GMW Price Submission 2020-2024

November 2019

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Executive Summary

For the past year, we have been transforming our business. We have committed to a renewal that was driven from the top down and is being embraced from the bottom up. It began with the creation of our new corporate values – Excellence, Honesty, Accountability, Courage and Care. These values accurately describe our 'line in the sand' moment – who we are now, what we stand for, how we behave, how we do business, how we treat people and how we look to the future. These values are now the bedrock of our business and the bedrock upon which this Pricing Submission has been built.

We have recently achieved significant savings and have committed to further cutting our costs by almost $20 million per annum for the next four years. We have done this by aggressively reducing future operating expenditure by $14.4 million per annum and creating asset management systems such as the channel-by-channel assessment that optimise our assets. This has enabled a modest capital spend in the coming term of about $25 million per annum.

These achievements have resulted in a landmark drop in our revenue requirement from $504.6 million during the current period, to $439.6 million over the next four years. We are returning these savings to our customers as price reductions of around 10 per cent.

We have engaged with our customers like never before. Our engagement has been broad, deep and diverse and has touched over 10 per cent of our customers. It has included over 1,000 face-to-face conversations, a suite of activities with our Water Services Committees and beyond. We have run an information website and collected online feedback. For the first time we have held a deliberative forum. Listening to our customers' feedback was not always easy but it has strengthened our resolve to continuously improve our services and strive for excellence.

We have a deep understanding that our customers expect us to be a credible and accountable business. We have reached out to learn of their priorities and have committed to those as the outcomes we will deliver. This document genuinely reflects those outcomes. In doing so, it takes the courageous yet appropriate step of considering equity and simplicity along with price reflectivity. Not only does this fit with customer views and our (broader) statutory requirements, it fits with our values and we believe it delivers a fairer deal for all.
We have heard our customers call for a reliable supply, credible business, fair pricing, efficient operations, responsive services and simple systems. We have committed to delivering those.

Customers have told us the levels of service they are prepared to accept. We have co-created a suite of new and revised standards for licensing, customer service, water delivery and complaints management. They are a healthy stretch for us but an expectation for our customers. We are willing to be held accountable to those standards and will deliver a report card to our customers every six months that clearly demonstrates our performance.
We have developed options for services and pricing and tested and refined or excluded those, in collaboration with our customers.

From there we did a deep dive into our tariff, looking at both the structure of fees and the underlying philosophy, to find the sweet spot that recovers cost but also delivers great service value to our customers. We heard the expected chorus of voices calling for price reductions but as importantly, we heard new calls for pricing equity and transparency. For the first time, GMW has laid bare the detail of our fee structures and their underlying costs.

It was then our customers led us to consider a shift from a two-tiered pricing system (basin and system), removing the differentiation between 'water users' and 'non-water users'. This drove significant tariff reform in a move to Goulburn and Murray system pricing for retail customers. As the same logic applies to bulk water, we are continuing discussions with bulk entitlement holders with a view to moving them to two system pricing as soon as possible.

Our drive for transformation then found operational efficiencies that reduced irrigation costs across the Goulburn-Murray Irrigation District and most particularly in Shepparton. This, combined with more accurate cost allocations, closed the gap between the various irrigation areas to a point that enables uniform pricing across the GMID.

In addition to these tariff reforms, we are proposing modifications to customer service fees, service point fees and more appropriate pricing for some small anomalous groups. Overall, however, the headline story is a broad based price reduction of around 10 per cent for most customers. In the few cases where increases are forecast, transitional arrangements are proposed to mitigate financial impacts. In all cases, we have smoothed price paths to deliver the certainty and stability that our customers have asked for.

We have also accepted the risk associated with our proposals, including forecasting lower demand. Our project management governance arrangements have been sound and our proposals have stood the 'prudency and efficiency' test of a rigorous peer review by KPMG.

Our Board has been assured that this Pricing Submission is reasonably based, complete and accurate and delivers our best offer to our customers. They have attested to that.
We are confident that what we are proposing is courageous yet achievable. It aligns with our values. It addresses the views of our customers and creates a step change in GMW's performance. Just as we have embraced our challenges, we are also embracing this next step in our remarkable renewal.

Board Attestation

As at 15/11/2019, we the Directors of Goulburn-Murray Water, having made such reasonable enquiries of management as we considered necessary (or having satisfied ourselves that we have no query), attest that, to the best of our knowledge, for the purpose of proposing prices for the Essential Services Commission's Goulburn-Murray Water 2020 Price Review:

- Information and documentation provided in the price submission and relied upon to support Goulburn-Murray Water's price submission is reasonable based, complete and accurate in all material respects;
- Financial and demand forecasts are the best estimates, and supporting information is available to justify the assumptions and methodologies used; and
- The price submission satisfies the requirements of the Essential Services Commission in all material respects.

Diane James AM

Chairman

How we sought customer input

Our process was designed to better understand our customers, what is important to them, and what they want from GMW.

Using this information and our customers' proposals, we developed options for consideration. Our customers deliberated on these options and we used their feedback to develop a set of proposals which were then released for community consultation.

Our engagement strategy

GMW's engagement for its Pricing Submission has captured the views of our customers across all segments and relevant stakeholders.

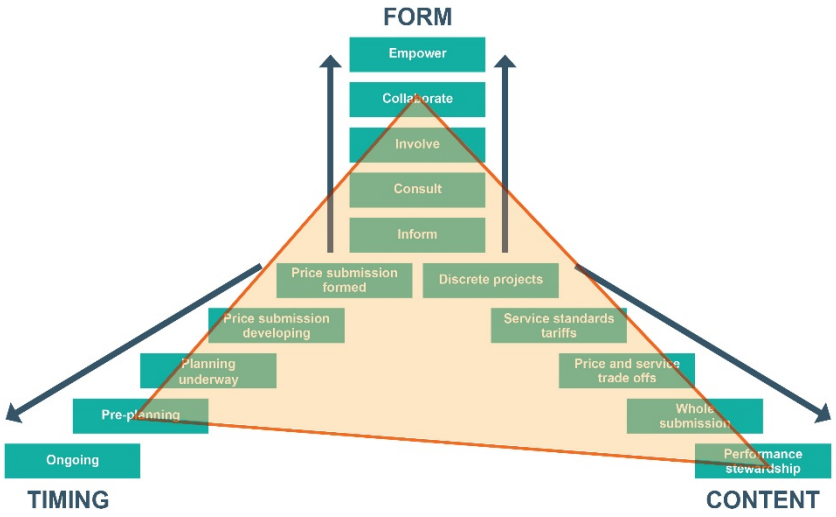
Our planned two-way program ensured meaningful engagement opportunities for customers right across northern Victoria – from Corryong in the east to Nyah in the north, and from Laanecoorie Reservoir in the west to Dartmouth Dam in the east.

Our engagement program has strengthened the trust between our customers, stakeholders and GMW by providing a platform to have their voices heard, considered and acknowledged.

It has been flexible and we have responded to risks, opportunities and changes in thinking – at the same time ensuring we have qualitative and quantitative information capture.

Importantly, it stretched GMW along the IAP2 Engagement Spectrum from 'inform' all the way to 'collaborate', depending on the topic or critical decision to be made.

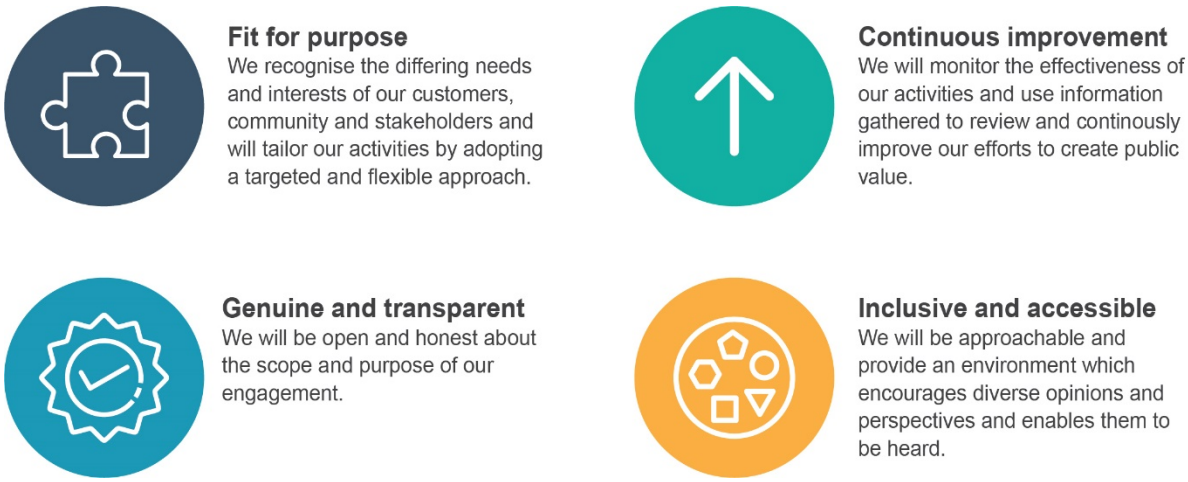
Figure 1: How GMW's engagement aligned with the ESC's engagement framework.



Our engagement principles

The GMW Engagement Principles shown below derive from the IAP2 Core Values and were developed through an inclusive process. They provide a solid foundation for meaningful engagement.

Figure 2: GMW's Engagement Principles.



How we engaged

Our engagement program was delivered in ten stages, these being:

Stage one (November 2016)	We completed a customer segmentation project that identified 11 clear customer groups. Through this project we looked beyond our traditional method of viewing customers based on the service we provide them. It required us to appreciate our communications and engagement may not always be appropriate, to look at our customers from a new perspective and to recognise customer differences even among those receiving the same GMW service.
Stage two (January 2017)	An in-depth customer needs analysis was completed, providing us with a detailed understanding of the needs, behaviours and preferences of our customers and stakeholders. We spoke to all of our customer segments which allowed us to identify where we need to improve our communications and engagement to meet their needs. Also during this stage, six personas were identified representing the different value-sets across our customer base. These personas allow GMW to plan and design engagement programs that ensure our customers have the opportunity to share their thinking, their way.
Stage Three (February – December 2018)	Seven working groups were established to provide input and advice on customers' future service needs and pricing and tariff strategy. These working groups comprised of everyday customers, highly knowledgeable customers such as Water Services Committee chairs and deputies, and stakeholders such as the Victorian Farmers Federation, Catchment

Management Authorities, environmental water holders and industry representatives.

The constitution of these strategic working groups enabled GMW to balance input from its broad customer and stakeholder base. The groups were independently facilitated which allowed for robust discussion, but encouraged dialogue, consensus and compromise.

Stage Four (November 2018)

GMW's Communications, Engagement and Partnerships Strategy was developed and delivered, providing the strategic direction to ensure customers' voices are heard and views considered in decisions.

The strategy includes the GMW Engagement Lens, a step-by-step process that identifies where projects or issues should sit on the engagement spectrum and which tools are the most effective.

Stage Five (January – July 2019)

More than 1000 face-to-face conversations were held with customers about what GMW should start, stop and keep doing.

GMW staff hit the streets to host these conversations, visiting rural stores, town centres and community events to reach as many customers as possible. We wanted to understand our customers' views and expectations. These broad questions helped us achieve this goal.

Stage Six (March 2019)

A new online hub, yoursay.gmwater.com.au, was developed to enable customers to have easy input into topics across the spectrum of services, projects and prices. Through Your Say, we shared information on our business, wrote briefing papers on topics of interest and shared the outcomes from some of our engagement sessions. This ensured a transparent process and built trust with our customers.

This website helped us engage more broadly than ever before. It helped us gain input from our hard-to-reach customers, those who we learnt in Stage Two did not value face-to-face communication and wanted to have their say in their own time.

Stage Seven (July – August 2019)

26 drop-in days were held across GMW's operating area. These allowed us to start validating what we had heard in the previous stages and to ensure we were not misinterpreting anything. These drop-in days were held throughout GMW's 68,000 square km operating area, further ensuring we provided input opportunities for our diverse customer base.

Stage Eight (July – August 2019)

18 customer workshops were held in various locations, finishing with a two-day Pricing and Tariff Summit. This allowed us to test our thinking with our customers. These workshops allowed:

- Intensive investigations into the infrastructure access fee with Water Services Committees
- Customer education on reducing costs
- GMW to develop actions for further engagement
- Customer input for future modelling, and
- Customers to gain transparency around costs.

We also held a number of one-on-one sessions with irrigators from differing demographics, leveraging learnings from Stages 1 and 2.

Stage Nine (August 2019)

A three-day deliberative forum '*Beneath the Waterline'* was held. Participants were selected using criteria developed by an independent statistician to ensure a representative sample across all customer segments, customer size, location, production and service type.

This forum allowed us to validate what we had heard in the previous stages and also to understand customers' willingness to pay, and trade-offs between service and costs. Participants deliberated on a range of topics and then voting was used to confirm the final recommendations and rationales.

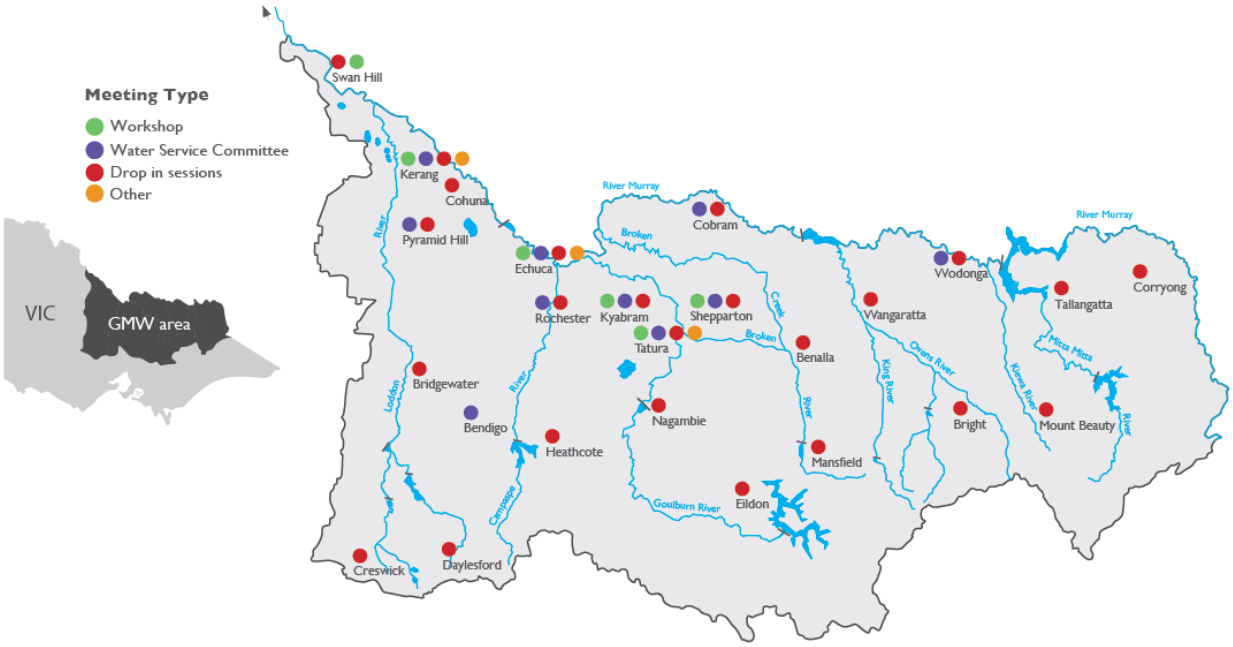
Stage 10 (October 2019)

The ***A fairer deal for all*** document was released to 'close the loop' and communicate back to customers how their input affected pricing decisions. This was GMW's opportunity to put forward the proposals it had developed with its customers, to play back what it had heard and a final opportunity to ensure we're meeting our customers' needs.

A broad communications strategy was used to ensure ***A fairer deal for all*** reached our 21,000-strong customer base. It included online, a further round of face-to-face feedback opportunities and traditional communications such as media, advertising and social media.

Figure 3: The significant reach we achieved through our engagement activities.

Figure 4: GMW's locations for Pricing Submission engagement activities.



Engagement methods

GMW's depth of engagement stretched along the IAP2 Engagement Spectrum from 'inform' to 'collaborate', depending on the topic or critical decision to be made.

We drew heavily on the toolkit we developed during Stage Two of our engagement strategy – which determines appropriate methods of communications and engagement, based on the level of impact and on our customer and stakeholders' preferred methods.

Table 1: Engagement methods used based on the level of impact.

Inform	Consult	Involve	Collaborate
General Communication • Media releases • Newsletters • Emails • Advertising • Website • Social media • Fact sheets • Posters • Letters • SMS • Phone calls • Briefing papers	**Direct and Interactive Engagement** • Call Centre • Dedicated email address • Meetings • Phone calls • *A fairer deal for* all – closing the loop document • Formal correspondence seeking feedback • Polling • Surveys	**Feedback forums** • Your Say – Online Engagement Hub • Drop-in sessions • Meetings with other stakeholders	**Working and Advisory groups** • Seven working groups • Tariff and Pricing Summit • Service Standards Summit • *Beneath the Waterline* deliberative forum • Water Services Committees

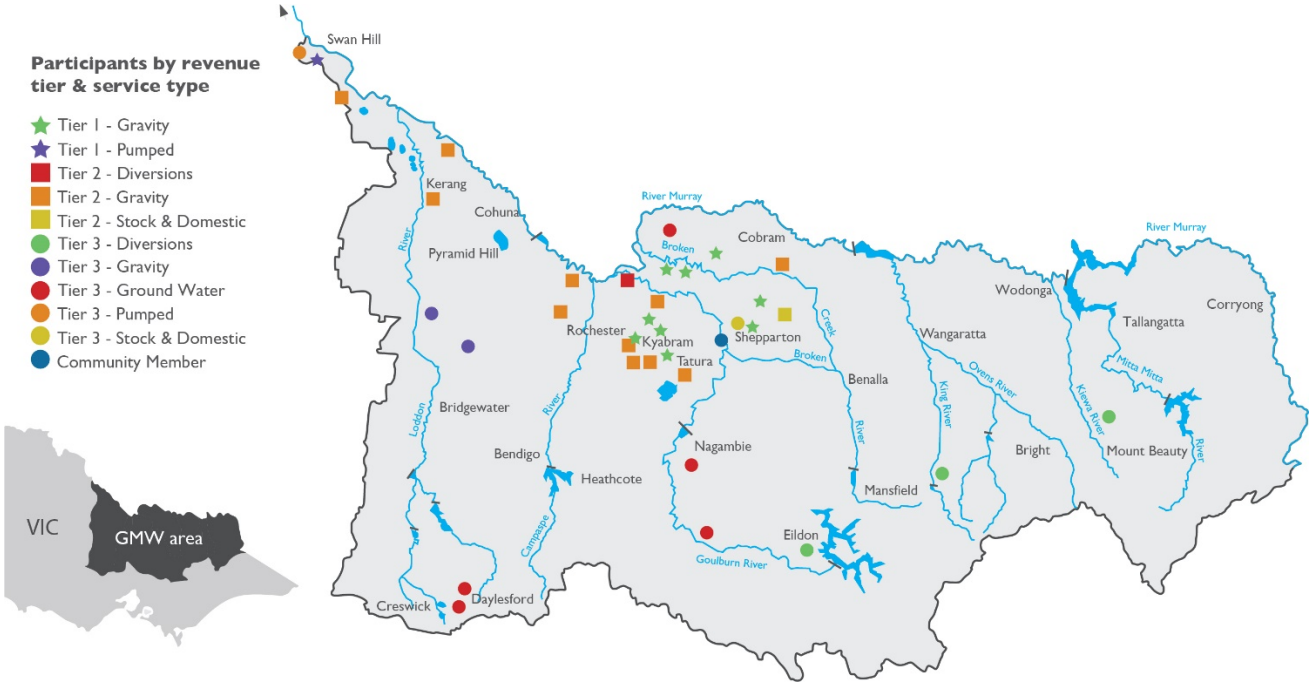
Deliberative forum

As part of Stage Nine the findings of our previous engagement with customers were tested during a deliberative forum, *Beneath the Waterline*.

GMW engaged two providers for the delivery of our deliberative forum: Max Hardy Consulting and Insync. We did this to ensure the process was designed with the rigour it needs to ensure independence in the process.

Insync developed the criteria for a random stratified sample of our customers across all segments, customer size, location, production and service type. Max Hardy Consulting was responsible for designing and delivering the deliberative process.

Figure 5: Beneath the Waterline participants by revenue tier and service type.



Participants were required to actively engage in debate, deliberation and make judgements on a broad range of issues. Combining their own experience with expert briefings from GMW, key stakeholders and industry presenters, they voted on options relating to key aspects of our pricing.

The deliberative forum reflected our diverse customer base and the complexity of developing our Pricing Submission. For GMW, it provided a clear validation, that the outcomes we had developed were correct.

It made it clear that affordability was more important than increasing service standards, that where there is the same service it should be the same price, and that everyone should pay their fair share.

How we structured our forum

We had 36 customers attend our three day forum, including:

- Gravity irrigators – 22
- Pumped irrigators – 2
- Groundwater users – 5
- Diverters – 4
- Stock and Domestic customers – 2
- Community member – 1

During this forum, we invited a number of stakeholders and experts to present on key issues for discussion including:

- Committee for Greater Shepparton – who provided a regional development perspective on 365 day delivery services
- KPMG – who presented the basis for price regulation and explained how the prices and price paths are built
- Department of Environment, Land, Water and Planning – who provided information about how the environmental contribution levy is administered
- Victorian Environmental Water Holder – who presented on the importance of environmental flows to maintaining the health of our waterways
- Goulburn Broken Catchment Management Authority – who presented on projects across northern Victoria that have been funded by the environmental contribution levy, and
- Victorian Farmers Federation Water Policy – who presented an irrigator's perspective on the Entitlement Storage Fee.

These presentations were designed to inform robust discussions on a number of key topics that had been raised by our customers through previous engagement activities, including:

- 365 day irrigation
- Customer hardship
- The differentiation between water and non-water user
- System vs basin pricing
- A single customer fee
- A Victorian Water Register fee
- Reform options for service point fees
- Communications options, including desire for digital content and accessibility
- Price paths

To ensure our customers' views were heard, we ran a series of polls to understand their preferences for change. These responses are detailed in Appendix 1, and the independent facilitator's report can be found on our website.

These views informed the development of proposals, which were then further tested in our customer facing document, ***A fairer deal for all***.

A fairer deal for all

To close the loop with our customers GMW released ***A fairer deal for all*** in October. The document was released for community feedback over four weeks. It detailed:

- The engagement process we had completed to date
- Key issues that had been raised through various engagement activities
- Options that GMW was considering for inclusion within its 2020 price submission
- Customer bill impacts of each of these options, and
- Survey questions seeking preferences on these options.

The release of ***A fairer deal for all*** was shared through multiple mediums, including through our website, via email, text message notifications and hard copies for pick-up at our regional offices. This was designed to cater for our differing customer demographics.

Only twenty-eight responses in total were received from customers through YourSay and a small number of others through other mediums. Using our triage process the majority of these were outside scope of the pricing submission. The relevant responses were discussed with customers in person, where possible and considered for volume (numbers), relevance to topic

and strength of argument. We acknowledge that there are still some small groups of customers who do not agree with some of our proposals. In conclusion, however, it was felt there was not material opposition through numbers or substantial argument to outweigh the intentions of the proposals. The 'YourSay@GMW' responses are detailed in Appendix 2.

Information provided to customers

During these engagement activities information provided to customers was detailed and extensive. Formal correspondence was also sent to all GMW customers encouraging them to participate and inviting them to engagement opportunities. Every customer who attended a workshop or the *Beneath the Waterline* forum was provided with a welcome pack and topic-based briefing papers. Briefing notes on every GMW service standard and proposed pricing impacts were also made available at workshops and on yoursay.gmwater.com.au.

Table 2: All information provided to customers and links to these documents.

What	Topic
Fact sheet	Have your say on the future of GMW and our region
Briefing paper	Water delivery service standards
Briefing paper	Surface drainage service standards
Briefing paper	Sub-surface drainage service standards
Briefing paper	Diversions: Groundwater service standards
Briefing paper	Diversions: Regulated system service standards
Briefing paper	Diversions: Unregulated system service standards
Briefing paper	GMW's hardship policy
Briefing paper	General customer service standards
Briefing paper	Exploring the Infrastructure Access Fee
Fact sheet	Helping people learn about water
Fact sheet	Reducing our carbon emissions
Fact sheet	Fixed and variable pricing
Fact sheet	Creating a Customer Fee and Water Register Fee
Fact sheet	Customer service point fees
Fact sheet	GMID price path – five districts
Fact sheet	GMID price path – Shepparton
Survey	365-day delivery service
Survey	Entitlement Storage Fees
Survey	IAF and uniform delivery charges
Survey	Customer Fee and Water Register Fee
Survey	Customer Service Point Fees
Survey	Torrumbarry Natural Carriers Rebate
Survey	Gravity pricing
Survey	Water Districts pricing
Survey	Pumped irrigation district pricing
Survey	Diversions pricing
Welcome pack	Beneath the Waterline
Consultation document	A fairer deal for all
Letter	Have your say on the future of GMW and our region

What our customers asked for

We adopted a five stage process of issues identification, outcomes development, refinement of service standards, options development and proposals (to be included within the Price Submission).

Through each step, we collaborated with our customers and tested customer preferences, choices and impacts.

Issues identification

Through customer engagement Stages Three to Seven (refer to page 7), our customers explained this issues of importance to them. This included:

- They want stable pricing now and in the future
- The need to keep water in the region
- The same services should be charged the same prices, and
- Everyone should pay their fair share.

Outcomes

Leveraging the issues identified through these four stages, we developed a set of outcomes that were tested and confirmed as being appropriate with a sub-set of customers. These are:

We need our water to stay in the region.

We need GMW to be transparent, honest and trustworthy and have a stable leadership team.

We need prices that fairly reflect the true use of infrastructure by all water users (including irrigators, investors and the environment).

We need the business to run lean enough to deliver affordable prices that support farmers to stay on the land.

We need GMW people and systems to deliver the right flow rates in the right timeframes.

We need digital information and communications systems that are fast and simple (for customer service, water delivery and billing).

Refinement of service standards

To support delivery of these outcomes, we reviewed our existing service standards and targets for alignment. It was determined and agreed with customers that our service standards were too 'inward focused' and 'technical', and needed to more clearly reflect what was of importance to customers and the services they receive.

To do this, we ran a Service Standards Summit and held a series of six workshops as part of Stage Eight of the customer engagement process. These were held across our six area offices and included a mix of Water Services Committee members and other customers.

The output of this process is to replace the current categories and service standards with 26 new or refined performance measures. This is a reduction overall of four (six removed, two created) against those that were historically measured and reported. The six removed were:

- Customer complaints to GMW (per 1000 customers)
- Efficiency achieved as a % of diverted (water districts)
- Efficiency achieved as a % of delivered
- Efficiency achieved as a % of diverted (diversions)
- Maintenance requests responded within target
- Unplanned service interruptions

All of these service standards have been replaced with new standards that better reflect what is important to our customers. As an example, the customer complaints to GMW service standards has been replaced with complaints resolved to the satisfaction of the customer, to reflect the intentions of a revised complaints management process, focussed on resolution.

Our performance against existing targets, obligations and duties under legislation are outlined in Appendix 3. The following details our proposed service standards and associated targets, based on the services we provide, including alignment with the preceding customer outcomes.

General Customer Service – Licensing and Administration

What did our customers say?

Customers were generally happy with the current processing of applications, including existing performance measures and targets. Customers also indicated that GMW should educate and encourage all customers to move to online platforms, which have quicker turnaround times and can generate business efficiencies. To do this, GMW is increasing communications and awareness of its online application processes. GMW has not proposed any changes to these measures, or the associated targets.

Table 3: Licensing and Administration service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
We offer timely transactions for our customers.	Efficient Operations	We process all allocation trade applications within five business days. (existing)	90%
		We process all water share applications within 10 business days. (existing)	95%
		We process all change of ownership applications within 10 business days. (existing)	90%

General Customer Service – Customer Service

What did our customers say?

Customers stated that GMW's call centre provides a valuable service and that it should remain local, staffed by local people with local knowledge and not be outsourced. Customers value simple access to information and the answers it provides. Significant value is placed on resolving problems and working with customers, rather than statistic-based reports about complaint numbers.

To support this feedback, we have created a new service standard, which seeks to measure whether complaints have been resolved to the satisfaction of our customers. This will be measured by surveying customers upon resolution of their complaint, something that we do not currently do.

Further, we recognise the importance of first point resolution, and that customers find it frustrating having to deal with multiple people within the business to have their queries resolved. As such, we are increasing our targets to reach 70 per cent by the end of the next regulatory period. We are also materially reducing the service standard on responding to complaints, from 10 business days to three[1]. This demonstrates our desire to improve current correspondence service levels, without any additional cost to our customers.

To achieve this improvement, we are extending the target time for answering calls to 60 seconds, which will allow us to optimise resourcing to resolve queries upon first contact. Customers were clear that answering calls within 30 seconds is less important than resolving issues upon first contact.

We are also proposing to increase the target for Energy and Water Ombudsman Victoria (EWOV) complaints to 1 per 1,000 customers. This is due to the completion of the Connections Project, and associated complaints handling moving over to GMW in October 2020. This is well below current performance (2.04 in 2018-19), and as such is an overly ambitious target. To achieve this target, we will be developing a Customer Experience Plan in 2020, which will include revision of GMW's complaints management process.

Table 4: Customer Service service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
We take quick action on complaints to reach resolutions for our customers.	Credible Business	Complaints to EWOV per 1000 customers each year (modified)	1.00
		Complaints process managed to the satisfaction of the customer (NEW)	85%
		We respond to complaints in writing within 3 business days (modified)	100%
We answer our customers' calls quickly and effectively.	Simple Systems	Calls are answered within 60 seconds (modified, previously within 30 seconds with a target of 80%)	85%

[1] We note that we are targeting resolution of complaints within 10 business days

The person who answers your call can usually answer your questions.	Credible Business	First point-of-call resolution (modified targets)	2020/21: 64% 2021/22: 66% 2022/23: 68% 2023/24: 70%

Diversions Service Standards

What did our customers say?
Diversions customers were happy with the service GMW provides, but asked for greater focus on customer education and communication activities such as water resource monitoring data.

To do this, we have created a new service standard to ensure customers have the information they need about restrictions on unregulated streams. This will be achieved my measuring how many of our customers receive a notification (either via SMS, electronically or in writing) of restrictions being placed on these river diversions, within 24 hours of this restriction being placed.

Table 5: Water Districts service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
Our diversions customers have access to the water resource monitoring data they need.	 Responsive Services	Within two weeks of it being submitted. (existing)	90%
We comply with the Local Management Rules we developed with our customers for unregulated streams and groundwater.		Access to unregulated stream flows is managed in accordance with restriction triggers in Local Management Rules. (existing)	100%
		Customer access to groundwater is managed through seasonal allocations which are announced in accordance with relevant management plans. (existing)	100%
Our customers know when restrictions on unregulated streams are in place.		Customers receive notification in writing (through SMS, email or written letters) within 24 hours. (NEW)	100%

Water Districts Service Standards

What did our customers say?
Customers are happy with the service they receive and indicated that the supply interruptions standard was important as it reflected the right amount of on-farm storage to meet any outages (being four days when they sign on).

Table 6: Water Districts service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
We supply water to our water districts customers when they need it.	 Efficient Operations	Supply interruptions do not exceed 96 hours. (existing)	100%

Pumped Irrigation Service Standards

What did our customers say?

Through engagement, our pumped customers were clear that we should differentiate between winter and summer supply interruptions. They stated that supply interruptions in the summer months have a more significant impact on these customers, whereas winter was less important. As such, we are proposing a lower threshold on summer supply interruptions (eight hours) against winter interruptions (24 hours).

Customers also noted that knowledge of outages remains crucial.

Table 7: Pumped Irrigation service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
We supply water to our Pumped District customers when and where they need it.	 Efficient Operations	Irrigation orders are delivered on the day requested. (existing)	98%
		Supply interruptions do not exceed eight hours in the summer months and 48 hours in the winter. (modified to reflect new summer and winter specific performance measures)	80%
Our customers are informed by SMS when there is a supply interruption and again when it is restored.	 Simple Systems	Within two hours. (existing)	100%

Water Delivery Service Standards

What did our customers say?

Feedback on service in the GMID was simple – “flow rate is king”. Customers told us to remove irrelevant internal measures and focus on what matters. In response, GMW is proposing to increase the delivery target by 2 per cent and maintain the current target flow rate.

Table 8: Water Delivery service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
Our GMID irrigators are supplied water when and where it’s needed.		Orders are delivered within 24 hours. (modified target – 2% increase)	95%

	Responsive Services	Flow rate is within 10 per cent of order. (existing)	80%

Drainage Service Standards

What did our customers say?
Customers were clear that they wanted drains and connected assets (e.g. pumps) available all of the time, other than during agreed scheduled maintenance activities (e.g. weed spraying).

Further, GMW is taking the opportunity to rationalise these measures, where we currently differentiate between surface and sub-surface drainage, despite achieving a similar level of service.

Table 9: Drainage service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
We maintain drains to remove excess runoff.	Responsive Services	Drains are maintained to a level that they are available to remove run-off (modified measure)	98%

Bulk Water Service Standards

What did our customers say?
Through engagement, customers were clear that for environmental water delivery and planning, it is essential the system meets demand. Harvesting is also important because it supports system reliability.

Customers were supportive of the existing service standards and targets, and hence we have proposed to maintain these going forward.

Table 10: Bulk Water service standard themes and outcomes.

Customer theme	Outcome	Service standard	Target
Our regulated systems are delivering water to meet our customers' demands.	Reliable Supply	Percentage of time a customer demand can be met. (existing)	99%
We maximise harvesting opportunities – to deliver the best water outcomes for our customers.		Up to 100 per cent of design storage capacity. (existing)	100%
We maintain the minimum required flow rates in our rivers.	Responsive Services	Flow requirements as specified in the relevant bulk entitlements. (existing)	98%
Our customers are informed of seasonal determinations on time, every time.		As per the defined time frames. (existing)	100%
Our customers are informed about risk of spill announcements on time, every time.		As per the defined time frames. (existing)	100%

Network delivery efficiency

What did our customers say?
The efficiency of our network is of utmost importance to our customers. Every megalitre of water lost through leakage or evaporation is a megalitre of water that cannot be used for irrigation.

We currently have multiple measures of efficiency across our different services, however there are only two that customers have indicated matter:

- The efficiency of our 'closed' piped network, and
- The efficiency of our 'open' channel network.

Therefore, we have set two targets that reflect current performance and the expectations of relevant customers.

Table 11: Network delivery efficiency themes and outcomes.

