



# Final Service and Performance Plan 2021/22

Nogoa Mackenzie Bulk Water Service Contract

30 August 2021

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# At a glance

## Our performance in 2019/20



**Operating costs:**  
\$2.88 million (16.2% more than forecast)

Key drivers of cost variance:


- higher operations costs following the transfer of the Nogoia Mackenzie (Emerald) service contract to local management arrangements
- higher than forecast insurance costs.



**Annuity-funded costs:**  
\$0.72 million (62.9% less than forecast)


Negotiations in relation to the handover of town water facilities to the Central Highlands Regional Council were not finalised and a decision was made to put on hold associated works at the water treatment plant. All future costs in relation to the town water facilities will not be passed on to customers.

Key annuity-funded projects that were undertaken in 2019/20 included bathymetric surveys at Fairbairn Dam and Selma and Town Weirs, and comprehensive inspections at the scheme’s weirs.



**Total water deliveries:**  
124,117 ML


Water delivered to irrigators: 102,493 ML



**Service targets: Met**

No exceptions


## Outlook for 2021/22



**Forecast operating costs:**  
\$2.72 million

Significant areas of expenditure:

- insurance (\$1.00 million)
- operations (\$1.02 million)
- preventative maintenance (\$0.36 million).



**Forecast annuity-funded costs:**  
\$0.27 million

Key projects planned:

- upgrade program to replace customer river meters with AS4747 compliant equipment (\$0.11 million)
- replacement of the remote telemetry unit and radio at the Selma gatehouse (\$0.06 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 Nogo 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. 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 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.

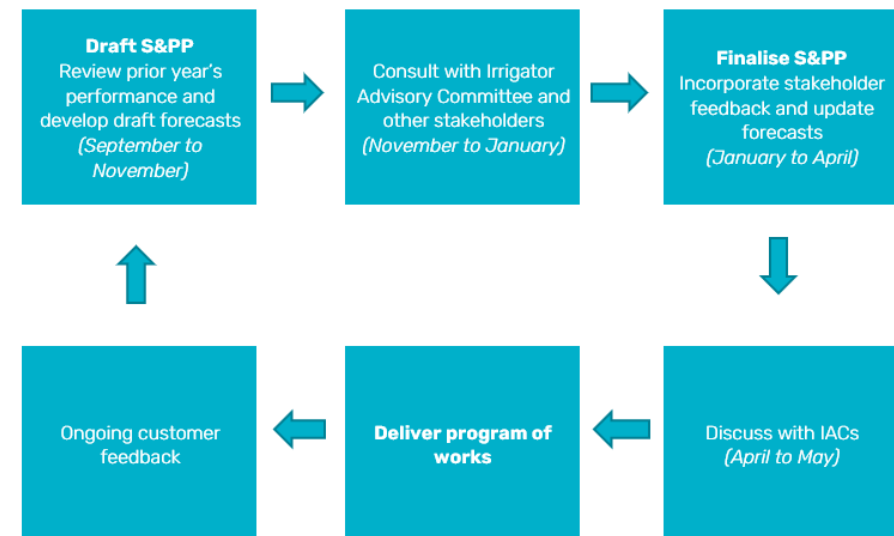
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

[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 Nogoa 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 2019/20. 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 2019/20 (ML)
Irrigation	191,780	9349	182,431	102,493
Industrial	28,146	25,727	2419	15,273
Urban	8548	8459	90	6310
Sunwater (excl. distribution losses)	3071	2279	792	41
Sunwater distribution losses	313	313	0	0
<b>Total</b>	<b>231,859</b>	<b>46,127</b>	<b>185,732</b>	<b>124,117</b>

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

## Irrigation charges

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

Table 2: Irrigation charges for 2021/22<sup>1</sup>

Tariff group	Product	2021/22 (\$/ML) <sup>2</sup>	QCA cost-reflective (\$/ML) <sup>3</sup>
Bulk water – Medium priority	Allocation Charge – Part A	10.39	6.79
	Allocation Water – Part B	0.71	0.86
Bulk water – High priority	Allocation Charge – Part A	27.12	47.58
	Allocation Water – Part B	0.71	0.86
Bulk water – Local management supply – Medium priority	Allocation Charge – Part A	5.64	6.79
	Allocation Water – Part B	0.71	0.86
Bulk water – Local management supply – High priority	Allocation Charge – Part A	27.12	47.58
	Allocation Water – Part B	0.71	0.86

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		
			2017/18	2018/19	2019/20
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	Planned or unplanned interruptions per water year	6	0	0	0

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

In addition, Sunwater has company-wide customer interactions service targets. Our performance in 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 <sup>1</sup>	80.00%	94.87%
Requests actioned within Service Level Agreement (SLA) timeframes <sup>2</sup>	> 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 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.

