

# Seqwater submission to QCA Irrigation Price Review 2020-2024



November 2018



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## Executive Summary

The Queensland Competition Authority (QCA) has commenced its review of pricing practices related to Seqwater's irrigation services for the period from 1 July 2020 to 30 June 2024. This is based on the Referral and Direction Notice (the Referral Notice) issued on the 29<sup>th</sup> of October 2018 by the Treasurer and Minister for Aboriginal and Torres Strait Islander Partnerships (the Minister).

Seqwater has around 1200 irrigation customers across seven bulk water schemes and two distribution systems. In preparing this submission Seqwater has consulted with irrigation customers on its proposals and has obtained customer support for its forecast costs and proposed indicative pricing in most schemes.

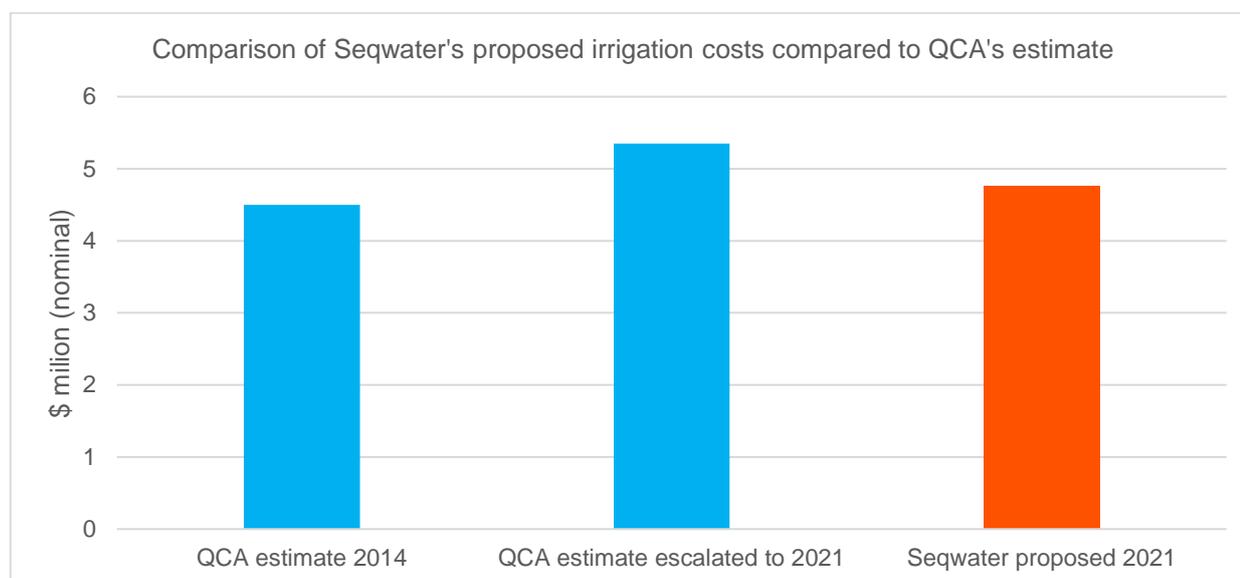
Seqwater's costs have reduced compared to the last irrigation pricing review concluded in 2013. The previous review estimated the costs of irrigation services at around \$4.5 million in 2014 which escalated to 2021 is around \$5.35 million. Seqwater is now proposing irrigation costs of around \$4.8 million in 2021 (excluding QCA fees, an estimate of which is yet to be provided by the QCA). The figure below illustrates this comparison once the QCA's costs are escalated to the 2021 year. This is a result of cost reductions and the requirement of the Referral Notice for recreation services to be excluded from irrigation prices from 1 July 2020. This reduction in costs will reduce pressure on prices. Seqwater receives a Community Service Obligation (CSO) payment from Government for its tariff groups that are not yet recovering the cost target (five out of the nine tariff groups).

Seqwater's cost reductions have been assessed by the QCA through the recent SEQ urban bulk water price review. Seqwater has derived its base year 2018-19 operating cost forecast for irrigation services from the QCA's recommended operating expenditure allowance in that review. The proposed costs for the 2018-19 year are therefore based on costs that have already been determined by the QCA to be prudent and efficient. Seqwater has developed this proposal with the expectation that the QCA take into account the findings of the recent investigation of Seqwater's bulk water prices, (which is consistent with the Referral Notice) rather than conduct a detailed review from first principles.

Given Seqwater's reduction in costs, the level of customer support for its proposal and the work recently completed for the 2018 urban bulk water price review, the QCA's investigation should be targeted toward matters where customers want further investigation.

The figure below compares the QCA's recommended total irrigation costs in the first year of the previous regulatory period (2013-14) to the costs proposed by Seqwater in this submission. The QCA's 2013-14 costs have been escalated by 2.5% each year (the QCA's measure of inflation used at the last irrigation pricing review) to arrive at a 2020-21 estimate for comparison. This shows Seqwater's proposed irrigation costs are around 10% less than that forecast by the QCA in 2013.

**Figure 1 – QCA estimated costs compared to Seqwater’s proposed irrigation costs (excludes QCA fees)**



The table below sets out the expected prices for 2019-20 (reflecting the continuation of the current price path) compared to Seqwater’s proposed costs per ML (cost reflective prices) for 2020-21.

**Table 1: Expected 2019-20 prices compared to proposed costs per ML 2020-21 (excludes QCA fees)**

Tariff Group	Part A or C		Part B or D	
	Expected 2019-20	Cost reflective 2020-21	Expected 2019-20	Cost reflective 2020-21
Cedar Pocket	22.36	363.17	42.84	18.31
Central Brisbane River	24.48	0	11.76	0
Central Lockyer	35.42	88.61	11.46	5.77
Morton Vale (Part A and B)	35.42	88.61	5.72	5.77
Morton Vale (Part C and D)	10.34	30.39	9.47	3.16
Logan River	31.54	23.61	11.58	0.88
Lower Lockyer	47.53	85.61	25.80	10.89
Mary Valley	29.50	16.94	9.63	1.38
Pie Creek (Part A and B)	26.97	16.94	9.63	1.38
Pie Creek (Part C and D)	27.34	373.82	81.94	184.65
Warrill Valley	25.41	21.68	8.48	1.74

Note: The expected 2019-20 prices are provided as an indicative comparison only, these are based on the current price path continuing and are subject to Government decision.

Seqwater’s proposed costs are lower than the previous irrigation price review, and result in the following indications for the cost recovery position of the irrigation tariff groups:

- Five tariff groups are expected to remain below cost recovery and proceed on the price path according to the policies set out in the Referral Notice: Cedar Pocket, Central Lockyer, Morton Vale, Lower Lockyer, and Pie Creek.

- Three tariff groups are now expected to be above cost recovery and according to the price path policies would have their fixed prices remain the same for the pricing period: Logan River, Mary Valley and Warrill Valley.
- Seqwater is proposing a zero cost allocation for the Central Brisbane scheme, which is discussed further in the scheme submission.

## Definitions

Terminology used in this submission	Description
<b>ARR</b>	Asset Restoration Reserve: this acts like a bank account for schemes to manage the funding of costs for renewals expenditure on the scheme.
<b>Bulk scheme</b>	A scheme that supplies water from storage assets
<b>Cost reflective price</b>	Represents the costs of the scheme allocated to irrigation based on the proposed cost allocations and represented on a per megalitre basis. This submission includes both fixed (Part A or C) and volumetric (Part B or D) costs per megalitre as cost reflective prices.
<b>CSO</b>	Community Service Obligation
<b>Distribution system</b>	A scheme that takes water from a bulk scheme, and uses distribution assets to transport water for additional users.
<b>HP</b>	High Priority water entitlement
<b>HUF</b>	Headworks Utilisation Factor: this is the method used to determine the allocation of headworks-related costs between high priority and medium priority customers.
<b>Irrigation only</b>	Referring to the irrigation share of costs – in shared schemes the irrigation share is only a proportion of the whole of scheme costs.
<b>ML</b>	Megalitre
<b>MP</b>	Medium Priority water entitlement
<b>Raw water</b>	Untreated water not fit for drinking
<b>Scheme</b>	Water Supply Scheme
<b>SEQ bulk water prices</b>	The prices paid by the SEQ service providers (distributor retail entities) for urban bulk water supply. These prices are set by the Minister.
<b>SEQ urban bulk water price review</b>	The QCA's review of Seqwater's SEQ bulk water prices from 2018-21, completed in March 2018.
<b>Shared scheme</b>	A water supply scheme that provides water for both irrigation services and urban bulk water supply.
<b>Tariff group</b>	A customer group paying the same tariffs. Some schemes have more than one tariff group, for example a bulk scheme is a different tariff group to a distribution system.
<b>Treated bulk water</b>	Treated drinking water supplied at the bulk level to distributors
<b>Urban water supply</b>	Treated drinking water bulk supply to distributors
<b>WAE</b>	Water Access Entitlements including Water Allocations or interim water allocations or other rights to access water as relevant.
<b>Water Act</b>	Refers to the <i>Water Act 2000</i>
<b>Whole of scheme</b>	Referring to costs representing total scheme costs, not just the irrigation share

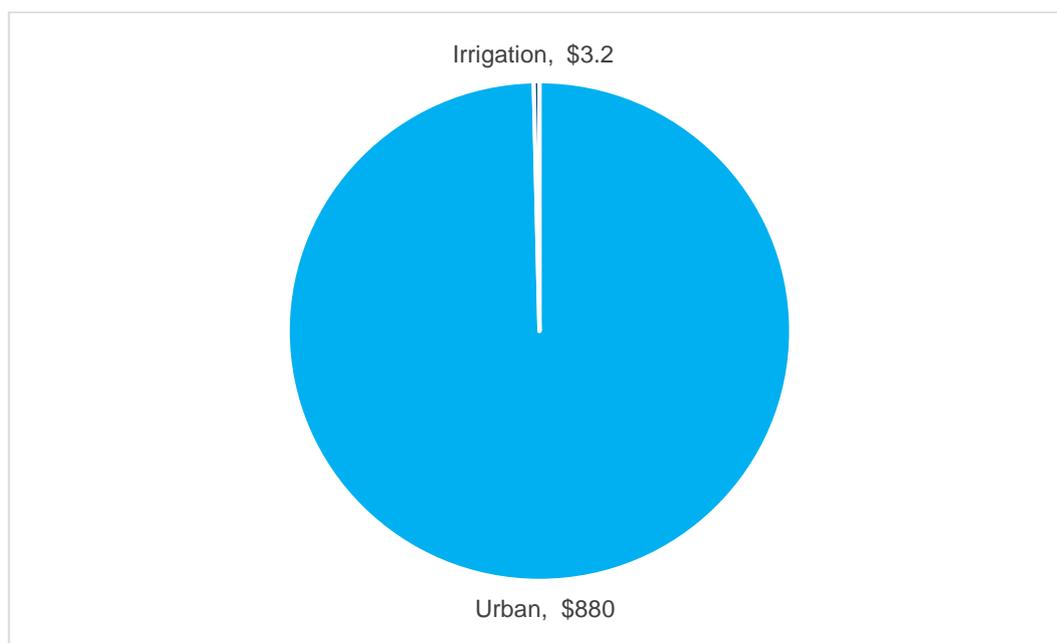
# 1 Business and regulatory framework overview

## 1.1 Overview of Seqwater's services

Seqwater owns and operates a network of water supply assets across South-East Queensland (SEQ), including dams, weirs, water treatment plants, the Gold Coast Desalination Plant (GCDP) and the Western Corridor Recycled Water Scheme (WCRWS). Seqwater's network of bulk water supply assets stretches from Noosa on the Sunshine Coast in the north to Tugun on the Gold Coast in the south, and from North Stradbroke Island in the east to Gatton in the west. Seqwater's pipeline network enables drinking water to be transported around the region.

Seqwater owns and operates \$8.5 billion of assets<sup>1</sup>, made up of 26 dams, 51 weirs, two borefields, 600 km of pipelines, 22 bulk water pump stations and 18 bulk water reservoirs. Seqwater's assets also include water treatment works and manufactured water assets. Annual revenue from customers was \$883 million in 2016-17, of which \$3.2 million (0.4%) came from irrigation customers. Seqwater's irrigation prices in some schemes do not recover the minimum costs of providing the irrigation services and for these schemes the Government provides Seqwater with a Community Service Obligation payment (CSO).

Figure 2 Composition of revenue (\$ million 2016-17)



Source: 2016-17 Seqwater annual report, Section 2, B1-1 Water sales

While irrigation supplies are a very small part of Seqwater's business, obligations to some 1200 rural irrigators are taken seriously and look to deliver quality service at the lowest possible price. These irrigation customers are rural landholders and businesses that use water for irrigation purposes<sup>2</sup>. These customers use the water to support a wide variety of farming and agriculture activities, such as orchards, vegetable and fodder crops, dairy and grazing.

<sup>1</sup> Regulated Asset Base value as at 1 July 2018 as determined by the QCA in the 2018-21 SEQ urban bulk water price review.

<sup>2</sup> An irrigation service is defined in Schedule 4 of the *Water Act 2000* as the supply of water or drainage services for irrigation of crops or pastures for commercial gain.

The focus of this submission is Seqwater's irrigation customers, and the costs involved in servicing them. The irrigation (or part-irrigation) schemes owned by Seqwater and regulated by the Queensland Competition Authority (QCA) comprise:

- Cedar Pocket Water Supply Scheme
- Central Brisbane River Water Supply Scheme
- Central Lockyer Valley Water Supply Scheme
- Logan River Water Supply Scheme
- Lower Lockyer Valley Water Supply Scheme
- Mary Valley Water Supply Scheme
- Warrill Valley Water Supply Scheme

Seqwater also owns two distribution systems which are also subject to this pricing review:

- the Morton Vale Pipeline, from which customers can take water from the Central Lockyer; and
- the Pie Creek distribution system, which supplies irrigators by pumping water from the Mary Valley.

## 1.2 Referral Notice

The QCA has been directed by the Treasurer to recommend prices for the period 1 July 2020 to 30 June 2024 for the above seven bulk schemes and two distribution systems.

The QCA is recommending prices for bulk water supply for irrigation services, which is defined as the supply of water or drainage services for irrigation of crops or pastures for commercial gain.

The Referral Notice includes policies and other requirements from Government, including the Principles the QCA is to have regard to in making its recommendations. Seqwater's understanding of these is set out throughout this submission. The Referral Notice includes policies that are consistent with the previous review and new policies. A key policy that has been retained is the exclusion of any return on existing assets.

The price path arrangements are similarly maintained. For example, for water supply schemes where the prices do not recover the cost target, then this price is to increase annually by inflation plus \$2.38 per ML from 2020-21 (increasing by inflation each year). Where the fixed price is already above the level required to recover the cost target, then the price is to be maintained in nominal terms until the cost-reflective price is reached<sup>3</sup>. Slightly different principles apply to distribution systems. Volumetric prices may adjust to reflect costs as needed.

