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2016 Annual Network Service Plan

Proserpine 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		550
Irrigation		42,017
Urban		10,992
Other		0
SunWater		9,317
Total	94	62,876
QCA Assumed Water Usage for Irrigation		62.9%
QCA Assumed Water Usage for Total		62.1%

Table 3 – Revenue¹

	2013 SunWater Actual \$'000	2014 SunWater Actual \$'000	2015 SunWater Budget \$'000	2016 SunWater Budget \$'000
Irrigation Revenue	422	481	511	523
Industrial and Urban	1,881	1,953	2,005	2,231
Other Revenue	178	197	172	172
Total Revenue	2,481	2,632	2,688	2,927

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.)	689	106%	937	138%	797	117%	713	105%
Preventative	48	34%	91	62%	151	101%	200	133%
Corrective	83	161%	42	79%	58	106%	76	136%
Electricity	7	131%	7	123%	7	127%	7	118%
Total Routine Expenses	826	97%	1,077	122%	1,013	114%	996	112%

The budget routine spend is 12% above the QCA's target for 2016 however the budget falls to 99% of target when the above-QCA increases in insurance are taken into account.

Operations

The operations budget in 2016 is 5% above the QCA target, however this is entirely due to the increases in insurance costs being much greater than allowed for by the QCA. Increased premiums followed flood events that have occurred in the past few years in Queensland. This cost over-run is beyond SunWater's control. The budget for operations drops to 89% of the QCA target when the insurance over-run is taken into account.

Preventive Maintenance

Preventive maintenance is 33% above the QCA's target for 2016. This is due to realigning labour with preventative inspections as opposed to operations.

Corrective Maintenance

Corrective maintenance is 36% above the QCA's target for 2016. This is due to expected work based on recent experience and further works that are likely to be identified from preventative inspections.

Electricity

Electricity costs are budgeted 18% higher than the QCA target in 2016 mostly due to announced increases in electricity prices being much higher than the increases allowed for by the QCA. The QCA had allowed for tariff increases of around 35% over the first four years of the price path whereas actual increases have been around 50%. Resultant cost over-runs are beyond SunWater's control.

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. Additional projects have been planned for 2015 and 2016 which means spend over 2013-17 will now exceed the five-year QCA target. These projects are necessary as annual and 5-yearly dam inspections discovered issues such as erosion, deterioration of assets, faults, etc., that require investigation and refurbishment based on results of the investigations. Some of these refurbishments are required sooner rather than later, which also translates into savings for works undertaken now rather than costs for future failure of assets if nothing is undertaken.

Table 5 – Non-Routine Expenditure

	2013 SunWater Actual \$'000	%of 2013-17 Target %	2014 SunWater Actual \$'000	%of 2013-17 Target %	2015 SunWater Budget \$'000	%of 2013-17 Target %	2016 SunWater Budget \$'000	%of 2013-17 Target %
Annuity Funded								
R&E - Annuity Funded	18		33		211		388	
Corrective	0		0		0		0	
Other	0		0		0		0	
Non-direct	5		52		67		119	
Annuity Funded Total	23	3%	84	11%	278	37%	507	67%
Non-Annuity Funded								
R&E - Non-Annuity Funded	0		0		0		0	
Non-direct	0		1		0		0	
Total Non-Annuity Funded	0	n/a	1	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 PLC and SCADA system - KELSEY CREEK PIPELINE	Kelsey Creek Pipeline Offtake is situated at Peter Faust Dam on the Pioneer River. The pipeline is designed to supply allocated irrigation water from Peter Faust Dam to irrigable land within the Kelsey Creek Water Supply Area. Releases are normally made remotely by computer controlled valves. The replacement of the control system at the Kelsey Creek Pipeline Offtake is due as the old parts are already obsolete and are not supported by the manufacturer, making sourcing of replacement parts difficult. In addition, SunWater will be in breach of its obligations if the valves become inoperable due to a control system malfunction.	150
Options, design/drawings & repair pipe leak - KELSEY CREEK PIPELINE	In August 2014 it was reported that a joint between MSCL pipe and RCP pipe was leaking. An options analysis will be undertaken, prior to repair works commencing, to determine the best option to proceed, and design & drawings will be prepared based on its findings.	148
Clean relief holes, patch cracks & repair spots of drummy concrete - Spillway Floor (2013 DS Rec 7.1c&d) - PETER FAUST DAM	After multiple spill events since the first spill in December 2010, the spillway floor and walls were observed to have suffered minor damage, such as spalling on the spillway chute floor and cracks on right training wall. In addition, a number of weep holes were clogged. Moreover, during a site visit in Sep 2013, operators reported areas of 'drummy' concrete on the spillway chute. It is anticipated that potential voids under the spillway slab will worsen in time and require extensive rectification. To prevent further damage to the spillway such as collapsing of walls and unsupported sections of slab, or possible failure from back scouring of the spillway towards the crest in future spill events, it is recommended to repair identified areas of 'drummy' concrete now, to patch the spillway chute floor and right training wall cracks, and to reinstate the existing spillway drainage system.	106
Overhaul Actuator Hydraulic Rams/ Cylinders of regulating valves RV01 (2013 DS Rec. 8.5.1b) & RV02 (2013 DS Rec. 8.5.2b), & Refurbish & Overhaul Hydraulics unit - PETER FAUST DAM	During the 2013 five-yearly inspection, the valves and hydraulic units were tested. Valve #1 was unable to fully seal and remain water tight during the inspection, indicating that the valve travel is not sufficient to seal; adjustment of the valve travel is recommended. Valve #2 has a significant corrosion on the internal vanes and collars of the valve, blistering in places, and will require repair. The hydraulic cylinders that actuate and control dispersion valve #1 and 2 are leaking hydraulic fluid from the seals in the rod ends. The	39

