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# Annual Network Service Plan

## Boyne 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	9,461	4,626	4,626

<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	268	258	281	276
Preventive Maintenance	95	99	97	87
Corrective Maintenance	24	25	25	20
Electricity	0	0	0	0
Total	387	382	403	383

**Operations**

The operations budget in 2014 is in line with the QCA’s target for 2014.

**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 costs budgeted for this service contract in 2014.

<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.

## Flood Damage

There has been significant flood damage incurred to the assets in this service contract, particularly Boondooma Dam. The cost of the outstanding repairs is still being scoped and no allowance for the cost of these repairs has been included in the forecast numbers.

## Renewals and Enhancements

R&E annuity expenditure is forecast to be \$91k above target for 2014 and over the 5-year price period the estimated expenditure is \$108k over 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)
28	59	185	276	559	667

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)
13	(276)	(263)

Note: The figures in Table 5 do not include any allowance for any flood damage repairs that may eventually be funded from the annuity.

<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>
Study: 5yr Dam Comprehensive Inspection (by 1 Jun 2014) - BOONDOOMA DAM	Detailed inspections and condition assessment report of all civil, electrical and mechanical components of the Dam.	101
Investigate and implement options for safely opening/closing decking grating - BOONDOOMA DAM	Redesign deck grating to ensure safety of personnel/equipment during winching operations where grating needs to be removed.	57
Redesign and install new winch system for removing secondary bulkhead gate - BOONDOOMA DAM	The manually operated winch is extremely slow and hard to operate (45min approx. full travel). A mechanically operated winch is required to prevent back strain.	51
Provide reliable operation of the fixed cone valve indicators - BOONDOOMA DAM	The cone valve indicators drift during operation, providing inaccurate opening settings. Design of accurate indicators is required.	25
Other minor works		42
Total		276

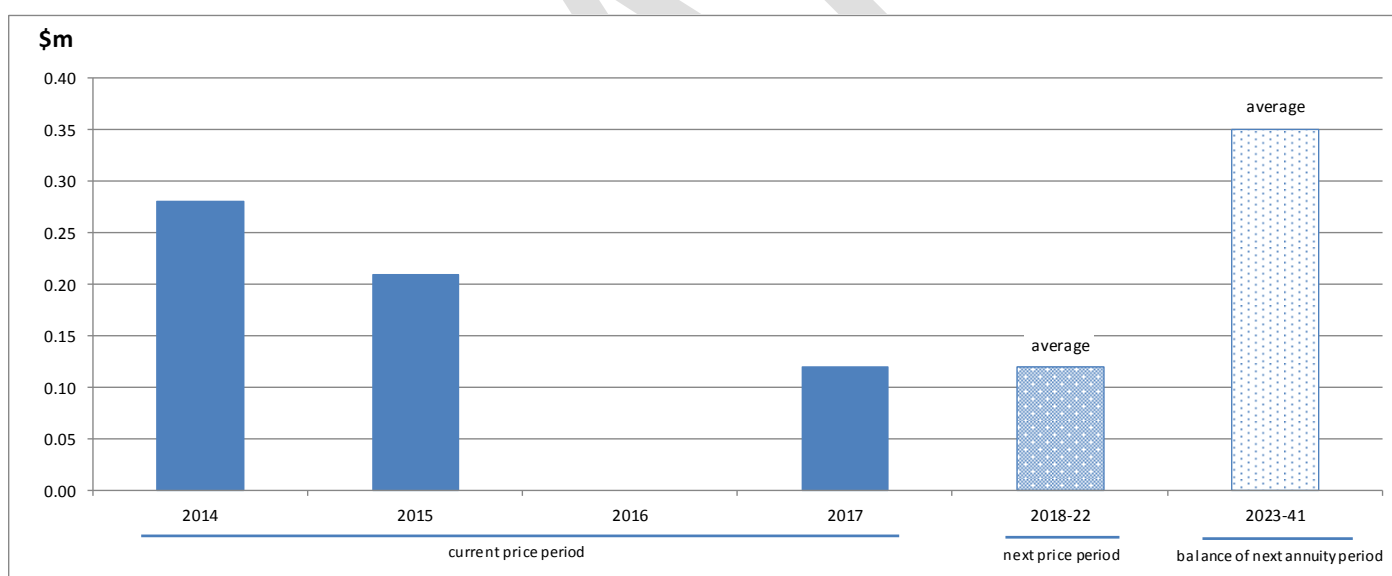
## Overview of Renewals and Enhancements 2014-41

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.



