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# Annual Network Service Plan

## Three Moon 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	14,147	5,659	5,659

<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	238	232	249	216
Preventive Maintenance	89	96	92	82
Corrective Maintenance	13	14	14	14
Electricity	9	12	10	10
Total	349	354	365	322

**Operations**

The operations budget in 2014 is below 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 in line with target for 2014. Over the full 5-year price period the estimated expenditure is well under the QCA target.

**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)
52	95	104	99	406	332

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)
108	(99)	9

<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**

Project Title	Project Scope	2014 Draft Budget (\$'000)
Refurbish bulkhead gate - Replace seals prior to 2014 5Yr inspection - CANIA DAM	To purchase a new seal and install it into the bulkhead gate. Bulkhead gate may have to be transported from the intake tower to contractor workshop if further refurbishment (e.g. re-painting) is required.	24
Study: 5yr Dam Comprehensive Inspection (by 1 Dec 2014). To be done in the first half of the calendar year - CANIA DAM	To inspect Cania Dam on all aspects: documentations, condition assessments (If possible, operation test all mechanical equipment and physical inspections (including conduit inspections).	65
Other minor works		10
Total		99

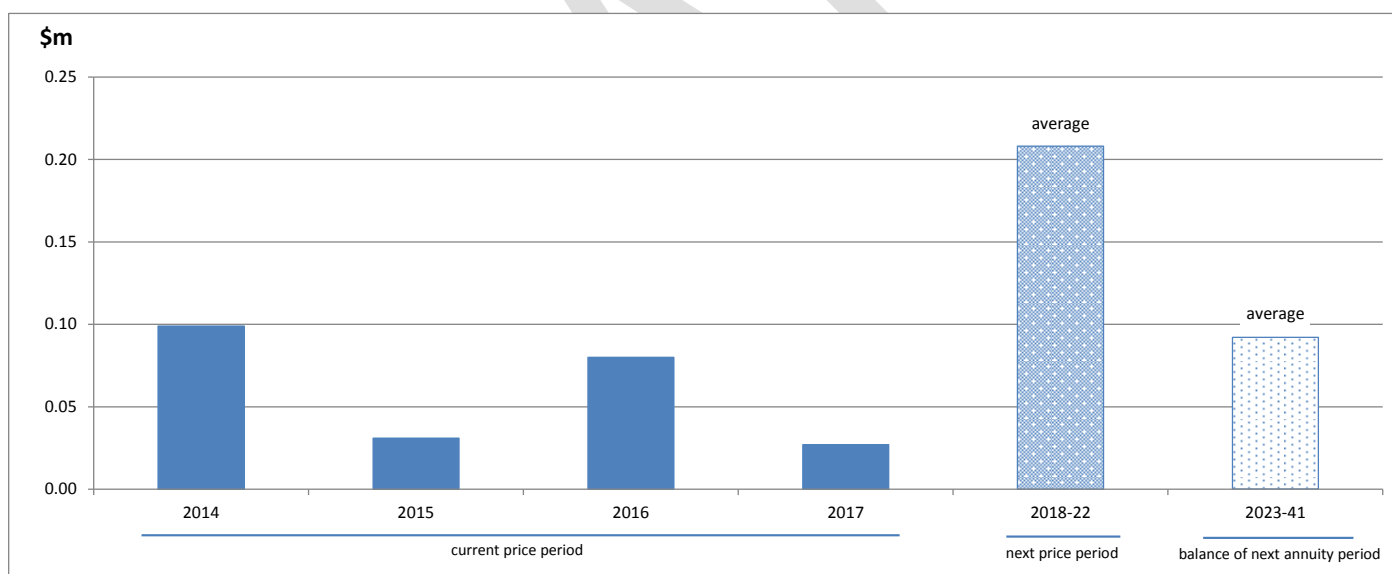
## Overview of Renewals and Enhancements 2014-41

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 is developing 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 bulkhead gate - Replace seals prior to 2014 5Yr inspection - Cania Dam

Year: 2014

Current estimate: \$24k

Options analysis completed: No

Short description of project scope:

To purchase a new seal and install it into the bulkhead gate. Bulkhead gate may have to be transported from the intake tower to contractor workshop if further refurbishment (e.g. re-painting) is required.

