sunwater

# Draft Service and Performance Plan

# 2021/22

## Bundaberg Distribution Service Contract

18 March 2021

# Contents



# At a glance

## Our performance in 2019/20

**Operating costs: $15.17 million (37.0% more than forecast)**

This can be attributed to the additional delivery costs—largely electricity—associated with the out of allocation event and water made available during the essential works project for Paradise Dam.

**Annuity-funded costs: $2.36 million (15.0% less than forecast)**

A key driver for the cost variance was the deferral of the Woongarra Balancing Storage comprehensive risk assessment (CRA) and associated input studies to 2020/21. These works will be combined with similar studies, to help deliver efficiency gains. The remainder of the 2019/20 program of works was delivered broadly in line with our forecasts, with variances between forecast and actual costs at the project level.

**Total water deliveries: 147,806 ML**

Water delivered to irrigators: 97,683 ML

**Service targets: Not met**

Unplanned shutdowns (duration) and maximum number of interruptions were not met.

## Outlook for 2021/22

**Forecast operating costs: $12.89 million**

Significant areas of expenditure:

- electricity ($5.23 million)
- insurance ($1.20 million)
- operations ($2.96 million)
- preventative maintenance ($2.18 million)
- corrective maintenance ($1.36 million).

**Forecast annuity-funded costs: $3.07 million**

Key projects planned:

- continuation of the cable and low voltage switchboard replacement at Bullyard pump station ($0.65 million)
- replacement of failed customer meters, as required ($0.36 million)
- design and procurement stage of the cable and switchboard replacement at Bucca pump station ($0.35 million)
- review of the CRA at Isis Balancing Storage and a comprehensive inspection ($0.22 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 Bundaberg Distribution Service Contract is to:

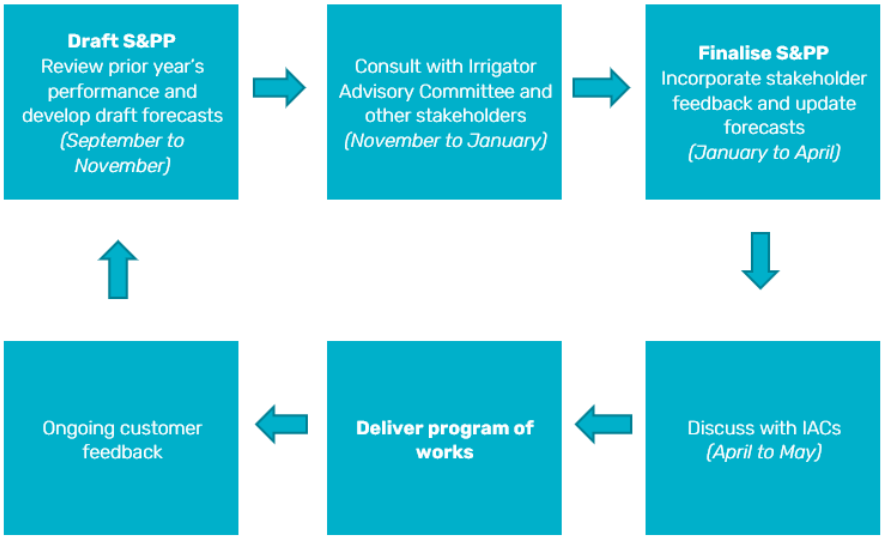
- present to customers Sunwater's projected costs[1] for the upcoming five-year period, i.e. 2021/22 to 2025/26
- consult with our customers on forecast operating and annuity-funded costs for 2021/22 and the forward program of works
- examine Sunwater's performance in 2019/20 against previous forecasts and service targets.

Our focus during 2021/22 will be on ensuring operations activities are implemented safely, timely and efficiently. We are also 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/

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

*Figure 1: Customer consultation and S&PPs*




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

Email: sppfeedback@sunwater.com.au
Post: S&PP Feedback
PO Box 15536
City East Qld 4002

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

# Delivering services to our customers

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

## Our customers

The majority of our 923 customers in this service contract are irrigators who grow crop types including sugar cane, tomatoes, rockmelons, watermelons, capsicum, zucchini, beans, macadamia nuts, avocados peanuts and soybeans. Water is also supplied to the Bundaberg Regional Council for urban purposes.

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[1]*

| Customer segment | Total water allocations (ML) | High priority water allocations (ML) | Medium priority water allocations (ML) | Total water deliveries 2019/20 (ML) |
|---|---|---|---|---|
| Irrigation | 149,075 | 12 | 149,063 | 97,683 |
| Industrial[2] | 13,113 | 151 | 12,962 | 4983 |
| Urban | 1859 | 1767 | 92 | 1597 |
| Sunwater (excl. distribution losses) | 70 | 0 | 70 | 12 |
| Sunwater distribution losses | 41,520 | 16,080 | 25,440 | 43,531[3] |
| **Total** | **205,637** | **18,010** | **187,627** | **147,806** |

1. Includes Burnett Water Pty Ltd (Paradise Dam).
2. Includes BWPL irrigation customers.
3. During 2019/20 Sunwater lowered Paradise Dam's water storage to facilitate essential work to reduce the risk of a dam failure. The released water was offered to customers free of charge which resulted in a higher distribution loss delivery volume than distribution loss allocations available. Unsold water allocations from the Sunwater trading accounts were temporarily transferred to cover the shortfall.

## 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. The Bundaberg Distribution Service Contract is not expected to fully recover irrigation's share of costs.

*Table 2: Irrigation charges for 2021/22[1,2]*

| Tariff group | Product | 2021/22 ($/ML)[3] | QCA cost-reflective ($/ML)[4] | Subsidy ($/ML) |
|---|---|---|---|---|
| Channel or watercourse supplemented by a channel | Allocation Charge – Part C | 47.31 | 70.83 | 23.52 |
| | Allocation Water – Part D | 55.57 | 55.57 | n/a |

1. This table includes distribution charges only. For bulk water charges, please refer to the Bulk Water Service Contract S&PP.
2. Excludes BWPL charges (Paradise Dam).
3. As recommended by the QCA. The Queensland Government has not yet determined the irrigation charges to apply in 2021/22.
4. 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.

For more information on Sunwater's fees and charges, refer to: www.sunwater.com.au/customer/fees-and-charges/

## Service targets

Sunwater and customers have agreed Water Supply Arrangements and Service Targets for the Bundaberg Distribution Service Contract. Table 3 below sets out our recent performance against selected service targets for this scheme.

