

2018/19 to 2023/24 Network Service Plan

Nogoa Mackenzie Distribution Service Contract

31 July 2018

Final

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Disclaimer

This Network Service Plan (NSP) has been prepared by SunWater to provide indicative information to our customers for the purpose of consultation. It contains estimates and forecasts which are based upon a number of assumptions. The actual financial performance of the Service Contract to which this NSP relates, and the operations and activities actually undertaken by SunWater during the relevant periods, may vary materially from the information contained in this NSP. This NSP should not be relied upon beyond its purpose as a tool for consultation and you should not rely on the information contained in this NSP in making decisions about your circumstances. SunWater will not be responsible or liable for any loss (including consequential loss), claim or damage (including in tort) that is in any way connected with the use of this NSP or the information contained within it.

Our plan for Nogo Mackenzie

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

The Nogo Mackenzie (Emerald) distribution system is a complex network covering approximately 15,000 hectares, containing 126 kilometres of channels and 144 kilometres of drains, requiring tailored maintenance to ensure reliability and stability to customers.

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.



Robert Lewis
General Manager Central

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.

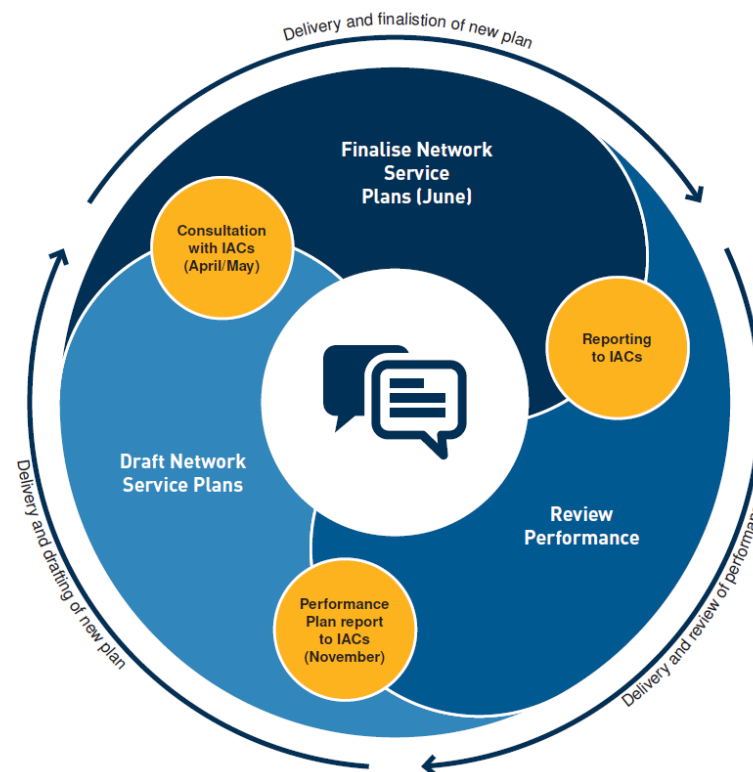
To have your say and shape future NSPs, please contact us via email or post:

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 majority of our customers in this Service Contract are irrigators of cotton, citrus (mandarins, oranges and lemons) and grapes. Other crops irrigated include wheat, pulse crops, sorghum, maize, lucerne, oats, macadamias and sunflowers.

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

Table 1: Water entitlement and usage data¹

Customer Segment	Total Water Entitlements (ML)	High Priority Water Entitlements (ML)	Medium Priority Water Entitlements (ML)	Water Deliveries 2016/17 (ML)
Irrigation	82,760	1166	81,594	71,031
Urban	90	0	90	0
Industrial	0	0	0	0
SunWater (excluding distribution loss)	0	0	0	0
SunWater distribution loss	0	0	0	12,734
Total	82,850	1166	81,684	83,765

1. Distribution system only.

The 2018/19 charges and cost per megalitre are shown in Table 2. The Nogoa Mackenzie Distribution Service Contract is not expected to fully recover irrigation's share of costs. For the full suite of charges that apply, refer to SunWater's website.

Table 2: Irrigation charges for 2018/19¹

Product	Charge type	2018/19 (\$/ML)	Cost (\$/ML) ^{2,3}	Subsidy (\$/ML)
Medium Priority Allocation Charge – Channel Distribution	Channel Distribution – Part C (fixed charge based upon entitlement)	26.60	39.88	13.28
Medium Priority Allocation Water – Channel Distribution	Channel Distribution – Part D (variable charge based upon usage)	6.71	9.96	3.25

1. This table includes distribution charges only. For river charges (Part A and Part B) please refer to the Bulk Water 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. Costs reflect a revised Medium Priority Headworks Utilisation Factor of 28 per cent (previously 45 per cent).

2.2 Service targets

SunWater and customers have agreed Water Supply Arrangements and Service Targets for the Nogoa Mackenzie Distribution 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	4 weeks	0
	For shutdowns planned to exceed 3 days	2 weeks	0
	For shutdowns planned to be less than 3 days	5 days	0
Unplanned shutdowns – duration¹	Unplanned shutdowns during Peak Demand Period	48 hours	0
	Unplanned shutdowns outside Peak Demand Period	5 working days	
Maximum number of interruptions²	Planned or unplanned interruptions per water year	6	0

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

2.3 Key infrastructure

Table 4 lists the key infrastructure used to deliver distribution services to our customers in Nogoia Mackenzie (Emerald). We also maintain the Selma drainage network.

