



2018/19 to 2023/24 Network Service Plan

St George Bulk Water Service Contract

31 July 2018

Final

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Disclaimer

This Network Service Plan (NSP) 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 NSP relates, and the operations and activities actually undertaken by SunWater during the relevant periods, may vary materially from the information contained in this NSP. This NSP should not be relied upon beyond its purpose as a tool for consultation and you should not rely on the information contained in this NSP 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 NSP or the information contained within it.

Our plan for St George

We’re focused on reliability, efficiency and safety, ensuring through ongoing consultation that the St George Bulk Water Service Contract continues to meet the needs and expectations of our diverse customer base.

In this Network Service Plan (NSP) we outline a range of proposed immediate refurbishment and longer-term improvement projects, and provide a detailed breakdown of anticipated costs for review.

Our focus during the 2018/19 to 2023/24 NSP period will be on ensuring dam safety compliance is maintained and that refurbishment and corrective work identified through annual and five yearly comprehensive inspections at Beardmore Dam and Jack Taylor Weir are implemented safely, timely and efficiently. We will be continuing to replace customer meters on an as needs basis to ensure our customers have accurate water metering in place. In the immediate future, works have also been scheduled to address the sand boils in Thuraggi Channel to ensure the ongoing safety and reliability of Beardmore Dam.

Together with continuing to implement an efficient and effective preventative maintenance program, we are focused on ensuring the Service Contract’s assets continue to perform reliably.

It is important to us that our customers are consulted in making important decisions. We welcome and encourage your feedback on this NSP, and look forward to working with you to deliver the programs of work.



John Kelly
Area Operations Manager South

1. Introduction

A Network Service Plan details a range of proposed immediate and longer-term improvement projects, and provides a detailed breakdown of anticipated costs for review.

NSPs are an important part of our asset management framework, feeding into our strategic asset management and corporate strategic plans, as illustrated in **Appendix 1**.

The purpose of this year’s NSP is twofold:

1. to consult with customers on routine and non-routine expenditure throughout the coming financial year
2. to present to customers SunWater’s projected efficient costs for the six year period from 2018/19 to 2023/24.

In particular, the NSP covers:

- past performance for routine and non-routine expenditure
- forecast routine and non-routine expenditure for 2018/19 to 2023/24
- the long-term outlook for material non-routine expenditure.

In this NSP, the focus of consultation was the draft budget figures for 2018/19 and thereafter. We have retained prior year actual results in **Appendix 2** for reference, as requested by customers.

Input from customers is a valuable part of SunWater’s planning processes and ensures that we invest in areas which support the services we provide to customers. Figure 1 below shows how SunWater and customers work together in relation to NSPs. SunWater has consulted with the Irrigator Advisory Committee (IAC) on the draft NSP and feedback from the Committee has been considered and incorporated where appropriate.

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

Email: nspfeedback@sunwater.com.au

Post: NSP Feedback
PO Box 15536 City East
Brisbane Qld 4002

We consider and respond to all submissions, publishing all responses on our website.

Figure 1: Customer consultation and Network Service Plans



2. Delivering services to customers

At SunWater we are committed to working collaboratively with our customers to deliver value and fit-for-purpose water solutions. SunWater’s Customer Service Commitment can be viewed at: www.sunwater.com.au

2.1 Our customers

The majority of our 169 customers in this Service Contract are irrigators with crop types including cotton, wheat, grapes, peanuts, carrots, mung beans, chickpeas, onions and other small crops. Water is also supplied to the town of St George and industrial users, including an abattoir and tourist accommodation.

The water entitlements for each customer segment are shown in Table 1.

Table 1: Water entitlement and usage data

Customer Segment	Total Water Entitlements (ML)	High Priority Water Entitlements (ML)	Medium Priority Water Entitlements (ML)	Water Deliveries 2016/17 (ML)
Irrigation ¹	81,471	3000	78,471	86,879
Urban	3024	0	3024	1336
Industrial	60	0	60	4
SunWater ¹	20	0	20	130
Total	84,575	3000	81,575	88,349

1. Pending confirmation of new local management entity arrangements.

The 2018/19 charges and cost per megalitre are shown in Table 2. For the full suite of charges that apply, refer to SunWater’s website.

Table 2: Irrigation charges for 2018/19¹

Product		2018/19 (\$/ML)	Cost (\$/ML) ^{2,3}	Subsidy (\$/ML)
Bulk water customers				
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	21.38	20.57	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	1.34	1.63	0.29
Bulk water customers who are also customers of a distribution system				
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	20.35	20.57	0.22
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	1.34	1.63	0.29

1. This table includes bulk water charges only. From 1 July 2018 distribution charges will be the responsibility of Mallawa Irrigation Ltd.
2. Costs reflect lower bound cost recovery ie recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.
3. The notional High Priority Allocation Charge cost per megalitre is \$32.58.

2.2 Service targets

SunWater and customers have agreed Water Supply Arrangements and Service Targets for the St George Bulk Water Service Contract.

Table 3 below sets out our performance in 2016/17 against the service targets for: issuing notification of planned shutdowns; the duration of unplanned shutdowns; and the frequency of interruptions to supply.

In addition, SunWater will be setting targets for the time it takes to resolve complaints and will be able to report our performance against these targets in future NSPs.

Table 3: Service targets and performance

Service target		Target	Number of exceptions 2016/17
Planned shutdowns – notification	For shutdowns planned to exceed 2 weeks	8 weeks	0
	For shutdowns planned to exceed 3 days	2 weeks	0
	For shutdowns planned to be less than 3 days	5 days	0
Unplanned shutdowns – duration¹	Unplanned shutdowns during Peak Demand Period	48 hours	0
	Unplanned shutdowns outside Peak Demand Period	5 working days	
Maximum number of interruptions²	Planned or unplanned interruptions per water year	6	0

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 bulk and distribution customers in the scheme that have been interrupted in excess of the target.

2.3 Key infrastructure

Table 4 lists the key infrastructure used to deliver bulk water services to our customers in St George.

Table 4: Key infrastructure

Asset	Description	Total storage capacity (ML)
Beardmore Dam	Earth and rock fill embankment with a central mass concrete gated spillway. Classified as a referable dam under the <i>Water Supply (Safety and Reliability) Act 2008</i> .	81,700
Jack Taylor Weir	Mass concrete structure with a gated ogee crest and bucket	10,100
Buckinbah Weir	U-shaped shallow, part levee, part spillway, grassed earth embankment	5120
Moolabah Weir	Earth fill embankment with a concrete faced spillway	3950

3. Financial summary – revenue and expenditure

All financial figures in this report are presented in nominal dollars.

A high-level summary of the budgeted financial performance of the St George Bulk Water Service Contract is presented in Table 5.

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 Queensland Competition Authority (QCA) as part of its review of irrigation charges and is intended to allow SunWater to recover its prudent and efficient costs of operating the Service Contract.

SunWater anticipates an increase in revenue for the St George Bulk Water Service Contract in 2018/19.

In 2018/19, SunWater plans to increase routine and non-routine expenditure for the St George Bulk Water Service Contract, with a focus on projects that improve efficiency and performance, and allow us to deliver the best possible service to our customers. This will continue to be our focus throughout the upcoming price path period.

Further detail on the planned spend and annuity revenue is outlined on subsequent pages of this NSP and a further breakdown of expenditure by type can be found in **Appendix 2**.

