



# Draft Service and Performance Plan 2021/22

Mareeba-Dimbulah Distribution Service Contract


2 February 2021

# Contents

At a glance.....	2
Introduction .....	3
Delivering services to our customers .....	4
Financial summary—Revenue and expenditure.....	7
Cost of delivering services—Operating expenditure .....	8
Cost of delivering services—Annuity and non-annuity funded expenditure .....	11
Annuity balance.....	13
Appendix 1—Historical water usage .....	14
Appendix 2—Operating and annuity-funded costs by expense type .....	15
Appendix 3—Comparison of forecast and actual annuity-funded projects for 2019/20 .....	16
Appendix 4—Annuity-funded projects for 2020/21 to 2025/26 .....	18


# At a glance

## Our performance in 2019/20

 **Operating costs:**  
\$6.15 million (6.9% less than forecast)

Key drivers of cost variance:

- staff vacancies
- lower corrective maintenance costs.


 **Annuity-funded costs:**  
\$0.99 million (4.8% more than forecast)

Key drivers of cost variance:

- refurbishment of the M9 offtake structure required a reconfiguration of the site, resulting in higher than planned supply and installation costs
- the scope of work to refurbish the outlet works at Collins Weir was more complex than initially planned, requiring some additional modification to ensure reliability
- the copper sulphate project has continued with the development of a Code of Practice for its use in the scheme.


 **Total water deliveries:**  
142,652 ML

Water delivered to irrigators: 121,488 ML

 **Service targets: 2 exceedances**


While two unplanned shutdowns failed to be rectified in time, the impact on customers was minimal as the shutdowns occurred outside of peak periods. Fifteen customers were interrupted in excess of 10 times, largely due to pipe breaks on ageing infrastructure and modernisation work.

## Outlook for 2021/22

 **Forecast operating costs:**  
\$6.93 million

Significant areas of expenditure:

- electricity (\$0.72 million)
- insurance (\$0.58 million)
- operations (\$2.63 million)
- preventative maintenance (\$1.02 million)
- corrective maintenance (\$1.97 million).

 **Forecast annuity-funded costs:**  
\$1.13 million

Key projects planned:

- upgrade or replacement of switchboard, cables and control system at Price Creek A pump station (\$0.29 million)
- upgrade or replacement of switchboard, cables and control system at Price Creek B pump station (\$0.21 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 Mareeba-Dimbulah Distribution 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 operations activities are implemented safely, timely and efficiently. We will also concentrate on water order compliance and implementing new channel control infrastructure. In addition, we are continuing to implement an efficient and effective preventative maintenance program, with a focus on ensuring the service contract’s assets continue to perform reliably.

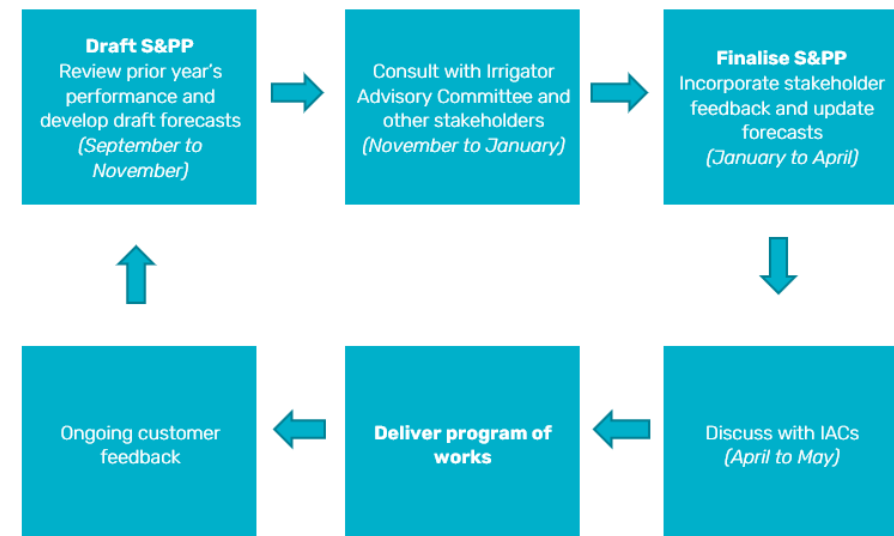
In addition to this S&PP, Sunwater has published an information sheet which explains the types of costs we incur in delivering water to our customers and how those costs are allocated to service contracts. The information sheet is available at:

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

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

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

Figure 1: Customer consultation and S&PPs



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

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

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

# Delivering services to our customers

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

## Our customers

The Mareeba-Dimbulah Distribution Service Contract is one of Sunwater’s largest service contracts. The majority of the 962 customers in this service contract are irrigators who grow a variety of crops including mangoes, bananas, paw paws, citrus, avocados, general horticulture, sugar cane, tea-trees and coffee. Water is also supplied to the townships of Walkamin, Mareeba, Mutchilba and Dimbulah.

