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2016 Annual Network Service Plan

Mareeba Bulk

June 2015

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Notes

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

Most of the financial figures in the QCA's final report on SunWater's irrigation pricing were presented in real dollars (\$2011). To allow comparison to this NSP, convert the QCA final report real dollar figures to nominal dollars by, multiplying the QCA \$real figures by the following factors, which are based on the QCA's assumed inflation rate of 2.5% p.a.

Table 1 – Conversion Factors for real \$2011 to Nominal Dollars

	2013	2014	2015	2016	2017
Conversion Factor	1.051	1.077	1.104	1.131	1.160

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Introduction

A recommendation from the 2013-17 review of SunWater's irrigation pricing was for SunWater to produce annual Network Service Plans (NSPs) to help keep customers informed throughout the pricing period. These annual NSPs will focus on both routine expenditure (opex) and non-routine expenditure. In particular, the NSPs will cover:

- past performance for routine opex and non-routine expenditure,
- forecast opex and non-routine for the approaching year, and
- the long-term outlook for material non-routine spend.

SunWater published draft 2016 NSPs for each of thirty Service Contracts during March 2015. This was followed by consultation meetings held throughout regional Queensland over March and April. These discussions involved many customers and other stakeholders at Irrigation Advisory Committee meetings and other forums. Valuable feedback was received from customers that can be found, along with SunWater's responses, at <http://www.sunwater.com.au/schemes/nsp/annual-nsp-and-performance-reports>

SunWater values customer feedback and will publish all submissions and SunWater's responses on our website. Customers can provide their feedback via email or post using one of the following addresses:

Email: nspfeedback@sunwater.com.au

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

Water Data

Table 2 – Water Data

	No. of Customers	Water Entitlements ML
Industrial		1,201
Irrigation		151,563
Urban		6,660
Other		0
SunWater		45,001
Total	1,112	204,425
QCA Assumed Water Usage for Irrigation		60.4%
QCA Assumed Water Usage for Total		69.4%

Table 3 – Revenue¹

	2013 SunWater Actual \$'000	2014 SunWater Actual \$'000	2015 SunWater Budget \$'000	2016 SunWater Budget \$'000
Irrigation Revenue*	161	132	(94)	16
Industrial and Urban*	1,866	1,576	1,143	1,143
Other Revenue	2	2	2	2
Total Revenue	2,029	1,710	1,051	1,161

* Bulk water charges have not been unbundled from Distribution charges therefore a portion of the Distribution revenue is attributable to the Bulk service contract. The irrigation revenue reflects the variation in annuity spending each year and this why revenue is negative in 2015 and low in 2016.

¹ The budget figures form the basis for SunWater’s SCI submission, which is yet to be agreed with SunWater’s shareholding Ministers. While the budgets are not expected to change from here, there is always the possibility of further directions from Government and these may have budget implications.

Routine Expenditure

Table 4 – Routine Operating Expenditure²

	2013 SunWater Actual	%of 2013 Target	2014 SunWater Actual	%of 2014 Target	2015 SunWater Budget	%of 2015 Target	2016 SunWater Budget	%of 2016 Target
	\$'000	%	\$'000	%	\$'000	%	\$'000	%
Operations (Excl. Elect.)	785	100%	872	107%	879	108%	835	103%
Preventative	136	70%	148	72%	195	96%	270	134%
Corrective	16	64%	16	64%	23	92%	65	257%
Electricity	2	33%	2	26%	2	31%	2	28%
Total Routine Expenses	939	93%	1,038	99%	1,100	105%	1,172	112%

The budget routine spend is 12% above the QCA's target for 2015 however the budget falls to 99% of target when the above-QCA increases in insurance are taken into account.

Operations

The operations budget is 3% above the QCA's target for 2016.

Preventive Maintenance

Preventive maintenance is 34% above the QCA's target for 2016. This is due to forecast inspections and monitoring associated with dam safety compliance.

Corrective Maintenance

Corrective maintenance is 157% above the QCA's target for 2016. This is due to escalated costs managing safety hazards due to ageing services within the dam gallery.

Electricity

Electricity costs are budgeted 72% below the QCA target in 2016. This is despite the QCA limiting estimated tariff increases to around 35% over the first four years of the price path when actual increases have been around 50%. Mareeba Bulk electricity costs can vary from year-to-year and in total represent less than 1% of total routine costs.