Table 4: Key infrastructure

Asset	Description	Capacity (ML/day)
Selma pump station	3 variable discharge pumps	800
Selma system relift pump station	3 relift pump stations	46
Selma main channel	46.7 km in length and supplies subsidiary channels that are 26.8 km long. The channel is mostly open earthen, with some sections concrete lined or lined with high-density polyethylene sheeting.	612
Weemah main channel	52.6 km in length. Open earthen channels with manually operated regulating structures	305

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 Nogoa Mackenzie Distribution 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 to revenue for the Nogoa Mackenzie Distribution Service Contract in 2018/19.

In 2018/19, SunWater plans to increase routine and non-routine expenditure for the Nogoa Mackenzie Distribution 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^{1,2}

Nogoa Mackenzie Service Contract	2014/15 Actual \$'000	2015/16 Actual \$'000	2016/17 Actual \$'000	2017/18 Estimate \$'000	2018/19 Forecast \$'000
Revenue					
Irrigation	3227.9	3474.6	3585.5	3435.1	3520.0
Community Service Obligation	-	-	-	-	-
Industrial	-	-	-	-	-
Urban ³	11.7	11.9	12.1	12.3	12.6
Revenue transfers ⁴	(740.3)	(770.0)	(805.4)	(970.9)	(995.0)
Drainage	378.5	383.1	399.2	411.9	422.1
Other	34.8	39.1	3.3	7.0	7.0
Insurance proceeds – flood	-	-	-	-	-
Revenue Total	2912.7	3138.7	3194.7	2895.4	2966.8
Less – Routine expenditure	(2279.2)	(2341.8)	(2393.5)	(2423.2)	(3073.4)
Less – Non-routine expenditure					
Annuity funded	(513.1)	(563.3)	(551.0)	(276.1)	(1131.4)
Non annuity funded	-	-	-	-	-
Surplus (deficit)	120.4	233.6	250.2	196.2	(1238.0)

1. Totals may not add due to rounding.
2. This table excludes the irrigation channel efficiency project which was awarded funding under the National Water Infrastructure Development Fund.
3. Forecast revenues for urban customers are based on current contractual arrangements.
4. 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.

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

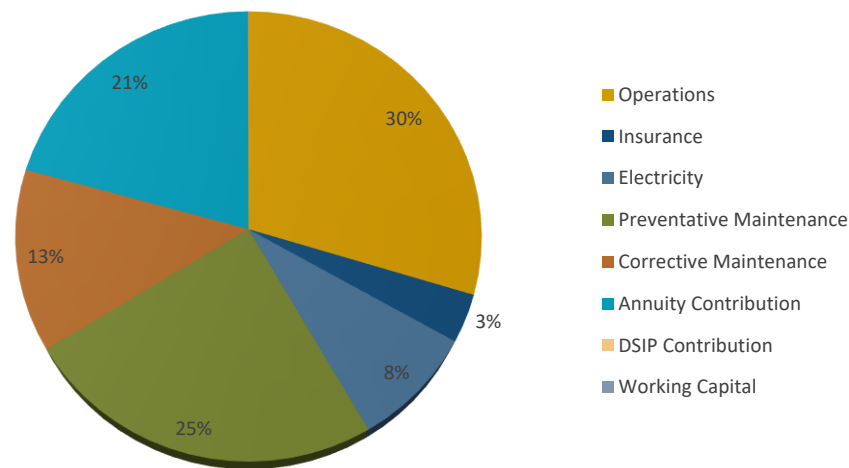
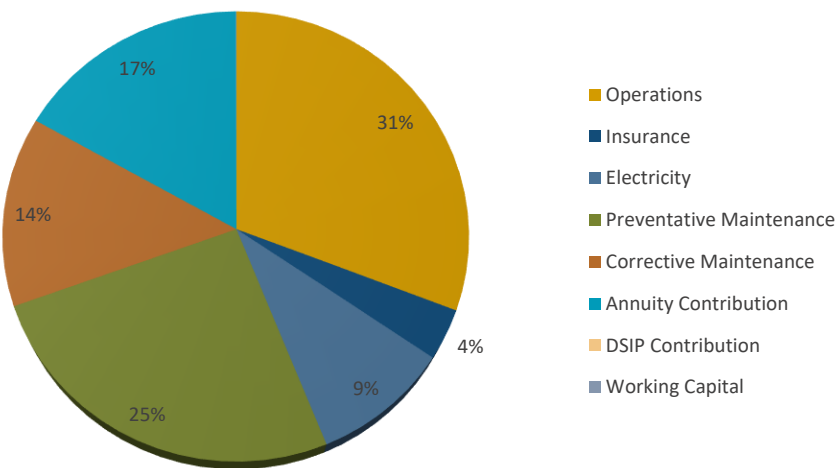


Figure 3: Breakdown of total service contract costs – 2019/20 to 2023/24 forecasts



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 Nogoa Mackenzie Distribution 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 2.36 per cent reduction in indirect costs.

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

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

Nogoa Mackenzie 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	305.9	161.9	144.0	250.8	165.9	330.0	170.1	366.0	364.1	376.2	385.9	378.6
Insurance	138.5	111.5	27.0	138.5	114.3	135.4	117.2	138.5	141.7	145.0	148.3	151.7
Operations	860.7	809.1	51.6	818.8	829.3	1150.0	850.1	1155.9	1187.1	1219.0	1251.9	1285.6
Operations Total	1305.1	1082.5	222.6	1208.1	1109.5	1615.4	1137.3	1660.4	1692.9	1740.2	1786.1	1816.0
Preventative maintenance	880.6	662.2	218.3	865.8	678.8	951.0	695.8	962.8	987.3	1012.5	1038.3	1064.7
Corrective maintenance	207.9	307.4	(99.5)	349.2	315.0	507.0	322.9	513.5	526.7	540.2	554.0	568.3
Routine Total	2393.5	2052.1	341.5	2423.2	2103.4	3073.4	2156.0	3136.7	3206.9	3292.8	3378.5	3449.0

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

Nogoa Mackenzie Distribution Service Contract's total operations budget in 2018/19 is 42.04 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by higher electricity costs and overheads. 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 and demand patterns 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. As flagged in the draft NSPs, SunWater is considering self-insurance in the distribution schemes in order to achieve further cost savings. However, given the potential consequences for customers should an event occur,

SunWater will undertake more detailed consultation with customers before making such a significant change to policy coverage.

