

Seqwater

# Bulk Water Price Submission

## 2023–2026

30 JUNE 2021



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# Executive Summary

As South East Queensland’s bulk water supply authority, Seqwater is responsible for delivering safe, secure, and cost-effective bulk water supply. We are one of Australia’s largest water businesses with the most geographically spread and diverse asset base of any capital city water authority, servicing over three million people.

This submission presents our proposed revenue requirement for the 2023-26 regulatory period for the purpose of setting bulk water prices, based on the terms of the Minister’s Referral Notice. This must include our forecasts for the duration of the price path (i.e. to 2027-28), noting that the focus of this submission is our forecasts for the 2023-26 regulatory period.

## Strategic context

We operate in a highly dynamic environment. The foundation for our regulatory proposal is our 2020-24 Corporate Strategy. This includes the five strategic objectives we have identified in response to our key external drivers and the opportunities and challenges facing our business, which are to:

- improve safety and organisational culture
- improve processes, systems and planning
- strengthen financial sustainability
- increase water supply certainty
- increase stakeholder, customer and community satisfaction and support.

In reviewing the revenue required to recover our prudent and efficient costs in delivering bulk water services, there are a number of specific objectives that fit within this broader strategic context.

Improving engagement	We have been working in partnership with our Retailer Customers to deliver better outcomes for end customers. We have made significant improvements to customer, stakeholder and community engagement across our business, which has also meant that our consultation leading up to the lodgement of our revenue proposal has been more targeted. We will continue to build on this into the future.
Improving efficiency	We have been continuing to identify and implement initiatives to improve our efficiency, in the face of continued cost pressures and uncertainties.
Building and maintaining a resilient network to ensure water security	We have implemented a number of material enhancements to our asset management framework, including adopting a new risk-based prioritisation framework and making significant improvements to our asset management and capital planning processes. The principles of this approach are to ensure our capital plan - the Asset Portfolio Master Plan (APMP) - is prudent, efficient, financially sustainable and deliverable.
An adaptive and agile approach to optimising bulk water supply and system operations, including in drought	The services we provide are governed by a number of key planning frameworks, including the Water Security Program. Within that context, optimising the provision of bulk water supplies while maintaining water security is a dynamic process that is impacted by a number of variables and influences, some of which are beyond our control. This includes managing the impacts of drought. We manage this within a structured and transparent framework, while practicing adaptive management to look for opportunities to reduce costs without compromising our water security objectives.

Maintaining stable and sustainable prices	We have developed a set of Bulk Water Pricing Principles that have also been discussed with our Retailer Customers. One of those principles is that prices should be stable into the future, avoiding large increases or decreases.
Maintaining a sustainable business	Consistent with the Referral Notice, we need to recover our prudent and efficient costs, including remaining on track to ensure repayment of the Price Path Debt by 2027-28. Our fully volumetric tariff means that our revenue recovery will vary directly with demand changes, including in the event of drought. Overall, we need to be able to recover our costs without compromising our principle of maintaining stable prices. Key to this is ensuring we 'live within our means' and look for opportunities to improve efficiencies where possible.
Managing risk and uncertainty	Our business and operating environment is characterised by uncertainty, including a changing climate, which could see an increased risk of more frequent and severe droughts. This also presents challenges in forecasting demand and expenditure. Where appropriate, and subject to the terms of the Referral Notice, we are looking to use accepted regulatory mechanisms, such as Review Events, to manage risk and uncertainty.
Working towards a standard regulatory framework	Our current business was only established in 2013 as part of a suite of institutional reforms. We also assumed responsibility for the large water security investments made in response to the Millennium Drought, along with the associated debt. Since then, we have transitioned to a common bulk water price across SEQ that enables full cost recovery. We are also required to recover the Price Path Debt that emerged from a decision to smooth the price impact of the Millennium Drought investments, which has subsequently grown due to continued revenue under-recoveries. Our aim is to transition to a standard, best practice regulatory framework, particularly when the Price Path Debt has been repaid.

## Current period outcomes

The term of the current regulatory period is from 1 July 2018 to 30 June 2021 and this was therefore also the focus of the QCA's previous bulk water price investigation. The QCA's next bulk water price investigation was deferred for a year as a consequence of the focus of all stakeholders on COVID-19. This resulted in the QCA's recommended bulk water price for 2020-21 being rolled forward for one additional year (2021-22), with the Government recently directing the same 3.5% increase that was applied in 2020-21.

### Demand

Our demand is set within the 'low' and 'high' range established under our Water Security Program. Our demand forecast for the current period was initially set at the lower end of that range, which reflected where actual demand was at that time, transitioning to the medium demand profile in 2026-27. Overall, in the current period our actual demand has been higher than this forecast, noting that it has been impacted by drought in the most recent years.

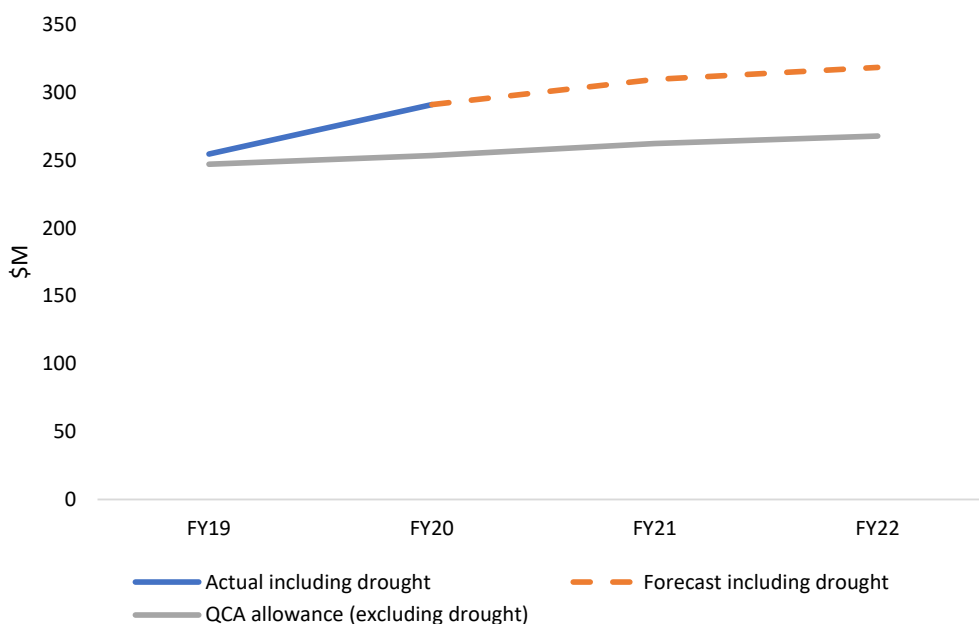
### Capital expenditure

In the current period we have delivered \$406.4 million in capital investments, \$84.3 million below the QCA's recommendation, although this difference falls to \$51.3 million with the inclusion of the natural assets and grid support costs that are also proposed to be capitalised. This is partly due to improvements we have made to our asset management and capital delivery processes, and strong management of some major projects that have delivered significant savings. Also contributing to the difference was the prudent re-phasing of projects to ensure the most efficient options were analysed, selected and delivered, as well as some unforeseen expenditure not known at the time of our submission to the 2018-21 bulk water price investigation.

## Operating expenditure

Our operating expenditure has been significantly above the QCA's recommended allowance over the current period and this is forecast to remain the case for the 2020-21 year. However, the QCA's recommended allowance did not provide for drought-related future costs, or costs associated with recommissioning part of the Luggage Point Advanced Water Treatment Plant that we identified as necessary at that time. In our 2018-21 price investigation we also identified other costs that have subsequently been incurred, including additional water production costs associated with water treatment plants being upgraded during the current pricing period. The difference between our actual expenditure and the QCA's recommended allowance is shown below.

### Actual operating expenditure versus the QCA's recommended allowance (\$m)



There have been a wide range of material factors that have impacted our actual operating expenditure, the majority of which could not have been foreseen at the time of the QCA's 2018 Final Report, nor could they be controlled in the period that followed. Where permitted, we have sought to recover some of these costs under the Review Event mechanism (\$82.06 million in total, the majority of which relate to drought costs). Some of the other cost impacts have to be absorbed by the business.

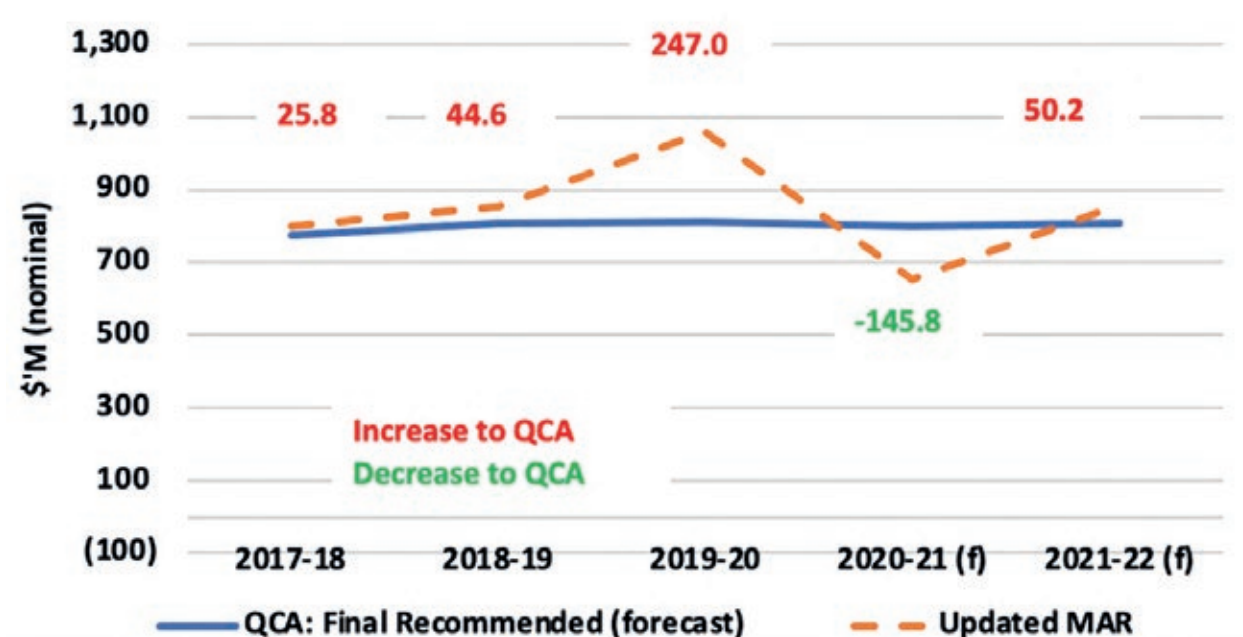
## Price Path Debt adjustments

We have made an end of period adjustment to the Price Path Debt balance as at 1 July 2017 in accordance with section (C) (12) of the Referral Notice. This has resulted in a projected decrease in the Price Path Debt balance from \$2,415.9 million as at 1 July 2017 to \$2,398.0 million as at 30 June 2022 (forecast), which will be the opening balance as at 1 July 2022. However, even though this slight decrease in the balance is forecast, the repayments required to fully repay the debt by 2028 have increased given the shorter remaining timeframe.

One of the main end of period adjustments impacting our Price Path Debt balance is our updated Maximum Allowable Revenue (MAR). The figure below shows the difference between the QCA's recommended forecast and our updated MAR. The key driver of that difference has been the actual inflation outcome compared to the QCA's recommended inflation forecast.

Actual inflation for the 2020-21 year will be updated prior to the QCA's Final Decision (along with an update of our forecast of actual inflation for 2021-22), which will impact our final updated MAR and hence our opening Price Path Debt balance as at 1 July 2022.

## Comparative Maximum Allowable Revenue: QCA Final v actual/forecast 2017-28 to 2021-22 (\$m, nominal)



## Our approach

The key elements of our approach to forecasting our revenue requirement for the 2023-26 regulatory period are summarised below.

### Referral Notice

We must estimate our proposed revenue requirement under the terms of the Referral Notice, issued by the Minister to the QCA under section 23(1) of the *Queensland Competition Authority Act 1997*. Most of the key elements of that Referral Notice reflect the standard ‘building blocks’ approach that is applied by the QCA and other Australian regulators, the purpose of which is to enable full recovery of our prudent and efficient costs, including a return on capital.

A fundamental difference is allowing for the repayment of the Price Path Debt, which Government has determined must occur by 2027-28. This has also resulted in the QCA recommending forecasts for the duration of that price path (i.e. to 2027-28), while standard regulatory practice is to limit the scope of the review to the duration of the relevant regulatory period. Another key difference – which also relates to our level of gearing (including the Price Path Debt) – is that our return on debt is estimated based on QTC’s forecast of our actual cost of debt.

Other important points to note regarding our Referral Notice include the following.

### Drought allowance

Along with recommending the bulk water price to apply in normal operating conditions, the QCA is to recommend a drought allowance. The Referral Notice states that this is “expected to provide Seqwater with total revenue sufficient to recover the prudent and efficient costs associated with Drought operating conditions” (as per the Drought Response triggers in the Water Security Program), along with a contribution towards the revenue foregone from reduced demand.

The establishment of a drought allowance is consistent with emerging regulatory practice in other jurisdictions. We consider this a more efficient and effective means of recovering the costs (and foregone revenue) associated with drought. It also sends a price signal to end customers as to the scarcity value of water during drought.

We will lodge a supplementary submission detailing our proposed drought allowance for the 2023-26 regulatory period.



## Demand Forecast and the Water Security Program

In setting our demand forecasts (including for normal and drought operating conditions), the Referral Notice requires that this be set within the bounds of the 'published' Water Security Program. The current Water Security Program (the 2017WSP, or version 2) is currently being reviewed. The updated version 3 of the Program (WSP2022) will be published in March 2022, which will also coincide with the timing of the QCA's Final Report. This version will be the relevant 'published' version for the purpose of the Referral Notice.

Our proposed demand forecast under normal operating conditions for the 2023-26 regulatory period is based on the medium demand profile in our 2019 Demand Forecast Assessment. This is our current expectation of the demand forecast that will be contained in the updated WSP2022. This forecast has been developed in consultation with our Retailer Customers as part of the Demand Forecasting Network and has been formally endorsed by them as part of that network.

As the 'most likely' assessment of future demand, we consider that this medium demand profile is most appropriate for setting bulk water prices. We propose that to the extent that the QCA considers it necessary to adjust that forecast, this is limited to within plus or minus 2% of our proposed forecast. Recent experience shows that while demand forecasting is inherently uncertain, actual demand has been within plus or minus 3% of our medium demand profile in the 2017WSP.

## Inflation forecasting methodology

The Referral Notice mandates the use of inflation swaps to derive our inflation forecast.

## Rate of return

The Referral Notice prescribes the application of a benchmark Weighted Average Cost of Capital (WACC). As noted above, our return on debt is to be set based on QTC's forecast of our actual cost of debt. We have proposed a return on equity that reflects the return that would be required by an investor in bulk water supply infrastructure and having regard to relevant regulatory precedent. We have also received independent expert advice from Frontier Economics.

The QCA is currently reviewing its preferred approach to estimating the rate of return. Its Draft Decision was published on the 28th of June 2021. We have therefore not had time to consider this for the purpose of our revenue proposal.

## Capital expenditure

We have made material improvements to our asset management and capital delivery processes over the current regulatory period, which also had regard to recommendations made by the QCA's consultant, KPMG, in the 2018-21 bulk water price investigation. We have also implemented learnings from projects undertaken in the current period. One of our key improvements has been the establishment of a dedicated Major Projects Group. This will also result in a more coordinated and consistent approach to project planning and delivery under the Asset Management Framework, including efficiencies in managing projects.

Our capital expenditure forecast for the 2023-26 regulatory period is based on our Asset Portfolio Master Plan (APMP). Our APMP is focused on renewing critical aging assets at the most efficient time in the asset lifecycle and delivering capacity enhancement projects at the optimal time. In 2021 we undertook consultation with our Retailer Customers on our 2021-22 capital forecast and 2023-26 capital forecast (being the five years contained in our APMP). Our APMP reflects normal operating conditions.

## Operating expenditure

As in previous QCA reviews, our operating expenditure forecast for the 2023-26 regulatory period (under normal operating conditions) uses a base-step-trend approach for forecasting fixed operating expenditure, which has involved:

- Base - setting a base year to reflect Seqwater's efficient fixed operating costs, which has been set at the most recently completed financial year, 2019-20.

- Step - adding or subtracting one-off, new and additional ongoing costs from 2022-23, of which 12 of these are analysed, with a focus on their prudence and efficiency.
- Trend - escalating input costs using a set of cost indices, as well as applying an ongoing efficiency saving target, consistent with the efficiency target included in the current regulatory period.

Forecasts for the two years outside this regulatory price path, 2026-27 and 2027-28, have been derived by adopting the forecast for 2025-26, removing steps that are not ongoing and applying the relevant cost and efficiency indices.

Variable water production costs are a function of the unit cost of production and the amount of water produced. These costs are predominantly those related to energy, chemicals and the disposal of residual waste products from our Water Treatment Plants (WTPs) (residue) and vary by WTP. To forecast variable costs a forecast production mix by WTP has been developed and costs have been estimated based on the average production cost per ML in 2019-20. We have proposed a plus or minus 2% range for these costs to the extent that the QCA considers it necessary to adjust our demand forecast, which we propose is within a plus or minus 2% band, as outlined above.

## Tax allowance

We have estimated an allowance for taxation, consistent with the Referral Notice. The two main issues that need to be addressed are:

- The correct definition of income: We have estimated our allowance based on total income, inclusive of revenue received to recover the Price Path Debt. Calculating tax payable based on total income is consistent with standard commercial and regulatory practice.
- The treatment of accumulated tax losses: Expert advice received from Frontier Economics is that tax losses from the years prior to 2018-19 should not be recognised in calculating our tax allowance. However, we have recognised these losses in order to reduce our tax allowance for the 2023-26 regulatory period. We have done this to mitigate price impacts for the 2023-26 regulatory period, based on our Bulk Water Pricing Principles.

## Our proposed revenue requirement for the 2023-26 regulatory period

Applying the above approach, our proposed total revenue requirement for the 2023-26 regulatory period is summarised below. This shows:

- our total MAR before repayment of the Price Path Debt
- our total revenue requirement including repayment of the Price Path Debt.

**Total forecast revenue 2022-23 to 2025-26 (\$m, nominal)**

	2022-23	2023-24	2024-25	2025-26
Return on assets	499	496	494	495
Depreciation	267	274	280	287
Operating costs	305	328	340	349
Tax allowance	4	67	86	108
Concealed Leaks Remission	3	3	3	3
<b>Sub total</b>	<b>1,077</b>	<b>1,168</b>	<b>1,203</b>	<b>1,243</b>
Less inflationary gain or asset indexation	(163)	(184)	(206)	(214)
Less revenue offsets	(20)	(21)	(21)	(23)
Less Mid-year Cash flow Adjustment	(16)	(16)	(15)	(15)
<b>Total MAR: normal operating conditions – before PPD repayment</b>	<b>877</b>	<b>947</b>	<b>961</b>	<b>991</b>
PPD Interest	123	114	102	84
PPD Repayment	310	349	451	548
<b>Plus Total repayment of PPD (including interest)</b>	<b>433</b>	<b>463</b>	<b>553</b>	<b>632</b>
<b>Total Revenue: normal operating conditions with PPD repayment</b>	<b>1,311</b>	<b>1,410</b>	<b>1,514</b>	<b>1,623</b>

**Comparative total forecast revenue 2022-23 to 2025-26 (\$m, nominal)**

	2018 QCA Recommended	Seqwater Proposed	Difference
Return on assets	2,133	1,984	-7%
Depreciation	1,123	1,108	-1%
Operating costs	1,147	1,321	15%
Tax allowance	-	265	-
Concealed Leaks Remission	-	12	-
<b>Sub total</b>	<b>4,403</b>	<b>4,691</b>	<b>7%</b>
Less inflationary gain or asset indexation	(902)	(767)	-15%
Less revenue offsets	(69)	(85)	23%
Less Mid-year Cash flow Adjustment	(66)	(62)	-6%
<b>Total MAR: normal operating conditions – before PPD repayment</b>	<b>3,366</b>	<b>3,777</b>	<b>12%</b>
PPD Interest	409	423	3%
PPD Repayment	1,553	1,658	7%
<b>Plus Total repayment of PPD (including interest)</b>	<b>1,963</b>	<b>2,081</b>	<b>6%</b>
<b>Total Revenue: normal operating conditions with PPD repayment</b>	<b>5,329</b>	<b>5,858</b>	<b>10%</b>

This shows that in terms of our MAR, our return on and of capital allowances are below the QCA's recommended forecast from its 2018 Final Report. This reflects our lower WACC and our lower Opening RAB compared to forecast. Our forecast operating expenditure is higher, for the reasons explained below.

Given the growth in our Price Path Debt balance over the period, when we add on the increased required Price Path Debt repayment, our total revenue requirement is also higher than the QCA's recommended forecast.

A summary of the key building blocks underpinning this revenue requirement is provided below.

## Opening RAB

The roll forward of our RAB to 1 July 2022 is shown below.

### RAB roll forward to 1 July 2022 (\$m)

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Opening RAB	8,465.7	8,470.5	8,474.7	8,251.5	8,474.8
Actual capitalised expenditure	97.63	105.81	107.76	128.23	116.69
Asset indexation/inflationary gain	145.6	143.2	(85.3)	352.5	154.7
Depreciation	(238.4)	(244.8)	(245.7)	(257.4)	(261.1)
<b>Closing RAB</b>	<b>8,470.5</b>	<b>8,474.7</b>	<b>8,251.5</b>	<b>8,474.8</b>	<b>8,485.1</b>

## Demand

Our proposed demand forecast under normal operating conditions for the 2023-26 regulatory period is based on the medium demand profile in our 2019 Demand Forecast Assessment. This is our current expectation of the demand forecast that will be contained in the updated WSP2022. This forecast has been developed in consultation with our Retailer Customers as part of the Demand Forecasting Network and has been formally endorsed by them as part of that network. We consider that this forecast is the most appropriate one to apply for regulatory pricing purposes because it reflects our expectation of the 'most likely' demand profile over the regulatory period.

We propose that to the extent that the QCA considers it necessary to adjust that forecast, this is limited to within plus or minus 2% of our proposed forecast. Recent experience shows that while demand forecasting is inherently uncertain, actual demand has been within plus or minus 3% of our medium demand profile in the 2017WSP.

## Return on capital and inflation

Our proposed WACC reflects the following:

- An indicative return on equity of 7.47%.
- An indicative return on debt as advised by QTC – this estimate varies in each year of the 2023-26 regulatory period. For the first year (2022-23) the estimate is 4.52%.
- Benchmark gearing of 60%.

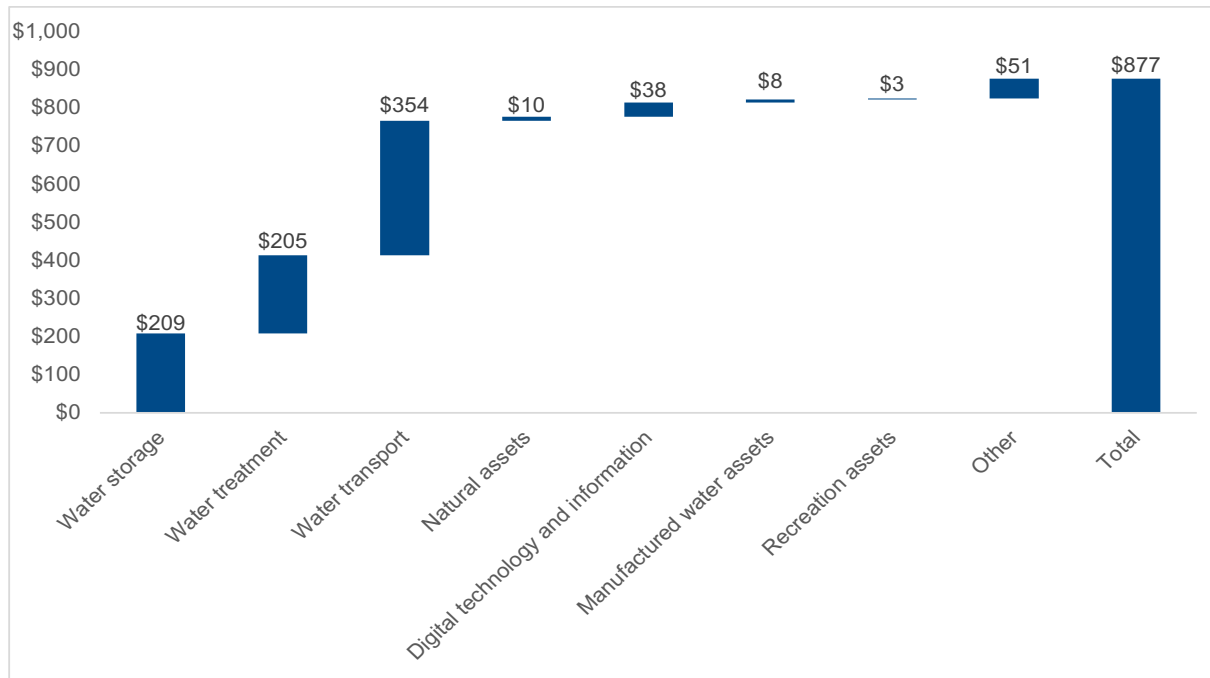
These numbers are indicative as the risk-free rate and return on debt will be updated for prevailing market rates in our response to the QCA's Draft Report. We have also forecast expected inflation for each year using inflation swaps (consistent with the Referral Notice) - these forecasts will also be updated in our response to the QCA's Draft Report.

Based on the expert opinion of Frontier Economics we remain of the view that the most appropriate value of gamma is 0.25. However, having regard to our Bulk Water Pricing Principles, to mitigate price impacts for the 2023-26 regulatory period we are proposing to adopt the QCA's preferred value of 0.47 from the current period.

## Capital expenditure

During 2023-26 we intend to invest \$877 million in renewing and upgrading existing assets and investing in new assets to service our customers or manage risks. The largest drivers of our capital expenditure are meeting our legal and regulatory obligations and renewing our infrastructure to ensure it continues to meet customers’ needs. As shown below, our biggest investments for 2023-26 are in water storage, water treatment and water transport.

### 2023-26 Capital forecast by strategic asset group (\$m nominal, as capitalised)



We recognise that this is a significant increase in expenditure from the current regulatory period. However, we are confident in our ability to deliver this program, given the significant improvements that have been made to our asset planning and capital delivery frameworks, along with our experience in the current period. This delivery capability is also enhanced by the establishment of our dedicated Major Projects group.

## Operating expenditure

The following table summarises our forecast operating expenditure, applying the base-step-trend approach. After making adjustments to our 2019-20 base year expenditure (i.e. for costs claimed under Review Events, one-off costs, capitalised costs and externally funded expenditures), our proposed base year expenditure is \$8.2 million higher than the QCA’s recommended forecast for 2019-20 of \$253.7 million. We have then identified 12 prudent and efficient step changes in our operating expenditure for the 2023-26 regulatory period.

These forecasts exclude the Luggage Point step change costs. The use of two additional trains at Luggage Point is a recent initiative and therefore the ongoing operating costs continue to be refined. We will therefore advise the QCA of these costs as soon as they become available. The refined expenditure forecast will be provided with the supplementary submission on our proposed drought allowance.

Our variable production cost forecasts depend upon demand. As noted above, our proposed demand forecast is the medium demand profile that is currently expected to inform the updated WSP2022. We have also proposed that to the extent that the QCA considers it necessary to adjust that forecast, this is limited to within plus or minus 2% of our proposed forecast as our medium demand forecast for the 2023-26 regulatory period. A forecast range has been prepared to illustrate the current uncertainties around demand, however for the purposes of developing our operating expenditure forecast the mid-range forecast has been used. If the final demand forecast recommended by the QCA varies from this mid-range forecast, the variable cost forecast will also need to be adjusted.



## Forecast operating expenditure (excluding Luggage Point step change) (\$'000)

Cost Category	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Fixed opex base (\$2019-20)	228,603	228,603	228,603	228,603	228,603	228,603
Fixed opex steps (\$2019-20)	20,709	35,015	38,638	38,557	32,761	32,761
Total Fixed opex (\$2019-20)	249,312	263,618	267,242	267,160	261,364	261,364
Weighted escalator	109	111	114	116	119	122
Fixed opex (nominal)	270,279	292,006	303,242	310,641	311,433	319,218
Efficiency Adjustment	(1,357)	(1,969)	(2,559)	(3,142)	(3,659)	(4,287)
Total Fixed Opex (nominal)	268,922	290,038	300,683	307,499	307,774	314,931
Variable cost (nominal)	38,666	40,658	42,826	44,938	46,958	49,112
<b>Total Operating costs (nominal)</b>	<b>307,588</b>	<b>330,696</b>	<b>343,509</b>	<b>352,437</b>	<b>354,732</b>	<b>364,043</b>

<sup>1</sup> Indicative

## Tax allowance

Based on the approach described above, our proposed tax allowance is shown below.

### Proposed tax allowance 2022-23 to 2025-26 (\$m, nominal)

	2022-23	2023-24	2024-25	2025-26
Proposed Tax Allowance	4	67	86	108

## Drought allowance

As explained above, we will lodge a supplementary submission with our proposed drought allowance.

## Other policy issues

### Risk and uncertainty

Review Events remain an important mechanism to enable us to recover prudent and efficient costs that were unforeseeable and uncontrollable. We are not proposing any changes to our Review Events from the QCA's 2018 Final Report.

The end of period revenue true-up has also been essential in enabling us to recover our prudent and efficient costs, particularly given our exposure under a fully volumetric tariff. To date, this adjustment has been made to the Price Path Debt. We have no certainty as to whether such an adjustment will be made at the end of the 2023-26 regulatory period. This is a significant risk to our financial sustainability. We have therefore requested for the QCA to make a recommendation to the Minister to enable such an adjustment at the end of the period.

# Special considerations for end customers

## Concealed leaks

Concealed leaks can be a potential source of financial hardship for end customers. Our Retailer Customers are currently required to have a concealed leaks remissions policy in place to provide financial relief to impacted end customers in appropriate circumstances. We are precluded from providing any corresponding discounts to bulk water charges unless we have Ministerial approval.

The Minister has approved for us to develop a concealed leaks remission policy in consultation with our Retailer Customers and Government. We have been engaged in this consultation for the last several years although the policy is still to be finalised.

In anticipation of the finalisation and implementation of this policy for the 2023-26 regulatory period, we are requesting the QCA to make a recommendation to the Minister to ensure that the Price Direction Notice allows us to provide a discount for concealed leaks in accordance with the concealed leaks remission policy, with the foregone revenue to be recovered via bulk water charges (consistent with section (C)(18)(d) of the Referral Notice).

## Prudent discounts

In 2019 the Minister approved a prudent discount with a large user to avoid uneconomic bypass. While we are not expecting these cases to be frequent, we see benefit in having a prudent discount framework in place to provide certainty as well as consistency in any future negotiations. These commercial negotiations also need to be completed in a timely manner.

We have commenced discussions with our Retailer Customers on the proposed framework, which will be based on the same criteria as are applied under the National Electricity Rules. This is intended to ensure that the negotiation and agreement of such discounts remain in the best interests of all end users.

We are requesting the QCA to review our proposed criteria and to make a recommendation to the Minister that future prudent discounts be approved by the Minister if they meet the recommended criteria, as well as continue to recover the foregone revenue from approved prudent discounts, which will remain subject to the QCA's review and recommendation.

# 1 Introduction and context

This chapter provides an overview of Seqwater’s business and operations, as well as information and context that is relevant to our revenue proposal for the 2023-26 regulatory period.

## 1.1 About Seqwater

### 1.1.1 What we do

#### 1.1.1.1 Roles and responsibilities

Seqwater delivers safe, secure, and cost-effective bulk water supply for over three million people across South East Queensland (SEQ). We provide flood mitigation services, catchment management and recreation facilities.

On behalf of our communities, we manage and maintain water supply assets, including dams, weirs, conventional water treatment plants, reservoirs, pumps and pipelines, as well as climate resilient water sources, such as the Gold Coast Desalination Plant (GCDP) and the Western Corridor Recycled Water Scheme (WCRWS). Our operations extend from the New South Wales border to the base of the Toowoomba ranges and north to Gympie.

We own and operate the SEQ Water Grid, a 600 kilometre two-way pipeline network that enables treated drinking water to be moved around the region (see below). We supply bulk treated drinking water to five retailer customers: Unitywater, Urban Utilities and the water businesses of the Logan, Redland and Gold Coast councils (referred to as our ‘Retailer Customers’ in this submission). The retailers in turn deliver drinking water to their customers (‘end customers’) through their distribution networks. We work in partnership with our Retailer Customers to achieve the best whole-of-system solutions that will meet the needs of the end customer at least cost, while remaining compliant with a range of regulatory obligations.

Our catchment areas cover around 1.2 million hectares of land, of which we only own about 65,000 hectares. We work in partnership with our neighbours, catchment land owners and the broader community to achieve better land management and water quality outcomes.

We also provide access to diverse recreation opportunities on our land and water storages. In 2019-20, 2.3 million people visited our recreation facilities at our dams and lakes. Providing this access requires us to maintain public facilities such as car parks, picnic grounds and tables, barbecues, lavatories and boat ramps. Given the benefits that these facilities provide for SEQ residents, our efficient costs of operating and managing them are recovered from bulk water prices.

In addition to urban bulk water supply, we supply irrigation water to about 1,200 farmers and growers through seven schemes. We also have arrangements in place to supply water to Toowoomba and Gympie regional councils and power stations operated by Stanwell Corporation and CleanCo. The costs associated with these activities are excluded from bulk water prices and are recovered through contracts with those customers and supplemented by a Community Service Obligation payment from Government.

We also have installed hydro-electricity generation at Wivenhoe<sup>1</sup>, Somerset and Hinze dams, which we treat as unregulated services. We invest in and operate these assets as a separate commercial venture and exclude the costs from bulk water prices, which is also consistent with the Referral Notice.

<sup>1</sup> Ownership of this asset will transfer to Seqwater in December 2022.

# SEQ Water Grid



## Legend

- Northern Pipeline Interconnector
- Western Corridor Recycled Water Scheme
- Southern Regional Water Pipeline
- Eastern Pipeline Interconnector
- Network Integrative Pipeline
- Other bulk water pipelines connecting the SEQ water grid
- Local government boundary

- Reservoirs
- Water Treatment Plants (WTP) – connected to grid
- Water Treatment Plants (WTP) – off grid
- Water Treatment Plants (WTP) – other
- Western Corridor Recycled Water Scheme
- Desalination plant
- Power Station

### Water Treatment Plants (WTP)

- 1 Araby Point WTP
- 2 Banksia Beach WTP
- 3 Beaudesert WTP
- 4 Bessiah Kallar WTP
- 5 Capangra WTP
- 6 Capalaba WTP
- 7 Deebona WTP
- 8 Douchwick WTP
- 9 East Bank (Mount Crosby) WTP
- 10 Enoggera WTP
- 11 Esk WTP
- 12 Ewan Maddock WTP
- 13 Hince Dam WTP
- 14 Inangahat WTP
- 15 Jirra WTP
- 16 Kerslawerth WTP
- 17 Kibby WTP
- 18 Kirkleagh WTP
- 19 Koorabbin WTP
- 20 Laidlaw Shute WTP
- 21 Linnile WTP
- 22 Lowood WTP
- 23 Maroon Dam WTP
- 24 Molendinar WTP
- 25 Moograh Dam WTP
- 26 Mulganaba WTP
- 27 Nivola WTP
- 28 North Pine WTP
- 29 North Stradbroke Island WTP
- 30 Point Lookout WTP
- 31 Rathdowney WTP
- 32 Somerset Dam (Toowoomba) WTP
- 33 West Bank (Mount Crosby) WTP
- 34 Wiskelee Dam WTP

### Western Corridor Recycled Water Scheme

- 35 Bundamba Advanced Water Treatment Plant AWWP
- 36 Gibson Island AWWP
- 37 Luggage Point AWWP

### Desalination Plant

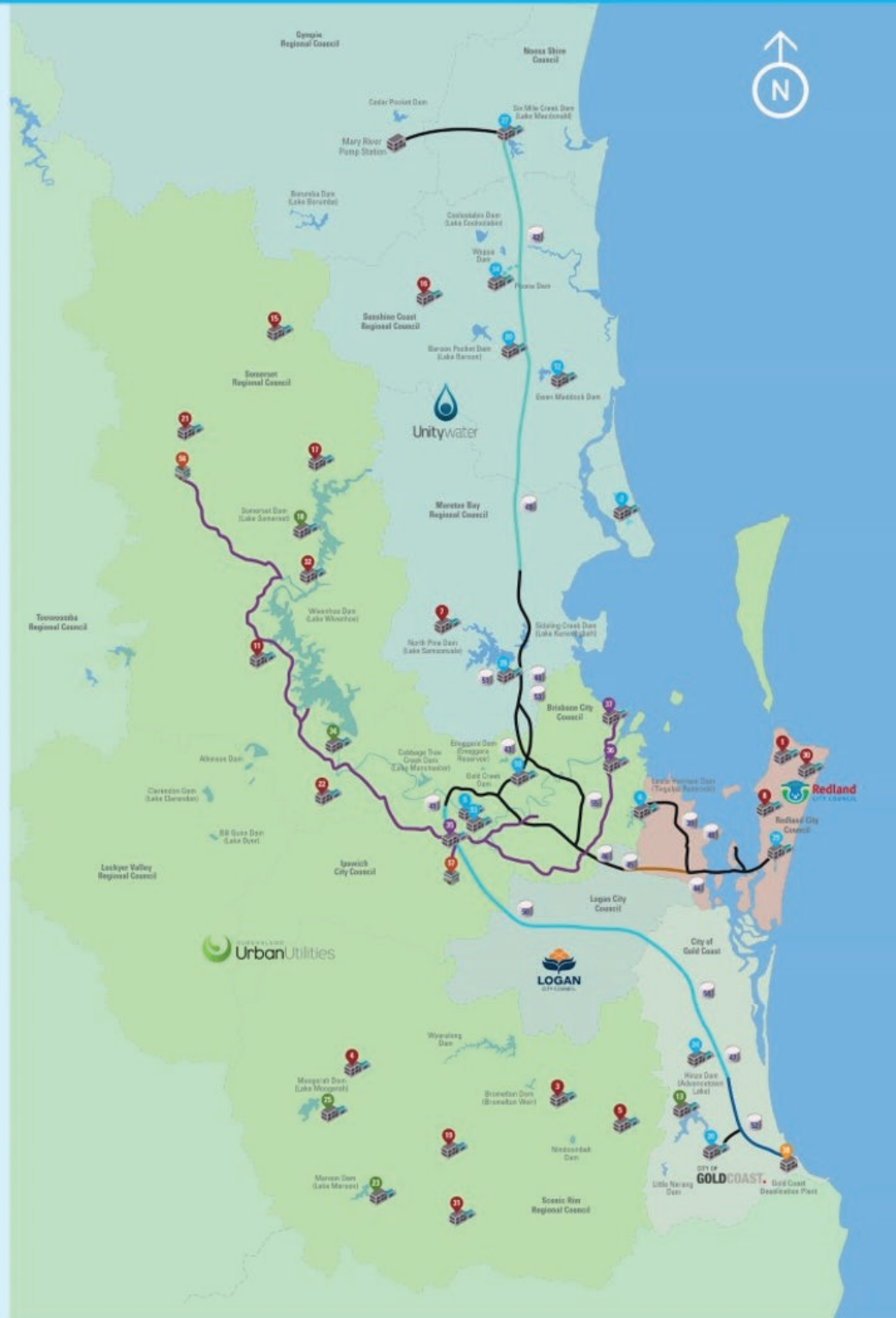
- 38 Gold Coast Desalination Plant

### Reservoirs

- 39 Alexandra Hills Reservoirs
- 40 Appleby Reservoir
- 41 Cameron Hill Reservoir
- 42 Fernvale Reservoir
- 43 Green Hill Reservoirs
- 44 Heintzmann Road Reservoirs
- 45 Kimberley Park Reservoirs
- 46 Kuraby Reservoir
- 47 Molendinar Reservoir
- 48 Mt Cotton Reservoir
- 49 Narangba Reservoirs
- 50 North Beaudesert Reservoirs
- 51 North Pine Reservoirs
- 52 Hobina Reservoir
- 53 Sparkes Hill Reservoirs
- 54 Stappleton Reservoir
- 55 Wellers Hill Reservoirs

### Power Stations

- 56 Tarong Power Station
- 57 Swanbank Power Station



We are a statutory authority established by the Queensland Government under the *South East Queensland Water (Restructuring) Act 2007* and we are a statutory body for the purposes of the *Financial Accountability Act 2009* and the *Statutory Bodies Financial Arrangements Act 1982*. We also contribute to advancing the Queensland Government's objectives for the community through:

- investing in water infrastructure to support a strong economy and ensure water now and for future generations;
- protecting SEQ drinking water supply catchments and collaborating with government, industry and SEQ communities to improve catchment health;
- involving the people who live and work in the region in planning to shape a shared water future;
- engaging with our Retailer Customers, communities and other stakeholders, to understand their needs and expectations; and
- contributing to the SEQ Regional Plan.

Under the *South East Queensland Water (Restructuring) Act 2007*, each year our Board is required to submit draft strategic and operational plans to our responsible Ministers (the Treasurer and Minister for Investment and the Minister for Regional Development, Manufacturing and Water). Our annual Operational Plan, which aligns with our Strategic Plan, is a performance agreement between our Board and the Ministers, setting out financial and non-financial performance targets, along with our major initiatives, policies and investments. Our key strategic objectives and priorities, which are relevant to our forecasts for the 2023-26 regulatory period, are discussed further section 1.5.

### 1.1.1.2 Water security

One of our key roles is to provide water security for SEQ. To do this, we must actively plan for the future by considering the region's potential water needs and future water supply options, as well as design, operate and maintain our assets to manage fluctuations in weather conditions and water demand.

The Millennium Drought led the State Government to create a major infrastructure investment program to build the SEQ Water Grid. We use the SEQ Water Grid to enhance water security while minimising the costs, through directing treated water and operating manufactured water assets if required. We also supply water to 16 stand-alone communities who are not connected to the SEQ Water Grid.

We plan for future water supplies and drought response. This plan, the Water Security Program, was last updated in March 2017 (version 2), and a new Program (version 3) is currently being developed (refer section 1.5.3). We develop this plan to meet the water security Levels of Service (LOS) objectives set for us by Government, which also includes drought response. Ultimately, our efficient costs, as reflected in bulk water prices, will be driven by our LOS objectives, along with our other key regulatory obligations. Where we can, we continue to look for opportunities to reduce our costs without compromising those objectives or our ability to meet our obligations.

The creation of the LOS objectives is enabled under the *Water Act 2000*. The LOS objectives for SEQ are prescribed in the *Water Regulation 2016* and are also published in the Water Security Program. They are currently specified in relation to<sup>2</sup>:

- projected regional average urban demand;
- bulk water drought supply; and
- minimum operating levels and essential minimum supply volume.

We also publish a two-page Water Security Status Report on our website a monthly basis<sup>3</sup>.

## 1.1.2 Key regulatory obligations

We are subject to a range of other regulatory obligations that will directly impact our costs of delivering bulk water services.

<sup>2</sup> Refer: Seqwater (2017). Water for Life: South East Queensland's Water Security Program 2016-2046, version 2, Appendix A.

<sup>3</sup> <https://www.seqwater.com.au/waterforlife>



### 1.1.2.1 Bulk water service obligations

We provide bulk water that has been treated to drinking water quality standards to our five Retailer Customers at bulk connection points across SEQ. In providing these services we must comply with a range of obligations.

The Bulk Water Supply Code (the Code)<sup>4</sup> regulates the services such as the supply of water between us and our Retailer Customers. We must comply with the Code, which focusses on operational matters including:

- establishing Operating Protocols with our Retailer Customers that govern requirements such as minimum storage levels in reservoirs, flow rates and pressure at connection points and notification requirements;
- preparing and publishing a Customer Confidence Report setting out our performance against drinking water quality standards;
- metering obligations and standards;
- providing water consumption data; and
- emergency planning that coordinates responses across the water supply chain, including our Retailer Customers' distribution networks.

Since 2019, we have been working with our Retailer Customers to develop a proposed suite of amendments to the Code to improve its flexibility, provide certainty and clarity and ensure that the Code supports the best interests of end customers. If approved by the Minister, the amended Code would be in place for the start of the 2023-26 regulatory period.

We also have a bulk water supply agreement (agreement) with each of our Retailer Customers determined by the Minister for Regional Development, Manufacturing and Water.<sup>5</sup> The agreement requires us to use our best endeavours to supply to our Retailer Customers at each bulk water supply point such volume of potable water as is necessary to meet their demand.<sup>6</sup>

The agreement defines the quality standards for drinking water. This details some specific quality parameters for each Retailer Customer, while also requiring us to comply with the Australian Drinking Water Guidelines (ADWG). The ADWG sets minimum guideline values for drinking water quality at the bulk water supply point and also sets out the practices for managing water quality risks, such as a multi-barrier approach that includes catchment management and source protection.<sup>7</sup>

Since 2018, we have been working with each of our Retailer Customers to establish water quality service standards, to be incorporated into each contract, along with an improvement plan for the desired standards. Once complete, we will continue to work with our Retailer Customers to define the remaining service standards, such as reliability, pressure and metering.

In addition to the agreement, our obligations for drinking water quality are also regulated with respect to fluoride and e.coli levels (specifically)<sup>8</sup> and more broadly through compliance with an approved Drinking Water Quality Management Plan.

### 1.1.2.2 Other key regulatory obligations

In order to provide our services, we need to comply with a wide range of legislative and regulatory requirements. These include:

- **Dam Safety:** we need to make sure our dams do not pose unacceptable risks to downstream communities. This can require capital and operating expenditure to improve the structures and/or make changes to the way we store and release water.
- **Flood operations and notifications:** our major incident and emergency services work to reduce the severity of flooding.

4 Bulk Water Supply Code, 1 January 2013, as made under s360M of the *Water Act 2000*.

5 Refer s360G of the *Water Act 2000*.

6 The obligation in relation to water quantity is to meet each customer's forecasts under the Code and contract.

7 Our bulk water supply agreements with Stanwell Corporation and Toowoomba Regional Council are for raw water, not drinking water.

8 For example, under the *Public Health Act 2005*.

- **Water entitlements and resource management:** we must manage the water entitlements from our dams to meet the requirements under the water planning framework. We must also store and release water in accordance with these requirements and regularly report our performance.
- **Development conditions:** many of our newer assets have significant development conditions attached that must be complied with. These include environmental monitoring, fish passage, vegetation offsets and provision of recreation services.
- **Noxious weeds and pests:** we are one of the largest landholders in SEQ and must meet our obligations for controlling noxious weeds and pests on this land.
- **Environmental obligations and licensing:** we have extensive obligations to ensure our activities do not do harm to the environment.

In addition, over the current period there has been an increase in corporate regulatory obligations targeting large corporations, some of which impact Seqwater. This increased regulation is targeted at addressing environmental, social, and governance (ESG) issues throughout corporate Australia and is being led by a Government response to greater public and governmental awareness of ESG benefits, increased scrutiny of corporate action, and calls for greater corporate accountability.<sup>9</sup> Additional corporate regulatory obligations we must comply with include:

- *Modern Slavery Act 2018 (Cth)* – requires large corporations and other entities to make annual reports (Modern Slavery Statements) to the Commonwealth Government on their actions to address modern slavery risks in their operations and supply chains.
- *Payment Times Reporting Act 2020 (Cth)* – requires large corporations and other entities to report twice annually to the Commonwealth Government on payment terms and practices, including statistics on how long the entity takes to pay small business suppliers.
- *Human Rights Act 2019 (Qld)* – requires us to implement appropriate governance to promote the Act’s objectives of developing a culture that protects, respects and promotes human rights in the Queensland public sector. In our annual report to our responsible Ministers, we must also detail actions taken to further the objects of the Act, any human rights complaints and any reviews of internal controls for their compatibility with human rights.

Establishing governance and ongoing compliance with these additional corporate regulatory obligations has required additional people and financial resources.

## 1.2 Bulk water prices

### 1.2.1 How prices are set

Our bulk water prices allow us to recover the prudent and efficient costs of providing bulk water services. Our Retailer Customers pay bulk water prices for the water they take at their respective bulk connection points. These bulk water costs, as well as other costs involved in supplying end customers, are then incorporated into retail water prices.

Under the *Water Act 2000*,<sup>10</sup> the Minister may determine a bulk water price having regard to the principles in the Code. In making a determination, the Code allows the Minister to issue a direction (the Referral Notice) to the Queensland Competition Authority (QCA) to make a recommendation about a pricing decision.<sup>11</sup>

Bulk water prices have currently been set until 30 June 2022. Under the Referral Notice, the Treasurer and Minister for Investment has directed the QCA to review and recommend bulk water prices to apply from 1 July 2022 to 30 June 2026 (the 2023-26 regulatory period).

<sup>9</sup> For example, Government responding to recommendations from the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry,

<sup>10</sup> s360W(1)

<sup>11</sup> s48. S360W(2) of the *Water Act 2000* provides that “Before deciding a cost or price, the Minister may seek advice from an entity nominated to provide advice about costs or prices to the Minister under the bulk water supply code.”

The Referral Notice prescribes a fully volumetric charge, with a single common price now applying across all SEQ council areas. The current practice is for our Retailer Customers to charge the same volumetric charge to their customers and show this price as a separate line item on the retail bill.

## 1.2.2 The Referral Notice

The Referral Notice requires the QCA to consider and make recommendations that allow us to earn sufficient revenue to recover prudent and efficient costs related to the provision of bulk water services and to repay the Price Path Debt by 2027-28 (the Price Path Debt is explained further in section 1.2.3). Bulk water costs include, but are not limited to:

- prudent and efficient capital and operating expenditure
- a return on assets (including working capital)
- an allowance for tax (where applicable)
- interest on Price Path Debt
- depreciation
- any costs detailed in Seqwater's bulk water supply agreements
- additional prudent and efficient operating and capital costs arising from Review Events.

There are a number of key features of the Referral Notice that differ from the previous Referral Notice issued for the current regulatory period. The most significant are listed below.

- **Inclusion of a 'bridging year' between current and next regulatory period.** The term of the current regulatory period is from 1 July 2018 to 30 June 2021 and this was therefore also the focus of the QCA's previous price investigation. The QCA's next price investigation was originally due to commence in 2020 in anticipation of a new regulatory period from 1 July 2021. However, this was deferred for a year as a consequence of the focus of all stakeholders on COVID-19. This resulted in the QCA's recommended bulk water price for 2020-21 being rolled forward for one additional year (2021-22), with the Government recently directing the same 3.5% increase that was applied in 2020-21. In this proposal we present forecasts of our expenditure for the 2021-22 year. In comparing actual expenditure to the QCA's recommended forecast for the 2018-21 period, our actual expenditure for 2020-21 year is also based on a forecast.
- **Drought allowance.** Along with recommending the bulk water price to apply in normal operating conditions, the QCA is to recommend a drought allowance. The Referral Notice states that this is "expected to provide Seqwater with total revenue sufficient to recover the prudent and efficient costs associated with Drought operating conditions" (as per the Drought Response triggers in the Water Security Program), along with a contribution towards the revenue foregone from reduced demand. The establishment of a drought allowance is consistent with emerging regulatory practice in other jurisdictions.
- **Prescribed inflation forecasting methodology.** The Referral Notice also prescribes a market-based approach to forecasting inflation for Seqwater for the 2023-26 regulatory period.

