Final Draft Report

Qualitative Framework and Assessment of Fixed and Variable Cost Drivers

Prepared for:

Queensland Competition Authority

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MANAGEMENT SUMMARY

Indec has prepared an analysis to provide a view on which of SunWater's costs are most likely to vary with water use to assist in the determination of the most appropriate tariff structure for the 2012 to 2017 Irrigation Price Paths. The primary purpose of the analysis of SunWater's fixed and variable costs is to identify appropriate fixed and variable tariff structures based on Part A fixed charge based on water allocations held and Part B variable charge based on water use. Given that the variable tariff is based on water use, the variable cost driver of most interest is water use. During the course of the review, Indec has considered other factors which could be considered as drivers of fixed and variable costs.

The purpose of this draft report is to provide a framework and an identification and assessment of the key fixed variable and semi-variable cost drivers in SunWater's irrigation water supply services based on SunWater's service contract structure.

The fixed and variable cost framework for SunWater's irrigation water services proposed in this draft report is in accordance with the Authority's Terms of Reference dated 2 July 2011 and is primarily focussed on an analysis of whether:

- costs of a particular activity or category are material or not;
- in periods of fluctuating water demand, costs can be practicably varied using an optimal (prudent and efficient) management approach that considers SunWater's operating environment (whether costs are likely to be fixed, variable or semi-variable);
- there are any discernible drivers of variable costs other then water use; and
- there are other key factors that impact on costs (i.e. regulation, material costs, etc.).

Stage One - Qualitative Analysis

Indec has developed an analysis framework based on its knowledge of SunWater's business operations to identify the key asset, processes and activities and related cost drivers to develop an initial qualitative assessment framework. This framework was discussed with SunWater staff during interviews to validate Indec's understanding of the key cost drivers that are likely to be variable and semi-variable with a variation in customer water use. The fixed and variable cost analysis framework structure for the major SunWater activities is shown in figure m-1.

In completing its initial qualitative assessment, Indec has considered whether costs are likely to be fixed, variable or semi-variable in the context of fixed and variable tariff structures. In particular, cost impacts arising from a prudent management response to variations in water have been considered.

The framework applied by Indec in completing its qualitative assessment has been based on the following suppositions:

- Variable costs are directly related to water use.
- Fixed costs are incurred irrespective of water use.
- Semi-variable costs have a fixed component and a variable component directly related to water use.

In that context, the qualitative assessment has found that the costs of water harvesting and storage, and water distribution and accounting are semi variable and the cost of administration are considered relatively fixed.

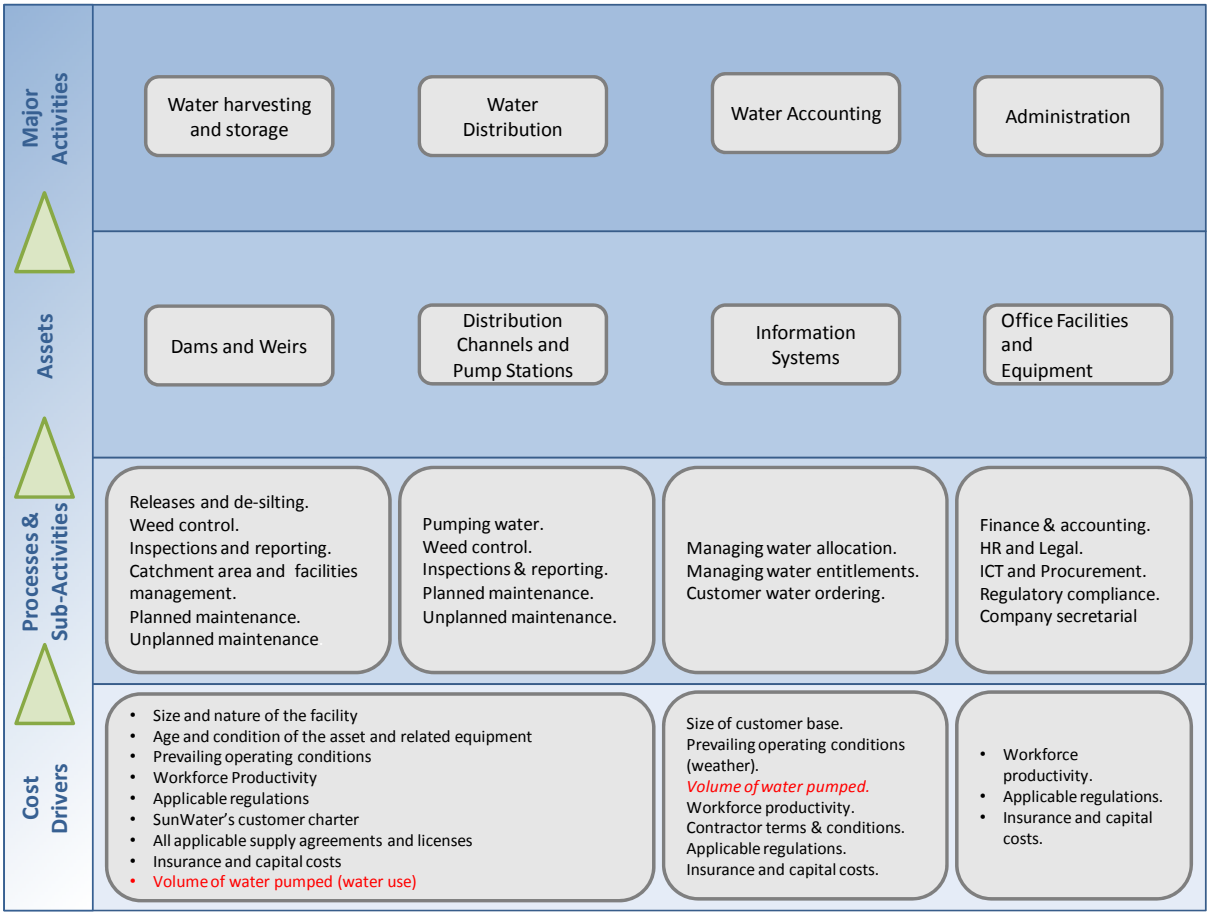

Figure m-1 Fixed and Variable Cost Analysis Framework

The analysis shows that there are a number of cost drivers that influence the key processes and sub activities and related costs.

Water use is only one of the cost drivers in major SunWater activities. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal

(prudent and efficient) management approach that considers SunWater's operating environment. The impact of varying processes and sub-activities is likely to be more material in water distribution than in other major SunWater activities.

Examples of water distribution processes and sub-activities and related costs that could be varied with water use include scheduling and delivering water (semi variable), electricity costs (variable), corrective maintenance (semi variable) and weed control management (semi variable).

Stage Two – Analysis of Historical Costs

Indec performed an extensive econometric analysis on SunWater's (available) quarterly historical cost data for 2007-11 to establish whether historical costs were fixed, variable or semi-variable with a variation in customer water use.

Indec carried out regression analysis of historical costs for the period July 2007 to June 2011 against water usage. The agreed scope specified that regression analysis be conducted on regression analysis of annual historical costs for the period 2002/2003 to 2004/05 and forecast costs 2005/06 to 2010/11 (8 observations) against water usage. However, data limitations and inconclusive results led to the need to progressively expand the scope during the course of the analysis. Specifically, additional analysis scope included a regression analysis of quarterly historical costs for the period 2006/07 to 2010/11 versus water usage (20 observations) and regression analysis of historical expense versus a number of other potential variable cost drivers.

Outputs of this analysis were subjected to a decision rule which considered simultaneously conditions on the values of three statistical outputs namely R–squared – greater than or equal to 0.6; Significance of F – less than 0.05; and P-Value– less than 0.05. The regression analysis outputs for the cost categories that meet the above decision rule are summarised in figure m-2.

Service Contract	Variable Cost	R Squared	Signigicance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient)
Bundaberg Irrigation Distribution	Electricity	0.9239585	1.63355E-11	25.1286554	1.699151167	1.6E-11	0.961227615
Burdekin Irrigation Distribution	Electricity	0.6745904	9.02959E-06	8.99432567	1.472405697	9E-06	0.821334505
Dawson Irrigation Distribution	Electricity	0.6396234	2.31515E-05	6.44864697	1.140902256	2.3E-05	0.799764611
Eton Irrigation Distribution	Electricity	0.9358645	3.50817E-12	9.9995893	0.617005148	3.5E-12	0.967400882
Lower Mary Water Supply	Electricity	0.6397347	2.30855E-05	11.6482138	2.060318446	2.3E-05	0.799834166
Mareeba Irrigation Distribution	Electricity	0.7554824	6.56394E-07	2.80074668	0.37556102	6.6E-07	0.869184883
Three Moon Water Supply	Prev. Maintenance	0.6581158	1.42347E-05	22.9637563	3.901171326	1.4E-05	0.811243373
Upper Condamine Water Supply	Electricity	0.9254523	1.36544E-11	3.55677431	0.237935965	1.4E-11	0.962004325

Figure m-2 Regression Analysis Outputs[1]

The incorporation in the decision rule of an R-squared value greater than or equal to 0.6 is based on the notion that this value equates to a correlation coefficient of approximately plus or minus 0.775 which would indicate that some possible association between two variables exists. An R

[1] Regression analysis outputs that meet the defined decision rule

squared of 0.6 indicates that 60% of the change in one variable (i.e. water use) is explained by a change in the related variable (i.e. labour hours)

It should be noted that in the context of pure applied statistics, a caution applies to R-squared statistical measures. Correlation does not necessarily imply causation. While correlations may provide valuable clues regarding causal relationships among variables, a high correlation between two variables does not necessarily represent adequate evidence that changing one variable has resulted, or may result, from changes of other variables. A sample of the outputs of this additional regression analysis is shown in figure m-3.

SET	Independent Variable	Dependent Variable	Level of correlation	R Squared	Significance of F	P Value	R (Correlation Coefficient)
1	Water Use	Operations and Maintenance	reasonable	0.45932	0.00279	0.00279	0.67773
2	Labour	Materials	reasonable	0.41821	0.00502	0.00502	0.64669
3	Renewals (expense + capital)	Contractors	good	0.81992	0.00000	0.00000	0.90549
4	Labour	Indirects & Overheads	weak	0.35112	0.01219	0.01219	0.59256
5	Renewals (expense + capital)	Other	weak	0.17824	0.09139	0.09139	0.42219
6	Water Use	Renewals (expense + capital)	none	0.03423	0.47713	0.47713	-0.18502
7	Water Use	Preventative maintenance	none	0.16661	0.10384	0.10384	0.40818
8	Renewals (Labour hrs)	Renewals (expense + capital)	weak	0.36267	0.01052	0.01052	0.60222
9	Water Use	Ops and Mnt'ce (labour hrs)	weak	0.26771	0.03341	0.03341	0.51741
10	Water Use	Renewals (expense + capital)	weak	0.33803	0.02301	0.02301	0.58141

Figure m-3 Sample of Additional Regression Analysis Outputs

The results in figure m-3 show that good correlation between Sunwater's overall renewals and contractors expense and reasonable correlation between water use, and operations and maintenance expense. Correlation between water use and operations and maintenance labour hours, and water use and renewals expense was weak. In drawing these conclusions, Indec acknowledges that some correlation analysis results did not meet the strict decision criteria required to establish beyond doubt whether historical costs were fixed, variable or semi-variable with a variation in customer water use.

The regression analysis results show that historically, principally only electricity costs displayed a close correlation with water use. To further explore the variability of historical costs and water use, the agreed scope for Stage Two had to be progressively expanded during the course of the analysis. Specifically, additional analysis scope other than the expanded regression analysis referred to above included, without limitation:

- analysis of quarterly historical costs, in addition to analysing annual historical costs;
- analysis quarterly historical costs by sub-activity and expenditure type;
- 'classical' time series decomposition and seasonal indices;
- analysis of quarterly labour bookings by activity, sub-activity, expenditure type and source (hours booked for the period July 2007 and 2011);

- analysis of historical costs and labour hours by region and depot;
- moving averages and other smoothing techniques; and
- construction of two models, to enable the extended historical analysis of expense and labour hours to the level of detail outlined above. The models incorporate approximately one hundred graphs to assist in the visual interpretation of SunWater's historical data. The models also incorporate some high level correlation analysis of historical base data. At the request of the Queensland Competition Authority, the models have been extended to also incorporate high level correlation analysis of four period moving averages for selected expense and labour hours data (smoothed historical data).

Indec considered that historical expense by activity including operations, preventative and corrective maintenance expense varied with water use, albeit weakly. Indec's conclusion is based on the assumption that operations expense is managed within the overall operations and maintenance expense which varies moderately with water use over the period June 2007 to September 2010. Indec also concluded that historical renewals and enhancements expense varied with water use, albeit weakly.

Electricity is a cost by expense type. Indec considered electricity expense a fully variable costs in contract areas where a significant proportion of water supply is pumped (refer figure m-2).

Indec concluded that other historical costs by expense type including labour, materials, contractors and 'other' did vary with water use to varying degrees. In drawing this conclusion, Indec acknowledges that some correlation analysis results did not meet the strict decision criteria required to establish beyond doubt whether historical costs were fixed, variable or semi-variable with a variation in customer water use.

Indec has used an indirect inference on the variability of some expenses by type to that of water use, through the variability of other expense types in regards to that of water use. It should be noted that correlation does not necessarily imply causation.

In summary, the stage 2 analysis of historical costs does demonstrate that SunWater has to some extent varied costs other than electricity expense with water use. However, the results of the historical cost analysis are somewhat inconsistent and tenuous and are based on past cost behaviour which Indec does not consider to have been the optimum approach to variations in water use. The results of the historical cost analysis have therefore only been indirectly applied to the Stage Three assessment of an optimum approach to varying costs with variations in water use.

However, the fact that SunWater already varies certain activities and expenses with varying water use in a number of depots and service contracts has been considered in assessing appropriate fixed/variable expense ratios.

Stage Three - Assessment of Optimal Approach

As part of the terms of reference, Indec was required to take into account an optimal management approach to varying water use which considers SunWater's operating environment.

The framework applied by Indec in determining an optimal management approach involved the objective of delivering services in a prudent and efficient manner whilst at the same time acknowledging some of the operating and other restraints which SunWater may face.

SunWater must manage its operations taking into account all relevant risks and opportunities whilst not compromising on the delivery of services to customers as outlined in SunWater's Standard of Service.

Certain operating and regulatory constraints were identified which restrict SunWater's ability to reduce workload during periods of low water demand, as staffing levels are largely driven by:

- the need to maintain a minimum critical mass on site to respond to operational events to meet customer service standards;
- occupational health and safety requirements which preclude staff working by themselves in prescribed circumstances;
- distances between depots which range from 125 to 520 kilometres. One way travel times range from 2-5 hours and 5 - 7 hours. Travel times in conjunction with the need to provide overnight accommodation limits cost efficient resource sharing between some depots; and
- the need to have available personnel with the right skills and safety certificates for work in certain environments (confined spaces, low voltage, etc).

Indec has applied its judgement to determine what it considers an optimal management approach based on its experience of reviewing and benchmarking utility industries and its knowledge of the SunWater business operations gained during the previous irrigation price path review in 2005/06 and more recently from reviewing actual and forecast cost and labour data, documents outlining operating and asset management practices and interviews with senior SunWater staff.

Indec's view is that in times of low water demand, operations and maintenance activities can be reduced. The reduction may be the result of:

- deferment of non-essential planned and unplanned maintenance activities;
- selective delegation of certain operational activities to water users (subject to further investigation);
- re-allocation of operations and maintenance personnel to other service contracts; and

- re-allocation of operations and maintenance personnel to O&M or R&E activities that would otherwise carried out by contractors (temporarily reduce the use of contractors and casual labour);

The extent to which the above measures are practicable is likely to vary for each area and service contract. Indec acknowledges that such a measure may lead to a reduced 'core' establishment of operations and maintenance staff.

Indec's view is that in times of low water demand, renewals and enhancements expense can be reduced. The reduction may be the result of:

- deferment of some priority 2 refurbishment and enhancements activities;
- re-allocation of operations and maintenance personnel to O&M or R&E activities that would otherwise carried out by contractors (temporarily reduce the use of contractors and casual labour);
- review of planned scope of refurbishments and enhancements in that budget year; and
- phasing of renewals and enhancements works over a longer period.

Other strategies have been considered in order to reduce staffing levels below the minimum critical mass otherwise required. For example, the use of 'flying' gangs, 'mothballing' of schemes or restricting maintenance activity to 'stand-by' maintenance on equipment and assets. All of these measures, however, would require customers to agree to a reduction in customer service levels to provide for example, a start-up period before water can be delivered after water becomes available.

Indec has identified for each category of expenditure, as outlined in SunWater's NSPs, the low and high range of fixed costs based on water volumes delivered to customers. The difference between the high and low ranges is deemed to be a variable cost based on water volumes. The range provides for some discretion with respect to tolerances typically applicable to these type of assessments and any transition period which may be required to achieve the optimal approach to varying water use.

Indec has completed this analysis for each of the thirty service contracts relevant for the setting of the irrigation price paths. By way of example, the extent of automation and labour required to operate each service contract was one consideration in assessing the mix of fixed and variable operating costs. This consideration assumes that a higher degree of automation generally results in a higher proportion of fixed operating costs. Conversely, it has been assumed that a more manual or labour intensive system results in a relatively lower proportion of fixed costs.

A summary of the quantitative assessment of fixed versus variable costs for water distribution systems is summarised in figure m-3 and for bulk water supply systems in figure m-3. Indec

estimates that an appropriate fixed variable ratio for water distribution ranges from 70% fixed and 30% variable to 63% fixed and 37% variable. Indec recommends a transitional overall fixed to variable ratio water distribution of 67% fixed to 33% variable which is the mid-point in the estimates range. The recommended ratios vary by service contract (figure m-3).

		Low			Recommended			High		
	Service Contract	Fixed	Variable	Total	Fixed	Variable	Total	Fixed	Variable	Total
Distribution	Burdekin Distribution	63%	37%	100%	60%	40%	100%	56%	44%	100%
	Bundaberg Distribution	61%	39%	100%	59%	41%	100%	56%	44%	100%
	Mareeba Dimbulah Distribution	86%	14%	100%	83%	17%	100%	79%	21%	100%
	Eton Distribution	76%	24%	100%	72%	28%	100%	69%	31%	100%
	Emerald Distribution	85%	15%	100%	80%	20%	100%	75%	25%	100%
	St George Distribution	89%	11%	100%	84%	16%	100%	80%	20%	100%
	Theodore Distribution	81%	19%	100%	78%	22%	100%	75%	25%	100%
	Lower Mary Distribution	80%	20%	100%	78%	22%	100%	75%	25%	100%
	Distribution Average	70%	30%	100%	67%	33%	100%	63%	37%	100%

Figure m-3 Fixed versus Variable Costs Water Distribution Systems

The recommended ratios incorporate the impact of electricity expense which varies with water use from zero per cent to one hundred. The variable proportion of the average total price path costs excluding electricity ranges from 7.3% to 15.9%. The variable proportion of the average total price path costs excluding electricity for the recommended overall ratio is 11.6%. A summary of Indec's assessment of optimal fixed and variable costs for bulk water supply systems is summarised in figure m-4.

		Low			Recommended			High		
	Service Contract	Fixed	Variable	Total	Fixed	Variable	Total	Fixed	Variable	Total
Bulk Supply	Burdekin Haughton Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Bundaberg Bulk Supply	97%	3%	100%	93%	7%	100%	90%	10%	100%
	Mareeba Dimbulah Bulk Supply	95%	5%	100%	90%	10%	100%	86%	14%	100%
	Eton Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Nogoa-Mackenzie Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	St George Bulk Supply	97%	3%	100%	95%	5%	100%	92%	8%	100%
	Dawson Valley Bulk Supply	96%	4%	100%	92%	8%	100%	88%	12%	100%
	Lower Mary Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	Barker Barambah Bulk Supply	94%	6%	100%	90%	10%	100%	87%	13%	100%
	Bowen Broken Bulk Supply	96%	4%	100%	93%	7%	100%	89%	11%	100%
	Boyne River & Tarong Bulk Supply	95%	5%	100%	91%	9%	100%	87%	13%	100%
	Callide Valley Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	Chinchilla Weir Bulk Supply	95%	5%	100%	90%	10%	100%	86%	14%	100%
	Cunnamulla Bulk Supply	95%	5%	100%	91%	9%	100%	86%	14%	100%
	Lower Fitzroy Bulk Supply	96%	4%	100%	92%	8%	100%	88%	12%	100%
	Macintyre Brook Bulk Supply	97%	3%	100%	94%	6%	100%	91%	9%	100%
	Maranoa Bulk Supply	96%	4%	100%	91%	9%	100%	87%	13%	100%
	Pioneer River Bulk Supply	97%	3%	100%	94%	6%	100%	90%	10%	100%
	Proserpine River Bulk Supply	94%	6%	100%	89%	11%	100%	84%	16%	100%
	Three Moon Creek Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Upper Burnett Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Upper Condamine Bulk Supply	93%	7%	100%	91%	9%	100%	89%	11%	100%
	Bulk Supply Average	96%	4%	100%	93%	7%	100%	89%	11%	100%
	Combined Average	**96%**	**4%**	**100%**	**93%**	**7%**	**100%**	**89%**	**11%**	**100%**

Figure m-4 Fixed versus Variable Costs
Selected Bulk Water Supply Systems

Indec estimates that an appropriate fixed variable ratio for bulk water supply ranges from 96% fixed and 4% variable to 89% fixed and 11% variable. Indec recommends a transitional overall fixed to variable ratio for water distribution of 93% fixed to 7% variable. The recommended ratios vary by service contract (figure m-4).