4.2 Preventative maintenance

Preventative maintenance underpins the ongoing operational performance and service capacity of Nogoa Mackenzie Distribution 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. Nogoa Mackenzie Distribution Service Contract's preventative maintenance for 2018/19 is budgeted to be 36.68 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by higher material costs (acrolein) and 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.

Nogoa Mackenzie Distribution Service Contract's corrective maintenance for 2018/19 is budgeted to be 57.01 per cent above the QCA's recommended costs (adjusted for inflation). This variance is largely driven by higher contractor costs and overheads. Corrective maintenance will be undertaken on Winton Creek and drains.

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.

SunWater has developed a whole of life strategy around the replacement and maintenance of its asset portfolio which is based on the concept of optimised life. The key drivers in this approach are the risk and condition of each asset. The current condition of an asset drives an estimate of the future work required to ensure an asset continues to be able to provide the required level of service into the future. SunWater maintains a program of asset inspections and condition assessments which continually updates our knowledge of asset condition. This information feeds into the annual review of the renewals program. Items requiring immediate maintenance or replacement are included in the budget for the following year.

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

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

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

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

Table 7 sets out our non-routine annuity and non-annuity funded expenditure.

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

Table 7: Non-routine expenditure¹

Nogoa Mackenzie 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	4.0	-	4.0	-	-	-	-	-	-	-	-	-
Preventative maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Corrective maintenance (flood)	23.8	-	23.8	-	-	-	-	-	-	-	-	-
Renewals	523.2	583.8	(60.6)	276.1	353.0	1131.4	1018.3	444.9	420.1	428.4	457.2	548.7
Non-routine total	551.0	583.8	(32.8)	276.1	353.0	1131.4	1018.3	444.9	420.1	428.4	457.2	548.7
Non annuity funded												
Other	-			-		-		-	-	-	-	-

1. Totals may not add due to rounding.

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

6. Annuity balance

Annuities are managed by SunWater on behalf of each Service Contract. They allow for customer charges to reflect a constant amount necessary to recoup the costs of refurbishment/rehabilitation of the assets over a pre-determined period of time. The forecast annuity balances, and the impacts of budgeted non-routine spend, are shown in Table 8 below.

The QCA and SunWater closing balances will differ due to differences in the expenditure profile allowed by the QCA in 2012 and actual expenditure incurred

by SunWater between 2012/13 and 2018/19. For example, SunWater rehabilitated the LN1 drain to original design specifications in response to the 2011 Queensland Floods Commission of Inquiry (approximately \$650,000). An options study of Selma pump station also identified significant shortcomings in the facility, including safety and reliability issues, which were addressed over a number of years.

Table 8: Annuity balance¹

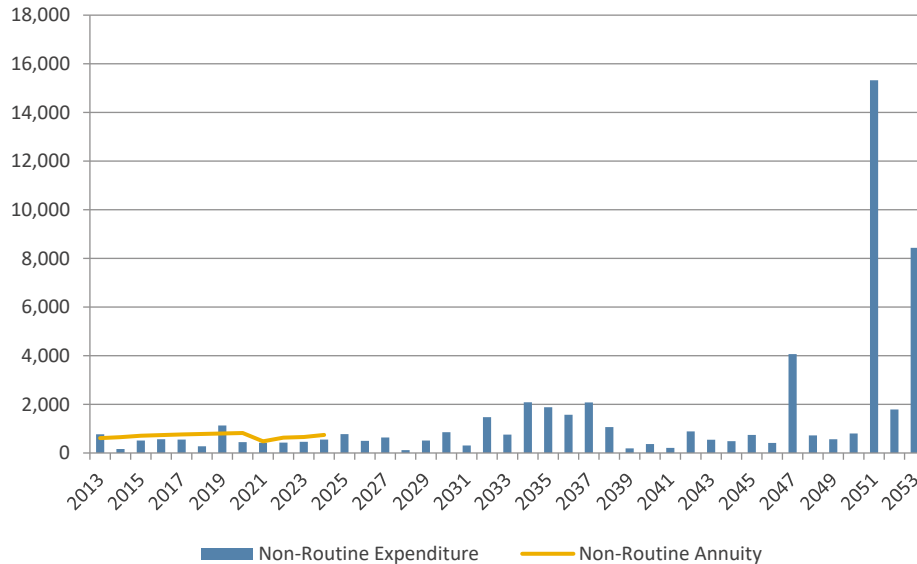
Nogoa Mackenzie Service Contract	2016/17 Actual \$'000	2017/18 Estimate \$'000	2018/19 Forecast \$'000	2019/20 Forecast \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000
Annuity								
Opening balance ²	765.5	1034.3	1617.2	1408.1	2144.9	2328.1	2667.7	3018.6
Spend	(551.0)	(276.1)	(1131.4)	(444.9)	(420.1)	(428.4)	(457.2)	(548.7)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution ³	762.5	781.5	801.1	821.1	479.2	633.3	653.7	740.2
Interest/financing costs	57.3	77.5	121.1	105.5	124.1	134.7	154.4	174.7
SunWater – Closing Balance	1034.3	1617.2	1408.1	1889.7	2328.1	2667.7	3018.6	3384.7
QCA – Closing Balance	2199.0	2792.2	2784.1					
Difference	(1164.7)	(1175.0)	(1376.0)					

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 4 below.

