



Final Service and Performance Plan 2021/22

Bowen Broken Rivers Bulk Water Service Contract


6 August 2021

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At a glance

Our performance in 2019/20

 **Operating costs:**
\$1.62 million (8.8% less than forecast)


Key drivers of cost variance:

- lower than expected electricity costs
- a reduction in the amount of non-direct costs allocated to the service contract
- less corrective maintenance work due to drier conditions.


 **Annuity-funded costs:**
\$2.14 million (13.8% more than forecast)

Key drivers of cost variance:

- higher contractor costs and an increase in the scope of works for replenishing the rip rap at Gattonvale Off-stream Storage
- higher contractor costs associated with the replacement of the compost toilet block at the Eungella Dam recreation area, as well as increased costs to meet regulatory conditions.


 **Total water deliveries:**
21,683 ML

Water delivered to irrigators: 753 ML

 **Service targets: Met**


No exceptions

Outlook for 2021/22

 **Forecast operating costs:**
\$1.87 million

Significant areas of expenditure:

- electricity (\$0.26 million)
- insurance (\$0.29 million)
- operations (\$0.72 million)
- preventative maintenance (\$0.32 million)
- corrective maintenance (\$0.27 million).

 **Forecast annuity-funded costs:**
\$0.35 million

Key projects planned:

- a comprehensive risk assessment of Eungella Dam (\$0.30 million)
- repairs to the Gattonvale pump station high voltage pit walls and covers (\$0.04 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 compares Sunwater's actual costs for 2019/20 with our previous forecasts for this scheme.

The purpose of this year's S&PP for the Bowen Broken Rivers Bulk Water Service Contract is to:

- present to customers Sunwater's projected costs¹ for the upcoming five-year period, i.e. 2021/22 to 2025/26
- consult with our customers on forecast operating and annuity-funded costs for 2021/22 and the forward program of works
- examine Sunwater's performance in 2019/20 against previous forecasts and service targets.

Our focus during 2021/22 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 Eungella Dam are implemented safely, timely and efficiently.

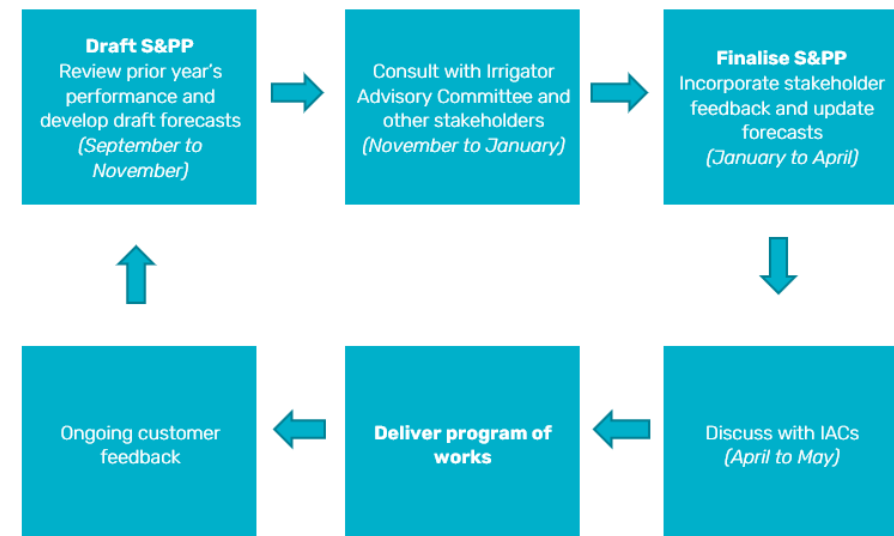
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

www.sunwater.com.au/customer/products-and-services/service-and-performance-plans/

¹ 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

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 primary purpose of this scheme is to supply industrial users. Water is also supplied to irrigation farms downstream of Bowen River Weir and to the towns of Glenden and Collinsville.

The water allocations for each customer segment are included in Table 1, together with water deliveries in 2019/20. Historical total water usage is available in **Appendix 1**.