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	144,548	0	144,548	121,488
Industrial	1243	135	1108	597
Urban	1167	431	736	473
Sunwater (excl. distribution losses)	0	0	0	0
Sunwater distribution losses	45,000	8000	37,000	20,095
<b>Total</b>	<b>191,957</b>	<b>8566</b>	<b>183,391</b>	<b>142,652</b>

1. Distribution system only.

## Irrigation charges

The 2021/22 charges and cost per megalitre from the Queensland Competition Authority’s (QCA) 2020–2024 irrigation price investigation are shown in Table 2. Apart from the Channel – Relift tariff group, the Mareeba-Dimbulah Distribution Service Contract does not need additional subsidies to recover irrigation’s share of future renewals, maintenance and operating costs.

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>	Subsidy (\$/ML)
River – Supplemented Streams & Walsh River	Allocation Charge – Part C	25.99	25.98	n/a
	Allocation Water – Part D	3.63	3.62	n/a
Channel – Outside a relift up to 100ML	Allocation Charge – Part C	54.91	54.90	n/a
	Allocation Water – Part D	6.04	6.03	n/a
Channel – Outside a relift 100ML to 500ML	Allocation Charge – Part C	48.40	48.39	n/a
	Allocation Water – Part D	6.04	6.03	n/a
Channel – Outside a relift more than 500ML	Allocation Charge – Part C	37.52	37.52	n/a
	Allocation Water – Part D	6.04	6.03	n/a
Channel – Relift	Allocation Charge – Part C	43.94	53.75	9.81
	Allocation Water – Part D	90.12	91.05	0.93

1. This table includes distribution charges only. For bulk water charges, please refer to the Bulk Water Service Contract S&PP.
2. As recommended by the QCA. The Queensland Government has not yet determined the irrigation charges to apply in 2021/22.
3. Reflects the cost-reflective price determined by the 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.

In addition to these charges, an annual access charge of \$718.93 per customer is expected to apply in 2021/22.

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 Mareeba-Dimbulah Distribution Service Contract. Table 3 below sets out our recent performance against selected service targets for this scheme.

In 2019/20, two exceedances of the unplanned shutdown (duration) service target were recorded. These exceedances related to a pipe leak and repairs to the M9 gate and had a minimal impact on customers as they were undertaken outside of major demand periods.

Fifteen customers were interrupted more than 10 times. This was largely due to general pipe leaks associated with ageing infrastructure, as well as planned work related to the Mareeba-Dimbulah Water Supply Scheme Efficiency Improvement Project.

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	6 months	0	0	0
	For shutdowns planned to exceed 3 days	4 weeks	0	0	0
	For shutdowns planned to be less than 4 days	5 days	0	0	0
Unplanned shutdowns – duration <sup>1</sup>	Unplanned shutdowns during Peak Demand Period	72 hours	2	0	2
	Unplanned shutdowns outside Peak Demand Period	5 working days			
Maximum number of interruptions <sup>2</sup>	Planned or unplanned interruptions per water year	10	7	21	15

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

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 distribution services to our customers in Mareeba-Dimbulah. We also maintain a large network of channels and pipelines.

Table 5: Key infrastructure

Asset	Description	Capacity
Bruce Weir	Mass concrete gravity weir with central ogee spillway.	970 ML
Collins Weir	Mass concrete gravity weir with central ogee spillway.	600 ML
Dulbil Weir	Mass concrete gravity weir with centre and right bank ogee spillways.	271 ML
Granite Creek Weir	Mass concrete gravity weir with centre, right and left ogee spillways.	244 ML
Leafgold Weir	Mass concrete gravity weir with central ogee spillway.	260 ML
Solanum Weir	Mass concrete gravity weir with central ogee spillway	345 ML
Price Creek A pump station	Two pumps and a 1 ML balancing storage.	22 ML/day 12 ML/day (pumps)
Price Creek B pump station	Two pumps and a 1 ML balancing storage.	17 ML/day 7 ML/day (pumps)
WB10 pump station	One pump.	8 ML/day
Paddy's Green A pump station	Three pumps and 1 ML storage.	18 ML/day (pumps)
Paddy's Green B pump station	Three pumps and 1 ML storage.	16 ML/day (pumps)

## Financial summary—Revenue and expenditure

A high-level summary of the budgeted financial performance of the Mareeba-Dimbulah Distribution 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 Mareeba-Dimbulah Distribution Service Contract in 2021/22.

