



# Final Service and Performance Plan

2022/23

Nogoa Mackenzie Bulk Water Service Contract

26 July 2022

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# At a glance


## Our performance in 2020/21



**Operating costs:**  
\$3.47 million (62.6% more than QCA target)


Key drivers of cost variance:

- insurance
- direct costs such as labour
- non-direct costs.




**Annuity-funded costs:**  
\$0.59 million (399.6% more than QCA target)

Sunwater undertook an arc flash study to reduce risk and a comprehensive risk assessment of Fairbairn Dam. These projects were not part of the 2020/21 program of works assessed by the QCA.



**Total water deliveries:**  
81,904 ML


Water delivered to irrigators: 62,108 ML



**Service targets: 1 exceedance**

The customer interruptions target was not met.


## Outlook for 2022/23



**Forecast operating costs:**  
\$2.86 million

Significant areas of expenditure:

- insurance (\$0.91 million)
- operations (\$1.41 million)
- preventative maintenance (\$0.31 million).



**Forecast annuity-funded costs:**  
\$3.09 million

Key projects planned:

- risk reduction program at Fairbairn Dam (\$2.00 million)
- replace customer meters (\$0.41 million)
- comprehensive inspection of Fairbairn Dam (\$0.16 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 Nogoa Mackenzie 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 efficient water delivery, meter reliability and safety compliance is maintained. In addition, refurbishment and corrective work identified through our annual and five yearly comprehensive inspections will be 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

Most customers in this scheme are irrigators of cotton, citrus (mandarins, oranges, and lemons) and grapes. Other crops irrigated include wheat, pulse crops, sorghum, maize, lucerne, oats, macadamias, and sunflowers.

Water from Fairbairn Dam is released down the Nogoia River to Selma Weir for supply to the town of Emerald and is released to supply coal mining developments on the Bowen Basin.

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<sup>1</sup>

Customer segment	Total water allocations (ML)	High priority water allocations (ML)	Medium priority water allocations (ML)	Total water deliveries 2020/21 (ML)
Irrigation	191,751	9349	182,402	62,108
Urban	8568	8459	110	5767
Industrial	28,161	25,735	2426	13,999
Sunwater (excl. distribution losses)	3063	2271	792	31
Sunwater distribution losses	313	313	0	0
<b>Total</b>	<b>231,857</b>	<b>46,127</b>	<b>185,730</b>	<b>81,904</b>

1. Includes bulk water, Blackwater Pipeline and the Gregory, Oakey Creek and Saraji Offtakes.

## Irrigation charges

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

Table 2: Irrigation charges for 2022/23<sup>1</sup>

Tariff group	Product	2022/23 (\$/ML) <sup>2</sup>	QCA cost-reflective (\$/ML) <sup>3</sup>
Bulk water – Medium priority	Allocation Charge – Part A	10.39	6.94
	Allocation Water – Part B	0.73	0.88
Bulk water – High priority	Allocation Charge – Part A	29.79	48.64
	Allocation Water – Part B	0.73	0.88
Bulk water – Local management supply – Medium priority	Allocation Charge – Part A	5.77	6.94
	Allocation Water – Part B	0.73	0.88
Bulk water – Local management supply – High priority	Allocation Charge – Part A	29.79	48.64
	Allocation Water – Part B	0.73	0.88

1. This table includes bulk water charges only. Distribution charges are set by Fairbairn Irrigation Network Ltd.
2. 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.
3. Is the cost-reflective price determined by the Queensland Competition Authority (QCA) in its 2020–2024 irrigation price investigation (excluding dam improvement costs). 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 Nogo Mackenzie 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	4 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	0	0	0
	Unplanned shutdowns outside Peak Demand Period	5 working days			
Maximum number of interruptions <sup>2</sup>	Planned or unplanned interruptions per water year	6	0	0	14

1. This is the number of times that the unplanned shutdown has exceeded the shortest of the peak/off peak periods.
2. Total number of customers that have been interrupted in excess of the target.

