

SunWater Limited
Level 10, 179 Turbot Street
PO Box 15536 City East
Brisbane Queensland 4002
www.sunwater.com.au
ACN 131 034 985



2016 Annual Network Service Plan

Bowen Broken Bulk

June 2015

Table of Contents

Introduction	4
Water Data	4
Revenue	5
Routine Expenditure	6
Operations	6
Preventive Maintenance	6
Corrective Maintenance	6
Electricity	6
Non-Routine Expenditure	7
Non-Routine Budget	7
Annuity Balance	9
Overview of Annuity Funded Non-Routine Projects 2013-41	10
Material Projects 2016-17	10
Material Projects 2018-22	10
Material Projects 2023-41	11
Appendix –Total Expenditure by Expense Type	13

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

Disclaimer

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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		30,300
Irrigation		5,676
Urban		1,785
Other		296
SunWater		872
Total	50	38,929
QCA Assumed Water Usage for Irrigation		11.7%
QCA Assumed Water Usage for Total		43.1%

Table 3 – Revenue¹

	2013 SunWater Actual \$'000	2014 SunWater Actual \$'000	2015 SunWater Budget \$'000	2016 SunWater Budget \$'000
Irrigation Revenue	65	67	78	80
Industrial and Urban	4,874	4,910	5,062	5,040
Other Revenue	(1)	16	8,652	1,383
Total Revenue	4,938	4,993	13,792	6,502

Other revenue budgeted for 2015 and 2016 relate to SunWater's assumption that funds will be received to offset the cost of the proposed Eungella Dam safety upgrade project.

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.)	828	163%	807	153%	642	121%	719	136%
Preventative	103	53%	140	69%	177	86%	231	113%
Corrective	191	89%	123	55%	212	94%	147	64%
Electricity	136	117%	109	87%	80	60%	80	56%
Total Routine Expenses	1,258	122%	1,179	109%	1,111	101%	1,177	106%

The budget routine spend is 6% 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 36% above the QCA target, however this is largely 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 120% of the QCA target when the insurance over-run is taken into account. Routine operational costs associated with managing the recreational facilities contribute to the higher than QCA forecasted costs. The Gattonvale Offstream Storage was constructed during the last drought to improve supply reliability. The storage is constructed of dispersive soils and requires additional surveillance to ensure its ongoing safety. This is offset by lower than forecasted corrective work.

Preventive Maintenance

Preventive maintenance is budgeted 13% above the QCA's target for 2016.

Corrective Maintenance

Corrective maintenance is budgeted below the QCA's target for 2016.

Electricity

Electricity costs are budgeted at \$64k below the QCA target in 2016. Bowen Broken electricity costs can vary by +/- \$80k from year-to-year due to normal variability. SunWater will continue to review tariffs each year to identify the best tariff for the expected future operations.

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. Overall, it is expected that the 2013-17 spend for non-routine can be controlled to meet the five-year QCA target within the framework of SunWater's Reliability Centred Maintenance (RCM) approach and risk based prioritisation.

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	90		88		122		139	
Corrective	(1)		0		0		0	
Other	0		0		0		0	
Non-direct	16		96		86		57	
Annuity Funded Total	106	12%	184	20%	208	23%	196	22%
Non-Annuity Funded								
R&E - Non-Annuity Funded	(0)		90		8,487		1,148	
Non-direct	(0)		65		153		223	
Total Non-Annuity Funded	(0)	n/a	155	n/a	8,640	n/a	1,371	n/a

The details for the major annuity-funded projects planned for 2016 are provided below:

