2018/19 to 2023/24 Network Service Plan

Mareeba-Dimbulah Bulk Water Service Contract

31 July 2018

Final

Contents

Our plan for Mareeba-Dimbulah

We're focused on reliability, efficiency and safety, ensuring through ongoing consultation that the Mareeba-Dimbulah 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 maintaining an efficient and reliable water supply and continuing safe operations. Customers will also see improved transparency, openness to working together, a focus on efficiency gains, and more appropriate risk sharing, which hopefully results in lower costs.

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.

Travis Richards

General Manager North

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.

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 consulted with the Mareeba-Dimbulah Irrigation Area Council (MDIAC) on the draft NSP and received endorsement from the Council. Feedback has been considered and incorporated where appropriate.

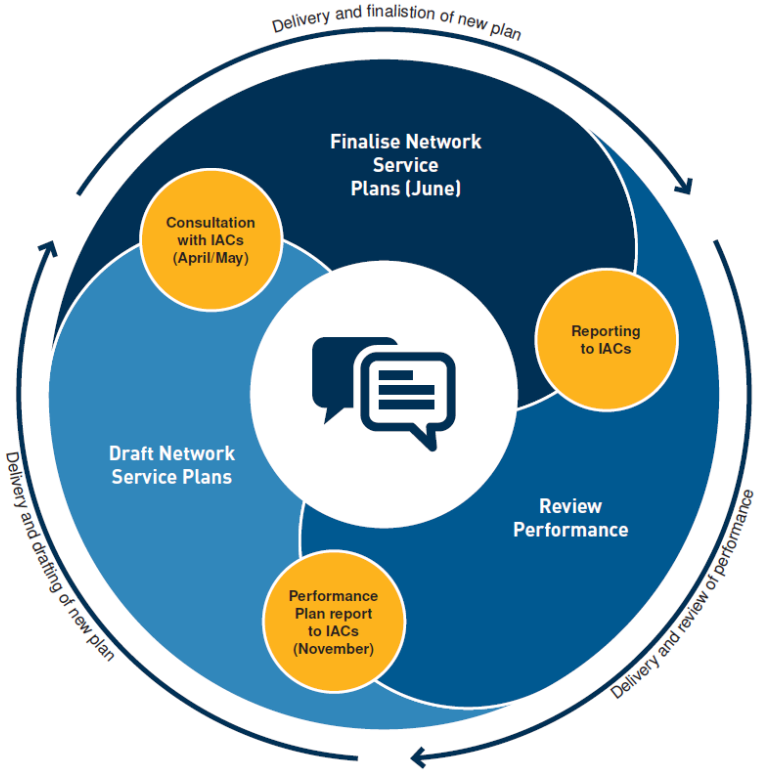
To have your say and shape future NSPs, please contact us via email or post:

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

This Service Contract provides water for a number of uses including irrigation, grazing, and hydro power generation. Water is also supplied to the townships of Tinaroo, Kuranda and Yungaburra.

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

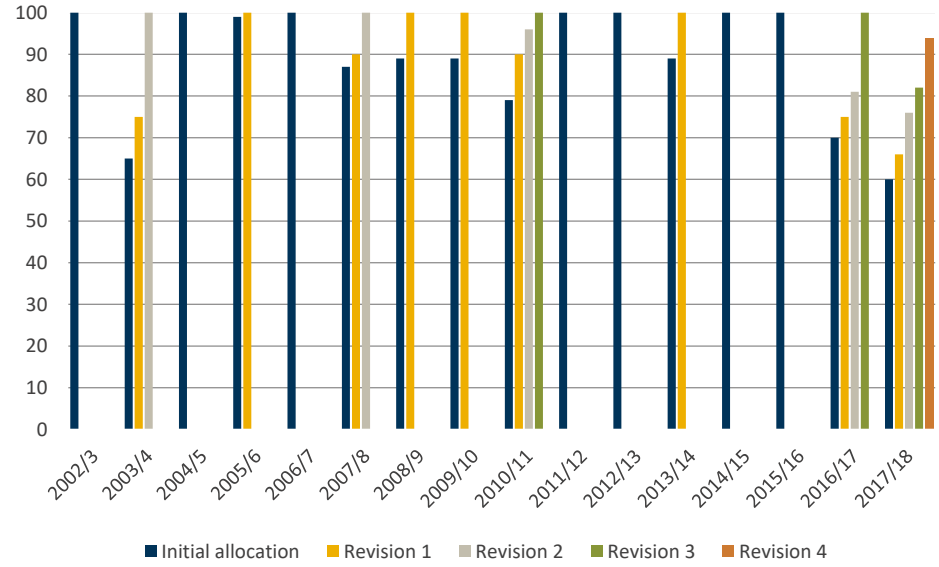
Table 1: Water entitlement and usage data[1]

Customer Segment	Total Water Entitlements (ML)	High Priority Water Entitlements (ML)	Medium Priority Water Entitlements (ML)	Water Deliveries 2016/17 (ML)
Irrigation	6665	0	6665	3455
Urban	2915	2915	0	3372
Industrial	318	0	318	8
SunWater	2593	2555	38	0
Total	**12,491**	**5470**	**7021**	**6835**

1. Bulk water only.

The historical medium priority announced allocations for the Mareeba-Dimbulah Bulk Water Service Contract are shown in Figure 2.