Customer theme	Outcome	Service standard	Target
Our delivery systems efficiently deliver water from storage to our customers.	 Efficient Operations	Water delivered to customer properties through the closed piped network as a percentage of water extracted. (NEW)	92%
		Water delivered to customer properties through the open channel network as a percentage of water extracted. (NEW)	85%

In summary, GMW has:

- Maintained 15 existing service standards and targets
- Tightened the threshold on three existing service standards
- Changed the target of three existing service standards
- Removed four standards that customers do not value, and
- Created four new service standards that better reflect the services that customers value.

We have done this at no extra cost to our customers.

Options development

GMW implemented a multi-stage engagement program of issues identification, refinement and development of options:

Stages Three to Seven	We collated all issues of importance to customers, identifying those that were relevant to the price submission, but also maintained a log of remaining issues for GMW to address through other mediums. Through this process, we identified issues of most importance, but also those that the business was unable to address at this time (including communication back to customers as to why). All of the issues raised are detailed on our website.

Stage Eight	We presented options for consideration and co-created with customers further options. Further, we took these options away and modelled the potential business and customer impacts and communicated these back to customers. Where these options contravened good practice cost allocation approaches or would have been too expensive, they were discontinued and communicated back to customers directly and through the GMW website. An example of this is the in-depth workshops on the Infrastructure Access Fee with Water Services Committees. We explored many options for reallocating costs, but where the impacts on were not reasonable or did not meet Australian Competition and Consumer Commission (ACCC) pricing principles we did not proceed.
Stage 10	We released ***A fairer deal for all***, which contained our final options and draft proposals to be included within this price submission.

This is demonstrated in the following table:

Table 12: GMW's multi-stage engagement program.

Stages 3 to 7 (Listening)

The key themes raised were:

- We need our water to stay in the region
- We need GMW to be transparent, honest and trustworthy and have a stable leadership team
- We need prices that fairly reflect the true use of infrastructure by all water users (including irrigators, investors and the environment)
- We need the business to run lean enough to deliver affordable prices that support farmers to stay on the land
- We need GMW people and systems to deliver the right flow rates in the right timeframes, and
- We need digital information and communications systems that are fast and simple (for customer service, water delivery and billing).

Stage 8 (Co-creating)

We presented a number of options through our workshops, which included:

- customer outcomes
- the weighting between our fixed (infrastructure access fee) and variable (infrastructure use fee) delivery fees
- separating our water register fee and customer service fee
- different price paths, including smoothed price paths, year one adjustments and then no further increase, and matching forecast revenue and the revenue requirement
- reforming customer service point fees
- 365 day irrigation
- Response to climate change, and
- Customer hardship and education.

We also heard a number of options from customers that we took away, considered and refined, which included:

- Reallocating costs away from the infrastructure access fee, and
- Refining storage fees and delivery charges such that all customers (including irrigators, the environment and investors) pay the same fee.

We co-created with customers:

- Changes to service standards, thresholds and targets, and
- Changes to the costs recovered through the infrastructure access fee.

Stages 9 (Deliberating)

During the three day deliberative forum, we presented, discuss and deliberated over the following options:

- Proposed service standards
- 365 day irrigation
- Customer hardship
- The differentiation between water and non-water user (which influences the storage fees a customer faces)
- System vs basin pricing
- A single customer fee
- A Victorian water register fee
- Reform options for service point fees
- Communications options, including desire for digital content and accessibility, and
- Price paths.

We also held a sessions during the forum for customers to raise their own options for GMW consideration. These topics included:

- Changes to carryover rules (removal of spillable water accounts, create one set of rules within each of the systems)
- Changes to the infrastructure access fee (consider Broken Creek realignment and any costs that can be removed), including uniform delivery fees
- Environmental delivery charges in the GMID (everyone who uses the system should pay a fair share), and
- Customer bills (electronic billing and combining multiple accounts).

Stage 10 (Testing)

Within ***A fairer deal for all***, we have proposed the following changes for our price submission:

- Fully harmonised delivery charges (across all six irrigation districts)
- Removing the differentiation between water user and non-water user
- Moving to system based storage charging
- A single customer service fee
- A water register fee
- Simplification of customer service point fees, and
- Committing to investigating 365 day delivery service.

Proposals

A fairer deal for all, contained a series of proposals upon which customers and the community could provide final feedback.

The following table documents these proposals, and reconciles these to what we heard and the outcomes we are proposing to deliver. Customer survey responses are detailed in Appendix 2.

Table 13: How our customers have significantly influenced the key areas of our Pricing Submission.

What we heard	How this will be achieved	Customer Outcome
• Customers told us they did not want bill increases. • "Drop the price of water for the next three years." • "Investigate pricing structure options to help sustain our delivery system."	Through this process and our Transformation Project we have constantly challenged costs and programs to ensure our prices reflect this. This Pricing Submission will provide price reductions for almost all our customers (see *Tariff* section).	Fair Pricing
• Our customers said we must simplify pricing. • "Simplify– the whole billing system is too complex." • "Stop charging such high prices for services other that water."	• The establishment of a Customer Account Fee to replace multiple service fees and allow customers to amalgamate accounts will achieve this (see *Tariff* section). • Treating all service points the same way across customer groups will achieve this (see *Tariff* section, Service Point Fees).	Simple Systems Fair Pricing
• Customers told us to drive efficiencies and cost reductions, without impacting on service. • "Start to put the customer, and the communities reliant on irrigated agriculture first. Our viability is reliant on a strong robust irrigated agriculture sector."	We are proposing a revenue requirement of $439.6 million during this Pricing Submission. A reduction of about 12 per cent from the previous water plan's revenue requirement of $504.6 million (see *Revenue* section).	Efficient Operations
• Our customers told us where there is a single service there should be a single price. • "Charge non-landholders that own water the same as irrigators who own land."	• Removing the water user/non-water user categories in the Entitlement Storage Fee. (see *Tariff* section, Storage fees) • Moving to system pricing in the Entitlement Storage Fee (see *Tariff* section, Storage fees). • Uniform delivery charges in the GMID (see *Tariff* section, Irrigation delivery fees).	Fair Pricing
• Our pumped district customers told us supply interruptions in the summer months had a serious impact. • "We're happy with our service, but outages have a serious impact in the summer months."	We have changed our service standard to reflect the different performance measures during summer and winter months (see *Pumped Irrigation Service Standards*).	Responsive Services

• Our customers told us they were comfortable with how we managed hardship. • "Keep costs down so customers do not get into hardship."	We are not proposing to change our hardship procedure.	
• Our customers told us flow rate was most important for successful irrigation. • "Flow rate is king."	We are proposing a new service standard: Our GMID irrigators are supplied water when and where it's needed, with an increased performance measure of 2 per cent to 85 per cent (see *Water Delivery Service Standards*).	
• Our customers told us we needed to attract new investment to the region. • "We need to attract new investment to the region. The vegetable growers are interested in this area, but need winter water access for production."	We will investigate the opportunities and risks of pursuing 365-day delivery within the GMID.	
• We heard everyone should pay their fair share – a fairer deal for all. • "Non-water users should pay their share."	• Removing the water user/non-water user categories in the Entitlement Storage Fee (see *Tariff* section, page 86). • Moving to system pricing in the Entitlement Storage Fee (see *Tariff* section, Storage fees). • Participating in the Department of Environment, Land, Water and Planning's Environmental Water Review.	

How we will report our performance and continue engagement

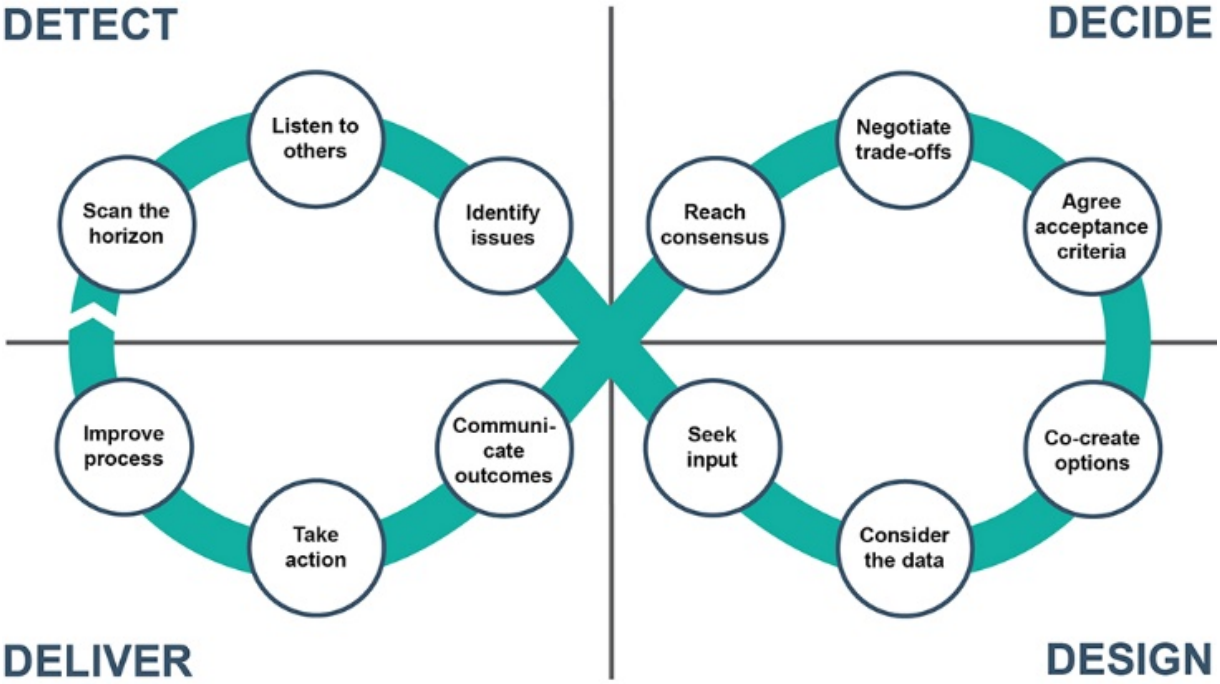
GMW's performance on service standards is made public by publishing annual results online. However, we have heard our customers want to learn more about how we are tracking. Transparent performance reporting is also an essential aspect of our corporate value of accountability.

Therefore, we will publish on our website a six-monthly report card of our performance against our Service Standards and Customer Outcomes.

We also intend to build on the success of our 2019 engagement activities, by creating ongoing cycles of engagement that enable two-way information exchanges and build stronger relationships. It will enable customers to clearly paint their concerns, achievements, needs and issues across a very broad canvas.

The model will serve as a useful platform for communicating the outcomes of the Pricing Submission and delivering the six-monthly report card. Further, this approach will serve as the commencement of customer engagement for the 2024 Pricing Submission, by providing early advice on customer issues and opportunities.

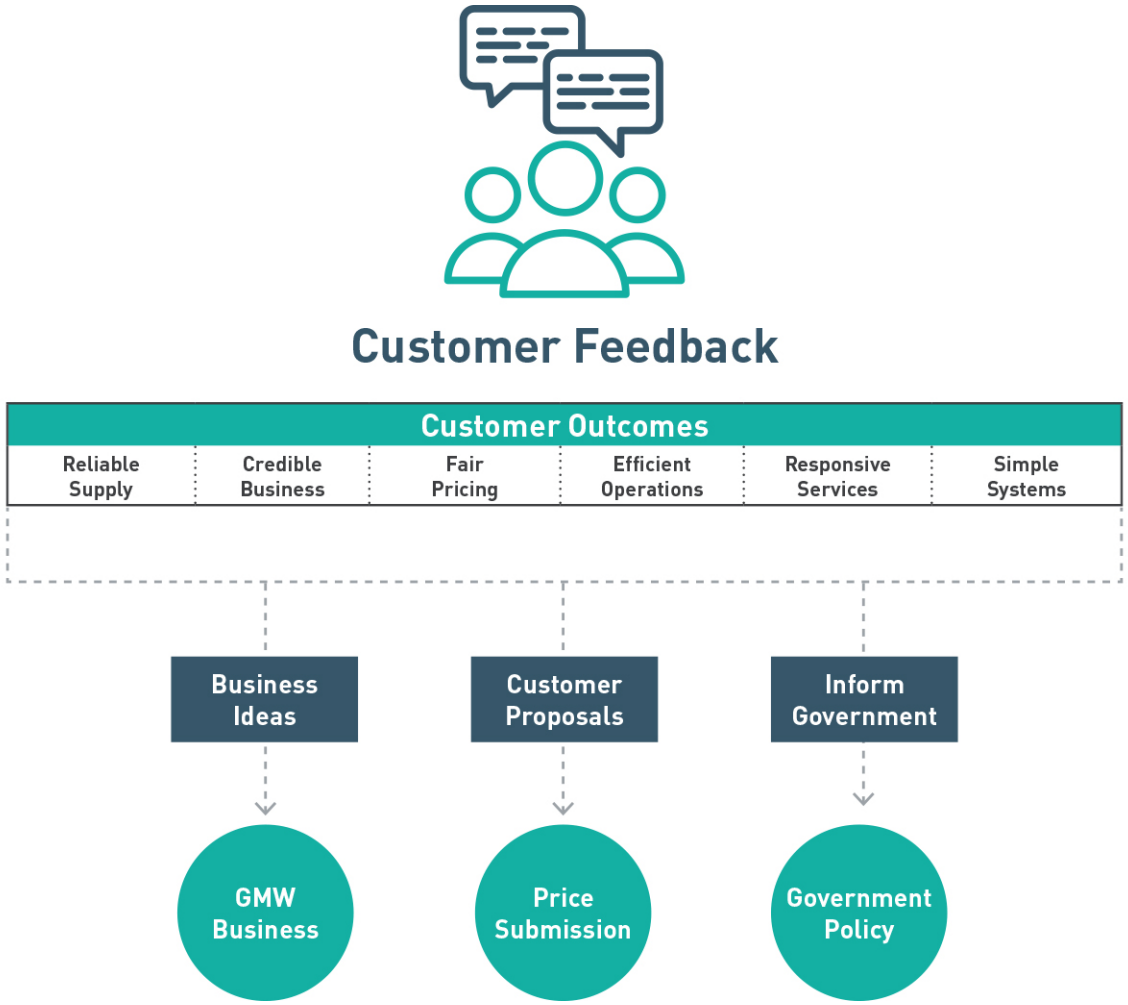
Figure 6. GMW's continuous engagement loop.



Matters outside of scope

During our engagement program we gathered more than 1300 pieces of customer feedback. Recognising that not all feedback was applicable to the Pricing Submission we used a triage process to categorise the feedback into three clearly defined areas – business ideas, customer proposals and inform government. This has ensured the appropriate response, accountability and action occurred.

Figure 7. GMW's triage process.



We then used ***A fairer deal for all*** as an opportunity to inform customers which of their proposals related to the pricing submission and how management planned to address these. A full list of our customer proposals and management comments can be found on our website.

How we are better managing risk

We have developed and implemented an explicit regulatory risk strategy, which seeks to minimise the cost burden we place on customers. We are doing this by optimising the level of risk we manage across our service standards, our expenditure proposals and our tariffs.

To strengthen this pricing submission, we have paid particular attention to the impact on customers of our regulatory risk management and allocation strategies. We have adopted a policy of allocating risk to the party best positioned to manage it, and where possible, for GMW to manage risk on behalf of our customers.

This is consistent with our corporate strategy of minimising bills to our customers, feedback from our customers learned through engagement (a focus on cost reduction), and also the intention of the ESC's approach to economic regulation.

Through GMW's transformation process, we are changing how we consider risk in planning and network operations and management. Where in the past we would have sought to manage uncertainty through conservative cost estimates and regulatory strategies that minimise risk, we have ensured our forecasts and strategies are our best offer, and have avoided including uncertain expenditure in our forecasts, or where uncertainty exists, to ensure minimal allowances are included that cost that risk. An example of this approach is our channel-by-channel approach to renewing our irrigation and drainage networks. Through this approach, we are optimising our assets to reduce the overall cost incurred.

To support this strategy, we developed a Regulatory Risk Framework, which was used by the business to assess the impact of its cost assumptions and regulatory strategies on customers. Within this framework, we documented each of the regulatory risks for explicit consideration, its current approach to managing risk and an assessment of whether these assumptions/strategies seek to manage/transfer risk.

Risks assessed include:

- Approaches to capital planning and forecasting
- Opex price and non-price escalation assumptions
- Connections and delivery growth
- Different tariff options
- The form of price control, and
- Changes to service standards.

Table 14. The risks assessed, options we considered and assumptions we adopted.

Price submission element	Risk option	Price submission strategy
Capex	Contingency – consistency across the different gates of the capital planning process	GMW scales contingency allocation to the complexity and state of knowledge of projects. GMW policy sets contingency at 40 per cent for concept level, 25 per cent at preliminary design and 15 per cent at detailed design. The majority of proposed works are repeatable in nature and contained within programs and are included with a contingency of 15 per cent. GMW has adopted P50 estimates for all our major projects and optimised contingency allowances.
	Uncertain projects – exclude capital projects where the timing is uncertain or the estimates are highly uncertain	GMW has excluded $57.8 million in uncertain projects from our forecast, and will bear the risk of some of these projects being required during the next regulatory period.
	Asset management good practice – alignment with ISO 55000 and DTF's asset management accountability framework (AMAF)	GMW's asset management practices and systems were reviewed prior to Board Attestation of compliance to DTF's AMAF. No significant non-conformances were identified and closure of small gaps has occurred.
	Options analysis – Channel-by-channel assessment	Through taking a varied and less conservative approach to risk using the channel-by-channel tool, GMW will reduce expenditure on irrigation and drainage renewals saving $39.5 million compared to spend in the 2016-20 period.
	Delivery mechanisms	GMW seeks a balance between internal and external delivery models. Smaller scale and repeatable works are generally delivered in-house. Larger more complex projects are contracted out unless there is significant contractual and/or operational risk. This model demonstrates value for money by allowing effective comparison across the two approaches.
	Risk management good practice – alignment with ISO 31000	GMW's approach to risk management adopts the principles, frameworks and processes for managing risk detailed under ISO 31000.
Opex	Productivity greater than the ESC's hurdle rate of 1 per cent per annum	We have been going through a significant business transformation process. While we have identified some cost savings through changes to business processes and improved efficiencies, we have also committed to achieve further savings into the future.
	Labour price growth	Labour increases have been forecast at CPI. The new organisational structure reflects a mix of positions that is forecast to reduce the cost per FTE by 15 per cent. The result from this is a savings of $8.0 million on the annual labour costs.
	Energy price growth	GMW is committed to offset any price increases above CPI.

Price submission element	Risk option	Price submission strategy
	Growth	While there may be small growth in the GMW region, we have applied no increase to our opex to account for this growth.
Demand	Water delivery	A range of climate dependant delivery possibilities were modelled, with the median delivery scenario used as the forecast. Retention of the fixed and variable weighting of tariffs addresses the uncertainty in delivery volumes due to climate over the period.
	Connections	Updated information for the Connections Project used to forecast quantity and type of service points and number of delivery shares.
Tariffs	Reweighting the fixed and variable tariff, such that customers have greater control over the bill, especially in years of lower allocations	GMW engaged its customers through the Tariff and Pricing Summit and a range of workshops to identify any desire for a change to the fixed and variable bill components. Customers were generally supportive of GMW continuing with the current weighting.
	System vs basin pricing	We are proposing to transfer all customers to system based storage pricing. This will ensure all customers that receive the same service, pay the same price. It will also remove any differentiation between water users and non-water users. Where there are any revenue shortfalls from this change, these will be borne by GMW.
	Uniform delivery charges	GMW proposes uniform GMID delivery charges, such that there is no differentiation across its six irrigation districts. This will drive simplification in our charging arrangements, and ensure anyone receiving the same service pays the same price.
Form of price control	Revenue cap	To determine the most appropriate form of price control moving forward, we developed a price control options paper (which can be provided upon request), which detailed the costs and benefits of differing models. It was determined that the current revenue cap optimised risk sharing between the business and its customers, due to uncertainty regarding available allocations during the irrigation season. About 90 per cent of GMW's costs (and hence its prices) are fixed, and with a side constraint of +/- 10%, the potential risk of material annual price variations is limited. We recognise that there is a lack of transparency regarding how our revenue cap currently operates. As such, within the price control section, we have documented the formula for our cap going forward, including how any overs (unders) will be over collected (under collected) revenue will be returned (recovered) in the next year. We have also been transparent regarding estimated over-recovered revenue in the final year of the current regulatory period, and how we propose to return this revenue in year one of the price submission.
	Price cap	
	Tariff basket	

Price submission element	Risk option	Price submission strategy
Length of regulatory period	Four years	The length of the regulatory period is prescribed in the Water Charge Infrastructure Rules, and hence cannot be changed.
Service performance	Proposing an improving target	We have committed to increase our targeted performance for some services, with no increase in cost. Examples include: • We have increased our flow rate performance measure by 2 per cent to 85 per cent.
	Reducing the threshold in the performance measure	We have tightened the threshold on three targets to ensure a higher level of service. This will be achieved at no extra cost to our customers.

By doing this, GMW sought to develop a holistic strategy to managing risk, such that any cost impacts on customers were minimised.

Our Regulatory Risk Framework and the outputs of our analysis is documented, and can be made available to the ESC where requested.

Managing the rigour of our price review

We have adopted good practice project governance, planning and independent review to ensure we have developed our best offer and rigorously met the expectations of both our customers and the ESC.

We have recognised the limitations of our past strategies for developing and defending our price submission. In particular, the quality of evidence provided to the ESC, and the rigour of our forecasts.

To ensure that we have prepared our best offer, we:

- Established good practice project governance and planning arrangements
- Developed a fit-for-purpose monitoring and reporting framework to support Board assurance, and
- Engaged KPMG to undertake a multi-stage detailed review of our price submission, the financial template and supporting forecasts.

The purpose of these arrangements were to ensure the best deal for our customers, but also to support the ESC's assessment of the prudency and efficiency of our proposals. We have worked hard within our business to transform how we run our business, to be more transparent, honest and efficient. We strongly believe the implementation of these arrangements has ensured the rigour of our price submission.

Good practice project governance and planning

At the beginning of 2018, we documented our project objectives and overarching principles that we sought to deliver during the development of our submission and supporting proposals. This included:

Customer advocated – Customers were engaged early, and on issues that mattered to them. We determined a set of outcomes to meet these priorities, and then these outcomes informed the development of deliverable outputs (eg. service performance targets), activities and inputs. Customer groups supported the main elements of our submission.

Alignment with a long term strategy to rationalise assets – GMW will redefine the nature of future capital investment to rationalise underutilised assets (eg. channels, concrete structures) and renew/replace modernised assets (eg. meters, automated gates). Proposed changes will be tested and supported through ongoing customer engagement, and drive better outcomes for both the business and the irrigation district.

Alignment and delivery of the Strategic Advisory Panel's recommendations and the work program of the Transformation Panel – A strong focus on efficiency to offset cost increases and maintaining prices as low as possible, while ensuring financial sustainability and maximising customer value.

On time and on budget – We have met all our internal and external requirements, through good project governance, appropriate management of internal and external resources, and consistency with the budget it allocated at the beginning of the price review.

Articulated the "golden threads" – We have provided a clear narrative through the entire price submission and supporting documents, demonstrating that we are delivering better customer outcomes, have pushed the envelope on cost efficiency, managed regulatory risks effectively and engaged early and on matters of importance to customers, clearly reflecting their views in our proposals.

Risk identified, monitored and mitigated – All material risks (from a likelihood and consequence perspective) were identified early and allocated to responsible parties to manage, with strategies developed for regular monitoring and control.

We created strong project governance arrangements, through:

- A Project Board, comprising members of GMW's Executive Leadership Team and each of the work stream leaders within the organisation
- A dedicated project manager for the duration of the development of the submission
- External regulatory advisors to provide strategic advice over the coordination of the development of our submission
- A detailed project plan which outlined our project structure, project governance, outputs to be delivered and detailed timetable
- A Board assurance framework, detailing steps to be taken to achieve Board assurance
- A detailed terms of reference for each work stream (tariffs, cost allocation, board assurance, regulatory risk, outcomes and service standards, capex, opex, demand, price control and revenue), including:
    - Legislative and regulatory requirements
    - Objectives
    - Scope of work
    - Methodology
    - Resourcing
    - Deliverables
    - Interdependencies with other work streams
    - Sign-off processes
- Fortnightly Project Board meetings
- Weekly project updates provided to the Project Board, detailing progress for completion of each work stream, and
- Regular updates and papers (see below) provided to GMW's Board of Directors of progress to achieving assurance for the final price submission.

These governance arrangements ensured all tasks were completed on time, rigorously and supported the detailed requirements of the ESC's Guidance Papers. These documents are available for ESC review, as required.

Board assurance

Consistent with the ESC's Water Industry Regulatory Order (WIRO) Guidance Paper, GMW's Board of Directors are required to provide assurance over the quality and accuracy of the information included in its price submission, and that the price submission complies with the ESC's Guidance Papers in all material respects.

To do this, we developed a Board Assurance Framework, which sought to detail our internal control procedures and checks to report accountability and progress to GMW's Board, such that Directors have confidence in attesting to the quality, completeness, accuracy and consistency of the price submission and the ESC's financial template.

Under this framework, GMW defined the:

- **conditions for providing assurance** – we defined each of the conditions[2] that GMW must meet, in order for the Board to sign the ESC's assurance statement
- **elements requiring internal sign-off** – we identified the various elements of our price submission that require internal sign-off to allow for Board assurance, and
- **certifications from GMs** – we developed monthly certification status updates, a data checklist report to ensure assumptions and forecasts were robust and accurate, and a data assurance risk monitoring.

The elements of the price submission that required certification, and hence sign-off to support Board assurance, were:

- Tariffs (conditions 1, 2 and 3)
- Cost allocation (conditions 1 and 3)
- Regulatory risk (conditions 1 and 3)
- Outcomes and service standards (condition 3)
- Capex (conditions 1, 2 and 3)
- Opex (conditions 1, 2 and 3)
- Demand (conditions 1, 2 and 3)
- Customer engagement (condition 3)
- Form of price control (conditions 1 and 3), and
- Revenue (conditions 1 and 3).

Monthly certification status reports were completed by each work stream lead and provided to the relevant General Manager. These status reports used traffic lights to indicate progress to achieving Board assurance.

This framework provided a rigorous governance arrangement to support GMW's Board in providing assurance over the quality and accuracy of the information included in our price submission, and that the price submission complies with the ESC's Guidance Papers in all material respects.

Our Board Assurance Framework is available for review as required.

Peer review of our price submission, supporting documents and proposals

To earn the trust of our customers, the ESC and our stakeholders, it was important that we put forward our best offer. This meant:

[2] Condition 1 - information and documentation provided in the price submission and relied upon to support GMW's price submission is reasonably based, complete and accurate in all material respects. Condition 2 - financial and demand forecasts are the best estimates, and supporting information is available to justify the assumptions and methodologies used. Condition 3 - the price submission satisfies the requirements of the 2020 Goulburn-Murray Water price review guidance papers issued by the Essential Services Commission in all material respects.

- Forecasts that only reflect prudent and efficient expenditure
- A price submission that reflects customer values and needs, while addressing all of the ESC's guidance requirements, and
- A submission, financial template and supporting documents that were consistent, accurate and free from error.

While we have implemented our own rigorous internal checks and balances, we also sought to engage an external party to perform a two stage review of our proposals and submission. To do this, we engaged KPMG, for their knowledge of the ESC's regulatory framework and exemplary reputation in the Victorian water sector. The KPMG review included:

- An assessment of our forecasts for prudency and efficiency. This included:
  - **For opex** – justification of GMW's baseline, adjustments to the baseline, necessary step changes during the next regulatory period, and adjustments for ongoing price (e.g. labour) and non-price (e.g. efficiency) trends
  - **For capex** – a review of a sample of our largest projects and programs of work, including assessment of business cases, options analysis, trend analysis, cost estimates, risk analysis and alignment with good practice asset management and capital governance and planning, and
  - **For demand** – an assessment of our forecasting methodologies, underlying assumptions and consistency with historical trends.

- An assessment of our final draft price submission and financial template, to support Board assurance. This included:
  - For assurance condition 1 – Information and documentation provided in the price submission and relied upon to support GMW's price submission is reasonably based, complete and accurate in all material respects.
    - **Information review** – An assessment for accuracy and consistency between our final draft price submission and the ESC's financial template.
    - **Statements review** – An assessment of the overall narrative and customer value proposition contained within the price submission, as compared against the intended objectives of the ESC regulatory framework.
  - For assurance condition 2 – Financial and demand forecasts are the business's best estimates, and supporting information is available to justify the assumptions and methodologies used.
    - **Final forecast review** – review of our models that underpin the opex, capex and demand forecasts, for accuracy, and a final review of expenditure and demand forecasts, against the recommendations made in KPMG's initial review of the forecasts.
  - For assurance condition 3 – The price submission satisfies the requirements of the 2020 Water Price Review Guidance paper issued by the ESC in all material respects.
    - **Compliance review** – Review the written submission to ensure that each of the ESC's Guidance Paper requirements have been explicitly met/addressed.

We have accepted and/or responded to all of the findings provided by KPMG.

Our proposals to meet customer needs

We are committing to a 14.8 per cent reduction in opex, 34 per cent reduction in capex, a 10 per cent real reduction in the average price path and simplified tariffs that ensure every customer who receives the same service, receives the same price.

The following section details our regulatory proposals, designed to address customer feedback and deliver agreed customer outcomes (eg. through expenditure activities).

Our forecasts

Operating Expenditure

Current Regulatory Period Performance

Operating expenditure is forecast to be $18.1 million less than approved over the current regulatory period as shown in Table 15. The positive variance against the approved expenditure reflects our commitment (2013 Blueprint) to reduce annual operating expenditure and our financial objectives under Transformation following the Strategic Advisory Panel (SAP) Review[3].

Table 15. Total prescribed operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	102.9	101.3	101.1	99.4	404.6
Actual / forecast	97.1	98.3	97.0	94.1	386.5
Variance	**-5.7**	**-3.0**	**-4.1**	**-5.3**	**-18.1**

The first three years of the current regulatory period reflect our 2013 Blueprint commitment to efficiencies and cost savings. Controllable expenditure against forecast is expected to be $17.3 million less than approved.

Table 16. Controllable operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	88.2	86.6	85.4	83.7	343.9
Actual / forecast	88.5	80.5	79.5	77.9	326.5
Variance	**0.3**	**-6.1**	**-5.8**	**-5.8**	**-17.3**

[3] GMW Strategic Advisory Panel Review

Following the organisational restructure and workforce review in 2015-16, we established tighter budget controls and a review of each labour vacancy. These actions have allowed us to achieve significant savings compared to our allowance. Labour and contract services have been the main contributors of the savings, followed by materials, plant and motor vehicles.

Table 17. Labour expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	59.5	63.2	63.9	60.6	247.1
Actual / forecast	59.5	56.4	55.2	51.9	223.0
Variance	**0.0**	**-6.8**	**-8.7**	**-8.7**	**-24.2**

The Full Time Equivalents (FTEs) from the original forecast in Water Plan 4 for the year 2018/19 of 549FTEs have reduced by 99FTEs to 450FTEs as at the end 2018-19 with the main reduction occurring in Gravity Irrigation and Water Delivery Management (60 per cent), followed by Corporate and Customer Service and Billing (25 per cent).

The last year of the current regulatory period reflects our transition to a new business structure driven by Transformation. Savings from organisational changes are forecast to commence in 2019-20 and accelerate throughout the regulatory period to 2023. The savings in 2019-20 are offset by a $4.0 million investment required to implement the required changes.

Figure 8. Net savings achieved through Transformation in 2019-20.

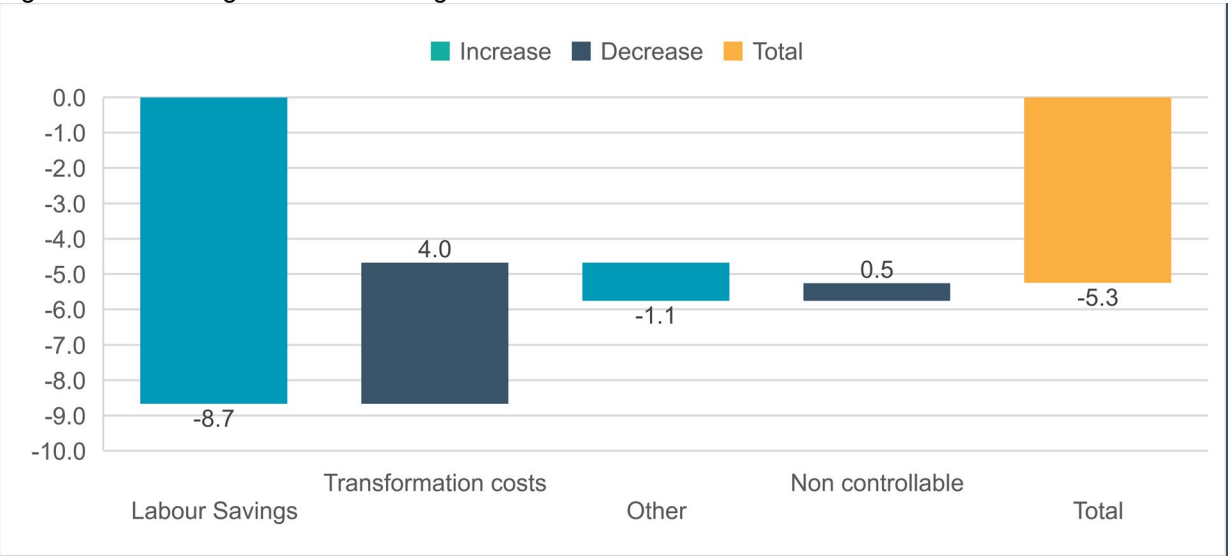


Table 18. Non-controllable operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	14.7	14.6	15.7	15.7	60.7
Actual / forecast	8.6	17.8	17.4	16.2	60.0
Variance	**-6.1**	**3.1**	**1.7**	**0.5**	**-0.7**

Non-controllable expenditure is forecast to be $0.7 million lower than approved expenditure over the regulatory period.

Services performance against current determination

Irrigation and drainage

Over the current regulatory period, expenditure on irrigation (gravity, pumped and water supply districts) is forecast to be $12.7 million less than planned.

Table 19. Irrigation and drainage operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	62.1	62.8	61.4	60.2	246.5
Actual / forecast*	65.2	58.3	56.0	54.4	233.8
Variance	**3.1**	**-4.5**	**-5.4**	**-5.8**	**-12.7**

*Includes $1 million of externally funded expenditure for the Mitiamo Pipeline project

Modernisation has enabled efficiencies and savings in the irrigation business by reducing the workforce required for manual operations and maintenance activities and replacing it with a smaller workforce responsible for the operations and maintenance of the automated aspects of the network. The most evident saving has been and will be in the number of staff needed to run the system.