Consistent with the previous regulatory period, the QCA is required to assess our expenditure forecasts for the duration of the price path i.e. to 2027-28. In presenting our expenditure forecasts for this submission, our focus is the 2023-26 regulatory period (i.e. to 2025-26), which are then rolled forward for the remaining two years of the price path to provide an indicative forecast for the duration of the price path. The updated expenditure forecasts for those additional years will be subject to a full update and review in the next bulk water price investigation.

## 1.2.3 The Price Path Debt

Seqwater was established in 2013 as part of a suite of institutional reforms in SEQ including the amalgamation of the SEQ Water Grid Manager, Linkwater and the former Seqwater and parts of the Queensland Water Commission. Upon establishment we became responsible for all of the relevant SEQ Water Grid assets, including large water security investments made in response to the Millennium Drought, including the GCDP and WCRWS. We also assumed responsibility for the debt associated with those investments.

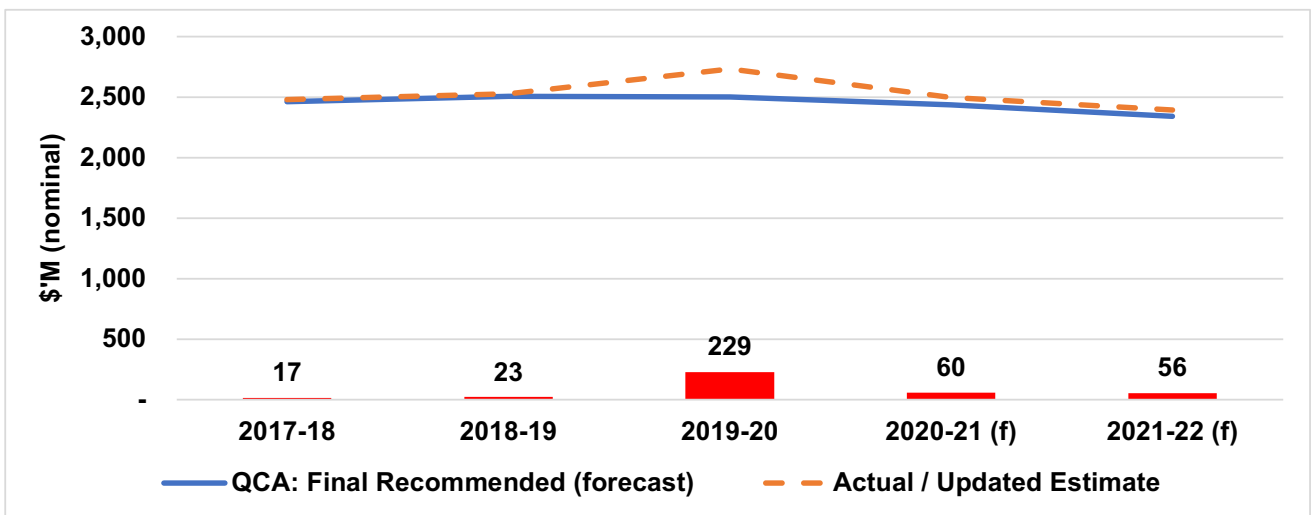
A decision was made to smooth the price impacts of these investments over a 20 year period, from 2008 to 2028. The deferral of cost recovery was akin to a 'loan' from Seqwater to Retailer Customers that was expected at the time to be repaid over a 20 year period.

The original expectation was that the Price Path Debt would be paid down gradually by 2028. However, in practice, we have recovered less revenue historically than anticipated. While there are a number of different reasons for this, a key driver has been lower than expected demand for our services combined with a fully volumetric tariff.

This means that we have been unable to fully recover the efficient costs of delivering bulk water services. Over time, the Price Path Debt has therefore evolved into the key 'unders and overs' mechanism that is also used to recover the cumulative amount of MAR that we have under-recovered each regulatory period (this would similarly apply if we had over-recovered revenue). This is similar in concept to a revenue cap mechanism; however, rather than making direct adjustments to prices each period for any under- or over-recovery of revenue, the adjustment is added to the Price Path Debt.

As a consequence, in prior regulatory periods the balance of the Price Path Debt has grown. In the current period we are projecting a slight reduction in the Price Path Debt balance, as shown in Figure 1.1, although this projected reduction is not as large as the QCA forecast in the 2018 review. However, this will also depend on the final difference between actual and forecast inflation. In our response to the QCA's Draft Report we will update this for actual inflation in the 2020-21 year, along with an updated forecast of inflation for 2021-22.

**Figure 1.1 – Comparative Price Path Debt (QCA Final vs. Actual/Estimate)**



Even though this slight decrease in the balance is forecast, the repayments required to fully repay the debt by 2028 have increased given the shorter remaining timeframe.

This presents significant financial challenges as we seek to recover sufficient revenues to not only repay the debt associated with the investments made to improve water security for SEQ but to also ensure we are able to fully recover our efficient costs of providing bulk water services. At the same time, we need to balance this against delivering the stable and predictable prices that our Retailer Customers are seeking.

The proposed adjustment to our Price Path Debt for the current regulatory period is explained in section 8.1.

## 1.2.4 Drought allowance for the 2023-26 regulatory period

We will lodge a supplementary submission detailing our proposed drought allowance for the 2023-26 regulatory period.

## 1.2.5 The QCA's water pricing principles

It is also noted that the QCA has recently completed a review of its pricing principles for the water sector.<sup>12</sup> Consistent with the terms of the Referral Notice, one of the key principles relates to the recovery of efficient costs (including an appropriate return on and of capital), based on "service levels that are necessary to meet required service standards and other regulatory obligations".<sup>13</sup> As outlined above, our levels of service are mandated by Government via the LOS objectives. We also have a range of regulatory obligations that must be met.

Otherwise, most of the remaining water pricing principles relate to the tariff structure, including the provision of price signals and the allocation of risk between the water business and its customers. Our fully volumetric tariff structure is mandated by Government under the Referral Notice and this will remain the case for the 2023-26 regulatory period.

# 1.3 Managing the SEQ Water Grid

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## 1.3.1 Optimising Bulk Water Supply and System Operations

Our provision of bulk water supply services is governed by a number of key planning frameworks, including the Water Security Program and the annual Operational Plan, with the latter including a performance agreement between our Board and Shareholding Ministers. Within that context, optimising the provision of bulk water supplies while maintaining water security is a dynamic process that is impacted by a number of variables and influences, some of which are beyond our control. This includes (but is not limited to) influences such as changes in demand, rainfall, capital projects, maintenance and other operational issues. Currently (and as detailed further in this submission), a number of drought response initiatives are also being undertaken.

Each year we prepare a Bulk Water Supply Annual Operating Strategy (AOS), which details how we intend to operate our infrastructure to meet the forecast customer water demands for the next five years, while balancing water security and cost efficiency. The AOS sets out our planned operation for each key source in our bulk water supply system (including manufactured water assets), having regard to considerations such as known capital works and planned maintenance, and demand forecasts. Its main aim is to minimise the cost of system operation for as long as possible without compromising the provision of essential supply during an extreme drought scenario.

The level of water security in different parts of the SEQ Water Grid is very dynamic and can change rapidly. We actively monitor the water security status of the SEQ Water Grid and the performance of the assets to make prudent and efficient operating decisions. While the AOS provides the overall foundations, it is complemented by regular communication between strategy and operational departments, focussed monitoring of areas and prompt decisions driven by pertinent data.

We also practice adaptive management to look for opportunities to save costs without compromising water security objectives. An example of how we make prudent and efficient operation decisions in real-time concerns operation of the GCDP, as outlined below.

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<sup>12</sup> Queensland Competition Authority (2021). Final Statement: Statement of Regulatory Pricing Principles for the Water Sector, April.

<sup>13</sup> Queensland Competition Authority (2021). p.3.



### Box 1.1 Real-time operation of the Gold Coast Desalination Plant

As a result of detailed modelling considering available historic climate data and known demands, the Water Security Program version 2 and subsequent Bulk Water Supply Annual Operating Strategies cited operating the GCDP at full capacity when the SEQ Water Grid storage level reached 60%. Monitoring the SEQ Water Grid storage levels, this was predicted to occur on 15 September 2021, and the Grid reached 60% on this date. Operation of the GCDP was maximised accordingly.

In early December 2020, rainfall occurred in the Gold Coast region, significantly improving the storage levels in the Hinze Dam. Staff monitored the level of Hinze dam and identified that the Hinze dam had risen 11% in one week. Furthermore, they identified that further rainfall was predicted by the Bureau of Meteorology, and the chances of Hinze Dam filling were high. It was therefore proposed on the 16th of December to reduce operation from maximised use of the GCDP to top-up mode only and to instead try to maximise available surface water from Hinze Dam.

The strategy was accepted and communicated to operations staff on the same day. In this instance the rain continued to fall and the dam filled. Operation of GCDP at top up mode has continued since mid-December and is estimated to have saved several million dollars, while maintaining water security. This was made possible through staff who are knowledgeable about our assets and the philosophies of the AOS, and processes that support real-time decision making.

## 1.3.2 Managing the impacts of drought

The Millennium Drought highlighted the pervasive impacts that drought can have on our community, economy and way of life. One of our core responsibilities as custodian and manager of SEQ's bulk water assets is to prepare for and respond to drought. This requires a proactive and holistic risk management approach to an event that is inherently uncertain and beyond our control.

Responding to drought is not simply a matter of Seqwater switching between 'normal operating conditions mode' and 'drought conditions mode' once the relevant triggers are reached under the Water Security Program. Some of the activities involved in responding to drought involve considerable lead time to adequately prepare and meet our expectations for customer engagement.

We use an adaptive management approach to implement the Water Security Program. The driver for the adaptive management approach is primarily to identify opportunities to save money compared to a very literal interpretation of when to start initiatives cited in the Water Security Program, based on circumstances at the time. Adaptive management has yielded cost savings given the levels of the SEQ Water Grid storages have fluctuated between around 55% and 70% over the last two years. The most significant example of the savings this approach has yielded has been via the deferral of the recommissioning of the WCRWS.

It is impossible for us to predict the likelihood, timing, duration and/or severity of a drought. What we do have more control over is how prepared we are for drought and how quickly and effectively we can respond once the triggers are reached. We need to categorise our drought preparedness and response costs into two main categories:

- costs that are part of our business as usual (BAU) expenditure: these are costs that we consider are prudent and efficient to incur so that we can be adequately prepared if and when the region is subject to drought operating conditions; and
- costs that are incremental: these are costs that we will only incur once our Drought Response Plan is invoked – these costs may be addressed via the drought allowance and Review Event mechanism.

Given the uncertainty associated with drought, it is challenging to accurately forecast these costs. Some of them will depend on timing, while others will be influenced by the nature, extent and severity of the drought.

This distinction has implications for the current and future period. Currently, the main mechanism we have to recover drought-related costs that were not reflected in our forecasts used to set prices is the Review Event. Given we have incurred prudent and efficient drought-related costs in the current period that were not anticipated at the start of the

period, we have proposed an end-of-period adjustment under the Review Event mechanism (refer Chapter 7).

For the 2023-26 regulatory period, the Referral Notice directs the QCA to recommend a drought allowance that could be applied during the regulatory period to recover a contribution towards our material drought response costs earlier (which is also consistent with approaches recently approved by the Independent Pricing and Regulatory Tribunal in New South Wales)<sup>14</sup>. This will also provide a price signal to water users.

The three main ways that we can manage the recovery of our drought response costs are therefore now:

- continuing to forecast more certain drought-related costs as part of our business as usual forecasts (refer Chapter 6);
- forecasting our material incremental costs of drought that we propose to recover via the drought allowance (this will be addressed in our supplementary submission); and
- continuing to recover any residual costs at the end of the period via the Review Event, which if necessary, could also address any over-recovery of costs (refer Chapter 10).

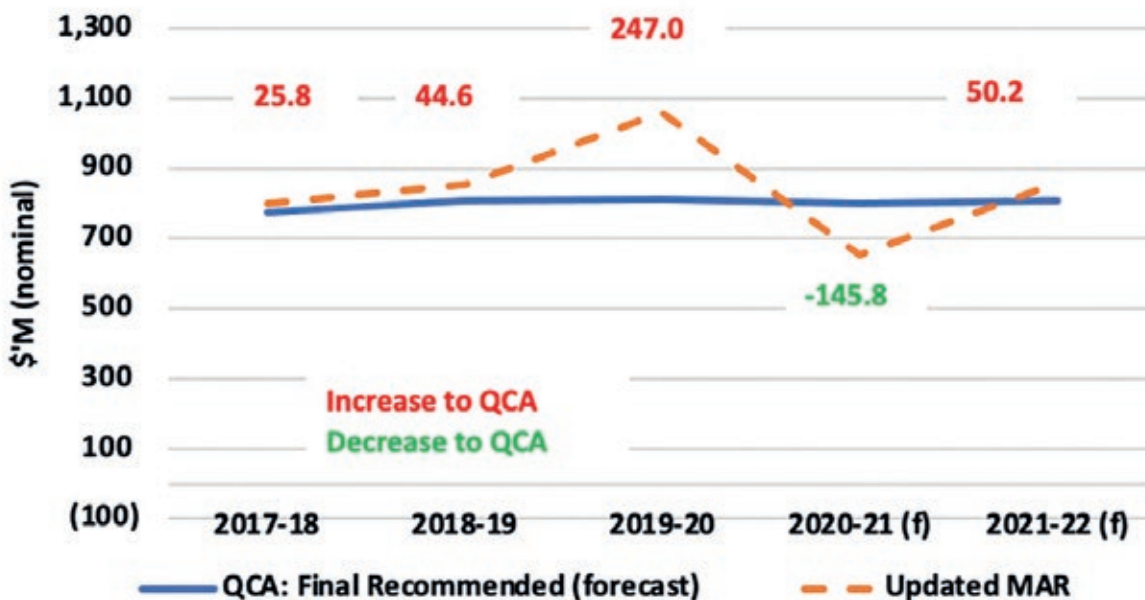
We will also be clear and transparent as to where those costs have been included to demonstrate that we are not recovering them more than once.

## 1.4 Current period outcomes

The current regulatory period has continued to present a number of opportunities and challenges for Seqwater. As outlined above, a key focus of the current period has been drought preparedness activities.

The total revenue we are forecast to recover in the 2018-21 regulatory period and the QCA's recommended MAR for that period is shown below. This includes our forecast revenue for the 2021-22 year.

**Figure 1.2 – Comparative MAR (QCA Final vs. Updated MAR)**



The main driver of our updated MAR has been the difference between the QCA's recommended inflation forecast and actual inflation. This reflects the adjustment that is made to the MAR to avoid the double counting of the inflationary gain in our Regulated Asset Base (RAB) (with that gain being deducted from our MAR). This means that:

- if actual inflation is lower than forecast (for example, in 2019-20 as shown in Figure 1.2), our updated MAR will be higher than the QCA's recommended forecast, meaning that we will have under-recovered the revenue that we would have been entitled to earn had bulk water prices reflected actual inflation; and conversely

<sup>14</sup> For example, refer: Independent Pricing and Regulatory Tribunal (2020a). Review of Prices for WaterNSW Greater Sydney, Final Report. June.

- if actual inflation is higher than forecast (which is currently forecast or the 2020-21 year), our updated MAR will be lower than the QCA's recommended forecast.

This (positive or negative) difference between the QCA's recommended forecast and our actual MAR is applied to the Price Path Debt. We will be updating our current period MAR for actual 2020-21 inflation, along with forecast inflation for the 2021-22 year, in our response to the QCA's Draft Decision.

A more detailed review of our current period expenditure is provided in Chapters 5, 6 and 7. We explain our end-of-period revenue adjustments in section 8.1.

Other business outcomes we have delivered over the regulatory period include:

- industry leading water security planning and drought preparedness;
- increased catchment health through catchment partnering;
- improved organisational safety management and safety leadership;
- organisational alignment with services including the establishment of a dedicated Major Projects group;
- material improvements to our asset planning and capital delivery processes;
- a refresh of organisational culture including vision and values;
- development and implementation of a refreshed Corporate Strategy;
- community education and engagement programs around drought and water source provision;
- establishment of a dedicated customer team to provide a voice of the customer and drive customer oriented initiatives for both retailer and irrigation customer segments;
- increased business systems flexibility and resilience, enabling an agile and disciplined response to Covid-19.

### **Box 1.2 Our response to COVID-19**

We have responded with agility and flexibility to the Covid-19 pandemic and its associated social and economic consequences. As an essential service provider with an older workforce profile and a number of critical operational roles, we recognised our vulnerabilities early and were able to transition to remote working quickly and effectively, planning to reduce the risks to our workforce and minimise the risks where operational requirements meant isolation and distancing was not always possible.

Our response built on existing initiatives transitioning the core business to agile work environments and the adoption of MS Teams in the months prior to the pandemic. Similarly historic investment in business culture and values, systems resilience and ICT service provision, along with strategic decisions to insource key ICT functions, were proven to have been effective risk mitigants.

Assessments of the impact of the changes to working practices on the business have indicated that business performance has not suffered through the period, which we believe is a reflection on our organisational culture, workforce commitment, effective planning and a resilient business accustomed to dealing with major challenges.

# 1.5 The 2023-26 period: opportunities, challenges and pricing principles

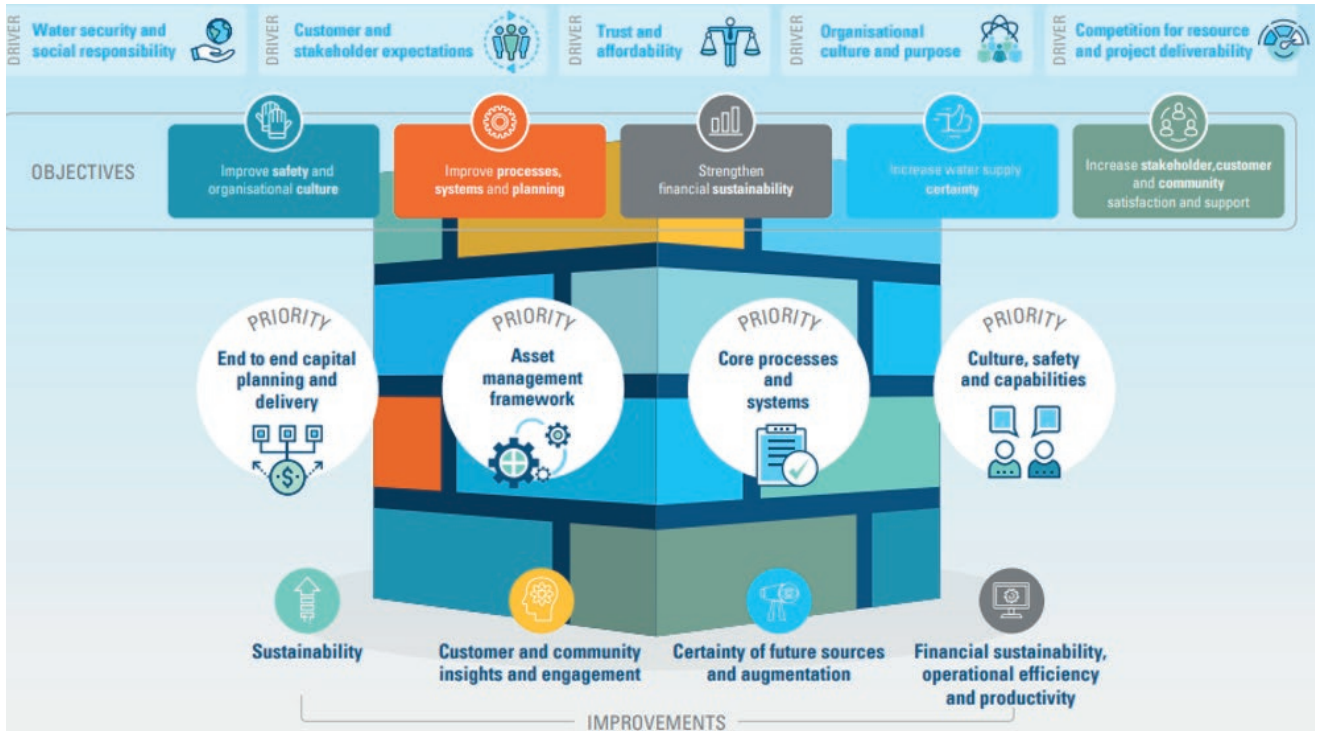
## 1.5.1 External drivers and strategic objectives

Our 2020-24 Corporate Strategy identifies five external drivers for our business, which all have the potential to impact the delivery of our bulk water services and the costs of those services.

Driver	Implications	Implications for bulk water services and prices
<b>Water security and social responsibility</b>	Water security, corporate-social responsibility, policy direction, and growth in demand due to expanding cities and populations remain central issues for the water sector. The future must recognise the nexus between water, energy and carbon.	Water security is our core responsibility. This must be done in a socially and environmentally sustainable way. These drivers are recognised in the planning, development and delivery of our capital program, along with management of our operating and maintenance expenditure.
<b>Customer and stakeholder expectations</b>	Expectations around customer centricity, price, climate change, and effective engagement have increased, with customers and community looking for these to be considered in the delivery of services. Community, customer, stakeholder and shareholder expectation for organisational sustainability.	As will be outlined in this proposal, we have been working to embed customer and stakeholder engagement as part of our core business. We have also engaged with our Retailer Customers on matters relevant to this revenue proposal.
<b>Trust and affordability</b>	Continued focus on cost of living and utility bills across stakeholders. Retailer Customers value price stability - price shocks can impact on trust.	We have specified a set of pricing principles to guide our proposal (outlined below), which have also been discussed with our Retailer Customers.
<b>Organisational culture and purpose</b>	Culture and the purpose of any organisation are a focal point for boards. Strong evidence from recent Royal Commissions that an organisation's culture must stand behind its brand and reputation.	Investment programs and future efficiencies are dependent upon a fit for purpose organisational design and culture, and the attraction and retention of talent is a risk to achievement. Organisational investment in culture has been and will continue to be required to deliver organisational objectives.
<b>Competition for resource and project delivery</b>	The infrastructure investment pipeline increases competition for resources and places significant strain on program and project deliverability across Australia.	As will be outlined in Chapter 5, one of the improvements we have made to our capital program is risk-based prioritisation. This has placed a greater focus on deliverability, having regard to a number of factors, including resource requirements and availability. This has also presented challenges in managing costs. A key aspect of our response to this has been the establishment of the dedicated Major Projects Group in 2019.

Our five strategic objectives are shown below, along with the four strategic priorities that we are targeting for 2020-22.

**Figure 1.3 Seqwater Corporate Strategy 2020-24**



Of particular relevance to this review are the initiatives we have been undertaking in relation to end-to-end capital planning and delivery, along with our asset management framework. As will be outlined in section 5.6, we have already implemented a number of material improvements in both of these priority areas over the current regulatory period and we continue to build on these in the future.

## 1.5.2 Opportunities and challenges

Our Operational Plan identifies a number of opportunities for us to support continued improvement in the delivery of our services.

Implications	Implications for bulk water services and prices
Driving internal performance improvements and efficiencies through business re-alignment, enterprise planning and systems transformation and process improvement.	This will assist in improving operational efficiencies and reducing our expenditure.
Driving improvements in the planning and delivery of large capital projects through the implementation of a dedicated major projects team.	As outlined in section 5.6, we have made a number of improvements focussed at improving the deliverability of our capital program, including the establishment of the dedicated Major Projects Group. This will also result in a more coordinated and consistent approach to project planning and delivery under the Asset Management Framework, including efficiencies in managing projects. It will also enable us to deliver the large capital program projected for the 2023-26 regulatory period.
Improving the resilience of our asset base through criticality assessment and resilience planning.	Our risk-based prioritisation framework is seeing a more focussed approach to planning and delivering the capital program. We also continue to invest in data and tools to assess asset condition and reduce the risk of asset failure.

Implications	Implications for bulk water services and prices
Improving long-term planning by considering climate change in modelling assumptions.	While the impacts of climate change are highly uncertain, this is of critical importance to our business and our responsibilities in delivering water security. We therefore need to be proactive in how we reflect this in our planning framework.
Undertaking a strategic assessment for the next major water supply augmentation.	This will align with the update of the Water Security Program, which identifies and assesses options for the next major augmentation (including non-capital options), as well as the timing. This will be a major driver of our longer term capital program and could have a more significant impact on prices. In the meantime, our operating and capital expenditure needs to be optimised.
Identify and acquire strategically located land packages for future supply sources.	This proactive strategy should also assist in minimising long-run costs by enabling us to procure land in optimal locations when opportunities arise.

Our business also continues to face a number of challenges and risks, which we seek to address as part of our enterprise risk management framework. Integral to this is maintaining water security and system resilience in a changing (and increasingly variable) climate, including how we prepare for and respond to drought, as well as flood mitigation. With our degraded catchments, water source protection and catchment health also remain key priorities in maintaining reliable water supplies that meet required water quality standards.

Balanced against the need to maintain security of supply is projecting future demand, including projecting future population growth in SEQ. This is a challenge that impacts our business, along with our Retailer Customers. Our approach to forecasting demand within the Water Security Program is discussed further in Chapter 3.

Other key challenges for our business include the following.

- Maintaining financial sustainability, including when volumes fall during drought. With a fully volumetric tariff, our revenues are directly correlated with changes in demand. As outlined above, going forward, we must apply our revenue to a fixed annual repayment of the Price Path Debt, as well as recovering our ongoing prudent and efficient costs.
- Uncertainties as to what our future regulatory framework may look like following repayment of the Price Path Debt.
- Environmental issues and impacts across our catchment areas and operations.
- Technology, including existing systems capability issues, and emerging cyber security risks.
- Refinement of categorisation of capital expenditure.
- Balancing dam safety driven investment needs against affordability considerations.
- Influencing regional planning processes through collaboration on integrated water cycle planning with our Retailer Customers to recognise water supply and sewerage considerations and support better value outcomes for the SEQ region.

### 1.5.3 Update to Water Security Program

The current Water Security Program (version 2) was published in March 2017 (herein referred to as WSP2017). It sets out our high-level plan to ensure supply of SEQ's drinking water for the next 30 years. This high-level plan is compliant with the Queensland Government's desired level of service objectives and Water Security Program development guideline requirements. We undertake extensive consultation, including with our Retailer Customers, in developing and reviewing this Program.

Under section 359 of the *Water Act 2000* our Water Security Program must be reviewed at least every five years beyond 2017. A further review could be required "if there is a significant change in any matter affecting, or likely to affect, the achievement of the desired level of service objectives for water security". The next version (version 3) is well advanced and



will be published in March 2022 (herein referred to as WSP2022). This is therefore expected to coincide with the timing of release of the QCA's Final Report on our bulk water prices for 2023-26.

The Referral Notice makes references to the “published” Water Security Program, including in relation to demand forecasts and drought response triggers. As these provisions are forward looking, the updated WSP2022 should therefore be the published Water Security Program for the purpose of the Referral Notice.

With the development of the updated WSP2022 well advanced, for the purpose of setting our required revenue and prices for the 2023-26 regulatory period, our revenue proposal reflects our current expectation of what will be in the WSP2022, including the demand forecast and our adaptive drought management approach. It also must be reviewed by the Queensland Water Supply Regulator (the Director-General for Regional Development, Manufacturing and Water) and is noted by Cabinet.

## 1.5.4 Bulk Water Pricing Principles

In developing our revenue proposal for the 2023-26 regulatory period we have specified a set of Bulk Water Pricing Principles. We developed these principles in consultation with our Retailer Customers. Their feedback was clear on the need for stable prices over time and the avoidance of price shocks, which erode end customer trust.

Our proposed Bulk Water Pricing Principles are that prices should:

- be stable into the future, avoiding large increases or decreases;
- be based on standard regulatory pricing frameworks where possible, and adopt tariff mechanisms and assumptions that reduce the scope for large between-period price changes (e.g. recovery of drought costs);
- support prudent and efficient cost recovery and ensure that Seqwater has sufficient cashflow to manage its financial obligations;
- be able to accommodate agreements for the recovery of rebates agreed between Seqwater and the SEQ water service providers, such as prudent discounts and a concealed leaks policy.

We have referred to these principles in developing this revenue proposal. This includes contemplating the potential pricing impacts in addressing some of the key requirements in the Referral Notice, such as the repayment of Price Path Debt.

Our overarching approach to the development of our regulatory proposal has been to enable us to recover our prudent and efficient costs (including a return on capital) consistent with accepted commercial, financial and regulatory principles. However, this could necessitate price increases that compromise the Bulk Water Pricing Principle of prices being stable into the future.

We have therefore made adjustments to some of the key inputs that impact our final MAR with a view to mitigating these price impacts. This has involved departing from positions that we consider would otherwise be consistent with accepted commercial practice. These departures are summarised in Table 1.1.

**Table 1.1** Positions proposed to mitigate price impacts

Input	Position
<b>Tax allowance</b>	As outlined in section 4.6, the advice we received from Frontier Economics is that tax losses from the years prior to 2018-19 should not be recognised in calculating our tax allowance. However, we have recognised these losses in order to reduce our tax allowance for the 2023-26 regulatory period.
<b>Gamma</b>	Based on the expert opinion of Frontier Economics (refer section 4.4.5), we remain of the view that the most appropriate value of gamma is 0.25. However, to mitigate price impacts we are proposing to adopt the QCA's preferred value of 0.47 from the current regulatory period.

Allowing for a plus or minus 2% band around our proposed demand forecasts (refer section 3.5.2) could also be used to mitigate price impacts – noting that we are proposing that any such adjustments are limited to be within that band.

We will review our position on each of these inputs in forthcoming bulk water price reviews, having regard to the need to balance commercial principles and practice against managing end customer price impacts.

## 1.6 Engaging with our customers

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As discussed further in Chapter 2, we have continued to focus on developing our customer and stakeholder engagement strategy. This also reflects our corporate objective to increase customer, stakeholder and community satisfaction and support.

We recognise that increasing importance that is being placed on customer engagement by Australian regulators, including in the energy and water sectors. Recognising that consensus or agreement may not always be able to be reached, we observe that a key emphasis of customer engagement in a regulatory context is explaining proposals and providing customers with the opportunity to provide feedback – and then demonstrating how the business has listened to this feedback and taken it into account in developing revenue and pricing proposals. Depending on the scope and audience for the engagement, there can also be a role for the regulated business in educating and informing customers on a range of matters.

For Seqwater, most of the focus of our customer and stakeholder engagement strategy reflects a need to embed this into our key business activities as part of business as usual. This has been reflected in changes to our organisational structure as well as the way we do things. We have also undertaken engagement with our Retailer Customers in the development of this submission, including on our pricing principles.

However, unlike other regimes, the scope of the QCA's bulk water price investigation is driven by the terms of the Referral Notice. As this has been subject to change over time we have no certainty as to its terms until the release of the final Referral Notice. This tends not to be released by Government until just prior to the deadline for lodgement of our submission to the QCA. This practically limits the extent to which we can fully engage with our Retailer Customers in developing our regulatory proposal.

As explained in Chapter 2, our engagement strategy also recognises that our Retailer Customers have the key interface with end users. While we engage widely with the community and stakeholders on a range of matters relating to water use and supply, including drought, the primary focus of our customer engagement for this revenue proposal has been our Retailer Customers.

We acknowledge that the development of our customer engagement strategy is ongoing and this is something that we will continue to work on over the 2023-26 regulatory period, as well as through the QCA's price investigation process.

## 1.7 Structure of this submission

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This submission is structured as follows:

- Chapter 2 outlines our customer, stakeholder and community engagement;
- Chapter 3 discusses the approach used to develop our demand forecast;
- Chapter 4 presents our proposed estimates for the rate of return, inflation and our taxation allowance;
- Chapter 5 presents our capital expenditure forecast, as well as a review of our expenditure in the current period;
- Chapter 6 presents our operating expenditure forecast;
- Chapter 7 presents our proposed Review Events for the current period;
- Chapter 8 summarises other key revenue items and adjustments, including our proposed opening balance for the Price Path Debt as at 1 July 2022;
- Chapter 9 summarises our proposed revenue requirement for the 2023-26 regulatory period;
- Chapter 10 discusses the mechanisms to address our risk and uncertainty; and
- Chapter 11 outlines special considerations for end customers (concealed leaks remissions and prudent discounts).

The following items are attached to this submission:

- Attachment 1: Frontier Economics – The Term of the Risk Free Rate
- Attachment 2: Frontier Economics – The Market Risk Premium
- Attachment 3: Frontier Economics – Equity Beta for a Benchmark Efficient Water Utility
- Attachment 4: Frontier Economics – Gearing for a Benchmark Efficient Water Utility
- Attachment 5: Queensland Treasury Corporation – Updated Cost of Debt Estimates for Seqwater
- Attachment 6: Frontier Economics – The Role of Gamma in the Regulatory Process
- Attachment 7: Frontier Economics – Regulatory Corporate Tax Allowance
- Attachment 8: Frontier Economics – Cost Escalation Factors
- Attachment 9: Frontier Economics – Estimation of Seqwater’s Productivity Growth Rate.

## 2 Customer, stakeholder and community engagement

- Over the current regulatory period we have made material improvements to our customer, stakeholder and community engagement.
- This includes regular engagement with our Retailer Customers, including via the SEQ Water Service Providers Partnership (CEO Forum). This reflects the need for us to work in partnership to improve outcomes for the end customer. The scope of our engagement extends across a range of initiatives, including demand forecasting, capital planning, operational improvements and drought readiness and response.
- We also note the increasing importance of customer engagement in economic regulation, including in the water sector. Given the extent of the engagement we are now undertaking with our Retailer Customers, the consultation we have undertaken leading up to the lodgement of our regulatory submission has been quite targeted.
- In the lead-up to this pricing investigation we held a series of workshops with our Retailer Customers that identified and focussed on the following key issues: (1) repayment of the Price Path Debt (and the implications for prices); (2) tariff reform (which we have agreed would not be pursued in the 2023-26 regulatory period); (3) bulk water pricing principles; (4) drought tariffs; and (5) prudent discounts and concealed leaks.
- We also have established engagement forums for capital projects and demand forecasting.

This chapter will provide an overview of:

- the extensive customer and stakeholder engagement that we now embark on across a range of key business activities as part of 'business as usual'; and
- the engagement we have undertaken leading up to the development of this submission.

### 2.1 Overview

Since the start of the current regulatory period, we have made material improvements to our customer, stakeholder and community engagement. The improvements we have made to our Retailer Customer engagement – which are ongoing – reflect our efforts to work with our Retailer Customers as partners in the water supply chain. This has resulted in the development and implementation of a number of initiatives that will improve outcomes for the end customer. It has also enabled the development of more effective working relationships with our Retailer Customers, which provides a solid foundation for future work.

Customer, stakeholder and community expectations has been identified as one of the five main external drivers of our Corporate Strategy, including expectations around customer centricity, price, climate change and effective engagement in the delivery of services. In response to this driver, increasing stakeholder, customer and community satisfaction and support is one of the five strategic objectives in our Corporate Strategy.

To deliver against this strategic objective we are working towards embedding the consideration of these expectations in all that we do. Integral to this is engagement, where we have the opportunity to listen, gather information, educate, inform and respond. This encompasses a wide range of activities extending from online tools, through to workshops and forums, one-on-one engagement and research and insights.

In the 2018 Final Report the QCA encouraged us to consult and collaborate with customers in the future, including in the development of our regulatory submission.<sup>15</sup> We also note the increasing importance of customer engagement in the

<sup>15</sup> Queensland Competition Authority (2018). p.85.

regulation of energy and water businesses. The extent of the collaboration we are now undertaking means that most of this will occur in the normal course of our business. Engagement that specifically relates to our regulatory submission can therefore be more targeted.

As we have previously highlighted, in the provision of bulk water services our direct interface is with our Retailer Customers. Ultimately, we must work in partnership with our Retailer Customers towards the common goal of best meeting the needs of the end customer and delivering safe, sustainable and reliable water supply in the most cost-effective way.

This chapter summarises our approach to engagement, including how it impacts matters relevant to our bulk water prices and service delivery. We emphasise that our customer, stakeholder and community engagement strategy is an ongoing process that we will continue to develop and improve over the course of the next regulatory period and beyond.

## 2.2 Customer and stakeholder engagement as part of BAU

### 2.2.1 Drivers

Effective stakeholder, customer and community engagement is essential to achieving our business goals and fulfilling our ‘stewardship’ role as owner and manager of SEQ’s bulk water assets. Engagement is considered critical to our social licence to operate and contributes to building and sustaining trust in Seqwater and our operations.

Engagement encompasses the ‘end to end’ of our operations, including (but not limited to) the following activities.

**Table 2.1** Examples of engagement activities

Our planning	Capital	Day to day operations
The Water Security Program, including the Drought Response Plan and demand forecasts	Dam improvement upgrades, plant and pipeline projects (including community impacts during construction)	The way we manage floods and communications regarding dam releases
Recommissioning of the Western Corridor Recycled Water Scheme and the use of recycled water	Investment in catchment repair, which is generally not on our own land	The management of water supply issues, such as burst pipes and water quality problems
The decision on the next new water source/s	Investment in the maintenance, improvement and extension of recreation facilities	Drinking water prices and the impact on water bills.
Reducing or ceasing recreation activities from storages that may be needed to supply drinking water in a drought.	The rationalisation of our water infrastructure that requires further investment in retailer distributor networks.	
Water for SEQ		

The *South East Queensland Water (Restructuring) Act 2007* also requires us to collaboratively plan with our Retailer Customers to deliver safe, secure and reliable water supply, along with supporting cost-effective operations and promoting the efficient use of, and investment in, water infrastructure.<sup>16</sup> The Code requires the coordination of water system planning with our Retailer Customers, including the establishment of a Joint Working Group.

We have also been (voluntarily) certified against the AS/NZS 9000 and 9001 Quality Management Systems standards, which recognises that “the primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations.”<sup>17</sup> We also follow the IAP2 Quality Assurance Standard, which is a standardised set of best practice principles to ensure consistency and quality in engagement processes.

<sup>16</sup> Section 9(1)(g).

<sup>17</sup> AS/NZS ISO 9000. Quality Management Systems – Fundamentals and Vocabulary, section 2.3.1.

## 2.2.2 Implementation

We engage with our customers and stakeholders at many levels across the organisation, with the core responsibility for the development, implementation and maintenance of our customer and stakeholder engagement strategy sitting in our Customer, Strategy and Planning Group.

To meet the needs and expectations of our customers we have established a new function, our Commercial and Customer Direction Team. This brings greater focus and coordination to our engagement with our three groups of customers: commercial and industrial customers, Retailer Customers and irrigators.

This team brought together:

- existing Regulatory and Commercial capability
- irrigation functions including regulatory and operational capability
- a newly established Retailer Customer Service management capability.

Our reinvestment in building this new integrated capability demonstrates our commitment to our strategic objectives of truly engaging and collaborating with our customers at all levels. We believe that this investment will help drive long term efficiencies in our relationships with these customer groups and ensure that we meet their growing and evolving needs.

To support this capability we have developed our Stakeholder, Customer and Community Engagement Guideline. This is an important resource for staff across the business to guide a clear and consistent approach to engagement. It will continue to be reviewed on an annual basis as part of continuous improvement.

We provide some key examples of our engagement activities below to illustrate the nature and scope of these activities across the business and how they influence what we do.

## 2.3 Engagement initiatives

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We are currently reviewing our Retailer Customer engagement model to ensure that it continues to operate effectively, minimises any engagement overlap and meets the evolving needs of our Retailer Customers. This section provides examples of significant engagement activities we have been undertaking, however this is not exhaustive.

### 2.3.1 The SEQ Water Service Providers Partnership (CEO Forum)

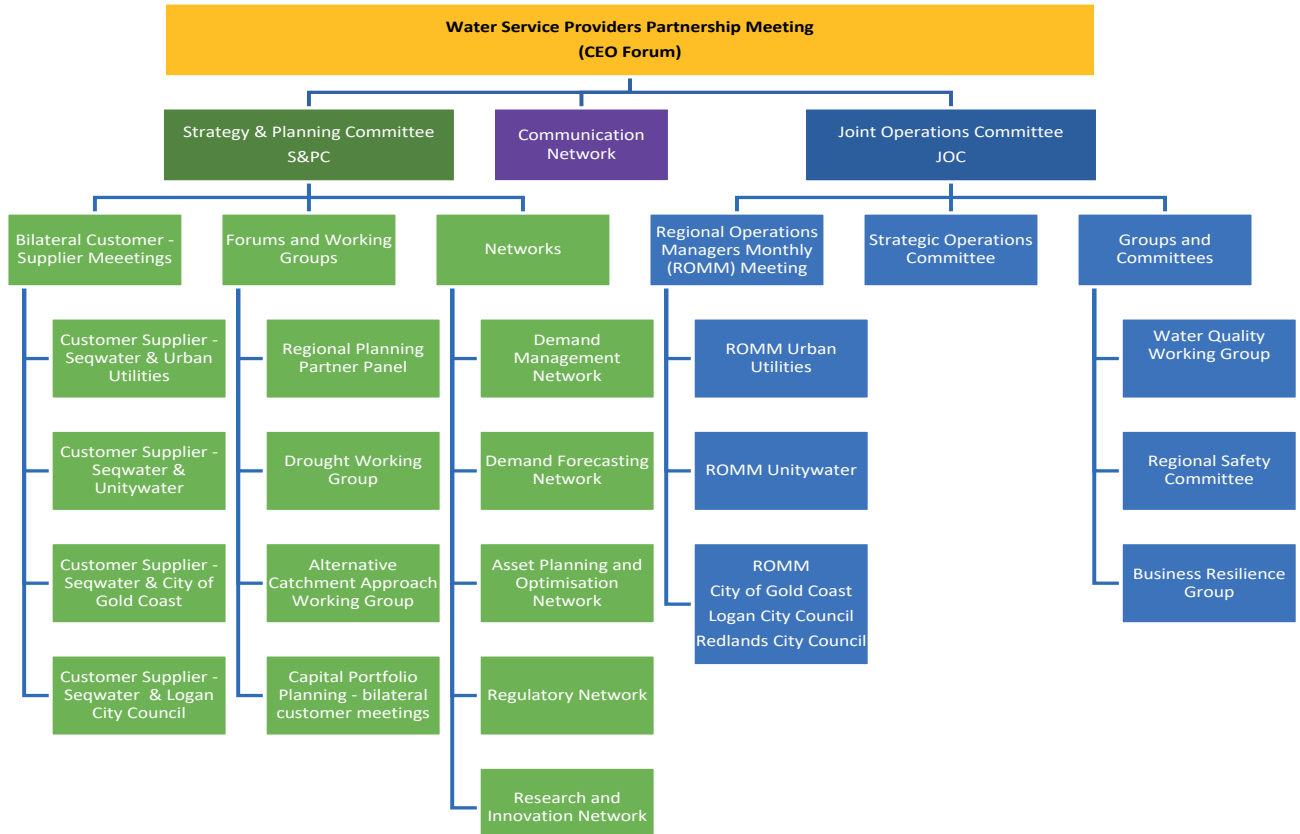
#### 2.3.1.1 The CEO Forum

In 2013, we joined with our Retailer Customers to establish the SEQ Water Service Providers Partnership (the CEO Forum). The CEO Forum's purpose is to provide coordination and integration of strategy, planning and operational activities across SEQ to deliver the best value water service for the SEQ community.

The CEO Forum meets quarterly and supports engagement through a wide range of matters via a number of forums. Some of the key forums are shown below.



**Figure 2.1 CEO Forum Structure**



The Strategy and Planning Committee and the Joint Operations Committee are made up of executive leaders from Seqwater and each of our Retailer Customers, to participate in collaborative planning and operational activities. The Strategy and Planning Committee also gives effect to the coordinated planning requirement under the Code, which requires the establishment of a Joint Working Group.

To further its purpose of effecting coordinated planning, the Strategy and Planning Committee has developed a vision and strategic directions (see below), which have been supported by all CEOs.

Integrated and collaborative water cycle management across South East Queensland ensures water and sewerage services are reliable, affordable, and sustainable both now and in the future.

People trust an aligned water industry to deliver outcomes that are best for the region and support the health and wellbeing of people, enhance local waterways and catchments, manage uncertainties, and drive economic prosperity for the region. The benefits and costs of an integrated and regional approach to water management are realised, pursued and shared equitably between stakeholders.

### OUR VISION

STRATEGIC DIRECTION 1

People understand, value and feel connected to water.

STRATEGIC DIRECTION 2

Water drives a thriving, sustainable economy.

STRATEGIC DIRECTION 3

Collaboration across organisations and sectors drives integrated, regional water outcomes.

STRATEGIC DIRECTION 4

Water services (raw water, drinking water, sewerage, recycled water, stormwater) are delivered safely, affordably and sustainably across South East Queensland's diverse communities.

STRATEGIC DIRECTION 5

Water services support and enhance quality of lifestyle and health and wellbeing of people.

STRATEGIC DIRECTION 6

South East Queensland's catchments and ecosystems are healthy and enhanced by effective water management across jurisdictional boundaries.

To achieve the vision and strategic directions a number of strategic initiatives have been developed, including Key Possible Projects. The Water for SEQ Plan is one of these projects. There is also a strategic initiative to develop a collaborative and strategic approach to community engagement, education and messaging around regional water issues and outcomes. Partnership activities and outcomes are published in an Annual Report, which is available on our website.<sup>18</sup>

### 2.3.1.2 Water for SEQ Plan

The Water for SEQ Plan aims to be a key pillar of future regional plans to support projected population growth through the provision of sustainable, adaptable and integrated water and sewerage services that meet community needs. It will also be another important input into our asset management framework and investment decision-making.

As part of the development process, engagement has occurred with a number of Queensland Government Departments, as well as Healthy Land and Water. Further engagement will progress over the coming months as Water for SEQ is set to progress in more detail from 1 July 2021. Our Retailer Customers have commenced engagement with their Councils. Workshops will also commence to bring a broader range of stakeholders together. The first Water for SEQ Plan is due for completion in 2023.

### 2.3.1.3 Other strategic initiatives

The Strategy and Planning Committee has identified a number of other strategies initiatives that will enable us to proactively prepare for, and respond to, the challenges and opportunities we face. They will all ultimately impact the provision of bulk water services and the costs of those services. Examples of some of these initiatives include:

- coordinated drought preparedness and response;
- the development of water quality service standards;
- the SEQ Water Supply System Regional Secondary Disinfection Optimisation Project;
- demand forecasting and data sharing through data collection, analytics and reporting;
- coordinated catchment management activities; and
- ongoing collaboration around community education through the Water Futures Program (a Key Possible Project).

#### Box 2.1 Water Quality Service Standards Initiative

Seqwater and Unitywater collaborated to define the current and desired water quality service standards for the provision of bulk drinking water from Seqwater. There were existing stringent water quality requirements, such as the Australian Drinking Water Quality Guidelines. We wanted to do more to better define the quality required at the point of handover, and to include additional water quality parameters.

The current service standard includes water quality parameters and monitoring points not previously part of any regulatory or contractual requirement. The desired service standard represents a judgement on the water quality consumers desire and are willing to pay for and requires some additional investment and/or operational changes to achieve. Where there is a gap between the current service standard and desired service standard, an improvement plan describes how the gap will be addressed.

These standards will be used:

- to drive towards the optimal balance of water quality and cost for consumers
- as a basis for our operational and capital planning.

Seqwater is now working with the other Retailer Customers to progress this work. Completing desired service standards for all Retailer Customers will provide the basis for us to identify commonalities across SEQ and work towards implementing least cost solutions.

18 <https://www.seqwater.com.au/waterforlife>

The Regional Planning Partner Panel also recently launched a monthly ‘Lunch and Learn’ initiative for all SEQ Water Service Provider staff. These informal sessions provide an opportunity for employees from all partner organisations to learn from each other, share what is happening at each business and discuss how the organisations can work together for our common goals.

## 2.3.2 Water Security Program Consultation

We have also been undertaking consultation to inform the current review of the Water Security Program. This has been with our Retailer Customers, individuals, community groups and the Government. Our engagement activity as part of this program includes:

- **Water Security Program scenario planning:** this was a unique collaboration between more than 50 regional stakeholders, including local and state government, the CSIRO, climate change experts, academics, industry leaders, and representatives of the water service providers to develop plausible visions for SEQ’s future. Six plausible futures were developed.
- **Regional Planning Partner Panel:** a panel comprising representatives from Seqwater and our Retailer Customers with the purpose of providing strategic advice in the development of the Water Security Program.
- **Community feedback:** the two main areas of focus for this engagement have been: (1) the options assessment framework; and (2) community expectations in times of severe drought. Our engagement on drought response encompassed water targets, water efficiency, liveability and willingness to pay. We also undertook a quantitative study of 2,500 SEQ households to further understand the value to them of avoiding severe demand reductions under extreme drought.

## 2.3.3 Community engagement on key activities and projects

In addition to engaging with the community on matters such as planning and drought response, we also engage with the community on some of our major capital works projects. For these major projects we provide information and updates on our website. We also undertake direct consultation. As we do for all significant dam upgrades, in the case of the Somerset Dam Upgrade<sup>19</sup> we are establishing Community Reference Groups, which are open to:

- residents, including those near the site as well as upstream and downstream of the dam;
- businesses, including local businesses, tourism operators and industry, employment and training services;
- the community, including recreation users, environment and/or heritage groups and health and community service providers.

Any interested party can also provide feedback on this project via our website.

### Box 2.2 The Water Future Program

In 2018 we launched the Water Future Program. The program is a diverse range of initiatives that help build ‘water wise’ communities—communities that are connected to water, participate in decision-making and take action to manage water sustainably. We recognise that community support for future investment decisions is critical to optimising the long-term cost to the community of water security. This support is best built by educating the community on water sustainability and security.

The Water Future Program answers questions from the community about the region’s future water security. It also seeks to understand community values towards future water sources. Engagement has occurred via community forums, asset tours, community organisation presentations and briefings and school education.

Information we have gathered from this engagement is also feeding into our review of the Water Security Program.

<sup>19</sup> Refer: <https://www.seqwater.com.au/project/somerset-dam-upgrade>

## 2.4 Retailer Customer engagement for the 2023-26 price review proposal

### 2.4.1 Objective

The goal for customer engagement in the development of a regulatory proposal is to be able to secure agreement on as many aspects of this proposal as possible. However, and noting the experience of other regulated businesses elsewhere, securing agreement from all relevant customers and stakeholders is not always feasible, recognising that organisations have their own business objectives and governance structures. The uncertainty of the timing and scope of the Referral Notice also means that customer engagement on pricing is largely limited to consultation rather than collaboration.

The focus of our Retailer Customer engagement in the lead-up to this regulatory proposal has been sharing our thinking on key pricing-related matters and listening to what our Retailer Customers have to say. Our Retailer Customers have provided invaluable perspectives not only in terms of impacts on their own organisations, but ultimately, the impacts on the end customer. Managing these end customer impacts has been a primary driver of our Bulk Water Pricing Principles (refer section 1.5.4).

### 2.4.2 Process

Commencing in late 2019, we have conducted a series of Retailer Customer workshops that have focussed on a number of key topic areas relating to bulk water pricing. These workshops were held at officer level and allowed for the open sharing of views and information. The outcomes of the workshops were documented and circulated for feedback. This included highlighting the areas of common ground, as well as those matters where there may have been more divergent views.

A summary of the workshop we have undertaken is presented in Table 2.2. The gap between the first and second workshop series reflects the deferral of the QCA's bulk water pricing investigation.

