hardship policy is:

Goulburn-Murray Water will provide customers who are having payment difficulties, suffering hardship or upon request with information relating to programs to assist in the payment of their bill on a case by case basis. This will include information on programs relating to:

- *Flexible payment plans*
- *Any government assistance/rebate packages available*

This right applies to all customers not just to domestic and stock customers who have a quasi residential supply.

Consultation

Our current hardship policy and Debt Management Guidelines have been discussed with our customer representatives through our Water Services Committees. The broad response was that G-MW's customers are commercial customers who contract to receive services as inputs to a business enterprise. Any special cases or bad debt written off merely increase the costs that have to be recovered from other customers.

The feedback received from WSCs was therefore in general support of the current Debt Management process including:

- Withholding of supply
- Recovery of the cost of debt management

Proposals

This Water Plan proposes to retain the current hardship and debt management policy with an extension to the payment options. Historically, Section 278 of the *Water Act 1989* gave authorities the power to dispose of property where fees and charges had remained unpaid for three years. Sections 278, 279 and 280 of *the Water Act 1989* have recently been repealed. Our debt management guidelines have been amended to reflect this change.

G-MW will continue to monitor and contribute to development of legislative and regulatory change in this area and amend our policy as appropriate.

4 Benchmarking

4.1 Benchmarking efficient operating expenditure

G-MW is committed to operating a lean and efficient business to deliver maximum benefits for our customers. In order to assess our relative efficiency we sought advice on how we stood in comparison with equivalent service providers in Victoria and other States.² This advice analysed authoritative data from independent sources collected on a consistent basis to enable G-MW to assess how it stood in comparison with other rural irrigation water supply organisations.

This section provides a brief summary of key findings from that advice.

4.2 Functional comparability

The benchmarking covers the major rural water providers across Australia, with a particular focus on southern NSW.

Table 6: Comparators for benchmarking

Organisation	State
Central Irrigation Trust	SA
Coleambally Irrigation	NSW
Goulburn-Murray Water	Vic
GWM Water	Vic
Harvey Irrigation	WA
Lower Murray	Vic
Murray Irrigation	NSW
Murrumbidgee Irrigation	NSW
Ord Irrigation	WA
SRW	Vic
State Water	NSW
SunWater	Qld

Any benchmarking of costs and efficiency needs to be based on comparing equivalent entities. The above table is not a list of directly comparable entities as they each perform a different mix of functions.

G-MW provides a wide range of functions including headworks management, river operation, irrigation district delivery, licensing of diversions and natural resource management. Most other entities provide only one or two of these functions. In southern NSW, the full range of services delivered by G-MW is undertaken by six separate organisations, as State Water manage the headworks, Murray, Murrumbidgee and Coleambally Irrigation run the irrigation delivery businesses, the Office of Water licences diverters and the Murray CMA delivers Natural Resource Management programs.

Table 7 confirms this allocation of functions by irrigation service entity. When comparing costs and performance across these providers it is essential to be aware of the range of functions being provided.

G-MW is clearly a larger organisation than its peers in terms of staff numbers. But when the range of functions delivered by the different agencies in NSW is combined then G-MW's staffing levels are lower per customer served reflecting its large customer base

² RM Consulting Group (2012), *Rural water sector benchmark analysis and review*.

Table 7: Scale and functions of comparators

Entity	State	Volume (GL)	Farm Customers	Staff	Storage	River delivery	Irrigation districts	Drainage	Bulk urban	Licences	NRM
G-MW	Vic	1,400	20,000	713	✓	✓	✓	✓	✓	✓	✓
State Water	NSW	5,000	5,719	301	✓	✓			✓		
SRW	Vic	165	1,300	167	✓	✓	✓	✓	✓	✓	
SunWater	Qld	1,513	4,425	494	✓	✓	✓		✓		
Coleambally	NSW	362	342	33			✓	✓			
Murray Irrigation	NSW	1,126	2,400	100			✓	✓			
Murrumbidgee	NSW	862	3,364	183			✓				✓
Lower Murray	Vic	87	1,350	176			✓	✓		✓	
GWM Water	Vic	35	2,500	211	✓		**			✓	
Central Irrigation	SA	105	1,538	24			✓	✓			
Ord Irrigation	WA	114	111	9		✓	✓				
Harvey Irrigation	WA	69	949	26	✓		✓				

** GWM Water supplies water for stock and domestic use through a piped scheme. The irrigation district is defunct.
 Source: NWC (2011), *National Performance Report – Rural water services providers 2009-10*

4.3 Functional analysis: costs and activities

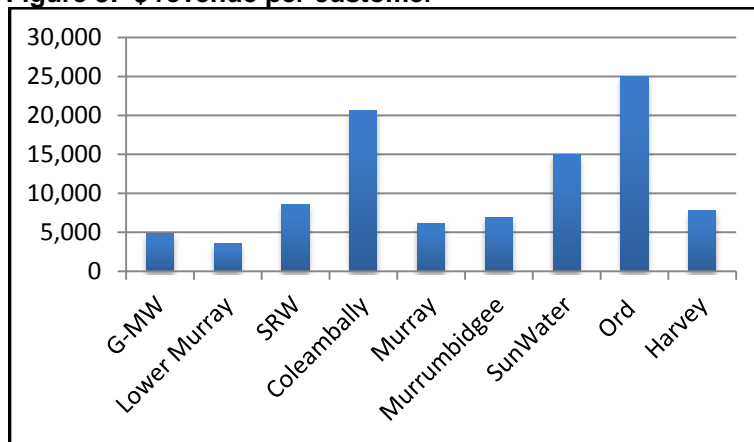
The next analysis looks at the costs and revenues of the entities across irrigation district delivery as an activity with sufficient data to enable robust comparisons of alternative providers. Four comparative indices are presented:

- \$ revenue per customer
- \$ revenue per ML delivered
- \$ costs per customer
- \$ costs per km of asset managed

a) \$ Revenue per customer

The report records the revenue generated by the irrigation and drainage service. This analysis presents the results in terms of the size of that revenue per customer.

Figure 3: \$ revenue per customer

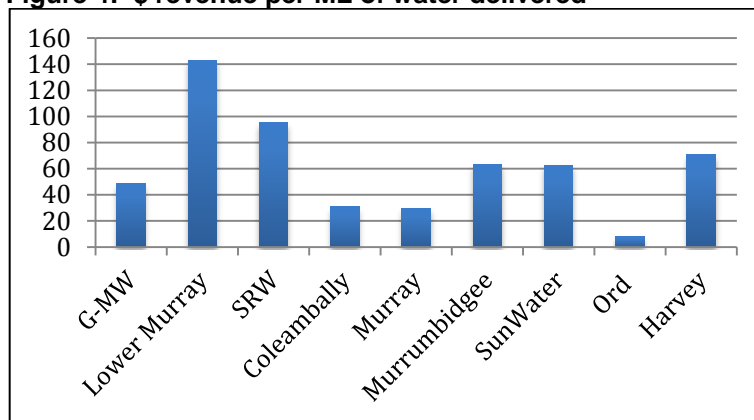


Here G-MW is shown as a low cost company as it has a large number of customers to service. Whilst this analysis reflects G-MW's economies of scale, analysis disadvantages businesses supplying a smaller number of large customers such as Coleambally and Ord Irrigation.

b) \$ Revenue per ML delivered

The next chart reports the revenue generated per ML of water delivered.

Figure 4: \$ revenue per ML of water delivered



This metric shows a distinction between businesses such as Coleambally and Murray Irrigation who rely on annual broad acre crops such as rice and therefore provide a high volume to a smaller number of larger customers, and businesses such as Murrumbidgee and Lower Murray who supply smaller volumes to higher value activities. G-MW falls between these camps. Ord Irrigation is the extreme example where very large volumes are delivered but to very few customers.

c) Operating Costs per Customer

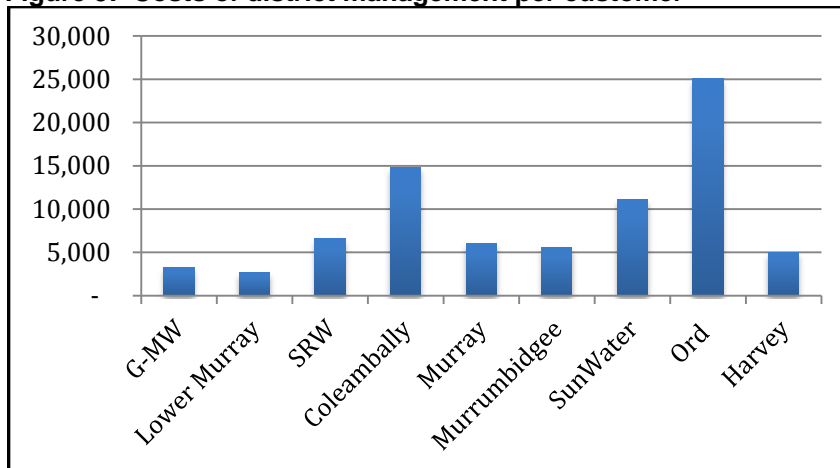
The next analysis looks at the costs of running the irrigation district per customer. Costs are a more reliable index of relative efficiency than revenue as water charges are highly influenced by decisions on cost recovery for past investment.

Three annual costs are aggregated:

- Operating costs: the costs of running the system
- Maintenance costs: the costs of maintaining the assets
- Administration costs: the overhead costs

The three costs are summed as there are likely to be some differences in recording and reporting practice within categories so the aggregate value is more likely to be a robust basis for comparison.

Figure 5: Costs of district management per customer



Once again G-MW’s large customer base and economies of scale presents it as relatively efficient when compared with businesses with a smaller number of larger customers.

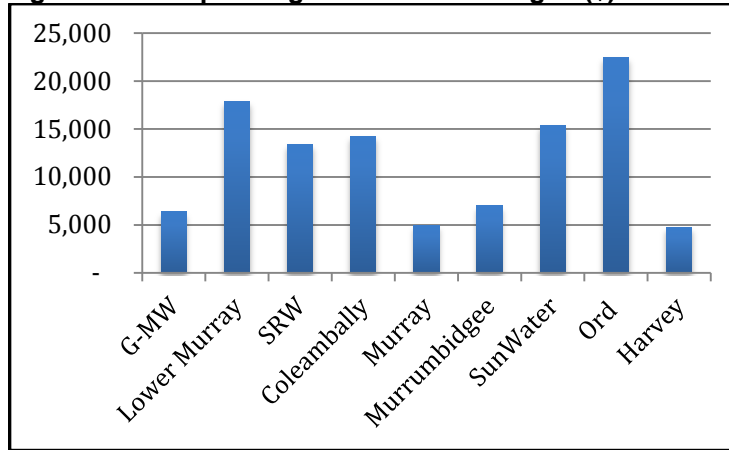
d) \$ Costs per km of asset managed

The final comparison for the irrigation districts relates to the annual costs of system operation per kilometre of asset managed. This corrects for the scale and extent of the different businesses.

Three asset lengths are summed, as separate costs are not provided by reference to the asset class:

- Length of channels
- Length of pipelines
- Length of river managed as a natural carrier

Figure 6: Cost per length of assets managed (\$)



The considerable length of G-MW's assets presents it as a relatively efficient performer in comparison with its peer group and very similar to the two southern NSW irrigation districts at Murray and Murrumbidgee Irrigation.

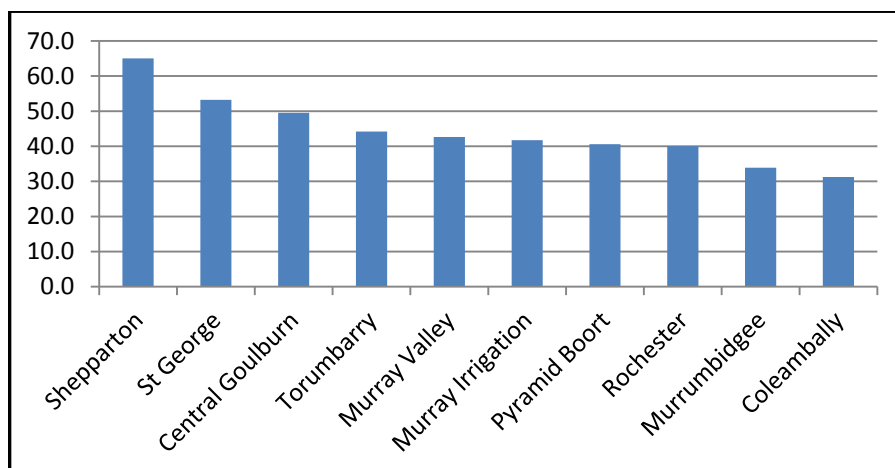
4.4 Farm-gate prices

For the individual irrigator the critical issue is the size of his water bill. This section therefore reviews average charges at the farm-gate.

There are significant methodological challenges in generating this comparative data as each of the businesses has a different tariff structure. However, the ACCC has recently published a report with comparative data on charges. This allows some high-level assessment of relative charges.

Figure 7 presents the farm-gate charges that an average irrigator faces when using 250 ML in different locations. This takes account of all the various fees and charges incurred and assume that the irrigator receives a 100% allocation. In this table, the different G-MW irrigation areas are shown separately, as are other irrigation districts in Sunraysia, southern NSW and southern Queensland.

Figure 7: \$/ML farm-gate charges for 50 ML usage in gravity districts³

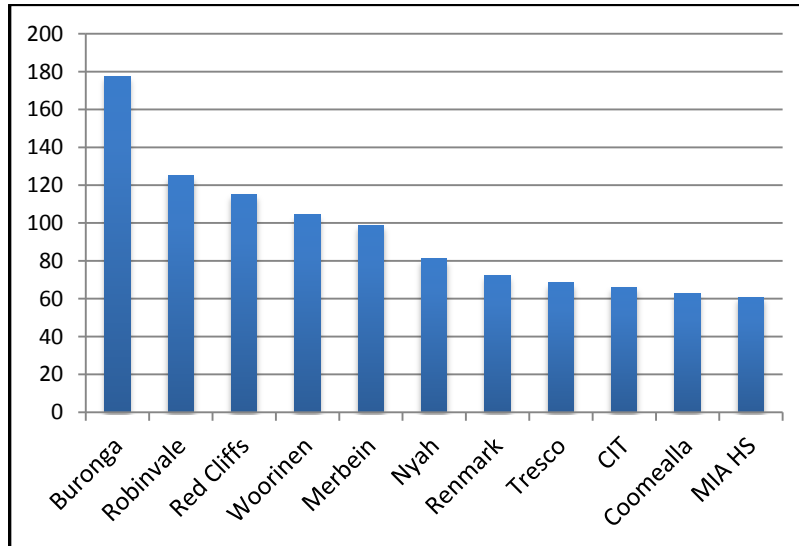


This shows that most of G-MW's irrigation gravity districts sit at around a figure of \$40-\$50/ML which is consistent with the majority of other service providers. Our irrigators receive a high level of service as their entitlements have a higher reliability of supply than equivalents with General Security entitlement in southern NSW.

³ Data from ACCC (2012), *Water Monitoring Report: 2010-11*, Table 4.2, page 47, analysis by RMCG

Figure 8 shows equivalent data for irrigators using 250 ML in pumped districts. This shows a cluster of districts at around \$60/ML and another above \$100/ML. G-MW's districts sit in the middle of the pack. The differences are due largely to the different histories regarding the upfront investment in district modernisation.

Figure 8: \$/ML farm-gate charges for 250 ML usage in pumped districts⁴



4.5 Commitment to Improvement

The above analysis suggests that G-MW is reasonably positioned within its peer-group in terms of current performance.

But we are determined to do better, to drive for greater efficiency and to lower our costs. This is the basis for the commitment to a productivity dividend in Water Plan 3 which returns \$6 million to customers over three years from efficiency savings.

⁴ ACCC (2012), *Water Monitoring Report: 2010-11*, Table 4.2, page 47, analysis by RMCG.

5 Operating Costs

5.1 Overview/Summary

This chapter reports on our operating expenditure over the course of Water Plan 2, and our projections for Water Plans 3 and 4.

Operating expenditure is the on-going cost of running the business rather than the cost of creating new assets to expand services. Operating expenditure is characterised by the following:

- low value items with short lives
- associated with providing a service during a year of operation
- involves recurrent expenditure such as investigatory expenditure, power, fuel, telephone, employee costs, materials, cleaning, minor equipment, maintenance and depreciation.

Maintenance is a component of operating expenditure. It relates to periodic expenditure on an asset, which is to ensure that the asset achieves its estimated useful life. Maintenance expenditure includes corrective, emergency and preventative.

5.1.1 Water Plan 2

Our business and customers faced a very challenging operating environment in Water Plan 2. This included lengthy droughts, serious floods and the setting up of the Northern Victoria Irrigation Renewal Project (NVIRP) which was given responsibility for the modernisation of our gravity irrigation delivery system.

These drivers led to variances in actual operating expenditure both above and below our projected costs. It also led to reductions in our revenues as entitlement allocations were far below projected volumes. Our proposal for Water Plan 3 therefore includes an adjustment to reflect the under-recovery from Water Plan 2.

5.1.2 Water Plan 3

With the exception of our Gravity Irrigation Business Water Plans 3 assumes a stable operating environment with efficiency gains delivered from business improvement. This will provide benefits to our customers.

