



Final Service and Performance Plan

2022/23

Barker Barambah Bulk Water Service Contract

28 July 2022

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At a glance

Our performance in 2020/21

 **Operating costs:**
\$1.37 million (28.9% more than QCA target)


Key drivers of cost variance:

- higher insurance costs due to market escalation
- higher energy costs because of low level pumping requirements at Bjelke-Petersen Dam.


 **Annuity-funded costs:**
\$3.64 million (64.3% more than QCA target)

Key drivers of cost variance:

- refurbishment of Silverleaf Weir
- comprehensive risk assessment input studies.


 **Total water deliveries:**
8022 ML

Water delivered to irrigators: 7530 ML

 **Service targets: Met**


No exceptions

Outlook for 2022/23

 **Forecast operating costs:**
\$1.32 million

Significant areas of expenditure:

- insurance (\$0.34 million)
- operations (\$0.69 million).

 **Forecast annuity-funded costs:**
\$0.85 million

Key projects planned:

- a 20-year dam safety review of Bjelke-Petersen Dam (\$0.42 million)
- grout anchor pull-out tests to inform the dam safety review (\$0.15 million)
- replace customer meters, as required (\$0.12 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 Barker Barambah Bulk Water Service Contract is to:

- present to customers Sunwater’s projected costs¹ 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 delivering water to customers within agreed service standards, ensuring assets are maintained and works are completed in a safe, timely and efficient manner.

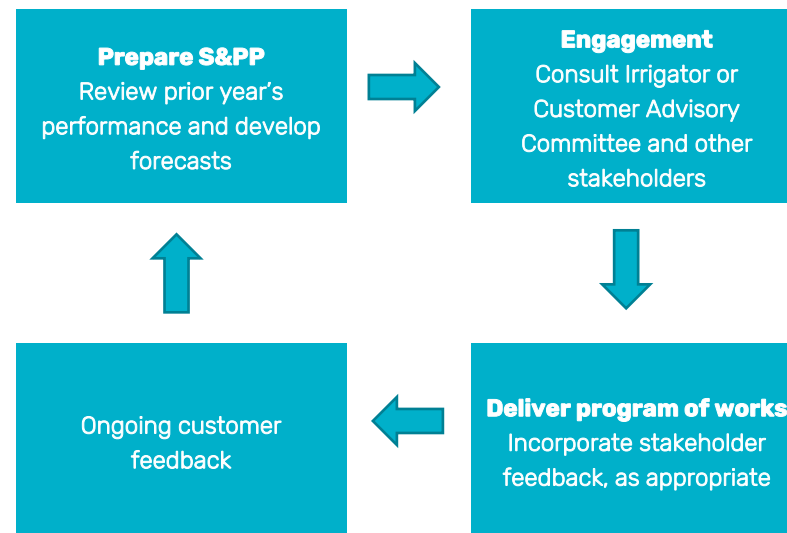
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

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 majority of our 150 customers in this service contract are farmers in the areas of Redgate, Murgon and Mondure. Water is also provided to supplement the town water supply for the townships of Murgon, Wondai, Bye and Cherbourg.

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 priority water allocations (ML)	Medium priority water allocations (ML)	Total water deliveries 2020/21 (ML)
Irrigation	31,321	0	31,321	7530
Urban	2115	2100	15	493
Industrial	40	0	40	0
Sunwater	839	136	703	0
Total	34,315	2236	32,079	8022

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) ¹	QCA cost-reflective (\$/ML) ²
River	Allocation Charge – Part A	27.17	45.57
	Allocation Water – Part B	3.70	4.45
Redgate Relift	Allocation Charge – Part A	27.17	50.82
	Allocation Water – Part B	20.04	55.89

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 Barker Barambah 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		
			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	Unplanned shutdowns will be fixed so that at least partial supply can be resumed	48 hours	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 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 ¹	80.00%	90.93%
Requests actioned within Service Level Agreement (SLA) timeframes ²	> 95.00%	99.14%

