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Annual Network Service Plan

Lower Mary Bulk Supply

April 2013

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Notes

All financial figures in this report 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 convert to nominal dollars multiply by the following factors, which are based on the QCA's assumed inflation rate of 2.5% p.a.

Table 1 – Conversion Factors for Nominal-to-Real Dollars

Year	2013	2014	2015	2016	2017
Conversion Factor	0.952	0.929	0.906	0.884	0.862

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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 operating expenditure (opex) and renewals and enhancements (R&E) expenditure. In particular, the NSPs will cover:

- current year performance for opex and R&E,
- forecast opex and R&E for the approaching year, and
- the long-term outlook for material R&E spend.

This is the first annual NSP that SunWater has produced. Given that it is being published in the first year of the new price path, and the 2013 year is incomplete, there is no actuals data reported in the performance tables. Also, very few options analyses have been completed to date as the annual planning for renewals and enhancements discussed in this NSP was completed just prior to publishing.

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Email: nspfeedback@sunwater.com.au

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

Past¹ and Forecast Performance

The tables in the following sections show the QCA targets with planned water use and spend for the current year and future years. Budgets for future years are based on the current draft budget at the time of consultation and are therefore subject to change.

Water Usage

Table 2 - Water Usage

	WAE	2013 QCA Forecast (ML)	2014 QCA Forecast (ML)
Total	22,055	7,609	7,609

¹ As this is the first year of the 5-year price period, this NSP has the current year and following year figures only; future NSPs will also report on the past year performance against target and budget.

Table 3 – Operating Expenditure

	2013		2014	
	QCA Target (\$'000)	SunWater Budget (\$'000)	QCA Target (\$'000)	SW Draft Budget ² (\$'000)
Operations	201	186	209	178
Preventive Maintenance	73	74	76	65
Corrective Maintenance	12	12	13	15
Electricity	0	0	0	0
Total	286	272	298	258

Operations

The operations budget in 2014 is below the QCA’s target.

Preventive Maintenance

Preventive maintenance is budgeted in line with the QCA’s target for 2014.

Corrective Maintenance

Corrective maintenance is budgeted in line with the QCA’s target for 2014.

Electricity

No electricity expenses budgeted for 2014.

² SunWater draft budget figures as at the time of consultation. Budget figures for the following financial year are not locked down until late in the financial year prior.

Renewals and Enhancements

R&E annuity expenditure is forecast to be \$70k above target for 2014 and over the full 5-year price period the estimated expenditure is \$56k over the QCA target due to the risk of significant damage occurring to Tinana Barrage if the subsided slab is not reinstated.

Table 4 – R&E Expenditure (excl. dam safety & other)

2013		2014		5 year price period (2013-17)	
QCA Target (\$'000)	SunWater Budget (\$'000)	QCA Target (\$'000)	SW Draft Budget (\$'000)	QCA Target (\$'000)	SunWater Estimate ³ (\$'000)
11	-	12	82	48	104

The renewals annuity income has been set by the QCA until the end of the current price path in 2017. SunWater will aim to limit the R&E expenditure to the QCA's targets over the current price path in order to manage the annuity balance to reasonable levels. The impact of the draft budget R&E spend on the annuity balance for 2014 is shown in the following table.

Table 5 – Annuity Balance 2014

2014 Annuity Income (\$'000)	2014 Draft Budget Annuity Spend (\$'000)	Estimated Impact on Annuity Balance (\$'000)
110	(82)	28

³ Actual figures will replace budget figures in the forecast as each year of the price period is completed. R&E forecasts and estimates are subject to change as planning is refined throughout the price period.