Our gravity irrigation business will see profound transformation of its core delivery infrastructure through our Connections Program over the next seven years. The investment will be funded by the State and Commonwealth governments. This program will boost levels of customer service which will promote productivity and enhance the viability of communities of northern Victoria. This will also deliver reduced operating expenditure in the medium term from the reduction in our asset footprint and the automation of our main channel backbone. In the transition we will need to manage a hybrid system comprising an automated backbone and meters but with many of our spur channels and outlets still manually operated. For this reason efficiency savings will not be reflected immediately in our forecast costs.

We face pressures for an increased revenue requirement from our growing regulatory asset base (RAB) where we earn a return on capital and depreciation. This reflects that G-MW commenced the current regulatory regime with effectively a zero RAB. We also face pressures for increased costs from increases in electricity prices and from our Enterprise Agreement (EA) which involves increases above the rate of inflation due to the difficulty of retaining skilled technical staff in regional Victoria.

Despite these pressures we intend to limit the recovery of revenue to a maximum increase of CPI + 1.5% pa over the three years of Water Plan 3. We will deliver this price stability by reducing our operational expenditure by \$6 million over the three year period. This Water Plan therefore delivers our customer a highly attractive package of enhanced levels of service yet stable prices driven by greater efficiency.

Table 8 presents our operating expenditure separated into the ESC’s cost categories for the second, third and fourth regulatory periods:

Table 8 - Historical actual and forecast operating expenditure (2012-13 \$M)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Operations & Maintenance	67.52	73.78	72.30	64.00	72.90	73.41	77.40	77.12	76.89	76.42	76.14	74.95
Customer Service and billing	3.09	3.47	3.93	3.22	2.84	3.94	3.84	3.84	4.36	4.40	4.44	4.53
Corporate	11.74	13.12	16.53	15.29	14.69	18.00	18.18	18.10	19.22	19.09	19.11	19.42
Other operating expenditure	-	-	-	-	-	-	-	-	-	-	-	-
License fees - Essential Services	0.15	0.09	0.10	0.11	0.09	0.18	0.09	0.18	0.09	0.18	0.09	0.18
Environmental Contribution	1.69	1.65	1.60	1.55	1.53	1.69	1.69	1.69	1.69	1.69	1.69	1.69
Productivity Dividend	-	-	-	-	-	(1.00)	(2.00)	(3.00)	(4.00)	(5.00)	(6.00)	(7.00)
New Initiatives	-	-	-	-	0.62	1.47	1.66	1.26	0.65	0.65	0.65	0.65
Net total Prescribed Operating Ex	84.18	92.10	94.45	84.16	92.66	97.68	100.86	99.18	98.89	97.43	96.12	94.42
Externally Funded Operating Exp	22.39	37.90	18.12	4.85	6.02	0.24	0.24	0.24	0.24	0.24	0.24	0.25
Total Prescribed Operating Expe	106.57	130.00	112.57	89.01	98.69	97.92	101.10	99.42	99.13	97.67	96.36	94.66

5.2 Water Plan 2: Assessment framework

This section reviews our actual expenditure in Water Plan 2 with that approved in the pricing determination.

The approved operating expenditure included operating expenditure for a range of activities where G-MW acts as an agent for government in delivering projects. Costs for these programs are only incurred by G-MW where there is agreed funding in advance from government. This expenditure therefore did not form part of the costs that were recovered through our prescribed fees.

This operating expenditure is therefore excluded from this assessment. Table 9 shows the variance between approved and actual expenditure for Water Plan 2 as a whole and then the variance for the externally funded expenditure.

Table 9: Variance between Water Plan 2 projected and actual expenditure (2012-13 \$M)

Category	2008-09	2009-10	2010-11	2011-12	2012-13	Total
WP2 Approved	109.04	110.03	103.36	98.18	97.92	518.52
Actual Expenditure	106.57	130.00	112.57	89.01	98.69	536.84
Overall variance	(2.47)	19.97	9.21	(9.16)	0.77	18.32
Variance externally funded projects	5.33	17.83	4.71	(2.69)	(0.64)	24.54

This demonstrates that almost all the variance between the approved and actual operating expenditure for Water Plan 2 represents variance within the externally funded projects. This issue is not relevant to the remainder of this assessment.

5.3 Water Plan 2: Approved expenditure and actuals

This section compares our actual expenditure for Water Plan 2 with the approved operating expenditure, excluding sums for externally funded projects. Our overall operating expenditure was very close to the approved figure, with lower expenditure of \$6.21 million under our approved expenditure of \$454 million or around 1.4%.

Table 10: Variance between Water Plan 2 projected and actual expenditure (2012-13 \$M)

Category	2008-09	2009-10	2010-11	2011-12	2012-13	Total
WP2 Approved Less Funded	91.98	89.96	89.96	90.64	91.25	453.78
Adjusted Actual	84.18	92.10	94.45	84.16	92.66	447.57
Variance	(7.80)	2.14	4.50	(6.47)	1.42	(6.21)

However, this aggregate variance masks significant changes within the different programs that go to make up that overall operating expenditure. A number of drivers were influential in driving significant differences between the planning assumptions for specific programs in our Water Plan 2 submission and our actual operating expenditure. The major drivers are explored further below and include:

- System modernisation and NVIRP
- Drought conditions
- Floods
- Increased obligations

The Water Plan 2 determination in 2008 explicitly acknowledged the uncertainty that surrounded key elements of our operating environment, in particular the implications of the NVIRP initiative for our costs. As a result, the ESC initially set prices only for one financial year.

G-MW has, therefore, submitted reports to the ESC each year revalidating its revenue requirement and proposed charges within an overall revenue cap. The ESC has therefore been kept well briefed on the substantial changes to our operating costs and revenues as Water Plan 2 has been rolled-out.

5.3.1 System modernisation

Water Plan 2 included operating expenditure to promote system rationalisation and reconfiguration. It included operating expenditure to fund our Advanced Maintenance Program (AMP). AMP aims to extend the asset life of key parts of our system and delay significant asset replacement while providing greater flexibility in future asset decision making.

This program was significantly amended as a result of NVIRP taking on responsibility for our system modernisation activities. This led to a reduction of \$18.2 million in our capital works program over Water Plan 2 as projects were either cancelled or transferred to NVIRP. It also reduced our operating expenditure as we minimised expenditure on our spur channel system that was liable for rationalisation under NVIRP.

As a result, the actual operating expenditure on AMP over Water Plan 2 was \$16.33 million (in 2012-13 prices) compared with the projected cost of \$49.24 million, representing a reduction of \$32.90 million.

5.3.2 Drought

The unprecedented drought over most of the period of Water Plan 2 impacted both on our revenues and on our costs.

The original Water Plan 2 submission had assumed 100% allocations against entitlements, whereas, in practice, the drought sequence resulted in far smaller allocations. As a result, the smaller volumes decreased our *Infrastructure Use Fees* and drainage revenues at the farm gate. This led to an under-recovery of \$22.9 million in charges over the first three years of Water Plan 2.

We implemented a wide range of drought response initiatives to manage and share limited water resources in response to the extreme drought conditions and low water resources:

- We pumped the dead-space in the Waranga Basin to access water that could not be released under gravity, in order to maintain a limited supply to our customers. This activity added significant costs to our operating expenditure with a one-off cost of \$1.66 million in 2008-09.
- We introduced modified system operating arrangements to reduce channel distribution losses and make more water available for allocation to customers. That involved additional administration and system management costs.
- We enhanced our irrigation administration activities. We streamlined customer access to the Victorian Government state wide drought rebate scheme and introduced dry season trading rules to increase water trading opportunities for irrigators. We helped implement the Commonwealth Government's 'buyback' initiative and held extensive customer

meetings across the region to help customers understand options to use water-trading and carryover.

- We enhanced our range of communications to customers, industry and the wider community on water resources, access, delivery and trading issues, including dedicated drought, fire and flood recovery information pages on our website.
- We implemented an expanded compliance regime to give confidence to all customers that the scarce resource was being allocated fairly and in accordance with licence conditions and our rostering schedule. This initiative required six extra staff to manage licence access and rostering across an area the size of Tasmania. This added an additional \$3.76 million to our operating expenditure.

5.3.3 Floods

The severe floods in western Victoria early in 2011 affected the irrigation areas of Torrumbarry and Pyramid Hill, which were under water for several weeks. The floods also damaged our infrastructure. We worked closely with the SES in our response.

G-MW faced significant additional operating costs from the overtime that staff incurred and from the additional costs of hiring contractors in managing our short-term response to maintain and restore supply and from the damage to our assets. This involved an increase in operating expenditure of \$4.22 million vs \$5.05 million for Water Plan 2.

5.3.4 Increased obligations

G-MW also faced increased compliance obligations to implement requirements stemming from the:

- Water Right unbundling
- Updated Terrorism Act
- Safe Drinking Water Act
- Dairy wash down program
- Disability Action Plan and Green Buildings
- Northern Region Sustainable Water Strategy responsibilities
- Environmental Water entitlements and their management
- Bureau of Meteorology information management
- National Metering Standards (NMS)

The most significant cost driver related to the unbundling of Water Rights and the creation of the Water Registry. This process started in 2007, however its major implementation occurred during Water Plan 2. The workload required to deliver these major changes was more substantial than anticipated in the 2008 submission as the drought drove increased demand for water trading.

This required a larger number of staff to process the applications and enhanced data management systems to validate, hold and transmit data on sales to the state-wide registry. Staff numbers from the customer service and billing divisions increased from a total of 24 to a peak of 74, with an equivalent increase in associated overheads from accommodation, IT support and facilities. This figure has now reduced post the peak work load.

5.3.5 Summary of variance

The following table summarises the variance between projected and actuals by key program area, excluding externally funded projects.

Table 11: Water Plan 2: Expenditure Variance by program area (2012-13 \$M)

Operating Expenditure Category	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Non-recurring costs						
Pumping Waranga Basin	1.66	-	-	-	-	1.66
Flood Recovery	-	-	4.48	0.57	-	5.05
Sub total	-	-	-	-	-	6.71
Recurring Costs						
AMP	(5.10)	(4.56)	(8.35)	(6.88)	(7.77)	(32.67)
Customer Service & Billing	0.81	1.92	2.60	1.78	1.21	8.32
Strategy & Communications, HR, OH&S and Risk	0.86	1.83	2.98	2.52	2.80	10.99
Compliance	0.61	0.65	0.82	0.77	0.91	3.76
Information Technology	(0.02)	1.11	1.25	1.43	1.90	5.68
Water Operations Support, research & development, asset management and diversions O&M	(1.74)	(1.56)	(1.68)	(2.06)	(1.96)	(8.99)
Fee for Service (Irrigation administration)	1.23	1.06	1.39	0.43	1.17	5.28
Other costs	(6.11)	1.70	1.00	(5.04)	3.78	(4.66)
Sub total	-	-	-	-	-	(12.31)
Total	(7.80)	2.14	4.50	(6.47)	2.04	(5.59)

This confirms that the total variance includes both the significant reduction in the AMP program over Water Plan 2 (with costs being transferred to NVIRP) and also higher costs to deal with drought and flood from one-off projects and recurrent expenditure.

5.3.6 Productivity, shared services and cost saving initiatives

The drought and floods placed extra demands and costs on the business. As a result, we deferred maintenance and other expenditure where we could to minimise costs in the short-term, while ensuring service delivery and safety were not impacted.

It is problematic to accurately measure our performance against the Water Plan 2 productivity hurdle because the business has changed significantly since the original determination. We have experienced a series of changes during the Water Plan 2 period, many of which were externally imposed. Unpacking the series of changes to accurately measure whether we have met the productivity hurdle is not a practicable exercise.

However, the Water Plan 2 period saw major productivity initiatives, including an organisation wide three year productivity plan and from time to time cost reviews. We also implemented three important initiatives to deliver improved services to customers at lower costs. These demonstrated productivity gains through centralising services:

- **Coordination of service delivery:** we have coordinated services within each district to improve service delivery and minimise costs. That means we have a single, consistent presence at the local level through a one-stop shop for all services including gravity irrigation and diverters.
- **Consolidated our regional teams:** We have consolidated our regional teams to reduce management costs. For example, we merged the Pyramid-Boort team and the Rochester team, as a new Loddon Valley Team. This reduced overheads as management and supervision is now shared across the two areas.
- **Improved water planning:** We brought together the irrigation planning functions to save costs and improve services to customers. Customers now have access to staff 24 hours a day to assist with any service issue and to make changes to their irrigation plans. Where possible, we transferred local planning staff to work in the new planning unit to ensure that local knowledge was retained.

5.3.7 Shared services

Shared services are services that can be shared between businesses. Although the intention of shared services provision is directed towards Melbourne metropolitan water businesses, we have explored potential cost savings through the sharing of services. We discovered that the sharing of services, based on current conditions, could not be feasibly implemented given our location and specific requirements. Notwithstanding the lack of opportunities to share services between businesses, we have explored opportunities to coordinate service delivery between functional parts and separate locations across the business.

5.3.8 Competitive procurement

G-MW has a policy of benchmarking all procured services. G-MW regularly procures external contractors to assist in delivering its service outcomes. For work that may be undertaken by external contractors, their costs are benchmarked through an advertised tender process. The tender process is followed by a review into the most cost-effective way to deliver on G-MW's service outcomes.

The above review process is completed regularly.

In Water Plan 2, the majority of procurement activities were dominated by the FutureFlow alliance. The FutureFlow alliance procured approximately \$300 million worth of work through competitive bidding process. The majority of the contracts were awarded subject to a publically advertised tender process.

5.4 Baseline for Water Plan 3 projections

A 2011-12 operating expenditure baseline has been provided however there are significant changes in baseline capital expenditure because of the nature of change occurring in our business.

We currently are transforming our core delivery infrastructure with our Connections Project. While the overall impact of the program reduces operating expenditure, during the transition phase costs are likely to be higher as we need to run both pre and post modernised systems.

Since our opex forecasts are based on a transitioning business, it is more relevant to use a baseline for a transition phase – this is the baseline operating expenditure for 2013-14. The difference is shown below in Table 12.

Table 12 – Comparison of baseline operating expenditure (2012-13 \$M)

Operating Expenditure Category	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Proposed Expenditure	99.09	103.15	102.48	103.16	102.70	102.39	101.69
Productivity Dividend	(1.00)	(2.00)	(3.00)	(4.00)	(5.00)	(6.00)	(7.00)
Amended Proposed Expenditure	98.09	101.15	99.48	99.16	97.70	96.39	94.69
Baseline Expenditure based on							
Actual 2011-12	83.59	83.59	83.59	83.59	83.59	83.59	83.59
Amendments to base 2011-12							
ESC Licence Fees	0.07	(0.02)	0.07	(0.02)	0.07	(0.02)	0.07
Environmental contribution	0.13	0.13	0.13	0.13	0.13	0.13	0.13
New Initiatives	1.47	1.66	1.26	0.65	0.65	0.65	0.65
MDBA Contribution	2.90	5.98	5.98	5.98	5.98	5.98	5.98
Training	0.37	0.38	0.39	0.42	0.42	0.42	0.42
Operations	5.64	6.32	6.65	6.40	6.59	6.48	5.96
Maintenance	1.86	2.21	1.60	1.64	1.01	0.84	0.13
Management & Admin	(0.54)	(0.83)	(0.36)	1.58	1.46	1.60	1.89
Research & Development	(0.49)	(0.49)	(0.49)	(0.49)	(0.49)	(0.49)	(0.49)
Baseline	94.99	98.93	98.81	99.89	99.41	99.18	98.33

Notwithstanding our view of an appropriate baseline year, we also have constructed a 2011-12 baseline in accordance to the ESC's needs. This is based on our 2011-12 operating expenditure inflated to a 2012-13 price base.

Explanations for the major amendments are:

- MDBA contribution - is set by the Ministerial Council and passed on to G-MW by the Victorian Government. It is based on works carried out in the Murray-Darling Basin over prior years. The budget is based on the best estimates available at this time.
- Training - under spent in 2011/12 due to organisational change – adjustment reflect realistic budget to provide long term professional and technical development.
- Operations
 - Wage increase of 4% per year until 31 July 2015 (1.5% real)
 - Increased cost of operating the hybrid gravity irrigation system during the transition from manual to automatic operation
 - Increased electricity costs due to the carbon tax
 - Increased insurance costs
- Maintenance
 - Wage increase of 4% per year until 31 July 2015 (1.5% real)
 - Changes in the maintenance program for a modernised gravity irrigation system.