In 2021/22, Sunwater expects to spend \$489 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 Mareeba-Dimbulah Distribution 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)

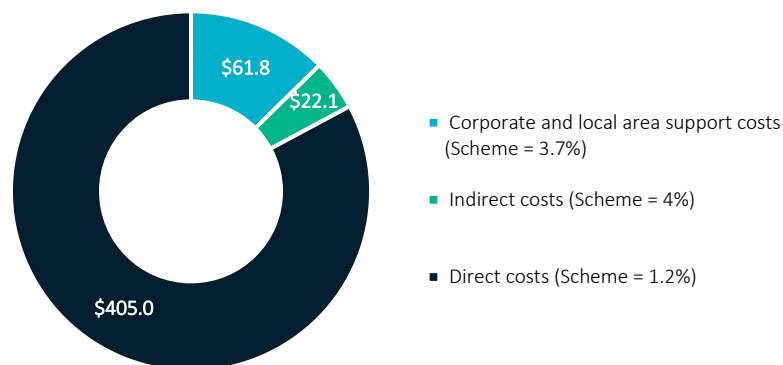


Table 6: Service contract financial summary

Mareeba-Dimbulah Distribution Service Contract	2017/18 Actual \$'000	2018/19 Actual \$'000	2019/20 Actual \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000
Revenue					
Irrigation	7489.0	7805.9	8134.4	8016.0	8643.2
Community Service Obligation	48.6	30.4	11.8	-	-
Industrial <sup>1</sup>	266.3	254.9	264.9	231.0	236.7
Urban <sup>1</sup>	203.6	206.1	211.3	217.2	222.6
Revenue transfers <sup>2</sup>	(927.0)	(933.2)	(950.8)	(1068.1)	(1094.8)
Drainage	-	-	-	-	-
Other	(1806.4)	37.4	42.8	10.0	10.3
<b>Revenue total</b>	<b>5274.1</b>	<b>7401.4</b>	<b>7714.3</b>	<b>7406.0</b>	<b>8018.0</b>
Less – Operating expenditure	4871.4	5794.2	6145.7	6779.4	6926.7
Less					
Annuity-funded	554.5	1048.7	991.6	1473.5	1125.5
Non-annuity funded	18.8	15.3	-	-	-
<b>Surplus (deficit)</b>	<b>(170.6)</b>	<b>543.2</b>	<b>577.0</b>	<b>(846.9)</b>	<b>(34.1)</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. The revenue accrues to the distribution system before it is transferred to the Bulk Water Service Contract as a contribution to the cost of the bulk water service.

## 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 Mareeba-Dimbulah Distribution Service Contract. For a more detailed breakdown by cost category, refer to **Appendix 2**.

### Our performance in 2019/20

In 2019/20, operating costs were lower than our previous forecast.<sup>2</sup> Staff vacancies existed for most of the year, combined with a decrease in corrective maintenance.

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

Mareeba-Dimbulah Distribution 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	2384.2	3317.5	3596.1	3402.2	(193.8)	3852.4	3494.5	3934.1	3603.3	4102.4	4154.6	4225.3	4273.4
Electricity	543.2	532.7	630.9	573.5	(57.4)	700.4	484.2	717.9	528.7	735.8	754.2	696.4	713.8
Insurance	348.1	369.2	411.0	423.3	12.2	570.5	465.0	584.8	474.3	599.4	614.4	629.8	645.5
Operations	1492.9	2415.7	2554.1	2405.5	(148.6)	2581.5	2545.3	2631.4	2600.3	2767.2	2786.0	2899.1	2914.1
Preventative maintenance	767.4	930.8	970.1	936.0	(34.1)	997.2	1010.2	1019.4	1032.1	1072.7	1083.9	1129.0	1137.1
Corrective maintenance	1719.9	1545.8	2037.3	1807.5	(229.8)	1929.8	1822.1	1973.2	1861.1	2072.4	2096.2	2180.8	2199.4
<b>Operating costs total</b>	<b>4871.4</b>	<b>5794.2</b>	<b>6603.4</b>	<b>6145.7</b>	<b>(457.7)</b>	<b>6779.4</b>	<b>6326.8</b>	<b>6926.7</b>	<b>6496.5</b>	<b>7247.6</b>	<b>7334.7</b>	<b>7535.0</b>	<b>7610.0</b>
Recreational facility costs <sup>3</sup>						-		-		-	-	-	-
<b>Operating costs total (incl. recreational facility costs)</b>	<b>4871.4</b>	<b>5794.2</b>	<b>6603.4</b>	<b>6145.7</b>	<b>(457.7)</b>	<b>6779.4</b>		<b>6926.7</b>		<b>7247.6</b>	<b>7334.7</b>	<b>7535.0</b>	<b>7610.0</b>

1. Sunwater's 2021/22 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/Mareeba-Dimbulah/](http://www.sunwater.com.au/schemes/Mareeba-Dimbulah/)



## Electricity

One of the key challenges for Sunwater is managing the cost of electricity. In 2019/20, Sunwater undertook the following energy improvement initiatives in the Mareeba-Dimbulah Distribution Service Contract:

- a review of our electricity tariff selections, to ensure that we are using the most cost-effective tariffs. The review focused on pump stations as these assets consume the most electricity and resulted in no tariff changes in 2019/20.
- interval meters were installed at pump stations (as required) to provide the granular level of consumption and demand information needed to accurately assist in identifying operational optimisation and renewable generation opportunities
- a solar assessment, which resulted in 16.86kW being installed at the Mareeba office. The assessment found it is not currently cost-effective to invest in solar installations at the pump stations.
- a small hydro economic feasibility assessment was undertaken at 'The Chute'. It is not feasible to progress with the recommendation to investigate behind the meter options for the site to be economically viable as there is not a pump station at this location to install a hydro facility behind the meter.