Figure 2: Medium Priority Announced Allocations[1]



1. Data as at 28 February 2018.

The 2018/19 charges and cost per megalitre are shown in Table 2 below. The Mareeba-Dimbulah Bulk Water Service Contract does not need additional subsidies to recover irrigation's share of future renewals, maintenance and operating costs.

In addition to these charges, an annual access charge of $670.99 per customer applies in 2018/19. For the full suite of charges that apply, refer to SunWater's website.

Table 2: Irrigation charges for 2018/19[1]

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)	15.48	2.18	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	0.58	0.40	N/A
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)	3.37	2.18	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	0.58	0.40	N/A

1. This table includes bulk water charges only. For distribution charges (Part C and Part D) please refer to the Distribution Service Contract NSP.
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 $22.76.

2.2 Service targets

SunWater and customers have agreed Water Supply Arrangements and Service Targets for the Mareeba-Dimbulah 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.

Table 3 indicates that the maximum allowable number of service interruptions was exceeded in 2016/17. The majority of these service interruptions are short, 1- to 2-day interruptions related to repairing the joints on pipelines within the system. This is a well-documented and understood issue in the Service Contract and SunWater continues to work closely with impacted customers to ensure the duration of any service interruptions are kept to a minimum.

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

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

Tinaroo Falls Dam is the key infrastructure used to deliver bulk water services to our customers in Mareeba-Dimbulah, with a total storage capacity of 438,920 ML. It is classified as a referable dam under the *Water Supply (Safety and Reliability) Act 2008*.

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 Mareeba-Dimbulah Bulk Water Service Contract is presented in Table 4.

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 a minor increase in revenue aligned with revenue transfers and the potential operation of the Tinaroo Hydro facility within the Mareeba-Dimbulah Bulk Water Service Contract in 2018/19.

In 2018/19, SunWater's routine expenditure is set to increase slightly and non-routine expenditure will be focused on comprehensive inspections of the dam and upgrading water regulating and release assets. SunWater will continue to focus on improving the efficiency of routine and project expenditure for the Mareeba-Dimbulah Bulk Water Service Contract in 2018/19.

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 4: Service contract financial summary[1]

Mareeba-Dimbulah Service Contract	2014/15 Actual $'000	2015/16 Actual $'000	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000
Revenue					
Irrigation	76.9	254.7	283.3	83.4	145.2
Community Service Obligation	-	-	-	-	-
Industrial[2]	1474.5	484.4	200.7	562.7	563.1
Urban[2]	340.2	345.0	350.5	357.3	366.3
Revenue transfers[3]	512.2	536.7	540.4	812.6	832.7
Drainage	-	-	-	-	-
Other	(1.8)	45.7	1.2	4.0	4.0
Insurance proceeds – flood	-	-	-	-	-
Revenue Total	**2402.0**	**1666.6**	**1376.2**	**1820.0**	**1911.3**
Less – Routine expenditure	(1223.0)	(1270.4)	(1113.2)	(1268.5)	(1415.7)
Less – Non-routine expenditure					
Annuity funded	(78.4)	(474.3)	(524.8)	(194.5)	(376.3)
Non annuity funded[4]	(0.3)	-	-	-	-
Surplus (deficit)	**1100.3**	**(78.1)**	**(261.9)**	**357.0**	**119.3**

1. Totals may not add due to rounding.
2. Forecast revenues for industrial and urban customers are based on current contractual arrangements.
3. Revenue transfers represent the cost of bulk water supplies delivered through the distribution system(s). 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.
4. This is expenditure which has not been funded by irrigation customers.

As part of our commitment to transparency, Figure 3 and Figure 4 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 3: Breakdown of total service contract costs – 2018/19 forecast

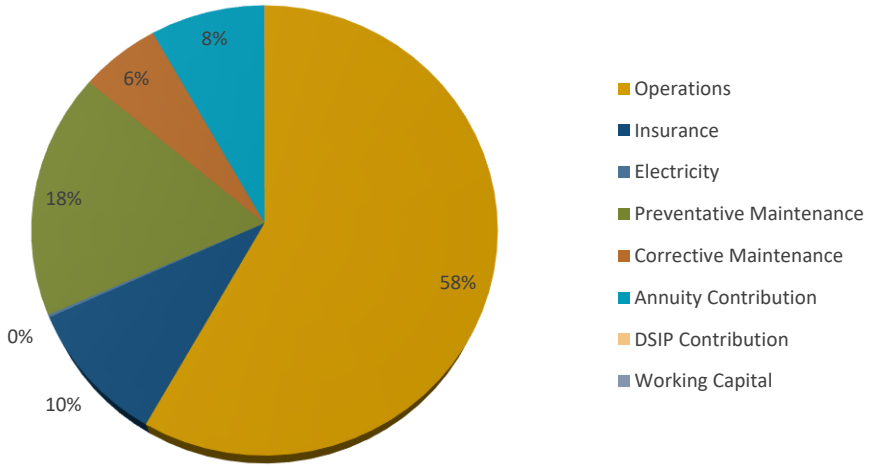
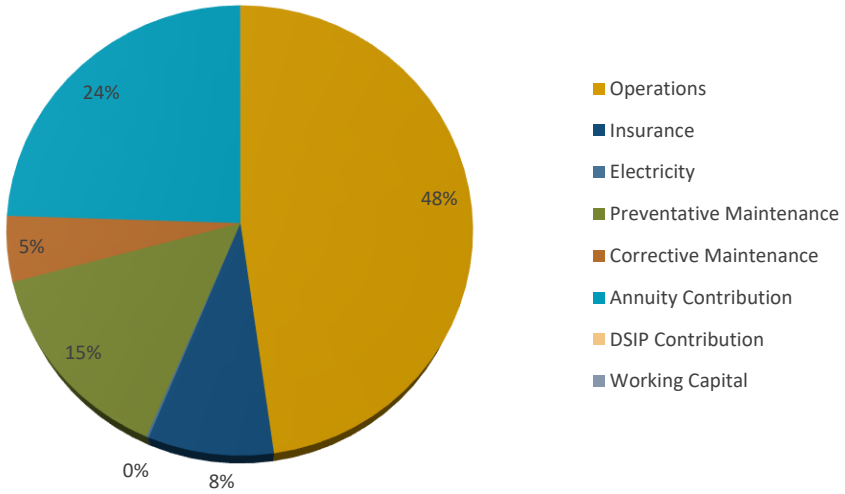