Table 6 – Non-Routine Projects 2016

Project Title	Project Scope	2016 Budget (\$'000)
ROV/Diving inspection to assess the condition of stop logs externally - EUNGELLA DAM	This project is required to determine the condition of the conduit's upstream stoplogs as they are believed to be leaking. Further work may be required on the stoplogs if the assumption is correct.	61
Repair the scour under the dissipater apron - BOWEN RIVER WEIR	During the 5-yearly inspection of the weir, a small section of the dissipater was found to be undermined. It needs to be reinstated to prevent further undermining or damage to the dissipater.	32
Investigate the root cause of guard valve functionality – EUNGELLA DAM	The guard valves at Eungella Dam are malfunctioning as Valve 1 closes too quickly at higher flows and Valve 2 experiences delays when opening.	25
Replace SCADA PC Register System and migrate programs - BOWEN RIVER WEIR	The SCADA system at the weir is aged; the computer system on which it runs is obsolete and spare parts are not available for the system.	23
Asset Revaluation - Bowen Broken	It is necessary to conduct an infrastructure asset revaluation on Bulk Water assets by updating the schedule of rates, indirect cost percentage and Bill of Materials, updating replacement costs on infrastructure assets, and updating the cost of planned replacement items	18
Other works	Various replacement and refurbishment projects.	37
Total		196

SunWater does not propose to fund the Eungella Dam safety upgrade project from the scheme annuity.

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

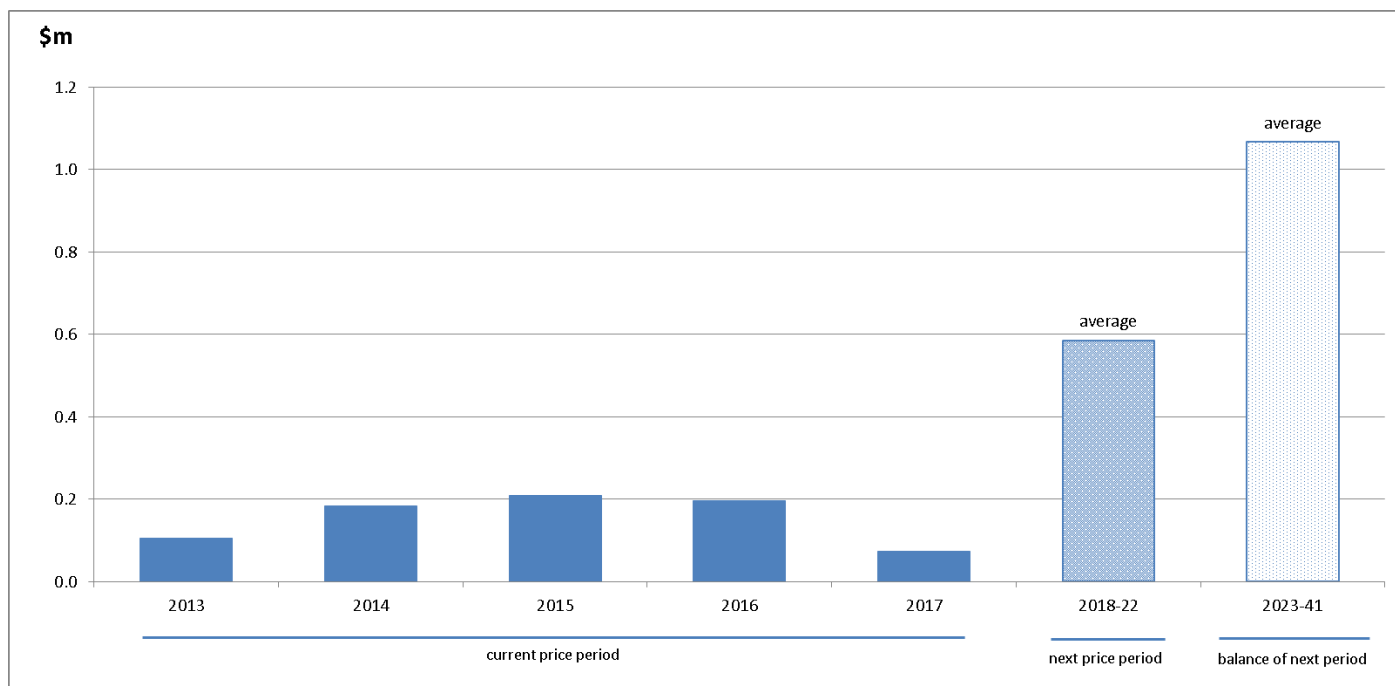
ANNUITY	2013	2014	2015*	2016
	\$'000	\$'000	\$'000	\$'000
Opening Balance	(2,722)	(2,708)	(2,770)	(2,848)
Annuity Income	324	326	337	436
Spend	(106)	(184)	(208)	(196)
Interest	(204)	(203)	(207)	(213)
Closing Balance	(2,708)	(2,770)	(2,848)	(2,822)

* 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

The evenness in the spread of estimated project costs and/or spend that has already occurred over 2013-15 means there are no projects which exceed the materiality threshold for this service contract for the 2016-17 period.