Table 5: Service contract financial summary¹

St George Service Contract	2014/15 Actual \$'000	2015/16 Actual \$'000	2016/17 Actual \$'000	2017/18 Estimate \$'000	2018/19 Forecast \$'000
Revenue					
Irrigation	347.7	355.8	364.6	377.8	1845.0
Community Service Obligation	-	-	-	-	-
Industrial ²	6.2	6.2	6.3	6.5	6.6
Urban ²	176.1	179.1	181.9	185.2	189.9
Revenue transfers ³	1004.7	1090.6	1135.4	1085.1	-
Drainage	-	-	-	-	-
Other	(16.8)	4.0	3.6	5.0	5.0
Insurance proceeds – flood	-	-	-	-	-
Revenue Total	1517.8	1635.8	1691.9	1659.6	2046.5
Less – Routine expenditure	(782.8)	(904.1)	(739.5)	(927.4)	(1204.0)
Less – Non-routine expenditure					
Annuity funded	(497.8)	(770.1)	(1315.1)	(574.0)	(1592.3)
Non annuity funded ⁴	-	(0.4)	-	-	-
Surplus (deficit)	237.1	(38.8)	(362.7)	158.2	(749.8)

- Totals may not add due to rounding.
- 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 St George 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. The QCA established the transfer cost for irrigation supplies at the cost reflective bulk water tariff. From 1 July 2018, due to the transfer of the St George distribution system to Mallowa Irrigation Ltd, revenue transfers will be nil and instead appear as revenue from irrigation.
- This is expenditure which has not been funded by irrigation customers.

As part of our commitment to transparency, Figure 2 and Figure 3 show a high-level breakdown of total Service Contract costs. The item 'Annuity Contribution' refers to the annualised renewals annuity component of the Service Contract's total costs.

Figure 2: Breakdown of total service contract costs – 2018/19 forecast

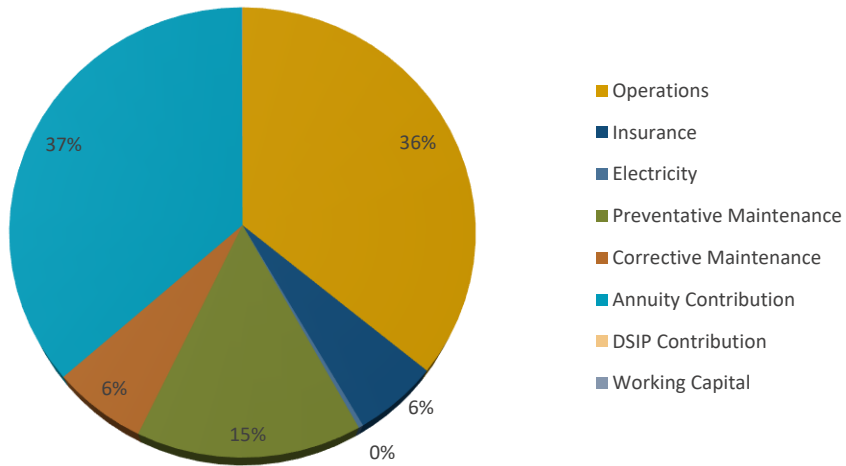
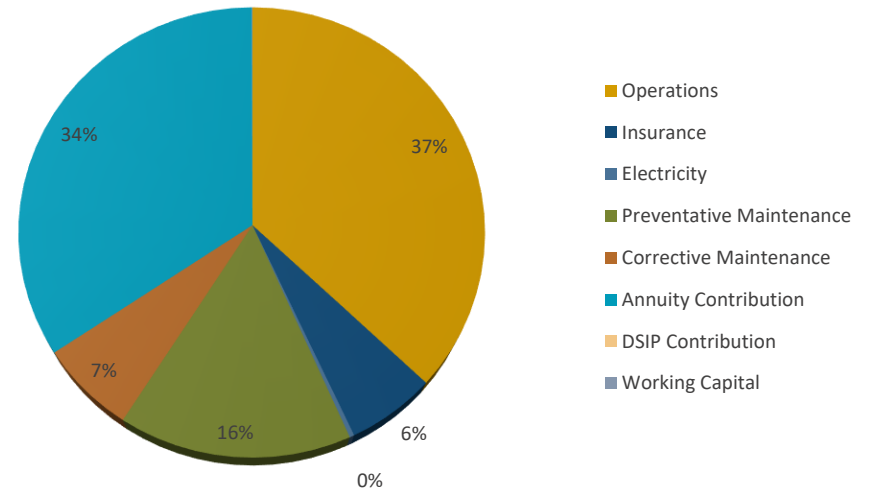


Figure 3: Breakdown of total service contract costs – 2019/20 to 2023/24 forecasts



4. Cost of delivering services – routine expenditure

Routine (or annual) expenditure includes funds for operations activities (operations, electricity and insurance), preventative maintenance and corrective maintenance.

SunWater has budgeted an increase in St George Bulk Water Service Contract's routine operating expenditure in 2018/19 (refer to Table 6). SunWater's proposed budgets for routine operating expenditure for 2019/20 to 2023/24 are also presented in this table.

From 2019/20, SunWater has built into forecast costs an efficiency saving of 0.2 per cent every year (cumulative).

Following consultation with customers on the draft NSPs and a further review of potential savings in non-direct costs, SunWater has included an additional one-off reduction in routine non-direct expenditure from 2019/20 onwards comprising: an 8.00 per cent reduction in corporate support costs, a 1.00 per cent reduction in local area support costs and a 1.36 per cent reduction in indirect costs.

The data presented in Table 6 includes direct expenses and a share of local area support costs, indirect costs and corporate support costs. For a more detailed breakdown and explanation of these costs, refer to **Appendix 2**.

Table 6: Routine operating expenditure^{1,2}

St George Service Contract	2016/17			2017/18 ³		2018/19 ³		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Estimate \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000
Electricity	7.5	11.1	(3.6)	6.5	11.4	6.0	11.6	6.0	5.9	6.1	6.3	6.2
Insurance	114.4	43.8	70.6	114.4	44.9	108.4	46.0	110.9	113.4	116.1	118.7	121.5
Operations	313.6	637.3	(323.7)	567.7	653.2	680.6	669.6	672.5	690.3	708.5	727.3	746.5
Operations Total	435.5	692.2	(256.7)	688.5	709.5	795.0	727.2	789.3	809.6	830.7	852.3	874.1
Preventative maintenance	282.0	234.0	48.0	142.1	239.8	288.1	245.8	284.6	292.1	299.8	307.7	315.8
Corrective maintenance	22.0	144.5	(122.5)	96.8	148.1	120.8	151.8	119.4	122.6	125.8	129.1	132.5
Routine Total	739.5	1070.7	(331.2)	927.4	1097.5	1204.0	1124.9	1193.4	1224.3	1256.3	1289.1	1322.5

1. Totals may not add due to rounding.

2. SunWater's 2019/20 to 2023/24 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.

3. For 2017/18 and 2018/19 SunWater has included and reported against the 2016/17 QCA recommended costs adjusted for inflation which was assumed to be 2.5%.

4.1 Operations

St George Bulk Water Service Contract's total operations budget in 2018/19 is 9.32 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely due to higher insurance costs than what the QCA forecast.

For further detail on what is included in operations expenditure, refer to **Appendix 3**.

Electricity

One of the key challenges for SunWater is managing the cost of electricity. SunWater is therefore targeting several initiatives over the next 24 months to help manage these costs, including:

- annual tariff reviews to match electricity usage with the best electricity tariff
- testing the contestable market for potential savings
- ensuring our assets are operating as efficiently as possible
- operational management of usage to reduce the impact of demand charges.

