2018/19 to 2023/24 Network Service Plan

Upper Condamine Bulk Water Service Contract

31 July 2018

Final

Contents

Our plan for Upper Condamine

We're focused on reliability, efficiency and safety, ensuring through ongoing consultation that the Upper Condamine 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 Leslie Dam 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. Works have also been scheduled to ensure the ongoing reliability of the Yarramalong pumps and re-profiling of the North Branch to ensure efficient water deliveries to customers in that part of the scheme.

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.

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.

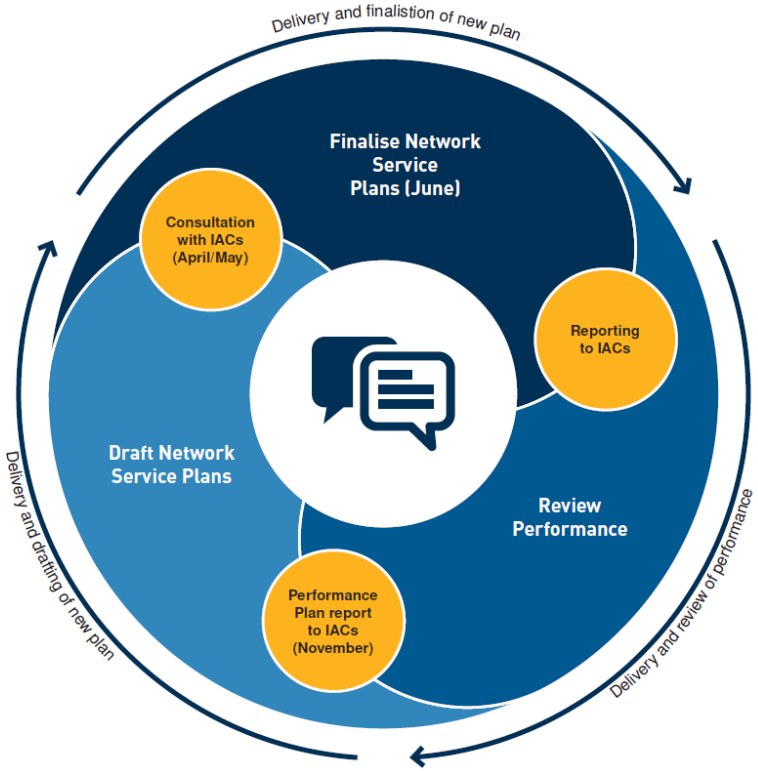
To have your say and shape future NSPs, please contact us via email or post:

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

The majority of our 92 customers in this Service Contract are irrigators who grow crops including cotton, sorghum, maize, soybean, sunflower, barley, oats, wheat and lucerne. Water is also supplied to the towns of Warwick and Cecil Plains.

Table 1: Water entitlement and usage data

Customer Segment	Total Water Entitlements (ML)	High-A Priority Water Entitlements (ML)	High-B Priority Water Entitlements (ML)	Medium Priority Water Entitlements (ML)	Risk-A Priority Water Entitlements (ML)	Risk-B Priority Water Entitlements (ML)	Water Deliveries 2016/17 (ML)[1]
Irrigation	30,363	0	0	22,165	7320	878	17,891
Urban	3207	3207	0	0	0	0	1999
Industrial	0	0	0	0	0	0	0
SunWater (Excluding Distribution Loss)	365	30	125	163	0	47	275
SunWater Distribution Loss	25	25	0	0	0	0	0
Other	0	0	0	0	0	0	2
Total	**33,960**	**3262**	**125**	**22,328**	**7320**	**925**	**20,167**

1. Water deliveries include in-stream flows.

The 2018/19 charges and cost per megalitre are shown in Table 2. Overall, the Upper Condamine Bulk Water Service Contract does not need additional subsidies to recover irrigation's share of future renewals, maintenance and operating costs. For the full suite of charges that apply, refer to SunWater's website.

Table 2: Irrigation charges for 2018/19

Product		2018/19 ($/ML)	Cost ($/ML)[1,2,3]	Subsidy ($/ML)
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	33.20	19.36	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	5.43	14.14	8.71

1. 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.
2. The notional High Priority Allocation Charge cost per megalitre is $398.29.
3. Costs reflect a revised Medium Priority Headworks Utilisation Factor of 8 per cent (previously 11 per cent).

2.2 Service targets

SunWater and customers have agreed Water Supply Arrangements and Service Targets for the Upper Condamine 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 – duration[1]	Unplanned shutdowns during Peak Demand Period	4 days	0
	Unplanned shutdowns outside Peak Demand Period	7 working days	
Maximum number of interruptions	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.

2.3 Key infrastructure

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

Table 4: Key infrastructure

Asset	Description	Capacity
Leslie Dam	Mass concrete gravity dam with a saddle dam. Classified as a referable dam under the *Water Supply (Safety and Reliability) Act 2008*.	106,200 ML
Cecil Plains Weir	All concrete with a centre spillway	700 ML
Lemon Tree Weir	Concrete faced earth-fill wall	300 ML
Melrose Weir	Grassed earthen construction with a small curved concrete spillway	160 ML
Nangwee Weir	Concrete faced earth-fill embankment	80 ML
Talgai Weir	Concrete faced earth-fill structure	640 ML
Wando Weir	Grassed flat earthen bank incorporating a v-shaped concrete sill at the head of a long and shallow rock mattress covered spillway	310 ML
Yarramalong Weir	Sheet piling filled with free-draining sandfill under impervious clay and topped with either reinforced concrete or concreted rockfill	390 ML
Yarramalong pump station	3 submersible pumps	346 ML/day

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 Upper Condamine 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 no material change in revenue for the Upper Condamine Bulk Water Service Contract in 2018/19.