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.

Plug the river conduit inlet permanently - EUNGELLA DAM

Year: 2018

Current estimate: \$560k

Options analysis completed: No

During the 2014 comprehensive inspection of Eungella Dam, the river conduit could not be drained for inspection. Engineers believe the upstream stop logs are leaking and therefore need to be plugged. Apart from allowing inspections, there is a risk of piping occurring along the outside of the conduit that may lead to a dam failure scenario. The guard and regulating valves, through which river releases are made, cannot be maintained whilst the stop logs leak, therefore there is a risk of these failing which may cause the dam to drain if they fail. A “do nothing” approach is not acceptable as it creates a WHS risk to engineers for conduit inspections, which are a necessary part of 5-yearly dam safety inspections and a regulatory requirement. Decommissioning the conduit pipe would be a more expensive option as further water cannot be released to meet the downstream flow requirement. The other options are to plug the gap between stoplogs with concrete or put a cover on the base of the inlet tower that was not built. Since the proposed ROV inspection has not been carried out yet, these are only preliminary options.

Study: 20yr Dam Safety Review - EUNGELLA DAM

Year: 2020

Current estimate: \$410k

Options analysis completed: No

Eungella 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.

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 Spillway Energy Dissipater - BOWEN RIVER WEIR

Year: 2028

Current estimate: \$795k

Options analysis completed: No

The scheduled replacement of the energy dissipater at Bowen River Weir is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

Replace Submersible Pump, 620Mm Flygt - GATTONVALE PUMP STATION

Year: 2035

Current estimate: \$2,67m

Options analysis completed: No

The scheduled replacement of a submersible pump at Gattonvale Pump Station is based on the standard asset life, but is subject to condition and risk assessments and an options analysis before it can proceed.

Study: 20yr Dam Safety Review - EUNGELLA DAM

Year: 2040

Current estimate: \$649k

Options analysis completed: No

See description for 2020 project, above.

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	218		147		126		130	
Materials	17		57		21		25	
Contractors	65		109		86		72	
Other	116		215		163		184	
Non-direct	412		279		247		308	
Operations Total	828	163%	807	153%	642	121%	719	136%
Preventative								
Labour	29		33		48		48	
Materials	4		7		8		8	
Contractors	16		37		30		60	
Other	0		0		0		3	
Non-direct	54		62		90		112	
Preventative Total	103	53%	140	69%	177	86%	231	113%
Corrective								
Labour	37		25		31		8	
Materials	26		27		31		27	
Contractors	55		18		85		85	
Other	1		3		2		3	
Non-direct	72		49		63		24	
Corrective Total	191	89%	123	55%	212	94%	147	64%
Electricity	136	117%	109	87%	80	60%	80	56%
Total Routine Expenses	1,258	122%	1,179	109%	1,111	101%	1,177	106%
NON-ROUTINE EXPENSES								
Annuity Funded								
R&E - Annuity Funded	90		88		122		139	
Corrective	(1)		0		0		0	
Other	0		0		0		0	
Non-direct	16		96		86		57	
Total Annuity Funded Non-Routine	106	12%	184	20%	208	23%	196	22%
TOTAL REGULATED EXPENSES	1,364		1,363		1,319		1,373	
Non-Annuity Funded								
R&E - Non-Annuity Funded	(0)		90		8,487		1,148	
Non-direct	(0)		65		153		223	
Total Non-Annuity Funded	(0)	n/a	155	n/a	8,640	n/a	1,371	n/a
TOTAL EXPENSES	1,364		1,518		9,959		2,744	