*Table 3: Scheme service targets and performance*

| Service target | | Target | Number of exceptions | | |
|---|---|---|---|---|---|
| | | | 2017/18 | 2018/19 | 2019/20 |
| Planned shutdowns – notification | For shutdowns planned to exceed 2 weeks | 8 weeks | 0 | 0 | 0 |
| | For shutdowns planned to exceed 3 days | 2 weeks | 0 | 0 | 0 |
| | For shutdowns planned to be less than 3 days | 5 days | 0 | 0 | 0 |
| Unplanned shutdowns – duration | Unplanned shutdowns will be fixed so that at least partial supply can be resumed | 72 hours | 2 | 3 | 1 |
| Maximum number of interruptions[1] | Planned or unplanned interruptions per water year | 10 | 15 | 16 | 12 |

1. 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[1] | 80.00% | 94.87% |
| Requests actioned within Service Level Agreement (SLA) timeframes[2] | > 95.00% | 95.46% |

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

## Key infrastructure

Table 5 lists the key infrastructure used to deliver distribution services to our customers in Bundaberg.

*Table 5: Key infrastructure*

| Asset | Description | Capacity |
|---|---|---|
| Isis Balancing Storage | Earth embankment across a watercourse. Classified as a referable dam under the *Water Supply (Safety and Reliability) Act 2008*. | 6160 ML |
| Woongarra Balancing Storage | Earthen embankment constructed across two small watercourses. Classified as a referable dam under the *Water Supply (Safety and Reliability) Act 2008*. | 1225 ML |
| Gooburrum Balancing Storage | Earth embankment across a shallow depression. | 1040 ML |
| Bullyard Creek Balancing Storage | Earth embankment. | 453 ML |
| Monduran pump station | Three pumps. This pump station also performs a bulk water function. | 1100 ML/day |
| Don Beattie pump station | Three pumps. | 648 ML/day |
| Bullyard Creek pump station | Four pumps. | 415 ML/day |
| Woongarra pump station | Five pumps. | 395 ML/day |
| Gooburrum pump station | Two pumps. | 300 ML/day |

| Asset | Description | Capacity |
|---|---|---|
| Quart Pot Creek pump station (two sections) | Four pumps (two in each section). | 250 ML/day<br>275 ML/day |
| Walker Street pump station | Four pumps. | 225 ML/day |
| Dinner Hill pump station | Three pumps. | 160 ML/day |
| Tirroan pump station | Two pumps. | 72 ML/day |
| North Gregory pump station | Two pumps. | 63 ML/day |
| Bucca pump station | Two pumps. | 60 ML/day |
| McIlwraith pump station | Two pumps. | 60 ML/day |
| Abbotsford pump station | Two submersible pumps. | 23.7 ML/day |

# Financial summary—Revenue and expenditure

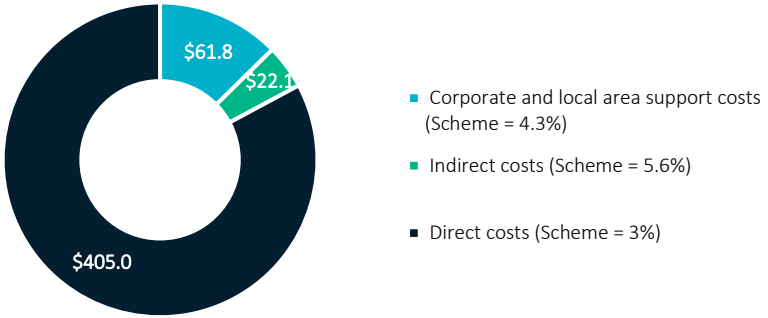
A high-level summary of the budgeted financial performance of the Bundaberg Distribution Service Contract is presented in Table 6.

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 Bundaberg 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 Bundaberg 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[1]—2021/22 forecast ($M)*




1. Prior to the transfer of a portion of Gin Gin main channel and Monduran pump station costs to the Bundaberg Bulk Water Service Contract.

*Table 6: Service contract financial summary*

| Bundaberg 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 | 11,532.9 | 15,565.1 | 13,707.7 | 11,800.1 | 12,969.0 |
| Community Service Obligation | - | - | - | - | - |
| Industrial[1] | 102.1 | 115.8 | 113.8 | 117.6 | 120.5 |
| Urban[1] | 624.5 | 645.3 | 646.9 | 634.8 | 650.7 |
| Revenue transfers[2] | (3006.5) | (3134.0) | (3595.5) | (3966.1) | (4065.2) |
| Drainage | - | - | - | - | - |
| Other | (303.0) | 22.3 | 108.5 | 1.0 | 1.0 |
| **Revenue total** | **8950.1** | **13,214.5** | **10,981.4** | **8587.4** | **9676.0** |
| Less – Operating expenditure | 10,693.8 | 13,619.4 | 15,166.4 | 12,609.3[3] | 12,892.2[3] |
| Less | | | | | |
| Annuity-funded | 1527.6 | 1826.2 | 2357.4 | 4096.6[3] | 3068.1[3] |
| Non-annuity funded[4] | 130.3 | 67.3 | 126.0 | 84.2 | - |
| **Surplus (deficit)** | **(3401.7)** | **(2298.4)** | **(6668.4)** | **(8202.6)** | **(6284.2)** |

1. Forecast revenues for industrial and urban customers are based on current contractual arrangements.
2. 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.
3. Excludes a share of Gin Gin main channel and Monduran pump station costs which have been transferred to the Bundaberg Bulk Water Service Contract.
4. This is expenditure which has not been funded by irrigation customers. An example of this in the Bundaberg Distribution Service Contract is metered offtakes.

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

*Table 7: Operating expenditure*[1]