In 2018/19, SunWater plans to increase routine and decrease non-routine annuity funded expenditure for the Upper Condamine 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 summary[1]

Upper Condamine Service Contract	2014/15 Actual $'000	2015/16 Actual $'000	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000
Revenue					
Irrigation	950.9	1039.8	1190.5	1080.8	1107.9
Community Service Obligation	-	-	-	-	-
Industrial[2]	9.9	-	-	-	-
Urban[2]	1127.8	1321.7	1538.4	1757.3	1801.2
Drainage	-	-	-	-	-
Other	76.5	1.5	-	2.0	2.0
Insurance proceeds – flood	-	-	-	-	-
Revenue Total	**2165.1**	**2363.0**	**2728.9**	**2840.1**	**2911.1**
Less – Routine expenditure	(976.1)	(1154.5)	(1321.0)	(1317.4)	(1551.8)
Less – Non-routine expenditure					
Annuity funded	(218.2)	(621.5)	(840.5)	(815.9)	(247.5)
Non annuity funded[3]	-	-	-	(576.6)	(1205.7)
Surplus (deficit)	**970.9**	**587.0**	**567.4**	**130.2**	**(94.0)**

1. Totals may not add due to rounding.
2. Forecast revenues for industrial and urban customers are based on current contractual arrangements.
3. This is expenditure which has not been funded by irrigation customers. An example of this in the Upper Condamine Bulk Water Service Contract is the dam improvement program (DIP).

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

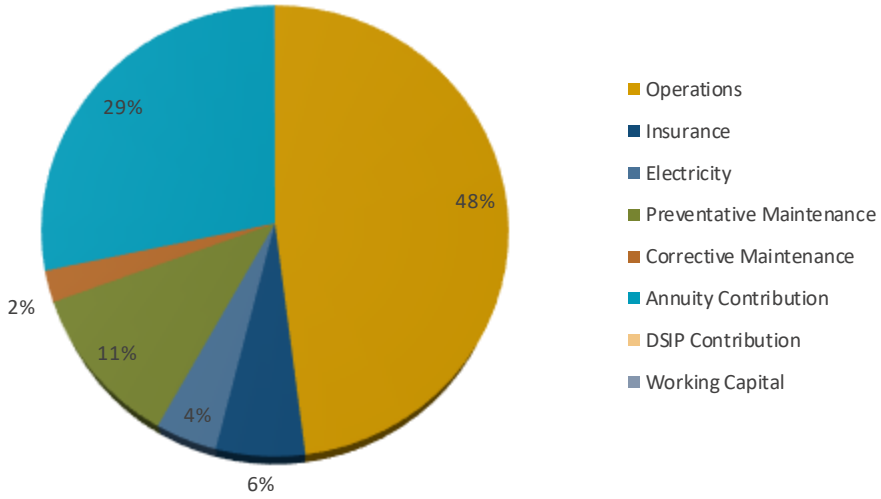
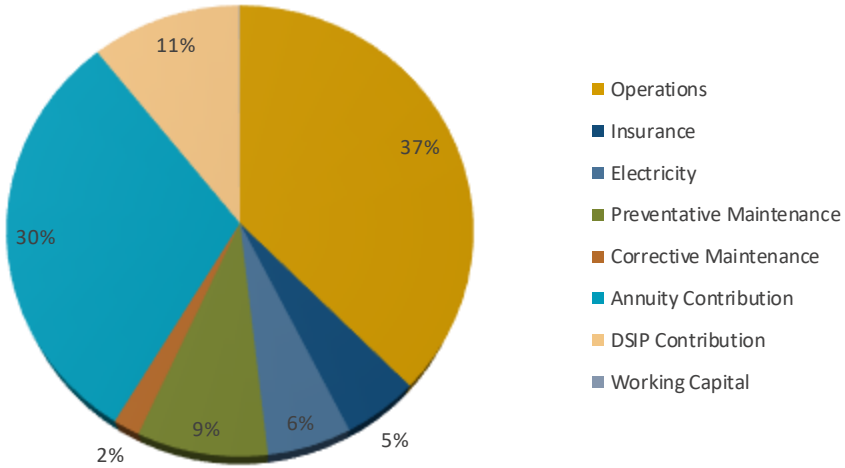


Figure 3: Breakdown of total service contract costs – 2019/20 to 2023/24 forecasts



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 Upper Condamine 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 1.61 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]

Upper Condamine 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	164.1	84.9	79.2	150.5	87.0	90.0	89.2	151.7	151.0	156.0	160.0	157.0
Insurance	132.8	74.1	58.7	132.8	75.9	129.3	77.8	132.3	135.3	138.4	141.6	144.8
Operations	739.8	667.9	71.9	773.2	684.6	1039.3	701.7	972.3	998.2	1024.7	1052.0	1080.0
Operations Total	**1036.6**	**826.8**	**209.8**	**1056.5**	**847.5**	**1258.6**	**868.7**	**1256.3**	**1284.5**	**1319.1**	**1353.6**	**1381.8**
Preventative maintenance	222.9	182.6	40.2	182.2	187.2	244.2	191.9	228.3	234.4	240.7	247.1	253.7
Corrective maintenance	61.5	77.2	(15.7)	78.8	79.1	49.0	81.1	46.6	47.7	48.9	50.0	51.2
Routine Total	**1321.0**	**1086.7**	**234.4**	**1317.4**	**1113.8**	**1551.8**	**1141.7**	**1531.2**	**1566.6**	**1608.6**	**1650.8**	**1686.8**

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

Upper Condamine Bulk Water Service Contract's total operations budget in 2018/19 is 44.89 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by insurance and overheads, which include costs associated with the Inspector-General Emergency Management (IGEM) Review recommendations. 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 Upper Condamine 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. Upper Condamine Bulk Water Service Contract's preventative maintenance for 2018/19 is budgeted to be 27.25 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by higher overheads.