A key change in policy for Seqwater is the removal of costs associated with recreation activities. Many of Seqwater's dams are open for recreation use, including the dams in schemes subject to this review. Maintaining these facilities in a safe way to the standard expected by the community comes at a cost. Irrigators in the current price path contribute to these costs. The change in policy to remove these costs from irrigation prices will be welcomed by Seqwater's irrigation customers.

In line with this policy Seqwater's submission does not include costs associated with recreation activities at its schemes. These costs have been identified and removed from the cost forecast and therefore from indicative prices. As Seqwater will continue to incur these costs it will seek to recover the share that was formerly borne by irrigation customers in future SEQ urban bulk water price reviews, noting that the consequent impact on urban bulk water prices is expected to be negligible.

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<sup>3</sup> Unless the Fixed (Part A) price applies to customers of a distribution system operated by a local customer owned company or co-operative, in which case the Fixed (Part A) price should be reduced to the cost-reflective Fixed (Part A) price.

Another change in the arrangements set out in the Referral Notice is the inclusion of QCA regulatory fees to be recovered through irrigation prices, up to a cap of \$2.5 million. This is consistent with standard regulatory practice and is the approach taken in the SEQ urban bulk water price reviews. Seqwater does not yet have an estimate of the fees for its review so they have not been included in this submission. It is understood that the QCA will consider these for inclusion at the Draft Report stage.

There are other policy issues the QCA is directed to investigate as part of this Referral Notice that do not have any impact on Seqwater in this review. These are the investigation of changing tariff groups in some of SunWater's schemes, and whether irrigation customers should contribute toward dam safety upgrade expenditure. The latter is discussed in section 6.

A key requirement of the Referral Notice for Seqwater is that the QCA should take into account findings of the recent investigation of Seqwater's SEQ urban bulk water prices for 2018-21 (the 2018-21 urban Bulk Water Price Review). This submission uses the same cost base that the QCA has assessed as prudent and efficient in the 2018-21 urban Bulk Water Price Review, which is expected to avoid the need for the QCA to conduct a further detailed review of these costs.

Seqwater has proposed an exception to the price path arrangements in the Pie Creek distribution system for the Part D price. This proposal is consistent with the approach taken in the current price path and is allowed for under the Referral Notice, with Part C (1.4)(a) allowing the QCA to consider less than cost reflective volumetric prices where necessary to moderate bill impacts for customers.

Seqwater has also undertaken a cost allocation investigation with customers in the Central Brisbane River Water Supply Scheme, and as a result is proposing \$0/ML cost allocation for this Scheme. The Referral Notice provides for fixed prices to fall from 2020-21 as an outcome of such investigations.

### 1.3 Price regulation

The services from these schemes that are price regulated include raw water supply to irrigation customers, as is currently regulated through the Rural Pricing Direction Notice, issued by the Responsible Ministers under the *Water Act 2000* (Water Act). The regulation of urban bulk water prices relates to the supply of treated bulk water to the SEQ Service Providers who on-supply treated water to households and businesses in SEQ. While the regulatory framework for urban water prices is different to the framework applying to irrigation prices, many of the costs of providing these services are shared. As outlined above, the QCA's investigation of costs as part of the 2018-21 urban Bulk Water Price Review are therefore relevant to this review.

Seqwater has other customers whose prices are not regulated under either framework. These include commercial and other raw water customers who own Water Access Entitlements (WAEs) in the schemes and do not fall within the definition of irrigation customers. They are therefore not regulated by the Rural Pricing Direction Notice. Seqwater is able to negotiate and set prices for these customers commercially. While the prices for these customers are not subject to this review, the WAE for these customers may be relevant.

### 1.4 Cost savings

The Referral Notice requires the QCA to take into account the findings of its 2018-21 urban Bulk Water Price Review. A key aspect of this is the assessment of costs. As outlined above, Seqwater has applied the same cost base in developing its irrigation prices.

Over recent years Seqwater has secured significant operating costs savings. As shown in the 2018-21 urban Bulk Water Price Review Seqwater exceeded the QCA's target operating cost savings by an additional \$67 million over 2015-2018. Additionally, the QCA found Seqwater's operating costs to be largely efficient resulting in only a 5% reduction in operating costs compared its submitted costs over 2012 to 2028. These cost savings also apply to Seqwater's irrigation services.

## 1.5 Irrigation services

Irrigation supplies in all schemes are subject to contractual terms. These are generally standard across all users and reflect the standard supply contracts set under the *Water Act 2000*. Under this standard contract, the customer, as owner of the WAE, bears the risk of the availability of water under their WAE. Customers can also trade WAEs in accordance with the requirements of any Resource Operations Plan (ROP) or Interim Resource Operations Licence (IROL). These terms of supply have not changed since the previous QCA review.

These regulations also place requirements on Seqwater to undertake metering activities and water accounting. Seqwater is responsible for reading meters and monitoring water accounts to check on compliance and report any issues to the regulator, the Department of Natural Resources Mines and Energy (DNRME).

Service standards have been established in all WSSs, except Central Lockyer and Central Brisbane River, in consultation with customer representatives in 2001 and were carried across to Seqwater from SunWater Limited. The service standards for Central Brisbane River and Central Lockyer have been defined in the contract terms and through the water planning processes.

It is noted that the Moreton Water Plan is being reviewed, which will impact the Central Lockyer and Morton Vale Pipeline schemes. The costs per ML in this submission are based on the IROL. DNRME has published a draft plan for consultation in November 2018 with a view to having the water planning process complete by April 2019. The finalisation of the Water Plan may impact this pricing review.

## 1.6 Cost recovery position and pricing

This submission includes proposed prices for eight tariff groups. Prices for only three of these tariff groups are estimated to have generated sufficient revenue to recover their cost target, while the remainder are still forecast to be recovering revenue below the cost target and therefore will continue on price path arrangements. These schemes that are below cost recovery will require a CSO payment from Government to ensure that Seqwater is able to recover the costs of delivering irrigation services.

The cost recovery positions of all schemes are consistent with the last review. However, due to Seqwater's cost savings their positions have improved slightly. This means that schemes that were forecast to generate sufficient revenue to recover their cost target are now expected to exceed this, while those recovering below their cost target are closer to cost recovery than previously estimated. This is summarised in the table below.

**Table 2: Proposed irrigation cost target and indicative cost recovery position (before QCA fees)**

Tariff group	Cost target 2021 (\$M)	Cost recovery position
Cedar Pocket	0.19	Below cost recovery
Central Lockyer	1.78	Below cost recovery
Morton Vale	0.11	Below cost recovery
Logan River	0.32	Already at cost recovery
Lower Lockyer	1.10	Below cost recovery
Mary Valley	0.39	Already at cost recovery
Pie Creek	0.35	Below cost recovery
Warrill Valley	0.52	Already at cost recovery
<b>Total</b>	<b>4.77</b>	

## 2 Seqwater's approach to the review

### 2.1 Consistency with the 2018-21 urban Bulk Water Price Review

Seqwater's approach to this review should reduce the investigative burden on the QCA given it has sought to be consistent with cost estimates and approaches recommended by the QCA in the 2018-21 urban Bulk Water Price Review. As noted above, Seqwater's irrigation services are a comparatively small part of its business (only around 0.4%) in revenue terms.

The 2018-21 urban Bulk Water Price Review was extremely thorough. Seqwater has derived its base year (2018-19) operating expenditure allowance from the QCA's recommended allowance as finalised in that review. Further:

- The operating costs for irrigation services align with the allocation of costs excluded from the bulk water costs recommended by the QCA in the 2018-21 urban Bulk Water Price Review;
- The QCA found all renewals projects to be prudent and efficient. Specifically, the QCA's consultant KPMG did not identify any systemic issues with Seqwater's renewals program, and therefore excluded renewals from any of the efficiency adjustments made for other capital expenditure;
- Irrigation costs are well below the cost targets previously set by the QCA at the last irrigation price review; and
- Customers are generally supportive of Seqwater's proposal, particularly Seqwater's operating and renewals costs, given the reductions compared to the last review.

As part of the 2018-21 urban Bulk Water Price Review the QCA (through its consultant KPMG) also reviewed governance and planning frameworks. KPMG completed a desktop review of Seqwater's supporting policies and procedures detailing its overarching governance and planning frameworks. KPMG then sought to test the application of these frameworks in the development of its capex and opex proposals to the QCA. KPMG found:

*Overall, we found the corporate governance and procurement framework of Seqwater, as supported by various policies and processes such as the Enterprise Risk Management Framework, Investment Decision Making or gateway process, to provide for an effective approach to management of key asset and investment risks and compliance obligations*

These same governance and planning frameworks underpin the development of Seqwater's proposed irrigation prices for 202-24.

Seqwater has adopted the same cost escalators that were approved for the SEQ urban bulk water price review, and have updated for revised estimates, including WPI and AEMO's electricity forecasts. Wherever costs are shared between urban and irrigation users, these costs have been assessed and then allocated appropriately.

In the 2018-21 urban Bulk Water Price Review the QCA assessed that irrigation-related operating costs<sup>4</sup> would be \$3.75 million in 2020-21, which was then excluded from urban prices to avoid any double-recovery. This estimate was based on escalation of Seqwater's 2016-17 actual operating costs related to irrigation services. This submission proposes a slightly lower figure of \$3.3 million in 2020-21. This difference means that the costs allocated to irrigation were slightly over-estimated in the exclusion from SEQ urban bulk water prices.

Seqwater's approach in the development of this submission has been to focus on customer engagement, targeting to matters of material impact for customers. Due to the nature of the price path policies, in many cases prices are effectively set by the Referral Notice. This is particularly the case for the fixed price, which either remains frozen or increases in accordance with the price path dependent on the position relative to costs. This

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<sup>4</sup> Excluded HP share of scheme costs

submission demonstrates that Seqwater's schemes are firmly in one of either case and this position is not expected to change within the 2020-24 pricing period.

Further, Seqwater has been able to deliver services at significantly lower costs than the QCA allowed during the previous regulatory period and intends to maintain this cost reduction, noting that the costs of delivering irrigation services are small compared to the overall business. Seqwater's focus is now on how it can improve customer relationships and the customer experience.

## 2.2 Customer engagement

### 2.2.1 Approach

Seqwater has undertaken customer engagement in two steps: (1) establishing small reference groups for detailed feedback; and (2) holding 'town-hall' style forums in each scheme area inviting all customers to attend. Both processes were used for six of the seven schemes.

For the Central Brisbane River Water Supply Scheme Seqwater engaged directly with the Mid-Brisbane River Irrigators Committee (MBRI), which represents the majority of irrigation customers in the scheme. The engagement with this scheme was different and is outlined in the scheme submission attached (Appendix C).

As part of its normal course of business Seqwater's consultation process includes annual forums focusing on its Network Service Plans. These are usually held around May to present draft annual outcomes and budgets and seek feedback from customers. The Network Service Plans are then published by 30 September. This process was implemented based on the QCA's recommendations from the last irrigation pricing review.

In 2018, preparing for this pricing review, Seqwater undertook a different process. It established irrigation customer reference groups for the six schemes, which comprised three to five customers who were identified by Seqwater either from previous attendance and engagement at its annual forums or were suggested by other customers as being someone who would be interested in being involved. These groups were not formally elected by customers and were not decision-making groups. Rather, they provided a small group with whom Seqwater could share matters of detail and seek feedback on the most appropriate and effective way to share information with a wider participant base at each scheme forum.

Seqwater then held forums in the six schemes in September 2018 to provide all customers with an opportunity to be consulted prior to the development of the submission. This involved writing to all customers inviting them to the forum and providing an online engagement website where a survey was available for customers to provide their feedback if they could not attend. Details relating to the attendances at the forums, reference group meetings and survey feedback are provided in Appendix A.

Seqwater consulted customers on its forecast costs, along with its proposed approaches to other matters covered in this submission such as water usage forecasts and allocating costs as fixed and variable. Feedback was also sought on Seqwater's services. Customer views are provided throughout the submission where relevant.

### 2.2.2 Overview of feedback

In all six schemes and the associated distribution systems Seqwater was able to demonstrate that it has been able to reduce its costs compared to the regulatory targets set by the QCA at the last irrigation price review. In general, customers were supportive of these costs given they had been reduced. Positive feedback was also received on the services provided by Seqwater, particularly the regional operations teams, and customers were generally supportive of the proposed approaches to key assumptions for the review. Customers also provided feedback to undertake further work to investigate improvements. These are summarised in the table below.

**Table 3: Summary of customer feedback**

Customer support	Customer feedback for further work
Supportive of costs given reductions	Meter replacement costs
Services particularly from regional operations teams	Water trading information noticeboard
Proposed approach to using long term water usage forecasts	Central Lockyer and Morton Vale reconfigurations
Proposed approach for allocating some costs as 95% fixed costs	Some concerns regarding Seqwater’s billing process and improvements for sharing water accounting information
Supportive of proposal to reinvest any scheme surplus revenue into the renewals fund (where relevant to their scheme)	

The above provides a summary of general feedback from the schemes. There were other specific concerns raised by customers in specific schemes, which are outlined further in the scheme submissions attached (Appendices B to H).

The schemes in the Lockyer Valley did not provide support for Seqwater’s proposals. The issues raised by customers in these schemes are focused on performance, sustainability and access to water. As most of the issues raised by these customers are considered to be beyond the scope of this review, they have not been considered further in this submission. However, Seqwater acknowledges the importance of these issues to these customers and would support them being investigated further outside of this review (either by the QCA if appropriate or by Government).

Seqwater understands there are other processes underway in the Lockyer Valley, including the establishment of volumetric water entitlements in the Central Lockyer and investigations for alternative water supply options.

Seqwater’s two other schemes that are not yet recovering the cost target are Pie Creek and Cedar Pocket. While these schemes do not have the same concerns as the Lockyer Valley schemes regarding scheme performance and access to water, there are significant concerns regarding their sustainability and affordability. However, customers in these schemes expressed support for Seqwater doing what it can to manage the costs of these schemes and supported the proposals regarding using long term average water usage forecasts and the proposed allocation of costs between fixed and variable tariffs.

Another part of the customer engagement process was a survey provided to customers online and at the forums. Of the responses received, the key findings are that the strong majority of responding customers:

- support Seqwater’s pricing proposal;
- are satisfied with Seqwater’s services; and
- do not want further investigation of their scheme for the pricing review.

The exception to this would be in the Lockyer schemes where limited responses to the survey were received and customers have raised concerns about the scheme.

Overall, Seqwater found the customer consultation process valuable to indicate where to focus its efforts for the submission, as well as providing feedback to continue to improve its services to customers.