² The budget figures form the basis for SunWater's SCI submission, which is yet to be agreed with SunWater's shareholding Ministers. While the budgets are not expected to change from here, there is always the possibility of further directions from Government and these may have budget implications.

Non-Routine Expenditure

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 and items requiring immediate maintenance or replacement are included in the budget for the following year.

While the immediate program for the next year's budget is well defined; the further into the planning timeline, the more uncertain the estimates become. Consequently, the program of works is not a specific forecast of when individual projects are expected to be executed but rather it is portfolio level estimate of works based on the best-available risk and condition information for the service contract as a whole. This information feeds into calculation of the annuity to fund renewals. Having an annuity funding arrangement acknowledges that a long-term view of renewals spend is required to ensure adequate funding and to address issues such as inter-generational equity.

The QCA targets were set against a snapshot of the estimated program of works taken during the 2010-11 year. While this was the best estimate of expected work at the time, there has been significant project churn since this estimate was made. This can mean that, in some cases, the QCA's funding allowance for renewals work does not cover the total expenditure required to maintain asset condition to the required standard. In addition, there are unexpected events, such as floods, that are not allowed for in the QCA's annuity funding allowance. Notwithstanding these points, SunWater aims to limit renewals expenditure to the QCA's targets over the 2013-17 price path in order to manage the annuity balance to reasonable levels.

Non-Routine Budget

The budget non-routine spend for 2016 is shown in the table below, along with the actual spend for 2014 and the budget spend for 2015. The planned spend for 2016 has increased over last year's NSP due to the need to address the asbestos issue with Tinaroo Falls lights. Aside from the asbestos issue, the condition of the system and especially power distribution boards is very poor and does not comply with current standards. The full system requires replacement as soon as practicable by a contractor licenced to work with asbestos. Overall, the 2013-17 non-routine spend will exceed the five-year QCA target.

Table 5 – Non-Routine Expenditure

	2013 SunWater Actual	%of 2013-17 Target	2014 SunWater Actual	%of 2013-17 Target	2015 SunWater Budget	%of 2013-17 Target	2016 SunWater Budget	%of 2013-17 Target
	\$'000	%	\$'000	%	\$'000	%	\$'000	%
Annuity Funded								
R&E - Annuity Funded	214		102		104		236	
Corrective	0		0		0		0	
Other	0		0		0		0	
Non-direct	36		107		31		64	
Annuity Funded Total	250	58%	209	48%	135	31%	301	69%
Non-Annuity Funded								
R&E - Non-Annuity Funded	(2)		1		0		0	
Non-direct	0		2		0		0	
Total Non-Annuity Funded	(1)	n/a	3	n/a	0	n/a	0	n/a

The details for the five major projects planned for 2016 are provided below:

Table 6 – Non-Routine Projects 2016

Project Title	Project Scope	2016 Budget (\$'000)
Replace remaining lights in Tinaroo Falls Dam Galleries due to existence of asbestos - TINAROO DAM	Since the gallery lighting system was inspected by SunWater in Sep 2014, it has become evident that aside from the existence of asbestos, the condition of the system and especially power distribution boards is very poor and does not comply with current standards. The full system requires replacement as soon as practicable by a contractor licenced to work with asbestos.	152
Tinaroo Falls extreme hazard mapping for EAP and community engagement - TINAROO DAM	This project is to update the hazard maps for the Emergency Action Plan for Tinaroo Falls Dam to improve public safety during flood events. This is required as the existing extreme hazard map needs updating to incorporate population growth.	47
Overhaul gearbox & replace gate bottom seal (2013 DS Rec. 6.4.11 b&c) - TINAROO DAM	During the 2013 five-yearly inspection, the radial gate was cycled from fully closed through fully open and back to fully closed with some minor noise coming from the actuator gearbox. The condition of the gearbox, which also displayed minor oil leaks, suggests it requires servicing. This project is to undertake an overhaul.	45
Refurbish Gate - replace all bolts & nuts, remove corrosion product and reapply protective coating (2013 DS Rec. 6.4.16 a&b) - TINAROO DAM	During the 2013 five-yearly inspection, it was noted that approximately 30% of bolts and nuts were significantly corroded and require replacement as soon as practicable. No dam safety conduit inspections can be done until the gate is repaired.	23
Replace Meter Program (2 per year) - BARRON RIVER DISTRIBUTION	Some meters have been assessed as being in an unacceptable condition. They require replacement to maintain the accuracy of meter reads in accordance with SunWater's Metering Policy.	21
Other works	Various smaller replacement and refurbishment projects.	13
Total		301

Annuity Balance

The estimated 2015 and 2016 annuity balances are shown below; the annuity income shown has been set by the QCA until the end of the current price path in 2017. SunWater aims to limit the annuity spend to the QCA's targets over the 5-year price path in order to manage the annuity balance to reasonable levels.

