



# Final Service and Performance Plan

2022/23

Callide Valley Bulk Water Service Contract


12 August 2022

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# At a glance

## Our performance in 2020/21




**Operating costs:**  
**\$1.86 million (4.3% more than QCA target)**

Operating costs were broadly in line with the QCA’s cost target. However, there were variations at the cost category level. Insurance, preventative maintenance, and corrective maintenance costs were higher than allowed, while operations activities were lower.




**Annuity-funded costs:**  
**\$2.87 million (232.5% more than QCA target)**

Sunwater commenced the Callide Dam Gates Project in 2021 to investigate, remediate, and restore the spillway gates at Callide Dam to address intermittent occurrences of vibration during their operation and ensure ongoing dam safety and long-term water security. This project was not part of the program of works assessed by the QCA.



**Total water deliveries:**  
**14,086 ML**


Water delivered to irrigators: 9481 ML



**Service targets: Met**

No exceptions


## Outlook for 2022/23



**Forecast operating costs:**  
**\$2.20 million**

Significant areas of expenditure:

- insurance (\$0.55 million)
- operations (\$1.25 million)
- preventative maintenance (\$0.23 million).



**Forecast annuity-funded costs:**  
**\$3.33 million**

Key projects planned:

- risk reduction program (\$2.00 million)
- finalisation of the radial gate rectification project at Callide Dam (\$0.92 million).

# Introduction

This Service and Performance Plan (S&PP) details a range of proposed scheme activities and projects and presents a breakdown of anticipated costs for review. It also sets out Sunwater’s actual costs for 2020/21.

The purpose of this year’s S&PP for the Callide Valley Bulk Water Service Contract is to:

- present to customers Sunwater’s projected costs<sup>1</sup> for the upcoming five-year period, i.e. 2022/23 to 2026/27
- consult with our customers on forecast operating and annuity-funded costs for 2022/23 and the forward program of works
- examine Sunwater’s performance in 2020/21 against cost and service targets.

Our focus during 2022/23 will be on ensuring dam safety compliance is maintained and that refurbishment and corrective work identified through our annual and five yearly comprehensive inspections at Callide and Kroombit dams are implemented safely, timely and efficiently.

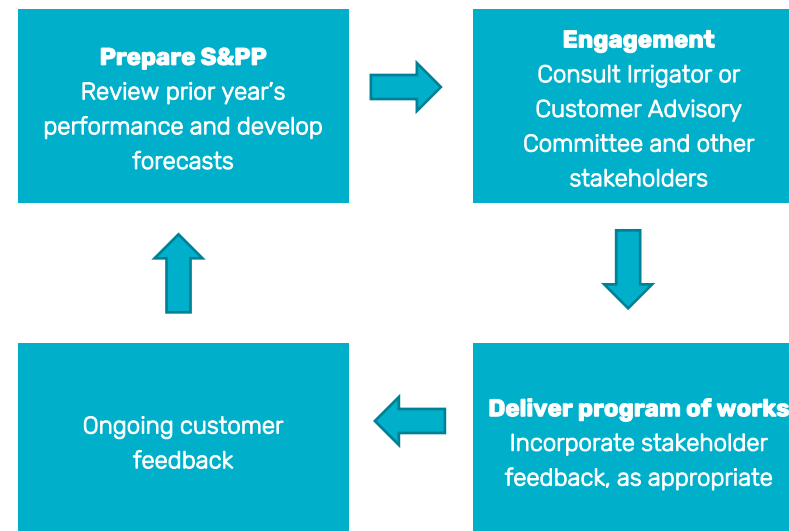
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

[www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/](http://www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/)

<sup>1</sup> All financial figures reported in this document are in nominal dollars, i.e. dollars of the day. Figures may not sum due to rounding.

Input from customers is a valuable part of Sunwater’s planning process and ensures that we invest in areas which support the services we provide to customers. Figure 1 outlines how Sunwater and customers work together in relation to S&PPs.

Figure 1: Customer consultation and S&PPs



We welcome and encourage your feedback on this S&PP. To have your say and shape future S&PPs, please contact us via email or post:

Email: [sppfeedback@sunwater.com.au](mailto:sppfeedback@sunwater.com.au)

Post: S&PP Feedback  
PO Box 15536  
City East Qld 4002

# Delivering services to our customers

At Sunwater we are committed to working collaboratively with our customers to deliver value and fit-for-purpose water solutions.

## Our customers

The majority of our 132 customers in this scheme are irrigators of agriculture including dairy, fodder crops and winter and summer cereal cropping. Water is also supplied to township of Biloela, an abattoir, and industrial users, including the Callide Power Station.

The water allocations for each customer segment are included in Table 1, together with water deliveries in 2020/21. Historical total water usage is available in **Appendix 1**.

*Table 1: Water allocations and usage data*

Customer segment	Total water allocations (ML)	High-A priority water allocations (ML)	High-B priority water allocations (ML)	Medium priority water allocations (ML)	Risk priority water allocations (ML)	Total water deliveries 2020/21 (ML)
Irrigation	13,458	0	79	12,865	514	9481
Urban	2207	1220	987	0	0	1170
Industrial	3777	3084	0	693	0	3434
Sunwater	7	7	0	0	0	0
<b>Total</b>	<b>19,449</b>	<b>4311</b>	<b>1066</b>	<b>13,558</b>	<b>514</b>	<b>14,086</b>

## Irrigation charges

The 2022/23 charges and cost per megalitre are shown in Table 2.