## 3 Operating Expenditure

Seqwater's proposed operating expenditure for this review uses the QCA's recommended 2018-19 operating expenditure from the 2018-21 urban Bulk Water Price Review for the base year, which has already been established as a prudent and efficient basis for operating expenditure.

### 3.1 Overview of approach

This chapter sets out Seqwater's forecast operating expenditure for the period of 1 July 2020 to 30 June 2024, consistent with the Referral Notice. The Referral Notice requires the QCA to allow Seqwater to recover its prudent and efficient operational, maintenance and administrative costs.

Operating activities include service provision, compliance, recreation, and other supporting activities:

- service provision relates to:
  - scheduling and releasing bulk water from storages, surveillance of water levels and flows in the river, and quarterly meter reading
  - customer service and account management.
- compliance requirements relate to:
  - water management and other requirements set out in the Water Plan and Resource Operations Licence (ROL)
  - notifications and communications in response to the recommendations made by the Inspector General of Emergency Management
  - dam safety obligations under the *Water Supply (Safety and Reliability) Act 2008*
  - environmental management obligations to comply with the relevant water planning instruments and *Environmental Protection Act 1994*
  - land management, workplace health and safety obligations and other reporting obligations
- other supporting activities required to carry out services and comply with law, and which cover a range of services including central procurement, human resources and legal services.

Operating costs are driven by operational elements such as operations activities and maintenance of the assets, meter reading and maintenance, environmental management obligations, data management, compliance reporting and customer service.

### 3.2 Forecasting method

As explained previously, Seqwater has based 2018-19 operating expenditure on the expenditure approved as part of the 2018-21 urban Bulk Water Price Review. Seqwater has proposed the total operating and capital expenditure necessary to comply with current relevant regulatory obligations and requirements. This proposal has been developed to ensure it can provide water services to customers at least cost, and in a way that meets their long-term needs.

The base year costs are then escalated forward using the QCA's approved escalation factors from the 2018-21 urban Bulk Water Price Review for the balance of the regulatory period. Where appropriate, Seqwater has made specific adjustments where its financial systems have not appropriately allocated costs to specific irrigation schemes. The forecasts exclude any QCA fees for this review, as they are yet to be estimated by the QCA.

Seqwater's forecast aligns with its operating policies. These policies relate to the entire business (bulk and irrigation) and as noted above, have already been recently reviewed by the QCA, and its consultant KPMG, as part of the 2018-21 urban Bulk Water Price Review.

### 3.3 Operating expenditure forecasts

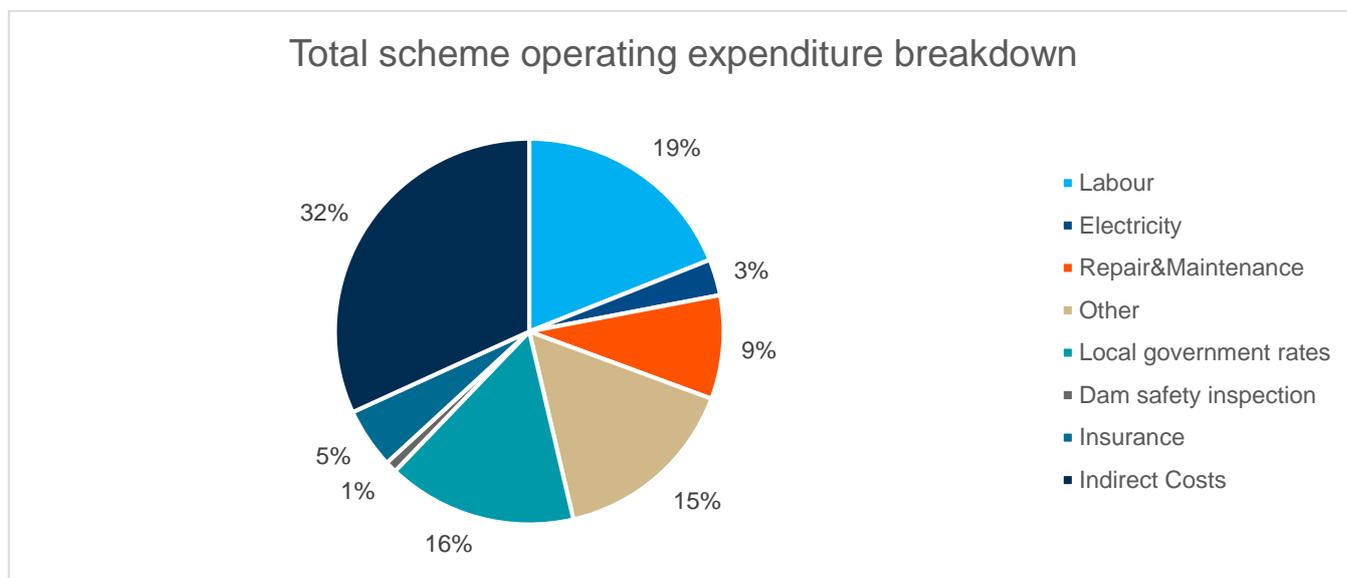
Direct costs are those costs that can be allocated to the individual asset or scheme level. Seqwater has excluded costs that relate only to urban bulk water services, and then allocated the costs between water users in shared schemes. Also, consistent with the Referral Notice, Seqwater has removed costs associated with recreation activities.

Seqwater captures operating costs in its forecasts based on the following categories:

- Labour. The key tasks that require labour are:
  - scheduling and releasing bulk water from storages, surveillance of water levels and flow rates in water courses and quarterly meter reading
  - customer service and account management
  - complying with requirements of relevant Water Plans, IROLs, ROLs and ROPs; dam safety obligations including under the *Water Supply (Safety and Reliability) Act 2008*; the *Environmental Protection Act 1994*; and land management, Workplace Health and Safety (WHS) and other reporting obligations.
- Electricity. Electricity use is predominantly for lighting and equipment, however some schemes include periodic pumping to fill storages. The Pie Creek scheme incurs electricity costs for pumping to supply customers.
- Repairs & Maintenance. This involves maintaining assets that support irrigation water supply including: scheduled maintenance generated by Seqwater's financial reporting system CIS, planned maintenance comprising scheduled inspections and strategic maintenance, and reactive maintenance resulting from unplanned breakdowns.
- Other (e.g. plant and fleet costs, materials and consumables).
- Local government rates.
- Dam safety inspections and surveys.
- Insurance – its allocation to the schemes is discussed in section 3.7.3 below.
- Indirect costs. These are costs that are not directly attributable to the operations and management of a specific scheme and include both indirect and overhead costs associated with the provision of corporate and other business services.

The figure below shows the components of total scheme operating expenditure. Indirect costs are the largest component, followed by labour costs. Direct costs represent 68% of operating costs.

**Figure 3 Breakdown of total scheme operating expenditure (excludes QCA fees)**



There is \$12.3 million of operating expenditure needed to operate the nine irrigation schemes in 2018-19 - this represents total scheme costs. In shared schemes (Central Brisbane, Logan, Mary and Warrill) irrigators only pay for irrigation costs. The method for allocation is the same as the approach approved by the QCA in the previous irrigation pricing review and the results are shown below.

**Table 4: Whole of scheme operating expenditure (\$ nominal, exclusive of QCA fees)**

Scheme	2021 (\$)	2022 (\$)	2023 (\$)	2024 (\$)	Total (\$)
Cedar Pocket	172,078	206,338	181,531	189,180	749,126
Central Brisbane River	6,358,504	6,445,285	6,652,198	6,789,104	26,245,090
Central Lockyer	794,761	835,260	845,689	854,800	3,330,510
Mortonvale	69,585	71,518	73,443	75,419	289,965
Logan River	2,109,122	2,213,910	2,220,413	2,301,300	8,844,745
Lower Lockyer	683,008	697,742	722,585	764,203	2,867,538
Mary Valley	771,935	769,657	786,553	810,990	3,139,135
Pie Creek	296,270	304,463	314,297	321,555	1,236,586
Warrill Valley	1,012,876	1,047,522	1,095,459	1,103,479	4,259,336
<b>Total</b>	<b>12,268,140</b>	<b>12,591,695</b>	<b>12,892,167</b>	<b>13,210,030</b>	<b>50,962,032</b>

### 3.4 Cost escalators

The escalators for operating costs are proposed to be the same as those approved by the QCA in the 2018-21 urban Bulk Water Price Review, with updated estimates, including WPI and AEMO’s electricity forecasts. These are set out below.

**Table 5: Cost escalators by cost category**

Cost category	2021	2022	2023	2024
Employee Expenses	3.0%	3.1%	2.9%	2.9%
Contract Labour	3.0%	3.1%	3.1%	3.1%
Contractors (Service Delivery)	2.59%	2.59%	2.57%	2.57%
Electricity	-2.09%	3.7%	9.04%	-0.45%
Chemicals	2.5%	2.5%	2.5%	2.5%
Other Materials and Services	2.5%	2.5%	2.5%	2.5%
Insurance	2.5%	2.5%	2.5%	2.5%
Capital Expenditure	2.5%	2.5%	2.5%	2.5%
General Inflation	2.5%	2.5%	2.5%	2.5%

### 3.5 Efficiency

As part of the 2018-21 urban Bulk Water Price Review the QCA accepted Seqwater’s proposal to apply a continuing efficiency target of 0.2% each year (cumulative) of controllable operating expenditure across the regulatory period. The QCA expanded the definition of controllable costs to include a wider range of cost categories compared to Seqwater’s proposal. For the purposes of this irrigation price review the cost categories that are relevant to irrigation are all largely within the QCA’s scope of controllable costs. On this basis it is proposed to allocate the same efficiency target used in the 2018-21 urban Bulk Water Price Review, which is 0.2% each year (cumulatively), to all irrigation operating expenditure. This is considered prudent noting the significant efficiency gains Seqwater has already achieved over the previous regulatory period in response to the QCA’s recommendations in the 2013 irrigation pricing review, which are directly reflected in a reduced operating expenditure allowance for the 2020-24 pricing period.

### 3.6 Revenue offsets

Most of Seqwater’s revenue offsets that were identified in the previous irrigation price review relate to recreation services. As recreation costs are being excluded from this review, Seqwater believes that recreation revenue should not be offset for the purpose of setting irrigation prices. There are only minor remaining sources of alternate revenue for the schemes. These are accounted for as revenue offsets in the relevant schemes. The total revenue offsets for all schemes totals around \$0.06 million in 2020-21.

### 3.7 Indirect costs

Indirect costs are business operating costs that cannot be readily assigned to a water supply scheme. This is because indirect costs derive from group or corporate functions, such as finance and human resources, which support all parts of the business. Indirect costs are considered fixed costs because they do not change with water use.

Seqwater has applied the same methodology used in the previous irrigation price review to allocate indirect costs.

#### 3.7.1 Indirect operating cost allocation to schemes

The process of calculating the indirect cost base commenced with a review of forecast corporate and administration costs for 2018-19. The objective of this review was to:

- identify and remove those costs not associated with the provision of services to the water supply schemes. These costs included costs that relate solely to the provision of urban drinking water and water grid services;

- identify and remove costs that can be directly costed to scheme assets such as project management and asset planning costs, as these are allocated directly to the relevant scheme;
- identify and remove one-off and abnormal costs such as flood class action costs;
- identify those costs that can legitimately be attributed to assets where the operation and maintenance is not relevant to irrigation services such as the Gold Coast Desalination Plant and Western Corridor Recycled Water Scheme;
- identify and remove insurance premiums for separate cost allocation; and
- identify local council rates not costed directly to schemes and allocate these as direct costs to the relevant schemes (discussed further below).

This review established the indirect cost bases for allocation over all assets, consistent with the approach from the 2013 review. This includes that some indirect costs are allocated to assets operated by contractors, while other indirect costs are not allocated to these assets. These are set out in the following table:

**Table 6: Indirect cost bases**

Indirect cost base description	\$2018-19
Indirect cost base for distribution over all assets	47,710,275
Indirect cost base for distribution over all assets plus contractors	25,744,198

Indirect costs are allocated to a scheme based on the proportion of direct costs used by the scheme. This is the same approach as was used in the previous irrigation review and was also the approach used in applying the offset for irrigation costs in the 2018-21 urban Bulk Water Price Review. This approach requires the following to be calculated:

- total irrigation direct operating costs as a percentage of total direct costs, excluding contractors;
- total irrigation direct operating costs as a percentage of total direct costs, including contractors; and
- direct operating costs of each tariff group as a percentage of total irrigation direct operating costs.

These percentages were applied to the indirect cost base for distribution over all assets and the indirect cost base for distribution over all assets plus assets operated by contractors. The amounts allocated to each tariff group are set out in the following table:

**Table 7: Indirect operating cost allocation to tariff groups (whole of scheme)**

Tariff group	\$2021
Cedar Pocket Dam	54,701
Central Brisbane <sup>5</sup>	2,016,809
Central Lockyer Valley	258,820
Morton Vale Pipeline	22,096
Logan River	672,557
Lower Lockyer Valley	227,898
Mary Valley	237,550

<sup>5</sup> Indirect costs are allocated to the Central Brisbane scheme in order for the scheme to take its share of the indirect costs, however, it is proposed that these costs are not recovered from irrigation customers. Refer to the scheme submission for Central Brisbane.

Pie Creek	95,706
Warrill Valley	322,686

The only change Seqwater proposes to the process of allocating indirect costs to schemes is the treatment of insurance costs. These were previously treated as an indirect cost even though they were allocated directly to the schemes. Seqwater has now captured this cost as a direct cost and therefore this contributes to the share of indirect costs each scheme receives based on the approach to allocate on the proportion of direct costs. Seqwater considers this approach is more consistent with its treatment of insurance costs as a direct cost and therefore should attract a share of indirect costs.

### 3.7.2 Non-infrastructure assets

Non-infrastructure assets are the office equipment, plant and buildings utilised in the operation of the water supply schemes. Non-infrastructure assets do not include vehicles or mobile plant that are costed directly to tariff groups. Non-infrastructure asset costs are not included in the renewals nor are they captured in the direct operating costs. However, it is necessary for these costs to be attributed to the schemes. Consistent with the approach used to develop current approved irrigation prices, Seqwater has continued to use depreciation costs as a measure of the consumption of the service potential of these assets. As these assets generally support multiple schemes, the costs are not captured at individual scheme or tariff group level. Accordingly, aggregate non-infrastructure depreciation for 2017-18 has been allocated to all tariff groups on the basis of the proportion of direct costs. The following table sets out the allocation of non-infrastructure costs to tariff groups.