We have reduced the number of FTE by 22 per cent in the gravity irrigation service since the start of Modernisation. This has been largely driven through reductions in operations staff of 30 per cent.

Figure 9: Gravity Irrigation full-time equivalents.

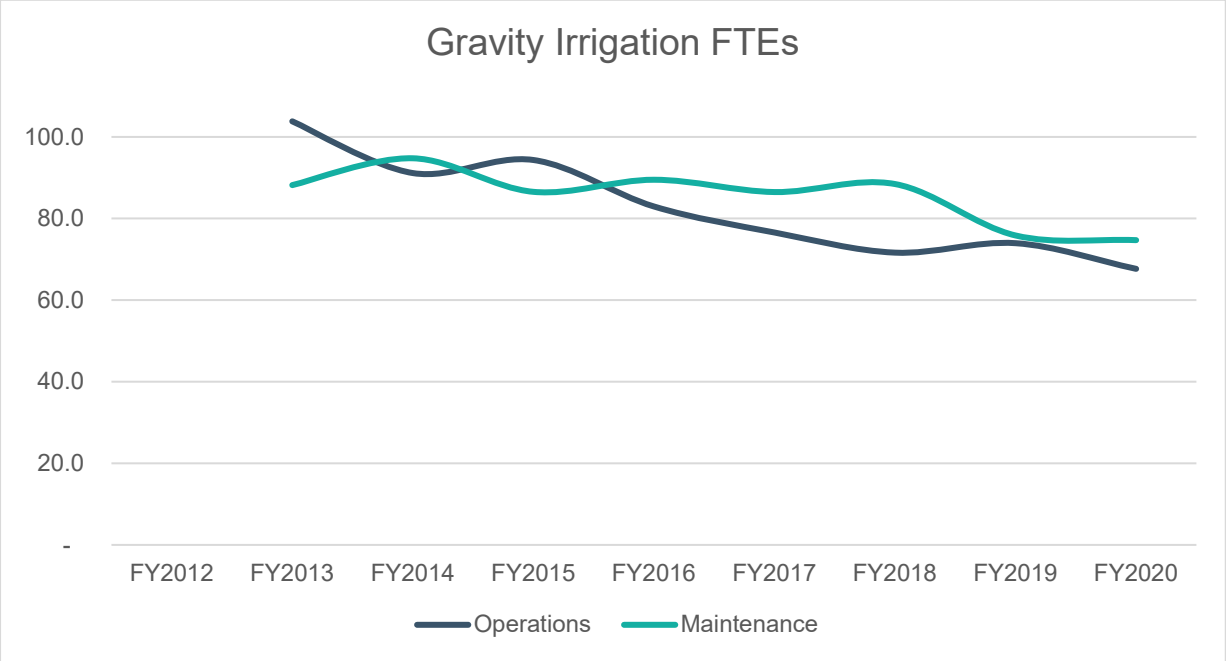
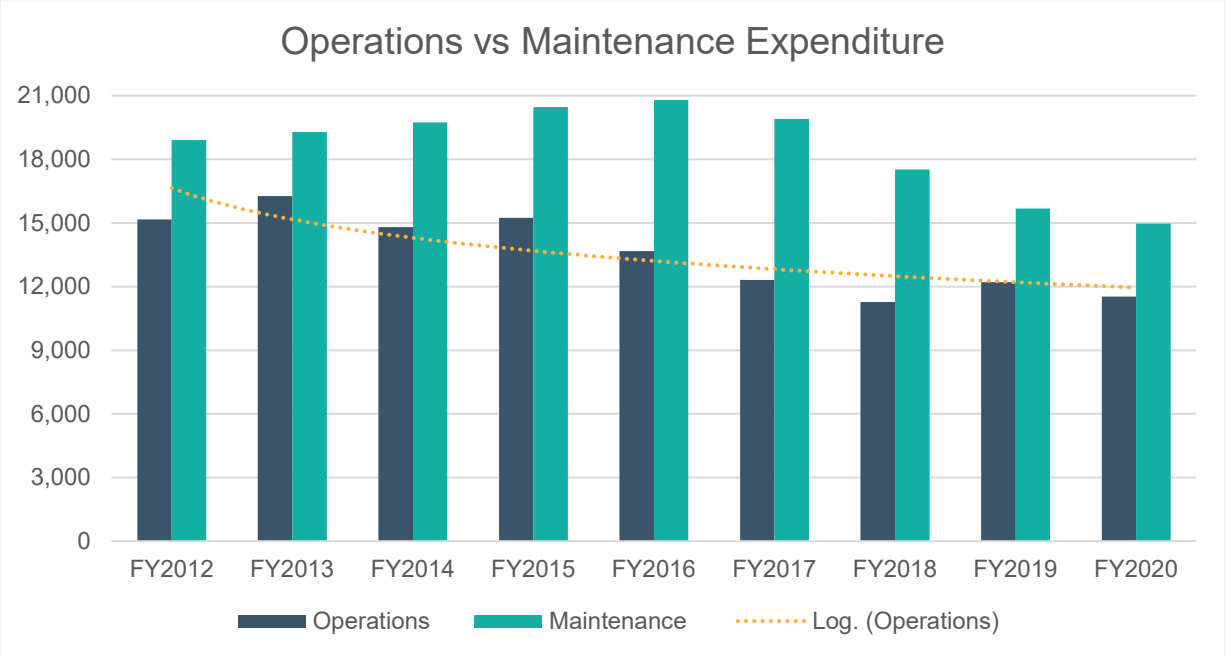


Figure 10: Operation versus maintenance expenditure.



Operations and maintenance costs for the gravity irrigation business are expected to be $4.4 million lower than approved at the end of the current regulatory period.

Further details on how we have seen improvements in business productivity through our Modernisation and Connections Project are detailed on page 51.

Diversions

The performance in the Diversion service reflect a stable operating environment and the commitment to achieving efficiencies. Forecast expenditure is $2.3 million lower than approved.

Table 20. Diversions operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	4.8	5.6	5.6	5.5	21.5
Actual / forecast	5.0	4.8	4.9	4.6	19.3
Variance	**0.1**	**-0.9**	**-0.6**	**-0.9**	**-2.3**

Bulk Water

Operating expenditure in the Bulk Water services is forecast to be lower than approved by $2.7 million.

Table 21. Bulk Water operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	16.5	14.0	14.3	14.0	58.8
Actual / forecast	13.5	13.0	14.6	15.0	56.1
Variance	**-3.0**	**-1.0**	**0.3**	**1.0**	**-2.7**

Note: Excludes Murray Darling Basin Contribution

Operational and maintenance expenditure reflects no floods or emergencies over the period. It also reflects a window for outages to undertake asset inspections and maintenance of bulk water assets during the non-irrigation period.

Customer Service and Billing

The Customer Service and Billing segment performance is in line with approved expenditure. This segment is expected to undergo staffing changes during 2019-20 and 2020-21 to achieve operational savings. The Customer Relations team will be reduced in alignment with the Connections Project winding down.

Table 22. Customer service and billing operating expenditure in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	4.6	4.3	4.1	4.0	17.0
Actual / forecast	4.8	4.5	4.0	4.0	17.4
Variance	**0.2**	**0.2**	**-0.1**	**0.0**	**0.3**

Non Controllable Expenditure

Environment contribution expenditure is in line with approved expenditure.

Table 23. Environment contribution in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	1.8	1.7	2.8	2.8	9.1
Actual / forecast	1.8	1.7	2.7	2.7	9.0
Variance	**0.0**	**0.0**	**-0.1**	**-0.1**	**-0.1**

Contribution to the Murray-Darling Basin is largely in line with approved expenditure. The annual average contribution over the period is $12.7 million compared to $12.8 million approved. The variability in the actual reported figures reflects invoice and accounting timing.

Table 24. Murray-Darling Basin contribution in the current regulatory period (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Approved	12.8	12.8	12.8	12.8	51.3
Actual / forecast	6.7	16.0	14.6	13.4	50.7
Variance	**-6.1**	**3.2**	**1.8**	**0.6**	**-0.6**

Forecasting opex

We have adopted the Base Step Trend (BST) method as the overarching forecasting method, which is consistent with the ESC's approach to forecasting opex. Our BST methodology is documented in a paper that can be provided to the ESC upon request.

We have tested our top-down forecast through bottom-up assessment by activity and business segment. This approach complements our Transformation program and the GMID modernisation programs, which will result in significant savings to operating expenditure going forward.

Baseline

We have used the 2018-19 year to establish our baseline expenditure going forward. The baseline expenditure has been adjusted to exclude non-controllable and non-recurrent expenditure.

Table 25. Adjusted Controllable Opex Baseline ($m).

	2018-19
Baseline year opex	97.0
Less non-controllable expenditure	
Environment contribution	2.7
MDB contribution	14.6
ESC licence fees	0.1
Baseline controllable opex	79.6
Non-recurring items	
Termination packages	0.3
Consultants	0.4
Labour hire	0.2
Surplus plant disposal	0.3
Adjusted baseline controllable opex	**78.3**

Trends analysis

Output growth

There is no expected customer growth. Delivery shares are assumed to remain constant with water deliveries reducing over the regulatory period. No growth has been considered in the forecast.

Real input price growth

While there is a reasonable basis for including price trends above CPI (eg. energy and labour), we are committed to absorbing any increasing above inflation. On this basis, we are bearing the risk of future price increases above CPI.

Productivity

We established a Transformation program following the Strategic Panel Advisory review in 2017[4]. The Transformation program and the GMID Modernisation Program will result in productivity savings of 3.5 per cent per annum.

Savings are expected in labour, contracts and services, fleet and facilities. Review of individual services and maintenance needs has also been undertaken to fine tune the forecast.

Proposed new expenditure

New proposed expenditure for the next regulatory period includes:

- Water storage opex projects ($5.3 million). Projects include dam safety investigations and studies as a result of our recent portfolio risk assessment, Dam Safety design reviews and large maintenance tasks, and
- Further works will be identified as part of these dam safety investigations and reviews, which when known, will be budgeted in the following regulatory period.

[4] GMW Strategic Advisory Panel review

Step changes

No material step changes are included in the forecast.

Table 26. Forecast Expenditure 2020-28 regulatory periods (real $m 2019-20).

	2018-19	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Adjusted baseline controllable opex	78.3	**78.3**	**78.3**	**78.3**	**78.3**	**78.3**	**78.3**	**78.3**	**78.3**
New costs: Water storage projects		2.7	0.8	0.9	0.9	0.5	0.3	0.1	0.0
New costs: Transformation cost		4.0							
Real price growth		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Productivity: Modernisation Impact		-5.4	-5.4	-5.4	-5.4	-5.3	-5.3	-5.3	-5.3
Productivity: Transformation labour savings		-6.0	-6.3	-6.8	-6.8	-6.9	-6.9	-6.9	-6.9
Productivity: Transformation services, materials and equipment savings		-0.6	-0.4	-0.6	-0.7	-0.4	-0.5	-0.5	-0.4
Step changes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total forecast variations		-5.3	-11.3	-11.9	-11.9	-12.1	-12.4	-12.6	-12.6
Total controllable opex		**72.9**	**66.9**	**66.4**	**66.4**	**66.2**	**65.9**	**65.7**	**65.7**
Plus non-controllable expenditure									
Environment contribution		2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
MDB Contribution		13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
ESC Licence fees		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total prescribed opex		**89.1**	**83.1**	**82.6**	**82.5**	**82.4**	**82.1**	**81.9**	**81.8**

Our more detailed underlying assumptions that form the basis of our forecast can be provided to the ESC upon request.

Expenditure for 2020-24 and 2024-28

Forecast operating expenditure for the next regulatory period is $337.3 million. For the 2024-28 period, the forecast expenditure is $328.1 million.

Table 27. Total prescribed operating expenditure in the 2020-28 period (real $m 2019-20).

	2020-21	2021-22	2022-23	2023-24	2020-24	2024-28
Controllable	72.9	66.9	66.4	66.4	272.7	263.4
Non Controllable	16.2	16.2	16.2	16.2	64.7	64.7
Total Prescribed Expenditure	**89.1**	**83.1**	**82.6**	**82.5**	**337.3**	**328.1**

Our savings objectives under Transformation are forecast to be in place by the end of the regulatory period (2023-24). The Transformation savings target is forecast to be reached by 2022-23. The proposed prescribed annual operating expenditure is $82.5 million in 2023-24 compared to $97.0 million in 2018-19. This is a reduction of $14.4 million.

Major opex reductions are forecast in 2019-20 and 2020-21 in line with our transition to a new organisational structure.

Labour is the major contributor to the reduction in proposed operating expenditure in the next price submission. The operating expenditure labour forecast for the last year of the next regulatory period is $11.3 million less than 2018-19. Labour cost reductions are due to a lower number of FTEs and lower average cost per FTE. The new organisational structure reflects a mix of positions that is forecast to reduce the cost per FTE by 15 per cent. The result from this is a saving of $8.0 million on annual labour costs. In addition, $3.1 million annual labour savings are forecast as result of a reduction of FTEs.

Figure 11: Costs across Pricing Submission 5.

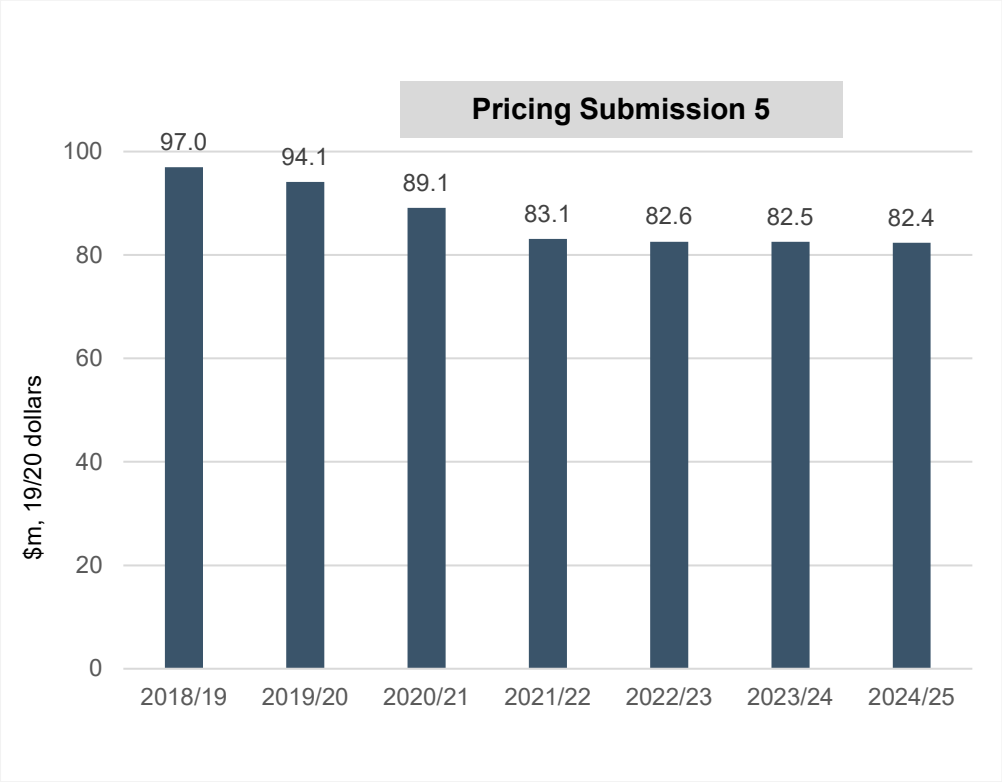
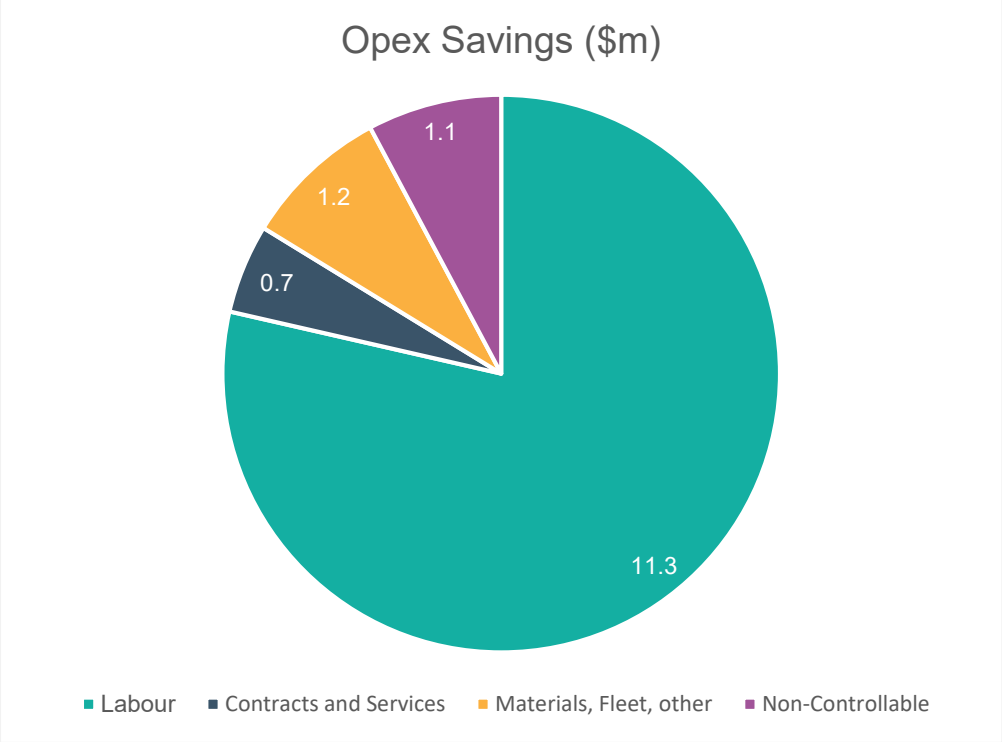


Figure 12: Opex savings.



Further annual controllable operating expenditure savings ($2.0 million) are forecast through reductions in Contracts and Services and Materials and Fleet. Electricity accounts for a small proportion of our operating costs ($1.9 million). Electricity is higher than it was in 2012 due to the Modernisation program. Electricity costs are forecast to be broadly in line with the 2018-19 baseline. While additional small sites will be added to our energy consumption, the costs are offset by efficiencies achieved through the Tatura office consolidation and opportunities for solar connections at our Casey Street head office.

Information Technology annual operating expenditure is forecast to reduce $1.0 million by the end of the 2020-24 regulatory period. The savings are driven by labour and contracts and services costs. We will seek to adopt cloud-based applications where it makes sense to do so.

Our channel-by-channel assessment will allow us to undertake preventative maintenance on critical assets and optimise our capital and maintenance investments.

Our Transformation program will lead to savings across the whole business. The proposed expenditure for the next two regulatory periods by service is shown in the table below.

Table 28. Total prescribed operating expenditure in the 2020-28 period by service (real $m 2019-20).

	2020-21	2021-22	2022-23	2023-24	2020-24	2024-28
Irrigation and drainage	47.8	45.1	45.0	45.0	182.9	181.5
Diversions	4.6	4.3	4.2	4.2	17.3	16.9
Bulk Water	17.2	14.4	14.1	14.1	59.7	52.4
Customer Service and billing	3.3	3.2	3.1	3.1	12.7	12.6
Non-Controllable	16.2	16.2	16.2	16.2	64.7	64.7
Total Prescribed Expenditure	**89.1**	**83.1**	**82.6**	**82.5**	**337.3**	**328.1**

Irrigation and drainage

Gravity irrigation operating expenditure is forecast to be $10.9 million less than 2018-19 on an annual basis. Reduced expenditure in gravity irrigation is mainly driven by the modernisation program. We have expanded on the impact of the Modernisation program on the gravity irrigation business in the “Modernisation impact” section below.

Expenditure in the Subsurface Drainage services will reduce as we deactivate underutilised pumps.

Diversions

Diversions operating expenditure is forecast to be $0.7 million less than 2018-19 on an annual basis as a result of GMW’s Transformation program.

Bulk Water

Bulk Water operating expenditure is forecast to be $0.6 million less than 2018-19 on an annual basis.

Bulk Water services forecast expenditure in the next regulatory period includes $5.3 million in additional expenditure above the routine operating costs. The proposed expenditure covers the following activities:

- Various maintenance tasks across dams $1.0 million

- Inspection, Operation & Maintenance (IOM) Schedule tasks ($0.5 million) – Each storage has a comprehensive IOM Schedule that details all the tasks that must be undertaken to manage and maintain the storage. The majority of the IOM tasks are completed within the recurrent budget, however there are a few larger task that require additional budget. For example, Cattanach Canal ($0.2 million) requires a total structure repaint. The significant cost is due to the need to fully encapsulate the structure whilst undertaking the works to protect staff, public and the environment from the toxic materials that need to be removed from the structure before it can be painted
- Ground anchor testing at Cairn Curran, Buffalo, Laanecoorie and Goulburn Weir, which is cyclic, undertaken approximately every 10 years ($0.5 million)
- Valve refurbishments scheduled at Eildon, Nillahcootie and William Hovell. The valves have all been identified as needing major refurbishment during recent Dam Safety Inspections ($0.7 million), and
- The Eppalock Rock Wall Stability project. This project has had thorough investigation, design and risk assessment. This project will reduce structural, environmental and financial risks. The works will be undertaken when conditions are favourable (low storage level) during the regulatory period ($1.1 million).

As well as dam safety investigations, such as:
- Investigation works identified in our recent Portfolio Risk Assessment ($0.4 million), and
- Dam Safety Design Reviews, which are conducted every 20 years in accordance with the ANCOLD Guidelines ($1.1 million).

Customer Service and Billing

Operating expenditure will be lower by $0.9 million compared with 2018-19 due to reductions in labour. Reductions in this service are expected as the Connections Project winds down.

Non Controllable Expenditure

Murray-Darling Basin Authority (MDBA) contribution forecast for the next regulatory period is $13.4 million per annum.

GMW and DELWP have agreed that:

- GMW needs to provide a predictable price path for customers, and
- A predictable price path will be better achieved by GMW paying DELWP a fixed annual amount. The fixed annual amount of $13.4 million is based on the average annual cash payment made by GMW to DELWP over the last four years.

GMW and DELWP will review GMW's annual contribution payment to DELWP in four years to inform the 2024 price submission.

The Environment Contribution is forecast at $2.7 million per annum based on DELWP's latest historic calculation.

Appendix 4 includes a detailed breakdown of our operating expenditure by service and category, including fully funded government or customer programs.

Reflection of customer feedback

We have been significantly reducing operating expenditure and are committed to achieving the saving recommended by the SAP during the next regulatory period. This is consistent with our customers' feedback.

Our opex forecast reflects our Transformation program that aims to deliver enhanced customer outcomes, including a credible and efficient business. Our operating expenditure forecast is designed to reflect the outcomes customers are seeking from us, including:

We need our water to stay in the region.

We need GMW to be transparent, honest and trustworthy and have a stable leadership team.

We need prices that fairly reflect the true use of infrastructure by all water users (including irrigators, investors and the environment).

We need the business to run lean enough to deliver affordable prices that support farmers to stay on the land.

We need GMW people and systems to deliver the right flow rates in the right timeframes.

We need digital information and communications systems that are fast and simple (for customer service, water delivery and billing).

Managing uncertainty

We have avoided overly conservative cost estimates. Our forecast reflects the business Transformation ambitions towards financial sustainability. We are reducing our ongoing costs of running the business and have put forward our best offer. To do this, we have committed to productivity improvements of 2.5 per cent above the ESC's 1 per cent hurdle rate. This means the risk of opex price and non-price cost escalation sits with GMW and not with our customers.

The forecast method is consistent with GMW's strategy of minimising price increases to customers. Both customer feedback from the pricing submission engagement program (focus on cost reduction) and the ESC's approach to economic regulation support this approach.

Modernisation Impact

The Modernisation Project has allowed us to reduce Gravity Irrigation annual operational expenditure by $3.7 million. A further $4.0 million annual savings are forecasted in the next regulatory period. The annual operating expenditure for the Gravity Irrigation service is forecast to be $7.7 million lower in 2023-24 compared to 2011-12.

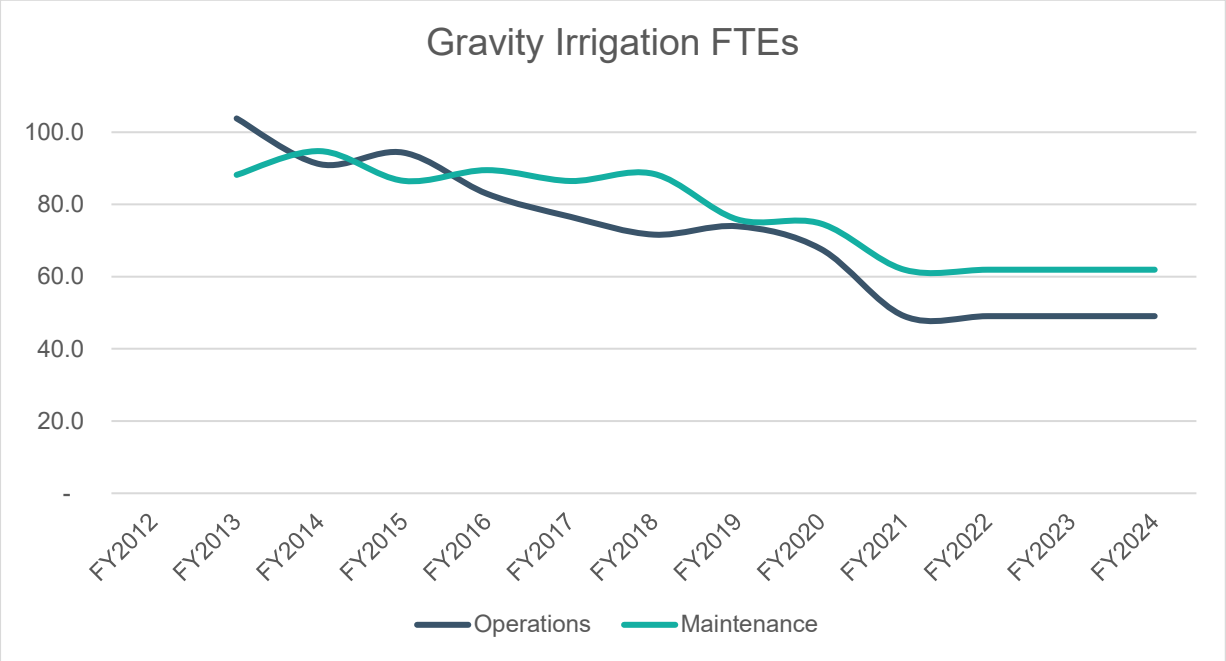
Table 29. Modernisation impact on Gravity Irrigation annual operating expenditure (real $m 2019-20)

	Impact to annual Opex from FY2012 to FY2020	Impact to annual Opex from FY2020 to FY2024	Total change to annual Opex from FY2012
Labour	-3.0	-2.0	-5.0
Equipment & Services	2.7	0.1	2.8
Electricity	0.5	0.0	0.5
Management &Admin & Supplies	0.3	-0.5	-0.2
Total Operations	**0.5**	**-2.4**	**-1.9**
Labour	-0.9	-1.2	-2.0
Materials	-1.5	0.0	-1.5
Equipment and Services	-2.1	0.2	-1.9
Management and Admin and Supplies	0.2	-0.5	-0.3
Total Maintenance	**-4.2**	**-1.5**	**-5.7**
Total Gravity Irrigation	**-3.7**	**-4.0**	**-7.7**

Modernisation of the irrigation supply system, reducing its length and automating regulators and outlets, has enabled us to make efficiency savings in the costs of running the system.

The most evident saving has been and will be in the number of staff needed to run the system. Operations direct labour costs have reduced 20 per cent (from $10.0 million in 2011-12 to $8.2 million in 2018-19) and are expected to be 50 per cent ($5.2 million) of what they were in 2011-12, into the future.

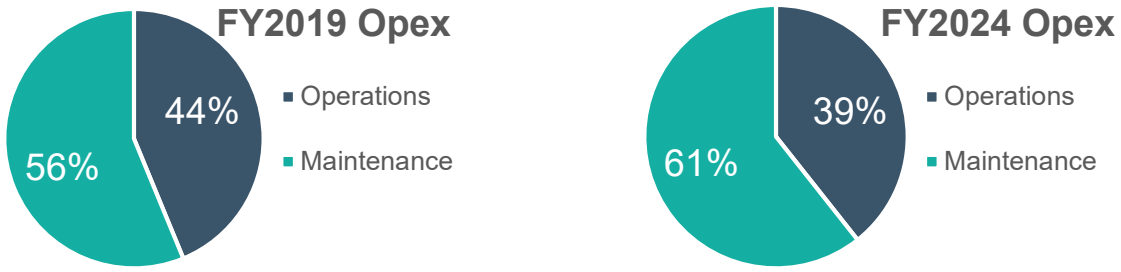
Figure 13: Gravity Irrigation full-time equivalents.



Modernisation has also allowed us to make reductions in staffing levels because the modernised system has a smaller footprint and automation replaces labour intensive manual processes.

Modernisation is shifting our activities resulting in a higher proportion of maintenance expenditure and a lower proportion of operations expenditure.

Figure 14: Opex 2019 and Opex 2024.



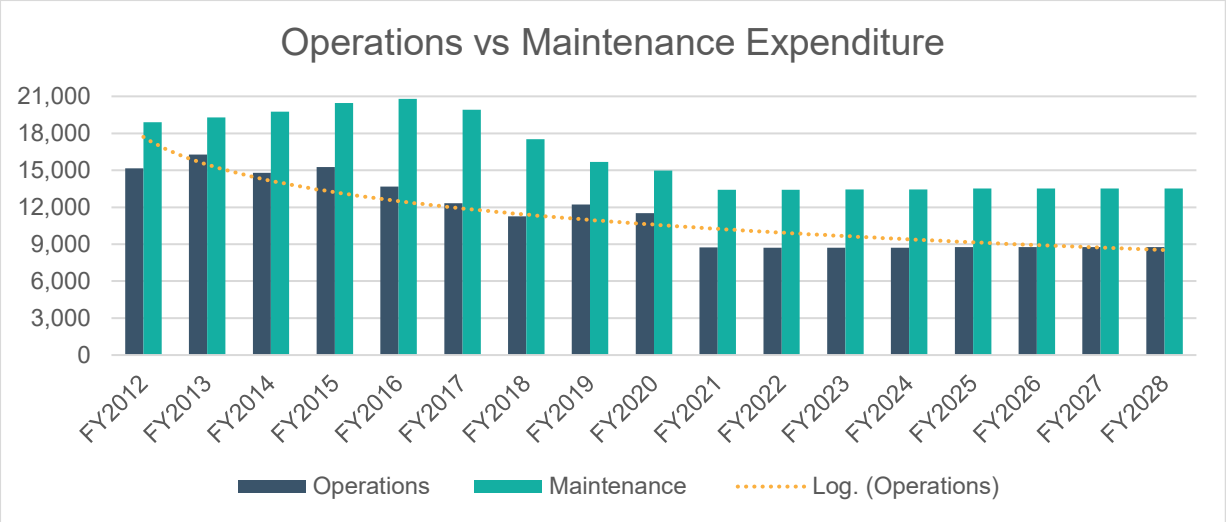
There has been an increase in unit staff costs as the modernised system requires a smaller number of higher skilled staff, raising the level of our average salary. Compared to 2012-13, the cost per FTE is 5 per cent higher.

Our operations cost base includes the costs of technology and software (Rubicon) to run the system. GMW starting incurring this cost in 2012-13.

As part of the Connections Project mid-term review, large kilometres of pipeline (107km) in the spur channels were proposed. The installation of pipelines and retaining these channels was not envisaged in the initial Connections Project objectives and plans. The main impact of this are on electricity costs which will be three times higher than 2011-12 ($0.7 million compared to $0.2 million).

Modernisation has delivered new assets requiring significantly less maintenance in the initial years. Modernisation has also rationalised assets eliminating the need for maintenance.

Figure 15: Operations versus maintenance expenditure.



Maintenance showed an increase until 2015-16 while we managed a hybrid system with many spur channels retained at the same time as the new automated system was introduced. In addition, components were not performing as expected.

In 2015-16 we launched front line maintenance, optimisation and innovation programs. The programs included improved data mining, maintenance analysis and performance monitoring. The front line maintenance, optimisation and innovation programs have resulted and will result in maintenance that is more efficient. Further savings are expected into the future as Transformation drives improved business performance and channel-by-channel assessment is introduced.

Reduction in maintenance expenditure has also been achieved by the implementation of a Plant and Equipment (P&E) Strategy. Key activities of this strategy are:

- Change portfolio to meet the needs of new system (eg. move from bigger machines to smaller ones)
- Rationalisation
- Greater utilisation, and
- Owning plant and equipment, rather than leasing it.

Better procurement policies and practices have driven value for money from our suppliers. Maintenance will continue to change and be tailored as new data becomes available.

Demonstrating prudency and efficiency

We have sought to put forward our best offer, taking into account all of the ESC's detailed requirements contained within its Guidance Papers. We have been ambitious in our assumptions and driven the business to consider how it can minimise cost impacts on our customers.

To ensure the rigour of our proposals, KPMG has independently assessed the prudency and efficiency of forecasts. We have responded to all their recommendations for improvement. An independent statement of KPMG regarding their assessment is included in Appendix 8.

Supporting documentation

GMW has prepared a suite of supporting papers and analysis that can be made available to the ESC to support its review. This is detailed in the following table:

Table 30: Supporting papers

Information	Content	File name
Opex forecast	Annual forecast and actual figures from 2016-17 as per Chart of Accounts (COA)	Opex forecast - working file 300919 FINAL.xlsx
FTE analysis	Summary of labour analysis – ESC template. Includes structure FTE analysis.	ESC template FTE Estimates v7 281019.xlsx
Electricity Forecast	Workings and summary – ESC template	ESC Template and workings Electricity v6 300919.xlsx
ICT Forecast	Forecast and variance analysis – ESC template	ESC Template IT v6 300919.xlsx
Trends file	Trends from 2011 to 2028 as per COA. (Graphs and transformation savings included).	Opex Cost Trend ANALYSIS PS20 v6 300919.xlsx
Transformation	Transformation highlights and work in progress	GMW Taking Action (A3607576).pdf
Connections Impact Analysis	Historic trends and analysis of Gravity Irrigation business by operations and maintenance including FTEs. Connections Impact notes	Modernisation impact on irrigation business v6 300919.xlsx
Assumptions and Issues and Risk Register	Documentation of assumptions, issues and risks.	WP5 Opex Assumptions Issues Risks Register.xlsx
Forecast Summary and data	Annual actual and forecast opex figures from 2011 as per COA. Analysis of forecast and summary as per Baseline methodology. Opex_FO ESC template.	Opex forecast data and summary v7 281019.xlsx
Forecasting method write up	Explanation about how the forecast has been developed.	WP Opex Forecast methodology.docx
Cost Allocation Manual (CAM)	The manual sets out the principles and methodology adopted by GMW for the allocation of first and shared costs between services. Appendix: Overhead table.	TATDOC-#669041-v19-G-MW_COSTING_MANUAL v4.docx
Performance against determination write up	Narrative of performance against determination per business segment.	Opex performance against WP4 (A3599961)
Performance against determination tables	Actual performance against determination tables per business segment and labour driver. Reference to supporting files.	Actuals vs WP4 Comparison tables v6.xlsx
Regulatory risk	Summary of opex impact on pricing and GMW strategy.	Regulatory Risk framework - Opex 300719.pptx

Capital Expenditure

This chapter sets out capital expenditure forecast for the next regulatory period, as well as providing an overview of our methodology in developing this plan. It also provides details in relation to performance against approved expenditure during the current regulatory period. Appendix 4 details our approach to:

- Capital planning and governance
- Asset management
- Risk prioritisation, and
- Managing uncertainty.