Table 2: Irrigation charges for 2022/23

Tariff group	Product	2022/23 (\$/ML) <sup>1</sup>	QCA cost-reflective (\$/ML) <sup>2</sup>
Surface Water Callide & Kroombit Creek	Allocation Charge – Part A	20.57	73.72
	Allocation Water – Part B	7.72	9.29
Callide Benefited Groundwater Area	Allocation Charge – Part A	20.57	73.72
	Allocation Water – Part B	7.72	9.29

- Includes the Queensland Government's 15 per cent discount for irrigation customers. Refer to [www.rdmw.qld.gov.au](http://www.rdmw.qld.gov.au) for more information.
- Is the cost-reflective price determined by the Queensland Competition Authority (QCA) in its 2020–2024 irrigation price investigation. Costs reflect lower bound cost recovery, i.e. recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.

For more information on Sunwater's fees and charges, refer to:

[www.sunwater.com.au/customer/fees-and-charges/](http://www.sunwater.com.au/customer/fees-and-charges/)

## Service targets

Sunwater and customers have agreed Water Supply Arrangements and Service Targets for the Callide Valley Bulk Water Service Contract. Table 3 sets out our recent performance against selected service targets for this scheme.

Table 3: Scheme service targets and performance

Service target		Target	Number of exceptions		
			2018/19	2019/20	2020/21
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	8 weeks	0	0	0
	For shutdowns planned to exceed 3 days	2 weeks	0	0	0
	For shutdowns planned to be less than 3 days	5 days	0	0	0
Unplanned shutdowns – duration <sup>1</sup>	Unplanned shutdowns during Peak Demand Period	48 hours	1	0	0
	Unplanned shutdowns outside Peak Demand Period	5 working days			
Maximum number of interruptions	Planned or unplanned interruptions per water year	6	0	0	0

- This is the number of times that the unplanned shutdown has exceeded the shortest of the peak/off peak periods.

In addition, Sunwater has company-wide customer interactions service targets. Our performance in 2020/21 against these service targets is shown in Table 4.

Table 4: Customer interactions service targets and performance

Service target	Target	2020/21
Telephone answering <sup>1</sup>	80.00%	90.93%
Requests actioned within Service Level Agreement (SLA) timeframes <sup>2</sup>	> 95.00%	99.14%

- This target measures the percentage of 13 15 89 calls that are answered within 60 seconds.
- This target measures the percentage of email or workflow requests (such as property transfers and temporary transfers) to the Customer Support team that are completed within the agreed SLAs. The SLA timeframes range between two and 10 business days, depending on the request.

## Key infrastructure

Table 5 lists the key infrastructure used to deliver bulk water services to our customers in Callide Valley.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Callide Dam	Earth and rock fill dam with an ogee-type crest with three pairs of radial gates. The spillway chute is concrete lined and ends with a long dissipator pool. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	136,300
Kroombit Dam	Spillway of roller-compacted concrete covered with facing concrete, which is flanked by earth and rock fill embankments. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	14,600
Callide Weir	Steel sheet piled structure with three concreted rockfill steps.	506
Callide Diversion Channel	A diversion channel (consisting of earth channel and pipeline sections) through which water can be diverted from Callide Dam to Kroombit and Kariboe creeks.	n/a

## Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Callide Valley Bulk Water Service Contract is presented in Table 6.

The revenue Sunwater receives from urban and industrial customers is agreed by term contract. The revenue we receive from irrigation customers is determined by the Queensland Government, based on recommendations made by the QCA as part of its review of irrigation prices.

In 2022/23, Sunwater expects to spend \$501 million across all parts of our business, i.e. regulated and non-regulated. A breakdown of the forecast total cost pool at the direct and non-direct cost level is shown in Figure 2, together with the percentage of these costs allocated to the Callide Valley Bulk Water Service Contract. Details on the planned spend for this scheme are outlined on subsequent pages of this S&PP.

Figure 2: Total Sunwater cost pools and allocation to scheme—2022/23 forecast (\$M)