The details for the major projects planned for 2014 are provided below:

Table 6 – R&E Projects 2014

Project Title	Project Scope	2014 Draft Budget (\$'000)
Reinstate subsided downstream face slab on left bank of barrage (20mm subsidence) - TINANA BARRAGE	Remove subsided slab. Reinstate rock material. Reinstate new slab.	68
DEFORMATION SURVEY - to be conducted prior to 5Y inspection - MARY BARRAGE	Survey the barrage crest to measure movement. Prepare a survey report identifying if any excessive movement has occurred.	7
DEFORMATION SURVEY - to be conducted prior to 5Y inspection - TINANA BARRAGE	Survey the barrage crest to measure movement. Prepare a survey report identifying if any excessive movement has occurred.	7
Total		82

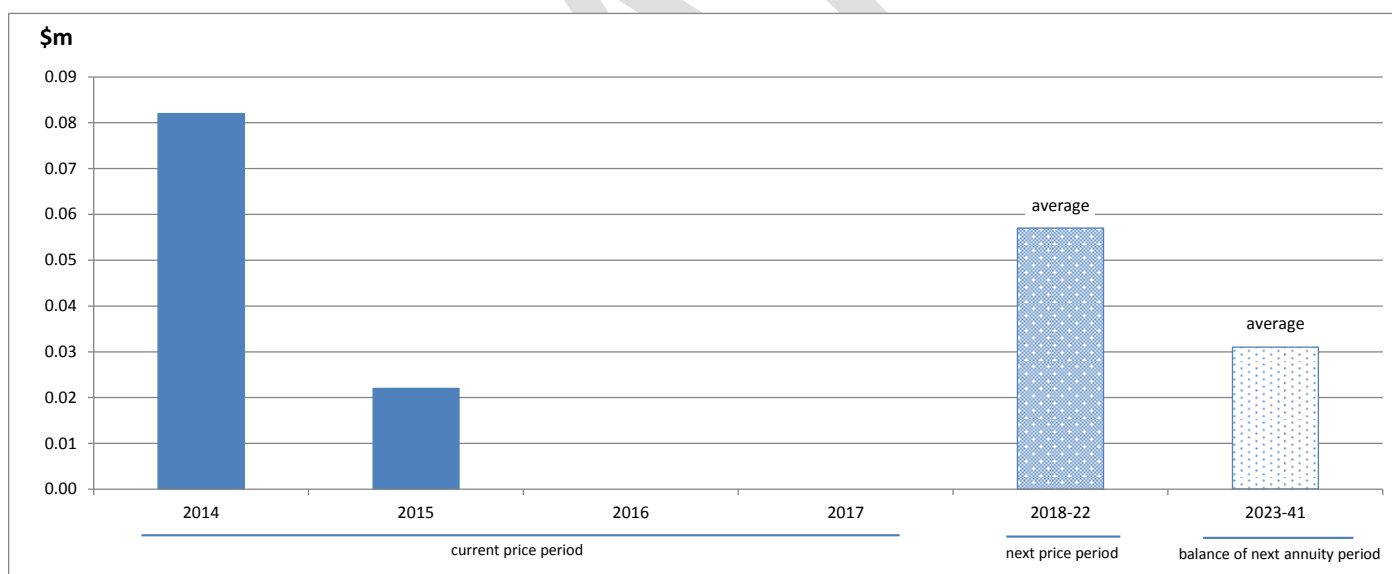
Overview of Renewals and Enhancements 2014-41

SW 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 R&E program, the most recent of which was completed in February 2013. Items requiring immediate maintenance or replacement will be included in the budget for the following year, which was covered in the previous section.

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 R&E. Having an annuity funding arrangement acknowledges that a long-term view of R&E spend is required to ensure adequate funding and to address issues such as inter-generational equity.

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

Figure 1 –R&E Annuity Expenditure 2014-41



All material R&E 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 more detailed options analyses being completed for the 5-year pricing periods than 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 2014-17

Reinstate subsided downstream face slab on left bank of barrage - Tinana Barrage

Year: 2014

Current estimate: \$68k

Options analysis completed: No

The work in this project is to reinstate one of the barrage face slabs that has subsided. A risk assessment determined that the slab has to be reinstated to prevent further deterioration of the barrage, with potential loss of storage and delineation of fresh and salt water movement.

Potential options include:

Option 1 – Do nothing, but there is potential for further damage and loss of a section of the barrage.

Option 2 – Pour a concrete skin over the subsided slab but this will delaminate in the next flood.

Option 3 – Reinstate the subsided slab.

The preferred option is option 3 because it is the best engineering solution and offers the best value for money.