Figure 4: Breakdown of total service contract costs – 2019/20 to 2023/24 forecasts



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 Mareeba-Dimbulah Bulk Water Service Contract's routine operating expenditure in 2018/19 (refer to Table 5). 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 1.44 per cent reduction in indirect costs.

The data presented in Table 5 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 5: Routine operating expenditure[1,2]

Mareeba-Dimbulah 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	5.3	7.7	(2.4)	2.2	7.8	3.0	8.0	3.0	3.0	3.1	3.1	3.1
Insurance	159.0	89.3	69.7	159.0	91.5	154.2	93.8	157.7	161.4	165.1	168.9	172.7
Operations	581.2	728.7	(147.5)	726.2	746.9	898.2	765.6	889.4	912.6	936.4	960.9	986.0
Operations Total	**745.5**	**825.6**	**(80.2)**	**887.4**	**846.3**	**1055.4**	**867.4**	**1050.1**	**1076.9**	**1104.6**	**1132.9**	**1161.8**
Preventative maintenance	253.6	202.7	50.9	276.4	207.8	272.0	213.0	268.8	275.9	283.2	290.8	298.5
Corrective maintenance	114.2	25.4	88.7	104.7	26.1	88.4	26.7	87.5	89.8	92.2	94.6	97.1
Routine Total	**1113.2**	**1053.8**	**59.4**	**1268.5**	**1080.1**	**1415.7**	**1107.2**	**1406.4**	**1442.6**	**1480.0**	**1518.2**	**1557.4**

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

Mareeba-Dimbulah Bulk Water Service Contract's total operations budget in 2018/19 is 21.67 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by insurance costs and overheads.

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

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 Mareeba-Dimbulah 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. Mareeba-Dimbulah Bulk Water Service Contract's preventative maintenance for 2018/19 is budgeted to be 27.68 per cent above the QCA's recommended costs (adjusted for inflation). This variance is related to the use of contractors and overheads applied to the Service Contract.

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.

Mareeba-Dimbulah Bulk Water Service Contract's corrective maintenance for 2018/19 is budgeted to be 230.65 per cent above the QCA's recommended costs (adjusted for inflation). This variance is driven by labour and contractor costs that are above the QCA's recommended costs and overheads applied to this Service Contract. This is in line with historical expenditure.

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 6 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 6 sets out our non-routine annuity and non-annuity funded expenditure.

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

Table 6: Non-routine expenditure[1]

Mareeba-Dimbulah 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	12.9	2.7	10.2	4.2	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Corrective maintenance (flood)	-	-	-	-	-	-	-	-	-	-	-	-
Renewals	512.0	237.0	274.9	190.3	68.7	376.3	192.2	430.5	271.3	212.0	150.4	482.5
Non-routine total	**524.8**	**239.7**	**285.1**	**194.5**	**68.7**	**376.3**	**192.2**	**430.5**	**271.3**	**212.0**	**150.4**	**482.5**
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 7 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, the budgeted increase in expenditure for 2018/19 is related to necessary dam inspections and upgrades to existing water regulating assets on the outlet of the dam and in the bench flume headworks.

Table 7: Annuity balance[1]

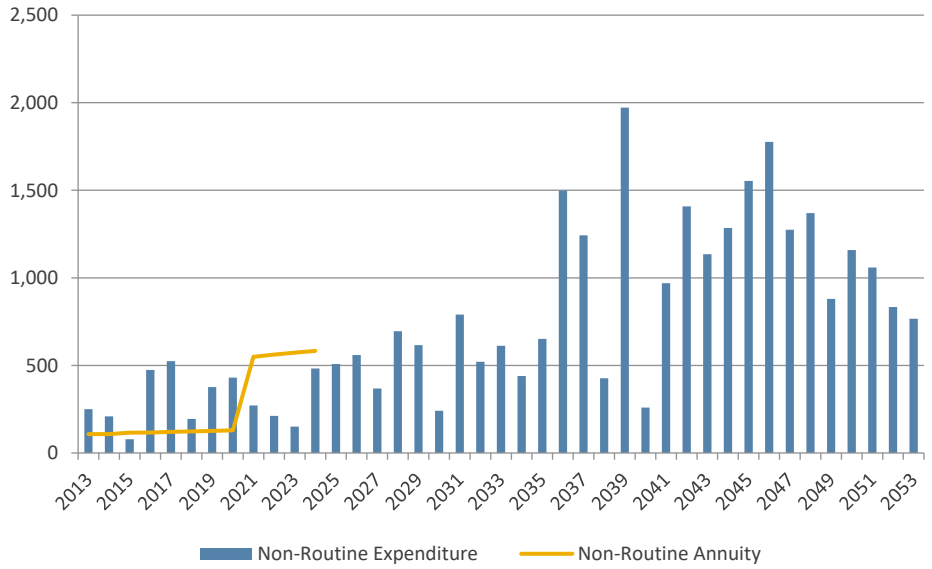
Mareeba-Dimbulah Service Contract	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
Annuity								
Opening balance[2]	734.1	384.6	342.1	117.7	(732.2)	(496.4)	(174.8)	237.5
Spend	(524.8)	(194.5)	(376.3)	(430.5)	(271.3)	(212.0)	(150.4)	(482.5)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[3]	120.2	123.2	126.3	129.5	549.5	562.3	572.9	582.9
Interest/financing costs	55.0	28.8	25.6	8.8	(42.4)	(28.7)	(10.1)	13.7
SunWater – Closing Balance	**384.6**	**342.1**	**117.7**	**(174.4)**	**(496.4)**	**(174.8)**	**237.5**	**351.6**
QCA – Closing Balance	**992.4**	**1121.3**	**1139.4**					
Difference	(607.8)	(779.1)	(1021.7)					

