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# 2014 Annual Performance Report Bowen Broken Bulk

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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 the QCA report real dollars to nominal dollars, multiply by the following factors; these 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

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. SunWater has decided to also produce annual Performance Reports such as this report to show how SunWater has performed against the QCA targets for the year just completed.

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 at the following addresses:

Email: <a href="mailto:nspfeedback@sunwater.com.au">nspfeedback@sunwater.com.au</a>

Post: NSP Feedback

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## Water Usage

Table 2 – 2014 Water Usage

	No. of Customers	Water Entitlements M∟	Available Water ⊠∟	Available Water %	Water deliveries ⊠L	Water deliveries % of entitlement	Water deliveries % of available
Industrial		30,300	30,600	101%	10,663	35%	35%
Irrigation		5,676	5,677	100%	1,197	21%	21%
Urban		1,785	1,485	83%	785	44%	53%
Other		296	360	122%	257	87%	71%
SunWater		872	808	93%	352	40%	44%
Total	50	38,929	38,930	100%	13,254	34%	34%

QCA Assumed Water Usage for Irrigation 11.7%
QCA Assumed Water Usage for Total 43.1%

Table 3 – Revenue

	2013 SunWater Actual \$'000	2014 SunWater Actual \$'000	2015 SunWater Budget \$'000
Irrigation Revenue	65	67	78
Drainage	0	0	0
Irrigation CSO	0	0	0
Industrial and Urban	4,874	4,910	5,062
Other Revenue	(1)	16	8,652
Total Revenue	4,938	4,993	13,792

<sup>\*</sup> Bulk water charges have not been unbundled from Distribution charges therefore a portion of the Distribution revenue is attributable to the Bulk service contract.

## **Routine Expenditure**

**Table 4 – Routine Operating Expenditure** 

	2013 SunWater Actual	%of 2013 Target	2014 SunWater Actual	%of 2014 Target	2015 SunWater Budget	% of 2015 Target
	\$'000	%	\$'000	%	\$'000	%
Operations (Excl. Elect.)	828	163%	807	153%	642	121%
Preventative	103	53%	140	69%	177	86%
Corrective	191	89%	123	55%	212	94%
Electricity	136	117%	109	87%	80	60%
<b>Total Routine Expenses</b>	1,258	122%	1,179	109%	1,111	101%

#### **Operations**

Operation activities include the day-to-day costs of the administration and management of the scheme, water delivery and meeting compliance obligations. Specific activities include the direct and non-direct cost of 1:

- Scheduling and delivering water, including processing water orders, releasing water, operating pump stations, regulation and monitoring of channel flows and monitoring of customer deliveries;
- Emergency responses for channel overflows and other emergency events;
- Meter reading;
- Administration of water accounts, billing and receipting payments;
- Customer management, including enquiries, complaints and maintaining the customer service help desk;
- Scheme management including licences and permits, rates, land management, planning and reporting;
- Insurance;
- Monitoring the security of infrastructure and unauthorised access and trespass; and
- Managing public relations associated with the scheme.

The operations expenditure in 2014 was \$264k, or 40%, above the QCA target. The major exceptions and highlights with operation activities for the year included:

- Insurance costs \$122k higher than target; and
- Local Authority rates \$5k higher than budget.

#### **Preventive Maintenance**

Preventive maintenance is maintaining the ongoing operational performance and service capacity of physical assets to designed standard. Preventive maintenance is cyclical in nature with a typical interval of 12 months or less. Preventive maintenance activities are based on the updated work instructions developed for operating the scheme and include an estimate of the resources required to implement that scope of work. Preventive maintenance includes<sup>1</sup>:

Condition monitoring – the inspection, testing or measurement of physical assets to report and record its condition and
performance for determination of maintenance requirements. Condition monitoring is carried out on electrical,
mechanical and civil assets including pump stations (pumps, electrical motors, valves, switchboards and associated
equipment), channels (regulator gates, civil works, signs, structures, etc.), drains (civil works, structures etc.), pipelines
(valves, air valves, scours easements etc.), and other infrastructure;

<sup>&</sup>lt;sup>1</sup> Activities listed will not apply to all service contracts.

- Servicing planned maintenance activities normally expected to be carried out routinely on physical assets including valves, cranes, sump pumps and associated equipment; and
- Weed control which includes the following activities:
  - o Slashing channels and drains;
  - o Acrolein treatment of channels; and
  - o Spraying and other activities to control operational and noxious weeds within channel and drainage reserves.

Preventive maintenance for 2014 was \$63k below the QCA's target. The major exceptions and highlights with preventive maintenance activities for the year included:

• Higher than forecasted operation duties meant less preventative maintenance was performed.