Table 1: Water allocations and usage data

Customer segment	Total water allocations (ML)	High-A1 priority water allocations (ML)	High-A2 priority water allocations (ML)	Medium priority water allocations (ML)	Total water deliveries 2019/20 (ML)
Irrigation	5676	0	0	5676	753
Industrial	30,580	9189	21,391	0	19,687
Urban	1785	1785	0	0	871
Sunwater (excl. distribution losses)	395	181	214	0	42
Sunwater distribution losses	494	494	0	0	330
Total	38,930	11,649	21,605	5676	21,683

Irrigation charges

The 2021/22 charges and cost per megalitre are shown in Table 2.

Table 2: Irrigation charges for 2021/22

Tariff group	Product	2021/22 (\$/ML) ¹	QCA cost-reflective (\$/ML) ²
River	Allocation Charge – Part A	10.63	7.30
	Allocation Water – Part B	6.04	7.52

1. Includes the Queensland Government's 15 per cent discount for irrigation customers. Refer to www.rdmw.qld.gov.au for more information.
2. 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/

Service targets

Sunwater and customers have agreed Water Supply Arrangements and Service Targets for the Bowen Broken Rivers Bulk Water Service Contract. Table 3 below 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		
			2017/18	2018/19	2019/20
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	8 weeks	0	0	0
	For shutdowns planned to exceed 3 days	3 weeks	0	0	0
	For shutdowns planned to be less than 3 days	5 days	0	0	0
Unplanned shutdowns – duration	Unplanned shutdowns will be fixed so that at least partial supply can be resumed	7 days	0	0	0
Maximum number of interruptions	Planned or unplanned interruptions per water year	6	0	0	0

In addition, Sunwater has company-wide customer interactions service targets. Our performance in 2019/20 against these service targets is shown in Table 4.

Table 4: Customer interactions service targets and performance

Service target	Target	2019/20
Telephone answering ¹	80.00%	94.87%
Requests actioned within Service Level Agreement (SLA) timeframes ²	> 95.00%	95.46%

1. This target measures the percentage of 13 15 89 calls that are answered within 60 seconds. The 2019/20 result reflects the average monthly performance over the November 2019 to June 2020 period.
2. This target measures the percentage of email or workflow requests (such as property transfers and temporary transfers) to the Customer Support email address that are completed within the agreed SLAs. The SLA timeframes range between two and 10 business days, depending on the request. The 2019/20 result covers the October 2019 to June 2020 period.

Key infrastructure

Table 5 lists the key infrastructure used to deliver bulk water services to our customers in Bowen Broken Rivers.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Eungella Dam	Earth and rock fill embankment with an uncontrolled concrete ogee crest spillway that has a concrete lined sideways chute. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	112,400
Gattonvale Off-stream Storage	Incorporates a river water harvesting pump station with a nominal capacity of 250 ML/day.	5232
Bowen River Weir	Combination of mass concrete, tiered sheet piling and rock gabions and mattresses.	943

Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Bowen Broken Rivers 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.

Sunwater anticipates an increase in revenue for the Bowen Broken Rivers Bulk Water Service Contract in 2021/22.

In 2021/22, Sunwater expects to spend \$473 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 Bowen Broken Rivers Bulk Water Service Contract. Detail on the planned spend for this scheme is outlined on subsequent pages of this S&PP.

Figure 2: Total Sunwater cost pools and allocation to scheme—2021/22 forecast (\$M)