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 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 5 below.

Figure 5: 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 the MDIAC and other Irrigator Advisory Committees, 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.

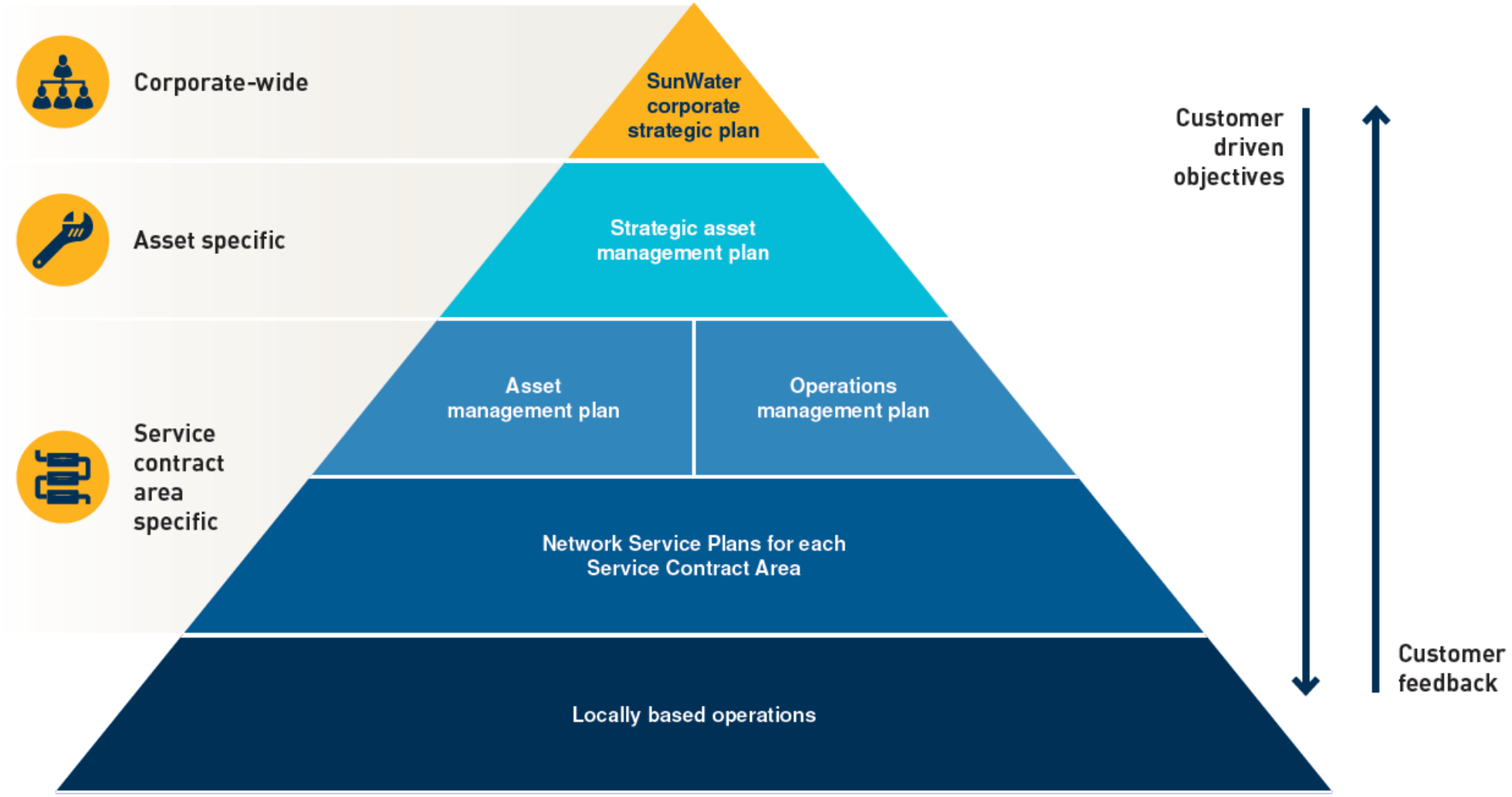
For less complex (more routine) renewals projects with fewer practical outcomes, SunWater will use its engineering knowledge and experience to determine the optimum solution.