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



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

6.2 Options assessment

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

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

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

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

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

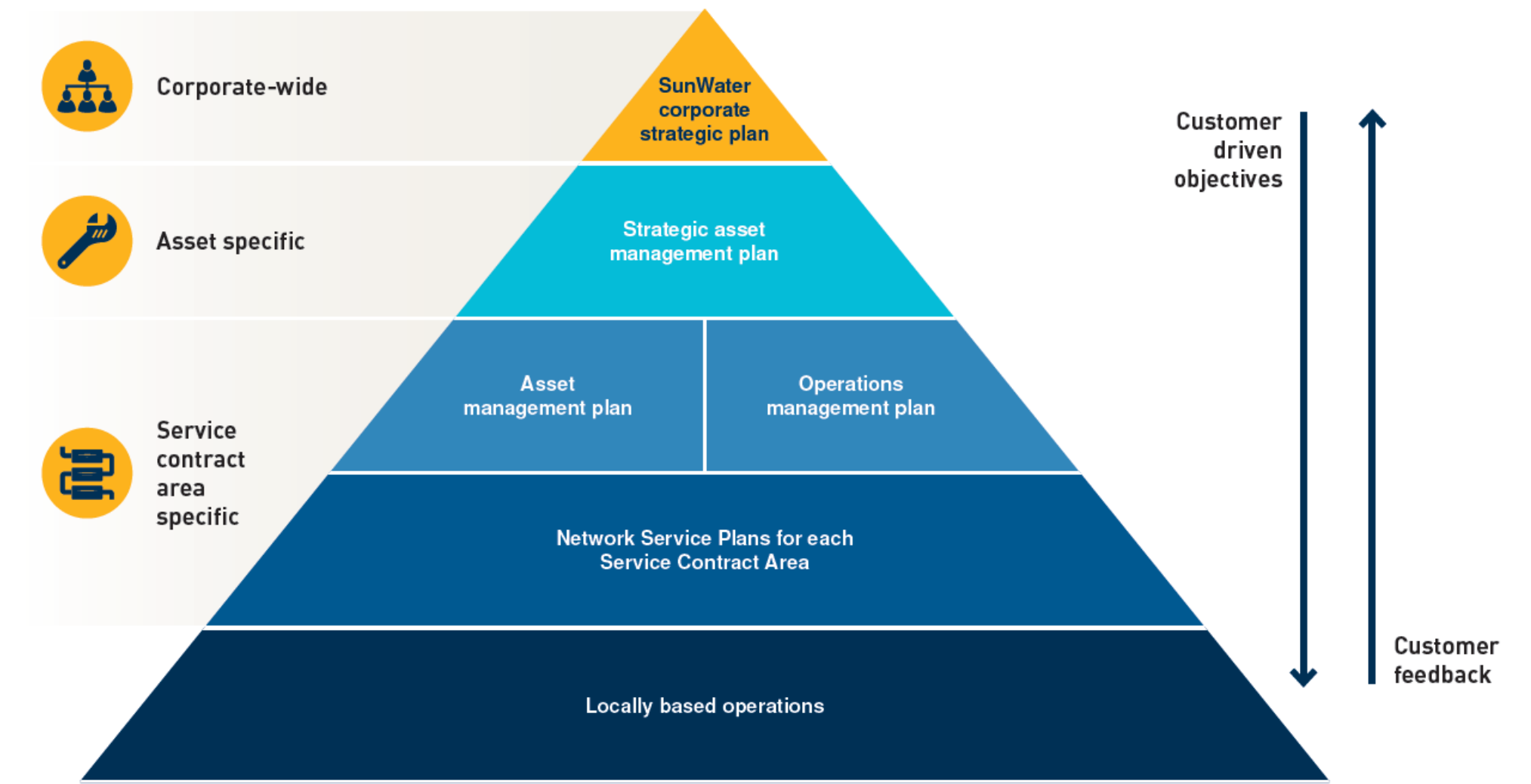
For less complex (more routine) renewals projects with fewer practical outcomes, SunWater will use its engineering knowledge and experience to determine the optimum solution.