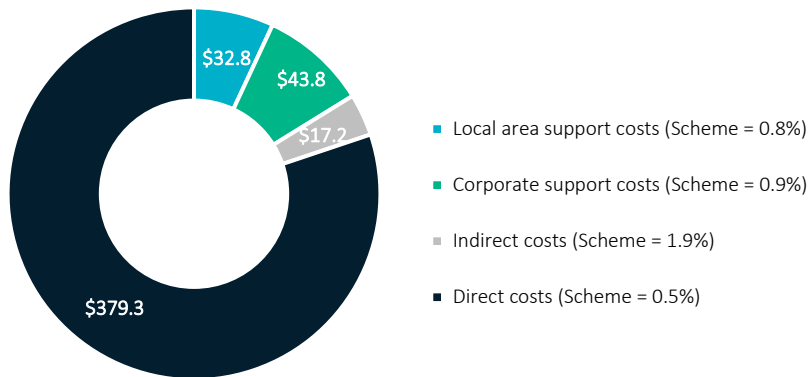


Table 6: Service contract financial summary

Bowen Broken Rivers Bulk Water Service Contract	2017/18 Actual \$'000	2018/19 Actual \$'000	2019/20 Actual \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000
Revenue					
Irrigation	68.6	73.9	76.4	88.0	88.7
Community Service Obligation	-	-	-	-	-
Industrial ¹	5215.8	5535.2	5632.4	5623.2	5997.9
Urban ¹	-	-	-	-	-
Revenue transfers ²	635.3	523.8	545.5	631.1	834.3
Drainage	-	-	-	-	-
Other	15.6	10.2	15.6	11.0	13.0
Revenue total	5935.3	6143.1	6269.9	6353.3	6933.9
Less – Operating expenditure	1476.5	1772.9	1617.7	2064.1	2302.0
Less					
Annuity-funded	708.2	1248.4	2141.0	756.3	353.4
Non-annuity funded ³	-	-	-	-	216.0
Surplus (deficit)	3750.7	3121.8	2511.2	3533.0	4062.6

- Forecast revenues for industrial and urban customers are based on current contractual arrangements.
- Revenue transfers represent the cost of bulk water supplies delivered through the Collinsville and Eungella pipelines. The revenue accrues to the pipeline systems before it is transferred to the Bulk Water Service Contract as a contribution to the cost of the bulk water service.
- This is expenditure which has not been funded by irrigation customers. An example of this in the Bowen Broken Rivers Bulk Water Service Contract is recreational facility projects from 2020/21.

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 Bowen Broken Rivers Bulk Water Service Contract. For a more detailed breakdown by cost category, refer to **Appendix 2**.

Our performance in 2019/20

In 2019/20, operating costs were lower than our previous forecast.² This was primarily due to lower than expected electricity costs and a reduction in the amount of non-direct costs allocated to the service contract. Further, due to drier conditions, less corrective maintenance work was required.

Table 7: Operating expenditure¹

Bowen Broken Rivers Bulk Water Service Contract	2017/18	2018/19	2019/20			2020/21		2021/22		2022/23	2023/24	2024/25	2025/26
	Sunwater Actual \$'000	Sunwater Actual \$'000	Sunwater Forecast \$'000	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 ²	Sunwater Forecast \$'000	QCA Target \$'000 ²	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Operations	996.5	1131.3	1192.4	1171.5	(20.9)	1170.1	1026.8	1272.1	1127.4	1284.3	1316.7	1348.7	1377.4
Electricity	107.7	153.6	181.7	151.7	(30.0)	256.4	185.4	256.4	268.2	261.6	266.8	272.1	277.6
Insurance	136.6	144.6	161.2	165.1	3.9	223.7	182.2	293.6	185.8	299.5	305.5	311.6	317.9
Operations	752.2	833.0	849.6	854.8	5.2	689.9	659.2	722.0	673.4	723.2	744.4	765.0	782.0
Preventative maintenance	364.8	470.7	335.6	317.3	(18.2)	265.0	234.1	322.9	239.1	148.2	151.6	154.9	158.1
Corrective maintenance	115.2	170.9	245.1	128.8	(116.2)	235.9	113.8	272.1	116.2	273.8	281.3	288.1	294.5
Operating costs total	1476.5	1772.9	1773.0	1617.7	(155.3)	1670.9	1374.7	1867.1	1482.7	1706.2	1749.6	1791.7	1830.0
Recreational facility costs ³						393.2		434.8		378.1	388.7	398.8	407.6
Operating costs total (incl. recreational facility costs)	1476.5	1772.9	1773.0	1617.7	(155.3)	2064.1		2302.0		2084.4	2138.3	2190.6	2237.6

1. Sunwater's 2022/23 to 2025/26 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.

² See the 2019/20 Network Service Plan at www.sunwater.com.au/schemes/Bowen-Broken-Rivers/

Electricity

One of the key challenges for Sunwater is managing the cost of electricity. In 2019/20, Sunwater undertook the following energy improvement initiatives in the Bowen Broken Rivers Bulk Water Service Contract:

- a review of our electricity tariff selections, to ensure that we are using the most cost-effective tariffs. The review focused on pump stations as these assets consume the most electricity. There were no tariff changes in 2019/20.
- a solar assessment, which found that it is not currently cost-effective to invest in a solar installation at the Gattonvale pump station.

Outlook for 2021/22

Operations

Bowen Broken Rivers Bulk Water Service Contract's total operations budget in 2021/22 is 12.8 per cent above the QCA's recommended cost target. This variance is largely driven by higher than allowed insurance costs (see below) and non-direct costs.