**Table 2.2 Retailer Customer workshops**

Date	Topics
2019 Workshops	
7 June 2019	The first workshop agreed the purpose, scope and process. This resulted in the workshop series being focused on the following key topic areas:
5 July 2019	The Price Path Debt
8 August 2019	Tariff structures
6 September 2019	Implementation issues for tariff reform
25 October 2019	Bulk water pricing principles
	Drought pricing
	Concealed leaks and prudent discounts.
	In the final workshop we were joined by representatives from Government, to whom we presented the key issues and findings from the workshop series.
2020/21 Workshops	
8 December 2020	Overview and update of submission process
	Seqwater's current approach to sustainability
	Feedback from Retailer Customers on their current pricing environment and their priorities for the QCA pricing investigation.

Date	Topics
19 January 2021	Submission process update Issues and pricing impacts associated with the Price Path Debt repayment Implementation of a drought tariff
8 February 2021	Submission process update Implementation of a drought tariff Concealed leaks and prudent discounts
17 March 2021	Submission process update Implementation of a drought tariff Concealed leaks and prudent discounts

While this work was shared and discussed at executive level, including as part of the CEO Forum, there were no formally agreed positions on all matters. Some Retailer Customers did endorse the Bulk Water Pricing Principles.

The main areas of focus in these workshops were the following.

- **Bulk Water Pricing Principles.** As discussed section 1.5.4, one of the outcomes of the workshops was a proposed set of Bulk Water Pricing Principles. This emerged from discussions around key pricing matters, including the potential impact on bulk water prices once the Price Path Debt has been repaid. The clear feedback that we received from our Retailer Customers is the importance of avoiding price shocks, whether they are increases or decreases. This not only impacts affordability but can also undermine trust<sup>20</sup>.
- **Tariff Reform.** Based on the issues and risks associated with our fully volumetric tariff, we discussed tariff reform. The feedback from our Retailer Customers at the workshops was that there is no appetite for this for the next regulatory period.
- **Drought pricing.** We explored the concept, design and implementation of drought pricing. Our Retailer Customers also highlighted a number of issues relating to application and implementation, which will be discussed in our supplementary submission addressing our proposed drought allowance.
- **Concealed leaks and prudent discounts.** The application of discounts for concealed leaks was discussed to address customer hardship, as well as the ability to apply prudent discounts to large users to avoid inefficient network bypass. These are discussed further in Chapter 11.

Giving the timing of the release of the final Referral Notice, we were unable to undertake further consultation on key aspects of that Notice, in particular, the drought allowance.

In terms of other key engagement activities that are of direct relevance to this review:

- Our capital expenditure forecasts are based on our APMP (refer Chapter 5). We consult with our Retailer Customers in the development of our capital program, including as part of the annual review and update of our APMP. This focusses on key projects that of most relevance to each Retailer Customer and the region they service.
- Our demand forecasts are developed in consultation with the Demand Forecasting Network, which sits under the CEO Forum. This network comprises representatives from Seqwater and our Retailer Customers. As will be outlined in Chapter 3, our demand forecasts for this submission are based on our 2019 Demand Forecast Assessment, which have been formally endorsed by our Retailer Customers as part of the Demand Forecasting Network.

<sup>20</sup> This was also a finding of the Water Services Association of Australia's 2019 Customer Perceptions Survey.

# 3 Demand forecast: normal operating conditions

- Under the Referral Notice, our demand forecast for the purpose of setting bulk water prices is to be set within the range (low-high) published in the Water Security Program. As the third version of the Water Security Program (WSP2022) will be finalised in March 2022, this will be the relevant published Water Security Program for this purpose.
- Our proposed demand forecast under normal operating conditions for the 2023-26 regulatory period is based on the medium demand profile in our 2019 Demand Forecast Assessment. This is our current expectation of the demand forecast that will be contained in the updated WSP2022. This forecast has been developed in consultation with our Retailer Customers as part of the Demand Forecasting Network and has been formally endorsed by them as part of that network.
- We consider that this forecast is the most appropriate one to apply for regulatory pricing purposes because it reflects our expectation of the 'most likely' demand profile over the regulatory period.
- We propose that to the extent that the QCA considers it necessary to adjust that forecast, this is limited to within plus or minus 2% of our proposed forecast. Recent experience shows that while demand forecasting is inherently uncertain, actual demand has been within plus or minus 3% of our medium demand profile in the 2017WSP.
- Our proposed demand forecast under drought operating conditions for the purpose of setting our drought allowance is discussed in section.

## 3.1 Referral Notice

Consistent with the Referral Notice for the 2018-21 regulatory period, the Referral Notice for the 2023-26 regulatory period provides that:<sup>21</sup>

“For the purpose of recommending Prices, forecast demand is to be as provided by Seqwater for normal operating conditions and must be within the range (low-high) published in the SEQ Water Security Program.”

Clause (C)(3) allows the QCA to make adjustments to Seqwater’s demand forecasts “to ensure it is appropriate for regulatory pricing purposes” provided it remains within the range (low-high) in the published Water Security Program. This reflects recommendations made by the QCA in its 2018 Final Report.

## 3.2 Key issues in determining our demand forecast

The reliance on the Water Security Program demand forecasts is not contentious. This reflects the importance of consistency with those forecasts, which are ultimately submitted to Government as part of the regulatory review of the Water Security Program. It also acknowledges the extremely detailed and robust methodology that is used to develop them, which is also done in consultation with our Retailer Customers. Recognising the challenges in projecting future demand, we continue to develop and improve our methodology over time, having regard to a myriad of factors and influences.

There are two important matters that arise in complying with the Referral Notice, being:

- the relevant 'published' Water Security Program for the 2023-26 regulatory period; and

<sup>21</sup> Clause (C)(2).



- the appropriateness of the proposed forecast for regulatory pricing purposes.

These are discussed below.

## 3.3 Water Security Program forecasts

### 3.3.1 The 2019 Annual Demand Assessment

In addition to being required to review our Water Security Program at least every five years, we are also required to undertake an annual assessment of whether the projected regional average urban demand remains current.<sup>22</sup> In October 2019 we completed a detailed review of the demand forecast - the 2019 Annual Demand Forecast Assessment. Undertaking a more detailed review at that time was also part of the preparation of WSP2022.

The 2019 Annual Demand Forecast Assessment was developed in consultation with our Retailer Customers through the Demand Forecasting Network, where we discuss core demand drivers, trends and influences. It is formally endorsed by our Retailer Customers as part of that network and was also peer reviewed by an external expert. It incorporated a number of improvements to our approach in preparation for the updated WSP2022, including extending the planning horizon to 50 years, incorporating the most recent Government population growth projections and including a new sector-based demand model to enable us to better consider regional demand growth.

We use this demand forecast across all of our business planning. In addition to long-term water security planning, the shorter to medium-term forecasts inform:

- the bulk water price path
- drought response planning and monitoring
- the development of our Bulk Water Supply Network Annual Operating Strategy
- capital works planning
- capital investment gateway process support
- our annual revenue and operating budget forecasts.

The forecasts are developed on the assumption of fair weather.

At the current time, our expectation is that the 2019 Annual Demand Forecast Assessment will be the demand forecast contained in the WSP2022 (version 3 of the Program). As WSP2022 will be published in March 2022 prior to the commencement of the next regulatory period, this will be the relevant 'published' Water Security Program for the purpose of the Referral Notice.<sup>23</sup> This is particularly important in setting the demand forecast as it will need to reflect the most recent forecast.

The Water Security Program forecast is established as a range from low to high. As would be expected, the difference between the low and high forecast increases with time, reflecting the increasing uncertainty of forecasting demand well into the future. The medium demand profile is the 'most likely' demand profile and is used for planning purposes under the Water Security Program.

In 2020 we undertook a review of the 2019 Annual Demand Forecast, in consultation with our Retailer Customers. While updated inputs resulted in a marginally higher long-term forecast (3% by 2065), actual observed demands did not vary significantly enough from the 2019 Annual Demand Forecast to warrant adopting a new forecast. We therefore consider that the demand forecasts in the 2019 Annual Demand Forecast Assessment are the most appropriate basis for setting our bulk water prices under normal operating conditions for the 2023-26 regulatory period.

<sup>22</sup> *Water Regulation 2016*, part 6, clause 79.

<sup>23</sup> Under section 359 of the *Water Act 2000* the Water Security Program must also be reviewed "if there is a significant change in any matter affecting, or likely to affect, the achievement of the desired level of service objectives for water security."

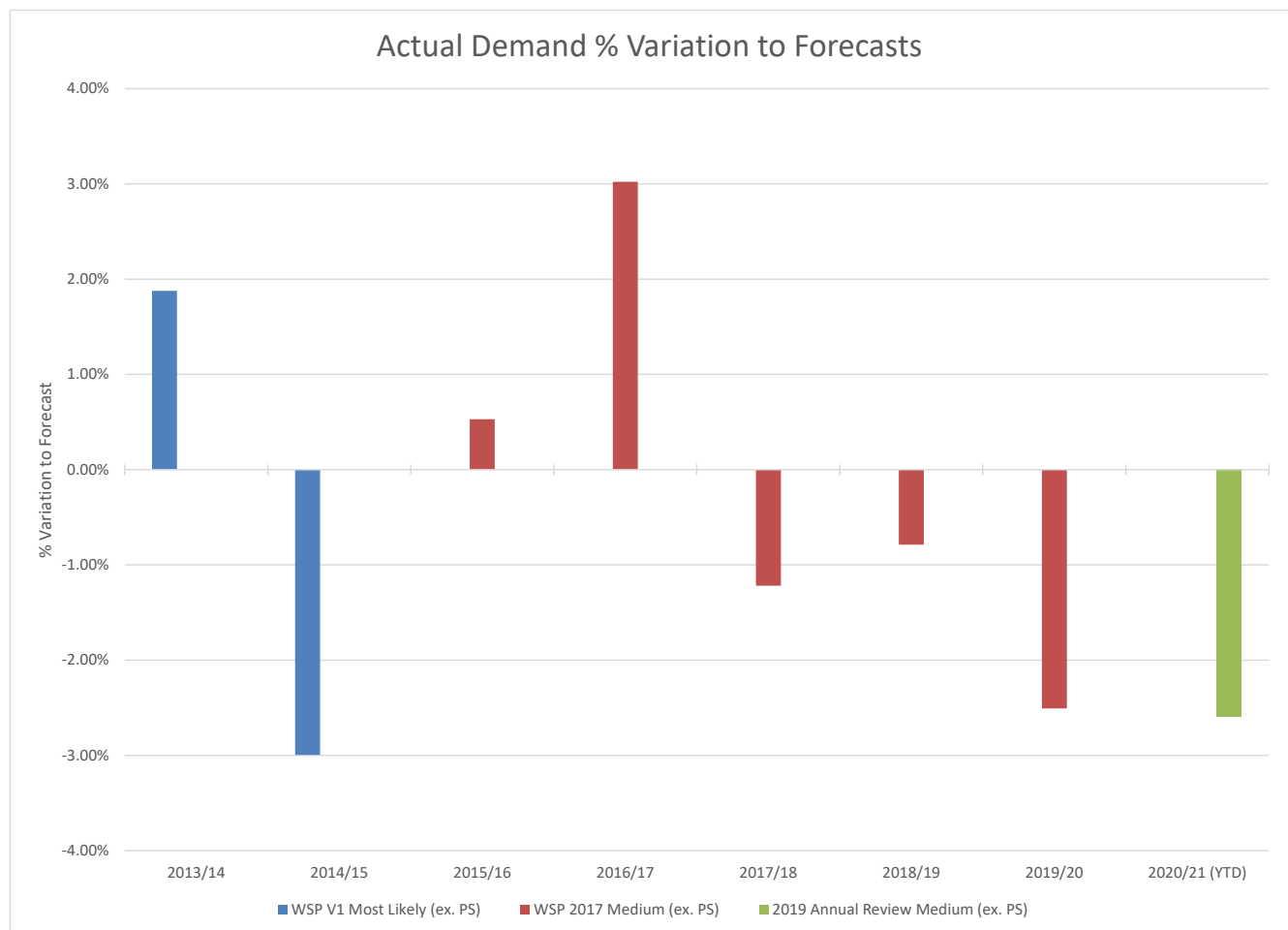
### 3.3.2 Variability in our demand forecasts

To provide context, Figure 3.1 shows the variability in actual demand relative to the medium forecast in the WSP2017 since 2017-18. For the 2020-21 comparison, we have substituted the updated forecast under the 2019 Annual Demand Forecast Assessment, which is to the end of April 2021.

Actual demand has been below the WSP2017 forecast between 2017-18 and 2019-20, which has reflected a number of factors, including weather conditions. Actual (year to date) demand in 2020-21 has still also been below the updated forecast in the 2019 Annual Demand Forecast Assessment. There are a number of reasons why actual demand has been lower than the revised forecast, including the uncertainties associated with the impact of COVID-19, along with wetter conditions in the Spring and Summer seasons.

Overall, this also shows that the difference between actual demand and the medium demand profile in the WSP2017 is not material and has remained under 3% in the last four years. Given the uncertainty associated with demand forecasting this degree of error is not considered to be significant. Indeed, given the inherent uncertainties in forecasting demand and the range of factors that can influence it over time<sup>24</sup>, the fact that actual demand has largely tracked within a plus or minus 3% band around that medium profile demonstrates that the model is fit for purpose.

**Figure 3.1** Difference between actual demand and medium forecast (%)



Looking forward, the revised medium profile in the 2019 Annual Demand Forecast Assessment is 3.8% lower than the WSP2017 forecast for the first five years, before converging with that forecast towards 2026-27. This further reinforces why this is the more appropriate forecast to rely on for the 2023-26 regulatory period.

24 More significant demand impacts would be observed, for example, under Medium Level Water Restrictions.

## 3.4 Establishing the forecast for regulatory pricing purposes

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We must select a demand profile within the range in the published Water Security Program that is appropriate for regulatory pricing purposes. In its 2018 Final Report, the QCA commented that:<sup>25</sup>

“Demand forecasts should be as accurate as possible, particularly given that prices are fully volumetric. If demand forecasts are significantly different from actual demand, then Seqwater will under- or over-recover its required revenue over the next regulatory period. An under-recovery of revenue will put upward pressure on prices beyond the next regulatory period. It is also important that demand forecasts are reasonable, so that the prudent and efficient level of costs can be assessed.”

What is ‘appropriate for regulatory pricing purposes’ therefore involves a number of considerations.

### 3.4.1 Pricing impacts

One of our Bulk Water Pricing Principles for this review is for prices “to be stable into the future, avoiding large increases or decreases” (refer section 1.5.4) This is particularly challenging given our fully volumetric tariff structure because this exposes us to material revenue under- or over-recoveries if demand varies from forecast.

The key issue here is price changes between regulatory periods. Starting prices in the next regulatory period will be influenced by outcomes over the most recent regulatory period. Going forward, as the QCA highlights, the goal is to minimise the need for large revenue true-ups at the end of the next regulatory period. We agree with the QCA that this requires an accurate – or at least a ‘most likely’ – volume forecast.

In terms of the potential impact of demand changes on prices in the next period, one of the most significant sources of uncertainty is drought. This impacts our costs as well as the revenue we are able to recover. In the 2023-26 regulatory period, the ability to levy a drought allowance has the potential to mitigate some of the between-period price impacts by bringing the recovery of some of these costs and foregone revenue forward.

It is also important to note that it is not just demand forecasts that will influence the need for between-period price adjustments. As explained in section 8.1.2.2, one of the key drivers in the current period has been the difference between actual and forecast inflation.

### 3.4.2 Cost forecasts

The demand forecast will also influence our prudent and efficient operating and capital expenditure forecasts. Overall, the majority of our costs are fixed. For our variable operating expenditure, we align these forecasts to our proposed demand forecast (refer section 6.3.4). We use our Water Security Plan forecasts to inform our annual operating strategy and set our annual operating budgets.

As explained in Chapter 5, our capital expenditure forecasts are based on our APMP. Any new or recent assessments undertaken to develop the APMP are based on the medium forecast in the 2019 Annual Demand Forecast Assessment. We may need to make necessary adjustments to our proposed capital program for the 2023-2026 regulatory period to the extent that our demand forecast for bulk water pricing purposes is materially different to the forecast used to develop the APMP. For example, this could impact the timing of some projects.

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<sup>25</sup> Queensland Competition Authority (2018). p.9.

## 3.5 Proposed demand forecast: normal operating conditions

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### 3.5.1 Proposed demand forecast

For the 2023-26 regulatory period we have based our demand forecast under normal operating conditions on the medium demand profile in the 2019 Annual Demand Forecast Assessment. This is currently our most likely expectation of demand over the 2023-26 regulatory period under normal operating conditions. This forecast has been developed in consultation with our Retailer Customers as part of the Demand Forecasting Network and has been formally endorsed by them as part of that network. Our current expectation is that this will be the demand forecast in the WSP2022, which is due for publication in March 2022, just prior to the commencement of the 2023-26 regulatory period.

As noted above, while our Water Security Program demand forecasts have a long horizon (consistent with the water security planning framework), the medium demand profile reflects our view of 'most likely' demand in the short-, medium- and long-term. Our medium demand profile in the Water Security Program has been within 3% of actual demand over the last four years, which is considered a low degree of error in this context.

We consider that our proposed demand forecast is appropriate for regulatory pricing purposes for the following reasons:

- at the current time, it represents our best estimate of the most likely demand profile for the 2023-26 regulatory period, with a view to minimising the degree of mismatch between forecast and actual demand (under normal operating conditions);
- our variable operating expenditure forecasts are aligned with this demand profile;
- our capital expenditure forecasts from the APMP are also based on this demand profile.

We have not presented these forecasts in this submission because the WSP2022 is yet to be finalised and then is subject to approval by the Queensland Water Supply Regulator. However, these forecasts are developed within a robust regulatory framework and in consultation with our Retailer Customers.

### 3.5.2 Proposed band for QCA adjustments

To the extent that the QCA considers it necessary to make further adjustments to this forecast, we propose that this is limited to within plus or minus 2% of our proposed forecasts. This proposed 2% band is based on two main considerations. First, any variations outside of this band could compromise our objective of maintaining more stable prices between the current regulatory period and the 2023-26 regulatory period. Second, variations between actual demand and our medium demand forecast over the current period have remained below 3%.

We have therefore also presented a band for our variable operating expenditure forecast that corresponds to the demand forecast being set within plus or minus 2% of our proposed forecast (refer section 6.3.4). Any adjustments made to the demand forecast within that band will not impact our proposed capital program.

### 3.5.3 Demand forecast: drought operating conditions

For the purpose of estimating our drought allowance under section (C)(17) of the Referral Notice, we will be proposing an adjusted demand forecast for drought operating conditions. This will be addressed in our supplementary submission.

# 4 Return on capital, inflation and taxation

- We have provided indicative forecasts of our proposed rate of return and inflation in what remains a highly uncertain financial and economic environment.
- We have estimated our proposed Weighted Average Cost of Capital (WACC) based on the benchmark return that would be required by an investor in bulk water supply infrastructure and having regard to relevant regulatory precedent. We have also received independent expert advice from Frontier Economics. It is also noted that the QCA is currently reviewing its preferred approach to estimating the rate of return.
  - This approach results in an indicative return on equity of 7.47%.
  - Under the Referral Notice our return on debt continues to be based on QTC's estimate of our actual cost of debt. This estimate varies in each year of the 2023-26 regulatory period. For the first year (2022-23) the estimate is 4.52%.
  - The risk free rate and return on debt will be updated in our response to the QCA's Draft Report based on prevailing market interest rates.
  - Based on the expert opinion of Frontier Economics we remain of the view that the most appropriate value of gamma is 0.25. However, having regard to our Bulk Water Pricing Principles, to mitigate price impacts for the 2023-26 regulatory period we are proposing to adopt the QCA's preferred value of 0.47 from the current regulatory period.
- The Referral Notice requires expected inflation to be forecast using inflation swaps. We have provided forecasts for each year of the price path using this methodology.
- We have estimated an allowance for taxation, consistent with the Referral Notice. The two main issues that need to be addressed are:
  - The correct definition of income: We have estimated our allowance based on total income, inclusive of revenue received to recover the Price Path Debt. This is consistent with standard commercial and regulatory practice.
  - The treatment of accumulated tax losses: The advice received from Frontier Economics is that tax losses from the years prior to 2018-19 should not be recognised in calculating our tax allowance. However, we have recognised these losses in order to reduce our tax allowance for the 2023-26 regulatory period. We have done this to mitigate price impacts for the 2023-26 regulatory period, based on our Bulk Water Pricing Principles.

## 4.1 Introduction

This chapter sets out our proposed rate of return, inflation forecast and taxation allowance.

Our rate of return and inflation forecast are expected values that will depend on the current outlook for the economy and financial markets. Forecasts for parameters such as the risk free rate, return on debt and inflation are more sensitive to these conditions. The values for these parameters contained in this proposal for the 2023-26 regulatory period are therefore 'placeholder' estimates that will be updated prior to the QCA's Final Report, using the same methods and data sources that have been used to derive the indicative estimates. Consistent with the current regulatory period, under the Referral Notice our return on debt is based on an estimate of our actual cost of debt as advised by QTC.

## 4.2 Referral Notice

Section (C)(10) provides that our return on capital will be determined as follows:

- (a) "for assets (including working capital), a benchmark weighted average cost of capital (WACC) return, using a cost of equity as determined by the Authority for the equity component, and Seqwater's cost of debt as advised by Queensland Treasury Corporation (QTC) for the debt component; and

- (b) if the cost of equity calculation determined by the Authority is lower than Seqwater’s cost of debt, the rate of return applying to assets should be Seqwater’s cost of debt as advised by QTC.”

In terms of inflation, section (C)(9) prescribes that for the 2023-26 regulatory period, expected inflation must be forecast “using the 40-day average of the forward inflation rate for that year implied by traded zero-coupon Australian inflation swaps”.

Section (A)(2)(iii) also provides for prices to be consistent with an allowance for tax “where applicable”.

## 4.3 Context: economic and financial market outlook

As the domestic and global economies seek to emerge from COVID-19-related disruptions, the economic and financial market outlook remains highly uncertain. In its May 2021 Statement on Monetary Policy, the Reserve Bank of Australia observed that the Australian economy is “transitioning from recovery to expansion phase earlier and with more momentum than anticipated”<sup>26</sup>. This has been attributed to the “unique” features of the COVID-19 pandemic and the nature of the Government’s policy response. The global economic outlook is also improving as vaccinations roll out and additional fiscal support is provided, although it is expected to be “incomplete” in many economies and particularly varied in the near-term, as the risk of second (or subsequent) wave outbreaks remains.

Given the uncertainty underpinning the economic recovery, the RBA has considered two different scenarios for the outlook for the Australian economy.<sup>27</sup> The upside scenario is accelerated growth if households increase spending by more than expected. The downside scenario is a weaker growth trajectory if households consume their income and/or prior savings more slowly than expected. It notes other sources of uncertainty to the economic outlook although sees these risks as more balanced.

Overall, this highlights an uncertain economic outlook between now and the finalisation of our rate of return and inflation forecast that will be used to determine final prices for the 2023-26 regulatory period. Stronger than expected growth could see an increase in interest rates (both the risk free rate and cost of debt) as well as inflationary pressures. Conversely, the risks of a weaker recovery, as well as further economic shocks, remain. On the current trajectory the RBA stated that it will not increase the cash rate until inflation is “sustainably” within the 2% to 3% target range, which “is unlikely to be until 2024 at the earliest.”<sup>28</sup>

## 4.4 Return on capital

Our proposed rate of return has been informed by recent QCA precedent, as well as relevant regulatory precedent in other jurisdictions. We have also sought advice from Frontier Economics (Frontier) on key elements of the rate of return. Overall, our aim is to ensure that our proposed rate of return is commensurate with the commercial return that an investor would require for an efficient bulk water service provider with a similar scale and scope of operations to Seqwater.

### 4.4.1 The QCA’s Rate of Return Review

The QCA has commenced a review of its rate of return approach (the Rate of Return Review). Its anticipated date for completion of this review is June 2021. We lodged a submission in response to the QCA’s Request for Comments paper, which highlighted a number of the issues relevant to the rate of return to apply for our 2023-26 regulatory period. The QCA published its Draft Report on the 28th of June 2021. We have therefore not had time to consider this for this revenue proposal.

The QCA has highlighted the importance of determining an appropriate rate of return. This has a significant impact on allowed revenue and prices for most regulated businesses that must invest large amounts of capital to deliver their services, including Seqwater. As the QCA states:<sup>29</sup>

26 Reserve Bank of Australia (2021). Statement on Monetary Policy, May 2021. p.71.

27 Reserve Bank of Australia (2021). p.72.

28 Reserve Bank of Australia (2021). p.4.

29 Queensland Competition Authority (2020a). Request for Comments: Rate of Return Review, November. p.3.



- “If the rate of return is too low, it could have a chilling effect on investment leading to inadequate capacity and/or service quality and potentially reduce revenues to the point where the financial sustainability of a regulated entity is endangered.
- Conversely, if the rate of return is too high, a regulated entity could be encouraged to over-invest, leading to inefficient capital allocation in the economy and higher prices that could reduce consumer welfare or discourage investment in dependent markets.”

This highlights the importance of setting a required rate of return that is commensurate with, but no more than, the commercial return that an investor would require in the market.

## 4.4.2 Return on equity

### 4.4.2.1 Risk free rate

As stated in its Request for Comments paper, the QCA has more recently reverted to using a ten year term to maturity for the risk free rate “as we considered that it would better provide for an overall return that was commensurate with the commercial and regulatory risks involved for regulated entities that invest for the life of the asset (long-term).”<sup>30</sup> We support this view.

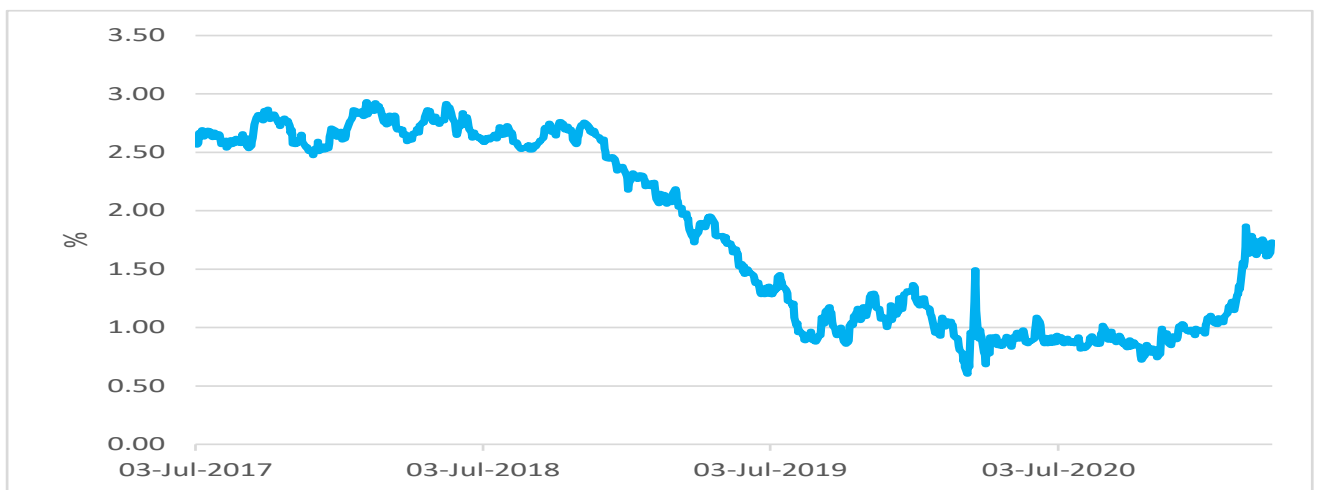
The rationale for the application of a ten year risk free rate is explored in more detail in the accompanying report from Frontier (refer Attachment 1). Frontier demonstrates that the assumption of a ten year term to maturity is consistent with the approach adopted by other regulators, corporations, investors, market participants and independent expert valuation professionals and is also recommended in leading textbooks. Aligning the allowed rate of return to the return that commercial market investors require from a regulated business is consistent with the objectives of incentive regulation. That is, it will incentivise efficient investment in, and utilisation of, the regulated assets.

Frontier also highlights how the assumption of a ten year to term to maturity for the risk free rate maintains internal consistency with the term assumptions underpinning estimates of the market risk premium (MRP).

#### 4.4.2.1.1 Current environment

The risk free rate fell to historically low levels following the COVID-19 crisis. The following chart shows the ten year risk free rate since the commencement of our current regulatory period.

**Figure 4.1 Ten year Commonwealth Government bond yield: 1 July 2017 to 31 March 2021**



Source: Reserve Bank of Australia.

It shows a recent uptick in the ten year Commonwealth Government bond yield, reflecting the current prospects of an economic recovery. As outlined above, those prospects remain subject to considerable uncertainty.

<sup>30</sup> Queensland Competition Authority (2020a). p.16.

The Australian Energy Regulator (AER) is also currently reviewing its Rate of Return Guideline. In a Working Paper released in May 2021, the AER examined the implications of the current low interest rate environment.<sup>31</sup> First, in a historical context (i.e. back to the 1940s) the AER acknowledges that we are in a “low” interest rate environment. Second, it notes the direct link between the fall in Commonwealth Government bond yields (as the proxy for the risk free rate) and the required return on equity as estimated using its preferred methodology.

The AER notes the inherent challenges in estimating the required return on equity given it is not directly observable. The current low interest rate environment has not prompted it to question the use of the Commonwealth Government bond yields as the proxy for the risk free rate. However, given the recent movements in interest rates it is now proposing to reconsider the assumed relationship between the yields on Commonwealth Government bonds and the expected return on equity. For example, could it be possible that the return expectations of equity investors have not declined to the same extent. It states:<sup>32</sup>

“We are aware that there are differing views on return on equity and whether it moves with interest rates (these can be considered in real and nominal terms). One view is that the expected return on equity moves on average with interest rates. Another view is that the expected return on equity on average may not change with movements in interest rates. There are also a range of possibilities between these two extremes, or it may even be the case that expected returns on equity could decline, on average, by more than interest rates. At the current time when interest rates have declined significantly, we consider it is important to review the available material on this relationship again. Any approach we adopt must be capable of being implemented in a manner that is sufficiently robust, transparent and evidence based to be suitable for regulatory purposes.”

The AER intends to address this as part of its return on equity working paper, which is due for release in July 2021.

The QCA's approach to estimating the return on equity similarly assumes a direct relationship between Commonwealth Government bond yields (as the proxy for the risk free rate) and the required return on equity. The veracity of this assumed relationship is highly important to ensuring that regulated rates of return align with investor expectations. This is considered further below in the context of the MRP.

#### 4.4.2.1.2 Indicative estimate

For the purpose of this regulatory proposal, our indicative ten year risk free rate estimate is 1.72%, which is the 20 day average of the ten year Commonwealth Government bond yield to 31 March 2021. This will be updated prior to the QCA's Final Report based on prevailing market rates.

#### 4.4.2.2 Market risk premium

The accompanying report by Frontier (refer Attachment 2) addresses the estimation of the MRP. Frontier highlights the importance of a MRP estimate that is appropriately responsive to market conditions. Long-run historical estimates of the MRP as seen as the ‘anchor’ for the estimate as they reflect long-run average market conditions. They are more statistically precise given the large data sets, however have the disadvantage of not reflecting current market conditions. This is especially pertinent in the low interest rate environment we are currently experiencing.

Frontier analyses the QCA's recent approach to estimating the MRP and demonstrates that in practice, it has remained fixed at 6.5% rather than responding to the changing market conditions.

Frontier therefore recommends estimating the MRP by applying equal weights to long-run historical average estimates and forward-looking estimates based on current market data. It does this by applying equal weight to the Ibbotson and Wright (or total market return) approaches. These approaches are also seen as representing two ends of a spectrum, where:

- the Ibbotson approach assumes that the MRP is constant, meaning that the required return on equity moves one-for-one with changes in government bonds yields; and
- the Wright approach assumes that the real required return on equity is constant, so that any change in the risk free rate is assumed to be offset by a change in the MRP.

31 Australian Energy Regulator (2021). Rate of Return and Cashflows in a Low Interest Rate Environment, Draft Working Paper, May.

32 Australian Energy Regulator (2021). pp.5-6.

This is also consistent with the approach applied by Independent Pricing and Regulatory Tribunal (IPART), where its default MRP estimate is determined by giving equal weights to the current and long term historical average MRP.

Recognition of these two ends of the spectrum is also consistent with the observations made by the AER in its recent working paper, as outlined above. The fundamental issue here is how investors' return expectations vary with changes in the risk-free rate. That is, do they vary one for one (as the Ibbotson approach assumes), remain constant (the Wright approach) or sit somewhere in between (that is, investors may make some adjustment but not one-for-one with the risk free rate).

Frontier considers that as "the truth lies between these two extremes" it is appropriate to take the mid-point of this range. At the current time, this results in a MRP estimate of 7.75%.

The Ibbotson and Wright approaches have been referred to by the QCA in its estimates of the MRP. Frontier also demonstrates why the Cornell, Seigel and survey methods that have also been referred to by the QCA should not be used to inform the MRP.

#### 4.4.2.2.1 Proposed estimate

We consider that the Frontier estimate is the best estimate of the expected MRP at the current time. It is objective, robust and transparent. It also gives appropriate recognition to the uncertainty as to how changes in the risk free rate influence investors' return expectations.

Consistent with the QCA's current approach, we have rounded this down to the nearest half percent interval (noting that the QCA's preferred approach is currently subject to review). This results in a proposed MRP of 7.5% for the 2023-26 regulatory period.

#### 4.4.2.3 Beta

Our asset beta estimate of 0.4 has remained stable over the QCA's recent pricing investigations. We note that beta estimation is imprecise and estimates are prone to statistical error. We would only propose a change to our beta estimate if there was sufficient evidence to suggest that the systematic risk of the efficient benchmark firm had changed, having regard to evidence from appropriate comparators. This also promotes regulatory predictability and certainty.

We note that the QCA increased the asset beta applied to Gladstone Area Water Board (GAWB) for the 2020-25 pricing period, from 0.4 to 0.45, having regard to the beta estimates of the sample of comparator firms. The QCA commented that this was higher than the asset beta applied to Seqwater for the 2018-21 regulatory period, although it noted our higher equity beta, reflecting our higher gearing. The key issue however is whether a different asset beta should be applied. The QCA concluded that:<sup>33</sup>

"While GAWB may bear some residual (long-term) demand risk, we nevertheless consider GAWB is likely to be exposed to a broadly similar level of risk overall as typical water utilities, and therefore water utilities provide an appropriate comparator group for estimating GAWB's beta."

In other words, it didn't adjust GAWB's asset beta for systematic risk factors that might be specific to that business.

We also engaged Frontier to review our beta estimate (refer Attachment 3). Frontier developed an independent 'best' estimate of beta based on its preferred approach. Applying this approach and having regard to relevant market evidence, including data from listed water utilities, it considered that if any changes were to be made to Seqwater's beta, it would be increased, with the evidence supporting a re-levered equity beta of at least 0.9.

It also determined an estimate by applying the same approach used by the QCA's consultant, Incenta, in previous reviews of our beta. Frontier found that in applying Incenta's previous approach, there was no material change in either the point or upper bound estimates of beta for the comparator sample. While there were slight differences they were not statistically significant. Frontier therefore considered that these changes were more likely attributable to random statistical estimation error, rather than changes to systematic risk.

<sup>33</sup> Queensland Competition Authority (2020b). Final Report, Gladstone Area Water Board Price Monitoring 2020-25, Part A – Overview, May, p.82.

Frontier also noted a number of improvements that could be made to the approach that has been adopted by Incenta. These include:

- consideration of other reference days
- use of total debt, instead of net debt, to calculate the gearing of comparators
- removing the tax rate term for the de-levering and re-levering equations
- inclusion of illiquidity and data quality filters
- adjustments to raw betas to correct statistical bias
- expanding the comparator sample to include other relevant businesses.

#### 4.4.2.3.1 Proposed estimate

The evidence from Frontier’s report does support enhancements to the methodology previously used by Incenta to produce a more robust beta estimate. While Frontier’s independent view supports a higher beta for Seqwater, in the interests of regulatory certainty and predictability, we are proposing no change to our asset beta of 0.4. Using the QCA’s preferred Conine approach and assuming gearing of 60%, this equates to an equity beta of 0.766. This is the same as the equity beta recommended by the QCA for the 2018-21 regulatory period.

### 4.4.3 Gearing

Across regulated businesses and industries, gearing assumptions for the purpose of setting the required rate of return have remained very stable over time.

We engaged Frontier to review whether this assumption remains appropriate for the 2023-26 regulatory period (refer Attachment 4). The focus of Frontier’s review was other regulated water and energy networks. Frontier concluded that the 60% gearing assumption has become the standard estimate applied to regulated water businesses in Australia and remains appropriate for Seqwater. It also distinguished the circumstances supporting a higher level of gearing for Seqwater compared to GAWB.

#### 4.4.3.1 Proposed estimate

We propose to maintain a gearing estimate of 60% for the 2023-26 regulatory period.

### 4.4.4 Return on debt

Under the Referral Notice, our return on debt is as advised by QTC. QTC has supplied the following return on debt estimates for the purpose of estimating our WACC (refer Attachment 5).

**Table 4.1 QTC estimates of the actual cost of debt (weighted)**

2022-23	2023-24	2024-25	2025-26
4.52%	4.34%	4.15%	4.02%

Debt raising costs are currently not applicable to Seqwater while we apply QTC’s actual cost of debt, noting that QTC’s rates are inclusive of its administration fee. These rates will be updated in our response to the QCA’s Draft Report.

### 4.4.5 Gamma

In its 2018 Final Report the QCA recommended a gamma of 0.47. This is consistent with its preferred approach to estimating the value of gamma, which has been estimated at 0.484 in more recent reviews. This will also be examined as part of the QCA’s Rate of Return Review.

Gamma is the product of two inputs – the distribution rate and the utilisation rate (or the value of distributed franking credits, also referred to as theta). The QCA’s value of gamma reflects a distribution rate of 0.88 and a value of franking credits of 0.55.

As submitted to the QCA's Rate of Return Review, in estimating the distribution rate we consider that the QCA should define clearly whether the benchmark efficient entity is a large multinational. If that is not the case, then the QCA should estimate the distribution rate by giving consideration to the proportion of credits distributed by unlisted firms in Australia.

The value of franking credits has been particularly contentious in economic regulation. The accompanying report from Frontier (refer Attachment 6) maintains its position that this should be estimated using market values. It examines the QCA's preferred redemption/utilisation approach and highlights why this does not result in a value of gamma that aligns with the way it is valued by investors.

Our required rate of return should be commensurate with the return that investors in regulated assets (and other infrastructure) would require in the market. The value of gamma should be set in the same way. The higher the assumed value of franking credits, the lower the return that investors are assumed to require from dividends and capital gains (and vice versa).

As explained by Frontier, the value of franking credits must reflect the rate at which investors would forego dividends and capital gains in order to receive imputation credits. The redemption or utilisation approach currently applied by the QCA does not have regard to the actual utilisation of those credits or how they are valued by investors in the market. This market value is best estimated using dividend drop-off analysis. Frontier maintains that the best estimate of the market value of franking credits is 0.35.

Assuming a distribution rate of 0.7, Frontier's best estimate of gamma using the market value approach is 0.25. This was the value previously adopted by the AER (when it last adopted a market value of gamma) and is also applied by IPART.

#### **4.4.5.1 Proposed estimate**

Frontier's methodology and estimate is consistent with our preferred approach, as submitted in response to the QCA's Rate of Return Review. However, we also acknowledge that a lower value of gamma will materially increase our tax allowance for the 2023-26 regulatory period, and hence prices.

Having regard to our Bulk Water Pricing Principles, including maintaining stable and predictable prices, we are therefore proposing to retain the value of gamma recommended by the QCA for the 2018-21 regulatory period. This value is 0.47.

As with other aspects of our regulatory proposal, we have had to make a specific trade-off between what we consider is the most appropriate approach, having regard to commercial and economic principles, and customer price impacts. It is important that we are clear and transparent as to where these trade-offs are being made.

#### **4.4.6 Proposed WACC**

Based on the above, our proposed Weighted Average Cost of Capital (WACC) for the 2023-26 regulatory period is shown below. This is compared to the WACC recommended by the QCA for the 2018-21 regulatory period. As the QTC cost of debt varied in each year of the regulatory period, this has been shown for the 2021-22 year, which is compared against the QCA's recommended WACC for the last year of the 2018-21 regulatory period.

We propose that the QCA uses this indicative WACC to provide a price path to 2027-28.

**Table 4.2 Indicative WACC**

Parameter	QCA Recommended 2020-21	Proposed estimate 2022-23
Risk-free rate	2.14%	1.72%
Market risk premium	7.00%	7.50%
Gearing	60%	60%
Asset beta	0.4	0.4
Debt beta	0.11	0.11
Equity beta	0.766	0.766
Return on equity	7.50%	7.47%
Return on debt	5.15%	4.52%
Debt raising costs	n/a	n/a
Nominal vanilla WACC	<b>6.09%</b>	<b>5.70%</b>
Gamma	0.47	0.47
Corporate tax rate	30%	30%

The risk free rate and return on debt will be updated in our response to the QCA’s Draft Report based on prevailing market rates.

We have also calculated our working capital requirement for the 2023-26 regulatory period using the approach used in the 2018-21 pricing investigation. As allowed for in the Referral Notice, we have applied a return on that working capital using our proposed WACC.

## 4.5 Inflation

In the Referral Notice, the QCA is required to estimate expected inflation for the 2023-26 regulatory period using inflation swaps (i.e. a market based approach). This is to be based on “the 40-day average of the forward inflation rate for that year implied by traded zero-coupon Australian inflation swaps”.

Our estimate of expected inflation was derived over the 40 trading days ending 31 March 2021. For each trading day, we derived the inflation rate for the period starting on the sample trading day and ending on 30 June for years 2022 through 2027 through interpolation of traded zero-coupon Australian inflation swaps, obtained from Bloomberg. We then decomposed these rates to obtain forward rates for each of the years ended 30 June 2023 to 2027. These forward inflation rates were then averaged over the 40 trading days in the sample to derive our inflation forecasts.

This resulted in indicative estimates of expected inflation as shown below.

**Table 4.3 Indicative expected inflation estimates**

2022-23	1.89%
2023-24	2.10%
2024-25	2.32%
2025-26	2.38%
2026-27	2.40%
2027-28	2.43%

These estimates are indicative because they will be updated in our response to the QCA’s Draft Report based on prevailing market rates.



## 4.6 Taxation

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### 4.6.1 Background

The conventional building block approach delivers annual revenues that have a net present value equal to the value of the asset (assuming that appropriate parameter inputs are adopted). This is what the QCA refers to as its 'NPV=0' principle. Under this approach, the steady state situation is that the benchmark efficient firm earns a profit each year and pays some tax on that profit. For this reason, the benchmark efficient corporate tax allowance is a standard element of the regulatory building block approach.

Historically, we have incurred losses. This has arisen because:

- we have a high level of gearing relative to comparable entities, resulting in high levels of interest expense; and
- we have recovered less revenue than our efficient costs for a variety of reasons, including lower-than-forecast demand and inflation.

The 2018-21 regulatory period was the first period in which a regulatory tax allowance was considered for Seqwater (under the terms of the Referral Notice). The Referral Notice for the 2023-26 regulatory period similarly provides for an allowance for tax "where applicable".

When determining our tax allowance for the 2018-21 regulatory period, the QCA determined that the allowance would be calculated:

- on the basis that the total taxable income was equivalent to the MAR only, rather than the MAR plus the revenues related to recovery of the Price Path Debt - we had proposed that approach as a means of managing price impacts; and
- by netting off accumulated tax losses from previous years.

We have revisited those two approaches below.

### 4.6.2 Matters to be addressed for the 2023-26 regulatory period

In considering these questions we commissioned independent advice from Frontier, which is provided in Attachment 7.

#### 4.6.2.1 Income used for the tax calculation

The first question is whether our tax allowance should again be computed based on our MAR alone (consistent with the current regulatory period), or based on our total taxable income, which also includes the revenues required to repay the Price Path Debt and associated interest costs. As noted above, the main reason we proposed to limit this to the MAR (rather than total revenues) for the 2018-21 regulatory period was to manage the consequent price impacts for that period.

In principle, the tax allowance should reflect the regulated firm's total taxable income. This is because an efficient benchmark firm's tax obligation would be determined by reference to its total taxable income, rather than just a subset of its total income (i.e. the MAR alone). Hence, for that business to be made whole, the regulatory tax allowance must be set at a level that would cover its entire expected tax obligation - not just a portion of that tax obligation. This assessment is confirmed in the advice received from Frontier.

This issue is potentially very material in terms of our allowable revenues. We estimate that due to the size of the forecast recovery of the Price Path Debt, the allowed revenues over the 2023-26 regulatory period would be \$237 million higher if the regulatory tax allowance is determined on the basis of total taxable income rather than the MAR alone.

### 4.6.2.2 Application of accumulated tax losses

The second question is whether accumulated tax losses from previous years should be netted off against the regulatory tax allowance for the 2023-26 regulatory period.

This is the approach that the QCA and most other Australian regulators adopt on the grounds that if the tax benefits of a tax loss are not realised by the asset owner in year in which those losses arise, they would be carried forward and realised in future years by reducing future tax obligations. Since the regulatory tax allowance is supposed to reflect the tax obligations of an efficient benchmark firm, then the tax allowance should be reduced commensurately to reflect the reduction in the tax obligation.

We asked Frontier to assess whether it would be appropriate to adopt such an approach in our circumstances. The appropriateness of that approach will depend on the origins of the tax losses recorded in the regulatory model. Consistent with the principles of incentive regulation, this should reflect the past tax losses of the efficient benchmark firm rather than actual losses.

The Referral Notice for the 2018-21 regulatory period was the first time that the QCA was directed by Government to consider a tax allowance for Seqwater, consistent with standard regulatory approaches. Prior to this period, there was no consideration of corporate taxes. Our rate of return was also set to equal our return on debt rather than allow for a standard WACC.

Frontier's conclusions are that the Referral Notice for the 2018-21 regulatory period drew a clear 'line in the sand' in terms of the treatment of our accumulated tax losses. It considers that given a tax allowance was not applied up to that point, any tax losses accumulated in the years up to and including 2017-18 should not be applied to offset our tax obligations from 2018-19 and beyond. It states that the effect of the exclusion of corporate taxes from previous pricing investigations:<sup>34</sup>

“...is equivalent to assuming, for the purposes of setting regulatory allowances, that the benchmark efficient entity was exempt from corporate taxation prior to FY 2019, so no regulatory allowance for corporate tax was required. The notion of tax losses has no economic meaning for an entity that is exempt from corporate taxation. Hence any tax losses generated prior to FY 2019 by the regulatory model should be ignored.”

Any tax losses created from 2018-19 should be carried forward and taken into account in subsequent years for the purpose of setting our tax allowance. This is because the benchmark efficient firm is assumed to be liable for the efficient costs of corporate tax. To ensure recovery of our prudent and efficient costs, we are therefore entitled to recover an allowance for those costs.

### 4.6.3 Proposed treatment

We consider it important to ensure that our tax liability is based on the correct definition of income. This is our total income, inclusive of revenue received to repay the Price Path Debt. We recognise that this will result in a higher tax allowance however consistent with the move towards a more standard regulatory framework for Seqwater, this is consistent with the situation that would be faced by any business in practice (including any other regulated business).

Frontier's advice in relation to the treatment of accumulated tax losses also recognises the clear transition from a more Government policy-driven approach to a standard regulatory framework. This would imply limiting the recognition of tax losses to the years 2018-19 and beyond. The QCA did recognise the losses from the prior years in the 2018-21 price investigation.

While we agree with Frontier's interpretation, we are proposing to continue to recognise losses from the years prior to 2018-19 (as well as future years) in calculating our tax allowance. The main reason for this is that recognition of these prior losses will reduce our tax allowance and mitigate price impacts, having regard to our proposal to move to the most appropriate definition of income for tax purposes.

<sup>34</sup> Frontier Economics (2021). Regulatory Corporate Tax Allowance. June. p.5.

While adopting both of Frontier’s recommendations has clear merit, this will result in higher prices for the 2023-26 regulatory period. Of the two issues, ensuring our tax liability is calculated based on total income – rather than a subset of that income - is considered the more important priority to address. It is also forward looking and an approach that we consider to be consistent with standard regulatory practice. We acknowledge that the tax loss issue requires a retrospective examination of past Government policy decisions and the intent of those decisions.

Applying that approach, our proposed tax allowance for the 2023-26 regulatory period is shown below.

**Table 4.4 Proposed Tax Allowance 2022-23 to 2025-26 (\$m, nominal)**

	2022-23	2023-24	2024-25	2025-26
Proposed Tax Allowance	4	67	86	108

# 5 Capital expenditure

- During 2023-26 we intend to invest \$877 million in renewing and upgrading existing assets and investing in new assets to service our Retailer Customers or manage risks.
- The largest drivers of our capital expenditure are meeting our legal and regulatory obligations and renewing our infrastructure to ensure it continues to meet the needs of our Retailer Customers and their end customers.
- During 2023-26 we will:
  - Continue to upgrade Seqwater's referable dams to comply with Queensland Regulatory Guidelines on Acceptable Flood Capacity for Water Dams;
  - Improve water quality for SEQ through the upgrade of two water treatment plants;
  - Improve the flood resilience of our networks, to protect end customers from water supply outages during flood events;
  - Increase water security and quality for the Beaudesert Water Supply Zone by delivering a pipeline that connects the standalone system to the SEQ Water Grid;
  - Maintain the Gold Coast Desalination Plant and other manufactured water assets to secure the water supply in SEQ;
  - Upgrade a proportion of disparate and obsolete field technology, increasing the reliability of our water networks; and
  - Continue providing recreational access to our land for the enjoyment of end customers.
- While delivering all these key outcomes for the Retailer Customers, we will also continue to deliver value through improved asset planning and capital delivery processes.
- We will continue to develop our Retailer Customer centric planning processes, delivering prudent and efficient capital investments that our Retailer Customers want, need and value.

## 5.1 Summary of proposal

In section 1.1 we provided an overview of the SEQ Water Grid and the assets we use to deliver bulk water services. To manage these assets appropriately and deliver the best value for money for our Retailer Customers, we have adopted a new risk-based prioritisation framework and made significant improvements to our asset management and capital planning processes.

The principles of this approach are to ensure our capital plan, known as the Asset Portfolio Master Plan (APMP), is:

- prudent
- efficient
- financially sustainable
- deliverable.

Our APMP is focused on:

- renewing critical aging assets at the most efficient time in the asset lifecycle; and
- delivering capacity enhancement projects at the optimal time.