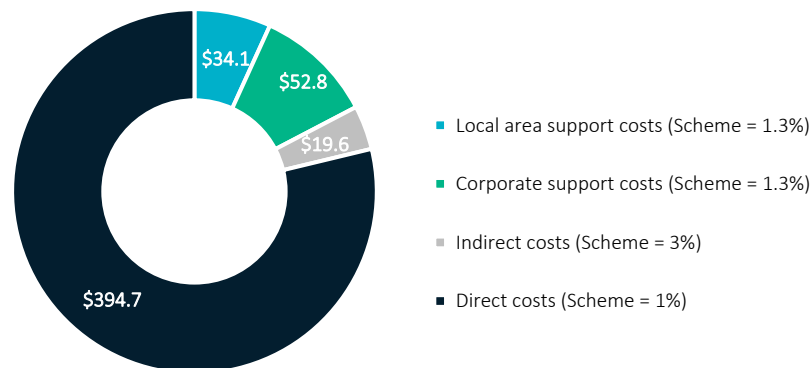


Table 6: Service contract financial summary

Callide Valley Bulk Water Service Contract	2018/19 Sunwater / QCA Actual \$'000	2019/20 Actual \$'000	2020/21 Actual \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000
Revenue					
Irrigation	350.8	347.0	332.9	389.4	330.9
Community Service Obligation	-	-	696.4	-	-
Industrial <sup>1</sup>	898.6	911.5	1108.6	985.1	984.6
Urban <sup>1</sup>	386.4	390.2	394.0	399.0	399.0
Revenue transfers	-	-	-	-	-
Drainage	-	-	-	-	-
Other	52.8	(9.2)	3.1	-	-
<b>Revenue total</b>	<b>1688.7</b>	<b>1639.7</b>	<b>2534.9</b>	<b>1773.5</b>	<b>1714.4</b>
Less – Operating expenditure	1613.9	1748.6	1868.2	2416.8	2204.7
Less					
Annuity-funded	651.9	1086.1	2865.8	12,342.1	3328.0
Non-annuity funded	1055.1	0.4	-	-	-
<b>Surplus (deficit)</b>	<b>(1632.3)</b>	<b>(1195.5)</b>	<b>(2199.1)</b>	<b>(12,985.4)</b>	<b>(3818.3)</b>

1. Forecast revenues for industrial and urban customers are based on current contractual arrangements.

## Cost of delivering services—Operating expenditure

Operating expenditure includes funds for: operations activities, i.e. operations, electricity, and insurance; preventative maintenance; and corrective maintenance.

Table 7 sets out actual and forecast operating expenditure for the Callide Valley Bulk Water Service Contract. For a more detailed breakdown by cost category, refer to **Appendix 2**.

### Our performance in 2020/21

In 2020/21, operating costs were broadly in line with the QCA’s recommended cost target. However, there were variations at the cost category level. Insurance, preventative maintenance, and corrective maintenance costs were higher than allowed, while operations activities were lower. Additional corrective maintenance activities were required, including repairing a crack on the left embankment at Kroombit Dam, the Callide Dam outlet works cone valve and the Callide Diversion Channel, which was damaged due to rainfall events.

Table 7: Operating expenditure<sup>1</sup>

Callide Valley Bulk Water Service Contract	2018/19	2019/20	2020/21		2021/22		2022/23		2023/24	2024/25	2025/26	2026/27	
	Sunwater Actual \$'000	Sunwater Actual \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Forecast \$'000	QCA Target \$'000 <sup>2</sup>	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Operations	1067.2	1106.6	1374.7	1274.4	(100.3)	1930.1	1403.6	1804.0	1437.1	1892.5	1966.3	2050.4	2149.6
Electricity	15.1	5.9	4.8	5.6	0.8	4.5	4.8	6.0	4.9	6.2	6.3	6.5	6.7
Insurance	322.9	369.0	406.7	492.5	85.8	654.6	414.8	551.4	424.4	594.9	641.8	692.4	747.0
Operations	729.3	731.7	963.2	776.3	(186.9)	1270.9	983.9	1246.6	1007.8	1291.5	1318.2	1351.5	1395.9
Preventative maintenance	434.1	492.5	333.8	421.0	87.2	296.3	341.1	232.3	349.4	239.8	246.3	252.3	261.0
Corrective maintenance	112.6	149.5	79.1	169.1	90.0	190.5	80.8	168.4	82.7	173.6	178.4	182.8	188.8
<b>Operating costs total</b>	<b>1613.9</b>	<b>1748.6</b>	<b>1787.6</b>	<b>1864.5</b>	<b>77.0</b>	<b>2416.8</b>	<b>1825.4</b>	<b>2204.7</b>	<b>1869.2</b>	<b>2305.9</b>	<b>2391.0</b>	<b>2485.5</b>	<b>2599.4</b>
Recreational facility costs <sup>3</sup>				3.7		-		-		-	-	-	-
<b>Operating costs total (incl. recreational facility costs)</b>	<b>1613.9</b>	<b>1748.6</b>		<b>1868.2</b>		<b>2416.8</b>		<b>2204.7</b>		<b>2305.9</b>	<b>2391.0</b>	<b>2485.5</b>	<b>2599.4</b>

1. Sunwater’s 2022/23 to 2026/27 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. Reflects the QCA’s 2020–2024 irrigation price investigation final recommendations. Excludes recreational facility costs.
3. From 1 July 2020, irrigation customers no longer contribute towards the cost of operating and maintaining recreational facilities. Forecast costs have been separately identified for transparency.



## Outlook for 2022/23

### Operations

Callide Valley Bulk Water Service Contract's total operations budget in 2022/23 is 25.5 per cent above the QCA's recommended cost target. The total variance from the QCA cost target is \$366.9k. The key cost categories behind this variance are insurance costs (\$127.0k above), corporate support costs (\$127.8k above) and direct labour (\$100.7k above). Labour cost increases are driven by additional resources engaged to manage future retirement risk over the short to medium term.

### Insurance

Insurance is one of Sunwater's largest expenditure items. These costs have increased significantly in recent years due to multiple flood events in Queensland and global insurable events impacting premiums. Although Sunwater is subject to market forces in the pricing of insurance premiums, we have also been actively managing insurance premium costs by reviewing coverage levels and policy specifications (including deductibles) to ensure that our insurance coverage is appropriate and reflective of the risks faced by our business.

Our insurance broker has indicated that prior to the early 2022 flood events, premium increases were trending downwards from a peak in late

2020 (with some exceptions). However, with another significant natural disaster in Australia, this is now likely to change. Insurance premiums in 2022/23 are therefore expected to be higher than the QCA's recommended allowance and historical costs.