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%

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 Nogo Mackenzie.

Table 5: Key infrastructure

Asset	Description	Total storage capacity (ML)
Fairbairn Dam	Earth and rock fill clay-core embankment, complemented by six secondary earth and rock fill saddle dams. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	1,301,000
Bedford Weir	Mass concrete weir.	17,973
Bingegang Weir	Mass concrete weir.	8060
Selma Weir	Mass concrete weir.	1180
Tartrus Weir	Ogee-crested mass concrete weir.	12,000

# Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Nogo Mackenzie 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 Nogo Mackenzie 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)

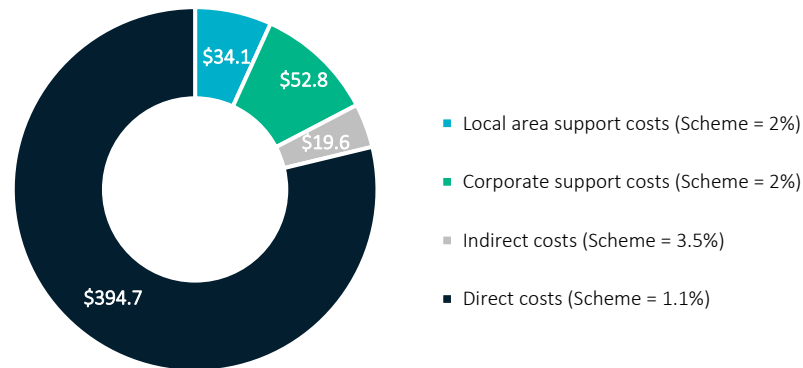


Table 6: Service contract financial summary

Nogo Mackenzie 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	937.9	2334.4	2095.1	1724.7	1814.5
Community Service Obligation	-	-	433.9	-	-
Industrial <sup>1</sup>	3018.7	3114.4	3499.0	2603.9	2468.0
Urban <sup>1</sup>	465.5	440.1	400.3	326.1	326.1
Revenue transfers <sup>2</sup>	1285.1	266.5	263.8	204.8	204.9
Drainage	-	-	-	-	-
Other	5.5	8.6	116.8	-	-
<b>Revenue total</b>	<b>5712.7</b>	<b>6164.0</b>	<b>6808.9</b>	<b>4859.5</b>	<b>4813.5</b>
Less – Operating expenditure	2629.5	2883.6	3935.4	3312.0	3536.5
Less					
Annuity-funded	595.8	724.4	589.6	267.0	3089.4
Non-annuity funded <sup>3</sup>	32,085.1	45,097.3	4447.0	5.3	-
<b>Surplus (deficit)</b>	<b>(29,597.6)</b>	<b>(42,541.4)</b>	<b>(2163.2)</b>	<b>1275.1</b>	<b>(1812.4)</b>

- 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 distribution system and the Blackwater Pipeline. Since the transfer of the distribution system to Fairbairn Irrigation Network Ltd on 30 June 2019, Fairbairn Irrigation Network has been invoiced directly for its contribution to the cost of the bulk water service. Therefore, this revenue is now part of “Irrigation” revenue. For Blackwater Pipeline, the revenue accrues to the pipeline system 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 Nogo Mackenzie Bulk Water Service Contract is the Dam Improvement Program.

## 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 Nogo Mackenzie 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 more than the QCA’s recommended cost target. This was primarily due to increases in insurance, direct and non-direct costs. Part of this was related to additional costs that were incurred due to low level pumping activities and associated works.