	seals in the hydraulic cylinders need to be repaired / replaced.	
Replace Meter Program (2 per year) - Proserpine River - PROSERPINE 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.	31
Other works	Various smaller replacement and refurbishment projects.	33
Total		507

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

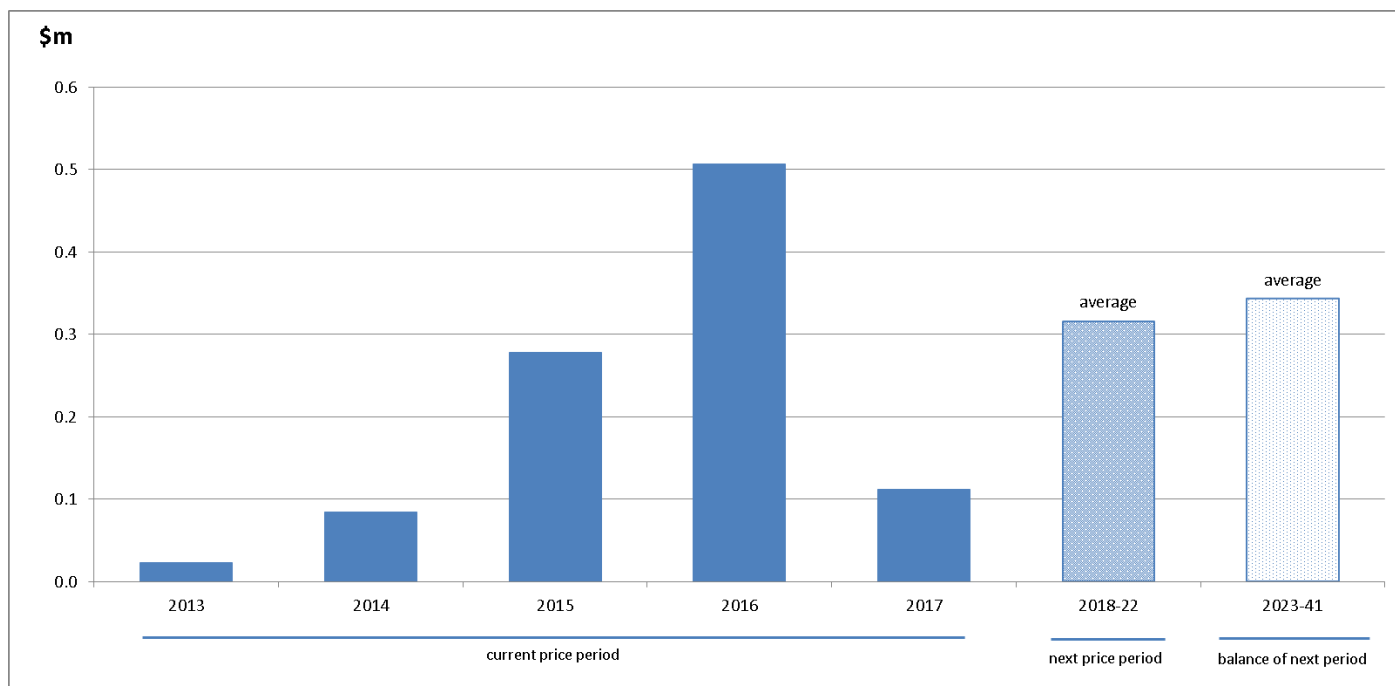
ANNUITY	2013	2014	2015*	2016
	\$'000	\$'000	\$'000	\$'000
Opening Balance	(360)	(212)	(112)	(197)
Annuity Income	198	200	202	201
Spend	(23)	(84)	(278)	(507)
Interest	(27)	(16)	(8)	(15)
Closing Balance	(212)	(112)	(197)	(518)

* 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

Clean relief holes, patch cracks and repair spots of drummy concrete - Spillway Floor - PETER FAUST DAM

Year: 2016

Current estimate: \$106k

Options analysis completed: Yes

After multiple spill events since the first spill in December 2010, the spillway floor and walls were observed to have suffered minor damage, such as spalling on the spillway chute floor and cracks on right training wall. In addition, a number of weep holes were clogged. Moreover, during a site visit in Sep 2013, operators reported areas of 'drummy' concrete on the spillway chute. It is anticipated that potential voids under the spillway slab will worsen in time and require extensive rectification. To prevent further damage to the spillway such as collapsing of walls and unsupported sections of slab, or possible failure from back scouring of the spillway towards the crest in future spill events, it is recommended to repair identified areas of 'drummy' concrete now, to patch the spillway chute floor and right training wall cracks, and to reinstate the existing spillway drainage system.