The impact of the budget non-routine spend on the annuity balance for 2016 is shown in the following table. The balances for 2015 and 2016 are estimates only at this stage because the final actual spends for 2015 and 2016 will not be known until after each of these years is completed.

Table 7 – Annuity Balances

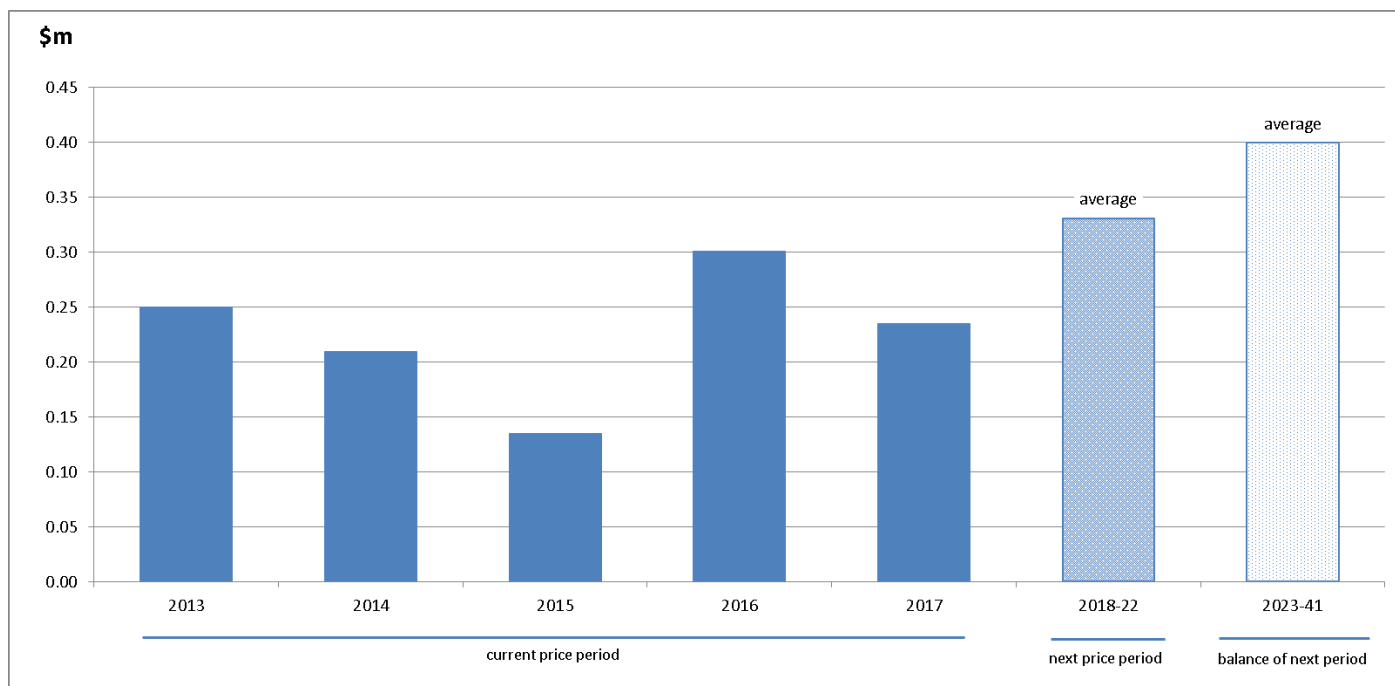
ANNUITY	2013	2014	2015*	2016
	\$'000	\$'000	\$'000	\$'000
Opening Balance	1,007	940	910	959
Annuity Income	108	108	116	117
Spend	(250)	(209)	(135)	(301)
Interest	75	70	68	72
Closing Balance	940	910	959	847

* All 2015 and 2016 figures are subject to change once actual spend is known.

Overview of Annuity Funded Non-Routine Projects 2013-41

The renewals annuity is calculated over a 20-year planning period; given that the following pricing period ends in 2022, the estimated renewals spend out until 2041 will affect the next pricing review. The estimated renewals expenditure out to 2041 is shown in the chart following.