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

Nogo Mackenzie 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	2001.0	2319.9	1740.8	2359.4	618.5	2035.8	1777.3	2339.2	1819.4	2456.4	2571.2	2690.8	2833.1
Electricity	43.1	57.9	19.0	17.8	(1.2)	18.0	19.3	22.0	19.5	22.6	23.2	23.9	24.5
Insurance	495.5	561.5	624.1	748.2	124.1	995.9	636.5	911.9	651.2	983.8	1061.4	1145.1	1235.4
Operations	1462.5	1700.5	1097.8	1593.4	495.6	1021.9	1121.4	1405.3	1148.7	1450.0	1486.6	1521.9	1573.2
Preventative maintenance	361.7	314.1	256.7	518.9	262.2	364.7	262.3	306.2	268.7	316.0	324.7	332.5	344.0
Corrective maintenance	266.8	249.6	137.1	593.4	456.3	316.8	140.0	217.6	143.4	224.2	230.4	236.2	243.8
<b>Operating costs total</b>	<b>2629.5</b>	<b>2883.6</b>	<b>2134.6</b>	<b>3471.6</b>	<b>1337.0</b>	<b>2717.3</b>	<b>2179.5</b>	<b>2863.0</b>	<b>2231.5</b>	<b>2996.7</b>	<b>3126.3</b>	<b>3259.6</b>	<b>3420.9</b>
Recreational facility costs <sup>3</sup>				463.8		594.7		673.6		694.9	712.9	730.0	754.5
<b>Operating costs total (incl. recreational facility costs)</b>	<b>2629.5</b>	<b>2883.6</b>		<b>3935.4</b>		<b>3312.0</b>		<b>3536.5</b>		<b>3691.6</b>	<b>3839.2</b>	<b>3989.6</b>	<b>4175.4</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

Nogoa Mackenzie Bulk Water Service Contract's total operations budget in 2022/23 is 28.6 per cent above the QCA's recommended cost target.

Sunwater anticipates that insurance (see below), operations labour, other costs, and non-direct costs will be higher than the target, while Sunwater's budget for contractor use and materials is slightly lower.

### 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 Nogoa Mackenzie Bulk Water Service Contract are 14.0 per cent above the QCA's recommended cost target. This is because of an increase in contractor costs, supply chain materials and non-direct costs.

### Corrective maintenance

In 2022/23, Sunwater anticipates spending \$217.6k on corrective maintenance in the Nogoa Mackenzie Bulk Water Service Contract. This is 51.8 per cent above the QCA's recommended cost target, primarily due to higher than recommended labour, contractor, and non-direct costs.



## 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>

Nogoa Mackenzie 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	595.8	724.4	118.0	589.6	471.6	267.0	178.1	3089.4	1010.4	2235.0	1909.0	2428.1	2228.4
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Annuity-funded total</b>	<b>595.8</b>	<b>724.4</b>	<b>118.0</b>	<b>589.6</b>	<b>471.6</b>	<b>267.0</b>	<b>178.1</b>	<b>3089.4</b>	<b>1010.4</b>	<b>2235.0</b>	<b>1909.0</b>	<b>2428.1</b>	<b>2228.4</b>
<b>Non-annuity funded</b>													
Dam Improvement Program	32,085.1	45,087.6		4447.0		-		-		-	-	-	-
Recreational facility projects				-		5.3		-		560.6	141.0	545.6	127.2
Metered offtakes and dividend reinvestment	-	9.7		-		-		-		-	-	-	-
<b>Non-annuity total</b>	<b>32,085.1</b>	<b>45,097.3</b>		<b>4447.0</b>		<b>5.3</b>		<b>-</b>		<b>560.6</b>	<b>141.0</b>	<b>545.6</b>	<b>127.2</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 primarily driven by unplanned arc flash risk reduction works and the Fairbairn Dam comprehensive risk assessment.

### 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 Fairbairn Dam and replace river metering.

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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