1. INTRODUCTION

Indec has prepared an analysis to provide a view on which of SunWater's costs are most likely to vary with water use to assist in the determination of the most appropriate tariff structure for the 2012 to 2017 Irrigation Price Paths. The primary purpose of the analysis of SunWater's fixed and variable costs is to identify appropriate fixed and variable tariff structures based on Part A fixed charge based on water allocations held and Part B variable charge based on water use. Given that the variable tariff is based on water use, the variable cost driver of most interest is water use. During the course of the review, Indec has considered other factors which could be considered as drivers of fixed and variable costs.

The purpose of this draft report is to provide a framework and an identification and assessment of the key fixed variable and semi-variable cost drivers in SunWater's irrigation water supply services based on SunWater's service contract structure.

The fixed and variable cost framework for SunWater's irrigation water services proposed in this draft report is in accordance with the Authority's Terms of Reference dated 2 July 2011 (see Appendix A) and is primarily focussed on an analysis of whether:

- costs of a particular activity or category are material or not;
- in periods of fluctuating water demand, costs can be practicably varied using an optimal (prudent and efficient) management approach that considers SunWater's operating environment (whether costs are likely to be fixed, variable or semi-variable);
- there are any discernible drivers of variable costs other then water use; and
- there are other key factors that impact on costs (i.e. regulation, material costs, etc.).

2. METHODOLOGY

Indec has followed the requirements of the Authority's Terms of Reference dated 2 June 2011 under Section 4 (b) to develop the methodology to be applied (see Appendix A). The key objective of the analysis of SunWater's fixed and variable costs on a service contract basis is to establish any causal relationship between water use and variable costs for tariff setting purposes. Once any causal relationships have been established, the focus of the analysis is to estimate the portion of scheme costs proposed for 2011-12 to 2016-17 that vary according to water use.

The analysis has considered an optimal (prudent and efficient) management approach which considers SunWater's operating environment.

Indec's methodology involves the following three stages:

- qualitative assessment based on Indec's industry experience and knowledge gained of SunWater's business operations from the previous SunWater irrigation price review. This draft report includes this qualitative assessment and identifies the key activities, the respective costs drivers and the nature of these cost drivers compared to water use: fixed, variable or semi-variable;

- regression analysis of annual historical costs for the period 2002/2003 to 2004/05 and forecast costs 2005/06 to 2010/11 (8 observations) against water usage; and

- Identify optimal management approach to scheme operation and asset management to estimate the portion of scheme costs proposed for the 2011-12 to 2016-17 irrigation price path that may vary according to water use. This step will also identify any key strategic limitations within SunWater's operating environment which may prohibit or restrict the variability of certain costs. Indec will apply its industry experience and knowledge of SunWater's business operations gained from the previous irrigation price review to complete this stage.

Some of the key steps involved in the methodology are summarised below.

- Review key outcomes from Indec analysis completed as part of previous price review and identify key issues relevant to current analysis.

- Review relevant material and analysis gathered by the Authority i.e. other consultant reports on SunWater maintenance activities, efficiency reviews.

- SunWater interviews with key personnel to discuss asset management and operating and maintenance management approaches.

- Analyse historical data to identify causal relationships. The indicative approach to the analysis for classifying historical costs into fixed, variable and semi-variable costs is to:

- analyse historical trends, cyclical and seasonal variation of water usage (ML) or any other discernible drivers of variable costs using regression analysis and seasonal/cyclical index analysis;
- identify candidate costs and inputs (i.e. electricity - $ and KWh, and direct labour hours - $ and hrs) that may vary with water usage or any other discernible drivers of variable costs;
- conduct simple regression and correlation analysis for each identified candidate variable cost and input to establish the relationship between candidate variable costs and inputs, and water usage or any other discernible drivers of variable costs (if any);
- check if each variable input and related costs display similar correlation with water usage or any other discernible drivers of variable costs and if differences can be explained (i.e. impact of electricity tariff structures on costs vs. electricity usage in KWh, and differential labour rates for normal time and penalty rates on costs vs. labour usage in hours);
- add candidate inputs/costs to variable the cost pool if a relationship can be established and if appropriate, conduct multiple regression analysis on the identified variable inputs and costs (multivariate regression modelling);
- check if any trends in historical expenditure types can be observed such as the inter-relationship between corrective and preventative maintenance and the influence of water usage and other discernable drivers on the expenditure levels across corrective and preventative maintenance; and
- forecast possible cost variations over the five year price path based on historical practices and costs.

- The analysis of historical costs will be useful to establish impacts on cost and inputs of historical management approaches to variations in water usage and other discernible drivers of variable costs and inputs (if any).
- In its analysis, Indec has considered an optimal (prudent and efficient) management approach to variations in water usage and other discernible drivers of variable costs that considers SunWater's operating environment.
- Prepare analysis for each service contract to estimate proportion of proposed scheme costs for 2011/12 to 2016/17 which can vary according to water use and other discernable drivers, as agreed with the Authority.

3. STAGE ONE - QUALITATIVE ASSESSMENT

In delivering irrigation water supply services SunWater carries out four key activities:

- water harvesting and storage;
- water distribution;
- water accounting; and
- administration.

In carrying out these activities, SunWater must adhere to strict regulatory compliance covering such areas as dam safety, environmental, water accounting, occupational, and health and safety regulation. Regulations covering SunWater's irrigation water storage and distribution assets and services are an external factor impacting on its fixed and variable operating costs. SunWater deploys a number of key assets in its provision of irrigation water supply services:

- major dams, weirs and other bulk water harvesting and storage facilities, and related assets and equipment;
- distribution channels, drains, pump stations and related pipe lines, water metering and other distribution related equipment;
- information systems and equipment; and
- office facilities and equipment.

The fixed and variable cost framework for SunWater's irrigation water services proposed in this final draft report in accordance with the project brief is primarily focussed on an analysis of whether:

- costs of a particular activity or category are material or not;
- in periods of fluctuating water demand, costs can be practicably varied using an optimal (prudent and efficient) management approach that considers SunWater's operating environment (whether costs are likely to be fixed, variable or semi-variable);
- there are any discernible drivers of variable costs other then water use; and
- there are other key factors that impact on costs (i.e. regulation, material costs, etc.).

Indec has developed a fixed and variable cost analysis framework for the major SunWater irrigation supply activities is shown in figure 3.1.

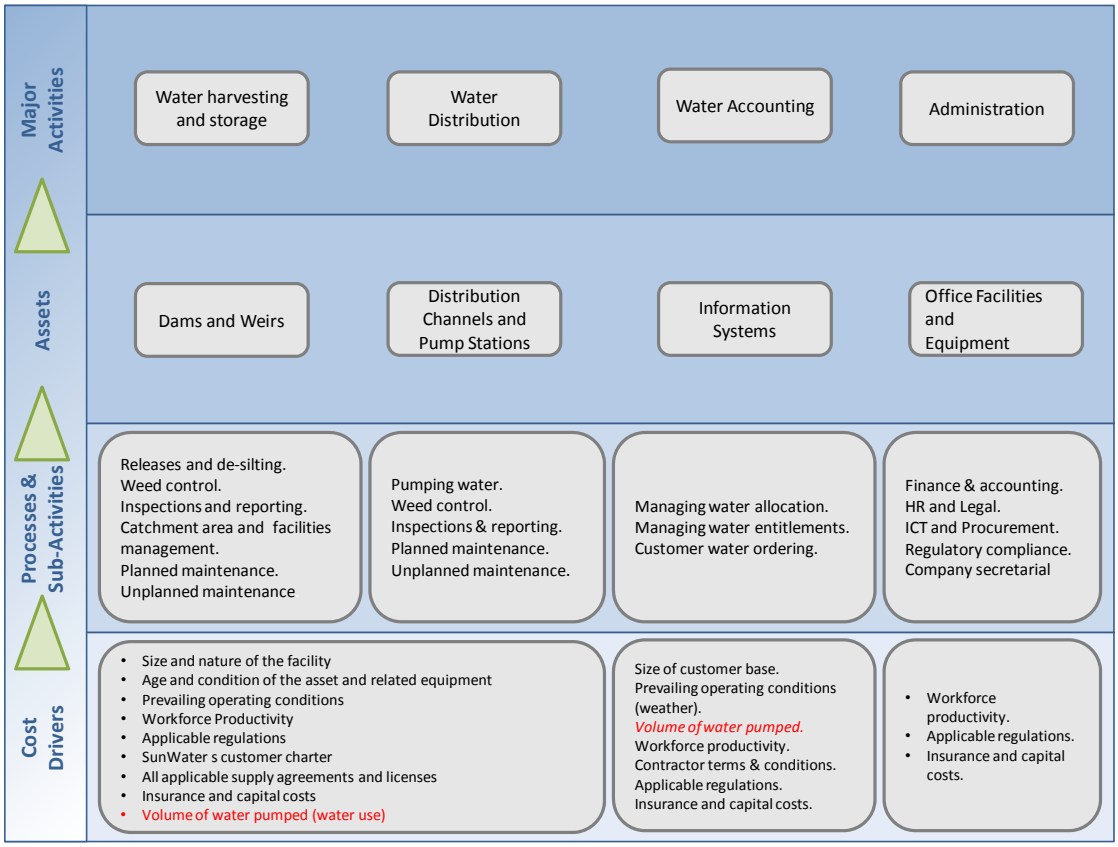

Figure 3.1 Fixed and Variable Cost Analysis Framework

Indec has considered whether costs are likely to be fixed, variable or semi-variable in the context of fixed and variable tariff structures. In particular, cost impacts arising from a prudent response to variations in water use have been considered.

- Variable costs are directly related to water use.
- Fixed costs are incurred irrespective of water use.
- Semi-variable costs have a fixed component and a variable component directly related to water use.

In that context, the preliminary assessment is that the costs of water harvesting and storage, and water distribution and accounting are semi variable and the cost of administration should be considered relatively fixed.

The analysis to date shows that there are a number of cost drivers which potentially influence key processes and sub activities and related costs. Water use is only one of the cost drivers in water harvesting and storage, and distribution and accounting. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach. The ability of SunWater to vary selected processes during periods of fluctuating water use would need to be assessed against SunWater's operating

environment to determine if the variations are possible. The impact of varying processes and sub-activities is likely to be more material in water distribution than in other major SunWater activities. Examples of SunWater's key processes, sub-activities and related costs that could be varied with water use include scheduling and delivering water (semi variable), electricity costs (variable), corrective maintenance (semi variable) and weed control management (semi- variable). Sections 3 and 4 of this report outline in more detail the reasoning for these findings.

A complete indicative qualitative assessment of SunWater's cost structures in terms of fixed, variable and semi-variable cost classifications is attached as Appendix D.

3.1. Bulk Water Harvesting and Storage

The analysis in this section covers the major SunWater activity of bulk water harvesting and storage. Operating and unplanned maintenance costs of water harvesting and storage facilities are expected to be highest in extreme operating conditions such as drought and flood conditions. The fixed and variable cost analysis framework structure for operating and maintaining a major dam is shown in figure 3.1.1.

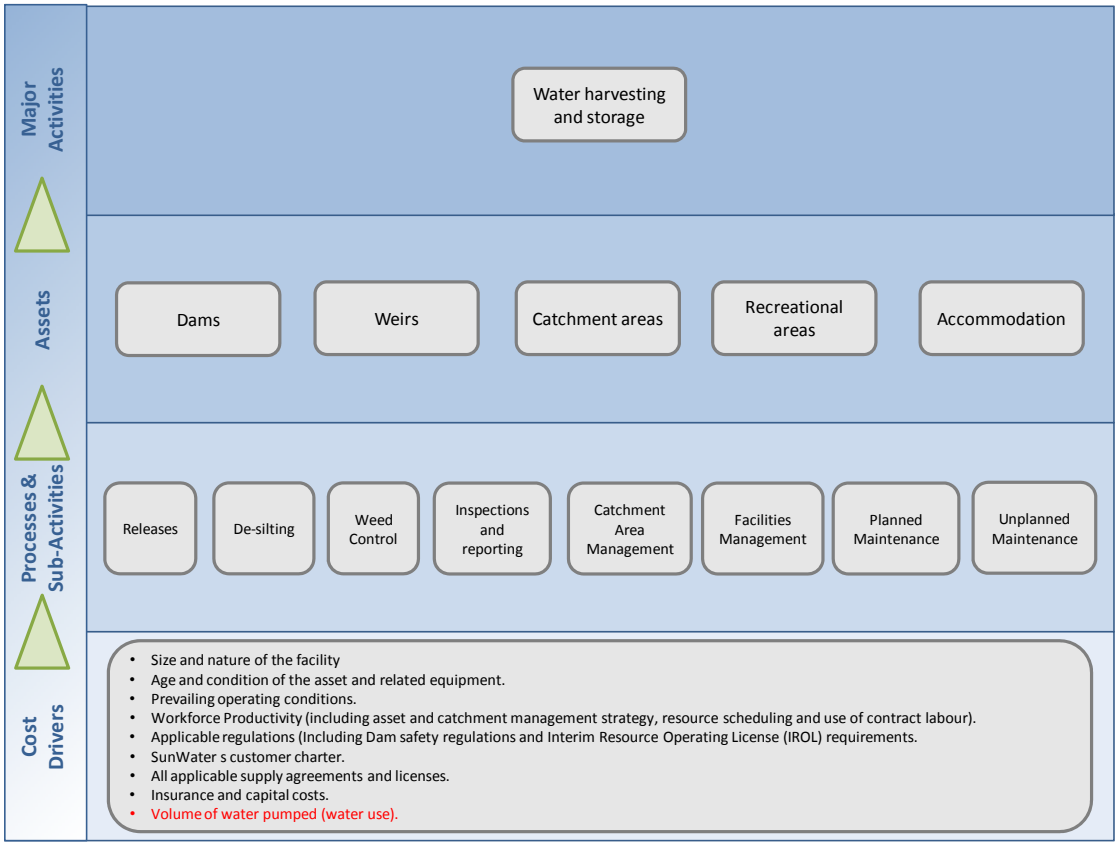

Figure 3.1.1 Fixed and Variable Cost Analysis Framework for Water Harvesting and Storage

The cost of operating and maintaining water harvesting and storage facilities is a semi-variable costs. Key cost drivers consist of the size and nature of the facility, the age and condition of the

asset and related equipment, the prevailing operating condition, workforce productivity, applicable regulations (i.e. dam safety), and insurance and capital costs (depreciation).

All gated storages or facilities considered 'high risk' are permanently attended by SunWater staff. Dams which do not incorporate gated structures are typically remotely monitored and maintained from a nearby depot. Generally, only dams that are located in remote regions where access may be difficult or untimely during extreme weather conditions are permanently manned by SunWater staff.

There are a number of discernible cost drivers related to the operation and maintenance of water harvesting and storage facilities. Operating and unplanned maintenance costs of water harvesting and storage facilities are expected to be highest in extreme operating conditions such as drought and flood conditions. Any direct causal relationship between water use and the cost of operating and maintaining water harvesting and storage facilities is unlikely to be material. In periods of extended drought and low water use average costs are likely to rise.

If a water levels are low, aquatic weed control costs can be expected to increase if storage facilities are not regularly flushed. Customer and departmental liaison may also increase as water releases including the management of environmental releases require particularly careful planning and management during periods of drought. Fauna and flora management may also require additional resources during periods of drought.

If flood conditions prevail or there is a risk of flooding, a flood control response is required which may result in extensive resource requirements at penalty rates. This is particularly the case if the facility incorporates flood mitigation storage with the Peter Faust Dam (Proserpine Water Supply Scheme) being the only such storage owned and managed by SunWater. Removal of debris from spillways and gated structures, and fish management may also require additional resources during periods of flooding.

3.1.1. Large Dams

Large dams incorporate of a number of key assets and equipment:

- main dam wall incorporating abutments, spillway, galleries, ventilation system and lift;
- saddle dam(s);
- outlet works including gates, etc.;
- intake structure;
- electrical system and distribution network;
- domestic water supply and treatment plant (not required for irrigation);

- fixed or mobile instrumentation to measure dam conditions;
- catchment area including access roads, fences and gates; and
- recreational facilities.

Key large dam operating activities include:

- operating the outlet works (water releases must be complying with the Resource Operating License (IROL), SunWater's customer charter and all applicable supply agreements and licenses. For dams no analysis included on fixed, variable or semi-variable conducting routine inspections of the galleries and lift;
- conducting routine inspections of the galleries and lift;
- monitoring the dam including inspection of the embankments, keeping the dam logbook, reporting observations and measurements, storage and flow data;
- using instruments to measure dam conditions;
- operating the intake structure;
- operating the standby diesel generator and backup electrical system in case of failure;
- managing the storage including monitoring data quality, blue algae levels, storage inspection and control of noxious weeds;
- operating the domestic water supply and water treatment plant (not required for irrigation);
- monitoring on-site security fencing and buildings;
- monitoring signs and erecting temporary signs where necessary;
- inducting visitors; and
- for certain facilities collecting rubbish and cleaning of recreational facilities.

Other activities include planned and unplanned maintenance of all dam equipment and facilities and any augmentation or renewals work.

The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to operating and maintaining a large dam:

- Size and nature of the facility;
- Age and condition of the asset and related equipment;

- Prevailing operating conditions;
- Workforce Productivity (including asset and catchment management strategy, resource scheduling and use of contract labour);
- Applicable regulations (Including Dam safety regulations and Resource Operating Plans (ROP) requirements;
- SunWater's customer charter;
- All applicable supply agreements and licenses;
- Insurance and capital costs; and
- *Volume of water pumped (water use).*

Water use is only one of the cost drivers in major SunWater activities. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. The impact of varying processes and sub-activities is likely to be more material in water distribution than in other major SunWater activities. Examples of processes, sub-activities and related costs for large dams that could be varied with water use include scheduling and delivering water (semi variable), corrective maintenance (semi variable) and weed control management (semi variable). Sections 4 and 5 of this report outline in more detail the reasoning for these findings.

3.1.2. Weirs and other Storage Facilities

Weirs and other storage facilities incorporate of a number of key assets and equipment:

- site facilities incorporating roads, recreation facilities, water and waste water, weather station, HV electrical system, signs and marker posts, buildings, houses, fencing, gates and marker buoys;
- protection works;
- weir structure;
- hydraulic system and electrical system;
- control system;
- instrumentation; and
- cathodic protection.

Key weir and other storage facilities operating activities are similar to the operating activities carried out for large dams and include:

- Operating the outlet works (water releases) - (semi-variable). For dams in 2.1 above no analysis included on fixed, variable or semi-variable.
- Conducting routine inspections of the galleries and lift (fixed).
- Monitoring the dam including inspection of the embankments, keeping the dam logbook, reporting observations and measurements, storage and flow data (fixed).
- Using instruments to measure dam conditions (fixed).
- Operating the intake structure (semi-variable).
- Operating the standby diesel generator and backup electrical system in case of failure (semi-variable).
- Managing the storage including monitoring data quality, blue algae levels, storage inspection and control of vegetation and noxious weeds (semi-variable).
- Operating the domestic water supply and water treatment plant (not required for irrigation) – (semi-variable).
- De-silting (semi-variable).
- Other inspections and reporting (semi-variable).
- Planned maintenance (semi-variable).
- Unplanned maintenance (semi-variable).
- Catchment area management (semi-variable).
- Weed control (semi-variable).
- Inspections and reporting (semi-variable).
- Planned maintenance (semi-variable).
- Unplanned maintenance (semi-variable).
- Monitoring signs and on-site security fencing (fixed).
- Erecting temporary signs where necessary (semi-variable).
- Inducting visitors (semi-variable).

- Collecting rubbish (semi-variable).
- Cleaning of recreational facilities (semi-variable).
- Monitoring buildings (semi-variable).

The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to operating and maintaining a weir.