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.

In 2020/21, Sunwater experienced a significant price increase in insurance premiums. Our insurance broker has indicated this is the beginning of an upward trend in premiums due to, among other factors, the number and size of natural disasters that have occurred in Australia over the past 12 months. Insurance premiums in 2021/22 are therefore expected to be higher than the QCA's recommended allowance and historical costs.

Electricity

In 2021/22, Sunwater will continue our focus on managing the cost of electricity in this service contract. The following energy improvement initiatives are currently planned:

- annual tariff optimisation analysis
- operational optimisation assessment (as required)
- renewable generation opportunity assessment (as required).

Preventative maintenance

The forecast preventative maintenance costs for the Bowen Broken Rivers Bulk Water Service Contract are 35.1 per cent above the QCA's recommended cost target. This is because of marginally higher labour costs and associated non-direct costs.

Corrective maintenance

In 2021/22, Sunwater anticipates spending \$0.27 million on corrective maintenance in the Bowen Broken Rivers Bulk Water Service Contract. This is 134.2 per cent above the QCA's recommended cost target, primarily due to higher contractor, labour and non-direct costs. Sunwater's forecast assumes a wet year, which predicts more repairs will be undertaken than may have been the case in the past.

Electricity metrics

Table 8 sets out electricity usage and efficiency-related information for the Bowen Broken Rivers Bulk Water Service Contract.

Table 8: Electricity usage and efficiency-related metrics

Metric	2016/17	2017/18	2018/19	2019/20
Electricity usage (kWh)	468,555	307,559	546,100	593,506
Water usage (ML)	11,362	14,028	16,653	21,683
Actual electricity cost per ML (\$/ML delivered)	14.07	7.68	9.22	6.99
Average pump energy indicator ¹ (kWh/ML/per metre of head)	6.75	6.43	5.80	5.28

1. The industry guidelines are 3.4 to 4.5, depending on the size and design of the pump station with the benchmark for larger pump stations being more efficient.

To effectively monitor pump efficiency, a granular level of both energy and water data is required. With the installation of interval meters at Gattonvale pump station in 2020 to capture energy consumption at a granular level, Sunwater is now able to more frequently monitor our performance against this metric.

Having said this, the irregular operation makes it difficult to monitor pump efficiency on an ongoing basis, as the pump units typically operate for three months straight and then remain idle for the rest of the year. A more regular operating pattern allows more regular monitoring.

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

Annuity expenditure include funds for preventative and corrective maintenance, as well as large, one-off operations activities. The preventative maintenance activities monitor the asset condition and inform the corrective maintenance program when an asset needs to be refurbished or replaced. Non-annuity funded expenditure largely relates to Sunwater’s Dam Improvement Program and recreational facility costs.

Table 9 outlines our annuity and non-annuity funded expenditure. A comparison of forecast and actual annuity-funded projects for 2019/20 is provided in **Appendix 3**, with details of the major annuity-funded projects planned for the 2020/21 to 2025/26 period set out in **Appendix 4**.

Table 9: Annuity and non-annuity funded expenditure^{1,2}

Bowen Broken Rivers Bulk Water Service Contract	2017/18	2018/19	2019/20		Variance \$'000	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26		
	Sunwater Actual \$'000 ³	Sunwater Actual \$'000 ³	Sunwater Forecast \$'000	Sunwater Actual \$'000		Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	
Annuity-funded													
Operations	10.3	-	-	-	-	-	-	-	-	-	-		
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-		
Planned corrective maintenance	566.7	674.3	1284.3	1417.4	133.2	756.3	494.5	353.4	-	220.3	242.6	746.3	501.7
Unplanned corrective maintenance	131.2	574.1	596.6	723.5	126.9	-	-	-	-	-	-	-	-
Annuity-funded total	708.2	1248.4	1880.8	2141.0	260.1	756.3	494.5	353.4	-	220.3	242.6	746.3	501.7
Non-annuity funded													
Dam Improvement Program	-	-	-	-	-	-	-	188.9	-	1331.7	-	-	-
Recreational facility projects	-	-	-	-	-	-	-	27.1	-	53.9	-	74.4	19.7
Metered offtakes and dividend reinvestment	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-annuity total	-	-	-	-	-	-	-	216.0	-	1385.6	-	74.4	19.7

1. Sunwater’s 2022/23 to 2025/26 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 2017/18 and 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.