**Table 8: Non-infrastructure cost allocation to tariff groups (whole of scheme)**

Tariff group	\$2021
Cedar Pocket Dam	2,099
Central Brisbane <sup>6</sup>	77,372
Central Lockyer Valley	9,929
Morton Vale Pipeline	848
Logan River	25,802
Lower Lockyer Valley	8,743
Mary Valley	9,113
Pie Creek	3,672
Warrill Valley	12,379

### 3.7.3 Insurance

Seqwater insures its infrastructure assets as a complete portfolio. Seqwater engages the services of a professional broker when procuring insurances and conducts a competitive process. Because the premium covers the insurance of all assets, the share of the insurance premium to be allocated to tariff groups is based on the proportion of tariff group infrastructure asset values to the total value of all infrastructure assets. This is consistent with the approach used in the 2013 review. As discussed above, this cost has now been treated as a direct cost. The following table sets out the allocation of the insurance premium to tariff groups:

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<sup>6</sup> Indirect costs are allocated to the Central Brisbane scheme in order for the scheme to take its share of the indirect costs, however, it is proposed that these costs are not recovered from irrigation customers. Refer to the scheme submission for Central Brisbane.

**Table 9: Insurance cost allocation to tariff groups (whole of scheme)**

Tariff group	\$2021
Cedar Pocket Dam	3,372
Central Brisbane <sup>7</sup>	279,584
Central Lockyer Valley	70,357
Morton Vale Pipeline	1,112
Logan River	159,377
Lower Lockyer Valley	28,763
Mary Valley	52,411
Pie Creek	2,641
Warrill Valley	21,319

### 3.8 Billing and water accounting system

Seqwater is proposing to undertake a business case to identify an improvement to upgrade its billing and water accounting system for irrigation customers and other raw water WAE customers. The system used at present includes many manual processes and takes significant time to send bills out after the end of the quarter. The Mary Valley and Logan River irrigation customer reference group were consulted about this and were supportive of investigating options for improvements. Customers in other schemes have made similar comments about improving Seqwater’s water accounting so that they could access this information in a more timely manner.

As these costs relate to customer accounts, Seqwater proposes these costs should be allocated based on the number of customers per scheme, rather than based on proportion of direct costs. This is proposed to be treated as an additional indirect cost. As Seqwater has not yet completed the business case, a notional amount of \$300,000 per annum has been included in this submission. This will be further investigated and the results provided to QCA in a subsequent submission, prior to the QCA’s Draft Report.

### 3.9 Working capital

The QCA did not provide Seqwater with a working capital allowance in the last irrigation price review. While conceptually a working capital allowance would be appropriate, and there is precedent for this in the 2018-21 urban Bulk Water Price Review (and this is also provided for provided for SunWater’s irrigation prices). However, as the allowance for irrigation services would likely be small, for simplicity Seqwater is assuming a zero allowance.

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<sup>7</sup> Indirect costs are allocated to the Central Brisbane scheme in order for the scheme to take its share of the indirect costs, however, it is proposed that these costs are not recovered from irrigation customers. Refer to the scheme submission for Central Brisbane.

## 4 Renewals expenditure

The Referral Notice requires the QCA to allow for prudent and efficient expenditure on renewing existing assets. As required by the Referral Notice the QCA should take into account the findings of the recent 2018-21 urban Bulk Water Price Review. In that review, the QCA's consultant KPMG reviewed Seqwater's planning framework and found:

*Overall, KPMG consider the capital planning framework to be commendable and consistent with Seqwater's legislative requirements and industry practice. We note, in addition to the Water Security Program, Seqwater are building on its planning processes through development or further enhancement of an Integrated Master Plan, Asset Portfolio Master Plans and Asset Class Plans. These plans are supported by Seqwater's strategy assessment management framework (systems, policies and procedures).<sup>8</sup>*

Seqwater's policies and procedures for planning bulk and irrigation renewal expenditure are identical and are the basis for the proposed renewals expenditure in this submission. Accordingly, the QCA's assessment of Seqwater's renewal program for the bulk review is also relevant to this irrigation review.

The QCA's consultant KPMG reviewed three renewal projects for the 2018-21 urban Bulk Water Price Review, which were:

- Fleet and plant renewals
- Mudgeeraba WTP renewals
- Mt Crosby WPS renewals.

KPMG found that these projects were both prudent and efficient and did not identify systemic issues with Seqwater's renewals program. On this basis, the QCA accepted Seqwater's forecast renewals expenditure. As Seqwater has prepared its renewal forecasts in the same manner for irrigation, there is limited need for the QCA to review the renewals program.

### 4.1 Seqwater's approach to renewals

The renewals forecast underlying Seqwater's irrigation pricing submission is based on a composite approach, drawing data from multiple sources to derive long term renewals profiles. Non-metering Renewals for FY 2021 to FY2035 are sourced from Asset Management's renewals planning process, which are then supplemented with forecast data from prior long-term renewals forecasts for FY 2036 to FY 2050 – these longer term projections take into account QCA adjustments from the 2013 review (up until 2037). The metering renewals included to 2022 follow the current planning for meter replacements which were not included in the renewals planning process as they are being addressed separately as part of the current meter replacement program.

Consistent with the previous QCA irrigation pricing review, Seqwater proposes to recover these costs through a renewals annuity. As explained in more detail in section 5, the renewals annuity has previously been based on a 20-year period. Seqwater is now proposing to apply a 30 year period. This section provides a summary of the forecasting approach.

Seqwater has maintained the same definition of renewals expenditure as was used for the previous review. Renewals expenditure is non-maintenance expenditure that is required to maintain the service capacity of the assets.

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<sup>8</sup> Seqwater expenditure review, KPMG, p6. <http://www.qca.org.au/getattachment/10915e79-d25e-47e9-9397-40e65401ff48/KPMG-report.aspx>

Renewals includes (regardless of frequency or cost) the following types of works:

- replacement of assets and components of assets, including replacements required in response to events causing asset damage;
- refurbishment of assets and components of assets, including replacements required in response to events causing asset damage;
- upgrade or modification to assets when required for compliance purposes. In accordance with the Referral Notice, capital expenditure (renewals) costs for dam safety upgrades and meter upgrades to meet national metering standards have been excluded, and while such works are noted in this report for completeness, they are not included in the renewals annuity.

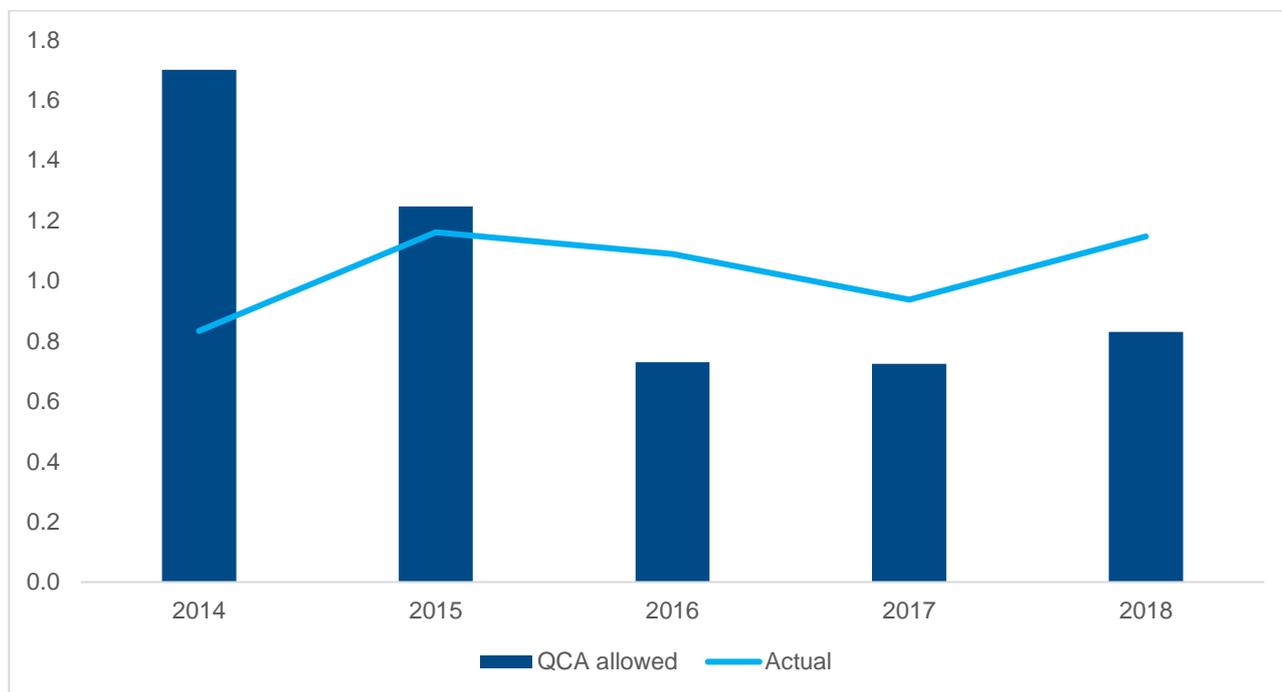
## 4.2 Improvements since the last review

A significant improvement in Seqwater’s process is the annual Network Service Plan reporting to its irrigation customers. This allows customers to understand the upcoming expenditure and to provide feedback. Seqwater works closely with its customers to ensure that it is meeting their needs in the least cost manner, consistent with its regulatory obligations.

## 4.3 Summary of previous renewals

In the previous irrigation pricing review the QCA approved renewal expenditure of \$5.23 million across the five years of the previous regulatory period which have now been completed. Seqwater has spent \$5.17 million over this period – 1.2% less than the QCA allowance.

Figure 4 Renewal expenditure against QCA allowance (\$ million, nominal)



Additionally, Seqwater has spent \$1.36 million on uninsured flood damage costs, this is made up of the schemes’ proportional share of the flood damage costs which were not able to be claimed, for example, the deductible is shared across affected assets. This type of cost cannot be planned for, however, it is considered appropriate to recover the costs as the expenditure was prudent and efficient.

## 4.4 Forecast renewal expenditure

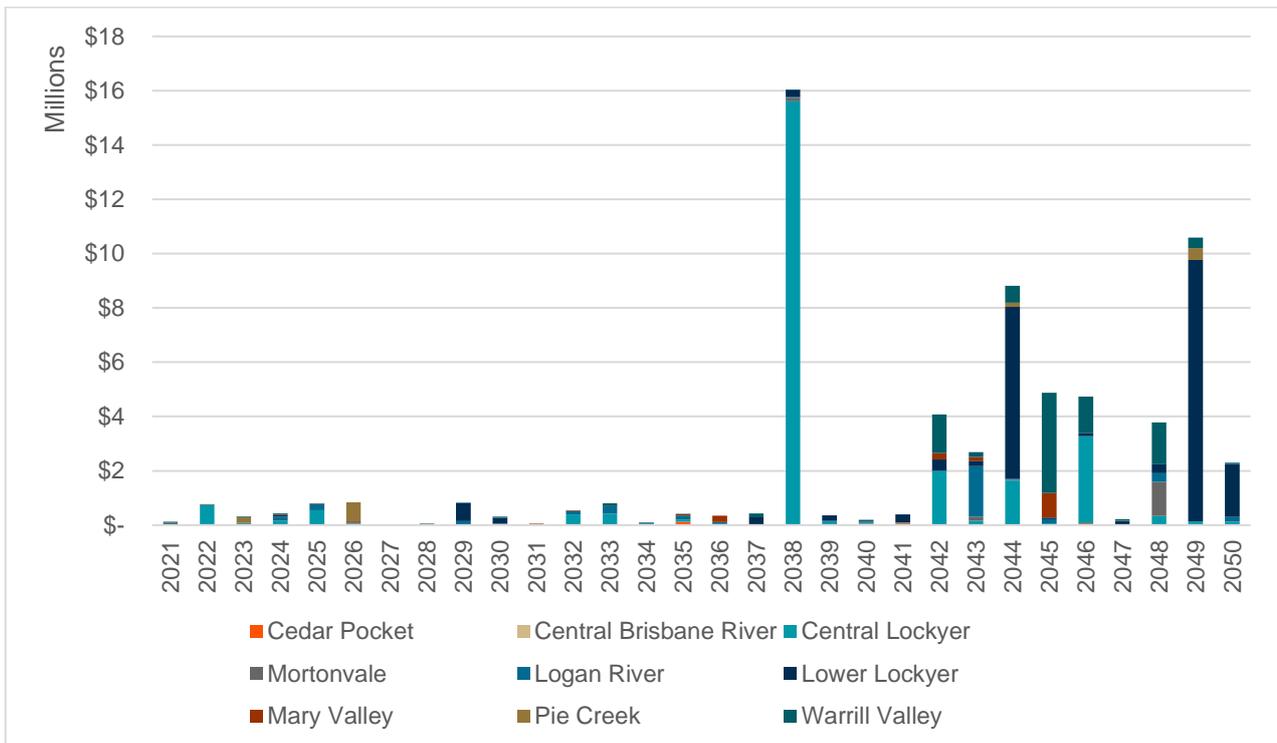
Seqwater identified renewals needs and the schedule of projects through a range of processes, including:

- the existing Facility Asset Management Plans (FAMPs)
- the existing asset maintenance program
- reports from site safety inspections and dam safety management program
- advice from operators.

Seqwater regularly evaluates potential projects including considering conditions assessments. These inform the next few years of renewals planning at a time. In many cases over time, Seqwater has deferred the timing of major renewals jobs where there was not sufficient evidence that the asset required renewal, or renewal of the asset could be deferred at an acceptable risk of failing to meet service standards or compliance obligations.

The forecast renewals expenditure is shown in the figure below. The material spend of around \$16M in 2038 in the Central Lockyer scheme is predominantly for the replacement of the Lake Dyer diversion pipeline for supply to Bill Gunn Dam.

**Figure 5 Renewal expenditure forecast (\$ million nominal)<sup>9</sup>**



<sup>9</sup> The renewals expenditure forecast excludes Central Brisbane as Seqwater is proposing not to recover these costs from irrigation customers, refer to the scheme submission for Central Brisbane.

## 5 Renewals Annuity

### 5.1 Historical renewal expenditure and opening balances

The QCA established the opening Asset Restoration Reserve (ARR) balances to apply on 1 July 2013. Seqwater has adopted these balances, as shown below.

**Table 10: Opening ARR balances – 1 July 2013**

Schemes	Opening ARR balance \$
Cedar Pocket	15,593
Central Lockyer	226,978
Morton Vale	417,301
Logan River	-700,646
Lower Lockyer	-518,133
Mary Valley	-3,678,393
Pie Creek	-28,002
Warrill Valley	-568,965

Source: QCA final report, Volume 1, Table 5.9

Seqwater has calculated the opening ARR balances for this review as at 1 July 2020. This is based on customer contributions, renewal expenditure and interest over the price path period. The summary is shown below, and a detailed annual roll-forward is presented in each scheme submission.