Figure 1 – Annuity Expenditure 2013-41



All material renewals items out until 2041 are discussed in the sections following. Materiality is defined as >10% of the present value of the period in question. SunWater will develop options analyses for all material items in the annuity calculation planning period. These reports will be tailored to suit project complexity and budget, with detailed options analyses being completed within the current and following 5-year pricing periods and high-level options analyses for the 20-year period beyond the next price path. The materiality tests will be applied each year as part of annual planning process. Given that there will be project churn, some items will no longer require options analysis in future years and new items may join the list.

Material Projects 2016-17

Replace remaining lights at the Tinaroo Falls Dam Galleries due to the existence of asbestos - TINAROO DAM

Year: 2016

Current estimate: \$152k

Options analysis completed: No

Since the gallery lighting system was inspected by SunWater in September 2014, it has become evident that aside from the existence of asbestos, the condition of the system and especially power distribution boards is very poor and does not comply with current standards. The full system requires replacement as soon as practicable by a contractor licenced to work with asbestos.

Conduct Post tensioning of the Anchors by a Specialist Contractor - TINAROO DAM

Year: 2017

Current estimate: \$213k

Options analysis completed: No

The dam has been assessed as an “Extreme” hazard category dam in accordance with ANCOLD Guidelines on Assessment of the Consequences of Dam Failure. The guidelines on dam safety management by ANCOLD states 5-yearly monitoring frequency of post tensioning of the anchors for “Extreme” hazard category dam. As previous monitoring of post tension anchors will be conducted in 2017, it will also be due for monitoring in 2022. Given this requirement is stipulated in the guidelines, an options analysis will not be completed.

Material Projects 2018-22

The program of works for 2018-22 should be viewed as indicative at this stage and will be refined as the next pricing review draws closer.

5yr Dam Comprehensive Inspection - TINAROO DAM

Year: 2019

Current estimate: \$297k

Options analysis completed: No

SunWater policy is to conduct annual and 5 yearly inspections on our dam assets to ensure that the asset will be able to perform its designed function. The estimate to carry out the works is a built up figure using our works order system and recognised the time and rate of engineers and also the remoteness of the site. No options analysis is required.

Replace Half of Trash Rack Screen - TINAROO DAM

Year: 2020

Current estimate: \$321k

Options analysis completed: No

The program to replace the Trash Rack Screens will start from 2020. They are approaching 30 years old (end of the lifecycle) and may show signs of needing the replacement to be done. The trash screens were inspected in 2013 by industrial divers and their inspections did not observe significant defects to the screens; the general condition of the trash screens was satisfactory. Condition of the screens will be monitored and an option analysis will be carried out in 2019 prior to the replacement of trash screen at outlet works.

Conduct Post tensioning of the Anchors by a Specialist Contractor - TINAROO DAM

Year: 2022

Current estimate: \$239k

Options analysis completed: No

The dam has been assessed as an “Extreme” hazard category dam in accordance with ANCOLD Guidelines on Assessment of the Consequences of Dam Failure. The guidelines on dam safety management by ANCOLD states 5-yearly monitoring frequency of post tensioning of the anchors for “Extreme” hazard category dam. As previous monitoring of post tension anchors will be conducted in 2017, it will also be due for monitoring in 2022. Given this requirement is stipulated in the guidelines, an options analysis will not be completed.

Material Projects 2023-41

The program of works for 2023-41 should be viewed as indicative at this stage and will be refined as the next pricing review draws closer.

Replace Half of Trash Rack Screen - TINAROO DAM

Year: 2025

Current estimate: \$422k

Options analysis completed: No

The program to replace the Trash Rack Screens will start from 2020. They are approaching 30 years old (end of the lifecycle) and may show signs of needing the replacement to be done. The trash screens were inspected in 2013 by industrial divers and their inspections did not observe significant defects to the screens; the general condition of the trash screens was satisfactory. Condition of the screens will be monitored and an option analysis will be carried out in 2024 prior to the replacement of trash screen at outlet works.

Replace Cables & Cableways - TINAROO DAM

Year: 2027

Current estimate: \$723k

Options analysis completed: No

The estimated end of life of these assets is 2027. Cables and cableways will be condition assessed through an ongoing program of electrical testing to monitor ageing and deterioration to better determine replacement timelines. An option analysis will be carried out prior to the replacement of cable and cableways based on time based replacement/renewal strategy. Options are limited to maintaining assets in service for as long as possible and then replacing on a like for like basis or using alternative distribution methods such as overhead, if this is possible or practical.