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.

Upper Condamine Bulk Water Service Contract's corrective maintenance for 2018/19 is budgeted to be 39.58 per cent below the QCA's recommended costs

(adjusted for inflation). This variance is due to no labour costs being included in corrective maintenance as they have been allocated to Operations.

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 8 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 8 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***.

5.1 Dam improvement program

Under current Queensland Government policy, expenditure for the dam improvement program (DIP) is not recovered from customers. Table 7 shows forecast DIP expenditure, as well as the return on assets. This expenditure is non annuity funded.

Table 7: Dam improvement program

Upper Condamine Service Contract	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
DIP Expenditure[1]	3346.7	9987.3	403.8	-	-
DIP Contribution[2]	-	198.4	408.2	426.3	437.0
DIP Contribution - % of Total Costs	0.0%	7.6%	14.2%	14.4%	14.4%

1. DIP expenditure reflects approximately 50 per cent of the current cost estimates, as a detailed business case has not yet been completed.
2. The DIP contribution is based on an "as incurred" approach for transparency of potential cost impacts on customers to 2023/24.

Table 8: Non-routine expenditure[1]

Upper Condamine 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	34.3	-	34.3	9.6	-	28.9	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Corrective maintenance (flood)	3.4	-	3.4	-	-	-	-	-	-	-	-	-
Renewals	802.8	860.7	(57.9)	806.3	40.4	218.5	-	192.9	207.3	308.9	259.4	695.1
Non-routine total	**840.5**	**860.7**	**(20.2)**	**815.9**	**40.4**	**247.5**	**-**	**192.9**	**207.3**	**308.9**	**259.4**	**695.1**
Non annuity funded												
Other	**-**			**576.6**		**1205.7**		**6680.1**	**19,931.6**	**805.9**	**-**	**-**

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 9 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, in 2017, one of the seals on the hydraulic gate cylinder failed at Leslie Dam and we replaced all of the seals at a cost of $122,000. In addition, SunWater incurred unexpected costs to rectify flood damage from the 2010/11 and 2012/13 flood events.

Table 9: Annuity balance[1]

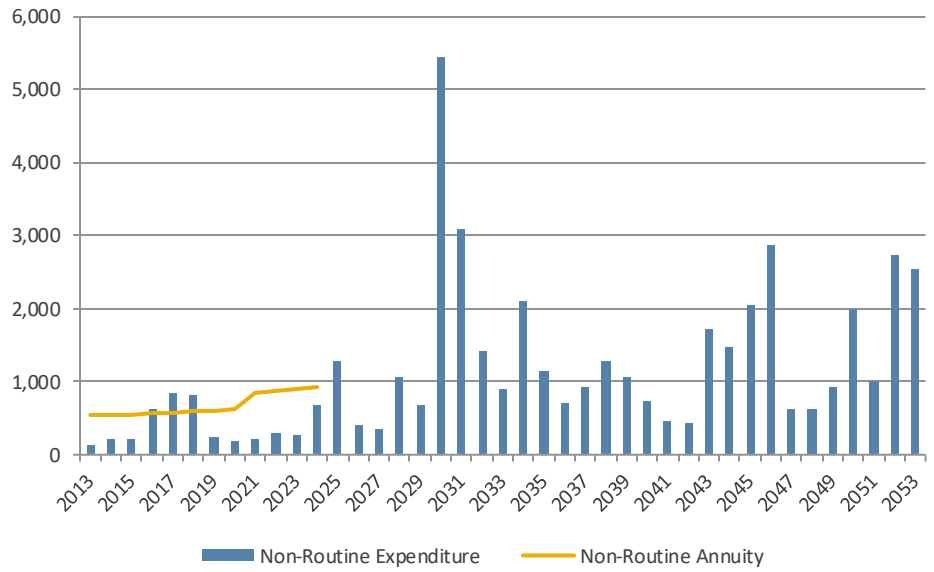
Upper Condamine Service Contract	2016/17 Actual $'000	2017/18 Estimate $'000	2018/19 Forecast $'000	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
Annuity								
Opening balance[2]	(593.2)	(894.6)	(1179.5)	(902.3)	111.0	764.5	1367.7	2086.0
Spend	(840.5)	(815.9)	(247.5)	(192.9)	(207.3)	(308.9)	(259.4)	(695.1)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[3]	583.5	598.1	613.0	628.3	854.4	867.8	898.6	927.6
Interest/financing costs	(44.4)	(67.0)	(88.3)	(67.6)	6.4	44.2	79.1	120.7
SunWater – Closing Balance	**(894.6)**	**(1179.5)**	**(902.3)**	**(534.4)**	**764.5**	**1367.7**	**2086.0**	**2439.2**
QCA – Closing Balance	**(984.7)**	**(500.8)**	**74.8**					
Difference	90.0	(678.8)	(977.1)					

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 was 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 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.