Table 13: Derivation of baseline operating expenditure (2012-13 \$M)

Operating Expenditure Category	Cost
2011-12 expenditure*	82.50
Less	
Flood recovery	0.57
Baseline*	81.93
Add	
ESC Licence Fees	0.11
Environmental Contribution	1.55
Final baseline	83.59

* excluding Fully Funded Government Projects, ESC Licence Fees and Environmental contribution

5.5 Water Plan 3: Projections

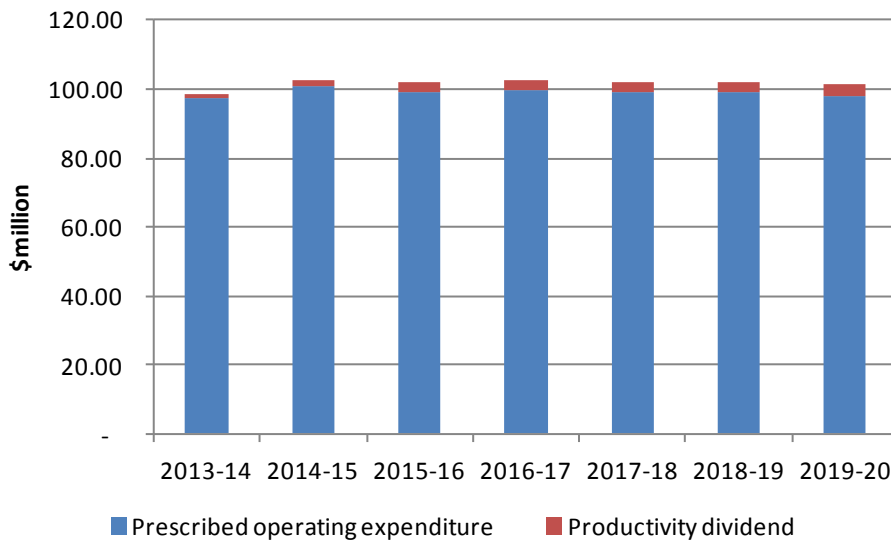
This section identifies our projected operating expenditure profile for Water Plan 3. It starts with an overview, confirms the key changes in each of our core business units and then summarises some of the major drivers of future costs. Specifically, we have created

Figure 9 to demonstrate the impact of our productivity dividend, of which is elaborated in greater detail below.

Table 14 - Forecast operating expenditure (2012-13 \$M)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Business as Usual	95.35	99.43	99.06	100.46	99.91	99.69	98.90
New Initiatives	1.47	1.66	1.26	0.65	0.65	0.65	0.65
Environmental Contribution	1.69	1.69	1.69	1.69	1.69	1.69	1.69
ESC Licence Fees	0.18	0.09	0.18	0.09	0.18	0.09	0.18
Externally funded operating expenditure	0.24	0.24	0.24	0.24	0.24	0.24	0.25
Total Prescribed operating expenditure	98.92	103.10	102.42	103.13	102.67	102.36	101.66
Externally funded	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.25)
Net total prescribed operating expenditure	98.68	102.86	102.18	102.89	102.43	102.12	101.42
Productivity dividend	(1.00)	(2.00)	(3.00)	(4.00)	(5.00)	(6.00)	(7.00)
Net total prescribed operating expenditure inc. productivity	97.68	100.86	99.18	98.89	97.43	96.12	94.42

Figure 9 - Prescribed operating expenditure including the productivity dividend



5.5.1 Water Plans 3 and 4 overview

- Business as usual:** Business as usual dominates our future expenditure with the exception of the gravity irrigation business. The challenge is to deliver this with greater efficiency and higher level of customer focus
- Transformation:** The biggest change to our business in Water Plans 3 and 4 is the transformation of our irrigation delivery systems, through the implementation of our Connections Project. This is a \$2 billion investment by the State and Commonwealth Governments to transform the strategic and operational functionality of our gravity channel supply system and on-farm efficiencies. This will enhance levels of service, increase reliability and promote productivity across the region. It will also drive greater efficiency and lower costs and charges than would have applied with the continuation of the historic supply system.
- New Obligations:** There is little change to our future operating expenditure driven by new external obligations.
- Demand changes:** We face considerable uncertainty about our demand projections due to lack of clarity regarding the outcomes of the Murray-Darling Basin Plan and the roll out of the Connections Program. Variability in demand is unlikely to make a major impact on our operating expenditure over this timeframe as our operating costs do not vary significantly with demand.
- Productivity:** We are confident that our operating expenditure is prudent and efficient. Benchmarking demonstrates that we sit reasonably within our peer group. We are in a period of transition and will have the costs of hybrid manual and automatic operation of our major gravity irrigation systems through most of Water Plans 3 and 4. However, we believe that there is the potential to generate a productivity dividend from the implementation of programs to achieve our three fundamental commitments. So this submission proposes to limit our revenue recovery to effectively CPI+1.5% per year. We will need to achieve a cumulative efficiency target of \$6 million over the three years of Water Plan 3 to stay within this cap, equivalent to a one percent annual productivity improvement to our proposed business as usual operating expenditure.

5.5.2 Our key operating units

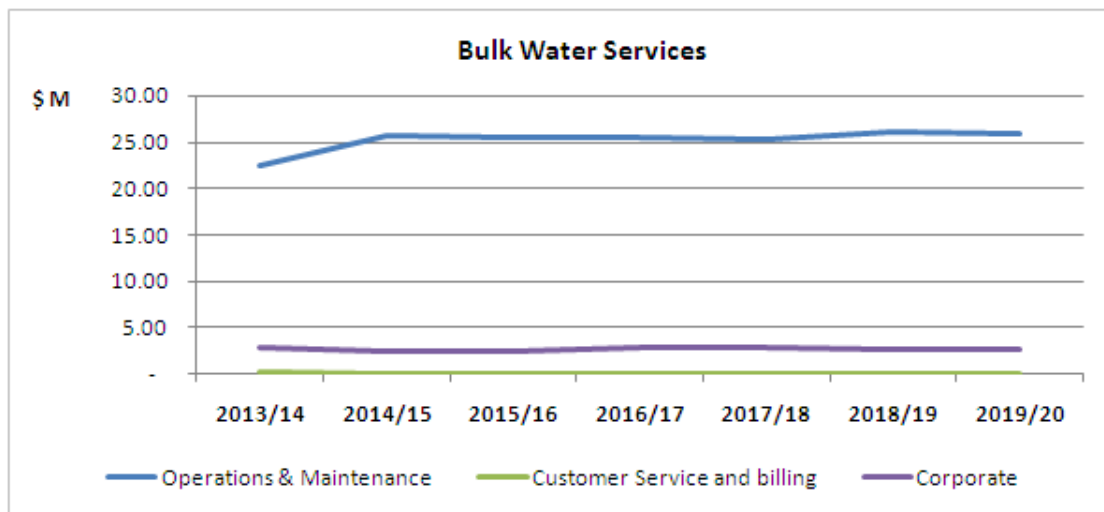
For most of our customer segments the story of Water Plan 3 is one of stability, with a focus on consolidation and driving both improved customer service and greater efficiency. The following sections set out operational expenditure trends. It should be noted the following analysis excludes the productivity dividend which is yet to be allocated to customer segments.

a) Headworks

Our ‘Catchment Services’ business unit manages our storages and bulk water supply. It also provides a range of important natural resource management and catchment management services. Water Plan 3 projects little change in its operating or maintenance costs except for the charges we receive from the MDBA for services delivered in managing the River Murray. These charges are set by the Ministerial Council and passed on to G-MW by the Victorian Government

Water Plan 3 projects stable internal operating costs that are under our control but assumes an increase in the MDBA’s charges by \$2.7 million in 2014-15 from the 2013-14 forecast cost.

Figure 10: Bulk Water – Water Plans 3 & 4 (2012-13 \$M)

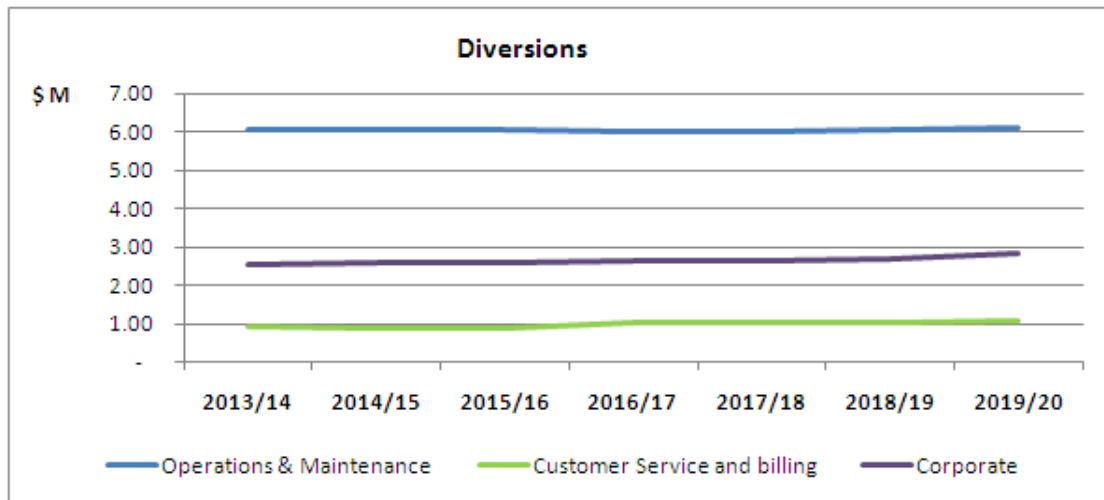


b) Licensed diverters

We act on behalf of the Minister in managing diversion licences both from surface and groundwater resources. Water Plan 3 will see the continued roll-out of resource management plans at a local level but few changes in our costs.

Our operating expenditure for diversions customers will be held broadly constant throughout the Water Plan period. The only additional cost is to cleanse and upgrade the data we hold on diversion licences to establish authoritative title. This work is required by DSE to meet our obligations under the Northern Region SWS, the annual reporting requirements in the National Water Initiative and the forthcoming Murray-Darling Basin Plan.

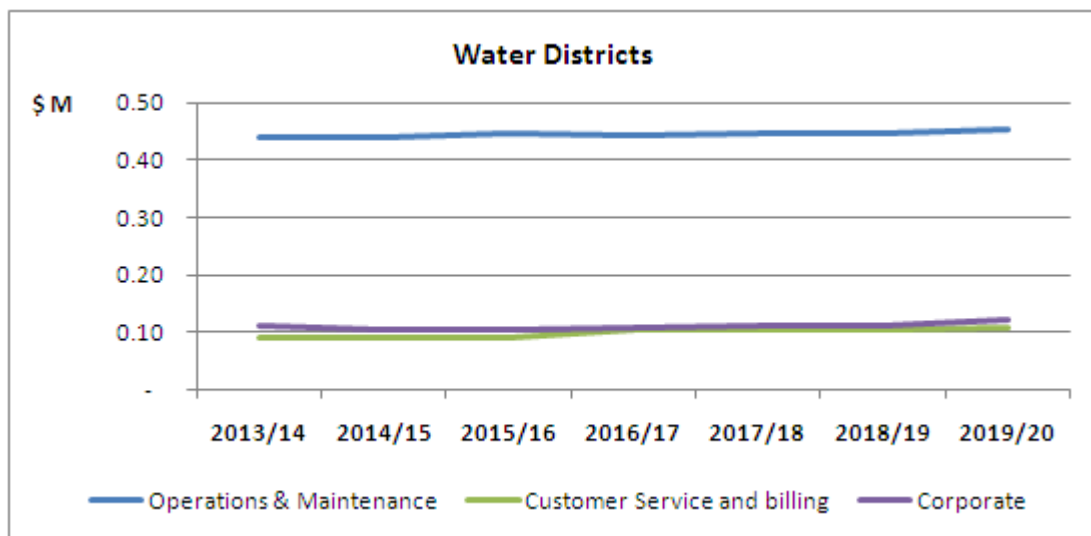
Figure 11: Diversions Water Plans 3 & 4 (2012-13 \$M)



c) Water Districts

We deliver piped non-potable water supplies for stock and domestic use. Costs here are stable as the systems are relatively newly constructed. It is proposed to hold operating expenditure steady for the duration of Water Plan 3, except for a slight uplift to reflect an anticipated rise in pumping costs from increased electricity prices in response to the *Clean Energy Act 2011* and broader price rises.

Figure 12: Water Districts Water Plans 3 & 4 (2012-13 \$M)



However, the stability and consolidation in these business areas is in high contrast to the transformation that is evident across our other major areas of activity:

- **Gravity irrigation districts:** Water Plans 3 & 4 will see transformation of the delivery system in our gravity irrigation districts leading to greatly enhanced levels of service. This will generate efficiency savings over the longer term, but we have to maintain a hybrid system for much of this period until the remainder of the older manual system can be decommissioned. Further details are provided below.
- **Corporate:** We are rebuilding our shared resources and systems as part of the three fundamental commitments to ensure G-MW has the necessary capability across people, processes and systems.

5.6 Modernisation and Connections

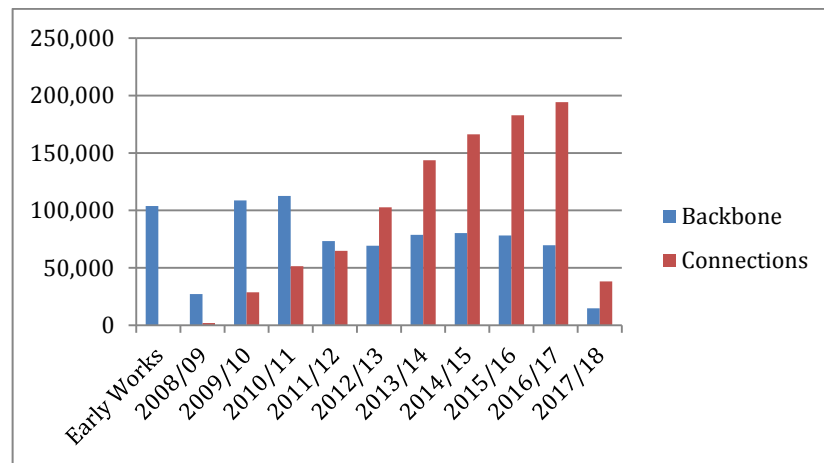
5.6.1 Program roll-out

We have started a journey that will transform our irrigation supply system from a manually operated system, much of it 80 years old or more, into an automated state-of-the-art system that will match the best of anywhere in the world.

The program involves unparalleled investment by the State and Commonwealth Governments in the future of irrigation in northern Victoria. This will be delivered through investment both in:

- Modernising and automating our backbone delivery system. This involves expenditure of \$800 million over the life of the project with \$240 million to be spent over the period of Water Plan 3; and
- Providing private, modernised connections from the backbone to individual properties. This will see investment of nearly \$1 billion over the life of the project, with \$500 million projected to be spent over the three years of Water Plan 3.

Figure 13: Connections Program expenditure (\$'000s)



It had originally been planned that irrigators would contribute \$200 million of the initial capital costs of the project, in return for 175 GL of the water savings. However, in October 2011 the Commonwealth Government agreed to take over the irrigators' total cost share in return for an additional 100 GL of the savings. The agreement will reduce the revenue requirement of the business by around \$50 million over Water Plan 3 and over \$60 million over Water Plan 4.

For the purposes of the Water Plan the cost impacts of the Connections Project are therefore restricted to the on-going operational and maintenance costs of the new system.

It will take until 2019 to complete the works. That will be as we complete Water Plan 4. Over the three years of Water Plan 3 we will focus on managing the changes needed to reach that successful outcome.

5.6.2 Program benefits

Cost benefit analysis of the program formed part of the due diligence assessment of the project for the Commonwealth government. The Business Case confirmed that the investment generated a strongly positive benefit cost ratio taking account of the range of benefits. Those benefits included:

- **Cost savings:** The new system will result in reductions in the Whole of Life costs of running the delivery system in comparison with the base case of maintaining the un-modernised supply system.
- **Productivity:** The fully modernised system will deliver water on-demand at high, consistent flow-rates through modern outlets that can be integrated with best-practice on-farm irrigation systems. This will boost the productivity of northern Victoria's 'food-bowl'

and support the expansion of critical export industries such as the dairy sector and its important regional processing centres. That will help sustain and enhance the viability of our regional communities.

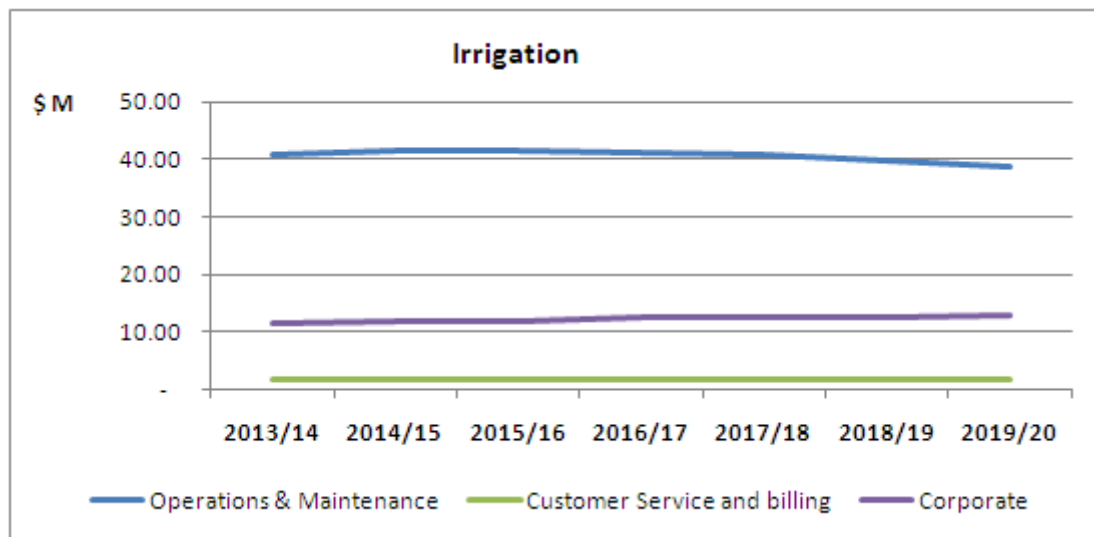
- **Water Savings:** The investment will also generate substantial water savings that will enhance environmental flows in our river systems as well as provide water for use by customers in Melbourne and enhance security of supply for irrigators.