Sunwater anticipates an increase in revenue for the Nogo Mackenzie 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 Nogo Mackenzie 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)

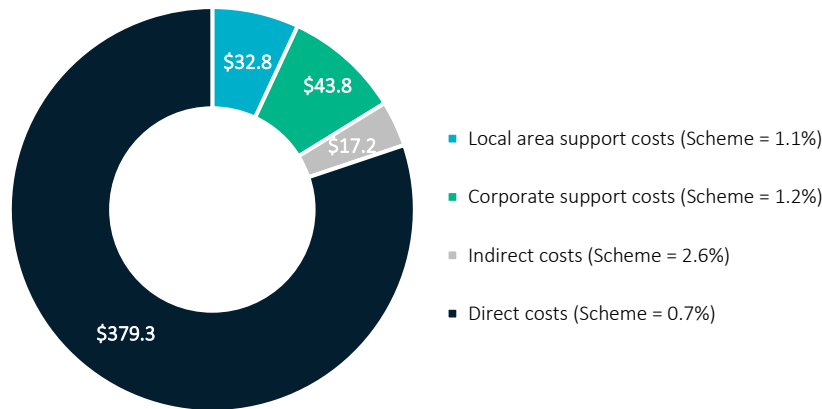


Table 6: Service contract financial summary

Nogo Mackenzie 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	1128.9	937.9	2334.4	1694.2	1724.7
Community Service Obligation	-	-	-	-	-
Industrial <sup>1</sup>	2669.4	3018.7	3114.4	2295.4	2603.9
Urban <sup>1</sup>	429.3	465.5	440.1	327.9	326.1
Revenue transfers <sup>2</sup>	1333.1	1285.1	266.5	359.4	2141.6
Drainage	-	-	-	-	-
Other	4.3	5.5	8.6	3.0	-
<b>Revenue total</b>	<b>5565.1</b>	<b>5712.7</b>	<b>6164.0</b>	<b>4679.9</b>	<b>6796.3</b>
Less – Operating expenditure	2204.1	2629.5	2883.6	2869.2	3313.3
Less					
Annuity-funded	1054.1	595.8	724.4	494.9	267.0
Non-annuity funded <sup>3</sup>	32,994.1	32,085.1	45,097.3	20,589.6	505.3
<b>Surplus (deficit)</b>	<b>(30,687.3)</b>	<b>(29,597.6)</b>	<b>(42,541.4)</b>	<b>(19,273.9)</b>	<b>2710.6</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 2019/20

In 2019/20, operating costs were more than our previous forecast.<sup>2</sup> This was primarily due to higher operations costs, following the transfer of the Nogo Mackenzie (Emerald) Distribution Service Contract to Fairbairn Irrigation Network Ltd. Specifically, a higher level of direct management and non-direct costs were allocated to the bulk water service contract.

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

Nogo Mackenzie 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 <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	1593.3	2001.0	1898.8	2319.9	421.1	1741.0	1740.8	2036.7	1777.3	2029.5	2078.1	2124.1	2168.7
Electricity	38.0	43.1	18.0	57.9	39.9	18.0	19.0	18.0	19.3	18.4	18.7	19.1	19.5
Insurance	463.6	495.5	546.7	561.5	14.9	758.8	624.1	995.9	636.5	1015.8	1036.2	1056.9	1078.0
Operations	1091.7	1462.5	1334.1	1700.5	366.3	964.2	1097.8	1022.8	1121.4	995.3	1023.2	1048.2	1071.2
Preventative maintenance	424.3	361.7	366.8	314.1	(52.7)	334.7	256.7	364.7	262.3	366.3	378.0	388.1	397.1
Corrective maintenance	186.5	266.8	215.6	249.6	33.9	251.9	137.1	316.8	140.0	317.3	326.9	335.3	342.9
<b>Operating costs total</b>	<b>2204.1</b>	<b>2629.5</b>	<b>2481.2</b>	<b>2883.6</b>	<b>402.4</b>	<b>2327.7</b>	<b>2134.6</b>	<b>2718.3</b>	<b>2179.5</b>	<b>2713.2</b>	<b>2782.9</b>	<b>2847.5</b>	<b>2908.8</b>
Recreational facility costs <sup>3</sup>						541.5		595.1		586.2	603.4	618.5	632.4
<b>Operating costs total (incl. recreational facility costs)</b>	<b>2204.1</b>	<b>2629.5</b>	<b>2481.2</b>	<b>2883.6</b>	<b>402.4</b>	<b>2869.2</b>		<b>3313.3</b>		<b>3299.4</b>	<b>3386.3</b>	<b>3466.1</b>	<b>3541.2</b>