- Size and nature of the facility;
- Age and condition of the asset and related equipment;
- Prevailing operating conditions;
- Workforce Productivity (including asset and catchment management strategy, resource scheduling and use of contract labour);
- Applicable SunWater's customer charter;
- All applicable supply agreements and licenses;
- Insurance and capital costs; and
- *Volume of water pumped (water use).*

Water use is only one of the cost drivers in operating and maintaining a weir. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment.

The impact of varying processes and sub-activities is not likely to be material in the costs associated with operating and maintaining a weir. Examples of water distribution processes and sub-activities, and related costs for weirs and other storage facilities that may be able to be varied with water use include scheduling and delivering water (semi-variable), corrective maintenance (semi variable) and weed control management (semi-variable). Sections 4 and 5 of this report outline in more detail the reasoning for these findings.

3.2. Water Distribution

The analysis in this section covers the major SunWater activity of water distribution. Key assets deployed include open and piped channels, pump stations and pipelines. Water distribution services are delivered in the field by operational staff supported by four area operations centres and nine depots. The fixed and variable cost analysis framework structure for water distribution is shown in figure 3.2.1.

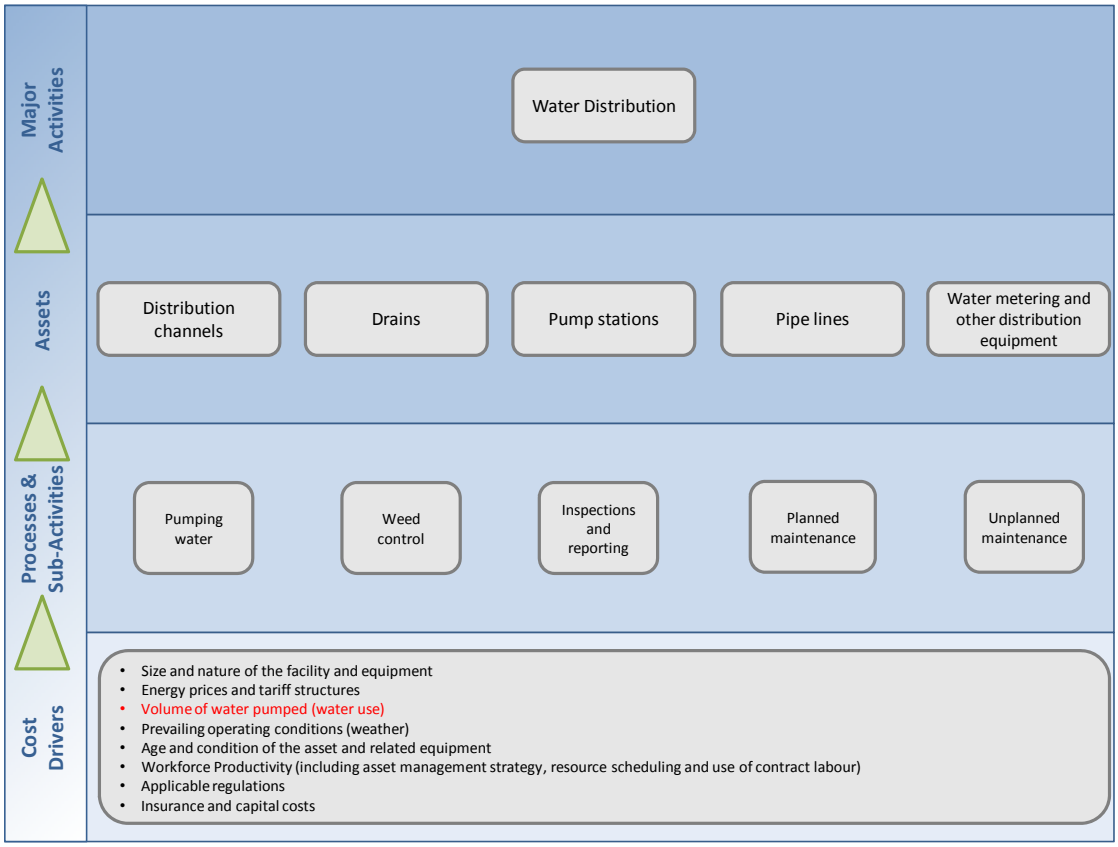

Figure 3.2.1 Fixed and Variable Cost Analysis Framework for Water Distribution

Key common water distribution activities include:

- customer liaison on delivery issues (semi-variable);
- water delivery (semi-variable);
- meter reading (semi-variable);
- debris removal (semi-variable);
- condition monitoring (semi-variable);
- inspections and reporting (semi-variable);
- planned maintenance (semi-variable);
- unplanned maintenance (semi-variable); and
- renewal works (semi-variable);

3.2.1. Channels

Channels can be open or piped. Open channels incorporate the following key assets and equipment:

- channel flow meter(s);
- channel meter outlet(s);
- regulating gate(s);
- siphon(s);
- rock drop(s);
- crossing(s);
- drain(s);
- fencing;
- access road(s);
- sign(s); and
- marker buoy(s).

Key water delivery activities were summarised in section 3. Principle activities for open channels also include vegetation and weed control, and silt removal. Piped channels typically incorporate the following key assets and equipment:

- air vent(s);
- flow meter(s);
- off-take(s);
- pipe(s); and
- valve(s).

The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to operating and maintaining channels.

- Size and nature of the facility;
- Age and condition of the asset and related equipment;

- Prevailing operating conditions;
- Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour);
- Applicable SunWater's customer charter;
- All applicable supply agreements and licenses;
- Insurance and capital costs; and
- *Volume of water pumped (water use).*

Water use is only one of the cost drivers in operating and maintaining a channels. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. The impact of varying processes and sub-activities is likely to be more material in water distribution than in other major SunWater activities.

SunWater has advised that concrete channel linings primary course of failure is due to ground movement. HDP (high density polyethylene) channel linings are said to primarily fail due to the impact of exposure to ultra-violet sunlight and damage caused from debris and foreign matter. SunWater further advised that unlined earth channels are more susceptible to weed outbreaks.

SunWater also advised that a key maintenance/renewals cost driver for piped channels is failures due to ground movement and corrosion, and installation and maintenance of cathodic protection.

SunWater's Standard of Service and stock and domestic customers drives whether in periods of low water demand, channels remain charged or not. For example, water demand from one user may lead to a requirement to keep charged a channel designed for multiple water users even if the other users do not require supply or the channel system is required to provide continuous supply to stock and domestic customers. In such circumstances a charged channel may be more susceptible to weed outbreaks due to relatively stagnant water (minimal flow).

Examples of water distribution processes and sub-activities and related costs for channels that could be varied with water use include scheduling and delivering water (semi-variable), corrective maintenance (semi-variable) and weed control management (semi-variable). Sections 4 and 5 of this report outline in more detail the reasoning for these findings.

3.2.2. Pump Stations and Pipelines

Pump stations incorporate the following key assets and equipment:

- site facilities (incl. control building);

- inlet works;
- pump well;
- pump unit;
- compressed air system;
- vacuum priming system;
- electrical systems (HV, LV and ELV);
- control equipment;
- flow meter; and
- rising main.

Pipelines incorporate the following key assets and equipment:

- air valves;
- scour outlets;
- meter outlets;
- fish screen;
- flow meter;
- valve pit;
- manholes;
- swab pit or station;
- surge tank;
- balancing storage; and
- cathodic protection.

Key common activities relating to pump station and pipelines are similar to the common water delivery activities summarised in section 3.2. The fixed and variable cost analysis framework structure for pump stations and pipelines is further detailed in appendix B. The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to operating and maintaining pump stations and pipelines;

- Size and nature of the facility;
- Electricity tariffs (pump stations only);
- Age and condition of the asset and related equipment;
- Prevailing operating conditions;
- Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour);
- Applicable SunWater's customer charter;
- All applicable supply agreements and licenses;
- Insurance and capital costs; and
- *Volume of water pumped (water use).*

Water use is only one of the cost drivers in operating and maintaining pump stations and pipe lines.

In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. The impact of varying processes and sub-activities is likely to be more material in water distribution than in other major SunWater activities.

SunWater has advised that key maintenance cost drivers for pumps consist of corrosion and breakdown of seals due to age and climate related deterioration. These failure modes are said to occur irrespective of whether pumps are in use or not.

Examples of water distribution processes and sub-activities and related costs for pump stations and pipelines that could be varied with water use include scheduling and delivering water (semi-variable), electricity costs (variable) and corrective maintenance (semi-variable). Sections 4 and 5 of this report outline in more detail the reasoning for these findings.

3.3. Water Accounting

The analysis in this section covers the major SunWater activity of water accounting. The fixed and variable cost analysis framework structure for water accounting is shown in figure 3.3.1.

The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to water accounting:

- Regulatory and statutory obligations;

- Size and nature of the information system;
- Number of customers;
- Number of transactions;
- Workforce Productivity (including information management strategy, resource scheduling and use of contract labour);
- All applicable supply agreements and licenses;
- Insurance and capital costs; and
- *Volume of water pumped (water use).*

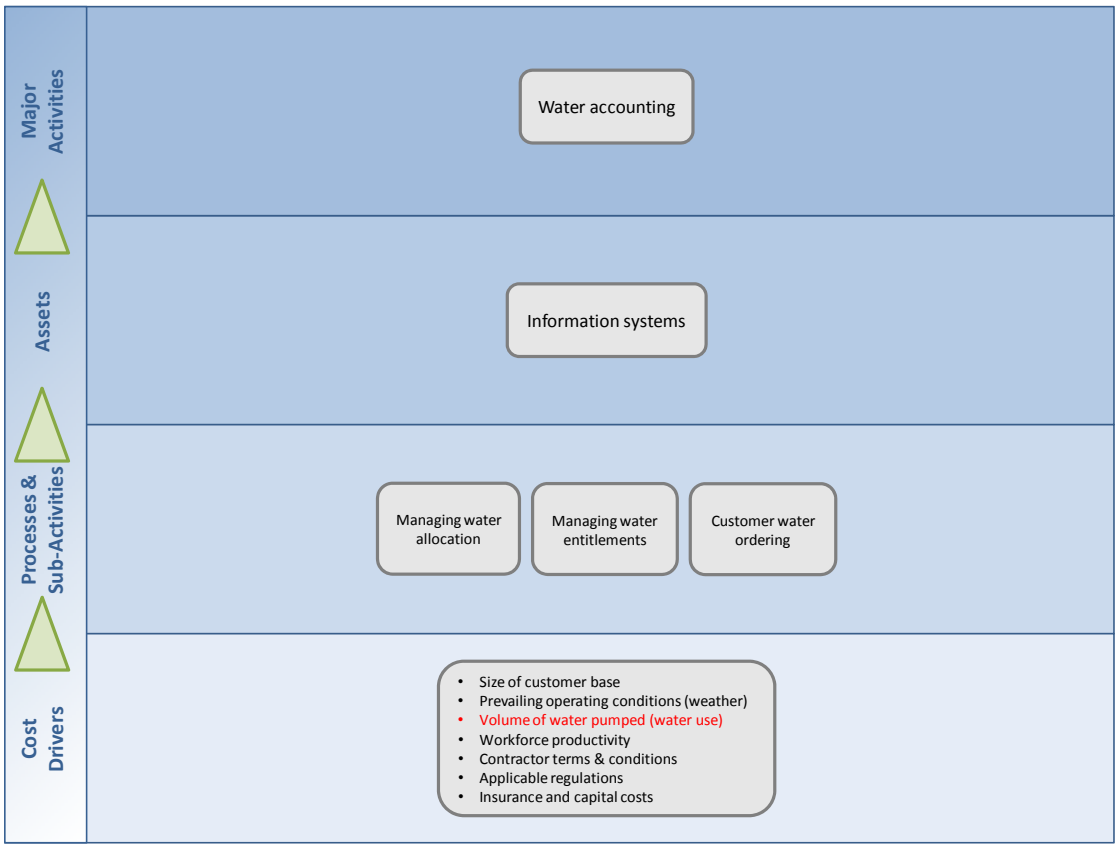

Figure 3.3.1 Fixed and Variable Cost Analysis Framework for Water Accounting

Water use is only one of the cost drivers in water accounting activities. In periods of fluctuating water demand it may be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. The impact of varying processes and sub-activities is not likely to be material in the water accounting activities.

Examples of water accounting processes and sub-activities and related costs that could be varied with water use include processing customer orders (semi variable), and allocation management (semi variable).

Water use is unlikely to be a material cost drivers of water accounting cost. In periods of fluctuating water demand it may not be possible to vary the processes and sub-activities of highest cost materiality using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. Water accounting costs are therefore considered to be relatively fixed.

3.4. Administration

The analysis in this section covers the major SunWater activity of administration. The fixed and variable cost analysis framework structure for administration is shown in Figure 3.4.1.

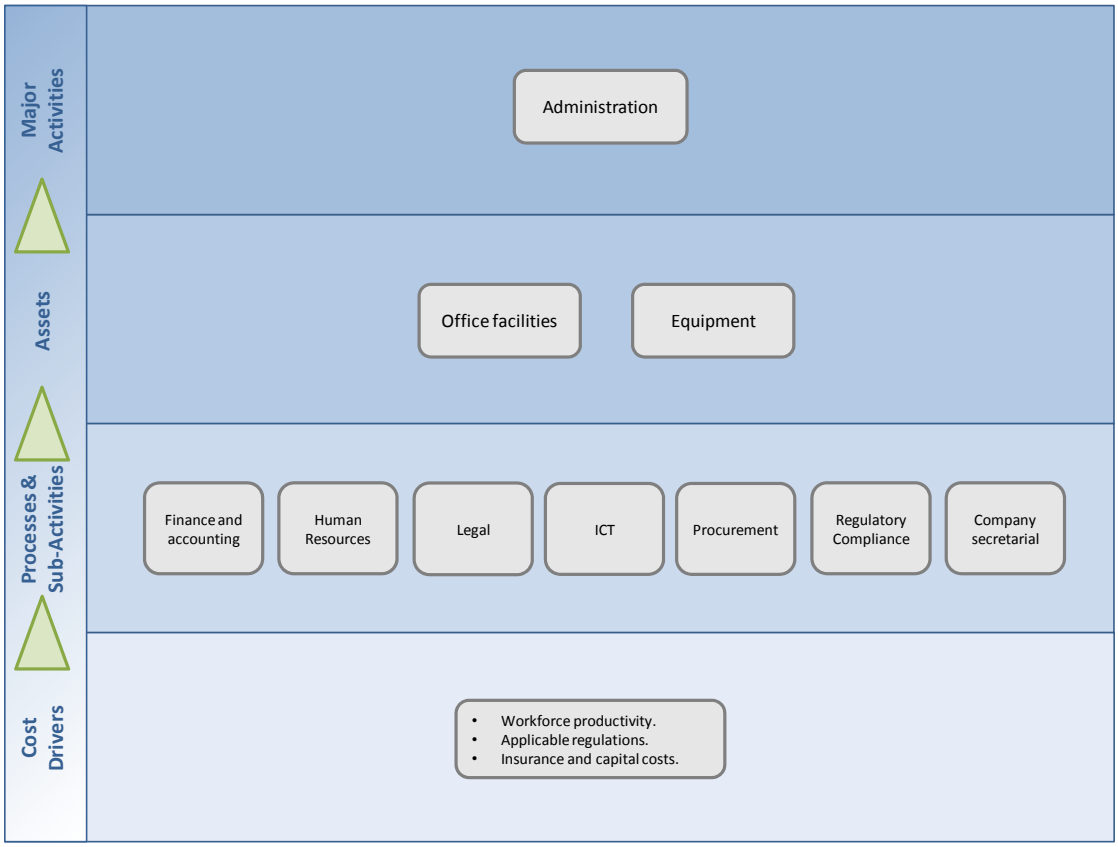

Figure 3.4.1 Fixed and Variable Cost Analysis Framework for Administration

The analysis to date shows that there are a number of cost drivers that influence processes and sub activities and related costs relating to administration:

- Regulatory and statutory obligations;
- Size and nature of the information system;

- Size of business and staff numbers;
- Number of financial and non-financial transactions;
- Workforce Productivity (including information management strategy, resource scheduling and use of contract labour);
- All applicable supply agreements and licenses; and
- Insurance and capital costs.

Water use is unlikely to be one of the cost drivers of administration cost. In periods of fluctuating water demand it may not be possible to vary selected processes and sub-activities using an optimal (prudent and efficient) management approach that considers SunWater's operating environment. Administration costs are therefore considered to be relatively fixed.

4. STAGE TWO - ANALYSIS OF HISTORICAL COSTS

Indec performed an econometric analysis on SunWater's (available) quarterly historical cost data for 2007-11 to establish whether historical costs were fixed, variable or semi-variable with a variation in customer water use. The analysis in the following sections 4.1 to 4.4 focuses on SunWater overall. Indec has conducted the same analysis by region, depot and service contract. Sample results of the analysis are contained in Appendices F to H.

4.1. Regression Analysis of Historical Costs and Water Use

The agreed scope specified that regression analysis be conducted on regression analysis of annual historical costs for the period 2002/2003 to 2004/05 and forecast costs 2005/06 to 2010/11 (8 observations) against water usage. However, data limitations and inconclusive results led to the need to progressively expand the scope during the course of the analysis. Specifically, additional analysis scope included a regression analysis of quarterly historical costs versus water usage for the period 2006/07 to 2010/11 (20 observations).

- operations;
- electricity;
- preventative maintenance;
- corrective maintenance; and
- renewals expenditure and capital.

4.1.1. Outputs

The outputs of the regression analysis include:

- R-squared;
- Significance of F;
- R (Correlation Coefficient);
- P Value;
- Coefficient;
- Standard Error;
- Intercept Coefficient;
- Intercept Std Error; and

- Intercept t-stat.

Of these, the key statistical outputs that Indec has used to analyse the relationships between activity costs and water use are:

- R-squared;
- Significance of F;
- P Value;
- Coefficient;
- Standard Error; and
- R (Correlation Coefficient).

These statistical outputs are discussed below.

- **Null Hypothesis** - In this context, it is important to note that in regression analysis, the null hypothesis is that there is no relationship between the independent variable (X)[2] and the dependent variable (Y)[3] which infers that Y is independent of X. In other words, for the Regression Line Y = AX +B, the coefficient (A) of the independent variable X is zero.
- **R Squared (R2) -** R-squared demonstrates how well the regression line approximates the real data. The maximum value for R-squared is one (1), and indicates a perfect fit for the regression line. In other words the regression line passes through all real data points when R-squared equals 1. R-squared values close to one (1) infer a better regression line fit. For the purpose of this report, a value of R-squared greater than or equal to 0.6 is considered statistically significant. R-squared is a guide to the 'goodness of the fit' and does not provide information on the statistical significance. P-value and Significance of F indicate the statistical significance of the regression testing
- **P-Value -** P-Value is a measure of how much evidence there is against the null hypothesis. In statistical significance testing, the p-value is the probability of obtaining a test result 'at least as extreme' as the real data. If the p-value is smaller than an accepted level of significance (alpha), the null hypothesis can be rejected. For a confidence level of 95% for the regression testing, the accepted level of significance (alpha) is 0.05. Mathematically, therefore, if P < 0.05,

[2] In this instance water use
[3] In this instance is an expense

the null hypothesis can be rejected[4]. Conversely, if P > 0.05, the null hypothesis can be accepted (i.e. that there is no relationship between X and Y).

- **Significance of F** - This is another measure of the statistical significance of the relationship between the variables being tested. Essentially, Significance of F is the probability value of obtaining a test result at least as extreme as the real data. If the Significance of F is less than the accepted significance level (alpha, in this case 0.05), the null hypothesis can be rejected. In this case, a statistically significant association between X and Y can be inferred. A Significance of F value greater than 0.05 infers that there is no relationship between X and Y.

- **Coefficient** – This determines size of the effect the water usage has on a particular cost category cost. The sign of coefficient gives direction of the effect (negative or positive).

- **Standard Error** – This is an estimate of the standard deviation of the coefficient.

- **Correlation Coefficient** – This measures the strength and direction of a linear relationship between two variables. Its value is always between minus one (-1) and one (+1) and a value close to either limit indicates a strong linear relationship (positive or negative).

4.1.2. Decision Rule

From a statistical point of view, Indec has considered simultaneously the values of R-squared, p-value and significance of F to determine the nature of the relationship between the costs and the water usage for the service contracts. In discussion with the Authority, Indec defined a "decision rule" which considers simultaneously the conditions on the values of these three statistical outputs. These conditions are an R–squared value of greater than or equal to 0.6; a Significance of F value of less than 0.05; and a P-Value of less than 0.05.