Impact of overall business transformation on asset management

In the 2018, the SAP Review[5] included a range of business performance initiatives and outcomes to be achieved in the short, medium and long term. This included changes to project management, capital planning and asset management processes, policies and governance structures. Improved processes included a fit-for-purpose "channel by channel" methodology, which was integral to the development of this Price Submission.

For the last two years of the current period, approximately $15 million of expenditure has been avoided/deferred through adoption of varied risk assessment and acceptance strategies.

Our channel-by-channel framework is detailed in Appendix 5.

Overview of capex by service/driver for 2016-20

The 2016 price determination established a capital allowance of $145.4 million. Capital expenditure of $106.7 million is forecast for the current regulatory period, which will be $38.7 million less than the ESC approved.

Table 31: Determined capital expenditure in the current regulatory period by driver (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Renewals	33.4	24.4	24.1	19.1	101.0
Compliance	6.9	4.3	4.3	3.8	19.3
Improved service	3.9	3.6	3.7	3.2	14.4
Growth	3.9	2.6	2.4	1.8	10.7
Total	48.1	34.9	34.5	27.9	145.4

Table 32: Determined capital expenditure in the current regulatory period by service (real $m 2019-20).

	2016-17	2017-18	2018-19	2019-20	Total
Irrigation and drainage services	31.1	25.9	24.1	19.9	101.0
Diversion services	1.4	1.1	1.1	1.0	4.6
Bulk water services	15.6	7.9	9.3	7.0	39.8
Total	48.1	34.9	34.5	27.9	145.4

Justification for material variances against the determination

During the current regulatory period, we have spent $38.7 million less than the ESC's determination, while maintaining service performance. The most material changes were:

[5] GMW Strategic Advisory Panel review.

- We brought forward approximately $10 million in capital works from the current period (2016-20), into the previous period (2012-16). These items included:
- Tullaroop Dam Safety Upgrade works
- Buffalo Spillway Hoists and Gate Refurbishment
- Bulls siphon replacement brought into the 2016 Price Submission from 2021 to align with Campaspe siphon refurbishment ($2.6 million)
- Acceleration of channel remodelling works in year 1 and 2 ($7.4 million) and use of some structure funds for bank remodelling in years 3 and 4, and
- In years 3 and 4 of the current pricing period approximately $15 million has been deferred based on revised assessment of risk.

Table 33: Actual capital expenditure in the current regulatory period (real $m 2019-20).

	2013 PS (yr3)	2016 Price Submission				2016 PS (yr1-4)
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Approved	34.9	48.1	34.9	34.5	27.9	145.4
Actuals / forecast	43.4	35.3	38.7	19.4	13.3	106.7
Variance	8.5	-12.8	3.8	-15.1	-14.6	-38.7

In the current regulatory period, capital expenditure primarily relates to water delivery and storage services. The capital expenditure for water delivery services includes works to maintain asset reliability and levels of service within the gravity, pumped irrigation and drainage areas, surface diversions and groundwater. The water storage capital expenditure includes works to maintain levels of service, asset reliability to ensure harvesting of flows within major storages and to comply with obligations such as the ongoing commitment to dam safety upgrades. A breakdown of the variances across each of the services is provided in the tables below.

Irrigation and Drainage

The majority of expenditure was delivered through two works programs, the Linear and Structures programs. These programs were made up of numerous discrete packages of work across the GMID. Acceleration of works impacted the mix and scope of works undertaken allowing a greater number of assets to be treated. Larger packages of linear work increased the economies of scale resulting in lower unit rates and longer lengths of poor condition channel bank to be remodelled. Consolidating like structure work packages gave efficiencies and cost savings allowing the planned scope to be delivered under budget.

Table 34: Irrigation and drainage actual capital expenditure (real $m 2019-20).

	2013 PS (yr3)	2016 Price Submission				2016 PS (yr1-4)
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Approved	22.5	31.1	25.9	24.1	19.9	101.0
Actuals / forecast	26.7	28.8	31.5	12.1	8.8	81.2
Variance	4.2	-2.3	5.6	-12.0	-11.1	-19.8

Diversion services

Capital expenditure for diversions services during the current period was predominantly used for Customer Service Point (CSP) replacement when meters failed or were required to be upgraded to meet the AS4747 National Metering Standards for Non-Urban Metering.

The business case was revised to only invest in replacing failed meters, not a proactive meter upgrade program for non-compliant CSP's. Funding to continue replacing failed meters is forecast within the 2020 pricing period.

Works were also undertaken to extend the life of three weirs (Tea Garden Creek, Campaspe and Serpentine).

Table 35: Diversion services capital expenditure (real $m 2019-20).

	2013 PS (yr3)	2016 Price Submission				2016 PS (yr1-4)
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Approved	1.8	1.4	1.1	1.1	1.0	4.6
Actuals / forecast	2.0	0.4	0.8	0.7	0.6	2.5
Variance	0.2	-1.0	-0.3	-0.4	-0.4	-2.1

Water Storage

Expenditure for the current period will be substantially below what was approved by the ESC, as we were able to bring forward works that were forecast to be completed in 2016-17, to 2015-16 (the final year of the last regulatory period). This included the Tullaroop and Buffalo storage works. This meant that majority of the 2016-17 budget was not required.

The deferral of the Laanacoorie Outlet Valve replacement in years 2 and 3 and deferral of the Newlyn Dam Safety upgrade works has also affected the Bulk Water expenditure profile. Works at these two storages were deferred pending the outcome of the Portfolio Risk Assessment and the development of a Dams Strategy to help determine the best way forward for smaller storages with price pressures.

Table 36: Water Storage capital expenditure (real $m 2019-20).

	2013 PS (yr3)	2016 Price Submission				2016 PS (yr1-4)
	2015/16	2016-17	2017-18	2018-19	2019-20	Total
Approved	6.3	15.6	7.9	9.3	7.0	39.8
Actuals / forecast	14.7	6.1	6.4	6.6	3.9	23.0
Variance	8.4	-9.5	-1.4	-2.7	-3.1	-16.7

Information and Communications Technology

Year 1 of the current period saw a reduction in ICT capital spend, primarily as a result in the carryover of effort to close out projects from the last year of the previous pricing period. Year 2 saw projects delivered mostly as expected, with modest variances as a result of savings made, or adjustments in scope as a result of the contemporary context. Year 3 saw a conservative spend due to the ICT strategy and forward look being redefined as a part of the organisation-wide Transformation program.

Table 37: ICT capital expenditure (real $m 2019-20).

	2013 PS (yr3)	2016 Price Submission				2016 PS (yr1-4)
	2015/16	2016-17	2017-18	2018-19	2019-20	Total
Approved	3.1	4.6	4.2	4.1	2.9	15.8
Actuals / forecast	5.1	1.9	3.4	1.4	2.8	9.5
Variance	2.0	-2.7	-0.8	-2.7	-0.1	-6.3

Note: This is total ICT capital expenditure approximately 10% is allocated to non-prescribed. ICT spend is rolled up in corporate allocation and included in totals shown in Tables 43-36.

Delivery of major projects/programs for the current period

The table below details the significant capital projects and programs in the current regulatory period which are discussed above in terms of their variances against approved expenditure. While there have been some under and over expenditure for specific projects and programs, and reprioritisation of expenditure, overall expenditure is less than approved.

Table 38: Significant Projects and Programs (real $m 2019-20).

	Budgeted expenditure allowance	Actual/estimated expenditure	Variance	Driver
Tullaroop Dam Safety Upgrade	4.3	0.2	-4.1	Compliance
Buffalo Spillway Hoists and Gate Refurbishment	1.6	1.8	0.2	Renewals
Buffalo Dam Safety Upgrade – increase spillway capacity	1.6	0	-1.6	Compliance
Cohuna Weir Fishway	2.5	0	-2.5	Compliance
Channel remodelling and Structure replacement	67.7	67.6	-0.1	Renewals
Total	**77.7**	**69.6**	**-8.1**	

Total capex forecast for 2020-24

During the next regulatory period, capital expenditure is forecast to be $96.2 million, or an average of $24.1 million per annum. This is significantly lower than the actual/forecast for the current regulatory period of $26.7 million per year. The decrease reflects more agile and prudent asset management practices including a risk based bottom up approach, ensuring a stable price path for customers.

Maintaining a stable price path for customers, meeting agreed levels of service and using a prudent, bottom up, risk based asset management approach have been the key drivers in developing capital expenditure in this submission. The expenditure associated with each service has been reviewed and prioritised to ensure it is justified in terms of timing and cost. Our reduced capex forecast is largely driven by:

- Irrigation and drainage – $39.5 million reduction, and
- Bulk water – $15.6 million reduction.

This price submission includes three major projects:
- Cohuna Weir Fishway – construction scheduled for winter 2021
- Mitiamo pipeline scheduled for 2021, and
- Tatura Campus Solar Panel Installation in 2022.

In addition to this are a number of works programs as well as the externally funded Koondrook Weir Fishway to be delivered in conjunction with the Cohuna Weir Fishway.

Forecast capital expenditure by service

Forecast capital expenditure by service is documented in the following table.

Table 39: 2020-24 forecast capex, by service (real $m 2019-20).

	2020-21	2021-22	2022-23	2023-24	Total
Irrigation and drainage services	19.4	14.1	14.1	13.9	61.5
Diversion services	0.3	0.3	0.3	0.3	1.2
Water Storage services	5.7	6.8	5.2	6.4	24.1
Corporate Services	2.6	2.3	2.5	1.9	9.4
Total	**28.0**	**23.5**	**22.1**	**22.6**	**96.2**

Irrigation (gravity, pumped and water districts) and drainage expenditure

Irrigation expenditure in the next regulatory period is $61.5 million. This expenditure will enable GMW to meet customer service standard expectations and supply serviced properties with consistent flow rates and orders at the time requested, with minimum interruptions to service that result from asset failures.

The majority of irrigation and drainage capital expenditure is made up of three programs which replace or rehabilitate channel and drainage network assets at the end of their useful life. These programs were reviewed and revised in the current regulatory period to improve efficiencies in managing and delivering the works (as outlined above). They comprise of:

- The **Linear Works Program** associated with channels and drains, such as channel bank remodeling and related earthworks, rock armouring, pipelines, access tracks and fencing
- The **Structural Works Program** which includes renewing and refurbishing road culverts/bridges, occupational crossings, subways, syphons, beaching and backfilling structures to extend life and prioritised replacement/upgrade of bridge and culvert guardrailing
- The **Electrical and Mechanical Works Program** such as pump stations, and,
- Other works such as meter replacements, facility upgrades, plant and equipment.

The value of each of these programs of work is based on the unit rates and predicted quantities of each treatment type. The unit rates reflect the most recent actual rates (based on works undertaken in 2017-18 and 2018-19) and are therefore viewed as a good predictor of cost. The predicted quantities are calculated from the bottom up, considering asset condition and risk as informed by the Asset Information Management System and channel-by-channel assessment, which includes an assessment of predicted demand and use of the infrastructure.

The **Linear Works Program** comprises of works that are aligned with maximising the efficiency of water delivery to customer supply points. They are made up of:

- **Channel Bank Remodeling works –** these involve physical remodeling of the channel banks to ensure channels can provide customers consistent supply levels without leaking. These works can include rock armouring and pipelines, as well as earthworks techniques to extend the life of the bank including desilting and placing material on top of the bank, core trenching and ripping up the bank and rolling/compacting material. GMW has developed a prioritised program of remodeling works using data from the Asset Information Management System based on the location, capacity, condition and risk associated with the assets. Operational and customer representative reviews ensure that

any asset solution adopted is prudent and appropriate given the channel operational factors, revenue, usage and maintenance profiles (channel-by-channel analysis).

- **Access and Fencing works –** access to the automated regulator sites enables proactive maintenance of the regulators and quick response times for reactive maintenance ensuring the benefits of modernization continue to be realised. Site access also allows for spraying of weeds in channels to maintain their effective working order and again ensure that the enhanced service levels from modernisation are realised. Stock damage is the greatest contributor to deterioration of channels and targeted fencing will extend the lives of prioritised channels. When completing other channel works (i.e. prioritised remodeling works), access and fencing will be delivered where required so as to achieve efficiencies.

The **Structural Works Program** provides capital expenditure to replace and refurbish structures, such as road crossings, channel syphons and drainage subways. The expenditure reflects standard unit rates for a program of expected works. The assets to be replaced under this program have been selected using data from the Asset Information Management System, based on location, capacity, condition and risk. A focus of all renewals is that the asset solution adopted provides the lowest whole of life cost outcome, meets the service and safety obligations and is prudent and appropriate given the channel revenue, history and maintenance profile (channel-by-channel analysis).

The irrigation and drainage expenditure is therefore made up of a large number of standard activities at multiple locations rather than a few large items and will ensure the continued delivery of service to customers. During the next regulatory period the works to be undertaken are established using a criticality assessment aligned with the corporate risk framework and refined/enhanced through consultation and input from local operators and customer representatives (channel-by-channel).

The **Cohuna Weir Fishway** is one of three major projects in this price submission period. In 2005, GMW replaced the old Cohuna Weir but no fishway was constructed. It was agreed at the time with the North Central Catchment Management Authority and the relevant government departments that the statutory provision of fish passage could be deferred until a later date. This was in part due to the legislation changing at the time of design completion and in part due to the lack of fish studies to inform the design of a fishway. These studies have now been completed and there is now a requirement from the Catchment Management Authority and an expectation from the local community to construct a fishway. Cohuna Weir Fishway works will be completed in the same winter as the Government-funded **Koondrook Weir Fishway** to minimise disruption to aquatic life and irrigators and maximise the benefit of removing all barriers to fish passage along Gunbower Creek from the Murray to the National Offtake.

The **Mitiamo pipeline** will replace an existing open Stock and Domestic channel network near the townships of Mitiamo, Tennyson and Dingee. The pipeline will connect more than 180 customers to a new pipeline and pumping station. It will service 75,000 hectares and include 375km of pipeline and 376 tapping points. The total cost of the project is estimated to be $29.0 million, with customers contributing $4.3 million in the next regulatory period. The Government has committed to the remaining funding and the project is scheduled to be delivered in 2020-21.

Diversion expenditure

Diversions expenditure of $1.2 million is planned in the next regulatory period, primarily for the replacement of failed meters.

Our Metering Action Plan guides the overall investment in meters. Capital funding requirement for our price submission has been based on the age profile of the meter fleet, historical failure rates and average replacement costs. The program is delivered primarily as a reactive response to a failed meter, however, sites that pose an unacceptable safety risk for operations staff are also targeted.

GMW invest in AS4747 compliant meters to achieve compliance with State Policy and achieve an infield accuracy of +/-5%.

Water Storage expenditure

Water storage expenditure of $24.1 million is forecast, made up of business as usual activities comprising small-medium scale on-going renewals projects and three Dam Safety projects identified through the recent PRA. This will enhance or promote GMW's continued ability to harvest and store water in provision of bulk water service targets and address the highest priority dam safety risks.

The small-medium scale on-going renewal projects are informed by recent comparable projects which provide the most reasonable estimate of expenditure and are supported by an agreed project mandate document that defines the business need and scope of each project. The dam safety projects are proposed at:

- Newlyn
- Nillahcootie, and
- Tullaroop.

They are supported by the recent PRA with a detailed consultant report and project mandates.

Corporate/ICT expenditure

We are forecasting $9.4 million in ICT/Corporate asset expenditure for the next period. This will ensure the organisation's increasing reliance on automation is supported by reliable systems and will drive improvements in data management and systems to facilitate more efficient service delivery.

The corporate capex program includes a regular, baseline refresh of client device hardware that needs to take place every year. The amount budgeted for 2020-21 and onwards is lower than in previous years, and reflects the expected reduction in staff numbers. A move to managed services (cloud) will drive a reducing investment in on-premise hardware, although some ongoing investment is unavoidable, and this will include replacement of computer, storage and network assets. Capital costs will continue with major application version refreshes, although the push to managed services will see this take place at a lower rate during this pricing submission, and then continue to trend lower in the following regulatory period.

Commencing in the second year of the pricing submission a major solar power project (Tatura Campus Solar Panel Installation) at a forecast cost of $1.0 million, will be delivered at the Casey Street Main office in Tatura to reduce energy costs and continue the reduction of greenhouse gas emissions.

Also included in the corporate capex program is expenditure related to ensuring GMW's office facilities are compliant with today's essential service measures for buildings and replacement of plant and equipment at end of useful working life.

Detail of corporate expenditure is shown in Table 40 below.

Table 40: Corporate/ICT Programs in the 2020 Price Submission period (real $m 2019-20).

	Total	2020-21	2021-22	2022-23	2023-24	Driver
Client device hardware refresh	2.2	0.4	0.4	0.4	0.9	Renewals
Computer / storage / networking hardware refresh	3.1	1.4	0.6	0.7	0.4	Renewals
Solar power for main office sites	1.0	0.0	0.5	0.5	0.0	Renewals
Application program	1.3	0.3	0.3	0.4	0.2	Renewals
Essential service upgrades	1.2	0.3	0.3	0.3	0.3	Renewals
Plant and equipment replacement	1.5	0.4	0.4	0.4	0.3	Renewals

Capex forecast by driver

During the next regulatory period, renewals expenditure is the most significant driver of capital expenditure across the business. This is consistent with the current regulatory period.

Compliance expenditure to meet obligations imposed on the business, eg. Occupational Health & Safety, components of metering and facility improvements under the statement of obligations forms a smaller component of expenditure during the next regulatory period.

Expenditure on growth includes the customer contribution to the largely externally funded Mitiamo pipeline in year 1 and a small external investment in expanding the drainage service within the GMID. Further detail of capital expenditure by cost driver is shown in the following table.

Table 41: Forecast capital expenditure by driver (real $m 2019-20).

	2020-21	2021-22	2022-23	2023-24	Total
Renewals	23.3	22.3	21.5	20.4	87.5
Improvements / Compliance	0.2	1.0	0.4	2.0	3.6
Growth	4.5	0.2	0.2	0.2	5.1
Total	**28.0**	**23.5**	**22.1**	**22.6**	**96.2**

Major projects for the 2020-24 period

As outlined above, there are three major customer-funded projects (Cohuna Weir Fishway, Mitiamo Pipeline and Tatura Campus Solar Panel Installation) during the next regulatory period with total expenditure of $11.9 million. These major projects are each supported by a business case, which considers the project drivers, justification, options, expenditure (capital and operating) and delivery approaches. Each major project and program has been forecast in line with GMW's Policy on Cost Estimation and Risk Sharing, which includes an appropriate level of contingency based on the current understanding of the project scope and risks. The contingency allowance will be specific to each project and specified in each associated business case document.

In providing irrigation and drainage services, there are also several large composite programs of expenditure detailed above and outlined in the following table. These programs are also supported by business cases which consider the project drivers, options, expenditures and delivery approaches. To address dam safety risks associated with potential loss of life, there is also a program consisting of three projects within the next period supported by the PRA and project mandate documents.

Each of these business cases are available for review by the ESC. The following table details each of these major projects/programs, the timing of expenditure and the driver for the works. The long-running Channel Remodelling and Structure Replacement Program has been reduced by approximately $25 million (compared to the 2016 Pricing Submission) as a result of applying the channel-by-channel asset investment prioritisation.

Table 42: Forecast major projects and programs 2020-24 (real $m 2019-20).

		Total over Project life	2020-21	2021-22	2022-23	2023-24	Driver/s
Cohuna Weir Fishway – construction of new vertical slot fishway	Cohuna Weir Fishway works will be completed in the same winter as the Government funded Koondrook Weir Fishway to minimise disruption to aquatic life and irrigators and maximise the benefit of removing all barriers to fish passage along Gunbower Creek from the Murray to the National Offtake.	2.8	0.2	1.3	1.3	0.0	Compliance, Stakeholder reputation
*Koondrook Weir Fishway – externally funded		3.7	2.7	1.0	0.0	0.0	Compliance, Stakeholder reputation
Mitiamo Pipeline	Connections will deliver the new Mitiamo pipeline in the first year of the 2020 Price Submission. The government endorsed business case included a customer contribution to the capital project of $4.35 million.	4.3	4.3	0.0	0.0	0.0	Customer service levels and satisfaction, Water System Reliability, Stakeholder Reputation – Note total project $29 million, balance funded by State and Federal Governments
Tatura Campus Solar Panel Installation	The Tatura Campus Solar Panel Installation is the highest electricity-based contributor to GMW's carbon emissions reduction. This project seeks to deliver a 487.3 T CO2-e per year reduction – representing 4.6 per cent of GMW's 2017-18 emissions total.	1.0	0.0	0.5	0.5	0.0	Sustainable Pricing, Stakeholder Reputation, Enhance Business Assets
Channel remodeling – renewal of channel banks	The Linear Works Program provides capital expenditure to remodel channel banks to ensure customers get consistent supply levels without leaking.	24.4	5.9	6.1	6.4	6.0	Health & Safety, Sustainable Pricing, Customer service levels and satisfaction, water system reliability
Access tracks and fencing –	Access also allows for spraying of weeds in channels to maintain their	4.8	1.2	1.2	1.2	1.2	Health & Safety, Sustainable Pricing, Customer service levels

		Total over Project life	2020-21	2021-22	2022-23	2023-24	Driver/s
construct access tracks and fencing	effective working order and ensure the enhanced service levels from modernisation are realised. Stock damage is the greatest contributor to deterioration of channels and targeted fencing will extend the lives of prioritised channels.						and satisfaction, water system reliability
Structures – replacement and refurbishment on channels and drains	The Structural Works Program provides capital expenditure to replace and refurbish structures, such as road crossings, channel syphons and drainage subways.	13.4	3.6	2.7	3.0	4.0	Health & Safety, Sustainable Pricing, Customer service levels & satisfaction, water system reliability
Meter Replacement	GMW will continue the Meter Replacement Program to replace failed meters with pattern approved and compliant devices.	5.9	1.5	1.3	1.5	1.6	Compliance, Sustainable Pricing, Customer service levels and satisfaction, water system reliability
Dam Safety – Newlyn, Nillahcootie and Tullaroop	The Dam Safety Program responds to issues identified through the recent PRA at Tullaroop, Nillahcootie and Newlyn. Design will be completed at all three sites. Works will be completed at Newlyn in the regulated period and works commenced at Nillahcootie and Tullaroop (to be included in 2024 Pricing Submission).	3.6	0.2	1.0	0.4	2.0	Health & Safety, Sustainable Pricing, Risk, Compliance, Customer service levels and satisfaction, water system reliability

Impact of modernisation/Connections Project

The Connections Project's fundamental objective was to invest in infrastructure to deliver water savings. We have benefited from these works in the form of future capital cost avoidance.

Since 2012, the Connections Project has delivered capital cost avoidance through executing the following activities shown in Table 43.

Table 43: Avoided capital costs over 50 years (real $m 2019-20).

Connections Activity	No.	Unit	Capital Avoided cost
Length Decommissioned Channel	1,513	km	378.2
Non-Regulating Structures on Decommissioned Channel	2,966	Each	166.3
Regulating Structures on Decommissioned Channel	1,830	Each	109.8
Monitoring Stations on Decommissioned Channel	16	Each	0.2
Length Channel Bank Remodelling	34	km	7.1
No. New Concrete Reg Flumes (inc Automated Gate)	544	Each	32.6
New Culverts associated with new RegCombine Flume	41	Each	0.8
Modernised Irrigation Outlets	4,968	Each	124.2
SCADA Nodes – Upgraded SCADA Canopy	48	Each	5.0
TOTAL Avoided Capital Cost			**824.4**

In total the project will result in excess of $800 million of capital cost being avoided over the next 50 years. The true benefits of the Connections Project is very difficult to quantify due to the interrelation between the Transformation Project and the Connections Project. Many of the Transformation benefits are a result of modernisation over the past 15 or so years and Connections is a vital segment of this Transformation journey.

Reflection of customer feedback

During stage 3 of our engagement program, we engaged with customer representatives as part of the GMID Asset Strategy Working Group and the GMID Irrigation Tariff Group to understand what services customers value and their thoughts regarding ongoing asset investment. In addition, broader engagement with customers was also undertaken across the region and online during 2019. Customers indicated that while price reductions are their priority, they have sustained expectations regarding the infrastructure that supplies their water and are keen to see price reductions derive from reduced operational expenditure through Transformation. The proposed capital expenditure has been focused on maintaining our ability to deliver water at the time and flow rate customers have requested it.

Our capital expenditure forecast is designed to reflect the outcomes customers are seeking from us, including:

- **Reliable Supply** – 91 per cent of our capital program is relating to the ongoing renewal of assets, ensuring continued reliable supply for our customers
- **Credible Business** – We are implementing a new channel-by-channel approach to optimising asset renewals. This has materially decreased renewals expenditure by 13 per cent compared with approved expenditure during the current regulatory period. This supports the directive from customers to reduce cost, and hence bills. The recently completed Portfolio Risk Assessment assures our customers and regulators that we are appropriately managing risk at critical infrastructure

- **Fair Pricing** – Our proposed harmonisation of delivery charges supports an optimised approach to capital delivery across the entire GMID
- **Efficient Operations** – Our improved channel-by-channel modelling approach to support capital planning and investment is driving better asset performance, and optimising subsequent maintenance costs. This approach ensures appropriate capex-opex trade-offs, and the lowest total expenditure outcome across the GMID
- **Responsive Services** – GMW has increased the target for delivering orders within 24 hours, at no extra capital cost. By doing this, we will be pushing our network harder. We are also proposing to tighten the threshold regarding customer notifications for restrictions on diversions, without any increased spend on our IT assets, and
- **Simple Systems** – We are transitioning ICT from hard assets to cloud technology, providing better access to digital information and a more interactive web platform. This is driving lower ICT capex.

Managing uncertainty

In our forward planning we identified a number of works programs that could be considered as valid but through our risk prioritisation process, we have excluded projects where there is a lack of certainty regarding timing, or where cost estimates are not rigorously developed/tested. All projects will require further review and consideration for the next price submission. The excluded projects were:

Table 44: Excluded Projects from 2020-24 Forecast (real $m 2019-20).

Program	Estimated Forecast
Linear-Composite Bank	8.0
Structure-Beaching	2.0
Linear-Rock Armouring	4.0
Structure-Extended Guardrail program	2.0
Linear-Major Carrier Fencing	0.9
Diversions-Telemetry	2.7
Waranga Dams Safety	9.1
Eildon Dam Safety	19.1
Eppalock Dams Safety	4.0
William Hovell Dam Safety	6.0
Total Excluded Projects	**57.8**

We are managing risk where we are best placed to do so, to reduce our cost impact on our customers. We have done this by:

- Adopting P50 estimates
- Optiminsing contingency allowances
- Including a reasonable rate of improvement in productivity in our renewals program (2 per cent over the next regulatory period, as compared with performance during the current regulatory period), and
- Utilising contractual agreements where needed to manage the risk of project delays and overruns.

Demonstrating prudency and efficiency

Similar to opex, we have put forward our best offer, considering all of the ESC's detailed requirements contained within its Guidance Papers.

To ensure the rigour of our proposals, KPMG has independently assessed the prudency and efficiency of forecasts. We have responded to all their recommendations for improvement. An independent statement of KPMG regarding their assessment, is included in Appendix 8.

Supporting documentation

GMW has prepared a suite of supporting papers and analysis that can be made available to the ESC to support its review. This is detailed in the following table:

Table 45: Supporting papers.

Information	Content	File name
Asset Management	Asset Management Policy	A3377848
	43 x Asset Class Management Plans	qA104718; qA26915
Risk Management	Board Policy and Framework	A3395664
Project Documentation	Dams project mandates	qA223774
	Drainage Structures Business Case	A3624658
	Irrigation Structures Business Case	A3643975
	Linear Program Business Case	A3641186
	Elec/Mech Project Mandates	fA24621
	Cohuna Weir Fishway Business Case	A2980062
	Mitiamo & District Reticulated Water Supply Business Case	A2812998
	Tatura Campus Office Solar Power Business Case	A3144853
Project Prioritisation	Business Drivers	A3677207
	Decision and Priority Manual	A980099
Financial Management	Contingency Allocation Policy	A462490

Revenue requirement

To deliver the proposed outcomes and meet the required service standards in this price submission, the forecast revenue requirement for the next regulatory period is $439.6 million. This is $65.0 million lower than the ESC's determination in the current period, and $60.8 million lower than the total revenue collected during the current period.

Figure 16. Annual building blocks.

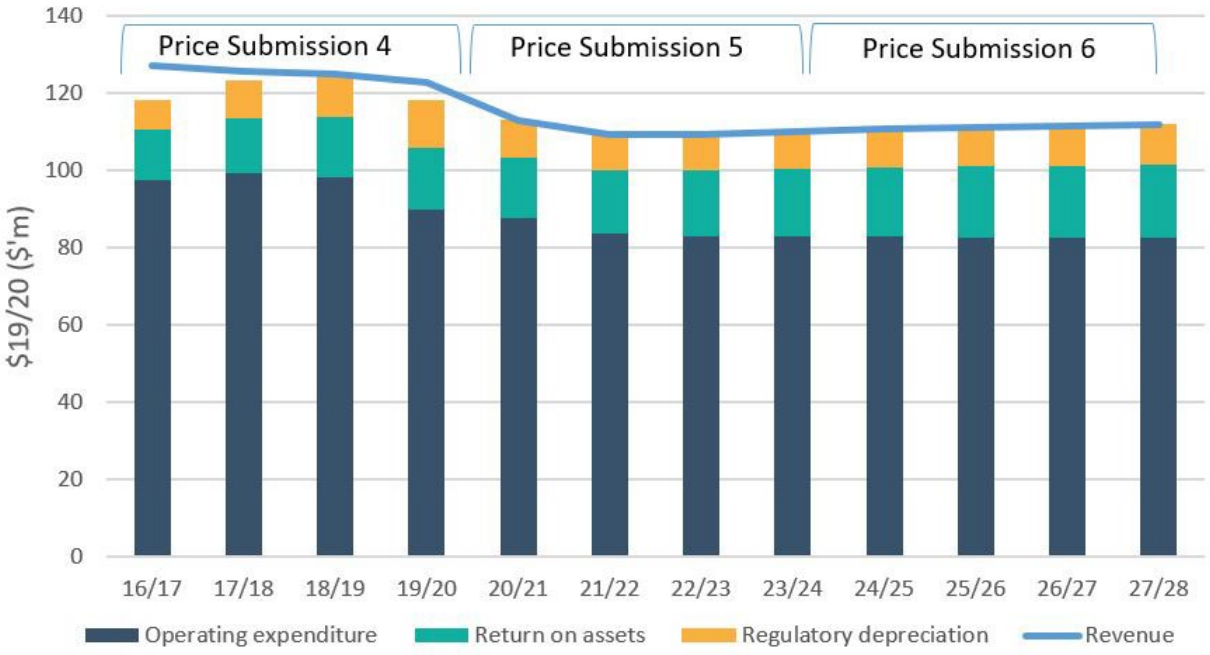


Table 46: Annual building block forecast.

Revenue requirement 2019/20 $'m	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Operation Expenditure	97.3	99.1	98.3	89.7	89.1	83.1	82.6	82.6	82.4	82.0	81.8	81.8
Return on Assets	13.2	14.5	15.5	16.1	15.3	15.8	16.3	16.8	17.3	17.8	18.3	18.7
Regulatory Depreciation	7.7	9.5	11.1	12.3	9.5	9.4	9.5	9.6	9.9	10.1	10.3	10.5
Total Revenue Requirement	**118.2**	**123.1**	**124.9**	**118.1**	**113.9**	**108.3**	**108.4**	**109.0**	**109.6**	**109.9**	**110.4**	**111.0**

The proposed revenue requirement is almost 12 per cent lower than the actual revenue generated in Pricing Submission 4. This is predominantly due to the transformation savings achieved through operating expenditure. These transformation savings are partially offset by a 5 per cent increase in regulatory depreciation and return on assets due to the growing Regulated Asset Base (RAB). The majority of our asset base is gifted, thus capital expenditure programs increase RAB through replacement of gifted assets and result in an increase in regulatory depreciation and return on assets.

Each of the building blocks listed above are described in further detail in the following chapters, except the non-prescribed services. Non-prescribed services include revenue from sources such as rental from commercial lease arrangements, houseboat licences, and sundry recoverable works.

The revenue requirement is proposed to be generated through levying of fixed and variable charges to GMW's irrigation, bulk water and diverter customers based on the services provided and in accordance with the tariff criteria.

Taxation

Since the inception of the National Tax Equivalent Regime (NTER) administered by the Australian Tax Office (ATO), GMW has accumulated significant carry forward tax losses. These tax losses are expected to cover any potential tax payable generated throughout the 2020-24 regulatory period. No tax payable is therefore forecast during this period.

Return on the regulatory asset base

The revenue requirement includes a return on the RAB through regulatory depreciation and return on assets.

The table below shows the forecast closing RAB at the end of the current regulatory period. The roll forward is completed with a combination of actual results (until 2018-19) and then the current forecast for 2019-20. We have used the current forecast RAB in 2019-20 rather than the ESC forecasted expenditure as we are currently forecasting lower expenditure in 2019-20 and therefore cost savings can be passed back to customers more swiftly. The closing value of the RAB is forecast to be $374.1 million.

Table 47: Forecast value of the RAB at the end of the fourth regulatory period.