Study: 20yr Dam Safety Review - TINAROO DAM

Year: 2028

Current estimate: \$494k

Options analysis completed: No

Tinaroo Dam is a category 1 referable structure and the 20 Year Dam Safety Review is required for Queensland Government Regulatory Compliance. The review is a procedure for systematically assessing the safety of a dam after its original construction. It is a fresh engineering assessment of the integrity of all elements of a dam. It usually incorporates a:

- current failure impact assessment,
- detailed review of structural, hydraulic, hydrologic and geotechnical design aspects,
- review of historical operational performance,
- review of surveillance reports,
- comprehensive inspection of the dam, and
- comparison of the standards used for building and upgrading the dam against current design standards.

Given this requirement is mandatory, an options analysis will not be completed.

Replace Dispersion Valve - TINAROO DAM

Year: 2032

Current estimate: \$458k

Options analysis completed: No

The scheduled replacement of a cone dispersion valve at Tinaroo Falls Dam is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

Conduct Post tensioning of the Anchors by a Specialist Contractor - TINAROO DAM

Year: 2032

Current estimate: \$301k

Options analysis completed: No

The dam has been assessed as an “Extreme” hazard category dam in accordance with ANCOLD Guidelines on Assessment of the Consequences of Dam Failure. The guidelines on dam safety management by ANCOLD states 5-yearly monitoring frequency of post tensioning of the anchors for “Extreme” hazard category dam. As previous monitoring of post tension anchors will be conducted in 2017, 2022, 2027, and will also be due for monitoring in 2032. Given this requirement is stipulated in the guidelines, an options analysis will not be completed.

Conduct Post tensioning of the Anchors by a Specialist Contractor - TINAROO DAM

Year: 2037

Current estimate: \$341k

Options analysis completed: No

The dam has been assessed as an “Extreme” hazard category dam in accordance with ANCOLD Guidelines on Assessment of the Consequences of Dam Failure. The guidelines on dam safety management by ANCOLD states 5-yearly monitoring frequency of post tensioning of the anchors for “Extreme” hazard category dam. As previous monitoring of post tension anchors will be conducted in 2017, 2022, 2027, 2032, and will also be due for monitoring in 2037. Given this requirement is stipulated in the guidelines, an options analysis will not be completed.

Appendix – Total Expenditure by Expense Type

Table 8 – Expenditure for Activity by Type

	2013 SunWater Actual \$'000	% of 2013 Target %	2014 SunWater Actual \$'000	% of 2014 Target %	2015 SunWater Budget \$'000	% of 2015 Target %	2016 SunWater Budget \$'000	% of 2016 Target %
ROUTINE EXPENSES								
Operations								
Labour	143		147		138		118	
Materials	7		5		2		2	
Contractors	7		7		9		10	
Other	318		412		394		388	
Non-direct	310		301		336		317	
Operations Total	785	100%	872	107%	879	108%	835	103%
Preventative								
Labour	38		52		67		70	
Materials	1		2		1		1	
Contractors	1		2		4		30	
Other	24		0		0		8	
Non-direct	72		91		123		161	
Preventative Total	136	70%	148	72%	195	96%	270	134%
Corrective								
Labour	3		2		6		7	
Materials	2		2		3		4	
Contractors	2		7		2		35	
Other	2		0		1		1	
Non-direct	7		4		12		18	
Corrective Total	16	64%	16	64%	23	92%	65	257%
Electricity	2	33%	2	26%	2	31%	2	28%
Total Routine Expenses	939	93%	1,038	99%	1,100	105%	1,172	112%
	2013 SunWater Actual \$'000	% of 2013-17 Target %	2014 SunWater Actual \$'000	% of 2013-17 Target %	2015 SW Budget \$'000	% of 2013-17 Target %	2016 SW Budget \$'000	% of 2013-17 Target %
NON-ROUTINE EXPENSES								
Annuity Funded								
R&E - Annuity Funded	214		102		104		236	
Corrective	0		0		0		0	
Other	0		0		0		0	
Non-direct	36		107		31		64	
Total Annuity Funded Non-Routine	250	58%	209	48%	135	31%	301	69%
TOTAL REGULATED EXPENSES	1,189		1,247		1,235		1,472	
Non-Annuity Funded								
R&E - Non-Annuity Funded	(2)		1		0		0	
Non-direct	0		2		0		0	
Total Non-Annuity Funded	(1)	n/a	3	n/a	0	n/a	0	n/a
TOTAL EXPENSES	1,187		1,250		1,235		1,472	