Replace PLC and SCADA system - KELSEY CREEK PIPELINE

Year: 2016

Current estimate: \$150k

Options analysis completed: Yes

The replacement of the control system at the Kelsey Creek Pipeline is due. This replacement is required as many old parts have already become obsolete and without support from the manufacturer, sourcing any replacement parts will be difficult, if not impossible. An options analysis was undertaken to consider several available options and then decision was made to select one option based on the highest benefit that can be achieved at the lowest cost.

The option analysis has been done in 2014 FY. Three options were considered:

- Option 1 - This option uses SunWater standard Schneider Hardware and Software.
- Option 2 - This option uses Allen Bradley PLC Hardware and Software instead of SunWater standard Schneider Hardware and Software.
- Option 3 - In this option the control system will not be replaced.

The recommendation is to replace the control system with SunWater Standard PLC hardware (option 1).

Study: Options, design/drawings and repair pipe leak - KELSEY CREEK PIPELINE

Year: 2016

Current estimate: \$148k

Options analysis completed: No

In August 2014 it was reported that a joint between MSCL pipe and RCP pipe was leaking. An options analysis will be undertaken, prior to repair works commencing, to determine the best option to proceed, and design & drawings will be prepared based on its findings.

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.

Extend right bank revetment mattresses further upstream to protect slope against erosion - PETER FAUST DAM

Year: 2018

Current estimate: \$234k

Options analysis completed: No

During the 2013 five-yearly inspection, it was noted that the spillway approach channel has suffered erosion of the right bank upstream of the revetment mattresses. A small area of the rock protection upstream of the mattress had slipped and exposed the erodible material. The batter could be further damaged in future floods or from heavy rainfall and should be repaired. Restricted and difficult access to the revetment mattresses has had a significant effect on the cost of this project.

5yr Dam Comprehensive Inspection - PETER FAUST DAM

Year: 2019

Current estimate: \$127k

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 Boat Ramp - PETER FAUST DAM

Year: 2022

Current estimate: \$125k

Options analysis completed: No

The scheduled replacement of the boat ramp at Peter Faust Dam is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

Replace V Notch Weir - PROSERPINE RIVER DISTRIBUTION

Year: 2022

Current estimate: \$199k

Options analysis completed: No

The scheduled replacement of a v-notch weir on the Proserpine River is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

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.

Study: 20yr Dam Safety Review - PETER FAUST DAM

Year: 2023

Current estimate: \$421k

Options analysis completed: No

Peter Faust 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 Cables and Cableways - PETER FAUST DAM

Year: 2031

Current estimate: \$433k

Options analysis completed: No

The scheduled replacement of cables and cableways at Peter Faust Dam is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

Replacement balance for cable and cableways - PETER FAUST DAM

Year: 2032

Current estimate: \$1.19m

Options analysis completed: No

Cables will be monitored over time through an ongoing program of electrical testing to determine ageing and deterioration to better establish 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.

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	135		167		132		95	
Materials	19		27		22		24	
Contractors	46		50		84		69	
Other	224		377		294		289	
Non-direct	264		316		264		235	
Operations Total	689	106%	937	138%	797	117%	713	105%
Preventative								
Labour	13		20		34		48	
Materials	3		16		14		14	
Contractors	3		16		36		23	
Other	2		1		1		4	
Non-direct	26		39		66		111	
Preventative Total	48	34%	91	62%	151	101%	200	133%
Corrective								
Labour	13		4		9		10	
Materials	21		18		21		16	
Contractors	15		12		9		20	
Other	3		0		0		5	
Non-direct	30		8		18		25	
Corrective Total	83	161%	42	79%	58	106%	76	136%
Electricity	7	131%	7	123%	7	127%	7	118%
Total Routine Expenses	826	97%	1,077	122%	1,013	114%	996	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	18		33		211		388	
Corrective	0		0		0		0	
Other	0		0		0		0	
Non-direct	5		52		67		119	
Total Annuity Funded Non-Routine	23	3%	84	11%	278	37%	507	67%
TOTAL REGULATED EXPENSES	849		1,162		1,292		1,503	
Non-Annuity Funded								
R&E - Non-Annuity Funded	0		0		0		0	
Non-direct	0		1		0		0	
Total Non-Annuity Funded	0	n/a	1	n/a	0	n/a	0	n/a
TOTAL EXPENSES	849		1,163		1,292		1,503	