## Outlook for 2021/22 Operations

Mareeba-Dimbulah Distribution Service Contract's total operations budget in 2021/22 is 9.2 per cent above the QCA's recommended cost target. Additional expenditure is expected to be incurred, when compared to historical expenditure and the QCA target, for increased staffing levels related to modernisation and additional water sales.

### Insurance

Insurance is one of Sunwater's largest expenditure items. These costs have increased significantly in recent years due to multiple flood events in Queensland and global insurable events impacting premiums. Although Sunwater is subject to market forces in the pricing of insurance premiums, we have also been actively managing insurance premium costs by

reviewing coverage levels and policy specifications (including deductibles) to ensure that our insurance coverage is appropriate and reflective of the risks faced by our business.

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

### Electricity

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

- annual tariff optimisation analysis
- operational optimisation assessment (as required)
- renewable generation opportunity assessment (as required)
- outcome of energy audits reviewed and implemented (as required).

### Preventative maintenance

The forecast preventative maintenance costs for the Mareeba-Dimbulah Distribution Service Contract are in line with the QCA's recommended cost target (1.2 per cent below the target).

### Corrective maintenance

In 2021/22, Sunwater anticipates spending \$1.97 million on corrective maintenance in the Mareeba-Dimbulah Distribution Service Contract. This is 6.0 per cent above the QCA's recommended cost target. However, the total combined preventative and corrective maintenance budget is broadly aligned to the QCA's targets.

## Electricity metrics

Table 8 sets out electricity usage and efficiency-related information for the Mareeba-Dimbulah Distribution Service Contract. An energy audit for this scheme is due to be completed by May 2021. This audit will consist of an overall scheme energy efficiency review, plus a deeper dive into the pump efficiency metrics.

*Table 8: Electricity usage and efficiency-related metrics*

Metric	2016/17	2017/18	2018/19	2019/20
Electricity usage (kWh)	1,877,847	1,812,023	2,195,965	2,359,432
Water usage (ML)	132,084	111,947	115,303	142,652
Actual electricity cost per ML (\$/ML delivered)	3.77	4.85	4.62	4.02
Average pump energy indicator <sup>1</sup> (kWh/ML/per meter of head)	4.55	4.63	4.69	5.02

1. The industry standard is 3.4 to 4.5, depending on the size 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 expenditure include funds for preventative and corrective maintenance, as well as large, one-off operations activities. The preventative maintenance activities monitor the asset condition and inform the corrective maintenance program when an asset needs to be refurbished or replaced. Non-annuity funded expenditure largely relates to Sunwater’s Dam Improvement Program and recreational facility costs.

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

Table 9: Annuity and non-annuity funded expenditure<sup>1,2</sup>

Mareeba-Dimbulah Distribution 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	
<b>Annuity-funded</b>													
Operations	48.8	98.4	-	141.6	141.6	-	-	-	-	-	-		
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-		
Planned corrective maintenance	505.7	950.3	946.1	850.1	(96.0)	1473.5	1262.4	1125.5	831.4	1222.6	1771.7	784.1	3710.4
Unplanned corrective maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Annuity-funded total</b>	<b>554.5</b>	<b>1048.7</b>	<b>946.1</b>	<b>991.6</b>	<b>45.5</b>	<b>1473.5</b>	<b>1262.4</b>	<b>1125.5</b>	<b>831.4</b>	<b>1222.6</b>	<b>1771.7</b>	<b>784.1</b>	<b>3710.4</b>
<b>Non-annuity funded</b>													
Dam Improvement Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Recreational facility projects	-	-	-	-	-	-	-	-	-	-	-	-	-
Metered offtakes and dividend reinvestment	18.8	15.3	-	-	-	-	-	-	-	-	-	-	-
<b>Non-annuity total</b>	<b>18.8</b>	<b>15.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

1. Sunwater’s 2021/22 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 specific potential improvements and the broader asset management and planning processes as outlined below. We will report on our progress on the implementation of these initiatives in the final S&PP for 2021/22.

## Asset management performance growth

This initiative provides the opportunity to improve predictive maintenance capability and focuses on monitoring asset performance data of critical assets. The asset data will provide a greater insight into asset performance, condition, and refurbishment and replacement planning.

## Asset management planning

A change to Sunwater’s asset planning cycle has improved the near-term cost estimation of annuity-funded work. The change targets 18 months of fully cost-estimated work and will help improve future asset replacement values.

## Asset management improvement

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 we identify and deliver maintenance work. 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 Portfolio, Program and Project Management Framework (P3MF). P3MF defines the management and governance of projects including when an options analysis is required.