| Bundaberg 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[2] | Sunwater Forecast $'000 | QCA Target $'000[2] | Sunwater Forecast $'000 | Sunwater Forecast $'000 | Sunwater Forecast $'000 | Sunwater Forecast $'000 |
| Operations | 7407.3 | 10,141.5 | 7937.0 | 11,624.7 | 3687.7 | 9181.7 | 8102.5 | 9387.4 | 9508.2 | 9686.9 | 9892.5 | 10,180.8 | 10,344.5 |
| Electricity | 4393.5 | 6751.9 | 4527.8 | 8282.0 | 3754.2 | 5100.2 | 4572.9 | 5227.7 | 5903.8 | 5358.4 | 5492.3 | 5629.6 | 5770.4 |
| Insurance | 708.3 | 755.7 | 845.6 | 870.7 | 25.1 | 1173.8 | 951.8 | 1203.1 | 970.8 | 1233.2 | 1264.0 | 1295.6 | 1328.0 |
| Operations | 2305.5 | 2633.9 | 2563.5 | 2471.9 | (91.5) | 2907.7 | 2577.8 | 2956.6 | 2633.6 | 3095.4 | 3136.2 | 3255.6 | 3246.1 |
| Preventative maintenance | 2136.4 | 2244.4 | 1940.0 | 2205.7 | 265.7 | 2131.2 | 2025.5 | 2179.3 | 2068.9 | 2285.8 | 2313.7 | 2405.1 | 2427.8 |
| Corrective maintenance | 1150.1 | 1233.5 | 1191.9 | 1336.0 | 144.2 | 1334.4 | 1349.6 | 1364.2 | 1378.4 | 1434.2 | 1449.9 | 1509.2 | 1521.2 |
| *Less* costs transferred to Bundaberg bulk for Gin Gin main channel and Monduran pump station costs[3] | | | | | | (37.9) | (34.4) | (38.8) | (38.9) | (40.2) | (41.0) | (42.3) | (42.9) |
| **Operating costs total** | **10,693.8** | **13,619.4** | **11,068.9** | **15,166.4** | **4097.5** | **12,609.3** | **11,443.1** | **12,892.2** | **12,916.7** | **13,366.7** | **13,615.1** | **14,052.9** | **14,250.6** |
| Recreational facility costs[4] | | | | | | - | | - | | - | - | - | - |
| **Operating costs total (incl. recreational facility costs)** | **10,693.8** | **13,619.4** | **11,068.9** | **15,166.4** | **4097.5** | **12,609.3** | | **12,892.2** | | **13,366.7** | **13,615.1** | **14,052.9** | **14,250.6** |

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. Under the water planning framework, the Gin Gin main channel and Monduran pump station also perform a bulk water function. In its 2020–2024 irrigation price investigation final recommendations, the QCA transferred a share of the Gin Gin main channel and Monduran pump station costs from the Bundaberg Distribution Service Contract to the Bundaberg Bulk Water Service Contract. Refer to section 6.4.1 of the QCA's final Part B report at: www.qca.org.au/project/rural-water/irrigation-price-investigations/
4. 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.

# Our performance in 2019/20

In 2019/20, operating costs were higher than our previous forecast.[2] This can be attributed to the additional delivery costs—largely electricity—associated with the out of allocation event and water made available during the essential works project for Paradise Dam.

## 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 Bundaberg 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 with five tariff changes, resulting in a decrease from 21.38 c/kWh in 2018/19 to 18.04 c/kWh in 2019/20.
- an investigation into the investment in small-scale solar systems across all pump stations, in collaboration with Bundaberg CANEGROWERS Ltd, CANEGROWERS Isis Ltd and Bundaberg Fruit and Vegetable Growers Cooperative Ltd. Three sites were identified as being cost-effective for solar installation as part of Sunwater's energy strategy. A request for quote process is scheduled to be undertaken in 2020/21 to validate the cost-effectiveness.
- interval meters were installed at pump stations (as required) to provide the granular level of consumption and demand information required to accurately assist in identifying operational optimisation and renewable generation opportunities.

# Outlook for 2021/22

## Operations

Bundaberg Distribution Service Contract's total operations budget (prior to cost transfers) in 2021/22 is broadly in line with the QCA's recommended cost target (1.3 per cent below the target). Electricity costs are projected to be lower than the QCA's allowance, while insurance costs are expected to be higher.

### 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 (prior to cost transfers) for the Bundaberg Distribution Service Contract are 5.3 per cent above the QCA's recommended cost target. Statutory compliance drives a large portion of expenditure in the preventive maintenance field on items such as overhead cranes, fire panels and high voltage (HV) testing regimes.

[2] See the 2019/20 Network Service Plan at www.sunwater.com.au/schemes/Bundaberg/

## Corrective maintenance

In 2021/22, Sunwater anticipates spending $1.36 million on corrective maintenance (prior to cost transfers) in the Bundaberg Distribution Service Contract. This is consistent with the QCA's recommended cost target (1.0 per cent below the target).

# Electricity metrics

Table 8 sets out electricity usage and efficiency-related information for the Bundaberg Distribution Service Contract.

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

| Metric | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|
| Electricity usage (kWh) | 26,757,865 | 19,625,264 | 31,378,276 | 45,869,105 |
| Water usage (ML) | 134,817 | 95,428 | 161,167 | 147,806 |
| Actual electricity cost per ML ($/ML delivered) | 42.49 | 46.04 | 41.89 | 56.03 |
| Average pump energy indicator[1] (kWh/ML/per metre of head) | 3.64 | 3.65 | 3.55 | 3.58 |

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 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** (all projects except Gin Gin main channel and Monduran pump station) and **Appendix 5** (Gin Gin main channel and Monduran pump station projects).

*Table 9: Annuity and non-annuity funded expenditure[1,2]*

| Bundaberg Distribution Service Contract | 2017/18 Sunwater Actual $'000[3] | 2018/19 Sunwater Actual $'000[3] | 2019/20 Sunwater Forecast $'000 | 2019/20 Sunwater Actual $'000 | Variance $'000 | 2020/21 Sunwater Forecast $'000 | 2020/21 QCA Target $'000[4] | 2021/22 Sunwater Forecast $'000 | 2021/22 QCA Target $'000[4] | 2022/23 Sunwater Forecast $'000 | 2023/24 Sunwater Forecast $'000 | 2024/25 Sunwater Forecast $'000 | 2025/26 Sunwater Forecast $'000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Annuity-funded** | | | | | | | | | | | | | |
| Operations | 0.4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Preventative maintenance | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Planned corrective maintenance | 1409.5 | 1826.2 | 2773.2 | 2357.4 | (415.8) | 4118.8 | 1912.9 | 3118.2 | 1357.1 | 2188.9 | 2821.2 | 3408.8 | 2965.8 |
| Unplanned corrective maintenance | 117.7 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Less* costs transferred to Bundaberg bulk for Gin Gin main channel and Monduran pump station[5] | | | | | | (22.2) | (10.5) | (50.1) | (6.8) | (6.7) | (7.8) | (8.4) | (5.9) |
| **Annuity-funded total** | **1527.6** | **1826.2** | **2773.2** | **2357.4** | **(415.8)** | **4096.6** | **1902.4** | **3068.1** | **1350.3** | **2182.2** | **2813.4** | **3400.4** | **2959.9** |
| **Non-annuity funded** | | | | | | | | | | | | | |
| Dam Improvement Program | - | - | - | - | - | - | | - | | - | 59.8 | 371.5 | 567.0 |
| Recreational facility projects | | | | | | 84.2 | | - | | - | - | - | - |
| Metered offtakes and dividend reinvestment | 130.3 | 67.3 | - | 126.0 | 126.0 | - | | - | | - | - | - | - |
| **Non-annuity total** | **130.3** | **67.3** | **-** | **126.0** | **126.0** | **84.2** | | **-** | | **-** | **59.8** | **371.5** | **567.0** |

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.
5. In its 2020–2024 irrigation price investigation final recommendations, the QCA transferred a share of the Gin Gin main channel and Monduran pump station costs from the Bundaberg Distribution Service Contract to the Bundaberg Bulk Water Service Contract. Refer to section 6.4.1 of the QCA's final Part B report at: www.qca.org.au/project/rural-water/irrigation-price-investigations/

## Asset management and planning improvements

In its final report for the 2020–2024 irrigation price investigation, the QCA identified several potential improvements to Sunwater's asset management and planning framework. It suggested Sunwater should:

- improve our predictive maintenance and asset condition reporting arrangements to better inform the timing of asset replacement
- review our cost estimation approach and ensure that asset values are based on modern equivalent replacement values where appropriate
- develop transparent guidelines for options analyses.[3]

Sunwater acknowledges there is room for improvement in our asset management system and is working on several initiatives to address 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.