1. This target measures the percentage of 13 15 89 calls that are answered within 60 seconds.
2. 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 Barker Barambah.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Bjelke-Petersen Dam	Earth and rock fill dam, consisting of a saddle wall and a main wall. The spillway is located on the left abutment. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	134,900
Joe Sippel Weir	Cascading concrete wall.	710
Silverleaf Weir	Timber piled, earth and rock structure.	580
Redgate Diversion Pipeline	Gravity, with a pumping unit installed when the dam level is too low. Transfers water from Bjelke-Petersen Dam to Joe Sippel Weir.	n/a
Upper Redgate Relift Pipeline	Includes a pump.	n/a

Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Barker Barambah 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 Barker Barambah 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)

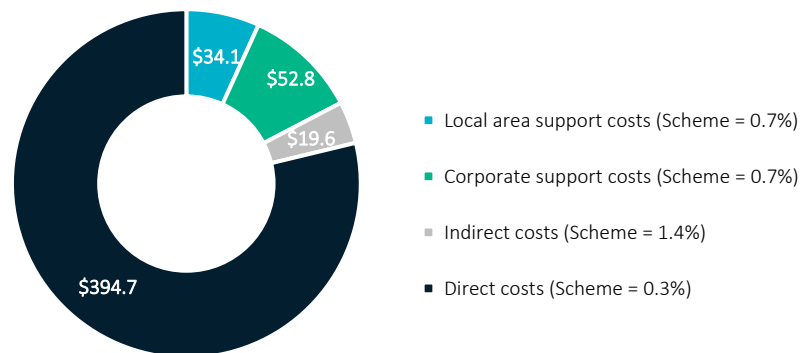


Table 6: Service contract financial summary

Barker Barambah 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	864.2	843.9	851.6	1074.7	915.3
Community Service Obligation	-	-	542.6	-	-
Industrial ¹	-	-	-	13.3	13.3
Urban ¹	260.9	264.8	269.7	274.3	274.3
Revenue transfers	-	-	-	-	-
Drainage	-	-	-	-	-
Other	3.5	6.2	26.3	1.0	1.0
Revenue total	1128.5	1114.9	1690.4	1363.3	1203.9
Less – Operating expenditure	1129.7	1200.5	1469.1	1487.8	1346.8
Less					
Annuity-funded	171.6	1126.5	3637.8	218.4	846.8
Non-annuity funded ²	-	-	123.8	-	-
Surplus (deficit)	(172.8)	(1212.2)	(3540.4)	(342.9)	(989.8)

- Forecast revenues for industrial and urban customers are based on current contractual arrangements.
- This is expenditure which has not been funded by irrigation customers. An example of this in the Barker Barambah 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 Barker Barambah 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 higher than the QCA’s recommended cost target. Some contributing factors included market escalation in insurance costs, higher energy costs because of additional pumping requirements at Bjelke-Petersen Dam due to low water levels and labour costs being above the QCA’s forecast.

Table 7: Operating expenditure¹

Barker Barambah 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 ²	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	999.1	1039.6	932.3	1218.1	285.8	1297.8	954.8	1081.8	977.3	1132.1	1178.3	1227.3	1289.5
Electricity	86.2	46.1	40.5	75.1	34.6	67.0	44.1	50.0	44.7	51.4	52.8	54.2	55.7
Insurance	207.0	236.0	260.8	314.0	53.2	417.6	266.0	337.5	272.1	364.1	392.8	423.8	457.2
Operations	705.8	757.6	631.1	829.0	197.9	813.2	644.7	694.3	660.4	716.6	732.7	749.2	776.5
Preventative maintenance	110.5	137.6	94.3	116.1	21.8	115.2	96.4	154.0	98.7	159.0	163.4	167.3	173.1
Corrective maintenance	20.1	23.3	33.9	33.2	(0.6)	45.9	34.6	83.3	35.4	86.0	88.4	90.5	93.6
Operating costs total	1129.7	1200.5	1060.5	1367.4	306.9	1458.9	1085.8	1319.1	1111.5	1377.1	1430.1	1485.0	1556.2
Recreational facility costs ³				101.8		28.9		27.7		28.5	29.2	29.9	31.0
Operating costs total (incl. recreational facility costs)	1129.7	1200.5		1469.1		1487.8		1346.8		1405.7	1459.3	1514.9	1587.2

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.