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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)

# 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

Mareeba-Dimbulah Distribution 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>	6515.5	8674.5	10,556.5	12,693.7	12,604.4	12,939.5	13,220.4	13,014.3	16,748.8
Spend <sup>2</sup>	(554.5)	(1048.7)	(991.6)	(1473.5)	(1125.5)	(1222.6)	(1771.7)	(784.1)	(3710.4)
Insurance proceeds receipts (if applicable)									
Prior year	-	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-	-
Annuity contribution <sup>3</sup>	2225.4	2281.0	2338.1	829.2	909.5	937.8	987.5	3949.6	3994.2
Interest/financing costs	488.0	649.7	790.7	555.0	551.1	565.7	578.0	569.0	732.3
<b>Sunwater – Closing balance</b>	<b>8674.5</b>	<b>10,556.5</b>	<b>12,693.7</b>	<b>12,604.4</b>	<b>12,939.5</b>	<b>13,220.4</b>	<b>13,014.3</b>	<b>16,748.8</b>	<b>17,764.9</b>
<b>QCA – Closing balance</b>	<b>8674.5</b>	<b>10,556.5</b>	<b>12,799.3</b>	<b>12,925.8</b>	<b>13,569.1</b>	<b>13,792.5</b>	<b>14,534.5</b>		
Difference	-	-	(105.7)	(321.4)	(629.6)	(572.1)	(1520.2)		

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	93,971
2011/12	117,164
2012/13	145,206
2013/14	121,589
2014/15	148,111
2015/16	154,442
2016/17	132,084
2017/18	111,947
2018/19	115,303
2019/20	142,652
<b>18-year historical average</b>	<b>125,873</b>