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.³

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 2021/22 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 asset data will provide a greater insight to asset performance, condition, and refurbishment and replacement planning.

³ See pages 58 to 60, www.qca.org.au/wp-content/uploads/2020/02/irrigation-price-review-part-b-sunwater-final-report.pdf

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 has also recently undertaken an asset valuation exercise 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 will inform the replacement values underpinning forecast annuity-funded costs.

Options analyses

Sunwater is implementing 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 follows Sunwater’s project, program and portfolio management framework (P3MF) and is subject to an options analysis.

Options analyses under P3MF 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 10 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 10: Annuity balance

Bowen Broken Rivers Bulk Water Service Contract	2017/18 Actual \$'000	2018/19 Actual \$'000	2019/20 Actual \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000	2024/25 Forecast \$'000	2025/26 Forecast \$'000
Opening balance ¹	(2349.3)	(2783.8)	(3779.8)	(5731.5)	(5879.1)	(5623.8)	(5213.1)	(4802.0)	(4706.5)
Spend ²	(708.2)	(1248.4)	(2141.0)	(756.3)	(353.4)	(220.3)	(242.6)	(746.3)	(501.7)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution ³	449.7	460.9	472.4	859.2	865.7	876.9	881.7	1051.7	1098.8
Interest/financing costs	(176.0)	(208.5)	(283.1)	(250.6)	(257.0)	(245.9)	(227.9)	(210.0)	(205.8)
Sunwater – Closing balance	(2783.8)	(3779.8)	(5731.5)	(5879.1)	(5623.8)	(5213.1)	(4802.0)	(4706.5)	(4315.1)
QCA – Closing balance	(2783.8)	(3779.8)	(5406.7)	(5278.4)	(4643.4)	(4154.9)	(3654.1)		
Difference	-	-	(324.8)	(600.7)	(980.4)	(1058.2)	(1147.9)		

1. The opening balances for 2017/18, 2018/19 and 2019/20 reflect the QCA's 2020–2024 irrigation price investigation final recommendations.
2. The spend for 2017/18 and 2018/19 reflects the QCA's 2020–2024 irrigation price investigation final recommendations, which included adjustments to Sunwater's actual costs. The 2019/20 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 18-year average for the 2002/03 to 2019/20 period.

Year	Usage (ML)
2010/11	11,085
2011/12	13,753
2012/13	15,453
2013/14	13,254
2014/15	16,894
2015/16	17,251
2016/17	11,362
2017/18	14,028
2018/19	16,653
2019/20	21,683
18-year historical average	15,448