Nogoa Mackenzie 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>	(4112.9)	(4522.6)	(5079.2)	(4620.9)	(3787.8)	(5697.7)	(6776.7)	(7482.4)	(8646.9)
Spend <sup>2</sup>	(595.8)	(724.4)	(589.6)	(267.0)	(3089.4)	(2235.0)	(1909.0)	(2428.1)	(2228.4)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution <sup>3</sup>	494.2	506.5	1270.0	1302.1	1345.1	1405.1	1499.6	1590.7	1678.2
Interest/financing costs	(308.1)	(338.7)	(222.1)	(202.0)	(165.6)	(249.1)	(296.3)	(327.1)	(378.1)
<b>Sunwater – Closing balance</b>	<b>(4522.6)</b>	<b>(5079.2)</b>	<b>(4620.9)</b>	<b>(3787.8)</b>	<b>(5697.7)</b>	<b>(6776.7)</b>	<b>(7482.4)</b>	<b>(8646.9)</b>	<b>(9575.2)</b>
<b>QCA – Closing balance</b>	<b>(4522.6)</b>	<b>(5904.0)</b>	<b>(5010.1)</b>	<b>(4105.2)</b>	<b>(3949.9)</b>	<b>(3249.0)</b>			
Difference	-	824.7	389.2	317.3	(1747.8)	(3527.6)			

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	78,314
2011/12	169,236
2012/13	166,681
2013/14	189,851
2014/15	157,152
2015/16	183,846
2016/17	168,908
2017/18	178,911
2018/19	119,961
2019/20	124,117
2020/21	81,904
<b>19-year historical average</b>	<b>155,594</b>