Future operating costs for Water Plan 3

The following charts report our proposed operating expenditure for the seven years of Water Plans 3 and 4. This is broken out into three main lines showing our projected expenditure for Operations, Maintenance and Shared Services.

This confirms that we intend to hold expenditure steady over this period despite significant upward pressures on costs from managing a hybrid system and that we project a fall in those costs as the modernisation program is completed in 2018.

Figure 14: Irrigation Districts Water Plans 3 & 4 (2012-13 \$M)



5.7 Cost Allocation

G-MW allocates operational costs in one of two ways:

1. Direct Charge Basis – Where costs are direct charged to a pricing service – for example, weed spraying costs incurred directly in the Shepparton Irrigation District.
2. Indirect Charge Basis– Where costs are allocated to a pricing entity based on a pre-determined driver.

Where practical, G-MW applies the Direct Charge Basis for allocating operational costs. Where direct charging is not practical operational costs are charged on an Indirect Charge Basis. There are two main categories of expenditure allocated using the Indirect Cost Basis:

Operational Management Overhead

These costs are associated with supervisory management of operational staff. These costs are allocated to provide a proxy for direct charging.

Costs are allocated based on the activities that the manager’s workforce is undertaking. This is achieved by a labour on-cost applied to the Manager’s staff hourly charge out rate.

Corporate Overhead

These are costs associated with the provision of corporate services (i.e. Finance) where it is impractical to directly link overhead expenditure to pricing services.

These operational costs are generally allocated to pricing services of the business based on the pro-rata of operational and capital expenditure for all pricing services.

There are some exceptions where a more specific allocation basis is applied such as People and Performance costs that are allocated based on labour expenditure.

5.8 Labour and wage rates

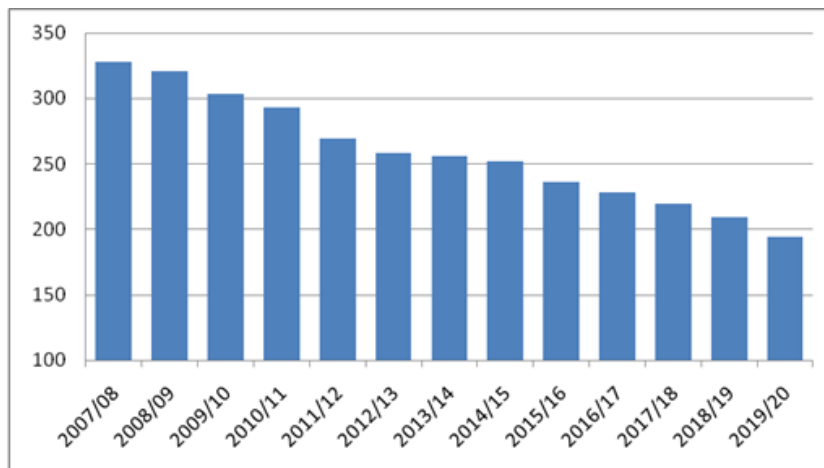
We will see an overall reduction in our labour costs by the end of Water Plan 4 following completion of the modernisation program in our gravity irrigation districts and the roll-out of our business wide transformation. This reduction will be particularly evident in our gravity irrigation districts.

Modernising our irrigation supply system, reducing its length and automating regulators and outlets will enable us to make efficiency savings in the costs of running the system. The most evident saving will be in the number of staff needed to run the system. So, for example, in the Murray Valley gravity irrigation area:

- We originally employed 22 staff to operate 16 separate zones
- We currently employ 13 staff to manage 9 integrated zones
- We will only need 8 staff to manage 6 fully automated zones when our system modernisation and Connections Project is fully rolled-out.

We have already reduced the overall staffing across our irrigation districts from 330 down to 260 and will continue to drive down these numbers as we roll out our modernisation program.

Figure 15: Reducing staff numbers in our gravity irrigation districts



Modernisation allows us to make reductions in staffing levels because the modernised system will have a smaller footprint and automation replaces labour intensive manual processes. However, in the period up to completion of the modernisation program we will need to manage a hybrid system with many spur channels retained at the same time as the new automated backbone is introduced. That means the full efficiency savings will not be realised until later in Water Plan 4 when we can fully decommission our older system.

There will also be a number of off-setting cost drivers:

- An increase in unit staff costs as the modernisation and connections program requires a smaller number of higher skilled staff, raising the level of our average salary. There will also be increased technical maintenance costs

- A small increase in staff in our water administration, asset management, dams operations and maintenance and HR divisions
- An increase in wages from the 4% per annum increase in our enterprise agreement up to July 2014. This reflects the difficulties in attracting and retaining skilled engineering and professional staff in regional Victoria given the higher salaries available in metropolitan settings and the mining sector
- Additional contributions to our defined superannuation benefits plan. This plan is managed by a third party who provides advice on the amount of additional contributions required to maintain the funded status of the defined benefits scheme. As they were unable to provide forecasts of likely additional unfunded contributions to the defined benefits plan, no allowance was made for this possibility in Water Plan 2 forecasts. It now appears likely that significant unfunded contributions will be more likely.

5.9 Clean Energy Act 2011 and the Carbon Price

We forecast that our energy costs will increase in the third and fourth regulatory periods, driven by two factors:

- An increase in our unit costs, and
- An increase in the volume of energy used

We do not face any direct liabilities from the *Clean Energy Act*. Therefore the main impact of the 'Carbon Price' will be through an increase to our input costs, in particular to our energy bills. Our modelling suggests that the projected carbon price will lead to a 10 per cent per annum increase in our power bills. This is based on the Australian Treasury's conservative modelling of the impact on electricity prices. We also expect general price increases from higher transmission and distribution charges. This will translate into across the board cost increases of 1% on operational costs and 0.6% for capital costs. We have factored in likely electricity price increase but have not factored in likely broad base carbon tax impacts

We also project the need for greater groundwater pumping in Water Plans 3 and 4. Our modelling suggests greater rainfall than in the Water Plan 2 drought sequence, leading to raised water table levels. We project that we will have to pump more groundwater, to manage the risks of water logging and salinity, increasing our energy usage compared with historic levels.

5.10 Information Technology Costs

Our business is highly data intensive. We have 20,000 customers serviced by 6,000 km of channels and 16 major storages, with diverters located across an area the same size as Tasmania. We manage those assets through the second largest radio controlled network system in the world after the US armed services. We are transforming our gravity delivery system from being manually operated into a high-tech automated water super highway. Customers now expect to be able to access our system on-line, interrogate information about their account, order water and control deliveries in near real-time.

Data generation, capture, analysis and control have become a core business function. We need to have the systems in place to service and support this function. We have invested in a number of stand-alone systems to service different business units. Water Plan 3 will see roll-out of an integration program to ensure that all systems are fully implemented and utilised and that data capture, validation and use is properly controlled and shared to optimise business performance.

The main driver of our Information Technology (IT) costs is therefore from additional staff not major new systems. We expect to see an increase in staff numbers from 2011-12 to 2014-15 (Table 6). The increase in IT costs from 2011-12 to 2012-13 is the result of increasing reliance on technology associated with the Connections Project and higher emphasis on data management and analysis. The variance over time between 2014 and 2017 reflects our

varying workload. This increased reliance on IT has also driven higher IT Costs throughout Water Plan 2

Table 15 - Future Information Technology costs (2012-13 \$M)

	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19
IT operating expenditure	1.43	1.72	2.05	2.10	1.99	2.18	2.12	2.12

5.11 Shared Services

As discussed earlier, we investigate opportunities to take advantage of the sharing of services where possible. In Water Plan 3 and onwards, we intend to continue this approach to find additional cost savings.

5.12 Competitive procurement

We will continue our policy of benchmarking procured services. The process of tendering contracts and reviewing engagements, as discussed earlier, will continue in Water Plan 3 and onwards.

5.13 Environmental contribution

We have been advised by DSE that the environmental contribution for 2013-14 to 2015-16 will continue to be based on a set percentage of our revenue. This equates to approximately \$0.2 million additional operating expenditure.

5.14 Service outcomes

5.14.1 Introduction

Chapter 3 reports on the Service Outcomes we will deliver in Water Plans 3 and 4. The chapter confirms that the large majority of our operating expenditure is to maintain 'business as usual' and to meet existing service outcomes.

5.14.2 Existing service outcomes

The majority of the operating expenditure is incurred to meet current service outcomes. Service outcomes are driven by statutory obligations such as our statement of obligations and duties in the Water Act 1989 or other specific legislation, and service standards in our Customer Charter.

5.14.3 New service outcomes

For Water Plan 3, we face three new service obligations.

- **Harmonisation of OH&S legislation:** The Federal Government harmonised all OH&S legislation across all states and territories. Subsequently, the Federal Government requires that businesses that are captured in the legislation to undertake due diligence to ensure compliance. To meet this requirement, we believe we will incur an extra \$7,000 per year in training, travel and accommodation costs.
- **Safe Drinking Water Act 2003:** The Department of Health recently provided additional guidance on the compliance requirements for the amended *Safe Drinking Water Act 2003*. The additional guidance provided certainty as to our obligations. Subsequently, we have budgeted approximately \$370,000 in costs to meet the Department of Health's requirements.

- **Data cleansing for Licensees:** We face expanded obligations to cleanse and upgrade the data we hold on diversion licences to establish authoritative title. This work is required by DSE to meet our obligations under the *Northern Region SWS*, the annual reporting requirements in the *National Water Initiative* and the forthcoming *MD Basin Plan*. We have budgeted approximately \$1.5 million

5.14.4 Modernisation and service outcomes

The Connections program transforms our water delivery system in irrigation districts, greatly enhancing the standards of service for irrigators. Some of the main service benefits include:

- Reduced order notice for delivery - with effectively 'water-on-demand' for most irrigators
- More consistent flow rates
- Increased flow rates
- Increased functionality of outlets

It is also important to note the on-farm benefits will also drive significant productivity benefits for our irrigation customers.

The section above confirms the operating expenditure savings that will be triggered in comparison to the baseline cost profile without the investment.

5.15 Tariff strategy

In parallel with the development of the Water Plan, G-MW has launched a comprehensive tariff strategy review. It is critical that our future tariffs are aligned with and support our revised operating environment and business objectives.

We have involved our customers in the centre of this process. The review of our retail tariffs is being led by an Advisory Group made up of the chairs of our Water Services Committees. They have steered the development of a discussion paper that promotes debate around:

- Our business objectives for our tariff strategy
- The principles that should underpin that strategy
- The targets we should aim at as endpoint to aim at for our core tariffs

We have also engaged with our bulk water customers through bilateral discussions. We have sought comments and feedback from across our customer base through flyers, public meetings and web-based systems.

6 Capital Expenditure

6.1 Summary

G-MW owns and manages 6,300 km of channels, more than 3,000 km of drains and over 900 km of piped supplies. We also manage 16 storages to harvest and store bulk water with a capacity of 11.3 million megalitres. Four of these storages are managed on behalf of the MDBA. The replacement value of this storage and delivery network is more than \$5.9 billion.

We have a major on-going cost in maintaining this extensive asset base to continue to deliver reliable services to our customers and provide confidence to the community on the safety of our storages.

We are halfway through a major transformation of our delivery system implementing a \$2 billion modernisation program. This will see half our previous delivery system automated to become world-class status and half replaced with new connections owned by the end user. This will deliver enhanced productivity for irrigators across our region.

Water Plan 2 saw a significant change in our projected operating environment with the creation of NVIRP to deliver our modernisation program. This led to major changes in our projected capital expenditure (capex) with savings delivered to our customers.

Equally, much of our capital expenditure program for Water Plan 3 has been incorporated into this wider modernisation program. The modernisation program is being funded by the state and federal governments and so is not included in this submission.

A summary of our historical and forecast capex is shown below in Table 16 below. The apparent drop in 2019-20 reflects the limited plans currently developed for this period.

Table 16 - Historical and forecast capex (2012-13 \$M)

2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
17.78	22.11	28.36	19.11	26.41	22.29	33.86	26.81	35.79	31.80	29.44	20.27

For the purposes of this Water Plan, capital expenditure is defined as expenditure that:

- is relatively large, ie greater than \$2,000 per item
- relates to an asset that generates future economic benefits by providing service potential
- involves an asset that is owned and funded by G-MW
- has an expected lifespan greater than 12 months

The definition includes expenditure for the refurbishment and enhancement of existing assets which extends the original life of the asset. For example, in this Water Plan we have defined expenditure under our *Advanced Maintenance Program* as capital expenditure as it involves expenditure on our assets to enhance service potential and extend asset life. This reflects the changing nature of this program over time.

6.2 Historical Capital Expenditure Summary - Water Plan 2

Budgeted and Actual Capex

G-MW's Water Plan 2 determination included projected capex of \$222 million. This comprised a combination of G-MW funded projects and activities that were funded by external third parties (Table 17).

Table 17: Water Plan 2 Capital Expenditure proposed (2012-13 \$M)

	2008-09	2009-10	2010-11	2011-12	2012-13	Total
G-MW	30.23	27.42	27.77	26.08	25.30	136.80
External	43.42	19.50	7.59	7.31	7.75	85.57
Total	73.65	46.92	35.36	33.39	33.05	222.37

In the assessment below we report solely on the capex that was funded by G-MW as it is this capex that will contribute to the RAB and is reflected in charges.

The Water Plan 2 period saw variance between projected capex and actuals (Table 18). This resulted in capex being lower than planned by some 17% or \$23.0 million.

Table 18: Water Plan 2 Capital Expenditure: G-MW actuals as against determination (2012-13 \$M)

	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Projected	30.23	27.42	27.77	26.08	25.30	136.80
Actuals	17.78	22.11	28.36	19.11	26.41	113.76
Variance	(12.45)	(5.31)	0.59	(6.97)	1.11	(23.04)

Variance analysis

There are a number of factors that contributed to the majority of this variance between our actual capital expenditure and the approved capex:

- The capex proposals for Water Plan 2 were drafted before NVIRP came fully on-stream. Therefore a significant part of our capital works program which had been targeted at system modernisation was transferred to NVIRP as part of the wider modernisation program, now with third party funding
- All renewal work on our extensive spur-channel system was curtailed once the extent of the modernisation program became apparent, to ensure that no funds were spent on assets that would later be retrenched
- We implemented a new approach to risk assessment for our headworks business. This showed that the risks at Lake Buffalo and Lake Newlyn were at a level for which action is not required in the short term. This allowed deferral of \$11.2M capex.
- We reduced the scale of our metering program for diverters as a result of the Commonwealth water purchase and the foreshadowed MDBA plan which is likely to result in a number of private diversion points being decommissioned and not requiring metering

6.3 Top 10 Projects in Water Plan 2

Our Water Plan 2 submission identified 10 top capital works projects or capital programs with an overall value of \$138 million (Table 19).

Table 19: Water Plan 2 Top ten Projects (2012-13 \$M)

	Projected Total	Actual					Total	Variance
		2008-09	2009-10	2010-11	2011-12	2012-13		
Dam Safety Upgrade	40.09	8.18	7.01	1.61	0.36	3.55	20.72	19.37
Surface Water Management	23.40	3.89	3.75	2.98	1.23	2.05	13.91	9.50
Reconfiguration	20.00	0.81	0.14	0.16	0.02	-	1.13	18.87
Channel Remodelling - Central Goulburn	2.15	0.32	0.63	1.13	0.74	-	2.82	(0.67)
Channel Remodelling - Torrumbarry	1.37	0.38	0.36	0.65	1.07	1.12	3.57	(2.20)
Channel Remodelling - Rochester	1.22	0.14	0.07	0.45	0.16	0.14	0.95	0.28
Culvert Program - Rochester	1.93	0.01	0.28	0.85	0.51	0.30	1.95	(0.02)
Mokoan - Return to Wetlands	30.24	14.57	3.36	1.12	1.09	-	20.15	10.10
Metering - Diversions	11.59	0.99	0.24	0.09	-	-	1.33	10.26
Waranga West Channel - Subway Program	6.12	0.44	1.65	1.70	0.87	0.57	5.23	0.89
Total	138.11	29.74	17.49	10.74	6.05	7.73	71.74	66.37

* Externally funded programs/projects

Of this capital expenditure \$38.47 million of the variance relates to external funded projects, primarily surface water management, reconfiguration and Mokoan return to wetlands.

These projects were significantly affected by the drivers of variance identified above. A brief report is provided below on each project. The works that were undertaken were completed to time.

- **Dam Safety Upgrade Program:** Projects completed under this program included William Hovell flood capacity upgrade and Goulburn Weir superstructure strengthening. The upgrade of Laanecoorie was not planned in Water Plan 2 but was initiated in response to deformations from the January 2011 flooding. Other works were deferred reflecting our revised risk assessment approach. This program was largely internally funded
- **Surface Water Management Program:** The surface water management program involves the construction of new drainage systems. It is largely funded by external agencies. The level of activity was scaled back due to the drought.
- **Reconfiguration Program:** This program of works was transferred to NVIRP and was externally funded.
- **Channel Remodelling & culverts - all areas:** all works were reduced due to advent of NVIRP and constrained to the backbone channels. The Board transferred any residual funds to the access tracks and fencing program.
- **Lake Mokoan return to Wetlands:** This project was delivered to DSE requirements and was externally funded.
- **Metering diverters:** The extent of works was reduced to take account of the change in policy in the Northern Region Sustainable Water Strategy and the proposed Murray Darling Basin Plan. This program was part externally funded.
- **Waranga Western Channel:** These works were delivered as required, with a number of subways rehabilitated with lining rather than replacement.