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.

<sup>2</sup> See the 2019/20 Network Service Plan at [www.sunwater.com.au/schemes/Nogo-Mackenzie/](http://www.sunwater.com.au/schemes/Nogo-Mackenzie/)

## Outlook for 2021/22

### Operations

Nogoa Mackenzie Bulk Water Service Contract's total operations budget in 2021/22 is 14.6 per cent above the QCA's recommended cost target. Sunwater anticipates that insurance and other costs will be higher than the target, while Sunwater's budget for operations labour and contractor use is 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.

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.

### Preventative maintenance

The forecast preventative maintenance costs for the Nogoa Mackenzie Bulk Water Service Contract are 39.1 per cent above the QCA's recommended cost target. This is because of an increase in non-direct costs but is also the result of the two and five yearly preventative maintenance items falling due in 2021/22.

### Corrective maintenance

In 2021/22, Sunwater anticipates spending \$316.8k on corrective maintenance in the Nogoa Mackenzie Bulk Water Service Contract. This is 126.3 per cent above the QCA's recommended cost target, primarily due to higher than recommended labour and non-direct costs.



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

Nogoa Mackenzie 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 <sup>3</sup>	Sunwater Actual \$'000 <sup>3</sup>	Sunwater Forecast \$'000	Sunwater Actual \$'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	9.0	-	1086.1	-	(1086.1)	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
Planned corrective maintenance	1045.2	595.8	866.5	724.4	(142.2)	494.9	118.0	267.0	178.1	1086.3	420.5	722.7	2130.8
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Annuity-funded total</b>	<b>1054.1</b>	<b>595.8</b>	<b>1952.6</b>	<b>724.4</b>	<b>(1228.3)</b>	<b>494.9</b>	<b>118.0</b>	<b>267.0</b>	<b>178.1</b>	<b>1086.3</b>	<b>420.5</b>	<b>722.7</b>	<b>2130.8</b>
<b>Non-annuity funded</b>													
Dam Improvement Program	33,014.9	32,085.1	49,902.0	45,087.6	(4814.4)	19,268.8		500.0		-	-	-	-
Recreational facility projects						1320.9		5.3		777.2	2071.2	141.3	538.5
Metered offtakes and dividend reinvestment	(20.7)	-	-	9.7	9.7	-		-		-	-	-	-
<b>Non-annuity total</b>	<b>32,994.1</b>	<b>32,085.1</b>	<b>49,902.0</b>	<b>45,097.3</b>	<b>(4804.7)</b>	<b>20,589.6</b>		<b>505.3</b>		<b>777.2</b>	<b>2071.2</b>	<b>141.3</b>	<b>538.5</b>

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.<sup>3</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 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.

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<sup>3</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)

## 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 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	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 <sup>1</sup>	(3294.2)	(4112.9)	(4522.6)	(5079.2)	(4526.2)	(3689.0)	(3591.5)	(2764.0)	(2253.6)
Spend <sup>2</sup>	(1054.1)	(595.8)	(724.4)	(494.9)	(267.0)	(1086.3)	(420.5)	(722.7)	(2130.8)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution <sup>3</sup>	482.1	494.2	506.5	1270.0	1302.1	1345.1	1405.1	1353.9	1492.0
Interest/financing costs	(246.7)	(308.1)	(338.7)	(222.1)	(197.9)	(161.3)	(157.0)	(120.8)	(98.5)
<b>Sunwater – Closing balance</b>	<b>(4112.9)</b>	<b>(4522.6)</b>	<b>(5079.2)</b>	<b>(4526.2)</b>	<b>(3689.0)</b>	<b>(3591.5)</b>	<b>(2764.0)</b>	<b>(2253.6)</b>	<b>(2990.9)</b>
<b>QCA – Closing balance</b>	<b>(4112.9)</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	483.9	416.1	358.4	485.1		