Rolled forward asset base $m		Fourth Regulatory Period			
	2015-16	2016-17	2017-18	2018-19	2019-20
Opening asset base	280.8	310.5	337.8	365.8	373.6
plus Gross capex	43.4	35.3	38.7	19.4	13.3
less Government contributions	0.2	0.2	0.9	0.1	0.4
less Customer contributions	0.0	0.1	0.1	0.2	0.0
less Proceeds from disposals	0.0	0.1	0.2	0.1	0.1
less Regulatory depreciation	13.5	7.7	9.5	11.1	12.3
Closing asset base	**310.5**	**337.8**	**365.8**	**373.6**	**374.1**

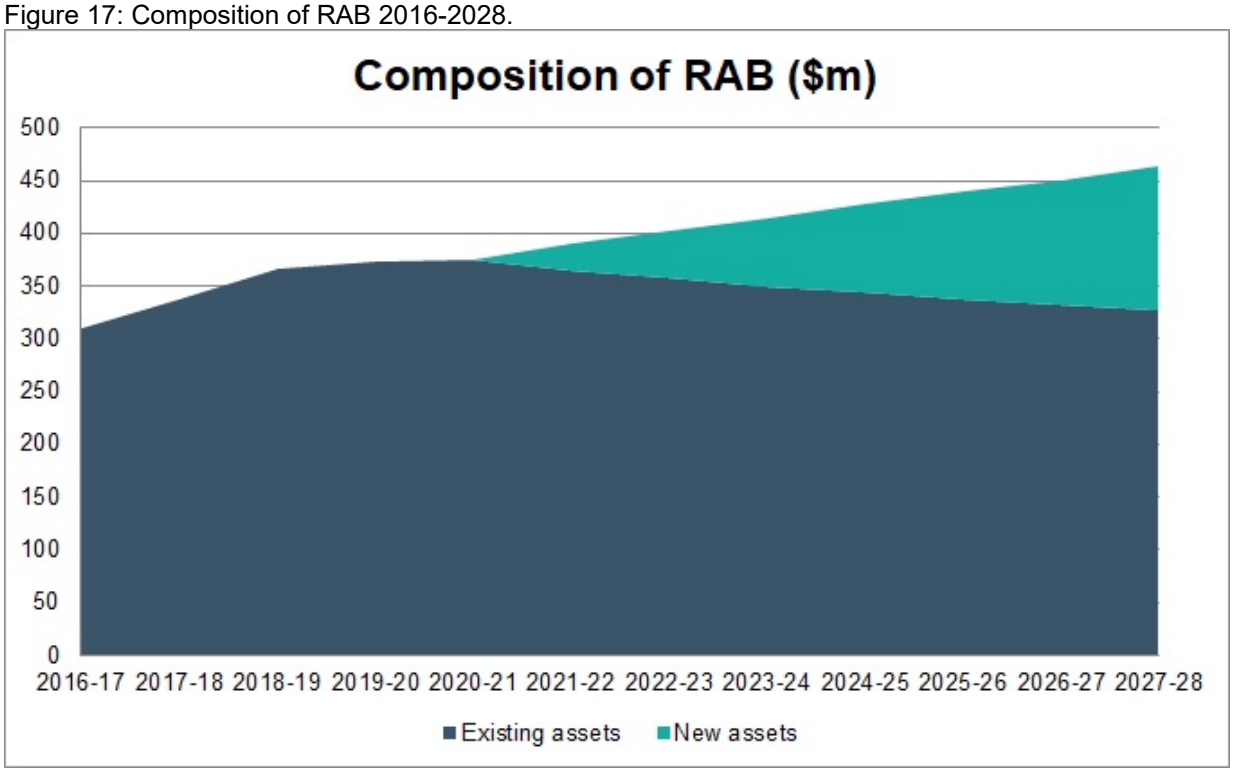
The proposed capital expenditure program for the next two regulatory periods is forecast to increase GMW's RAB in line with the table below. We have forecast proceeds of disposal based on historical trends. Most of the assets disposed are rationalised and therefore not able to be sold, proceeds from disposal relates predominantly to minor income generated from sale of items of plant and equipment that have broader value. Customer contributions are generally minor and ad-hoc therefore customer contribution estimates are not built into the RAB.

Table 48: Estimated value of the RAB for the fifth and sixth regulatory periods.

Rolled forward asset base $m	2019/20	Fifth Regulatory Period				Sixth Regulatory Period			
		2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Opening asset base	373.6	374.1	389.6	402.4	414.7	427.3	438.9	450.6	462.8
plus Gross capex	13.3	28.0	23.5	22.1	22.5	21.8	22.0	22.8	18.6
less Government contributions	0.4	2.9	1.2	0.20	0.2	0.2	0.2	0.2	0.2
less Customer contributions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
less Proceeds from disposals	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
less Regulatory depreciation	12.3	9.5	9.4	9.5	9.6	9.9	10.1	10.3	10.5
Closing asset base	**374.1**	**389.6**	**402.4**	**414.7**	**427.3**	**438.9**	**450.6**	**462.8**	**470.6**

The composition of our RAB over the current and next two regulatory periods is represented in the graph below, showing the impact of the proposed capital investment during this period on the RAB.

Figure 17: Composition of RAB 2016-2028.



Depreciation

Depreciation is categorised into the asset types listed in the table below. The depreciation rates are applied on a straight line basis over the expected useful lives of the assets as determined by the asset type.

Table 49: Estimated regulatory depreciation 2020-2028.

Depreciation by Asset Category 2019/20 $'m	Useful life	Average remaining useful life	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Access & Fencing	20	15.1	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2
Buildings	40	32.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Dams Structures	60	56.4	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8
Electrical, SCADA & Radio Network	15	12.0	0.6	0.7	0.9	1.1	1.3	1.4	1.7	1.9
Equipment & Systems	5	2.3	2.7	2.3	1.8	1.7	1.5	1.3	1.2	1.0
Infrastructure	100	98.1	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.4
Meters	30	24.3	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6
Mobile Plant & Vehicles	10	5.9	0.9	1.0	1.0	1.0	1.1	1.2	1.1	1.1
Pump Stations	30	19.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Retail Structures	80	71.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8
Total Prescribed			**9.5**	**9.4**	**9.5**	**9.6**	**9.9**	**10.1**	**10.3**	**10.5**

Depreciation is expected to continue increasing over the longer term, as we replace gifted assets (that have no value in the RAB) at the point of renewal.

Contributions

Contributions are received from the government to fund capital expenditure. These are ad hoc in nature and generally small in value. When forecasting the estimated RAB for the fifth and sixth regulatory periods, where agreements are either in place or expected to be in place, then the contribution and corresponding capital project has been recorded. Otherwise a minor level of funding has been recorded.

Form of price control

GMW currently uses the revenue cap form of price control with a +/- 10 per cent rebalancing constraint to manage customer prices. GMW proposes to continue using the revenue cap form of control including the +/- 10 per cent rebalancing constraint for the WP5 period. GMW will use this rebalancing constraint in such a way that limits the weighted average real price change to +/- 10 per cent for any individual tariff in any one year. GMW has identified in the *Tariff* section any tariffs that are proposed to be exempt from the rebalancing constraint

Over and under recoveries of the revenue cap will be passed through to customers during the annual price review where prices will be adjusted to ensure that water plan to date revenue is lower than the water plan to date revenue cap.

$$cap_t = \left[rev_t + \left(cap_{t-1} - \sum_{i=1}^{n} \sum_{j=1}^{m} p_{t-1}^{ij} q_{t-1}^{ij} \right) * cpi_t * (1 + WACC) \right] + MDBA$$

Where GMW has n tariff categories, which have up to m tariff components, and where:

p_{t-1}^{ij} is the proposed tariff component j of tariff i for the regulatory year $t-1$

q_{t-1}^{ij} is the forecast quantity of tariff component j of tariff i for the regulatory year $t-1$

cap_t is the revenue cap for the regulatory year t calculated in accordance with the formula set out above

cap_{t-1} is the revenue cap for the regulatory year t-1. For the second year of the regulatory period, cap_{t-1} is equal to rev_t for the first regulatory year. For subsequent regulatory years, cap_{t-1} is the amount calculated in accordance with the formula set out above.

rev_t is the total revenue requirement for the regulatory year t.

cpi_t is the Consumer Price Index: All Groups Index for the eight Capital Cities as published by the ABS for the March quarter immediately preceeding the start of the regulatory year, divided by the same index from the March quarter of the previous regulatory year.

$WACC$ is the weighted average cost of capital, proposed to be 4 per cent.

$MDBA$ is an allowance to reflect a material change in the cost contribution required by GMW to DELWP in respect of the Victorian share of the MDBA contribution.

Demand

Overview

Demand forecasts are an important element of our pricing proposal. In developing our forecasts we have sought to ensure that they reflect the most recent data available and that the assumptions underlying them reflect our best expectations of outcomes over the next five years.
The main drivers of our demand forecasts over the Pricing Submission 5 period include:

- The continuing impact of the Connections Project. The Connections Project has had a significant impact on forecasts through its modernisation of the irrigation network, upgrading of service points, channel remediation and other water savings projects. The biggest impact of the Connections Project relates to the number and type of service points and number of delivery shares and is evident in the step changes across a number of forecasts for Pricing Submission 5 compared to the forecasts for Pricing Submission 4. While the project is nearing completion there are still some forecast reductions in service points and delivery share due to Connections works expected to be completed through season 2019-20.
- An expectation that water moving from productive use within the GMID to higher value use in horticulture on the lower section of the Murray River will result in further declines in forecast delivery volumes.

Both of these drivers and their impacts on our forecasts are discussed in this chapter.

Demand forecasts

This chapter focuses on the demand forecasts for the primary tariff classes based on revenue materiality, operational importance and the materiality of forecasted change. The forecasts included in the chapter are outlined in Table 50. Further technical forecasting information is available in GMW's Demand Data Manual.

Table 50: Demand forecasts by service and tariff.

Service	Demand forecasts (tariffs)
Irrigation services	Infrastructure Use Fees Infrastructure Access Fees Service Point Fees
Customer Service and Billing.	Customer Fee
Drainage services:	Area Fee Water use fee Subsurface Drainage local benefit Water Use Fees
Diversion services	Surface Water Diversions (Access Fee – Service Point) Ground Water Diversions (Access Fee - Service Point)
Bulk Services	Entitlement Storage Fee HRWS Entitlement Storage Fee LRWS High Reliability (HR) Low Reliability (LR)

The following sections outline the forecasts, forecasting method and major forecasting assumptions used to determine the proposed demands for this Price Submission.

Irrigation services

Water deliveries and demand forecasts for Irrigation Infrastructure Use Fees

The Pricing Submission 5 demand forecasts for Infrastructure Use Fees are determined by the volume of water delivered to Goulburn Murray Irrigation Districts over the pricing period. The annual volume of water deliver to the GMID is highly variable and dependent on weather conditions.

Current period performance

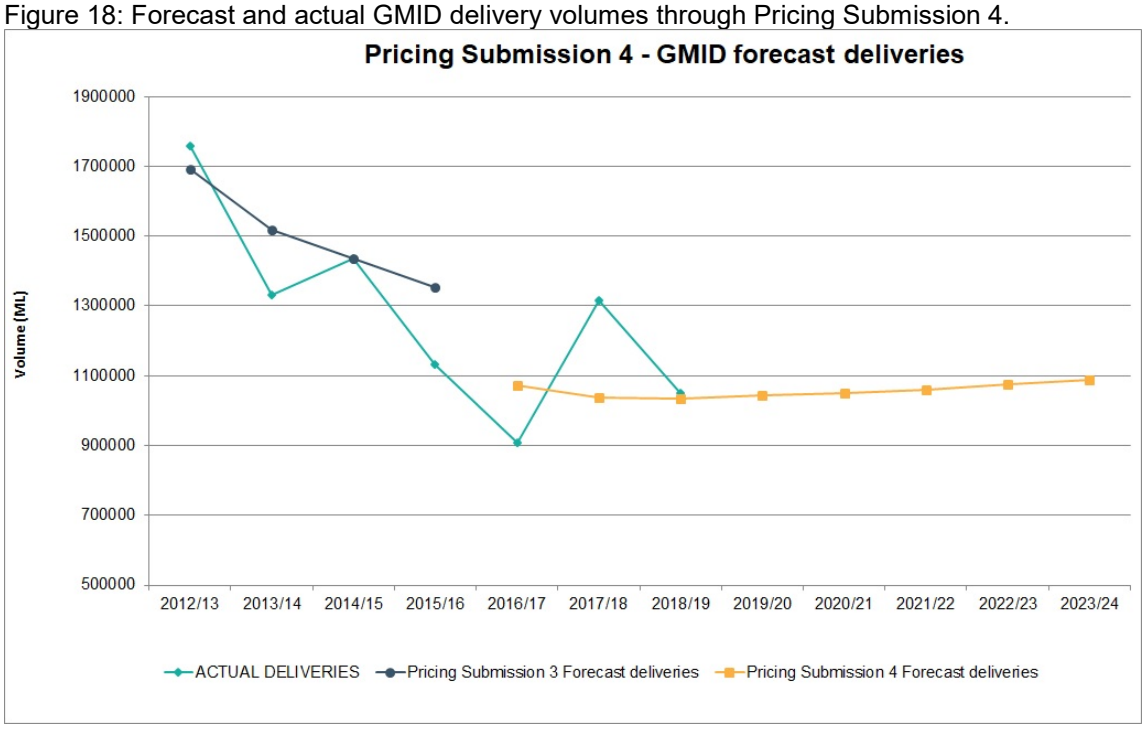
With the exception of 2018-19, actual deliveries over the Pricing Submission 4 varied from Water Plan 4 forecasts due to weather. The variance between actuals and forecasts in 2016-17 is due to a relatively wet season with high levels of recorded rainfall resulting to a lower than average delivery year. Variance in 2017-18 is attributable to a relatively dry season resulting in a higher than average delivery year (see Figure 18).

This year on year variance is consistent with the inherent uncertainty associated with forecasting weather dependent demand, and is also observable in the difference between actuals and forecasts for the preceding Pricing Submission 3 period.

GMID delivery forecasts were made in season 2015-16 for the 2016 price submission. A chart showing the actual demand volumes versus forecast volumes for the 2016 price submission is shown in Figure 18.

The high water availability, low use 2016-17 season resulted in sufficient carryover volumes available in the much drier 2017-18 year. Thus 2017-18 was a much higher delivery year. Another dry winter and spring in 2018 lead to lower water availability across the Southern Connected Basin, driving an increase in the price of temporary water in the market. This meant deliveries for the year reduced to around the forecast median volume for the GMID.

Figure 18: Forecast and actual GMID delivery volumes through Pricing Submission 4.



Pricing Submission 5 forecasts

We are forecasting a step decline in 2019-20 for delivery volumes in Pricing Submission 5 relative to previous Pricing Submission 4 forecasts. Volumes are then forecast to decline steadily to 2023-24 and then level out thereafter. Table 51 provides the forecast numbers for the Pricing Submission 5 and 6 periods (the orange line in Figure 19).

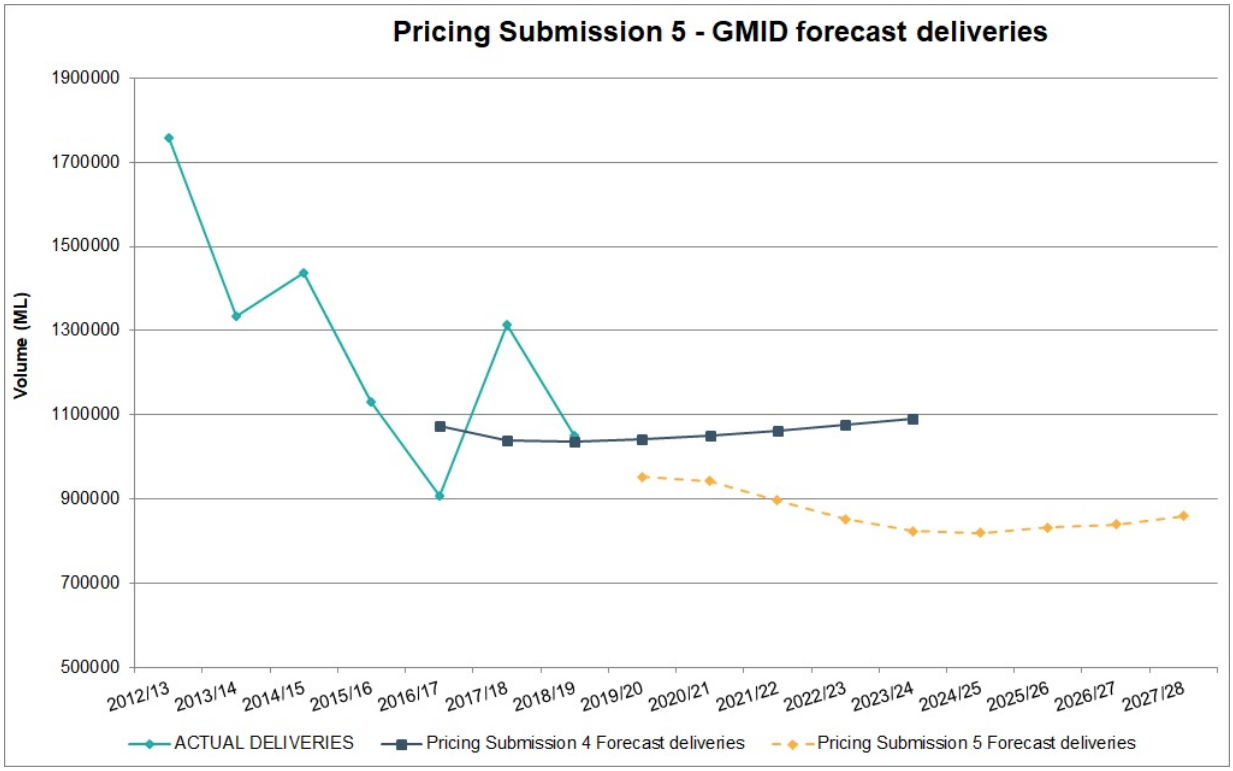
Table 51: Pricing Submission 5 delivery forecasts (ML).

Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Volume	951,691	941,608	896,815	852,238	824,001	818,675	831,416	839,451

Note: GMID total deliveries (excluding Woorinen, Nyah, Tresco and water districts, excluding delivery of environmental water

Figure 19 below shows the forecast of GMID deliveries through the Pricing Submission 5 and Pricing Submission 6 periods versus actual delivered volumes to date and the Pricing Submission forecast delivery volumes.

Figure 19: Forecast GMID delivery volumes for Pricing Submission 5.



The forecasting method adopted for Pricing Submission 4 did not account for changes in water use patterns, particularly the potential for the export of water from the GMID to other irrigation regions. There have been several developments in the Southern Connected Basin over the past decade that have impacted use of irrigation water in the GMID including:

- Commonwealth purchase of water entitlements for environmental use (eg. Murray-Darling Basin Plan), which has led to a reduction of the water available for irrigation
- An increase in trade activity in the temporary water market
- An increase in permanent horticulture development along the section of the Murray river downstream of Nyah, and
- A contraction in dairy due to different price and cost drivers.

These developments have meant that the demand model used within the resource models (i.e. how the resource models translate available water into farm-gate water delivery) is not current. For example, the models do not model trade of water to highest value use. To account for this shortfall in the models, the baseline delivery forecast has been adjusted to account for expected movement of water out of the GMID.

For the purposes of Pricing Submission 5 we utilised the resource model runs performed for Pricing Submission 4. These resource model runs provide a range of potential annual delivery volumes, dependant on the climate scenario. We then scaled the storage level assumptions to match actual levels for 2018-19 and then adjusted forecasts to account for the export of water to other systems. The steps in this process were:

Step 1: Resource model runs using climate change scenario – select median delivery volume as best guess. The models used to generate delivery forecasts are pre-existing resource models used by DELWP (the REALM Goulburn Simulation Model (GSM) and the MSM BIGMOD Murray Resource Model). These are monthly time-step models that output various water resource criteria. The model runs generate delivery volumes for nine year scenarios using historic climate data. Each modelled period provides a possibility of deliveries, dependent on the climate of the period. Given the large number of possible delivery scenarios, the median delivery volume for each year in the nine year period is selected as the forecast delivery volume for that year.

Step 2: Scaling of model outputs. Model runs performed for Pricing Submission 4 were used for the Pricing Submission 5 forecast. Each of the models (the Goulburn and the Murray model) were run twice for Pricing Submission 4, once initialised for start 2014-15 and the other at start 2015-16. This provided two different sets of delivery scenarios given the two different initialisation points. Using the current resource positions in the systems and given the way the model translates resource position into forecast deliveries: volume in storage → volume allocated to entitlements → volume delivered, the previous model outputs of delivery forecasts are scaled to the current resource position as defined by the volume in storage.

Step 3: The baseline model is then adjusted for an anticipated reduction in deliveries, relative to the baseline, due to water moving away from productive use in the GMID.
There are two primary assumptions underlying our method. The first is the climate change assumption underlying the resource model runs in Step 1. Delivery forecasts for the Infrastructure Use Fee are based on a climate change assumption of 20 per cent reduction in inflows compared to the long term average based on the Northern Region Sustainable Water Strategy (2009). The climate scenario used in model runs was developed by the CSIRO for previous system reliability analyses. The assumptions from the 2009 Sustainable Water Strategy remain valid in light of more recent literature and are generally accepted by the broader water sector.

The second major assumption relates to the movement of water out of GMID, specifically assumptions regarding expected movement away from traditional irrigation activities such as dairying in the GMID toward permanent horticulture in the reach of the Murray river downstream of Nyah. This activity has been examined in different analyses in recent years, most recently as reported by DELWP (*An assessment of future water availability and permanent horticulture irrigation water demand, June 2019*). Based on this analysis we made the assumption that delivery volumes would reduce by an additional 150 GL in 2020/21, with this reduction growing to 271 GL by 2024/25 as new plantings mature.

Delivery Shares and Infrastructure Access Fees

The Pricing Submission 5 demand forecasts for Infrastructure Access Fees are based on the delivery shares held by customers in the GMID over the pricing period. The fixed nature of delivery shares provides for forecasts that are fairly constant over the period.

Current period performance

Actual delivery shares over the Pricing Submission 4 were within a 0.5 per cent variance from forecasts. A comparison of delivery share quantities forecast for Pricing Submission 4 and the actual quantities over the period is shown in Table 52. This small level of variation reflects the fixed nature of delivery shares.

Table 52: Pricing Submission 4 Delivery Shares – forecasts versus actuals (ML/Day).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	15,574	15,430	15,285	15,285
Actuals	15,528	15,413	15,383	15,358
Variance	**-46**	**-17**	**98**	**73**

At the time of forecasting for Pricing Submission 4, the GMW Connections Project was taking place. The Connections Project works program was, at the time of forecasting, projecting a small reduction in delivery shares over the Pricing Submission 4 period. Actual delivery share quantities reduced over the period, but not quite to the extent originally forecast.

Pricing Submission 5 forecasts

We are forecasting delivery shares to remain constant over the Pricing Submission 5 period. There is a small reduction on the present quantities (2019-20) of delivery shares anticipated in 2020-21 due to the Connections Project being in its final stages of completion. These small reductions are forecast to occur in Central Goulburn, Murray Valley, Loddon Valley and Torrumbarry.

Once the Connections Project is completed, delivery share quantities are expected to remain constant over the forecast period. A steady state assumption for this quantity is consistent with what has been observed in recent years.

Table 53: Pricing Submission 5 Delivery Share forecasts (ML/Day).

Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Delivery share	15,358	15,312	15,312	15,312	15,312	15,312	15,312	15,312	15,312

Note: Actuals for 2019-20 are 15,358, see table 58.

Service Points and Service Point Fees

The Pricing Submission 5 demand forecasts for Service Point Fees are based on the number of service points held by customers in the GMID over the pricing period. There are three separate categories of Service Point Fees: Gravity Service Point Fees, Pumped Irrigation Service Point Fees and Water Supply District Service Point Fees (also referred to as Domestic and Stock supply system).

Current period performance – Gravity Irrigation

Actual gravity service points over the Pricing Submission 4 varied significantly from forecasts. A comparison of Service Points forecast for Pricing Submission 4 and the actual quantities over the period is shown in Table 54. In total service point forecasts underestimated actual

service points by an average of 2,612 per annum over the period being an average variance of 10.5 per cent.

Table 54: Pricing Submission 4 Gravity Service Points – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	26,022	22,989	19,956	19,956
Actuals	25,101	24,956	24,710	24,604
Variance	**-921**	**1,967**	**4,754**	**4,648**

Note: Aggregate numbers are the sum for Gravity Irrigation of D&S, Local Read, Remote Read and Remote Operate service points.

As with Delivery Shares, the number and type of service points forecast for Pricing Submission 4 was dependant on information on planned works in the Connections Project over the period. Actual numbers of the service points varied to the forecasts due to actual works performed under the Connections Project varying to the works forecast prior to Pricing Submission 4.

Current period performance – Pumped Irrigation

The actual number of additional service points varied to the forecast quantity over the Pricing Submission 4 period, but remained within a 10 per cent variance.

Table 55: Pricing Submission 4 Pumped Irrigation Additional Service Points – forecasts vs actuals.

Year	2016-17	2017-18	2018-19	2019-20	Total
Pricing Submission 4 forecasts	487	487	487	487	487
Actuals	469	519	468	454	469
Variance	**-18**	**32**	**-19**	**33**	**-18**

Current period performance – Water Districts

The actual number of additional service points for water supply districts increased through the Water Plan 4 period. The increase was caused by customers amalgamating properties and updates to the customer database with best available information over the period.

Table 56: Pricing Submission 4 Water Supply District Additional Service Points – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20	Total
Pricing Submission 4 forecasts	12	12	12	12	12
Actuals	18	21	30	51	18
Variance	**6**	**9**	**18**	**39**	**6**

Pricing Submission 5 forecasts

Gravity Irrigation

We are forecasting gravity Service Points to remain constant over the Pricing Submission 5 period. There is a 953 unit reduction on the present quantities (2019-20) of service points in 2020-21 due to the Connections project and their meter upgrade and rationalisation works planned to the end of the project. A steady state assumption for this forecast is consistent with what has been observed in actuals over the Pricing Submission 4 period, which only evidenced a 0.66 per cent average annual decreasing trend.

Table 57: Pricing Submission 5 Gravity Service Point forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
D&S	9,628	9,628	9,628	9,628	9,628	9,628	9,628	9,628
Local Read	4,093	4,093	4,093	4,093	4,093	4,093	4,093	4,093
Remote Read	2,430	2,430	2,430	2,430	2,430	2,430	2,430	2,430
Remote Operate	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Total Service Points	**23,651**	**23,651**	**23,651**	**23,651**	**23,651**	**23,651**	**23,651**	**23,651**

Pumped Irrigation

There are three pumped irrigation areas: Nyah, Woorinen and Tresco. These three areas have their own bulk diversion points and infrastructure and incur fees specific to the area. Commencing in the first year of Pricing Submission 5, pumped irrigation customers will be charged for the number and type of Service Points they own.

Prior to this, pumped irrigation customers were only charged for every additional Service Point they owned, i.e. the first service point was not charged for but every additional Service Point was thereafter. Table 58 provides the number and type of service points in each of the pumped districts. The tariff is planned to be phased in commencing in 2020-21. Forecasts are based on a steady state assumption as there is no anticipated growth or decline in Service Points over the period.

Table 58: Pricing Submission 5 Pumped Irrigation service point forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Woorinen D&S	69	69	69	69	69	69	69	69
Woorinen Local Read	234	234	234	234	234	234	234	234
Nyah D&S	252	252	252	252	252	252	252	252
Nyah Local Read	280	280	280	280	280	280	280	280
Tresco D&S	160	160	160	160	160	160	160	160
Tresco Local Read	159	159	159	159	159	159	159	159
Total	**1,154**	**1,154**	**1,154**	**1,154**	**1,154**	**1,154**	**1,154**	**1,154**

Water Districts

Like the pumped irrigation districts, Pricing Submission 5 will see water supply district customers charged for the number and type of Service Points owned, as opposed to just an additional Service Point fee. The service point charge is planned to be phased in commencing in 2020-21. Table 59 shows the Forecasts which are based on a steady state assumption as there is no anticipated growth or decline in service points over the period.

Table 59: Pricing Submission 5 Pumped Irrigation Service Point forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Normanville D&S	395	395	395	395	395	395	395	395
Tungamah D&S	875	875	875	875	875	875	875	875
East Loddon D&S	224	224	224	224	224	224	224	224
Mitiamo D&S	374	374	374	374	374	374	374	374
Total	**1,868**	**1,868**	**1,868**	**1,868**	**1,868**	**1,868**	**1,868**	**1,868**

Customer Service and Billing

The Customer Fee is proposed to replace the previous Service Fee and is intended to be introduced from 2021-22. The Customer Service fee will be levied on a customer account basis, this will mean GMW customers will only pay a single fee as a customer, rather than multiple Service Fees for each service they receive from GMW.

Current period performance

The number of service fees charged for the Pricing Submission 4 period was assumed to remain constant, however there was a small increase in the number of Service Fees across the period (see Table 60). In total Service Fee forecasts under estimated actual service fees by an average of 866 per annum being about three per cent less than actuals.

Table 60: Pricing Submission 4 Service Fees – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	31,889	31,889	31,889	31,889
Actuals	31,988	32,397	33,133	33,503
Variance	**99**	**508**	**1,244**	**1,614**

Pricing Submission 5 forecasts

We are forecasting Customer Fees to remain constant over the Pricing Submission 5 period once introduced in 2021-22. The step change in quantity in 2021-22 from 33,503 to 19,958 (refer Table 61) is due purely to the transition to a per customer charge. There are currently 19,958 customers. Consistent with historical trends in customer numbers, the number of customers is not expected to change over the course of the Pricing Submission 5 period.

Table 61: Pricing Submission 5 Customer Fee forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Customer Fee	33,503*	19,958	19,958	19,958	19,958	19,958	19,958

Note: * Service Fees for 2020-21.

Drainage Services

Surface Drainage

GMW provides a surface drainage service to customers, dependant on the location of their land parcels in relation to the surface drain network. An Area Fee is levied on customers for this service on a district basis (Shepparton, Central Goulburn, Rochester, Loddon Valley, Murray Valley, Torrumbarry and Tyntynder districts).

Current period performance

The area (ha) where Surface Drainage Area Fees applied for the Pricing Submission 4 period was assumed to remain constant. These forecasts varied from actual outcomes that were lower over the period. In total forecasts marginally overestimated actual area by an average of 9,479 ha (see Table 62), being approximately 3.5 per cent greater than actuals.

Table 62: Pricing Submission 4 Area (ha) Surface Drainage Area Fees – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	272,172	272,172	272,172	272,172
Actuals	263,893	261,177	262,689	263,012
Variance	**-8,279**	**-10,995**	**-9,483**	**-9,160**

Note: table reports the sum total area fees across all districts.

Water Plan 5 forecasts

We are forecasting Surface Drainage Area Fees to remain constant over the Pricing Submission 5 period (see Table 63) consistent with historical trends in actuals over the Pricing Submission 4 period that declined at an annual average rate of 0.1 per cent per annum. The forecast for 2020-21 represents a step increase on actuals for 2019-20 (of 263,012) reflecting an increase in land subject to the area fee following the construction of new primary and community surface drains.

Table 63: Pricing Submission 5 Area (ha) Surface Drainage Area Fees forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Shepparton	34,709	34,709	34,709	34,709	34,709	34,709	34,709	34,709
Central Goulburn	77,238	77,238	77,238	77,238	77,238	77,238	77,238	77,238
Rochester-Campaspe	42,757	42,757	42,757	42,757	42,757	42,757	42,757	42,757
Loddon Valley	9,280	9,280	9,280	9,280	9,280	9,280	9,280	9,280
Murray Valley	45,074	45,074	45,074	45,074	45,074	45,074	45,074	45,074
Torrumbarry	62,855	62,855	62,855	62,855	62,855	62,855	62,855	62,855
Total	**271,913**	**271,913**	**271,913**	**271,913**	**271,913**	**271,913**	**271,913**	**271,913**

Subsurface Drainage

Similar to surface drainage service, GMW customers are charged for sub-surface drainage service dependant on where their parcels of land are located in relation to the network of public pump stations. The public pumps are operated by GMW to manage the levels of groundwater tables to limit the impacts of groundwater salinity. Subsurface drainage customers face a Local Benefit Area Fee.

Current period performance

The area (ha) where Subsurface Local Benefit Area Fees applied was forecast to remain constant over the Pricing Submission 4 period. As with Surface Drainage Area Fees, these forecasts varied from actual outcomes. In total forecasts overestimated the actual outcome by an average of 3,462 ha (see Table 64), being approximately 6.3 per cent greater than actuals. The most material variance occurred in 2018-19 in the Rochester District. This change represents a correction of shortfalls in GMW's application of the fee identified in a review conducted on the subsurface drainage charge for the Rochester area in 2017-18.

Table 64: Pricing Submission 4 Area (ha) for Local Benefit Area Fees – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission forecasts	58,050	58,050	58,050	58,050
Actuals	54,063	54,463	54,440	54,665
Variance	**-3,987**	**-3,587**	**-3,610**	**-3,385**

Note: table reports the sum total local benefit area fees across all districts.

Pricing Submission 5 forecasts

We are forecasting the area (ha) where the Local Benefit Area fee applies for subsurface drainage services to remain constant over the Pricing Submission 5 period (see Table 65) consistent with historical trends in actuals over the Pricing Submission 4 period that declined at an annual average rate of 0.4 per cent per annum. The steady state assumption is based on the quantity of area attracting the subsurface drainage local benefit area over the period of Pricing Submission 5 being fixed.

Table 65: Pricing Submission 5 Area (ha) for Local Benefit Area Fees forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Central Goulburn	44,846	44,846	44,846	44,846	44,846	44,846	44,846	44,846
Rochester	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
Murray Valley	8,651	8,651	8,651	8,651	8,651	8,651	8,651	8,651
Total	**54,650**	**54,650**	**54,650**	**54,650**	**54,650**	**54,650**	**54,650**	**54,650**

Diversions Services

GMW's diversions customers include those who pump water directly from the natural water course, surface water, both regulated and unregulated rivers and creeks, and groundwater customers. There are no variable charges for diversions customers.

Current period performance

Diversion Access Fee (Service Point) forecast for both surface water and groundwater was assumed to remain constant over the Pricing Submission 4 period. In total forecasts overestimated actual outcome by an average of 394 per annum (see Table 66) for surface water and 102 per annum for groundwater (see Table 67), being approximately 4.5 per cent and 3 per cent greater than actuals respectively. These variances while relatively small reflected a new tariff structure for diversions customers being phased in from 2014-15 over the course of the Pricing Submission 4 period. This process involved reclassification of service points types (that is, a shift from 'small' and 'large' service points to unmetered and metered) and a cleanse of the customer database.

Table 66: Pricing Submission 4 Surface Water Diversions Access Fees (Service Point) – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	8,816	8,816	8,816	8,816
Actuals	8,571	8,423	8,458	8,346
Variance	**-245**	**-393**	**-358**	**-470**

Table 67: Pricing Submission 4 Groundwater Diversions Access Fees (Service Point) – forecasts versus actuals.