**Table 11: Closing ARR balances – 30 June 2020**

Schemes	Closing ARR balance \$
Cedar Pocket	67,650
Central Lockyer	-2,108,937
Morton Vale	123,065
Logan River	-2,318,511
Lower Lockyer	-1,469,738
Mary Valley	-4,214,386
Pie Creek	400,309
Warrill Valley	-1,789,024

### 5.2 Methodology

Seqwater clearly separates renewals expenditure from maintenance activities and the two are treated differently for pricing purposes. Maintenance is treated as an operating cost, while renewals are treated as capital expenditure and recovered through the renewals annuity. Maintenance work is about maintaining the service potential of existing assets, while renewals is about replacing assets or asset parts. For example, for a pump, maintenance work would include reconditioning the impellor, while replacing the pump would be a renewals activity.

Seqwater has continued to use the renewals annuity method for recovering ongoing renewals capital expenditure for the schemes. The renewals annuity includes the calculation of an Asset Restoration Reserve (ARR), which acts like a notional bank account for the scheme based on what was spent for the scheme versus the revenue received for the scheme that reflects the renewals annuity component of prices. The renewals annuity component is calculated based on the opening balance of the ARR, along with the forecast expenditure for the relevant scheme. The annuity is the annual amount that would ensure the ARR is returned to zero at the end of the period, that is, it would ensure that sufficient revenue is recovered to recover the forecast renewals expenditure after taking into account the starting balance. It is calculated using an appropriate discount rate (see section 5.4).

In late 2017, Seqwater commissioned Indec to complete a quality assurance review of the methodology and calculations of the ARR balances associated with irrigation water supply for the 2013-14 to 2016-17 period. This review provided Seqwater with independent assurance that the ARR balances are appropriately calculated, and any assumptions made are reasonable and justified. Indec confirmed Seqwater's ARR calculation methodology is appropriate and conforms to prevailing regulatory requirements from QCA decisions and position papers.

In consultation for this review, Seqwater found that, particularly in shared schemes (i.e. a scheme supplying both urban HP customers and irrigation MP customers), customers find the ARR balances confusing to interpret. This is particularly due to Seqwater's shared schemes having quite small shares for irrigation customers, and because Seqwater's urban prices recover costs through a different approach (i.e. through a building blocks approach that uses a Regulated Asset Base).

Therefore, Seqwater proposes to calculate and report the ARRs for the irrigation share only. This also allows for ease in the calculation of expenditure such as the meter replacement program, the costs of which are recovered only from the irrigation customers. The non-irrigation portion of the ARR is not used to set SEQ urban bulk water prices and therefore is not relevant for Seqwater. Seqwater seeks QCA feedback on this approach but believes the calculations will provide the same result, just in a more transparent and simple way to irrigation customers.

### 5.3 Annuity period

At the last irrigation price reviews for SunWater and Seqwater the QCA considered whether the planning period should be 20 or 30 years. A longer planning period smooths out the lumpy expenditure and ensures that long-lived assets are paid for over a long period. The QCA was concerned that there would be intergenerational inequity if a long-lived asset (for example, a dam safety project with a 100-year life) was paid for by a single cohort of irrigators over 20 years. However, the QCA considered that the uncertainty regarding the costs and timing of renewal projects outweighed the benefits of a longer renewals period. The QCA recommended a renewal planning period of 20 years and that the length of the planning period be revisited in subsequent price reviews, including identifying where problems of intergenerational equity could arise as a result of significant capital expenditure proposals.

Seqwater provided 30 years of data at the last review to enable consideration however proposed a 20-year period on the basis of difficulty forecasting costs beyond 20 years. In this submission Seqwater has provided a 30-year renewals expenditure forecast and calculated proposed prices based on a 30-year annuity. It considers this appropriate as:

- Many of Seqwater's assets used to provide irrigation services have lives greater than 20 years and the period of recovery should ideally match the asset life;
- A 30-year annuity is less volatile and allows expensive renewal projects to be included without creating a volatile price impact;
- The annuity and the renewal expenditure are recalculated regularly (at each price reset), so uncertainty in forecasts can be reduced over time. The discounting of future expenditure appropriately takes into account this uncertainty and the renewal project has a bigger impact on the annuity as it draws closer and becomes more certain;
- The ARR provides a balancing mechanism to ensure the business does not over-recover renewals costs.

Seqwater’s proposal to include a 30 year annuity period was presented to customers in the consultation process however customers did not provide feedback on the renewals period. As with the previous review, there remains uncertainty over renewals forecasts in the 20 to 30 year period. This uncertainty will remain as conditions will change over time. Given this it would not be prudent or efficient to undertake full analysis of renewals expenditure forecasts over such a lengthy time frame. As time goes on Seqwater will undertake conditions assessments to re-evaluate the proposed renewals activities as they get closer.

## 5.4 Weighted Average Cost of Capital (WACC)

Another input into the calculation of the renewals annuity is the use of the Weighted Average Cost of Capital (WACC) as a discount rate to amortise the costs over the term of the annuity.

Seqwater proposes to use the WACC components as determined by the QCA in the 2018-21 urban Bulk Water Price Review, updated to reflect current market conditions. While Seqwater does not necessarily agree with all aspects of the approach used by the QCA to estimate the WACC, it considers this to be prudent in this context rather than spending further effort and cost re-litigating WACC in the context of the current irrigation price review.

Therefore, Seqwater proposes the parameters as set out in Table 12 below, these are compared to a market parameters approach which is understood to be the QCA’s preference. This is also outlined in the table below.

**Table 12: WACC Parameters**

	Estimated QCA Market Parameters approach	Seqwater proposed
Target Gearing	60%	60%
Cost of debt	4.44%	5.2% average
Cost of equity	7.6%	7.6%
Asset Beta	0.4	0.4
Market Risk Premium	7%	7%
Nominal vanilla post-tax WACC	5.70%	6.15%

Note: The risk free rate used for these WACC parameters uses a 20 day averaging period to 28 September 2018

Seqwater notes the QCA’s preference to use a post-tax approach to its regulatory reviews. Seqwater has included a post-tax WACC for use in this preferred approach. However, it is noted that for irrigation services there have been no tax cashflows included. Previously tax was excluded from the review, and despite this a post-tax WACC was applied. While tax is not explicitly excluded in this review Seqwater has not proposed any tax cashflows. The QCA could therefore consider if the post-tax WACC remains appropriate without any tax cashflows.

## 6 Other cost issues

### 6.1 Dam safety upgrades

In 2012-13, Seqwater commissioned an independent assessment of its 26 regulated dams. This assessment included a review of the condition of its dams and their compliance with current Queensland and Australian guidelines and has identified a program of work needed to ensure the dams meet these guidelines. Under Seqwater’s Dam Improvement Program, it will upgrade some dams and reduce the water levels of others until upgrades can be completed. Seqwater regularly reassesses the drivers for dam safety upgrades and therefore expected timing and planned works may change.

Irrigation prices and CSOs do not currently recover or contribute to the costs of dam safety upgrades for dams providing irrigation services.

Seqwater currently recovers a portion of costs associated with dam safety upgrades through SEQ urban bulk water prices, according to those dams’ share of capital costs for urban bulk water services. This means for schemes with an irrigation share, the irrigation share has been excluded. This is applied through the Headworks Utilisation Factor (HUF) where relevant, and in irrigation-only schemes, such as in the Lockyer Valley schemes, the full costs of any upgrades in these schemes are not recoverable through SEQ urban bulk water prices. Additionally, as previous Government policy has excluded recovery from irrigation prices, these costs are also not recoverable through the renewals annuity for irrigation assets and are therefore completely unfunded for Seqwater.

The mechanism used in SEQ urban bulk water prices is the Regulatory Asset Base (RAB). The RAB represents the value of assets that is used for determining the capital components of prices. The value of the RAB changes over time to reflect additions for capital expenditure and asset appreciation (inflationary gain), and deductions for depreciation. Seqwater proposes that if it were to recover irrigators’ share of dam safety upgrade costs from irrigation customers, it would seek to do this via a RAB based on when the projects are commissioned. The rationale for this is:

- Dam safety upgrades have very long lives similar to the dams they improve, therefore it would not be appropriate to recover these costs over a 20 or 30 year period used in the renewals annuity method;
- A RAB approach means customers do not contribute to the costs of the project until it is commissioned; and
- Seqwater already uses a RAB approach for SEQ urban bulk water prices so it would provide for consistency.

The currently planned timing for upgrading Seqwater’s irrigation scheme dams demonstrates that none of these projects are expected to commission within the 2020-24 pricing period. Therefore, based on the proposed approach to recover the costs of dam safety upgrades via a RAB, Seqwater is not proposing any costs in this submission. However, it will revisit this at the next irrigation pricing review, subject to Government policy decisions on this matter. The timings set out below in Table 13 are the current estimates, further studies and assessments may change the drivers for dam safety upgrades.

**Table 13 – Projected timing of dam safety upgrade projects**

Scheme	Dam Safety Upgrade timing (if any)
Warrill Valley	Moogerah Dam (Stage1B) - Commissioning expected 2034-35 Moogerah Dam (Stage 2) - Commissioning expected after 2036-37
Lower Lockyer	Atkinson Dam - Commissioning will not occur before 2036-37
Central Lockyer	N/A - Projects for Bill Gunn Dam and Clarendon Dam are commissioning before 2020-21

Scheme	Dam Safety Upgrade timing (if any)
Mary Valley	Borumba Dam - Commissioning 2035-36
Cedar Pocket	N/A – No upgrade currently required
Logan River	Maroon Dam - Commissioning will not occur before 2036-37
Central Brisbane	Somerset 2025-26 Wivenhoe 2031-32

## 7 Water volumes and usage forecasts

To convert the estimate of total variable costs to a volumetric tariff requires an estimate of annual water use. The QCA's forecasts from the 2013 review have been well above actual use over the period, and Seqwater is therefore proposing a different approach below.

### 7.1 Previous review

In the previous irrigation pricing review, the QCA sought to determine the water use in a 'typical' year for each tariff group. This was based on the QCA's understanding that Seqwater's approach to budgeting assumed a typical year. The QCA noted that Seqwater's irrigation water use was more variable than SunWater's irrigation water use.

The QCA selected a time period that balances two factors. The QCA sought a time period that took into account any recent structural reform. This requires consideration of recent water use that reflects the current crops and water use efficiency practices. However, a short-term average can be affected by short-term water availability variations. To balance these factors, the QCA extended the period of historical water use from ten to 15 years between its draft and final reports. The QCA did this in recognition that water use over the past ten years had not been typical, and that a longer time series was needed to reduce the temporary impact of recent drought.

The QCA adopted a water use estimate based on the average of those years that exceed the 15-year average for each tariff group. That is, a 15-year average was calculated, then any annual water use amounts less than the average were discarded. An average of the remaining annual water use amounts was calculated and used as the typical water use.

This had the impact of removing years (approximately half of years) with low water use, resulting in the forecast of typical use being much higher than the long-term average water use.

### 7.2 Water use over 2014-18

Since the commencement of the last regulatory period, actual water use across Seqwater's schemes has been 29% lower than the water use figure recommended by the QCA to determine volumetric charges. Of the nine schemes, two had higher water use: Cedar Pocket (4% higher) and Morton Vale Pipeline (12% higher). The other seven all were lower, including the Lower Lockyer, where water use was 53% lower than the QCA forecast.

These results indicate that if fixed costs have been recovered through the volumetric prices, which Seqwater believes is the case, Seqwater would have under-recovered its costs due to the lower water usage. However, as Seqwater has been able to reduce its costs, this impact has been mitigated. As shown in the table below, the difference in volumetric revenue between the QCA's forecast and the actual revenue received reflects an under-recovery over five years of \$0.9 million. Low announced allocations particularly in the Lower Lockyer reduce the ability to receive revenue as the customers are not able to take their full allocation.

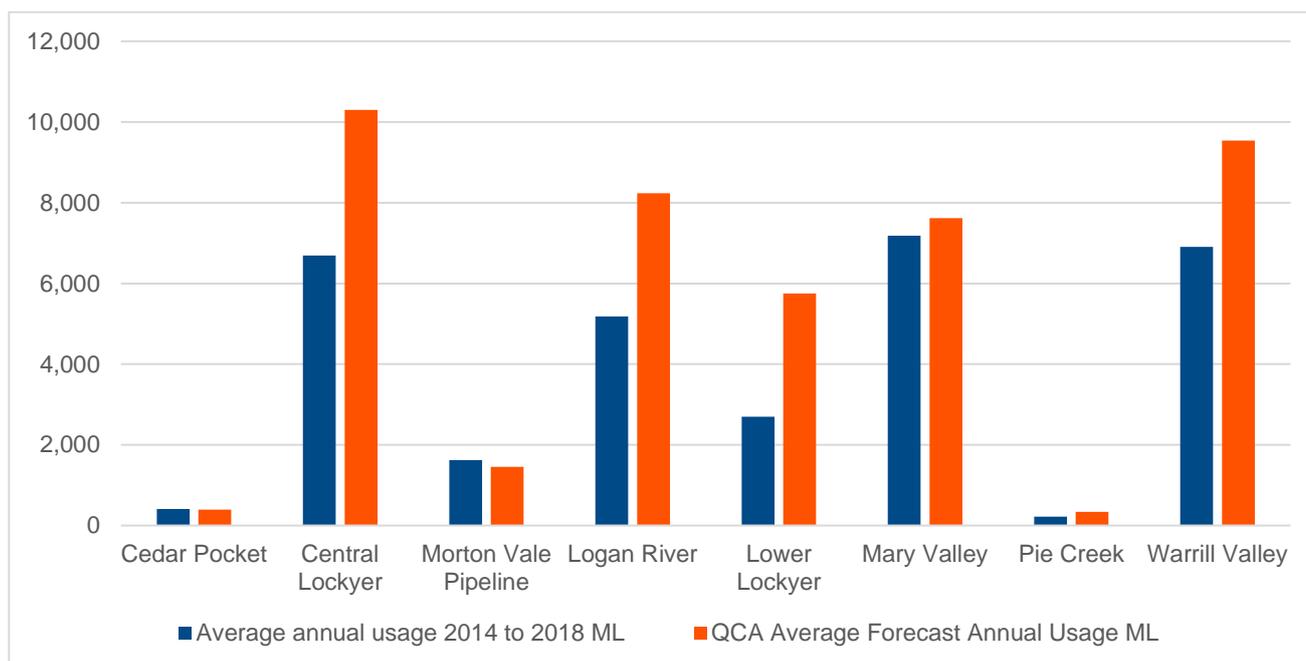
**Table 14: Variance in variable revenue compared under QCA water usage forecast (2014-18)**

Scheme	Variance
Cedar Pocket	\$ 3,081
Central Lockyer	-\$ 186,592
Morton Vale	\$ 7,000
Logan River	-\$ 161,184
Lower Lockyer	-\$ 364,659

Mary Valley	-\$	19,366
Pie Creek	-\$	44,111
Warrill Valley	-\$	101,496
Central Brisbane	-\$	38,079
<b>Total</b>	<b>-\$</b>	<b>905,406</b>

The difference in water use over the 2014 to 2018 period is also illustrated below.