### Preventative maintenance

The forecast preventative maintenance costs for the Callide Valley Bulk Water Service Contract are 33.5 per cent below the QCA's recommended cost target. However, increasing supply chain costs for contractors and materials are likely to result in actual expenditure closer to the QCA target. Sunwater will continue to use best endeavours to complete all necessary maintenance activities as efficiently as possible.

### Corrective maintenance

In 2022/23, Sunwater anticipates spending \$168.4k on corrective maintenance in the Callide Valley Bulk Water Service Contract. This is 103.6 per cent above the QCA's recommended cost target.

It is inherently difficult to forecast corrective maintenance costs. Sunwater will aim to keep actual corrective maintenance costs to a minimum, while ensuring all assets can perform satisfactorily. Costs will only be realised if required.

## Cost of delivering services—Annuity and non-annuity funded expenditure

Annuity-funded expenditure include funds for preventative and corrective maintenance, as well as large, one-off operations activities. Preventative maintenance activities monitor the asset condition and inform when an asset needs to be refurbished or replaced under the corrective maintenance program.

Non-annuity funded expenditure largely relates to Sunwater’s Dam Improvement Program and recreational facility costs.

Table 8 outlines our annuity and non-annuity funded expenditure for this service contract.

Table 8: Annuity and non-annuity funded expenditure<sup>1,2</sup>

Callide Valley Bulk Water Service Contract	2018/19	2019/20	2020/21			2021/22		2022/23		2023/24	2024/25	2025/26	2026/27
	Sunwater / QCA Actual \$'000 <sup>3</sup>	Sunwater Actual \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Forecast \$'000	QCA Target \$'000 <sup>4</sup>	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
<b>Annuity-funded</b>													
Operations	-	-	-	-	-	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned corrective maintenance	651.9	1086.1	861.8	2865.8	2003.9	12,342.1	229.3	3328.0	112.2	1368.2	2127.6	1250.8	820.3
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Annuity-funded total</b>	<b>651.9</b>	<b>1086.1</b>	<b>861.8</b>	<b>2865.8</b>	<b>2003.9</b>	<b>12,342.1</b>	<b>229.3</b>	<b>3328.0</b>	<b>112.2</b>	<b>1368.2</b>	<b>2127.6</b>	<b>1250.8</b>	<b>820.3</b>
<b>Non-annuity funded</b>													
Dam Improvement Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Recreational facility projects	-	-	-	-	-	-	-	-	-	-	-	-	-
Metered offtakes and dividend reinvestment	1055.1	0.4	-	-	-	-	-	-	-	-	-	-	-
<b>Non-annuity total</b>	<b>1055.1</b>	<b>0.4</b>											

1. Sunwater’s 2022/23 to 2026/27 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. Forecast annuity-funded costs from 2020/21 exclude recreational facility projects.
3. The annuity-funded spend for 2018/19 reflects the QCA’s 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater’s actual costs.
4. Reflects the QCA’s 2020–2024 irrigation price investigation final recommendations.

## Our performance in 2020/21

### Performance against the QCA target

Sunwater updates our program of works based on our whole-of-life replacement and maintenance strategy, which looks at the risk and condition of each asset and uses this information to estimate the future work required to ensure the asset will continue to provide the required level of service into the future. Other factors such as changes in project delivery timing (e.g. due to weather) may also affect the program of works.

These factors mean the actual program of works delivered in any given year will differ to the program assessed by the QCA. At a project level, cost variances may also occur due to changes in the scope of work and cost inputs.

In 2020/21, total annuity-funded costs were higher than the QCA's recommended cost target. This was driven by the Callide Dam Gates Project which was established in 2021 to investigate, remediate, and restore the spillway gates at Callide Dam to address intermittent occurrences of vibration during their operation and ensure ongoing dam safety and long-term water security.

### Project level cost variances

**Appendix 3** provides a comparison of the annuity-funded projects planned for 2020/21 and the actual projects undertaken, together with justification for the variances.

## Outlook

Details of the major annuity-funded projects planned for the 2022/23 to 2026/27 period are set out in **Appendix 4**. In 2022/23, Sunwater plans to commence a risk reduction program at Kroombit Dam and complete the Callide Dam Gates Project.

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<sup>2</sup> See pages 58 to 60, [www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf](http://www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf)

## Asset management and planning improvements

In its final report for the 2020–2024 irrigation price investigation, the QCA identified several potential improvements to Sunwater's asset management and planning framework. It suggested Sunwater should:

- improve our predictive maintenance and asset condition reporting arrangements to better inform the timing of asset replacement
- review our cost estimation approach and ensure that asset values are based on modern equivalent replacement values where appropriate
- develop transparent guidelines for options analyses.<sup>2</sup>

Sunwater acknowledges there is room for improvement in our asset management system and is working on several initiatives to address these potential improvements, as outlined below.

### Predictive maintenance and asset condition reporting

A focus during 2022/23 and beyond is to better leverage data to make more informed decisions and to ensure operations and maintenance activities are implemented safely, timely and efficiently.

To achieve this, Sunwater has invested in a new Enterprise Asset Management system (SAP). The new system and other IT infrastructure changes, such as a mobility solution that enables near real-time data to be loaded into the system and data automation initiatives, have presented a significant opportunity to transition to a data driven decision-making business.

