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# Annual Network Service Plan

## Macintyre Brook 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

## Disclaimer

This report has been produced by SunWater, to provide information for client use only. The information contained in this report is limited by the scope and the purpose of the study, and should not be regarded as completely exhaustive. Permission to use or quote information from this report in studies external to the Corporation must first be obtained from the Chief Executive, SunWater.

## 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](mailto:nspfeedback@sunwater.com.au)

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

## Past<sup>1</sup> 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	23,719	16,485	16,485

<sup>1</sup> 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 <sup>2</sup> (\$'000)
Operations	719	777	747	743
Preventive Maintenance	190	199	199	186
Corrective Maintenance	37	39	39	35
Electricity	2	2	2	2
Total	948	1,017	987	966

**Operations**

The operations budget in 2014 is in line with the QCA 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**

Electricity costs are budgeted higher than the QCA target in 2014 due to announced increases in electricity prices being much higher than the 12.5% and 7% increases allowed by the QCA in 2013 and 2014. This cost over-run is beyond SunWater's control and is likely to trigger a within-period cost pass-through application to the QCA.

<sup>2</sup> 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 \$124k above target for 2014 and over the full 5-year price period the estimated expenditure is \$40k over the QCA target expenditure. The main reason for the larger expenditure in 2014 relates to the symmetry in jobs and the cost savings achieved by carrying these out concurrently rather than spreading out and incurring large start-up and preparation costs involved in working in confined space areas.

**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 <sup>3</sup> (\$'000)
297	-	188	312	809	849

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)
254	(312)	(58)

<sup>3</sup> 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**

<b>Project Title</b>	<b>Project Scope</b>	<b>2014 Draft Budget (\$'000)</b>
Refurbish: Float wells (Float Guides / Ropes / Tie rod ends) - Refer to report file 08-000175/001 - COOLMUNDA DAM	The work is required to ensure gate jamming incident which occurred at the similarly constructed Callide dam is not repeated at Coolmunda Dam.	143
Refurbish coating on 750mm valve and provide safe access to reg valves (2010 DS Report 6.5.2a ,b ,d) - COOLMUNDA DAM	The 2010 5-yearly inspection identified the coating failures and recommended rectification.	32
Refurbish: Paint, check for new seals; leaf repairs (2010 DS Rec 6.5.3a) - COOLMUNDA DAM	The condition of the main guard valve was recorded in the 2010 5 yearly inspection and repairs recommended. We have deferred till now to align projects for overall cost saving	28
Incorporate the access point fairing piece into the cover. Install davit arm to allow easy access (2010 DS Rec 6.4.3a) - COOLMUNDA DAM	Access for inspection of the conduit and also for planned repairs of the coating failure is restricted to a 450mm access. We are increasing this to 600mm because can't rescue through a 450mm opening.	27
Refurbish: Replace Crest Seal (2010 DS Rec 6.3.13a) - See Notes - COOLMUNDA DAM	Based on Condition. The Crest seal for Gate 6 was replaced this year; This project is for gate 2. The other 5 gate seals are in fair condition and replacement has been pushed out. This decision will be reviewed during the 2015 5 yearly inspection.	27
Other minor works		55
<b>Total</b>		<b>312</b>

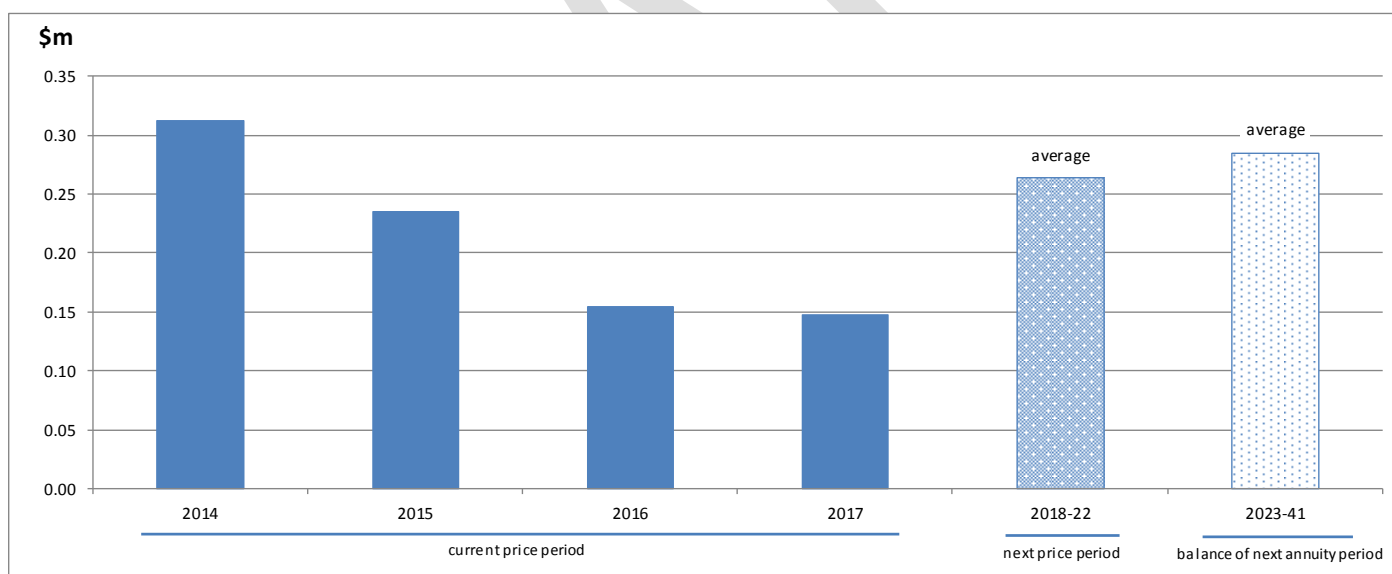
## Overview of Renewals and Enhancements 2014-41