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	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
<b>18-year historical average</b>	<b>159,687</b>

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

Nogoa Mackenzie 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
<b>Operating costs</b>													
Operations	1593.3	2001.0	1898.8	2319.9	421.1	1741.0	1740.8	2036.7	1777.3	2029.5	2078.1	2124.1	2168.7
Labour	255.9	320.6	287.8	399.0	111.2	186.1	249.4	215.6	255.2	213.3	219.7	226.3	233.1
Contractors	144.0	138.5	175.0	205.2	30.2	122.3	125.8	97.5	128.4	97.1	99.1	101.1	103.1
Materials	15.8	19.5	20.0	18.1	(1.9)	14.8	21.9	14.8	22.3	15.1	15.4	15.7	16.0
Electricity	38.0	43.1	18.0	57.9	39.9	18.0	19.0	18.0	19.3	18.4	18.7	19.1	19.5
Insurance	463.6	495.5	546.7	561.5	14.9	758.8	624.1	995.9	636.5	1015.8	1036.2	1056.9	1078.0
Other	104.5	168.8	177.5	271.6	94.2	159.2	109.8	156.1	112.0	157.8	159.6	161.7	164.0
Local area support costs	197.8	298.4	160.3	230.9	70.6	107.6	120.3	140.7	122.9	138.9	143.0	147.3	151.7
Corporate support costs	135.4	295.8	214.9	304.6	89.7	139.6	192.5	204.8	196.7	202.7	208.7	215.0	221.4
Indirect costs	238.4	221.0	298.6	271.0	(27.6)	234.6	278.1	193.3	284.1	170.4	177.6	181.0	181.8
Preventative maintenance	424.3	361.7	366.8	314.1	(52.7)	334.7	256.7	364.7	262.3	366.3	378.0	388.1	397.1
Labour	113.8	92.1	97.6	82.9	(14.7)	91.3	75.4	102.4	77.2	105.5	108.6	111.9	115.3
Contractors	78.1	48.5	50.0	60.1	10.1	37.1	23.2	18.5	23.6	18.9	19.3	19.7	20.1
Materials	2.1	5.6	5.0	2.3	(2.7)	3.7	2.8	3.7	2.9	3.8	3.9	3.9	4.0
Other	6.6	7.2	12.0	4.1	(7.9)	8.9	6.9	6.7	7.1	9.1	9.3	9.4	9.6
Local area support costs	88.8	91.4	61.5	45.8	(15.7)	54.8	36.4	66.6	37.2	68.6	70.6	72.7	74.9
Corporate support costs	48.7	75.0	72.9	63.0	(9.9)	68.5	58.2	97.3	59.5	100.2	103.2	106.3	109.5
Indirect costs	86.2	41.9	67.8	55.9	(11.9)	70.5	53.7	69.5	54.9	60.3	63.1	64.1	63.7
Corrective maintenance	186.5	266.8	215.6	249.6	33.9	251.9	137.1	316.8	140.0	317.3	326.9	335.3	342.9
Labour	14.6	18.7	35.8	24.3	(11.5)	49.0	22.4	75.6	22.9	77.9	80.2	82.6	85.1
Contractors	110.7	156.4	75.0	160.0	85.0	74.1	45.0	44.5	45.9	45.4	46.3	47.2	48.1
Materials	19.6	19.2	20.0	13.6	(6.4)	14.8	11.0	14.8	11.3	15.1	15.4	15.7	16.0
Other	6.7	29.7	15.0	3.3	(11.7)	11.1	14.5	9.6	14.8	9.8	10.0	10.2	10.4
Local area support costs	11.4	18.4	18.2	13.5	(4.6)	28.4	10.8	49.1	11.1	50.6	52.1	53.7	55.3
Corporate support costs	12.5	18.7	26.7	18.9	(7.9)	36.7	17.3	71.8	17.7	74.0	76.2	78.5	80.8
Indirect costs	11.0	5.6	24.9	15.9	(9.0)	37.8	16.0	51.3	16.3	44.5	46.6	47.3	47.1
<b>Operating costs total</b>	<b>2204.1</b>	<b>2629.5</b>	<b>2481.2</b>	<b>2883.6</b>	<b>402.4</b>	<b>2327.7</b>	<b>2134.6</b>	<b>2718.3</b>	<b>2179.5</b>	<b>2713.2</b>	<b>2782.9</b>	<b>2847.5</b>	<b>2908.8</b>
<b>Annuity-funded costs</b>													
Labour			120.7	65.8	(54.9)	37.2	8.9	39.3	26.2	137.6	21.4	120.4	349.8
Contractors			264.9	445.9	181.0	98.0	23.4	49.9	33.3	210.0	288.6	98.7	444.3
Materials			1333.4	57.6	(1275.8)	280.8	67.0	73.2	48.8	433.3	63.1	229.4	391.4
Other			(0.0)	25.1	25.1	1.4	0.3	14.9	9.9	4.8	0.4	12.1	191.8
Local area support costs			59.7	36.0	(23.7)	20.8	5.0	25.6	17.1	91.3	14.1	78.8	227.6
Corporate support costs			90.1	53.1	(37.0)	27.9	6.7	37.4	24.9	130.7	20.4	114.4	332.3
Indirect costs			83.9	40.9	(42.9)	28.7	6.9	26.7	17.8	78.7	12.5	69.0	193.5
<b>Annuity-funded total<sup>1</sup></b>	<b>1054.1</b>	<b>595.8</b>	<b>1952.6</b>	<b>724.4</b>	<b>(1228.3)</b>	<b>494.9</b>	<b>118.0</b>	<b>267.0</b>	<b>178.1</b>	<b>1086.3</b>	<b>420.5</b>	<b>722.7</b>	<b>2130.8</b>
<b>Total costs<sup>2</sup></b>	<b>3258.2</b>	<b>3225.3</b>	<b>4433.9</b>	<b>3608.0</b>	<b>(825.9)</b>	<b>2822.6</b>	<b>2252.6</b>	<b>2985.3</b>	<b>2357.6</b>	<b>3799.5</b>	<b>3203.5</b>	<b>3570.2</b>	<b>5039.6</b>