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 6: SunWater's asset management framework



Appendix 2: Total expenditure by expense type

Table 8: Expenditure for activity by type[1]

Mareeba-Dimbulah 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	140.8	200.3	(59.5)	165.5	206.7	(41.2)	147.8	213.3	(65.5)	178.0	218.7	164.3	224.1	165.8	170.6	175.6	180.7	186.0
Contractors	14.1	16.7	(2.6)	8.4	17.2	(8.8)	7.4	17.5	(10.1)	10.0	18.0	10.3	18.4	10.3	10.5	10.8	11.1	11.3
Materials	1.6	2.8	(1.2)	1.3	2.9	(1.6)	1.7	3.0	(1.3)	3.0	3.1	2.1	3.1	2.1	2.1	2.2	2.2	2.3
Electricity	3.1	6.6	(3.5)	2.7	7.2	(4.5)	5.3	7.7	(2.4)	2.2	7.8	3.0	8.0	3.0	3.0	3.1	3.1	3.1
Insurance	210.5	86.3	124.2	190.4	87.8	102.6	159.0	89.3	69.7	159.0	91.5	154.2	93.8	157.7	161.4	165.1	168.9	172.7
Other	134.5	80.4	54.1	141.0	81.8	59.2	140.4	83.2	57.2	162.0	85.3	149.9	87.4	150.3	153.8	157.3	161.0	164.7
Local area support costs	103.7	-	103.7	138.4	-	138.4	111.8	-	111.8	138.8	-	199.0	-	198.2	203.4	208.7	214.1	219.7
Corporate support costs	67.0	205.4	(138.4)	62.1	202.0	(139.9)	51.8	206.5	(154.7)	91.9	211.6	106.8	216.9	98.9	101.5	104.1	106.8	109.6
Indirect costs	124.5	222.3	(97.8)	180.4	212.0	(31.6)	120.3	205.1	(84.9)	142.5	210.2	266.0	215.5	263.8	270.7	277.7	285.0	292.4
Preventative maintenance																		
Labour	93.4	64.4	29.0	90.0	66.5	23.5	81.1	68.6	12.4	89.0	70.3	69.0	72.1	69.7	71.7	73.8	76.0	78.2
Contractors	11.2	1.1	10.1	23.7	1.1	22.5	24.8	1.1	23.7	35.0	1.2	20.0	1.2	20.1	20.6	21.1	21.6	22.1
Materials	0.6	2.7	(2.1)	2.7	2.8	(0.1)	2.4	2.9	(0.4)	5.0	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.3
Other	33.5	3.8	29.7	36.0	3.9	32.1	3.2	4.0	(0.8)	10.0	4.1	10.0	4.2	10.0	10.3	10.5	10.7	11.0
Local area support costs	68.9	-	68.9	77.4	-	77.4	69.7	-	69.7	69.5	-	84.2	-	83.9	86.1	88.3	90.6	93.0
Corporate support costs	34.7	63.3	(28.5)	28.3	62.1	(33.8)	24.2	63.5	(39.3)	40.1	65.1	44.9	66.7	41.6	42.7	43.8	44.9	46.1
Indirect costs	71.4	68.5	2.9	83.7	65.0	18.8	48.2	62.6	(14.4)	27.8	64.2	40.8	65.8	40.5	41.5	42.6	43.7	44.9
Corrective maintenance																		
Labour	10.8	6.6	4.3	3.0	6.8	(3.8)	12.7	7.0	5.8	27.0	7.2	19.7	7.3	19.9	20.5	21.1	21.7	22.3
Contractors	70.4	1.1	69.3	24.7	1.1	23.5	73.2	1.1	72.0	25.0	1.2	15.0	1.2	15.1	15.4	15.8	16.2	16.6
Materials	3.2	2.2	1.0	1.5	2.3	(0.8)	1.2	2.3	(1.1)	5.0	2.3	2.0	2.4	2.0	2.1	2.1	2.1	2.2
Other	1.2	1.9	(0.7)	1.3	1.9	(0.6)	1.2	1.9	(0.8)	5.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2
Local area support costs	7.8	-	7.8	2.6	-	2.6	11.0	-	11.0	21.1	-	25.2	-	25.1	25.8	26.4	27.1	27.8
Corporate support costs	7.6	6.7	0.9	2.2	6.6	(4.3)	7.3	6.7	0.6	13.2	6.9	12.8	7.0	11.9	12.2	12.5	12.8	13.1
Indirect costs	8.4	7.0	1.4	3.2	6.6	(3.4)	7.6	6.4	1.2	8.4	6.5	11.6	6.7	11.6	11.9	12.2	12.5	12.8
Routine total	1223.0	1050.2	172.9	1270.4	1044.5	225.9	1113.2	1053.8	59.4	1268.5	1080.1	1415.7	1107.2	1406.4	1442.6	1480.0	1518.2	1557.4
Non-routine spend																		
Labour	13.9	-	13.9	47.7	19.1	28.6	75.0	40.1	34.8	-	11.5	46.2	32.0	68.4	38.2	13.7	24.1	85.6
Contractors	36.9	-	36.9	309.6	21.1	288.5	278.6	42.9	235.8	174.8	12.4	136.5	34.7	144.3	115.6	166.0	35.7	119.8
Materials	-	-	-	0.1	21.1	(21.0)	7.2	42.8	(35.5)	4.0	12.4	65.9	34.6	49.7	23.0	-	24.1	51.5
Other	0.0	-	0.0	8.1	11.5	(3.5)	18.6	23.4	(4.8)	6.4	6.8	36.8	18.9	16.9	14.6	2.2	13.2	45.6
Local area support costs	11.3	-	11.3	41.0	17.3	23.8	64.5	48.8	15.6	-	13.5	33.5	37.8	57.1	25.8	11.2	20.6	61.6
Corporate support costs	6.3	-	6.3	29.2	-	29.2	36.3	-	36.3	9.3	-	30.0	-	56.8	31.7	11.4	20.0	71.1
Indirect costs	10.0	-	10.0	38.5	15.6	22.9	44.6	41.7	2.9	-	12.2	27.3	34.0	37.3	22.4	7.7	12.8	47.4
Non-routine total	78.4	-	78.4	474.3	105.8	368.4	524.8	239.7	285.1	194.5	68.7	376.3	192.2	430.5	271.3	212.0	150.4	482.5
Total spend	**1301.4**	**1050.2**	**251.3**	**1744.7**	**1150.3**	**594.3**	**1638.1**	**1293.5**	**344.5**	**1463.0**	**1148.8**	**1792.0**	**1299.3**	**1836.9**	**1713.9**	**1692.0**	**1668.6**	**2039.9**