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

Bowen Broken Rivers Bulk Water Service Contract	2017/18	2018/19	2019/20			2020/21		2021/22		2022/23	2023/24	2024/25	2025/26
	Sunwater Actual \$'000	Sunwater Actual \$'000	Sunwater Forecast \$'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
Operating costs													
Operations	996.5	1131.3	1192.4	1171.5	(20.9)	1170.1	1026.8	1272.1	1127.4	1284.3	1316.7	1348.7	1377.4
Labour	202.2	202.7	202.7	183.8	(18.9)	159.9	145.2	167.3	148.5	172.3	177.5	182.8	188.3
Contractors	82.9	69.4	70.0	115.3	45.3	52.6	82.1	63.1	83.8	64.4	65.7	67.0	68.4
Materials	8.4	7.7	10.0	6.4	(3.6)	7.5	14.9	7.5	15.2	7.7	7.8	8.0	8.1
Electricity	107.7	153.6	181.7	151.7	(30.0)	256.4	185.4	256.4	268.2	261.6	266.8	272.1	277.6
Insurance	136.6	144.6	161.2	165.1	3.9	223.7	182.2	293.6	185.8	299.5	305.5	311.6	317.9
Other	51.2	50.8	92.4	186.9	94.5	62.5	52.1	65.0	53.2	65.6	66.1	68.6	69.3
Local area support costs	148.6	177.4	104.4	97.5	(6.9)	91.2	70.1	108.9	71.6	112.1	115.5	118.9	122.5
Corporate support costs	88.3	186.9	151.4	139.3	(12.1)	119.9	112.1	159.0	114.5	163.7	168.6	173.7	178.9
Indirect costs	170.5	138.1	218.7	125.5	(93.2)	196.3	182.7	151.2	186.6	137.3	143.1	145.9	146.5
Preventative maintenance	364.8	470.7	335.6	317.3	(18.2)	265.0	234.1	322.9	239.1	148.2	151.6	154.9	158.1
Labour	67.4	84.0	64.7	67.7	3.0	50.2	41.1	64.6	42.1	10.9	11.3	11.6	11.9
Contractors	30.5	49.6	55.0	55.6	0.6	41.3	44.9	45.1	45.8	46.0	46.9	47.9	48.8
Materials	2.3	1.1	5.0	0.9	(4.1)	3.8	2.6	3.8	2.7	3.8	3.9	4.0	4.1
Other	126.9	153.6	85.0	58.9	(26.1)	63.9	64.6	62.4	65.8	63.6	64.9	66.2	67.5
Local area support costs	52.5	72.8	32.7	37.3	4.6	29.3	19.8	42.0	20.3	7.1	7.3	7.5	7.8
Corporate support costs	34.2	72.9	48.3	51.2	2.9	37.7	31.8	61.3	32.4	10.4	10.7	11.0	11.4
Indirect costs	51.0	36.8	44.9	45.8	0.8	38.8	29.3	43.8	29.9	6.3	6.5	6.6	6.6
Corrective maintenance	115.2	170.9	245.1	128.8	(116.2)	235.9	113.8	272.1	116.2	273.8	281.3	288.1	294.5
Labour	11.3	22.8	31.9	24.3	(7.6)	39.0	14.9	47.5	15.3	49.0	50.4	52.0	53.5
Contractors	58.3	74.1	125.0	44.5	(80.5)	94.0	48.5	96.6	49.5	98.5	100.5	102.5	104.6
Materials	15.7	9.1	10.0	9.1	(0.9)	7.5	10.7	7.5	10.9	7.7	7.8	8.0	8.1
Other	4.4	10.1	16.0	2.9	(13.1)	13.5	10.4	12.0	10.6	12.3	12.5	12.8	13.0
Local area support costs	8.8	24.5	16.2	13.1	(3.0)	22.6	7.2	30.9	7.3	31.8	32.8	33.8	34.8
Corporate support costs	8.3	16.8	23.8	18.6	(5.2)	29.2	11.5	45.2	11.8	46.5	47.9	49.4	50.8
Indirect costs	8.5	13.5	22.2	16.3	(5.8)	30.1	10.6	32.3	10.8	28.0	29.3	29.8	29.6
Operating costs total	1476.5	1772.9	1773.0	1617.7	(155.3)	1670.9	1374.7	1867.1	1482.7	1706.2	1749.6	1791.7	1830.0
Annuity-funded costs													
Labour			218.1	96.2	(121.8)	61.1	39.9	12.9	-	22.3	34.5	151.7	74.4
Contractors			882.6	1824.3	941.7	334.1	218.5	296.7	-	105.5	36.8	174.6	160.8
Materials			358.0	22.1	(335.9)	227.9	149.0	10.2	-	43.6	90.8	84.6	72.5
Other			4.1	21.6	17.5	8.0	5.2	4.2	-	0.9	5.2	4.6	33.7
Local area support costs			103.7	46.5	(57.2)	32.2	21.1	8.4	-	14.0	22.5	99.6	48.5
Corporate support costs			162.8	67.0	(95.8)	45.8	29.9	12.2	-	21.2	32.8	144.1	70.7
Indirect costs			151.5	63.2	(88.4)	47.1	30.8	8.7	-	12.7	20.0	86.9	41.2
Annuity-funded total¹	708.2	1248.4	1880.8	2141.0	260.1	756.3	494.5	353.4	-	220.3	242.6	746.3	501.7
Total costs²	2184.7	3021.3	3653.9	3758.7	104.8	2427.2	1869.2	2220.5	1482.7	1926.6	1992.2	2538.0	2331.7

1. The 2017/18 and 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 2019/20

The below table sets out the major annuity-funded projects planned for the Bowen Broken Rivers Bulk Water Service Contract in 2019/20 and the actual projects undertaken.