6.4 Proposed Capital Expenditure Summary

The capital expenditure proposed in this Water Plan is modest in scale relative to the size of our organisation and its asset base as outline above. It is broadly consistent with the scale of capex in previous determinations.

We have outlined our capex schedule separated by purpose and whether it is for new service outcomes, as shown in Table 20 below. The analysis distinguishes between the different drivers of that expenditure:

- **Renewals:** this refers to work required to maintain the serviceability of our existing assets. This forms by far the largest category of expenditure
- **Growth:** this refers to expenditure driven by the need to augment assets to respond to growth in demand. We do not identify any such expenditure
- **Improve service:** this refers to expenditure driven by the aim of enhancing the level of service delivered to customers. All such expenditure is validated by explicit customer support
- **Compliance:** this refers to activities driven by obligations imposed on the business, for example meeting new requirements regarding drinking water quality
- **New Service Outcomes:** this refers to expenditure to create new products or services beyond the historic business as usual

Table 20 - Forecast capital expenditure by purpose (2012-13 \$M)

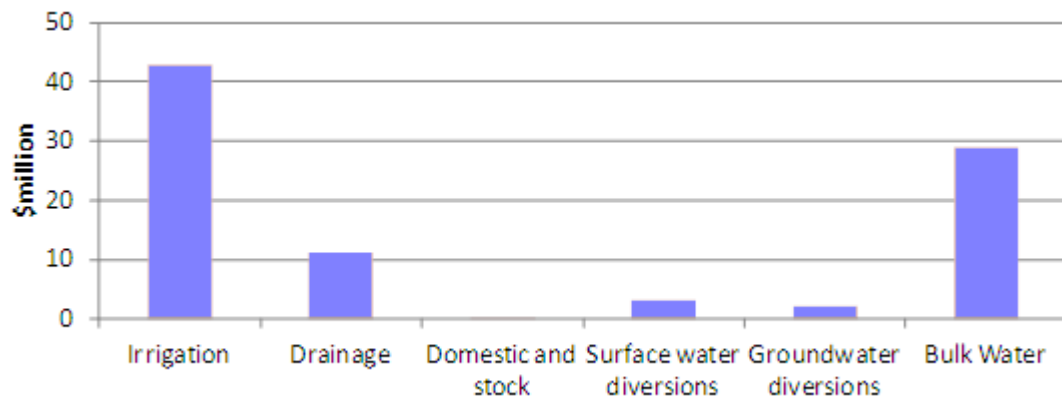
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Capital Expenditure								
Renewals	17.08	21.85	23.30	25.52	22.08	18.81	15.31	143.95
Growth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Improve service	2.99	2.83	2.22	1.91	1.24	1.94	3.90	17.03
Compliance	2.06	9.09	1.72	9.53	9.14	9.41	1.58	42.54
Total	22.13	33.76	27.24	36.96	32.47	30.17	20.79	203.52

There are a number of reasons for the proposed scale of capex in Water Plan 3:

- The \$2 billion cost of our major modernisation program is being funded from external sources, with \$730 million projected to be spent on this project over the life of Water Plan 3 and a further \$317 million in Water Plan 4. That capex will not form part of the future Regulatory Asset Base and so is not included in this Water Plan submission;
- The majority of the capex for our irrigation districts comprises small-scale works to complement the major modernisation program. We have integrated our capital works and maintenance programs with the Modernisation Connections Program to minimise risks of duplication or conflict;
- In our diversions business we act as the licensing authority and not as an asset owner and manager. We therefore have only minor capex on finalising a state-wide metering program;
- In our headworks business we have a major ongoing dam safety program. However, only one dam falls into this program in Water Plan 3. Several of the major storages used by G-MW are owned by the MDBA. Capex for these storages is recovered through annual bulk water charges and is therefore included in our operating expenditure .

The total proposed capex for Water Plan 3 comprises a figure of \$83 million. That figure is split between our operating divisions as follows:

Figure 16: Proposed capital expenditure Water Plan 3 (2012-13 \$M)



The expenditure is targeted to specific outcomes as follows:

- For the gravity irrigation area, we propose total capex of \$40 million over the three years. However, this represents a large number of standard activities at multiple locations rather than a few large items. The large majority involve actions to optimise the benefits of the modernisation program. This will see standardised approaches targeted at multiple sites to ensure service delivery outcomes
- Minimal capital expenditure is proposed for our pumped irrigation or water districts as these are relatively newly constructed schemes;

- The small investment in the diversions business involves finalising the installation of meters which are the sole assets owned by G-MW
- For the bulk water business we project \$29.5 million capital investment over Water Plan 3. The largest single cost relates to safety issues at Tullaroop Reservoir. This forms part of our on-going Dam Improvement Program and will cost some \$8.2 million over the three years of Water Plan 3. The rationale for this capex is outlined further below
- All other capital works for our Bulk Water business comprise small-scale on-going maintenance to deliver business as usual across our extensive asset base
- We also propose capital costs of \$12.5 million in corporate services, in particular on information systems to drive improvements in our data management and on works depots and to complement the Connections Program Modernisation. This has been allocated to the operating divisions and is included in the proposed capital expenditure in Figure 16.

6.5 Capital program for Water Plan 4

We project a broadly consistent capex program over each of the next seven years, through until the end of Water Plan 4 in 2020. This approach is based on maintaining business as usual across our extensive asset base and rolling forward our revised dam safety program. Given the very significant capex underway to transform our delivery system we do not anticipate the need for other major capex over this period.

The year 2019 will be a watershed for G-MW as this year will see completion of our Connections Program and also implementation of the Murray Darling Basin Plan. That will provide a further step change in our operating environment.

6.6 Proposed - Top Projects

Our capex program for Water Plan 3 comprises a large number of small-scale projects, rather than a smaller number of large projects. The major driver is the maintenance of existing assets or the upgrade of multiple assets associated with the modernisation program.

Only one major investment, valued at over \$8 million, is proposed as a stand-alone project. This is for Tullaroop Reservoir embankment. Almost all remaining capex 'projects' can be considered composite programs comprising aggregated initiatives such as "the provision of access tracks and fencing" rather than one-off projects constructing discrete physical assets.

The table below confirms the 8 largest capex projects proposed for Water Plan 3. This program is in addition to the significant investment in system modernisation through our Connections Program. We have presented evidence on the top 8 projects, rather than top 10, because the top 8 represents the majority of our capex cost.

Table 21: Water Plan 3 Top capital projects (2012-13 \$M)

Project	Total Cost (\$M)	2013-14	2014-15	2015-16	Driver	Works
Major assets						
Tullaroop Reservoir	8.20	0.82	7.38		Dam safety	Construction of buttress across embankment and additional instrumentation
Mildura Merbein Salinity Interception Scheme	4.90	0.85	2.08	1.97	Renewal and compliance	Renewal of existing groundwater pumps and disposal mains to meet salinity obligations in the River Murray.
Aggregate Programs						
Access tracks & fencing	13.00	2.60	4.80	5.60	Optimise service and maintenance	Construct tracks and provide fencing to improve service and reduce costs of maintaining delivery channels
Road culvert and crossing replacement	5.80	1.70	2.40	1.70	Renewal	Renewal and replacement of channel crossings and road culverts on the backbone
Backbone remodelling	5.50	1.80	1.70	2.0	Renewal/maintain service quality	Bringing backbone channels up to service standard beyond the Backbone modernisation and Connections program
Storage management program	3.00				Dam safety and service maintenance	13 minor projects at different locations
Rock armouring	2.40	0.75	0.76	0.89	Optimise service	Placing rock armouring on channel banks to improve service delivery and increase asset life

In this Water Plan we report mainly on the single material capital expenditure project related to Tullaroop reservoir. All other elements of the program represent part of our on-going asset management program. These are subject to the structured expenditure approval process confirmed below.

We have not had a requirement to defer or smooth our capex program as the large majority of capex involves aggregate programs at multiple locations which are rolled out on a progressive basis over time.

- Tullaroop:** Since recent flooding there have been issues associated with movement and subsidence in the dam. It is proposed to construct works to mitigate dam safety risks, consistent with the requirements of the SoO. The works will involve the construction of a filter buttress across the main embankment section and upgrading the existing instrumentation. These works form part of the longer-term Dam Improvement Program.
- Mildura/Merbein Salinity Interception scheme:** The scheme intercepts saline groundwater and pumps it to salt disposal basins. The existing scheme is reaching the end of its useful life. Upgrade of the system is required to ensure compliance with state obligations for salinity targets in the River Murray. The scheme is funded equally by Victoria and the MDBA. G-MW owns and contributes 50% of the capital costs which is added to our RAB.
- Access tracks and fencing:** The modernisation program involves the automation of regulators that were previously operated manually. We need access to sites for weed spraying and to keep the new controls in effective working order to ensure that the enhanced service levels from modernisation are realised. Stock damage is the greatest contributor to deterioration of channels. Fencing to exclude stock will significantly extend

the lives of channels. A highly prioritised program of sites has been selected for treatment.

- **Replacement of crossing and culverts:** The modernisation program has left some locations where we need to replace assets such as road crossings and culverts. Once again a prioritised program has been developed.
- **Backbone remodelling:** the externally funded modernisation program will not upgrade all of the 'backbone'. There are stretches of major channels where expenditure is required to ensure a consistent level of service. A prioritised program has been developed using the relevant Asset Condition Rating from the *Asset Management Information System*, based on location, capacity and condition.
- **Storage management:** there are multiple small scale projects to ensure the continued compliance of storages with relevant guidelines. Most of these are of individual value of less than \$100,000.
- **Rock armouring:** Placing rock at the normal operating water level in channels prevents fretting of the channel banks by flowing water and wave action. This provides a significant benefit to channel bank lives. The benefits and technique of placing rock armour on channel banks has been proven under the *Advanced Maintenance Program*. Costs have been benchmarked to ensure the extension in design life represents an economically sound investment.

6.7 Linking capex to service outcomes

Our capex program is almost entirely driven by the requirement to maintain '*business as usual*' to meet existing service outcomes.

6.7.1 Existing service outcomes

The majority of the capex is incurred to meet current service outcomes. Service outcomes are driven by statutory obligations such as our *Statement of Obligations* and duties in the *Water Act 1989* or other specific legislation, and service standards in our *Customer Charter*.

6.7.2 New service outcomes

No capex is associated with new service obligations.

6.8 Capital Program development

We have a rigorous, professional process to validate our proposed future capex. This involves a sequential stepped program with a reduction in the programs retained at each stage:

- Confirm strategic objectives and framework
- Nominate proposals, validate drivers and test efficiency
- Risk assessment of proposals
- Multi-criteria assessment of proposals
- Cost benefit assessment and options analysis for major investments
- Board approval

The key stages in the development of the Water Plan 3 capital expenditure program are confirmed below:

- a) **Strategic objectives:** the first step was to reconfirm the strategic objectives of the organisation to ensure alignment between any proposals and a medium to long-term approach. So, for example, the business has a long-term dam safety program that references national and international standards and has prioritised investments on a risk-based analysis.

- b) Project nomination and test:** functional managers were then invited to nominate proposals for specific areas of the business in line with these strategic objectives. Nominations had to confirm the driver as being
- Business as usual
 - New obligations or
 - Customer led and supported enhanced service levels
- These nominations were subject to challenge by senior staff to test for need and best value
- c) Risk Assessment:** all retained proposals were then required to complete a rigorous risk assessment in line with the Corporate Risk Management Framework and ISO 31000:2009. This scores each project against a scale for both likelihood of occurrence and severity of outcome with the consequence scored against multiple factors including:
- Service delivery
 - Financial
 - Individual safety
 - People
 - Credibility
- The outcome was to omit projects that were of low risk and consequence.
- d) Multi-criteria assessment:** the retained proposals were then assessed against a wider suite of factors to judge their implications for
- Corporate risk: how does the project reduce corporate risk?
 - Return on investment: how good an investment is the proposal in terms of a cost benefit return?
 - Strategic alignment: how closely does the project deliver key business priorities?
 - Project maturity: how well defined and developed is the proposal and close to “shovel ready”?
- This staged process narrowed down the initial listing of nominated projects to a priority listing of investments that best matched the priorities and risks of the business and delivered best value for the investment.
- e) Business Case and Board approval:** any major projects were then subjected to a structured business case protocol to validate and document the approach proposed and the costs involved. This provided a proposal for a suite of validated projects that was subject to formal review, critique and approval by the Board.

6.9 Delivery Mechanism

G-MW has implemented rigorous arrangements to ensure that its capital works program is delivered in a way that drives best outcomes in terms of price, quality and timeliness.

G-MW has adopted a mix of internal resources, design consultants and contractors to deliver its capital works programs to meet these ends.

Project scoping, planning, limited engineering design and project management of design and construction phases have generally been undertaken by internal resources, with individuals working across the full cycle of capital projects and maintenance programs. That ensures development and retention of critical intellectual capital in-house to manage our network infrastructure.

Specialist consultants are generally engaged to complete engineering concept and detailed design work for defined projects. This is mainly through a consultancy panel agreement ensuring competition is maintained in procurement while facilitating a streamlined process for

awarding specific packages of work. Contracts include appropriate risk sharing arrangements.

An internal construction workforce of approximately 50 staff is maintained. This workforce is generally engaged on irrigation infrastructure works but also provides a capable and flexible workforce able to quickly respond to changes in priorities including emergency response activities. Additional construction contractors are engaged on an as-needs basis to complete works of a specialist nature or when workloads exceed the internal resource capacity. External contractors are engaged through competitive market practices for specific packages of work.

A review of the capex for 2010-11 indicates that of the overall capital program of \$34M, over \$26M was spent external to G-MW. The majority of this external capex followed competitive procurement processes to ensure value for money.

The modernisation of our delivery system has driven a change in the nature of the services required to ensure effective on-going maintenance. This places a premium on electrical service technician capability. The majority of the capital works in this area is delivered through G-MW's Engineering and Maintenance Services (EaMS) unit.

The change in the asset base of G-MW's retail assets from a simple manually operated system of concrete drop bar regulators and channels to automated regulators and an extensive SCADA network, has required a substantial shift in the amount of planning required to effectively manage these assets.

More sophisticated equipment requires improved planning processes to ensure preventative maintenance regimes are optimised to minimise life cycle costs and reactive maintenance is undertaken to maintain customer service standards. A greater emphasis is required on strategic and corporate planning to reduce long term costs of these short lived assets.

7 Revenue Requirement

This chapter outlines the application of the building block methodology to construct our revenue requirement for Water Plan 3.

7.1 Establishing the base RAB

The first step is to confirm the opening value of the RAB at 1 July 2013.

This opening value is calculated from

- The RAB at 1 July 2008
- + prudent actual capital expenditure from 2007-08 to 2011-12
- + assumed prudent capital expenditure for 2012-13
- Less customer and government contributions
- Less regulatory depreciation
- Less proceeds from sale of assets

RAB Roll Forward	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Opening Asset Base	125.33	138.80	155.36	177.32	189.99	234.83	249.21	273.47
plus Gross Capex	221.74	107.68	48.24	30.84	30.79	23.32	35.67	29.68
less Government contributions	(4.88)	(3.04)	(0.68)	(0.01)	(0.01)	(0.16)	(0.26)	(0.38)
less Customer contributions	(5.25)	(3.15)	(5.85)	(2.90)	(2.04)	(0.16)	(0.26)	(0.38)
less Fully Government funded programs/projects	(193.84)	(79.38)	(13.35)	(8.83)	(2.35)	(0.87)	(1.39)	(2.23)
less proceeds from disposals	-	-	-	-	-	-	-	-
less Regulatory depreciation	(4.30)	(5.55)	(6.40)	(6.43)	(6.18)	(7.75)	(9.51)	(11.23)
sub total	138.80	155.36	177.32	189.99	210.22	249.21	273.47	288.93
plus Annuities					24.61			
Closing Asset Base	138.80	155.36	177.32	189.99	234.83	249.21	273.47	288.93

7.2 Prudent Capex

Chapter 6 confirms the value of the capital expenditure undertaken in Water Plan 2 and projected to be completed in the financial year 2012-13.

The total value is less than that originally projected in the Water Plan 2 submission due to the transfer of a considerable volume of work to the NVIRP modernisation program. We also faced additional unplanned demands due to the impact of the drought and floods.

The capital works undertaken were necessary to maintain asset serviceability or to comply with obligations, and that the approach adopted was efficient and yielded good value.

7.3 External contributions

Water Plan 2 saw extensive external funding of capital works through NVIRP, MDBA and the State Government. Water Plan 3 will see equivalent funding with the major focus being funding for system modernisation and the connections program.

We have excluded all external capital contributions from the calculation of the RAB.