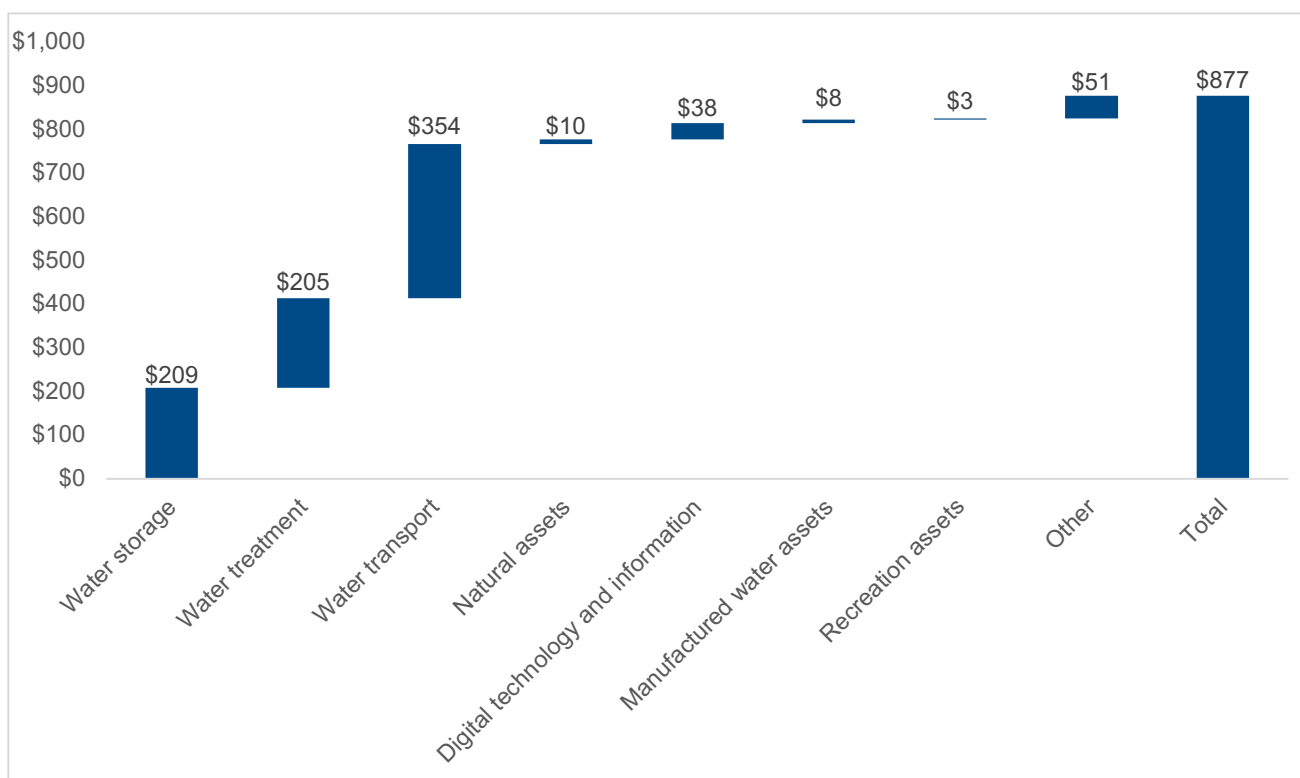
We undertook a strategic review of our capital planning and delivery processes in 2020-2021, taking into consideration:

- industry best practices and alignment with industry standards;
- what our Retailer Customers need and expect from us;
- our corporate strategy; and
- independent expert advice including the recommendations made by KPMG and the QCA during the 2018 price investigation.

The improvements we implemented are set out in section 5.6.5. The result is prudent, efficient and well-planned capital investments to meet our legal, regulatory, corporate and Retailer Customer objectives. These improved processes underpin our 2021-22 and 2023-26 capital forecasts set out in this chapter. We have also implemented learnings from 2018-21 investments (discussed in section 5.4).

During 2023-26 we intend to invest \$876.8 million in renewing and upgrading existing assets and investing in new assets to service the Retailers or manage supply and compliance risks (Figure 5.1).

**Figure 5.1 2023-26 capital forecast by strategic asset group (\$m nominal, as capitalised)**



Our biggest investments for 2023-26 are in water storage, water treatment and water transport. We are investing in dam safety (in line with legislative and regulatory requirements), meeting our water quality obligations and securing the water supply for SEQ. We will achieve this by:

- upgrading our dams in a risk-prioritised way;
- continuing to work with our Retailer Customers to understand their water quality and security risks;
- increasing the connectivity of our network by building the South West Pipeline to connect the Beaudesert Water Supply Zone to the rest of the SEQ Water Grid; and
- improving the flood resilience of our assets to protect end customers from water supply outages during flood events.

We will also be investing in digital technology and information, to ensure our network is as reliable as possible, and that our business decisions are based on real-time, accurate data wherever possible.

We are focussed on delivering benefits for our Retailer Customers efficiently and effectively. These benefits and key projects are set out in section 5.7. While delivering these key outcomes we will also continue to deliver value through improved asset planning and capital delivery processes.

We will continue to develop our Retailer Customer centric planning processes, delivering prudent and efficient capital investments that they want, need and value.

## 5.2 Referral Notice

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For the purpose of establishing our opening RAB as at 1 July 2022, the Referral Notice requires the QCA to assess our capital expenditure from 1 July 2017 to 30 June 2022 for prudency and efficiency. Section (C)(7)(a) states that:

“The review should focus on items that would have a material impact rather than matters which are likely to have a minor or inconsequential impact in total. Any findings of the Authority against the prudency and efficiency of projects sampled should not be extrapolated to un-sampled projects.”

This is addressed in sections 5.4 and 5.5.

The Referral Notice also requires the QCA to assess our capital forecasts for prudency and efficiency from 1 July 2022 to 30 June 2028 (section (C)(5)). This is addressed in section 5.7.

In its 2018 investigation the QCA defined its assessment of prudency and efficiency in the following way:<sup>35</sup>

“We consider capex to be prudent if the expenditure can be justified by reference to an identified need or cost driver, such as a legal or regulatory obligation. We consider capex to be efficient if it is the least cost option to deliver on an appropriately defined scope and standard of works.”

In section 5.7 below we set out the capital expenditure required to meet:

- legal and regulatory obligations (compliance)
- growth (demand for services)
- improvement of services, and
- the renewal of existing infrastructure

in the least cost ways to meet the need and manage the risks we need to address. This assessment is made based on the least cost method over the life cycle of the asset in question, and in the long-term best interests of our Retailer Customers, and includes full compliance with all legal and regulatory requirements, as well as prudent assessment of risks.

This price investigation will assess our capital expenditure on an “as capitalised” basis, not an “as incurred basis”, meaning the forecasts set out in this chapter represent the project costs as assets are commissioned. This is particularly evident in the 2022-23 and 2024-25 financial years where a number of assets will be commissioned which inflates our capital forecast for those years (on a capitalised basis). This is discussed further in section 5.7. We have provided an estimate of forecast actual data as well as “as capitalised” data on individual projects discussed throughout this chapter to give a more accurate representation of what is being spent and delivered in each period, and across the life of the project. This forecast data shows that we have smoothed the program on an as incurred basis, in line with the objectives of our capital planning processes – prudent, efficient, prioritised and financially sustainable.

In line with previous practice, where a project will be commissioned outside of the 2023-26 period, the project will not be considered as part of this price investigation.

## 5.3 Nominal dollars

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All expenditure referred to in this chapter is in nominal dollars. 2020-21 data is forecast data as at 2 June 2021. Actual 2020-21 financial data will be provided to the QCA after the end of financial year and auditing processes occur.

Values presented throughout may not add due to rounding.

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35 QCA, Seqwater Bulk Water Price Review 2018–21, March 2018, p. 39



## 5.4 2018-21 expenditure

During the 2018 bulk water price investigation we proposed, and the QCA recommended, capital expenditure of \$490.7 million across 2017-18 to 2020-21 (the 2018-21 period).

During 2018-21 we have delivered \$406.4 million in capital investments, \$84.3 million below the QCA recommendation, although this difference falls to \$51.3 million with the inclusion of the natural assets and grid support costs that are also proposed to be capitalised .

This is partly due to improvements we have made to our asset management and capital delivery processes, and strong management of some major projects that have delivered significant savings.

Also contributing to the differences between what was allowed and what we spent were prudent re-phasing of projects to ensure the most efficient options were analysed, selected and delivered, as well as some unforeseen expenditure not known at the time of our 2018 submission. These are discussed in sections 5.4.3 and 5.4.4 . A comparison between our actual capital expenditure and the QCA's recommended forecast is summarised below.

We also reclassified approximately \$25.5 million of previously approved capital expenditure to operating expenditure in line with Australian Accounting Standards, which contributed to our underspend in 2018-21. As discussed in section 5.4.5, we are proposing to recover this expenditure through capitalisation into the RAB, consistent with the prior regulatory treatment.

**Table 5.1 Actual capex 2018-21 \$m nominal, as capitalised**

	2017-18	2018-19	2019-20	2020-21 <sup>36</sup>	Total
QCA Recommended	125.1	110.2	87.0	168.4	490.7
Actual Expenditure	89.6	96.0	99.1	121.7	406.4
Difference	-35.5	-14.2	+12.1	-46.7	-84.3

### 5.4.1 Delivering capital more efficiently

During the 2018-21 period we worked more closely with our capital delivery partners and improved our procurement processes to leverage market experience and realise efficiencies.

We improved the commercial acumen of our teams internally so that procurement and construction risks could be assessed more accurately, with more commercial risk taken where the financial benefits could be considerable. This was achieved through improved collaboration, having the appropriately skilled people provide input into planning and evaluation activities, and investing in coaching and mentoring of our more junior delivery staff.

The planning teams have strengthened processes to enhance focus in the early phases of the project life cycle to identify and more accurately define the scope of projects prior to tendering. This has resulted in fewer contract variation claims throughout the contract lifecycle and more accurate cost estimating prior to going to market.

The true value of this is yet to be quantified because most projects where this approach has been utilised are still in the delivery phase. Once projects are complete and close out processes are undertaken an accurate quantification of the cost savings will be calculated. This will be fed into a continuous refinement of this improvement to understand how further cost efficiencies can be leveraged in the future.

In 2018-21, where efficiencies in contractor costs could be leveraged with a slightly higher-risk commercial approach, we mitigated this risk by utilising a small proportion of the construction savings to implement a greater level of internal oversight and management of our contractors to monitor and manage project and delivery risks more closely. This ensured the proposed contract benefits could be realised and maximised as projects progressed.

<sup>36</sup> Estimated forecast of actual capex as at 2 June 2021.

This approach contributed to a \$7 million saving on the Ewen Maddock Dam Upgrade Stage 2A project and also shaped our thinking when planning for the efficient delivery of the Leslie Harrison Dam and Sideling Creek Dam upgrades.

This is a strong outcome for our Retailer Customers and the community, and a process we will continue moving forward. Investing in the skill and capability of our teams is allowing us to take a higher level of commercial risk than we have in the past (without risking quality or reliability of our water supply), and work with our capital delivery partners to ensure benefits for our Retailer Customers.

During 2018-21 we also implemented the Works and Services Standing Offer Arrangement (WSSOA). This arrangement is a pre-qualified supplier panel providing a broader service offering, with improved terms resulting from greater flexibility based on value, risk and complexity. This panel is for works up to \$4 million, across a variety of different engineering disciplines and has contributed to procurement efficiency in 2018-21. Use of panel contracts is common in other industries and produces good value when utilised appropriately. It improves confidence in the outcome by having service providers pre-qualified for key aspects of the works, particularly safety, and also creates efficiencies through the internal procurement processes by removing a large portion of the effort required to establish new contracts.

The Major Projects Group has been established to focus on the planning and delivery of high value and/or high risk projects in line with requirements of Queensland Treasury. This group has been formed with resources experienced in the delivery of major infrastructure projects. This planning and delivery method will ensure the prudence and efficiency of major projects and increase capability across the organisation.

## 5.4.2 Savings on significant projects

During 2018-21 enhanced project management on major projects led to significant savings.

The Leslie Harrison Dam Upgrade and Sideling Creek Dam Upgrade projects were both beneficiaries of strong, efficient procurement practices, close contract management and robust project management which delivered significant savings. These are discussed in sections 5.4.7.1 and 5.4.7.2.

## 5.4.3 Prudent re-phasing of expenditure

During 2018-21 we made prudent decisions to re-phase capital projects to allow for more detailed analysis of options and further investigations to occur prior to selecting a preferred option. This was to ensure sufficient analysis occurred, informed by new and emerging information, and external consultation including market feedback, to ensure the most efficient option was selected.

Some examples of these are discussed below.

### 5.4.3.1 Lake Macdonald Dam Upgrade

The expenditure approved in the 2018 price investigation was a forecast subject to further project development and approval of the detailed business case by the Responsible Ministers.

The detailed business case was approved by our Board in December 2018 and subsequently issued to the Ministers for approval in early 2019. As part of the Ministers' due diligence, an external project review was requested and undertaken in mid-2019.

Following the review we commenced early tenderer involvement and early procurement processes. However during the procurement stage it became evident that the project costs would be significantly higher than the approved budget. The potential cost increase is due to a more thorough understanding of the project, based on the detailed design of the dam wall structures, the construction complexity, and additional risk mitigation activities.

Before proceeding any further with the project, we considered it prudent to re-evaluate the options available to us to resolve the safety risks at Lake Macdonald Dam. The cost estimate at present is \$140 million capitalising in 2025. This sum is included in our 2023-26 forecast but will need to be reviewed as the project progresses through the options evaluation investigation.

### 5.4.3.2 Mt Crosby East Bank Flood Resilience

The East Bank Flood Resilience Program consists of several projects that aim to reduce flood risks to critical bulk water infrastructure at the East Bank Pump Station site in Mt Crosby.

The Mt Crosby East Bank Raw Water Pump Station and Mt Crosby East Bank WTP are two of our most critical assets as they typically supply up to one third of SEQ's water supply needs.

The 2011 flood event highlighted the flood risk associated with the Mt Crosby East Bank Raw Water Pump Station and electrical substation. In addition, the existing Energex substation, which services both the Mt Crosby East Bank Raw Water Pump Station and Mt Crosby East Bank WTP, is now past the end of its serviceable life, having been constructed in the 1940's and being an obsolete voltage (5.5kV). All five transformers are currently being operated at 40% duty by Energex to extend their operational life.

This project has been rephased due to multiple stakeholder engagement requirements, ensuring compliance with Building Queensland's Business Case Development Framework, and delays in negotiating and receiving development approval for the precinct. Our Board approved the detailed business case for the substation and enabling works in May 2020.

This project will now be completed in the 2023-26 period (refer section 5.7.1.3.3).

### 5.4.3.3 Mt Crosby East Bank WTP Filter Upgrade

The Mt Crosby Water Treatment Plant complex consists of two plants, East Bank and West Bank. They treat water from the Brisbane River system, which comprises approximately 50% of our total water allocations. Both water treatment plants are considered critical assets, and they are becoming increasingly important, routinely operating at allocation or capacity limits.

The Mt Crosby East Bank WTP was first commissioned in 1882. The first six filters were built in 1944 to 1946 and are almost 75 years old. The second to fourth stages (a further 14 filters), were built between 1957 and 1967. The mechanical, electrical and control systems including the filter underdrain system of all filters are over 30 years old and have reached end of life.

The filters currently do not conform with standard practice and are incapable of producing the required throughput to guarantee public health.

It was identified during 2018-21 that other work had to be performed before the filtration upgrade could commence. These works included the replacement of a number of very large valves providing the necessary isolation means to perform the filter upgrades safely. With these matters now addressed, and bundled for greater efficiency, this project is currently underway and will further proceed in the 2023-26 period. A recent review of the works schedule has identified an opportunity to overlap some portions of work. This will allow for earlier completion of the works and will realise a cost saving through reduced project overheads, both internal and from the contractor.

### 5.4.3.4 South West Pipeline

Water to the Beaudesert Water Supply Zone is currently supplied from the Beaudesert WTP, an independent system that is not connected to the SEQ Water Grid. The Beaudesert WTP is in poor condition and currently unable to treat sufficient volumes of water during periods of peak demand. Poor water quality in the local catchment also impacts the volume of water able to be supplied by the Beaudesert WTP.

Demand for water has been increasing in this area over time and expected to continue to increase with significant residential and industrial growth projections for the Beaudesert and Logan South areas. To address these volumetric and quality issues, we are connecting the Beaudesert Water Supply Zone to the SEQ Water Grid via a new pipeline, the South West Pipeline.

This project will deliver a 23km pipeline transporting treated water from a future Wyaralong WTP to Beaudesert through Logan City Council and Scenic Rim Regional Council regions. It also includes a 3km long section of pipeline along Bushland Road connecting the proposed future Wyaralong Water Treatment Plan to the existing Logan City Council trunk main transfer system. This is the most cost-effective increase in water supply available to this part of the network and will also increase reliability, reduce water quality issues and increase grid-wide operational security and efficiency.

The project has gone through a robust Independent Peer Review and Stakeholder Assessment which resulted in the business case and project scope being revised to maximise value for money.

The Design and Construct contract for the South West Pipeline was awarded in December 2020, with construction to commence in the second half of 2021. As a result, the project’s commissioning date will now complete within the 2023-26 period. The entirety of the \$108 million budget will now be capitalised in 2023 and is discussed in section 5.7.1.3.1.

### 5.4.3.5 Somerset Dam Upgrade

The Somerset Dam Upgrade is an important part of our dam safety program. As part of the prudent delivery and governance of projects of this size, we are required to seek the Responsible Minister’s approval of our detailed business case (in line with the Queensland Treasury’s Project Assessment Framework).

Part of this process includes review by various government agencies as an additional, and independent, lens of project development and governance. As part of this process, we have worked with government stakeholders to undertake further investigation and optioneering to inform the Somerset detailed business case. These investigations are intended to provide a robust assessment of the potential project benefits, as well as guide Seqwater and stakeholders on important impacts influencing the investment decision.

This work is currently progressing and final options, costs and timeframes for delivery are being developed, with the current timeframe for completion being outside the 2023-2026 period.

## 5.4.4 Expenditure brought forward or unforeseen

While some expenditure has been re-phased or deferred to the next period, some additional investment occurred during the 2018-21 period that could not be foreseen. Approximately \$44 million for specific key projects was brought forward or occurred in the 2018-21 period that was not anticipated at the time of the 2018 submission. Material projects are set out in Table 5.2 and discussed further below.

**Table 5.2 Unforeseen capex in 2018-21 (\$m nominal, as capitalised)**

Projects	Actuals 2017/18 - 2020/21 (\$m)_
Sparkes Hill Reservoir Roof Replacement	13.5
Beaudesert WTP Storage Upgrade	7.1

### 5.4.4.1 Sparkes Hill Roof Replacement

Sparkes Hill Reservoir 2 stores 18% of the Seqwater supply system storage capacity. The roof structure failed in December 2018, with a section of the roof structure collapsing into the reservoir.

The rectification works and roof structure rehabilitation were considered emergency works due to the criticality of this infrastructure and the risk to quality and reliability of supply so in January 2019, we engaged SMEC Australia Pty Ltd to undertake a detailed engineering assessment into the underlying causes of the roof collapse and provide remedial options to address the structural failure and various risks.

Following the commencement of work and associated internal inspections, it was found that:

- the roof membrane had numerous defects and there was widespread cracking on the topping slab leading to leaks;
- two crews of 12 construction workers would be required over a three and a half month period working six days per week (almost five times the original estimate);
- there was significant displacement of u-plank joints requiring more material to be removed;
- considerable works were required to reinstate the topping slab according to design; and
- there was widespread spalling of the bearing surface of the u-planks.

We identified that there would be an opportunity to harness efficiencies by undertaking work concurrently to rectify the structural and the legacy issues, thereby only requiring that the reservoir be taken offline just once.

Due to the level of urgency brought about by the roof collapse and uncertainty around structural integrity of the roof, the decision was made to engage design and construction contractors who had intimate knowledge of the reservoir from a previous project along with a construction firm who were able to mobilise to site immediately.

A robust procurement strategy was developed to ensure value for money. This strategy included externally facilitated strategic risk workshops, and a procurement strategy options workshop, where we tested:

- delivery model options
- project characteristics and risk
- sourcing considerations
- analysis and evaluation of procurement and delivery model options.

Contractors were engaged following this process and work commenced on site on 24 July 2019. Practical completion was achieved on 26 June 2020, \$800,000 below the final project budget of \$14.3 million, at a cost of \$13.5 million.

#### 5.4.4.2 Beaudesert Water Treatment Plant Storage

The Beaudesert WTP storage upgrade was not sufficiently developed at the time to include in the 2018 submission but was carried out in 2018-21 at a cost of \$7.1 million, progressing the overall water supply and security program of works for the South Logan and Beaudesert areas.

### 5.4.5 Reclassification of capex as opex

Also contributing to our underspend in the 2018-21 period is the reclassification of natural assets capital budgets, as operating expenditure in line with Australian Accounting Standards. This saw approximately \$19.5 million of approved capital expenditure reclassified as operating expenditure (this is explained further in section 6.3.3.4).

In preparing our 2023-26 capital expenditure forecast we have followed the Australian Accounting Standards for capitalisation. For natural assets expenditure in the 2018-21 period, we are still proposing to recover this via capitalisation into the RAB, consistent with the prior regulatory treatment.

**Table 5.3 Natural assets expenditure 2018-21 (\$m)**

	2017-18	2018-19	2019-20	2020-21
Natural Assets	6.5	7.3	5.8	6.0

Our proposal also includes an estimate for 2020-21 natural assets expenditure, which will be updated during the QCA's bulk water price investigation following finalisation of financial actuals.

### 5.4.6 Reclassification of opex as capex

Both the GCDP and the Southern Regional Water Pipeline (SRWP) have been used in facilitating capital projects, by supplementing and transporting water respectively as part of the grid response to major plant upgrades and maintenance (this is explained further in section 5.7.1.6).

These grid support costs, totalling \$7.9 million, are currently reported as operating costs but we are proposing to recover them through capitalisation into the RAB.

**Table 5.4 Grid support expenditure 2018-21 (\$m)**

	2017-18	2018-19	2019-20	2020-21
GCDP	1.4	3.3	2.6	0.3
SRWP	0.1	0.2	0.3	0.2
Total Grid Support	1.5	3.5	2.9	0.5

Our revenue proposal also includes an estimate for 2020-21 grid support costs, which will be updated during the QCA's bulk water price investigation following finalisation of financial actuals.

We are not currently forecasting any further grid support costs associated with capital projects over the period 2023-2026.

## 5.4.7 Top five projects

Of the top five projects delivered in 2018-21, we delivered a combined saving of \$13.9 million against the QCA's recommended allowances (excluding expenditure for Sparkes Hill Roof Replacement that was not foreseen at the time of the 2018 price investigation).

This is a 20% delivery efficiency and largely attributable to the \$8.3 million saving achieved on the Leslie Harrison Dam Upgrade Stage 1 and \$6.9 million on the Sideling Creek Dam Safety Upgrade Stage 1. These savings are shown in Table 5.5 below.

**Table 5.5 Top five projects 2018-21 (\$m nominal, as capitalised)**

	QCA 2018 (\$m)	Year	Capitalised (\$m)	Year
Leslie Harrison Dam Upgrade Stage 1	29.26	2021	21.24	2019
Sideling Creek Dam Safety Upgrade Stage 1	19.55	2021	12.66	2020
Sparkes Hill Roof Replacement	0.00	N/A	13.51	2020
North Pine WTP Sludge Upgrade	10.90	2019	12.20	2018
Petrie WTP New Supply Connection	10.28	2018	10.03	2018

### 5.4.7.1 Leslie Harrison Dam Upgrade

During the 2018- 2021 period we successfully delivered two high priority dam safety upgrades. The Leslie Harrison Dam Safety Upgrade Stage 1 and the Sideling Creek Dam Safety Upgrade Stage 1 were undertaken to achieve compliance with the Queensland Dam Safety Regulations and satisfy the ALARP principle, as two of our highest priority safety risks.

The QCA approved \$29.26 million to carry out the Leslie Harrison Dam upgrade Stage 1. We successfully achieved the outcomes and delivered this project for \$21.24 million, a cost saving of \$8.03 million, due to the contract model (a single contractor for both this project and the Sideling Creek Dam Safety Upgrade Stage 1 was nominated), and innovative solutions identified by the contractor during construction and excellent management of the project.

### 5.4.7.2 Sideling Creek Safety Upgrade

Sideling Creek Dam Safety Upgrade Stage 1 was also completed in the 2018-21 period, being one of our highest risk dams identified in the Portfolio Risk Assessment.

The QCA approved a total budget of \$19.5 million for this project in 2018 but the project was successfully delivered in 2020 for a total cost of \$12.7 million, a cost saving of \$6.9 million due to strong procurement practices, close contract management and robust project management.

In addition to the contract model, we delivered savings through our approach to managing costs and outcomes during the construction phase which included:

- The use of pre-construction risk workshops with the contractor to highlight key risks and to implement critical monitoring and tracking procedures;
- Internal and external design team focus on quality control to identify and rectify construction issues; and
- Opportunities identified to limit foundation excavation and reuse materials onsite, resulting in project savings.



### 5.4.7.3 North Pine Water Treatment Plant Sludge Upgrade

The North Pine WTP is our third largest water treatment plant and an important contributor to the bulk water supply network. The capacity of North Pine WTP to produce reliable and efficient water supply was limited during wet weather events due to its residual (sludge) handling system.

The former sludge handling beds also resulted in the discharge of water that did not meet the environmental requirements of the Environmental Authority. A project was designed to resolve these two issues and through a competitive tender process and robust evaluation framework. The project was completed in 2018 and under budget by approximately \$428,000.

## 5.5 2021-22 forecast expenditure

The 2021-22 capital forecast has been derived through the same robust capital planning process that underpins our 2023-26 capital forecast.

We propose to spend \$116.7 million in 2021-22 investing in our assets to maintain and improve the services we provide (Table 5.6).

**Table 5.6 2021-22 capital forecast (\$m nominal)**

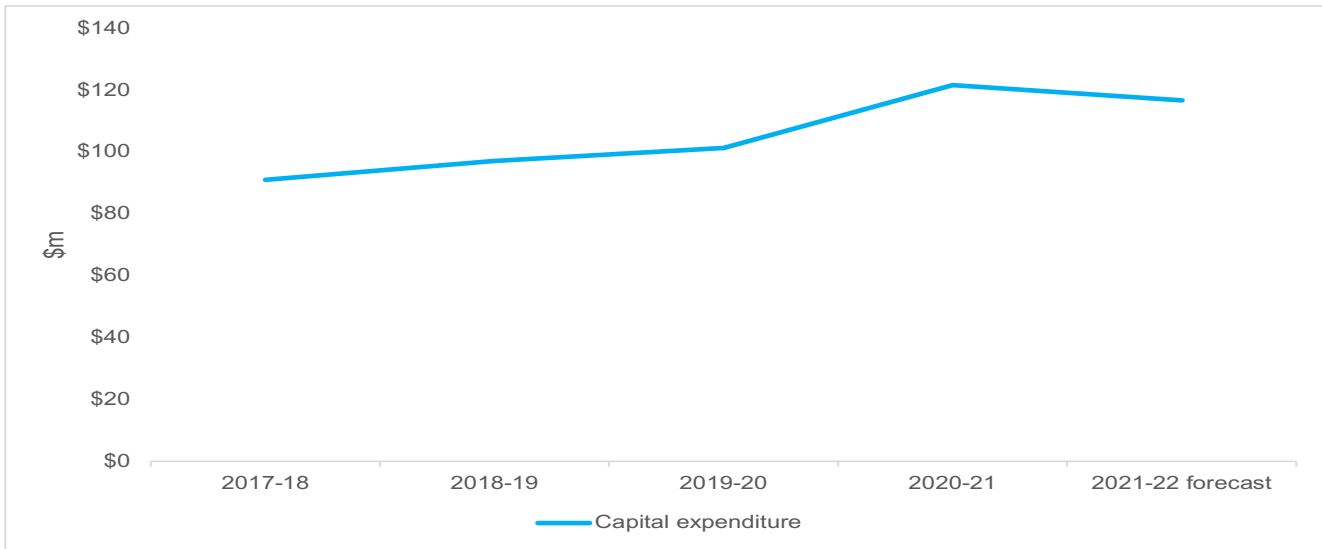
	As Incurred (\$m)			Capitalised Total (\$m)
	2019 - 20	2020 - 21	2021 - 22	2021 - 22
Water storage	4.0	12.7	5.9	23.1
Water treatment	5.3	14.0	11.6	32.3
Water transport	5.2	6.6	4.5	17.3
Natural	1.2	0.2	0.3	1.9
Digital technology and information	1.4	1.0	5.3	7.9
Manufactured water	0	7.3	11.9	19.6
Recreation	0	0	0.5	0.5
Other	4.6	3.9	7.5	14.1
<b>Total</b>	<b>21.6</b>	<b>45.6</b>	<b>47.4</b>	<b>116.7</b>

This \$116.7 million investment is 13.5% higher than the average capital spend over the last four years, but lower than both the approved and actual spends for the 2020-21 financial year. Our capital investment needs are increasing as our infrastructure ages, as we deliver necessary dam safety upgrades to meet current safety guidelines, secure the water supply for SEQ and accommodate growth in the region. This increases the number of major projects required to mitigate risks (Figure 5.2 and Table 5.7).

**Table 5.7 Historical capital expenditure (\$m nominal, as capitalised)**

	2017-18 (\$m)	2018-19 (\$m)	2019-20 (\$m)	2020-21 (\$m)	2021-22 forecast (\$m)
Capital expenditure	89.6	96.0	99.1	121.7	116.7

**Figure 5.2** Historic capital expenditure 2018-22 (\$m nominal, as capitalised)



The expenditure required on a capitalised basis in 2021-22 is mainly driven by five large projects totaling \$58.4 million of the \$116.7 million required. These projects are included in the list below (Table 5.8).

**Table 5.8** Top 10 projects 2021-22 (\$m nominal)

	Driver	Strategic Asset Group	Actuals			Capitalised Total
			2018 - 19	2019 - 20	2020-21	2021 - 22
Ewen Maddock Dam Safety Upgrade Stage 2A Construction	Compliance	Water storage	3.7	12.3	0.1	17.2
Aspley-Narangba Pipeline Northerly Capacity Upgrade	Growth	Water transport	3.3	3.1	0.3	7.3
North Pine Dam WTP Replace 6.6kV Main Switchboard	Renewal	Water treatment	0.2	3.3	1.6	5.3
North Pine Dam WTP Solids Storage Area Expansion (SSA)	Renewal	Water treatment	1.2	3.0	0.4	5.0
Mt Crosby East Bank WTP MCS Renewal Stage 2	Renewal	Other	2.4	0.9	0.5	4.2
Mt Crosby Holts Hill WTP Chloramination Mixing Improvements	Compliance	Water treatment	1.1	1.3	1.6	4.2
Mt Crosby Cottages General Building Works	Compliance	Water transport	0.6	1.5	1.8	4.2
Mt Crosby East Bank WTP Repair Clear Water Tanks for Filters Stage 1 and 2	Renewal	Water treatment	1.5	2.0	0.3	4.1
North Pine Dam WTP MCS renewal Stage 2 and 3	Renewal	Other	1.4	0.4	1.8	3.9
Lowood WTP Interim Sustaining Works – UV	Compliance	Water treatment	0.0	2.0	0.9	3.0
<b>Total</b>			<b>15.7</b>	<b>29.8</b>	<b>9.2</b>	<b>58.4</b>

The Ewen Maddock Dam Safety Upgrade is the largest project capitalising in 2021-22 and was required to address dam safety risks.

This project is being carried out in a three-phase approach:

- Stage 2A – Embankment Works and Temporary Lowering Reservoir (completing in 2021-22)
- Stage 2B-1 – Spillway Works (completing before 2035)
- Stage 2B-2 – Cone Fishway at Mooloolah Gauging Weir (delivered in 2022-23).

\$17.2 million from Stage 2A of this project will be capitalised in 2021-22 with \$100,000 to be capitalised in 2023-26.

Stage 2A of this project will be delivered approximately \$7 million below budget as a result of exceptional management of the project, which has seen it delivered one full wet season before its original completion date. Avoiding another wet season of construction works has saved considerable capital costs.

## 5.6 Approach used to develop our 2023-26 capital expenditure forecast

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With a vast and expansive network, we rely on sound asset management and capital planning processes to identify and manage infrastructure risks in a prioritised and efficient way. We have adopted a new risk-based prioritisation framework and are committed to continual improvement based on standard industry practice and improvements to asset management and capital planning processes.

This ensures our capital plan, known as the APMP, is prudent, efficient, financially sustainable, and deliverable. Our APMP is focused on renewing aging assets critical to operations at the most efficient time in the asset lifecycle and delivering capacity enhancement projects at the optimal time.

In order to balance these critical objectives, we reviewed our asset management and capital planning frameworks, taking into consideration standard industry practice and advice from independent experts. These changes to our processes are set out below, along with the capital expenditure required to deliver our services in the 2023-26 regulatory period.

We are focussed on delivering benefits, efficiently and effectively. These benefits and key projects are also set out below.

### 5.6.1 How we developed our 2023-26 forecast

In the lead up to the 2023-26 period, we have redesigned our asset management and capital planning processes. In redesigning these processes, we have had regard to:

- industry best practices and alignment with industry standards
- what our Retailer Customers need and expect from us
- our corporate strategy
- independent expert advice including the recommendations made by KPMG and the QCA during the 2018 price investigation.

The improvements we have made to these processes align with industry standards and lead to the most prudent and efficient capital investments being made to meet our legal, regulatory, corporate and customer objectives. These improvements include the following and are discussed in section 5.6.5 below:

- improvements to our capital planning process, including a new risk-based prioritisation framework
- monthly monitoring and oversight
- project bundling
- increased Retailer Customer engagement
- enhanced cost estimating
- implementing KPMG's recommendations from the 2018 price investigation.

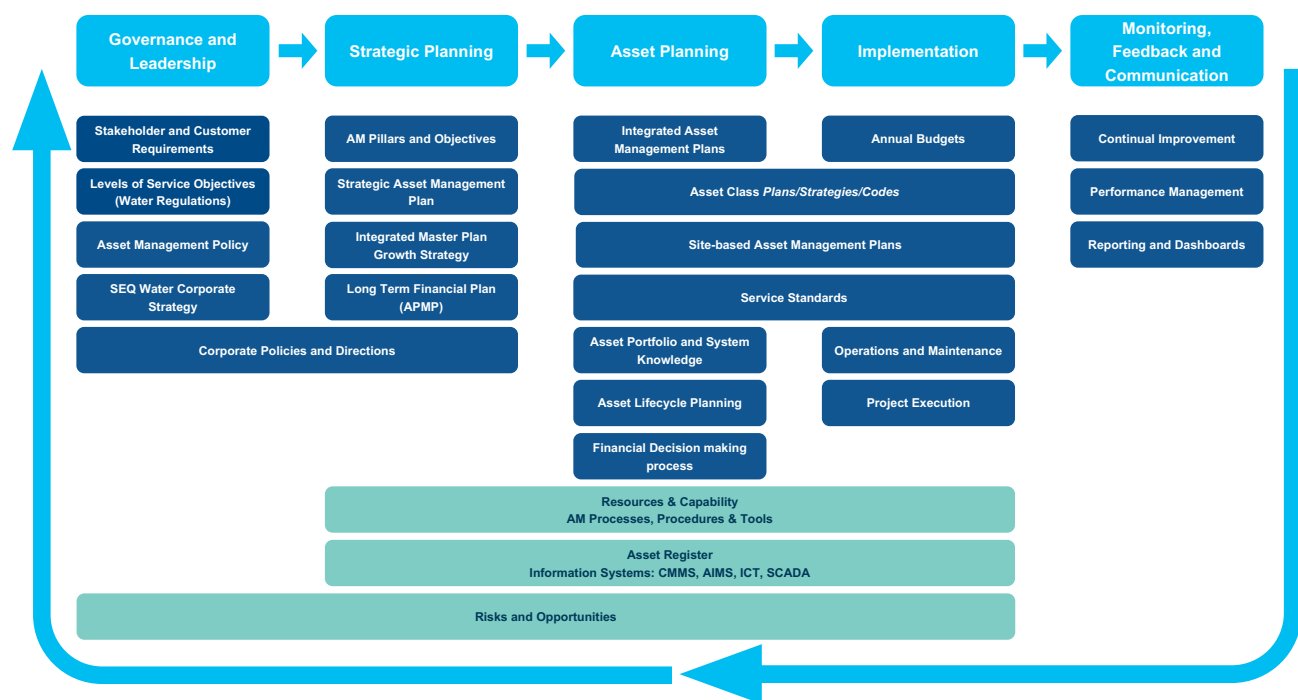
## 5.6.2 Our asset management framework

We have a robust asset management framework that has been informed by a vast program of improvements over the 2018-21 period. This improved asset management framework consists of the following key asset management processes:

- governance and leadership
- strategic planning
- asset planning
- implementation
- monitoring, feedback and communication.

How these processes inform our decision making is set out below (Figure 5.3).

**Figure 5.3 Seqwater’s Asset Management System**



Critical to these processes are our Strategic Asset Management Plan (SAMP) and Long Term Capital Plan, known as our APMP. The SAMP sets out our corporate strategy for the optimal management of our assets across their entire lifecycle. The APMP is our plan for capital expenditure and captures a five year planning cycle in detail.

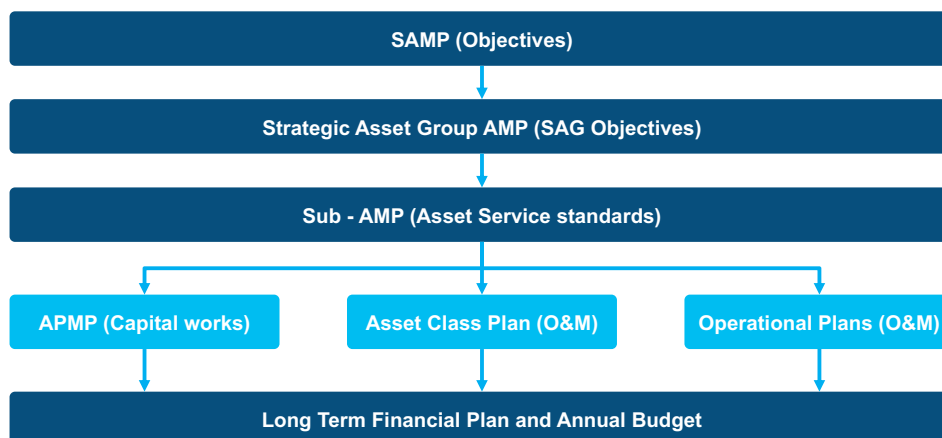
The approach taken to consider future project and program forecasts for the 2023-26 period was significantly different to previous iterations of the APMP and is now based on a risk-based prioritisation approach. The principles of this approach are to ensure the APMP has:

- a focus on investment in renewal of aging assets critical to operations
- a review of appropriate timing of capacity enhancement projects
- an appropriate consideration of prudence, efficiency and financial sustainability
- an appropriate consideration of cashflow forecast and project deliverability.

The risk-based prioritisation approach is discussed in more detail in section 5.6.5.

The APMP brings together the following planning (Figure 5.4).

**Figure 5.4 APMP inputs**



Our SAMP details a set of asset management objectives with measures, targets and initiatives against each that inform our asset planning.

### 5.6.2.1 Governance

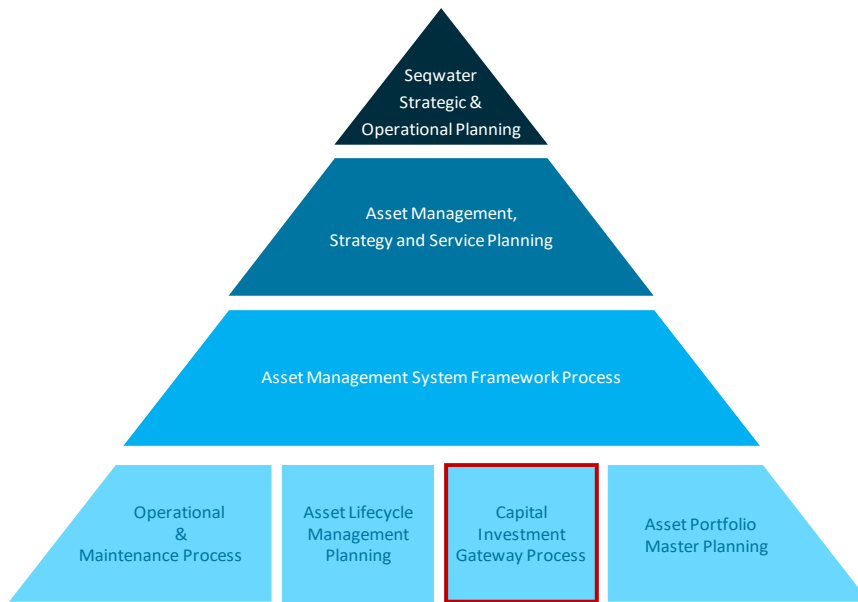
The development of the APMP is overseen and executed with established governance practices. Planning for each strategic asset group goes through bespoke, expenditure-specific governance processes. These plans then go through an extensive internal review and external consultation (including with Retailer Customers) before forming a draft plan.

This plan then goes through an auditing process, the risk-based prioritisation process discussed in section 5.6.5.1, consultation with, and review by, operational teams and a delivery validation process. The final plan is then presented to, and approved by our executive leadership team, our Investment and Procurement Committee, and then our Board of Directors. It is then monitored and actioned monthly by the Capital Portfolio Governance Group and Executive Fiscal Review Committee. The governance roles of these groups are detailed in section 5.6.5.2.

## 5.6.3 Good practice capital planning and governance

Once investment is planned, it proceeds through an established capital planning and governance process, simplified into six gateways, as shown in Figure 5.5.

**Figure 5.5 The planning and investment processes**



Our gateway process provides a formal review and approval framework that ensures industry standard governance and quality assurance is upheld in our capital planning and delivery processes. This governance process has been developed in line with the Queensland Treasury’s Project Assessment Framework and Project Delivery Framework (refer Figure 5.6).

**Figure 5.6 Project planning and delivery phases by gateway**

	PROJECT PLANNING			PROJECT DELIVERY		PROJECT REVIEW
	Gate 0	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Gate Decision Point	Strategic Business Case	Preliminary Business Case	Detailed Business Case	Investment Decision	Readiness for Service	Benefits Realisation
Outcome	Strategic Business Case approved	Preliminary Business Case approved	Detailed Business Case approved	Contract Award	Project Delivery & Handover	Project Performance review

This governance process has been designed to apply to all Seqwater capital investments. This process ensures the project need and the efficiency of the proposed solution are reviewed at multiple touchpoints prior to expenditure. Additional reviews of prudence and efficiency have been implemented at Gateway 2 and 5 of this process, as recommended by independent consultant, GHD, and discussed in section 5.6.5.7.

### 5.6.4 Realignment

During 2018-21, we realigned our structure to deliver continual improvements to our asset management, capital planning and delivery processes.

In response to the increasing size and complexity of projects within the portfolio, we established a Major Projects Steering Committee (MPSC) during 2019 to address high risk projects and/or those greater than \$40m in value. We are in the early stages of embarking on a program of major dam safety upgrades, major civil works including bridge upgrades and improved flood resilience works to protect significant assets.

The MPSC continues to provide a stabilising influence so high level requirements, risks, opportunities and challenges are managed, cooperation across the business is supported and appropriate resources provided. Members of the committee ensure business objectives are being adequately addressed and the projects remain under control.



Seqwater's structure, resources and delivery mechanisms were subsequently revised based on this 'new' typical capital program. The MPSC oversaw the implementation of the Major Projects Group, recognising the need for program level resources to provide overall program management and specialist advice and guidance consistently across all major projects, in parallel with our business as usual capital program.

The Major Projects Group processes have been aligned to the requirements of Queensland Treasury's Project Assessment Framework. In accordance with section 18(4) of the Financial and Performance Management Standard, Queensland Departments and statutory bodies must have regard to this framework in preparing evaluations concerning the acquisition, maintenance or improvement of significant assets. This framework outlines the requirements for each stage of project development and delivery and underpin the Major Projects Group's governance and approach.

It should be noted that the significant increase in the number and complexity of the upcoming major projects will require a corresponding increase in operational planning funding, in addition to the capital investment required for construction and project delivery. This is discussed further in section 6.3.3.9.

Another key structural improvement made was the integration of the Planning and Delivery groups with the Operations Group. This has resulted in significant improvements to the way capital projects are planned and delivered, by creating a closer link between planning, delivery and operations. Operational endorsement continues to be required for each gate approval process, resulting in a deeper understanding of the requirements and timeframes involved in planning and delivery.

As outlined above, operational feedback is also sought for the development of the APMP to inform and confirm the prioritisation process. Operational priorities for capital delivery are continually reviewed via the Capital Portfolio Governance Group and formal feedback review sessions.

## 5.6.5 Improvements to our asset management system

One of our four strategic priorities for 2020-22 is our asset management system. Central to this is the Asset Management Improvement Program. The Asset Management Improvement Program bridges an identified 'maturity gap' in our asset management framework and brings together a number of existing improvement initiatives to deliver an appropriate balance between cost, risk and asset performance.

The key initiatives under the Asset Management Improvement Program include:

- an update of the SAMP and our asset management objectives;
- the development of an integrated asset management system that aligns with ISO 55001;
- the identification and establishment of asset management documents, along with the development of new Integrated Asset Management Plans; and
- defining our assets, which includes (but is not limited to) identifying critical asset information requirements.

### 5.6.5.1 Improvements to our capital planning process

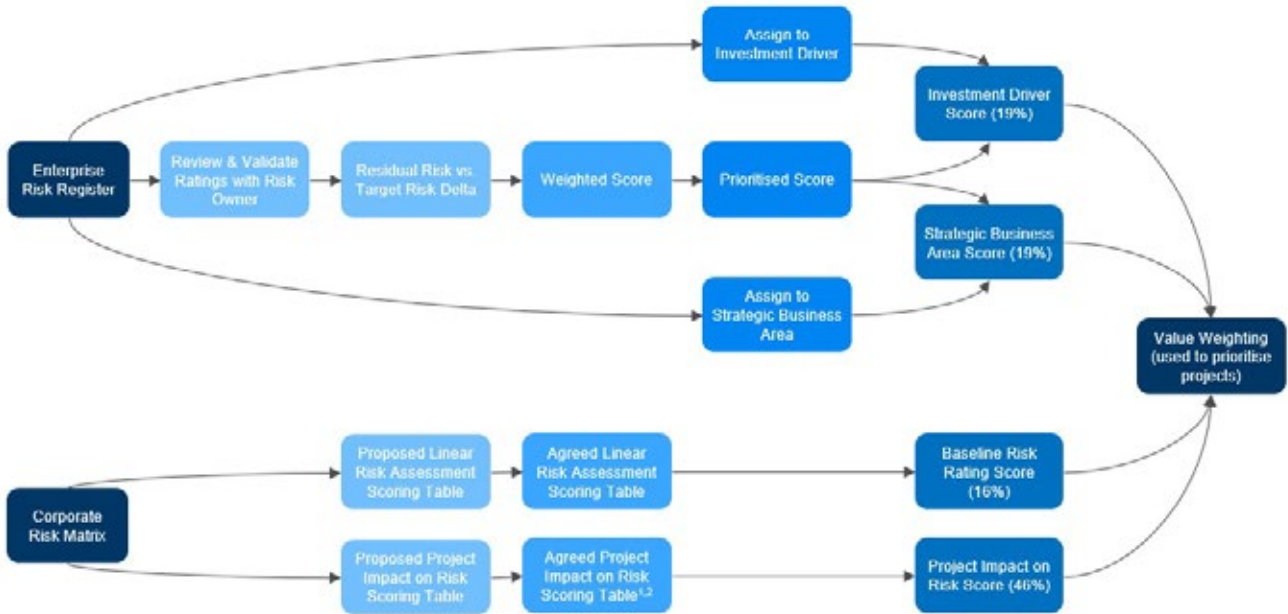
Another of our key strategic priorities is end-to-end capital planning and delivery. The management of large capital programs is complex and dynamic. We have introduced a risk-based approach to prioritising capital expenditure to ensure the highest risks, whether they are legal, regulatory, reliability, quality or safety risks, are addressed within the required timeframes, and in the most efficient way possible.

Our risk-based prioritisation framework is linked to our strategic objectives and involves the identification and assessment of risks that could impact the achievement of those objectives. Capital projects are prioritised based on the extent to which they mitigate these risks.

This process combines a review of business cases and other documentation as well as internal engagement with a range of stakeholders equipped to understand and objectively assess these risks, and the best way to manage them. This includes consideration of both capital and operating interventions to ensure the least cost method to resolving the issue over the lifecycle of the asset is considered and selected.

Capital expenditure is now assessed and prioritised on the extent of risk mitigation and degree of strategic alignment. This can lead to the prudent deferral of projects no longer required during the original timing expected, and the bring forward of projects required to address an immediate need (refer Figure 5.7 and Figure 5.8).

**Figure 5.7 Risk-based Prioritisation Framework**



**Figure 5.8 Project Value Decision Framework**



Using this approach, a project's value is assessed based on the extent of risk mitigation it is expected to deliver, and its degree of strategic alignment. Projects are then prioritised on the basis of relative value to the organisation to produce the APMP, our prioritised investment plan for a five year period.

**5.6.5.2 Monthly monitoring and oversight**

We have changed how we undertake monthly monitoring and reporting of our capital program at various levels of the organisation, appropriately resourced to ensure the prudence and efficiency of the program is maintained at all times, including where change may be necessary to achieve this.

Capital expenditure is reported, monitored and managed on a monthly basis through two key management groups:

- the Capital Portfolio Governance Group, chaired by the Manager, Asset Strategy and Planning
- the Executive Fiscal Review Committee, chaired by the Chief Executive Officer.

### 5.6.5.2.1 Capital Portfolio Governance Group

The purpose of the Capital Portfolio Governance Group is to:

- provide objective advice, insights and recommendations to the CEO and Executive Leadership Team on the overall direction and execution of the capital portfolio;
- actively identifying risks to achievement of our organisational objectives as they relate to the capital portfolio; and
- oversee internal controls and the decision-making framework for the capital portfolio, including prioritisation of projects, development of the annual and five year APMP, annual allocation of capital to projects and Groups, and in-year-reprioritisation of projects and reallocation of capital.

### 5.6.5.2.2 Executive Fiscal Review Committee

The Executive Fiscal Review Committee is a core Standing Committee of the Executive Leadership Team and has the primary role of considering matters which may have financial or budgetary implications for Seqwater. The Committee's role includes the review and endorsement of initiatives or proposals that cannot be accommodated within existing budgets and providing proactive advice and oversight on strategic issues.

The implementation of the Capital Portfolio Governance Group and Executive Fiscal Review Committee requires all groups across the business to submit forecast expenditure on a project-by-project basis, to improve transparency and accountability. Together, the groups then review progress against capital commitments, strategic objectives and the efficient investment of capital expenditure to achieve our obligations as an organisation and manage our assets in the most prudent long-term interests of our Retailer Customers with respect to the reliability, quality and price of services.

### 5.6.5.3 Bundling

Since the 2018 price investigation, we have spent time reviewing our capital program and identifying opportunities for project bundling. Project bundling can improve the efficiency of our capital program by:

- reducing the costs of operational disruption by limiting the instances of shut-downs to our network or individual assets;
- improving procurement efficiency, by reducing the total number of individual contracts and allowing for the opportunity for synergies and cost savings to be developed between initiatives;
- optimising project management resources by enabling project managers to manage larger projects and programs, rather than a large number of small projects; and
- leveraging cost efficiencies in the supply chain.

It also has the opportunity to reduce the instances where we have multiple projects and contractors on the same site at the same time, which can increase safety and construction risk and costs.

Some of the projects we have been able to include as indicative bundles over the 2021-22 financial year and 2023-26 period include:

- Noosa Regional Program: 14 projects (\$9.2 million over five years)
- Mt Crosby Program: 38 projects (\$44 million over five years)
- Gold Coast Program: 45 projects (\$17.6 million over five years).<sup>37</sup>

The financial benefits of the bundling take effect from 2022-23. Benefits will be quantified after further analysis.

The bundling approach will continue to evolve. Experience with bundling will enable us to better understand and quantify the benefits, as well as where it is the most appropriate and effective way to deliver works.