**Figure 6 2014 to 2018 actual irrigation water use compared to QCA forecast (ML)**



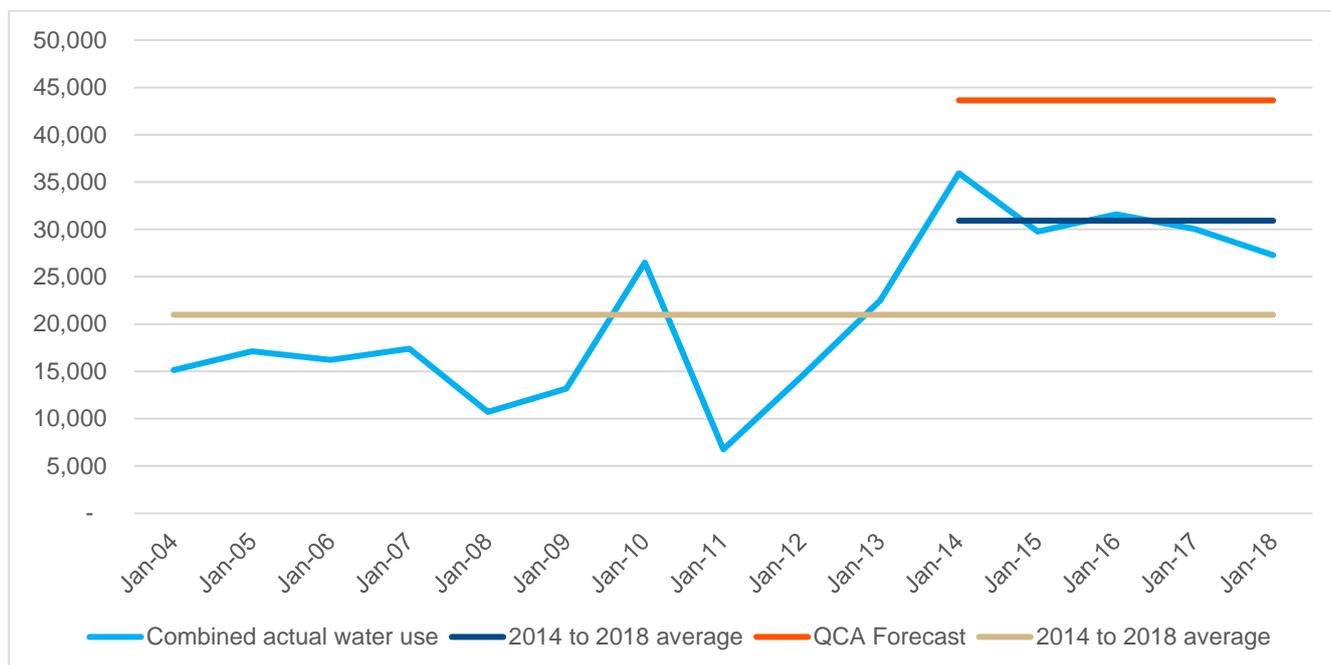
Source: Seqwater and QCA Final report

### 7.3 Seqwater’s proposal

Seqwater submits that forecast water deliveries should be based on the most accurate and reliable data available and be the most likely forecast at the relevant point in time.

Accordingly, Seqwater submits that the QCA’s previous approach was not based on the best data. The removal of data points only below the average was almost certainly going to result in a higher water use than would occur. This has been borne out over the regulatory period as shown in Figure , as water use has been 29% lower than the QCA forecast.

**Figure 7 2004 to 2018 actual irrigation water use compared to QCA forecast (ML)**



Source: Seqwater and QCA Final report

Seqwater proposes that the historical period to consider should remain at 15 years. This is to promote:

- the objectives of regulatory precedent and certainty as the period is the same as the previous QCA decision;
- price stability, as a shorter period will be more variable, and could lead to price volatility at each price reset.

It is proposed that a simple average should be used over this period as:

- Seqwater’s budgeting is not done based on a typical year, as suggested by the QCA in its previous review. Seqwater considers its costs to be fixed and does not budget on the basis that above-average water deliveries will be needed. Seqwater bases its budget on historical trends, without excluding observations.
- To calculate the variable charge based on an above-average water use forecast effectively ensures that Seqwater will not recover its variable revenue over the long-term. Should the QCA consider that cost estimates are too high, this should be identified as part of the review of Seqwater’s proposed forecasts. It is not reasonable for the QCA to recommend a variable cost component that cannot be recovered in normal conditions.
- This is consistent with other jurisdictions. For WaterNSW, IPART divides the variable revenue requirement by the 20-year rolling average of water use. This is re-calculated annually through the regulatory period. Therefore, this proposal is consistent in terms of approach and uses a similar timeframe. Other rural water jurisdictions provide limited comparison because they do not have variable charges, and therefore limited need to determine water use.

The Table below summarises Seqwater’s proposed water usage assumption compared to the WAE in each scheme.

**Table 15: Long term average water usage for each scheme (irrigation only)**

	Cedar Pocket	Central Lockyer	Morton Vale	Logan River	Lower Lockyer	Mary Valley	Pie Creek	Warrill Valley
MP WAE	495	16,357	3,420	13,555	12,620	21,829	835	23,884
Usage	300	4,729	701	3,914	1,673	5,933	206	3,640

Using the long term average of water usage as the basis for pricing was a key matter in which Seqwater sought customer feedback. This approach was supported by Seqwater customers.

## 8 Allocating costs to customers

### 8.1 Headworks Utilisation Factors

A Headworks Utilisation Factor (HUF) describes the percentage of a WSS's storage headworks volumetric capacity that is effectively utilised by each priority group of water entitlements in that scheme. This factor is a key consideration in, and input into, the allocation of the costs between medium and high priority customers.

#### 8.1.1 Previous review

In March 2012, Seqwater submitted HUFs to the QCA based on advice from Parsons Brinckerhoff. As a HUF only relates to storages assets, the two distribution networks do not have a HUF. Further, three schemes (Cedar Pocket Dam, Central Lockyer Valley and Lower Lockyer Valley) supply only medium priority customers, so there is no need to allocate costs between customer types.

The QCA recommended the adoption of HUFs that were generally consistent with Seqwater's submission as follows:

- Logan – 16% for medium priority and 84% for high priority;
- Mary Valley – 26% for medium priority and 74% for high priority;
- Warrill Valley – 11% for medium priority and 89% for high priority;
- Central Brisbane River – The usual HUF methodology was not used by the QCA for this scheme, rather the QCA calculated an allocation of 1.6% for medium priority and 98.4% for high priority.

#### 8.1.2 Seqwater updated HUFs

Seqwater engaged Badu Advisory to review and update the relevant HUFs. Their report forms Appendix I. Central Brisbane River was not included in this report, as Seqwater is undergoing a separate process to determine cost allocation in this scheme. The HUFs were updated to take into account of:

- Cut-off rules that prevent releases from headworks storage under defined conditions: The HUF methodology proposes additional steps to address situations where a WSS's water sharing rules are subject to "within water-year headworks storage cut-off rules"<sup>10</sup> (that have the effect of disallowing continuing access to announced allocations within a water year once headwater storage water levels have fallen below a defined trigger level). The 2012 analysis did not properly incorporate the medium priority cut-off rule that applies to water supplied from Borumba Dam. Correctly modelling the cut-off rule materially changes the HUF in the Mary scheme.
- Change in high priority allocations: Logan has additional high priority allocations due to the addition of new storages, and some conversion of medium priority to high priority. While this lowers the share for irrigation it also increases the costs to be shared as the costs associated with the new storages now need to be included<sup>11</sup>. In Warrill, the volume of high priority allocations has decreased by 3,500 ML.
- Significant changes to water sharing rules: The Logan ROP also updated the water sharing rules to provide preferential access by the newly created high priority water allocations to the water stored in the scheme's combined storage.

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<sup>10</sup> *Headworks Utilisation Factors: Technical Paper, Seqwater & SunWater, 24 April 2018, pp 13-14.*

<sup>11</sup> These new storages added to the water sharing rules were constructed prior to 1 July 2013 and therefore based on the settings of the current price path, return on or of the initial capital augmentation costs for these assets are not to be recovered from irrigation customers, however the operating costs of these assets would be included and are therefore proposed in this submission.

- Correction and updating of the 15-year critical period: The 2012 analysis (incorrectly) used 14 years of data. The updated analysis (appropriately) uses 15 years of data.

The combination of these effects has a significant impact of the HUF in Logan and Mary as shown in **Error! Reference source not found.16**.

**Table 16 Seqwater’s new HUFs**

Scheme	2013 HUF	Proposed 2018 HUF	Reason for change
Logan	16%	2% <sup>12</sup>	Significant impact from changes to ROP and water sharing rules: <ul style="list-style-type: none"> <li>• New storages included</li> <li>• Increased HP allocations</li> <li>• Changed sharing rules to prioritise HP</li> </ul> Minor error 14 years vs 15 years
Mary	26%	11%	Significant impact from missed cut-off rule. Minor error 14 years vs 15 years.
Warrill	11%	10%	Minor impact from change in volume of HP allocations Minor error 14 years vs 15 years.

Source: Seqwater

These proposed HUFs are consistent with the methodology previously approved by the QCA. However, they have been corrected and updated to take into account the changed circumstances since 2013.

These reductions in the HUF have resulted in significant reductions to the costs allocated to irrigation, and consequently the cost-reflective prices in these schemes.

Seqwater proposes that the difference between actual revenue collected and cost-reflective revenue be credited to the ARR in each scheme to reduce the pressure on future prices. This proposal is discussed further below.

## 8.2 Fixed and variable cost allocation

A key step in the process of allocating costs to customers is the allocation of costs as either fixed or variable to attribute these costs toward fixed or volumetric prices. The Referral Notice requires that the QCA, in considering tariff structures, have regard to the fixed and variable nature of the underlying costs. Accordingly, Seqwater has examined whether a cost is fixed or varies according to water deliveries.

Costs that do not vary with the volume of water deliveries should be recovered through the fixed price, per ML of water allocation. A cost that varies with water deliveries should be recovered through the variable price, per ML of water use.

### 8.2.1 Previous review

During the 2013 irrigation pricing review, the QCA determined the portion of costs that were fixed and variable. The allocation between fixed and variable costs was based on the assessment the QCA made during the

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<sup>12</sup> While the cost share for the Logan scheme has been reduced, this is accompanied by an increase in the costs for the scheme taking into account the costs associated with operations, maintenance and renewals of the storages of Wyaralong Dam, Cedar Grove Weir and Bromelton Offstream Storage, which are now included in the scheme.

preceding review into the SunWater irrigation schemes. The same percentages were applied to the Seqwater irrigation review.

Indec was engaged by the QCA to advise on whether costs were fixed or variable. Indec examined the historical relationship between water deliveries and costs and concluded that some expenditure did vary with water use to varying degrees.

In drawing this conclusion, Indec acknowledged that some correlation analysis results did not meet the strict decision criteria required to establish beyond doubt whether historical costs were fixed, variable or semi-variable with a variation in customer water use. Further, Indec noted that correlation does not necessarily imply causation. Indec considered that some costs should optimally vary with water use. Overall, Indec recommended that 93% of bulk costs were fixed, and 7% variable.

The QCA accepted Indec’s advice and applied a fixed/variable split for each category, as shown in the table below.

**Table 17 QCA recommended variable costs from the previous review, by activity**

Activity	Variable in bulk	Variable in distribution
Labour	20%	25%
Contractors	20%	25%
Repairs and maintenance	20%	25%
Materials and other	20%	25%
Dam safety	0%	Na
Rates	0%	0%
Electricity (pumping)	50-100%	100%
Non-directs	0%	0%
Renewal annuity	0%	0%

Source: QCA Final Report 2013

These allocations were then applied to the cost categories in each scheme, to obtain an overall split for each scheme.

## 8.2.2 2018-21 urban Bulk Water Price Review

The QCA reviewed Seqwater’s costs as part of the 2018-21 urban Bulk Water Price Review. The QCA recommended that 15% of total opex was variable in the base year. This break-down is shown in the table below.

**Table 18 QCA recommended fixed and variable operating costs (2018-19, \$ million)**

Activity	QCA recommended	Allocation
Base year fixed opex	207.2	85%
Base year variable opex	37.4	15%
Total	244.6	100%

Source: QCA 2018 SEQ bulk water price path review

The variable costs relate to only three categories: chemicals, electricity and sludge.

The chemical category consists mainly of alum, sodium hypochlorite, lime, activated carbon and carbon dioxide. Chemicals are used exclusively to treat water, for the purpose of drinking. This is not an irrigation activity, as the irrigation contract requires no minimum water quality. Accordingly, this variable component will not be included in irrigation costs.

Variable electricity from the SEQ urban bulk water review is that used at water treatment plants. This is not an irrigation activity and should not be included in irrigation costs. While there are electricity costs in pumping for pump stations associated with the irrigation schemes these are largely not variable costs. For example, pumping to some of the scheme storages is simply to fill the storage, it does not depend on demand. The exception is in Pie Creek where water is pumped from the Mary River to fill water orders. It is Seqwater's view that this is the only true variable cost for the irrigation schemes.

The sludge category relates to the disposal of sludge, which is a by-product from its treatment plants. This activity is undertaken only for the benefit of bulk (non-irrigation) customers. Accordingly, this variable component will not be included in irrigation costs.

None of the variable costs identified in the 2018-21 urban Bulk Water Price Review therefore relate to irrigation activities.

### 8.2.3 Other Jurisdictions

Other regulators have recently determined the allocation of fixed and variable costs, as summarised below. Each regulator has concluded that 100% of costs are fixed.

#### 8.2.3.1 IPART – Rural water

WaterNSW submitted to continue with the prevailing current fixed variable pricing structures, predominantly 40:60, to align with customer preferences<sup>13</sup>. However, this does not reflect the underlying nature of the costs and exposes WaterNSW to revenue risk. WaterNSW submitted that a cost reflective tariff would be close to 100 per cent fixed.

IPART allowed a volatility allowance of about \$1.3 million per year. This recognises that WaterNSW is subject to revenue volatility risk, which arises from the difference between its largely fixed cost structure and its price structure (which is 40:60 fixed to variable in many valleys).

#### 8.2.3.2 ESC - Goulburn-Murray Water

The Essential Services Commission (ESC) of Victoria approved Goulburn-Murray Water's proposed bulk storage charges. In its decision, the ESC concluded that: "This charge is based on the size of the water share held by a customer."<sup>14</sup> There is no variable charge.