#### **Corrective Maintenance**

Corrective maintenance includes activities to correct unexpected failures or to return an asset to an acceptable level of performance or condition. While these are difficult to forecast with accuracy, history has shown that such events can be expected and need to be factored into expenditure forecasts. Forecasts include provision for labour, materials and plant hire.

The corrective maintenance forecast does not include any costs of damage arising from major unexpected events, such as floods. These costs are categorised as non-routine corrective maintenance which is discussed in the following section.

There are two types of corrective maintenance – scheduled and emergency<sup>2</sup>:

- Scheduled corrective maintenance is maintenance that can be planned and scheduled, and includes:
  - o Channels
    - De-silting channels and catch drains;
    - Erosion control and repair of rock protection works;
    - Repair fencing;
    - Repair concrete structures; and
    - Repair regulator gates, control valves, etc.
  - o Drains
    - De-silting drains;
    - Erosion control and repair of rock protection works;
    - Repair fencing; and
    - Repair concrete structures.
  - Pipelines
    - Repair air valves, scour valves, etc.;
    - Erosion control and repair of rock protection works; and
    - Repair concrete structures.
  - o Scheme Roads
    - Repair pot holes;
    - Grade roads; and
    - Repair, replace and paint guide posts and signs.
  - Pump stations
    - Repair pumps and motors;
    - De-silt intake structures;
    - Repair concrete structure; and
    - Repair control building.
  - o Storages (balancing storages and reservoirs)

<sup>&</sup>lt;sup>2</sup> Activities listed will not apply to all service contracts.

- Repair control gates and valves;
- Repair walls, embankments and spillways; and
- Repair concrete structures.
- o Meters
  - Repair bulk water meters; and
  - Repair customer meters.
- Emergency corrective maintenance is maintenance that has to be carried out immediately to restore normal operation or supply to customers or to meet regulatory obligations (e.g. rectify a safety hazard) and includes:
  - Repair or correction of pump station faults;
  - o Repair or correction of channel faults;
  - o Repair or correction of pipeline faults; and
  - o Response to theft or vandalism associated with scheme assets.

Corrective maintenance was \$99k below the QCA's target for 2014. The major exceptions and highlights with corrective maintenance activities for the year included:

• Non-Routine work removed the need for some corrective tasks leading to a lower than budgeted spend in this area.

#### **Electricity**

Electricity costs were \$16k below the QCA target in 2014. Electricity usage in Bowen Broken varies from year-to-year depending heavily on the amount of pumping to Gattonvale off-stream storage.

## 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, the most recent of which was completed in February 2014; 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 an estimated program of works from the 2010-11 year. While this was the best estimate of expected work at the time, there has been significant project churn in the three years 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. However, SunWater expects 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	%of 2013-17 Target	2014 SunWater Actual	%of 2013-17 Target	2015 SunWater Budget	% of 2013-17 Target
	\$'000	%	\$'000	%	\$'000	%
Annuity Funded						
R&E - Annuity Funded	90		88		122	
Corrective	(1)		0		0	
Other	0		0		0	
Non-direct	16		96		86	
Annuity Funded Total	106	12%	184	20%	208	23%
Non-Annuity Funded						
R&E - Non-Annuity Funded	(0)		90		8,487	
Non-direct	(0)		65		153	
Total Non-Annuity Funded	(0)	n/a	155	n/a	8,640	n/a

#### R&E - Annuity Funded

The annuity funded R&E direct spend was \$88k. Projects undertaken included:

- Dam Break Analysis Eungella Dam \$64k<sup>3</sup> was spent in 2014. Comprehensive assessment must include a dam break analysis for a range of dam failure scenarios such as overtopping, sabotage, seepage and piping failure as per section 2.5.2 of Guidelines for Failure Impact Assessment of Water Dams prepared by the Department of Energy and Water Supply. A Dam Break Analysis for Eungella dam was completed in June 2005, but the dam break geometrical configuration was questioned by the department. The project updated the dam break model Mike-11 and inundation maps, however hydrological studies still need to be revised to include recent flood events.
- GOSS Upgrading PLC & SCADA and installing power metering and monitoring system \$60k was spent in 2014. Gattonvale pump station PLC (Programmable Logical Control) system is an old version of Schneider Electric PLC and spare parts are no longer available, which became the driver for this project. Works completed to date includes installation and commissioning of new PLC (Modicon 340 Schneider) and SCADA (Schneider Electric PM710). The works remaining are update of the engineering drawings and update of SCADA page.
- Replace Electrical Components Eungella Dam \$24k was spent in 2014. A six-monthly inspection report recommended replacement of switchboards. The switchboards in the valve house, winch house, and ablution block are very old with a minimum degree of protection, posing a workplace health and safety issue. The new switchboards need to be customdesigned for outdoors, utilising stainless steel material with protection degree of IP56. The works to date include preparation of scope, technical specifications and procurement (contract has been awarded) and it is expected that the remaining works will be completed by November 2014.
- Install Bulkhead Gate GOSS Pump station Inlet Structure \$14k was spent in 2014. The bulkhead gate is required to allow de-watering for inspection and maintenance works. The gates were originally designed and fabricated in 2009/10. On commissioning, it was found that the gates would not seal and were about 80mm off seating. The project requires redesign and re-fabrication after carrying out a professional diving inspection to confirm the cause of leakage. Works to date include the preparation of scope, investigation and arrangement with a contractor to carry out the inspection to confirm the cause of the leakage. The remaining works are expected to be completed by December 2014.