Project	Forecast \$'000	Actual \$'000	Commentary
Eungella Dam – 20-year dam safety review (20BBR07)	356	394	Higher contractor costs than anticipated.
Gattonvale Off-stream Storage (GOSS) – Inner batter rip rap repairs (17BBR02)	394	536	Higher contractor costs than anticipated. There was also an increase in the scope of works—approximately 1700m of rip rap and rock needed to be removed and the crest capped with a 100mm mix of crusher dust/decomposed granite and compacted for a length of 1900m.
Eungella Dam – Comprehensive risk assessment (CRA) (Stage 1) (20BBR13)	147	131	Lower contractor costs than anticipated.
Eungella Dam, Bowen River Weir and GOSS – Comprehensive inspections (20BBR08, 20BBR01 and 20BBR02)	165	81	The comprehensive inspection of Bowen River Weir was postponed, and efficiency gains related to mobilisation were achieved for the other two inspections.
Eungella Dam – Recreational facility (20BBR16 and 19BBR05/20BBR17)	223	503	Removal of old equipment at the Eungella Dam toilet block was more expensive than anticipated (20BBR16) and we needed to install power at the facility to operate the new wastewater treatment system. The project costs for replacing the compost toilet block (19BBR05) also increased significantly due to increased regulatory conditions and higher than estimated contractor costs given the remoteness of the area. In addition, Sunwater incurred hire costs for temporary amenities.
Bowen River Weir/Fish lock flood damage repairs (19BBR12, 19BBR13 and 19BBR14)	203	187	The project was delivered within budget.
Eungella Dam – Water treatment plant (20BBR15)	58	105	There was an increase in the scope of works, including amounts for an additional water tank and replacement gutters to provide adequate potable water to houses/offices/amenities. Removal of the existing water treatment plant cost more than anticipated, due to the remoteness of the site. The scheme’s contingency funds of \$51k (included in the forecast ‘Other works’ amount) were re-allocated to this project.
Other works	335	104	The key cost variances were due to: <ul style="list-style-type: none"> a decision not to proceed with designing and installing a safe method of changing over the bulkhead at Eungella Dam, following a risk assessment which concluded no action was required (20BBR04, \$22k less than forecast) a decrease in scope for installing three additional survey points on the downstream embankment face at Eungella Dam, as well as an efficiency gain related to mobilisation (20BBR05, \$12k less than forecast)

Project	Forecast \$'000	Actual \$'000	Commentary
			<ul style="list-style-type: none"> the conduits at Eungella Dam being in a better condition than expected (20BBR09, \$18k less than forecast) a decision not to proceed with electrical works at Gattonvale Off-stream Storage, following a risk assessment which concluded no action was required (19BBR06, \$63k less than forecast) a decision not to proceed with works on the Eungella Dam outlet works access platform, following a risk assessment which concluded no action was required (20BBR11, \$13k less than forecast) the carryover of a project at Gattonvale pump station to 2020/21 (20BBR03, \$28k less than forecast) lower than anticipated contractor costs for the seismic investigation at Eungella Dam (20BBR12, \$23k less than forecast).
Non-scheduled works	-	100	The Eungella Dam Crest Road Risk Assessment returned a risk rating of 'High' in relation to the lack of guard railing along the upstream side of the dam crest road. A project was undertaken to install the guard railing.
2019/20 Total	1881	2141	

Appendix 4—Annuity-funded projects for 2020/21 to 2025/26

The below table sets out Sunwater’s currently planned annuity-funded projects for the 2020/21 to 2025/26 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
2020/21 ⁴	Gattonvale pump station	Refurbish – project to automatically remove silt and debris deposition during flood events to enable continued operation during peak opportunity pumping periods.	244
	Eungella Dam	Study – comprehensive risk assessment (CRA) and updated consequence, geotechnical and stability input studies to assess risks and refine refurbishment priority in accordance with regulatory requirements.	229
	Eungella Dam	Study – 20-year dam safety review based on regulatory requirements to better understand asset condition and risk. The project cost includes spillway crest/chute anchor pull-out tests and inspections.	103
	Gattonvale Off-stream Storage	Replace – isolation valve gearbox at the pump station and undertake minor storage civil works based on known asset condition and age. Also includes a cathodic protection study.	53
	Eungella Dam	Refurbish – spillway bridge based on Department of Transport and Main Roads Inspection Manual.	37
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	31
	Scheme	Study – arc flash study to determine arc flash risk and classification for all electrical switchboards and distribution boards.	26
	Multiple	A contingency amount for unplanned capital replacements in the scheme.	33
		2020/21 Total	
2021/22	Eungella Dam	Study – CRA based on regulatory requirements to better understand asset condition and risk.	300
	Gattonvale pump station	Refurbish – high voltage pit walls and covers based on known asset condition and age.	36
	Eungella Dam	Replace – drain/filling line pit sump pump and pipe works based on known asset condition and age.	8
	Eungella Dam	Refurbish – review spillway chute sub-surface drainage access point based on known asset condition and age.	6
	Eungella Dam	Refurbish – amend instrumentation drawing #206433B to include new, replaced and relocated configurations to mitigate known safety risk.	3
		2021/22 Total	