Electricity

Sunwater continues to proactively manage the cost of electricity. In 2020/21, Sunwater undertook the following energy improvement initiatives in the Barker Barambah Bulk Water Service Contract:

- a review of our electricity tariff selections, to ensure that we are using the most cost-effective tariffs. Our review focused on the Upper Redgate pump station as it represents 88 per cent of consumption and most of the scheme's electricity costs. There was a tariff change during 2020/21, which has reduced average costs from 29.94 c/kWh to 25.62 c/kWh.
- commencement of Operational Electricity Dashboard Reporting with key electricity metrics monitored on a continual basis to identify efficiency opportunities.²

Outlook for 2022/23

Operations

Barker Barambah Bulk Water Service Contract's total operations budget in 2022/23 is 10.7 per cent above the QCA's recommended cost target. This variance is largely driven by increased insurance and electricity costs (see below).

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

² Some measuring points are not currently available at all pump stations. Sunwater is working towards capturing this information in the future.

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.

Electricity

In 2022/23, 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
- potential desktop energy audit
- monitoring of asset energy operational performance.

Preventative maintenance

The forecast preventative maintenance costs for the Barker Barambah Bulk Water Service Contract are 56.0 per cent above the QCA's recommended cost target. This is attributed to a rebalancing of resources assigned to perform preventative maintenance and operational activities, as well as increased compliance driven maintenance tasks associated with more frequent crane inspections and other asset inspections.

Corrective maintenance

In 2022/23, Sunwater anticipates spending \$83.3k on corrective maintenance in the Barker Barambah Bulk Water Service Contract. This is 135.2 per cent above the QCA's recommended cost target. This is attributed to a rebalancing of resources and tasks to the corrective maintenance program from operations.

Electricity metrics

Table 8 sets out electricity usage and efficiency-related information for the Upper Redgate pump station.

Table 8: Electricity usage and efficiency-related metrics – Upper Redgate pump station¹

Metric	2017/18	2018/19	2019/20	2020/21
Electricity usage (kWh)	125,314	276,771	56,130	195,620
Volume pumped (ML)	882	1673	422	1448
Actual electricity cost (\$)	33,537	69,402	21,367	50,427
Actual electricity cost per ML (\$/ML pumped)	38.02	41.48	50.63	34.83
Average pump energy indicator ² (kWh/ML/per metre of head)	5.68	6.62	5.32	5.15

1. Upper Redgate pump station only. Electricity costs do not reconcile to figures presented elsewhere in this S&PP, which are scheme wide.
2. 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 in early 2020 to capture energy consumption at a granular level, Sunwater is now able to more frequently monitor our performance against this metric.

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

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

Barker Barambah 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 ³	Sunwater Actual \$'000	QCA Target \$'000 ⁴	Sunwater Actual \$'000	Variance \$'000	Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	QCA Target \$'000 ⁴	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000	Sunwater Forecast \$'000
Annuity-funded													
Operations	-	-	-	-	-	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned corrective maintenance	171.6	1126.5	2213.7	3637.8	1424.1	218.4	558.0	846.8	499.6	411.3	125.4	480.7	324.3
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Annuity-funded total	171.6	1126.5	2213.7	3637.8	1424.1	218.4	558.0	846.8	499.6	411.3	125.4	480.7	324.3
Non-annuity funded													
Dam Improvement Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Recreational facility projects	-	-	-	116.0	-	-	-	-	-	126.8	-	-	-
Metered offtakes and dividend reinvestment	-	-	-	7.8	-	-	-	-	-	-	-	-	-
Non-annuity total	-	-	-	123.8	-	-	-	-	-	126.8	-	-	-

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 primarily driven by the refurbishment of Silverleaf Weir which was originally planned to continue into the 2021/22 financial year but was completed in 2020/21, resulting in some costs being brought forward. The full scope of the project was also unknown at the time of our June 2019 submission.