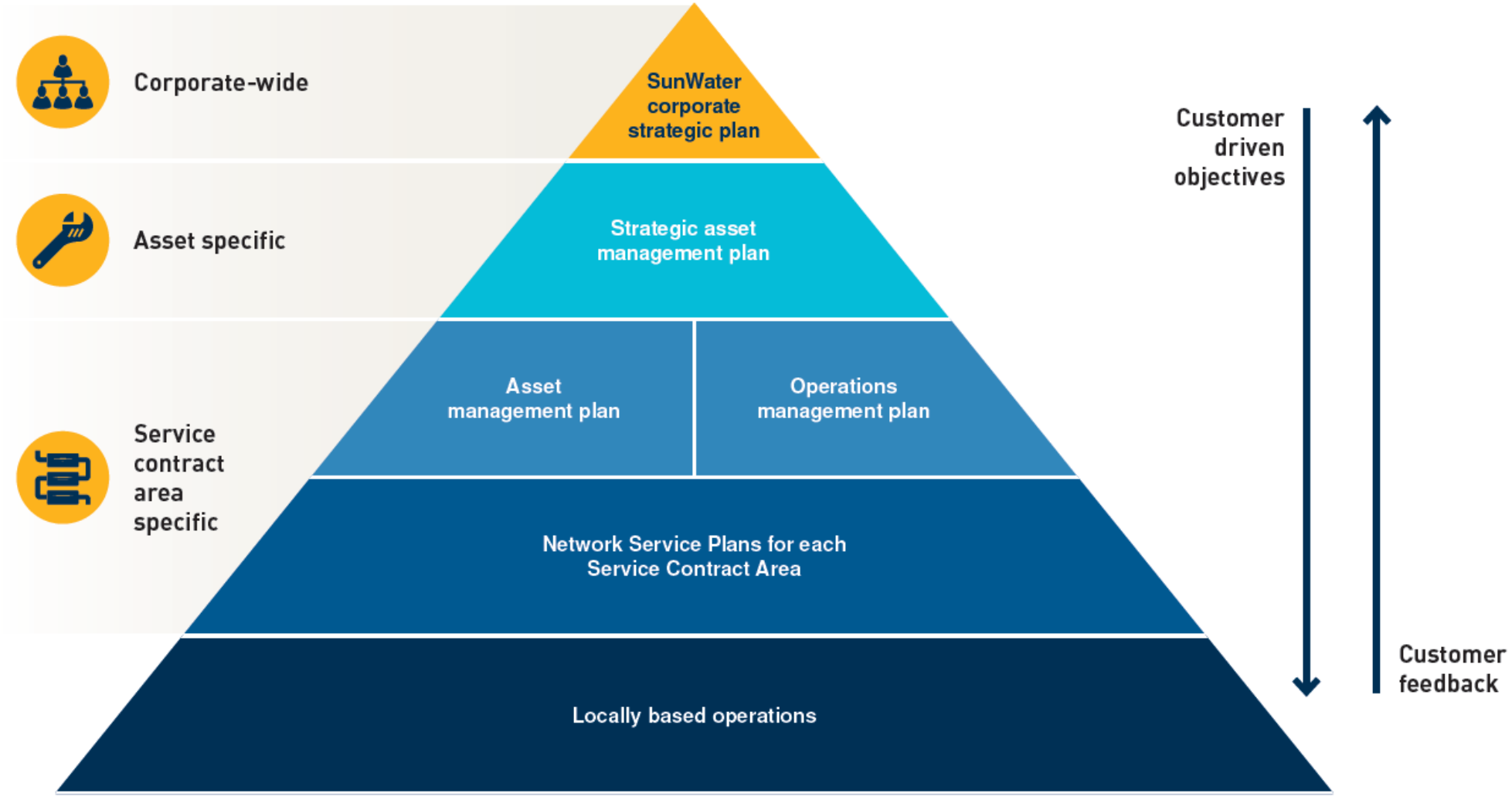
For less complex (more routine) renewals projects with fewer practical outcomes, SunWater will use its engineering knowledge and experience to determine the optimum solution.

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 10: Expenditure for activity by type[1]