In addition, Sunwater is improving predictive maintenance capability by monitoring asset performance data of critical assets. For example, the preventative maintenance program for pump stations is transitioning to usage-based intervals and energy and condition data is being analysed via remote dashboards. The SAP Analytic Cloud should also allow asset condition data to be trended over time. This will present asset condition decay curves which can be used to predict when an asset should be

scheduled for maintenance. The asset data will provide a greater insight to asset performance, condition, and refurbishment and replacement planning.

### **Cost estimation approach**

A change to Sunwater’s asset planning cycle in 2019 has improved the near-term cost estimation of annuity funded work. The change targets two years of fully cost-estimated work and has increased the visibility of the forward program.

Sunwater undertook an asset valuation exercise in 2021 to estimate the value of fully replacing high value assets including dams and pipelines using a bottom-up assessment of material line items. This data informs the replacement values underpinning forecast annuity-funded costs outside of the immediate program of works.

### **Options analyses**

Sunwater has implemented improvements to our asset management system with a fit-for-purpose alignment to the ISO55001 asset management standard. Key to the alignment is the simplification of how maintenance work is identified and delivered.

Low value, low complexity work follows a standard work management methodology and is managed at a service contract level. High value, high complexity work is managed at an individual level and is subject to an options analysis. High value, high complexity work will also be assessed against the relevant criteria to determine if it meets Sunwater’s project, program, and portfolio management framework (P3MF) for project management guidelines.

Options analyses examine a range of options and assess the shortlisted options against selected criteria, including financial, regulatory, social, and environmental factors.

# Annuity balance

Annuities are managed by Sunwater on behalf of each service contract. They allow for customer charges to reflect a constant amount necessary to recoup the costs of refurbishment/replacement of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted spend, are shown in Table 9 below.

The QCA and Sunwater closing balances differ due to differences in the expenditure profile allowed by the QCA in its 2020–2024 final recommendations and actual expenditure incurred by Sunwater in 2019/20 and what we expect to spend thereafter.

Table 9: Annuity balance

Callide Valley Bulk Water Service Contract	2018/19 QCA Actual \$'000	2019/20 Actual \$'000	2020/21 Actual \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000	2024/25 Forecast \$'000	2025/26 Forecast \$'000	2026/27 Forecast \$'000
Opening balance <sup>1</sup>	(6711.2)	(7361.6)	(8589.4)	(10,484.9)	(21,933.8)	(24,838.8)	(25,310.2)	(24,183.6)	(22,114.0)
Spend <sup>2</sup>	(651.9)	(1086.1)	(2865.8)	(12,342.1)	(3328.0)	(1368.2)	(2127.6)	(1250.8)	(820.3)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	104.5	-	-	-	-	-	-	-	-
Annuity contribution <sup>3</sup>	399.7	409.7	1345.9	1351.6	1382.0	1982.8	4360.9	4377.8	4406.7
Interest/financing costs	(502.7)	(551.4)	(375.6)	(458.4)	(959.0)	(1086.0)	(1106.6)	(1057.4)	(966.9)
<b>Sunwater – Closing balance</b>	<b>(7361.6)</b>	<b>(8589.4)</b>	<b>(10,484.9)</b>	<b>(21,933.8)</b>	<b>(24,838.8)</b>	<b>(25,310.2)</b>	<b>(24,183.6)</b>	<b>(22,114.0)</b>	<b>(19,494.4)</b>
<b>QCA – Closing balance</b>	<b>(7361.6)</b>	<b>(8254.4)</b>	<b>(8131.2)</b>	<b>(7364.5)</b>	<b>(6416.7)</b>	<b>(5320.3)</b>			
Difference	-	(335.0)	(2353.6)	(14,569.3)	(18,422.1)	(19,990.0)			

1. The opening balances for 2018/19 and 2019/20 reflect the QCA's 2020–2024 irrigation price investigation final recommendations.
2. The spend for 2018/19 reflects the QCA's 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. The 2019/20 and 2020/21 spend reflects Sunwater's actual costs. Thereafter, the spend is based on Sunwater's forecasts.
3. The annuity contribution is included in the prices paid by customers. It was set by the QCA from 2012/13 to 2016/17 and was rolled forward with the Consumer Price Index (CPI) for 2017/18, 2018/19 and 2019/20. From 2020/21 to 2023/24, the annuity contribution is based on the QCA's 2020–2024 irrigation price investigation final recommendations. Thereafter, it is based on Sunwater's projections.

## Appendix 1—Historical water usage

The below table contains the scheme's recent water use, together with the 19-year average for the 2002/03 to 2020/21 period.