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	3,382	3,382	3,382	3,382
Actuals	3,308	3,261	3,255	3,259
Variance	**-74**	**-121**	**-127**	**-123**

Pricing Submission 5 forecasts

We are forecasting Access Fee (Service Points) for both surface water and groundwater to remain constant over the Pricing Submission 5 period (see Table 68) consistent with historical trends in actuals over the Pricing Submission 4 period that declined at an annual average rate of 0.9 per cent per annum and 0.2 per cent per annum respectively.

Table 68: Pricing Submission 5 Access Fees (Service Point) forecasts.

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Surface Water Diversions	8,346	8,346	8,346	8,346	8,346	8,346	8,346	8,346
Groundwater Diversions	3,289	3,289	3,289	3,289	3,289	3,289	3,289	3,289
Total	**11,634**	**11,634**	**11,634**	**11,634**	**11,634**	**11,634**	**11,634**	**11,634**

Bulk Water Services

Our bulk water services are supplied to retail and wholesale customers. The retail customers, comprising gravity irrigation, pumped irrigation, diversions and water districts, largely hold water shares which are delivered by GMW. The demand forecasts relevant to these customers relate to the following Entitlement Storage Fees (ESF):

- ESF High-Reliability Water Shares (HRWS) (water user)
- ESF HRWS (non-water user)
- ESF Low-Reliability Water Shares (LRWS) (water user), and
- ESF LRWS (non-water user).

Wholesale customers are water corporations and environmental water holders, who hold bulk entitlements and environmental entitlements respectively. The demand forecasts relevant to these customers relate to:

- High Reliability Fees (HR)
- Very High Reliability Fees (VHR), and
- Low Reliability Fees (LR).

Water Shares and Entitlement Storage Fee HRWS forecasts

Water shares impact the tariffs that irrigators pay for bulk water services. For Pricing Submission 4, we applied the Goulburn and Murray system pricing approach for water shares associated with land (water users). Water Shares not associated to land (non-water users) were charged at the applicable basin price (refer to the tariff change proposal section for more detail on system vs. basin pricing).

Current period performance

The following tables (Tables 69 and 70) outline a broad transition of demand from water users to non-water users in the Goulburn and Murray basins over Pricing Submission 4. This movement was created by the price differential between water user customers paying the system price versus the non-water user customers paying the lower basin price. The Pricing Submission 4 forecast assumed a movement of water shares from water user to non-water user based on an assessment of water storage cost savings for customers holding in excess of 100 ML of HRWS. In practice, the shift was not as substantial as that forecast.

Table 69: Pricing Submission 4 ESF HRWS (water user) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	1,058,691	785,358	532,024	278,691
Actuals	1,038,479	993,934	957,509	897,328
Variance	**-20,212**	**208,576**	**425,485**	**618,637**

Note: table reports the sum of Goulburn and Murray Basins.

Table 70: Pricing Submission 4 ESF HRWS (non-water user) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	947,412	1,232,173	1,485,507	1,738,840
Actuals	915,516	963,253	1,022,146	1,146,972
Variance	**-31,896**	**-268,920**	**-463,361**	**-591,868**

Note: table reports the sum of Goulburn and Murray Basins.

Pricing Submission 5 forecasts

We are proposing in the Pricing Submission 5 period to remove the distinction between water user and non-water user fees and levy a Goulburn system and Murray system based fee. The Pricing Submission 5 forecasts for the new ESF HRWS Fee is outlined in Table 71.

Table 71: Pricing Submission 5 ESF HRWS Fees forecasts (ML).

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Goulburn System	1,126,158	1,126,158	1,126,158	1,126,158	1,126,158	1,126,158	1,126,158	1,126,158
Murray System	1,006,567	1,006,567	1,006,567	1,006,567	1,006,567	1,006,567	1,006,567	1,006,567
Total	**2,132,725**	**2,132,725**	**2,132,725**	**2,132,725**	**2,132,725**	**2,132,725**	**2,132,725**	**2,132,725**

Note: Goulburn system includes the Bullarook, Loddon, Campaspe, Goulburn and Broken basins, the Murray system includes the Ovens and Murray basins

Water Shares and Entitlement Storage Fee LRWS forecasts

Current period performance

The following tables (Tables 72 and 73) outline the consistent level of actuals for LRWS. A similar assumption of shifting entitlement from water user to non-water user was made for LRWS as was made for HRWS. Like the HRWS forecast, the shift of LRWS was not as substantial as that forecast.

Table 72: Pricing Submission 4 ESF LRWS (water user) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	602,030	518,697	435,363	352,030
Actuals	586,665	556,233	542,014	505,444
Variance	**-15,365**	**37,536**	**106,651**	**153,414**

Note: table reports the sum of Goulburn and Murray Basins.

Table 73: Pricing Submission 4 ESF LRWS (non-water user) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	170,836	257,303	340,637	423,970
Actuals	171,157	194,794	226,159	270,495
Variance	**321**	**-62,509**	**-114,478**	**-153,475**

Note: table reports the sum of Goulburn and Murray Basins.

Pricing Submission 5 forecasts

Consistent with HRWS we are proposing in the Pricing Submission 5 period to remove the distinction between water user and non-water user fees and levy a Goulburn system and Murray system based fee. The Pricing Submission 5 forecasts for the new ESF LRWS Fee is outlined in Table 74.

Table 74: Pricing Submission 5 ESF LRWS Fees forecasts (ML).

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Goulburn System	491,222	491,222	491,222	491,222	491,222	491,222	491,222	491,222
Murray System	315,012	315,012	315,012	315,012	315,012	315,012	315,012	315,012
Total	**806,234**	**806,234**	**806,234**	**806,234**	**806,234**	**806,234**	**806,234**	**806,234**

Note: Goulburn system includes the Bullarook, Loddon, Campaspe, Goulburn and Broken basins, the Murray system includes the Ovens and Murray basins

Bulk Entitlements and HR, VHR and LR fees

Bulk entitlements impact the tariffs which urban and rural water corporations and the environmental water holders pay for bulk water services. Basin pricing is applied to Bulk Entitlement volumes within each water system managed by GMW. This long-term pricing mechanism was consulted with bulk water customers during development of the Pricing Submission 5 submission.

Current period performance

The volume of bulk entitlements held by water corporations and environmental water holders has remained stable through the Pricing Submission 4 period, the exceptions being:

- The Victorian Environmental Water Holder's (VEWH) Bulk Entitlement volumes in the Goulburn and Murray systems have shifted after their previously held provisional entitlements for Stage 1 Connections works converted into Bulk Entitlements. This conversion occurred to meet Victoria's obligations to the MDB Plan.
- The three Melbourne retailer's provisional entitlements in the Goulburn and Murray systems have increased slightly as further works have been completed against Stage 1 of the Connections Project.
- Shifting ownership of water shares between GMW and Lower Murray Water (LMW) customers impacts the volumes as LMW is charged as a Bulk Entitlement holder for water shares owned by its customers

Table 75 (below) shows the High Reliability Bulk Entitlement volumes over the period, the reduction in volumes at the end of Pricing Submission 4 are due to the conversion of Stage 1 Connections provisional entitlements into Bulk Entitlements

Table 75: Pricing Submission 4 High Reliability Fees (HR + equivalents) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	767,009	767,009	767,009	767,009
Actuals	764,301	762,696	754,861	725,457
Variance	**-2,708**	**-4,313**	**-12,148**	**-41,552**

The Very High Reliability entitlements are held by urban water corporations in the Goulburn basin. These volumes did not change over Pricing Submission 4.

Table 76: Pricing Submission 4 Very High Reliability Fees (VHR) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	36,010	36,010	36,010	36,010
Actuals	36,010	36,010	36,010	36,010
Variance	**0**	**0**	**0**	**0**

An increase in Low Reliability entitlements held by Bulk Entitlement holders was caused by the conversion of provisional entitlements held by the VEWH into High and Low reliability entitlements, but otherwise remain constant over the period.

Table 77: Pricing Submission 4 Low Reliability Fees (LR) – forecasts versus actuals (ML).

Year	2016-17	2017-18	2018-19	2019-20
Pricing Submission 4 forecasts	293,205	293,205	293,205	293,205
Actuals	294,793	296,093	296,882	301,035
Variance	**1,588**	**2,888**	**3,677**	**7,830**

Pricing Submission 5 forecasts

The provisional entitlements held by the three Melbourne retail water corporations are expected to remain as provisional volumes to at least 2023-24, at which time there will be a conversion of the provisional entitlements to conventional Bulk Entitlement volumes. There is a process underway for the irrigator's share of Stage 1 of the Connections Project with a similar timeframe for conversion. However, the form and distribution of entitlements for the irrigator's portion of the savings is currently subject to consultation with stakeholders. Otherwise, Bulk Entitlement volumes within GMW's region (i.e. excluding LMW) are expected to remain constant through Pricing Submission 5.

Table 78 outlines the forecast volumes for HR Bulk Entitlements across the various basins. These forecasts remain constant across the period which is reflective of historic performance.

Table 78: Pricing Submission 5 HR (and equivalents) Volumes (ML).

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Murray Basin	501,509	501,509	501,509	501,509	501,509	501,509	501,509	501,509
Ovens Basin	7,832	7,832	7,832	7,832	7,832	7,832	7,832	7,832
Broken Basin	135	135	135	135	135	135	135	135
Goulburn Basin	188,404	188,404	188,404	188,404	188,404	188,404	188,404	188,404
Campaspe Basin	21,127	21,127	21,127	21,127	21,127	21,127	21,127	21,127
Loddon Basin	5,950	5,950	5,950	5,950	5,950	5,950	5,950	5,950
Bullarook Basin	500	500	500	500	500	500	500	500

Table 79 outlines the forecast volumes for Very HR Bulk Entitlements in the Goulburn basin. This forecast remains constant across the period which is reflective of historic performance.

Table 79: Pricing Submission 5 VHR Volumes (ML).

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Goulburn Basin	36,010	36,010	36,010	36,010	36,010	36,010	36,010	36,010

Table 80 outlines the forecast volumes for Low Reliability Bulk Entitlements in the Murray, Goulburn and Campaspe basins. The forecast volumes remain constant across the period which is reflective of historic performance.

Table 80: Pricing Submission 5 LR Volumes (ML).

Year	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Murray Basin	115,865	115,865	115,865	115,865	115,865	115,865	115,865	115,865
Goulburn Basin	177,156	177,156	177,156	177,156	177,156	177,156	177,156	177,156
Campaspe Basin	8,014	8,014	8,014	8,014	8,014	8,014	8,014	8,014

Tariffs

We are proposing to simplify a number of tariffs, to respond to clear customer feedback for:

- fairer pricing, and
- same service – same price.

We have been through a rigorous, detailed and consultative tariff reform process. This process has included:

1. Understanding and documenting the different services GMW provides, the costs drivers, how costs are currently allocated, how costs are recovered
2. Documenting all feedback provided by customers through engagement regarding tariff reform options
3. Detailing the 'long list' of options; (leveraging proposals yet to be delivered from the 2016 price submission, proposals developed with customer working groups, proposals raised by DELWP's Delivery Share Review, proposals raised by WSCs and proposals presented by GMW staff
4. The development of a set of criteria based on the ACCC's WCIR pricing principles, good practice and corporate strategy
5. An assessment of the long list of options against the criteria established, by comparing each option against the status quo. Scoring was based on a convention of +2 to -2, depending on whether the option was better or worse than the status quo. We only progressed options that received an aggregate score of +5 or more
6. These options were then assessed for costs of implementation (eg. ability for current systems to capture this data, integration in existing IT systems etc.). Where it was determined that options could be progressed without material implementation costs, these options were refined and presented to customers through engagement, including customer bill impacts under a number of scenarios, and
7. Engagement feedback was then used to determine which tariffs were acceptable, and which ones were not. Those presented in *A fairer deal for all* released for community consultation, presented tariff reform options that were discussed both in our Tariff and Pricing Summit, and at our three day deliberative forum in Echuca. Customer feedback was sought and considered in finalising the proposals.

This section details:

- The tariff assessment criteria that we used to assess tariff reform options; and
- Our proposed tariff reforms, including:
  - The current state
  - Driver for change
  - Proposal
  - Assessment against the criteria, and
  - Customer impacts.

Our tariff assessment criteria

To inform our tariff reform journey, we have triangulated the pricing principles contained in the ACCC's Water Charge Infrastructure Rule 6, feedback provided by customers through engagement and our corporate objectives.

The output of this process was a set of best practice pricing principles that included:

[6] ACCC Water Charge Infrastructure Rules

Customer: Any tariff structure should be supported by customers, such that they have been involved in the tariff's design, understand impacts on their bill and seek to appropriately allocate risk.

Cost reflectivity: Prices reflect the costs of providing the service, and send appropriate signals to consumers regarding the costs of connection, usage and disconnection.

Efficiency: Prices are designed to provide appropriate signals regarding efficient use and trading of water, and efficient investment in infrastructure.

Revenue adequacy: In totality, GMW is provided with a reasonable opportunity to generate enough revenue to recover the efficient costs associated with the provision of regulated services.

Equity: Prices should be seen through the prism of the customer, in particular, the extent to which customers may consider those prices, or price structures, to be equitable or fair. Customers want to face the same price as other customers who face the same (or similar) circumstances and / or the same (or similar) cost structures.

Simplicity: A tariff should be administratively simple and easy to understand. If a customer is unable to respond to the price signal because of its complexity, it is highly unlikely that efficient decisions will be made.

Flexible: Tariffs should be flexible enough to cater for multiple circumstances. It is no use having a tariff that is only applicable to certain constrained situations, and which is unable to be applied in many feasible circumstances (i.e. during times of drought). Tariffs provide a balance between flexibility and prescription. An overly prescriptive approach could inhibit GMW from dealing with customer applications in a timely manner.

Transparency: A tariff's design and information provided to support its implementation, must allow customers to understand how the price was determined.

Our proposed tariff structure changes

Storage fees

Our customers told us:	The outcome they're seeking:
"Non-water users should pay their share."	Fair Pricing

Current state
Storage fees currently differentiate between whether a customer is a 'water user' (i.e. water is associated with land) or a 'non-water user' (water is disassociated with land). Where it is associated with land, customers pay a 'system' price. Where it is not associated to land, customers pay a 'basin' price.

There are two systems in GMW's area – the Goulburn and Murray systems. Each system contains a number of basins. The system price is a weighted average across each of the basins in the system. The basin price is the cost-reflective price within that basin.

Storage fees are paid by our wholesale and retail customers:

- Bulk Entitlement (BE) holders – All BE holders (eg. GMW, Lower Murray Water, urban water corporations, Victorian Environmental Water Holder) pay bulk water charges. These charges are calculated using the basin pricing method, with charges based on the costs of the storage that supplies their entitlement.
- Water Shareholders – All individual Water Share owners currently pay an Entitlement Storage Fee. The price they pay is currently determined by their categorisation as either a Non-Water User (water not linked to land) or a Water User (water linked to land). This categorisation determines whether they pay a Basin or a System price. The table below reflects the current High Reliability Water Share prices in 2019-20.

Table 81: HRWS prices, 2019/20.

		Current pricing arrangements ($/ML)	
Water basin	**Bulk entitlement Holders (basin pricing method)**	**Non Water User water shares (basin pricing method)**	**Water User water shares (Goulburn and Murray systems)**
Broken	59.56	59.96	11.10
Goulburn	7.46	7.67	11.10
Campaspe	26.00	26.75	11.10
Loddon	44.13	45.41	11.10
Bullarook	461.67	475.06	11.10
Murray	9.22	9.49	13.86
Ovens	75.62	75.62	13.86

Drivers for change

During the customer engagement program, we heard from our Water Services Committee members and various workshops that the perceived inequity in storage fees was one of the top two pricing issues. Customers were concerned that investors and the environment were receiving a discount. They felt that it was unfair non-water users got a better deal.

In recent years, a number of customers had disassociated their water from land, where the basin price was less than the system price. This has seen the gap between these two prices increasing, creating further inequities. Customer behaviour shows that people are actively and increasingly taking this decision.

The important point to note is that whilst Water Shares are currently categorised as 'Non-Water User' and 'Water User', the reality is that they are the same products and there is no difference in service based on the categorisation. Historically the rationale for categorising Water Shares was to ensure compliance with trade restrictions. The applicable trade rule at the time was that not more than 10 per cent of water shares could be held in the Non-Water User category. This rule was abolished several years ago.

Through engagement, customers almost unanimously agreed that GMW should remove the differentiation of water and non-water user.

Our proposal

GMW is proposing to remove the differentiation in pricing between water users and non-water users. Further:

- For retail customers – transitioning all entitlement storage fees to a two system (i.e. Goulburn and Murray) price from 1 July 2020, and

- For wholesale customers – maintaining the current basin pricing approach, with no real change in prices (as compared to those in place during 2019-20).

During the next regulatory period, we propose to continue discussion on transitioning bulk charges to a system price, with our bulk water customers.

Table 82: Proposed prices (19/20 $).

Water basin	Basin Price (2020-21	Goulburn System (2020-21)	Murray System (2020-21)
Broken	59.96	9.62	
Goulburn	7.45		
Campaspe	26.00		
Loddon	44.13		
Bullarook	461.67		
Murray	9.22		10.95
Ovens	75.62		

Assessment against the criteria

The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 83: Criteria and justification.

Criteria	Rating	Justification
Customer	+2	Customers were clear that they felt all customers that receive the same service, should pay the same price. More specifically, that there should be no differentiation between water user and non-water user. We have received strong support through the deliberative forum, responses to *A fairer deal for all* and subsequent customer workshops, for transitioning retail customers to a system price.
Cost reflectivity	-2	System pricing approach is less cost-reflective.
Efficiency	+1	The system price recognises the connectivity of the basins and accepts that they operate as broader system servicing the region rather than individual basins.
Revenue adequacy	0	No change.
Equity	+2	Propose changes to the pricing structure support that there should be no differentiation in price, on the basis of how the entitlement holder users their water. Further, a move away from basin pricing will avoid significantly high basin prices for customers in smaller basins.
Simplicity	+2	Implementing a system based entitlement storage fee will achieve this.
Flexible	-1	It would become very challenging to transition back to basin pricing, should customers seek a more granular pricing arrangement.
Transparency	+2	Customers will now more readily understand the basis for changing, as compared to the current mix of system and basin pricing.

Customer impacts

Customers in the Goulburn and Murray basins will pay a higher price (29 per cent and 19 per cent respectively) to subsidise customers in the higher cost basins (Broken, Campaspe, Loddon, Bullarook and Ovens).

Irrigation delivery fees

Our customers told us:	The outcome they're seeking:
"Investigate pricing structure options to help sustain our delivery system."	Fair Pricing

Current state
Our pricing in the GMID is a two-area model. With one area the Shepparton Irrigation Area, and a second the remaining five districts: Murray Valley, Rochester, Central Goulburn, Torrumbarry and Loddon Valley.

In our last Price Submission we proposed the establishment of uniform GMID Delivery Fees. At the time, the cost differential between Shepparton and the other districts was too great to support full harmonisation.

Drivers for change
There are several drivers for change:

- We have heard from Shepparton irrigators that it is unfair that they face substantially higher delivery prices than other customers in the GMID – particularly when their water savings have at times been shared across the GMID
- We heard from a range of customers and stakeholders from various irrigation areas, that uniform pricing would strengthen the GMID as a whole and enable it to compete on the global market, rather than competing between itself
- The Broken Creek costs and revenues more correctly belong within the Shepparton Irrigation Area, rather than the Murray Valley Irrigation Area. This is because the vast majority of water supplied to Broken Creek customers uses Shepparton infrastructure.
- The inefficiencies of administering multiple pricing entities, and
- The cost differential between the cost of delivering water via the gravity network in Shepparton is comparable to the average cost across the other five districts. In the 2016 price submission, this difference was 89 per cent. Now it is 15 per cent.

Our proposal
The reduced costs of Shepparton and more correct cost allocation of Broken Creek customers provides the opportunity to move to uniform pricing across the GMID.

In real terms, uniform pricing will bring the Infrastructure Access Fee for all six areas to $2,416 per delivery share. This is a drop of almost $500 per delivery share from the current price of $2,925 per delivery share for the five districts. We propose to implement these changes immediately.

Assessment against the criteria
The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 84: Criteria and justification.

Criteria	Rating	Justification
Customer	+2	Customers in the Shepparton irrigation district have been consistently campaigning for changes to the two area charging arrangement, and to bring their price into alignment with the other five districts. It also provides price certainty and stability for customers, something they have asked for.

Cost reflectivity	0	As the two area charge would have provided a similar outcome regarding the prices, there is no effective change in the level of cost reflectivity.
Efficiency	+1	A harmonised delivery charge across the GMID will reduce unnecessary complexity within our IT, finance and billing, as well as our internal financial models, which require dedicated resourcing to maintain and update. A single charge also reflects the interconnectivity of the modernised GMID.
Revenue adequacy	0	No change.
Equity	+2	Supports the same price for the same service.
Simplicity	+2	Moves from a two area pricing arrangement, to a single area charge.
Flexible	0	No change.
Transparency	-1	There is less transparency regarding the cost differences between irrigation districts

Customer impacts
Customers will receive an average price reduction of 21 per cent from their Infrastructure Access Fee.

Customer fee and water register fee

Our customers told us:	The outcome they're seeking:
"Simplify– the whole billing system is too complex." "Stop charging such high prices for services other than water."	Simple Systems

Current state
GMW's Service Fee, is a fixed fee and recovers the costs of maintaining customers, land and water records, billing, debt recovery, central customer service and a fixed payment to DELWP for access to the Victorian Water Register.

Customers pay a Service Fee for each service they receive from GMW. For example, if a customer has a GMID property receiving delivery and drainage services, they pay two service fees; if they also have a groundwater licence on the property they pay a third. If they have another property receiving two services then they pay two further Service Fees, making a total of five.

The 2019-20 Fixed Charges accounts included 33,503 Service Fees at $120 each. GMW has an estimated 19,958 customers.

Drivers for change
GMW's customer service administration costs are not proportional with the number of services provided. In the past, processing customer accounts was a more manually driven process, supporting a charge for each service. Now that we have transitioned to electronic systems and digital processes, a single customer fee is more important.

We also incur additional costs for sending multiple bills and multiple newsletters (for every service) to customers. As such, it would be fairer that these costs are recovered equally from all customers, and not be driven by the number of services they receive.

Further, the Water Register Fee is imposed on GMW from DELWP on the basis of customers' water entitlement records stored in the Victorian Water Register. Some customers have no water entitlements while some have as many as 170. Under our current arrangements, all customers face the same cost, regardless of the number of entitlements they have in the Victorian Water Register. This creates cross-subsidies in our pricing that we need to address.

Our proposal
We are proposing a single Customer Fee to be recovered from every customer.

In the example above, the five Service Fees would be replaced by a single Customer Fee. Customer Fees would recover all costs currently recovered by the Service Fee, except Victorian Water Register costs. The Customer Fee would be $130 to $135 per year.

It is proposed to introduce the Customer Fee from 2021-22. This will provide time for GMW to configure its databases, develop business rules, re-design bills and communicate the change with customers.

We are also proposing an explicit Water Register Fee, to pass through to individual customers the costs of storing their records in the Water Register. In many cases, customers will be able to consolidate their water entitlements, reducing the number of records. Lower Murray Water successfully introduced a Water Register Fee several years ago.

Water entitlement types include bulk entitlements, water shares, unregulated licences, groundwater licences, water allowances and supply-by-agreements. The Water Register Fee would be $13.47 in 2019-20 (made up of $13.21 set by DELWP + 2 per cent Environmental Contribution Levy).

It is proposed to introduce the Water Register Fee in 2021-22, to complement the introduction of the Customer Fee. GMW will investigate with DELWP opportunities to waive the application fee for water entitlement consolidations that occur in 2021-22.

Assessment against the criteria
The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 85: Criteria and justification.

Criteria	Rating	Justification
Customer	+1	Customer feedback indicated a desire to reduce the administrative burden of managing multiple accounts with multiple bills.
Cost reflectivity	+2	Removes existing cross subsidies in the recovery of water register costs. Also aligns customer service administrative costs with the fees imposed.
Efficiency	0	No change.
Revenue adequacy	0	No change.
Equity	+1	Everyone that receives the same service, receives the same price. Removal of cross subsidies means proposed prices would be fairer
Simplicity	+2	Removes the current complexity of charging multiple fees across multiple services.
Flexible	0	No change.
Transparency	+1	Separation of the customer service fee and water register fee provides appropriate signals regarding the costs of providing those services.

Customer impacts
Preliminary analysis indicates most customers who currently pay for two or more Service Fees would be better off with the proposed changes. These tend to be larger customers.

Domestic & Stock customers across GMW may face a slight increase, estimated at $30.

Removal of Torrumbarry Natural Carriers Rebate

Our customers told us:	The outcome they're seeking:
"Same service, same price." "Everyone should pay their share."	Efficient Operations

Current state
The GMID delivery system mostly comprises channels and pipes. However, natural carriers (creeks, lakes, lagoons) also form part of the system. Unlike most GMID customers, those taking water from the natural carriers generally pump onto their properties.

In the Torrumbarry Irrigation Area (TIA), those taking water from nominated natural carriers have, since 1996, been eligible for the Torrumbarry Natural Carriers Rebate (also known as the "Pumpers Rebate").

The 1996 rationale for the rebate was that:
- It is cheaper for GMW to deliver water in natural carriers than the constructed delivery system
- Pumpers received a lower standard of service
- Pumpers incurred a higher private cost, due to pumping, and
- The rebate would promote more accurate water measurement by making the rebate conditional on meter installation.

Recipients of the rebate pay standard Torrumbarry IA delivery tariffs and prices. The calculated rebate ($/ML) is then applied to each ML used. The rebate calculation formula is linked to the operations and maintenance budget for the TIA and average delivery volumes.

Drivers for change
The rebate is funded by other delivery service customers (previously only Torrumbarry, but now also Murray Valley, Central Goulburn, Rochester and Loddon Valley), resulting in higher prices for them. The rebate has averaged a total of $400,000 ($2019-20) for the last three years. In 2018-19, the rebate was $11.02/ML compared to the Infrastructure Use Fee of $5.10/ML. i.e. rebate recipients were being paid $5.92 for every ML pumped.

The original rationale and rebate formula are considerably outdated and need to be removed.

In 2013 a review into the rebate (which included input from customers) found it should be removed, but this should be deferred until changes to service point fees were complete. With this work being completed in 2019/20, we're now proposing the rebate be phased out over four years.

Our proposal
It is proposed the rebate be phased out over four years – as outlined below.

Table 86: Proposed rebate phase-out timeline.

2020-21	Pumpers receive updated Rebate Agreements. Rebate reduced by 25% to $8.27/ML
2021-22	Rebate reduced by 50% to $5.51/ML
2022-23	Rebate reduced by 75% to $2.75/ML
2023-24	Rebate not available

Assessment against the criteria

The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 87: Criteria and justification.

Criteria	Rating	Justification
Customer	+2	The Torrumbarry WSC and other customers with awareness of the Pumpers Rebate support it being removed. A customer working group (comprising Water Services Committee members, pumpers and gravity customers) was established in 2012, and it was agreed that the rebate should not continue.
Cost reflectivity	+1	Removal of the Torrumbarry Natural Carriers Rebate will ensure other prices are more cost reflective.
Efficiency	+1	Removal of cross-subsidies lead to more cost reflective prices, and hence better signals regarding consumption and investment decisions.
Revenue adequacy	+1	Removal of the rebate will reduce unnecessary payments to customers.
Equity	+1	There are currently material cross subsidies in the current rebate arrangement that will be removed. This will ensure Torrumbarry pumpers are paying their fair share for services.
Simplicity	+1	The removal of this rebate creates a simpler pricing arrangement.
Flexible	0	No real change.
Transparency	+1	Removal of this pricing arrangement will reduce concerns regarding the basis for the rebate.

Customer impacts

Eliminating the rebate will result in a perceived price increase (noting that the removal of the rebate will be customers paying 'normal' prices) for those who currently have a NCR agreement. This impact, at the end of the transition period, will be $11.02/ML based on the 18/19 NCR formula calculation. For other customers, the estimated price decrease is about one per cent.

Unregulated licences

Current state

Historically, unregulated licences were issued for an annual term (an unregulated river or stream is one that does not have its flow regulated by a water corporation dam). Rather than following the correct renewal process, GMW and its predecessors informally renewed the licence upon payment of the annual charges.

From 2014 to 2016, GMW, with some financial assistance from DELWP, undertook a project to properly renew these licences, with the key objectives being:

- correct details of licence holders
- consistent contemporary licence conditions
- consistent take periods for winter-fill licences (previously there were three variants)
- 15 year licence terms (previously one year)

- removal of any special trading restrictions (standard trade rules now apply), and
- standard tariffs and charges for all renewed licences.

These objectives have been achieved, except in relation to standard tariffs and charges. Some unregulated licensees not paying standard charges were identified before our 2016 price submission was lodged. These have been transitioned to standard charges over this same period.

Driver
The exemption from the Resource Management Fee was linked to a prohibition on these licences being traded. The licence renewal project resulted in them gaining access to standard trading rules. It is appropriate that they now pay the standard tariffs and charges.

Our proposal
During the current regulatory period, we identified 25 licences that take water from unregulated tributaries of the Loddon River, currently not paying the Resource Management Fee element of the tariff have been identified.

It is proposed to transition these licences to the full Resource Management Fee over the four years of the next regulatory period. The 25 licences are for a volume of 3000 ML. This is about three per cent of the total standard unregulated licence volume. Applying the Resource Management Fee will increase the revenue base for the Unregulated Diversion pricing entity, resulting in an approximate $0.11/ML (3.5 per cent) reduction in the Resource Management Fee, assuming none of the licence volume is surrendered.

Assessment against the criteria
The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 88: Criteria and justification.

Criteria	Rating	Justification
Customer	0	As this anomaly has only recently been identified, the proposal has not yet been explored with impacted customers. Engagement will be conducted with customers, although this is not anticipated to be a lengthy process.
Cost reflectivity	+1	The Resource Management Fee cross-subsidises the exemption offered to these customers.
Efficiency	0	No change.
Revenue adequacy	0	No change.
Equity	+2	As licences can now be traded, it is fair that these customers now pay the standard tariffs and charges.
Simplicity	+1	The removal of exemptions provides for a simpler tariff structure.
Flexible	0	No change.
Transparency	+1	This change removes the confusion that providing these exemption created, improving transparency regarding the application of Resource Management fees.

Customer impacts
A small number of customers (about 25) will see an increase in their bills to align with all other customers with unregulated licences.

Service Point Fees

Our customers told us:	The outcome they're seeking:
"Stop charging for service points that never get used." "Look at the fee structure, how can remove access fees be so high."	 Responsive Services

Current state

The Service Point is the location at which customers take water – whether that be from a channel or pipe owned by GMW or from a river, stream or bore managed by GMW. It is the physical interface between GMW's operational control and the customer.

GMW determines the configuration and functionality of a service point based on factors including the desired flow rate, metering compliance and need for real time information.

GMW's approach to the recovery of service point costs currently varies significantly across its four main retail customer groups (GMID, pumped irrigation districts, water districts and diversions). Service points capable of higher flow rates generally need to have higher functionality to enable automated channel control.

Table 89: Service points.

	Service point type			
	D&S	Irrigation - Local Operate, Local Read	Irrigation - Local Operate, Remote Read	Irrigation – Remote Operate, Remote Read
2019-20 SPF	$120	$350	$850	$1060
Service point ownership	Customer	GMW	GMW	GMW
Operation and Control	Customer	Customer	Customer	Automated
Deliveries require scheduling for system operation	No	Yes	Yes	Yes
Monitoring and control of deliveries required for system operation	No	Field monitoring	Real time monitoring	Real time monitoring and control
Customer service depends on supply level	No (customers mostly pump)	Yes	Yes	Automatically adjusts to maintain flow rate, subject to property command
Meter required	No*	Yes	Yes	Yes

*Note: some commercial operations are required to meter; GMW has a calibration meter fleet to support deeming.

In the pumped irrigation districts there is no specific fee for the first service point on a property, however an **Additional Service Point Fee** applies to all other service points on that property. The Additional Service Point Fee is $120. The Additional Service Point Fee is a carryover from earlier incarnations of the Service Point Fee (the same approach was used in the GMID through most of the 2000's).

The **Additional Service Point Fee** applies in the three existing pipelined water districts – East Loddon, Normanville, Tungamah. The Additional Service Point Fee is $120. Unlike the

Pumped Irrigation Districts, the Additional Service Point Fee applies by exception only to additional service points requested by landowners when the pipelines were being designed. There are 517 additional service points in total.

Diversions introduced a Service Point Fee, at the same price for all service points, in 2014/15. Since 2015/16 there have been two SPFs:

- *D&S/Irrigation – Unmetered SPF* – Same price as GMID D&S SPF. Applies to all D&S service points (same as GMID) but also to unmetered irrigation service points. This is a different approach to the GMID (and that proposed for Pumped Irrigation Districts). For Diversions, the meter is a more significant component of the total service point cost, making it difficult to gain customer agreement to the GMID approach to unmetered irrigation service points (which pay the Irrigation Local Read SPF).
- *Irrigation – Metered SPF* – Same price as GMID Local Operate, Local Read SPF. GMW's infrastructure at metered diversion service points is less than in irrigation districts. Offsetting this cost saving, nearly all Diversion service points are local read. They are spread over a much larger geographic area, leading to higher labour and vehicle costs compared to irrigation districts.

Drivers for change
Through engagement, customers have emphasised:
- That some of the service points are redundant, yet attract fees, and
- Charges need to be simplified and made fairer.

We have also identified a number of other drivers that support change:

- GMW incurs costs for all service points and cost-reflective prices would ensure customers meet the costs of each service point they have and provide incentive for them consider how many they require
- All delivery system customers, not just those with higher functionality service points benefit from the SCADA system. It enables more effective and efficient operation and higher levels of service. Local operate, remote read customers receive no appreciable service level benefit from the SCADA link to their service points
- The Connections Project no longer offers the local operate, remote read service point
- Customers receive essentially the same level of service from Local Operate, Local Read and Local Operate, Remote Read irrigation service points, yet pay almost $500 more
- There are some corporate cost overheads that should be recovered through the service point fees
- Increased opportunities to work with customers to reduce manual meter reading costs (for monitoring unauthorised water use), and
- D&S service points costs are similar across all customer groups.

Our proposal
We are proposing changes to service point fees for:
- GMID
- Pumped Irrigation Districts (Nyah, Tresco, Woorinen)
- Piped Water Districts (East Loddon, Mitiamo, Normanville and Tungamah), and
- Diversions (Regulated, Unregulated, Groundwater).