### 5.6.5.4 Customer engagement

In line with the recommendations made by KPMG during the last QCA Review, we have incorporated customer engagement

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<sup>37</sup> Note: the bundled values are on as incurred basis, as per the APMP

as a core part of our business activities. This is particularly important in planning and developing our capital program.

In 2021 we undertook consultation with our Retailer Customers on our 2021-22 capital forecast and 2023-26 capital forecast (the five years contained in our APMP). This included explaining the process we have gone through to develop the forecast and the changes we have made. The consultation also focused on projects specific to each Retailer Customer and their own capital programs, planning, prioritisation, and what matters to them.

The focus of this consultation was to ensure our APMP took into consideration the water supply and capital needs of our Retailer Customers and aligned our capital programs to theirs where possible and most efficient to do so. This resulted in the timing of some projects being altered. For example, the Kimberley Park Reservoir project was brought forward in response to additional information received. Logan Water raised concerns around the disinfection levels at Kimberly Park Reservoir and the risks that presents to 35,000 end customers. This project was assessed as being a high priority for both Logan Water and Seqwater and consequently brought forward to address critical water quality risks.

This customer engagement is an ongoing collaboration scheduled quarterly or biannually, depending on the Retailer Customers' needs. The aim of this program of customer engagement is to work together to ensure the SEQ water assets are planned for, delivered and managed as a single, integrated, efficient and effective system.

More information on our customer engagement activities is provided in Chapter 2.

### 5.6.5.5 Cost Estimation Guideline

In its report for the QCA during the 2018-21 price investigation, KPMG reviewed a number of our proposed projects for prudence and efficiency. During this review, KPMG observed that our capital planning processes were resulting in contingency allowances they considered too high. KPMG was of the view that the following contingency allowances are more in line with industry best practice where a project has passed Gateway 2 and has an identified preferred option:

- a contingency of 15 percent of total direct costs; and
- an allowance for indirect costs of 12.5 per cent of total direct costs.

This is a total contingency allowance of 27.5% of direct costs, or 21.6% of 'total project costs'.

We have taken this feedback on board and attempted to ensure that all projects at Gateway 2 with a preferred option identified have appropriate contingency allowances. Projects at an earlier stage of development than Gateway 2 still follow the estimating guidelines set out in our Cost Estimation Guideline.

Contingency allowances can be developed by one of two methods of risk assessment: deterministic or probabilistic. We encourage the use of probabilistic risk evaluation methods, wherever practicable, but it is required for projects that are significant or complex in nature.

For all first principle estimates probabilistic estimates are undertaken to P50, P80 and P90 levels. P50, P80 and P90 estimates have, respectively, a 50%, 20% and 10% probability of being exceeded. Where probabilistic cost estimates are prepared to a P80 or above level, these must be adopted as part of the approved business case. We apply five classes of cost estimate in terms of increasing certainty, with Class 5 representing less certain and Class 1 most certain costs. The estimate that is required at any given point in a project's lifecycle is dependent on:

- the project's cost category: the three main categories are 'Minor', 'Medium' and 'Major', which is determined by an assessment of the project's value, complexity and risk profile;
- the Gateway stage: as would be expected, certainty increases as projects progress through each Gateway; and
- the purpose for which the estimate is being prepared: for example, Options Analysis, Business Case (recommended option), Readiness for Market.

Table 5.9 below shows the levels of contingency to be applied in cost estimates for various stages of project development.

**Table 5.9 Contingencies for cost estimates**

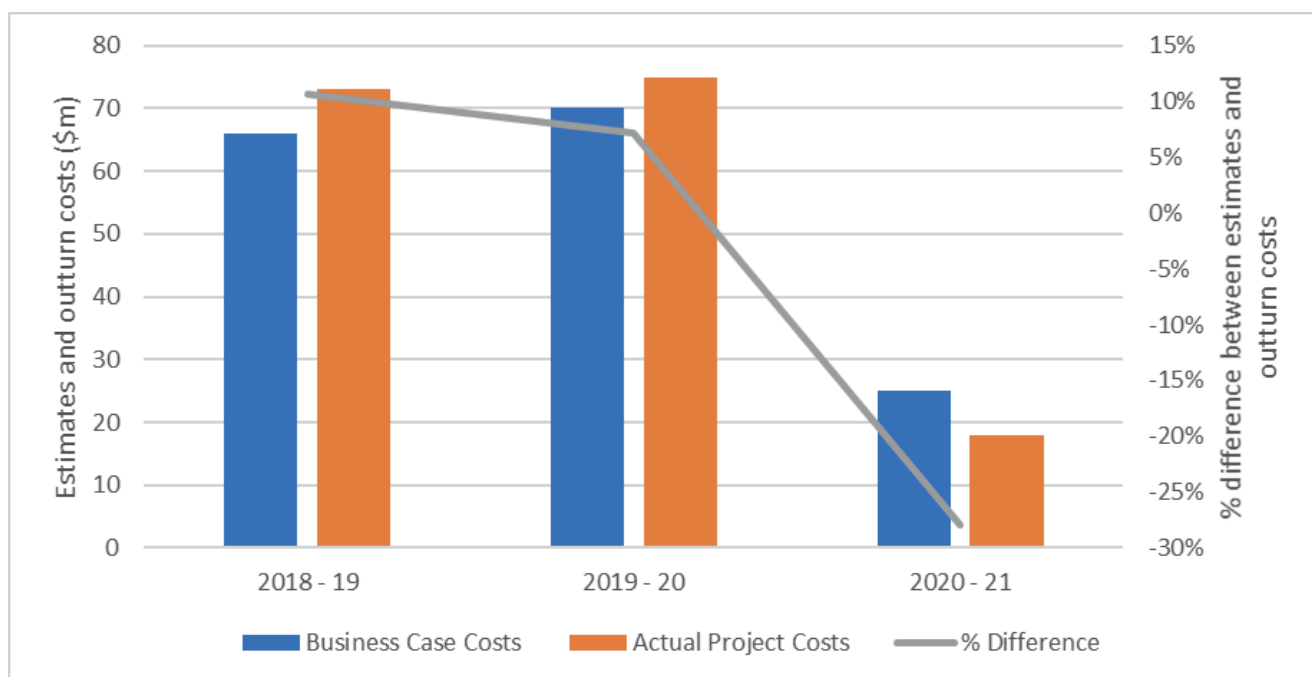
Estimate class	Project category		
	Minor	Medium	Major
Class 5	70% - 100%	30% - 70%	
Class 4	20% - 30%	20% - 30%	Probabilistic estimation
Class 3	10% - 20%	10% - 20%	
Class 2	10% - 15%	10% - 15%	
Class 1			

Robust reasons must be provided to substantiate the use of contingency outside the specified ranges.

As evident from the above table, once our projects reach Class 3 estimates or above, our contingency allowances should fall within the band KPMG identified as industry best practice, that is, 27.5% of direct costs, or 21.6% of 'total project costs'.

To provide further confidence in our estimating methodologies, Figure 5.9 below shows that historically, our business case estimates come within 4% of project outturn costs on average, and costs generally track higher than original estimates. This demonstrates that our estimating methodology does not over-estimate costs.

**Figure 5.9 Business case estimates vs project outturn costs 2018-21 (\$m nominal, as incurred)<sup>38</sup>**



### 5.6.5.6 Implementing the recommendations made by KPMG

As part of the 2018-21 pricing investigation, KPMG made a number of recommendations on improvements we could make to our asset management and capital planning processes. These recommendations (as discussed in Table 5.10) have informed a program of improvements we have made, or are in the process of making, to our processes.

<sup>38</sup> Based on Sustaining Capital data. Sustaining Capital is an internal business unit of Seqwater that plans and delivers capital projects.

**Table 5.10 Implementation of KPMG suggested improvements**

Suggested improvement by KPMG	Implementation
<b>Governance</b>	
<p>Using data driven metrics from condition and performance assessments to help predict the likelihood and consequence of asset failure and better prioritise investments.</p>	<p>Using data driven metrics from condition and performance assessments to help predict the likelihood and consequence of asset failure and better prioritise investments. Improvements have been made to the quality of condition and criticality data through the ongoing implementation of a new criticality framework and clarified condition assessment criteria.</p>
<p>Including additional procedures to its investment gateway process to minimise the risk of projects passing through gateways without appropriate documentation, review or completion of necessary approvals.</p>	<p>We commenced an independent review of the gateway process as part of our Asset Management Improvement Program. This review was undertaken by Infrasol, who recommended a range of improvements be made to the gateway process in line with standard industry practice. This included the consideration of risk when determining project types, the development of a Principal Projects Requirements document for all projects as a key planning artefact, combining gates 1 and 2 for lower value/ risk projects and the use of independent reviews and verification for higher value/ risk projects. The governance and assurance processes were also updated to ensure appropriate alignment for project classifications with the applicable management sign-off and approvals to spend.</p> <p>We are in the process of developing a framework to implementing these improvements. In addition to this, we engaged GHD Advisory (GHD) in April 2019 to assess our readiness for an ex-post review of the capital program proposed in the 2018-21 bulk water price review, applying the same standards that the QCA and its consultant would apply.</p> <p>As a result of this exercise, GHD recommended we prepare a high-level summary document for each project which links to the documentation provided (via a document register), outlining:</p> <ul style="list-style-type: none"> <li>• project description, need, assessment and chronology;</li> <li>• forecast vs actual spend;</li> <li>• our approach to project management and delivery;</li> <li>• a brief summary as to why particular information was not provided or developed; and</li> <li>• a document register to facilitate easy access to critical supporting information that establishes prudence and efficiency.</li> </ul> <p>This process is will now be implemented at Gateway 2 and Gateway 5 of our gateways process.</p>
<p>Automating low value spend (i.e. below \$5,000) to free up resources to monitor larger projects with significantly higher spend.</p>	<p>There is only a very small number of low value initiatives included in our 2023-2026 capital forecast. Where practicable, low value projects are being bundled for the reasons set out at section 5.6.5.3 above.</p>



Suggested improvement by KPMG	Implementation
<b>Capital planning and asset management frameworks</b>	
Ensuring that the asset management system includes relevant resourcing requirements.	<p>As part of the review of our asset management system, and the implementation of the Asset Management Improvement Program, we developed a new SAMP, which identified the need for sufficient support, resources and an engaged and competent workforce to deliver our asset management system.</p> <p>The Asset Management Governance Group, which is responsible for the implementation of the asset management system, must monitor and identify any resourcing gaps, and recommend the resources required to fill those gaps. This is also documented in our Asset Management Manual (which also sets the requirements for the management of outsourced resources).</p> <p>Resource planning is also included as part of our Operational Plans.</p>
Ensuring that the selection and prioritisation of work in the APMP is based on criteria that have been agreed with our Retailer customers.	<p>As set out in section 5.6.5.4 above, we have incorporated customer engagement as a core part of our business activities. In 2021 we undertook consultation with our Retailer Customers on our 2021-22 capital forecast and 2023-26 capital forecast (the 5 years contained in our APMP).</p> <p>The focus of this consultation was to ensure our APMP took into consideration the water supply and capital needs of our Retailer Customers, and aligned our capital programs to theirs where possible and most efficient to do so.</p> <p>This resulted in the timing of some projects being altered. For example, the Kimberley Park Reservoir project was brought forward in response to additional information received. Logan Water raised concerns around the disinfection levels at Kimberly Park Reservoir and the risks to 35,000 end customers. This project was assessed as being a high priority for both Logan Water and Seqwater and brought forward to address critical water quality risks.</p> <p>This customer engagement is an ongoing collaboration scheduled quarterly or biannually, depending on the Retailer Customers' needs. The aim of this program of customer engagement is to work together to ensure the SEQ water assets are planned for, delivered and managed as a single, integrated, efficient and effective system.</p> <p>Customer engagement directly informs our risk assessments which form part of our newly developed risk-based prioritisation framework.</p>
Formalising the asset management policy and communicating it widely through the organisation.	Our updated asset management policy was approved in 2020 and shortly after communicated widely across the business. It is also available on our intranet for all staff to access.
Ensuring that key performance indicators are informed by asset management objectives.	Our SAMP, currently under development, now sets out a detailed set of measures, targets and initiatives against each of our asset management objectives.
Ensuring that the SAMP evolves to focus on setting a direction for asset management and providing a roadmap for future improvements.	Our SAMP governs the holistic planning, development, delivery and management of our assets based on a life-cycle approach. It provides the framework to ensure that our physical and natural assets are planned, developed, operated and maintained, upgraded, renewed or disposed of to ensure that service expectations are achieved in the most cost effective and sustainable way.



Suggested improvement by KPMG	Implementation
Finalising asset class plans to gain a clearer view of lifecycle activities.	<p>In line with the implementation of an improved asset management system, we are in the process of a full review and update of our asset class plans. Each asset class plan will specify:</p> <ul style="list-style-type: none"> <li>• an asset reliability strategy, maintenance strategy and procedures;</li> <li>• condition assessment and monitoring programs;</li> <li>• condition management strategies;</li> <li>• typical failure modes and controls; and</li> <li>• asset decay curves.</li> </ul> <p>The asset class plans aim to optimise the design or the operating, inspection and maintenance strategies to enable efficient asset management (cost, risk, performance). The optimisation analysis assesses the likely failure modes and identify weak areas in the design, the safety-critical components, or critical maintenance and test procedures.</p>
Prioritising the testing and implementation of a renewals support tool to increase analytical capability.	<p>The renewals support tool has not yet been implemented. IT investment is required and due to a number of pre-cursor projects yet to be carried out the timeframe for the development of this tool has not been finalised.</p> <p>In the meantime, renewals models have been improved with updated condition and criticality assessment data. The outputs are being tested with targeted field data through prioritised investigations to inform renewals expenditure.</p>

### 5.6.5.7 Independent expert review of actual capex to inform continual improvement

In addition to implementing the recommendations made by KPMG, we engaged an independent review of actual capital expenditure to inform continual improvement of our planning processes and execution. This review was carried out by GHD, undertaking a prudency and efficiency assessment for a sample of projects and providing feedback to us on the robustness of our information and processes.

Through these reviews GHD made a number of recommendations to us including the implementation of a high-level summary document for each project linking to the documentation required to justify the expenditure. This summary document will now be required at both Gates 2 and 5 set out above and forms an important part of our capital planning process and project justification documentation going forward.

The capture of project information would enable rapid project knowledge transfer, as well as set out the information clearly and succinctly in relation to the prudency and efficiency of each project. This allows the information to be retained and stored, and more robust lessons learned activities to be carried out with learnings applied back into our corporate processes.

In 2020 and 2021, GHD reviewed our project documentation as part of the planning process supporting the 2023-26 capital forecast, with learnings and recommendations applied to our internal processes to develop a robust and well-informed forecast.

## 5.7 Capital forecast 2023-26

Our capital expenditure forecast represents the level of investment that we consider necessary to meet our service delivery requirements and legislative obligations. It is the level of investment we require to continue to provide safe, secure and resilient water supply at the least cost. It has been developed through the planning processes set out above, designed to ensure our capital program is prudent, efficient, financially sustainable and deliverable. The forecast excludes source protection projects that are not able to be capitalised.

Our APMP is focused on renewing aging assets critical to operations at the most efficient time in the asset lifecycle and delivering capacity enhancement projects at the optimal time for end customer benefit and efficient investment in infrastructure.

Forecast capital expenditure is proposed to be \$876.8 million for the 2023-26 regulatory period (Table 5.11).

**Table 5.11 Forecast capital expenditure 2023-26 (\$m, nominal), as capitalised**

	2022-23 (\$m)	2023-24 (\$m)	2024-25 (\$m)	2025-26 (\$m)	Four year Total (\$m)	2026-27 & 2027-28 (\$m) Indicative Figures only
Forecast capital expenditure (as capitalised)	295.5	135.7	284.3	161.3	876.8	454.6

This expenditure is on an 'as capitalised' basis for the purposes of this price investigation.

Actual capital expenditure to be incurred over the period is shown in Table 5.12.

**Table 5.12 Forecast capital expenditure 2023-26 (\$m, nominal), as incurred**

	Before 2022-23 (\$m)	2022-23 (\$m)	2023-24 (\$m)	2024-25 (\$m)	2025-26 (\$m)	TOTAL (\$m)
Forecast capital expenditure (as incurred)	234.9	174.5	179.6	140.7	109.3	838.9

Historically, we spend approximately \$100 million per year renewing and upgrading existing assets and investing in new assets to service our Retailer Customers or manage risks.

In 2022-23 and 2023-24 we plan to spend \$174.5 million and \$179.6 million on an as incurred basis respectively, because we need to invest in water storage and water treatment more heavily than in previous years. This is to address critical risks that have been prioritised through our risk-based prioritisation framework.

Key projects being undertaken in 2022-23 and 2023-24 include the following.

- Lake Macdonald Dam Safety Upgrade – Before proceeding any further with the project, we considered it prudent to re-evaluate the options available to us to resolve the safety risks at Lake Macdonald Dam. The cost estimate at present is \$140 million capitalising in 2025. This sum is included in our 2023-26 forecast but will need to be reviewed as the project progresses through the options evaluation investigation.<sup>39</sup>
- Mt Crosby Bridge Upgrade – a \$24.8 million project across 2023-26 to address risks at the Mt Crosby crossing as discussed in 5.7.1.1.2.<sup>40</sup>
- Mt Crosby East Bank Substation and Enabling Works – a \$37.7 million project across 2023-26 required to address risks at Mt Crosby (included in the Mt Crosby Flood Resilience program discussed in section 5.4.3.2).<sup>41</sup>
- Mt Crosby East Bank Filtration Upgrade – \$42.4 million<sup>42</sup> capitalising in 2023.

These large-scale projects will be contracted out to the market in line with our good practice procurement processes. Enhanced internal management discussed above will be utilised to monitor contractor performance and project risks. It is this utilisation of the market, and our improved internal processes, that will allow us to deliver these critical projects in the early years of the 2023-26 regulatory period.

## 5.7.1 What we are investing in

Over the 2023-26 period we propose to invest \$876.8 million in renewing and upgrading existing assets and investing in new assets to service our Retailer Customers or manage risks.

<sup>39</sup> As capitalised basis

<sup>40</sup> As capitalised basis

<sup>41</sup> As capitalised basis

<sup>42</sup> As capitalised basis

This is across our eight key strategic asset groups:

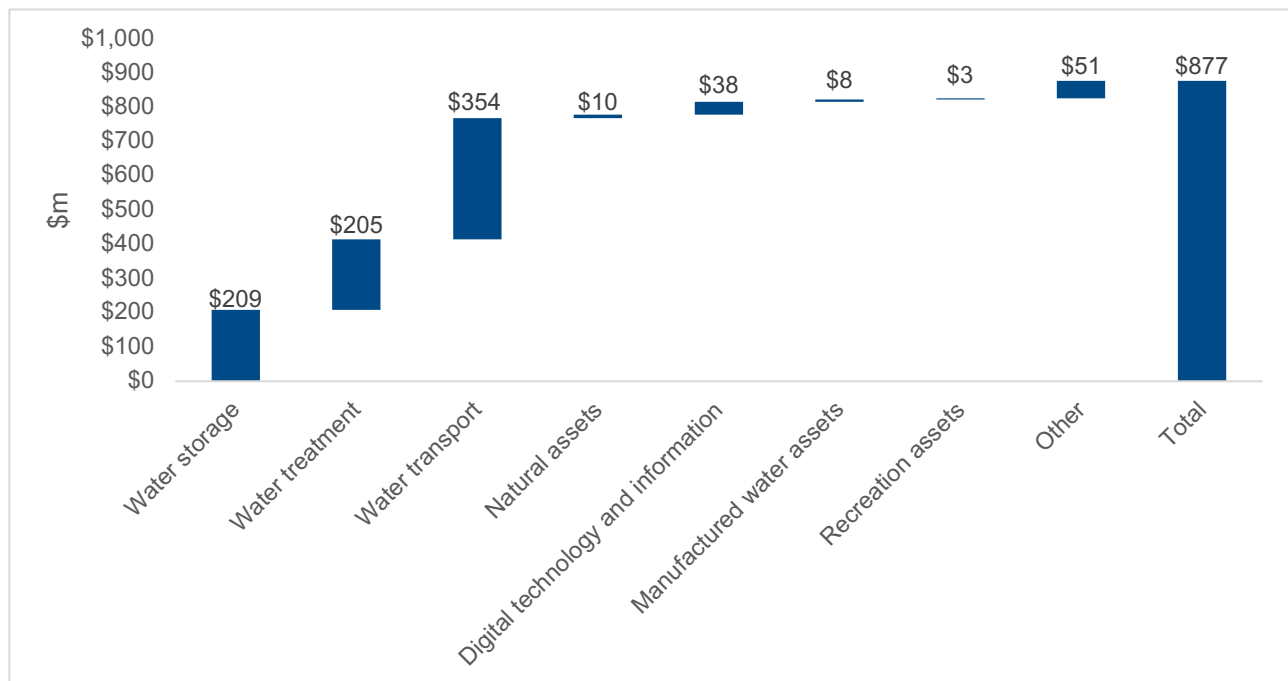
- Water storage
- Water treatment
- Water transport
- Natural assets
- Digital technology and information
- Manufactured water assets
- Recreation assets
- Other.

The drivers of our expenditure are:

- meeting our legal and regulatory obligations (compliance)
- renewing our existing assets (renewals)
- upgrading our existing dams (safety compliance)
- augmenting our system or building new assets to meet growth in demand for our services (growth)
- improvements to our services.

We propose to spend \$876.8 million across our strategic asset groups during 2023-26, as shown in Figure 5.10.

**Figure 5.10 2023-26 capital forecast by strategic asset group (\$m nominal, as capitalised)**



Our biggest investment strategic asset groups for 2023-26 are water storage, water treatment and water transport. We are investing in referable dam safety (in line with legislative and regulatory requirements), improved water quality and water security, as discussed below.

### 5.7.1.1 Water storage

We propose to spend \$209 million during the 2023-26 regulatory period to continue supporting water storage infrastructure. Many of these assets require safety upgrades to meet legal and regulatory requirements (Table 5.13).

Dams are highly regulated and all our dams go through a rigorous risk assessment and prioritisation process to determine the highest priority dams for safety upgrades by the safety risks that they pose. Changes to dam safety guidelines by the dam safety regulator necessitate investment to maintain compliance.

**Table 5.13 Water storage capital expenditure 2023-26 (\$m nominal, as capitalised)**

	2022-23 (\$m)	2023-24 (\$m)	2024-25 (\$m)	2025-26 (\$m)	Total (\$m)
Compliance	24.9	6.1	140.1	0	171.1
Renewals	5.5	11.9	2.9	16.7	37
Growth	0	0	0	0	0
Improvements to services	0	0	0.7	0	0.7
<b>Total</b>	<b>30.4</b>	<b>18.1</b>	<b>143.7</b>	<b>16.7</b>	<b>208.9</b>

Our top five largest water storage projects to be completed in 2023-26 are set out below in Table 5.14.

**Table 5.14 Five largest water storage projects capitalising in 2023-26 (\$m nominal)**

Project Name	Driver	Forecast capital expenditure (\$m)					Year to capitalise	Total project cost to capitalise (\$m)
		Before 2022-23	2022 - 23	2023 - 24	2024 - 25	2025 - 26		
Lake Macdonald Dam Upgrade <sup>43</sup>	Compliance	26.8	26.0	36.9	37.6	0	2025	140.1
Mt Crosby Weir Bridge Structure Upgrade	Compliance	2.5	22.0	0	0	0	2023	24.8
Little Nerang Dam Lower Access Road	Renewal	0.4	0	1.2	2.9	1.4	2026	6.3
North Stradbroke Island Renew Borefields Switchboards	Renewal	2.0	2.9	0	0	0	2023	5.1
Ewen Maddock Dam – Stage 2B-2 – Cone Fishway at Mooloolah Gauging Weir	Compliance	0.5	1.5	1.5	0	0	2024	3.7
<b>Total</b>		<b>32.2</b>	<b>52.5</b>	<b>39.6</b>	<b>40.4</b>	<b>1.4</b>		<b>180.0</b>

<sup>43</sup> Before proceeding any further with the project, we considered it prudent to re-evaluate the options available to us to resolve the safety risks at Lake Macdonald Dam. The cost estimate at present is \$140 million capitalising in 2025. This sum is included in our 2023-26 forecast but will need to be reviewed as the project progresses through the options evaluation investigation.

### 5.7.1.1.1 Lake Macdonald Dam Upgrade

As discussed in section 5.4.3.1, the Lake Macdonald Dam Upgrade was re-phased to 2023-26 to allow us to carry out further investigations and re-evaluate the options to address the safety risks at this dam.

Before proceeding any further with the project, we considered it prudent to re-evaluate the options available to us to resolve the safety risks at Lake Macdonald Dam. The cost estimate at present is \$140 million capitalising in 2025. This sum is included in our 2023-26 forecast but will need to be reviewed as the project progresses through the options evaluation investigation.

### 5.7.1.1.2 Mt Crosby Bridge Structure Upgrade

The Mt Crosby Weir (and bridge) is located on the Brisbane River downstream of Wivenhoe Dam. The weir is a critical asset for our bulk water supply system forming the pumping pool to supply water to the two Mt Crosby Water Treatment Plants.

The bridge carries a public road (Allawah Road) that is used by Seqwater staff and the local community to access either side of the Brisbane River. The existing bridge was originally designed as a rail bridge and subsequently converted to enable vehicular traffic. Independent assessments show the deck is in poor condition, is deteriorating and does not meet current load and safety standards. Speed and load restrictions currently apply in order to temporarily manage the risks.

After undertaking a risk assessment, multi-criteria analysis and NPV analysis, the most cost effective option was to construct a new dual lane vehicle bridge and modify the existing bridge to provide a fully compliant pedestrian walkway, to remove the safety risks to pedestrians of the current bridge construction.

This was the most technically feasible option of all options considered and satisfies the needs, minimises the cost of water quality and environmental risks, minimises the flood risk during construction and maximises community benefits and ongoing benefits to us.

## 5.7.1.2 Water treatment

**Table 5.15 Water treatment capital expenditure 2023-26 (\$m nominal, as capitalised)**

Water treatment	2022-23	2023-24	2024-25	2025-26	Total
Compliance	57.4	3.9	10.2	1.7	73.2
Renewals	15.6	53.8	27.3	14.0	110.7
Growth	0.5	7.5	4.4	1.4	13.8
Improvements to services	0.1	6.4	0.2	0	6.7
<b>Total</b>	<b>73.7</b>	<b>71.6</b>	<b>42.1</b>	<b>17.1</b>	<b>204.4</b>

Over the 2023-26 regulatory period approximately \$204.4 million of the \$876.8 million proposed investment, or 23%, will be spent on water treatment to ensure we continue to meet our service obligations under the Water Act 2000. The five largest projects appear in Table 5.16.

**Table 5.16 Five largest water treatment plants capitalising in 2023-26 (\$m nominal)**

Project Name	Driver	Forecast capital expenditure (\$m)					Capitalised date	Total project cost to be capitalised (\$m)
		Before 2022-23	2022 - 23	2023 - 24	2024 - 25	2025 - 26		
Mt Crosby East Bank Water Filtration Upgrade	Compliance	34.9	2.9	0	0	0	2023	42.4
Noosa WTP Replace Reservoir Roof	Renewal	0.0	2.1	8.4	0	0	2024	10.6
Multiple Sites Renew HV VSD Power Cells	Renewal	0.0	3.6	2.1	1.6	0	2025	7.8
Noosa WTP Access Road and Bridge Upgrade	Renewal	6.3	0.1	0	0	0	2024	7.5
Lowood WTP Clarifier	Growth	0.8	5.1	1.1	0	0	2024	7.5
<b>Total</b>		<b>42.0</b>	<b>13.7</b>	<b>11.7</b>	<b>1.6</b>	<b>0</b>		<b>75.8</b>

#### 5.7.1.2.1 Mt Crosby East Bank WTP Filter Upgrade

Mt Crosby East Bank WTP was first commissioned in 1882. The first six filters were built in 1944 to 1946 and almost 70 years old. The second to fourth stages (a further 14 filters), were built between 1957 and 1967. The filter structures and underdrains of all filters are more than 30 years old. The filters currently do not conform with standard practice and are incapable of producing the required throughput to guarantee public health.

It was identified during 2018-21 that other work had to be performed before the filtration upgrade could commence. These works included the replacement of several very large valves providing the necessary isolation means to perform the filter upgrades safely. With these matters now addressed, and bundled for greater efficiency, this project is currently underway and will further progress in the 2023-26 period.

#### 5.7.1.2.2 Noosa Replace Reservoir Roof

The Noosa WTP Reservoir was constructed in the 1960s. The reservoir is a circular concrete reservoir with a timber framed asbestos clad roof. The condition of the reservoir structure and roof frame is fair, but the asbestos roof sheeting is in poor condition.

A recent sanitary inspection of the reservoir found that there were deficiencies in the condition and design of the roof. These deficiencies increase the risk of contamination of the reservoir that may lead to public health impacts.

The condition of the reservoir roof is such that it is at high risk of physical failure and is a safety risk to our staff and contractors due to the presence of friable asbestos. The design and condition also does not provide a sufficient barrier against contamination under modern drinking water tank design standards. For these reasons we are required to replace the reservoir roof.

Roof failure increases the asbestos risk to our staff and contractors. Asbestos is a carcinogen, and the inhalation of asbestos fibres is known to cause malignant mesothelioma, lung cancer and asbestosis. The roof needs to be replaced to remove the risk of failure and inhalation of asbestos fibres by staff or contractors attending site and/or working on or near the reservoir roof.

This project is a high priority due to the safety and water quality risks. The cost estimate is \$10.6 million.

### 5.7.1.3 Water transport

**Table 5.17 Water transport capital expenditure 2023-26 (\$m nominal, as capitalised)**

Water transport	2022-23	2023-24	2024-25	2025-26	Total
Compliance	37.7	0.0	49.1	55.3	142.1
Renewals	19.9	4.6	26.9	26.7	78.1
Growth	109.1	6.4	0	8.4	123.9
Improvements to services	0	0	6.3	4.0	10.3
<b>Total</b>	<b>166.7</b>	<b>11.0</b>	<b>82.2</b>	<b>94.4</b>	<b>354.4</b>

We propose to invest \$354.4 million over the 2023-26 period to continue to move treated drinking water through our network to augment local supply in times of need.

The bulk of this is spent in order to meet our legal and regulatory obligations and in renewing our infrastructure to continue to meet our supply obligations to end customers. However, we are capitalising a key growth project in 2022-23 – the delivery of the South West Pipeline. This pipeline will connect the Beaudesert Water Supply Zone to the rest of the SEQ Water Grid, ensuring water security to end customers in this area into the future, as the region grows.

Our top five transport projects are set out below. These projects account for \$271.6 million of the \$354.4 million we propose to capitalise in 2023-26 (Table 5.18).

**Table 5.18 Five largest water transport capital projects (\$m nominal)**

Project Name	Driver	Forecast capital expenditure (\$m)					Capitalised date	Total project cost to be capitalised (\$m)
		Before 2022-23	2022 - 23	2023 - 24	2024 - 25	2025 - 26		
South West Pipeline	Growth	93.3	7.8	0	0	0	2023	108.0
Mt Crosby East Bank Raw Water Pump Station Flood Resilience	Compliance	0.0	0	0	10.0	44.7	2026	55.3
Mt Crosby East Bank Renewal and Flood Resilience	Compliance	4.4	8.0	25.0	6.3	0	2025	47.2
Mt Crosby East Bank Raw Water Pump Station Sub-station and Enabling Works	Compliance	24.0	11.6	0	0	0	2023	37.7
North Pine Pump Station Renewal	Renewal	0.0	0	3.4	9.6	9.6	2026	23.4
<b>Total</b>		<b>121.7</b>	<b>92.1</b>	<b>27.3</b>	<b>28.4</b>	<b>25.9</b>		<b>271.6</b>

#### 5.7.1.3.1 South West Pipeline

Water to the Beaudesert Water Supply Zone is currently supplied from the Beaudesert WTP, an independent system that



is not connected to the SEQ Water Grid. The Beaudesert WTP is in poor condition and currently unable to treat sufficient volumes of water during periods of peak demand. Poor water quality in the local catchment also impacts the volume of water able to be supplied by the Beaudesert WTP. The raw water supply from Maroon Dam is also unreliable and will not meet desired levels of service into the future as demand increases.

Demand for water has been increasing in this area over time and is expected to continue to increase with significant residential and industrial growth projections for the Beaudesert and Logan South areas. To address these volumetric and quality issues, we are connecting the Beaudesert Water Supply Zone to the SEQ Water Grid via a new pipeline, the South West Pipeline.

This project will deliver a 23km pipeline transporting treated water from a future Wyaralong WTP to Beaudesert through Logan City Council and Scenic Rim Regional Councils. It also includes a 3km long section of pipeline along Bushland Road connecting the proposed future Wyaralong WTP to the existing Logan City Council trunk main transfer system.

This is the most cost effective increase in water supply available to this part of the network and will also increase reliability, reduce water quality issues and increase grid-wide operational security and water efficiency.

### 5.7.1.3.2 Mt Crosby East Bank Raw Water Pump Station Flood Resilience

The Mt Crosby East Bank Raw Water Pump Station Flood Resilience is a \$55.3 million project to improve flood resilience through the upgrade of the motors and pumps, electrical switchgear and motor control systems and the upgrade of distribution systems at the East Bank Raw Water Pump Station to match the voltage change to 11kV occurring as part of the below project.

### 5.7.1.3.3 Mt Crosby East Bank Renewal and Flood Resilience

The Mt Crosby East Bank Renewal and Flood Resilience is a \$47.2 million project to improve flood resilience at the Mt Crosby East Bank WTP through the upgrade of the motors and pumps, electrical switchgear and motor control systems and the upgrade of distribution systems at the Mt Crosby East Bank WTP to match the voltage change to 11kV occurring as part of the below project.

### 5.7.1.3.4 Mt Crosby East Bank Raw Water Pump Station Sub-station and Enabling Works

Mt Crosby East Bank substation and enabling works are a \$37.7 million package of works to improve flood resilience at the Mt Crosby East Bank Raw Water Pump Station through the provision of a new substation, civil enabling works and the relocation of a kindergarten that would have been in close proximity to the optimal location for the new substation.

### 5.7.1.3.5 North Pine Pump Station Renewal

The North Pine Hub (which includes the North Pine Pump Station) acts as a key interface between the central and northern subregions of the SEQ Water Grid. The hub performs a dual function of supplying water south to Brisbane via the Aspley and South Pine reservoirs, and North to Moreton Bay and the Sunshine Coast via the Narangba Reservoirs.

Capacity limitations at the hub result in shortfalls in supply under peak demand to the northern and water supply interruptions. This results in inadequate water in terms of both volume and quality being available to the northern regions. We propose to renew and upgrade the capacity of the pumps at the North Pine Pump Station at an estimated cost of \$23 million. This will enable greater volumes of drinking water to be supplied to the Northern grid region.

## 5.7.1.4 Natural assets

**Table 5.19 Natural asset expenditure 2023-26 (\$m nominal, as capitalised)**

Natural assets	2022-23	2023-24	2024-25	2025-26	Total
Compliance	3.7	5.2	0	1.1	10.0
Renewals	0	0	0	0	0
Growth	0	0	0	0	0

Natural assets	2022-23	2023-24	2024-25	2025-26	Total
Improvements to services	0	0	0	0	0
Total	3.7	5.2	0	1.1	10.0

The main objective of our capital natural assets program is to reduce the risks to water quality received at treatment facilities via prioritised and targeted catchment management activities. This investment can also lead to efficiencies in the water treatment capital program, enabling the deferral or avoidance of upgrades of treatment facilities, along with reduced operating costs.

We have developed long-term planning reports for 13 priority water catchments. Across these, we have identified six catchment management programs. These programs are informed by an assessment of risks to water quality in accordance with the Australian Drinking Water Guidelines.

Our long-term planning is reviewed to incorporate refinements to the source protection planning framework and outputs from the Catchment Investment Decision Support System (CIDSS), which enables a more robust and consistent approach to decision-making. Our long-term planning reports will soon be replaced by an updated catchment master plan, which fully incorporates the outputs of the CIDSS.

A business case is prepared for each catchment management program, or in some cases specific projects such as large bank stabilisation works, which must also ensure that the expenditure is appropriately classified (i.e. as capital or operating expenditure). With in-catchment works undertaken by our Retailer Customers, we have the opportunity to collaborate with them on capital planning and delivery. This is central to our customer engagement activities and is proving very beneficial to us and our Retailer Customers.

Expenditure under this program is minimal for 2023-26. As explained further in section 6.3.3.4, much of the natural assets expenditure will now be classified as operating expenditure. This is being delivered through partnership arrangements with catchment organisations and local councils, with only prudent activities being undertaken. These include:

- riparian vegetation projects on Seqwater-owned land;
- rehabilitation of lands recently acquired by Seqwater for source water protection in the Lake Baroon catchment; and
- remediation of high priority erosion, including large-scale riverbank stabilisation projects.

### 5.7.1.5 Digital technology and information

**Table 5.20 Digital technology & information capital expenditure 2023-26 (\$m nominal, as capitalised)**

Digital technology and information	2022-23	2023-24	2024-25	2025-26	Total
Compliance	0	1.0	0.5	0.2	1.7
Renewals	8.3	6.2	6.2	6.2	26.9
Growth	0	0	0	0	0
Improvements to services	2.6	1.9	3.3	1.2	9.0
Total	10.9	9.1	10.1	7.6	37.6

A holistic review of our digital systems carried out in 2020 identified the upgrades required to address our system deficiencies to modern standards would cost in excess of \$140 million. We have adopted an incremental approach to modernising our technology on a risk basis. Our investment in digital technology and information during the 2023-26 period combines initiatives to achieve our Digital Strategic Vision (improvements to the data our people have access to for decision-making, improvements to the technology systems that support critical infrastructure and digital solutions to keep our people safer whilst in the field), along with the continued provision of core technology, network services and cyber security services.

\$37.6 million in digital technology and information expenditure is proposed to be capitalised in the 2023-26 regulatory period. The primary driver of this expenditure is renewals. We have a backlog of outdated and amalgamated digital assets that require upgrade or replacement to ensure the reliability of our network assets, and our water supplies.

We inherited network assets when multiple entities were amalgamated. Many of these assets run on disparate and some obsolete technology. We have a variety of SCADA and PLC technology that ideally should not be maintained as disparate systems. The reliability of these assets is compromised under the current arrangements, however replacing all outdated and/or obsolete technology immediately is not financially viable for us or our Retailer Customers. For this reason, our digital technology and information capital program has been prioritised on a risk basis with a view to addressing this ‘technical debt’ in a prudent and efficient way.

### 5.7.1.6 Manufactured water assets

**Table 5.21 Manufactured water asset capital expenditure 2023-26 (\$m nominal, as capitalised)**

Manufactured Water Assets	2022-23	2023-24	2024-25	2025-26	Total
Compliance	0	0	0	0	0
Renewals	1.5	1.1	3.8	1.1	7.5
Growth	0	0	0	0	0
Improvements to services	0	0	0	0	0
<b>Total</b>	<b>1.5</b>	<b>1.1</b>	<b>3.8</b>	<b>1.1</b>	<b>7.5</b>

Our ‘manufactured water assets’ include the Gold Coast Desalination Plant and the Western Corridor Recycled Water Scheme. These assets underpin our ability to respond to drought and meet the Level of Service objectives for providing a safe and secure water supply for end customers.

#### The Gold Coast Desalination Plant (GDCP)

The GDCP operates in a state of readiness referred to as ‘Hot Standby’. Hot Standby allows the plant to be able to respond as a contingent supply and provide 33% capacity within 24 hours of being requested to do so and provide 100% capacity within 72 hours.

Under the current WSP2017, the GDCP will be brought up to 100% production when combined water storage levels drop to 60%. To maintain this state of readiness the plant must be operated and maintained appropriately.

#### The Western Corridor Recycled Water Scheme (WCRWS)

The WCRWS is capable of recycling water (secondary or tertiary treated wastewater) sourced from six wastewater treatment plants. Under WSP2017 the current trigger for recommissioning the WCRWS is once grid storages reach 60%.

Veolia Water is currently contracted to maintain and operate the manufactured water assets. Based on projected demands, Veolia Water provides advice on the recommended future maintenance requirements for these assets. We review these recommendations to ensure alignment with our asset management practices before including them in our capital forecasts.

### 5.7.1.7 Recreation assets

**Table 5.22 Recreation asset capital expenditure 2023-26 (\$m nominal, as capitalised)**

Recreation Assets	2022-23	2023-24	2024-25	2025-26	Total
Compliance	0	0.2	0	0	0.2
Renewals	0.4	0.7	0.4	0.1	1.6
Growth	0	0	0	0	0
Improvements to services	0.3	0.4	0.4	0.6	1.7

Recreation Assets	2022-23	2023-24	2024-25	2025-26	Total
Total	0.6	1.3	0.8	0.7	3.5

In 2013 we developed a Recreation Management Framework to guide future decision-making in regard to recreation management. As part of this, we undertook a Recreation Review to explore the recreational opportunities in and around our facilities to deliver a suite of management plans. This was subject to extensive community consultation.

Since 2017, we have been developing a long-term master planning process, policy and strategy to define the service standards and provide guidance for management decision-making for Seqwater's recreation sites. The recreation master plan is in the final stages of completion.

We propose expenditure of \$3.5 million over the 2023-26 regulatory period to maintain recreational access to our land.

### 5.7.1.8 Other infrastructure

**Table 5.23 Other infrastructure asset capital expenditure 2023-26 (\$m nominal, as capitalised)**

Other	2022-23	2023-24	2024-25	2025-26	Total
Compliance	2.2	9.0	0	0	11.2
Renewals	5.9	9.5	1.5	22.8	39.7
Growth	0	0	0	0	0
Improvements to services	0	0	0.2	0	0.2
Total	8.0	18.5	1.7	22.8	51.1

Other infrastructure specialist equipment includes water quality management facilities, monitoring and control systems, dosing and monitoring stations and alert stations. This strategic asset group also includes minor reactive works (known as 'emergent works') to address breaks and malfunctions that require immediate action.

### 5.7.1.9 Top 10 projects

Our top 10 projects (by value) across all eight of our key service areas detailed in the sections above are summarised below (Table 5.24).

**Table 5.24 Top 10 projects 2023-26 (\$m nominal)**

Project	Service	Driver	Total 2023-26 (\$m)	Expected project completion date	Gateway stage
Lake Macdonald Dam Upgrade	Water storage	Compliance	140.1	2025	1 - Preliminary Business Case
South West Pipeline	Water transport	Growth	108.0	2023	4 - Readiness for Service
Mt Crosby Flood Resilience	Water transport	Compliance	55.3	2026	Pre Gate 0
Mt Crosby East Bank Renewal and Flood Resilience	Water transport	Compliance	47.2	2025	2 - Detailed Business Case
Mt Crosby East Bank WTP Filtration Upgrade/Improvement	Water transport	Compliance	42.4	2023	4 - Readiness for Service

Project	Service	Driver	Total 2023-26 (\$m)	Expected project completion date	Gateway stage
Mt Crosby East Bank Raw Water Pump Station Sub Station and Enabling Works	Water transport	Compliance	37.7	2023	3 - Investment Decision
Mt Crosby Weir Bridge Structure Upgrade	Water storage	Compliance	24.8	2023	2 - Detailed Business Case
North Pine Pump Station Renewal	Water transport	Renewals	23.4	2026	0 - Strategic Business Case
Emergent Works	Other	Renewals	17.2	ongoing	Pre Gate 0
IT Operations Asset Replacement	Digital technology and information	Renewals	16.1	2026 (ongoing renewals program)	Pre Gate 0

## 5.7.2 Investment by driver

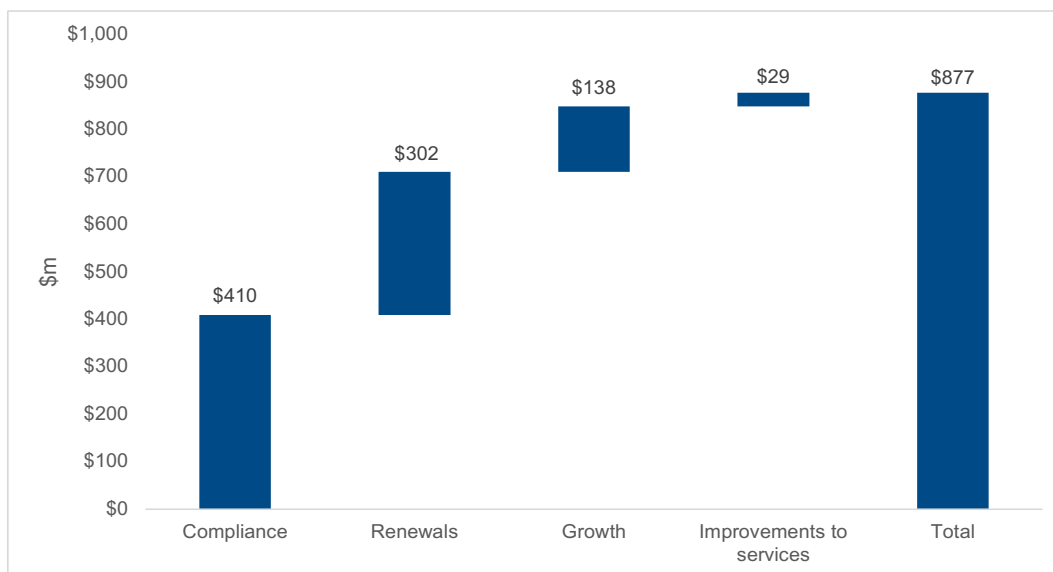
Across our key service areas, the drivers of expenditure can be summarised as:

- compliance with our regulatory and service obligations
- asset renewal to maintain the service capacity of our assets
- meeting additional demand or growth
- improvements to our services.

We classify all expenditure against one of these primary drivers (there can be secondary drivers), so we can monitor and understand what is driving our capital investment over time.

Our 2023-26 capital forecast is driven by these needs (summarised in the sections above) in the following way (Figure 5.11).

**Figure 5.11 2023-26 capital expenditure by driver (\$m nominal, as capitalised)**



Our capital investment needs are largely driven by meeting our legal and regulatory obligations and renewing our infrastructure to ensure it continues to meet our Retailer Customers' needs.

During 2023-26 we will capitalise \$711 million of our \$876.8 million capital investment through compliance and renewal driven projects.

### 5.7.3 Key outcomes for our customers

This expenditure will ensure we continue to meet our legal and regulatory obligations and provide reliable water services that meet Australian Drinking Water Guidelines, and the supply needs of our Retailer Customers.

The key outcomes for our Retailer Customers from our proposed 2023-26 capital plan are:

- dams upgraded in line with dam safety regulations;
- improved water quality for SEQ through the upgrade of two water treatment plants;
- improved flood resilience of our networks, to protect end customers from water supply outages during flood events;
- increased water security for the Beaudesert Water Supply Zone by delivering a pipeline that connects the standalone system to the SEQ Water Grid;
- ongoing maintenance of the GCDP and other manufactured water assets to secure the water supply in SEQ;
- a gradual upgrade of disparate and obsolete field technology, increasing the reliability of our water networks; and
- continued recreational use of our land for the enjoyment of end customers.

While delivering all of these key outcomes for Retailer Customers, we will also continue to deliver value through improved asset planning and capital delivery processes. We will continue to develop our customer centric planning processes and put our Retailer Customers at the heart of everything we do, delivering prudent and efficient capital investments that our Retailer Customers want, need and value.

### 5.7.4 Deliverability of this forecast

One of the key drivers of the improvements we have made to our APMP, the risk-based prioritisation process, is ensuring that our proposed program can be delivered on time and on budget.

In developing our APMP, a review was undertaken considering each project on a risk-based prioritisation and deliverability. For the purposes of this exercise, deliverability risk was assessed on the status of the project and the cost of the project. This review allows for the appropriate timing of projects depending on:

- size
- complexity
- level of project maturity
- required statutory approvals
- time for planning, design, procurement and internal approvals
- construction staging and minimisation of operational risks.

The efficiencies that can be generated through bundling projects will also enhance our ability to deliver our capital program, including by streamlining design and construction and enabling economies of scale.

We also continue to mature our procurement and governance processes and to facilitate improved project delivery timelines.

### 5.7.5 Key assumptions

The following are key assumptions of the robust capital forecasting methodology that underpins our 2022-26 capital forecast.

#### 5.7.5.1 Capital cost escalation

The values used to escalate our capital costs are based on information provided by Queensland Treasury in the preparation of its forward forecast. Using the historical and current indexation rates provided by Queensland Treasury we have applied a 2.5% escalation rate for 2021-22 and future years. However, it is noted that due to the likelihood of significant increases

in infrastructure expenditure in South East Queensland, it is possible that there will be limited competitive tension in market forces. This may impact on materials, such as steel and concrete and overall project cost.

### **5.7.5.2 Interest during construction**

Consistent with the approach applied in previous bulk water price investigations (and regulatory practice more generally), for multi-year projects we apply interest during construction, at the WACC for the relevant year/s. This is not applied in the APMP, which is why the cost estimates in the APMP may not reconcile with the forecasts in our revenue proposal.

### **5.7.5.3 Contingency**

In its report for the QCA during the 2018-21 price investigation, KPMG reviewed a number of our proposed projects for prudence and efficiency. During this review, KPMG, observed that our capital planning processes were resulting in contingency allowances they considered were too high. KPMG was of the view that the following contingency allowances are more in line with industry best practice where a project has passed Gateway 2 and has an identified preferred option:

- a contingency of 15 per cent of total direct costs
- an allowance for indirect costs of 12.5 per cent of total direct costs.

We have taken this feedback on board and attempted to ensure that all projects at Gateway 2 with a preferred option identified have contingency allowances (where a probabilistic cost estimate is not used), in line with KPMG's recommendation.

### **5.7.5.4 Owner's costs and indirect costs**

Our Cost Estimating Guideline sets out guidance for estimating owner's costs and indirect costs when preparing project estimates. These estimates are updated with contractor quotation data, where available, once the project reaches Gateway 3.

### **5.7.5.5 Aligning expenditure with demand forecasts**

Our capital planning processes adopt the medium demand forecast for the timing of growth projects, in line with the recommendations from the Integrated Master Plan.

Any decisions in relation to project prioritisation, including any changes to the timing of demand driven projects, is governed by our risk-based prioritisation framework (discussed in section 5.6.5.1 above), which takes into consideration a variety of factors including local demand. Many of our demand-driven projects are dependent on demand at a local level or regional level, rather than at a grid-wide level such as the demand forecasts used for setting revenue requirements and bulk water prices.

### **5.7.5.6 Allocation between bulk water services and other services**

Our capital expenditure forecast for 2023-26 includes expenditure related to regulated bulk water services. Consistent with the Referral Notice, expenditure related to unregulated asset and activities, irrigation meters and irrigation-only water supply schemes are excluded.

### **5.7.5.7 Classification of capex and opex**

In preparing our capital forecast for the 2023-26 regulatory period, we have followed Australian Accounting Standards in relation to capitalising expenses.