In relation to diversion charges, the ESC commissioned INDEC to provide advice. INDEC concluded that "G-MW provided cost data which demonstrated that the operating cost base related to the diversion services is fixed and does not vary with the volumes of water usage of diversion customers."<sup>15</sup>

#### 8.2.3.3 ACCC

The ACCC's Water Monitoring Report 2016–17 reported bills comprising of entirely fixed charges for Lower Murray Water<sup>16</sup>.

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<sup>13</sup> Review of prices for rural bulk water services from 1 July 2017 to 30 June 2021, IPART, p115  
<https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-legislative-requirements-water-bulk-water-review-of-prices-for-waternsw-rural-bulk-water-services-from-1-july-2017-formerly-state-water-corporation/final-report-waternsw-review-of-prices-for-rural-bulk-water-services-from-1-july-2017-june-2017.pdf>

<sup>14</sup> <https://www.esc.vic.gov.au/sites/default/files/documents/660a47ab-75c3-48cb-a643-1430a961b174.pdf> P63

<sup>15</sup> <https://www.esc.vic.gov.au/sites/default/files/documents/51456619-bc08-44af-886d-cffd72b820db.pdf> P30

<sup>16</sup> [https://www.accc.gov.au/system/files/ACCC%20Water%20Monitoring%20Report%202016%E2%80%9317\\_0.pdf](https://www.accc.gov.au/system/files/ACCC%20Water%20Monitoring%20Report%202016%E2%80%9317_0.pdf) P43

## 8.2.4 Proposed split of fixed and variable costs

Seqwater considers its obligations and therefore costs, budgeting process and operational procedures are the same regardless of whether there is water used. The activities required to maintain and repair bulk infrastructure do not vary with water use.

Seqwater does not consider that it is reasonable to continue to rely on Indec’s analysis, which was undertaken in 2011. It was done for another business and applied to Seqwater. While for reasons of efficiency, Seqwater considered this to be reasonable at the time, there is no evidence that SunWater-specific analysis, which is now over seven years old, is applicable to Seqwater’s irrigation schemes.

Given the need to undertake fresh analysis, Seqwater considers it appropriate for the QCA to rely on its own recent review of Seqwater’s bulk costs and reviews undertaken by other regulators in other jurisdictions, while having regard to the differences in variable costs between bulk water and irrigation services, as described above.

The only activity in irrigation services which could be considered to have some variable component relates to making water releases. A small amount of labour effort is required to take the order, and to make the release. In practice, Seqwater cannot increase and decrease labour costs in response to a short-term change in water use. However, as operators work across several schemes, labour effort can be varied at the scheme level. In recognition of this, Seqwater proposes that 5% of some costs be treated as variable.

Bulk electricity is needed for lighting, security and site operations. These requirements do not vary with water use.

The bulk infrastructure needs to be repaired and maintained irrespective of whether deliveries are been made. The schemes need to be ready to supply water in accordance with contractual obligations. Repairs and maintenance cannot be deferred if water use is low. Similarly, the amount the deliveries does not materially increase the wear on any equipment, leading to a deterioration of its conditions.

Further:

- Local government rates are determined by unimproved land value and zoning, not water deliveries.
- Dam safety inspection requirements are a function of a storages size and age, not water deliveries.
- Insurance costs are determined by the replacement cost of the insured object, not water deliveries.

Seqwater consulted with customers and they supported allocating some costs to the volumetric charge. Its proposal is that 5% of some cost categories should be treated as variable costs, and recovered through the variable charge, as shown in the table below.

**Table 19 Seqwater’s proposed fixed and variable costs**

Cost category	Variable costs	Fixed costs
Labour	5%	95%
Electricity (non-pumping)	5%	95%
Repairs and Maintenance	5%	95%
Other	5%	95%
Local government rates	0%	100%
Dam safety inspection	5%	95%
Insurance	5%	95%

Indirect costs	0%	100%
Annuity	0%	100%

Source: Seqwater

The only scheme with a proposed exclusion to the above approach is Pie Creek, where there is a true variable cost in electricity from pumping from the Mary River to supply Pie Creek customers according to the water ordered. This cost is not incurred unless customers in Pie Creek order water to take.

## 8.2.5 Customer views

Customers in most schemes were supportive of the proposed allocation of fixed to variable costs. The exception to this was in the Lockyer Valley schemes, where due to the performance of the schemes (where the customers have their announced allocations reduced substantially quite frequently), they are of the view they would prefer costs be allocated more to the volumetric prices. Seqwater appreciates this argument relates more to the performance of the schemes, rather than the underlying costs that customers understood to be fixed.

## 9 Proposed price outcomes & CSO

The above sections of this submission outline the inputs and methodology used to calculate irrigation prices. This section outlines Seqwater’s proposed cost reflective prices. It is recognised that these prices are indicative only, they exclude QCA fees and are subject to the QCA’s investigation and recommendations.

### 9.1 Cost target

The cost target for irrigation prices includes the components such as the costs of operations, administration, maintenance and renewals. Each of these components have been discussed in the sections above. Together they form the cost target for irrigation prices.

Figure 8: Components of the cost target



The below table includes Seqwater’s proposed cost target for each scheme compared to the QCA’s targets from the previous review<sup>17</sup>. This demonstrates that Seqwater’s proposed irrigation cost target is lower than the QCA’s previous target. While Seqwater’s proposed cost target for irrigation from 2020-21 excludes any costs for Central Brisbane these represented only around \$0.2 million p.a. of the QCA’s target from the 2013 review. That is, even excluding the impacts of Central Brisbane Seqwater’s proposed cost target is lower than the QCA’s 2013 target.

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<sup>17</sup> The QCA’s targets have been escalated by the QCA’s measure of inflation at 2.5% p.a.

**Table 20: Cost target comparison: Seqwater proposed to previous QCA targets (irrigation only)**

Scheme	QCA Target 2013 Review (escalated to 2020-21)	Seqwater Proposed Cost Target (Excludes QCA fees) (2020-2021)
Cedar Pocket	200,189	185,489
Central Brisbane	207,720	0
Central Lockyer	1,122,894	1,782,931 a
Morton Vale	67,919	106,292 a
Logan River	550,251	323,284
Lower Lockyer	1,551,474	1,099,453
Mary Valley	645,072	393,565
Pie Creek	372,779	349,415
Warrill Valley	628,268	524,614
<b>Total</b>	<b>5,346,566</b>	<b>4,765,044</b>

Source for QCA Target: QCA pricing model

Note a: Central Lockyer and Morton Vale proposed cost targets are higher than QCA targets, this is due to the renewals annuity being higher than QCA's forecast from the last review, operating costs are lower.

## 9.2 Proposed costs per ML outcomes (before QCA fees)

Seqwater's calculation of costs per ML (cost reflective prices) is based on its forecast costs without QCA fees and having regard to the proposed cost allocation approaches described above. Tables 21 and 22 below compares Seqwater's proposed cost reflective prices for 2020-21 with the prices expected to be paid by irrigators in 2019-20. These prices are based on continuation of the current price path for 2019-20 and are subject to Government decision.

The outcomes of Seqwater's proposed costs and approach have the following key results:

- Fixed price outcomes:
  - Three schemes have 2019-20 fixed prices above the cost reflective level proposed for 2020-21, under the Referral Notice requirements this would mean no increase to the fixed prices from 2020-21: Mary, Logan and Warrill.
  - Five tariff groups with 2019-20 fixed prices below the 2020-21 cost reflective level, the Referral Notice sets out that these schemes would therefore face price path increases of inflation plus an additional component of \$2.38 per ML from 2020-21 (increasing by inflation each year): Cedar Pocket, Central Lockyer, Morton Vale, Lower Lockyer and Pie Creek
- Variable price outcomes:
  - All tariff groups have 2019-20 expected variable prices above the proposed cost reflective level for 2020-21, which under the Referral Notice would result in variable price reductions.
  - The exception to this is Seqwater proposes a different approach for the Part D price for Pie Creek. The Referral Notice section C(1.4)(a) allows the QCA to have regard to considering less than cost reflective volumetric prices that are necessary to moderate bill impacts for customers. The cost reflective Part D price for Pie Creek is significantly above the 2019-20 Part D price, therefore Seqwater proposes that the Part D continue to be below the cost target and increase with inflation only (refer to scheme submission).

- Central Brisbane costs per ML are proposed to be \$0 – refer to the scheme submission for further detail.

Inflation has been assumed to continue at 2.5% in line with the QCA's approach from the previous irrigation pricing review. The indicative costs will change if a different measure is chosen.

**Table 21: Fixed prices expected 2019-20 and proposed cost reflective 2020-21, before QCA fees (\$/ML)**

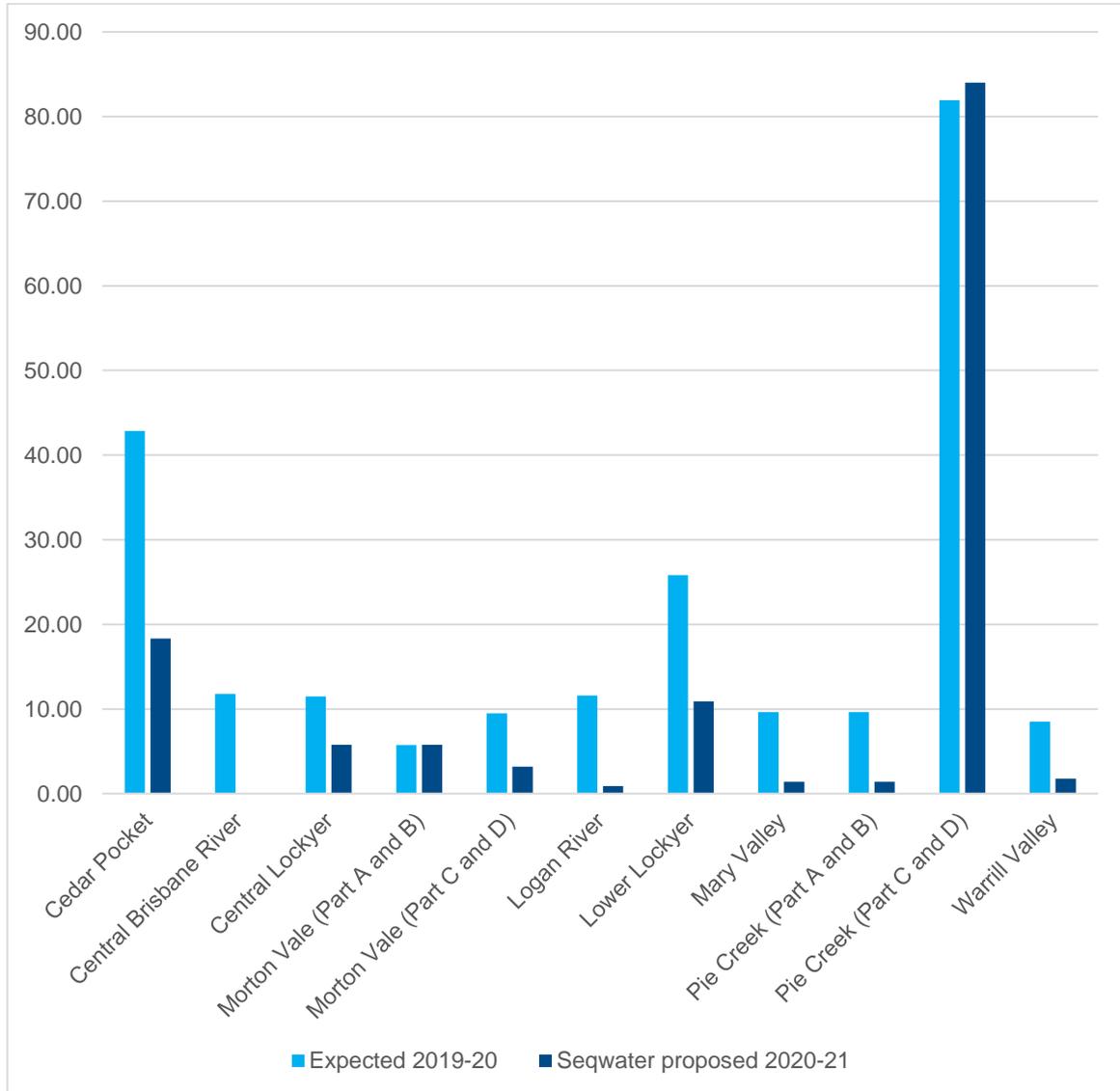
Tariff group	Expected 2019-20	Cost reflective
Cedar Pocket	22.36	363.17
Central Brisbane River	24.48	0
Central Lockyer	35.42	88.61
Morton Vale (Part A)	35.42	88.61
Morton Vale (Part C)	10.34	30.39
Logan River	31.54	23.61
Lower Lockyer	47.53	85.61
Mary Valley	29.50	16.94
Pie Creek (Part A)	26.97	16.94
Pie Creek (Part C)	27.34	373.82
Warrill Valley	25.41	21.68

**Table 22: Volumetric prices expected 2019-20 compared to proposed 2020-21 (\$/ML)**

Tariff group	Expected 2019-20	Seqwater proposed 2020-21
Cedar Pocket	42.84	18.31
Central Brisbane River	11.76	0
Central Lockyer	11.46	5.77
Morton Vale (Part B)	5.72	5.77
Morton Vale (Part D)	9.47	3.16
Logan River	11.58	0.88
Lower Lockyer	25.80	10.89
Mary Valley	9.63	1.38
Pie Creek (Part B)	9.63	1.38
Pie Creek (Part D)	81.94	184.65
Warrill Valley	8.48	1.74

The figure below shows the difference between the expected 2019-20 volumetric prices, to Seqwater proposed volumetric prices (Part B or Part D). As above, Pie Creek is the exception while all other schemes are indicated to have a lower volumetric price based on Seqwater's proposal.

Figure 9: Proposed volumetric price changes (\$/ML)



### 9.3 Termination fees

Seqwater proposes the arrangements for termination fees should continue as per the current price path arrangements. That is, for the Morton Vale pipeline, termination fees should be 11 times the cost-reflective Part C price<sup>18</sup>, and for Pie Creek, the termination fee should be 11 times the recommended Part C price, with the Government providing a CSO for terminations in Pie Creek.

<sup>18</sup> This should not be confused with other termination arrangements which are set out in the Morton Vale contract.

## 10 Other

### 10.1 Returning surplus revenue to customers

In all Seqwater schemes, prices rose during the previous price path, most increasing above the QCA's forecast measure of inflation for at least part of the price path. Since this time, Seqwater has made significant cost savings, and has adjusted the cost allocation between MP and HP, such that these price increases are no longer needed, and indeed revenues will be above the cost target from 2020 in many schemes. This means these schemes recover more than the minimum level of cost recovery. None of the irrigation prices recover a full commercial return on the pre-2000 infrastructure in the schemes. In this way some return above the minimum costs of supply is positive as it allows Seqwater to recover some small return toward these assets. In our consultation process Seqwater has proposed to customers that it would seek to return this surplus revenue above the cost target to the schemes, there was strong support from customers for this proposal.