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 Nogo Mackenzie Bulk Water Service Contract in 2019/20 and the actual projects undertaken.

Project	Forecast \$'000	Actual \$'000	Commentary
Fairbairn Dam – Town Water Supply (TWS) control system and related works (19NMA13, 20NMA19, 20NMA20, 20NMA21 and 20NMA22)	1174	6	Negotiations with the Central Highlands Regional Council regarding the handover of the town water supply facilities were not finalised. The costs incurred related to the engagement of a contractor to assess the replacement of the water treatment plant control system, before the project was put on hold.
Fairbairn Dam – Bathymetric survey (20NMA02)	292	149	Contractor costs were lower than expected.
Comprehensive inspections – 4 weirs (20NMA08, 20NMA09, 20NMA10 and 20NMA11)	122	126	The comprehensive inspections were delivered in line with the budget.
Bedford Weir – Refurbish trash racks (20NMA07)	47	14	Contractor and material costs were lower than anticipated.
Tartrus Weir – Protection works (20NMA12)	47	27	Contractor and material costs were lower than anticipated.
Bedford Weir – Refurbish inlet baulks (20NMA06)	44	19	Contractor and material costs were lower than anticipated.
Fairbairn Dam – Saddle Dam 2 bulkhead (20NMA13)	34	78	Contractor and material (design, fabrication and installation) costs were higher than anticipated. The Sunwater procurement matrix was followed in the selection of the contractor and final design.
Other works	193	113	<p>Cost variances were due to:</p> <ul style="list-style-type: none"> <li>higher than expected labour costs to refurbish the outlet works at Bingegang Weir because of additional cracks that needed to be repaired following blasting of the gates (20NMA04, \$10k above forecast)</li> <li>lower than anticipated contractor and material costs to repair the inlet tower bridge and perform other minor works at Fairbairn Dam (20NMA03, \$17k less than forecast)</li> <li>the deferral of a project to replace the spillway access ladder at Fairbairn Dam to 2020/21 due to access issues (14NMA08, \$14k)</li> <li>lower than anticipated contractor and material costs to replace the corroded roofing sheets on the storage shed at Tartrus Weir (20NMA05, \$2k less than forecast)</li> <li>the deferral of a project to assess piezometer data to 2020/21 due to low water levels (20NMA14, \$20k).</li> </ul> <p>In addition, the contingency amount of \$39k was not used in this scheme.</p>