Upper Condamine 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	148.4	192.3	(43.9)	198.8	198.5	0.3	219.9	204.8	15.1	229.0	209.9	231.9	215.2	221.9	228.4	235.1	241.9	249.0
Contractors	27.6	18.6	9.1	22.1	19.2	2.9	12.2	19.5	(7.3)	20.0	20.0	15.0	20.5	14.3	14.6	15.0	15.3	15.7
Materials	3.4	9.3	(5.9)	3.8	9.6	(5.8)	3.1	9.7	(6.7)	10.0	10.0	10.0	10.2	9.5	9.7	10.0	10.2	10.4
Electricity	78.6	73.4	5.2	81.4	79.3	2.0	164.1	84.9	79.2	150.5	87.0	90.0	89.2	151.7	151.0	156.0	160.0	157.0
Insurance	166.0	71.6	94.4	149.3	72.8	76.5	132.8	74.1	58.7	132.8	75.9	129.3	77.8	132.3	135.3	138.4	141.6	144.8
Other	25.2	35.5	(10.3)	37.8	36.3	1.5	72.6	36.9	35.7	80.5	37.8	39.0	38.8	37.1	37.9	38.8	39.7	40.6
Local area support costs	111.4	-	111.4	170.7	-	170.7	189.1	-	189.1	178.6	-	296.8	-	280.2	287.5	295.0	302.7	310.6
Corporate support costs	61.8	194.9	(133.1)	66.2	191.6	(125.4)	72.6	195.8	(123.2)	108.9	200.7	150.7	205.7	131.7	135.2	138.7	142.3	146.0
Indirect costs	112.0	216.0	(104.0)	192.0	207.4	(15.3)	170.3	201.2	(30.9)	146.1	206.2	296.0	211.4	277.6	284.8	292.3	299.9	307.7
Preventative maintenance																		
Labour	64.4	59.0	5.4	55.6	60.9	(5.3)	73.5	62.8	10.7	63.7	64.4	65.4	66.0	62.6	64.4	66.3	68.2	70.2
Contractors	8.7	1.1	7.6	8.9	1.1	7.8	14.3	1.1	13.2	13.0	1.2	10.0	1.2	9.5	9.7	10.0	10.2	10.5
Materials	6.9	3.3	3.7	2.4	3.4	(1.0)	1.5	3.4	(2.0)	4.0	3.5	2.0	3.6	1.9	1.9	2.0	2.0	2.1
Other	11.4	-	11.4	2.3	-	2.3	6.9	-	6.9	4.0	-	2.0	-	1.9	1.9	2.0	2.0	2.1
Local area support costs	47.6	-	47.6	47.8	-	47.8	62.2	-	62.2	49.7	-	83.7	-	79.0	81.1	83.2	85.3	87.6
Corporate support costs	23.5	57.8	(34.3)	16.2	56.7	(40.5)	21.4	57.9	(36.5)	28.0	59.4	42.5	60.9	37.1	38.1	39.1	40.1	41.2
Indirect costs	48.7	62.7	(13.9)	50.5	59.5	(9.0)	43.0	57.3	(14.3)	19.9	58.7	38.7	60.2	36.3	37.2	38.2	39.2	40.2
Corrective maintenance																		
Labour	6.6	16.4	(9.8)	2.1	16.9	(14.8)	9.2	17.4	(8.3)	-	17.9	-	18.3	-	-	-	-	-
Contractors	5.1	10.9	(5.8)	26.1	11.3	14.8	17.8	11.5	6.4	51.0	11.7	35.0	12.0	33.3	34.1	34.9	35.8	36.6
Materials	5.4	10.9	(5.5)	13.6	11.3	2.3	16.0	11.5	4.5	20.0	11.7	12.0	12.0	11.4	11.7	11.9	12.2	12.5
Other	0.6	3.3	(2.6)	0.7	3.4	(2.7)	1.4	3.4	(2.0)	4.0	3.5	2.0	3.6	1.9	1.9	2.0	2.0	2.1
Local area support costs	5.0	-	5.0	1.8	-	1.8	7.3	-	7.3	-	-	-	-	-	-	-	-	-
Corporate support costs	2.8	17.3	(14.5)	2.6	17.1	(14.5)	4.3	17.5	(13.1)	3.8	17.9	-	18.3	-	-	-	-	-
Indirect costs	4.9	17.4	(12.5)	2.0	16.5	(14.6)	5.5	15.9	(10.5)	-	16.3	-	16.7	-	-	-	-	-
Routine total	976.1	1071.6	(95.5)	1154.5	1072.5	82.0	1321.0	1086.7	234.4	1317.4	1113.8	1551.8	1141.7	1531.2	1566.6	1608.6	1650.8	1686.8
Non-routine spend																		
Labour	42.3	52.5	(10.3)	99.1	97.5	1.6	87.0	144.0	(57.0)	182.5	6.3	43.1	-	16.3	10.2	35.3	37.2	117.9
Contractors	59.3	53.7	5.6	231.5	131.7	99.8	538.6	150.2	388.5	268.8	7.8	69.0	-	44.9	102.2	151.4	60.9	158.4
Materials	33.0	59.2	(26.2)	22.1	116.8	(94.7)	11.7	160.1	(148.4)	47.6	7.4	35.3	-	31.5	46.5	36.7	61.7	115.6
Other	1.0	56.5	(55.5)	52.4	51.3	1.1	23.4	81.9	(58.5)	23.5	3.4	3.2	-	64.6	26.7	7.7	18.5	49.8
Local area support costs	33.5	70.1	(36.5)	84.7	122.7	(38.0)	74.9	175.1	(100.2)	126.8	8.1	43.4	-	13.3	7.2	28.9	30.4	90.2
Corporate support costs	18.4	-	18.4	42.6	-	42.6	53.1	-	53.1	109.7	-	28.0	-	13.5	8.5	29.3	30.8	97.9
Indirect costs	30.7	64.7	(34.0)	89.0	109.4	(20.4)	51.7	149.4	(97.7)	57.0	7.3	25.5	-	8.9	6.0	19.7	19.8	65.2
Non-routine total	218.2	356.7	(138.5)	621.5	629.4	(8.0)	840.5	860.7	(20.2)	815.9	40.4	247.5	-	192.9	207.3	308.9	259.4	695.1
Total spend	**1194.3**	**1428.3**	**(234.0)**	**1776.0**	**1702.0**	**74.0**	**2161.5**	**1947.4**	**214.2**	**2133.4**	**1154.2**	**1799.3**	**1141.7**	**1724.1**	**1773.8**	**1917.6**	**1910.1**	**2381.8**

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 Upper Condamine Bulk Water Service Contract is allocated 1.806 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 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 Upper Condamine Bulk Water Service Contract is allocated 1.899 per cent of the forecast total indirect costs. Increases in indirect costs allocated to Operations are largely driven by new IGEM costs, which are $159,000 in 2018/19 for this Service Contract.