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

Nogoa Mackenzie 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	2001.0	2319.9	1740.8	2359.4	618.5	2035.8	1777.3	2339.2	1819.4	2456.4	2571.2	2690.8	2833.1
Labour	320.6	399.0	249.4	373.2	123.8	215.6	255.2	335.9	261.7	346.0	356.4	367.1	378.1
Contractors	138.5	205.2	125.8	146.3	20.5	97.5	128.4	122.3	131.4	125.7	129.1	132.7	136.3
Materials	19.5	18.1	21.9	20.3	(1.5)	14.8	22.3	14.8	22.8	15.2	15.7	16.1	16.5
Electricity	43.1	57.9	19.0	17.8	(1.2)	18.0	19.3	22.0	19.5	22.6	23.2	23.9	24.5
Insurance	495.5	561.5	624.1	748.2	124.1	995.9	636.5	911.9	651.2	983.8	1061.4	1145.1	1235.4
Other	168.8	271.6	109.8	153.6	43.8	156.1	112.0	159.2	114.5	162.0	165.0	168.3	172.8
Local area support costs	298.4	230.9	120.3	210.7	90.3	140.7	122.9	218.5	125.9	225.1	231.9	238.8	246.0
Corporate support costs	295.8	304.6	192.5	352.9	160.4	204.8	196.7	319.1	201.4	328.7	338.6	348.7	359.2
Indirect costs	221.0	271.0	278.1	336.3	58.3	192.4	284.1	235.3	290.9	247.3	250.0	250.2	264.3
Preventative maintenance	361.7	314.1	256.7	518.9	262.2	364.7	262.3	306.2	268.7	316.0	324.7	332.5	344.0
Labour	92.1	82.9	75.4	100.9	25.4	102.4	77.2	80.9	79.1	83.3	85.8	88.4	91.0
Contractors	48.5	60.1	23.2	156.0	132.8	18.5	23.6	37.1	24.2	38.1	39.1	40.2	41.3
Materials	5.6	2.3	2.8	0.6	(2.2)	3.7	2.9	3.7	2.9	3.8	3.9	4.0	4.1
Other	7.2	4.1	6.9	26.5	19.5	6.7	7.1	8.9	7.2	9.1	9.4	9.6	9.9
Local area support costs	91.4	45.8	36.4	60.5	24.1	66.6	37.2	52.6	38.1	54.2	55.8	57.4	59.2
Corporate support costs	75.0	63.0	58.2	95.3	37.1	97.3	59.5	76.8	60.9	79.1	81.5	84.0	86.5
Indirect costs	41.9	55.9	53.7	79.2	25.5	69.5	54.9	46.3	56.2	48.4	49.2	48.9	51.9
Corrective maintenance	266.8	249.6	137.1	593.4	456.3	316.8	140.0	217.6	143.4	224.2	230.4	236.2	243.8
Labour	18.7	24.3	22.4	36.0	13.6	75.6	22.9	37.1	23.5	38.2	39.3	40.5	41.7
Contractors	156.4	160.0	45.0	291.4	246.4	44.5	45.9	74.1	47.0	76.2	78.3	80.4	82.6
Materials	19.2	13.6	11.0	25.1	14.1	14.8	11.3	14.8	11.5	15.2	15.7	16.1	16.5
Other	29.7	3.3	14.5	154.9	140.3	9.6	14.8	11.1	15.2	11.4	11.7	12.1	12.4
Local area support costs	18.4	13.5	10.8	20.8	9.9	49.1	11.1	24.1	11.3	24.8	25.6	26.3	27.1
Corporate support costs	18.7	18.9	17.3	36.7	19.4	71.8	17.7	35.2	18.1	36.3	37.4	38.5	39.6
Indirect costs	5.6	15.9	16.0	28.5	12.5	51.3	16.3	21.2	16.7	22.2	22.5	22.4	23.8
<b>Operating costs total</b>	<b>2629.5</b>	<b>2883.6</b>	<b>2134.6</b>	<b>3471.6</b>	<b>1337.0</b>	<b>2717.3</b>	<b>2179.5</b>	<b>2863.0</b>	<b>2231.5</b>	<b>2996.7</b>	<b>3126.3</b>	<b>3259.6</b>	<b>3420.9</b>
<b>Annuity-funded costs</b>													
Labour		65.8	8.8	44.0	35.2	39.3	26.2	477.2	156.1	381.8	329.6	411.8	374.9
Contractors		445.9	86.5	432.0	345.6	49.9	33.3	1260.6	412.3	647.8	634.6	523.7	408.5
Materials		57.6	1.0	4.9	3.9	73.2	48.8	200.6	65.6	255.1	164.7	396.7	408.5
Other		25.1	1.5	7.6	6.1	14.9	9.9	148.4	48.5	155.6	109.5	221.7	222.8
Local area support costs		36.0	4.6	23.1	18.5	25.6	17.1	276.3	90.4	210.3	168.7	255.3	243.7
Corporate support costs		53.1	8.8	43.9	35.1	37.4	24.9	453.3	148.3	362.7	313.1	391.2	356.2
Indirect costs		40.9	6.8	34.0	27.2	26.7	17.8	272.9	89.3	221.8	188.8	227.7	213.8
<b>Annuity-funded total<sup>1</sup></b>	<b>595.8</b>	<b>724.4</b>	<b>118.0</b>	<b>589.6</b>	<b>471.6</b>	<b>267.0</b>	<b>178.1</b>	<b>3089.4</b>	<b>1010.4</b>	<b>2235.0</b>	<b>1909.0</b>	<b>2428.1</b>	<b>2228.4</b>
<b>Total costs<sup>2</sup></b>	<b>3225.3</b>	<b>3608.0</b>	<b>2252.6</b>	<b>4061.2</b>	<b>1808.6</b>	<b>2984.3</b>	<b>2357.6</b>	<b>5952.4</b>	<b>3241.9</b>	<b>5231.6</b>	<b>5035.3</b>	<b>5687.7</b>	<b>5649.2</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 Nogo Mackenzie Bulk Water Service Contract in 2020/21<sup>3</sup> and the actual projects undertaken.