The other main variance was the requirement to complete updated geotechnical and failure consequence assessments to inform the comprehensive risk assessment for Bjelke-Petersen Dam to meet dam safety regulator driven timings.

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.

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

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 carry out a 20-year dam safety review at Bjelke-Petersen Dam and replace customer meters.

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 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 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

Barker Barambah 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 ¹	(922.4)	(866.4)	(1793.1)	(4821.2)	(4494.0)	(4397.9)	(3852.7)	(2294.6)	(1012.0)
Spend ²	(171.6)	(1126.5)	(3637.8)	(218.4)	(846.8)	(411.3)	(125.4)	(480.7)	(324.3)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	38.4	-	-	-	-	-	-	-	-
Annuity contribution ³	258.3	264.8	688.1	756.4	1139.4	1148.8	1852.0	1863.6	1878.4
Interest/financing costs	(69.1)	(64.9)	(78.4)	(210.8)	(196.5)	(192.3)	(168.5)	(100.3)	(44.2)
Sunwater – Closing balance	(866.4)	(1793.1)	(4821.2)	(4494.0)	(4397.9)	(3852.7)	(2294.6)	(1012.0)	497.8
QCA – Closing balance	(866.4)	(2081.4)	(3698.0)	(3661.3)	(3181.7)	(2397.1)			
Difference	-	288.4	(1123.1)	(832.7)	(1216.3)	(1455.6)			

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	2651
2011/12	7974
2012/13	9819
2013/14	24,852
2014/15	17,435
2015/16	15,187
2016/17	18,010
2017/18	10,641
2018/19	13,134
2019/20	6511
2020/21	8022
19-year historical average	12,375