[3] See pages 58 to 60, 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*

| Bundaberg 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[1] | 7033.6 | 7939.2 | 8783.2 | 9086.6 | 6951.8 | 5793.9 | 5559.4 | 4755.1 | 5581.6 |
| Spend[2] | (1527.6) | (1826.2) | (2357.4) | (4118.8) | (3118.2) | (2188.9) | (2821.2) | (3408.8) | (2965.8) |
| Insurance proceeds receipts (if applicable) | | | | | | | | | |
| Prior year | - | - | - | - | - | - | - | - | - |
| Current year | - | 121.5 | - | - | - | - | - | - | - |
| Annuity contribution[3] | 1906.4 | 1954.1 | 2002.9 | 1586.7 | 1656.3 | 1701.1 | 1773.8 | 4027.4 | 4145.2 |
| Interest/financing costs | 526.8 | 594.6 | 657.9 | 397.3 | 304.0 | 253.3 | 243.1 | 207.9 | 244.0 |
| **Sunwater – Closing balance** | **7939.2** | **8783.2** | **9086.6** | **6951.8** | **5793.9** | **5559.4** | **4755.1** | **5581.6** | **7005.0** |
| **QCA – Closing balance** | **7939.2** | **8783.2** | **9034.9** | **9103.7** | **9800.9** | **9722.1** | **10,323.0** | | |
| Difference | - | - | 51.7 | (2151.9) | (4007.0) | (4162.7) | (5568.0) | | |
| | | | | | | | | | |
| *Less* annuity contribution transferred to Bundaberg bulk for Gin Gin main channel and Monduran pump station[4] | | | | (13.6) | (13.6) | (14.4) | (14.5) | (17.9) | (18.2) |

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. Figures presented are prior to cost transfers to the Bundaberg Bulk Water Service Contract.
3. The annuity contribution is included in the prices paid by customers. For 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.
4. In its 2020–2024 irrigation price investigation final recommendations, the QCA recovered part of the Bundaberg Distribution Service Contract annuity contribution from the River bulk water tariff group as the Gin Gin main channel and Monduran pump station also perform a bulk water function.

# 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. It includes water deliveries to BWPL.

| Year | Usage (ML) |
|---|---|
| 2010/11 | 33,923 |
| 2011/12 | 78,341 |
| 2012/13 | 87,436 |
| 2013/14 | 166,545 |
| 2014/15 | 101,563 |
| 2015/16 | 118,628 |
| 2016/17 | 134,817 |
| 2017/18 | 95,428 |
| 2018/19 | 161,167 |
| 2019/20 | 147,806 |
| **18-year historical average** | **97,687** |