#### 10.1.1 Referral Notice

The Referral Notice outlines the constraint on fixed prices not being able to be reduced in nominal terms.

*if the prevailing Fixed (Part A) price is above the initial cost-reflective Fixed (Part A) price, the prevailing Fixed (Part A) price should be maintained in nominal terms over the price path period until the cost-reflective Fixed (Part A) price is reached.*

Seqwater is therefore not proposing to reduce fixed prices, as this would not be consistent with the policy outlined in the Referral Notice.

#### 10.1.2 Previous review

In the previous review, the policy was for schemes that were above the cost target, fixed prices would only increase in line with inflation. The QCA forecast measure of inflation was 2.5%. Seqwater had only one scheme in this category, the Warrill Valley, whose fixed price was \$0.06/ML above the cost reflective level at the beginning of the current price path. All the other Seqwater schemes faced real price increases over 2.5% throughout the price path. Therefore, Seqwater has never substantially had any of its schemes providing revenue above the cost target.

#### 10.1.3 Seqwater proposal

Based on the factors discussed in this submission, Seqwater now has three schemes where prices are expected to be above the cost target for the next regulatory period. These are the Mary, Logan and Warrill schemes. The factors contributing are both reductions in the HUFs that reduce the share of costs for irrigation customers, and reductions in Seqwater's costs.

Additionally, the ARR renewals balances for these three schemes are negative and large with interest costs accruing at WACC, meaning these balances are a substantial burden on these schemes.

Seqwater proposes that for the upcoming regulatory period 2020-24, the gap between actual revenue collected and cost-reflective revenue be credited to the ARR renewal fund in each scheme.

For the case of the Mary scheme, where the HUF was too high in the previous review due to a cut-off rule being missed in the previous HUF calculation, Seqwater also proposed to customers that it would also seek to quantify the revenue received over the previous period, which would not have been received had the prices been based on the lower HUF. Over the period this amounts to around \$0.6 million. Seqwater has proposed it be included as a revenue back to the scheme in the years it was received and has recalculated the ARR balances accordingly.

While the change for the Logan scheme was also significant, this change was largely due to the complication of the ROP being amended to include additional infrastructure and High Priority water. This infrastructure had not

been accounted for in the QCA’s previous review, or any renewals expenditure included in the ARR over the current price path. It is therefore difficult for Seqwater to quantify what would have occurred if the costs of this additional infrastructure were included at the time along with the lower HUF. Therefore, Seqwater is at this stage only proposing to reinvest any revenue above the cost target into the ARR going forward over the next price path period.

Customers in the three schemes, Logan, Mary and Warrill, have been strongly supportive of Seqwater’s proposal. Their feedback is discussed in further detail in the customer engagement appendix.

The table below provides an estimate of the revenue to be returned to the schemes’ ARR balances under this proposal. This is based on the assumption that the of 2019-20 prices will continue on the current price path arrangements. Should Government make a different decision for prices in the 2019-20 year, these revenues would change.

**Table 23: Estimated revenue available to reinvest into the scheme ARR: / 2021-2024 (\$000 Nominal)**

Estimated revenue to reinvest	2021	2022	2023	2024	Total
Logan River	\$107	\$99	\$91	\$83	<b>\$381</b>
Mary Valley	\$275	\$266	\$256	\$247	<b>\$1,044</b>
Warrill Valley	\$74	\$61	\$48	\$34	<b>\$218</b>

Seqwater has not modelled the impact of this revenue being returned to the ARRs as part of calculating indicative prices. It is proposed this would be reinvested annually during the price path to benefit the ARR going forward. Seqwater has calculated cost reflective prices based on the revised costs and HUFs only, to establish the appropriate cost reflective prices that have been used to quantify an expected surplus revenue proposed to be returned to the ARR.

To add in this additional revenue would further reduce the ARR and thereby the cost reflective price. It is only appropriate to make this adjustment to prices at the start of each pricing reset, as otherwise including it into the ARR at this stage would create a further gap between the actual price and the cost reflective price. This would create an ongoing spiral further lowering the calculated cost reflective prices and would not result in Seqwater appropriately recovering its costs.

Seqwater proposes that it would manage this mechanism throughout the price path, reporting annually to customers through the Network Service Plans and forums. Seqwater proposes to calculate the difference between actual costs and revenue received and apply this as an additional revenue to the irrigation-only ARR. This approach provides Seqwater with confidence that this new approach would not reduce its ability to recover costs, and also provides customers with confidence that any surplus revenue will be returned to the scheme. At the next price path review, this revenue would then be submitted to the QCA for confirmation and inclusion in the cost reflective prices for the next price path.

In summary, Seqwater’s proposal is:

- For the Mary scheme, Seqwater has calculated the difference in what price revenue would have been over the 2014-2020 price path had the HUF accounted for the cut off rule at the time, and has returned this to the ARR in each of the years of the period, resulting in an improved ARR balance for the start of the 2020-24 regulatory period;
- For each year of the regulatory period 2020-24, return to the ARR a new revenue item for the difference between costs and revenue received for the Mary, Logan and Warrill schemes which are forecast to recover more than the cost target. For the latter, this process should occur over the 2020-24 regulatory period to improve the balance for the next regulatory period, and not affect cost reflective prices in this review.

## List of Appendices

### **A. Customer engagement**

*Scheme submissions:*

- B. Cedar Pocket**
- C. Central Brisbane**
- D. Central Lockyer and Morton Vale**
- E. Lower Lockyer**
- F. Logan River**
- G. Mary Valley and Pie Creek**
- H. Warrill Valley**

*Attached reports:*

- I. Badu Advisory HUF Review report**
- J. SLR report Central Brisbane Benefits Study**

## Appendix A: Customer engagement

### Our customer engagement process

Since the last irrigation price review Seqwater established an annual consultation process providing opportunity for all our irrigation customers to engage with it. This involves inviting all customers in a scheme to attend a forum in the local area.

At the forum, Seqwater representatives provide an update on the operations and renewals activities in the scheme, provides advice regarding announced allocations processes; and any updates on the price path positions. This informs the development of the annual Network Service Plans, which are published each year.

Seqwater has not established Irrigation Advisory Committees in its schemes as the customers did not indicate demand for this form of engagement. Rather, Seqwater continues to provide all customers in the scheme an opportunity to engage with it annually through the Network Service Plan forums.

However, in preparation for this pricing review, Seqwater contacted regular participants from the Forums to be involved in Irrigation Customer Reference Groups for six of its schemes. These are not considered Committees as they have not been voted in as representatives of all customers in the scheme. Seqwater saw benefit in establishing these groups to seek feedback in preparing for the wider forums and to discuss detailed matters for the pricing submission.

These Irrigation Customer Reference Groups were established with initial introductory meetings from April to June 2018. A second round of meetings were held in August 2018 where Seqwater shared its understanding of policies for the review, indicative cost information and to discuss information to be shared with customers at the wider forum.

Seqwater wrote to all customers in the six schemes inviting them to attend forums held in September 2018. This letter also included a link to the engagement website Seqwater established for the review, which also provided customers with the ability to complete a feedback survey online.

Attendance at the forums in September was comparable or higher than the attendance in previous years' Network Service Plan forums. The attendance details are provided below.

At the forums Seqwater representatives presented the annual operations and renewals updates, along with its proposal for the pricing submission. This included:

- Seqwater's expectation of the price path policies and other policies for the review;
- Changes to the Headworks Utilisation Factors where relevant;
- Previous performance on operating costs and forecasts for the next regulatory period;
- Previous performance on renewals costs and forecasts for the next regulatory period;
- The Asset Restoration Reserve accounts and their forecast position for the start of the next price path;
- Indicative prices including based on our assumptions of pricing policies, Seqwater's updated costs, and its proposal that costs be allocated at least 95% as fixed costs;
- Water usage history;
- Presenting some scenarios of Part B prices that are impacted by both the assumed water usage forecast and the costs that are allocated as variable costs; and

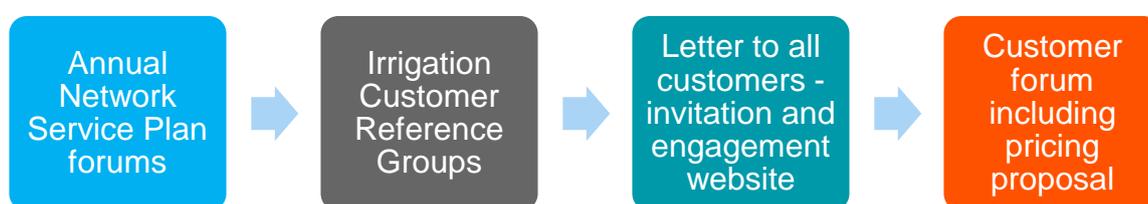
- Explaining that dam safety upgrade costs were to be investigated by the QCA but Seqwater did not have any of these projects to be commissioned within the regulatory period.

Customers at the forums were also given a survey to provide their feedback on Seqwater’s proposal and general service performance. The survey results are discussed below.

At the forums Seqwater also invited any other customers who were interested to join the reference group to work with it in further detail. It received interest from a number of new members.

Before submitting its regulatory proposal to the QCA Seqwater then held a final round of meetings with the irrigation reference groups that included the new members to discuss the final positions for the submission and seek any final feedback.

**Figure A1 – Customer Engagement Process**



The customer engagement process differed for the Central Brisbane River Water Supply Scheme. For this scheme there is a customer representative group established, the Mid-Brisbane River Irrigators Association (MBRI). Seqwater consulted directly with the Chair and Deputy Chair and met regularly between February 2018 to October 2018. This process is discussed further in the scheme submission for Central Brisbane.

Throughout these processes Seqwater has also maintained regular contact and involvement with the Queensland Farmers Federation (QFF). QFF attended some of the reference group meetings and most of the forums. QFF provided positive feedback to Seqwater, particularly with regard to having reduced costs and the proposal to reinvest surplus revenue into the renewals fund.

## Irrigation Customer Reference Groups

The Irrigation Customer Reference Groups involved three to five individuals in each of the six schemes.

**Table A1: Reference group meetings**

Reference group	Attendance round 1	Attendance round 2	Attendance round 3
Lockyer schemes	3 (18/4)	3 (22/8)	4 (19/10)
Morton Vale <sup>a</sup>			2 (16/10)
Mary	5 (28/5)	5 (17/8)	4 (18/10)
Cedar Pocket	3 (28/5)	4 (17/8)	Nil
Warrill	4 (1/6)	3 (21/8)	2 (1/11)
Logan	5 (1/6)	5 (21/8)	4 (31/10)

Notes:

<sup>a</sup> Morton Vale customers met with Seqwater separately in round 3, although one Morton Vale representative also attended the Lockyer schemes group meeting on 19/10.

## Summary of reference group feedback

- The reference groups provided key feedback in relation to the survey design and in terms of what information was important to present at the forums. This included keeping the survey to three questions, and information to be presented simply, including the use of charts where relevant.
- Other feedback from the reference groups included concerns raised about particular costs for Seqwater to follow up with more information to present at the forums. These included meter replacement, renewals and maintenance expenditure, dam safety costs and rates.
- Some schemes raised concerns about reliability of water – Lockyer schemes and Logan.
- Some schemes had concerns regarding affordability and sustainability of the schemes – Lockyer schemes, Pie Creek and Cedar Pocket.
- The reference groups are supportive of Seqwater’s proposals, with the exception of the Lockyer schemes. These proposals include the allocation of costs to be at least 95% fixed and only 5% to variable (with the exception of Pie Creek pumping costs), the long-term average water usage assumption, and the proposal to reinvest any surplus into the renewals fund to reduce the ARR balances.
- The Lockyer schemes, while understanding Seqwater’s perspective with regard to cost recovery and fixed costs, are concerned about the performance of the schemes and affordability of the schemes into the future and would like these issues taken into account for future prices.
- Some concerns were raised regarding improvements to Seqwater’s billing processes and provision of water accounting information.

Further details on the scheme-specific reference group feedback is included in the scheme submissions (Appendices B to H).

## Customer forums

Six forums were held throughout September to allow irrigators to provide feedback on Seqwater’s proposed approach to the pricing review.

**Table A2: Irrigation Customer Forums schedule and attendance**

Scheme	Date	Customer attendance
Warrill Valley	17 September 2018	13
Lower Lockyer	18 September 2018	8
Central Lockyer and Morton Vale	20 September 2018	13
Mary Valley and Pie Creek	24 September 2018	12
Cedar Pocket	25 September 2018	3
Logan River	26 September 2018	7

## Survey results

Seqwater did not receive many survey responses either at the forums or via the engagement website. Given discussion at the forums, it is Seqwater’s view that where customers were happy with Seqwater’s proposal there were more surveys filled out. In the Lockyer schemes, as discussed above, where there were many issues of concern from customers, only one customer completed a survey.

Three questions were asked in the survey:

- A. Do you support Seqwater’s proposal for your scheme? Yes, No or Unsure

- B. How satisfied are you with the services Seqwater provides to you? Rate from 1 to 7 where 1 = Entirely unsatisfied and 7 = Entirely satisfied.
- C. Would you like more government investigation for this price review? Please note that additional investigation by the QCA will incur a cost for irrigation customers. Yes, No, or Unsure.

Of the responses received, below is a table summarising the feedback received for each of the three questions. The key points from these results are that the strong majority of respondents:

- support Seqwater’s pricing proposal;
- are satisfied with Seqwater’s services; and
- do not want further investigation of their scheme for the pricing review

The exception to this would be in the Lockyer schemes where limited responses to the survey were received and customers have raised concerns about the scheme.

**Table A3: Survey response data from forums**

Scheme	Number of respondents	Question 1 – Seqwater’s proposal		Question 2 – Our Service		Question 3 – more investigation?	
		Positive responses (Yes)	Negative or neutral responses (No or Unsure)	Positive responses (6 or above)	Negative or neutral responses (5 or below)	Positive responses (No)	Negative or neutral responses (Yes or Unsure)
Logan River	4	75%	25% unsure	75%	25% (rated 2)	100%	
Warrill Valley	10	100%		90%	10% (rated 4 neutral)	90%	10% rated unsure
Cedar Pocket	3	100%		100%		100%	
Mary Valley and Pie Creek	4	100%		75% (rated 7)	25% (rated 1)	75%	25% no response
Lower Lockyer	1	100% (note only 1 response)			100% rated 5 (note only 1 response)	100% (note only 1 response)	

Note: For question 2 responses, those rating 1 or 2 as unsatisfied with the service did not leave any written comments explaining this view.