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

Barker Barambah 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
Operating costs													
Operations	999.1	1039.6	932.3	1218.1	285.8	1297.8	954.8	1081.8	977.3	1132.1	1178.3	1227.3	1289.5
Labour	181.9	174.1	152.9	200.2	47.3	193.9	156.4	163.8	160.4	168.8	173.8	179.0	184.4
Contractors	6.9	134.8	19.3	7.8	(11.5)	27.7	19.7	24.3	20.1	24.9	25.6	26.3	27.1
Materials	0.5	1.4	0.9	1.3	0.4	2.9	0.9	2.9	0.9	3.0	3.1	3.2	3.2
Electricity	86.2	46.1	40.5	75.1	34.6	67.0	44.1	50.0	44.7	51.4	52.8	54.2	55.7
Insurance	207.0	236.0	260.8	314.0	53.2	417.6	266.0	337.5	272.1	364.1	392.8	423.8	457.2
Other	85.0	110.1	74.9	101.1	26.2	100.9	76.4	103.0	78.2	104.1	105.4	106.7	111.6
Local area support costs	104.4	84.3	64.7	109.9	45.2	117.2	66.1	99.5	67.7	102.5	105.6	108.8	112.0
Corporate support costs	172.3	133.1	118.2	198.4	80.2	184.2	120.7	155.6	123.6	160.3	165.1	170.1	175.2
Indirect costs	154.8	119.8	200.1	210.3	10.1	186.4	204.5	145.1	209.4	153.0	154.1	155.2	163.0
Preventative maintenance	110.5	137.6	94.3	116.1	21.8	115.2	96.4	154.0	98.7	159.0	163.4	167.3	173.1
Labour	29.2	42.2	28.8	30.5	1.8	31.0	29.4	44.7	30.2	46.0	47.4	48.8	50.3
Contractors	23.2	9.0	6.2	6.4	0.2	11.7	6.3	11.7	6.5	12.0	12.3	12.6	13.0
Materials	0.8	0.1	1.3	1.3	0.0	1.0	1.3	1.0	1.4	1.0	1.0	1.1	1.1
Other	2.6	4.2	3.1	5.1	2.0	1.9	3.2	1.9	3.3	2.0	2.1	2.1	2.2
Local area support costs	15.4	22.0	12.2	17.9	5.7	19.3	12.4	26.8	12.7	27.6	28.4	29.3	30.2
Corporate support costs	24.2	33.3	22.2	30.7	8.4	29.4	22.7	42.4	23.3	43.7	45.0	46.4	47.8
Indirect costs	15.1	26.9	20.5	24.1	3.6	21.0	20.9	25.5	21.5	26.7	27.2	27.0	28.7
Corrective maintenance	20.1	23.3	33.9	33.2	(0.6)	45.9	34.6	83.3	35.4	86.0	88.4	90.5	93.6
Labour	2.9	2.1	7.7	1.8	(5.9)	10.0	7.9	22.3	8.1	23.0	23.7	24.4	25.1
Contractors	5.7	17.3	4.9	22.9	18.0	6.8	5.0	6.8	5.1	7.0	7.2	7.4	7.6
Materials	6.5	0.2	5.7	1.0	(4.7)	6.8	5.8	6.8	5.9	7.0	7.2	7.4	7.6
Other	-	-	0.8	3.4	2.6	-	0.8	-	0.8	-	-	-	-
Local area support costs	0.9	0.8	3.3	1.0	(2.3)	6.1	3.3	13.4	3.4	13.8	14.2	14.6	15.1
Corporate support costs	2.4	1.5	6.0	1.7	(4.2)	9.5	6.1	21.2	6.2	21.9	22.5	23.2	23.9
Indirect costs	1.8	1.5	5.5	1.4	(4.1)	6.8	5.6	12.8	5.8	13.4	13.6	13.5	14.3
Operating costs total	1129.7	1200.5	1060.5	1367.4	306.9	1458.9	1085.8	1319.1	1111.5	1377.1	1430.1	1485.0	1556.2
Annuity-funded costs													
Labour		287.2	144.7	237.8	93.1	13.5	34.5	143.0	84.4	69.4	21.2	81.7	55.0
Contractors		258.0	1712.9	2814.9	1101.9	74.5	190.3	157.3	92.8	76.2	23.2	89.2	60.0
Materials		29.7	11.7	19.3	7.6	72.7	185.8	157.3	92.8	76.2	23.2	89.2	60.0
Other		23.2	19.5	32.0	12.5	27.6	70.5	85.8	50.6	41.6	12.7	48.7	32.7
Local area support costs		118.8	64.0	105.1	41.1	8.1	20.8	85.8	50.6	41.7	12.7	49.0	33.0
Corporate support costs		219.1	149.3	245.3	96.0	12.8	32.7	135.9	80.2	66.0	20.2	77.6	52.3
Indirect costs		190.6	111.6	183.4	71.8	9.2	23.4	81.8	48.3	40.3	12.2	45.2	31.4
Annuity-funded total¹	171.6	1126.5	2213.7	3637.8	1424.1	218.4	558.0	846.8	499.6	411.3	125.4	480.7	324.3
Total costs²	1301.3	2327.1	3274.2	5005.2	1731.0	1677.3	1643.8	2166.0	1611.1	1788.4	1555.4	1965.7	1880.5

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 Barker Barambah Bulk Water Service Contract in 2020/21⁴ and the actual projects undertaken.