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

| Bundaberg 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating costs** | | | | | | | | | | | | | |
| Operations | 7407.3 | 10,141.5 | 7937.0 | 11,624.7 | 3687.7 | 9181.7 | 8102.5 | 9387.4 | 9508.2 | 9686.9 | 9892.5 | 10,180.8 | 10,344.5 |
| Labour | 754.6 | 682.7 | 711.1 | 719.6 | 8.4 | 755.5 | 726.1 | 778.1 | 742.8 | 801.5 | 821.5 | 842.0 | 863.1 |
| Contractors | 17.9 | 15.1 | 25.0 | 1.7 | (23.3) | 25.0 | 25.4 | 25.6 | 25.9 | 26.3 | 26.9 | 27.6 | 28.3 |
| Materials | 14.9 | 28.3 | 12.0 | 27.8 | 15.8 | 15.0 | 12.2 | 15.4 | 12.4 | 15.8 | 16.2 | 16.6 | 17.0 |
| Electricity | 4393.5 | 6751.9 | 4527.8 | 8282.0 | 3754.2 | 5100.2 | 4572.9 | 5227.7 | 5903.8 | 5358.4 | 5492.3 | 5629.6 | 5770.4 |
| Insurance | 708.3 | 755.7 | 845.6 | 870.7 | 25.1 | 1173.8 | 951.8 | 1203.1 | 970.8 | 1233.2 | 1264.0 | 1295.6 | 1328.0 |
| Other | 110.5 | 503.0 | 526.1 | 482.7 | (43.4) | 556.7 | 440.1 | 552.8 | 448.9 | 554.7 | 574.4 | 580.9 | 578.0 |
| Local area support costs | 586.1 | 398.1 | 273.7 | 347.0 | 73.3 | 420.8 | 307.3 | 433.4 | 313.9 | 446.4 | 457.6 | 469.0 | 480.8 |
| Corporate support costs | 335.6 | 659.9 | 531.0 | 549.3 | 18.3 | 566.6 | 561.2 | 583.6 | 573.2 | 601.1 | 616.1 | 631.5 | 647.3 |
| Indirect costs | 485.9 | 346.8 | 484.5 | 343.9 | (140.7) | 568.1 | 505.7 | 567.8 | 516.5 | 649.7 | 623.5 | 688.0 | 631.7 |
| Preventative maintenance | 2136.4 | 2244.4 | 1940.0 | 2205.7 | 265.7 | 2131.2 | 2025.5 | 2179.3 | 2068.9 | 2285.8 | 2313.7 | 2405.1 | 2427.8 |
| Labour | 548.2 | 593.6 | 505.5 | 589.7 | 84.2 | 519.3 | 516.2 | 534.9 | 528.0 | 551.0 | 564.7 | 578.9 | 593.3 |
| Contractors | 118.8 | 122.8 | 115.0 | 91.7 | (23.3) | 95.0 | 116.7 | 97.4 | 119.1 | 99.8 | 102.3 | 104.9 | 107.5 |
| Materials | 425.0 | 381.8 | 455.0 | 430.7 | (24.3) | 500.0 | 461.1 | 512.5 | 470.4 | 525.3 | 538.4 | 551.9 | 565.7 |
| Other | 56.6 | 45.1 | 52.0 | 84.4 | 32.4 | 60.0 | 46.9 | 61.5 | 47.8 | 63.0 | 64.6 | 66.2 | 67.9 |
| Local area support costs | 427.6 | 343.0 | 181.1 | 282.1 | 101.0 | 285.9 | 218.4 | 294.5 | 223.1 | 303.3 | 310.9 | 318.7 | 326.7 |
| Corporate support costs | 243.8 | 520.5 | 377.5 | 449.1 | 71.6 | 389.5 | 398.9 | 401.2 | 407.5 | 413.2 | 423.6 | 434.1 | 445.0 |
| Indirect costs | 316.3 | 237.6 | 253.9 | 278.0 | 24.1 | 281.4 | 267.2 | 277.4 | 272.9 | 330.1 | 309.1 | 350.4 | 321.8 |
| Corrective maintenance | 1150.1 | 1233.5 | 1191.9 | 1336.0 | 144.2 | 1334.4 | 1349.6 | 1364.2 | 1378.4 | 1434.2 | 1449.9 | 1509.2 | 1521.2 |
| Labour | 315.8 | 334.9 | 324.0 | 379.3 | 55.3 | 357.7 | 330.8 | 368.4 | 338.5 | 379.4 | 388.9 | 398.6 | 408.6 |
| Contractors | 2.3 | 31.3 | 20.0 | 59.3 | 39.3 | 18.0 | 20.3 | 18.5 | 20.7 | 18.9 | 19.4 | 19.9 | 20.4 |
| Materials | 106.1 | 116.8 | 150.0 | 117.5 | (32.5) | 135.0 | 152.0 | 138.4 | 155.1 | 141.8 | 145.4 | 149.0 | 152.7 |
| Other | 160.7 | 147.2 | 178.0 | 133.8 | (44.2) | 165.0 | 279.4 | 169.1 | 285.0 | 173.4 | 177.7 | 182.1 | 186.7 |
| Local area support costs | 246.3 | 221.0 | 115.1 | 176.9 | 61.8 | 196.7 | 140.0 | 202.6 | 143.0 | 208.7 | 213.9 | 219.3 | 224.7 |
| Corporate support costs | 136.6 | 239.0 | 242.0 | 288.6 | 46.6 | 268.2 | 255.7 | 276.3 | 261.2 | 284.6 | 291.7 | 299.0 | 306.5 |
| Indirect costs | 182.2 | 143.4 | 162.7 | 180.5 | 17.8 | 193.8 | 171.3 | 191.0 | 174.9 | 227.4 | 212.9 | 241.3 | 221.6 |
| *Less* cost transfer to Bundaberg bulk | | | | | | (37.9) | (34.4) | (38.8) | (38.9) | (40.2) | (41.0) | (42.3) | (42.9) |
| **Operating costs total** | **10,693.8** | **13,619.4** | **11,068.9** | **15,166.4** | **4097.5** | **12,609.3** | **11,443.1** | **12,892.2** | **12,916.7** | **13,366.7** | **13,615.1** | **14,052.9** | **14,250.6** |
| **Annuity-funded costs** | | | | | | | | | | | | | |
| Labour | | | 295.9 | 380.7 | 84.8 | 393.6 | 182.8 | 386.4 | 168.2 | 257.3 | 318.6 | 374.4 | 363.4 |
| Contractors | | | 1161.0 | 1034.2 | (126.8) | 1786.5 | 829.8 | 1082.8 | 471.3 | 678.5 | 1023.9 | 1151.8 | 897.4 |
| Materials | | | 835.6 | 251.4 | (584.2) | 1221.1 | 567.1 | 956.7 | 416.4 | 769.0 | 892.8 | 1173.4 | 920.7 |
| Other | | | - | 58.1 | 58.1 | - | - | - | - | - | 3.1 | - | 116.0 |
| Local area support costs | | | 111.2 | 167.1 | 55.9 | 209.0 | 97.1 | 202.2 | 88.0 | 137.0 | 169.5 | 201.6 | 198.8 |
| Corporate support costs | | | 221.0 | 290.8 | 69.8 | 295.2 | 137.1 | 289.8 | 126.1 | 192.9 | 238.9 | 280.8 | 272.5 |
| Indirect costs | | | 148.6 | 175.2 | 26.6 | 213.3 | 99.1 | 200.3 | 87.2 | 154.2 | 174.4 | 226.7 | 197.1 |
| *Less* cost transfer to Bundaberg bulk | | | | | | (22.2) | (10.5) | (50.1) | (6.8) | (6.7) | (7.8) | (8.4) | (5.9) |
| **Annuity-funded total[1]** | 1527.6 | 1826.2 | 2773.2 | 2357.4 | (415.8) | 4096.6 | 1902.4 | 3068.1 | 1350.3 | 2182.2 | 2813.4 | 3400.4 | 2959.9 |
| **Total costs[2]** | **12,221.4** | **15,445.5** | **13,842.1** | **17,523.8** | **3681.7** | **16,705.9** | **13,345.5** | **15,960.3** | **14,267.0** | **15,548.9** | **16,428.5** | **17,453.3** | **17,210.5** |

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 Bundaberg Distribution Service Contract in 2019/20 and the actual projects undertaken.

| Project | Forecast $'000 | Actual $'000 | Commentary |
|---|---|---|---|
| Monduran pump station | 416 | 437 | Works undertaken at Monduran pump station were completed broadly in line with the forecast. |
| Isis System | 374 | 307 | Dinner Hill pump station<br>The pump 3 electric motor at the Dinner Hill pump station was in a better condition than expected and subsequently required less work and effort to refurbish (20BIA40; $13k less than forecast). The discharge and suction valves were refurbished within budget, while additional repairs were required to the pump, pipework and frames (20BIA32, $46k above forecast). The additional works to the pipework and frames were only identified after the pump had been removed.<br>Isis Balancing Storage<br>A failure impact assessment review of the balancing storage was deferred (20BIA31, $16k) and will be undertaken as part of the CRA in 2020/21.<br>Isis channel<br>A project to replace sections of the pipeline was deferred (20BIA34, $42k). The project was planned in response to historical instances of pipe breaks. Prior to commencement of this project, a review was conducted to validate the works. It was deemed that replacement was not warranted yet.<br>The installation of bulkhead gate guides was deferred to the annual shutdown in 2020/21. Costs incurred for this project related to the purchase (manufacture) of the replacement guides only (20BIA39, $11k less than forecast).<br>Flow meter replacements<br>The original intent of these projects was a "like-for-like" replacement of the existing flow meters. A different type of meter was installed as it was non-invasive (no shutdown required) and minimised installation risks and long-term maintenance costs. The result was significantly less labour and less expensive hardware (20BIA30, $38k less than forecast).<br>Quart Pot pump station<br>Contractor costs to replace the fire alarm system were lower than estimated (20BIA35, $8 less than forecast), while the contractor costs to complete HV testing were more than forecast (20BIA36, $6k above forecast). The extent of work involved in refurbishing the motor starter at pump 3 was less than anticipated, leading to a $4k reduction in costs (20BIA38).<br>Other works<br>The remainder of the other works scheduled in the Isis System were completed in line with the forecast amounts. |
| Woongarra System | 1286 | 832 | Walker Street pump station<br>The estimate to refurbish a suction valve included an allowance for replacing the valve if its condition warranted. The valve was able to be refurbished cost effectively (20BIA29, $14k less than forecast). |