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 Mareeba-Dimbulah Bulk Water Service Contract is allocated 1.464 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 Mareeba-Dimbulah Bulk Water Service Contract is allocated 1.807 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.

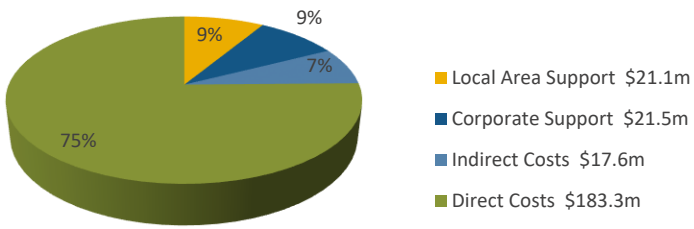
Corporate support costs

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 Mareeba-Dimbulah Bulk Water Service Contract is allocated 0.765 per cent of the forecast total corporate support costs.

Figure 7: Total SunWater cost pools – 2018/19 forecast



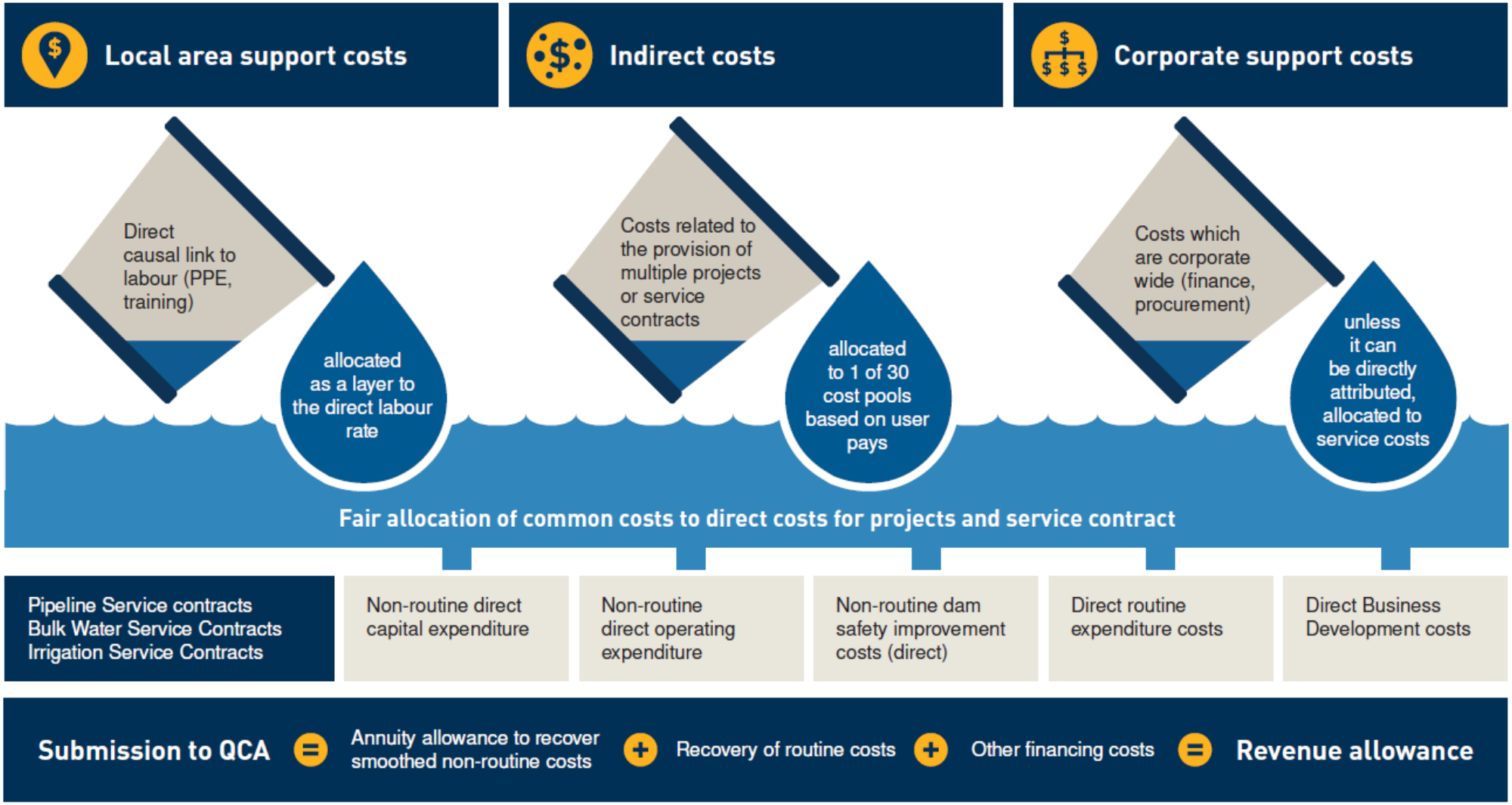
In the 2012 irrigation pricing review, the QCA reviewed and accepted SunWater's methodology for recovering local area support costs, indirect costs and corporate support costs. In 2018 we reviewed the cost allocation methodology and made changes to increase the transparency of local overhead costs and 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 8 below illustrates the allocation of costs associated with providing services.