# 6 Operating expenditure

- This chapter sets out forecasts for operating expenditure between 2022-23 and 2027-28. It explains how the forecasts have been estimated, changes to previous estimated operating expenditure and the rationale for the proposed forecast. It demonstrates that costs incurred in the current period have been prudent and efficient and often in response to issues beyond our control. It also highlights developments since the QCA's 2018-21 bulk water price investigation, including a continuation of the decline in SEQ Water Grid storage levels.
- The QCA's recommended operating expenditure forecast for the 2018-21 period did not provide for future drought-related costs, or costs associated with recommissioning part of the Luggage Point Advanced Water Treatment Plant (AWTP), which we identified as necessary at that time. Other costs were identified in the previous review that have subsequently been incurred, including additional water production costs associated with water treatment plants being upgraded.
- The operating cost expenditure forecast for the next period uses a base-step-trend approach for fixed operating expenditure, comprising:
  - Base - setting a base year to reflect efficient fixed operating costs, using the most recently completed financial year, 2019-20.
  - Step - adding or subtracting one-off, new and additional ongoing costs from 2022-23, of which 12 of these are analysed, with a focus on their prudence and efficiency.
  - Trend - escalating input costs using relevant cost indices, as well as applying an ongoing efficiency savings target, consistent with the efficiency target applied in the current regulatory period.
- In relation to the Luggage Point step change, operating expenditure for this AWTP has increased above base year expenditure. This was initially due to our decision made in 2018 to recommission an initial Luggage Point train, followed by a decision in March 2021 to recommission a further two trains, the costs of which were still being reviewed at the time of completing this submission. These costs will be provided at the time of our supplementary submission for our proposed drought allowance and are included as TBD ('to be determined') in this chapter.
- This chapter presents forecast operating expenditure for the years 2022-23 to 2027-28, excluding the Luggage Point costs as referred to above. Our expenditure is forecast to increase in nominal terms from \$307.6 million in 2022-23 to \$352.4 million in 2025-26. The main drivers of this forecast increase are the escalation of the base year expenditure and the inclusion of the step changes (noting this will change further when the Luggage Point costs are finalised and submitted).
- Our proposed Review Event claims for the current period are presented in Chapter 7.

## 6.1 Introduction

This chapter sets out our forecast operating expenditure for the period 2022-23 to 2027-28, which comprises the 2023-26 regulatory period and the remaining two years of the price path. The costs for the remaining two years (i.e. 2026-27 and 2027-28) are indicative only and will be subject to a full update and review by the QCA in the next bulk water price investigation.

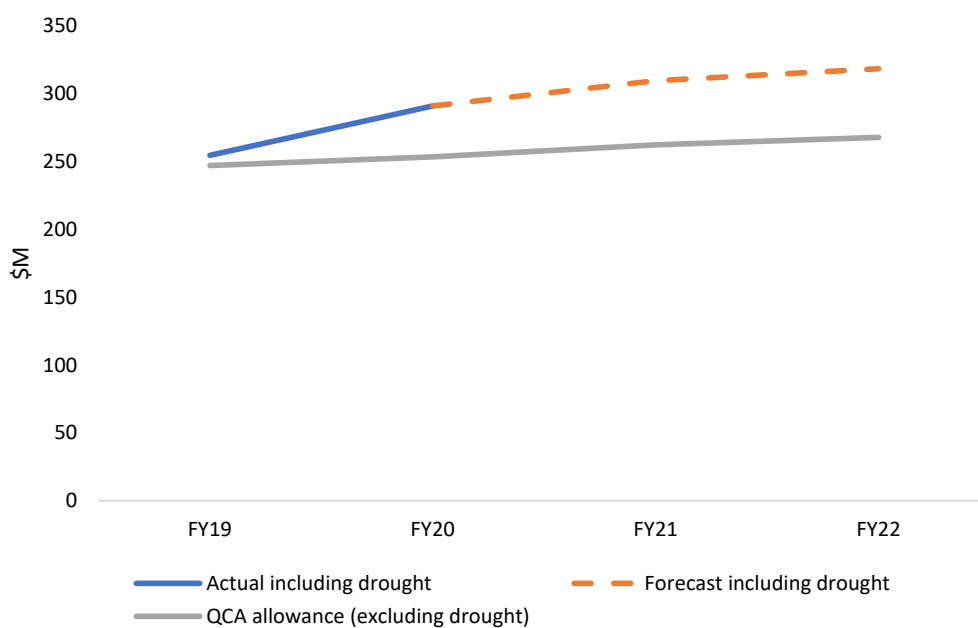
It explains how forecasts have been estimated, changes to previous estimated operating expenditure and the rationale for increased costs. It demonstrates that costs we have incurred are prudent and efficient. It also highlights a number of developments since the QCA's 2018-21 bulk water price investigation, including events beyond our control, such as a continuation of the decline in SEQ Water Grid storage levels.

## 6.1.1 Current period expenditure

The QCA's 2018 Final Report recommended an operating expenditure forecast for the 2018-21 regulatory period (which has now been extended to include 2021-22). The QCA's recommended forecast did not provide for drought-related future costs, or cost associated with recommissioning part of the Luggage Point Advanced Water Treatment Plant (AWTP) that we identified as necessary at that time.

Figure 6.1 compares the actual costs and forecast costs over this period with the QCA's recommended forecast. Our actual costs include drought related future costs and other prudent and efficient step changes in expenditure required, including items that could not have been foreseen at the time of the 2018-21 bulk water price investigation or controlled in the period that followed. We also identified other costs in the previous review that have subsequently been incurred, including additional water production costs associated with water treatment plants being upgraded during the current period.

**Figure 6.1 Expenditure compared to the QCA recommended forecast**

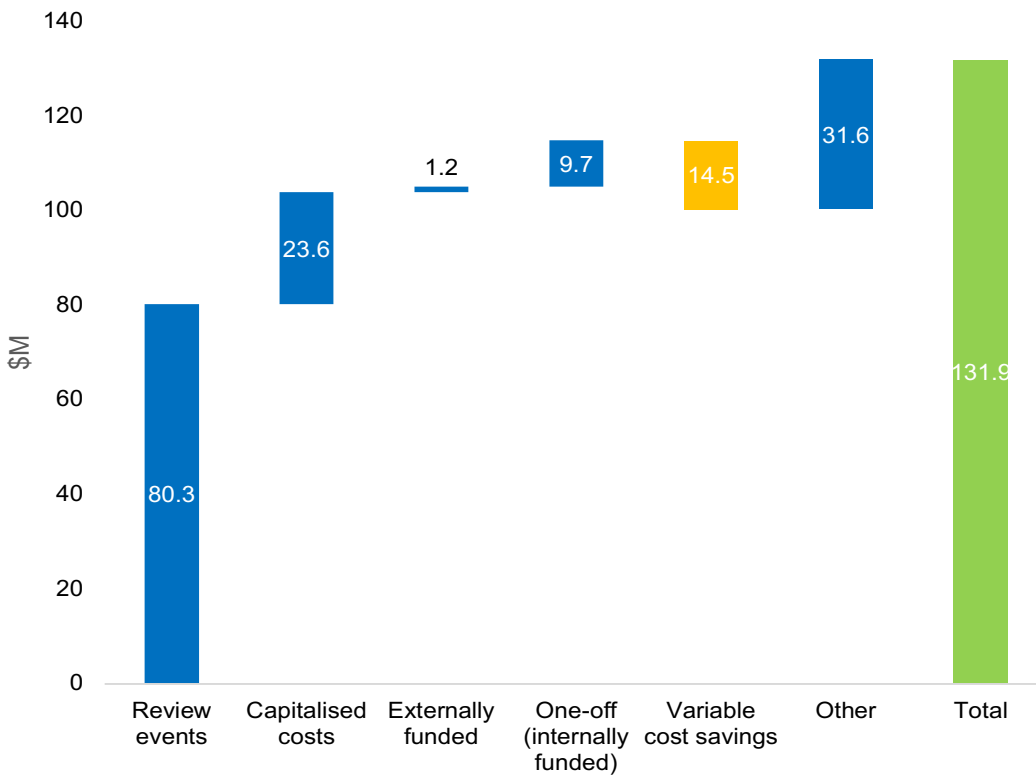


This increase has been driven by a range of factors including:

- higher water production
- higher insurance costs
- increased use of the GCDP
- increased use of the WCRWS to supply recycled water to industry
- costs associated with responding to drought conditions
- accounting changes and a range of one-off expenditures.

The relative scale of each of these factors is shown in the figure below.

**Figure 6.2 Increased operating expenditure by explanatory factor, 2018-19 to 2021-22**



## 6.1.2 Key changes in operating costs

The key changes in operating costs are summarised below.

### Review events

- Drought related costs:** Drought related costs can be triggered regionally depending on SEQ Water Grid storage levels and also by more localised droughts impacting sub-regions or off-grid communities.
  - In 2019-20 and 2020-21, SEQ Water Grid storage levels fell below the critical 60% level and as a result drought response measures were introduced. These include operation of the GCDP, increased use of WCRWS to supply recycled water to industry and additional water pumping.
  - In 2019-20 a single train at the Luggage Point AWTP became operational and has been reducing the amount of water that is drawn from Wivenhoe dam. Two additional trains are currently being recommissioned to further reduce the draw from Wivenhoe dam. These costs are expected to continue through at least some of 2021-22 given that storage levels at the end of the summer wet season were only at 59%.
  - Some drought related costs were also incurred over the review period to ensure levels of service to off-grid communities were maintained, including water carting, and to protect individual storage levels in accordance with the WSP2017.
- Dirty water events:** In some instances, periods of heavy rain have required additional treatment of water. This increases chemical costs, which are proposed to be recovered through the Review Event mechanism (refer Chapter 7).

### Capitalised costs

- Natural assets:** These costs are associated with managing the catchments to improve the quality of water. The QCA accepted this expenditure as prudent and efficient in its recommended capital expenditure forecast in its 2018 Final Report. A significant component of these costs has since been treated as operating expenditure in our financial accounts due to a subsequent change in the interpretation of the accounting standards (refer section 6.3.3.4).

- **GCDP capital support works:** The GCDP has also been operated during periods in which the Mt Crosby Water Treatment Plant (WTP) has been undergoing major upgrades, as well as maintenance at two of the southern WTPs. These costs are currently reported as operating costs but are to be treated as capital items for regulatory purposes.
- **Southern Regional Water Pipeline (SRWP):** The SRWP has also been operated to support capital projects. These costs are also currently reported as operating costs but are to be treated as capital items for regulatory purposes. This is described in section 5.4.6.

### Externally funded costs

- We incurred costs preparing the Toowoomba to Warwick Pipeline Feasibility Report that have been funded by the Department of Regional Development, Manufacturing and Water.

### Variable Costs

- Variable costs associated with non-manufactured water have been lower than forecast and are expected to remain lower than forecast on a per ML basis. This reduction is primarily due to a fall in electricity costs and is large enough to offset an increase in total water production (relative to forecast).

### Other costs and internally funded costs

Other cost increases include a range of costs that we have incurred over the period that do not fit the above categories. We have borne these cost increases over the current period. These include:

- **Insurance:** The cost of insurance has increased materially since 2018 due to a tightening in the insurance market internationally.
- **Strategic:** We have incurred over \$7 million in conducting a major review of our data and process systems (our 'Connect the Dots' initiative), which is expected to produce future operational efficiencies.

As detailed in section 6.3.2, a number of these costs are excluded from the ongoing operating cost forecasts:

- Toowoomba to Warwick pipeline investigation;
- higher than expected cost associated with the Water Futures program.

## 6.2 Referral Notice

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The Referral Notice requires the QCA to assess our operating expenditure forecasts for prudence and efficiency from 1 July 2022 to 30 June 2028 (section (C)(5)), focussing on "cost areas which are material rather than matters which are likely to have a minor and inconsequential impact in total". It is also to have regard to the strategic and operational plans approved by the responsible Ministers under the *South East Queensland Water (Restructuring) Act 2007*.

## 6.3 Forecast operating expenditure

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An operating expense is a cost encountered for the daily running of the organisation and ongoing provision of services. It includes costs required to treat and transport water, wages to pay for labour, contractors and consultants charges and routine maintenance. Some of these costs will vary to some extent with the level of water production.

By comparison, capital expenditure covers expenditure on assets that will bring future benefits or replace existing assets. This includes assets purchased to improve running of the water treatment plants, vehicles and buildings owned by us and dam safety works. Our forecast capital program is addressed in Chapter 5.

### 6.3.1 Methodology

The objective of the expenditure forecasting process is to produce a clear set of expenditure data that can be readily justified and clearly explained in terms of process/framework/system, with reference to authoritative and credible data sources. This must also reconcile with previously incurred expenditure to reflect trends and changes over time.

As in previous QCA bulk water price investigations, we have applied a base-step-trend approach for forecasting fixed operating expenditure for the 2023-26 regulatory period, which has involved:

1. **Base** - setting a base year to reflect Seqwater’s efficient fixed operating costs, which has been set at the most recently completed financial year, 2019-20.
2. **Step** - adding or subtracting one-off or new and additional ongoing costs from 2022-23 to 2025-26.
3. **Trend** - escalating input costs using a set of cost indices, as well as applying an ongoing efficiency savings target.

Forecasts for the remaining two years of the price path, 2026-27 and 2027-28, have been derived by adopting the forecast for 2025-26, removing steps that are not ongoing and applying the relevant cost and efficiency indices.

In the QCA’s 2018 Final Report, comment was made in relation to the challenges of using a budget forecast as the base year, which we have recognised by using the most recently fully completed financial year as the base year.

Variable water production costs are a function of the unit cost of production and the amount of water produced. These costs are predominantly related to energy, chemicals and the disposal of residual waste products from WTPs (residue) and vary by WTP. To forecast variable costs, a forecast production mix by WTP has been developed and costs have been estimated based on the average production cost per ML in 2019-20.

Fixed operating expenditure is incurred regardless of the volume of water produced and delivered to customers. This includes operation and maintenance activities, the fixed component of some operating costs, minor equipment purchases, costs associated with engaging specialist consultants and contractors, corporate overheads, and fixed contract fees.

The forecasts have been produced assuming normal operating conditions (as per the Referral Notice) and include drought costs that are known with certainty. Water production and storage is subject to the impact of extreme weather events and these can increase the cost of water production, storage, management and other operations.

## 6.3.2 Base Year

The base year for this analysis is the most recently completed financial year, 2019-20.

**Table 6.1 2019-20 operating expenditure (actuals \$’000)**

Base	2019-20 (actual)
Fixed operating expenditure	\$247,318
Variable operating expenditure	\$43,949
<b>Total</b>	<b>\$291,267</b>

For variable costs the base year includes business as usual expenditure that is extrapolated forward based on a range for demand to the extent that the QCA seeks to adjust our proposed demand forecast. As outlined in Chapter 3, we have proposed that any such adjustment to our demand forecast be limited to plus or minus 2% of our proposed forecast. We have therefore presented a range for variable costs that aligns with the range around our demand forecast.

To ensure that the base year used to estimate future operating costs is consistent with business as usual expenditure, the following adjustments have been made:

- operating costs that are funded through alternative sources have been excluded
- operating costs that are to be capitalised are excluded<sup>44</sup>
- ‘one-off’ expenditures have been excluded
- ‘one-off’ savings have been added back in
- expenditures that satisfy the requirements of a Review Event have been excluded.

Table 6.2 details the adjustments that have been made to the base year to account for these factors, totalling \$29.4 million.

<sup>44</sup> As discussed in more detail below, the inclusion of some ‘capital’ costs in the Seqwater’s reported opex costs is a function of the difference between the accounting rules which apply to government entities such as Seqwater and the principles which are applied by regulators when they are determining if an expense should be classified as opex or capex.

This includes drought review events, which were prominent in 2019-20.

The largest single non-drought factor is natural assets expenditure. As noted above, the QCA accepted this expenditure as prudent and efficient in its recommended capital expenditure forecast in its 2018 Final Report. Following a change in interpretation of the accounting standards, it is being capitalised for regulatory purposes while being treated as operating expenditure for financial accounting purposes (refer section 6.3.3.4). Two items have been identified as 'one off' expenditures that are neither reflected in the operating expenditure forecast for the current period or are able to be recovered as Review Events (under the current definition) – these are expenditures relating to the Connect the Dots initiative and Water Futures program.

There was also a net saving from the impact of COVID-19 on the business. This influenced costs in the base year in a number of ways. Higher costs were associated with a reduction in the number of leave days taken by staff (estimated to be 1 day per employee) and direct COVID-19 related costs and activities. These costs were offset by a reduction in indirect employee costs related to the training and the recruitment of new employees and other employee costs that are expected to be incurred again post COVID-19. The net impact of COVID-19 was to reduce costs by \$0.9 million in the base year below what is considered business as usual.

**Table 6.2 Adjustment to base year total operating expenditure**

Item of Expenditure	Reason for -Inclusion	Cost/(Saving)
Toowoomba to Warwick Pipeline Feasibility Report	Externally funded	\$1.2m
Natural assets	Capitalised	\$5.8m
Grid Support	Capitalised	\$2.9m
Connect the Dots project investment	One-off expenditure	\$4.3m
Water Futures Program	One-off expenditure	\$1.1m
Net impact of Covid 19	One-off saving	(\$0.9m)
Drought	Review event	\$13.3m
Dirty Water	Review event	\$1.0m
Connecting Our Business	One-off expenditure	\$0.7m
<b>Total</b>		<b>\$29.4m</b>

When these costs are excluded from total operating expenditure, the adjusted total expenditure in 2019-20 falls to \$261.9 million. This is \$8.2 million higher than the QCA's recommended forecast for 2019-20 of \$253.7 million. Of this increase, \$3.2 million reflects cost increases that are considered to be step changes associated with:

- increased insurance costs reflecting a hardening of insurance market conditions - \$1 million (refer section 6.3.3.3);
- additional costs associated with our expanded major capital works program capability - \$2.2 million (refer section 6.3.3.9).

We must bear these increases in the current period.

The remaining \$5 million of costs above the QCA's recommended forecast for 2019-20 reflect a number of factors including:

- increased maintenance costs associated with additional maintenance expenditure on certain assets to address deficiencies identified as a consequence of our improved approach to condition-based assessments;
- increased management and overhead costs associated with managing a larger business; and
- resourcing to address changes to our risk profile including safety management, cybersecurity and fire management.

These cost increases have been offset to some extent by savings that have been made in the operations of the WTPs and supply network (variable costs).

### 6.3.3 Step changes

In the 2018-21 bulk water price investigation we assessed our proposed step changes using the following criteria:

- The step change should relate directly to a new obligation, a change in an existing obligation or some other new expenditure<sup>45</sup>.
- The expenditure associated with the step change should be prudent and efficient.

Based on this definition a total of 12 step changes have been identified:

- Luggage Point AWTP operation
- Proactive drought management
- Insurance premium changes
- Natural assets
- Residue Disposal Cost
- Greenhouse Gas Emissions Abatement
- Wivenhoe Gates
- Options Analysis and Planning Costs
- Delivery of Large Infrastructure Projects
- Cyclical Expense for Negotiating Employee Agreements
- Water for SEQ planning project
- QCA regulatory fee.

Each of these is discussed below.

#### 6.3.3.1 Luggage Point AWTP Operation

Operating costs for the Luggage Point AWTP have increased above base year expenditure. This is due to an initial decision we made in 2018 to recommission a single train at Luggage Point to supply industrial users and reduce several key technical risks associated with remobilisation of the overall recycled water scheme, followed by a subsequent decision in March 2021 to recommission a further two trains at Luggage Point.

We are proposing to recover the costs incurred in relation to the first train to be approved as a drought-related Review Event (refer section 7.3), as these were incurred to manage water security in the region in a prudent and efficient manner. These additional production costs are ongoing and form part of the step change in future years, as they will continue to be incurred irrespective of further future water manufacturing profiles.

The two additional trains are required while drought conditions continue. Should SEQ Water Grid storage levels improve substantially, it is expected that the operation would be reduced to minimum operating costs, while enabling further use as and when drought conditions re-emerge.

The use of two additional trains at Luggage Point is a recent initiative and therefore the ongoing operating costs continue to be refined. We will therefore advise the QCA of these costs as soon as they become available. The refined expenditure forecast will be provided with the supplementary submission on our proposed drought allowance. There are therefore included as TBD (To be determined) in Table 6.3 below.

##### 6.3.3.1.1 Partial Recommissioning of Luggage Point AWTP – First Train

The WCRWS is a unique set of assets that were built for the Millennium Drought and completed after the drought had broken. Following construction and testing, the WCRWS was placed into hot standby condition and then subsequently into care and maintenance to reduce costs. As a consequence, unlike many other water security assets built during the Millennium Drought, the WCRWS was never fully commissioned, nor run for a proving period.

Under the WSP2017, the trigger for recommissioning the WCRWS is when SEQ Water Grid storage levels reach 60%.

<sup>45</sup> Queensland Competition Authority (2018). p. 23.



The Drought Readiness trigger of 70% was hit in September 2017, before improving with summer rainfall at the end of the year. It was determined in 2017 that one reverse osmosis train at Luggage Point should be partially recommissioned, producing up to 6ML/d of recycled water to supply to industry. The Luggage Point AWTP is a major production source for the WCRWS.

The purpose of the initiative was a drought response measure. The main driver was to remobilise a core team to increase understanding of the risks associated with a potential full restart. Given the importance of the WCRWS to water security, it was considered important to increase understanding of remobilisation timeframes and operational knowledge should drought conditions reappear and persist (which subsequently occurred). The partial remobilisation also facilitated a reduction in the water taken from Wivenhoe Dam by supplying recycled water to industry instead. The initial expenditure and running costs were approved by our Board in 2017.

In our submission in the response to the QCA's Draft Report for the 2018-21 bulk water price investigation, we proposed to recover additional operating costs associated with remobilising one of three Luggage Point trains.<sup>46</sup> The QCA did not accept that we had adequately demonstrated that the benefits of fully remobilising a train before the 60% trigger was reached would outweigh the costs that would be passed through to end customers. As part of this assessment, the QCA's consultant noted that storages were above the 60% trigger at the time of drafting (storage levels were a 80% in March 2018) but that, "in the event that the 60% trigger was reached, Seqwater may be able to recover the additional costs of remobilising the plant through the drought response review event mechanism".<sup>47</sup>

SEQ Water Grid storage levels have since reduced to below this trigger level. During 2019 the SEQ Water Grid storage levels dropped below 60% and remained below this level at various times during 2020 and 2021. The first train at Luggage Point began supplying purified recycled water to industrial customers in November 2020, offsetting demand from Wivenhoe Dam by up to 23 ML/day.

### 6.3.3.1.2 Partial Recommission at Luggage Point AWTP – Additional Trains

In March 2021 at the end of the summer wet season, we made a decision to restart two additional trains at Luggage Point. This was because SEQ Water Grid storage levels had not improved above the 60% drought trigger. Further, the combined storages of Wivenhoe and Somerset dams continued to be low (50%) and at levels not seen since the Millennium Drought.

The two additional trains increased the capacity to supply purified recycled water to industry in drought as an extension of the existing scheme. This would reduce the demand on Wivenhoe Dam and is consistent with the WSP2017, which allows for the recommissioning of the WCRWS to commence once SEQ Water Grid storage levels reach 60%. Full restart was not recommended at the time due to rain forecast at the end of the month, which ended up only improving grid levels to nominally above 60% (62%).

The project cost was estimated at \$20 million, \$10.5 million of which is operating expenditure. There is not expected to be any net increase to capital costs for the full restart scheme from bringing forward these operations.

**Table 6.3 Forecast expenditure for Luggage Point**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		TBD	TBD	TBD	TBD	TBD	TBD
Step		TBD	TBD	TBD	TBD	TBD	TBD

<sup>1</sup> Indicative

### 6.3.3.2 Proactive Drought Management

The WSP2017 requires us to plan for and respond to drought conditions. Additional positions were recruited once the SEQ Water Grid storage levels reached the 70% trigger as part of the Drought Readiness phase. The intent of the WSP2017 is to add resourcing in line with further triggers being reached and to cater for the increasing demands of drought management.

<sup>46</sup> In addition to the three 'duty' trains at Luggage Point AWTP, there is also one standby train.

<sup>47</sup> Queensland Competition Authority (2018). p.33.

Initially, when the SEQ Water Grid Storage level reached 70% in April 2019, consultants were hired at commercial rates to assist in managing the drought. We subsequently replaced these positions with fixed term direct labour for cost efficiency and as it became clear that drought conditions were likely to persist. The fixed term labour positions have continued in line with SEQ Water Grid storage levels, which have not reached 70% (at the time of preparing this revenue proposal) and therefore continue to be necessary.

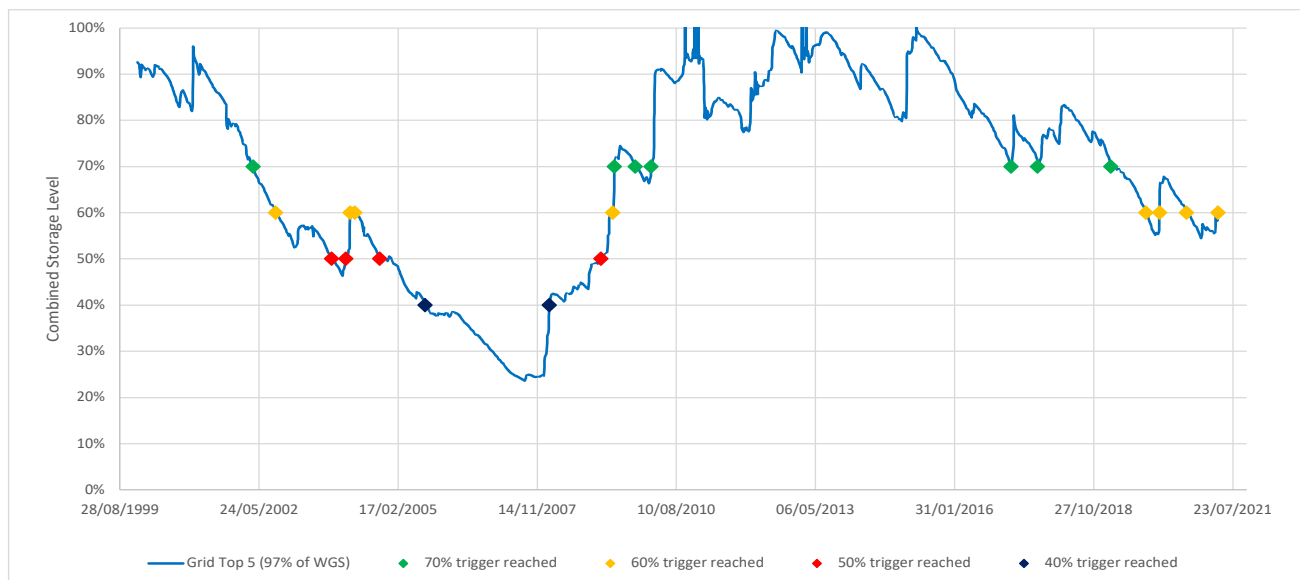
It has become increasingly apparent over the past two years that effective management of drought, including proactive management and continuous improvement, requires more than short-term resourcing. Following a review of the resourcing model, we identified opportunities for greater prudence and efficiency by revising the resourcing model and switching to a team that comprised a mixture of both permanent and fixed term staff.

Figure 6.3 models how the SEQ Water Grid storage levels would have performed in the Millennium Drought if the Grid had existed at the time. Drought is not typically a linear event, that is, the SEQ Water Grid storage level is not expected to decline in a straight line and instead fluctuates as occasional rainfall recharges storages to some extent. Triggers associated with hiring (or exiting) staff would have been hit several times over the timeframe, which has obvious resourcing, efficiency and cost implications.

Instead, it was considered to be more prudent and efficient to have a team with some permanent staff with relevant technical expertise, including a manager (August 2020), team leader (June 2021) and two technical specialists. Costs for this were further minimised by re-purposing a 0.5FTE from elsewhere in the business. Responsibilities for the new staff include water security planning and drought response implementation, drought needs technical assessments, project and program management, cost management, stakeholder management and infrastructure optimisation.

This resourcing approach is considered more cost efficient and facilitates a more collaborative approach to drought management with our Retailer Customers. It is also considered necessary to support an enhanced focus on adaptive drought management, financial transparency and cost efficiency.

**Figure 6.3 SEQ Water Grid levels during the Millennium Drought if Grid existed at the time**



**Table 6.4 Forecast expenditure for proactive drought management (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		0.68	0.68	0.68	0.68	0.68	0.68
Step		0.68	0.68	0.68	0.68	0.68	0.68

<sup>1</sup> Indicative

### 6.3.3.3 Insurance Premium Changes

We have established an insurance program aligned with our risk profile and risk appetite, which transfers catastrophic financial risks to the insurance market. The Industrial Special Risks Policy (ISR, related to property damage) and the Combined General Liability Policy (GLP, related to public liability) are the key policies we procure in terms of financial risk exposure. They therefore involve the largest annual premiums. At our 2020 renewal they equated to 85% of the overall program cost (of which ISR accounts for around 65%, and the GLP around 20%).

We work with a broker to actively manage our insurance portfolio and ensure that negotiated premiums are competitively priced. Our insurance premiums increased considerably in 2019-20, reflecting a hardening insurance market that coincided with the end of key multi-year policies (ISR and CGL). During 2019, in consultation with our broker, we established a renewal strategy to counter the anticipated price shock at the end of the multi-year policies, to the extent possible. This renewal strategy involved a remarket of the program to obtain competitive offers from alternate lead insurers.

Our insurance premium costs also increased significantly in 2020-21, reflecting further hardening in the insurance market. The outlook for the insurance market to 2025-26 is that it will continue to be in a hardened state. This means that our forecast insurance expenditure will increase over the 2023-26 regulatory period compared to the current period.

In 2013-14 we negotiated a lower insurance premium due to a softer market and changes in the agreed policy.<sup>48</sup> This lower cost was reflected in our forecast operating expenditure in the QCA's 2015 to 2018 bulk water price investigation. It would seem prudent to similarly ensure that our expenditure forecast reflects higher prices when insurance costs increase due to wider market forces that are beyond our control.

Insurance premium charges are forecast to increase by between \$3.7 million in 2022-23 and \$5 million in 2025-26 due to the hardening of the insurance market. Our broker has fully assessed the market and changes in premiums to ensure that we are able to maintain an appropriate level of cover at the most cost-effective rates. Table 6.5 summarises the impact of the change in premiums relative to the insurance allowance that is in the currently approved cost build up.

**Table 6.5 Forecast expenditure for insurance premium changes (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Current allowance	5.0						
Forecast	6.0	9.6	10.4	10.7	11.0	11.0	11.0
Step		3.7	4.5	4.7	5.0	5.0	5.0

<sup>1</sup> Indicative

### 6.3.3.4 Natural assets

Operating expenditure on natural assets is expected to be between \$8 million in 2022-23 and \$10 million in 2025-26, which is higher than the forecast for the current period. This is due to a change in the accounting classification of this expenditure.

As we own less than 5% of the source water catchments, we undertake catchment works on private landholdings through our source protection partnership program as our primary mechanism for protecting source waters to maintain water quality. This approach also realises substantial efficiency savings as the partnerships leverage community efforts and third-party funding sources to contribute to our objectives.

We undertake a range of actions to maintain and improve those assets. This includes management of our own land and initiatives to reduce water quality risks and manage future water treatment costs by improving the condition of SEQ catchments, including programs to support investment by other land holders. The actions range from weed control and fire management to gully and channel rehabilitation and land management extension schemes. The additional costs are requested as a step change for the 2023-26 regulatory period because they are an increase needed to meet existing obligations.

<sup>48</sup> [https://www.qca.org.au/wp-content/uploads/2019/05/25585\\_Seqwater-bulk-water-price-submission-FY16-18-FINAL-2-Sept-1.pdf](https://www.qca.org.au/wp-content/uploads/2019/05/25585_Seqwater-bulk-water-price-submission-FY16-18-FINAL-2-Sept-1.pdf)

In the 2018-21 bulk water price investigation, the QCA accepted our position that natural assets expenditure was capital in its nature and hence it was included in the RAB for pricing purposes. However, based on a subsequent assessment of the nature of the expenditure under the accounting standards, including the extent to which we exercise control over these assets, these costs are now expensed, rather than capitalised, in our financial accounts.

For instance, catchment-related works programs include expense items and methods of delivery that do not satisfy the definition of an accounting asset, as the elements of control, economic benefit, and directly attributable costs cannot be satisfied. This issue is now rectified for accounting purposes but requires adjustment for regulatory pricing purposes.

For financial years 2020-21 and 2021-22, we propose that the costs associated with natural assets continue to be included in the RAB for consistency (refer section 5.7.1.4). We are proposing to then align the treatment of this expenditure for bulk water pricing purposes with the accounting treatment from 2022-23. This will mean that from 2022-23 and beyond there will be a reduction in capital costs but a compensating increase in operating expenditure on natural assets.

The costs summarised in the table below have been developed based on an assessment of the requirements of the following catchments:

- Baroon Pocket
- Lockyer Valley (which impacts the Brisbane River)
- Logan River
- Maroochy River
- Mary Valley
- Mid Brisbane River
- Mooloolah River
- Nerang River
- Pine River
- North Stradbroke Island
- Six Mile
- Stanley River
- Upper Brisbane
- Warrill Valley.

The costs for this step change also include relevant compliance obligations. In particular, we have a number of vegetation offset environmental obligations related to the clearing of vegetation for capital works purposes, which are similar in nature to natural assets expenditure. Environmental offsets that currently occur on Seqwater land include the following types:

- vegetation offsets (an old form of offset under previous legislation)
- Local Law environmental offsets
- State Government environmental offsets
- Commonwealth Government environmental offsets.

Our forecast expenditure for natural assets is summarised in Table 6.6.

**Table 6.6 Forecast expenditure for natural assets (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		6.7	7.9	8.4	8.6	8.6	8.6
Vegetation offsets		1.4	1.1	1.3	1.4	1.4	1.4
Step		8.1	9.0	9.7	10.0	10.0	10.0

<sup>1</sup> Indicative, Note: Expenditure on natural asset in the base year was capitalised and application has been made to capitalise the costs in 2020/21 and in 2021/22.

### 6.3.3.5 Residue Disposal Cost

We have determined that by incurring a modest increase of \$0.5 million per annum in residue disposal costs we will ensure compliance with government policy, reduce future capex and reduce the risk of substantial costs arising from the potential Landfill Levy.

We completed a pilot project to implement beneficial reuse of WTP residuals, resulting in a new contract being negotiated for the transport and reuse of residuals from North Pine and Mt Crosby. The new contracts have increased our operating costs due to a different measurement system and the incorporation of beneficial reuse into the contract. This increase in operating costs is considered to be a step change event because the costs are required to meet existing obligations.

Whilst our operating expenditure has increased slightly, there are expected to be capital expenditure savings from the implementation of this project. This is estimated to be approximately \$11 million of savings between 2021 and 2038 from upgrading existing facilities for residuals management. The project also avoids exposure to a potential future Landfill Levy of between \$200,000 and \$3.5 million per annum from 2025.

This project will bring several benefits such as improved operability, reliability and environmental management via accurate tracking. It also allows for transition from landfill to beneficial reuse of WTP residuals to be consistent with Queensland Government targets for reducing waste and Seqwater policy. The additional costs are considered prudent because they are needed to achieve the ultimate objective of lower capital expenditure and avoiding the potential Landfill Levy. This is considered the most cost efficient option currently available and allows for opportunities to continue to improve efficiency as more experience is gained.

The additional operating expenditure is forecast to be \$0.4 million for 2020-21 and \$0.5 million per annum for 2021-22 and 2022-23.

**Table 6.7 Forecast expenditure for residue disposal (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		0.50	0.50	0.50	0.50	0.50	0.50
Step		0.50	0.50	0.50	0.50	0.50	0.50

<sup>1</sup> Indicative

### 6.3.3.6 Greenhouse Gas Emissions Abatement

The Queensland Government has committed to a greenhouse gas emissions target of net zero emissions by 2050 and a target of 50% renewable energy by 2030 in the Queensland Climate Transition Strategy. This includes an interim target of at least 30% below 2005 levels by 2030. Our Retailer Customers and/or their Council owners have similar or more progressive greenhouse gas emissions target. Comparable interstate water utilities, such as Melbourne Water, Sydney Water and SA Water have targets of being carbon neutral by 2030, carbon neutral for energy and electricity use in 2020, and a 2050 target 40% below 1990 levels respectively.

We have a corporate greenhouse gas emissions target of net zero emissions by 2050, in line with both the Queensland Government policy and community expectations from survey results.

In order to better understand our total greenhouse gas emissions for scope 1, 2 and 3 emissions, we examined our historical emissions reported under the National Greenhouse and Energy Reporting Act (2007) (NGERs) and also prepared a model to understand emissions projections to 2050 under different scenarios such as fair weather, drought and population growth. In our case, emissions from electricity use represent 95% of the total emissions reported under NGERs.

This assists with our understanding of both the sources and drivers of emissions, which then informs our considerations for both short- and long-term options to reduce emissions. In the short term, we considered several options such as the use of renewable energy, purchasing offsets and managing demand. The cost of full abatement was considered to be around \$2.5 million per year (excluding drought conditions), potentially increasing to \$8.1 million by 2028 in drought conditions.

The contemporary approach for organisations considering abatement options is to analyse the marginal abatement costs relevant to that organisation's circumstances. This was first completed in July 2020 and we intend to review the marginal abatement costs annually. That review will examine changes in technology, costs and carbon market changes to update the

optimal implementation approach.

We are proposing an increase in operating expenditure of \$1 million per annum towards the optimal implementation approach from July 2022, that may include the purchase of carbon offsets (e.g. Large Generation Certificates, Australian Carbon Credit Units) and /or other abatement options. This would reduce our greenhouse gas emissions by around 10-20% from forecast business as usual emissions.

With this level of abatement, our emissions will continue to increase relative to a 2019-20 baseline with even greater increases under drought conditions. However, this approach commences the abatement process whilst minimising the impact on bulk water prices. This is considered a prudent and efficient short-term approach. These costs are assumed to be a step change as they are a new expenditure that is needed to meet existing targets on greenhouse gas emissions.

**Table 6.8 Forecast expenditure for greenhouse gas emissions (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		0.92	0.92	0.92	0.92	0.92	0.92
Step		0.92	0.92	0.92	0.92	0.92	0.92

<sup>1</sup> Indicative

### 6.3.3.7 Wivenhoe Gates

The repainting of the radial gates and a bulkhead gate at the Wivenhoe dam is a maintenance project that is not part of the base year forecast. The project is forecast at \$6.6 million over the 2023-26 regulatory period.

Wivenhoe Dam is the largest dam in the SEQ Water Grid. It is designed for flood mitigation and also contains the water supply for the Mt Crosby water treatment plants. There are five very large mild steel radial gates at Wivenhoe dam that are essential for maintaining the safety of the dam in a flood event, by enabling controlled release of flood water out of the dam. The mild steel bulkhead gate is utilised to isolate a radial gate for maintenance or in the event of a gate failure in a flood situation.

These radial gates and bulkhead gates are inspected on a yearly basis as a part of the routine maintenance program of the dam. This inspection includes the painting system on the gates, with a patch painting program implemented to repair any faults in the system. It is not possible to access all areas of the radial gates from the existing accessways so not all areas can be patched. As the paint ages, the number of faults increase, eventually making patch painting uneconomic and requiring a full repaint of the gate.

A recent inspection has identified that three radial gates and the bulkhead gate paint system have a significant amount of rust forming indicating that a full repaint is necessary. If the gates are left in their current condition this rust could result in structural damage that would lead to major repairs or even replacement of the gate. In addition, the gates that were repainted relatively recently were found to have significant chalking of the paint. It is therefore recommended that these gates are also repainted as part of this program.

The repainting of the radial gates and bulkhead gate is a complex and time-consuming process. It involves a large scaffolding system and capturing and removing the waste generated (by sandblasting or washing down) to meet all of our Workplace Health and Safety and environmental requirements. The costs for this project have been developed with reference to the cost incurred on similar projects, including the costs incurred at the time of the previous repainting exercise.

These costs are incurred as a step change as they are needed to meet existing obligations.

**Table 6.9 Forecast expenditure for Wivenhoe gates (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		1.2	2.9	1.2	1.2	0	0
Step		1.2	2.9	1.2	1.2	0	0

<sup>1</sup> Indicative

### 6.3.3.8 Options Analysis and Planning Costs

Options analysis and planning costs are forecast to initially increase above the base forecast in 2022-23 and then increase further for the remaining years in the review period. This is due to an increase in planning costs required to meet the gateway approval process for a number of large capital projects.

There are a series of upcoming major projects that will require significant planning activities to meet the requirements of Queensland Treasury's Project Assessment Framework (PAF). As noted in section 5.6.4, as required under section 18(4) of the *Financial and Performance Management Standard 2019* (FPMS), Queensland Government Departments and statutory bodies must have regard to the PAF in preparing evaluations concerning the acquisition, maintenance or improvement of significant assets. Operational expenditure is required to meet the requirements of the PAF up to and including the Preliminary Business Case phase, after which project delivery is funded by the capital program.

As per the approved APMP (refer Chapter 5), a larger number of high value and high-profile capital projects are planned in the coming years than we have previously undertaken. As part of the continuing maturation of our capital works program, we have undertaken a review of the operational planning costs required for upcoming major projects, as part of an expected step change in planning costs. This exercise has helped to understand the operational costs associated with our 'business as usual' capital planning projects and the additional costs required to undertake major projects.

Table 6.10 sets out costs required to plan capital investment projects and their current stage (as at the development of this regulatory proposal). These costs are separate to the capital investment that will be needed to construct approved projects.

**Table 6.10 Forecast expenditure for planning projects (\$m)**

Item of Expenditure	Gate	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Next Major Bulk Augmentation	Pre-Gate	2.0	6.5	1.5	0.0	0.0	0.0
Wivenhoe Dam Stage 2 Dam Safety Upgrade	Strategic Business Case	0.9	4.0	8.5	2.5	0.0	0.0
North Pine Dam Safety Upgrade	Strategic Business Case	0.0	0.8	2.0	4.5	1.5	0.0
Borumba Dam Safety Upgrade	Pre-Gate	0.9	2.0	2.1	0.4	0.0	0.0
Wyaralong WTP First Stage	Strategic Business Case	0.0	2.0	3.0	1.0	0.0	0.0
Cameron's Hill Reservoir Storage Upgrade	Pre-Gate	0.4	0.5	1.5	3.5	0.0	0.0
Atkinson Dam Dam Safety Upgrade	Pre-Gate	0.0	0.0	0.1	2.0	1.0	1.0
Upgrade Image Flat WTP to 50ML/d	Pre-Gate	0.0	0.0	1.5	3.5	2.0	0.0
Future Projects <sup>1</sup> (Beyond approved program)		0.0	0.0	0.0	0.0	10.5	14.0
<b>Total Forecast (\$2020-21)</b>		4.2	15.8	20.2	17.4	15.0	15.0
Step (\$2019-20)		4.0	15.3	19.6	16.9	14.6	14.6

<sup>1</sup> Indicative

The majority of the planning costs for major projects are associated with external services, including investigations and studies, such as environmental and geotechnical investigations, modelling and design. These external services are supplemented with the time allocation of internal specialist staff who contribute to aspects of the project planning such as technical, integration, operations, legal and delivery. All of these services are required to ensure the projects are suitably



planned and able to proceed to the Detailed Business Case Stage in line with the gateway process. All phases of project development and delivery require external assurance reviews to ensure that the requirements of the PAF are met.

This is a step change for the organisation with the large number of major projects being planned and delivered in the approved forward capital program. Due to the required timing for completion of some of the largest projects, such as the Wivenhoe Dam Safety Upgrade and the next bulk augmentation, some of these planning activities will be run concurrently.

### 6.3.3.9 Delivery of Large Infrastructure Projects

Due to a significant body of major infrastructure work underway and more to be delivered over the next 10 years, in June 2019 we established a dedicated Major Projects Group to deliver projects that exceed \$40 million or are deemed high risk to the business and its key stakeholders (refer section 5.6.4).

As outlined above, operational expenditure is required to meet the requirements of the PAF up to and including the Preliminary Business Case phase, after which project delivery is funded by the capital program. Operational expenditure is also required to undertake program-level activities that are not directly attributable to an individual capital project. Therefore, costs incurred have been identified as an operating expenditure step change for the 2023-26 regulatory period.

Undertaken as part of a broader restructure of Seqwater, the newly created Major Projects Group delivered some key outcomes to improve the organisation structure and resourcing strategy. These included:

- restructuring the management team to ensure the team is better positioned and aligned to meet the needs of delivering major infrastructure projects in line with industry practice and Queensland Treasury's PAF;
- the approval and creation of all core positions to meet requirements for the current program and reduce the workload of the recruitment process;
- the recruitment of roles as required to align with budget forecasts and specific skillsets required as the projects progress through investment planning, pre-construction, and delivery; and
- the recruitment of staff with specific experience in the planning and delivery of major infrastructure projects.

Table 6.11 shows costs incurred in 2019-20, with a step change of \$0.8 million to reflect the full year impact of resources that were recruited during 2019-20. These costs are expected to roll forward, escalated appropriately.

**Table 6.11 Forecast expenditure for delivery of large infrastructure projects (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast	2.2	3.0	3.0	3.0	3.0	3.0	3.0
Step		0.8	0.8	0.8	0.8	0.8	0.8

<sup>1</sup> Indicative

### 6.3.3.10 Cyclical expense for negotiating Employee Agreements

The Enterprise Agreement is renegotiated every three years. The current agreement was delayed in commencement and was extended for an additional year. The next agreement will be negotiated in 2022-23 for commencement on 1 July 2023.

The Referral Notice has extended the term of the next regulatory period from three years to four. Consequently, we will be undertaking two separate Enterprise Agreement renegotiations during the 2023-26 regulatory period. These costs are presented in Table 6.12.

**Table 6.12 Cyclical expenses for negotiating Employee Agreements (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast	0	0.25	0	0	0.25	0	0
Step		0.25	0	0	0.25	0	0

<sup>1</sup> Indicative

### 6.3.3.11 Water for SEQ Plan development

An additional \$0.5 million is forecast in 2022-23 to cover the costs of the Water for SEQ Plan.

As outlined in section 2.3.1.2, the water for SEQ plan will mitigate the risks to the community of inadequate recognition of water security needs in regional planning and the imposition of suboptimal constraints on future water security planning – which would result in considerable capital investment inefficiency.

Water for SEQ is a collaborative planning process between Seqwater and its Retailer Customers. It is expected to result in potentially significant cost efficiencies for the region as planning is completed collaboratively and cross-boundary solutions can be more effectively considered with shared benefit outcomes. It will also result in governance and process changes to improve efficiencies.

The SEQ Water Service Providers' Partnership has agreed upon a 50-year total water cycle vision for the SEQ water industry that supports the achievement of the SEQ Regional Plan vision. One of the key deliverables under this vision is the Water for SEQ Plan. The first plan will focus on water (including recycled water) and sewerage. Future plans and activities will include consideration and integration of stormwater in the overall plan, bringing Councils into the collaborative planning process and enabling more optimal fit-for-purpose uses of water.

There are several benefits that this project will bring, including:

- providing a collaborative platform for planning which will drive regional best value outcomes;
- informing the SEQ Regional Plan on water and sewerage services and encouraging better outcomes for the SEQ region;
- guiding regulatory change to support the Water for SEQ vision; and
- a collaborative planning relationship between the SEQ Water Service Providers leading to improved planning, innovation and efficiencies.

The costs of the Water for SEQ plan will be shared across the SEQ Water Service Providers for the 2021-22 and 2022-23 financial years. Our budgeted share of these costs is \$1 million over the two years for consultancy fees. We have borne the first half of these costs in the current period. The remaining costs are considered prudent and efficient for the purpose of recovery through bulk water prices.

The development of the plan may also identify some implementation costs. These are not included in the costs to develop the plan initially but will need to be considered at a later date.

Both the SEQ Water Service Providers Partnership and the Strategy and Planning Committee (refer section 2.3.1) have approved the recommended funding plan for the development of the Water for SEQ Plan.

**Table 6.13 Forecast expenditure for Water for SEQ Plan (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast		0.49	0	0	0	0	0
Step		0.49	0	0	0	0	0

<sup>1</sup> Indicative

### 6.3.3.12 QCA Regulatory Fees

The QCA advised that indicative fees for the current bulk water price investigation will be \$2.01 million.

QCA fees in the 2019-20 base year were \$0.1 million, associated with the irrigation price review. Consequently, we will incur a step increase of \$1.9 million (in 2019-20 dollars) for the next bulk water price investigation (in 2025-26), assuming that the scope of the future review will be of a similar size and nature to the current review.

We have assessed consultancy expenses in the base year and consider them to be adequate. Therefore, no cyclical adjustment has been made for consultant fees except for the QCA fees.

**Table 6.14 QCA regulatory fees (\$m, 2019-20)**

Item of Expenditure	Base	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Forecast	0.0	0	0	0	1.9		
Step		0	0	0	1.9		

<sup>1</sup> Indicative

### 6.3.3.13 Summary – step events

Table 6.15 summarises all the proposed step changes to the base year expenditure.

**Table 6.15 Summary: Step changes, excluding Luggage Point (\$'000, 2019-20)**

Item of Expenditure, \$'000	2019-20	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>
Luggage Point AWTP Operation	TBD	TBD	TBD	TBD	TBD	TBD
Proactive drought management	680	680	680	680	680	680
Insurance premium changes	3,663	4,454	4,733	5,018	5,018	5,018
Natural assets	8,079	9,040	9,701	9,972	9,972	9,972
Residual disposal costs (variable)	496	496	496	496	496	496
Greenhouse Gas Emissions Abatement	915	915	915	915	915	915
Wivenhoe Gates	1,230	2,922	1,230	1,230	-	-
Delivery of Large Infrastructure Projects	816	816	816	816	816	816
Options Analysis and Planning costs	4,029	15,340	19,612	16,893	14,563	14,563
Cyclical expense for negotiation employee agreements	250	-	-	250	-	-
Water for SEQ Planning	485	-	-	-	-	-
QCA Regulatory Fees	-	-	-	1,906	-	-
<b>Total</b>	<b>20,643</b>	<b>34,662</b>	<b>38,182</b>	<b>38,176</b>	<b>32,460</b>	<b>32,460</b>

<sup>1</sup> These forecasts are indicative and incomplete, noting the total will be revised once Luggage Point costs have been submitted to the QCA

## 6.3.4 Variable Costs

Variable costs are predominantly those related to energy, chemicals and the disposal of water products from treatment plants (residue). Variable costs are a function of the unit cost of production and the amount of water produced. As such, the variable cost component of overall operating costs varies from year-to-year as the volume of water treated and supplied varies.

### 6.3.4.1 Variable costs over the current regulatory period

Variable water production costs have fallen during the current regulatory period when the impact of drought related manufactured water production costs and dirty water events are taken into account.

At the aggregate level costs are higher due to the increased requirement to use manufactured water to cater for drought and a major dirty water event in March 2020 (refer Table 6.16). When these costs are excluded the production cost per ML for non-manufactured water fell from the QCA's recommended estimate of \$116 to an actual cost of \$105 per ML in 2019-20. This is partly due to realised energy savings via electricity tariff reductions. These cost savings are expected to continue. The current year (2019-20) water production costs are therefore used as the basis of our variable cost forecast.

**Table 6.16 QCA recommended forecast vs actual variable costs 2018-19 and 2019-20**

	Cost (\$m)		\$ / ML	
	2018-19	2019-20	2018-19	2019-20
<b>QCA Recommended</b>				
Non manufactured	\$35.6	\$36.2	\$115.8	\$116.0
Manufactured	\$1.7	\$1.7	N/A	N/A
<b>Total – QCA</b>	<b>\$37.3</b>	<b>\$37.9</b>	<b>\$115.8<sup>2</sup></b>	<b>\$116.0<sup>2</sup></b>
<b>Actual</b>				
Dirty water events	\$0.2	\$1.0		
Non manufactured	\$34.3	\$33.3	\$109.2	\$105.1
Manufactured	\$5.6	\$9.7	\$715.3 <sup>1</sup>	\$568.4 <sup>1</sup>
<b>Total</b>	<b>\$40.2</b>	<b>\$44.0</b>	<b>\$127.0</b>	<b>\$132.9</b>

<sup>1</sup> GCDP cost only <sup>2</sup> Non manufactured production costs, GCDP hot standby costs excluded from calculation.