### **Investigate and implement options for safely opening/closing decking grating - Boondooma Dam**

Year: 2014

Current estimate: \$61k

Options analysis completed: No

The current arrangement at the dam requires large single piece of grating to be removed for access to equipment within the shaft. Removing /replacing of this grate is extremely difficult due to the design of the work area. It also becomes difficult to control whilst removing/replacing, even during light winds.

Options will be investigated and it is likely that the grating needs to be redesigned to allow smaller sections to be removed whilst retaining a clear path for removal of equipment. This also will provide a safer working environment for personnel who are carrying out operations on the structure.

### **5yr Dam Comprehensive Inspection - Boondooma Dam**

Year: 2014

Current estimate: \$101k

Options analysis completed: No

Carry out detailed inspections and operation of the Dam electrical/mechanical components to confirm that they function as designed. Detailed planning of this project is required to ensure that all items requiring inspection/operation are captured. This inspection is required under the Act therefore no options analyses are required.

### **Replacement of Sealer in upstream slope - Boondooma Dam**

Year: 2015

Current estimate: \$196k

Options analysis completed: Yes

Annual inspections identified cracking of the upstream sealant that resulted in a detailed inspection and report on the options to be considered.

Hummingbird document #1255312 Complete final Report Boondooma Dam Joint Inspection:

Option 1 – Replacement of the existing sealant by means of removing the existing sealant by means of saw cutting and/or water blasting and replacing with a combination of products

Option 2 –Not replacing the sealant but applying an overlaying joint sealant with no need to disturb the insitue sealant

The conclusion of the report indicates that there is no immediate need for undertaking sealant replacement as there is no evidence of imminent joint failure. This is backed up by very low seepage through the body of the dam. It is considered prudent to defer this work for another two years.

## 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 (by 1 May 2019) - Boondooma Dam**

Year: 2019

Current estimate: \$204k

Options analysis completed: No

Carry out desktop study of the Dams behaviour against design parameters. This entails a detailed review of the design parameters of the Dam including the site geology, construction materials/properties and how the dam is behaving in comparison to the design parameters. This inspection is required under the Act therefore no options analyses are required.

### **5yr Dam Comprehensive Inspection (by 1 Jun 2014) - Boondooma Dam**

Year: 2019

Current estimate: \$120k

Options analysis completed: No

Carry out detailed inspections and operation of the Dam electrical/mechanical components to confirm that they function as designed. Complete a detailed review of the previous 5 year maintenance history/strategy. This inspection is required under the Act therefore no options analyses are required.

### **Refurbish Metalwork - Handrail/ ladder & 450 CICL replacement - Boondooma Dam**

Year: 2020

Current estimate: \$111k

Options analysis completed: No

Review the condition of the ladders/handrails and walkways at the Dam to determine if they require refurbishment.

All metal components have a definitive life. Condition assessments of the ladders/handrails and walkways at the Dam will determine if they require refurbishment. Options analysis will be completed closer to the implementation.

## 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 Access Bridge - Boondooma Dam**

Year: 2040

Current estimate: \$2.9m

Options analysis completed: No.

Replacement of access bridge to the Inlet structure. Routine condition assessments of the access bridge will determine if it requires refurbishment/replacing. Options analysis will be completed closer to the implementation.

## 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 estimated flood damage and 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	62	55	64	52
Materials	2	6	3	3
Contractors	3	3	3	9
Other	65	66	67	107
Non-direct	136	128	144	105
Operations Total	268	258	281	276
<b>Preventive</b>				
Labour	29	29	29	27
Materials	5	5	5	5
Contractors	1	1	1	1
Other	0	0	0	1
Non-direct	60	64	62	53
Preventive Total	95	99	97	87
<b>Corrective</b>				
Labour	5	280	6	3
Materials	6	473	6	5
Contractors	1	303	1	4
Other	0	0	0	1
Non-direct	12	669	12	7
Corrective Total	24	1,725	25	20
Electricity	0	0	0	0
<b>Total Operating Exp.</b>	<b>387</b>	<b>2,082</b>	<b>403</b>	<b>383</b>
R&E Annuity Funded <sup>5</sup>	28	59	185	276
Dam Safety and other	0	0	0	0
<b>Grand Total</b>	<b>415</b>	<b>2,141</b>	<b>588</b>	<b>659</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.