Facility	Activity description	Forecast \$'000	Actual \$'000	Commentary
Nogo Mackenzie River	Replace – customer meters.	101	5	Sunwater replaced fewer meters than anticipated.
Bingegang Weir	Refurbish – outlet works (inlet and outlet) screens and protection works.	80	66	Works were completed under budget, with efficiencies gained by using a local supplier and equipment to reinstate the right bank upstream protection rock fill.
Scheme	Study – audit and review of all scheme switchboards and distribution boards to reassess arc flash rating in accordance with Australian Standards.	66	46	Sunwater was unable to fully complete this project during the financial year due to operational demands limiting the ability to affect an outage to gain access to the infrastructure.
Scheme	Study – asset revaluation.	47	0	This project was not undertaken as part of the annuity-funded program of works.
Tartus Weir	Repair – downstream left bank rock mattresses and rockfill elements.	35	20	There was a reduction in the scope of work required, due to part of the works being undertaken as part of the Rookwood Weir project.
Bedford Weir	Repair – downstream rock mattresses and rockfill elements.	34	18	There was a reduced scope of work.
Selma Weir	Repair – numerous minor concrete surface defects at the weir.	30	51	The number of defects requiring repair were larger than expected.
Fairbairn Dam	Repair – right bank slump.	21	25	The scope of works was greater than anticipated.
Fairbairn Dam	Study – detailed review and analysis of Fairbairn Dam piezometer performance to recommend if any further instrumentation works are necessary to ensure asset performance.	20	2	Works did not proceed due to low water levels. The costs incurred were associated with meetings to discuss how to deliver the project as water levels are expected to remain low in the short term.
Fairbairn Dam	Replace – obsolete spillway access ladder (post recent spillway upgrade works).	15	12	This project was completed under budget.
Multiple	A contingency amount for unplanned capital replacements.	46	0	The service contractor's contingency amount of \$45k was re-allocated to other projects.
Multiple	Various projects.	0	346	Most of this expenditure relates to the comprehensive risk assessment of Fairbairn Dam, which was misclassified in the 2021/22 S&PP as a Dam Improvement Program project.
<b>2020/21 Total</b>		<b>495</b>	<b>590</b>	

<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/Nogo-Mackenzie/](http://www.sunwater.com.au/schemes/Nogo-Mackenzie/)

## 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	Fairbairn Dam	Risk reduction program – investigation phase.	2000
	Scheme	Replace – river metering to Australian Standard (AS) 4747 to meet regulatory compliance.	411
	Fairbairn Dam	Study – comprehensive inspection to meet regulatory compliance.	160
	Bedford, Tartus and Selma weirs	Install – CCTV systems to mitigate known safety risks.	96
	Fairbairn Dam	Inspect – spillway bridge and inlet tower bridge Level 2 inspections based on Department of Transport and Main Roads’ Inspection Manual.	80
	Fairbairn Dam	Refurbish – right bank outlet works guard and regulating gate hoists, ropes, and electrics.	191
	Fairbairn Dam	Refurbish – right bank conduit concrete due to known asset condition and age.	119
	Fairbairn Dam	Replace – install security/public fencing across the top of saddle dam 4.	32
		<b>2022/23 Total</b>	
2023/24	Fairbairn Dam	Risk reduction program – evaluation phase.	1058
	Fairbairn Dam	Refurbish – reinforce rock stability and barricade works of the right abutment at the Weemah intake bridge approach (subject to renewed condition and risk assessment).	628
	Fairbairn Dam	Refurbish – access roads to the chase, right bank gatehouse, Selma pump station, bullring structure and spillway dissipator areas.	155
	Fairbairn Dam	Refurbish – Selma channel inlet left-hand and right-hand lift gates based on known asset condition and age.	122
	Fairbairn Dam	Refurbish – right bank outlet works trash rack No. 1 and No. 2 based on known asset condition and age.	65
	Fairbairn Dam – Saddle Dam 2	Refurbish – outlet works trash racks and guides based on known asset condition and age.	43
	Fairbairn Dam	Study – options analysis to review the replacement of upstream and downstream main embankment rip rap.	37
	Multiple	There are 11 other annuity-funded projects planned for 2023/24 related to river gauging station works; Bedford Weir minor works; Fairbairn Dam fencing; and left bank gate house hoist and ropes works.	126
		<b>2023/24 Total</b>	