Water production has been largely in accordance with the forecast provided to the QCA for the 2018 review, with values approximately 1% higher.

Under normal operating conditions, the growth trend from 2021-22 is less than the previous forecast (Figure 6.4) and the forecasts in the outer years are lower than the forecast used in the previous regulatory period. This is due to a combination of factors including lower than expected population growth.

A forecast range has been prepared to illustrate the current uncertainties around demand, however for the purposes of developing our operating expenditure forecast the mid-range forecast has been used. If the final demand forecast recommended by the QCA varies from this mid-range forecast, the variable cost forecast will also need to be adjusted.

**Figure 6.4 Comparison between current and QCA 2018 forecast demand range**

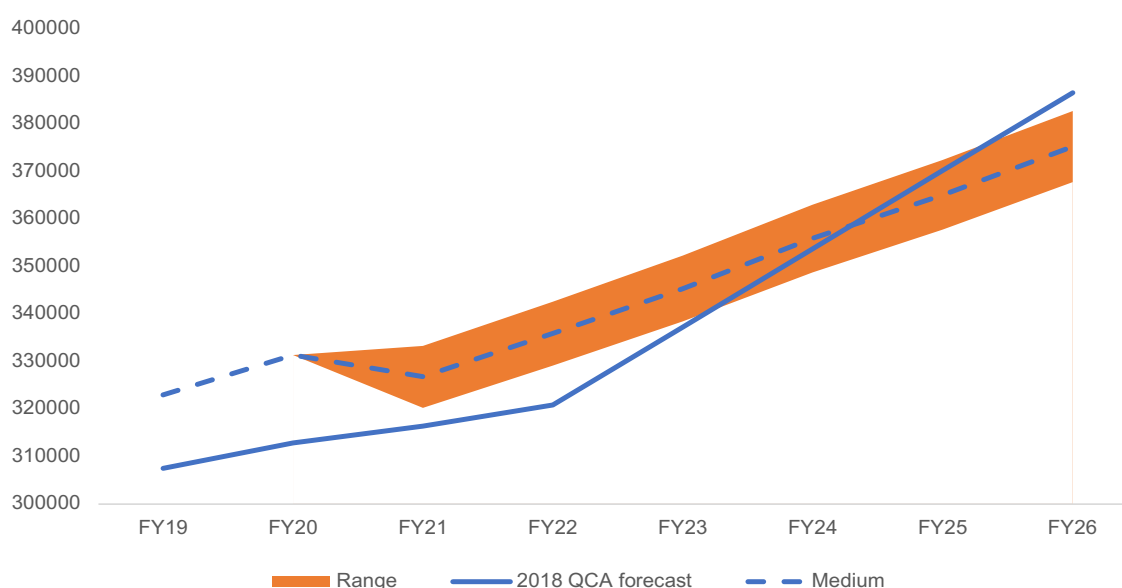


Table 6.17 presents the water production forecast for the next regulatory period by plant. The major grid-based plants are listed while the non-grid plant are summarised. Importantly, consistent with the assumption of normal operating conditions, the GCDP is expected to go back into hot standby mode during the 2023-26 regulatory period. Its production is expected to be picked up primarily by the Mt Crosby East water treatment plant. Variations in individual plant production are typically associated with planned shutdowns through the forecast period.

**Table 6.17 Water production forecast by plant (ML)**

	2019-20	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Molendinar WTP	38,053	42,646	41,873	46,686	46,543	46,189	45,821
Mount Crosby East Bank WTP	123,442	141,535	151,195	150,309	156,607	162,424	168,396
Mudgeeraba WTP	23,894	23,082	21,708	24,705	24,420	24,028	23,634
Image Flat WTP	3,250	4,878	4,982	5,010	5,010	4,987	4,963
Ewen Maddock WTP	5,422	3,600	3,641	4,240	3,891	3,554	3,246
Mount Crosby West Bank WTP	38,618	35,384	37,799	37,577	39,152	40,606	42,099
Noosa WTP	5,811	2,434	2,580	3,449	3,255	3,058	2,872
North Pine WTP	32,426	35,974	37,726	37,897	40,314	42,689	45,189
North Stradbroke Island WTP	7,451	6,836	6,971	7,214	7,378	7,511	7,644
Capalaba WTP	3,032	2,964	2,972	2,977	2,983	2,975	2,967
Landers Shute WTP	27,651	35,965	35,972	35,972	35,972	35,808	35,632
Off Grid	8,402	8,884	7,934	8,088	8,197	8,271	8,343
GCDP	13,805	1,071	480	858	1,434	920	1,070
Total	331,258	345,253	355,833	364,982	375,156	383,021	391,874

<sup>1</sup> These forecasts are indicative.

Source: Seqwater production forecast April 2021

To calculate forecast variable operating expenditure at WTPs, the \$/ML costs for energy, chemicals and other cost were calculated using the actual cost of production at individual plants from 2019-20 data. This \$/ML 'unit rate' is then applied to forecast production at that location. As Dosing and Pump stations do not produce water, their \$/ML variable cost rates were calculated based on total ML production. The variable operating costs at each location were then forecast by applying these \$/ML unit rates to total grid production forecasts.

Importantly, the cost of operating the GCDP plant in hot standby mode has been excluded from this variable cost analysis and are now captured in the fixed operating cost forecast. Variable costs associated with the WCRWS are also excluded and will be addressed in our supplementary submission on our drought allowance.

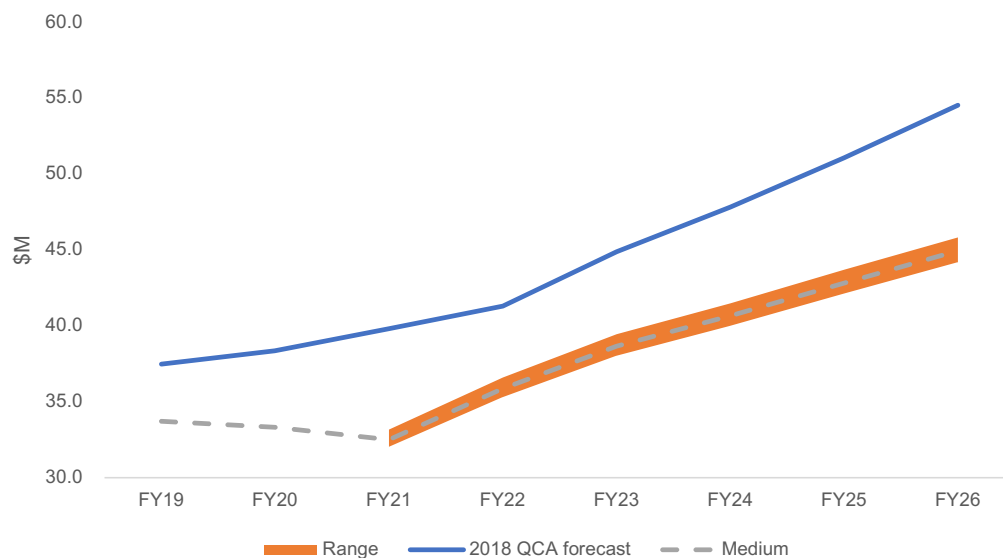
**Table 6.18 Forecast variable costs 2022-23 – 2027-28 (\$'000, 2019-20)**

	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Energy	13,629	14,148	14,477	14,905	15,269	15,657
Chemical	19,176	19,737	20,270	20,797	21,252	21,728
Other	3,088	3,055	3,282	3,287	3,281	3,276
Total	35,893	36,939	38,029	38,989	39,802	40,660
\$ / ML	104.3	104.0	104.4	104.3	104.2	104.0

Note: Costs exclude GCDP standby production which is treated as a fixed cost

Figure 6.5 illustrates the potential impact of the forecast range on variable operating costs and the size of the reduction in variable operating costs relative to the previous QCA recommended forecast.

**Figure 6.5 Comparison between current and QCA 2018 forecast and forecast range**



### 6.3.5 Escalators

The development of cost escalation factors is a key component that underpins the operating expenditure forecast. Our cost estimates are sensitive to changes in input prices, and, therefore, robust cost escalation factor estimates are required to ensure that these changes are accurately captured.

Escalation factors for our operating expenditure forecasts were developed by Frontier Economics (Frontier) for the following expenditure items (refer Attachment 8):

- employee and contract labour costs
- contractors (service delivery) costs
- electricity
- chemicals
- other materials and services.

In preparing their forecasts, Frontier examined a range of indices and regulatory precedent, and relied heavily on independent forecasts. This has provided a clear basis for the application of each of the cost escalators we have adopted and a detailed justification of how the measure aligns with anticipated changes in input prices over time. We have adopted the relevant recommended operating expenditure escalators for our operating expenditure forecasts as per Frontier’s advice. These are shown below.

**Table 6.19 Source for cost escalators**

Cost Category	Escalation Source 2020-21 – 2-25-26	Escalation Source 2026-27 – 2027-28
Employee and contract labour expenses	Frontier (per the Seqwater Enterprise Agreement)	Indicative
Contractors (service delivery)	Frontier	Indicative
Electricity	Contracted cost	Indicative
Chemicals	Frontier	Indicative
Other materials and services	Frontier	Indicative

The cost escalators applied to generate the forecasts are detailed in Table 6.20 below.

**Table 6.20 Cost escalator applied**

Cost Category	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Employee and contract labour expenses	0.20%	4.44%	4.42%	2.25%	2.59%	2.59%	2.59%	2.59%
Contractors (service delivery)	4.24%	1.81%	1.89%	2.10%	2.32%	2.38%	2.40%	2.43%
Electricity	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Chemicals	4.24%	1.81%	1.89%	2.10%	2.32%	2.38%	2.40%	2.43%
Other materials and services	4.24%	1.81%	1.89%	2.10%	2.32%	2.38%	2.40%	2.43%

<sup>1</sup> Indicative

To escalate both the base and step fixed operating cost estimates from the forecasts denominated in 2019-20 dollars, a weighted escalator was applied that was derived from the individual component's share of the base year expenditure. The variable operating cost estimates were derived by applying the individual escalators (electricity, chemicals and other materials and services) to the specific forecasts of these values in the variable cost build up.

### 6.3.6 Efficiency savings

Regulatory targets are often split between a catch-up efficiency target and an ongoing target. A catch-up efficiency target is designed to move the firm closer to operating on an efficient frontier. A continuing efficiency target is to reflect an industry-wide improvement in efficiency as productivity improves, such as through innovation.

Given our base year operating expenditure forecast is consistent with the forecast previously recommended by the QCA in its 2018 Final Report, when the impact of separately funded and explainable costs is taken into account, we do not consider it necessary to include a 'catch up' efficiency target. However, we have integrated a continuing efficiency target into the forecasts that is consistent with the efficiency target that was included in the 2018-21 regulatory period operating cost build up, which was 0.2% per year applied to controllable operating costs.

This target is consistent with the target applied by the QCA to Seqwater's irrigation operating expenditure in its January 2020 decision<sup>49</sup>. It is also in line with recommendations from Frontier who reviewed available evidence and recommended a cumulative productivity growth rate of no higher than 0.2% per annum (refer Attachment 9).

The target applies from 2019-20 to expenditure that is within our control. This is consistent with the previous approach in the 2018-21 bulk water price review. The extent to which individual cost elements are controllable varies and therefore we should only have regulatory incentives to reduce costs that we can control.

In total, 15.4% of the fixed costs in the base year were found to be uncontrollable, these include:

- grants, subsidies, and partnerships
- taxes and regulatory fees
- insurance
- the Veolia contracts on GCDP and WCRWS
- Moreton Bay Outcome Charge.

Efficiency targets that have been applied to controllable costs are provided in Table 6.21.

<sup>49</sup> Queensland Competition Authority (2020). Final Report, Rural irrigation price review 2020-24, Part C: Seqwater, January, p13.



**Table 6.21 Efficiency target**

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27 <sup>1</sup>	2027-28 <sup>1</sup>
Efficiency targets	0.2%	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%	1.6%

<sup>1</sup>Indicative

These savings will be achieved by a range of measures. These include:

- reduced expenditure on external contractors, consultants and professional services by bringing expertise inhouse;
- refined, reviewed and streamlined training packages and processes;
- reviewed vacancy and resource management;
- operations and maintenance savings and efficiencies through contract negotiations, investment to minimise downtime of critical spares, beneficial reuse of dry residue compared to wet centrifuge residue;
- initiatives to improve and uplift core systems, processes and planning such as the Connect the Dots program and preparing for Cloud Readiness;
- prioritise and reduction in non-essential projects;
- property, fleet and facilities savings from more staff working from home;
- travel expenditure reductions and savings through online meeting facilities and reduced international travel.

The base year forecasts already reflect the QCA's previous recommended efficiency targets and are therefore fully reflective of these. This means that we are not re-prosecuting these targets from 2018.

### 6.3.7 Uncertainty in estimates

There are many uncertainties involved with forecasting costs over an extended period of time. The cost of chemicals used during water treatment, macroeconomics indicators and the weather all vary and are outside of our control. Similarly, the amount of water demanded will vary based on the weather and the number and type of businesses operating in the area.

If the QCA adopts a demand forecast that differs to the medium scenario reflected in our forecast variable costs, then it should also make the corresponding adjustments to the variable cost allowances.

Some costs are difficult to clearly categorise as either operating or capital expenditure. Costs could be incurred for a short period of day-to-day operations that are higher than normal to support investment in improving other key assets. This cost would be an operating cost but is only incurred because of the capital investment it is supporting. This makes forecasting the required additional operating expenditure difficult, particularly in the early stages of planning for a large project. To reduce the uncertainty, demand production estimates have been carried out for a high, medium and low range.

To help reduce our financial risks for events beyond our control, we have a Review Events mechanism (consistent with regulatory practice elsewhere, including in the water sector). These work as a mechanism to recover costs that are not included in the expenditure forecasts and determine the risk allocation between us and our Retailer Customers. Chapter 7 provides more detail on the claims requested for Review Events during the current period, while Chapter 10 addresses these for the 2023-26 regulatory period.

### 6.3.8 Proposed Operating Cost Forecast

Table 6.22 summarises the fixed and variable cost forecast that have been built up using the base-step-trend approach detailed above. As discussed above, these exclude the Luggage Point step change costs, which will be provided separately in the supplementary submission.

**Table 6.22 Summary of operating expenditure (excluding Luggage Point step change) (\$'000)**

<b>Cost Category</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>	<b>2025-26</b>	<b>2026-27<sup>1</sup></b>	<b>2027-28<sup>1</sup></b>
Fixed opex base (\$2019-20)	228,603	228,603	228,603	228,603	228,603	228,603
Fixed opex steps (\$2019-20)	20,709	35,015	38,638	38,557	32,761	32,761
Total Fixed opex (\$2019-20)	249,312	263,618	267,242	267,160	261,364	261,364
Weighted escalator	109	111	114	116	119	122
Fixed opex (nominal)	270,279	292,006	303,242	310,641	311,433	319,218
Efficiency Adjustment	(1,357)	(1,969)	(2,559)	(3,142)	(3,659)	(4,287)
Total Fixed Opex (nominal)	268,922	290,038	300,683	307,499	307,774	314,931
Variable cost (nominal)	38,666	40,658	42,826	44,938	46,958	49,112
Total Operating costs (nominal)	<b>307,588</b>	<b>330,696</b>	<b>343,509</b>	<b>352,437</b>	<b>354,732</b>	<b>364,043</b>

<sup>1</sup>Indicative

# 7 Current Period Review Events

- The Review Events framework allows us to recover revenue for the prudent and efficient costs of certain events that were not reasonably foreseeable and are beyond our control. As permitted under the Referral Notice these reflect events previously recommended by the QCA. For the current period, these include dirty water events and drought costs.
- The drought costs, at \$80.0 million, account for the majority of the \$82.1 million of the additional costs we are seeking to recover under the Review Event provisions. The drought costs have been incurred in response to the low SEQ Water Grid storage levels during the period. Chapter 6 outlines how our ongoing monitoring and assessment of projected grid levels have resulted in significant cost savings.
- Chapter 10 addresses our proposed Review Events for the 2023-26 regulatory period.

## 7.1 Referral Notice

Under section (C)(12)(d), as part of the end of period adjustment made to determine the opening Price Path Debt as at 1 July 2022, this includes any prudent and efficient costs arising from Review Events. Section (C)(14) provides that these will be “defined in accordance with the Authority’s recommendations from the previous price review, as set out in its March 2018 report”. It also requests the QCA to make a recommendation on the appropriateness of future Review Events, which is addressed in Chapter 10.

## 7.2 Purpose and scope

The Review Events framework allows us to claim the prudent and efficient costs of events that meet the following criteria:

- an extreme event that triggers the Water Security Program or requires chemical dosing above the normal range;
- costs incurred that are materially above the forecasted expenditure;
- the impact is caused by events outside of our control;
- the event could not be reasonably foreseeable.

The QCA has previously agreed to recommend the reimbursement of costs for events that were considered beyond our control. We have been supportive of this approach in the past as such costs are unavoidable and should be recovered as part of the prudent and efficient costs of service delivery.

Rather than attempting to forecast inherently uncertain costs in advance, it is preferable to recover these costs as they are incurred (or, if this is not possible, in the subsequent regulatory period). These have been events such as heavy rainfall causing poor water quality, a tropical cyclone disrupting water supply and drought conditions.

At the end of the 2015-18 regulatory period we proposed to recover expenditure related to Review Events. These were reviewed by KPMG and mostly supported by the QCA as prudent and efficient, with some minor adjustments to the recommended amounts.

During the current period, there have been several periods of heavy rain as well as periods of drought. Whilst not all of these lead to extreme weather events requiring changes to normal operations, some events have resulted in us incurring material increases in our prudent and efficient costs that were not foreseeable at the start of the current period, nor were they controllable. Based on the QCA’s recommended Review Events, these events can be classified as drought related events and dirty water events.

## 7.3 Drought response and associated activities

The QCA has recognised that drought response activities may result in a Review Event. The QCA’s 2018 Final Report outlined its proposed approach to future reviews in relation to drought related Review Event costs:<sup>50</sup>

“Where Seqwater can demonstrate a change in prudent and efficient costs as a result of taking drought response measures in accordance with the Water Security Program, Seqwater should be able to recover these drought response costs as follows: (a) Where the impact is material, drought response costs should be recouped through a price adjustment during the three-year regulatory period. (b) Where the impact is not material, drought response costs should be recouped through an end-of-period adjustment.”

Table 7.1 outlines the periods relating to our proposed Review Event expenditures.

**Table 7.1** Periods of Review Event assessment

Year	Proposed for assessment in this review?	Justification
2017/18	Yes	Relates to previous regulatory period. The timing of the previous QCA report did not provide for the full assessment of all costs incurred.
2018/19	Yes	Relates to the current pricing period, for which actual expenses are available.
2019/20	Yes	Relates to the current pricing period, for which actual expenses are available.
2020/21	Yes	Relates to the current pricing period. The forecast included can be updated with audited 2020/21 expenses provided to the QCA once available.
2021/22	Yes	This relates to the current pricing period, when significant expenses are still being incurred following the failure of Summer rainfall inflows to boost overall grid levels. Seqwater will provide updated 2021/22 drought costs to the QCA during its assessment phase as more accurate forecasts become available.

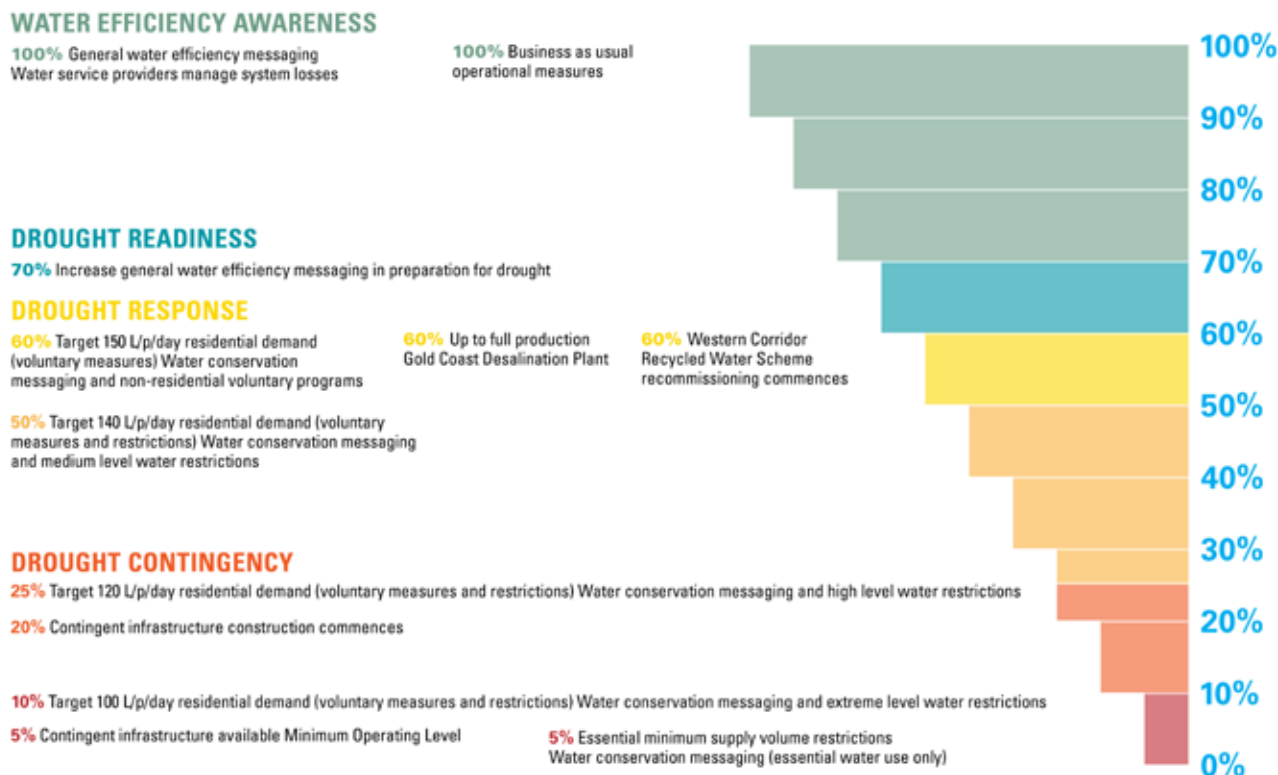
### 7.3.1 Water Security Program

As explained in section 1.1.1.2, the Water Security Program includes our Drought Response Plan. In responding to drought, it outlines high-level actions or programs of work at various trigger points, based on the combined SEQ Water Grid storage levels, along with requirements to protect off-grid communities and individual storages.

The current Drought Response Plan in the WSP2017 is shown below. This includes the recommended actions at various trigger points, noting that the actions of most relevance during the current period related to initially reaching the 70% combined SEQ Water Grid Storage level and subsequently 60% (on multiple occasions).

<sup>50</sup> Queensland Competition Authority (2018). p.81.

**Figure 7.1 Seqwater’s drought response actions recommended in WSPv2**



### 7.3.1.1 Drought triggers and approach to ensuring value for money

As discussed in section 1.3.2, our experience with drought has resulted in us practicing adaptive management, which enables us to effectively respond to drought while reducing costs.

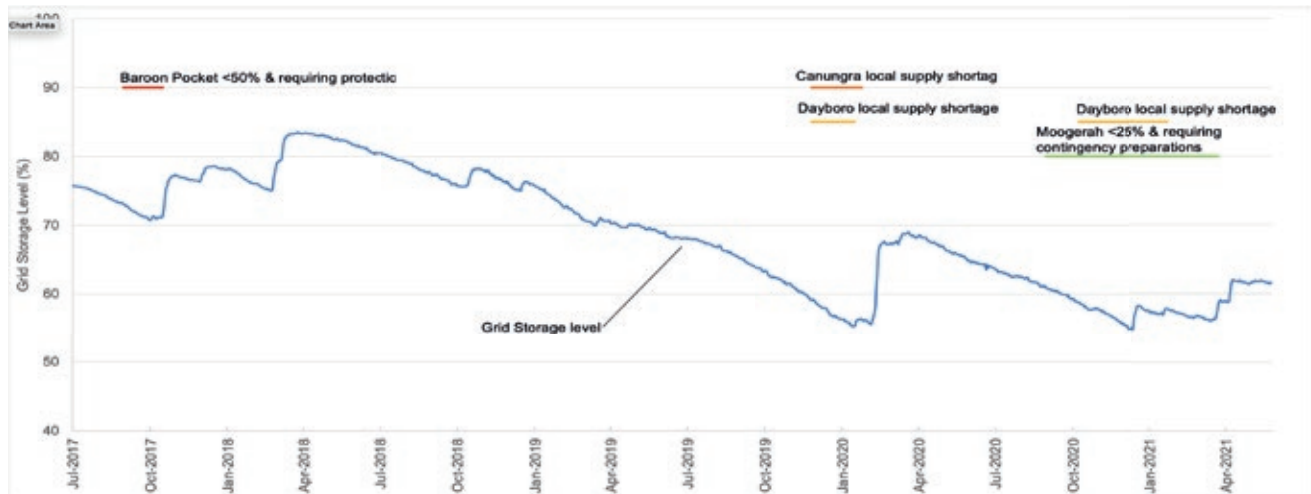
In summary, this means that we exercise judgement in implementing our Drought Response Plan based on the particular circumstances at the time. An important example of this has been the approach to the recommissioning of the WCRWS.

The WSP2017 allows for the recommissioning of the WCRWS when SEQ Water Grid storages reach 60%. However, while SEQ Water Grid storage levels reached 60% in November 2019, as this was the start of the wet season we did not take any restart action to provide an opportunity for storage levels to improve from seasonal rains. Subsequently, rains in February increased grid levels by over 10%. The approach was repeated again when SEQ Water Grid storage levels hit 60% in September 2020.

Investing time and effort in further assessing the triggers stipulated in the WSP2017 based on the specific circumstances at the time has resulted in significant cost savings compared to full recommissioning of the WCRWS. The above example is one of various instances where we have completed a more granular assessment to look for opportunities to save costs while balancing the requirements of water security.

Figure 7.2 illustrates the SEQ Water Grid storage levels and other triggers for drought initiatives that occurred at regional and local levels. Storage levels have spent a substantial portion of the 2020-21 year at or below 60%. Some of these drought initiatives are discussed in more detail below.

**Figure 7.2 Water Grid Storage levels and drought triggers**



### 7.3.1.2 Drought-related Initiatives

Drought related expenditures during the current period are categorised and summarised in two groupings as shown below: Drought Readiness and Planning and Drought Response and Implementation. This table provides some example initiatives where expenditure was required for each category.

**Table 7.2 Drought Related Initiatives**

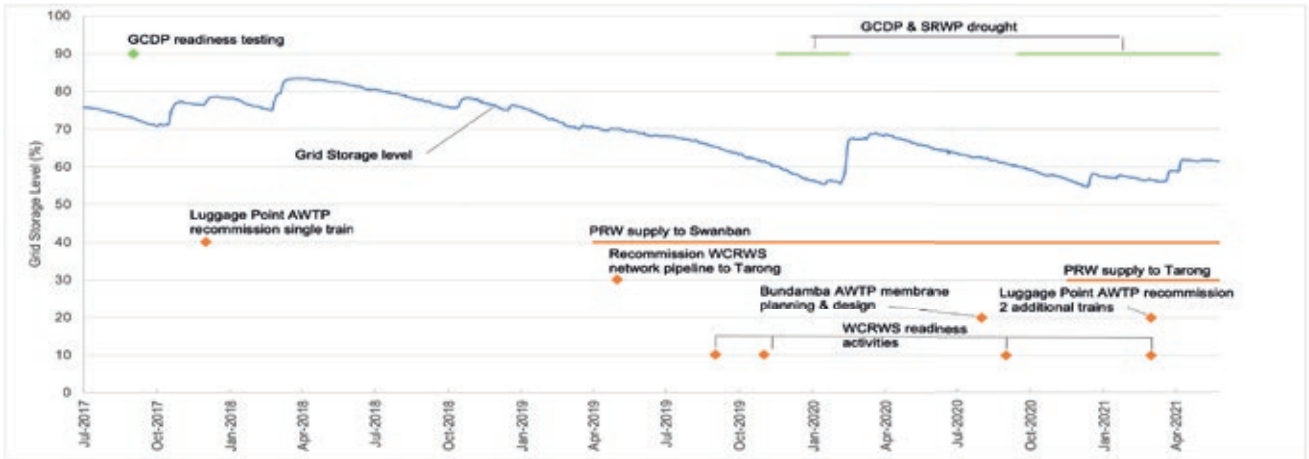
Drought Readiness and Planning	
Drought Team	Team Resourcing and Program Management (at 70% or less)
Demand Reduction	General Water Efficiency Messaging Demand reduction initiatives and investigations
Supply Augmentation	GCDP infrastructure readiness Source augmentation/ infrastructure investigations WCRWS infrastructure readiness
Grid Water Substitution	Operation of 1 train at Luggage Point to Industry (at 60-70%)
Drought Response and Implementation	
Demand Reduction	Media campaigns to target 150L/p/d Other demand reduction initiatives and investigations
Supply Augmentation	Up to Full Production of GCDP (at 60% or less) Production of GCDP at slightly more than 60% due to context - already operating the GCDP, and at only just above 60% while entering dry season Further source augmentation investigations WCRWS readiness activities Carting to off-grid communities
Grid Water Substitution	Operation of Luggage Point Train 1 to industry Restart of 2 additional trains
System Operation	Additional pumping costs above baseline Infrastructure investigations

These two categories are described in the WSP2017, including as illustrated in Figure 7.1 above. Both categories of initiatives have been implemented with an over-riding objective of efficiencies and cost savings relative to full

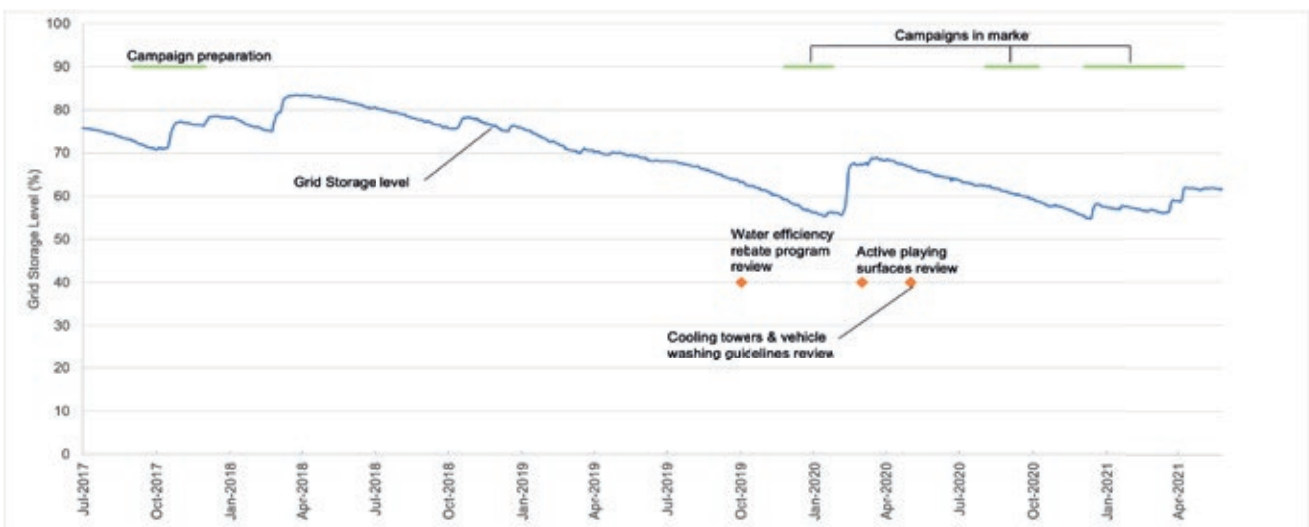
recommissioning of the WCRWS, which have periodically required an adaptive management approach.

Figure 7.3 and Table 7.4 summarise significant drought initiatives from 2017 until the present. The intensity of drought initiatives increased during the period from 2019 to the present as SEQ Water Grid storage levels continued to fall, with a short period of respite from summer rainfall inflows in early 2020.

**Figure 7.3 Supply augmentation and grid substitution using manufactured water assets**



**Figure 7.4 Drought related expenses**



### 7.3.1.3 Drought-related expenses

Drought related operating expenditure incurred and forecast during the 2018-21 period is included in Table 7.3. Indicative expenditures as per current forecasts for 2021-22 are described separately below, as these will be subject to updated estimates provided to the QCA later in 2021.

Figure 7.5 shows the amount spent each year on both Drought Response and Drought Readiness activities. Table 7.4 provides further details on each area of expenditure.

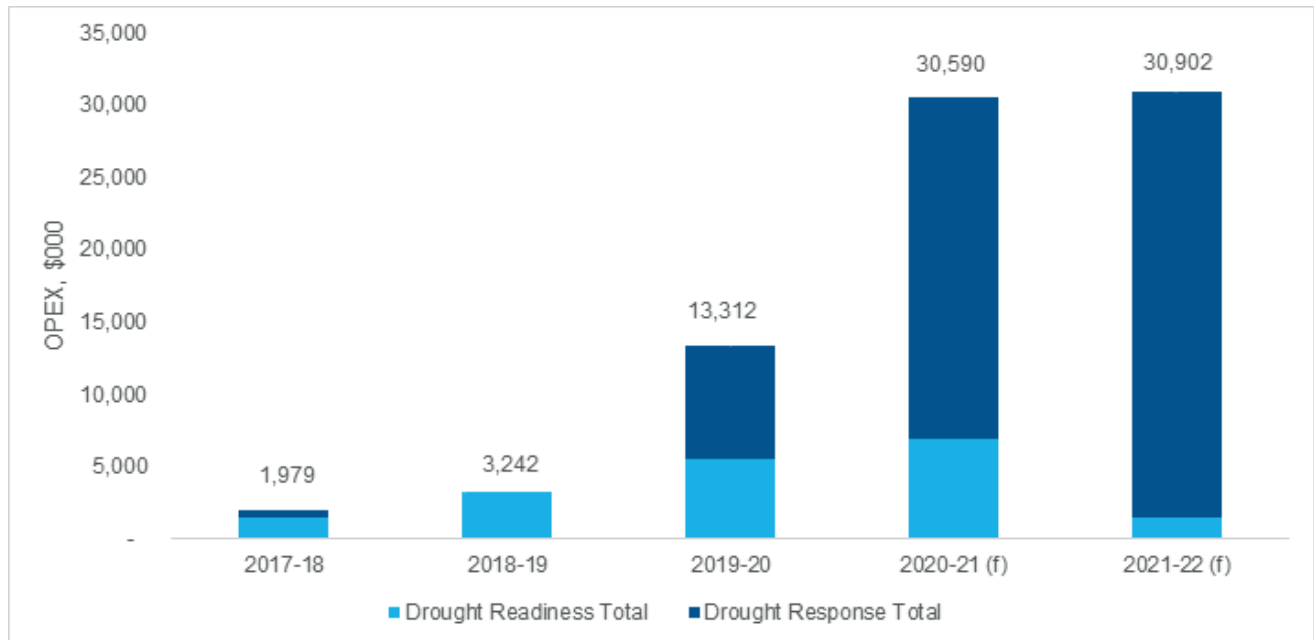
**Table 7.3 Drought-related Review Event expenditure 2017-18 to 2021-22**

Expenditure, \$000	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Drought Readiness	1,547	3,242	5,504	6,955	1,442
Demand reduction	567	-	169	549	5
General	-	138	697	140	-



Expenditure, \$000	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Grid water substitution	694	3,016	3,627	5,058	1,436
Supply augmentation	287	88	1,011	1,207	1
<b>Drought Response</b>	<b>431</b>	<b>-</b>	<b>7,809</b>	<b>23,635</b>	<b>29,459</b>
Demand reduction	-	-	1,122	2,000	1,600
Directing water	-	-	508	1,134	-
General	181	-	291	864	935
Grid water substitution	-	-	1,117	3,999	18,025
Supply augmentation	195	-	4,770	5,634	8,900
System Operation	56	-	-	4	-
<b>Total</b>	<b>1,979</b>	<b>3,242</b>	<b>13,312</b>	<b>30,590</b>	<b>30,902</b>

**Figure 7.5 Operating expenditure on drought readiness and drought response activities**



**Table 7.4 Detail on drought expenditure activities**

Drought Readiness	Drought Response	Key Initiatives	Justification
<b>Demand Reduction</b>			
✓	✓	<p>Drought Readiness Media preparations in (October 2017).</p> <p>Review of Active Playing Surface Guidelines were reviewed to assist in demand reduction for drought conditions at sporting clubs.</p> <p>Review of Cooling Towers Guidelines and car wash industry Vehicle Washing Guidelines.</p> <p>'Count the Ways' media campaigns to encourage SEQ residents to save water.</p>	<p>Community-wide and stakeholder-specific engagement to encourage water use savings, including the reliance on surface water storages.</p>

Drought Readiness	Drought Response	Key Initiatives	Justification
<b>Grid Water Substitution</b>			
✓	✓	<p>A single RO train (23ML/d) at Luggage Point AWTP was recommissioned along with sections of the pipeline network to supply PRW to Swanbank Power Station and other industrial customers. Commissioning two additional Trains at Luggage Point.</p> <p>Supply of PRW to Swanbank Power Station to reduce water supply from grid.</p> <p>Investigating the potential use of PRW at Tarong Power Station and, reinstating the Western Corridor pipeline network to restore capability to deliver PRW to Tarong Power Station's offtake.</p>	<p>The single train was recommissioned to provide a staged increase in operational skillsets and understanding of the asset given its long dormancy, in order to provide confidence in recommissioning requirements and timeframes.</p> <p>Supply of PRW water from WCRWS for industrial customers to reduce reliance on Wivenhoe Dam.</p> <p>Preparation for additional WCRWS production to meet industrial customer demand.</p>
<b>Supply Augmentation</b>			
✓	✓	<p>GCDP - readiness testing and corrective actions and, subsequently, production for grid supply purposes.</p> <p>WCRWS - Assessment of likelihood of needing to recommission the WCRWS; initial planning, procurement, and design work for Bundamba AWTP membranes.</p> <p>Preliminary readiness activities to de-risk WCRWS restart, should it be required. These include design amendments to standardise membranes at Bundamba AWTP, SCADA and telemetry upgrades, but limited to those initiatives that would not need to be repeated should full restart be delayed significantly.</p> <p>Development of a community and customer education, engagement, media and other stakeholder plan in anticipation of the likely need for additional focus on the need to increase the reliance on the use of Purified Recycled Water. Additionally, Water Grid Asset Awareness initiatives, including investigation of Kilcoy WTP raw water pumping system and preparing videos to explain manufactured water to the public.</p> <p>Off-grid community supplies - potable water carting to Canungra and Dayboro for drought response due to local supply shortfalls; installation of water tanker delivery connections at Kalbar WTP.</p> <p>Contingency Supplies - investigate contingency supplies and priorities, including Lake Manchester, Brisbane aquifers and Banksia Borefield, and Treated Water Reservoir at Enoggera WTP.</p>	<p>Preparation for, and response to, grid levels reaching 60%.</p> <p>Water carting and infrastructure to augment off-grid community supplies at relevant trigger points.</p> <p>Assessment of additional contingency supply options if drought conditions continued.</p> <p>De-risk full implementation of WCRWS if required.</p>

Drought Readiness	Drought Response	Key Initiatives	Justification
<b>Drought Response Team and associated activities</b>			
	✓	Drought Response Team resourcing, drought monitoring systems development and stakeholder engagement, including off-grid communities.	Internal drought expertise to plan, execute and monitor drought initiatives.
<b>Directing Water</b>			
	✓	Pumping water north through Southern Regional Water Pipeline.	To direct water to where it was needed most and reduced demand from the central storages, particularly Wivenhoe Dam.

**Figure 7.6 Drought readiness expenditure by category**

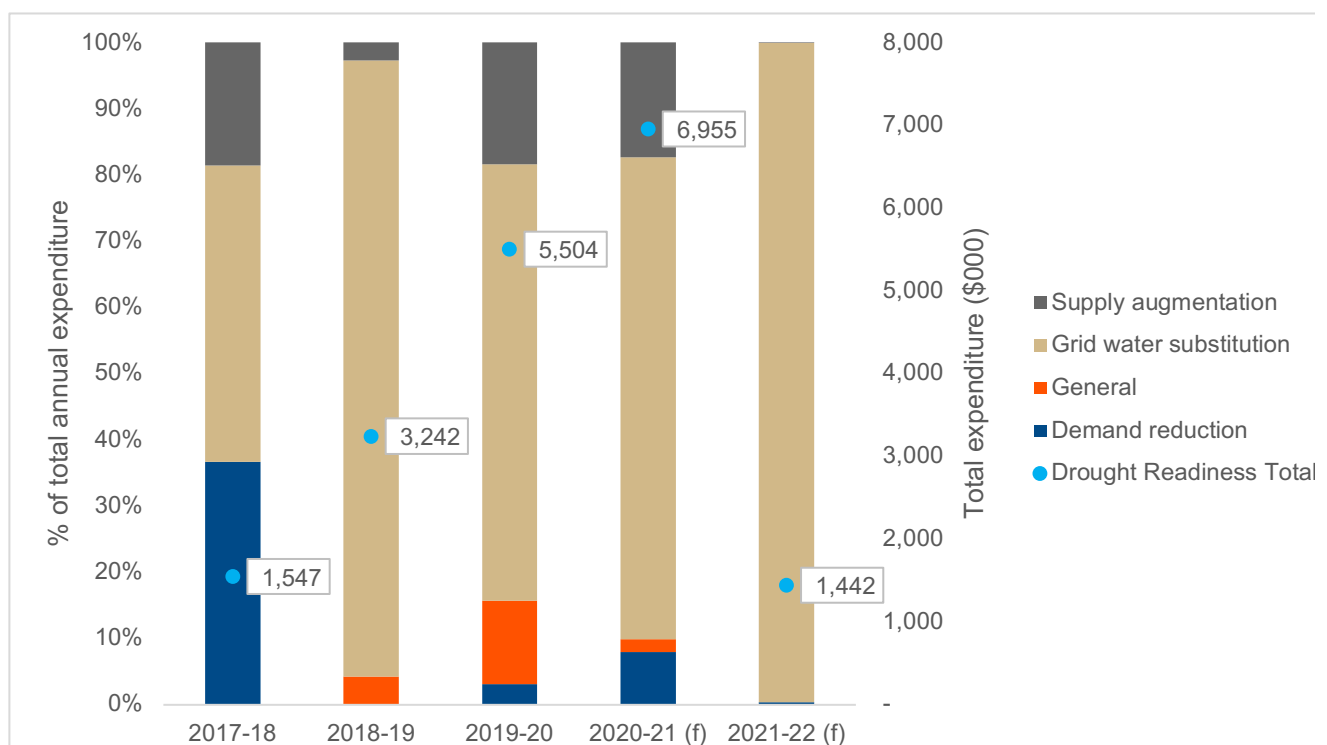
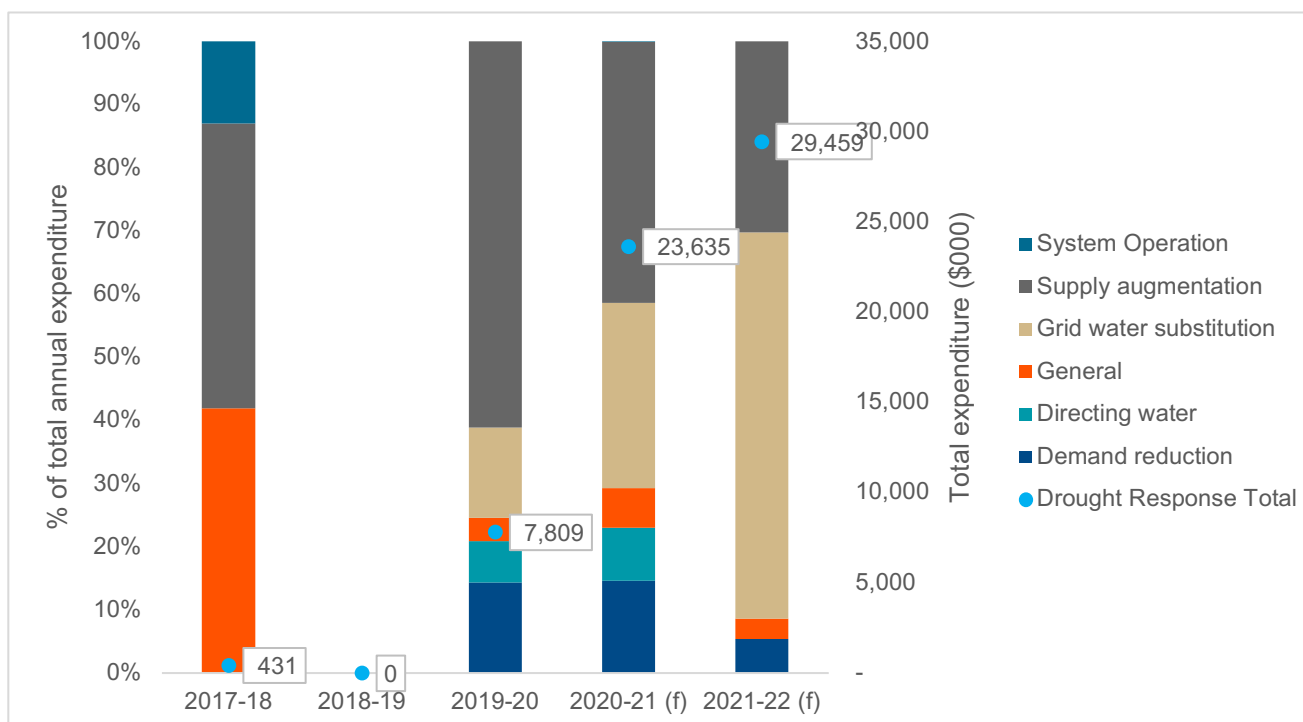


Figure 7.6 shows the proportion of expenditure on Drought Readiness activities in each category for each year, as well as the total amount spent. Most expenditure was incurred on grid water substitution activities. Total expenditure in 2021-22 was much lower than earlier years.

Expenditure for Drought Response activities is shown in Figure 7.7. Some Drought Response expenditure was incurred in 2017-18 but this is small compared to later years.

**Figure 7.7 Drought response expenditure by category**



### 7.3.1.4 Analysis of main expenditure items

Many of the most significant expenditure items highlighted in Figure 7.6 and Figure 7.7 relate to our two manufactured water facilities, the GCDP and the WCRWS (the latter to supply recycled water to industry). Both facilities were operated (including preparatory works) during the period relating to these Review Events. Contextual information in relation to these operations is provided below as this provides important background to the further analysis of the key expenditures.

#### 7.3.1.4.1 Gold Coast Desalination Plant

In the 2018-21 bulk water price investigation, the recommended expenditure for the GCDP was based on it operating in ‘hot standby’ mode so that it was able to respond as a contingent supply and provide 33% production capacity within 24 hours and full capacity within 72 hours. The criticality of this production source for the SEQ Water Grid is that it is a production-ready asset, with demonstrated capacity to be brought on-line quickly and if required, generate up to 133 ML per day of manufactured water for drinking purposes. To maintain its hot standby state of readiness, when not required for other purposes, the plant operates under a reduced frequency and run time mode.

The WSP2017 provides for the operation of the GCDP once grid levels reach 60%. This occurred during 2019-20 and in 2020-21. In mid-2021 the plant continued to operate despite being just above 60%. This was due to SEQ Water Grid storage levels being only marginally above the drought trigger and the timing being at the start of the dry season. In these circumstances it is inefficient to turn the plant off, only to restart it a short time later when grid levels are likely to drop below 60% again.

The GCDP was also operated to supplement the Gold Coast water supply during planned temporary closures of the Mudgeeraba and Molendinar WTPs, along with the Central sub-region’s largest treatment plant at Mt Crosby. Costs incurred to support these capital projects are not included in these Review Event expenditure proposals.

### 7.3.1.4.2 Western Corridor Recycled Water Scheme

The WCRWS comprises three Advanced Water Treatment Plants (AWTPs) at Luggage Point, Bundamba and Gibson Island. It also includes interconnecting pipelines and a pipeline from the Bundamba AWTP to Wivenhoe Dam, as well as to the Tarong Power Station pipeline connection. To date, the WCRWS has only been operated for supply of purified recycled water to power stations and requires Government approval to supply purified recycled water into Wivenhoe Dam for drinking water purposes.

The WSP2017 provides for recommissioning of the WCRWS when SEQ Water Grid storage levels reach 60%.

As noted above, we practice adaptive management to minimise drought costs. Therefore, while the SEQ Water Grid levels reached 60% in November 2019 and again on the 15th of September 2020, based on the results of detailed modelling considering statistical risks of the SEQ Water Grid level falling significantly further, it was determined that it would be prudent and efficient to provide the opportunity for summer rainfall to replenish grid levels. We also invested in relatively low value readiness activities and expanded existing initiatives to supply purified recycled water to industrial customers during drought, to enable deferral of far more significant costs.

Large industrial water users, notably the Swanbank and Tarong power stations, are often large bulk water customers. During 2019-20, 2020-21 and 2021-22 the power stations were partially diverted to WCRWS production from the Luggage Point AWPT, which had been partially recommissioned in late 2017. An additional industrial customer is scheduled to be supplied by this source commencing in mid-2021.

Table 7.5 and Table 7.6 show some of the highest expenditure initiatives for drought response. The tables also include a justification for why the expenditure was prudent and efficient in each case.

**Table 7.5 Drought response, Grid water substitution initiatives (\$'000)**

Expenditure on key Initiatives	2019/20 (actual)	2020/21 (actual + forecast)	2021/22 (forecast)	Prudency and Efficiency Justification
Supply of PRW to Swanbank while grid levels between 70% and 60%, reduced water consumption from Grid	1,788	715	-	Operational testing the WCRWS to partially recommission at a lower cost
Supply of PRW to Swanbank while grid levels less than 60%, reduced water consumption from Grid	1,073	2,503	-	Reduced reliance on grid supplies plus continued operational testing of WCRWS
Commissioning two additional Trains at Luggage Point	-	77	9,800	Alternate source to grid supplies for industrial customers did not increase capital costs of whole WCRWS scheme. Power station demand on the SEQ grid increased considerably, heightening the rate of drawdown of grid levels. This initiative helped protect water supplies in areas where it was most needed.

**Table 7.6 Drought response, supply augmentation initiatives (\$,000)**

Expenditure on key initiatives	2019/20 (Actual)	2020/21 (actual + Forecast)	2021/22 (forecast)	Prudency and Efficiency Justification
Contingency Supplies. Additional resources (direct placement and consultancies) to investigate contingency supplies and priorities.	-	600	1,000	Investigations into costs, yields, reliabilities and timeframes of longer-term water contingency sources. Provides basis for comprehensive prudency and efficiency assessments of additional supply sources
Potable water carting to supplement water supply to off-grid communities to meet demand due to drought	487	127	-	Water carting is part of the supply strategy for off-grid communities when extended dry periods impact on the ability of the local supply to reliably meet local demands. To ensure prudency and efficiency, Seqwater periodically review the supply options for off-grid communities to determine the most appropriate supply options. Carting is only used when the local supply option is not able to convincingly meet demand to maintain levels of service to the local community. Seqwater monitors the locals supplies works closely with the water service providers to allow them to manage local demand when it appears carting may be necessary.
GCDP operation for drought (Grid levels less than 60%)	5,755	13,700	7,700	Utilising existing operational asset once grid level reach 60%
SEQ Water Grid Asset Awareness Videos	165	-	-	
Bundamba AWTP membranes - initial planning, procurement and design work	-	1,200	-	Purchasing of long lead-time asset to defer commencement of full recommissioning of this AWTP

### 7.3.1.5 Expenditure in 2021-22

Expenditure of \$30.9 million is forecast for 2021-22. This can be broken down as shown in the table below.