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

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

Appendix 1: SunWater’s asset management framework

Figure 5: SunWater’s asset management framework



Appendix 2: Total expenditure by expense type

Table 9: Expenditure for activity by type¹

Nogoa Mackenzie 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	307.2	299.7	7.5	301.3	309.3	(8.0)	318.4	319.2	(0.7)	319.5	327.2	342.0	335.3	351.9	362.2	372.7	383.6	394.8
Contractors	3.4	-	3.4	1.7	-	1.7	8.2	-	8.2	2.0	-	2.0	-	2.0	2.1	2.1	2.2	2.3
Materials	-	3.7	(3.7)	0.4	3.9	(3.5)	0.1	3.9	(3.8)	2.0	4.0	2.0	4.1	2.0	2.1	2.1	2.2	2.2
Electricity	229.1	140.1	89.0	344.3	151.3	193.0	305.9	161.9	144.0	250.8	165.9	330.0	170.1	366.0	364.1	376.2	385.9	378.6
Insurance	158.2	107.8	50.4	143.3	109.6	33.7	138.5	111.5	27.0	138.5	114.3	135.4	117.2	138.5	141.7	145.0	148.3	151.7
Other	47.1	18.3	28.9	46.9	18.8	28.2	16.2	19.1	(2.9)	37.0	19.6	21.0	20.1	21.5	22.0	22.5	23.0	23.5
Local area support costs	211.0	-	211.0	257.9	-	257.9	273.9	-	273.9	249.2	-	437.7	-	444.7	456.3	468.2	480.5	493.0
Corporate support costs	119.1	305.6	(186.5)	93.6	300.2	(206.5)	97.3	306.7	(209.4)	144.0	314.4	222.3	322.3	210.3	215.8	221.4	227.2	233.1
Indirect costs	186.7	183.8	2.9	161.0	182.6	(21.7)	146.5	160.2	(13.7)	65.2	164.2	123.1	168.3	123.4	126.6	129.9	133.3	136.8
Preventative maintenance																		
Labour	164.5	118.8	45.7	145.6	122.6	23.1	187.7	126.5	61.2	205.3	129.7	169.9	132.9	174.9	180.0	185.2	190.6	196.2
Contractors	137.5	181.9	(44.4)	29.4	187.7	(158.3)	101.3	190.9	(89.6)	25.0	195.7	110.0	200.6	112.6	115.4	118.1	121.0	123.9
Materials	244.5	138.6	105.9	291.9	143.0	148.9	249.6	145.4	104.1	275.0	149.1	250.0	152.8	255.8	261.6	267.6	273.8	280.1
Other	4.7	6.0	(1.3)	19.9	6.1	13.7	23.0	6.2	16.8	54.0	6.4	32.0	6.6	32.7	33.5	34.3	35.0	35.9
Local area support costs	111.8	-	111.8	125.2	-	125.2	161.4	-	161.4	160.2	-	217.5	-	221.0	226.7	232.7	238.7	245.0
Corporate support costs	75.7	136.1	(60.4)	57.8	134.6	(76.8)	71.2	137.6	(66.4)	104.5	141.1	110.4	144.6	104.5	107.2	110.0	112.9	115.8
Indirect costs	97.6	65.5	32.1	79.9	65.0	14.9	86.3	55.5	30.8	41.9	56.9	61.2	58.3	61.3	62.9	64.5	66.2	68.0
Corrective maintenance																		
Labour	33.1	70.6	(37.6)	48.9	72.9	(24.0)	39.0	75.2	(36.2)	86.2	77.1	88.8	79.0	91.3	94.0	96.8	99.6	102.5
Contractors	61.3	69.6	(8.2)	101.4	71.8	29.6	71.8	73.0	(1.2)	95.0	74.8	160.0	76.7	163.9	167.8	171.8	176.0	180.2
Materials	16.5	35.8	(19.4)	5.6	37.0	(31.4)	15.1	37.6	(22.5)	25.0	38.6	35.0	39.5	35.8	36.6	37.5	38.3	39.2
Other	10.8	10.7	0.1	5.4	11.0	(5.6)	19.4	11.2	8.2	15.0	11.5	20.0	11.8	20.5	20.9	21.4	21.9	22.4
Local area support costs	22.5	-	22.5	39.7	-	39.7	31.3	-	31.3	67.2	-	113.6	-	115.4	118.4	121.5	124.7	128.0
Corporate support costs	16.5	76.7	(60.2)	17.8	75.6	(57.9)	14.4	77.3	(62.9)	43.2	79.2	57.7	81.2	54.6	56.0	57.5	59.0	60.5
Indirect costs	20.6	38.9	(18.3)	22.8	38.6	(15.8)	16.9	33.0	(16.1)	17.6	33.8	31.9	34.7	32.0	32.9	33.7	34.6	35.5
Routine total	2279.2	2008.1	271.1	2341.8	2041.7	300.2	2393.5	2052.1	341.5	2423.2	2103.4	3073.4	2156.0	3136.7	3206.9	3292.8	3378.5	3449.0
Non-routine spend																		
Labour	100.2	116.7	(16.5)	56.1	40.3	15.7	25.0	116.7	(91.7)	38.7	69.3	53.6	199.9	34.2	23.4	17.7	57.7	95.3
Contractors	199.0	119.8	79.2	361.0	56.0	305.0	334.0	141.0	193.0	84.8	79.4	352.8	229.1	85.2	70.5	147.7	142.1	102.6
Materials	25.5	170.5	(145.0)	0.5	27.3	(26.8)	0.4	96.5	(96.1)	26.6	74.8	555.0	215.9	256.1	277.8	165.4	135.7	102.6
Other	8.4	58.7	(50.3)	34.3	14.9	19.5	128.4	52.6	75.8	62.8	33.8	50.0	97.6	-	-	61.6	4.8	56.0
Local area support costs	74.6	44.3	30.3	46.9	43.5	3.4	21.5	125.7	(104.2)	30.2	65.9	65.8	190.1	27.4	18.7	14.1	46.2	76.3
Corporate support costs	45.8	-	45.8	35.1	-	35.1	30.1	-	30.1	25.1	-	34.9	-	28.4	19.5	14.7	47.9	79.1
Indirect costs	59.6	21.1	38.5	29.4	21.3	8.1	11.5	51.3	(39.7)	7.9	29.7	19.3	85.8	13.7	10.2	7.3	22.9	36.8
Non-routine total	513.1	531.1	(18.0)	563.3	203.2	360.0	551.0	583.8	(32.8)	276.1	353.0	1131.4	1018.3	444.9	420.1	428.4	457.2	548.7
Total spend	2792.4	2539.2	253.1	2905.1	2244.9	660.2	2944.5	2635.9	308.7	2699.2	2456.4	4204.8	3174.3	3581.6	3627.0	3721.3	3835.7	3997.7

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 Nogoia Mackenzie Distribution Service Contract is allocated 3.650 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 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 Nogoia Mackenzie Distribution Service Contract is allocated 1.227 per cent of the forecast total indirect costs.