Insurance

Insurance is one of SunWater's largest expenditure items and 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.

Although insurance premiums are forecast to increase globally in 2018/19, SunWater is forecasting a small reduction in our insurance costs in 2018/19 compared to the 2017/18 budget as a result of the review of our insurance coverage and recent market testing.

4.2 Preventative maintenance

Preventative maintenance underpins the ongoing operational performance and service capacity of St George Bulk Water Service Contract's physical assets.

Preventative maintenance is cyclical in nature with a typical interval of 12 months or less, however, the intervals can be longer. St George Bulk Water Service Contract's preventative maintenance for 2018/19 is budgeted to be 17.18 per cent above the QCA's recommended costs (adjusted for inflation). Preventative maintenance expenditure is returning to trend from an abnormally low base in 2017/18.

For more information on what is included as preventative maintenance, refer to **Appendix 3**.

4.3 Corrective maintenance

Corrective maintenance is identified in several ways including:

- through the performance of preventative maintenance
- operation of assets and equipment
- operational inspections where defects are identified
- through continuous monitoring by control systems, hazard inspections, safety audits and from incident and accident investigation outcomes.

Corrective maintenance includes activities to correct unexpected failures or to return an asset to an acceptable level of performance or condition. While these are difficult to forecast with accuracy, history has shown that such events can be expected and need to be factored into expenditure forecasts. SunWater conducts two types of corrective maintenance: scheduled and emergency.

Corrective maintenance expenditure forecasts include provision for labour, materials and plant hire, but do not include costs of damage arising from major unexpected events, such as floods. These costs are categorised as non-routine corrective maintenance, which is discussed in the following section.

St George Bulk Water Service Contract's corrective maintenance for 2018/19 is budgeted to be 20.41 per cent below the QCA's recommended costs (adjusted for inflation).

Scheduled corrective maintenance

Scheduled corrective maintenance is maintenance that can be planned and scheduled. For a list of what this typically includes, refer to **Appendix 3**. This work is managed on a risk and priority basis with as much forward planning as possible to cater for pricing cycles.

Emergency corrective maintenance

Emergency corrective maintenance (or breakdown maintenance) includes works required to restore system supply and capacity or equipment operation after an unplanned event. It is carried out immediately to restore normal operation or supply to customers or to meet regulatory obligations (eg rectify a safety hazard). For a list of what this typically includes, refer to **Appendix 3**.

5. Cost of delivering services – non-routine expenditure

SunWater’s approach to managing non-routine expenditure is underpinned by the concept of ‘optimised life cycle cost’, which seeks to optimise capital outlays and ongoing maintenance spend.

Our whole-of-life asset replacement and maintenance strategy looks at the risk and condition of each asset and uses this information to estimate the future work required to ensure it will continue to provide the required level of service into the future.

Having up-to-date knowledge of asset conditions is essential to this process. Information from our continuous program of asset inspections and condition assessments feeds into the annual review of the renewals program.

Non-routine expenditure is funded via an annuity. This expenditure could be capital or operating expenditure. The annuity approach acknowledges a long-term view of renewals spend and seeks to reduce the burden on future generations of water users.

The QCA applied a 20 year planning period for the purpose of calculating the 2012/13 to 2016/17 renewals annuity. For 2018/19 to 2023/24, SunWater is proposing to adopt a 30 year planning period. Our forecast annuity funded non-routine expenditure presented in Table 7 and elsewhere in this NSP reflects this proposal.

While the immediate program for the 2018/19 budget is well defined, estimates become more uncertain further into the planning timeline. As such, the program of works is not a specific forecast of when individual projects are expected to be executed, but rather a portfolio-level estimate based on the best-available risk and condition information for the Service Contract as a whole.

At SunWater, we focus on ensuring our assets are maintained to the required standard at the lowest cost. Our review of the renewals profiles also extends to considering the key asset replacement assumptions so that the profile better reflects likely spend each year and moves away from assuming assets are replaced at end of standard life, based on their replacement costs.

Table 7 sets out our non-routine annuity and non-annuity funded expenditure. Non-routine annuity expenditure is greater than the QCA forecasts in 2016/17 and 2018/19 as a result of unplanned works at Thuraggi Channel. During repair works in Thuraggi Channel in June 2015, sand boils and substantial seepage from beside the outlet training walls were observed.

SunWater carried out a number of investigation works and testing in 2016/17 to identify the source and pathway of seepage, and to determine the extent of the saturated sands. Following this, we completed an options study in 2017/18 to develop a possible long-term solution. This study recommended extending the outlet culvert downstream.

A temporary raising of Moolabah Weir located downstream of the outlet structure was undertaken in November 2017 to address the sand boil issue. This involved the bolting of half box culvert units to the concrete crest of the weir. A long-term solution to the sand boil issue will be implemented in 2018/19. Works will include increasing the length of the outlet channel and twin conduits about 40 metres downstream.

Details of the major non-routine projects planned for the period from 2018/19 to 2023/24 are set out in **Appendix 4**.

Table 7: Non-routine expenditure¹

St George Service Contract	2016/17			2017/18 ²		2018/19 ²		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Estimate \$'000	QCA Forecast \$'000	SunWater Forecast \$'000	QCA Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000
Annuity funded												
Operations	98.3	-	98.3	7.6	-	10.0	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Corrective maintenance (flood)	-	-	-	-	-	-	-	-	-	-	-	-
Renewals	1216.7	542.4	674.4	566.4	593.5	1582.4	71.5	514.2	183.8	466.7	519.0	183.7
Non-routine total	1315.1	542.4	772.7	574.0	593.5	1592.3	71.5	514.2	183.8	466.7	519.0	183.7
Non annuity funded												
Other	-			-		-		-	-	-	-	-

1. Totals may not add due to rounding.

2. The QCA Forecast for 2017/18 and 2018/19 are based upon the modelling undertaken by the QCA as part of the 2012 irrigation pricing review.

6. 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/rehabilitation of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted non-routine spend, are shown in Table 8 below.

The QCA and SunWater closing balances will differ due to differences in the expenditure profile allowed by the QCA in 2012 and actual expenditure incurred by SunWater between 2012/13 and 2018/19.

For example, as highlighted above, SunWater incurred expenditure for unexpected works on the Thuraggi Channel. These works involved extensive investigations into sand boils affecting the outlet structure to the channel and

temporary mitigation works to address immediate dam safety concerns. SunWater is proposing that the opening balance of the annuity in 2020/21 be adjusted to remove 50 per cent of the expenditure incurred to date (\$437,000). This proposed adjustment recognises that SunWater initially underestimated the complexity of the project and the time it would take to complete and did not keep customers adequately informed about the project. SunWater has subsequently reviewed our project governance around dam safety related projects to improve the efficiency of similar projects in the future.

SunWater also proposes a further adjustment of \$46,000 to exclude the costs of an inefficiency identified in the procurement process for the refurbishment of the electrical system at Beardmore Dam.