7.4 Adjustments to the RAB

We have made a number of minor adjustments to the approach to the inclusion of capital investment on the RAB for Water Plan 3:

- We have converted an annuity allocated to the Woorinen Water District and others into a capital value that has been added to the RAB. This simplifies regulatory accounting and is equitable with the treatment of capital investment across the business. The change has no material impact on prices
- We have capitalised future investment in our Advanced Maintenance Program (AMP). AMP aims to extend the asset life of key parts of our system and delay significant asset replacement while providing greater flexibility in future asset decision making. Previously these costs had been treated as operating expenditure. However as the program has evolved the expenditure has added asset life.

7.5 Regulatory Depreciation

We have followed a simple approach to regulatory depreciation with adoption of straight-line depreciation for all assets over their projected asset life. This is justified because we manage a very significant asset base with a large number of component elements all of which contribute to on-going serviceability.

We had no major projects that merited special attention that ran over between two regulatory periods.

7.6 Disposals

We had limited disposals of assets that comprised part of the RAB

7.7 Adjusting the RAB for inflation

Adjustments were made to the value of the RAB in line with the guideline recommendations

7.8 Cost of capital and taxation

This Water Plan has adopted the weighted average cost of capital (WACC) as determined by the ESC in the financial returns provided to G-MW.

We do not anticipate being liable for taxation on our projected revenues.

7.9 Efficient Operating Expenditure

The relevant chapter confirms the derivation of our projections for efficient operating expenditure. As noted this includes a commitment to share a productivity dividend with customers from efficiency gains.

This set the adjusted expenditure baseline for 2011-12 at a value of \$95.21 million.

7.10 Carry-over

We propose a minor adjustment to our revenue requirement for Water Plan 3 to reflect issues that arose in Water Plan 2. This approach is in line with the terms of our Revenue Cap. The adjustment has two elements:

- We under-recovered projected revenue
- We had to make efficient and necessary expenditure that was unforeseen and not capable of being anticipated

Under-recovery

The original Water Plan 2 submission assumed 100% allocations against entitlements, whereas the drought sequence resulted in far smaller allocations. This led to an under-recovery in revenue of \$22.9 million over the first three years of Water Plan 2.

Unforeseen but necessary expenditure

We faced the need to implement a range of initiatives to respond to the extreme drought and flooding.

We implemented a wide range of drought response initiatives to manage and share limited water resources in response to the extreme drought conditions and later flooding:

- We pumped the dead-space in the Waranga Basin: a one-off cost of \$1.66 million in 2008-09.
- We enhanced our irrigation administration activities. \$5.28 million was incurred to implement over the Water Plan 2 period.
- We implemented an expanded compliance regime. This added an additional \$3.76 million to our costs.
- The severe floods in western Victoria early in 2011 damaged our infrastructure. This involved an increase in operating costs of \$4.22 million for Water Plan 2.

This expenditure was necessary in order to maintain a minimum base flow to our customers. The actions were unparalleled and could not have been anticipated. In each case we assessed the range of options open to us and identified optimal cost effective solutions.

We have only included the Waranga Basin and Lake Buffalo pumping and flood remediation costs totalling \$5.88m as recoveries for the next regulatory period.

7.11 Overall revenue requirement

Our total revenue requirement comprises a sum of the three main building blocks, ie:

- Return on capital
- Regulatory depreciation
- Operating expenditure

We calculate the overall requirements for the three years of Water Plan 3 as follows

Table 22: Water Plan 3 Overall revenue requirement (2012-13 \$M)

Revenue Requirement	2013-14	2014-15	2015-16	Total
Return on Capital	11.31	12.31	13.34	36.96
Regulatory Depreciation	7.75	9.51	11.23	28.49
Operating Expenditure	98.68	102.86	102.18	303.72
Previous Period Adjustments *	2.45	2.45	3.05	7.94
Productivity Dividend	(1.00)	(2.00)	(3.00)	(6.00)
Total Revenue Requirement	119.18	125.13	126.80	371.11

* NPV of previous period adjustments for Pumping Waranga Basin and Flood Recovery

The sum of the revenue requirement from the building block approach generates a total of \$372 million over the three year period excluding under-recovery from Water Plan 2. We note that the revenue requirement includes an incremental efficiency saving of \$1 million a year, representing a total reduction of \$6 million over the three years.

However, G-MW intends to recover a maximum revenue through pricing of growing by CPI + 1.5% in each of the three years. Given our budgeted revenue in the current financial year that limits our maximum revenue to a total of \$357 million.

7.12 Non-prescribed services

G-MW provides a wide range of non-prescribed services. This includes:

- Houseboat licences and services
- Hydroelectricity generation
- Public access to our headworks
- Commercial leases for land and premises
- Storage management and operation for the MDBA
- NRM services for the CMA and state government

The following table confirms the projected expenditure and revenue for non-prescribed services for Water Plan 3.

Table 23: Non-prescribed services for Water Plan 3 (2012-13 \$M)

	2013-14	2014-15	2015-16
Revenue	35.59	32.80	37.45
Operating Expenditure	34.61	31.64	36.27
Capital Expenditure	4.96	7.32	4.37

8 Demand

This chapter assesses the significance of demand drivers for Water Plan 3.

8.1 Revenue sources and risk

G-MW's revenue comes from a range of sources both prescribed and non-prescribed.

Table 24: G-MW revenue sources 2011-12

Element		Value (\$'000)	%
Water Charges	Prescribed	104,089	65%
Bulk Water	Prescribed	10,028	6%
Victorian Government	Non-prescribed	10,539	7%
services to MDBA	Non-prescribed	23,641	15%
Interest	Non-prescribed	1,058	1%
Other Income	Non-prescribed	10,902	7%
Total		160,257	100%

The relevant revenues for this Water Plan are the first two prescribed services. These are shown broken out below into our key customer groups.

Table 25: Revenue streams from prescribed activities 2011-12

Prescribed Service	Value (\$'000)	%
Bulk Water	10,028	9%
Gravity Irrigation	92,919	81%
Pumped Irrigation	2,277	2%
Water Districts	1,021	1%
Licensed diverters	7,843	7%
Flood Protection	29	0%
Total	114,117	100%

This confirms that the 'Gravity Irrigation' business generates 81% of our total prescribed revenues. The relative significance of the different classes informs the analysis of the relative demand drivers below.

8.1.1 Tariff structures

G-MW costs are mostly fixed and its tariffs largely reflect the nature of its costs. G-MW generally has limited exposure within a year to risk from variation in volume delivered in relation to its total revenues, but there can be significant exposure at customer group level. Its fixed revenue base is forecast to decline, particularly in gravity irrigation districts as modernisation progresses:

- Bulk water entitlements: Charges paid in relation to bulk entitlements are fixed and related to the size and reliability of the bulk entitlement. Bulk entitlement holders in some river basins have access to additional carryover using spillable water accounts. We have assumed that some revenue will be earned from spillable water but there is inherent uncertainty due to the nature of the product.
- Gravity & Pumped Irrigation: G-MW has largely fixed charges for its gravity and pumped irrigation districts
 - A Service Fee to cover customer related account costs
 - Water Shares in storage face the standard fixed entitlement storage fee
 - Delivery Shares face an Infrastructure Access Fee irrespective of the volume used, and the Termination Fee provides a small measure of protection against revenue risk in the short to medium term from surrender of Delivery Shares (except future Delivery Share surrender as part of the Connections Program).
 - The Service Point Fee is levied for each outlet from the delivery system in gravity irrigation districts (the fee is not levied on the first outlet in pumped districts)
 - The volume metered at the property is liable to the Infrastructure Use or Casual Use Fee.
- Diverters: revenue from groundwater and unregulated surface water diverters is fixed by reference to two key charges: a service fee per property and an entitlement fee per ML of water held on the licence. Revenues from regulated diverters is also fixed.

8.1.2 Variable revenue

Fixed charges currently represent 85% of the water charges.

Table 28: Water Charges 2011-12

Charges	Value (\$'000)	%
Fixed	97,471	85%
Variable	16,646	15%
Total	114,117	100%

The balance between these charges has varied over the years, depending on the structure of the tariff and the level of allocation. Prior to 2006-07 the business was exposed to a higher degree of variability in its revenue. This was seen in 2002-03, when a low allocation season saw a sharp reduction in the revenue recovered through the variable charges. This challenged the financial sustainability of the business as the large majority of the businesses costs are fixed over the medium term.

As a result, the tariff was changed in 2009-10 so that the fixed charge would recover 90% of total water charges. It was estimated that 10% of annual costs were variable within the short-term (ie short-run marginal costs) from, for example, deferred works and lower labour and contracting costs.

This means that in a year when there is a 50% allocation, costs and total water charges would both reduce by 5% (50% of 10%). The extent of the short-run marginal costs in the delivery system is likely to reduce in the future with the fully automated, modernised system where more of the cost function will be independent of volume.

8.2 Demand drivers

Three main variables will determine revenue risk in the irrigation districts during Water Plan 3 & 4:

- The Murray-Darling Basin Plan: which will determine the total volume of water that may be taken for consumptive use;

- Climate: which affects storage inflows and therefore the allocation in any season;
- Modernisation: which will reduce the number of customer units as defined by the quantum of 'Delivery Shares' held.

8.2.1 Murray-Darling Basin Plan

The Basin Plan will have a profound long-term impact on northern Victoria as it will reduce the total volume of water that is available to support irrigated agriculture. This has already seen a 35% reduction from a figure of 1,600GL high-reliability water shares in 1991 in the GMID to the current volume of around 1,100GL.

There is considerable uncertainty as to the endpoint that will apply from 2019. The draft Plan as proposed in April 2012 set a target of 2,750GL potentially resulting in a further reduction of between 350GL and 450GL from northern Victoria, of which between 275 GL to 350 GL irrigator share would need to come from G-MW. The assumption was that this would be obtained from voluntary 'buyback' not from investment in infrastructure. This would entail loss of a further 20% of high reliability water shares (net of the distribution to irrigators of their 1/3 share of NVIRP Stage 1 water savings) from G-MW's region and would reduce total volumes available for irrigation to around 900GL by 2019.

A reduction in allowable diversions creates a short-term reduction in our variable revenues. However, this is a relatively small impact. The more significant effect is to reduce the overall scale of irrigation activity. This could undermine the viability of whole irrigation districts as the scale of activity becomes unsustainable given our continuing fixed costs. This impact will be exacerbated if the proposed 'buyback' is untargeted and applied at random across our region.

Termination fees provide a measure of revenue certainty in the medium term, However, a reduction in the total volume available for irrigation will inevitably lead to an increase in the size of the average bill per customer, given that our system costs are largely fixed. We estimated that the high buyback scenario could result in a 21% increase in the typical bill for a medium sized irrigation customer by the end of Water Plan 4.

On 6 August 2012, the MDBA announced that it had *prepared an altered Proposed Basin Plan for presentation back to the Murray–Darling Basin Ministerial Council*.⁵

At first sight it would appear that little has changed from the earlier draft. The note to clause 6.04 reads:

The Authority estimates the long-term average sustainable diversion limit for all surface water SDL resource units to be 10,873 GL per year. This reflects a reduction of 2,750 GL per year from the Authority's estimate of the BDL for all surface water SDL resource units. The Authority estimates that, as of 30 June 2012, 1,547 GL per year has been recovered for the environment, leaving a further 1,203 GL per year to be recovered.

This total reduction is in line with the earlier draft of the Basin Plan. However, the '*altered Proposed Basin Plan*' has introduced a new concept of an *Adjustment Measure* under Clause 6.12 "*Notification of expected adjustment measure*". This now allows works and measures and other infrastructure approaches to be used to meet the targets in clause 6.04. If implemented in full this approach might allow the proposed targets to be met with little further reduction in allowable consumptive diversions across northern Victoria.

There is considerable uncertainty as to the final Basin proposals:

Basin Ministers have three weeks (from Monday 6th August 2012) to present any further comments to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities, the Hon Tony Burke MP, for consideration. The Minister may then approve the plan or request further changes and only when satisfied will present the Plan to the Parliament.

It is unlikely there will be any resolution of this issue before the submission of our final Water Plan. In this Water Plan we have, therefore, made a realistic estimate of the likely impact of the Basin Plan. That is we have assumed that:

⁵ <https://www.mdba.gov.au/proposed-basin-plan>

- The 2,750GL target in the draft Basin Plan is retained
- There is limited use of adjustment measures due to the constraints in the proposed Basin Plan
- This would result in a reduction in the volume of GMID high reliability water shares to around 900 GL
- This change is implemented over time up to the introduction of the Basin Plan in 2019
- That involves an annual loss of variable revenue equivalent to less than 1% of total revenues over Water Plan 3
- The risk is therefore not great in the short-term

8.2.2 Climate impacts

The volume of water available for diversion in any year depends on catchment inflows in the run of seasons prior to that year.

The level of announced allocations impacts on our revenues and costs in a number of ways:

- In the short-term, lower levels of allocation reduce the total volumes diverted and so the revenue we collect through our Infrastructure Use Fees
- Extended periods of drought, as in Water Plan 2, create additional costs for G-MW as we have to implement extraordinary measures to maintain access to the resource for our customers
- In the longer-term, extended drought conditions reduce the confidence of investors in the value of irrigated farming and so the future investment by end-users and demand for our services.

Projections for catchment inflows for Water Plans 3 and 4 depend on assumptions about future climate change. In this Water Plan we have adopted the CSIRO medium climate change scenario for 2060. This is the same as the medium climate change scenario in the Northern Region Sustainable Water Strategy.

Following high rainfall over the last two years and the resulting large volumes of water in store, it seems likely that there will be reasonable water availability for customers for the current year and probably 2013-14.

There has been significant on-going structural adjustment to irrigated agriculture due to severe drought, uncertainty about future access to water as a result of environmental buyback and climate change, and prevailing commodity prices.

On balance, G-MW believes it is reasonable for 2013-14 to depart from our underlying assumption of deliveries equal to 100% of high reliability water shares. We have adopted a volume similar to the actual deliveries in the 2011-12 year.

We propose to review the delivery volume assumption as part of the annual price setting process during Water Plan 3.

8.2.3 Modernisation

The modernisation of our irrigation delivery system is based on two major elements:

- Automating our major channel system – the 'backbone'; and
- Connecting properties to that backbone either directly or by privately owned connections.

Two variables related to this program will affect G-MW's future revenues:

- The extent of Delivery Share terminated; and
- The number of outlets retained.

a) Delivery Shares

The starting assumption, for the 2004-05 base year, is that the total holding of delivery share in the GMID channel system is 16,400 ML/day. Of this, 8,840 ML/day is held by customers on the backbone and 7,562 ML/day by customers on the non-backbone. Of the 7,562 ML/day held in the non-backbone, about 30% (2,256 ML/day) will be modernised in Stage 1 and 70% (5,304 ML/day) in Stage 2.

The Connections Project aims to relocate all delivery share to the backbone. However, it is recognised that not all properties will seek to re-connect to the backbone. This will be due to structural adjustment and to the sale of Water Shares as part of the buyback program.

The Water Plan assumes that there will be a 15% reduction in the delivery shares progressively over the period to 2019 as part of the modernization of the GMID. It also assumes that future terminations under the Connections Program will not trigger payment of termination fees.

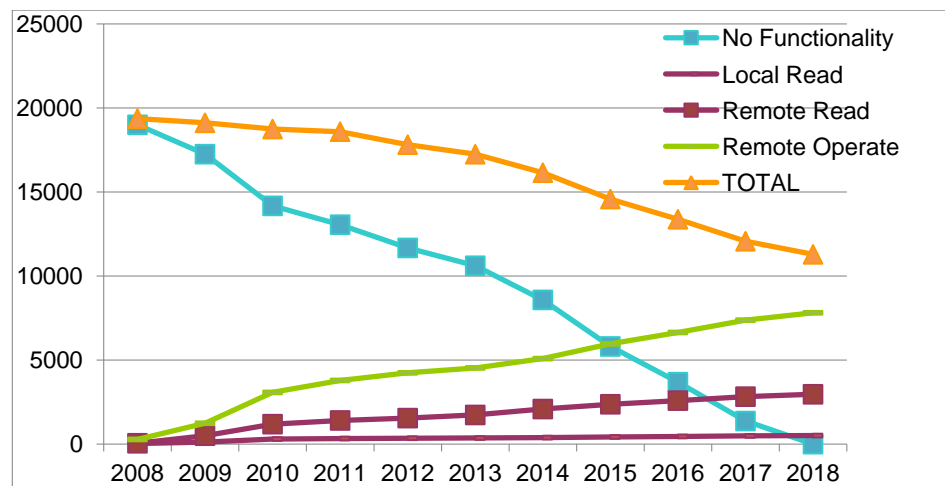
The expected outcome is that the reduction in delivery shares will result in an increase in the Infrastructure Access Fee required to recover our largely fixed costs from a smaller volume of Delivery Shares

b) Outlets

One of the main outcomes of the Connections Program will be to upgrade the functionality of the outlets from our backbone to the individual farm properties. This will see the conversion of the system from a large number of relatively simple Dethridge Wheels to a smaller number of higher functionality outlets capable of being integrated both with on-farm irrigation systems and wider system operation.

The new meters will have varying levels of functionality based on the flows they deliver and the degree of integration with the automated channel controls, most will have full integration with the system while a few smaller ones will remain merely as a 'local read' capability. The following chart confirms the projected program with different types shown.