Corporate support costs

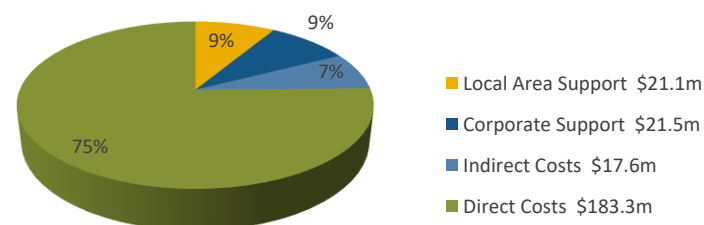
Corporate support costs are more generic than indirect costs and local area support costs, and are spread across all service contacts based on direct labour. They include the cost of human resources and payroll, information and communications technology, corporate communications, legal, property, finance, 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 Nogoia Mackenzie Distribution Service Contract is allocated 1.815 per cent of the forecast total corporate support costs.

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



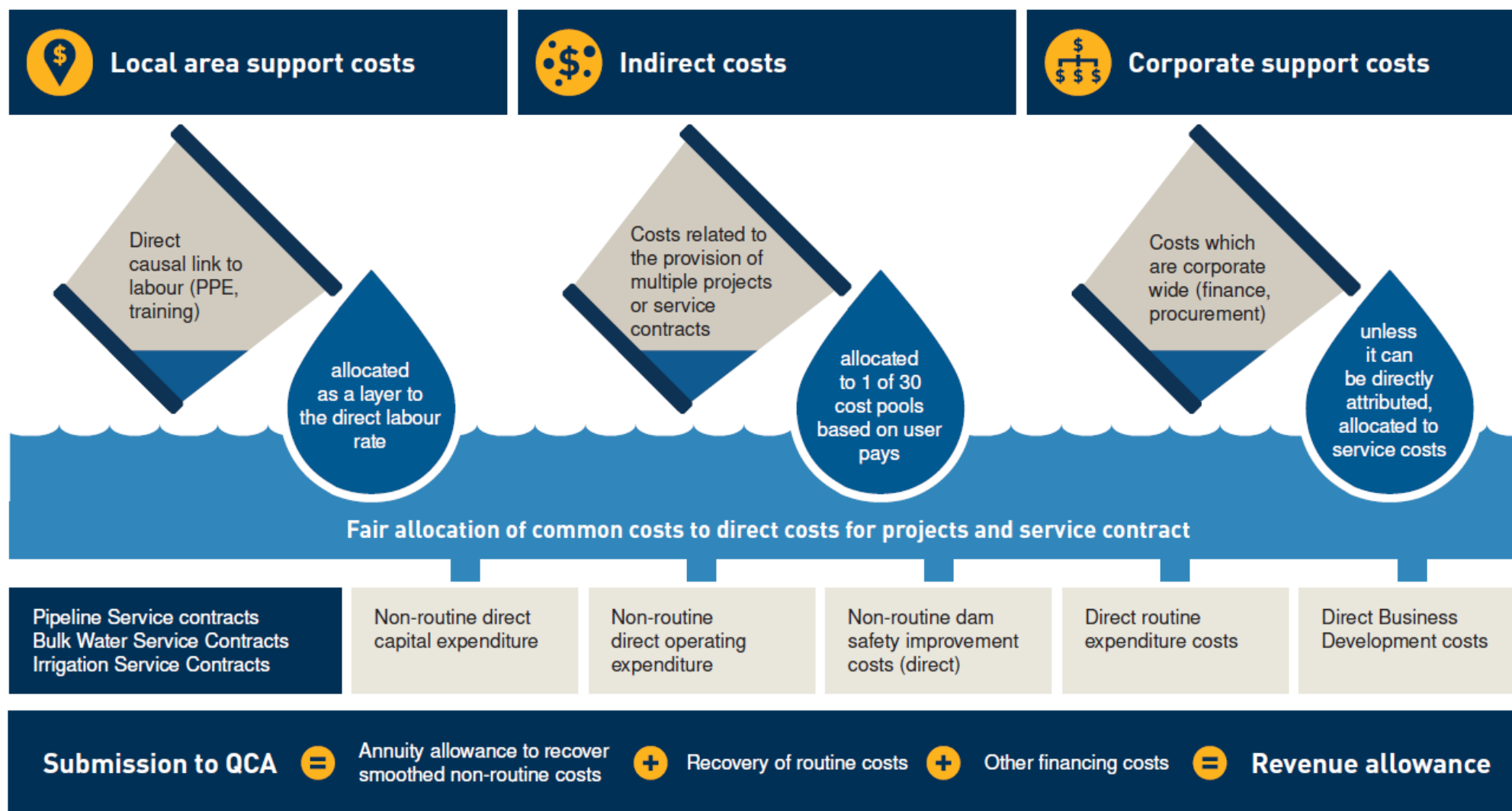
In the 2012 irrigation pricing review, the QCA reviewed and accepted SunWater's methodology for recovering local area support costs, indirect costs and corporate support costs. In 2018 we reviewed the cost allocation methodology and made changes to increase the transparency of local overhead costs and 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, regulating and monitoring channel flows, and monitoring customer deliveries
- emergency responses for channel overflows and other emergency events
- 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.

Preventative maintenance

Preventative maintenance for the Nogoa Mackenzie Distribution 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), channels (regulator gates, civil works, signs, structures, etc.), drains (civil works, structures etc.),

pipelines/siphons (valves, air valves, scours easements etc.) and other infrastructure.