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

Mareeba-Dimbulk Distribution Service Contract	2017/18 Sunwater Actual \$'000	2018/19 Sunwater Actual \$'000	2019/20 Sunwater Forecast \$'000	2019/20 Sunwater Actual \$'000	Variance \$'000	2020/21 Sunwater Forecast \$'000	2020/21 QCA Target \$'000	2021/22 Sunwater Forecast \$'000	2021/22 QCA Target \$'000	2022/23 Sunwater Forecast \$'000	2023/24 Sunwater Forecast \$'000	2024/25 Sunwater Forecast \$'000	2025/26 Sunwater Forecast \$'000
<b>Operating costs</b>													
Operations	2384.2	3317.5	3596.1	3402.2	(193.8)	3852.4	3494.5	3934.1	3603.3	4102.4	4154.6	4225.3	4273.4
Labour	489.4	709.5	698.1	796.8	98.6	747.5	671.6	769.9	687.0	793.0	812.8	833.1	854.0
Contractors	7.1	29.4	5.0	4.1	(0.9)	8.0	5.2	8.2	5.3	8.4	8.6	8.8	9.1
Materials	3.3	4.9	4.1	8.7	4.6	8.0	5.6	8.2	5.7	8.4	8.6	8.8	9.1
Electricity	543.2	532.7	630.9	573.5	(57.4)	700.4	484.2	717.9	528.7	735.8	754.2	696.4	713.8
Insurance	348.1	369.2	411.0	423.3	12.2	570.5	465.0	584.8	474.3	599.4	614.4	629.8	645.5
Other	114.6	118.3	539.3	126.6	(412.7)	420.2	518.7	423.3	529.1	429.0	431.4	437.3	444.7
Local area support costs	381.7	570.9	435.6	484.1	48.5	432.2	477.7	445.1	487.9	458.5	470.0	481.7	493.7
Corporate support costs	214.5	675.3	521.3	610.2	88.8	560.6	519.0	577.4	530.2	594.7	609.6	624.9	640.5
Indirect costs	282.3	307.4	350.6	375.0	24.4	405.1	347.6	399.2	355.1	475.2	444.9	504.4	463.1
Preventative maintenance	767.4	930.8	970.1	936.0	(34.1)	997.2	1010.2	1019.4	1032.1	1072.7	1083.9	1129.0	1137.1
Labour	232.8	214.8	288.8	248.1	(40.7)	278.1	278.7	286.5	285.1	295.1	302.4	310.0	317.8
Contractors	83.0	218.9	100.0	80.8	(19.2)	95.0	115.5	97.4	117.9	99.8	102.3	104.9	107.5
Materials	33.0	39.0	33.0	41.9	8.9	30.0	54.8	30.8	55.9	31.5	32.3	33.1	33.9
Other	5.8	8.2	3.0	102.9	99.9	75.0	3.2	76.9	3.2	78.8	80.8	82.8	84.9
Local area support costs	181.6	176.2	184.6	155.8	(28.8)	159.7	198.3	164.5	202.5	169.4	173.7	178.0	182.5
Corporate support costs	96.9	189.1	215.6	189.4	(26.2)	208.6	215.4	214.9	220.1	221.3	226.8	232.5	238.3
Indirect costs	134.3	84.6	145.0	117.1	(27.9)	150.7	144.3	148.5	147.4	176.8	165.6	187.7	172.3
Corrective maintenance	1719.9	1545.8	2037.3	1807.5	(229.8)	1929.8	1822.1	1973.2	1861.1	2072.4	2096.2	2180.8	2199.4
Labour	446.0	335.2	524.8	412.6	(112.2)	497.1	422.9	512.0	432.7	527.4	540.6	554.1	568.0
Contractors	108.5	178.7	85.0	171.5	86.5	90.0	83.6	92.3	85.4	94.6	96.9	99.3	101.8
Materials	322.3	373.0	330.0	417.7	87.7	330.0	363.4	338.3	370.7	346.7	355.4	364.3	373.4
Other	42.4	12.2	103.1	34.7	(68.4)	82.1	105.4	84.2	107.6	86.3	88.4	90.7	92.9
Local area support costs	346.9	306.9	338.9	259.0	(79.9)	288.3	300.8	297.0	307.3	305.9	313.5	321.4	329.4
Corporate support costs	197.1	244.5	391.9	312.6	(79.2)	372.8	326.9	384.0	333.9	395.6	405.4	415.6	426.0
Indirect costs	256.6	95.4	263.6	199.2	(64.3)	269.4	218.9	265.5	223.6	316.0	295.9	335.5	308.0
<b>Operating costs total</b>	<b>4871.4</b>	<b>5794.2</b>	<b>6603.4</b>	<b>6145.7</b>	<b>(457.7)</b>	<b>6779.4</b>	<b>6326.8</b>	<b>6926.7</b>	<b>6496.5</b>	<b>7247.6</b>	<b>7334.7</b>	<b>7535.0</b>	<b>7610.0</b>
<b>Annuity-funded costs</b>													
Labour			103.3	244.4	141.1	182.9	156.7	141.2	104.3	147.9	178.3	82.0	606.3
Contractors			412.6	206.2	(206.4)	590.6	506.0	465.9	344.2	354.9	762.6	420.6	920.6
Materials			232.7	95.8	(136.9)	363.3	311.3	259.6	191.8	438.0	500.2	122.2	728.0
Other			1.9	11.6	9.7	-	-	-	-	-	-	-	320.6
Local area support costs			66.6	133.1	66.5	100.5	86.1	79.6	58.8	82.4	99.3	48.3	351.5
Corporate support costs			77.2	191.8	114.6	137.2	117.5	105.9	78.2	110.9	133.7	61.5	454.7
Indirect costs			51.9	108.7	56.8	99.1	84.9	73.2	54.1	88.6	97.6	49.6	328.8
<b>Annuity-funded total<sup>1</sup></b>	<b>554.5</b>	<b>1048.7</b>	<b>946.1</b>	<b>991.6</b>	<b>45.5</b>	<b>1473.5</b>	<b>1262.4</b>	<b>1125.5</b>	<b>831.4</b>	<b>1222.6</b>	<b>1771.7</b>	<b>784.1</b>	<b>3710.4</b>
<b>Total costs<sup>2</sup></b>	<b>5425.9</b>	<b>6842.9</b>	<b>7549.5</b>	<b>7137.3</b>	<b>(412.2)</b>	<b>8252.9</b>	<b>7589.2</b>	<b>8052.1</b>	<b>7327.9</b>	<b>8470.2</b>	<b>9106.3</b>	<b>8319.1</b>	<b>11,320.4</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 Mareeba-Dimbulah Distribution Service Contract in 2019/20 and the actual projects undertaken.

Project	Forecast \$'000	Actual \$'000	Commentary
Meter replacements (20MDA11)	249	196	The supply and installation costs were lower than anticipated.
Mareeba Channel M15/2 – Pipeline replacement (20MDA23)	106	126	Additional remobilisation costs were incurred (plant/traffic control/internal resources) due to the inability to isolate and dewater at the planned time because of a failed upstream valve. This valve had to be replaced (not part of this project) before work could recommence.
West Barron main channel – Regulating gates (20MDA10 and 20MDA21)	97	77	Work was completed for less than anticipated. Work on one gate was completed under the National Water Infrastructure Development Fund.
Paddy’s Green A & B pump station – Screens (20MDA26 and 20MDA27)	62	65	Supply and installation costs were higher than anticipated as the result of additional time incurred when installing the new screens due to pump station power isolation, dewatering and refilling system requirements. The project to replace gate #1 at Paddy’s Green Pump Station B (\$11k) was removed from the program of works based on a condition assessment.
West Barron Balancing Storage – Rotating weed screen (20MDA05)	48	29	Work was completed for less than anticipated.
East Barron and South Walsh main channels – Control systems (20MDA07)	37	73	This project included works at Mareeba main channel and Solanum Weir (included in the “Other works” forecast figure below). The forecast amount for all work items was \$87k, i.e. the work was completed under budget.
Granite, Dulbil, Collins, Solanum, Bruce and Leafgold Weirs – Five yearly inspections and reports (20MDA14, 20MDA15, 20MDA16, 20MDA17, 20MDA18 and 20MDA19)	36	39	The inspections were completed in line with the forecast.
Mareeba, Price Creek and North Walsh – Options analyses (20MDA02, 20MDA25, 20MDA28 and 20MDA20)	35	50	Costs to develop the options analysis were higher than anticipated, including an increase in scope to consider additional pipelines.
Mareeba Channel M9 – Offtake replacement (20MDA22)	33	69	Supply and installation costs increased due to the need to reconfigure the site to ensure the safety of operations and maintenance staff.
Collins Weir – Outlet works (20MDA08)	31	52	Technical aspects and the effort required to complete this project were more complex than originally estimated. Refurbishment of the actuator required replacement of components, as opposed to refurbishment, as well as some modification of the arrangement itself. The project was carried over into 2020/21.
Other works	212	115	Other works included: refurbishment of West Barron Main Channel v-lift gate; replacement and/or refurbishment of safety screens, handrails, walkways and stairs in the Mareeba, West Barron and South Walsh Systems. The unplanned