Project	Activity description	Forecast \$'000	Actual \$'000	Commentary
Silverleaf Weir	Refurbish – install sheet piling on the upstream side, concrete cap the weir and install new outlet works.	3335	3172	This project was completed within budget.
Bjelke-Petersen Dam	Study – comprehensive risk assessment (CRA).	190	0	This project was combined with the input studies used to inform the CRA (see below).
Bjelke-Petersen Dam	Study – updated geotechnical and failure consequence assessments to inform the CRA.	154	324	The project costs (inclusive of the CRA) were within budget.
Bjelke-Petersen Dam	Replace – secondary bulkhead winch with an electrically actuated system.	34	53	Additional engineering and site works were required, above what was planned.
Bjelke-Petersen Dam	Refurbish – install guard valve No. 2 at Bjelke-Petersen Dam.	26	56	The valve was in worse condition than anticipated and required additional work to refurbish.
Multiple	Various projects.	197	31	The cost variance was driven by: <ul style="list-style-type: none"> the asset revaluation not being undertaken as part of the annuity-funded program of works (\$23k less) fewer meters requiring replacement than planned (\$11k less) the arc flash study being carried over to 2021/22 (\$4k less). In addition, the service contract's contingency amount of \$130k was not required.
Multiple	Replace – switchboards 1 and 5.	0	1	Minor expenditure related to a project undertaken in the previous financial year.
2020/21 Total		3936	3638	

⁴ Based on information extracted from Sunwater's systems in mid-2020. See the 2021/22 S&PP at www.sunwater.com.au/schemes/Barker-Barambah/

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	Bjelke-Petersen Dam	Study – 20-year dam safety review based on regulatory requirements and to better understand asset condition and risk.	424
	Bjelke-Petersen Dam	Study – ground penetrating radar survey of the crest and chute to identify voids.	77
	Bjelke-Petersen Dam and Upper Redgate	Replace – fences, gates and grids based on known condition.	38
	Bjelke-Petersen Dam	Study – options analysis to replace cables and cableways.	36
	Bjelke-Petersen Dam	Study – grout anchor pull-out tests to inform the 20-year dam safety review.	154
	Scheme	Replace – customer meters based on known asset condition and age.	118
	2022/23 Total		847
2023/24	Bjelke-Petersen Dam	Study – comprehensive inspection based on regulatory requirements and to better understand asset condition and risk.	163
	Bjelke-Petersen Dam	Study – Level 2 Bridge inspection based on Department of Transport and Main Roads Structures Inspection Manual.	55
	Bjelke-Petersen Dam	Replace – outlet building dehumidifier based on known asset condition and age.	53
	Stream gauging stations	Replace – stream gauging equipment based on known asset condition and age.	18
	Scheme	Replace – customer meters based on known asset condition and age.	122
	2023/24 Total		411
2024/25	Scheme	Replace – customer meters based on known asset condition and age.	125
	2024/25 Total		125
2025/26	Scheme	Replace – gauging station equipment at five locations based on condition.	111
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	31
	Bjelke-Petersen Dam	Replace – control equipment based on known asset condition and risk. Covers design, installation, and commissioning.	111
	Scheme	Replace – customer meters based on known asset condition and age.	129

Year	Facility	Activity description	Forecast \$'000
	Bjelke-Petersen Dam	Study – 10-yearly crest survey to validate the dam crest failure level.	15
	Redgate pipeline	Replace – 900 mm valve based on known condition.	84
	2025/26 Total		481
2026/27	Scheme	Replace – customer meters based on known asset condition and age.	133
	Silverleaf and Joe Sippel weirs	Study – comprehensive inspection of the weirs to understand current asset condition.	46
	Bjelke-Petersen Dam	Refurbish – main wall and outlet building access roads based on known condition.	66
	Bjelke-Petersen Dam	Replace – water level recorder based on known condition.	19
	Bjelke-Petersen Dam	Refurbish – ladders, handrails and platforms based on known condition.	60
	2026/27 Total		324

Contact us

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

Email: sppfeedback@sunwater.com.au

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

This Service and Performance Plan has been prepared by Sunwater to provide indicative information to our customers for the purpose of consultation. It contains estimates and forecasts which are based upon a number of assumptions. The actual financial performance of the service contract to which this plan relates, and the operations and activities actually undertaken by Sunwater during the relevant periods, may vary materially from the information contained in this plan. This plan should not be relied upon beyond its purpose as a tool for consultation and you should not rely on the information contained in this plan in making decisions about your circumstances. Sunwater will not be responsible or liable for any loss (including consequential loss), claim or damage (including in tort) that is in any way connected with the use of this plan or the information contained within it.