#### **Corrective Maintenance**

There was no expenditure categorised as "Corrective Maintenance" in 2014.

#### Other

There was no expenditure categorised as "Annuity-funded Other" in 2014.

#### R&E – Non Annuity

The Non-annuity funded R&E direct spend included:

- Eungella Dam Safety Upgrade Business Case \$155k was spent in 2014. The Regulator (DEWS) issued the Guidelines on Acceptable Flood Capacity for Water Dams in January 2013. Under the schedule for dam safety upgrades, Eungella Dam falls into the Tranche 1 category which is given the highest priority for upgrade. A Tranche 1 dam requires a minimum flood discharge capacity of 255 of Acceptable Flood Capacity (AFC) or at least 1:2000 AEP for erodible dam embankments (whichever is the largest), by a regulatory deadline 1 October 2015. The works completed to date are hydrological review, survey of crest, and design of upgrade options which include:
  - (a) decreasing at-risk downstream population;
  - (b) raising the crest to pass 1:10,000 AEP flood through the spillway and anchoring; and
  - (c) raising the crest to pass 1:2,000 AEP flood through the spillway and anchoring.

<sup>&</sup>lt;sup>3</sup> Individual project expenditures include non-directs.

## **Annuity Balance**

The 2014 annuity balance is shown below.

**Table 6 – Annuity Balance** 

	<b>2013</b> \$'000	<b>2014</b> \$'000	<b>2015*</b> \$'000	<b>2016</b> \$'000	<b>2017</b> \$'000
Opening Balance	(2,722)	(2,708)	(2,770)	\$ 000	\$ 000
Annuity Income	324	326	337	436	439
Spend	(106)	(184)	(208)		
Interest	(204)	(203)	(207)		
Closing Balance	(2,708)	(2,770)	(2,848)		

 $<sup>\</sup>ensuremath{^{*}}$  2015 figures are subject to change once actual spend is known.

# Appendix –Total Expenditure by Expense Type

Table 7 – Expenditure for Activity by Type

	2013 SunWater Actual	%of 2013 Target	2014 SunWater Actual	%of 2014 Target	2015 SunWater Budget	% of 2015 Target
	\$'000	%	\$'000	%	\$'000	%
ROUTINE EXPENSES						
Operations						
Labour	218		147		126	
Materials	17		57		21	
Contractors	65		109		86	
Other	116		215		163	
Non-direct	412		279		247	
Operations Total	828	163%	807	153%	642	121%
Preventative						
Labour	29		33		48	
Materials	4		7		8	
Contractors	16		37		30	
Other	0		0		0	
Non-direct	54		62		90	
Preventative Total	103	53%	140	69%	177	86%
Corrective						
Labour	37		25		31	
Materials	26		27		31	
Contractors	55		18		85	
Other	1		3		2	
Non-direct	72		49		63	
Corrective Total	191	89%	123	55%	212	94%
Electricity	136	117%	109	87%	80	60%
Total Routine Expenses	1,258	122%	1,179	109%	1,111	101%
	2013 SunWater Actual	% of 2013-17 Target	2014 SunWater Actual	%of 2013-17 Target	2015 SW Budget	%of 2013-17 Target
	\$'000	%	\$'000	%	\$'000	%
NON-ROUTINE EXPENSES						
Annuity Funded						
R&E - Annuity Funded	90		88		122	
Corrective	(1)		0		0	
Other	0		0		0	
Non-direct	16		96		86	
Total Annuity Funded Non-Routine	106	12%	184	20%	208	23%
TOTAL REGULATED EXPENSES	1,364		1,363		1,319	
Non-Annuity Funded						
R&E - Non-Annuity Funded	(0)		90		8,487	
Non-direct	(0)		65		153	
Total Non-Annuity Funded	(0)	n/a	155	n/a	8,640	n/a
TOTAL EVENUES						
TOTAL EXPENSES	1,364		1,518		9,959	