Year	Usage (ML)
2010/11	6042
2011/12	11,117
2012/13	11,801
2013/14	13,808
2014/15	10,812
2015/16	14,442
2016/17	14,953
2017/18	14,907
2018/19	17,325
2019/20	15,900
2020/21	14,086
<b>19-year historical average</b>	<b>12,136</b>

## Appendix 2—Operating and annuity-funded costs by expense type

Callide Valley Bulk Water Service Contract	2018/19	2019/20	2020/21			2021/22		2022/23		2023/24	2024/25	2025/26	2026/27
	Sunwater / QCA Actual \$'000	Sunwater Actual \$'000	QCA Target \$'000	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	QCA Target \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
<b>Operating costs</b>													
Operations	1067.2	1106.6	1374.7	1274.4	(100.3)	1930.1	1403.6	1804.0	1437.1	1892.5	1966.3	2050.4	2149.6
Labour	135.4	196.4	170.6	162.6	(8.0)	283.2	174.5	279.7	179.0	288.1	296.8	305.7	314.8
Contractors	14.8	13.8	48.2	26.6	(21.6)	23.0	49.2	20.0	50.4	20.6	21.1	21.7	22.3
Materials	0.4	5.4	3.0	3.3	0.3	2.0	3.1	2.0	3.2	2.1	2.1	2.2	2.2
Electricity	15.1	5.9	4.8	5.6	0.8	4.5	4.8	6.0	4.9	6.2	6.3	6.5	6.7
Insurance	322.9	369.0	406.7	492.5	85.8	654.6	414.8	551.4	424.4	594.9	641.8	692.4	747.0
Other	175.4	120.3	127.3	119.0	(8.3)	144.7	129.8	175.8	132.8	179.5	181.8	187.2	191.3
Local area support costs	118.8	108.6	82.4	91.7	9.3	184.8	84.2	182.0	86.2	187.4	193.0	198.8	204.8
Corporate support costs	127.5	151.6	131.9	155.6	23.7	269.0	134.7	265.7	138.0	273.7	281.9	290.4	299.1
Indirect costs	156.8	135.7	399.8	217.5	(182.3)	364.2	408.4	321.5	418.3	340.2	341.4	345.6	361.4
Preventative maintenance	434.1	492.5	333.8	421.0	87.2	296.3	341.1	232.3	349.4	239.8	246.3	252.3	261.0
Labour	116.8	141.0	102.3	115.3	13.0	78.3	104.6	61.9	107.3	63.7	65.7	67.6	69.7
Contractors	56.7	54.9	12.2	21.3	9.1	28.5	12.5	25.0	12.8	25.7	26.4	27.1	27.9
Materials	3.8	6.2	5.6	1.5	(4.1)	2.0	5.7	2.0	5.8	2.1	2.1	2.2	2.2
Other	5.2	9.5	12.4	9.0	(3.4)	9.0	12.6	9.0	12.9	9.2	9.5	9.8	10.0
Local area support costs	100.0	78.8	49.4	68.7	19.3	50.9	50.5	40.2	51.7	41.4	42.7	44.0	45.3
Corporate support costs	95.4	108.1	79.0	114.3	35.3	74.4	80.7	58.8	82.7	60.6	62.4	64.2	66.2
Indirect costs	56.1	94.0	72.9	90.9	18.0	53.2	74.5	35.4	76.3	37.0	37.6	37.4	39.7
Corrective maintenance	112.6	149.5	79.1	169.1	90.0	190.5	80.8	168.4	82.7	173.6	178.4	182.8	188.8
Labour	19.5	22.8	11.2	27.9	16.6	36.7	11.5	35.7	11.8	36.8	37.9	39.1	40.2
Contractors	40.2	42.9	28.2	52.2	24.0	50.0	28.8	40.0	29.4	41.1	42.2	43.4	44.6
Materials	4.8	28.8	7.3	17.5	10.2	15.0	7.5	10.0	7.6	10.3	10.6	10.8	11.1
Other	2.2	9.4	10.2	4.7	(5.5)	5.0	10.4	5.0	10.7	5.1	5.3	5.4	5.6
Local area support costs	18.2	13.0	5.4	16.2	10.7	23.9	5.5	23.2	5.7	23.9	24.6	25.4	26.1
Corporate support costs	16.1	18.0	8.7	28.6	19.9	34.9	8.9	34.0	9.1	35.0	36.0	37.1	38.2
Indirect costs	11.5	14.6	8.0	22.1	14.1	24.9	8.2	20.4	8.4	21.4	21.7	21.6	22.9
<b>Operating costs total</b>	<b>1613.9</b>	<b>1748.6</b>	<b>1787.6</b>	<b>1864.5</b>	<b>77.0</b>	<b>2416.8</b>	<b>1825.4</b>	<b>2204.7</b>	<b>1869.2</b>	<b>2305.9</b>	<b>2391.0</b>	<b>2485.5</b>	<b>2599.4</b>
<b>Annuity-funded costs</b>													
Labour		156.1	163.8	544.6	380.8	516.7	9.6	363.9	12.3	238.6	366.9	213.9	138.0
Contractors		602.8	307.1	1021.0	714.0	10,572.9	196.5	2065.0	69.6	548.1	695.8	324.2	150.4
Materials		25.3	14.3	47.5	33.2	114.9	2.1	76.0	2.6	56.9	191.1	168.7	150.4
Other		6.9	5.5	18.3	12.8	-	-	66.5	2.2	51.6	125.4	98.5	82.0
Local area support costs		72.6	78.9	262.5	183.5	295.9	5.5	202.7	6.8	107.7	189.7	124.0	89.7
Corporate support costs		125.8	166.3	553.1	386.7	490.9	9.1	345.7	11.7	226.7	348.6	203.2	131.1
Indirect costs		96.7	126.0	418.9	292.9	350.8	6.5	208.1	7.0	138.7	210.2	118.3	78.7
<b>Annuity-funded total<sup>1</sup></b>	<b>651.9</b>	<b>1086.1</b>	<b>861.8</b>	<b>2865.8</b>	<b>2003.9</b>	<b>12,342.1</b>	<b>229.3</b>	<b>3328.0</b>	<b>112.2</b>	<b>1368.2</b>	<b>2127.6</b>	<b>1250.8</b>	<b>820.3</b>
<b>Total costs<sup>2</sup></b>	<b>2265.9</b>	<b>2834.8</b>	<b>2649.4</b>	<b>4730.3</b>	<b>2080.9</b>	<b>14,758.9</b>	<b>2054.8</b>	<b>5532.7</b>	<b>1981.4</b>	<b>3674.1</b>	<b>4518.6</b>	<b>3736.3</b>	<b>3419.6</b>