Figure 8: 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, operating pump stations and monitoring customer deliveries
- Emergency Actions 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 Mareeba-Dimbulah 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, including pump stations (pumps, electrical motors, valves, switchboards and associated equipment), pipelines (valves, air valves, scours easements etc.) and other infrastructure.
- 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:

- Pipelines:
  - repairing pipe breaks, air and scour valves and concrete structures
  - erosion control and repairing rock protection works.
- Service Contract roads:
  - repairing pot holes and grading roads
  - repairing, replacing, and painting guide posts and signs.
- Pump stations:
  - repairing pumps, motors, concrete structures and control buildings
  - de-silting intake structures.
- Storages (balancing storages and reservoirs):
  - repairing control gates, valves and concrete structures
  - repairing walls, embankments and spillways.
- Meters:
  - repairing bulk water meters and customer meters.

Emergency corrective maintenance

Emergency corrective maintenance typically includes the repair or correction of faults in pump stations or pipelines. It also 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 9: Non-routine projects (or planning items) 2018/19 to 2023/24

Year	Project Title	Project Scope	Budget ($'000)
2018/19	Tinaroo Falls 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.	138
	Tinaroo Falls Dam – Replace electric actuator	The electric actuator on the channel release gate has reached the end of its life. It is not cost effective to repair it, so it will be replaced.	53
	Tinaroo Falls Dam – Plug inlet pipes	This project will plug the open-ended inlet pipes into the decommissioned water treatment plant. The plant pipework currently has blank flanges isolating the storage but these will need to be replaced eventually, so it is prudent to do it before they start leaking. Divers used during the comprehensive inspection will perform the work.	24
	Tinaroo Falls Dam – Irrigation regulating gates x4	The four gates, guide and spindles are badly corroded so need to be replaced to ensure ongoing safe operation.	92
	Tinaroo Falls Dam – River outlet Supervisory Control and Data Acquisition (SCADA) options	SCADA and Programmable Logic Controller (PLC) systems at the dam are ageing so it is prudent to identify and install modern options for their replacement before they fail. This project will identify those options.	20
	Other works	There are 3 other non-routine projects for 2018/19.	49
	2018/19 Total		**376**
2019/20	Tinaroo Falls Dam – Refurbish 54 (18x3) river inlet trash rack screens	The trash screens on the river inlet were removed for inspection during 2017 and were found to be badly corroded. All trash screens will be refurbished before being returned to service.	214
	Tinaroo Falls Dam – Irrigation outlet SCADA replacement options	This is the next phase in the SCADA replacement on the irrigation outlet – design work.	62
	Tinaroo Falls Dam – River outlet SCADA options	This is the next phase in the SCADA replacement on the river outlet – design work.	62

Year	Project Title	Project Scope	Budget ($'000)
	Tinaroo Falls Dam – Left abutment protection	The rock protection on the upstream left abutment is scouring away so needs to be replaced to maintain a safe level of protection for the dam.	31
	Tinaroo Falls Dam – Compensator gates	The steel liner in the gate channel is badly corroded. It will be removed, blasted and repainted before being returned to service.	29
	Other works	There are 2 other non-routine projects for 2019/20.	32
	2019/20 Total		**430**
2020/21	Tinaroo Falls Dam – Asset revaluation	Revalue the assets for insurance purposes; update asset replacement costs and Bill of Materials; and identify gaps in asset hierarchy data.	19
	Tinaroo Falls Dam – Irrigation outlet SCADA replacement options	Install a standalone SCADA for Tinaroo Falls Dam (radial gate) – procurement and installation.	109
	Tinaroo Falls Dam – River outlet SCADA options	Replace SCADA telemetry and controls – procurement and installation.	127
	Meter replacement	Replace meter program (3 per year) at Barron River.	16
	Other works	There are no other non-routine projects for 2020/21.	-
	2020/21 Total		**271**
2021/22	Meter replacement	Replace meter program (3 per year) at Barron River.	17
	Tinaroo Falls Dam – Post tensioning	The Australian National Committee on Large Dams Incorporated (ANCOLD) Guidelines on post tensioned dams recommends that they are tested every five years to determine if the tensioning has decreased or slipped. If it has, the anchors will need to be re-tensioned to maintain the required level of safety.	195
	Other works	There are no other non-routine projects for 2021/22.	-
	2021/22 Total		**212**
2022/23	Tinaroo Falls Dam – Compensator gates control equipment	SCADA and PLC systems at the dam are ageing so it is prudent to identify and install modern options for their replacement before they fail. This project will identify those options.	133
	Meter replacement	Replace meter program (3 per year) at Barron River.	17