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

### Refurbish Float wells (Float Guides / Ropes / Tie rod ends) - Coolmunda Dam

Year: 2014

Current estimate: \$143k

Options analysis completed: No

One gate at Callide Dam jammed during the last flood event. A similar situation exists at Coolmunda Dam where creep of the ropes has resulted in the 20 tonne floats in the float chambers extending below their existing guides. During a flood event, the floats rise to open the gates to pass the flood. If the float wheels miss the guides on the way up the gates may jam.

We have a firm offer to replace the tie rod ends and extend the float guides for one gate / bay, however, there are WH&S implications in this option with people working under a suspended 20 tonne weight with the only access by sliding past the 4m tall floats suspended on a winch.

At the same time, the tie rod ends which hold the 20 tonne float together (16 No in each float) were found to be corroded. The original plan was to replace these at the same time.

Option 1 – Do nothing at present is not an option. The risk has been identified and we have photographic evidence that the floats on more than one gate are lower than the guides.

Option 2 – An initial study indicated we could obtain a large crane and remove the floats from the float wells and carry out the full refurbishment. The costs of this option is believed to be upwards on \$1M

Option 3 – Undertake the project as per the firm offer above. Still a possibility, however the WH&S risks are extreme and board sign-off for this option will be needed after a full review from our engineering and WH&S staff

Option 4 – Construct a temporary form over the floatwell (removable for other floatwells) and remove the floats so work can be carried out in the well. This option has not been fully priced

Option 5 – Shorten or replace the ropes now and plan for the tie rod ends in the future.

The preferred option is to plan to carry out option 5 as there appears to be scope to shorten the ropes, or even replace. The tie rod ends will still need to be fixed, however we believe we would have a minimum of 5 years grace before it was required and we would benefit in the learning's of the project at Callide currently being planned.

### Develop and install an effective lock out system for spillway gate operation - Coolmunda Dam

Year: 2017

Current estimate: \$97k

Options analysis completed: No

In adopting the decision to shorten the ropes at Coolmunda, we can push out the replacement of the tie rod ends, however they will still be required to be renewed in the future. To carry out any maintenance which involves removal of the floats we need a method of locking the gates. The locking system will need to be designed, certified by RPEQ, fitted and tested

The options are basically to either lock the gate or develop a frame / crane method of supporting the gates to prevent movement when people are carrying out works. We believe that a permanent locking system will be the most cost effective method, however we will wait for the learnings of the project being carried out in Callide Dam in 2013.

## 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.

### 20yr Dam Safety Review - Coolmunda Dam

Year: 2021

Current estimate: \$145k

Options analysis completed: No

In 2001 a regulatory 20 Year dam safety review was undertaken at Coolmunda Dam. This involves a team of recognised dam experts reviewing all the geological aspects of the dam and includes a review of all events, all refurbishments and any other works carried out at the dam including a full review of event history and the maintenance histories over the preceding 20 years.

The review is a mandatory 20 year event and the cost estimate is based on the 2001 work required, allowing for the fact that much of the 2001 data is still valid. Given this requirement is mandatory, an options analysis will not be completed.

## Material Projects 2023-41

The evenness in the spread of estimated project costs means there are no projects which exceed the materiality threshold for this service contract for the 2014-17 period.

## 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 other non-routine work funded by the annuity.

**Table 7 – Expenditure for Activity by Type<sup>4</sup>**

	2013		2014	
	QCA Target (\$'000)	SunWater Budget (\$'000)	QCA Target (\$'000)	SW Draft Budget (\$'000)
<b>Operations</b>				
Labour	194	172	196	179
Materials	8	19	8	14
Contractors	33	17	17	12
Other	87	121	88	147
Non-direct	426	448	438	391
Operations Total	748	777	747	743
<b>Preventive</b>				
Labour	59	59	61	61
Materials	4	4	4	4
Contractors	2	2	2	2
Other	0	0	0	0
Non-direct	125	134	132	119
Preventive Total	190	199	199	186
<b>Corrective</b>				
Labour	11	11	12	11
Materials	2	2	2	2
Contractors	0	0	0	0
Other	0	0	0	0
Non-direct	24	26	25	22
Corrective Total	37	39	39	35
Electricity	2	2	2	2
<b>Total Operating Exp.</b>	<b>977</b>	<b>1,017</b>	<b>987</b>	<b>966</b>
R&E Annuity Funded <sup>5</sup>	297	0	188	312
Dam Safety and other	0	0	0	0
<b>Grand Total</b>	<b>1,274</b>	<b>1,017</b>	<b>1,175</b>	<b>1,278</b>

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

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