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

Scheduled corrective maintenance

Scheduled corrective maintenance varies by asset type and typically includes minor corrective works on:

- Channels:
 - de-silting channels and catch drains
 - erosion control and repairing rock protection works
 - repairing fencing, concrete structures, regulator gates, and control valves.
- Drains:
 - de-silting drains
 - erosion control and repairing rock protection works
 - repairing fencing and concrete structures.
- Pipelines/siphons:
 - 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.
 - Meters:
 - repairing bulk water meters and customer meters.

Emergency corrective maintenance

Emergency corrective maintenance typically includes restoring systems and equipment after faults or unplanned events, and responding to theft or vandalism associated with Service Contract assets.

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

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

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

Year	Work Items	Work Description	Budget (\$'000)
2018/19	Meter replacements – Bulk	Weemah and Selma main channel bulk water meter arrangements. New arrangement costs based on options analysis but subject to current investigations to confirm (or otherwise) existing partial flume arrangement accuracy.	277
	Selma pump station – Refurbish pump unit 3	Planned refurbishment of pump based on condition to retain facility capacity and reliability.	157
	Selma pump station switchyard – Replace electrical poles	Replace 4 electrical poles due to recent condition assessment to ensure reliable power supply and safety.	79
	Selma main channel – Replace damaged headwalls, wingwalls and aprons	Carryover project to replace damaged headwalls, wingwalls and aprons. Condition based works to ensure asset function.	57
	Other works	The balance of the 2018/19 program consists of Weemah main channel and Selma main channel end of system gauging stations to manage system efficiency, two customer meter replacement projects based on asset condition and costs related to managing drainage arrangements.	561
	2018/19 Total		1131
2019/20	Selma main channel – Replace control gates	Scheduled replacement of gates based on standard asset life to reinstate condition and maintain channel system control.	137
	Selma main channel – Replace control equipment	Scheduled replacement of equipment at 3 sites based on standard asset life to ensure remote and local gate control functions are maintained.	72
	Weemah main channel siphons – Refurbish fencing and screening	Refurbishment of fencing and screens to ensure workplace health and safety and public risks are managed. Works conducted in line with the 30 Year Irrigation Strategy.	56
	Meter replacements	Selma main channel customer meter and arrangement replacements based on standard asset life and in line with the 30 Year Irrigation Strategy and SunWater's staged meter replacement planning.	50

Year	Work Items	Work Description	Budget (\$'000)
	Selma pump station and Selma relift pump station – Replace Total Channel Control (TCC) monitoring equipment	Replacement works based on standard asset life to ensure equipment serviceability and system surveillance is maintained.	59
	Other works	The balance of the 2019/20 program consists of third-party crane inspections, general signage replacements in the Selma and Weemah systems, gate control (Selma main channel regulating gate 3) and Selma pump station replacement options analyses.	71
	2019/20 Total		445
2020/21	Selma main channel – Replace customer meters and regulating gate control equipment	Replace customer meters and regulating gate control equipment. Combined replacement project (10 sites) based on standard asset life to ensure continued serviceability and system control.	324
	Selma pump station – Refurbish electric motors	Refurbishments of electrical motors for Pump 1 and 2. Scheduled refurbishment based on standard asset life and refurbishment periods to ensure ongoing serviceability.	74
	Other works	The balance of the 2020/21 program consists of a Selma system radio/remote transmission unit replacement and general Selma and Weemah fencing works.	22
	2020/21 Total		420
2021/22	Selma main channel – Replace control equipment	Scheduled replacement of control equipment based on standard asset life to ensure remote and local gate control functions are maintained.	133
	Selma main channel – Replace meters and TCC monitoring equipment	Replace meters at 3 customer sites and Selma S1_B TCC monitoring equipment. Replacement works based on standard asset life to ensure equipment serviceability and system control is maintained.	133
	Selma drain – Refurbish rock protection works, and bed and bank earthworks	Refurbishment of rock protection works, and bed and bank earthworks to reinstate asset condition and maintain function.	64
	Selma main channel – Replace meters and arrangements	Replace customer meters and arrangements, based on standard asset life and in line with the 30 Year Irrigation Strategy and SunWater's staged meter replacement planning.	52
	Selma drain – Drainage inlet repairs	Drainage inlet repairs based on assessed condition. Reinstate risk protection and concrete sills to ensure asset function.	24
	Other works	The balance of the 2021/22 program consists of third-party hoist and crane inspections.	22

Year	Work Items	Work Description	Budget (\$'000)
	2021/22 Total		428
2022/23	Selma channel – Replace customer meter control equipment	Replacements based on standard asset life and to ensure serviceability and system control.	168
	Selma pump station – Refurbish S1 pump unit	Refurbishment based on standard asset life and refurbishment schedules to retain asset condition and serviceability.	34
	Selma pump station – Refurbish fixed wheel gate 2	Refurbishment based on standard asset life and refurbishment schedules to maintain condition and function.	26
	Selma pump station – Delivery pipework within station	Assess and refurbish/replace as required. Project based on standard asset life and replacement timing.	22
	Selma pump station – Refurbish baulk	Refurbishment based on standard asset life to ensure asset long-term function and condition.	24
	Other works	The balance of the 2022/23 program consists of 7 yearly third-party crane inspections, Selma and Weemah gauging equipment replacements, safety screen refurbishments, channel offtakes and gate refurbishments at various locations.	183
	2022/23 Total		457
2023/24	Selma pump station – Replace pump unit 1	Replacement based on standard asset life and assuming further refurbishment is uneconomic. Options will be considered prior to expenditure commitment.	304
	Meter replacement	Replacement of Selma main channel customer meter and arrangement based on standard asset life and in line with the 30 Year Irrigation Strategy and SunWater's staged meter replacement planning.	66
	Selma pump station – Replace S2 soft starter	Pump control equipment works based on standard asset life and obsolescence to maintain pump station reliability.	35
	Other works	The balance of the 2023/24 program consists of periodic transformer tests and servicing, a single gate replacement and further hoist/crane inspections.	144
	2023/24 Total		549



Contact us

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

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

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

Nogoa Mackenzie Distribution Service
Contract

6 November 2018

Final

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How to read this addendum

Several changes have been made to our forecast costs since we published our 2019 Network Service Plan for the Nogoia Mackenzie Distribution 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 D cost per megalitre.