The incorporation in the decision rule of an R-squared value greater than or equal to 0.6 is based on the notion that this value equates to a correlation coefficient of approximately plus or minus 0.775 which would indicate that some possible association between two variables exists. An R squared of 0.6 indicates that 60% of the change in one variable (i.e. water use) is explained by a change in the related variable (i.e. labour hours)

It should be noted that in the context of pure applied statistics, a caution applies to R-squared statistical measures. Correlation does not necessarily imply causation. While correlations may provide valuable clues regarding causal relationships among variables, a high correlation between two variables does not necessarily represent adequate evidence that changing one variable has resulted, or may result, from changes of other variables.

[4] i.e. reject that A = 0 and accept that a statistically significant association between X and Y exists.

4.1.3. Regression Analysis Results

The regression analysis results for the cost categories that meet the decision rule are summarised in figure 4.1.3.1.

Service Contract	Variable Cost	R Squared	Signigicance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient)
Bundaberg Irrigation Distribution	Electricity	0.9239585	1.63355E-11	25.1286554	1.699151167	1.6E-11	0.961227615
Burdekin Irrigation Distribution	Electricity	0.6745904	9.02959E-06	8.99432567	1.472405697	9E-06	0.821334505
Dawson Irrigation Distribution	Electricity	0.6396234	2.31515E-05	6.44864697	1.140902256	2.3E-05	0.799764611
Eton Irrigation Distribution	Electricity	0.9358645	3.50817E-12	9.9995893	0.617005148	3.5E-12	0.967400882
Lower Mary Water Supply	Electricity	0.6397347	2.30855E-05	11.6482138	2.060318446	2.3E-05	0.799834166
Mareeba Irrigation Distribution	Electricity	0.7554824	6.56394E-07	2.80074668	0.37556102	6.6E-07	0.869184883
Three Moon Water Supply	Prev. Maintenance	0.6581158	1.42347E-05	22.9637563	3.901171326	1.4E-05	0.811243373
Upper Condamine Water Supply	Electricity	0.9254523	1.36544E-11	3.55677431	0.237935965	1.4E-11	0.962004325

Figure 4.1.3.1 Regression Analysis Outputs[5]

Outputs for the regression analysis of water usage and the costs by electricity, and operations, maintenance and renewals activities for each of the service contracts are attached in Appendix C.

Regression analysis outputs for historical electricity costs for the Emerald Irrigation Distribution service contract are not included in figure 4.1.3.1 because the analysis resulted in a correlation coefficient of 0.131281667 and a R Squared value of 0.0172349. Lower Mary and St George are two other service contracts where the analysis resulted in reasonable correlation coefficients but R Squared values below 0.6 (0.4976727 and 0.4761061 respectively). The explanation is that in the Emerald, Lower Mary and St George distribution systems, water is largely transported by gravity.

The results show that historically, principally only electricity costs displayed a close correlation with water use. To explore potential direct or indirect associations between other cost drivers and water use, the regression analysis scope was further extended. Specifically, additional analysis scope included, without limitation and regression analysis of historical expense versus a number of other potential variable cost drivers. A sample of the outputs of this additional regression analysis is shown in figure 4.1.3.2.

SET	Independent Variable	Dependent Variable	Level of correlation	R Squared	Significance of F	P Value	R (Correlation Coefficient)
1	Water Use	Operations and Maintenance	reasonable	0.45932	0.00279	0.00279	0.67773
2	Labour	Materials	reasonable	0.41821	0.00502	0.00502	0.64669
3	Renewals (expense + capital)	Contractors	good	0.81992	0.00000	0.00000	0.90549
4	Labour	Indirects & Overheads	weak	0.35112	0.01219	0.01219	0.59256
5	Renewals (expense + capital)	Other	weak	0.17824	0.09139	0.09139	0.42219
6	Water Use	Renewals (expense + capital)	none	0.03423	0.47713	0.47713	-0.18502
7	Water Use	Preventative maintenance	none	0.16661	0.10384	0.10384	0.40818
8	Renewals (Labour hrs)	Renewals (expense + capital)	weak	0.36267	0.01052	0.01052	0.60222
9	Water Use	Ops and Mnt'ce (labour hrs)	weak	0.26771	0.03341	0.03341	0.51741
10	Water Use	Renewals (expense + capital)	weak	0.33803	0.02301	0.02301	0.58141

Figure 4.1.3.2 Sample of Additional Regression Analysis Outputs

[5] Regression analysis outputs that meet the defined decision rule

The results in figure 4.1.3.2 show that good correlation between Sunwater's overall renewals and contractors expense and reasonable correlation between water use, and operations and maintenance expense. Correlation between water use and operations and maintenance labour hours, and water use and renewals expense was weak.

4.1.4. Conclusion

In conclusion, regression analysis results of did not support that historical costs other than distribution system electricity costs vary with water use. To further explore the variability of historical costs and water use, the agreed scope for Stage Two had to be progressively expanded during the course of the analysis. Specifically, additional analysis scope other than the expanded regression analysis referred to in sections 4.1. and 4.1.3 included, without limitation:

- analysis of quarterly historical costs, in addition to analysing annual historical costs;
- analysis quarterly historical costs by sub-activity and expenditure type;
- 'classical' time series decomposition and seasonal indices;
- analysis of quarterly labour bookings by activity, sub-activity, expenditure type and source (hours booked for the period July 2007 and 2011);
- analysis of historical costs and labour hours by region and depot;
- moving averages and other smoothing techniques; and
- construction of two models, to enable the extended historical analysis of expense and labour hours to the level of detail outlined above. The models incorporate approximately one hundred graphs to assist in the visual interpretation of SunWater's historical data. The models also incorporate some high level correlation analysis of historical base data. At the request of the Queensland Competition Authority, the models have been extended to also incorporate high level correlation analysis of four period moving averages for selected expense and labour hours data (smoothed historical data).

The results of this additional analysis are commented on in the following sections 4.2 to 4.4 and in Appendices F, G and H.

4.2. Analysis of Historical costs by Activities

The relative materiality of the expense of SunWater's overall key irrigation related activities over the past 5 years (2006/07 to 2010/2011) is illustrated in figure 4.2.1.

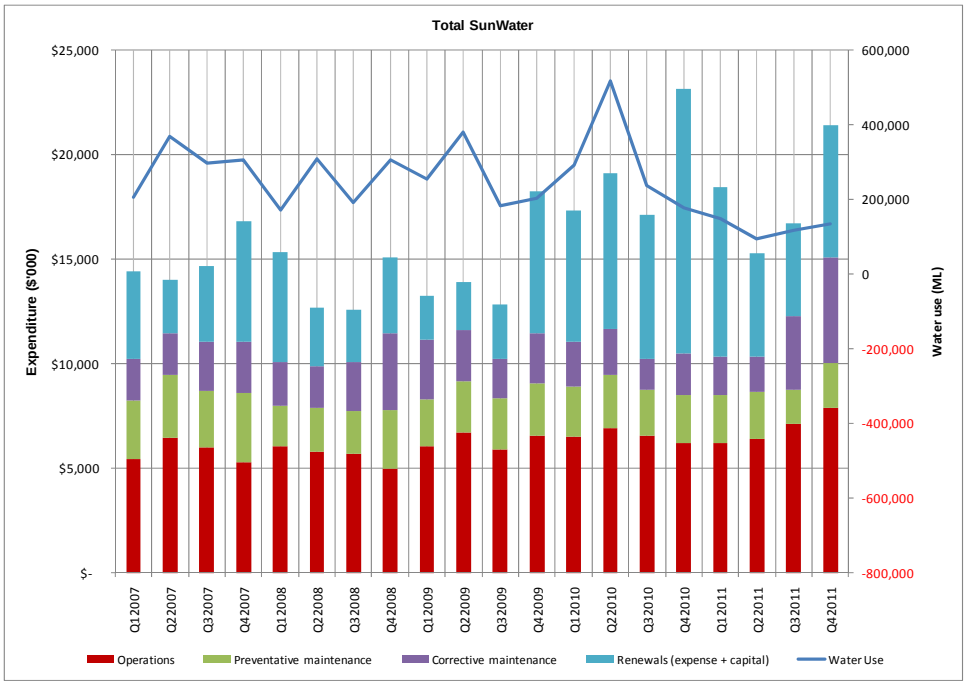

Figure 4.2.1 SunWater Quarterly Direct Expense by Category
July 2007 to June 2011

Total historical quarterly operations and maintenance expense by category and water use are illustrated in figure 4.2.2.

It is noted that historically, operations and maintenance expense does not appear to relate to the variations in water demand over the same period. In the 2011FY SunWater experienced a significant decline in water demand and due to high rainfall. As a result there was a significant decline in revenue due to a prevalent variable tariff component of around thirty per cent.

Historically the total operations and maintenance expense appears relatively stable in the period 1 July 2007 to 30 June 2011, except in the last two quarters of 2010/11. Indec has assumed that the increase in the last two quarters in 2010/11 was due to corrective and refurbishment works in relation to flood damage. It is noted that historically, operations and maintenance expense does not appear to relate to the variations in water demand over the same period. It was noted that the prevalent variable tariff component of around thirty per cent based on water use appears to have had little impact on the overall historical operations and maintenance expense. However, operations and maintenance resources may have been allocated to different service contracts in response to low water use in some areas.

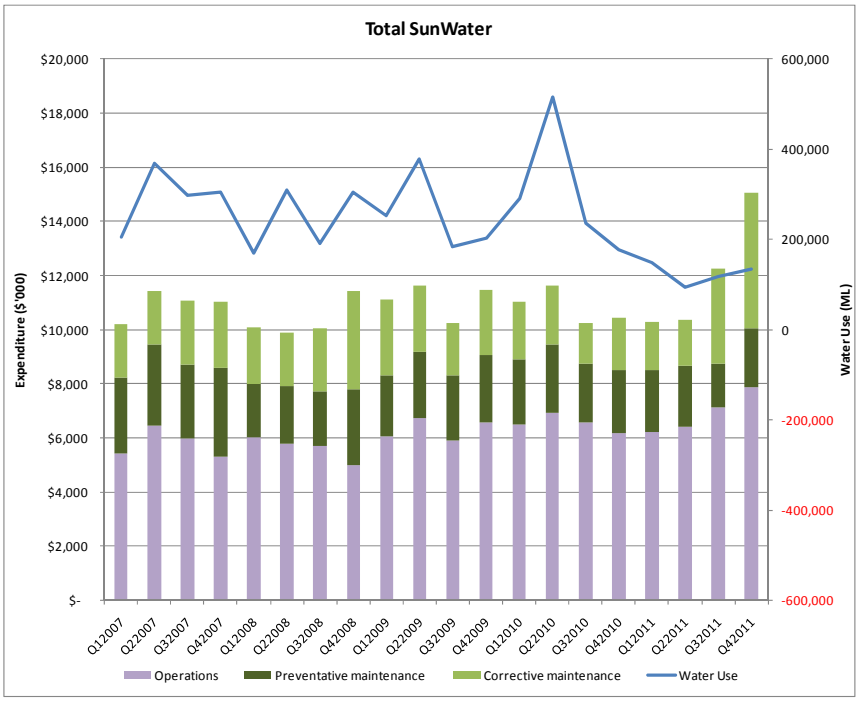

Figure 4.2.2 SunWater Operations and Maintenance Expense and Water Use July 2007 to June 2011

However, after removing the historical data for the last three quarters of 2011[6], there does appear to be reasonable correlation between overall operations & maintenance expense and water use in the period Q1-2007 to Q1 2011 (figure 4.2.3).

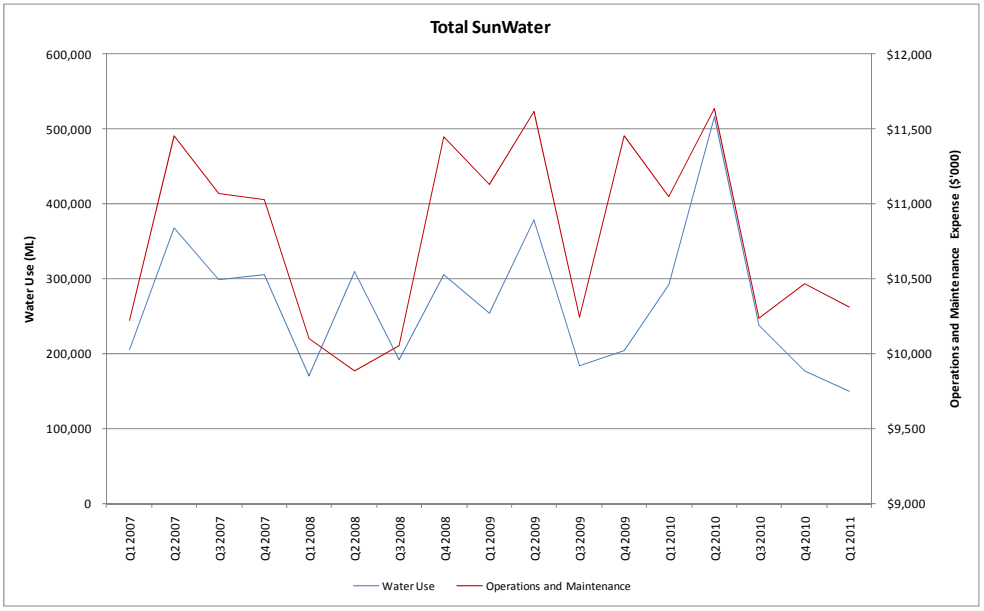

Figure 4.2.3 SunWater Operations and Maintenance Expense and Water Use Q1- 2007 to Q1 - 2011

[6] Q2-2011 to Q4-2011 was excluded as water use during that period was unusually low (outlier)

The regression outputs include an R Squared value of 0.46425, a Significance of F value of 0.0026, a P-Value of 0.0026 and a Correlation Coefficient of 0.68136.

SunWater has stated that it maintains a core of permanent operations and maintenance staff dimensioned to the base workload. SunWater has stated that a number of operations and maintenance staff are multi-skilled to operator/maintainer classifications. Indec understands that the base workload consists of the minimum a level of activity that applies irrespective of the level of demand (water use). During peak periods, permanent staff normally assigned to civil works assists with operational (water delivery) activities. SunWater also stated that peak workloads are managed by augmenting permanent staff resources with casual labour and contractors.

Indec concludes that operations and maintenance resources have been re-allocated among different service contracts in response to varying water use.

The correlation analysis results between water use and operations and maintenance expense for the period July 2007 to September 2010 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec concludes that SunWater has to some extent varied its overall operations & maintenance expense with water use over the period July 2007 to September 2010, albeit only moderately.

4.2.1. Operations

In isolation, historical operations expense for the period 2007 to 2011 appears to be unrelated to water use (figure 4.2.2.1).

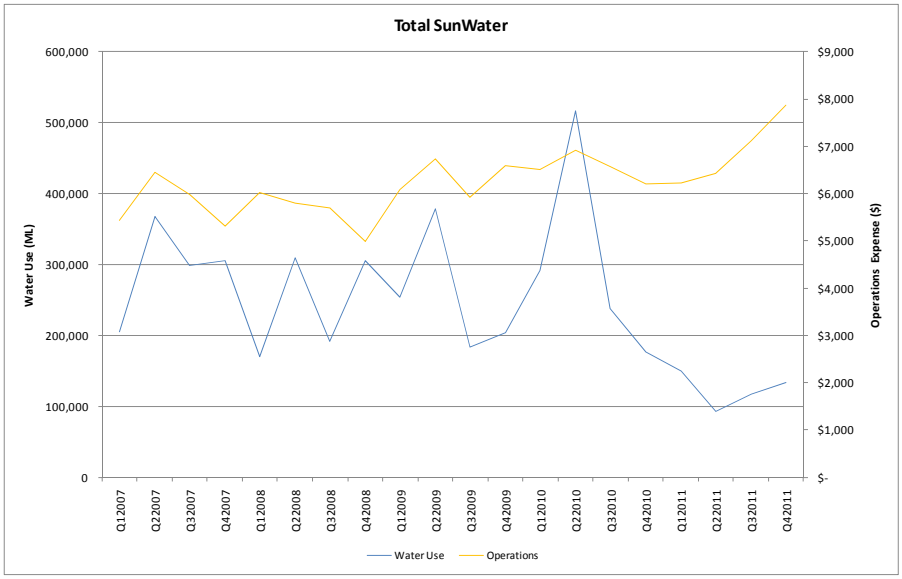

Figure 4.2.1.1 SunWater Operations Expense and Water Use
July 2007 to June 2011

Even after removing the data for the last three quarters of 2011[7], correlation between overall operations & maintenance expense and water use in the period Q1-2007 to Q1 2011 appeared weak.

However, this analysis is based on past cost behaviour which Indec does not consider to have been the optimum approach to variations in water use. Furthermore, as outlined in the section 4.2, operations and maintenance activities have to be considered in total rather than stand-alone. This approach recognises the fact it is established practice to re-allocate personnel within operations and maintenance activities. Operations and maintenance personnel do at times contribute to refurbishment and enhancement activities. However, in periods of low water demand, operations and maintenance personnel are more likely to be diverted to planned and corrective (unplanned) maintenance activities (within the operations and maintenance budget).

The correlation analysis results between water use and operations expense for the period July 2007 to September 2010 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical operations expense varied with water use, albeit weakly. Indec's conclusion is based on the assumption that operations expense is managed within the overall operations and maintenance expense which varies moderately with water use over the period June 2007 to September 2010 (also see section 4.3.2).

4.2.2. Maintenance

In isolation, historical overall preventative and corrective maintenance expense for the period 2007 to 2011 appears to be unrelated to water use (figure 4.2.2.1). Indec has assumed that the sudden increase in maintenance expense is related to corrective maintenance works relating to the recent floods (figure 4.2.2.2).

Operations and maintenance personnel do at times contribute to refurbishment and enhancement activities. However, in periods of low water demand, operations and maintenance personnel are more likely to be diverted to planned and corrective (unplanned) maintenance activities (within the operations and maintenance budget).

In terms of asset management strategies, SunWater is said to run most assets to failure before replacement. Assets considered high risk by SunWater may be replaced before failure subject to condition which is monitored at regular intervals. SunWater further advised that the ratio of corrective (reactive) maintenance over planned maintenance is approximately forty per cent (40%). In terms of replacement planning, for assets considered 'low risk' replacement is planned at the Projected Time Of Failure (PTOF). Assessed risk and condition, and the need for reducing supply, public and safety environment risks are key drivers of the timing of asset replacement. In summary,

[7] bid.

SunWater's asset management strategy is linked to risk, asset condition and Mean Time Between Failures (MTBF).

The analysis shows that the 2011 increase in corrective maintenance bookings was due to a material increase in scheduled corrective maintenance.

The spike in overall maintenance expense in the last quarter of 2011was primarily caused by a sudden increase in corrective maintenance expense assumed to be the result of an extreme weather event in that year.

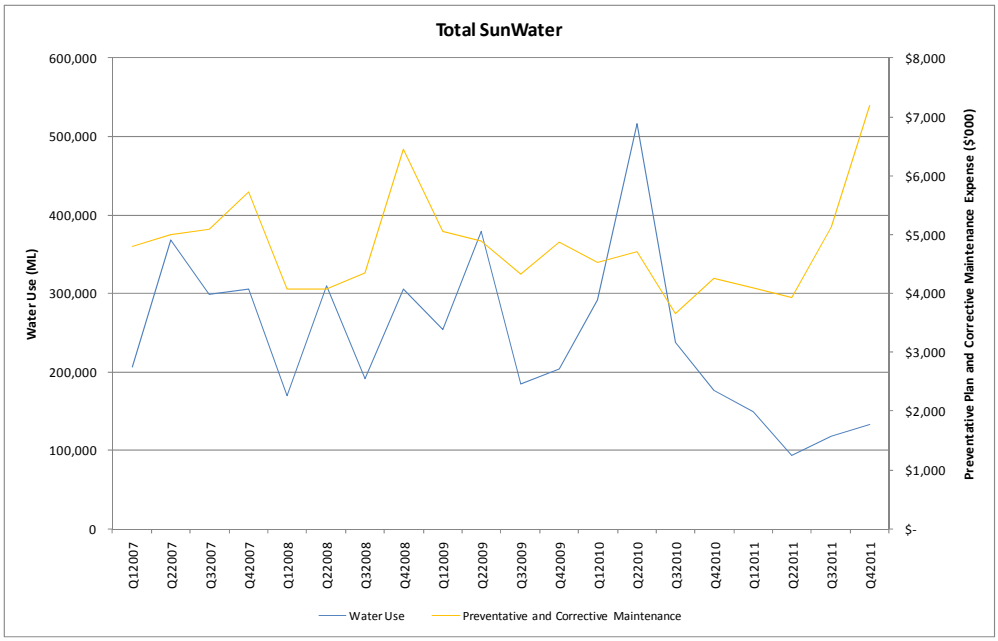

Figure 4.2.2.1 SunWater Overall Maintenance Expense and Water Use July 2007 to June 2011

As outlined in the section 4.2, operations and maintenance activities have to be considered in total rather than stand-alone. This approach recognises the fact it is established practice to re-allocate personnel within operations and maintenance activities.