**Table 7.7 Board approvals for forecast expenditure for 2021-22 (\$m)**

GCDP operations	7.7
PRW to industry	8.5
Media	1.6
Drought Program Management	0.2
Water Carting	0.2
PRW Communications and Resourcing	1.7
Contingency Planning	1.0
Additional Trains Luggage Point AWTP	9.8
Readiness Activities WCRWS	0.2
<b>Total</b>	<b>30.9</b>

These expenses are for committed costs for the period up to the end of October 2021. This includes some known full year costs, such as the two additional trains at Luggage Point, whilst other costs for ongoing operations are only included for the first few months of the year. Forecasting beyond this is more uncertain as it is largely dependent on the impact of rainfall on the grid levels.

## 7.4 Dirty water events

We are seeking to recover the costs for four dirty water events that occurred during the current period. These are all associated with periods of intense rainfall. The cause of the events is outside of our control and was unforeseeable. There is evidence to justify the expenditure incurred as prudent and efficient. For each event, additional costs were incurred for chemicals used during the event. Dosage used was prudent and action to solve the issue was efficient.

We are therefore proposing dirty water Review Events, with the associated costs shown in Table 7.8.



**Table 7.8 Summary of proposed Review Events**

Event Type	Date	Impact	Cost
Feedwater quality event (downstream of Wivenhoe Dam)	25 February – 31 March 2018	Heavy rainfall impacted Mt Crosby treatment plants requiring additional chemicals to maintain water quality.	\$513,712 total \$400,790 at Eastbank and \$112,922 at Westbank WTP
Feedwater quality event (downstream of Wivenhoe Dam)	22 October – 5 November 2018	Heavy rainfall increased levels of salt and bromide in the catchment water (particularly Black Snake Creek), requiring extra treatment to maintain water quality standard.	\$220,848 total \$175,109 at Eastbank and \$45,739 at Westbank WTP
Feedwater quality event (downstream of Wivenhoe Dam)	8 February – 16 March 2020	Heavy rainfall impacted raw water for Mt Crosby treatment plants requiring additional chemicals to maintain water quality standard.	\$964,974 total \$770,842 at East Bank and \$194,132 at West Bank WTP
Feedwater quality event (downstream of Wivenhoe Dam)	24 Mar – 27 April 2021	Heavy rainfall impacted raw water for Mt Crosby treatment plants requiring additional chemicals to maintain water quality standard.	\$334,259 total \$296,780 at East Bank and \$37,478 at West Bank WTP

## 7.5 Summary of Review Events

The activities described in the section above are the basis of a drought-response Review Event costs and Dirty Water Review Event costs incurred (or forecast in relation to 2020/21 and 2021/22 and noting that this final year will be subject to the provision of further forecasts and supporting information later in 2021). In summary, expenditure has occurred of \$80m for drought related costs and \$2m for dirty water related events. This is shown in Table 7.11.

**Table 7.9 Review Events Expenditure during Review Period**

	2017-18	2018-19	2019-20	2020-21	2021-22	Total
<b>Dirty Water</b>						
Event 1 – February 2018	\$513,712					\$513,712
Event 2 – October 2018		\$220,848				\$220,848
Event 3 – February 2020			\$964,974			\$964,974
Event 4 – March 2021				\$334,259		\$334,259
<b>Drought Related</b>						
	\$1,978,998	\$3,241,847	\$13,312,438	\$30,590,100	\$30,901,778	\$80,027,161
<b>Total</b>						
	\$2,492,710	\$3,463,695	\$14,278,412	\$30,924,359	\$30,901,778	\$82,058,954

# 8 Other Revenue Items and Adjustments

- Under the Referral Notice an end of period adjustment is made to the Price Path Debt to set the opening balance from 1 July 2022.
- In the current period we have under-recovered the revenue required to cover our prudent and efficient costs. There are a number of drivers of this, including actual inflation being well below the QCA's recommended forecast.
- Applying the end of period adjustments set out in the Referral Notice, our proposed opening Price Path Debt balance as at 1 July 2022 is \$2,398 million.
- The Referral Notice also requires us to make a number of adjustments for the purpose of setting our revenue requirement for the 2023-26 regulatory period, which are also set out in this chapter. This includes:
  - Offsetting forecast revenue from water sales to Toowoomba Regional Council, Stanwell and CleanCo.
  - Proposing a positive revenue adjustment to allow us to recover the revenue foregone from approved pricing amendments or decisions, being: (1) the agreement of a prudent discount to avoid uneconomic bypass of the bulk water supply network by a large water user; and (2) applying discounts for concealed leaks under a policy that has been under development in consultation with our Retailer Customers, to alleviate financial hardship.

In addition to the main building block components, there are a number of other revenue items and adjustments that are made in finalising the MAR that will be used to set bulk water prices for the 2023-26 regulatory period. This includes:

- the end-of-period 'true up' for the 2018-22 years (including Review Events), which is to be applied to set the opening balance of the Price Path Debt from 1 July 2022; and
- forecast revenue adjustments for the 2023-26 regulatory period.

This is addressed below.

## 8.1 End of period adjustment to the Price Path Debt

### 8.1.1 Referral Notice

Section (C)(12) provides that:

"To establish the opening Price Path Debt as at 1 July 2022, the Authority is to make an end of period adjustment to the Price Path Debt as at 1 July 2017 based on:

- a) an updated assessment of Maximum Allowable Revenue from 1 July 2017 to 30 June 2022 adjusting for the updated capital costs based on rolling forward the RAB as per item (C)(7);
- b) updating the rate of return and interest costs for the relevant actual cost of debt as advised by QTC;
- c) any prudent and efficient costs arising from Review Events as per (C)(14);
- d) any foregone revenue as a result of pricing amendments or decisions;
- e) Seqwater's actual revenue from 1 July 2017 to 30 June 2021 and forecast revenue for 1 July 2021 to 30 June 2022; and

- f) actual demand-related variable costs from 1 July 2017 to 30 June 2021 and forecast demand-related variable costs for 1 July 2021 to 30 June 2022.”

Each of these adjustments is addressed below.

## 8.1.2 Updated MAR

### 8.1.2.1 Regulated Asset Base

Section (C)(7) of the Referral Notice specifies that our opening RAB as at 1 July 2022 is to be established by rolling forward the opening RAB as at 1 July 2017 for the following:

- our actual capital expenditure, where available (otherwise our forecast capital expenditure), adjusted for any findings from the QCA’s prudency and efficiency review;
- depreciation, which is calculated using the straight-line method<sup>51</sup> and applying the remaining lives as used in the 2018-21 review<sup>52</sup>;
- actual inflation.

Our capitalised expenditure for the years 2017-18 to 2021-22 is presented in Chapter 5. This showed that in the current period we have delivered \$406.4 million in capital investments, \$84.3 million below the QCA’s recommendation, although this difference falls to \$51.3 million with the inclusion of the natural assets and grid support costs that are also proposed to be capitalised. The difference reflects improvements we have made to our asset management and capital delivery processes, strong project management, the prudent re-phasing of projects as well as some unforeseen expenditure not known at the time of our submission to the 2018-21 bulk water price investigation.

The roll forward of our RAB to 1 July 2022 is shown in Table 8.1.

**Table 8.1 RAB roll forward to 1 July 2022 (\$m)**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Opening RAB	8,465.7	8,470.5	8,474.7	8,251.5	8,474.8
Actual capitalised expenditure	97.63	105.81	107.76	128.23	116.69
Asset indexation/ inflationary gain	145.6	143.2	(85.3)	352.5	154.7
Depreciation	(238.4)	(244.8)	(245.7)	(257.4)	(261.1)
Closing RAB	8,470.5	8,474.7	8,251.5	8,474.8	8,485.1

### 8.1.2.2 Inflation adjustment

One of the most significant influences on our updated Opening RAB for the 2023-26 regulatory period is the reconciliation for actual inflation.

Our revenue and prices are set in a nominal framework. Each year, our RAB is rolled forward for inflation, to ensure that it maintains its real value over time (refer Table 8.1). This component is also termed the ‘inflationary gain’. As a nominal rate of return is then applied to that indexed RAB, an adjustment is made to the MAR to ensure that this inflationary gain is not double counted. This is done by deducting the amount of that inflationary gain from our MAR.

At the start of each regulatory period, these inflation adjustments are necessarily based on a forecast of expected inflation. Under the Referral Notice, a true-up occurs at the end of the regulatory period for actual inflation. We note that this is also consistent with regulatory practice elsewhere, where the objective is to ensure that the real value of the RAB is maintained over time.

<sup>51</sup> Section (C)(8).

<sup>52</sup> Section (C)(6).

In terms of our MAR, this means that:

- if actual inflation is lower than forecast (for example, in 2019-20 as shown in Table 8.2), our updated MAR will be higher than the QCA's recommended forecast, meaning that we will have under-recovered the revenue that we would have been entitled to earn had bulk water prices reflected actual inflation; and conversely
- if actual inflation is higher than forecast (which is currently forecast or the 2020-21 year), our updated MAR will be lower than the QCA's recommended forecast.

This (positive or negative) difference between the QCA's recommended forecast and our actual MAR is applied to the Price Path Debt.

For the current regulatory period we have updated the inflation adjustment using the following inflation rates:

- 2017-18 to 2019-20 years: consistent with the QCA's previous approach, actual inflation is based on the CPI Brisbane All Groups series for the July to June year;
- 2020-21 to 2021-22 years: we have used a forecast for inflation estimated using data from inflation swaps (consistent with section (C)(9) of the Referral Notice) – refer section 4.5.

Table 8.2 compares our actual inflation rates against the QCA's recommended forecast, along with the inflationary gain component of the RAB.

**Table 8.2 Inflation: actual versus QCA's recommended forecast**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
<b>Inflation rates: actual versus forecast</b>					
QCA: Recommended (forecast)	2.00%	2.25%	2.25%	2.50%	2.50%
Actual, updated	1.71%	1.68%	-1.00%	4.24%	1.81%
<b>Inflationary gain: actual versus forecast (\$m)</b>					
QCA: Recommended (forecast)	170.6	193.0	194.1	217.4	221.7
Actual, updated	145.6	143.2	(85.3)	352.5	154.7

We will be updating our current period MAR for actual 2020-21 inflation, along with forecast inflation for the 2021-22 year, in our response to the QCA's Draft Decision.

### 8.1.2.3 Updated MAR

Based on the above, our updated MAR for the 2018-22 period, along with the last year of the previous period (2017-18), is shown below.

**Table 8.3 Updated MAR (\$m)**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
QCA: Final Recommended (forecast)	773.3	808.8	812.9	799.4	809.0
Updated MAR	799.1	853.5	1,059.9	653.6	859.2
Difference	25.81	44.65	247.00	- 145.79	50.19

### 8.1.3 Interest rate on Price Path Debt

The Referral Notice requires the Price Path Debt be updated to reflect the actual cost of debt as advised by QTC. The forecast provided by QTC for the 2018-21 regulatory period, and its updated advice (refer Attachment 5), is set out below.

**Table 8.4 Updated Price Path Debt interest rates**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
QCA: Final Recommended (forecast)	5.11%	5.11%	5.11%	5.11%	5.11%
Updated (QTC)	5.11%	5.11%	5.07%	5.02%	5.15%

### 8.1.4 Review Events

Our proposed Review Events for the current period were addressed in Chapter 7. This results in a total proposed adjustment for Review Events of \$82.06 million for the 2018-22 period. We have offset the drought Review Event costs by the additional \$48.3 million of revenue arising from higher water sales to power stations under drought conditions<sup>53</sup>. This reduces our required recovery of those costs under the drought Review Event to \$33.6 million. We may choose to review this proposed offset to the extent that the QCA does not accept the full amount of our proposed drought Review Event costs.

### 8.1.5 Foregone revenue from pricing amendments or decisions

In 2019, the Minister approved a prudent discount for a large end user who had a feasible option that would have enabled it to bypass the network and source its own supplies. The withdrawal of this user's demand – and hence its contribution to revenues – would have had an adverse impact on bulk water prices (when reset for the next period) as this foregone revenue would need to be recovered from remaining end users.

This is the only case in the current regulatory period where we are seeking to recover foregone revenue as a result of a Minister-approved pricing decisions.

There may be other cases in future where the application of a prudent discount is in the best interests of end customers, although we are expecting these circumstances to be very limited. More information on the prudent discount mechanism, and the criteria that we propose to apply, are outlined in section 11.3. Any prudent discounts will remain subject to Ministerial approval.

### 8.1.6 Actual revenue and demand-related variable cost adjustment

The Referral Notice requires that Price Path Debt be updated for actual revenue from 1 July 2017 to 30 June 2021 and forecast revenue for 1 July 2021 to 30 June 2022. It also provides for an adjustment for our actual demand-related variable costs from 1 July 2017 to 30 June 2021 and forecast demand-related variable costs for 1 July 2021 to 30 June 2022. This is shown in Table 8.5.

**Table 8.5 Updated revenue and variable cost true-up (\$m)**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
QCA: Final Recommended (forecast)	848.1	889.6	940.4	987.8	1,026.6
Actual Revenue	856.5	931.3	990.0	1,018.0	1,085.0

<sup>53</sup> Power Station Sales Revenue over and above that forecast for in the 2018-21 pricing period.

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Difference	8.4	41.7	49.6	30.2	58.4
Variable Cost Volumetric True-Up	0	1.83	2.21	0	0
Total adjustment/shortfall	8.4	43.5	51.9	30.2	58.4

## 8.1.7 Updated Price Path Debt Balance as at 1 July 2022

Based on the terms of the Referral Notice and applying the inputs set out above, we have updated the balance of the Price Path Debt as at 1 July 2022.

**Table 8.6 Price Path Debt balance (\$m)**

	2017-18	2018-19	2019-20	2020-21 (f)	2021-22 (f)
Opening balance	2,415.9	2,480.5	2,529.4	2,732.9	2,498.8
Updated MAR	799.1	853.5	1,059.9	653.6	859.2
Actual revenue	856.5	931.3	990.0	1,018.0	1,085.0
Variable Cost Volumetric True-Up	0.0	1.8	2.2	0.0	0.0
Net Adjustments for Review Events	2.5	(7.8)	5.5	18.5	15.0
Updated actual interest costs	123.5	126.8	128.2	137.2	128.7
Closing balance	2,480.5	2,529.4	2,732.9	2,498.8	2,398.0

We will update our Closing Balance as necessary in our response to the QCA's Draft Report for the most recent information.

## 8.2 Proposed revenue adjustments for the 2023-26 regulatory period

### 8.2.1 Referral Notice

Section (C)(18) requires us to offset the following revenue streams against our bulk water costs:

- a) revenue from the sale of water to power stations;
- b) revenue from other water sales;
- c) revenue from any other source, except revenue related to the hydroelectric power stations; and
- d) revenue as a result of pricing amendments or decisions.

Section (C)(19) also requires us to exclude the costs and revenues associated with our declared irrigation services. The costs related to irrigation services are to be calculated consistent with the cost allocation approach adopted by the QCA in its review of our irrigation price paths for 2020-24.

## 8.2.2 Revenue offsets and adjustments

### 8.2.2.1 Revenue offsets

#### 8.2.2.1.1 Revenue from water sales

Based on the terms of the Referral Notice, and having regard to the QCA's 2018 Final Report, we have offset forecast revenue from water sales to Toowoomba Regional Council, Stanwell and CleanCo.

Some of the bulk water assets supply other customers who hold their own water entitlements, such as irrigators and Gympie Regional Council. We continue to allocate relevant operating and capital expenditure to irrigation entitlement holders and offset other commercial water sales revenue consistent with the Referral Notice.

#### 8.2.2.1.2 Other revenue offsets

Consistent with the approach used to determine our MAR for the current regulatory period, we have offset revenue, primarily from the leasing of land.

### 8.2.2.2 Revenue from pricing amendments or decisions

#### 8.2.2.2.1 Prudent discounts

As outlined above, we have made an adjustment for the foregone revenue associated with the application of the prudent discount as approved by the Minister. This is a positive revenue adjustment as it adds back the revenue that we would have otherwise recovered from this large user had we not granted the discount. This adjustment is necessary to ensure that we can generate sufficient revenue to fully recover our prudent and efficient costs.

#### 8.2.2.2.2 Concealed leaks

As described in section 11.2, we have been in discussions with our Retailer Customers for several years on a remissions policy for concealed leaks. Currently, our Retailer Customers are required to have a concealed leaks remissions policy, under which they have the discretion to set the level of discount they will apply to alleviate customer hardship caused by concealed leaks. Currently, no corresponding discount is provided on bulk water charges as any changes to these charges require Ministerial approval. We have been working on a policy with our Retailer Customers to align our approach to the treatment of concealed leaks, including allowing for a discount to the bulk water charge.

As will be outlined in section 11.2.2, we are proposing that the QCA makes a recommendation to the Minister that the Price Direction Notice allows us to provide concealed leaks discounts in accordance with any such agreement we make with our Retailer Customers.

As this will result us in foregoing bulk water services revenue, we need to be able to recover that foregone revenue from bulk water prices to ensure that we can fully recover our prudent and efficient costs. Similar to the prudent discount, this will be a positive revenue adjustment, rather than an offset. We have therefore included a forecast of this revenue adjustment in our proposed MAR, based on available forecasts from our Retailer Customers on the expected volume of concealed leaks that may be subject to a discount during the 2023-26 regulatory period, noting that not all Retailer Customers provided a forecast.

Given the uncertainty associated with this forecast (and noting that we have not been provided a forecast by all Retailer Customers) an end of period adjustment is likely to be required. This is discussed in section 10.4.

Adjustments for discounts and concealed leaks policy are based on current period (2018-21) bulk water prices and outer year estimates as per the QCA's 2018 Final Report.



### 8.2.2.3 Total revenue offsets/adjustments

Based on the above, the forecast total revenue adjustments we propose to make to our MAR for the 2023-26 regulatory period is presented in Table 8.7.

**Table 8.7 Forecast revenue offsets/adjustments (\$m)**

	2022-23	2023-24	2024-25	2025-26
Net revenue adjustment	-15.6	-15.9	-18.4	-19.6

### 8.2.3 Cost offsets

We have also adjusted our expenditure forecasts for the costs related to irrigation services. This includes:

- adjusting our operating expenditure forecast based on the cost allocation approach adopted by the QCA in its 2020-24 irrigation pricing review; and
- adjusting our proposed capital program, and hence our capital expenditure forecast, for any expenditure relating to irrigation services (refer section 5.7.5.6).

# 9 Proposed Revenue Requirement: Normal Operating Conditions

Based on the key building block components described in the preceding chapters, this chapter summarises our proposed total revenue requirement for the 2023-26 regulatory period for the purpose of setting bulk water prices under normal operating conditions. Consistent with section (A) of the Referral Notice, this is the total revenue we propose is required to recover our prudent and efficient costs of providing bulk water supply services and allow repayment of the Price Path Debt by 2028. This is under normal operating conditions.

Our proposed approach to the drought allowance will be addressed in our supplementary submission.

## 9.1 Key inputs

The following table summarises the key inputs that have been used to calculate our total revenue requirement under normal operating conditions.

**Table 9.1 Summary of revenue inputs and references (normal operating conditions)**

Input	Basis	Referral Notice Reference	Submission Reference
Demand forecast	Medium demand profile in the 2019 Demand Forecasting Assessment, which is the current expectation of the demand forecast for the WSP2022, with a range of plus or minus 2%.	(C)(2)-(3)	Section 3.5
Opening RAB as at 1 July 2022	Rolled forward from 1 July 2017 for actual capital expenditure, depreciation and inflation.	(C)(7)-(8)	Section 8.1.2.1
Return on capital	Benchmark WACC for assets (and working capital) and our forecast actual QTC cost of debt for the debt component.	(C)(10)	Section 4.4
Expected inflation forecast	The 40 day average of the forward inflation rate for that year implied by traded zero-coupon Australian inflation swaps.	(C)(9)	Section .5
Return of capital	We have used straight-line depreciation and applied the asset lives as recommended by the QCA in its 2018 Final Report.	(C)(8)	-
Forecast capital expenditure	Our forecast is based on our current approved Asset Portfolio Management Plan.	(C)(4)-(5)	Section 5.7
Forecast operating expenditure	Base-step-trend approach. The base year for our fixed operating costs is the most recently completed financial year (2019-21). We have escalated input costs using a set of cost indices provided by Frontier Economics and we have applied an ongoing efficiency saving target. We have also presented a band for our variable costs to the extent that the QCA seeks to adjust our proposed demand forecast (this is consistent with an adjustment within a plus or minus 2% band).	(C)(4)-(5)	Section 6.3
Taxation	We have calculated an allowance for corporate tax based on our total revenue (inclusive of the Price Path Debt repayments).	(A)(2)(a)(iii)	Section 4.6

Input	Basis	Referral Notice Reference	Submission Reference
Revenue offsets/ adjustments	We have offset revenue from water sales to Toowoomba City Council and Stanwell Power Station.  We have also forecast positive revenue adjustments for the revenue we expect to forgo from 'pricing amendments or decisions', being: (1) concealed leaks discounts; and (2) approved prudent discounts.	(C)(18)	Section 8.2
Price Path Debt repayment	Based on the updated balance of the Price Path Debt as at 1 July 2022, we have included an allowance to enable repayment of the Price Path Debt by 2028.	(C)(11)-(13)	Section 8.1.7

## 9.2 Summary of proposed total revenue requirement: normal operating conditions

Our proposed total revenue requirement for the 2023-26 regulatory period is summarised below. This shows:

- our total MAR before repayment of the Price Path Debt
- our total revenue requirement including repayment of the Price Path Debt.

**Table 9.2 Total forecast revenue 2022-23 to 2025-26 (\$m, nominal)**

	2022-23	2023-24	2024-25	2025-26
Return on assets	499	496	494	495
Depreciation	267	274	280	287
Operating costs	305	328	340	349
Tax allowance	4	67	86	108
Concealed leaks remissions	3	3	3	3
<b>Sub total</b>	<b>1,077</b>	<b>1,168</b>	<b>1,203</b>	<b>1,243</b>
Less inflationary gain or asset indexation	(163)	(184)	(206)	(214)
Less revenue offsets	(20)	(21)	(21)	(23)
Less mid-year cash flow adjustment	(16)	(16)	(15)	(15)
Total MAR: normal operating conditions – before PPD repayment	877	947	961	991
PPD interest	123	114	102	84
PPD repayment	310	349	451	548
Plus Total repayment of PPD (including interest)	433	463	553	632
<b>Total revenue: normal operating conditions with PPD repayment</b>	<b>1,311</b>	<b>1,410</b>	<b>1,514</b>	<b>1,623</b>

**Table 9.3 Comparative total forecast revenue 2022-23 to 2025-26 (\$m, nominal)**

	2018 QCA Recommended	Seqwater Proposed	Difference
Return on assets	2,133	1,984	-7%
Depreciation	1,123	1,108	-1%
Operating costs	1,147	1,321	15%
Tax allowance	-	265	
Concealed Leaks Remission		12	
Sub total	4,403	4,691	7%
Less inflationary gain on asset indexation	(902)	(767)	-15%
Less revenue offsets	(69)	(85)	23%
Less Mid-year Cash flow Adjustment	(66)	(62)	-6%
<b>Total MAR: normal operating conditions – before PPD repayment</b>	<b>3,366</b>	<b>3,777</b>	<b>12%</b>
PPD Interest	409	423	3%
PPD Repayment	1,553	1,658	7%
Plus Total repayment of PPD (including interest)	1,963	2,081	6%
<b>Total Revenue: normal operating conditions with PPD repayment</b>	<b>5,329</b>	<b>5,858</b>	<b>10%</b>

This shows that in terms of our MAR, our return on and of capital allowances are below the QCA's recommended forecast from its 2018 Final Report. This reflects our lower WACC and our lower Opening RAB compared to forecast. Our forecast operating expenditure is higher, for the reasons explained in Chapter 6.

When we apply the adjustments to our MAR, including for forecast actual inflationary gain and revenue offsets, our proposed total MAR for the 2023-26 regulatory period is \$3,777 million, compared to \$3,366 million in the current period. The main difference in these adjustments is the lower forecast inflationary gain for the 2023-26 regulatory period.

Our forecast Price Path Debt repayment is also higher for the 2023-26 regulatory period. This reflects the shorter timeframe remaining to fully repay the debt by 2028. This results in a total revenue requirement of \$5,858 million for the 2023-26 regulatory period.

# 10 Risk and uncertainty

- In operating in such a dynamic business and operating environment there are a number of uncertainties in forecasting our expenditure (and hence required revenue) for the next regulatory period. Section 6.3.3 identifies a number of proposed step changes to our operating expenditure forecast for the 2023-26 period in response to some of these known risks.
- To the extent that our capital expenditure increases above the QCA's recommended forecast in the current regulatory period we may be permitted to include this expenditure in our RAB subject to the QCA's ex post prudence and efficiency review. If our operating expenditure increases above the QCA's recommended forecast we must bear those costs unless it is approved by the QCA as a Review Event. The current Referral Notice also allows for an adjustment to demand-related variable costs.
- Currently, the main regulatory mechanisms that can be used to address uncertainty are: (1) our end of period true-up (which currently occurs via an adjustment to the Price Path Debt); and (2) Review Events.
- We are not proposing any changes to the Review Events as defined in the QCA's 2018 Final Report.
- We currently have no certainty as to whether the end of period true-ups applied in the current period (and prior periods) will be applied at the end of the next regulatory period, with the Price Path Debt now capped. These adjustments have been essential in enabling us to recover our prudent and efficient costs, particularly given the risks associated with a fully volumetric tariff – and are similarly important to ensure we do not over-recover revenue. We therefore request that the QCA considers making a recommendation to the Minister to allow these to be addressed as an end of period true-up for the next regulatory period, consistent with the mechanism applied in the current period.

## 10.1 Referral Notice

There are two main provisions in the Referral Notice that relate to the management of our risk and uncertainty.

Section (C)(12) provides for adjustments to the Price Path Debt for the period from 1 July 2017 to 30 June 2022 for certain outcomes over the current period, including Review Events. The proposed adjustments to the Price Path Debt are addressed in section 8.1, including our Review Events for the current period.

For the 2023-26 regulatory period, section (C)(14) provides that:

“Review Events are defined in accordance with the Authority's recommendations from the previous price review, as set out in its March 2018 report; with the Authority also to consider and make a recommendation on the appropriateness of future review events.”

This chapter reviews the Review Events that we propose to apply for the 2023-26 regulatory period. It also identifies the other sources of uncertainty that have been addressed to date via the end of period true-up mechanism.

## 10.2 Background

### 10.2.1 Inherent uncertainties in forecasting costs and revenues

#### 10.2.1.1 Revenue uncertainty

With a fully volumetric tariff, we are exposed to material demand risk as the future revenue we can recover from bulk water charges will vary directly with changes in demand. Under the Referral Notice, this will be addressed for the period

from 1 July 2017 to 30 June 2022 as an end of period adjustment, which is added to the Price Path Debt.

As outlined in section 3.5, we have adopted the medium 'most likely' demand forecast in developing our revenue proposal for the 2023-26 regulatory period (with a plus or minus 2% range). There is currently no certainty as to whether an adjustment will again be able to be made at the end of that period for any under- or over-recovery of revenue resulting from the difference between actual and forecast demand.

### 10.2.1.2 Cost uncertainty

There are several activities involved in the provision of bulk water services where we can forecast costs with a reasonable degree of certainty, particularly in those areas that are within our control. However, there are areas where there is more risk and uncertainty, especially where there are one or more factors that could impact costs that are not within our control (or over which we might have limited control). Drought response costs is a key example. Under certain circumstances we may now be able to recover some of these costs earlier via the drought allowance (to be addressed in our supplementary submission).

Our organisational risk profile evolves over time as new risks emerge and information improves our understanding of our business risks. Examples of this include cyber security risks, uncertainties associated with the impact of climate change (including fire management risk), risks associated with future legislative changes (e.g. landfill levy) and customer, community and stakeholder expectations (e.g. around billing/metering accuracy). This may also necessitate step changes in our operating expenditure forecast, as highlighted in section 6.3.3. We may also seek to manage these impacts by reallocating resources and reinvesting efficiency savings to address new sources of risk.

Under normal operating conditions an ongoing source of uncertainty is our demand-related variable costs. While we have a detailed understanding as to which costs are sensitive to demand – and how they change – there is less certainty over demand. The Referral Notice requires bulk water charges to be 100% variable, rather than cost reflective.

This imbalance, together with the demand true up, means that increases in variable costs due to higher than forecast demand are not offset by a corresponding increase in revenues. This is because under the (current) end of period true-up, an adjustment is made for the actual revenue we have earned over the regulatory period, meaning that any additional revenue we have earned above the QCA's recommended MAR due to higher than forecast demand is effectively rebated to our Retailer Customers. This is similar to a revenue cap form of regulation except that the adjustment is currently made via the Price Path Debt balance. However, we still would have incurred additional variable costs in servicing that higher demand but are unable to retain any of the additional revenue to cover those costs.

There are also uncertainties in developing cost estimates for our forecast capital expenditure and operating expenditure. To the extent that our actual capital expenditure varies from forecast, we may be permitted to recover those costs subject to an ex post prudency and efficiency review by the QCA (noting that under the current Referral Notice, the ex post review is limited to material projects only). We must absorb any increases in our operating expenditure above forecast, unless it is potentially recoverable as a Review Event.

## 10.2.2 Existing regulatory mechanisms

### 10.2.2.1 Review Events

Review Events are intended to reflect unanticipated and material changes in assumptions or circumstances impacting our costs and/or revenue that are not reflected in the approved forecasts for the relevant pricing period. The timing of application depends on the materiality of the change in revenue or costs, where:

- events that have resulted in a material change could be eligible for a mid-period review by the QCA, which could result in it recommending a new price path to replace the current approved price path;
- other changes that have not been subject to a mid-period review may be able to be recouped via an end-of-period adjustment.

Our current Review Events are as defined in the QCA's 2018 Final Report. In that report, the QCA considered that the (then) existing Review Events from the 2015-18 bulk water price review remained appropriate. It also recommended an additional Review Event for drought response. This results in the current list of Review Events, as shown below.

## Seqwater's Current Review Events

1. Where Seqwater can demonstrate that it is unable to manage the impact of unexpected changes to water demand or supply which causes a change in revenue or prudent and efficient costs:
  - a. a material change be eligible for a mid-price path review
  - b. where not subject to a mid-price path review, the change be recouped by an end-of-period adjustment.
2. Where the impact of law or government policy on bulk water prices is unambiguous, it be automatically passed through by Seqwater to customers.
3. Where Seqwater can demonstrate that it is unable to manage the impact of law or government policy on bulk water prices which causes a change in revenue, or prudent and efficient costs:
  - a. a material change be eligible for a mid-price path review
  - b. where not subject to a mid-price path review, the change be recouped by an end-of-period adjustment.
4. Where Seqwater can demonstrate that it is unable to manage the impact of feedwater quality which causes a change in revenue, or prudent and efficient costs:
  - a. a material change be eligible for a mid-price path review
  - b. where not subject to a mid-price path review, the change be recouped by an end-of-period adjustment.
5. Where Seqwater can demonstrate a change in prudent and efficient costs as a result of taking drought response measures in accordance with the Water Security Program, Seqwater should be able to recover these drought response costs as follows:
  - a. Where the impact is material, drought response costs should be recouped through a price adjustment during the three-year regulatory period.
  - b. Where the impact is not material, drought response costs should be recouped through an end-of-period adjustment.

a The QCA recommended that this provision applies where Seqwater's ability to manage the material impact of a change in government policy is less clear.

The current framework refers to 'material' change to be eligible for a mid-price path review. Currently, no materiality threshold has been defined. In the 2012-13 Grid Service Charge Review, the QCA recommended a materiality threshold of 5% of MAR. In its 2018 Final Report the QCA stated:

"We also still consider that the Government is best placed to determine when an impact is material and, therefore, when a within-period review is necessary."<sup>54</sup>

While the Referral Notice continues to refer to materiality, Government has not specified a threshold. We otherwise adopt a working assumption of 5%.

The other key principles that have underpinned the QCA's previous consideration of our Review Events are:

- the event could not reasonably have been foreseen when the cost forecast was developed
- one or more drivers of the event are not within our direct control.

### 10.2.2.2 End-of-period true-up mechanism

The other key regulatory mechanism is the end of period true-up. The Referral Notice prescribes a true-up for the current regulatory period (to 30 June 2022) for a number of factors that may have resulted in differences between our actual revenue or costs and the QCA's recommended MAR. The net effect of these factors could be an under- or over-recovery of revenue, although in the current period, this has been an under-recovery, as has been the case in prior periods. This balance is applied to the Price Path Debt (refer section 8.1).

54 Queensland Competition Authority (2018). Final Report, Seqwater Bulk Water Price Review 2018-21, March p.81.



The purpose of this mechanism is to ensure that we are able to fully recover our prudent and efficient costs - but no more than those costs - and repay the Price Path Debt within the required timeframe. This is generally consistent with a revenue cap form of regulation. We have no certainty as to what mechanism will apply at the end of the 2023-26 regulatory period.

## 10.2.3 Key principles underpinning regulatory mechanisms

### 10.2.3.1 Recovery of Seqwater's prudent and efficient costs

One of the main objectives underpinning our regulatory framework is the recovery of our prudent and efficient costs. This is a fundamental tenet of economic regulation, including in the water sector. The QCA has previously acknowledged this for Seqwater:

“Consistent with the guiding principles for this review, our approach has been to recommend prices that reflect the terms of the referral and our assessment of the prudent and efficient costs that Seqwater requires to provide bulk water supply services, and meet its legislative and regulatory obligations.”<sup>55</sup>

In the water sector this also reflects the 2010 Pricing Principles established under the National Water Initiative (NWI), which amongst other things, provides that:

“Water businesses should be moving to recover efficient costs consistent with the National Water Initiative (NWI) definition of the upper revenue bound: ‘to avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities, taxes or tax equivalent regimes, provision for the cost of asset consumption and cost of capital, the latter being calculated using a Weighted Average Cost of Capital (WACC)’”.<sup>56</sup>

This is also provided in the Referral Notice, which directs the QCA to recommend prices:<sup>57</sup>

“...that allow Seqwater sufficient revenue to recover the prudent and efficient costs of providing bulk water supply services...and repay Price Path Debt...by 2027-28”

A key objective underpinning the full cost recovery principle is not only to ensure that the business remains financially sustainable but to ensure that it has continued incentive to invest in infrastructure. Bulk water supply assets have significant upfront capital costs and (generally) long economic lives, resulting in a long capital recovery period. The majority of the cost base comprises fixed costs.

Pricing at a level that reflects full economic costs also sends clear signals to users about the costs of providing water services. The Productivity Commission recognised the importance of both objectives in its review of progress in national water reform:

“The NWI requirements ensure that prices reflect the long-run cost of service delivery, including both capital and operating expenditure. This is important for two reasons. First, prices that are at upper bound levels (that is, they are broadly cost reflective) send a useful signal to water consumers about how much water they should consume. Second, if prices are below lower bound levels, service providers may be forced to cut back on investment and maintenance due to a lack of revenue, reducing service quality over time; or they may become reliant on government subsidies, wasting taxpayer money and potentially distorting how services are provided.”<sup>58</sup>

In this report the Productivity Commission reiterated the need for all jurisdictions to move towards upper bound pricing, noting that large metropolitan providers have generally achieved this.

Pricing to ensure recovery of our efficient costs is therefore in the long-term interests of end customers by ensuring that prices reflect the economic costs of bulk water supply, as well as incentivising efficient investment and avoiding the need for Government subsidisation of services.

55 Queensland Competition Authority (2018). p.4.

56 Natural Resource Management Ministerial Council (2010). National Water Initiative Pricing Principles, Principle 1, p.10.

57 Section (A)(1).

58 Productivity Commission (2017). National Water Reform, Report no. 87, Canberra, p.220.

### 10.2.3.2 Other principles

In addition to ensuring that we can recover our prudent and efficient costs, which is in the long-term interests of end-users, there are a number of other objectives that are relevant to ensuring efficiency in setting prices and managing the associated risks under the regulatory framework:

- **Incentives-based:** Seqwater has appropriate incentives to provide services efficiently, which meet required standards and regulatory obligations at lowest long-term cost.
- **Unbiased:** the regulatory framework does not distort decisions impacting both the timing and nature of solutions, including no bias towards capital or operating expenditure.
- **Efficient risk allocation:** Seqwater should not be exposed to risks over which it has no control.
- **Proportionate:** regulation is cost-effective and proportionate.

## 10.3 Review Events

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Overall, we consider that our current Review Events remain appropriate for the 2023-26 regulatory period. This includes the existing Review Event for drought response costs, which provides an opportunity to recover these costs if we are unable to apply the drought allowance (this will be discussed further in our supplementary submission). It will also allow for us to address any consequent under- or over-recovery of those costs if the drought allowance is applied, noting the uncertainty associated with the actual financial impacts of drought on our business.

We are not proposing any new Review Events for the current period.

## 10.4 Other cost and revenue recovery risks for Seqwater

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### 10.4.1 Key sources of risk

Having regard to the need for us to be able to recover our prudent and efficient costs in delivering bulk water services, there are a number of key risk areas for Seqwater that have previously been addressed under the Referral Notice via an end of period adjustment (including for the current period). That adjustment has been applied to the Price Path Debt.

We do not know if there will be an end-of-period adjustment for the 2023-26 regulatory period or how this might be applied. Noting that to date, our form of regulation has been consistent with a revenue cap, this could continue to be managed via more conventional revenue approaches, such as revenue (and price) adjustments in the next period. This is a particularly significant issue for us given the degree of revenue risk we carry under a fully volumetric tariff.

Going forward, the key sources of risk that are not addressed under the Review Event mechanism include the following:

- until the Price Path Debt is fully repaid (and we can move to a more commercial gearing structure), the difference between the forecast and actual QTC cost of debt;
- any under- or over-recovery of revenue that will be primarily driven by differences between actual and forecast volumes, including in the event of drought (other than any foregone revenue we have been able to recover if we have been able to apply the drought allowance);
- the difference between our actual and forecast demand-related variable costs; and
- differences between actual and forecast revenue foregone as a result of pricing amendments or decisions.

In relation to the last point, as noted in section 8.1.5 and discussed further in section 11.2, we are proposing to include a forecast revenue adjustment to allow us to recover the foregone revenue from granting discounts for concealed leaks in the 2023-26 regulatory period, along with an adjustment for the existing prudent discount.

While we have requested forecasts of concealed leaks remissions from our Retailer Customers, forecasting concealed leaks – and the volume that would qualify for a discount – is extremely difficult. The policy is also still in the process of being finalised. Forecasting the adjustment required for the prudent discount is less uncertain.

For the current period, the Referral Notice allows us to make an adjustment for revenues resulting from price amendments or decisions, which would include concealed leaks and prudent discounts (section (C)(12)(d)). While the Referral Notice allows these adjustments to be made to our proposed revenue requirement for the 2023-26 regulatory period (section (C)(18)(d)), we have no certainty as to whether an end of period adjustment would be allowed to address any under- or over-recovery of revenue given the uncertainty in forecasting those amounts, particularly concealed leaks discounts.

## 10.4.2 Proposal

We therefore request that the QCA considers making a recommendation to the Minister to allow these risks to be addressed as an end of period true-up for the next regulatory period, consistent with the mechanism applied in the current period. These adjustments have been essential in enabling us to recover our prudent and efficient costs – and are similarly important to ensure we do not over-recover revenue. This could occur via a more standard regulatory mechanism (e.g. as occurs under a revenue cap).

# 11 Special considerations for end customers

## **Concealed leaks remissions policy**

- Concealed leaks can be a potential source of financial hardship for end customers. Our Retailer Customers are currently required to have a concealed leaks remissions policy in place to provide financial relief to impacted end customers in appropriate circumstances. We are precluded from providing any corresponding discounts to bulk water charges unless we have Ministerial approval.
- The Minister has approved for us to develop a concealed leaks remission policy in consultation with our Retailer Customers and Government. We have been engaged in this consultation for the last several years although the policy is still to be finalised.
- In anticipation of the finalisation and implementation of this policy for the 2023-26 regulatory period, we are requesting the QCA to make a recommendation to the Minister to ensure that the Price Direction Notice allows us to provide a discount for concealed leaks in accordance with the concealed leaks remission policy, with the foregone revenue to be recovered via bulk water charges (consistent with section (C)(18)(d) of the Referral Notice). A forecast of this foregone revenue for the 2023-26 regulatory period is provided in section 8.2.2.

## **Prudent discounts**

- In 2019 the Minister approved a prudent discount with a large user to avoid uneconomic bypass.
- While we are not expecting these cases to be frequent, we see benefit in having a prudent discount framework in place to provide certainty as well as consistency in any future negotiations. These commercial negotiations also need to be completed in a timely manner.
- We have commenced discussions with our Retailer Customers on the proposed framework, which will be based on the same criteria as are applied under the National Electricity Rules. This is intended to ensure that the negotiation and agreement of such discounts remain in the best interests of all end users.
- We are requesting the QCA to review our proposed criteria and to make a recommendation to the Minister that future prudent discounts be approved by the Minister if they meet the recommended criteria, as well as continue to recover the foregone revenue from approved prudent discounts, which will remain subject to the QCA's review and recommendation.

## 11.1 Referral Notice

For the current regulatory period, for the purpose of setting the opening balance of the Price Path Debt as at 1 July 2022, the Referral Notice allows for an end-of-period adjustment for any foregone revenue "as a result of pricing amendments or decisions" (section (C)(12)(d)). This was address in section 8.1.5.

Section (C)(18)(d) also requires us to make adjustments for revenue streams "as a result of pricing amendments or decisions" for the 2023-26 regulatory period.

This section identifies two key policies that would fall under the category of a "pricing amendment or decision", as well as how we propose to address this for the 2023-26 regulatory period.

## 11.2 Concealed leaks remissions

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### 11.2.1 Overview

Concealed leaks occur when water escapes from underground infrastructure but is hidden from view. It refers to leaks occurring past the retail water supply meter on the boundary of an end customer's property but where that customer could not reasonably be expected to know of its existence. End customers will typically become aware of concealed leaks when their bills contain higher usage charges without any known material increases in their own consumption.

#### 11.2.1.1 Concealed leaks remission policy

The *South East Queensland Water and Wastewater Customer Code*<sup>59</sup> requires the five SEQ Service Providers (our Retailer Customers) to have a concealed leaks remissions policy, however each has the discretion to choose the amount of the remission provided. This has resulted in differing levels of remissions as well as the types of end customers who are eligible for remission.

Currently, no discount is provided on bulk water charges that relate to a concealed leak as any changes in bulk water charges require Ministerial approval. We have been working with our Retailer Customers in aligning our approach to the treatment of concealed leaks, including allowing for a discount to the bulk water charge. This will assist in alleviating financial hardship for end customers from a concealed leak. We have no control over the incidence or cost of a concealed leak.

In 2018 the Minister wrote to our Board approving the development of a concealed leaks remission policy by Seqwater. The Minister acknowledged that this would need to be developed in consultation with our Retailer Customers and Government. We have subsequently been engaged in these discussions with a view to finalising this policy. In discussions to date, the principles that we are proposing for this policy are as follows:

- A rebate be made available to each service provider of up to 70% of the bulk water charges for concealed leak remissions approved by our Retailer Customers under their existing policies.
- The rebate would be subject to our Retailer Customers providing at least 70% remission of their charges.
- The rebate would be available for residential consumers, charities and not for profit consumers and other consumers where the service provider has provided a concealed leaks remission on the basis of hardship.

Formal agreement on the policy has not yet been secured from our Retailer Customers however we expect to achieve this prior to the commencement of the 2023-26 regulatory period.

#### 11.2.1.2 Cost to customers

Our Retailer Customers apply a two-part tariff (with some providing tiered usage charges), with the discount applied to the usage or volumetric charge. Our charge is fully volumetric. Applying a discount for concealed leaks will have a comparatively more significant impact on our revenue. This will therefore require an adjustment to bulk water charges in accordance with section (C)(18)(d) of the Referral Notice (i.e. revenue as a result of pricing amendments or decisions).

A concealed leak could have a significant financial impact on an individual end customer. In the absence of the ability to provide bill relief, the end customer could be faced with a large bill for their additional water usage as a consequence of that leak. With a concealed leaks remission policy, the increase in bulk water charges that would be required to cover the costs of providing this bill relief will be very small compared to the cost that an individual end user with a concealed leak could face in the absence of the policy. For example, depending on the extent of the leak, an individual end customer could possibly face additional bulk water charges totaling several hundred dollars or more, whereas under current policy and assumptions, this bill shock can be mitigated for an approximate of \$0.3 p.a. across all end customers.

This is therefore akin to an insurance policy for all end customers, provided the requirements of the concealed leaks remission policy are satisfied.

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<sup>59</sup> Available at: [https://www.dews.qld.gov.au/\\_\\_data/assets/pdf\\_file/0012/1239888/customer-water-wastewater-code.pdf](https://www.dews.qld.gov.au/__data/assets/pdf_file/0012/1239888/customer-water-wastewater-code.pdf)

## 11.2.2 Proposal

Our proposal is a request to the QCA to make a recommendation to the Minister to ensure that the Price Direction Notice allows us to provide a discount for concealed leaks in accordance with the concealed leaks remission policy, with the foregone revenue to be recovered via bulk water charges (consistent with section (C)(18)(d) of the Referral Notice).

As noted above, we have proposed to recover the foregone revenue as a positive adjustment to our MAR based on the forecasts of concealed leaks provided by our Retailer Customers. This will remain subject to the QCA's review and recommendation. The proposed adjustment for the 2023-26 regulatory period is presented in section 8.2.

To the extent permitted in the Referral Notice provided at the start of the next regulatory period, an end of period true-up may be required at the end of the 2023-26 regulatory period (and subsequent regulatory periods) to address any residual under- or over-recovery of revenue (as is the case for the current period). This is particularly important in the case of our forecast of foregone revenue from concealed leaks, noting that:

- the forecasts obtained from Retailer Customers as to the volume of concealed leaks that may be subject to a discount is highly uncertain (and not all Retailer Customers have supplied a forecast); and
- the policy is still in the process of being finalised for expected implementation in the 2023-26 regulatory period.

In Chapter 10 we therefore requested that the QCA make a recommendation to the Minister to address any consequent under- or over-recovery of revenue from pricing amendments or decisions via an end of period adjustment, consistent with the provision in the current Referral Notice. This would also extend to foregone revenue from prudent discounts, as set out below.

## 11.3 Prudent discounts

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### 11.3.1 Overview

#### 11.3.1.1 Circumstances where it may be appropriate to apply a prudent discount

Existing large water users in SEQ may have an option to directly source their bulk water supplies from alternatives such as local recycled water, on-site treatment, stormwater and desalination, which could allow them to bypass the bulk water and distribution network. If this bypass was to occur, the same amount of fixed network costs still needs to be recovered from remaining users, which could require an increase in bulk water charges to ensure recovery of our prudent and efficient costs.

In the electricity sector this risk is mitigated by allowing transmission network service providers (TNSPs) to apply a 'prudent discount' to large users that are otherwise looking to bypass the network. The objective of this is to provide those users with an incentive to remain connected to the network. However, this is only applied where it is in the best interests of all users, that is, remaining users are made no worse off (and are more likely to be better off) than had that large user disconnected from the network.

In the 2018-21 pricing investigation we had flagged the potential introduction of a prudent discount framework. In its 2018 Final Report the QCA stated that while this is something that could be considered, it was outside of the scope of its review and a matter for Government.

As outlined in section 8.1.5, in 2019 the Minister approved a prudent discount for a large user to avoid uneconomic bypass. We are not expecting many cases to arise where prudent discounts may be applied, however if they do, we see benefit in having sufficient certainty to enable us to commercially negotiate these discounts (with our Retailer Customers) in a timely manner.

#### 11.3.1.2 Prudent discount framework

We have commenced consultation with our Retailer Customers on the design and application of a prudent discount framework. The proposed framework is modelled on the criteria underpinning the application of prudent discounts by

TNSPs under the *National Electricity Rules*, which are also consistent with the criteria we applied in negotiating and agreeing the discount provided to the large user during the current regulatory period. The intent of the criteria is to ensure that these discounts are only applied where it is economically efficient to do so. This extends to the recovery of any foregone revenue from the application of the discount via bulk water charges. Again, we would require Ministerial approval for any such bulk water price adjustments.

The other key aspect of our framework is that it is also likely to impact the distribution network – indeed it may be more likely that the initial approach is made by a large user to one of our Retailer Customers. This would require a joint negotiation between us, the relevant Retailer Customer and the large user with the bypass option. The benefit of having an approved framework is to provide greater certainty to all stakeholders as part of commercial negotiations, including large users who may seek to negotiate a discount. However, it is also not intended to bind us or our Retailer Customers to a particular course of action.

In terms of bulk water charges, the Minister has the ultimate discretion as to whether this is approved. Once the approved framework is in place, we will still need to seek Ministerial approval of each discount, including any consequent changes we would propose to bulk water charges to recover foregone revenue. This will continue to occur on a case-by-case basis. The framework will provide a clearer process in terms of how this approval will be sought and what information will be provided.

The criteria that we would propose be applied in proposing a prudent discount for approval by the Minister are as follows.

- Discounts can only be applied for by large water users that have a technically and economically feasible option to bypass the SEQ Water Grid. That is:
  - is there an alternative water supply option available to which the large user could physically connect (technical feasibility); and
  - could the alternative water supply option provide delivered water that will meet the needs of the large user at a lower cost than connection to the SEQ Water Grid, having regard to all relevant capital and operating costs (economic feasibility).
- The size of any agreed discount to bulk water usage charges will:
  - be no larger than the amount required to prevent the large user from adopting the bypass alternative;
  - not result in any other users of the network being worse off, based on bulk water charges levied, than if the discount was not applied and the large user was to bypass the network;
  - not result in the large user paying a price that is less than the incremental costs of delivering bulk water services to it.

In principle, Seqwater and the relevant Retailer Customer will be entitled to recover up to 100% of the cost of providing the discount (i.e. the foregone revenue). However, it is recognised that in the case of bulk water charges, this will be subject to Ministerial approval, which will be considered on a case-by-case basis.

Specific details of these arrangements will remain commercial-in-confidence. However, any consequent revenue adjustments that could impact bulk water prices would still be subject to the QCA's review and recommendation.

In Chapter 8 we have outlined the adjustments we are proposing for the foregone revenue associated with the application of the current prudent discount that was approved by the Minister in 2019. These are:

- an adjustment to the Price Path Debt for the forgone revenue from the application of the discount from the date of commencement through to 30 June 2022 (refer section 8.1.5); and
- a positive adjustment to our proposed MAR for the 2023-26 regulatory period for the forecast revenue we expect to forgo from the application of that discount (refer section 8.2.2.2).



## 11.3.2 Proposal

In addition to considering the revenue adjustments proposed in section 8.1.5 for the existing prudent discount, we request for the QCA to:

- review our proposed prudent discount criteria as set out above; and
- make a recommendation to the Minister that future prudent discounts be approved by the Minister if they meet the recommended criteria and that we can continue to recover the foregone revenue from bulk water prices, subject to the QCA's review and recommendation.

We would be happy to engage with the QCA to develop these criteria further if required.