Year	Project Title	Project Scope	Budget ($'000)
	Other works	There are no other non-routine projects for 2022/23.	-
	2022/23 Total		**150**
2023/24	Tinaroo Falls 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.	159
	Tinaroo Falls Dam – Irrigation inlet	The steel bell mouth is starting to corrode so will need to be repainted in-situ to extend its life.	138
	Tinaroo Falls Dam – Irrigation inlet pipework	The small diameter embedded pipework occasionally clogs due to algal growth etc. It needs to be cleaned to ensure water can be supplied. If lining is practical and required, this will also occur to extend the pipework's life.	69
	Tinaroo Falls Dam – Compensator gates refurbishment	The compensator gate in the irrigation channel is in a similar condition to the vertical lift gates so will be removed, blasted and painted before being returned to service.	44
	Tinaroo Falls Dam – Gallery drains	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.	28
	Other works	There are 4 other non-routine projects for 2023/24.	45
	2023/24 Total		**483**

Contact us

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.

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

Mareeba-Dimbulah Bulk Water Service Contract

6 November 2018

Final

www.sunwater.com.au

Contents

How to read this addendum

Several changes have been made to our forecast costs since we published our 2019 Network Service Plan for the Mareeba-Dimbulah 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 2018/19[1] – 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)	15.48	4.36	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	0.58	0.90	0.32
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)	3.37	4.36	0.99
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	0.58	0.90	0.32

1. This table includes bulk water charges only. For distribution charges (Part C and Part D) please refer to the Addendum to the Distribution Service Contract NSP.
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 $35.85.

Table 2: Routine operating expenditure[1] – Restatement of Table 5 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	5.3	7.7	(2.4)	4.0	7.8	3.0	8.0	2.8	2.7	2.8	3.1	3.0
Insurance	159.0	89.3	69.7	146.0	91.5	154.2	93.8	157.3	161.0	164.7	168.4	172.3
Operations	581.2	728.7	(147.5)	734.4	746.9	898.2	765.6	887.8	910.4	933.7	957.1	981.1
Operations Total	**745.5**	**825.6**	**(80.2)**	**884.4**	**846.3**	**1055.4**	**867.4**	**1047.9**	**1074.1**	**1101.1**	**1128.6**	**1156.4**
Preventative maintenance	253.6	202.7	50.9	226.3	207.8	272.0	213.0	268.3	275.2	282.4	289.5	296.9
Corrective maintenance	114.2	25.4	88.7	20.9	26.1	88.4	26.7	87.3	89.6	91.9	94.2	96.6
Routine Total	**1113.2**	**1053.8**	**59.4**	**1131.6**	**1080.1**	**1415.7**	**1107.2**	**1403.5**	**1438.9**	**1475.4**	**1512.3**	**1549.9**

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 7 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]	734.1	384.6	288.7	60.3	(794.3)	(559.6)	(239.1)	172.5
Spend	(524.8)	(247.9)	(376.3)	(430.5)	(271.3)	(212.0)	(150.4)	(482.5)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[2]	120.2	123.2	126.3	129.2	552.4	565.3	575.9	586.0
Interest/financing costs	55.0	28.8	21.6	4.5	(46.4)	(32.7)	(14.0)	10.1
SunWater – Closing balance	**384.6**	**288.7**	**60.3**	**(236.5)**	**(559.6)**	**(239.1)**	**172.5**	**286.0**
QCA – Closing balance	**992.4**	**1121.3**	**1139.4**					
Difference	(607.8)	(832.6)	(1079.1)					

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 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	(6)
Annuity income difference	(329)
Intersafe project spend adjustment	0
Interest difference	21
Alignment to previously reported data	0
Interest	(244)
Total	**(558)**

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	1415.7	1403.5	1438.9	1475.4	1512.3	1549.9
Non-routine costs (Annuity contribution)	126.3	129.2	552.4	565.3	575.9	586.0
Dam improvement program	-	-	-	-	-	-
Working capital	1.0	1.0	-	-	-	-
Revenue offsets	(90.6)	(92.9)	(95.2)	(97.6)	(100.1)	(102.6)
Transfers (Distribution losses)	(474.4)	(470.9)	(647.8)	(663.8)	(679.0)	(694.2)
Total costs	**977.9**	**969.8**	**1248.3**	**1279.2**	**1309.2**	**1339.1**
Notional cost allocations						
Irrigation customers	747.5	740.9	915.8	938.6	960.8	983.1
Urban/Industrial customers	137.1	136.2	196.9	201.7	206.3	210.9
SunWater	93.3	92.7	135.6	138.9	142.0	145.1
Total costs	**977.9**	**969.8**	**1248.3**	**1279.2**	**1309.2**	**1339.1**

Table 6: Historical actual water usage

Year	Usage (ML)
2002/03	180,067
2003/04	114,204
2004/05	134,544
2005/06	104,163
2006/07	132,993
2007/08	117,854
2008/09	117,862
2009/10	144,393
2010/11	98,742
2011/12	122,934
2012/13	151,801
2013/14	116,028
2014/15	155,874
2015/16	161,879
2016/17	138,918
15-year average	**132,817**