The correlation analysis results between water use and maintenance expense for the period July 2007 to September 2010 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical maintenance expense varied with water use, albeit weakly. Indec's conclusion is based on the assumption that maintenance expense is managed within the overall operations and maintenance expense which varies moderately with water use over the period June 2007 to September 2010 (also see section 4.3.2).

Corrective Maintenance

In isolation, historical overall corrective maintenance expense for the period 2007 to 2011 appears to be unrelated to water use (figure 4.2.2.2).

The sudden spike in corrective maintenance expense in the last quarter does illustrate the influence of extreme weather events on maintenance costs. It is also a clear demonstration of the need for an adjustment mechanism to cover such events which cannot be provided for in this analysis.

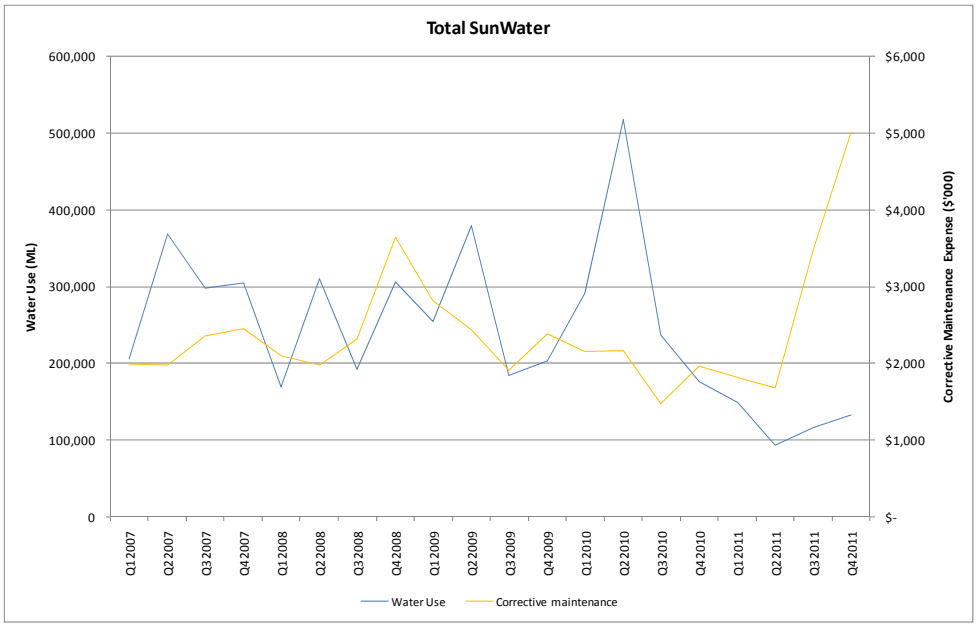

Figure 4.2.2.2 SunWater Corrective Maintenance Expense and Water Use July 2007 to June 2011

The correlation analysis results between water use and corrective maintenance expense for the period July 2007 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical corrective maintenance expense varied with water use, albeit weakly. Indec's conclusion is based on the assumption that maintenance expense is managed within the overall operations and maintenance expense which varies moderately with water use over the period June 2007 to September 2010 (also see section 4.3.2).

However, it should be noted from the events of 2011 that extreme weather events influence corrective maintenance labour. The above analysis highlights the need for an adjustment mechanism to cover such events. This cannot be provided for in this analysis.

Preventative Plan Maintenance

In isolation, historical overall preventative plan maintenance expense for the period 2007 to 2011 appears to be unrelated to water use (figure 4.2.2.3).

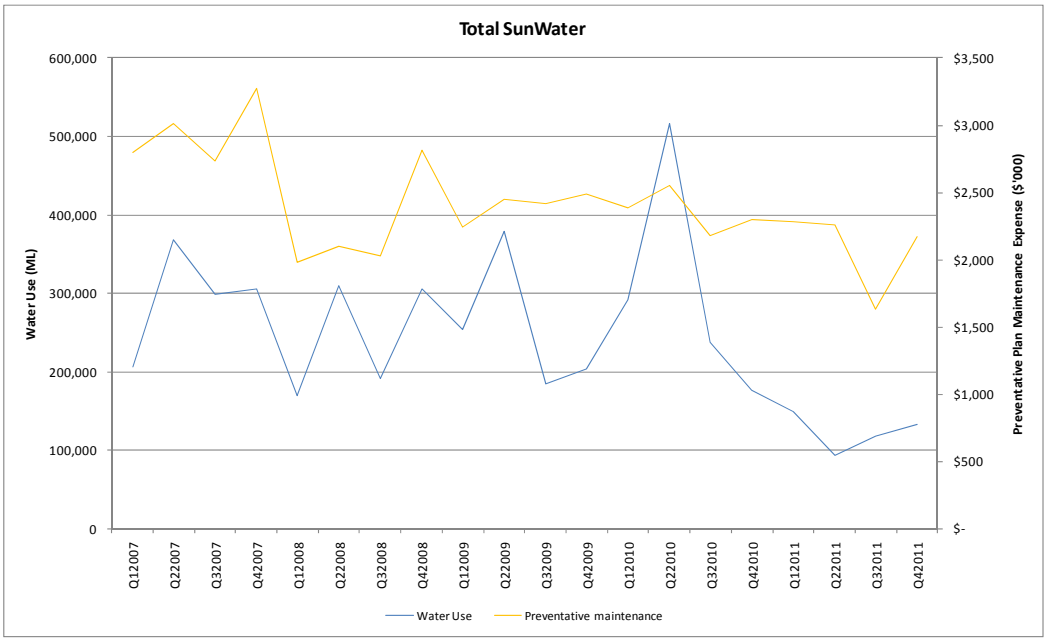

Figure 4.2.2.3 SunWater Preventative Plan Maintenance Expense and Water Use July 2007 to June 2011

Preventative Plan maintenance incorporates weed control (44.2%), condition monitoring (37.1%) and servicing (18.6%).

As outlined in the section 4.2, operations and maintenance activities have to be considered in total rather than stand-alone. This approach recognises the fact it is established practice to re-allocate personnel within operations and maintenance activities.

The correlation analysis results between water use and preventative maintenance expense for the period July 2007 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical preventative maintenance expense varied with water use, albeit weakly. Indec's conclusion is based on the assumption that maintenance expense is managed within the overall operations and maintenance expense which varies moderately with water use over the period June 2007 to September 2010 (also see section 4.3.2).

4.2.3. Renewals and Enhancements

Total quarterly renewals and enhancement expense, and water use for the period 2008 to 2011 are shown in figure 4.2.3.1. The two time series depicted in figure 4.2.3.1 appear to display a similar pattern, albeit out of phase by two periods (quarters). Specifically, renewals and enhancements expense appears to lag water use by two periods (two quarters). Indec has assumed that the time lag may have been caused by:

- a timing difference in processing renewals and enhancements expense; and/or
- a reaction time lag to adjusting the program in response to significant changes to water use.

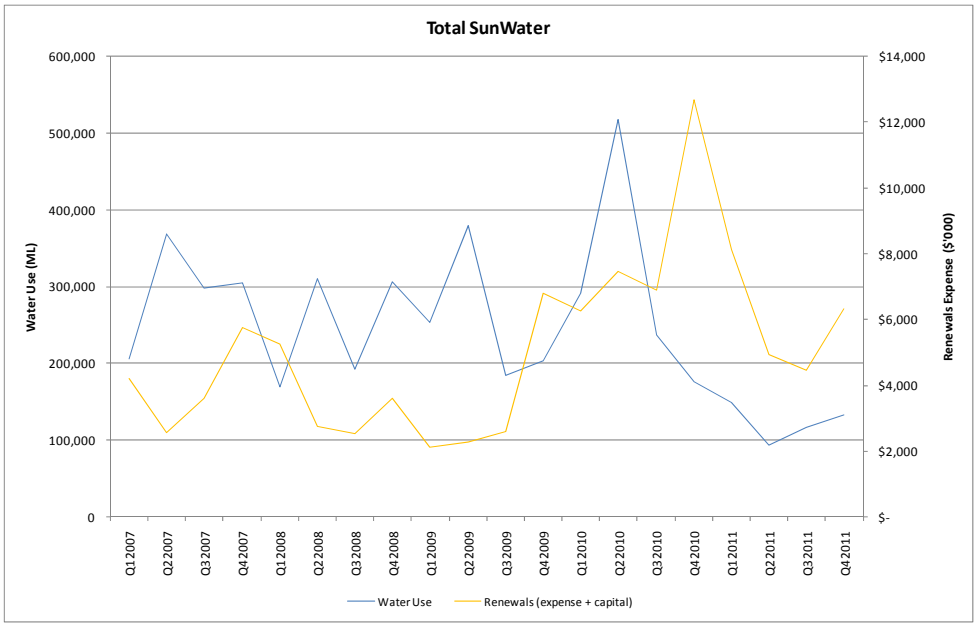

Figure 4.2.3.1 SunWater Renewals an Enhancements Expense and Water Use July 2007 to June 2011

However, after removing the historical data for the last three quarters of 2011[8] and advancing the water use time series by two periods (quarters) there does appear to have been some correlation between renewals and enhancements expense and water use in the period Q3 - 2007 to Q1 - 2011 (figure 4.2.3.2).

The regression analysis outputs include an R Squared value of 0.32941, a Significance of F value of 0.02527, a P-Value of 0.02527 and a Correlation Coefficient of 0.57394. The results suggest that historically some relationship existed at times between renewals and enhancements expense, and water use, albeit a weak one.

R&E activities are subject to a priority ranking. Priority 1 refurbishment and enhancement projects must typically be completed within a budget year. Priority 2 refurbishment and enhancement projects are preferably completed within a budget year but may be deferred or substituted by alternative projects. In periods of low water demand, operations and maintenance personnel is more likely to be diverted to planned and corrective (unplanned) maintenance activities than to refurbishment and enhancement activities.

SunWater advised that Renewals and Enhancement (R&E) expenditure in the 2010/11 year was in line with budget expectations even though flood damage rectification work had to be absorbed. As a result, some budgeted R&E works had to be deferred.

[8] Q2-2011 to Q4-2011 was excluded as water use during that period was unusually low (outlier)

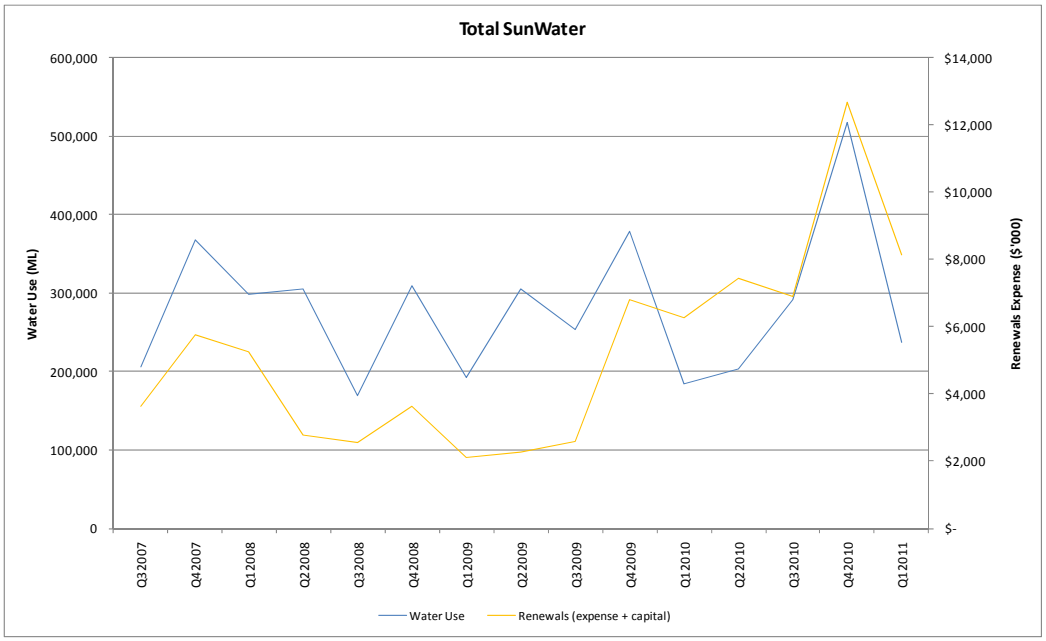

Figure 4.2.3.2 SunWater Renewals Expense and Water Use

Q3 - 2007 to Q1 - 2011 This analysis of historical data is based on past cost behaviour which Indec does not consider to have been the optimum approach to variations in water use.

The correlation analysis results between water use and renewals and enhancements expense for the period Q3 – 2007 and Q1 - 2011do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical renewals and enhancements expense varied with water use, albeit weakly (also see section 4.3.2).

4.3. Analysis of Historical costs by Expenditure Type

For the period 1 July 2007 to 30 June 2011, direct labour and contractors accounted for approximately 18.43% and 14.57% of total expense respectively. For the same period, materials accounted for approximately 11.28% and electricity 7.42% of total expense respectively. Overheads and indirects accounted for approximately 21.57% and 18.10% of total expense respectively. The balance of 8.62% of total expense is classified as 'other' expense (figure 4.3.1).

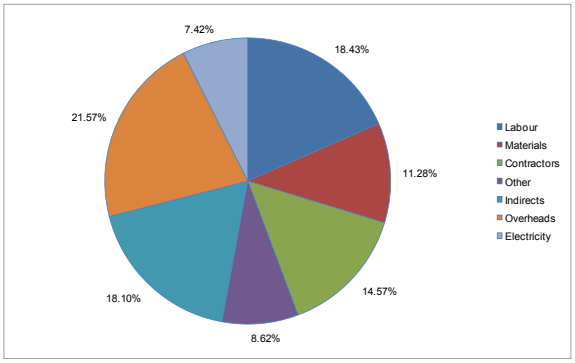

Figure 4.3.1 SunWater Expenses by Category

July 2007 to June 2011

In summary, direct costs for the period accounted for approximately 51.70% of total costs. Indirect costs and overheads including expenses classified as 'other'[9] for the period accounted for 48.3% of total costs.

4.3.1. Electricity

Electricity expense varies with water demand in areas where a significant amount of delivered water is pumped. These areas include Dawson, Eton (bulk water supply), Burdekin, Lower Mary, Bundaberg and Upper Condamine (bulk water supply). The correlation between the total SunWater variable cost of electricity and water use is illustrated in figure 4.3.1.1 below.

In some areas a small proportion of water supply is subject to pumping. One example is Mareeba where some channel pumping takes place to supply Paddy's Green. Another example is the use of the St George pump station supplying out of Beardmore dam to supply Jack Taylor Weir. Pumping is also required in St George when drought conditions prevail. Some other areas that are normally gravity fed are subject to pumping when dam levels fall below the outlet level.

However, the two time series appear to be closely related. Where the two time series are slightly out of phase, the most likely explanation is a timing issue in electricity billing. Indec has conducted a regression analysis of quarterly expenses versus water use for the period 1 July 2007 to 30 June 2011 by cost category for all service contracts. Sample outputs of the regression analysis are attached as Appendix B.

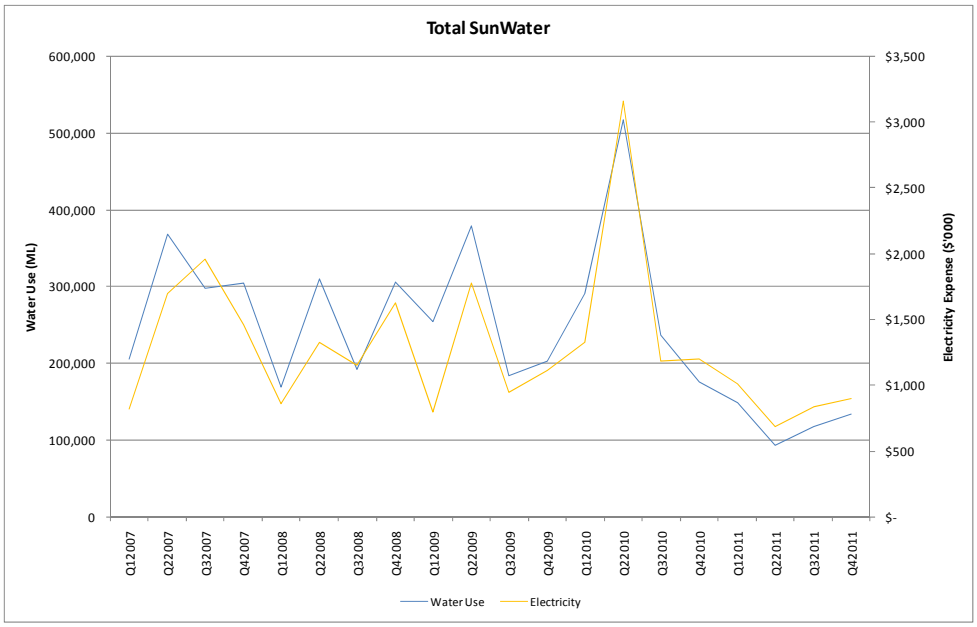

Figure 4.3.1.1 Quarterly Electricity Expense Versus Water Use July 2007 to June 2011[10]

[9] Expenses classified a s other may include some direct costs.

SunWater has advised that a small proportion of electricity expense not related to pumping water is likely to be fixed (i.e. in the Burdekin). However, it was not deemed to be a material electricity cost component in service contract areas where a significant proportion of water supply is pumped. In the absence of reliable data to separate any fixed electricity costs component, this issue has been excluded from the analysis.

In conclusion, Indec considers electricity expense a variable costs in contract areas where a significant proportion of water supply is pumped.

4.3.2. Labour

The impact of varying operations and maintenance processes and sub-activities is likely to primarily affect labour expense. Historical labour cost behaviour is based on the approach of maintaining a relatively stable permanent direct operations and maintenance workforce. The workforce has historically been dimensioned on an assumed base workload. Peak workloads are covered by expanding the use of casual labour and contractors. Base workloads include budgeted operations activities, planned and corrective maintenance, and activities subject to a priority ranking.

Total quarterly labour expense and water use for the period 2007 to 2011 is illustrated in figure 4.3.2.1. Although the base data shows little or no correlation with water use, the four period moving averages of the two time series do show a similar pattern. The correlation coefficient for the four period moving water use and labour expense averages from Q12007 and Q42011 is 0.696418 and the R Squared value is 0.484999.

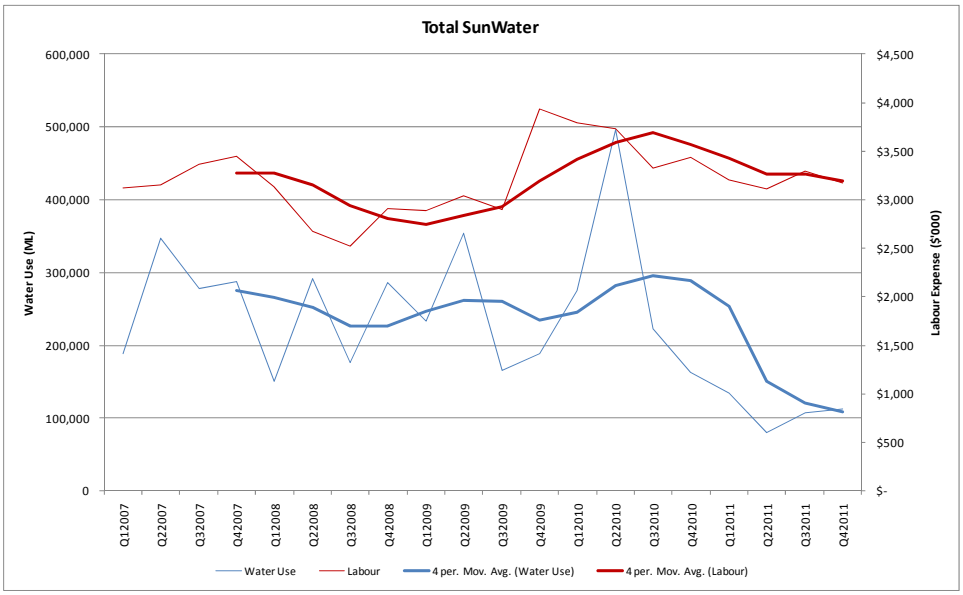

Figure 4.3.2.1 SunWater Labour Expense and Water Use July 2007 to June 2011

[10] Channel and River supply only – Excluding distribution losses

This pattern is repeated in the comparison of labour hours and water use for the period July 2008 to June 2011 (figure 4.3.2.2). It demonstrates that SunWater is already varying labour with water use. The correlation coefficient for the four period moving water use and labour hour averages from Q12008 and Q12011 is 0.700801 and the R Squared value is 0.491122.