Project	Forecast \$'000	Actual \$'000	Commentary
Non-scheduled works	-	191	<p>The following non-scheduled works were undertaken in 2019/20:</p> <ul style="list-style-type: none"> <li>• a bathymetric survey of the Selma and Town Weirs to assess the current storage capacities (20NMA27, \$89k)</li> <li>• replacement of the filter media in sand filters 1 and 2 at the water treatment plant at Fairbairn Dam to reduce public health risks (20NMA28, \$79k).</li> </ul> <p>Works were also carried over from 2018/19 in relation to the Fairbairn Dam comprehensive risk assessment (18NMA13, \$23k).</p>
<b>2019/20 Total</b>	<b>1953</b>	<b>724</b>	

## 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 <sup>4</sup>	Nogoa Mackenzie River	Replace – customer meters to Australian Standard (AS) 4747 to meet regulatory compliance.	101
	Bingegang Weir	Refurbish – outlet works (inlet and outlet) screens based on known asset condition and age.	80
	Scheme	Study – audit and review of all scheme switchboards and distribution boards to reassess arc flash rating in accordance with Australian Standards.	66
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	47
	Tartus Weir	Repair – downstream left bank rock mattresses and rockfill elements to ensure ongoing protection of the weir foundations and abutments.	35
	Bedford Weir	Repair – downstream rock mattresses and rockfill elements to ensure ongoing protection of the weir foundations and abutments.	34
	Selma Weir	Repair – numerous minor concrete surface defects at the weir based on inspection reports.	30
	Fairbairn Dam	Repair – right bank slump to ensure continued reliable delivery to the Selma channel system.	21
	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
	Fairbairn Dam	Replace – obsolete spillway access ladder (post recent spillway upgrade works) to ensure suitable and safe inspection access.	15
	Multiple	A contingency amount for unplanned capital replacements.	46
	<b>2020/21 Total</b>		<b>495</b>
2021/22	Nogoa Mackenzie River	Replace – customer meters to AS4747 to meet regulatory compliance.	108
	Selma Irrigation	Replace – Selma gatehouse remote telemetry unit and radio based on known asset condition and age.	61
	Bingegang Weir	Install – CCTV system to mitigate known safety risk.	30
	Fairbairn Dam	Study – review and update electrical drawings to mitigate known safety risk.	21

<sup>4</sup> 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
	Multiple	There are six other annuity-funded projects planned for 2021/22 related to investigations into upgrading baulks at Bedford, Bingegang and Tartrus weirs; a conduit outlet screen replacement at Bingegang Weir; investigations into noise reduction strategies at Bingegang Weir; and blister gate repairs at Selma Chase.	47
	<b>2021/22 Total</b>		<b>267</b>
2022/23	Fairbairn Dam	Refurbish – rock stability and barricade works to mitigate known safety risk.	511
	Fairbairn Dam	Study – comprehensive inspection to meet regulatory compliance.	133
	Bedford, Tartus and Selma weirs	Install – CCTV systems to mitigate known safety risks.	83
	Fairbairn Dam	Inspect – spillway bridge and inlet tower bridge Level 2 inspections based on Department of Transport and Main Roads Inspection Manual.	62
	Selma Weir	Refurbish – outlet works conduit 300mm based on known asset condition and age.	41
	Fairbairn Dam	Refurbish – right bank conduit concrete due to known asset condition and age.	31
	Multiple	There are 15 other annuity-funded projects planned for 2022/23 related to guard gate refurbishments (blast, paint, anodes, seals and bolts) at Fairbairn Dam; guard gate hoist motor, electrics and rope refurbishments/replacements at Fairbairn Dam; an outlet works regulating valve replacement at Selma Weir; and meter replacements.	226
	<b>2022/23 Total</b>		<b>1087</b>
2023/24	Fairbairn Dam	Refurbish – Selma Channel inlet left-hand and right-hand lift gates based on known asset condition and age.	102
	Fairbairn Dam	Refurbish – access roads based on known asset condition and age.	93
	Fairbairn Dam	Refurbish – right bank outlet works trash racks No. 1 and 2 based on known asset condition and age.	54
	Fairbairn Dam	Refurbish – right bank Bullring Road bitumen seal and gravel road based on known asset condition and age.	36
	Fairbairn Dam – Saddle Dam 2	Refurbish – outlet works trash racks and guides based on known asset condition and age.	36
	Multiple	There are nine other annuity-funded projects planned for 2023/24 related to cleaning weep holes and drainage at Bedford Weir; stairway, platform and handrail refurbishments at two gauging stations; electrical works at Selma pump station; options studies into refurbishing the main embankment at Kinchant Dam; and fencing upgrades at Fairbairn Dam.	99
		<b>2023/24 Total</b>	
2024/25	Fairbairn Dam	Replace – signs to mitigate known safety risks.	261
	Bedford, Bingegang, Tartrus and Selma weirs	Study – comprehensive inspections to meet asset management, condition and risk standards	135
	Bedford, Bingegang, Tartrus and Selma weirs	Replace – signs to mitigate known safety risks.	85
	Bedford Weir	Refurbish – access road, including pothole repairs, based on known asset condition and age.	53
	Tartrus Weir	Study – business case to define the optimal solution for the gate remote actuation and position.	41