1. The 2018/19 costs reflect the QCA's 2020–24 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. Sunwater has provided cost information at the lowest level of granularity available.

2. Excludes recreational facility costs from 2020/21.

## Appendix 3—Comparison of forecast and actual annuity-funded projects for 2020/21

The below table sets out the major annuity-funded projects planned for the Callide Valley Bulk Water Service Contract in 2020/21<sup>3</sup> and the actual projects undertaken.

Facility	Activity description	Forecast \$'000	Actual \$'000	Commentary
Callide Dam	Refurbish – investigate and enhance radial gate pump arrangements.	811	613	This project was amalgamated into the Callide Dam Gates Project below.
Kroombit Dam	Study – investigate roller compacted concrete to determine material properties and confirm strength and stability data for dam safety analysis.	802	0	Sunwater decided to defer this project to ensure that Sunwater has sufficient time to engage technical advisors and contracting partners to deliver the project given the current extreme workload in the industry.
Callide Dam	Study – ground penetrating radar survey of the concrete spillway for sub-surface damage.	244	0	This project was removed from the 2020/21 program of works, following the initiation of the Callide Dam Gates Project. Funds were re-allocated to the 20-year dam safety review of Callide Dam (see below).
Callide Dam	Replace – main electrical services building and diesel generator switchboards, including options analysis and design.	170	86	Sunwater did not undertake works in relation to the main electricity services building switchboard, while the control diesel generator scope of works was extended.
Kroombit Dam	Study – input studies to inform the comprehensive risk assessment (CRA), including a seismic investigation.	211	239	The seismic investigation was completed in 2019/20, with no costs incurred in 2020/21. The input studies to the CRA and the 20-year dam safety review of Kroombit Dam (see below) were carried out broadly in line with the budget.
Kroombit Dam	Study – 20-year dam safety review.	100	47	Refer above.
Callide Dam	Study – 20-year dam safety review.	83	210	Refer above.
Scheme	Study – asset revaluation.	65	0	The asset revaluation was not undertaken as part of the annuity-funded program of works.
Callide Valley	Replace – groundwater metering (12 sites) to Australian Standard (AS) 4747.	63	75	Sunwater replaced more meters than anticipated.
Callide Dam	Study – CCTV inspection of the spillway sub-surface drainage to confirm drainage functionality.	32	0	This project was not undertaken in 2020/21.
Multiple	Various projects.	108	29	Contractor costs were lower than budgeted for two projects, resulting in savings of \$9k. In addition, the comprehensive inspection of Callide Creek Weir was carried out under the operating cost program and delivered below budget, the arc flash study was carried over (\$11k less) and the

<sup>3</sup> Based on information extracted from Sunwater's systems in mid-2020. See the 2021/22 S&PP at [www.sunwater.com.au/schemes/Callide-Valley/](http://www.sunwater.com.au/schemes/Callide-Valley/)



Facility	Activity description	Forecast \$'000	Actual \$'000	Commentary
				service contract's contingency amount of \$46k was re-allocated to other projects.
Non-scheduled works	Various projects.	-	1567	<p>Most of this expenditure (\$1.55 million) related to a project Sunwater commenced in 2021 to investigate, remediate and restore the spillway gates at Callide Dam to address intermittent occurrences of vibration during their operation. The forecast cost of these works was not included in the 2021/22 S&amp;PP.</p> <p>In 2020/21, Sunwater engaged specialist engineers to analyse and develop a solution to mitigate/resolve the intermittent vibration issue. The initial approach to investigating the vibrations involved removing the gates from the spillway to enable closer inspection.</p> <p>In November 2021, Sunwater found a potential solution to the intermittent vibrations of the Callide Dam gates that allowed the gates to remain in place. This involved the strengthening of each gate structure at key locations and an upgrade to the manual gate control system. Design and testing of the viability of mechanisms to further control the vibrations is underway and is expected to be completed in 2022.</p> <p>Further information on the Callide Dam Gates Project is available on Sunwater's website: <a href="http://www.sunwater.com.au/projects/callide-dam-gates-project/">www.sunwater.com.au/projects/callide-dam-gates-project/</a></p>
<b>2020/21 Total</b>		<b>2689</b>	<b>2866</b>	

## Appendix 4—Annuity-funded projects for 2022/23 to 2026/27

The below table sets out Sunwater’s currently planned annuity-funded projects for the 2022/23 to 2026/27 period for this scheme. While the immediate program is well defined, estimates become more uncertain further into the planning timeline. Forecasts are likely to change in future S&PPs, reflecting changes in project delivery timing; asset condition and risk updates; outcomes from scheduled asset inspections; and customer feedback.