GMID
The following changes to SPFs for the GMID are proposed:

- Treating all service points the same way across all customer groups and recovering the average cost of operating and maintaining each type of service point at the individual service point level
- Supervisory Control and Data Acquisition (SCADA) system costs associated with total channel control would be removed from Irrigation Remote Read SPFs and recovered from the Infrastructure Access Fee (IAF), from 2020-21
- Incorporating corporate overhead costs in the Service Point Fee
- Removing the differentiation between Local Read Local Operate and Remote Read Locate Operate, and creating a single Local Operate charge (to be phased in over four years from 2020-21, and
- To assist in monitoring customer compliance with water use – and to reduce our costs – requiring customers with a local read outlet to enter a meter reading as part of the water ordering process, from 2020-21.

Proposed Service Point Fee prices at the end of the proposed transition period are:
- Domestic & Stock (D&S): $145 (no transition)
- Irrigation – Local Operate: $455 (four year transition commencing from 2020-21), and
- Irrigation – Remote Operate: $1,070 (no transition).

During the next regulatory period, we will also look at ways for customers to reduce their Service Point Fees by investigating mothballing and options to rationalise. This is also in line with transforming our business to reflect the consolidation of our customer base.

Pumped Districts
The following changes to SPFs for pumped districts are proposed:
- Corporate overheads would be included in SPFs, from 2020-21
- The Additional SPF would be replaced by a Service Point Fee on every service point. Prices would be the same as for the GMID. The SPFs would be phased in over four years, commencing 2020-21, and
- To improve water use compliance customers with local read service points would be required to enter meter readings each month, from 2020-21.

Water Districts
It is proposed to introduce a D&S Service Point Fee to all service points in pipelined water districts. The price would be the same as the D&S SPF for GMID, Pumped Irrigation Districts and Diversions.

For existing pipelined water districts, the D&S SPF would be phased in over the four years of this Pricing Submission. For the Mitiamo pipeline, which is scheduled to commence operation in 2020-21, the D&S SPF would apply from 2020-21.

Diversions
The following changes to the Diversions SPFs are proposed:
- Corporate overheads would be included in SPFs, from 2020-21, and
- To improve water use compliance customers with local read service points would be required to enter meter readings each month, from 2020-21.

Assessment against the criteria
The following documents our assessment of the proposal against the stated criteria, as compared to the status quo.

Table 90: Criteria and justification.

Criteria	Rating	Justification
Customer	+2	Proposed changes address direct feedback provided by customers. It also provides the opportunity for customers to have greater control over the bill.
Cost reflectivity	+1	We are making changes that will ensure the right costs are recovered through the right charges.
Efficiency	0	No change.
Revenue adequacy	0	No change.
Equity	+2	Our proposed changes treat all service points the same way across all customer groups.
Simplicity	+1	We are proposing to reduce the number of service point fees charged.
Flexible	0	No change.
Transparency	0	No change.

Customer impacts

Table 91 shows the Service Point Fee proposals. Note the amounts shown are the proposed price at the end of the transition period and current prices are shown in brackets.

Table 91: Service Point Fee proposals.

	Customer group			
	GMID	Pumped Irrigation Districts	Pipelined Water Districts	Diversions
Include corporate overheads in SPF	From 2020-21, phase in price increase up to four years	From 2020-21, phase in price increase up to four years	From 2020-21, phase in price increase up to four years	From 2020-21, phase in price increase up to four years
Apply SPF to all service points	No change	From 2020-21, four year phase in	From 2020-21, four year phase in	No change
Customers with local read service points to provide meter readings	From 2020-21, as part of water ordering process	From 2020-21, each month	From 2020-21, each month	From 2020-21, each month
Remove SCADA costs from Local Operate, Remote Read	From 2020-21	n/a	n/a	n/a
Local Operate SPF replaces Local Operate, Local Read and Local Operate, Remote Read	From 2020-21, four year phase in	n/a	n/a	n/a
D&S SPF	$145 ($120)	$145 ($120)	$145 (n/a)	$145 ($120)
Irrigation – Unmetered SPF	n/a	n/a	n/a	$145 ($120)
Irrigation - Local Operate SPF	$455 (Local Read - $350, Remote Read $850)	$455 (n/a – Additional Service Point Fee $120)	n/a	n/a
Irrigation – Metered SPF	n/a	n/a	n/a	$455 ($350)
Irrigation - Remote Operate SPF	$1,070 ($1,060)	$1,070 (n/a – Additional	n/a	n/a

		Service Point Fee $120)		

Miscellaneous charges

For individual applications made to GMW, ‘fees for service’ are paid by the applicant via Miscellaneous Fees and Charges. These fees recover the costs associated with assessing and processing an application and then issuing the relevant licences or authorisations.

To ensure costs are recovered accurately, GMW maintains a ‘Time and Motion’ analysis of all applications by recording the activities and average time spent to complete transactions associated with the various fee for service applications.

Throughout Price Submission 4 various Miscellaneous Fees and Charges have over or under recovered. After further analysis GMW has proposed to set all Miscellaneous Fees and Charges as cost reflective starting from the beginning of the new regulatory period.

The costs in the ‘Time and Motion’ report are updated annually and form the basis of setting GMW’s Miscellaneous Fees and Charges.

Non-prescribed services

Revenue allocation

Non-prescribed revenue is predominately generated through contracted works generated as part of GMW’s role as the Victorian state constructing authority for the MDBA. The majority of other non-prescribed service revenue comes from houseboats, RUSAF, recoverable works, Hydroelectricity generation, commercial leases and Government service contracts. These non-prescribed revenue streams have been part of GMW’s business for many years and have not changed in nature for Pricing Submission 5.

During Pricing Submission 4, GMW generated a substantial amount of revenue from contract works performed on behalf of the Connections Project. However included in this revenue is also revenue generated as an accounting artefact for gifted assets that due to the nature of the funding used were not treated as contributed capital. For Pricing Submission 5 there is no forecast revenue from the Connections Project. This is due to the expected completion of that project.

Figure 20: Non-prescribed revenue.

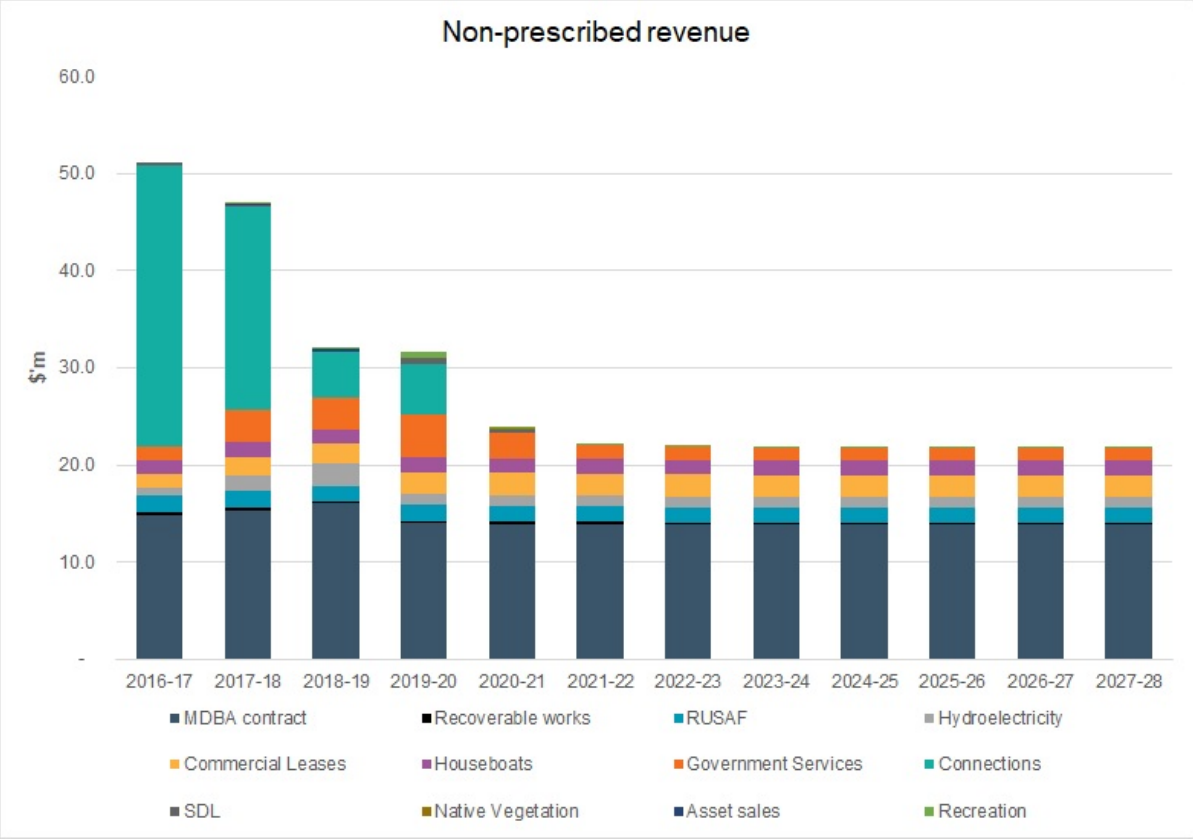


Table 92: Non-prescribed revenue in 2919-20.

Non-Prescribed Revenue 2019/20 $'m	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
MDBA contract	14.8	15.2	16.0	14.0	13.9	13.9	13.8	13.8	13.8	13.8	13.8	13.8
Recoverable works	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RUSAF	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Hydroelectricity	0.8	1.6	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Commercial Leases	1.4	1.9	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Houseboats	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Government Services	1.3	3.3	3.2	4.4	2.7	1.4	1.3	1.3	1.3	1.3	1.3	1.3
Connections	29.1	20.8	4.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SDL	0.3	0.2	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Native Vegetation	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Asset sales	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recreation	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total non-prescribed	**51.2**	**47.1**	**31.9**	**31.7**	**23.7**	**22.0**	**21.9**	**21.8**	**21.8**	**21.8**	**21.8**	**21.8**

Table 93: Non-prescribed operating expenditure in 2019-20.

Non-Prescribed Operating Expenditure 2019/20 $'m	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
MDBA contract	14.8	15.2	14.9	14.1	14.2	14.2	14.2	14.2	14.1	14.1	14.1	14.1
Recoverable works	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Training Services	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydroelectricity	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Commercial Leases	1.4	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Houseboats	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Government Services	1.3	2.4	3.2	3.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Connections	3.8	3.8	5.1	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SDL	0.3	0.2	0.1	0.7	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Native Vegetation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asset sales	23.2	45.0	27.1	40.2	5.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Recreation	1.7	1.6	1.5	1.6	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.3
Total non-prescribed	**48.2**	**70.5**	**54.0**	**68.5**	**23.6**	**19.5**	**19.5**	**19.3**	**19.3**	**19.3**	**19.3**	**19.3**

Cost allocation

Costs are allocated within GMW across both the prescribed and non-prescribed business. In the first instance, all costs that are directly attributable to providing one particular service, either prescribed or non-prescribed, are costed directly to that service through GMW's job costing system.

Where costs are not directly attributable to one particular service, costs need to be allocated. There are different tiers of allocation depending on the nature of the cost. Shared costs are allocated between a limited number of services based on legal agreements or long-standing allocation shares. Examples of these are allocations of operating and maintenance costs for bulk water assets also used for hydro electricity generation.

All other costs are classified as overheads. Overheads are broken into two categories, management overheads and corporate overheads. Management overheads are identified as costs that have a direct managerial relationship to staff who are direct charging their time to one particular service. Management overheads are therefore allocated using the causal relationship of the direct charged time.

Corporate overheads are the final allocation to occur. Predominantly corporate overheads are allocated based on total expenditure, with a cap on capital projects in excess of $1 million, due to the distortionary impact of these projects which are generally outsourced and therefore not overhead intensive. Where possible, overheads are allocated on a more appropriate base (i.e. total employee costs for HR and Safety overheads), however the majority are allocated on total expenditure. This allows costs to be allocated between prescribed and non-prescribed services on a consistent basis.

Appendices

Appendix 1. Beneath the Waterline - What our customers told us

The table below provides a summary of the topics and recommendations from the deliberative process where voting was sought.

Topic	What we asked	What we heard	How they voted
365-day irrigation Presenters: • Committee for Greater Shepparton CEO Sam Birrell • GMW's Sam Green	To what extent do you support the proposal of offering 365-day water delivery for irrigation?	GMW should offer 365-day water delivery for irrigation.	Fully support (25%) Mostly support (31%) Not sure (31%) Don't support (13%)
	Should GMW investigate the 365-day proposal further?	GMW should investigate the 365-day proposal further.	Fully support (48%) Mostly support (39%) Not sure (6%) Don't support (6%)
Customer billing and payment options Presenter: GMW's Fabian McCloy	Are the payment options currently available suitable?	Consider having payments due end at the end of month Consider incentivising the payment of the full amount if paid by September.	Fully support (61%) Mostly support (36%) Not sure (0%) Don't support (4%)
Customer hardship Presenter: GMW's Fabian McCloy	Do you think GMW's hardship policy is: • Too tough • Too soft • Just right	There was strong affirmation for the current hardship policy.	Too tough (10%) Too soft (10%) Just right (79%)
	To what extent do you support customers paying an additional $5/year to support those who are doing it tough?	There was little support for an additional payment to assist farmers in hardship.	Fully support (10%) Mostly support (10%) Not sure (7%) Don't support (73%)
Price paths Presenter: Tim White (KPMG)	Each segment was presented with at least two price path options. Which price path would you advise GMW to implement?	Customers value stability as it allows them to better plan and budget.	Gravity: red Pumped: green Water districts: green Diversions: more information

Pricing equity Presenters: GMW's Daniel Irwin and VFF's Richard Anderson	Should the price differential between water users and non-water users be removed?	There was strong support for removing the price differential between Water Users and Non-water use.	Yes (89%) No (4%) Not sure (7%)
	To what extent should our storage tariff reflect the principle of user pays and transparency, as opposed to simplicity?	There was majority support for the storage tariff to more strongly reflect principles of user pays and transparency, rather than simplicity.	To a large extent (39%) To a moderate extent (29%) Of equal importance with simplicity (14%) Unsure (4%) Of less importance than simplicity (14%)
Customer Service Point Fees Presenter: GMW's Sam Green	To what extent would you support the cost recovery of Total Channel Control to be recovered more broadly?	Majority support for the removal of the cost recovery for Total Channel Control from the Customer Service Point Fee.	Strongly support (49%) Moderately support (21%) Do not support (14%) Unsure (17%)
	To what extent would you support the introduction of a new fee for mothballed outlets?	Majority support for the introduction of a new Customer Service Point Fee for mothballed outlets.	Strongly support (60%) Moderately support (20%) Do not support (20%) Unsure (0%)
	Would you support GMW in applying the Customer Service Point Fee principles to all service points the same way?	Strong support for applying the Customer Service Point Fee principles to all Customer Service Points in the same way.	Strongly support (60%) Moderately support (28%) Do not support (3%) Unsure (3%)
	How should GMW recover the cost of meter compliance testing?	Very strong support for GMW to keep the cost of meter compliance testing as an operational overhead.	Keep as an operational overhead (88%) Include as an additional element in the CSP fee (8%) Unsure (4%)
	How best should GMW monitor customer compliance with ordered use for local read service points?	Very strong support to require customers to enter a meter read at the end of each irrigation.	Additional random visits (0%) Require customers to enter a meter read at the end of each irrigation (88%) Upgrade all local read service point to remote read (4%) Unsure (8%)

Appendix 2. A fairer deal for all - What our customers told us

The table below provides information on key questions and our customer responses from 'YourSay@GMW'.

What we asked	What we heard	How they voted
What things are important to you as we consider a 365-day delivery service in some parts of the system?	• I support this move if can be successfully incorporated into the winter works programs. • Is it going to drive costs higher? • Will it give GMW time to carry out maintenance?	N/A
Do you support the proposal to remove the categories of water user and non-water user in the Entitlement Storage Fee?	• I support all water owners (both users and non-users) contributing to the cost of maintaining storage and delivery infrastructure. • Investors who own water shares but no land should defiantly pay for water storage.	Responded: 28 Yes (72%) No (14%) Unsure (14%)
Do you support a move to system pricing?	• Simplify the whole system. • The Entitlement Storage Fee should be the same for Bulk Entitlement as well.	Responded: 28 Yes (54%) No (28%) Unsure (18%)
Do you support a move to uniform delivery charges in the GMID?	• GMW is so large it is difficult for individual instigators to have a good understanding of all the different aspects of the system. I have read your documents but still I feel unsure of the knock on effect that may be created by make changes. I do think simpler will be better.	Responded: 28 Yes (46%) No (36%) Unsure (18%)
Do you support the proposal to create a single customer fee to replace multiple service fees?	• So long as it doesn't cater for the big irrigators and put costs up for the others.	Responded: 20 Yes (55%) No (20%) Unsure (25%)
Do you support GMW's proposal to treat all service points the same way across all our customer groups?	• Those that don't use the service points shouldn't have to pay.	Responded: 21 Yes (48%) No (33%) Unsure (19%)

Do you support our proposal to recover the average cost of channel automation more broadly, from all customers within the gravity system?	• I don't want differentiation by entity size to result in different charges. It should be the same for all customers.	Responded: 17 Yes (37%) No (32%) Unsure (21%)
Do you support incorporating corporate overhead costs in the Service Point Fee?	• Not sure where they are currently recovered, but I think water users and non-users alike should all cover these costs, attaching to service point fees doesn't do this. (Note: Regrettably, we feel the high percentage of unsure responses indicates our information on this point was not clear enough and therefore the response cannot be relied upon.)	Responded: 20 Yes (5%) No (40%) Unsure (55%)
Do you support the creation of a Local Operate charge to replace the current Local Read Local Operate and Local Operate Remote Read charges?	• That sounds reasonable. • There should be no charge to read a meter.	Responded: 19 Yes (37%) No (26%) Unsure (37%)
Do you support customers with local read outlets entering meter readings to assist with compliance without increasing costs?	• As long as the meters are officially read at the end of each season and also a few randomly to make sure no tampering is happening.	Responded: 21 Yes (76%) No (19%)
Do you agree with our proposal to phase out the Torrumbarry Natural Carriers Rebate?		Responded: 19 Yes (42%) No (0%) Unsure (58%)

Appendix 3. GMW's service obligations and performance against service standards in the current regulatory period

Service Obligations

GMW has substantial obligations and duties under legislation, including under the *Water Act 1989* and the statement issued by the Minister for Water. These obligations drive service standards and expenditure.

Water Act 1989 Obligations

Significant statutory duties under the Water Act 1989 are set out in Table below.

Part and Section	Obligation
s43A	Appointment as resource manager
s51 et al	Diversion licences managed on behalf of Minister (delegated under Part and Section Obligation s306)
s64GA & s64GB	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 and associated drainage systems
s222	Duty to deliver water to each serviced property in its district

Statement of Obligations

A range of services and functions are delivered as required by the statement issued by the Minister for Water under Section 4I (2) of the Water Industry Act 1994. The table below sets out key obligations.

Obligation	Description
2-1 Water Plan	Prepare a Water Plan and deliver this to the ESC following consultation with the Minister.
3 Governance	The Board is accountable to the Minister for ensuring good governance of the Corporation.
4 Customer and Community Engagement	Transparent process to engage customers and community in planning processes, with the provision of sufficient information.
5 Managing Risk	Develop and implement plans, systems and processes to identify, assess, prioritise and manage its risks.

5-3 Dam Safety	Develop and implement processes to identify, assess, manage, and prioritise improvements to, and periodically review the safety of, dams.
5-4 Blue Green Algal Blooms	Report blue green algal blooms impacting on water supply or delivery services.
6-A Modelling for Climate Change and Supply Forecasting	Comply with guidelines for forecasting the impact of climate change on water supplies as issued by the department.
6-5 Water Allocation and Reserve Rules	Develop, publish and review the rules for allocating available water for the current year, and reserves for subsequent years, and contingency plans for managing severe water shortages.
7-1 Managing Assets	Develop and implement plans, systems and processes to manage its assets in order to maintain agreed service standards, deliver water efficiently, minimise whole of lifecycle costs and enhance environmental outcomes and amenity where service standards are not compromised.
7-1A Information Statements	Information statements must be easily accessible and must advise of any works owned or maintained by a water corporation.
7-2 Bulk Supply Systems	Develop and implement programs to improve the efficiency of bulk water supply, where benefits exceed costs, and enhance ecological benefits of waterways and wetlands where they are used to supply water.
7-3 Licensing Administration Functions	Exercise delegated powers and perform licensing administration functions in accordance with the terms and conditions of the instrument of delegation and in an effective and efficient manner in accordance with any guidelines or policies issued by the Minister for that purpose.
7-3A Compliance and Enforcement Functions	Develop and implement policies, standards and systems based on risk based regulatory models and on guidelines issued by the department.
7-4 Metering	Prepare and implement Metering Action Plans.
8 Compliance	Monitor compliance with obligations 1-7 and conduct audits of its compliance.

The statement sets guiding principles about continuously reviewing and improving performance, and implementing innovative solutions which optimise the way water systems are managed and water is delivered. GMW's approach aims to support enhanced environmental outcomes and amenity in urban and rural landscapes, and provide efficient fit-for-purpose water products for its customers.

Statement of Obligations Emissions Reduction

Obligation	Description
1 Policy	Victoria shall achieve a long-term emissions reduction target for the state of net-zero greenhouse gas emissions by the year 2050.
4 Emission Reductions	Reduce emissions in line with our emissions reduction pledge.
5 Compliance	When requested by the Minister, report on progress in meeting emission reductions obligations and conduct audits or reviews when requested.

Other Legislative Requirements

Core activities are also determined by ensuring compliance with other legislative obligations, including:

- Building Act 1993
- Building Regulations 2006
- Disability Act 2006
- Equal Employment Opportunity Act 2010
- Financial Management Act 1994
- Freedom of Information Act 1982
- Murray-Darling Basin Act 1993
- Planning and Environment Act 1987
- Protected Disclosure Act 2012
- Public Administration Act 2004
- Safe Drinking Water Act 2003
- Safe Water Drinking Regulations 2015
- Victorian Industry Participation Policy Act 2003

Obligations relating to our business functions

Each of the organisation's core services must comply with statutory duties specified in the Water Act 1989 and the relevant clauses in the statement. Key duties by business function are set out below.

Irrigation services

- Duty to supply serviced properties under s221 and s222 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
- Customer and Community Engagement under clause 4 of the Statement
- Managing Assets under clause 7-1 of the Statement.

Water Districts

- Duty to manage systems and supply water under s163 of the Water Act 1989.

Diversion services

- Issuing, monitoring and renewing licences issued under s51 of the Water Act 1989 on behalf of the Minister (delegated under s306)
- Licensing Administration functions under clause 7-3 of the Statement
- Metering under clause 7-4 of the Statement.

Bulk water

- Storage manager under Part 6C and s122ZL of the Water Act 1989
- Dam Safety under clause 5-3 of the Statement
- 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 and s64GB of the Water Act 1989
- Water allocation and reserve rules under clause 6-5 of the Statement.

Obligations as per the Minister's Letter of Expectations

Obligation	Description
E2/E3: Climate change	Provide services that minimise environmental impacts, mitigate climate change and put in place adaptation strategies and actions.
C1/C2:Customer and community outcomes	All aspects of service delivery will be customer and community centred.
AC1/AC2/AC3: Water for Aboriginal cultural, spiritual and economic values	Recognise and support Aboriginal cultural values and economic inclusion in the water sector.
L4: Resilient and liveable cities and towns	Contribute to healthy communities by supporting safe, affordable, high quality services and resilient environments.
Rec1: Recognising recreational values	Support the wellbeing of rural and regional communities by considering recreational values in water management.
G1/G2/G3: Leadership and culture	Water corporations reflect the needs of our diverse communities.
F1-F8: Financial sustainability	Delivering safe and cost-effective water and wastewater services in a financially sustainable way.

GMW's performance against service standards in the current regulatory period.

Service Standards	2016/17 Target	2016/17 Results	2017/18 Target	2017/18 Results	2018/19 Target	2018/19 Result	2019/20 Target
General Customer Service							
Licensing and Administration							
Processing allocation trade applications within 5 business days.	90%	100%	90%	100%	90%	99%	90%
Processing water share applications within 10 business days.	95%	100%	95%	92%	95%	83%	95%
Processing change of ownership applications within 10 business days.	90%	96%	90%	80%	90%	76%	90%
Customer Service							
Complaints to EWOV (per 1,000 customers).	0.17	0.15	0.32	0.36	0.32	0.62	0.32
Customer complaints to G-MW (per 1,000 customers).	3	2.9	5.68	3.47	5.68	2.42	5.68
Telephone calls answered within 30 seconds.	80%	89%	80%	93%	80%	78%	80%
Customer complaints responded to within 10 business days.	100%	100%	100%	100%	100%	100%	100%
Rate of first point resolution (for phone calls).	50%	73%	52%	76%	54%	77%	56%
Gravity Irrigation							
Water Delivery							
Efficiency achieved as a % of diverted.	80.50%	88.00%	82%	84%	83.50%	82.70%	85%
% of orders delivered on day requested.	93%	93%	93%	94%	93%	92%	93%
% of orders within +/- 10% of flow rate for 90% of time.	80%	75%	80%	77%	80%	76%	80%
% of orders within +/- 40mm of supply level 90% of time.	80%	78%	80%	79%	80%	82%	80%
Maintenance Delivery							
Maintenance requests responded within target (% Priority 1-2).	90%	95%	90%	94%	90%	92%	90%
Unplanned service interruptions (> 12 hours).	5	4	5	0	5	0	5
Drainage Irrigation							

Availability of surface drainage.	98%	100%	98%	100%	98%	100%	98%
Availability of sub-surface drainage.	98%	97%	98%	99%	98%	100%	98%
Pumped irrigation							
Irrigation water orders delivered on day requested.	98%	99%	98%	98%	98%	99%	98%
Number of unplanned supply interruptions greater than 12 hours.	5	1	5	11	5	0	5
Efficiency achieved as a % of delivered.	92%	80%	92%	91%	92%	89%	92%
Notification provided to affected customers on system restoration within 2 hours of unplanned outage.	100%	100%	100%	100%	100%	100%	100%
Water Districts							
Number of supply interruptions for continuous periods in excess of 96 hours.	0	0	0	0	0	0	0
Efficiency achieved as a % of diverted.	85%	84%	85%	77%	85%	0%	85%
Diversions							
Groundwater resource monitoring data is collected in accordance with management plan requirements and is readily accessible to our customers. Monitoring data made accessible within 2 weeks of data being submitted by the monitoring contractor.	90%	100%	90%	100%	90%	100%	90%
Customer access to groundwater is managed through seasonal allocations which are announced in accordance with relevant management plans.	100%	100%	100%	100%	100%	100%	100%
Access to unregulated stream flows is managed in accordance with restriction triggers in Local Management Rules. Number of verified concerns per 1000 customers.	2	0	2	1	2	0	2
Bulk water							
The ability of each regulated system to deliver water to meet customer demand as a percentage of time.	99%	100%	99%	100%	99%	100%	99%
The ability of each regulated system to maximise harvesting opportunities up to 100% of the design storage capacity as a percentage of time.	100%	100%	100%	100%	100%	100%	100%

Minimum flow requirements for regulated waterways as specified in the relevant bulk entitlements are satisfied as a % of time.	98%	99%	98%	99%	98%	99%	98%
Seasonal determination announcements for regulated systems to be made within defined timeframes each month.	100%	100%	100%	100%	100%	100%	100%
Risk of spill announcements for relevant regulated systems to be made within defined timeframes each month.	100%	100%	100%	100%	100%	100%	100%

Appendix 4. Opex Expenditure Breakdown

Expenditure by Service

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Irrigation	58.9	53.0	51.9	49.2	43.5	41.0	41.0	41.0	41.1	41.4	41.3	41.3
Drainage	4.8	4.0	3.4	4.4	3.6	3.4	3.4	3.4	3.4	3.4	3.5	3.5
Water districts	1.5	1.3	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Surface water diversions - regulated	1.6	1.6	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Surface water diversions - unregulated	1.3	1.2	1.4	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Groundwater diversions	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Bulk water services	13.5	13.0	14.6	15.0	17.2	14.4	14.1	14.1	13.7	13.1	12.8	12.8
Customer Service and Billing	4.8	4.5	4.0	4.0	3.3	3.2	3.1	3.1	3.1	3.1	3.1	3.2
Total Controllable Expenditure	91.4	83.4	82.6	80.6	72.9	66.9	66.4	66.4	66.2	65.9	65.7	65.7
Licence fees	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Environment Contribution	1.8	1.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Murray Darling Basin Contribution	6.7	16.0	14.6	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
Total Non- Controllable Expenditure	8.6	17.8	17.4	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
Total Prescribed Expend	100.1	101.2	100.0	96.8	89.1	83.1	82.6	82.5	82.4	82.0	81.9	81.8

Fully funded government or customer programs/projects (included in total prescribed expenditure)

Mitiamo pipeline business case – Water Supply	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Savings Program – Irrigation	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Savings - Lake Mokoan – Irrigation	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Groundwater (externally funded) – Diversions	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.6	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Expenditure by Category

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Operations and Maintenance	60.7	54.2	52.7	51.0	48.5	46.6	46.5	46.4	46.2	45.9	45.7	45.7
Customer Service and Billing	4.8	4.5	4.0	4.0	3.3	3.2	3.1	3.1	3.1	3.1	3.1	3.2
Corporate	22.9	21.9	22.8	22.9	21.1	17.2	16.8	16.9	16.9	16.9	16.8	16.8
Total Controllable Expenditure	88.5	80.5	79.5	77.9	72.9	66.9	66.4	66.4	66.2	65.9	65.7	65.7

Expenditure by Driver

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Labour	59.5	56.4	55.2	51.9	44.6	44.1	43.6	43.6	43.6	43.6	43.6	43.6
Energy	1.4	1.6	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9
IT costs	6.6	6.1	6.1	5.7	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0

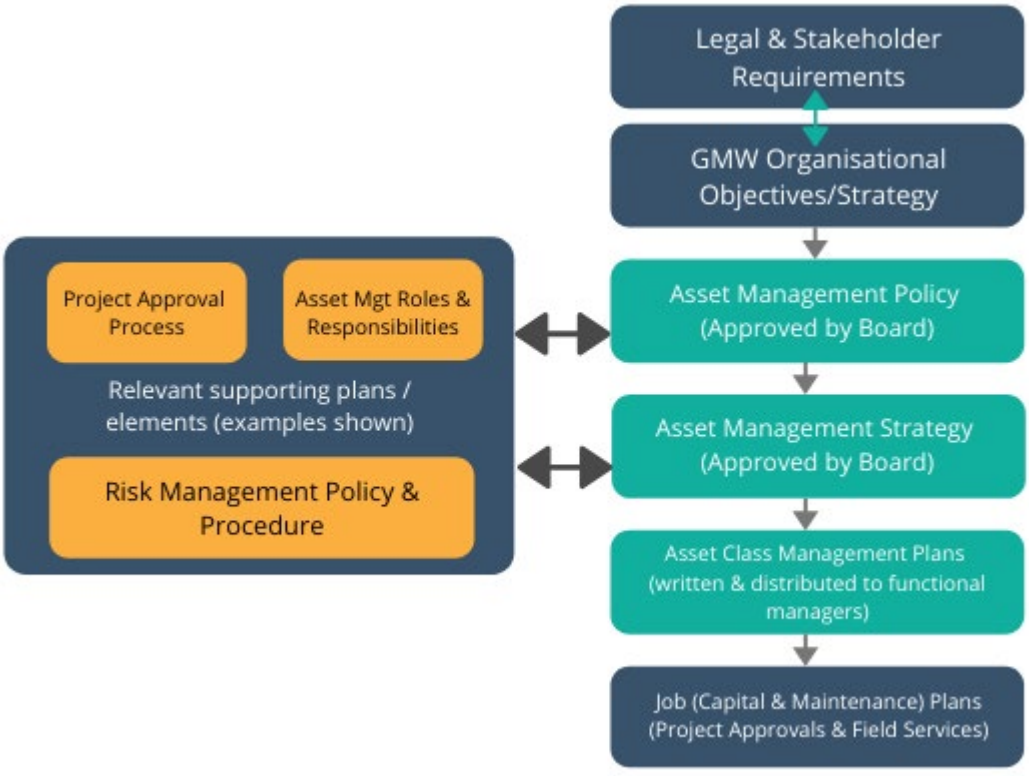
Appendix 5. GMW's approach to capital maintenance, planning and delivery

Asset management practices

GMW is committed to managing our assets through an integrated approach compliant with the Department of Treasury and Finance's Asset Management Accountability Framework (AMAF) and aligned with the ISO 55000 standard, optimising whole of life cost and managing risk to achieve our strategic goals. Our capital plans reflect the needs of stakeholders and statutory requirements, while providing the best value for customers now and into the future.

GMW's Asset Management Policy identifies asset management objectives and principles and GMW has developed an Asset Management Improvement Plan with remedial actions towards a better practice framework. Refer to Figure 1 for GMW's current Asset Management Framework.

Figure 1: Asset Management Framework



Asset management documents within the framework include the:

- Asset Management Policy
- Asset Management Strategy
- Asset Class Management Plans (x 43)
- Asset Priority & Decision Manual (Dams)
- Asset Priority & Decision Manual (Irrigation)

Capital expenditure reflects the ongoing expenditure required to renew the water delivery (irrigation and diversion), water storage (bulk water storage) and other business assets (including ICT assets, and facilities). It also reflects the expenditure required to meet compliance requirements, particularly in relation to dam safety and metering, as well as those which are occurring to improve business service.

Risk - Capital planning, prioritisation and approval

Assets are managed to provide efficient and affordable water services to our customers within agreed service standards.

To ensure best practice asset management compliant with the Department of Treasury and Finance's AMAF and alignment with the ISO 55000 standard, GMW uses a bottom-up, risk based asset analysis to identify and prioritise its capital plan. Asset condition and consequence of asset failure are key inputs used to determine the most appropriate approach in managing assets. This allows the identification of assets that pose potential unacceptable business risk to GMW.

Risk is determined for each asset based on an evaluated consequence rating multiplied by the likelihood of asset failure as per GMW's risk framework.

Following the determination of risk, the assets are sorted by risk score to produce an initial prioritisation order. The assets are then reviewed and other factors considered in refining and determining the appropriate treatment action, including:

- Dam Safety Program: reflects the dams PRA 2019 findings which provides a prioritised sequence of dam safety works to achieve an acceptable risk outcome. For this pricing period detailed design work for three dam safety projects are planned, with one being fully implemented and works commenced on a second in this regulatory period.
- Dams whole of life model, assessing operational requirements and outcomes from annual and comprehensive dam safety inspections to ensure emerging issues are addressed during the next regulatory period.
- Innovative data driven prioritisation methods, including channel by channel analysis, are utilised to ensure assets requiring refurbishment or replacement are identified and ranked for maximum benefit. Innovative techniques to extend the life of aging assets are being leveraged to ensure the risk presented by aging infrastructure is dealt with prudently and efficiently. Wherever possible and practical, assets are decommissioned to achieve a reduction in asset footprint.