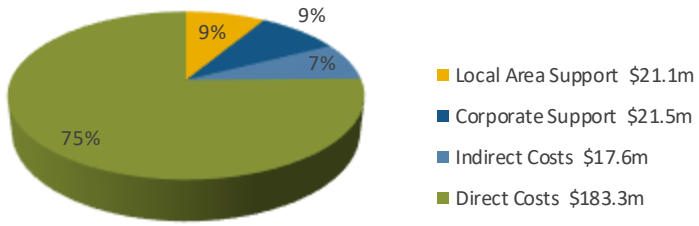
Corporate support costs

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 Upper Condamine Bulk Water Service Contract is allocated 0.898 per cent of the forecast total corporate support costs.

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



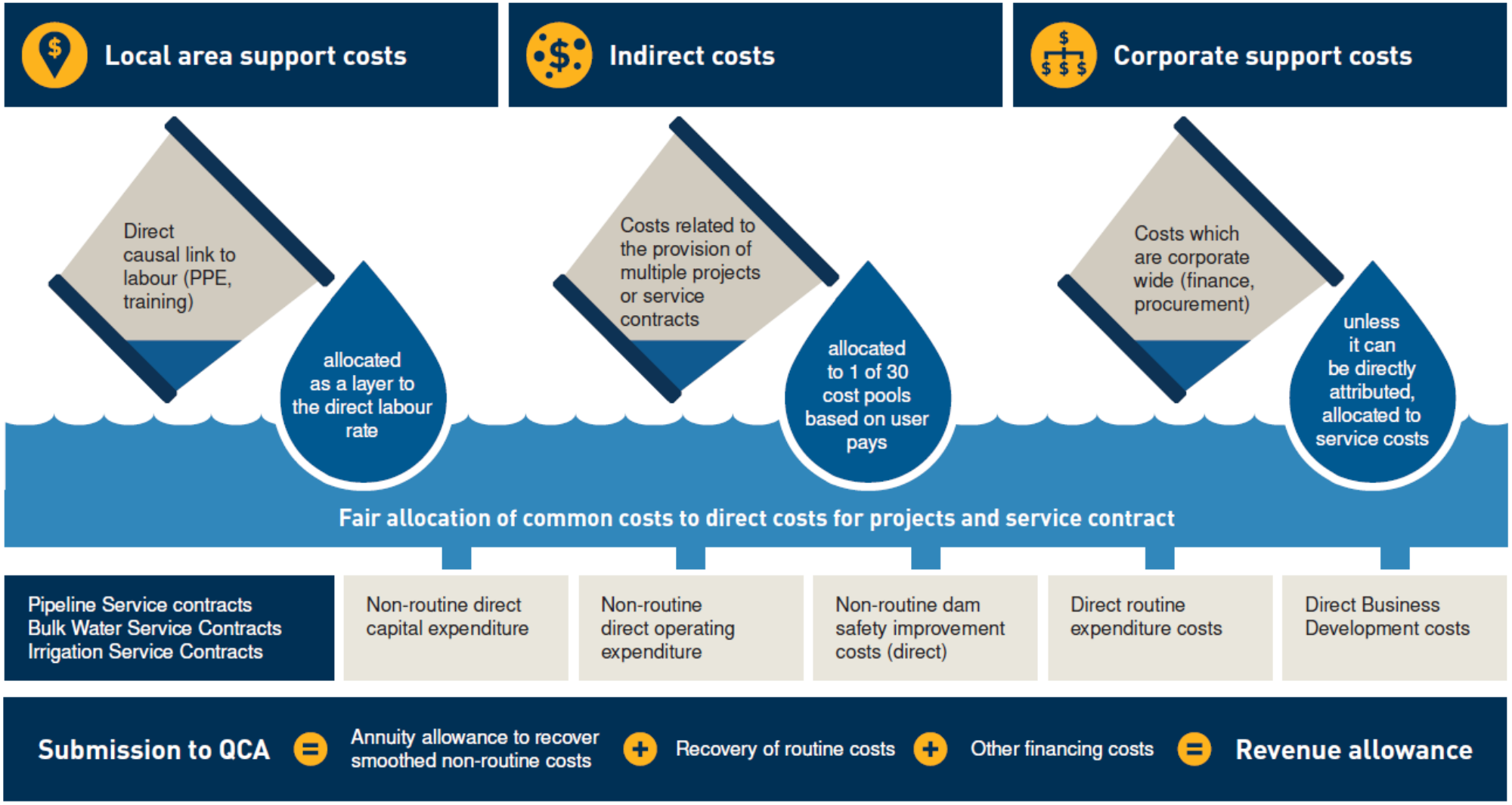
In the 2012 irrigation pricing review, the QCA reviewed and accepted SunWater's methodology for recovering local area support costs, indirect costs and corporate support costs. In 2018 we reviewed the cost allocation methodology and made changes to increase the transparency of local overhead costs and 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, operating pump stations 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
- tri-weekly dam inspections and other surveillance activities.