Table 8: Annuity balance¹

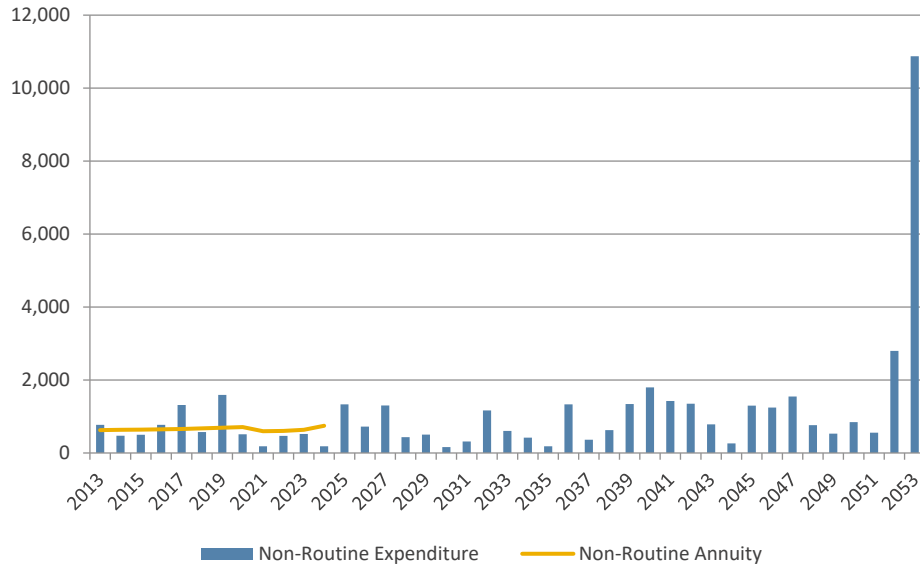
St George Service Contract	2016/17 Actual \$'000	2017/18 Estimate \$'000	2018/19 Forecast \$'000	2019/20 Forecast \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000
Annuity								
Opening balance ²	290.3	(346.0)	(272.5)	(1195.0)	(1111.0) ³	(762.7)	(669.1)	(592.0)
Spend	(1315.1)	(574.0)	(1592.3)	(514.2)	(183.8)	(466.7)	(519.0)	(183.7)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution ⁴	657.0	673.4	690.3	707.5	596.4	604.5	634.8	745.4
Interest/financing costs	21.7	(25.9)	(20.4)	(89.5)	(64.3)	(44.1)	(38.7)	(34.3)
SunWater – Closing Balance	(346.0)	(272.5)	(1195.0)	(1091.2)	(762.7)	(669.1)	(592.0)	(64.6)
QCA – Closing Balance	2193.9	2438.3	3239.7					
Difference	(2540.0)	(2710.8)	(4434.7)					

1. Totals may not add due to rounding.
2. The difference in the closing balance for 2019/20 and the opening balance for 2020/21 relates primarily to expenditure incurred prior to the start of the 2012 price path. For example, flood repairs associated with an insurance claim that were still outstanding in 2012. These amounts have been carried forward to 2020/21 so that they can be considered as part of the QCA's review of expenditure for the new irrigation price path.
3. The opening balance in 2020/21 does not yet incorporate the proposed adjustments to the annuity balance relating to the Thuraggi Channel works and the refurbishment of the electrical system at Beardmore Dam.
4. The annuity contribution is included in the prices paid by customers. It was set by the QCA for 2012/13 to 2016/17 and is rolled forward with CPI for 2017/18, 2018/19 and 2019/20. Thereafter the annuity contribution is based upon SunWater's forecast and will be included as part of SunWater's submission to the QCA for the upcoming price review.

6.1 Overview of annuity-funded, non-routine projects to 2052/53

The estimated renewals expenditure out to 2052/53 is shown in Figure 4 below.

Figure 4: Annuity expenditure to 2052/53 (\$'000)



The renewals annuity presented above is calculated over a 30 year planning period, with projects forecast to occur up to 2052/53 affecting the renewals annuity. The greater the value of the project, the more significant impact upon the renewals annuity.

6.2 Options assessment

SunWater is committed to maintaining assets that are fit for service with the lowest possible lifecycle cost.

In response to a recommendation from the QCA in 2012, SunWater has been preparing options analyses for all material renewals projects within the planning period. SunWater now has the benefit of learnings, having applied this approach for number of years, and has reflected and considered whether it is the most efficient approach or whether there is another way to approach this which provides customers with reassurance that SunWater's renewals expenditure is prudent and justified.

Following consultation with IACs, SunWater has decided to implement a new procedure for options assessments.

SunWater will continue to prepare an options analysis and supporting investigation where:

- there is no obvious solution
- the current maintenance strategy is changing
- technology has changed significantly, or
- there is a high risk in the project execution.

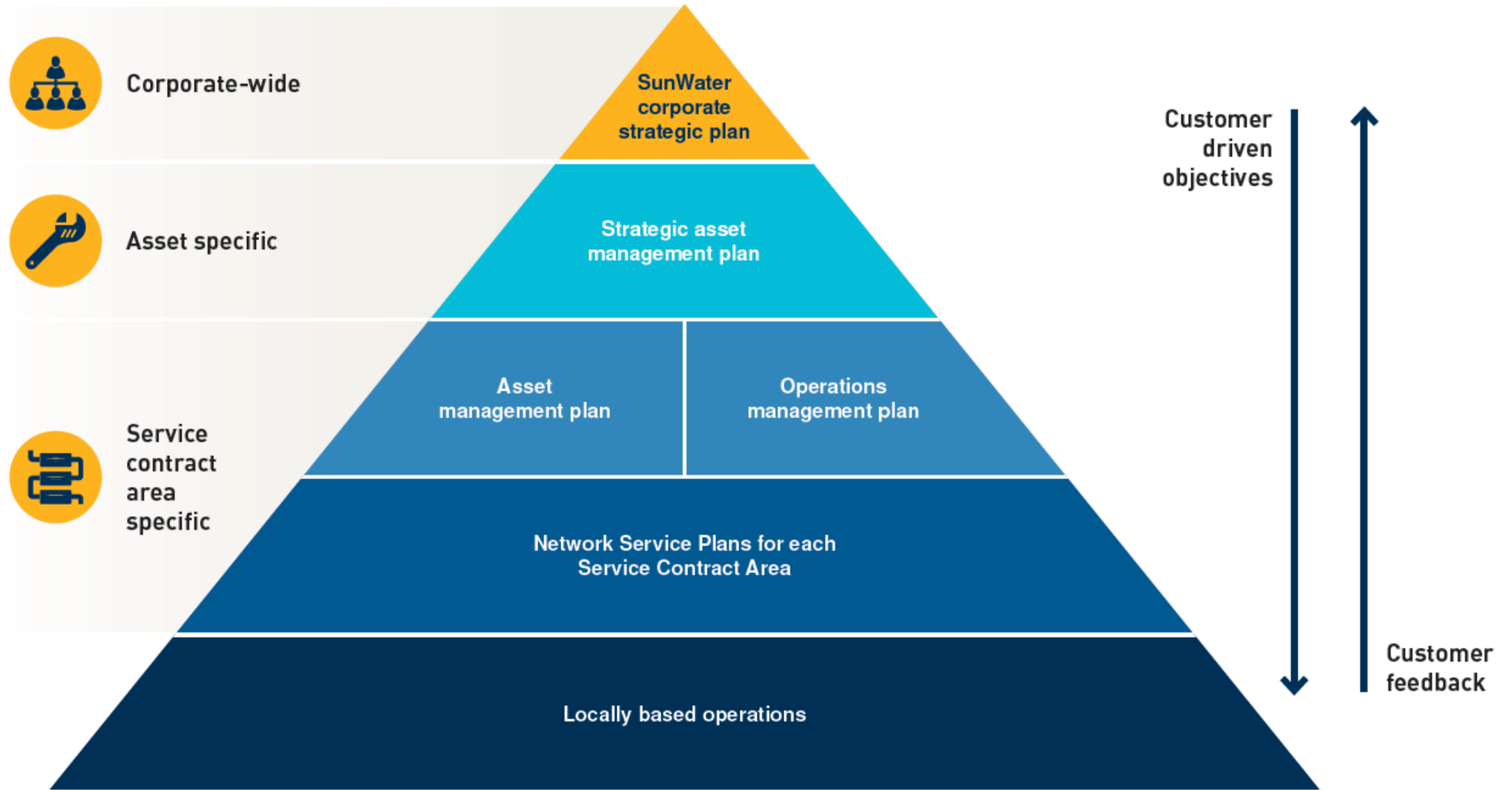
For less complex (more routine) renewals projects with fewer practical outcomes, SunWater will use its engineering knowledge and experience to determine the optimum solution.