Year	Facility	Activity description	Forecast \$'000
2024/25	Fairbairn Dam	Risk reduction program – definition phase.	1087
	Fairbairn Dam	Replace – signs to mitigate known safety risks.	299
	Bedford, Bingegang, Tartrus and Selma weirs	Study – comprehensive inspections to meet asset management, condition, and risk standards.	155
	Bedford, Bingegang, Tartrus and Selma weirs	Replace – signs to mitigate known safety risks.	94
	Bedford Weir	Refurbish – access road, including pothole repairs, based on known asset condition and age.	59
	Tartrus Weir	Study – business case to define the optimal solution for the gate remote actuation and position.	44
	Multiple	There are seven other annuity-funded projects planned for 2024/25 related to a vacuum pump siphon refurbishment and inlet tower lighting at Fairbairn Dam; gauge boards and handrails at Tartrus Weir; fencing upgrades; and supervisory control and data acquisition (SCADA) computer and software replacement at Bingegang Weir.	170
	<b>2024/25 Total</b>		<b>1909</b>
2025/26	Fairbairn Dam – Saddle dams	Refurbish – main embankment and all saddle dam crest access roads based on known asset condition and age.	687
	Fairbairn Dam	Risk reduction program – execution phase.	334
	Fairbairn Dam	Refurbish – right bank conduit based on known asset condition and age.	259
	Fairbairn Dam	Study – 10-yearly embankment crest surveys at the main dam and saddle dams to meet asset management, condition, and risk standards.	227
	Bingegang Weir	Refurbish – left-hand downstream and upstream face and weir left wall and crest based on known asset condition and age.	156
	Bingegang Weir	Refurbish – low level outlet works inlet structure and outlet structure based on known asset condition and age.	117
	Fairbairn Dam – Saddle Dam 2	Refurbish – outlet works main conduit based on known asset condition and age.	104
	Bingegang Weir	Refurbish – high level right bank outlet works outlet channel, outlet structure and intake structure based on known asset condition and age.	91
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	63
	Bedford Weir	Refurbish – outlet works inlet trash racks based on known asset condition and age.	61
	Fairbairn Dam	Replace – dam wall instrumentation based on known asset condition and age.	58
	Fairbairn Dam	Study – options analysis for the replacement of low voltage electrical cabling across the facility based on known asset condition.	41
	Fairbairn Dam	Replace – electrical cabling as identified in the options analysis.	41
	Fairbairn Dam	Replace – install upgraded spillway side fall arrest system.	26

Year	Facility	Activity description	Forecast \$'000
	Multiple	There are 16 other annuity-funded projects planned for 2025/26 related to, for example, Bedford Weir electrical condition assessment and SCADA computer replacement; Bingegang Weir control building, outlet works gates and screens, and remote operations options study; Tartus Weir control building refurbishment; Fairbairn Dam right bank control building works; environmental siphon ladder refurbishment; and minor pump/valve works.	162
	<b>2025/26 Total</b>		<b>2428</b>
2026/27	Fairbairn Dam	Study – periodic testing of the spillway stressed anchors.	535
	Fairbairn Dam (all saddle dams)	Refurbish – saddle dam upstream and downstream slope protection systems (subject to condition and completed options analysis).	495
	Fairbairn Dam	Refurbish – main embankment downstream face (subject to condition and completed option analysis).	268
	Tartus Weir	Replace – 1220 mm outlet works penstock gate arrangement and actuator.	201
	Bingegang Weir	Refurbish – sheet piling, and upstream and downstream protection works.	140
	Bingegang Weir	Refurbish – reline 660 mm AC outlet works pipe (subject to updated condition assessment).	138
	Bingegang Weir	Refurbish – upstream and downstream riverbank protection systems.	107
	Selma Weir	Refurbish – upstream and downstream riverbank protection systems.	107
	Bingegang Weir	Refurbish – high level right bank outlet works structure.	67
	Fairbairn Dam	Replace – piezometer level transmitter and remote telemetry unit.	44
	Multiple	There are 10 other annuity-funded projects planned for 2026/27 related to, for example, Tartus Weir hydraulic and metal works; Bingegang Weir and Bedford Weir gate actuator refurbishments; and Bedford Weir building and fencing works.	127
	<b>2026/27 Total</b>		<b>2228</b>

## 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](mailto:sppfeedback@sunwater.com.au)

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

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