Preventative maintenance

Preventative maintenance for the Upper Condamine 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), 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:

- 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 (headworks and weirs):
  - 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. 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 11: Non-routine projects (or planning items) 2018/19 to 2023/24

Year	Project Title	Project Scope	Budget ($'000)
2018/19	Leslie Dam – Comprehensive inspection	Leslie Dam is a referable dam therefore SunWater is required to undertake some actions to comply with the dam safety condition schedule. The 5 year inspection is a full civil, mechanical and electrical inspection of the assets in order for SunWater to maintain current asset condition knowledge to better inform the non-routine maintenance plans.	106
	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	40
	Leslie Dam – Crane audit	SunWater has complied with crane inspection and maintenance requirements in accordance with the relevant Australian Standards; however, in many cases, this appears to be over-servicing the cranes. This project will engage a crane expert to review each crane and derive an individual inspection and maintenance program for each one.	27
	Leslie Dam – Screen repair	This is a continuation project to replace the variable intake screen on the Warwick town water supply variable intake.	12
	Other works	There are 4 other non-routine projects for 2018/19.	62
	2018/19 Total		**247**
2019/20	North Branch reprofile	The North Branch needs re-profiling (de-silting) every 2-3 years on average. This is an allowance to conduct the reprofiling to ensure water is delivered to customers. There is an allowance in the next financial year so the work can be scheduled over two financial years.	58
	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	41
	Talgai Weir – Outlet gate refurbishment	The outlet gate at Talgai Weir needs minor refurbishment work (eg seals, corrosion). The concrete base on which the gate sits has also scoured over time so it needs to be reinstated to ensure the gate seals adequately.	40

Year	Project Title	Project Scope	Budget ($'000)
	Talgai Weir – Downstream face repairs	Concrete on the downstream right-hand wing wall has lifted. It needs to be reinstated before it fully lifts as flood waters could enter the body of the weir.	25
	Leslie Dam – Drain cleaning	SunWater's standard is to clean out foundation drains every five years, or as needed, to release uplift pressures from beneath the dam. Excessive uplift pressures could result in a sliding or overturning failure.	17
	Other works	There are 2 other non-routine projects for 2019/20.	12
	2019/20 Total		**193**
2020/21	North Branch reprofile	The North Branch needs re-profiling (de-silting) every 2-3 years on average. This is an allowance to conduct the reprofiling to ensure water is delivered to the customers.	58
	Asset revaluation	SunWater re-values the assets every five years for insurance purposes and to assist with preparing cost estimates for non-routine projects.	51
	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	42
	Talgai Weir – Refurbish the access road	The unsealed access road into Talgai Weir has an allowance every five years to refurbish to an acceptable standard, versus minor regrading as needed. If the road remains serviceable, the funds will remain in the annuity.	15
	Leslie Dam – Manufacture two new blank flanges	The 2014 dam safety inspection recommended that two blank flanges be made in preparation for replacing one of the intake regulating valves when they are in need of replacement.	12
	Other works	There are 4 other non-routine projects for 2020/21.	29
	2020/21 Total		**207**
2021/22	Yarramalong pump station – Pump refurbishment	SunWater has an allowance to refurbish the three submersible pumps at Yarramalong Pump Station every six years. The pumps' performance is monitored during the year; however, their physical condition cannot be fully known unless they are removed and inspected. The full scope of works cannot be derived until they are assessed.	141
	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	43

Year	Project Title	Project Scope	Budget ($'000)
	Leslie Dam – Regulating valves	A valve inspection report in 2016 indicated that the internal lining of the valves had failed and if left untreated would lead to premature corrosion failure of the valve. This project is to reinstate the internal lining on valve 1, with valves 2 and 3 to be done in 2022/23.	30
	Leslie Dam – Trash racks	The intake trash racks at the dam were showing signs of corrosion during the 2014 inspection. They will be reinspected during the 5 year inspection in 2019 at which time the decision on whether to proceed with this project will be made.	23
	Other works	There are 11 other non-routine projects for 2021/22.	72
	2021/22 Total		**309**
2022/23	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	44
	Yarramalong Weir – Desilting	An allowance to desilt Yarramalong Weir has been made as it was last done in 2003. Desilting the weir will supplement the North Branch desilting.	53
	Leslie Dam – Regulating valves x2	A valve inspection report in 2016 indicated that the internal lining of the valves had failed and if left untreated would lead to premature corrosion failure of the valve. This project is to reinstate the internal lining on valves 2 and 3.	61
	Leslie Dam – Document review	The dam safety documents at Leslie Dam are up for a major review, which is done every five years. It is part of the dam safety condition schedule to maintain the documents.	20
	Other works	There are 5 other non-routine projects for 2022/23.	81
	2022/23 Total		**259**
2023/24	Leslie Dam – Comprehensive inspection	Leslie Dam is a referable dam therefore SunWater is required to undertake some actions to comply with the dam safety condition schedule. The 5 year inspection is a full civil, mechanical and electrical inspection of the assets in order for SunWater to maintain current asset condition knowledge to better inform the non-routine maintenance plans.	120
	Leslie Dam – Gantry crane	The control equipment is coming towards the end of its life so it is prudent to plan for its replacement. A condition and risk assessment will be updated closer to 2023/24 to determine if it can be deferred further.	218

Year	Project Title	Project Scope	Budget ($'000)
	Leslie Dam – Intake Two	During the comprehensive inspection, a camera will be used to assess the internal condition of the conduit. This has not been done before so the methodology needs to be developed. It may require divers for a day.	62
	Meter replacements	This is an allowance to replace failed customer meters in the Upper Condamine. All unspent money will remain in the annuity.	45
	Leslie Dam – Regulating valve 1 refurbishment	Regulating valves are planned for refurbishment every 20 years. As this one has not been refurbished since 2003 it is prudent to include this in the forward program. Its need will be confirmed during the 2023/24 comprehensive inspection. If the refurbishment can be deferred, it will be.	36
	Other works	There are 11 other non-routine projects for 2023/24.	214
	2023/24 Total		**695**

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

Upper Condamine Bulk Water Service Contract

6 November 2018

Final

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 Upper Condamine 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 positively impacted the annuity balances for this service contract going forward, when compared to the 2019 Network Service Plan.
- 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
- updated dam improvement program (DIP) cost estimates.