Figure 17: Number of meter outlets and types Connections Program



This shows the steep reduction in meters with 'No Functionality' and the corresponding rise in newer high functionality meters. The overall effect is see a reduction from a peak of close to 20,000 meter outlets in 2008 to a final figure of around 12,000 at the completion of the program. It is assumed that 20% of outlets on the backbone will be rationalised and 80% replaced while 50% of non-backbone outlets will be replaced and 50% rationalised.

Currently, G-MW charges a *Service Point Fee* of \$250 for each outlet. This matches the relatively small costs incurred in reading and maintaining the Dethridge Wheels. The Tariff Strategy is reviewing the longer term whole of life costs of the outlet fleet to send strong cost reflective signals to irrigators.

In Water Plan 3 it is assumed that we will transition from a large number of outlets at a low unit charge to a smaller number of outlets at a higher charge. This will see our revenues from charge rise as the increase in the unit charge would be greater than the reduction in the number of outlets.

Table 29: Projected revenues from Service Point Fees over Water Plan 3

Date	Meter (nos)	Fee (\$/outlets)	Revenue (\$M)
2013-14	17,000	300	5.10
2015-16	14,000	600	8.40

Any future increase in the projected revenues from the Service Point Fee will be off-set by an equivalent reduction in the revenue from our Infrastructure Access Fees as the overall effects will be revenue neutral. The actual fee per outlet will be dependent on the outcomes of G-MW's tariff strategy review.

9 Form of Price Control

This section addresses the form of price control proposed for Water Plan 3.

9.1 Options Assessment

The form of price control plays an important role in creating incentives to drive business performance. A number of options are available to G-MW:

- **Price cap:** this sets the maximum price per unit of product sold - either as individual price caps or as the weighted average of a basket of prices
- **Revenue cap:** this sets the maximum overall revenue that can be earned, irrespective of the volume delivered
- **Hybrid:** a combination of the above methods.

We have assessed the alternative options against a series of principles to judge the optimal approach. Any form of price control should:

- Allocate risks to those best placed to manage them
- Align with the costs for the provision of the service
- Provide sufficient revenue adequacy to ensure financial sustainability
- Provide customers with price path certainty to support business decisions
- Create incentives for innovation and greater efficiency
- Be clear and easy to implement

9.2 Risk Allocation

G-MW has a very extensive asset base that requires routine annual maintenance, operations and renewal to ensure continued service quality. We face largely fixed costs that do not vary with the level of water supplied. We have few adjustment mechanisms to allow us to manage demand-side risk. This argues for the importance of an approach that guarantees revenue stability.

By contrast our customers operate businesses where water charges represent only some 5-10% of their input costs. They generally have better access to adjustment mechanisms that allow them to adapt to demand or supply-side risks. For example they can buy or sell water in the market or use carryover to spread risk, or they can substitute water with grain or fodder.

9.3 Price cap

We face declining demand and rationalisation of our asset base. We therefore have few opportunities to win the potential upside of a price cap that can incentivise a utility to seek out additional customers or promote growth in demand to win economies of scale. In our market the water is generally owned by our customers and we play the role of an infrastructure manager seeking to cover fixed costs and drive for greater efficiency in service delivery. The primary aim is to provide incentives to ensure we deliver high quality services at least long-term cost.

A price cap or revenue yield approach would require us to make robust projections as to the level of future demand, where we face considerable uncertainty. This is particularly true for:

- The Murray-Darling Basin Plan which could reduce the total volume of allowable diversions across northern Victoria, where it is still unclear what total volume will be allowed, under what arrangements and in what timeframe

- Connections Program: which will see surrender of delivery shares as farmers exit the industry or rationalise the scale of their activities. There is still uncertainty as to the location, speed and extent of the change program and on how many surrendered delivery shares will trigger payment of termination fees
- Climate Change: where both drought and floods can lead to a significant reduction in the level of demand. In the short-term, we project high allocation levels in reserve for the next couple of seasons, although high rainfall and market conditions can still subdue demand.

We accept the need to adapt to reflect future demand and supply side constraints within the medium term but we need to have sufficient time to transition to a new level of supply without jeopardising the continuity of our service or our financial sustainability.

9.4 Revenue Cap

This submission therefore proposes that a revenue cap form of price control should be applied in Water Plan 3. This best matches our assessment principles as it:

- allocates risks to the party best placed to manage them
- ensures revenue adequacy to match our high fixed costs and is aligned with our tariff structure which recovers more than 90 percent of our total revenues from fixed charges
- is simple and transparent in its operation and therefore involves low transaction costs to implement

However we appreciate that a Revenue Cap can create risks:

- It can lead to price shocks if the utility makes a large adjustment in prices in one season to rebalance under-recovery from the previous year
- It can dampen pressures for innovation and efficiency as there are few incentives to reduce costs as revenues are guaranteed

9.5 Hybrid Revenue Cap

We recognise the importance of providing customers with price stability to create the certainty they need for business investment decisions. We therefore propose to constrain the extent of price changes allowed between years to recover the value of the revenue cap. This approach represents a hybrid Revenue Cap.

Our draft Water Plan proposed an upper adjustment constraint between years of 15%. This constraint would apply to the maximum increase in the bill for three typical customer types for each customer group. We received no opposition to this proposal. We propose therefore that our expenditure in Water Plan 3 should be subject to a revenue cap but with a 15% annual rebalancing constraint. That would limit the degree of change between years but still allow G-MW to recover its required revenue over time.

Incentives for efficiency

We acknowledge that a revenue cap can also dampen incentives for innovation and efficiency. G-MW is committed to driving for greater customer service and lower charges. We can only deliver those combined outcomes by doing things better and more efficiently. That will require innovation and transformation. We have embarked on delivering fundamental commitments to our customers and are confident of generating efficiency gains that will yield the cost savings and improved services we seek.

Tariff Strategy

The other advantage of a revenue cap is that it allows us to adjust and adapt our tariff structure within the price period. We have launched a major Tariff Strategy review to ensure that our future charges are aligned with business objectives. We will not finalise proposals from that review until early in 2013. Having a revenue cap would allow us to introduce changes to our tariffs over time within Water Plans 3 and 4, within a revenue neutral outcome. That would give customers confidence that any changes proposed were not intended to raise additional revenue.

10 Tariff Issues

10.1 Overview

Our current tariff structure is complex, with many different elements. It was developed and designed to match the operating environment and customer preferences at the time. We now face a range of new and significant challenges which will test the relevance of these tariffs.

We have launched a tariff strategy review to engage our customers in developing a revised tariff structure that will be aligned with our new business aims and objectives. That process is being guided by an Advisory Group comprised of the chairs of our Water Services Committees. That ensures that customer interests and concerns are clearly understood and considered at the heart of the exercise.

10.2 History of current tariffs

Our current complex tariffs reflect our structure and history. These tariffs are highly cost reflective and granular in nature, having been clearly 'ring-fenced' between different regions and different types of services provided by G-MW.

10.2.1 We run different services

We run a range of different business activities and services. That includes:

- A headworks business: we provide harvesting, storage and delivery of bulk water services to a range of customers including urban, irrigation and the environment.
- Licensed diverters: we manage shared access to groundwater and surface water resources
- Irrigation areas: we own and manage infrastructure to deliver water to irrigators in six gravity irrigation districts and three pumped and we operate and maintain a large surface and sub-surface drainage network
- Water districts: we supply water to mainly domestic and stock customers in five water districts
- Other services: we also manage and provide flood mitigation services, as well as salt interception programs.

In New South Wales these functions are run by different organisations. We run each of these functions as a standalone activity and recover the costs of each only from the customers of those services.

10.2.2 Area-based pricing

We currently have an area-based approach to charges in our irrigation districts. That means, for example, that charges are different in Shepparton from those in Torrumbarry.

This approach was introduced following the McDonald Review in the 1990s which recommended that local communities should be given greater opportunity to influence the trade-off between levels of service and charges. This has allowed different areas to position themselves in terms of prices and levels of service to match their relative market advantage but means that different districts now have increasingly different levels of charges.

After modernisation those different areas would face very different prices for a standard level of service.

10.2.3 Unbundling

In 2007, the 'water rights' held by irrigators in districts were split into three separate parts:

- Water Shares: that represent a share of the water resource. This is a tradeable asset independent of ownership of land. Those Water Shares were also split into classes with different levels of security
- Delivery Shares: which give irrigators in a district a share of the delivery capacity of the infrastructure
- Use rights: which gave irrigators the right to use the water at a specific location

Our charges follow this same structure as the unbundling is underpinned by legislation.

10.2.4 History of schemes

We have extended our systems and supplies over time to new groups of customers. As we have introduced new supply systems we have developed charges for those schemes that reflect the costs we incurred and the level of any external funding provided by government or other agencies. The level of the charges has then been set to recover the outstanding costs of that particular scheme and the contribution expected from the users of that service.

Finally, we have around 150 separate miscellaneous charges for a wide range of specific services and transactions including applications for works, water trading and licence renewals.

10.2.5 Structure of current tariffs

The outcome of this history is that our current structure of charges is complex, with multiple categories and separate levels of charge depending on the services provided by G-MW.

These tariffs are very precise in allocating costs and charges to particular customer classes for specific services. That ensures clear price signals and minimises risks of cross subsidy. However, it is very difficult for most customers to understand and it is costly to manage. It also means that customers in different locations are paying different charges even though they are receiving a similar product or service.

10.3 Our future operating environment

Our future operating environment will be determined by a number of significant drivers.

10.3.1 Gravity system modernisation

We are transforming our gravity irrigation delivery system through our \$2 billion modernisation program. This will automate a backbone of major channels in the form of a water super-highway and replace the previous spur channels with new, modernised connections. The new backbone will provide an enhanced level of service at a standard level that will apply across the entire GMID.

These changes will have a profound effect on our future operating environment affecting how we deliver water, the skills and labour required to manage the system, the extent and nature of our costs and the likely pattern of demand from our customers. It will also reduce the variance between locations. The process will also see a proportion of our delivery shares retrenched. That might challenge the future viability of irrigation areas if all costs were still recovered solely from local irrigators.

10.3.2 Murray-Darling Basin Plan

The Murray-Darling Basin Plan will set a new balance between how much of our water is used for irrigation and how much is allocated for environmental flows. This will lead to a substantial reduction in the total volume of water delivered to properties across G-MW. It is still unclear what changes will be required and how and when they will take effect.

10.3.3 The environment will become our largest customer

The other major development is that the environment will become our largest single customer, transforming our operational priorities. The environment will seek products and services that

are outside the standard range of deliveries sought by most irrigators. That will affect our day to day activities and may lead to new costs.

10.4 Engaging customers

We have built our tariff review process around our customers and their interests. We have used three main vehicles to deliver this engagement:

- **Tariff Strategy Advisory Group:** We welcome the leadership that the chairs of our Water Services Committees have given in guiding the development of our tariff strategy. The chairs have formed an advisory group to develop recommendations to the Board on the best way forward for retail tariffs
- **Bulk Water Customers:** We are consulting directly with our bulk water customers. This covers urban water corporations and the environmental water holders. We have set up a working group with the Victorian Environmental Water Holder, DSE and the CMAs to explore the development of a new package of environmental services and charges
- **Public consultation:** The Advisory Group helped draft a discussion paper on the Tariff Strategy. This has formed the basis for wider customer consultation. We have delivered this through a wide range of channels including customer leaflets, our website and open meetings.

10.5 A strategic focus

We started by developing a strategic framework. This identified the important principles to consider and the broad direction that we want to head in. That provided us with guidelines as we assess individual tariff issues.

10.5.1 Objective

In developing the tariff strategy the Advisory Group agreed the following Objective for our tariff strategy:

A simple and transparent tariff, promoting productive agriculture, supporting rural communities and providing a fair price for bulk water customers

10.5.2 Principles for tariffs

The Advisory Group agreed the following principles to help guide the development of our tariff strategy:

- **Encourage agricultural production:** Tariffs should encourage productive agriculture as that underpins the regional economy and community.
- **Simple, clear and transparent to understand and manage:** Customers want to understand what they are paying for but without too much complexity. G-MW needs an approach that can be managed without undue cost
- **Tariffs are equitable:** the same service should attract the same fee, but charges should be cost reflective
- **Send clear signals on the real costs of services:** Charges should send clear signals as to the real costs of providing services. Customers should be able to see how their decisions are reflected in their charges to enable robust business decisions
- **Provide predictability:** Customers cannot manage their businesses if they face fluctuating prices. Both they and G-MW need predictable pathways for business investment decisions
- **Generate sufficient revenue:** G-MW needs to be financial sustainable. That means it needs to have certainty in its overall revenue yield and its cashflow over time.
- **Encourage efficient water markets:** Water trading is an essential tool to promote viable irrigated businesses. Tariffs need to facilitate speedy trading with low costs.

These principles match the recommended criteria in the ESC's guidelines and the wider ACCC guidance.

10.5.3 Strategic Priorities

The discussion paper reviews targets for where we want to be in 2020. We have selected a number of priority issues which will be critical to our future business environment:

- Bulk water charges
- Service Point Fees
- Infrastructure Access Fees
- Charges for diverters - where we have set up a separate working group as the issues are different from those facing irrigators in our districts

10.6 Reform timeline and process

10.6.1 Tariff strategy and Implementation Plans

We anticipate that it will take the next nine months to finalise a high level tariff strategy that sets out an agreed way forward on our key tariff issues. This will include a further round of public consultation, as necessary.

We will then translate the general principles and outcomes into detailed Implementation Plans for specific charges. These plans are likely to take a further six to nine months to develop to make sure we work through all the practical details of how to move from our current charges to our agreed outcomes. It will also allow us to take account of any incidence effects for different customer classes. The new tariff structure and charges would then be rolled-out over time from Water Plan 4. This approach is set out in the attached diagram (see Figure 18).

10.6.2 First steps for 2013-14

We are making a few minor first changes to our tariffs to start the process and follow the broad directions recommended by our Tariff Strategy Advisory Group and from our discussions with bulk water customers:

- **Service Point Fee:** we propose to increase the Service Point Fee to \$300 for all irrigation outlets. This reflects the real costs we incur and maintains signals to customers about our longer term direction
- **Infrastructure Access Fee:** applying the same % increase to all charges would increase the difference between districts. This would move them further apart and would also be inequitable. We propose to implement the increase in a way that does not increase the difference between districts
- **Infrastructure Use Fee:** we are moving towards a single variable charge as we have broadly completed the modernisation of the new backbone channel system
- **Diverters:** we propose to apply a generic top-down increase for diverters' charges and defer other changes until after the outcome of the Diverters' working group discussions.
- **Headworks:** we propose to retain the current tariff structure with wholesale charges applied to bulk water customers and retail charges applied to our irrigators. This responds to the initial customer feedback we have received and follows common industry practice
- **Environmental Entitlements:** we have established a working group with holders of the environmental entitlements to agree how we can work together to implement watering plans to deliver ecosystem outcomes. This will provide evidence on our costs for different services that will form the basis for a new suite of charges.

Figure 18: Tariff Strategy - timelines for roll-out for GMID

Strategic framework	2012							2013				
	J	J	A	S	O	N	D	J	F	M	A	M
June 2012 to May 2013												
TSAG guides principles & early directions	Blue	Blue										
Consult customers on draft strategy		Orange	Orange	Orange								
G-MW review of feedback & initial modelling				Green	Green							
TSAG reviews options and revises strategy					Blue	Blue						
Consult customers on draft strategic framework							Orange	Orange	Orange			
G-MW finalises strategic framework										Green	Green	
TSAG recommends strategic framework to Board												Blue

Implementation Plans	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
2012/13 to 2022	WP2	WP3			WP4				WP5	
Finalise strategic framework	Blue									
Develop Implementation Plans	Blue	Blue								
Early actions			Blue	Blue						
Staged roll-out					Blue	Blue	Blue	Blue	Blue	Blue

11 Our proposed charges

11.1 Principles to drive charges

Our charges for Water Plan 3 are informed by a number of principles and drivers.

- We are committed to providing price path certainty to our customers
- We intend to limit the increase in our overall revenue to a maximum of CPI + 1.5% in any year and will generate a productivity dividend to deliver that commitment
- We need to respond sensibly to the major changes in our operating environment particularly the modernisation of our gravity irrigation delivery system and the proposed changes in the forthcoming Basin Plan
- We have engaged our customers in discussions on our future tariff strategy. We have received broad feedback on the core elements. This is still more work to do to expand the framework into detailed proposals and to get customer feedback on those proposals
- We don't want to pre-empt that process but we don't want to let things drag on if that means we will face larger problems down the track. We have, therefore increased the *Service Point Fee* as there was broad support for this to be cost reflective
- We operate under a hybrid Revenue Cap which provides confidence to customers that total charges are adequately controlled but provides us with some flexibility to change the mix of those charges between years

11.2 Changes for year 1: 2013/14

So in 2013/14 we propose

- That our charges should be set so that our overall revenue recovery increases by CPI + 1.5% with an adjustment to reflect expected reductions in delivery shares and service points across districts
- *Bulk water* charges in the smaller catchments (basins) should continue to move towards full cost recovery with any annual increase limited to a rise of 10%
- *Irrigation Service Point Fees* should increase by \$50 to \$300 per outlet with an expectation that there will be more aggressive moves to fully cost reflective pricing in due course
- *Infrastructure Access Fees*: the overall revenue from these fees for the GMID should rise on average by the CPI + 1.5% limit. However, generally charges will also need to increase by a further increase to account for the reduction in the number of delivery shares and service points from which that revenue is recovered. This volume adjustment does not apply to the Shepparton irrigation District as it has reached a stable operating position
- *Infrastructure Use Fees* should move towards a more uniform figure to reflect the standard annual operating costs across districts
- The broad balance between fixed and variable charges should be retained
- *Diversers* will see a broadly based increase with a commitment to work towards a revised tariff strategy over the next six months.
- *Miscellaneous Fees* will be reviewed and consolidated to reduce the complexity of this portion of the tariff schedule. This will combine a number of similar types of fees and review the fee charged to customers.