| Project | Forecast $'000 | Actual $'000 | Commentary |
|---|---|---|---|
| | | | Woongarra Balancing Storage<br>The CRA (20BIA25, $177k) and associated input studies (20BIA27, $253k) were deferred to combine them with similar studies in 2020/21. The seismic investigation scoping determined that no further work was needed to satisfy the requirements of this study (20BIA26, $43k less than forecast).<br>Woongarra pump station<br>HV testing at the facility was no longer required as the switchboard was replaced (20BIA20, $11k), while pump and motor performance/efficiency testing took longer than anticipated due to the nature of the pump station and limited access to the station because of the switchboard upgrade (20BIA21, $5k above forecast).<br>Other works<br>The remainder of the other works scheduled in the Woongarra System were completed broadly in line with the forecast amounts. |
| Gooburrum pump station | 288 | 214 | Refurbishment of the bulkhead gate required slightly more labour than the estimate allowed (20BIA12, $1k above forecast).<br>The electric motor was in better condition than anticipated. The estimate included an allowance for certain aspects of the refurbishment which were not needed in this instance (20BIA09, $15k less than forecast). Similarly, the suction valve was in a better condition than expected and required less work to refurbish than the estimate allowed (20BIA15, $14k less than forecast).<br>HV testing was more complicated than expected and required additional labour hours and multiple switching operations which were not included in the estimate (20BIA14, $11k above forecast). |
| Bullyard pump station | 44 | 76 | The pump was in a worse condition than expected and required significantly more work to refurbish than the estimate allowed (20BIA07, $12k above forecast). Meanwhile, the options study cost was $20k above forecast as it included the cable and switchboard replacement options analysis for the Bullyard pump station (see below). |
| Bucca pump station – Cable and switchboard replacement options analysis | 21 | - | The project costs are included in the Bullyard pump station costs above. |
| Other works | 344 | 356 | Other works were completed broadly in line with the forecast. |
| Non-scheduled works | - | 135 | There was a carryover of costs for two projects that were undertaken in 2018/19:<br>• replacement of pump 1 discharge valve at Quart Pot pump station. The valve was installed in 2019/20 during the annual shutdown (19BIA40, $26k).<br>• refurbishment of pump 3 at Don Beattie pump station. The installation was scheduled for the annual shutdown in 2019/20 to minimise supply interruptions (19BIA44, $54k).<br>In addition, there was an unplanned project to address a safety hazard associated with access to a break pressure structure in the Bingera main channel (20BIA59, $45k) and other minor works. |
| **2019/20 Total** | **2773** | **2357** | |

# 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 (excluding Gin Gin main channel and Monduran pump station projects, refer to **Appendix 5**). 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 | Flow meter replacements | Replacement of failed flow meters at Woongarra, Bucca, Tirroan, Bullyard, Dinner Hill, North Gregory and McIlwraith pump stations to assist with water distribution. | 417 |
| | McIlwraith pump station | Refurbishment of pump unit 2 motor and discharge, suction and non-return valves. | 75 |
| | Bullyard pump station | Selective refurbishment of pumps, motors, valves and actuators across all four pumps to ensure ongoing optimal performance, and options and design of cable and low voltage (LV) switchboard replacement. Based on known condition of the assets. | 219 |
| | Woongarra Balancing Storage –CRA | A CRA is conducted with new information to assess the level of risks identified and further refine their priority for refurbishment. | 180 |
| | Meter replacements | This is an allowance to replace failed customer meters in the entire scheme. If meters are not replaced, the funds will remain in the annuity. | 349 |
| | Woongarra pump station | Continuation of the electrical upgrade of cables and all switchboards. | 1297 |
| | Woongarra Balancing Storage – CRA inputs | The CRA relies on current and accurate data upon which to conduct the risk assessments. In this case, updated geotechnical, hydrological, stability and failure consequence assessments will be conducted to inform the full level of societal risk. | 188 |
| | North Gregory pump station | Refurbishment of pump unit 1 pump due to a decline in performance. | 20 |
| | Don Beattie pump station | Deformation survey to determine if the rising main and break pressure structure are moving or not. | 16 |
| | Quart Pot Creek pump station | Pump unit 4 pump, motor, discharge valve and actuator refurbishment based on current known condition. | 177 |
| | Isis Balancing Storage – CRA inputs | Seismic, stability and geotechnical studies to inform the CRA. | 184 |
| | Other works | The balance of the 2020/21 program consists of regulating gate refurbishments; fencing improvements; design and installation of additional bulkheads to better facilitate acrolein treatments; an arc flash study to reduce electrical safety hazards; refurbishment of the inlet screen to Gooburrum Balancing Storage due to corrosion; and a contingency amount. | 552 |
| | **2020/21 Total** | | **3674** |
| 2021/22 | Meter replacements | This is an allowance to replace failed customer meters in the entire scheme. If meters are not replaced, the funds will remain in the annuity. | 358 |