Project	Forecast \$'000	Actual \$'000	Commentary
			capital replacements contingency budget (\$44k) was re-allocated to both scheduled and non-scheduled works.
Non-scheduled works	-	100	Most of these costs related to the development of a Code of Practice for the use of copper sulphate in the scheme.
<b>2019/20 Total</b>	<b>946</b>	<b>992</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	Project title	Project scope	Forecast \$'000
2020/21	Mareeba System – Concrete channel lining	Concrete lining section/panel replacements are based on the 30 Year Irrigation Asset Strategy. A system-wide strategy and prioritisation schedule was determined as part of a 2019 options analysis.	610
	Meter replacements	Staged upgrade of East Barron and North Walsh customer meters to improve accuracy and scheme delivery efficiency and comply with Australian Standard (AS) 4747.	228
	West Barron main channel – Regulating gate refurbishments	Periodic refurbishment of float and vertical slide type regulating gates, in accordance with Sunwater’s Float Regulating and Slide Gate Strategies.	173
	Arc flash study	Audit and review of all scheme switchboards and distribution boards to reassess arc flash rating in accordance with Australian Standards.	78
	Mareeba System – Road refurbishments	Road refurbishments are based on the 30 Year Irrigation Asset Strategy. Channel and access roads will be regraded and surfaced by priority as part of a five-yearly funding schedule.	59
	Mareeba System – Fencing refurbishments	Fencing refurbishments are based on the 30 Year Irrigation Asset Strategy. Fencing refurbishment is based on priority as part of a five-yearly funding schedule.	47
	South Walsh and West Barron – Control equipment	Scheduled replacement of control system equipment at the overflow and control gate structures to ensure continued control and communications functions.	38
	Mareeba Distribution – Regulating gates	Investigation, risk assessment and review of float regulating gate access arrangements resulting from identified hazard.	35
	Other works	The balance of the 2020/21 program consists of a suction pipe refurbishment at Price Creek B pump station, controls and radio replacements at various locations, break pressure structure refurbishment and minor metal works.	205
	<b>2020/21 Total</b>		<b>1473</b>
2021/22	Price Creek A pump station – Switchboard, cables and controls	Upgrade or replacement of switchboard, cables and control system. The timing, scope and costing of the works will be informed by an options analysis completed in 2020.	293
	Price Creek B pump station – Switchboard, cables and controls	Upgrade or replacement of switchboard, cables and control system. The timing, scope and costing of the works will be informed by an options analysis completed in 2019.	207
	Meter replacements	Staged upgrade of South Walsh SW11 and East Barron Ch EB04 customer meters to improve accuracy and scheme delivery efficiency and comply with AS4747.	206