Note:

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

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

Product	Charge type	2018/19 (\$/ML)	Cost (\$/ML) ²	Subsidy (\$/ML)
Medium Priority Allocation Charge – Channel Distribution	Channel Distribution – Part C (fixed charge based upon entitlement)	26.60	38.45	11.85
Medium Priority Allocation Water – Channel Distribution	Channel Distribution – Part D (variable charge based upon usage)	6.71	9.83	3.12

1. This table includes distribution charges only. For river charges (Part A and Part B) please refer to the Addendum to the Bulk Water 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.

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

	2016/17			2017/18 ²		2018/19 ²		2019/20	2020/21	2021/22	2022/23	2023/24
	SunWater Actual \$'000	QCA Recommended \$'000	Variance \$'000	SunWater Actual \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	2016/17 QCA Recommended (adjusted) \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000	SunWater Forecast \$'000
Electricity	305.9	161.9	144.0	417.1	165.9	330.0	170.1	346.6	338.6	350.5	381.5	379.0
Insurance	138.5	111.5	27.0	129.0	114.3	135.4	117.2	138.2	141.4	144.6	147.9	151.3
Operations	860.7	809.1	51.6	985.9	829.3	1150.0	850.1	1154.0	1184.3	1215.3	1246.5	1278.4
Operations Total	1305.1	1082.5	222.6	1532.1	1109.5	1615.4	1137.3	1638.8	1664.3	1710.4	1775.9	1808.8
Preventative maintenance	880.6	662.2	218.3	829.4	678.8	951.0	695.8	960.9	985.0	1009.6	1034.5	1060.0
Corrective maintenance	207.9	307.4	(99.5)	340.5	315.0	507.0	322.9	512.5	525.4	538.6	552.0	565.7
Routine Total	2393.5	2052.1	341.5	2702.1	2103.4	3073.4	2156.0	3112.2	3174.6	3258.7	3362.4	3434.4

1. SunWater's 2019/20 to 2023/24 budget figures are draft as at the time of consultation. These figures will not be locked down until late in the financial year prior.
2. For 2017/18 and 2018/19 SunWater has included and reported against the 2016/17 QCA recommended costs adjusted for inflation which was assumed to be 2.5%.

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

	2016/17 Actual \$'000	2017/18 Actual \$'000	2018/19 Forecast \$'000	2019/20 Forecast \$'000	2020/21 Forecast \$'000	2021/22 Forecast \$'000	2022/23 Forecast \$'000	2023/24 Forecast \$'000
Annuity								
Opening balance ¹	765.5	1034.3	1606.4	1396.4	2130.4	2313.7	2652.3	3002.2
Spend	(551.0)	(286.9)	(1131.4)	(444.9)	(420.1)	(428.4)	(457.2)	(548.7)
Insurance proceeds receipts (if applicable)								
Prior year	-	-	-	-	-	-	-	-
Current year	-	-	-	-	-	-	-	-
Annuity contribution ²	762.5	781.5	801.1	819.1	478.9	631.7	652.0	737.8
Interest/financing costs	57.3	77.5	120.3	104.6	124.6	135.3	155.1	175.5
SunWater – Closing balance	1034.3	1606.4	1396.4	1875.2	2313.7	2652.3	3002.2	3366.9
QCA – Closing balance	2199.0	2792.2	2784.1					
Difference	(1164.7)	(1185.8)	(1387.7)					

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	(36)
Annuity income difference	153
Intersafe project spend adjustment	0
Interest difference	23
Alignment to previously reported data	0
Interest	115
Total	255

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	3073.4	3112.2	3174.6	3258.7	3362.4	3434.4
Non-routine costs (Annuity contribution)	801.1	819.1	478.9	631.7	652.0	737.8
Dam improvement program	-	-	-	-	-	-
Working capital	2.4	2.4	-	-	-	-
Revenue offsets	(341.5)	(350.1)	(358.8)	(367.8)	(377.0)	(386.4)
Transfers (Distribution losses)	434.0	397.7	553.9	567.1	585.1	600.7
Total costs	3969.4	3981.3	3848.6	4089.7	4222.5	4386.6
Notional cost allocations						
Irrigation customers	3965.3	3977.3	3844.7	4085.5	4218.2	4382.1
Urban/Industrial customers	4.1	4.1	4.0	4.2	4.3	4.5
SunWater	-	-	-	-	-	-
Total costs	3969.4	3981.3	3848.6	4089.7	4222.5	4386.6

Table 6: Historical actual water usage

Year	Usage (ML)
2002/03	114,356
2003/04	67,352
2004/05	93,886
2005/06	84,946
2006/07	64,912
2007/08	50,276
2008/09	70,332
2009/10	104,409
2010/11	44,425
2011/12	84,117
2012/13	84,315
2013/14	94,707
2014/15	73,077
2015/16	89,720
2016/17	83,765
15-year average	80,306