| Year | Project title | Project scope | Forecast $'000 |
|---|---|---|---|
| | Bucca pump station | Design and procurement stage of the cable and switchboard replacement based on the outcome of the 2020 options study. The motor starters on units 1 and 2 will also be replaced, and some minor building works will occur. | 349 |
| | Bullyard pump station | Continuation of the cable and LV switchboard replacement based on the 2021 options study. Also, refurbishment of pump unit 3 pump, motor and discharge and non-return valves based on current known condition. | 654 |
| | Abbotsford pump station – Switchboard | The switchboard at Abbotsford pump station is coming towards the end of its life, and it is prudent to fully assess its condition and prepare options for replacing it with a modern equivalent if needed. The design and procurement stage will also occur in 2022 if replacement or refurbishment is recommended. | 179 |
| | Gooburrum pump station – Switchboard and cabling | The switchboard and cabling at Gooburrum pump station are coming towards the end of their life, and it is prudent to fully assess their condition and prepare options for replacing them with a modern equivalent if needed. The design and procurement stage will occur in 2023 if replacement or refurbishment is recommended. | 29 |
| | Woongarra System | Refurbishment of regulating gate 9 and bulkhead guides at the bench flume; a comprehensive inspection of the balancing storage to comply with the Queensland Dam Safety Condition Schedule; and some minor fencing repairs along the main channel. | 117 |
| | Isis Balancing Storage | Review of the CRA to identify hazards and prioritise the recommendations to address them; and a comprehensive dam safety inspection in accordance with the Queensland Dam Safety Condition Schedule. | 218 |
| | Other works | The balance of the 2021/22 program consists of motor, pump and valve works at other pump stations; screen and gate refurbishments on channels and storages; and other minor works. | 211 |
| | **2021/22 Total** | | **2115** |
| 2022/23 | Abbotsford pump station – Switchboard | This is the installation and commissioning phase of the switchboard replacement, based on the options and design from 2022. | 80 |
| | Gooburrum pump station | Pump unit 2 pump, motor and suction and discharge valve refurbishment based on current known condition; HV testing; and electric cable and switchboard replacement based on 2022 options study. | 574 |
| | Walker Street pump station | Pump unit 3 pump and suction, discharge and non-return valve refurbishments based on current known condition. | 76 |
| | Quart Pot Creek pump station | Programmable logic controller (PLC) and supervisory control and data acquisition (SCADA) system installation based on the 2018/19 options analysis; HV testing every three years in accordance with Sunwater's standards; pump unit 3 discharge valve refurbishment based on current known condition; and switchboard 2 replacement options study as it is coming towards the end of its life. | 338 |
| | Don Beattie pump station | HV testing every three years in accordance with Sunwater's standards; switchboard 2 replacement options study as it is coming towards the end of its life; and meter compliance and accuracy tests. | 48 |
| | Meter replacements | This is an allowance to replace failed customer meters in the entire scheme. If meters are not replaced, the funds will remain in the annuity. | 370 |
| | Bullyard pump station | Pump unit 4 discharge and non-return valves, actuator and pump refurbishment. | 158 |

| Year | Project title | Project scope | Forecast $'000 |
|---|---|---|---|
| | Other works | The balance of the 2022/23 program consists of regulating gate and weed screen refurbishments; flow meter replacements; and other minor works. | 412 |
| | **2022/23 Total** | | **2056** |
| 2023/24 | Bullyard pump station | Refurbishment of suction valves on all pumps, and refurbishment of discharge and non-return valves on pump unit 1. | 172 |
| | Bingera System | Concrete channel repairs; regulating gate refurbishment on gate 1 on Bingera main channel; refurbishment of submerged disk valve on break pressure structure 2; refurbishment of inlet and outlet gates on a reservoir; and customer meter replacements. | 195 |
| | Bucca pump station | Refurbishment of the pump and discharge, non-return and suction valves on pump unit 2. | 85 |
| | Gooburrum pump station | Switchboard and cable replacements; and air receiver replacement. | 688 |
| | Gooburrum System | Refurbishment of regulating gate 1; refurbishment or replacement of Bullyard storage inlet and outlet gates; Moore Park 1 inlet screen replacement; weed screen replacement on AC02 on Moore Park main channel; and customer meter replacements. | 140 |
| | Woongarra System | Pump unit 4 pump and motor refurbishment based on current known condition; pump unit 1 suction, discharge and non-return valve refurbishment; 20-year dam safety review of Woongarra Balancing Storage in accordance with the Queensland Dam Safety Condition Schedule; regulating gate refurbishments; and other minor works. | 490 |
| | Don Beattie pump station | Pump unit 2 pump, motor and suction valve refurbishment based on current known condition, and other minor works. | 288 |
| | North Gregory pump station | Cable and switchboard options study; and pump unit 2 non-return valve, discharge valve and pump refurbishment. | 73 |
| | Isis Balancing Storage | 20-year dam safety review in accordance with the Queensland Dam Safety Condition Schedule. | 332 |
| | Other works | The balance of the 2023/24 program consists of fencing upgrades; meter replacements; pump refurbishments; and minor electrical works. | 203 |
| | **2023/24 Total** | | **2666** |
| 2024/25 | Bingera System | Refurbishment or replacement of customer meters; channel fencing; break pressure structure metal work replacement; and screen replacements on balancing storages. | 186 |
| | Don Beattie pump station | HV switchboard design, procurement and replacement; LV switchboard replacement; fire alarm replacement; rising main survey; suction and delivery line blast and paint; inlet screen refurbishment; and general building maintenance. | 1013 |
| | Woongarra pump station | Pump unit 5 pump and motor refurbishment; and cooling water system replacement on pump units 1 to 3. | 280 |
| | Walker Street pump station | Pump unit 4 motor and suction and discharge valve refurbishment; general building maintenance; and SCADA computer replacement. | 85 |
| | Quart Pot Creek pump station | Electric cable and HV switchboard replacement; LV switchboard refurbishment; general building maintenance; and common control refurbishment. | 619 |

| Year | Project title | Project scope | Forecast $'000 |
|---|---|---|---|
| | Bucca pump station | Pump unit 1 suction, discharge and non-return valve refurbishment. | 55 |
| | Tirroan pump station | General building maintenance and electric cable replacement. | 121 |
| | North Gregory pump station | LV switchboard replacement and electric cabling design and procurement. | 74 |
| | Woongarra System | Regulating gate refurbishments; meter replacements; fencing work; and gate and guide refurbishments in the channel system. | 404 |
| | Gooburrum System | Regulating gate refurbishments; meter replacements; discharge valve refurbishment; and gate and guide refurbishments in the channel system. | 188 |
| | Other works | The remainder of the works include meter replacements; pipework refurbishment; channel screen, gate and guide refurbishments; and minor electrical works. | 217 |
| | **2024/25 Total** | | **3242** |
| 2025/26 | Bingera System | Fence, road and access crossing refurbishments; meter replacements; break pressure structure pipework refurbishments; screen and guide replacements; and minor building and electrical works. | 267 |
| | Gooburrum System | Fence and road refurbishments; customer meter replacements; inlet gate refurbishments on G6; and HV testing at the pump station in accordance with Sunwater's HV electrical policy. | 128 |
| | Don Beattie pump station | Common control system and HV switchboard replacements; flow meter replacement; and other minor works. | 1109 |
| | Woongarra pump station | Pump unit 1 pump and motor refurbishments; and HV testing in accordance with Sunwater's HV electrical policy. | 222 |
| | Isis Balancing Storage | 20-year dam safety review in accordance with the Queensland Dam Safety Management Guidelines and a CRA to identify the prioritisation schedule for the safety review recommendations. | 353 |
| | Meter replacements | Customer meter replacements in the Gin Gin, Isis and Woongarra systems. | 253 |
| | Isis System | Cable and switchboard replacements at North Gregory pump station; HV testing in accordance with Sunwater's HV electrical policy; screen and gate replacements at Fairnsfield and North Gregory balancing storages; and road and fencing refurbishments in the general system. | 305 |
| | Other works | The remainder of the works include road and fencing refurbishments in the Abbotsford and Woongarra systems; valve refurbishments at Walker St pump station; and other minor gate and screen works. | 211 |
| | **2025/26 Total** | | **2848** |

# Appendix 5—Gin Gin main channel and Monduran pump station annuity-funded projects for 2020/21 to 2025/26

The below table sets out Sunwater's currently planned Gin Gin main channel and Monduran pump station annuity-funded projects for the 2020/21 to 2025/26 period. Customers in the Bundaberg Distribution Service Contract contribute towards 95 per cent of these costs.