This approach takes the emphasis off the value of the renewals project and focuses on solutions and risk. It ensures that SunWater invests resources appropriately in those projects that would benefit from an options analysis.

SunWater will transition to this new approach, given options analyses have already been prepared for the 2018/19 material renewals projects. In the future, the Network Service Plans will identify renewals projects that we expect to prepare an options analysis for under the new approach. Customers will be able to provide feedback through the consultation process.

Appendix 1: SunWater's asset management framework

Figure 5: SunWater's asset management framework



Appendix 2: Total expenditure by expense type

Table 9: Expenditure for activity by type¹

St George Service Contract	2014/15			2015/16			2016/17			2017/18		2018/19		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Estimate \$'000	2016/17 QCA Recommended (Adjusted) \$'000	SunWater Forecast \$'000	2016/17 QCA Recommended (Adjusted) \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000
Routine spend																		
Operations																		
Labour	83.2	164.0	(80.8)	121.4	169.2	(47.9)	86.5	174.6	(88.1)	169.3	179.0	130.1	183.5	131.2	135.0	139.0	143.0	147.2
Contractors	23.5	17.5	6.0	7.9	18.0	(10.1)	10.2	18.3	(8.2)	20.0	18.8	15.0	19.3	15.0	15.4	15.8	16.2	16.5
Materials	5.3	68.8	(63.5)	4.6	71.0	(66.4)	1.8	72.2	(70.5)	6.0	74.0	20.0	75.9	20.0	20.5	21.0	21.5	21.9
Electricity	7.4	9.6	(2.2)	3.5	10.4	(6.9)	7.5	11.1	(3.6)	6.5	11.4	6.0	11.6	6.0	5.9	6.1	6.3	6.2
Insurance	134.9	42.4	92.6	117.8	43.1	74.7	114.4	43.8	70.6	114.4	44.9	108.4	46.0	110.9	113.4	116.1	118.7	121.5
Other	8.7	30.3	(21.6)	6.7	31.0	(24.3)	15.3	31.5	(16.2)	21.0	32.3	20.0	33.1	20.0	20.5	21.0	21.5	21.9
Local area support costs	60.5	-	60.5	104.4	-	104.4	74.3	-	74.3	132.0	-	165.1	-	164.3	168.6	173.0	177.5	182.1
Corporate support costs	37.2	168.5	(131.3)	40.8	165.8	(125.0)	31.3	169.4	(138.2)	79.6	173.7	84.6	178.0	78.2	80.3	82.4	84.5	86.7
Indirect costs	79.3	188.0	(108.7)	142.7	178.3	(35.5)	94.4	171.2	(76.8)	139.8	175.5	245.8	179.9	243.6	250.0	256.5	263.2	270.1
Preventative maintenance																		
Labour	97.3	73.2	24.1	92.2	75.5	16.7	88.9	77.9	11.0	33.1	79.9	70.0	81.9	70.6	72.6	74.7	76.9	79.2
Contractors	23.8	2.7	21.0	28.4	2.8	25.6	25.8	2.9	22.9	30.0	2.9	30.0	3.0	30.1	30.8	31.6	32.3	33.1
Materials	2.4	6.0	(3.5)	5.3	6.2	(0.9)	2.8	6.3	(3.5)	10.0	6.4	10.0	6.6	10.0	10.2	10.5	10.7	11.0
Other	19.5	3.4	16.1	16.4	3.5	12.9	8.4	3.6	4.8	16.0	3.6	16.0	3.7	16.0	16.4	16.8	17.2	17.6
Local area support costs	71.6	-	71.6	79.3	-	79.3	76.5	-	76.5	25.8	-	75.2	-	74.8	76.8	78.8	80.8	82.9
Corporate support costs	36.2	72.0	(35.8)	28.3	70.7	(42.4)	26.7	72.3	(45.5)	16.8	74.1	45.5	75.9	42.1	43.2	44.3	45.5	46.7
Indirect costs	74.5	77.8	(3.3)	89.3	73.8	15.5	52.9	71.1	(18.2)	10.3	72.9	41.4	74.7	41.0	42.1	43.2	44.3	45.5
Corrective maintenance																		
Labour	2.1	44.8	(42.6)	2.0	46.2	(44.2)	2.9	47.7	(44.8)	27.6	48.9	28.4	50.1	28.6	29.4	30.3	31.2	32.1
Contractors	6.3	2.7	3.6	0.5	2.8	(2.4)	7.3	2.9	4.5	15.0	2.9	10.0	3.0	10.0	10.3	10.5	10.8	11.0
Materials	3.1	2.7	0.4	0.7	2.8	(2.1)	5.0	2.9	2.1	5.1	2.9	5.0	3.0	5.0	5.1	5.2	5.4	5.5
Other	1.6	3.2	(1.6)	5.1	3.2	1.9	1.1	3.3	(2.2)	6.0	3.4	6.0	3.4	6.0	6.1	6.3	6.4	6.6
Local area support costs	1.6	-	1.6	3.3	-	3.3	2.5	-	2.5	21.5	-	36.3	-	36.1	37.1	38.0	39.0	40.0
Corporate support costs	1.3	44.2	(42.9)	1.4	43.4	(42.0)	1.5	44.3	(42.8)	13.0	45.4	18.4	46.5	17.0	17.5	17.9	18.4	18.9
Indirect costs	1.6	47.6	(46.0)	2.3	45.1	(42.9)	1.7	43.5	(41.8)	8.6	44.6	16.8	45.7	16.6	17.1	17.5	18.0	18.4
Routine total	782.8	1069.2	(286.4)	904.1	1062.8	(158.6)	739.5	1070.7	(331.2)	927.4	1097.5	1204.0	1124.9	1193.4	1224.3	1256.3	1289.1	1322.5
Non-routine spend																		
Labour	102.1	91.2	10.8	146.7	73.2	73.5	232.8	67.5	165.3	78.0	83.3	241.0	10.0	28.7	13.1	28.2	55.4	23.3
Contractors	174.7	107.2	67.4	277.1	78.4	198.7	590.1	141.0	449.0	309.7	166.5	793.5	20.1	427.4	129.9	367.1	315.7	62.8
Materials	0.5	97.9	(97.4)	21.6	78.4	(56.7)	16.0	142.9	(127.0)	43.6	95.7	93.4	11.5	7.8	12.1	8.2	25.3	35.8
Other	22.9	53.4	(30.5)	21.7	41.4	(19.8)	40.1	30.8	9.3	6.6	35.0	16.6	4.2	-	-	8.5	9.2	11.6
Local area support costs	78.4	119.5	(41.2)	126.1	90.4	35.7	200.2	90.1	110.1	60.8	112.0	148.6	13.5	10.8	10.0	15.6	37.8	17.9
Corporate support costs	44.1	-	44.1	57.1	-	57.1	97.5	-	97.5	51.0	-	156.7	-	23.9	10.9	23.4	46.0	19.3
Indirect costs	75.1	112.5	(37.4)	119.9	82.1	37.8	138.4	70.0	68.4	24.4	101.0	142.5	12.2	15.7	7.7	15.8	29.5	12.9
Non-routine total	497.8	581.8	(84.0)	770.1	443.8	326.2	1315.1	542.4	772.7	574.0	593.5	1592.3	71.5	514.2	183.8	466.7	519.0	183.7
Total spend	1280.6	1651.1	(370.4)	1674.2	1506.6	167.6	2054.6	1613.1	441.5	1501.5	1690.9	2796.3	1196.4	1707.6	1408.2	1723.0	1808.1	1506.2

1. Totals may not add due to rounding.

Direct costs

Direct costs are those costs which are able to be directly attributable to either an asset or a service contract eg maintenance or insurance of an asset or the electricity and other operations costs for a service contract.