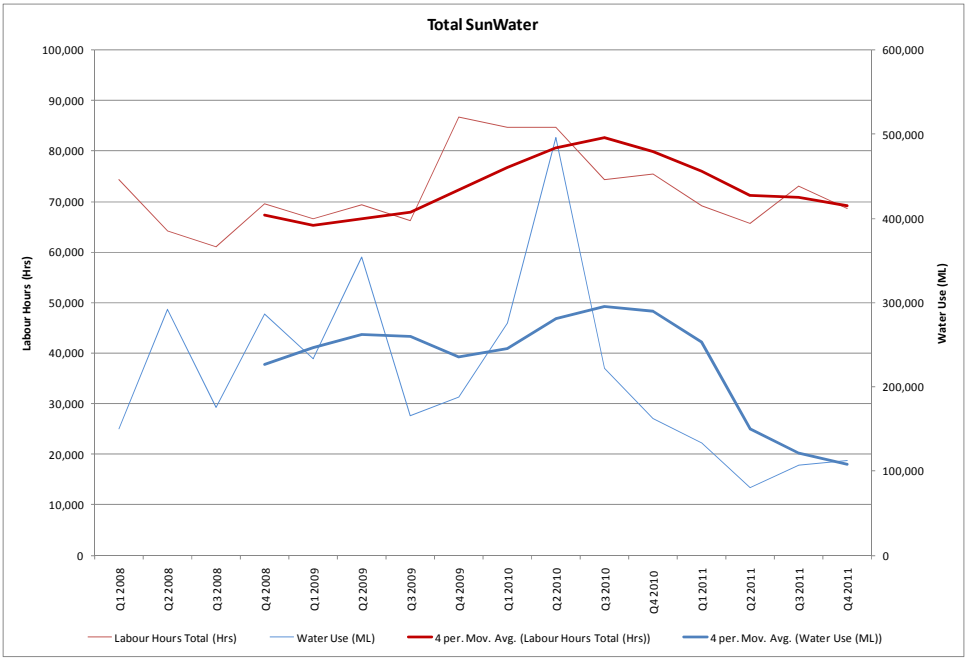

Figure 4.3.2.2 SunWater Labour Hours and Water Use
July 2008 to June 2011

The relative variations in labour hours and water use are even more visible on an annual basis (figure 4.3.2.3)

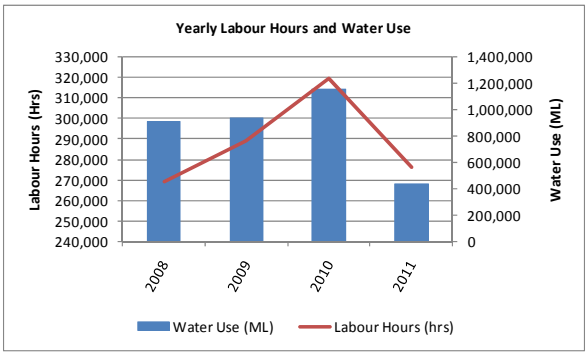

Figure 4.3.2.3 SunWater Labour Bookings and Water Use
July 2008 to June 2011

Historically, total SunWater labour inputs averaged approximately 72,000 hours per quarter for the period 2006/07 to 2010/11. Labour inputs averaged approximately 70,000 hours per quarter in 2006/07, 67,000 hours in 2007/08, 72,000 hours in 2008/09, 80,000 hours in 2009/10 and 69,000 hours per quarter in 2010/11 (figure 4.3.2.4).

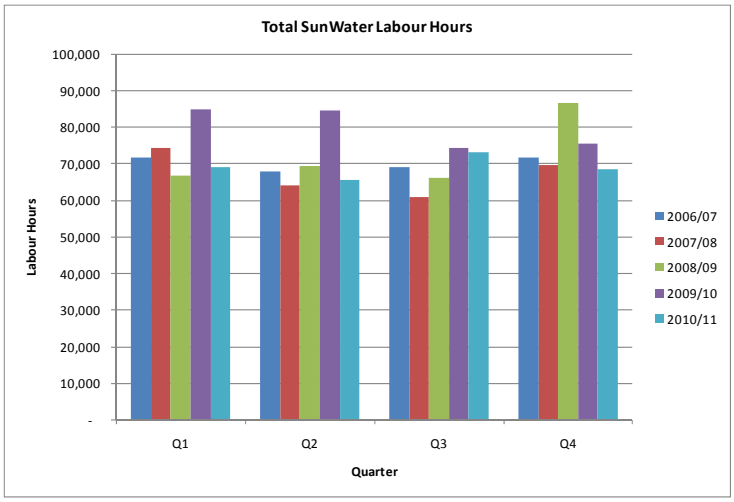

Figure 4.3.2.4 SunWater Direct Labour Hours
July 2008 to June 2011

In terms of seasonality, Labour inputs averaged approximately 73,000 hours in the first quarter, 70,000 hours in the second, 69,000 hours in the third and 74,000 hours in the fourth quarter. The apparent seasonality appears to be related to the fact that the first quarter (July to September) has more working days and that the traditional holiday periods fall in the second and third quarter.

Water use averaged approximately 294,000 ML per quarter in 2006/07, 244,000 ML in 2007/08, 255,000 ML in 2008/09, and 306,000 ML in 2009/10 but only 123,000 ML per quarter in 2010/11 Water usage in 2010/11 was less than fifty per cent of the average annual usage for the period 2006/07 to 2009/10. (figure 4.3.2.5). In terms of seasonality, water use was highest in the second quarter except in the 2010/11 year where water use in the first and fourth quarter was higher than in the second and third quarter.

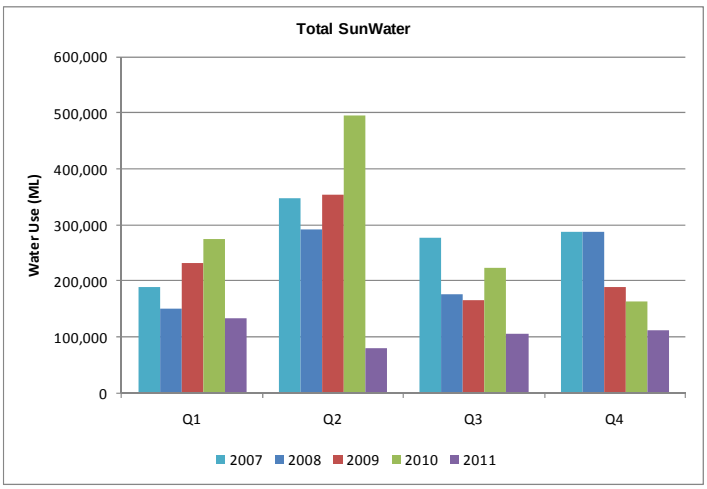

Figure 4.3.2.5 Water Use July 2008 to June 2011

In periods of low water demand, operations and maintenance personnel is more likely to be diverted to planned and corrective (unplanned) maintenance activities than to refurbishment and enhancement activities.

Sources of Labour Bookings - Resource Centres

Resource centres are the source of direct operations and maintenance labour bookings from field, depot and regional centre staff. Resource centres are located in Ayr, Biloela, Bundaberg, Toowoomba, MacKay and Mareeba. An analysis of annual operations labour bookings from resource centres for the period 2008 to 2011 also shows a definite trend with variations in water use (figure 4.3.2.6).

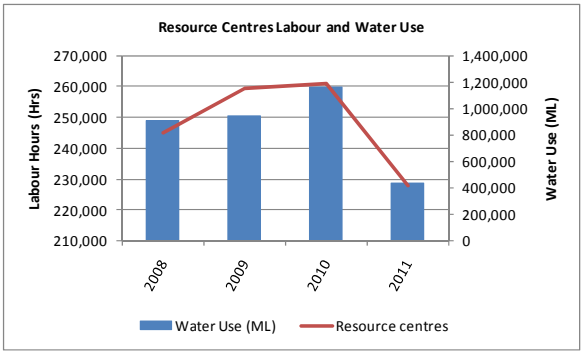

Figure 4.3.2.6 SunWater Direct Labour Bookings from Resource Centres and Water Use July 2008 to June 2011

For the period 2008 to 2011, bookings from resource centres accounted for approximately 993,340 hours or 86.1% of all operations labour bookings.

Sources of Labour Bookings - Corporate

Direct operations and maintenance labour bookings from sources other than resource centres from cover engineering, asset management, water accounting, legal, HSEQ management and 'other' activities .

Annual labour bookings from sources other than resource centres also show a similar pattern to water use but have significantly increased during the period 2008 to 2011 (figure 4.3.2.7). It was noted that labour bookings from sources other than resource centres have significantly increased during the period 2008 to 2011.

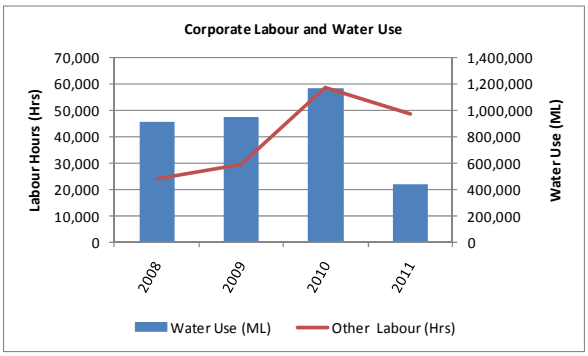

Figure 4.3.2.7 SunWater Direct Labour Bookings from Corporate and Water Use July 2008 to June 2011

For the period 2008 to 2011 these 'direct' labour bookings come from corporate support activities accounted for 160,594 hours or 13.9% of all labour bookings. Engineering accounted for 93,307 hours or 8.1% of total labour hours, asset management for 29,875 hours or 2.6%, project management for 1.6%, water accounting for 8,148 hours or 0.7%, legal for 4,993 hours or 0.4% and the balance of 0.5% was divided between HSEQ management and 'other'.

Operations

An analysis of annual operations labour bookings for the period 2008 to 2011 also shows a trend with variations in water use, albeit less pronounced than in overall labour bookings, particularly in the 2011 year which was subject to an extreme weather event. (figure 4.3.2.8). Operations sub-activities include water management, scheme management, scheduling and delivering water, customer management, workplace OH&S, environmental management, dam safety, and metering and facility management.

The key structural changes to operations labour bookings in the period 2008 to 2011 include a steady decline in hours booked on scheduling and delivering water, a steady increase in operations bookings, an increase in scheme management bookings and a significant increase in hours booked on dam safety activities in 2011.

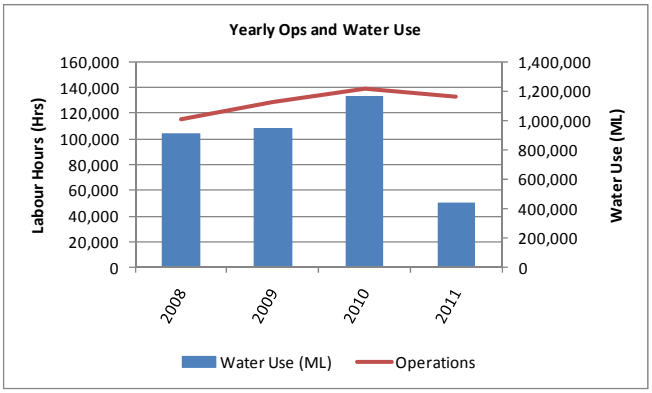

Figure 4.3.2.8 SunWater Operations Labour Bookings and Water Use July 2008 to June 2011

Operations labour hours cover a number of activities summarised in figure 4.3.2.9.

The analysis of operations labour bookings from resource centres also showed that there has been a steady increase of total labour bookings to scheduling and delivering water, and scheme management combined. The increase totalled 33.9% over the period 2008 to 2011.

The correlation analysis results between labour hours and water use for the period July 2008 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

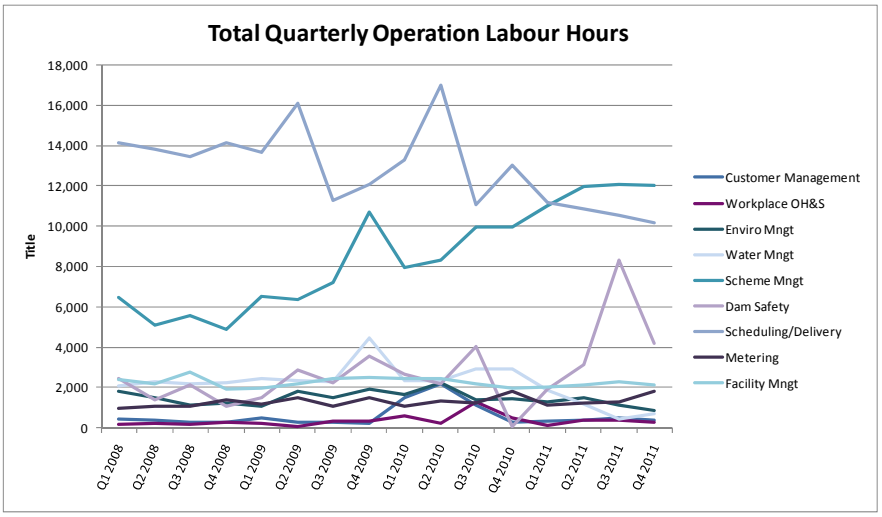

Figure 4.3.2.9 SunWater Operations Labour Bookings from Resource Centres July 2008 to June 2011

Nevertheless, Indec considers historical operations labour expense a semi-variable cost based on the above analysis and on the assumption that overall operations and maintenance expense varied with water use over the period June 2007 to September 2010.

Maintenance

An analysis of annual preventative plan maintenance labour bookings centres for the period 2008 to 2011 shows a definite trend with variations in water use (figure 4.3.2.10).

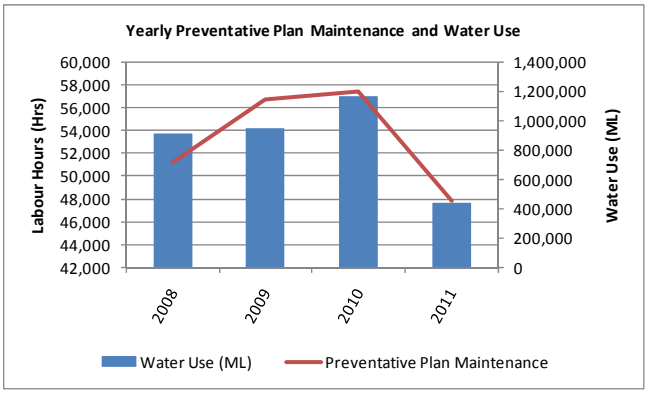

Figure 4.3.2.10 SunWater Preventative Plan Maintenance Labour Bookings and Water Use July 2008 to June 2011

Preventative plan maintenance incorporates a number of activities which are summarised in figure 4.3.211.

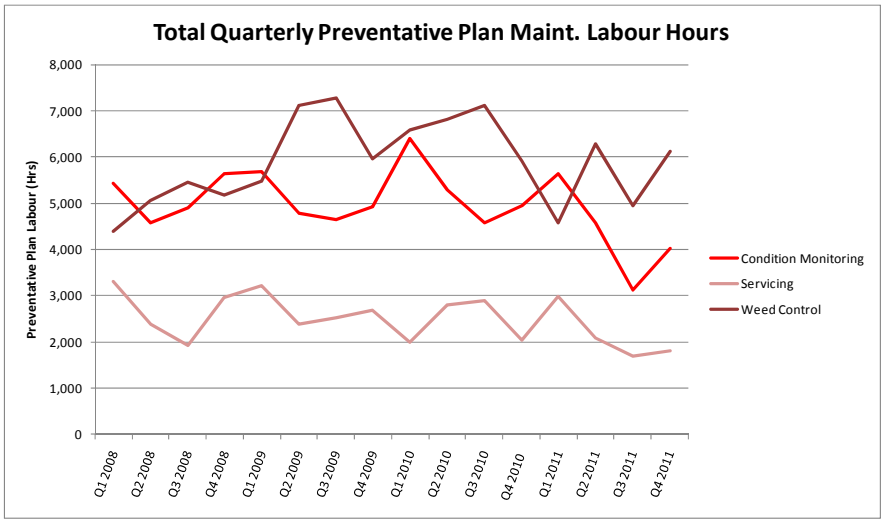

Figure 4.3.2.11 SunWater Preventative Plan Maintenance Labour Bookings July 2008 to June 2011

The correlation analysis results between preventative labour hours and water use for the period July 2008 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers preventative plan maintenance labour expense a semi-variable cost based on the above analysis and on the assumption that overall operations and maintenance expense varied with water use over the period June 2007 to September 2010.

In drawing the above conclusion, Indec has used an indirect inference on the variability of preventative maintenance labour hours and expense to the variability of water use, through the overall operations and maintenance expense' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

The spike in overall maintenance expense in the last quarter of 2011was primarily caused by a sudden increase in corrective maintenance expense assumed to be the result of an extreme weather event in that year (figure 4.3.2.12).

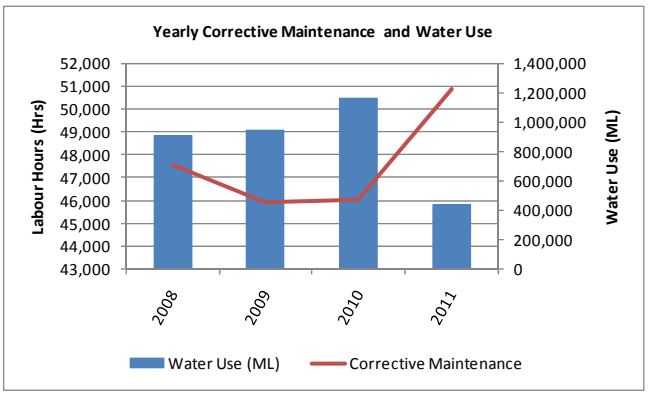

Figure 4.3.2.12 SunWater Corrective Maintenance

Labour Bookings and Water Use
July 2007 to June 2011

For the period 2008 to 2010, preventative plan maintenance accounted for approximately 54.2% of maintenance labour hours and corrective maintenance for 45.8%. In 2011, however, preventative plan maintenance accounted for approximately 48.5% of maintenance labour hours and corrective maintenance for 51.5%.

Corrective maintenance incorporates only two sub-activities which are summarised in figure 4.3.2.13.

The analysis shows that the 2011 increase in corrective maintenance bookings was due to a material increase in scheduled corrective maintenance.

The correlation analysis results between preventative labour hours and water use for the period July 2008 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers corrective maintenance labour hours and expense a semi-variable cost based on the assumption that overall operations and maintenance expense varied with water use over the period June 2007 to September 2010.

However, it is clear from the events of 2011 that extreme weather events influence corrective maintenance labour. The above analysis highlights the need for an adjustment mechanism to cover such events. This cannot be provided for in this analysis.

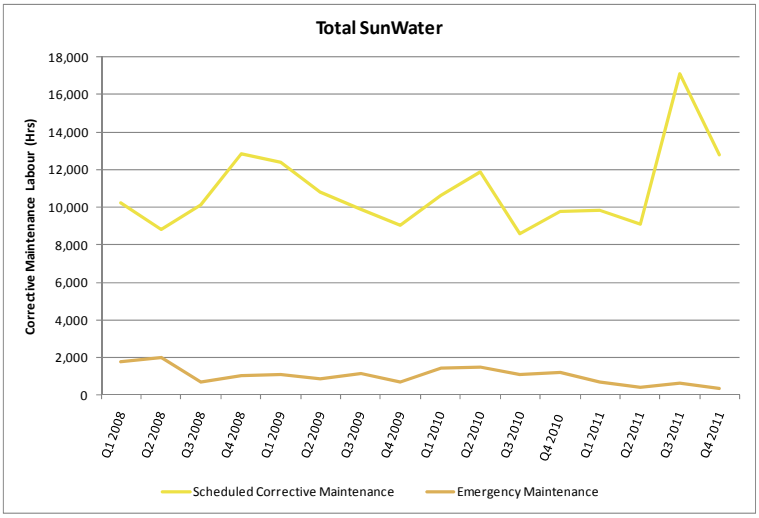

Figure 4.3.2.13 SunWater Corrective Maintenance Labour Bookings
July 2008 to June 2011

In drawing the above conclusion, Indec has used an indirect inference on the variability of corrective maintenance labour hours and expense to the variability of water use, through the

overall operations and maintenance expense' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

Renewals and Enhancements

Historical renewals and enhancements expense for the period 2007 to 2011 appears to display a similar pattern to renewals and enhancements labour hours for the same period (figure 4.3.2.14).