Year	Project title	Project scope	Forecast \$'000
	Mareeba main channel – P025 pipeline replacement	Replacement of P025 pipeline section due to age and condition and as confirmed through the 2019 business case.	132
	West Barron main channel – Vertical lift gates refurbishment	Periodic refurbishment of vertical lift type regulating gates, in accordance with Sunwater’s Vertical Lift Gate Strategy.	103
	West Barron main channel – Regulating gate refurbishments	Periodic refurbishment of float type (AMIL) regulating gates, in accordance with Sunwater’s Float Regulating Gate Strategy.	101
	Other works	The balance of the 2021/22 program consists of minor metal work items, bench flume deformation survey, and trash screen refurbishments.	83
	<b>2021/22 Total</b>		<b>1125</b>
2022/23	Mareeba System – Concrete channel lining	Concrete lining section/panel replacements are based on the 30 Year Irrigation Asset Strategy. A system-wide strategy and prioritisation schedule was determined as part of a 2019 options analysis.	649
	Meter replacements	Staged upgrade of 11 Mareeba, West and East Barron, Atherton and South Edge customer meters to improve accuracy and scheme delivery efficiency and comply with AS4747.	233
	West Barron main channel – Bench flume refurbishment	Stage 1 refurbishment of the bench flume bracing beams and fixings to retain structural integrity and operational performance.	180
	Mareeba main channel – Regulating gate refurbishments	Refurbishment of main channel regulating gates 1 and 2 based on asset standard refurbishment period to maintain serviceability.	62
	Mareeba System – Controls replacements	Scheduled replacement of station 3 and 4 central processing units to retain serviceability and future support.	41
	Other works	The balance of the 2022/23 program consists of gate refurbishments, minor options analyses and metal works.	58
	<b>2022/23 Total</b>		<b>1223</b>
2023/24	Paddy’s Green pump station A – Pump and valve replacements	Works involve the replacement of three pumps, pressure relief valves and non-return valves based on standard replacement periods. Project scheduling, scope and costings will be subject to an options analysis. The objectives of the work are to reinstate as-new function and service life of major pumping assets at the station.	891
	Mareeba channel M4 – Pipeline replacement	Replacement of M4 Duplication P002 pipeline section based on age and condition. The 2012 options study will be reviewed and updated (if required) before capital works are confirmed.	381
	Meter replacements	Staged upgrade of South Walsh and West Barron main channel customer meters to improve accuracy and scheme delivery efficiency and comply with AS4747.	217
	West Barron main channel – Bench flume refurbishment	Stage 2 refurbishment of the bench flume bracing beams and fixings to retain structural integrity and operational performance.	136
	West Barron & Mareeba – Regulating gate refurbishments	Periodic refurbishment of West Barron and Mareeba main channel regulating gates, in accordance with Sunwater’s Float Regulating Gate Strategy.	87
	Other works	The balance of the 2023/24 program consists of control equipment replacements and minor valve replacements.	60

Year	Project title	Project scope	Forecast \$'000
	<b>2023/24 Total</b>		<b>1772</b>
2024/25	Paddy's Green pump station B – Pump, motor and valve replacements	Scheduled replacement of pumps, motors and non-return valves to ensure continued reliable operation of the pump station.	288
	Meter replacements	Staged upgrade of South Walsh customer meters to improve accuracy and scheme delivery efficiency and comply with AS4747.	208
	Mareeba System – Supervisory control and data acquisition (SCADA) upgrade	Additional stage of the SCADA host system upgrade (Costin Street). The timing and scope of works will be subject to review pending earlier upgrades, functionality assessment and technological change.	116
	Weir (various) – Comprehensive inspections	Scheduled five yearly inspection of Solanum, Granite, Dulbil, Collins, Bruce and Leafgold Weirs to ensure structure safety and operational performance.	42
	Mareeba System – Sign replacements	Allocation for system wide replacement of obsolete signage with current Sunwater standard arrangements to ensure continued management of operational and public risks.	24
	South Walsh main channel – Bench flume survey	Three yearly deformation survey of the bench flume to monitor panel movements and ensure units remain functional and serviceable.	16
	Other works	The balance of the 2024/25 program consists of gate actuator works, air valves, an options analysis and minor valve works.	90
		<b>2024/25 Total</b>	
2025/26	Meter replacements	Staged upgrade of Mareeba, South Walsh, North Walsh and West Barron customer meters to improve accuracy and scheme delivery efficiency and comply with AS4747.	611
	Paddy's Green A and B pump station – Meters and controls	Scheduled replacement of pump station meters, control and communications equipment to improve accuracy and scheme delivery efficiency and comply with AS4747.	280
	Mareeba System – Concrete channel lining	Concrete lining section/panel replacements are based on the 30 Year Irrigation Asset Strategy. A system-wide strategy and prioritisation schedule was determined as part of a 2019 options analysis.	1881
	Mareeba and Biboohra main channels – Standpipes	Scheduled refurbishment of pipeline system standpipes to ensure continued pressure control and flow regulation.	229
	Mareeba and West Baron main channels – Air valves	Scheduled replacement of siphon/pipeline air valves and related arrangements to ensure continued safe draining and filling of the pipeline systems.	165
	Mareeba System – Road refurbishments	Road refurbishments are based on the 30 Year Irrigation Asset Strategy. Channel and access roads will be regraded and surfaced by priority as part of a five-yearly funding schedule.	143
	Mareeba System – Fencing refurbishments	Fencing refurbishments are based on the 30 Year Irrigation Asset Strategy. Fencing refurbishment is based on priority as part of a five-yearly funding schedule.	54
	SCADA/telemetry – Various	Scheduled replacements of aged radio/remote terminal unit and related telemetry equipment in the Mareeba, Biboohra, South Edge and West Barron channel sections to ensure continued reliable communications and control of channel flows.	171
	West Barron main channel – Vertical lift gate	Scheduled replacement of CR18 vertical lift gate. The gate will be condition assessed closer to the date, which will confirm the need for replacement and the timing of the works.	63

Year	Project title	Project scope	Forecast \$'000
	Other works	The balance of the 2025/26 program consists of gate actuator works, air valves, an options analysis and minor valve works.	113
	<b>2025/26 Total</b>		<b>3710</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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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.