Local area support costs

Local area support costs are spread across service contracts managed in each locality. They are costs which support local people doing their jobs eg regional accommodation costs, local administration support and training.

In 2018/19 the St George Bulk Water Service Contract is allocated 1.313 per cent of the forecast total local area support costs. Forecast local overheads in 2018/19 are higher than previous years and now more closely reflect actual local overheads in each region rather than local overheads averaged across SunWater.

Indirect costs

Indirect cost pools capture costs such as billing and customer support, irrigation pricing regulation and asset management (including dam safety, asset systems, channels and drainage) that have not been directly charged. They also include flood room operations, the Inspector-General Emergency Management (IGEM) emergency management program, water planning, hydrographic services, and environmental support costs. Indirect costs are based on a user pays approach eg service contracts without a dam or weir are not apportioned dam safety costs.

In 2018/19 the St George Bulk Water Service Contract is allocated 1.725 per cent of the forecast total indirect costs. Increases in indirect costs allocated to Operations are largely driven by new IGEM costs, which are \$141,000 in 2018/19 for this Service Contract.

Corporate support costs

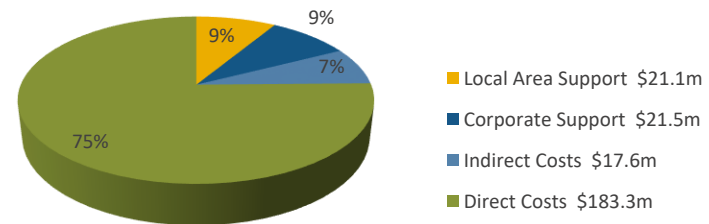
Corporate support costs are more generic than indirect costs and local area support costs, and are spread across all service contacts based on direct labour. They include the cost of human resources and payroll, information and communications technology, corporate communications, legal, property, finance, and internal audit, plus the costs of the Chief Executive Officer, Chief Financial

Officer and the SunWater Board, where these costs are not directly charged to activities within service contracts.

In 2017/18 SunWater completed a corporate restructure which resulted in a net reduction of 20 positions from the business and a reduction in total corporate overhead costs. Despite this, corporate overheads allocated to each service contract have increased since 2017/18. Contributing factors to the increase are: the transfer of St George and potential transfer of Dawson distribution schemes to locally managed entities and less charging of labour to direct costs.

In 2018/19 the St George Bulk Water Service Contract is allocated 0.691 per cent of the forecast total corporate support costs.

Figure 6: Total SunWater cost pools – 2018/19 forecast



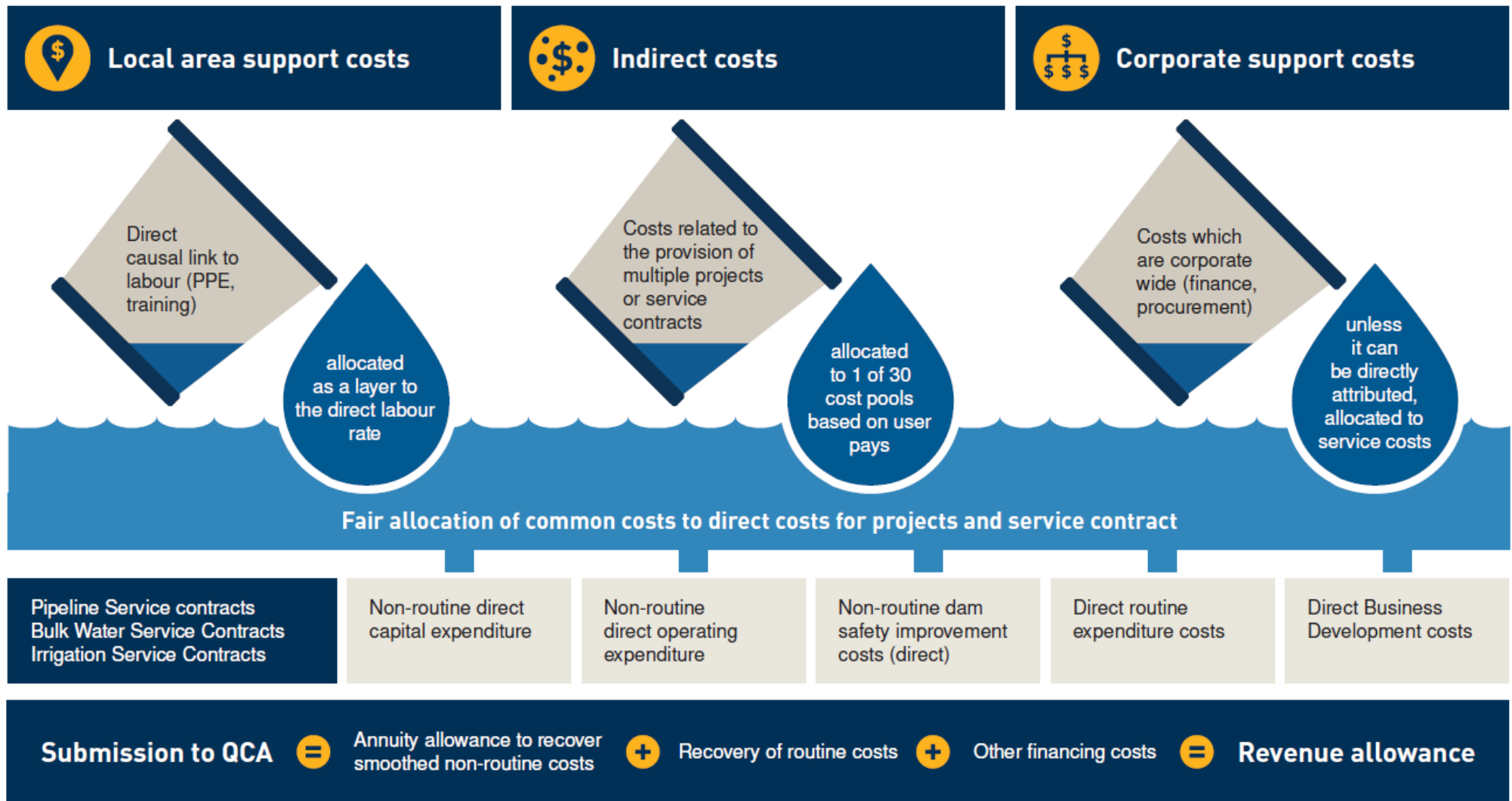
In the 2012 irrigation pricing review, the QCA reviewed and accepted SunWater's methodology for recovering local area support costs, indirect costs and corporate support costs. In 2018 we reviewed the cost allocation methodology and made changes to increase the transparency of local overhead costs and the allocation of corporate support costs to direct expenses. We also:

- removed the cascading of corporate overheads into indirect costs
- made the local overhead rate specific to each region
- simplified the cost drivers to labour only, removing the 5 per cent on direct cash costs excluding labour and electricity.