Year	Facility	Activity description	Forecast \$'000
2022/23	Kroombit Dam	Risk reduction program – investigation phase.	2000
	Callide Dam	Refurbish – radial gate rectification project.	915
	Callide Diversion Channel	Refurbish – diversion channel fencing project (carried forward).	125
	Callide Valley	Replace – groundwater metering to AS4747 to meet regulatory compliance.	75
	Callide Dam	Refurbish – multi-level intake based on known asset condition and age.	63
	Callide Dam	Refurbish – outlet work 660 mm regulating valve No. 1.	60
	Callide Dam	Refurbish – design and install permanent and safe access to dam seepage measurement points.	48
	Callide Dam	Refurbish – inlet tower lower handrails, stairs, and platforms.	42
		<b>2022/23 Total</b>	
2023/24	Kroombit Dam	Risk reduction program – evaluation phase.	1058
	Callide Dam	Refurbish – guard valve 1 based on known asset condition and age.	97
	Callide Valley	Replace – groundwater metering to AS4747 to meet regulatory compliance.	77
	Callide Dam	Replace – inlet tower, valve house and building services switchboards based on known asset condition and age.	53
	Callide Dam	Replace – electrical services (facility cableways) based on known asset condition and age. Design and drawing stage.	32
	Multiple	There are three other annuity-funded projects planned for 2023/24 related to Callide Dam guard valve and building maintenance; and one customer meter replacement.	51
		<b>2023/24 Total</b>	
2024/25	Kroombit Dam	Risk reduction program – definition phase.	1087
	Callide Dam	Study – comprehensive inspection based on regulatory requirements to better understand asset condition and risk.	142
	Callide Dam	Refurbish – 1200 mm diameter butterfly valves 3 and 4 based on known asset condition and age.	130
	Callide Dam	Refurbish – 900 mm diameter butterfly valves 5 and 6 based on known asset condition and age.	124
	Callide Dam	Refurbish – repack trunnion bearing grease based on known asset condition and age.	108

Year	Facility	Activity description	Forecast \$'000
	Callide Valley	Replace – groundwater metering to AS4747 to meet regulatory compliance.	79
	Callide Dam	Refurbish – clean and paint 1200 mm bell mouth intake and downstream of guard valve.	63
	Callide Dam	Refurbish – outlet works guard valves based on known asset condition and age.	62
	Kroombit Dam	Study – comprehensive inspection based on regulatory requirements to better understand asset condition and risk.	58
	Callide Dam	Study – control system and equipment replacement options analysis.	57
	Callide Dam	Replace – signs and post with current standard arrangements.	55
	Callide Dam	Refurbish – 450 mm upstream and downstream Callide A isolation valves.	48
	Multiple	There are six other annuity-funded projects planned for 2024/25 related to Callide Dam power poles, gate test pump set, generator battery works, outlet works and removal of obsolete hydraulic equipment; and refurbishment of a Callide Diversion Channel rock drop structure.	113
	<b>2024/25 Total</b>		<b>2128</b>
2025/26	Kroombit Dam	Risk reduction program – execution phase.	334
	Callide Dam	Refurbish – site facilities (barrier fencing) based on known asset condition and age.	259
	Callide Dam	Replace – outlet works inlet trash rack based on known asset condition and age.	144
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	87
	Kroombit Dam	Replace – gauge boards, rain recorder and tailwater recorder based on known asset condition and age.	86
	Callide Valley	Replace – groundwater metering to AS4747 to meet regulatory compliance.	81
	Callide Dam	Replace – water level recorder based on known asset condition and age.	65
	Callide Dam	Replace – left and right-hand gate trash rack lifting system based on known asset condition and age	58
	Multiple	There are eight other annuity-funded projects planned for 2025/26 related to an outlet works sump pump level controller replacement; a comprehensive inspection of Callide Creek Weir; testing pump local control stations; testing a gate pump pressure switch; a baulk storage rack refurbishment at Kroombit Dam; an inlet tower intake crane hydraulic system refurbishment at Callide Dam; sump pump outlet works replacements; and building works.	135
	<b>2025/26 Total</b>		<b>1251</b>
2026/27	Callide Creek Weir	Refurbish – general weir structure, spillway crest and downstream stepped cascade works on known asset condition.	201
	Callide Dam	Replace – electrical services/cabling design and drafting (Stage 2), and control system design and procurement (Stage 2).	176
	Callide Valley	Replace – groundwater metering to AS4747 to meet regulatory compliance.	84
	Callide Creek Weir	Refurbish – outlet works control structure and 900 mm regulating valve.	77
	Callide Creek	Refurbish – groundwater recorder building based on known condition.	39
	Callide Creek	Refurbish – Callide Creek measuring weir structure at 79.9 km.	40

Year	Facility	Activity description	Forecast \$'000
	Callide Creek Weir	Refurbish – security and public fencing, gates, and grids.	40
	Callide Dam	Replace – spillway lighting and power supplies.	37
	Multiple	There are 16 other annuity-funded projects planned for 2026/27 related to Callide Dam gate options analysis; Callide Diversion Channel minor outlet works metal work repairs; core shed refurbishment; water level recorder replacement; and wire rope replacement options (inlet tower).	126
	<b>2026/27 Total</b>		<b>820</b>

## Contact us

To have your say and shape future Service and Performance Plans, please contact us via email or post:

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