Option 1 – Use the bulkhead gate to seal the conduit during the next five year inspection without any refurbishment and re-assess its ability to seal. If it can seal the conduit properly, then, no further work/refurbishment may be required.

Option 2 – Do the refurbishment before the next five year inspection, so that, the bulkhead gate is ready to be used during the inspection.

The preferred option is option 1 because when the bulkhead gate was used to seal the conduit during the previous comprehensive inspection, the leakage was still tolerable (conduit was still safely accessible). Furthermore, there is a possibility that the leakage during the last comprehensive inspection was caused by debris jammed between the seal and concrete face. The seal condition was considered in satisfactorily condition during the last annual inspection. Close observation (especially on the joint) must be done during the next comprehensive inspection when the bulkhead gate is lifted up. This option is more cost effective than option 2.

### 5yr Dam Comprehensive Inspection - Cania Dam

Year: 2014

Current estimate: \$65k

Options analysis completed: No

Cania Dam is a category 2 referable structure and the Five Yearly Comprehensive Dam Safety Inspection is required for Queensland Government Regulatory Compliance. Given this requirement is mandatory, an options analysis will not be completed.

### Remove corrosion and paint lower exterior ladders and platforms at inlet tower - Cania Dam

Year: 2016

Current estimate: \$25k

Options analysis completed: No

When the storage level is low enough, the lower exterior ladders and platforms at Cania dam inlet tower will be repaired to remove any corrosion and to re-galvanise. Options analysis will be completed closer to implementation.

## 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.

### Replace Cables & Cableways - Cania Dam

Year: 2019

Current estimate: \$232k

Options analysis completed: No

Replace cables and cableways at Dam on the basis that it has reached its end of life. Condition assess cables through an ongoing program of electrical testing to monitor ageing and deterioration to better determine replacement timelines. An options analysis will be completed closer to implementation. 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.

### 20yr Dam Safety Review - Cania Dam

Year: 2020

Current estimate: \$139k

Options analysis completed: No

Cania Dam is a category 2 referable structure and the 20 Year Dam Safety Review is required for Queensland Government Regulatory Compliance and is usually conducted in conjunction with a Five Yearly Dam Safety Inspection. Given this requirement is mandatory, an options analysis will not be completed.

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 the following:

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

### Refurbish Rip Rap (decomposing, replace upstream) - Cania Dam

Year: 2020

Current estimate: \$111k

Options analysis completed: No

This project is scheduled based on the life of this equipment. Condition will be determined by annual and five year comprehensive inspections and an options analysis completed before 2020.

## 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 2023-41 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	59	53	64	38
Materials	0	4	5	1
Contractors	3	3	7	5
Other	51	51	52	93
Non-direct	125	121	139	79
Operations Total	238	232	267	216
<b>Preventive</b>				
Labour	28	28	29	25
Materials	2	2	2	2
Contractors	0	0	0	4
Other	2	2	2	2
Non-direct	57	64	59	49
Preventive Total	89	96	92	82
<b>Corrective</b>				
Labour	4	4	4	4
Materials	1	1	1	2
Contractors	0	0	0	0
Other	0	0	0	0
Non-direct	8	9	9	8
Corrective Total	13	14	14	14
Electricity	9	12	10	10
<b>Total Operating Exp.</b>	<b>349</b>	<b>354</b>	<b>383</b>	<b>322</b>
R&E Annuity Funded <sup>5</sup>	52	95	104	99
Dam Safety and other	0	0	0	0
<b>Grand Total</b>	<b>401</b>	<b>449</b>	<b>487</b>	<b>421</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.