Forecast figures contained in this NSP reflect this change in approach.

Figure 7 below illustrates the allocation of costs associated with providing services.

Figure 7: How are SunWater's costs allocated to each service contract?



Appendix 3: Routine expenditure

Operations

Operations expenditure includes day-to-day costs associated with management of the Service Contract, water delivery and meeting compliance obligations. Specific activities include the direct and non-direct costs of:

- scheduling and delivering water, including processing water orders, releasing water, regulating and monitoring channel flows, and monitoring customer deliveries
- Emergency Action Plans and seasonal event responses
- meter reading
- administration of water accounts, billing and receipting payments
- customer management, including enquiries, complaints and maintaining the customer service help desk
- Service Contract management, including licences and permits, rates, land management, planning and reporting
- insurance
- monitoring the security of infrastructure and unauthorised access
- managing engagement associated with the Service Contract
- managing enquiries from adjoining landholders and developers that require input from and negotiations with SunWater’s property and legal sections
- dam inspections and other surveillance activities.

Preventative maintenance

Preventative maintenance for the St George Bulk Water Service Contract includes:

- Condition monitoring — the inspection, testing or measurement of physical assets to report and record condition and performance to determine

maintenance requirements. Condition monitoring is carried out on electrical, mechanical and civil assets.

- Servicing — planned maintenance activities carried out routinely on physical assets including valves, gauging stations, cranes, sump pumps and associated equipment.
- Weed control — management of weeds, including spraying and other activities to control nuisance and noxious weeds.

Scheduled corrective maintenance

Scheduled corrective maintenance varies by asset type and typically includes:

- Storages:
 - repairing control gates, valves and concrete structures
 - repairing walls, embankments and spillways.
- Service Contract roads:
 - repairing pot holes and grading roads
 - repairing, replacing, and painting guide posts and signs.
- Meters:
 - repairing bulk water meters and customer meters.

Emergency corrective maintenance

Emergency corrective maintenance typically includes responding to theft or vandalism associated with Service Contract assets.

Appendix 4: Non-routine projects for 2018/19 to 2023/24

Non-routine projects are asset-related projects required to support service delivery which are undertaken less frequently than annually.

Table 10: Non-routine projects (or planning items) 2018/19 to 2023/24

Year	Project Title	Project Scope	Budget (\$'000)
2018/19	Beardmore Dam – Thuraggi Channel repair	Sand boils in the channel immediately downstream of the Thuraggi outlet need to be addressed by increasing the length of the outlet channel and twin conduits about 40 metres downstream along with channel slope protection.	1329
	Beardmore Dam – Upgrade recreational facilities	Fencing and viewing platform upgrades at Beardmore Dam’s recreational facilities.	57
	Beardmore Dam – Crane audit	This project is to derive an individual inspection and maintenance schedule for the winches at Beardmore Dam. Historically, SunWater has applied the relevant Australian Standards; however, there is scope to move away from the inspection frequencies under some circumstances.	33
	Jack Taylor Weir – Crane audit	This project is to derive an individual inspection and maintenance schedule for the winches at Beardmore Dam. Historically, SunWater has applied the relevant Australian Standards; however, there is scope to move away from the inspection frequencies under some circumstances.	33
	Jack Taylor Weir – Decommissioned outlet plugging	The two low-level outlet gates at the weir are in poor condition. It is not known if they have been plugged with concrete to prevent a run-away storage if they fail. This project is to fill them with concrete.	31
	Other works	There are 8 other non-routine projects for 2018/19.	109
	2018/19 Total		1592
2019/20	Beardmore Dam – Thuraggi Channel repair (Contingency)	This is a contingency for the Thuraggi Channel repairs.	307
	Beardmore Dam – Design and install Thuraggi Channel meters	Releases into Thuraggi Channel need to be metered for accurately recording volumes released into the irrigation schemes. This will allow better water management at the dam.	168
	Meter replacements	This is an allowance to replace failed customer meters. If no meters fail, the funds will remain in the annuity.	13

Year	Project Title	Project Scope	Budget (\$'000)
	Other works	There are 2 other non-routine projects for 2019/20.	26
	2019/20 Total		514
2020/21	Beardmore Dam winches and crane structure – 10 year inspection	The 10 year inspection will only occur if the 2019 crane audit determines its need. The current standard requires it; however, the timing can be moved if a suitably qualified crane engineer assesses each crane.	51
	Jack Taylor Weir winches – 10 year inspection	The 10 year inspection will only occur if the 2019 crane audit determines its need. The current standard requires it; however, the timing can be moved if a suitably qualified crane engineer assesses each crane.	30
	Meter replacements	This is an allowance to replace failed customer meters. If no meters fail, the funds will remain in the annuity.	13
	Jack Taylor Weir and Beardmore Dam – X-ray examination of the wire ropes x7	X-ray examination of seven of the wire ropes is an effective way of determining their condition so their replacement can be scheduled.	89
	Other works	There are no other non-routine projects for 2020/21.	-
	2020/21 Total		183
2021/22	Beardmore Dam – 20 year dam safety review	The Queensland Dam Safety Management Guidelines and condition schedule require each referable dam to undergo a dam safety review every 20 years to identify any deficiencies in design when compared to current standards and practices.	362
	Beardmore Dam – Thuraggi Channel bulkhead gate refurbishment	The seals and concrete sill will be refurbished prior to the next five-yearly inspection.	18
	Beardmore Dam – Foundation drain clean	The foundation drains in most dams with a gallery are checked every five years for calcite blockages. If blocked, they need to be cleaned out to relieve the uplift pressure beneath the concrete structure to retain its stability. Only the blocked drains will be cleaned.	35
	Meter replacements	This is an allowance to replace failed customer meters. If no meters fail, the funds will remain in the annuity.	14

Year	Project Title	Project Scope	Budget (\$'000)
	Jack Taylor Weir – Comprehensive inspection	SunWater conducts comprehensive inspections on each weir every five years to identify defects and plan for their repair. Keeping the condition and risk data current allows us to defer projects if they can be deferred and bring forward higher risk projects if required.	39
	Other works	There are no other non-routine projects for 2021/22.	-
	2021/22 Total		468
2022/23	Beardmore Dam – Comprehensive risk assessment (CRA)	This follows on from the dam safety review. The CRA fully assesses all new risks identified during the safety review, derives an initial list of recommendations to overcome the risks and starts to prioritise the work.	220
	Beardmore Dam – Comprehensive inspection	SunWater conducts comprehensive inspections on each dam every five years to identify defects and plan for their repair. Keeping the condition and risk data current allows us to defer projects if they can be deferred and bring forward higher risk projects if required. This is also a requirement of the dam safety condition schedule for each dam.	113
	Meter replacements	This is an allowance to replace failed customer meters. If no meters fail, the funds will remain in the annuity.	14
	Beardmore Dam – Refurbish winches	This will only occur if needed. Regular inspections leading up this project will inform SunWater if it can be deferred or not. The winches are critical assets so it is prudent to plan for the refurbishment.	93
	Jack Taylor Weir – Refurbish winches	This will only occur if needed. Regular inspections leading up this project will inform SunWater if it can be deferred or not. The winches are critical assets so it is prudent to plan for the refurbishment.	79
	Other works	There are no other non-routine projects for 2022/23.	-
	2022/23 Total		519
2023/24	Jack Taylor Weir – Refurbish remaining winches x6	This will only occur if needed. Regular inspections leading up this project will inform SunWater if it can be deferred or not. The winches are critical assets so it is prudent to plan for the refurbishment.	105
	Meter replacements	This is an allowance to replace failed customer meters. If no meters fail, the funds will remain in the annuity.	14