The regression analysis outputs include an R Squared value of 0.36267, a Significance of F value of 0.01052, a P-Value of 0.01052 and a Correlation Coefficient of 0.60222. The results suggest that historically some relationship existed at times between renewals and enhancements expense, and renewals and labour hours, albeit a weak one.

Indec has previously concluded that historical renewals and enhancements expense varied with water use over the period Q3 – 2007 and Q1 - 2011, albeit only weakly (section 4.2.3).

The correlation analysis results between renewals and enhancements expense and labour hours for the period July 2007 and June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical renewals and enhancements labour varied with enhancements expense, albeit moderately.

Consequentially, Indec concludes that SunWater's renewals and enhancements labour hours varied with water use for the period 2007 to 2011, albeit only weakly (semi variable cost).

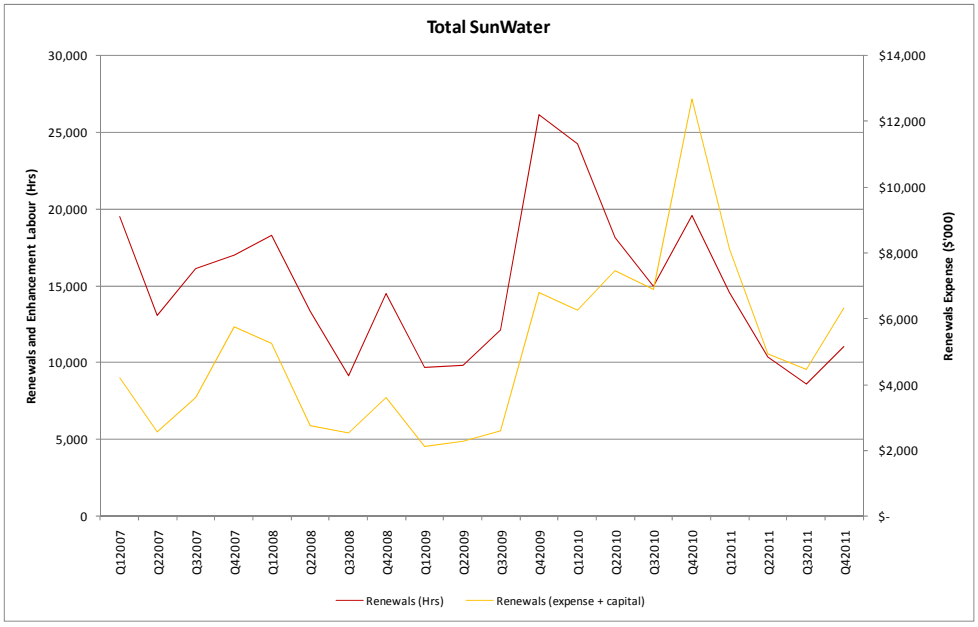

Figure 4.3.2.14 SunWater Renewals Expense and Renewals Labour Hours July 2007 to June 2011

In drawing the above conclusion, Indec has used an indirect inference on the variability of renewals labour hours to the variability of water use, through the renewals and enhancements expense' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

4.3.3. Materials

Historical materials expense for the period 2007 to 2011 appears to display a similar pattern to total labour hours for the same period (figure 4.3.3.1). The similarity of pattern between the two variables is particularly visible when examining the four period moving average of each time series.

The regression analysis outputs include an R Squared value of 0.41821, a Significance of F value of 0.00502, a P-Value of 0.00502 and a Correlation Coefficient of 0.64669. The results suggest that historically, reasonable correlation existed between materials and labour expense for the period Q1 - 2007 to Q1 - 2011.

The correlation coefficient for the four period moving indirects and overheads expense and labour expense averages from Q12008 and Q12011 is 0.646694 and the R Squared value is 0.418214. The results suggest that historically, reasonable correlation existed between materials and labour expense for the period Q1 - 2007 to Q1 - 2011.

In terms of materiality, for the period 1 July 2007 to 30 June 2011 materials accounted for approximately 11.28% of total expense.

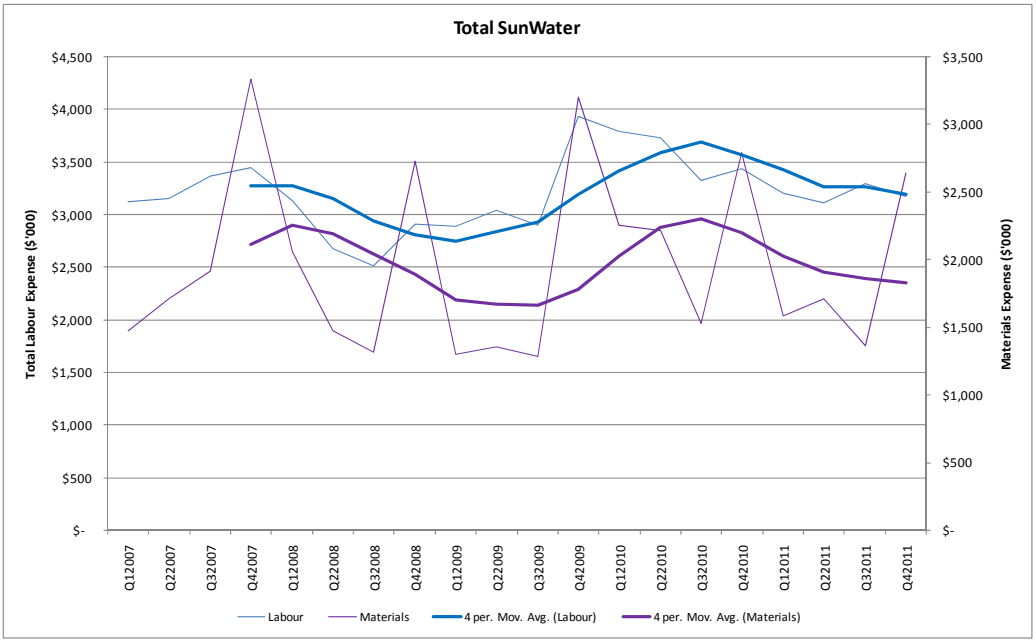

Figure 4.3.3.1 SunWater Material and Labour Expense
1 July 2007 to 30 June 2011

The correlation analysis results between labour and material expense for the period July 2007 to June 2011 do not meet the strict decision rule articulated in section 4.1.2.

Nevertheless, Indec considers historical material expense varied with labour expense, albeit moderately.

Indec concludes that SunWater's material expense varied with water use for the period Q1 - 2007 to Q1 - 2011, albeit moderately (semi variable cost).

In drawing the above conclusion, Indec has used an indirect inference on the variability of material costs to the variability of water use, through the labour costs' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

4.3.4. Contractors

SunWater makes extensive use of contractors for certain activities:

- renewals;
- slashing where contractors supply the necessary equipment (vegetation management and control);
- lift and crane maintenance;
- divers;
- pump and pump motor maintenance and refurbishment;
- water sampling and analysis;
- maintenance and certification of fire extinguishers and other fire fighting equipment;
- house painting and maintenance (SunWater has stated that it had disposed of 36 houses since the last review);
- fencing;
- scaffolding;
- weed and pest control; and
- supply of heavy plant (wet or dry hire).

Some of the contracted services are specialist in nature or involve the contractor supplying specialist equipment not available in-house at SunWater.

Contractor expense was found to vary with renewals and enhancements expense. Total quarterly renewals and enhancements, and contractor expense for the period 2008 to 2011 is shown in figure 4.3.4.1. The regression analysis outputs include an R Squared value of 0.81992, a Significance of F value of 0.00000, a P-Value of 0.00000 and a Correlation Coefficient of 0.90549.

The results suggest that historically a strong relationship existed between renewals and enhancements expense, and contract expense.

Indec has previously concluded that historical renewals and enhancements expense varied with water use over the period Q3 – 2007 and Q1 - 2011, albeit only weakly (section 4.2.3).

It should be noted that the analysis of historical enhancements and renewals expense data in section 4.2.3 is based on past cost behaviour which Indec does not consider to have been the optimum approach to variations in water use.

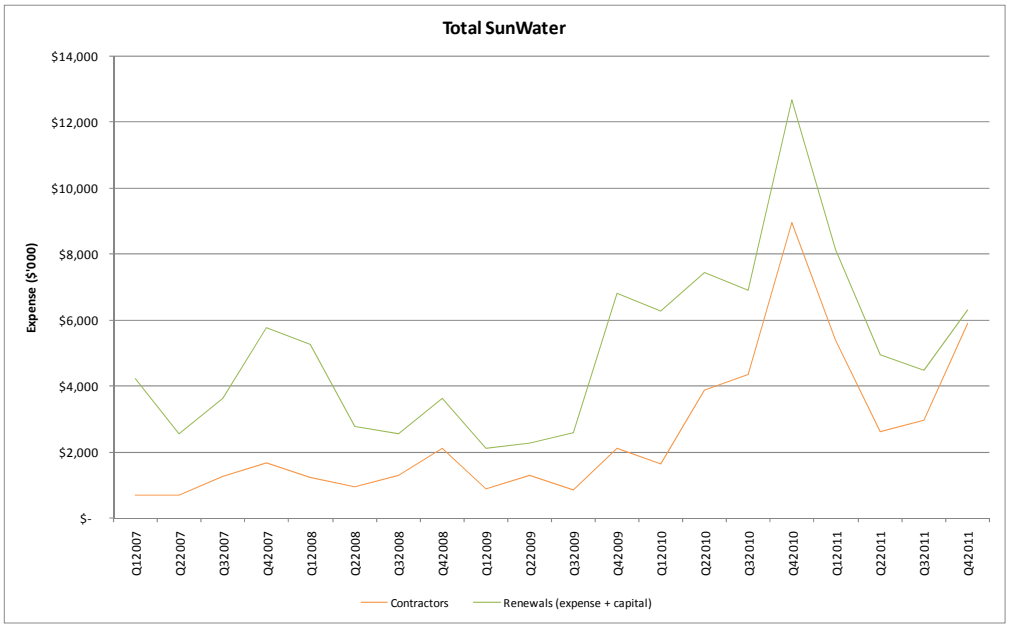

Figure 4.3.4.1 Renewals and Enhancements, and Contractors Expense July 2007 to June 2011

Consequentially, Indec concludes that SunWater's historical contractors expense varied with water use for the period 2007 to 2011, albeit only weakly (semi variable cost).

In drawing the above conclusion, Indec has used an indirect inference on the variability of contractor expense to the variability of water use, through the renewals and enhancements expense' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

4.3.5. Other

Total quarterly 'other' expense appears to vary to some degree with labour expense for the period 2007 to 2011 (figure 4.3.5.1).

The four period moving average of each variable do suggest some overall correlation between the two variables. However, regression analysis of the four period moving labour and 'other' expense averages suggest a weak association between the two variables.

The analysis of labour and 'other' expense for the period July 2007 and June 2011 illustrated in figure 4.3.5.1 does not meet the strict decision rule articulated in section 4.1.2.

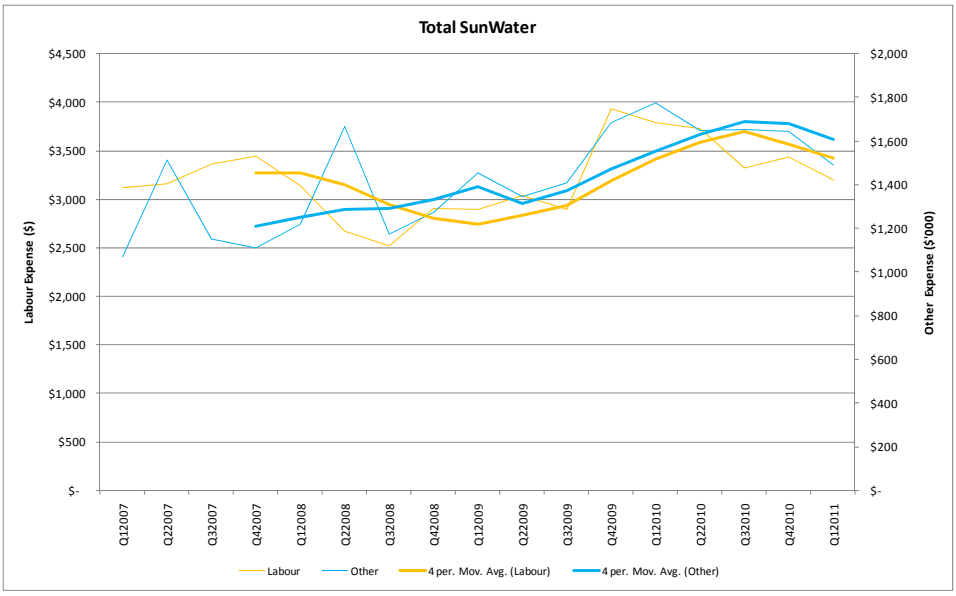

Figure 4.3.5.1 SunWater 'Other' and labour Expense
July 2007 to June 2011

Nevertheless, Indec considers historical 'other' expense varies to some extent with labour expense, albeit moderately.

Consequentially, Indec concludes that SunWater's 'other' expense did not vary with water use for the period Q1 - 2007 to Q1 – 2011.

4.3.6. Overheads and Indirects

Total quarterly overheads and indirects expense appears to vary to some degree with labour expense for the period 2007 to 2011 (figure 4.3.6.1). The regression analysis outputs include an R Squared value of 0.35112, a Significance of F value of 0.01219, a P-Value of 0.01219 and a Correlation Coefficient of 0.59256.

The correlation coefficient for the four period moving indirects and overheads expense and labour expense averages from Q12008 and Q42011 is 0.8126267 and the R Squared value is 0.666292.

The results suggest that historically a strong relationship existed between quarterly overheads and indirects expense, and total labour expense.

Indec considers historical indirects and overheads expense varied with labour expense, albeit moderately.

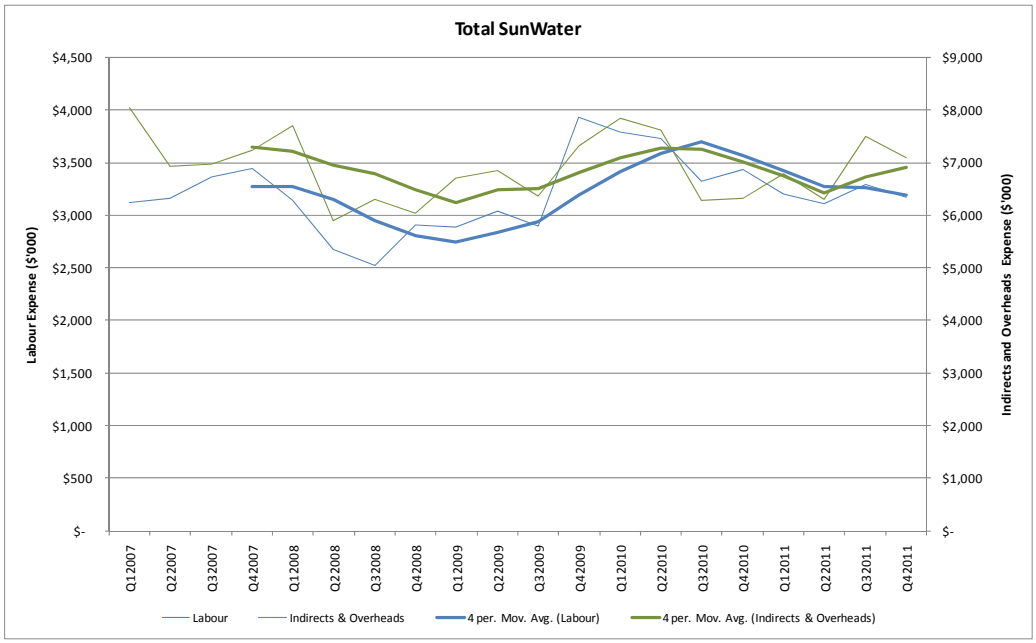

Figure 4.3.6.1 SunWater Indirects & Overheads and Labour Expense July 2007 to June 2011

Consequentially, Indec concludes that SunWater's indirects and overheads expense varied with water use for the period July 2007 to June 2011, albeit moderately (semi variable cost).

In drawing the above conclusion, Indec has used an indirect inference on the variability of indirects and overhead expense to the variability of water use, through the labour expense' variability in regards to variability in water use. It should be noted that correlation does not necessarily imply causation.

4.4. Summary

Historical costs of some activities and expenditure types have been shown to have directly or indirectly varied with water use. Indec acknowledges that such dependencies do not occur automatically, except for electricity expense which varies with water use in contract areas where a significant proportion of water supply is pumped. Any direct and indirect water use dependencies of activities and expense types highlighted in the foregoing analysis of historical costs are the result of past pro-active management by SunWater in response to variations in water use.

Indec concluded that other historical costs by expense type including labour, materials, contractors and 'other' did vary with water use to varying degrees. In drawing this conclusion, Indec acknowledges that some correlation analysis results did not meet the strict decision criteria required to establish beyond doubt whether historical costs were fixed, variable or semi-variable with a variation in customer water use.

Indec has used an indirect inference on the variability of some expenses by type to that of water use, through the variability of other expense types in regards to that of water use. It should be noted that correlation does not necessarily imply causation.

In summary, the stage 2 analysis of historical costs does demonstrate that SunWater has to some extent varied costs other than electricity expense with water use. However, the results of the historical cost analysis are somewhat inconsistent and tenuous (figure 4.4.1).

Region/Depot	Total Labour		O&M		Seasonality in			
	Hours	Expense	Hours	Expense	Q1	Q2	Q3	Q4
South Region	×	×	×	×				
St George Depot	×	×	×	×				
Toowoomba Depot	✓	✓	×	×				
Central Region	✓	✓		✓				
Bundaberg Depot	✓	✓		✓				
Biloela Depot	×	×	×	×				
North Region	×	×	✓	✓				
Moranbah Depot	×	×	×	×				
Emerald Depot	✓	✓		✓				
Eton Depot	✓	✓		✓				
Far North region	×	×	×	×				
Clare Depot	×	×	×	×				
Mareeba Depot	×	×	×	×				

Figure 4.4.1 Summary of Historical Data Analysis by Region and Depot

Specifically, the results are based on past cost behaviour which Indec does not consider to have been the optimum approach to variations in water use. The results of the historical cost analysis have therefore only been indirectly applied to the Stage Three assessment of an optimum approach to varying costs with variations in water use.

However, the fact that SunWater already varies certain activities and expenses with varying water use in a number of depots and service contracts has been considered in assessing appropriate fixed/variable expense ratios.

5. STAGE THREE – ASSESSMENT OF OPTIMAL APPROACH

The approach applied by Indec in determining fixed and variable costs with respect to water use for this report is outlined below. As part of the terms of reference, Indec was required to take into account an optimal management approach which considers SunWater's operating environment.

5.1. Methodology

The framework applied by Indec in determining an optimal management approach involved the objective of delivering services in a prudent and efficient manner whilst at the same time acknowledging some of the operating and other restraints which SunWater may face. SunWater must manage its operations taking into account all relevant risks and opportunities whilst not compromising on the delivery of services to customers as outlined in SunWater's Standard of Service.

As part of determining the optimal management approach, Indec developed a range of operating scenarios. The range provides for some discretion with respect to tolerances typically applicable to these types of assessments and any transition period which may be required to achieve optimal approach to varying water use. Indec has defined the upper bound as high; the lower bound as low and its recommended scenario is defined as optimal.

The high range may either represent that SunWater has the operational ability to quickly respond to varying level of water use or alternatively SunWater can vary service standards so that staffing levels can be reduced below the minimum otherwise required. For example, the use of 'flying' gangs, 'mothballing' of schemes or restricting maintenance activity to 'stand-by' maintenance on equipment and assets is an option under the high scenario. All of these measures, however, would require customers to agree to a reduction in customer service levels to provide for example, a delayed start-up period before water can be delivered after water becomes available.

The low range represent that SunWater has limited operational ability to quickly respond to varying levels of water use and/or cannot vary service standards so that staffing levels can be reduced below the minimum otherwise required.

The optimal approach is Indec's recommended outcome applying its judgement of SunWater's capabilities to respond to varying levels of water use based on Indec's understanding of SunWater's operational activities, the risks involved and the analysis of historical data which represents current management practices. The optimal approach recommended by Indec does not involve any changes to existing levels of customer service standards.