The ICT capital expenditure in this submission was developed around ensuring all infrastructure and systems are secure and fit for purpose. A move to managed services (cloud) will drive a reducing investment in on-premise hardware, although some ongoing investment is unavoidable, and this will include replacement of computer, storage and network assets.

Across the capital forecast a business unit driver prioritisation has been applied to ensure the level of expenditure is justified across the business. These processes are described in the following Figure 2.

Figure 2: Process for Risk Determination, Project and Program Capex Development

Managing Uncertainty

The proposed capital investment for the next regulatory period demonstrates a shift in accepting more risk around asset failure. Channel-by-channel and other strategic work has helped identify where it is acceptable to adopt a higher risk of failure. This has enabled many capital replacement works in the water delivery business to be deferred.

Table 1: Risk Mitigation in Capex Development

Risk	GMW Strategy	Assessment
Governance	Capital Investment Framework PRINCE2	Appropriate approval gateways. Projects inextricably linked to business justification / decision making.
Cost estimation	Primarily deterministic (contingency) Major projects (>$2m) have P50	Most capex is end of life replacement of existing assets. Cost estimates are reliably informed by previous works.
Options analysis	Channel-by-channel Dams Strategy and PRA	Higher risk acceptance than previous regulatory periods. Some risk of increased service interruption but lower price.
Delivery mechanisms	Mixed delivery model	Effectively manages risks. Large complex works often contracted out. Demonstrates value for money delivery by comparing internal and external delivery models.
Uncertain projects	Emergent works allocation	Acknowledges that there will be asset failures that have not been included in the pricing submission and gives avenue to respond.

Capital delivery

Rigorous arrangements have been adopted to ensure capital works programs are delivered to drive the best outcomes in terms of price, quality and timeliness. To ensure flexibility we adopt a mix of internal resources, design consultants and external contractors to deliver the capital

works programs. 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. This ensures development and retention of critical intellectual capital in-house to manage the network infrastructure. Specialist consultants are generally engaged to complete engineering concept and detailed design work for defined or complex projects. This is mainly through a professional services panel agreement ensuring value for money is maintained in procurement while facilitating a streamlined process for awarding specific packages of work.

Appropriate risk sharing arrangements are determined, developed and documented through use of GMWs Procurement Framework and development of individual Procurement Plans. GMW implements a number of risk sharing arrangements associated with our more complex capital works to ensure risk is adequately allocated between parties. For instance when working on live dams it is necessary to ensure that flooding risk is apportioned between GMW and the contractor in terms of emergency response and temporary demobilisation. If the entire risk of flooding at a GMW major storage is passed onto the contractor then the tender price for the work will reflect this risk or conversely if the flooding risk is not clearly defined then GMW could be liable for substantial unidentified costs. GMW instigates clear delineation of evacuation, standby and demobilisation costs and responsible party in the eventuation of a flooding scenario within the tender document. This model includes a reducing scale for the longer duration flooding events to minimise longer-term cost for GMW.

Detailed contracts (Victorian DTF Public Design & Construction Contracts) are utilised as a formal instrument documenting risk-sharing arrangements between GMW and:

- Consultants engaged to complete engineering concept and design work, and
- Contractors involved in delivering capital works.

Internally, a construction workforce of about 35 staff is maintained. This workforce is generally engaged on irrigation infrastructure works but is also capable of responding quickly to changes in priorities, including emergency response activities. Storage staff also deliver some of the water storage projects that are generally more routine in nature such as plant and equipment replacement and Facilities staff assist with any building works delivery. 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.

Governance

GMW uses PRINCE2 methodology to manage the delivery of capital projects. The Asset Investment Framework provides an efficient and accountable layer of governance over the capital spend to ensure all capital works are prudent and efficient for the business and customer.

The project governance framework is managed through project boards, with sign off by the responsible General Manager with delegated authority. The adoption of PRINCE2 ensures a consistent approach to project delivery through setting the standards, governance and provides overview for project approval in GMW (e.g. design, cost estimation, scheduling, and business case development to demonstrate value for money, change management, risk management, project management reporting and forecasting) and assigns responsibility for the various life cycle functions on a best-for-project basis.

Appendix 6. GMW's channel-by-channel framework

This framework is based on the following principles:

1) **Channel-by-channel – Context, Methodology, Transitioning**
   a) In the context of transforming the business, there is expectation by Government and Customers that GMW ensures at all times that its investments in the upgrade and maintenance of its delivery infrastructure are underpinned by a granular, agreed and documented strategy that is aligned with business circumstance both globally and locally.
   b) The Transformation actions include the development of tailored investment plans at the 'Pod' level (in effect 'sub-businesses' of the wider GMID business segment). The 213 GMID Pods were individually assessed for predicted financial performance in 5 year blocks over a 50 year period.
   c) Pods were identified as requiring an approach of 'Continue', 'Monitor' or 'Change' depending on the financial analysis outcome (categorisation may be amended by the Business Unit owner where unique circumstance dictates).
   d) The level of future capital commitment was tailored to the Pod categorisation output (excepting specifically identified assets where the consequence of failure is considered too high to allow the risk envelope to be responsibly explored), which required in parallel the application of an extended suite of alternate asset treatments, as had been developed through an intensive innovation scoping program over the last 2-3 years. This adaptive and flexible approach is critical to successful implementation and financial management.
   e) Transition to this investment approach was developed in 2018-19 as part of the wider Transformation Business Case, substantially enacted for the 19/20 works program subject to specific variances to maintain efficient business practise during transition, to reach a state of 'business as usual' by the commencement of this Price Submission.
   f) The approach represents a significant shift for the organisation, reflective of current circumstances (multiple factors in play) for the irrigation base and the need for the business to clearly demonstrate a plan for ongoing stability, resilience and adaptability.
   g) Given the significant revenue stream attached to gravity irrigation and that channel embankment and structure works are a primary capital cost component for this business segment, the method was applied to this investment portfolio initially.
2) **Channel-by-channel – Engagement, Business Value**
   a) The principles adopted through this strategy will be tested through extensive engagement both in the 'global' sense and at the local level (through 'Pod' based analytics and discussion pieces).
   b) The business change goes beyond a method for altered decision-making. The development of an internally developed, owned and customised data platform, which collates and presents information with minimal double handling that is also carefully selected for relevance and for statistical independence, has a very high ongoing business value both internally and externally. The tool/platform will allow business performance to be monitored and analysed more effectively, and to create a self-learning effect through the continuous data input-output cycle.
   c) The business will also become more efficient in its workflow by setting out advanced planning at the delivery system 'Pod' level. Equally, the business will be able to more

readily and commercially engage with private investor interests, providing opportunity to ultimately strengthen the service base for the benefit of the entire region.

3) Channel-by-channel – Service and Risk Measurement

a) The platform will allow service performance against corporate Key Performance Indicators and maintenance cost performance, to be monitored:

i) at the local level

ii) in close to real time

iii) building on existing business systems that are well established

The management of risk is a critical parallel task. Risk must be rigorously assessed, measured and documented, so that outcomes moving forward can be tested iteratively to determine any appropriate future amendment to the investment plan globally or locally.

Appendix 7. 2020-2024 Pricing

GMW Proposed Prices (2020-2024)

Tariff and Price Component		2020/21	2021/22	2022/23	2023/24
Customer Service & Billing					
Customer Fee	Each	N/A	124.22	126.10	123.26
Water Register Fee	Transaction	N/A	13.47	13.47	13.47
Goulburn Murray Irrigation District (Incorporating Central Goulburn, Loddon Valley, Murray Valley, Rochester, Shepparton, Torrumbarry Irrigation Areas) NOTE: Irrigation Service Fees, Distribution Fees, Delivery Share Fees and Termination Fees are proposed as uniform. Drainage fees are not yet uniform but a major review of drainage fees is currently underway.					
GMID Gravity Irrigation					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	D&S Service Point	141.74	138.55	135.44	132.39
Service Point Fee - Local Read	Irrigation Service Point	366.57	382.22	396.97	415.44
Service Point Fee - Remote Read	Irrigation Service Point	733.14	621.10	513.73	415.44
Service Point Fee - Remote Operate	Irrigation Service Point	1,045.94	1,022.43	999.44	976.97
Distribution					
Infrastructure Access Fee	ML/Day	2,416.42	2,416.42	2,416.42	2,416.42
Infrastructure Use Fee	ML	4.89	4.89	4.89	4.89
Casual Infrastructure Use Fee	ML	41.13	41.13	41.13	41.13
Distribution Access Fee	ML/day	2,416.42	2,416.42	2,416.42	2,416.42
Distribution Use Fee	ML	4.89	4.89	4.89	4.89
Delivery Share Reservation	ML/day	2,416.42	2,416.42	2,416.42	2,416.42
Termination Fee *	ML/day	24,164.22	24,164.22	24,164.22	24,164.22
Central Goulburn Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Central Goulburn Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	8.86	9.26	9.68	10.11
Water Use Fee	ML	2.73	2.51	2.31	2.12
Drainage Diversion Site Fee	Site	215.05	210.22	205.49	200.87
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Drainage Diversion Agreement Fee	ML/ENT	2.20	2.15	2.10	2.05
Central Goulburn Sub Surface Drainage					
Local Benefit Area Fee	ha	3.68	3.79	3.90	4.02
Local Benefit Water Use Fee	ML	1.38	1.28	1.18	1.09
Municipal Local Benefit Area Fee	ha	14.71	15.15	15.60	16.07
Loddon Valley Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Loddon Valley Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	5.78	6.35	6.99	7.69

Water Use Fee	ML	3.38	3.72	4.09	4.50
Drainage Diversion Site Fee	Site	53.76	53.76	53.76	53.76
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Murray Valley Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Murray Valley Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	11.18	11.18	11.18	11.18
Water Use Fee	ML	2.63	2.57	2.50	2.44
Drainage Diversion Site Fee	Site	215.05	210.22	205.49	200.87
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Drainage Diversion Agreement Fee	ML/ENT	2.20	2.15	2.10	2.05
Murray Valley Sub Surface Drainage					
Local Benefit Area Fee	ha	3.97	3.97	3.97	3.97
Local Benefit Water Use Fee	ML	1.66	1.66	1.66	1.66
Municipal Local Benefit Area Fee	ha	15.86	15.86	15.86	15.86
Rochester-Campaspe Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Rochester-Campaspe Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	9.33	8.96	8.78	8.60
Water Use Fee	ML	2.29	2.15	2.02	1.90
Drainage Diversion Site Fee	Site	215.05	210.22	205.49	200.87
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Drainage Diversion Agreement Fee	ML/ENT	2.20	2.15	2.10	2.05
Rochester Sub Surface Drainage					
Local Benefit Area Fee	ha	15.55	15.55	15.55	15.55
Local Benefit Water Use Fee	ML	0.98	0.96	0.94	0.92
Municipal Local Benefit Area Fee	ha	62.19	62.19	62.19	62.19
Campaspe Gravity Irrigation					
Service Fee	Property	117.30	N/A	N/A	N/A
Shepparton Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Shepparton Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	14.81	13.92	13.92	13.92
Water Use Fee	ML	3.85	3.31	2.98	2.68
Drainage Diversion Site Fee	Site	215.05	210.22	205.49	200.87
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Drainage Diversion Agreement Fee	ML/ENT	2.20	2.15	2.10	2.05

Torrumbarry Community Surface Drainage					
Community Surface Drainage Fee	KM	705.00	705.00	705.00	705.00
Torrumbarry Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	4.50	4.32	4.14	3.98
Water Use Fee	ML	1.99	1.73	1.51	1.31
Drainage Diversion Site Fee	Site	53.76	53.76	53.76	53.76
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Tyntynder Primary Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	11.83	13.01	14.31	15.74
Water Use Fee	ML	4.71	5.18	5.70	6.27
Drainage Diversion Site Fee	Site	53.76	53.76	53.76	53.76
Drainage Diversion Site (High Flow)	Site	83.09	81.22	79.39	77.61
Loch Garry					
Loch Garry Flood Protection					
Service Fee	Property	117.30	N/A	N/A	N/A
Flood Protection Fee	ha	1.62	1.79	1.96	2.16
Tungamah					
Tungamah - Water Supply District					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	D&S Service Point	39.10	71.67	107.42	132.39
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	KL/day	133.77	121.33	110.05	99.81
Infrastructure Use Fee	ML	49.41	60.28	73.55	89.56
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
Loddon Water Supply Districts					
Normanville Water Supply District					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	Service Point	39.10	71.67	107.42	132.39
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	kL/Day	167.32	157.28	147.84	138.97
Infrastructure Use Fee	ML	110.91	126.11	143.39	163.00
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
East Loddon (North) Water Supply District					
Service Fee	Property	117.30	N/A	N/A	N/A
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	ha	2.35	2.35	2.35	2.35
Distribution Access Fee	ML/day	2,416.42	2,416.42	2,416.42	2,416.42
Distribution Use Fee	ML	4.89	4.89	4.89	4.89
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
East Loddon Water Supply District					

Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	Service Point	39.10	71.67	107.42	132.39
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	kL/Day	65.93	44.17	37.55	31.91
Infrastructure Use Fee	ML	65.83	73.21	81.40	90.57
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
West Loddon Water Supply District					
Service Fee	Property	117.30	N/A	N/A	N/A
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	ha	2.62	2.54	2.46	2.39
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
Mitiamo Water Suppy District					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	Service Point	141.74	138.55	135.44	132.39
Water Allowance Storage Fee	ML/Allowance	8.49	9.62	9.62	9.62
Infrastructure Access Fee	kL/Day	155.38	155.38	155.38	155.38
Infrastructure Use Fee	ML	25.31	25.31	25.31	25.31
Distribution Access Fee	kL/Day	155.38	155.38	155.38	155.38
Distribution Use Fee	ML	25.31	25.31	25.31	25.31
Excess Fee	ML	1,955.03	1,911.08	1,868.11	1,826.11
Torrumbarry-Pumped					
Woorinen Pumped Irrigation					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	D&S Service Point	39.10	71.67	107.42	132.39
Service Point Fee - Local Read	Irrigation Service Point	112.41	229.33	336.26	415.44
Service Point Fee - Remote Operate	Irrigation Service Point	263.93	525.55	784.61	976.97
Distribution					
Infrastructure Access Fee	ML/Day	4,988.82	4,604.68	4,328.40	4,068.69
Infrastructure Use Fee	ML	20.61	21.13	21.66	22.20
Casual Infrastructure Use Fee	ML	95.44	90.20	86.58	83.23
Delivery Share Reservation	ML/day	4,988.82	4,604.68	4,328.40	4,068.69
Termination Fee *	ML/day	49,888.15	46,046.76	43,283.96	40,686.92
Woorinen Sub Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Area Fee	ha	2.31	2.54	2.80	3.07
Water Use Fee	ML	0.92	1.01	1.12	1.23
Nyah Pumped Irrigation					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	D&S Service Point	39.10	71.67	107.42	132.39
Service Point Fee - Local Read	Irrigation Service Point	112.41	229.33	336.26	415.44
Distribution					
Infrastructure Access Fee	ML/Day	4,750.20	4,322.68	3,933.64	3,579.61
Infrastructure Use Fee	ML	24.10	26.87	29.96	33.51
Casual Infrastructure Use Fee	ML	95.35	91.71	88.96	87.20

Delivery Share Reservation	ML/day	4,750.20	4,322.68	3,933.64	3,579.61
Termination Fee *	ML/day	47,502.00	43,226.82	39,336.41	35,796.13
Nyah Sub Surface Drainage					
Service Fee	Property	117.30	N/A	N/A	N/A
Water Use Fee	ML	4.91	5.40	5.94	6.53
Tresco Pumped Irrigation					
Service Fee	Property	117.30	N/A	N/A	N/A
Service Point Fee - D&S	D&S Service Point	39.10	71.67	107.42	132.39
Service Point Fee - Local Read	Irrigation Service Point	112.41	229.33	336.26	415.44
Distribution					
Infrastructure Access Fee	ML/Day	5,542.14	5,109.85	4,711.29	4,343.81
Infrastructure Use Fee	ML	13.03	15.09	17.47	20.28
Casual Infrastructure Use Fee	ML	96.16	91.73	88.14	85.44
Delivery Share Reservation	ML/day	5,542.14	5,109.85	4,711.29	4,343.81
Termination Fee *	ML/day	55,421.42	51,098.55	47,112.86	43,438.06
Tresco Sub Surface Drainage					
Subsurface Drainage Fee	ML	2.00	2.20	2.42	2.66
Surface water diversions					
Regulated Waterways					
Service Fee	Licence	117.30	N/A	N/A	N/A
Service Point Fee - Unmetered	Service Point	141.74	138.55	135.44	132.39
Service Point Fee - Metered (excluding D&S)	Service Point	366.57	382.22	396.97	415.44
Access Fee	Service Point	195.80	195.80	195.80	195.80
Unregulated Waterways					
Service Fee	Licence	117.30	N/A	N/A	N/A
Service Point Fee - Unmetered	Service Point	141.74	138.55	135.44	132.39
Service Point Fee - Metered (excluding D&S)	Service Point	366.57	382.22	396.97	415.44
Access Fee	Service Point	75.20	75.20	75.20	75.20
Resource Management Fee	ML	2.90	2.90	2.90	2.90
Groundwater Diversions					
Groundwater					
Service Fee	Licence	117.30	N/A	N/A	N/A
Service Point Fee - Unmetered	Service Point	141.74	138.55	135.44	132.39
Service Point Fee - Metered (excluding D&S)	Service Point	366.57	382.22	396.97	415.44
Access Fee	Service Point	132.00	132.00	132.00	132.00
Resource Management Fee	ML	3.98	3.98	3.98	3.98
Shepparton Irrigation Region Groundwater					
Service Fee	Licence	117.30	N/A	N/A	N/A
Access Fee	Service Point	59.20	59.20	59.20	59.20
Resource Management Fee	ML	0.70	0.70	0.70	0.70
Storage					

Entitlement Storage Fee					
Broken Basin - HRWS	ML	9.62	9.62	9.62	9.62
Broken Basin - LRWS	ML	4.41	4.41	4.41	4.41
Goulburn Basin - HRWS	ML	9.62	9.62	9.62	9.62
Goulburn Basin - LRWS	ML	4.41	4.41	4.41	4.41
Campaspe Basin - HRWS	ML	9.62	9.62	9.62	9.62
Campaspe Basin - LRWS	ML	4.41	4.41	4.41	4.41
Loddon Basin - HRWS	ML	9.62	9.62	9.62	9.62
Loddon Basin - LRWS	ML	4.41	4.41	4.41	4.41
Bullarook Basin - HRWS	ML	9.62	9.62	9.62	9.62
Bullarook Basin - LRWS	ML	4.41	4.41	4.41	4.41
Murray Basin - HRWS	ML	10.95	10.95	10.95	10.95
Murray Basin - LRWS	ML	4.02	4.02	4.02	4.02
Ovens Basin - HRWS	ML	10.95	10.95	10.95	10.95
Ovens Basin - Spill Reliability	ML	4.02	4.02	4.02	4.02
Service Fee - Non Water User					
Broken Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Goulburn Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Campaspe Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Loddon Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Bullarook Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Murray Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Ovens Basin - Service Fee (non water user)	Property	117.30	N/A	N/A	N/A
Entitlement Storage Fee - Above Entitlement Storage					
Goulburn Basin	ML	3.93	3.93	3.93	3.93
Campaspe Basin	ML	16.36	16.36	16.36	16.36
Murray Basin	ML	4.27	4.27	4.27	4.27
Bulk Water					
Murray - Entitlement					
Murray Basin HR	ML/ENT	9.22	9.22	9.22	9.22
Murray Basin LR	ML/ENT	4.19	4.19	4.19	4.19
Murray System - WR Equivalent	ML/ENT	10.80	10.80	10.80	10.80
Murray Basin Above Entitlement Storage	ML/ENT	4.19	4.19	4.19	4.19
Ovens Basin - Entitlement					
Ovens Basin HR	ML/ENT	75.62	75.62	75.62	75.62
Goulburn Supplemented Basin - Entitlement					
Goulburn System - WR Equivalent	ML/ENT	9.50	9.50	9.50	9.50
Broken Basin - Entitlement					
Broken Basin HR	ML/ENT	59.96	59.96	59.96	59.96
Goulburn Basin - Entitlement					

Goulburn Basin VHR	ML/ENT	7.79	7.79	7.79	7.79
Goulburn Basin HR	ML/ENT	7.45	7.45	7.45	7.45
Goulburn Basin LR	ML/ENT	3.85	3.85	3.85	3.85
Goulburn Basin Above Entitlement Storage	ML/ENT	3.85	3.85	3.85	3.85
Campaspe Basin - Entitlement					
GMW Capacity Share					
Campaspe Basin HR	ML/ENT	26.00	26.00	26.00	26.00
Campaspe Basin LR	ML/ENT	16.04	16.04	16.04	16.04
Campaspe Basin Above Entitlement Storage	ML/ENT	16.04	16.04	16.04	16.04
Coliban Capacity Share					
Source	ML/ENT	32.70	32.70	32.70	32.70
Loddon Basin - Entitlement					
Loddon Basin HR	ML/ENT	44.13	44.13	44.13	44.13
Bullarook - Entitlement					
Bullarook Basin HR	ML/ENT	461.67	461.67	461.67	461.67
Bullarook Basin LR	ML/ENT	279.73	279.73	279.73	279.73

Proposed Miscellaneous Prices (2020-2024)

Tariff and Price Component	2020/21	2021/22	2022/23	2023/24
GROUNDWATER				
Works Licence				
Groundwater - Construct Works Licence - Non Licensable Bore Form 72 Alter Existing/Issue New/Replace Existing	210.00	210.00	210.00	210.00
Groundwater - Construct Works Licence - Non Licensable Bore Form 72 Amend Existing/Renew Existing/ Transfer Ownership	210.00	210.00	210.00	210.00
Groundwater - Construct Works Licence - Non Licensable Bore Form 72 Additional Assessment	150.00	150.00	150.00	150.00
Groundwater - Construct Works Licence - Licensable Bore Form 70 Issue New/Alter Existing/Amend Existing	1,800.00	1,800.00	1,800.00	1,800.00
Groundwater - Construct Works Licence - Licensable Bore Form 70 Renew Existing/ Transfer Ownership	210.00	210.00	210.00	210.00
Groundwater - Construct Works Licence - Licensable Bore Form 70 Replace Works	1,100.00	1,100.00	1,100.00	1,100.00
Groundwater - Construct Works Licence - Licensable Bore Form 70 Additional Assessment	150.00	150.00	150.00	150.00
Groundwater - Online - Construct a Domestic and Stock Bore	235.00	235.00	235.00	235.00
Groundwater - Online - Amend and renew a Domestic and Stock Bore	80.00	80.00	80.00	80.00
Groundwater - Online - Construct an Investigation or Monitoring Bore	235.00	235.00	235.00	235.00
Groundwater - Online - Amend and Renew an Investigation or Monitoring Bore	80.00	80.00	80.00	80.00
Take and Use Licence				
Groundwater - Take and Use Licence - Licensable Bore Form 91 Issue New / Sale	1,800.00	1,800.00	1,800.00	1,800.00
Groundwater - Take and Use Licence - Licensable Bore Form 75GW Temporary Transfer Water Entitlement Tier 1	210.00	210.00	210.00	210.00
Groundwater - Take and Use Licence - Licensable Bore Form 75GW Temporary Transfer Water Entitlement Tier 2	1,600.00	1,600.00	1,600.00	1,600.00
Groundwater - Take and Use Licence - Form 74GW Permanent Transfer Water Entitlement	1,800.00	1,800.00	1,800.00	1,800.00
Groundwater - Take and Use Licence - Licensable Bore Form 93 Transfer Ownership / Transfer Extraction Share	210.00	210.00	210.00	210.00
Groundwater - Take and Use Licence - Licensable Bore Form 73GW Renew Existing	700.00	700.00	700.00	700.00
Groundwater - Take and Use Licence - Licensable Bore Form 91 Decrease volume/Remove land	210.00	210.00	210.00	210.00
Groundwater - Take and Use Licence - Licensable Bore Form 79 Surrender a Licence	150.00	150.00	150.00	150.00
Groundwater - Take and Use Licence - Licensable Bore Form 78 Subdivide a Licence	1,300.00	1,300.00	1,300.00	1,300.00
Groundwater - Take and Use Licence - Licensable Bore Form 77 Amalgamate Licences	1,300.00	1,300.00	1,300.00	1,300.00
Groundwater - Take and Use Licence - Licensable Bore Form 91 Amend Existing	700.00	700.00	700.00	700.00
REGULATED RIVERS AND STREAMS				
Works Licence				
Regulated Rivers - Construct Works Licence - Form 29 Issue New	700.00	700.00	700.00	700.00
Regulated Rivers - Operate Works Licence - Form 31 Amend Existing/Renew Existing	700.00	700.00	700.00	700.00
Regulated Rivers - Operate Works Licence - Form 31 Transfer Ownership	150.00	150.00	150.00	150.00
Water Use Licence or Registration				
Regulated Rivers - Water Use Licence or Registration - Form 23 Issue New (with Field Inspection)	700.00	700.00	700.00	700.00
Regulated Rivers - Water Use Licence or Registration - Form 23 Issue New (without Field Inspection)	100.00	100.00	100.00	100.00
Regulated Rivers - Water Use Licence or Registration - Form 24 Vary Existing (without Field Inspection)	100.00	100.00	100.00	100.00
Regulated Rivers - Water Use Licence or Registration - Form 24 Vary Existing (with Field Inspection)	700.00	700.00	700.00	700.00
Regulated Rivers - Water Use Licence or Registration - Form 25A Subdivide or Amalgamate (with Field Inspection)	700.00	700.00	700.00	700.00
Regulated Rivers - Water Use Licence or Registration - Form 25A Subdivide or Amalgamate (without Field Inspection)	100.00	100.00	100.00	100.00
UNREGULATED RIVERS AND STREAMS				
Works Licence				
Unregulated Rivers and Streams - Construct Works Licence - Form 90 Alter Existing/Amend Existing/Issue New/Renew Existing	1,400.00	1,400.00	1,400.00	1,400.00
Unregulated Rivers and Streams - Construct Works Licence - Form 90 Transfer Ownership	210.00	210.00	210.00	210.00
Unregulated Rivers and Streams - Construct Works Licence - Form 90 Decommission Works	150.00	150.00	150.00	150.00
Take and Use Licence				
Unregulated Rivers and Streams - Take and Use Licence - Form 71 Issue New / Sale	1,800.00	1,800.00	1,800.00	1,800.00
Unregulated Rivers and Streams - Take and Use Licence - Form 75SW Temporary Transfer Water Entitlement Tier 1	210.00	210.00	210.00	210.00

Unregulated Rivers and Streams - Take and Use Licence - Form 75SW Temporary Transfer Water Entitlement Tier 2	1,600.00	1,600.00	1,600.00	1,600.00
Unregulated Rivers and Streams - Take and Use Licence - Form 74SW Permanent Transfer Water Entitlement	1,800.00	1,800.00	1,800.00	1,800.00
Unregulated Rivers and Streams - Take and Use Licence - Form 93 Transfer Ownership / Transfer Extraction Share	210.00	210.00	210.00	210.00
Unregulated Rivers and Streams - Take and Use Licence - Form 73SW Renew Existing	700.00	700.00	700.00	700.00
Unregulated Rivers and Streams - Take and Use Licence - Form 77 Amalgamate Licences	1,300.00	1,300.00	1,300.00	1,300.00
Unregulated Rivers and Streams - Take and Use Licence - Form 78 Subdivide a Licence	1,300.00	1,300.00	1,300.00	1,300.00
Unregulated Rivers and Streams - Take and Use Licence - Form 71 Amend Existing	700.00	700.00	700.00	700.00
Unregulated Rivers and Streams - Form 95 Private Right Determination	600.00	600.00	600.00	600.00
Unregulated Rivers and Streams - Form 96 Waterway Determination	600.00	600.00	600.00	600.00
Unregulated Rivers and Streams - Form 96 Waterway Determination Additional Assessment	500.00	500.00	500.00	500.00
PRIVATE DAMS				
Private Dam - Construct Works Licence - Licensable dam Form 60 Alter Existing/Decommission/Issue new	1,500.00	1,500.00	1,500.00	1,500.00
Private Dam - Operate Works Licence - Licensable dam Form 61 Issue New	800.00	800.00	800.00	800.00
Private Dam - Operate Works Licence - Licensable dam Form 62 Renew Existing	800.00	800.00	800.00	800.00
INFORMATION STATEMENTS & SPECIAL METER READINGS				
Copy of Record	25.00	25.00	25.00	25.00
Information statements and Special meter reading - Information Statement	100.00	100.00	100.00	100.00
Information statements and Special meter reading - Information Statement Express service	150.00	150.00	150.00	150.00
Information statements and Special meter reading - Special Meter Reading	100.00	100.00	100.00	100.00
IRRIGATION DISTRICTS				
Irrigation District - Form 150 Amend District Boundary	800.00	800.00	800.00	800.00
Delivery Share				
Irrigation District - Delivery Share - Form 36 Transfer	210.00	210.00	210.00	210.00
Irrigation District - Delivery Share - Form 35 Vary Existing	210.00	210.00	210.00	210.00
Irrigation District - Delivery Share - Form 34 Issue New	210.00	210.00	210.00	210.00
Irrigation District - Delivery Share - Reservation	210.00	210.00	210.00	210.00
Irrigation District - Delivery Share - Capacity Assessment	210.00	210.00	210.00	210.00
Private Works				
Irrigation District - Private works - Form 130 Issue New	1,000.00	1,000.00	1,000.00	1,000.00
Irrigation District - Private works - Form 130 Security deposit	25% of job (min 1,000)	25% of job (min 1,000)	25% of job (min 1,000)	25% of job (min 1,000)
Irrigation District - Private works - Form 130 Supervision fee	5% of job (min 275)	5% of job (min 275)	5% of job (min 275)	5% of job (min 275)
Irrigation District - Private works - Form 131 Transfer Ownership	150.00	150.00	150.00	150.00
Irrigation District - Private works - Form 131 Renew Existing	400.00	400.00	400.00	400.00
Irrigation District - Private works - Form 135 Installation of a Small Pipe Outlet for Non Irrigation Purposes	450.00	450.00	450.00	450.00
Supply Agreement				
Irrigation District - Supply by Agreement - Drainage Diversion Form 143 Issue New (without field inspection)	200.00	200.00	200.00	200.00
Irrigation District - Supply by Agreement - Drainage Diversion Form 143 Issue New (with field inspection)	400.00	400.00	400.00	400.00
Irrigation District - Supply by Agreement - Form 141 Amend Existing/Issue New	500.00	500.00	500.00	500.00
Irrigation District - Supply by Agreement - Mobile Collection Form 142 Issue New	150.00	150.00	150.00	150.00
Water Use Licence or Registration				
Irrigation District - Water Use Licence or Registration - Form 23 Issue New (with Field Inspection)	700.00	700.00	700.00	700.00
Irrigation District - Water Use Licence or Registration - Form 24 Vary Existing (with Field Inspection)	700.00	700.00	700.00	700.00
Irrigation District - Water Use Licence or Registration - Form 25A Subdivide or Amalgamate (with Field Inspection)	700.00	700.00	700.00	700.00
Irrigation District - Water Use Licence or Registration - Form 23 Issue New (without Field Inspection)	100.00	100.00	100.00	100.00
Irrigation District - Water Use Licence or Registration - Form 24 Vary Existing (without Field Inspection)	100.00	100.00	100.00	100.00
Irrigation District - Water Use Licence or Registration - Form 25A Subdivide or Amalgamate (without Field Inspection)	100.00	100.00	100.00	100.00
WATER SUPPLY DISTRICT				
Water Supply District - Form 171 Amalgamate Properties per lot	350.00	350.00	350.00	350.00
Water Supply District - Form 172 Issue New	1,000.00	1,000.00	1,000.00	1,000.00

Water Supply District - Form 170 Subdivide a Property per lot	350.00	350.00	350.00	350.00
TECHNICAL ADVICE FOR HIGH RISK OR COMPLEX APPLICATIONS				
Technical Advice for High Risk or Complex Applications (Per Hr)	150.00	150.00	150.00	150.00

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

Appendix 8. KPMG independent statement

Goulburn Murray Water
40 Casey St
Tatura
3616

Our ref KPMG Statement of Review Procedures

14 November 2019

To whom it may concern

Review of Goulburn Murray Water's draft 2020 price submission

During the development of GMW's 2020 price submission, KPMG was engaged to provide review services for the purpose of supporting GMW's Board Assurance process.

To do this, KPMG developed a set of review procedures that supported the conditions contained within this Assurance Statement. For each condition, these were:

Condition 1 - information and documentation provided in the price submission and relied upon to support GMW's price submission is reasonably based, complete and accurate in all material respects.

- Statements review – An assessment of the overall narrative and customer value proposition contained within the price submission, as compared against the intended objectives of the ESC regulatory framework. This was supported by a 'structure and contents review' of all chapters of the price submission to test the logical flow, key massaging, language and presentation of proposals.
- Information review - An assessment for accuracy and consistency between GMW's final draft price submission and the ESC's financial template.

Condition 2 - financial and demand forecasts are the best estimates, and supporting information is available to justify the assumptions and methodologies used.

- Forecasts review – An assessment for prudency and efficiency of GMW's draft expenditure and demand forecasts, leveraging the ESC's assessment framework.
- Final forecast review - A review of GMW's expenditure and demand forecast draft chapters and how these chapters demonstrate prudency and efficiency, as well as reviewing how GMW has responded to each of KPMG's detailed draft findings, where opportunities for improvement were identified.

Condition 3 - the price submission satisfies the requirements of the 2020 GMW price review guidance papers issued by the ESC in all material respects.

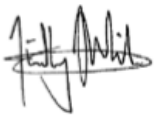
- Compliance review – A review of the written submission to ensure that each of the ESC's Guidance Paper requirements have been explicitly met/addressed.

These procedures were carefully designed to meet GMW's Board expectations regarding the rigour of the submission and supporting analysis, and to ensure that customers received GMW's best offer. Our procedures were iterative to allow GMW to consider and respond to opportunities for improvement. GMW has provided KPMG evidence that all feedback provided has been considered and addressed within:

- the written submission;
- its proposals; and
- supporting documentation.

In completing its assessment, KPMG reviewed a draft of the price submission dated 31 October 2019. Any changes made to this document after this date were not considered as part of this review.

Yours sincerely



Tim White
Victorian State Lead - Water
Director, Utilities Policy and Regulation