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 – Restatement of Table 2 from the 2019 Network Service Plan

Product		2018/19 ($/ML)	Cost ($/ML)[1,2,3]	Subsidy ($/ML)
Medium Priority Allocation Charge	Bulk Water Charge – Part A (fixed charge based upon entitlement)	33.20	19.35	N/A
Medium Priority Allocation Water	Bulk Water Charge – Part B (variable charge based upon usage)	5.43	14.67	9.24

1. 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.
2. The notional High Priority Allocation Charge cost per megalitre is $398.46.
3. Costs reflect a revised Medium Priority Headworks Utilisation Factor of 8 per cent (previously 11 per cent at the time of the 2012 review).

Table 2: Routine operating expenditure[1] – 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	164.1	84.9	79.2	21.9	87.0	90.0	89.2	147.9	144.5	149.5	162.8	161.7
Insurance	132.8	74.1	58.7	122.8	75.9	129.3	77.8	131.9	135.0	138.1	141.2	144.5
Operations	739.8	667.9	71.9	741.8	684.6	1039.3	701.7	970.5	995.7	1021.5	1047.5	1074.1
Operations Total	**1036.6**	**826.8**	**209.8**	**886.4**	**847.5**	**1258.6**	**868.7**	**1250.3**	**1275.1**	**1309.1**	**1351.5**	**1380.3**
Preventative maintenance	222.9	182.6	40.2	226.6	187.2	244.2	191.9	227.9	233.8	239.9	246.0	252.3
Corrective maintenance	61.5	77.2	(15.7)	67.4	79.1	49.0	81.1	46.5	47.6	48.7	49.9	51.1
Routine Total	**1321.0**	**1086.7**	**234.4**	**1180.4**	**1113.8**	**1551.8**	**1141.7**	**1524.7**	**1556.6**	**1597.8**	**1647.4**	**1683.6**

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: Dam improvement program – Restatement of Table 7 from the 2019 Network Service Plan

	2019/20 Forecast $'000	2020/21 Forecast $'000	2021/22 Forecast $'000	2022/23 Forecast $'000	2023/24 Forecast $'000
DIP Expenditure[1]	2045.0	11,203.3	805.7	-	-
DIP Contribution[2]	-	226.7	475.5	503.7	516.2
DIP Contribution - % of Total Costs	0.0%	8.7%	16.4%	16.8%	16.7%

1. DIP expenditure reflects approximately 50 per cent of the current cost estimate, as a detailed business case has not yet been completed.
2. The DIP contribution is based on an "as incurred" approach for transparency of potential cost impacts on customers to 2023/24.

Table 4: Annuity balance – Restatement of Table 9 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]	(593.2)	(894.6)	(774.9)	(467.3)	577.0	1232.4	1837.9	2559.0
Spend	(840.5)	(411.3)	(247.5)	(192.9)	(207.3)	(308.9)	(259.4)	(695.1)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution[2]	583.5	598.1	613.0	626.8	829.0	842.4	873.0	901.8
Interest/financing costs	(44.4)	(67.0)	(58.0)	(35.0)	33.7	72.1	107.5	149.6
SunWater – Closing balance	**(894.6)**	**(774.9)**	**(467.3)**	**(68.4)**	**1232.4**	**1837.9**	**2559.0**	**2915.3**
QCA – Closing balance	**(984.7)**	**(500.8)**	**74.8**					
Difference	90.0	(274.1)	(542.1)					

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 5 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 5: Adjustments to 2020/21 opening annuity balance

Adjustment	$'000
Actual spend adjustment	(6)
Annuity income difference	363
Intersafe project spend adjustment	0
Interest difference	(8)
Alignment to previously reported data	4
Interest	292
Total	**645**

Table 6: 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	1551.8	1524.7	1556.6	1597.8	1647.4	1683.6
Non-routine costs (Annuity contribution)	613.0	626.8	829.0	842.4	873.0	901.8
Dam improvement program[1]	-	-	-	-	-	-
Working capital	1.5	1.4	-	-	-	-
Revenue offsets	(2.0)	(2.1)	(2.1)	(2.2)	(2.2)	(2.3)
Transfers (Distribution losses)	(10.1)	(9.9)	(11.4)	(11.7)	(12.0)	(12.4)
Total costs	**2154.2**	**2141.0**	**2372.0**	**2426.3**	**2506.1**	**2570.8**
Notional cost allocations						
Irrigation customers	787.0	801.8	830.1	852.0	882.6	900.8
Urban/Industrial customers	1298.9	1272.2	1465.3	1496.2	1542.8	1587.1
SunWater	68.2	67.0	76.6	78.2	80.7	82.9
Total costs	**2154.2**	**2141.0**	**2372.0**	**2426.3**	**2506.1**	**2570.8**

1. For the purposes of this table, DIP costs have been excluded.

Table 7: Historical actual water usage

Year	Usage (ML)
2002/03	4021
2003/04	14,198
2004/05	2903
2005/06	15,118
2006/07	1804
2007/08	28,522
2008/09	16,313
2009/10	17,308
2010/11	9767
2011/12	22,551
2012/13	24,432
2013/14	22,202
2014/15	20,368
2015/16	8532
2016/17	20,167
15-year average	**15,214**