More detail on proposed 2013/14 prices can be found in Appendix A.

11.3 Changes for years 2 & 3 of Water Plan 3

For the remainder of Water Plan 3, we will operate under the proposed Revenue Cap constraints. These operate to:

- Limit the overall annual increase of our revenue to CPI+1.5%
- Adjust charges to reflect a reduction in the number of delivery shares and service points
- Constrain any change in a typical retail bill to a maximum annual increase of 15% incorporating a constraint on small wholesale basins of 10%.
- Allow phased introduction of changes flowing from our tariff strategy review

GOULBURN MURRAY WATER PRICES

APPENDIX A

Tariff and Price Component	Unit	Price (1 July 2013) 2013/14 \$*
Shepparton		
1.1 Shepparton Gravity Irrigation		
Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Distribution		
Infrastructure Access Fee	ML/Day	4,855.00
Infrastructure Use Fee	ML	11.10
Casual Infrastructure Use Fee	ML	102.13
Distribution Access Fee	ML/day	4,855.00
Distribution Use Fee	ML	11.10
Termination Fee *	ML/day	48,550.00
Overuse Fee	ML	2,000.00
1.2 Shepparton Community Surface Drainage		
Community Surface Drainage Fee	KM	598.00
1.3 Shepparton Primary Surface Drainage		
Service Fee	Property	80.00
Area Fee	ha	10.90
Water Use Fee	ML	5.20
Drainage Diversion Site Fee	Site	200.00
Drainage Diversion Agreement Fee	ML/ENT	2.00
1.4 Shepparton Sub Surface Drainage		
Subsurface Drainage Fee	ML/ENT	1.60
Loch Garry		
1.5 Loch Garry Flood Protection		
Service Fee	Property	80.00
Flood Protection Fee	ha	1.35
Tungamah		
1.6 Tungamah - Pipeline System		
Service Fee	Property	80.00
Additional Service Point Fee	Service Point	60.00
Water Allowance Storage Fee	ML/Allowance	7.60
Infrastructure Access Fee	ML/Allowance	147.20
Infrastructure Use Fee	ML	36.48
Overuse Fee	ML	2,000.00
Central Goulburn		
1.7 Central Goulburn Gravity Irrigation		
Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Distribution		
Infrastructure Access Fee	ML/Day	3,238.00
Infrastructure Use Fee	ML	6.20
Casual Infrastructure Use Fee	ML	66.91
Distribution Access Fee	ML/day	3,238.00
Distribution Use Fee	ML	6.20
Termination Fee *	ML/day	32,380.00
Overuse Fee	ML	2,000.00

1.8 Central Goulburn Community Surface Drainage

Community Surface Drainage Fee	KM	598.00
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1.9 Central Goulburn Primary Surface Drainage

Service Fee	Propoerty	80.00
Area Fee	ha	5.70
Water Use Fee	ML	2.80
Drainage Diversion Site Fee	Site	200.00
Drainage Diversion Agreement Fee	ML/ENT	2.00

1.10 Central Goulburn Sub Surface Drainage

Service Fee	ML	4.40
Local Benefit Area Fee	ha	3.50
Local Benefit Water Use Fee	ML	2.00
Municipal Local Benefit Area Fee	ha	14.00

Rochester-Campaspe

1.11 Rochester Gravity Irrigation

Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Distribution		
Infrastructure Access Fee	ML/Day	2,795.00
Infrastructure Use Fee	ML	5.80
Casual Infrastructure Use Fee	ML	58.21
Distribution Access Fee	ML/day	2,795.00
Distribution Use Fee	ML	5.80
Termination Fee *	ML/day	27,950.00
Overuse Fee	ML	2,000.00

1.12 Rochester-Campaspe Community Surface Drainage

Community Surface Drainage Fee	KM	598.00
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1.13 Rochester-Campaspe Primary Surface Drainage

Service Fee	Property	80.00
Area Fee	ha	7.40
Water Use Fee	ML	2.80
Drainage Diversion Site Fee	Site	200.00
Drainage Diversion Agreement Fee	ML/ENT	2.00

1.14 Rochester Sub Surface Drainage

Service Fee	ML	1.90
Local Benefit Area Fee	HA	15.70
Local Benefit Water Use Fee	ML	8.80
Municipal Local Benefit Area Fee	HA	62.80

1.15 Campaspe Gravity Irrigation

Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Distribution		
Infrastructure Access Fee	ML/Day	2,589.00
Infrastructure Use Fee	ML	8.50
Casual Infrastructure Use Fee	ML	57.04
Distribution Access Fee	ML/day	2,589.00
Distribution Use Fee	ML	8.50
Termination Fee *	ML/day	25,890.00
Overuse Fee	ML	2,000.00

1.16 Campaspe West Sub Surface Drainage

Subsurface Drainage Fee	ML	6.30
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Loddon Valley**1.17 Loddon Valley Gravity Irrigation**

Service Fee	Property	80.00
Service Point Fee - Irrigation	Service Point	300.00
Service Point Fee - D&S	Service Point	60.00
Distribution		
Infrastructure Access Fee	ML/Day	3,284.00
Infrastructure Use Fee	ML	7.50
Casual Infrastructure Use Fee	ML	69.08
Distribution Access Fee	ML/day	3,284.00
Distribution Use Fee	ML	7.50
D&S Supplied Outside Irrigation Period	Service	387.00
Termination Fee *	ML/day	32,840.00
Overuse Fee	ML	2,000.00

1.18 Loddon Valley Community Surface Drainage

Community Surface Drainage Fee	KM	598.00
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1.19 Loddon Valley Primary Surface Drainage

Service Fee	Property	80.00
Area Fee	ha	3.50
Water Use Fee	ML	2.90
Drainage Diversion Site Fee	Site	50.00
Drainage Diversion Agreement Fee	ML/ENT	n/a

Loddon Waterworks**1.20 Normanville Domestic & Stock**

Service Fee	Property	80.00
Service Point Fee	Service Point	60.00
Water Allowance Storage Fee	ML/Allowance	7.60
Infrastructure Access Fee	kL/Day	158.90
Infrastructure Use Fee	ML	119.46
Overuse Fee	ML	2,000.00

1.21 East Loddon (North) Domestic & Stock

Service Fee	Property	80.00
Water Allowance Storage Fee	ML/Allowance	7.60
Infrastructure Access Fee	ha	2.80
Distribution Access Fee	ML/day	3,284.00
Distribution Use Fee	ML	7.97
Overuse Fee	ML	2,000.00

1.22 East Loddon (South) Domestic & Stock

Service Fee	Property	80.00
Service Point Fee	Service Point	-
Water Allowance Storage Fee	ML/Allowance	7.60
Infrastructure Access Fee	kL/Day	102.00
Infrastructure Use Fee	ML	58.00
Overuse Fee	ML	2,000.00

1.23 West Loddon Domestic & Stock

Service Fee	Property	80.00
Water Allowance Storage Fee	ML/Allowance	7.60
Infrastructure Access Fee	ha	3.10
Overuse Fee	ML	2,000.00

Murray Valley**1.24 Murray Valley Gravity Irrigation**

Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Distribution		
Infrastructure Access Fee	ML/Day	2,951.00
Infrastructure Use Fee	ML	5.20
Casual Infrastructure Use Fee	ML	60.53
Distribution Access Fee	ML/day	2,951.00
Distribution Use Fee	ML	5.20
Termination Fee *	ML/day	29,510.00
Overuse Fee	ML	2,000.00

1.25 Murray Valley Community Surface Drainage		
Community Surface Drainage Fee	KM	598.00
1.26 Murray Valley Primary Surface Drainage		
Service Fee	Property	80.00
Area Fee	ha	8.10
Water Use Fee	ML	3.10
Drainage Diversion Site Fee	Site	200.00
Drainage Diversion Agreement Fee	ML/ENT	2.00
1.27 Murray Valley Sub Surface Drainage		
Service Fee	ML	2.10
Local Benefit Area Fee	ha	4.70
Local Benefit Water Use Fee	ML	3.50
Municipal Local Benefit Area Fee	ha	18.80
Torrumbarry-Gravity		
1.28 Torrumbarry Gravity Irrigation		
Service Fee	Property	80.00
Service Point Fee - Irrigation	Irrigation Service Point	300.00
Service Point Fee - D&S	D&S Service Point	60.00
Service Point Fee	Service Point	n/a
Delivery		
Infrastructure Access Fee	ML/Day	3,026.00
Infrastructure Use Fee	ML	6.80
Casual Infrastructure Use Fee	ML	63.54
Distribution Access Fee	ML/day	3,026.00
Distribution Use Fee	ML	6.80
Termination Fee *	ML/day	30,260.00
Overuse Fee	ML	2,000.00
1.29 Torrumbarry Community Surface Drainage		
Community Surface Drainage Fee	KM	598.00
1.30 Torrumbarry Primary Surface Drainage		
Service Fee	Property	80.00
Area Fee	ha	3.50
Water Use Fee	ML	2.50
Drainage Diversion Site Fee	Site	50.00
Drainage Diversion Agreement Fee	ML/ENT	n/a
1.31 Tyntynder Primary Surface Drainage		
Service Fee	Property	80.00
Area Fee	ha	7.20
Water Use Fee	ML	4.00
Drainage Diversion Site Fee	Site	50.00
Drainage Diversion Agreement Fee	ML/ENT	n/a
Torrumbarry-Pumped		
1.32 Woorinen Pumped Irrigation		
Service Fee	Property	80.00
Service Point Fee	Service Point	60.00
Distribution		
Infrastructure Access Fee	ML/Day	4,812.80
Infrastructure Use Fee	ML	18.70
Casual Infrastructure Use Fee	ML	108.94
Termination Fee	ML/day	48,128.00
Overuse Fee	ML	2,000.00
1.33 Woorinen Sub Surface Drainage		
Service Fee	Property	80.00
Area Fee	ha	1.60
Water Use Fee	ML	0.65
Drainage Diversion Agreement Fee	ML/ENT	n/a

1.34 Nyah Pumped Irrigation		
Service Fee	Property	80.00
Service Point Fee	Service Point	60.00
Distribution		
Infrastructure Access Fee - WR, D&S	ML/Day	3,582.00
Infrastructure Use Fee	ML	20.00
Casual Infrastructure Use Fee	ML	87.16
Termination Fee *	ML/day	35,820.00
Overuse of Annual Entitlement Fee	ML	2,000.00
1.35 Nyah Sub Surface Drainage		
Service Fee	Property	80.00
Water Use Fee	ML	3.50
Drainage Diversion Agreement Fee	ML/ENT	n/a
1.36 Tresco Pumped Irrigation		
Service Fee	Property	80.00
Service Point Fee	Service Point	60.00
Distribution		
Infrastructure Access Fee	ML/Day	4,541.00
Infrastructure Use Fee	ML	10.40
Casual Infrastructure Use Fee	ML	95.54
Termination Fee *	ML/day	45,410.00
Overuse Fee	ML	2,000.00
1.37 Tresco Sub Surface Drainage		
Subsurface Drainage Fee	ML	1.40
Drainage Diversion Agreement Fee	ML/ENT	n/a
Diversions		
1.38 Murray Regulated		
Service Fee	Licence	185.00
Water Delivery Fee	ML/day	766.00
Overuse Fee	ML	2,000.00
1.39 Goulburn Regulated		
Service Fee	Licence	185.00
Water Delivery Fee	ML/day	581.00
Overuse Fee	ML	2,000.00
1.40 Murray Unregulated		
Service Fee	Licence	185.00
Water Delivery Fee	ML/ENT	23.10
Overuse Fee	ML	2,000.00
1.41 Goulburn Unregulated		
Service Fee	Licence	185.00
Water Delivery Fee	ML/ENT	25.10
Overuse Fee	ML	2,000.00
1.42 Exceptions:		
(i) Fish Farming		
Service Fee		
Murray	Licence	185.00
Goulburn	Licence	185.00
Water Delivery Fee		
Goulburn Regulated	ML/ENT	33.60
Goulburn Unregulated	ML/ENT	33.60
Murray Unregulated	ML/ENT	33.60
Groundwater Diversions		
1.43 Groundwater Supply Area - Shepparton IRSWPA		
Service Fee	Licence	185.00
Service Point Fee	Bore	105.00
Groundwater Entitlement Fee	ML/ENT	3.81
Intensive Management Fee	ML/ENT	1.74
Overuse Fee	ML	2,000.00

1.44 Groundwater Supply Areas - Spring Hill, Campaspe, Katunga, Mid-Loddon, Upper Loddon, Kinglake, Mid Goulburn, Upper Ovens, Lower Ovens

Service Fee	Licence	185.00
Service Point Fee	Bore	105.00
Groundwater Entitlement Fee	ML/ENT	3.81
Intensive Management Fee	ML/ENT	4.70
Overuse Fee	ML	2,000.00

1.45 Other Groundwater Supply Areas

Service Fee	Licence	185.00
Service Point Fee	Bore	105.00
Groundwater Entitlement Fee	ML/ENT	3.81
Overuse Fee	ML	2,000.00

Storage**1.46a Entitlement Storage Fee - Water Entitlement Non Water User**

Broken Basin - HRWS (non water user)	ML	30.30
Broken Basin - LRWS (non water user)	ML	n/a
Goulburn Basin - HRWS(non water user)	ML	7.60
Goulburn Basin - LRWS (non water user)	ML	3.90
Campaspe Basin - HRWS (non water user)	ML	19.60
Campaspe Basin - LRWS (non water user)	ML	12.10
Loddon Basin - HRWS (non water user)	ML	32.30
Loddon Basin - LRWS (non water user)	ML	n/a
Bullarook Basin - HRWS (non water user)	ML	259.90
Bullarook Basin - LRWS (non water user)	ML	157.50
Murray Basin - HRWS (non water user)	ML	12.10
Murray Basin - LRWS (non water user)	ML	4.60
Ovens Basin - HRWS (non water user)	ML	38.20
Ovens Basin - LRWS (non water user)	ML	n/a

1.46b Entitlement Storage Fee - Water Entitlement Water User

Broken Basin - HRWS (water user)	ML	9.80
Broken Basin - LRWS (water user)	ML	4.80
Goulburn Basin - HRWS (water user)	ML	9.80
Goulburn Basin - LRWS (water user)	ML	4.80
Campaspe Basin - HRWS (water user)	ML	9.80
Campaspe Basin - LRWS (water user)	ML	4.80
Loddon Basin - HRWS (water user)	ML	9.80
Loddon Basin - LRWS (water user)	ML	4.80
Bullarook Basin - HRWS (water user)	ML	9.80
Bullarook Basin - LRWS (water user)	ML	4.80
Murray Basin - HRWS (water user)	ML	12.10
Murray Basin - LRWS (water user)	ML	4.60
Ovens Basin - HRWS (water user)	ML	12.10
Ovens Basin - LRWS (water user)	ML	4.60

1.46c Entitlement Storage Fee - Spillable Water Account

Goulburn Basin	ML	3.90
Campaspe Basin	ML	12.10
Murray Basin	ML	5.00

Bulk Water**1.47 Murray - Entitlement**

Murray Basin HR	ML/ENT	11.00
Murray Basin LR	ML/ENT	5.00
Murray System	ML/ENT	12.90
Spillable Water Account	ML	5.00

1.48 Ovens Basin - Entitlement

Ovens Basin HR	ML/ENT	38.20
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1.49 Goulburn Supplemented Basin - Entitlement

Goulburn System - WR Equivalent	ML/ENT	9.70
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1.50 Broken Basin - Entitlement

Broken Basin HR	ML/ENT	30.30
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1.51 Goulburn Basin - Entitlement

Goulburn Basin VHR	ML/ENT	8.00
Goulburn Basin HR	ML/ENT	7.60
Goulburn Basin LR	ML/ENT	3.90
Spillable Water Account	ML	3.90

1.52 Campaspe Basin - Entitlement

G-MW Capacity Share		
Campaspe Basin HR	ML/ENT	19.60
Campaspe Basin LR	ML/ENT	12.10
Spillable Water Account	ML	12.10
Coliban Capacity Share		
Source	ML/ENT	24.60

1.53 Loddon Basin - Entitlement

Loddon Basin HR	ML/ENT	32.30
Loddon Basin LR	ML/ENT	n/a

1.54 Bullarook - Entitlement

Bullarook Basin HR	ML/ENT	259.90
Bullarook Basin LR	ML/ENT	157.50

* Prices shown contain an estimate of CPI at 2.0%. Prices may vary with variation in actual CPI, or adjustments under the revenue cap.

Indicative; Termination Fee will be calculated using the actual fixed fees payable in the year of termination