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 | Total forecast project costs $'000 | Distribution share of forecast project costs $'000 |
|---|---|---|---|---|
| 2020/21 | Monduran pump station – Refurbish pump unit 1 | Refurbishment of pump, motor and suction, discharge and non-return valves on pump unit 1 based on current known condition. None of these units have previously been refurbished. | 245 | 233 |
| | Monduran pump station – Replace access stairs | Replacement of the access stairs is needed as the metal work is corroding and boards are splitting. | 100 | 95 |
| | Monduran pump station – Variable speed drives (VSDs) options study | The efficiency of pump units at Monduran pump station could be improved by installing VSDs to counter the change in head when the dam storage level changes. An options study will determine if it is cost-effective to install the VSDs. | 21 | 20 |
| | Monduran pump station – Switchboard options study | The condition assessment on the HV switchboard at the pump station identified some minor safety hazards that need to be addressed to keep operators safe. Options will be identified and included in the 2022 switchboard refurbishment project. | 14 | 13 |
| | Gin Gin main channel – Rectify bank slips | Some minor bank slips were identified during a study to determine the impacts of the main channel failing. The slips will be rectified. | 38 | 36 |
| | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel will be replaced to maintain adequate levels of public safety. | 27 | 26 |
| | Other works | There are no other annuity-funded projects planned for 2020/21. | - | - |
| | **2020/21 Total** | | **445** | **423** |
| 2021/22 | Monduran pump station – Refurbish pump unit 2 | Refurbishment of pump unit 2 pump and non-return, discharge and suction valves based on current known condition. | 149 | 142 |

| Year | Project title | Project scope | Total forecast project costs $'000 | Distribution share of forecast project costs $'000 |
|---|---|---|---|---|
| | Monduran pump station – Refurbish HV switchboard | The HV switchboard will undergo some small refurbishment work that has been identified during recent condition assessments. It will include overcoming safety hazards, subject to a 2020/21 options study. | 39 | 37 |
| | Monduran pump station – Install VSDs | Installation of VSDs on the pumps will occur if the 2020/21 options study determines it is cost-effective to retrofit these units. | 786 | 747 |
| | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel will be replaced to maintain adequate levels of public safety. | 28 | 27 |
| | Other works | There are no other annuity-funded projects planned for 2021/22. | - | - |
| | **2021/22 Total** | | **1002** | **953** |
| 2022/23 | Monduran pump station – Refurbish pump unit 4 | Pump unit 4 discharge, reflux and suction valves will be refurbished based on current known condition. There is no record of these having been refurbished previously. | 60 | 57 |
| | Monduran pump station – HV switchboard testing | Sunwater's HV switchboard testing standard requires condition assessment and safety testing every three years to ensure that the boards remain functional and safe for operators. | 12 | 12 |
| | Monduran pump station – Meter testing | Bulk water meters undergo tests every 10 years to ensure they remain functional and within the prescribed accuracy range. | 32 | 30 |
| | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel will be replaced to maintain adequate levels of public safety. | 29 | 28 |
| | Other works | There are no other annuity-funded projects planned for 2022/23. | - | - |
| | **2022/23 Total** | | **133** | **127** |
| 2023/24 | Monduran pump station – Refurbish control system | Refurbishment of the control system at Monduran pump station (PLC, monitors) to maintain continuity of supply. | 126 | 120 |
| | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel will be replaced to maintain adequate levels of public safety. | 30 | 28 |
| | Other works | There are no other annuity-funded projects planned for 2023/24. | - | - |
| | **2023/24 Total** | | **156** | **148** |
| 2024/25 | Monduran pump station – Replace SCADA computer | SCADA computer replacement and updating of the SCADA program occurs every five years to ensure the pumps remain operable. | 15 | 15 |
| | Monduran pump station – Replace switchboard cubicle | The LV switchboard runs on a vacuum priming system. The system's control cubicle is showing signs of deterioration and needs to be replaced. | 11 | 10 |
| | Monduran pump station – Replace pump and motor | The town water supply pump and motor that provide water to the pump station are starting to corrode and need to be replaced to ensure that water to the facilities at the pump station continues. | 20 | 19 |

| Year | Project title | Project scope | Total forecast project costs $'000 | Distribution share of forecast project costs $'000 |
|---|---|---|---|---|
| | Monduran pump station – Replace LV switchboard | The external coating and internal wiring on the LV switchboard are brittle, which poses a safety and supply risk. The switchboard will be replaced. | 91 | 86 |
| | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel will be replaced to maintain adequate levels of public safety. | 31 | 29 |
| | Other works | There are no other annuity-funded projects planned for 2024/25. | - | - |
| | **2024/25 Total** | | **168** | **159** |
| 2025/26 | Gin Gin main channel – Replace fencing | Sections of fencing along the main channel and Siphon H (close to Gin Gin school) will be replaced to maintain adequate levels of public safety. | 50 | 48 |
| | Monduran pump station – HV switchboard testing | Sunwater's HV switchboard testing standard requires condition assessment and safety testing every three years to ensure that the boards remain functional and safe for operators. | 15 | 14 |
| | Monduran pump station – Replace uninterruptible power supply (UPS) | The UPS for the SCADA computer will be replaced to ensure power supply when mains power is cut. | 20 | 19 |
| | Gin Gin main channel – Replace weed deflector | The weed deflector at Chainage 28,140m is deteriorating and needs to be replaced to prevent blockages. | 20 | 19 |
| | Gin Gin main channel – Replace water level sensor | Water level sensors along the main channel provide confirmation to operators that the channel is not being overfilled and/or blocked which could cause overflows. One of the sensors is at the end of its life but will only be replaced if the data it provides is inaccurate. | 13 | 12 |
| | Other works | There are no other annuity-funded projects planned for 2025/26. | - | - |
| | **2025/26 Total** | | **118** | **112** |

## Contact us

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

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