5yr Dam Comprehensive Inspection - Mary Barrage

Year: 2015

Current estimate: \$11k

Options analysis completed: No

Conduct a thorough civil and mechanical engineering assessment of the barrage. The barrage requires engineers across three engineering disciplines to travel from Brisbane to assess its condition and risk, prepare a report including recommendations for refurbishment work and plan the work in future years. Cost estimates have been based on past inspections. These inspections are undertaken under SunWater policy, therefore, no options analysis will be completed.

5yr Dam Comprehensive Inspection - Tinana Barrage

Year: 2015

Current estimate: \$11k

Options analysis completed: No

Conduct a thorough civil and mechanical engineering assessment of the barrage. The barrage requires engineers across three engineering disciplines to travel from Brisbane to assess its condition and risk, prepare a report including recommendations for refurbishment work and plan the work in future years. Cost estimates have been based on past inspections. These inspections are undertaken under SunWater policy, therefore, no options analysis will be completed.

Material Projects 2018-22

Projects in the R&E plan for 2018-22 should be viewed as indicative at this stage and will be refined as the next pricing review draws closer.

Apply a concrete skin over the existing rock protection on left bank downstream - Tinana Barrage

Year: 2018

Current estimate: \$93k

Options analysis completed: No

This project is to refurbish the existing concrete rock protection on the downstream left bank of Tinana Barrage.

Potential options include:

Option 1 – Do nothing, but the rock protection will continue to deteriorate.

Option 2 – Install rock mattresses and gabions, however this is not cost effective in this instance.

Option 3 – Bind the rock protection with a concrete cover to prevent movement and further deterioration.

The preferred option is option 2 because it is the most cost effective.

Refurbish downstream left abutment to prevent further erosion - Mary Barrage

Year: 2019

Current estimate: \$97k

Options analysis completed: No

Place rocks in the scoured areas downstream of the left abutment at Mary Barrage. Floods in the river during the past three years have successively caused an area approximately 200m downstream of the barrage to scour.

If Potential options include:

Option 1 – Do nothing however the scouring will continue and worsen

Option 2 - Install rock mattresses and gabions, however this is not cost effective in this instance.

Option 3 – Place rocks in the scoured area. This has proven a successful method at many storages across the state and is considered the best option here. A quarry with sufficient rock is within 5km of the barrage.

The preferred option is option 3 because it is a proven technique and the most cost effective for minor scour works such as these.

Material Projects 2023-41

Projects in the R&E plan for 2023-41 should be viewed as indicative at this stage and will be refined as the next pricing review draws closer.

Replace Fencing, Gates & Grids - Mary Barrage

Year: 2040

Current estimate: \$153k

Options analysis completed: No

This project is to replace damage fencing, gates and grids at the barrage for public and WHS risk mitigation. A full condition assessment of the fences, gates and grids and an options analysis will occur prior to the replacement to refine the scope of works.

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Appendix – Operating Expenditure by Expense Type

Table 7 below shows the operating expenditure for the service contract categorised by expenditure type. Operating expenditure below includes any other non-routine work funded by the annuity.

Table 7 – Expenditure for Activity by Type⁴

	2013		2014	
	QCA Target (\$'000)	SunWater Budget (\$'000)	QCA Target (\$'000)	SW Draft Budget (\$'000)
Operations				
Labour	56	51	58	50
Materials	1	4	1	4
Contractors	0	0	0	4
Other	15	15	15	22
Non-direct	129	116	135	98
Operations Total	201	186	209	178
Preventive				
Labour	22	22	23	22
Materials	0	0	0	0
Contractors	1	1	1	1
Other	0	0	0	0
Non-direct	50	51	52	42
Preventive Total	73	74	76	65
Corrective				
Labour	2	2	2	3
Materials	6	6	6	6
Contractors	0	0	0	0
Other	0	0	0	0
Non-direct	4	4	5	6
Corrective Total	12	12	13	15
Electricity	0	0	0	0
Total Operating Exp.	286	272	298	258
R&E Annuity Funded ⁵	11	0	12	82
Dam Safety and other	0	0	0	0
Grand Total	297	272	310	340

⁴ Nominal dollar figures can be converted to real dollars (\$2011) by dividing by the conversion factors in Table 1.

⁵ R&E and Dam Safety are built up from the same expenditure types shown for opex, including non-directs.