Year	Project Title	Project Scope	Budget (\$'000)
	Beardmore Dam – Left and right abutments refurbishment	These two projects are to periodically replace scoured or lost material from the embankments. If the fence option in 2020 proceeds, these will not be needed.	27
	Beardmore Dam – Internal road resurfacing	The internal sealed roads to the houses and left abutment need periodic treatment to keep them trafficable. If a condition assessment closer to this year determines they remain in good condition, this project will not be needed.	20
	Other works	There are 2 other non-routine projects for 2023/24.	17
	2023/24 Total		183



Contact us

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

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We consider and respond to all submissions, publishing all responses on our website.

Addendum to the 2018/19 to 2023/24 Network Service Plan

St George Bulk Water Service Contract

6 November 2018

Final

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How to read this addendum

Several changes have been made to our forecast costs since we published our 2019 Network Service Plan for the St George Bulk Water Service Contract in July 2018. We have therefore prepared this addendum to aid our customers' understanding of the changes and to assist the Queensland Competition Authority (QCA) in their review.

We have:

- updated for 2017/18 actual expenditure. This has impacted the annuity balances for this service contract going forward.
- revised market parameters, such as escalators and the Weighted Average Cost of Capital, for the latest available information
- used the scheme's 15-year average water usage over the 2002/03 to 2016/17 period to determine the Part B cost per megalitre.

Note:

- All financial figures contained in this addendum are nominal dollars.
- Totals may not add due to rounding.

Table 1: Irrigation charges for 2018/19¹ – Restatement of Table 2 from the 2019 Network Service Plan

Product		2018/19 (\$/ML)	Cost (\$/ML)^{2,3}	Subsidy (\$/ML)
Bulk water customers				
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	21.38	20.57	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	1.34	1.61	0.27
Bulk water customers who are also customers of a distribution system				
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	20.35	20.57	0.22
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	1.34	1.61	0.27

1. This table includes bulk water charges only. Distribution charges are set by Mallowa Irrigation Ltd.

2. Costs reflect lower bound cost recovery, ie recovery of future replacement and ongoing maintenance and operations. Charges do not allow for any returns on existing assets.

3. The notional High Priority Allocation Charge cost per megalitre is \$32.59.

Table 2: Routine operating expenditure¹ – Restatement of Table 6 from the 2019 Network Service Plan

	2016/17			2017/18 ²		2018/19 ²		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Actual \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000
Electricity	7.5	11.1	(3.6)	7.5	11.4	6.0	11.6	5.5	5.4	5.6	6.1	6.1
Insurance	114.4	43.8	70.6	102.7	44.9	108.4	46.0	110.6	113.2	115.8	118.4	121.2
Operations	313.6	637.3	(323.7)	694.4	653.2	680.6	669.6	671.3	688.6	706.4	724.3	742.6
Operations Total	435.5	692.2	(256.7)	804.5	709.5	795.0	727.2	787.5	807.2	827.8	848.8	869.8
Preventative maintenance	282.0	234.0	48.0	302.9	239.8	288.1	245.8	284.1	291.4	298.9	306.5	314.2
Corrective maintenance	22.0	144.5	(122.5)	131.2	148.1	120.8	151.8	119.2	122.3	125.4	128.6	131.8
Routine Total	739.5	1070.7	(331.2)	1238.6	1097.5	1204.0	1124.9	1190.8	1220.9	1252.1	1283.9	1315.8

1. SunWater's 2019/20 to 2023/24 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. For 2017/18 and 2018/19 SunWater has included and reported against the 2016/17 QCA recommended costs adjusted for inflation which was assumed to be 2.5%.

Table 3: Annuity balance – Restatement of Table 8 from the 2019 Network Service Plan

	2016/17 Actual \$'000	2017/18 Actual \$'000	2018/19 Forecast \$'000	2019/20 Forecast \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000
Annuity								
Opening balance ¹	290.3	(346.0)	(322.7)	(1249.0)	(1170.8) ²	(823.1)	(729.8)	(653.2)
Spend	(1315.1)	(624.2)	(1592.3)	(514.2)	(183.8)	(466.7)	(519.0)	(183.7)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution ³	657.0	673.4	690.3	705.8	600.0	608.1	638.3	748.0
Interest/financing costs	21.7	(25.9)	(24.2)	(93.5)	(68.5)	(48.1)	(42.7)	(38.2)
SunWater – Closing balance	(346.0)	(322.7)	(1249.0)	(1151.0)	(823.1)	(729.8)	(653.2)	(127.1)
QCA – Closing balance	2193.9	2438.3	3239.7					
Difference	(2540.0)	(2761.0)	(4488.6)					

1. The difference in the closing balance for 2019/20 and the opening balance for 2020/21 relates primarily to expenditure incurred prior to the start of the 2012 price path. Table 4 provides further details.
2. The opening balance in 2020/21 does not yet incorporate the proposed adjustments to the annuity balance relating to the Thuraggi Channel works and the refurbishment of the electrical system at Beardmore Dam.
3. The annuity contribution is included in the prices paid by customers. It was set by the QCA for 2012/13 to 2016/17 and is rolled forward with the Consumer Price Index (CPI) for 2017/18, 2018/19 and 2019/20. Thereafter the annuity contribution is based on SunWater's forecast.

Table 4: Adjustments to 2020/21 opening annuity balance

Adjustment	\$'000
Actual spend adjustment	(425)
Annuity income difference	342
Intersafe project spend adjustment	0
Interest difference	52
Alignment to previously reported data	1
Interest	10
Total	(20)

Table 5: Cost building blocks and notional cost allocations

	2018/19 Forecast \$'000	2019/20 Forecast \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000
Cost building blocks						
Routine costs	1204.0	1190.8	1220.9	1252.1	1283.9	1315.8
Non-routine costs (Annuity contribution)	690.3	705.8	600.0	608.1	638.3	748.0
Dam improvement program	-	-	-	-	-	-
Working capital	1.3	1.3	-	-	-	-
Revenue offsets	(5.0)	(5.1)	(5.3)	(5.4)	(5.5)	(5.7)
Transfers (Distribution losses)	-	-	-	-	-	-
Total costs	1890.5	1892.8	1815.6	1854.8	1916.6	2058.2
Notional cost allocations						
Irrigation customers	1822.5	1824.6	1750.2	1788.0	1847.6	1984.1
Urban/Industrial customers	67.6	67.7	65.0	66.4	68.6	73.6
SunWater	0.4	0.4	0.4	0.4	0.4	0.5
Total costs	1890.5	1892.8	1815.6	1854.8	1916.6	2058.2

Table 6: Historical actual water usage

Year	Usage (ML)
2002/03	65,610
2003/04	86,456
2004/05	83,029
2005/06	89,212
2006/07	41,852
2007/08	59,400
2008/09	75,739
2009/10	64,214
2010/11	37,624
2011/12	57,994
2012/13	67,285
2013/14	78,516
2014/15	90,226
2015/16	81,931
2016/17	88,350
15-year average	71,163