Year	Facility	Activity description	Forecast \$'000
	Multiple	There are six other annuity-funded projects planned for 2024/25 related to electrical works at the right bank inlet tower at Fairbairn Dam; vacuum pump siphon refurbishment; left abutment handrail refurbishment at Tarrus Weir; fencing upgrades at Bingegang Weir; downstream gauge board replacements at Tarrus Weir; and supervisory control and data acquisition (SCADA) computer and software replacement at Bingegang Weir.	148
	<b>2024/25 Total</b>		<b>723</b>
2025/26	Fairbairn Dam – Saddle Dams	Refurbish – embankment crest access roads based on known asset condition and age.	553
	Fairbairn Dam	Refurbish – right bank conduit based on known asset condition and age.	263
	Fairbairn Dam	Study – 10-yearly embankment crest surveys at the main dam and saddle dams to meet asset management, condition and risk standards.	230
	Bingegang Weir	Refurbish – high level right bank outlet works outlet channel, outlet structure and intake structure based on known asset condition and age.	158
	Bingegang Weir	Refurbish – left-hand downstream and upstream face and weir left wall and crest based on known asset condition and age.	158
	Bingegang Weir	Refurbish – low level outlet works inlet structure and outlet structure based on known asset condition and age.	145
	Fairbairn Dam	Refurbish – main dam embankment crest access road based on known asset condition and age.	105
	Fairbairn Dam – Saddle Dam 2	Refurbish – outlet works main conduit based on known asset condition and age.	105
	Fairbairn Dam	Replace – dam wall instrumentation based on known asset condition and age.	59
	Bedford Weir	Refurbish – outlet works inlet trash racks based on known asset condition and age.	53
	Scheme	Study – asset revaluation to define asset value for insurance purposes and future expenditure profiles.	52
	Multiple	There are 21 other annuity-funded projects planned for 2025/26 related to refurbishing valves at Bedford Weir; refurbishing outlet works inlet baulks and trash racks at Bingegang Weir; replacing the spillway side fall arrest system at Fairbairn Dam; refurbishing the left bank spillway siphon ladder at Fairbairn Dam; refurbishing the right bank inlet tower building structure and fixtures at Fairbairn Dam; replacing the SCADA computer at Bedford Weir; replacing an outlet works scour valve at Bingegang Weir; an options study into the replacement of low voltage cables and cableways at Fairbairn Dam; refurbishing embankment crest access road guard rails at Saddle Dams 2 and 3; refurbishing the control building structure at Bingegang Weir; condition assessments of electrical assets at Bedford and Bingegang weirs; a study into the remote operation of valves at Bingegang Weir; refurbishing a control building at Tarrus Weir; an options study into the replacement of high voltage cables and cableways at Fairbairn Dam; refurbishing a right bank meter cubicle at Fairbairn Dam; refurbishing an intake tower pump starter at Fairbairn Dam; and refurbishing an outlet works intake screen at Selma Weir.	249
		<b>2025/26 Total</b>	

## Contact us

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

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