⁴ Based on the program of works underpinning the 2020/21 annuity-funded budget figures presented in this S&PP. This data was extracted from Sunwater’s systems in mid-2020 and has been provided to facilitate future reporting of our performance against forecast costs. Changes to the 2020/21 program of works since the date of extraction are not incorporated here.

Year	Facility	Activity description	Forecast \$'000
2022/23	Gattonvale pump station	Refurbish – pump unit 3 pump based on known asset condition and age.	68
	Bowen River Weir	Refurbish – inlet trash screens (repaint and repair) based on known asset condition and age.	52
	Eungella Dam	Refurbish – regulating valve 1 based on known asset condition and age.	34
	Eungella Dam	Refurbish – regulating valve 2 based on known asset condition and age.	34
	Eungella Dam	Inspect – spillway bridge based on Department of Transport and Main Roads Inspection Manual.	32
	2022/23 Total		220
2023/24	Gattonvale pump station	Refurbish – pump unit 2 pump based on known asset condition and age.	74
	Eungella Dam	Refurbish – intake trash screen (blast, paint and new bearings and seals) based on known asset condition and age.	43
	Bowen River Weir	Refurbish – left-hand penstock gates, frames and actuators based on known asset condition and age.	34
	Bowen River Weir	Refurbish – right-hand penstock gates, frames and actuators based on known asset condition and age.	34
	Eungella Dam	Investigate – spillway sub surface drainage to mitigate known safety risk.	22
	Multiple	There are two other annuity-funded projects planned for 2023/24 related to replacing the supervisory control and data acquisition (SCADA) computers and software at Gattonvale pump station and Bowen River Weir.	36
	2023/24 Total		243
2024/25	Gattonvale pump station	Replace – rising main air valves (5), valve pit air valves (4) and gate valves (5) based on known asset condition and age.	120
	Eungella Dam	Study – comprehensive inspection to meet regulatory compliance.	113
	Gattonvale pump station	Refurbish – pump unit 1 pump based on known asset condition and age.	95
	Bowen River Weir	Study – comprehensive inspection to meet asset management, condition and risk standards.	64
	Gattonvale pump station	Refurbish – valve pit metal work (blast, paint, replace fixings, etc.) based on known asset condition and age.	63
	Gattonvale pump station	Replace – flow meter based on known asset condition and age.	52
	Bowen River Weir	Refurbish – metal work covers and gate guides based on known asset condition and age.	51
	Multiple	There are eight other annuity-funded projects planned for 2024/25. These projects include: refurbishment of actuators at Bowen River Weir; refurbishment of trash screens at Gattonvale pump station; a comprehensive inspection of Gattonvale Off-stream Storage; refurbishment of a rising main isolation valve at Gattonvale pump station; control building refurbishments at Gattonvale pump station; and minor electrical works at Eungella Dam.	189
	2024/25 Total		747
2025/26	Bowen River Weir	Replace – fishway hydraulic system instrumentation based on known asset condition and age.	100

Year	Facility	Activity description	Forecast \$'000
	Bowen River Weir	Replace – fishway programmable logic controller based on known asset condition and age.	66
	Eungella Dam	Refurbish – outlet works and dam crest access road based on known asset condition and age.	66
	Eungella Dam	Refurbish – outlet works right-hand guard valve based on known asset condition and age.	53
	Eungella Dam	Refurbish – outlet works left-hand guard valve based on known asset condition and age.	53
	Bowen Broken River	Replace – gauging station building based on known asset condition and age.	39
	Multiple	There are seven other annuity-funded projects planned for 2025/26. These projects include: left-hand and right-hand penstock reduction gear box replacements at Bowen River Weir; signage replacements; decommissioning of obsolete fishway entrance/gates; an asset valuation; replacement of a fishway hydraulic system flow meter at Bowen River Weir; and control building refurbishments at Bowen River Weir.	125
	2025/26 Total		502

Contact us

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