As part of developing the recommended optimal scenario, certain operating and regulatory constraints were identified which restrict SunWater's ability to reduce workload during periods of low water use or demand, as staffing levels are largely driven by:

- the need to maintain a minimum critical mass on site to respond to operational events to meet customer service standards;
- occupational health and safety requirements which preclude staff working by themselves in prescribed circumstances;
- the need to have available personnel with the right skills and safety certificates for work in certain environments (confined spaces, low voltage, etc); and
- distances between depots which range from 125 to 520 kilometres. One way travel times range from 2-5 hours (i.e. Emerald –Eton depots and Emerald Moranbah depots in North Region) and 5 - 7 hours (i.e. Toowoomba – St George depots in South Region, Emerald– Eton depots in North Region, and Clare – Mareeba depots in Far North Region). Travel times in conjunction with the need to provide overnight accommodation limits cost efficient resource sharing between some depots.

Indec has applied its judgement to determine what it considers an optimal management approach based on its experience of reviewing and benchmarking utility industries and its knowledge of the SunWater business operations gained during the previous irrigation price path review in 2005/06 and more recently from reviewing actual and forecast cost and labour data, documents outlining operating and asset management practices, and interviews with senior SunWater staff.

For each of the three selected scenarios (low, optimal and high), Indec has identified for each category of expenditure as outlined in SunWater's NSPs, the low and high range of fixed costs with respect to water volumes delivered to customers. The difference between the high and low ranges of fixed costs is deemed to be a variable cost with respect to water volumes. Indec has completed this analysis for each of the 30 service contracts relevant for the setting of the irrigation price paths.

Many factors have been considered by Indec, some which are unique to each service contract due to differing operating characteristics and/or operating assets. The factors considered are explained in more detail below and by way of example the extent of automation and labour required to operate each service contract was a key consideration.

5.2. Operations

Indec's view is that in times of low water demand, operations activities can be reduced. The reduction may be the result of:

- selective delegation of certain operational activities to water users;
- re-allocation of operations personnel to other service contracts; and
- re-allocation of operations personnel to O&M or R&E activities that would otherwise carried out by contractors (temporarily reduce the use of contractors and casual labour);

- reduction of direct bookings by corporate staff during period of low demand; and
- reduction in overtime and TOIL (Time Off In Lieu) during period of low demand.

The extent to which the above measures are practicable is likely to vary for each area and service contract. Indec acknowledges that such a measure may impact on the 'core' establishment of operations staff.

5.3. Maintenance

Indec's view is that in times of low water demand, maintenance activities can be reduced. The reduction may be the result of:

- deferment of non-essential planned and unplanned maintenance activities;
- re-allocation of maintenance personnel to other service contracts;
- re-allocation of maintenance personnel to O&M or R&E activities that would otherwise carried out by contractors (temporarily reduce the use of contractors and casual labour); and
- reduction in overtime and TOIL (Time Off In Lieu) during period of low demand.

5.4. Renewals and Enhancements

Indec's view is that in times of low water demand, renewals and enhancements expense can be reduced. The reduction may be the result of:

- deferment of some priority 2 refurbishment and enhancements activities;
- re-allocation of operations and maintenance personnel to O&M or R&E activities that would otherwise carried out by contractors (temporarily reduce the use of contractors and casual labour);
- review of planned scope of refurbishments and enhancements in that budget year; and
- phasing of renewals and enhancements works over a longer period.

5.5. Distribution

A summary of the preliminary quantitative assessment of fixed versus variable costs for selected water distribution systems is summarised in figure 5.5.1.

The Indec assessment indicates a range of fixed to variable cost ratios for each water distribution system. The range provides for some discretion with respect to tolerances typically applicable to these type of assessments and any transition period which may be required to achieve optimal approach to varying water use.

Indec estimates that an appropriate fixed variable ratio for water distribution ranges from 70% fixed and 30% variable to 63% fixed and 37% variable. Indec recommends a transitional overall fixed to variable ratio water distribution of 67% fixed to 33% variable which is the mid-point in the estimates range. The recommended ratios vary by service contract (figure 5.5.1).

		Low			Recommended			High		
	Service Contract	Fixed	Variable	Total	Fixed	Variable	Total	Fixed	Variable	Total
Distribution	Burdekin Distribution	63%	37%	100%	60%	40%	100%	56%	44%	100%
	Bundaberg Distribution	61%	39%	100%	59%	41%	100%	56%	44%	100%
	Mareeba Dimbulah Distribution	86%	14%	100%	83%	17%	100%	79%	21%	100%
	Eton Distribution	76%	24%	100%	72%	28%	100%	69%	31%	100%
	Emerald Distribution	85%	15%	100%	80%	20%	100%	75%	25%	100%
	St George Distribution	89%	11%	100%	84%	16%	100%	80%	20%	100%
	Theodore Distribution	81%	19%	100%	78%	22%	100%	75%	25%	100%
	Lower Mary Distribution	80%	20%	100%	78%	22%	100%	75%	25%	100%
	Distribution Average	70%	30%	100%	67%	33%	100%	63%	37%	100%

Figure 5.5.1 Fixed versus Variable Costs Water Distribution Systems

The recommended ratios incorporate the impact of electricity expense which varies with water use from zero to one hundred per cent. The variable proportion of the average total price path costs excluding electricity ranges from 7.3% to 15.9%. The variable proportion of the average total water distribution price path costs excluding electricity for the recommended overall ratio is $3.681 million per annum or 11.6%.

Details of the fixed/variable assessment for each water distribution system are attached in Appendix I. The key for distribution contracts outcomes are summarised below.

- Operations expense is estimated to be between 85% and 65% fixed and 15% to 35% variable respectively with respect to water deliveries for more automated scheme such as the Burdekin Haughton. Such schemes have a higher inherent fixed cost base. As a consequent fewer opportunities exist to reduce operating costs than in systems with a greater degree of labour involved in their operation.

  For distribution schemes with a lesser degree of automation and a greater degree of labour involved in operating the schemes, the fixed costs are estimated to range between 75% and 55% (i.e. Theodore and Lower Mary River). Those distribution systems with a mixture of automation and labour based operations are estimated to have a fixed cost base of between with respect to water deliveries.

  Indec recommends a transitional overall fixed to variable ratio for water distribution operations expense of 72% fixed to 28% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce operating costs during periods of low demand outlined in section 5.2.

- electricity expense is deemed to be a fully variable costs in terms of water deliveries based on the assumption that fixed electricity tariffs are immaterial and delivery of water to customers drives the pumping of water and the electricity expense.

- preventative maintenance in distribution systems is estimated to range between 65% and 80% fixed with respect to water use based on the particular characteristics of each distribution system. Specifically, in schemes that incorporate more rotating equipment such as pumping stations, greater potential exists to reduce preventative maintenance costs during periods of low water use.

  Indec has estimated that more automated distribution schemes such as the Burdekin Haughton have a higher percentage of fixed preventative maintenance costs (recommended 75% fixed) than manual operated distribution schemes such as Theodore (70% fixed).

  Indec recommends a transitional overall fixed to variable ratio for water distribution preventative maintenance expense of 76% fixed to 24% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce preventative maintenance costs during periods of low demand were outlined in the section 5.3.

- corrective maintenance is estimated to range between 90% to 70% fixed and 10% to 30% variable respectively based on water deliveries.

  Indec recommends a transitional overall fixed to variable ratio for water distribution corrective maintenance expense of 75% fixed to 25% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce corrective maintenance costs during periods of low demand were outlined in the section 5.3.

- revenue offsets are not related to water use and deemed to be 100% fixed.

- indirects and overheads expense is deemed to be 100% fixed.

- renewal annuity spend are deemed to be 75% fixed based on water volumes delivered with 25% of the spend subject to review to either reduce the scope of the works or defer the works for an assumed 2 year period. For the purposes of this draft report, the impact on the annuity has been estimated to average a 1% reduction over the 5 year price path period.

  Indec recommends a transitional overall fixed to variable ratio for water distribution renewals and enhancements expense of 99% fixed to 1% variable.

  Opportunities available to SunWater to reduce renewals and enhancements expense during periods of low demand were outlined in the section 5.4.

5.6. Bulk Water

A summary of Indec's assessment of optimal fixed and variable costs for bulk water supply systems is summarised in figure 5.6.1.

The Indec assessment indicates a range of fixed to variable cost ratios for each bulk water supply system. The range provides for some discretion with respect to tolerances typically applicable to these type of assessments and any transition period which may be required to achieve optimal approach to varying water use.

Indec estimates that an appropriate fixed variable ratio for bulk water supply ranges from 96% fixed and 4% variable to 89% fixed and 11% variable. Indec recommends a transitional overall fixed to variable ratio for bulk water of 93% fixed to 7% variable which is the mid-point in the estimates range. The recommended ratios vary by service contract (figure 5.5.1). The variable proportion of the average total bulk water supply price path costs excluding electricity for the recommended overall ratio is $2.704 million per annum or 10.8%.

Details of the fixed/variable assessment for each bulk water supply system are attached in Appendix J and key outcomes of the assessment for bulk supply contracts are summarised below.

- Operations expense is estimated to range 90% to 70% fixed and 10% to 30% variable respectively with respect to bulk water deliveries.

  Indec recommends a transitional overall fixed to variable ratio for bulk water operations expense of 80% fixed to 20% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce operating costs during periods of low demand outlined in section 5.2.

		Low			Recommended			High		
	Service Contract	Fixed	Variable	Total	Fixed	Variable	Total	Fixed	Variable	Total
Bulk Supply	Burdekin Haughton Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Bundaberg Bulk Supply	97%	3%	100%	93%	7%	100%	90%	10%	100%
	Mareeba Dimbulah Bulk Supply	95%	5%	100%	90%	10%	100%	86%	14%	100%
	Eton Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Nogoa-Mackenzie Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	St George Bulk Supply	97%	3%	100%	95%	5%	100%	92%	8%	100%
	Dawson Valley Bulk Supply	96%	4%	100%	92%	8%	100%	88%	12%	100%
	Lower Mary Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	Barker Barambah Bulk Supply	94%	6%	100%	90%	10%	100%	87%	13%	100%
	Bowen Broken Bulk Supply	96%	4%	100%	93%	7%	100%	89%	11%	100%
	Boyne River & Tarong Bulk Supply	95%	5%	100%	91%	9%	100%	87%	13%	100%
	Callide Valley Bulk Supply	96%	4%	100%	92%	8%	100%	89%	11%	100%
	Chinchilla Weir Bulk Supply	95%	5%	100%	90%	10%	100%	86%	14%	100%
	Cunnamulla Bulk Supply	95%	5%	100%	91%	9%	100%	86%	14%	100%
	Lower Fitzroy Bulk Supply	96%	4%	100%	92%	8%	100%	88%	12%	100%
	Macintyre Brook Bulk Supply	97%	3%	100%	94%	6%	100%	91%	9%	100%
	Maranoa Bulk Supply	96%	4%	100%	91%	9%	100%	87%	13%	100%
	Pioneer River Bulk Supply	97%	3%	100%	94%	6%	100%	90%	10%	100%
	Proserpine River Bulk Supply	94%	6%	100%	89%	11%	100%	84%	16%	100%
	Three Moon Creek Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Upper Burnett Bulk Supply	96%	4%	100%	93%	7%	100%	90%	10%	100%
	Upper Condamine Bulk Supply	93%	7%	100%	91%	9%	100%	89%	11%	100%
	Bulk Supply Average	96%	4%	100%	93%	7%	100%	89%	11%	100%
	Combined Average	**96%**	**4%**	**100%**	**93%**	**7%**	**100%**	**89%**	**11%**	**100%**

Figure 5.6.1 Fixed versus Variable Costs

Bulk Water Supply Systems

- Electricity expenses is deemed to be a fully fixed cost with respect to bulk water deliveries, except in Barker Barambah and Upper Condamine where electricity expense is deemed to be

a fully variable costs. Indec's assessment of full electricity cost variability for Barker Barambah and Upper Condamine is based on the assumption that fixed electricity tariffs are immaterial.

- Preventative maintenance is estimated to range between 90% to 70% fixed and 10% to 30% variable respectively based on bulk water deliveries.

  Indec recommends a transitional overall fixed to variable ratio for bulk water preventative maintenance expense of 80% fixed to 20% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce preventative maintenance costs during periods of low demand were outlined in the section 5.3.

- Corrective maintenance is estimated to range between 90% to 70% fixed and 10% to 30% variable respectively based on bulk water deliveries.

  Indec recommends a transitional overall fixed to variable ratio for bulk water corrective maintenance expense of 80% fixed to 20% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce corrective maintenance costs during periods of low demand were outlined in the section 5.3.

- Revenue offsets are not related to water use and deemed to be 100% fixed.

- indirects and overheads expense is deemed to be 100% fixed.

- renewal annuity spend are deemed to be 75% fixed based on water volumes delivered with 25% of the spend subject to review to either reduce the scope of the works or defer the works for an assumed 2 year period. For the purposes of this draft report, the impact on the annuity has been estimated to average a 1% reduction over the 5 year price path period.

  Indec recommends a transitional overall fixed to variable ratio for bulk water renewals and enhancements expense of 99% fixed to 1% variable which is the mid-point in the estimates range.

  Opportunities available to SunWater to reduce renewals and enhancements expense during periods of low demand were outlined in the section 5.4.

- Dam safety upgrades are deemed to be 100% fixed and not related to water volumes delivered nor do any opportunities exist to defer these upgrades due to the significant risks involved.

APPENDIX A

Terms of Reference

Terms of Reference

SunWater Water Supply Schemes 2011-2016 Price Paths

Part (B) Review of the SunWater Pricing Model - Component 2; and Other Concurrent Activities

2 June 2011

1. Project Background

The Authority engaged INDEC Pty Ltd under to Terms of Reference dated 21 September 2010 to undertake:

a) an audit of SunWater's Business Operating Model (BOM);

a) a review of SunWater's Financial Model (SFM) to be undertaken in a two stage process (Components 1 and 2); and
b) other concurrent activities, including providing ad-hoc advice and peering group reviews in relation to the outcomes of other consultancies.

INDEC Pty Ltd submitted its final reports in relation to the Audit of SunWater's BOM and Component 1 of the Review of SunWater's Financial Model in late March 2011.

2. Purpose and Requirements of Consultancy

The purpose of these Terms of Reference is to confirm and detail the Authority's requirements in relation to:

a) Component 2 of the review of SunWater's Financial Model; and

b) Other Concurrent Activities.

3. Component 2 - Review of the SunWater Financial Model (pricing version)

Under Component 1 of the review of SunWater's Financial Model, INDEC Pty Ltd undertook an audit to establish the integrity and robustness of a preliminary version the SunWater Financial Model (SFM) (Version 601).

Subsequently, in January 2011, SunWater used a revised version of its SFM to generate Network Service Plans (NSPs) for each of its irrigation water supply schemes (WSSs).

The Authority intends to generate draft prices for each tariff group for each WSS by:

a) incorporating a pricing module into the SFM (subsequent to version 601) to allow tariffs to be generated according to the Authority's pricing principles;

b) modifying (some) SFM costs at a scheme, regional and head office level; and

c) applying alternative approaches to overhead and indirect cost allocation.

Therefore, it will be necessary for the consultant to review the version of the SFM used to generate the January 2011 NSPs and to:

a) identify any changes incorporated into the SFM following completion of the Component 1 audit;

b) assess the appropriateness, validity and impact of any changes identified in (a) above

c) review the modules of the SFM not reviewed during the Component 1 review;

d) review the logic and integrity of SunWater's electricity forecasting model which is a separate model to the SFM and provides static electricity cost inputs into the SFM;

e) review the logic and integrity of the Authority's pricing module;

f) ensure all changes to costs, once finalised by the Authority, are correctly incorporated; and

g) ensure all changes to overhead and indirect cost allocation approaches, once finalised by the Authority, are correctly incorporated.

The above will necessarily include a review of the transfer of information between other models into the SFM, where applicable, and into scheme service contract spreadsheets within the SFM.

4. Other Concurrent Activities

The Authority also requires the consultant to undertake the following concurrent activities:

a) SunWater's Forecast Total Costs 2005-06 to 2010-11:

   i. provide the Authority with an electronic file containing relevant details of SunWater's total forecast expenditure, including efficiency gains (proposed by the Tier 1 Group) and the annual rate of cost escalation applied to the period 2006-07 to 2010-11 at the service contract level i.e. bulk supply and distribution.

   ii. an additional step may involve the disaggregation of the cost data for each tariff group;

iii. an additional step may involve the restatement of the allocation of overhead costs in the forecast data to broadly replicate the existing overhead allocation methodology applied to actual data to enable a more direct comparison of forecast cost with actual costs.

iv. determine whether:

- SunWater implemented previously proposed efficiency gains;
- SunWater reduced its cost base to reflect the loss of SEQ water responsibilities; and
- SunWater's proposed costs for the 2011-16 price path reflect previously anticipated efficiency gains based upon an analysis of actual and forecast costs for the previous period;

b) Undertake an analysis of fixed and variable costs for each service contract i.e. bulk supply and distribution and an additional step may involve an analysis at the proposed tariff group level:

i. establish the causal rationale (that is, explain the relationship to be expected) between water use and the variable costs (that is, costs which may vary over the five year regulatory period) of activities identified in NSPs;

ii. establish whether there are any other discernible drivers of variable costs; and

iii. for each service contract, estimate the portion of scheme costs proposed for 2011-12 to 2016-17 that vary according to water use and other drivers (as agreed with the Authority).

iv. If requested by the Authority, for each tariff group in each scheme, estimate the portion of scheme costs proposed for 2011-12 to 2016-17 that vary according to water use and other drivers (as agreed with the Authority), and quantify it in terms of $ per ML delivered.

For this purpose the consultant should:

i. identify the proposed methodology to be applied; and

ii. take into account an optimal (prudent and efficient) management approach that considers SunWater's operating environment.

c) Undertake an analysis of 2006-07 to 2010-11 renewals expenditure.

For each SunWater service contract:

i. provide an electronic file of SunWater's forecast renewals annuities for 2006-07 to 2010-11 on a project by project basis excluding overheads;

ii. compare previously forecast renewals expenditures from 2006-07 to 2010-11 excluding overheads with:

- actual expenditure over that period excluding overheads;
- an adjusted renewals forecast based on an index to be advised by the Authority before the commencement of the consultancy;
- an adjusted renewals forecast based on SunWater's approach proposed for the next price path; and
- an adjusted renewals forecast based on actual ABS annual rates of inflation for the period;

iii. identify for those service contracts where actual costs have exceeded forecast costs by 30% over the indexed estimated costs for each irrigation service contract;

iv. for those service contracts identified in (iii) above, identify projects the cost of which exceeds 5% of total annual renewals costs;

v. review SunWater's proposed methodology for converting the 22 scheme ARR balances into separate ARR balances for each distribution system and bulk segment; and

vi. determine whether the application of the methodology adopted by SunWater in (v) above generates an appropriate result and, if not, recommend adjusted opening balances for relevant scheme segments for 2012-13.

For (ii), the consultant is to identify and adjust for unplanned expenditure during that period (details to be sought from and provided by SunWater) and for any expenditure deemed not to be prudent by the Authority.

For (ii), the consultant is to include in its proposal the option to undertake this analysis including overheads costs.

5. Proposal Specifications and Fees

The proposal should include the name, address and legal status of the tenderer, and provide:

a) a fixed price quote for the provision of the services for Component 2 of the Review of SunWater's Pricing Model; and

b) separate fixed price quote for undertaking each of the three components of the other concurrent activities.

The fee quoted is to be inclusive of all expenses and disbursements. A full breakdown of consultancy costs will be required with staff costs reconciled to the consultancy work plan.

Total payment will be made within 28 days of receiving an invoice at the conclusion of the consultancy.

6. Resources/Data Provided

The consultant will be required to source information from relevant agencies as well as taking into account the following reports:

a) SunWater (2006) Irrigation Price Paths 2006/07-2010/11 Final Report http://www.sunwater.com.au/irrigationpricing/SunWater_Irrigation_Price_Paths_Final_Report.pdf;

b) Queensland Competition Authority (2000), Statement of Regulatory Pricing Principles for the Water Sector, December 2000. http://www.qca.org.au/files/PricingPrinciples.pdf; and

c) SunWater's SAP based asset and financial management system and pricing model including supporting data templates.

Additional information relevant to this consultancy may also be found in the Authority's publications, available from the Authority or for downloading from its website at www.qca.org.au.

The consultancy will commence in June 2011.

Dates for completion will be determined at the time of appointment.

Dates should be presented to the Authority as part of a detailed project plan submitted by the consultant for the Authority's approval. For this project, the consultant agrees that the Authority may provide the consultant's detailed project plan to SunWater.

7. Contractual Arrangements

This consultancy will only be offered in accordance with the Authority's standard contractual agreement.

This agreement can be viewed at http://www.qca.org.au/about/consultancyagreement.php

8. Reporting

The consultant will be required to provide the Authority with progress reports on an "as needs" basis or at least weekly and drafts of final reports will be required prior to project completion. If necessary, the consultant should advise at earliest opportunity any critical issues that may impede progress of the consultancy, particularly issues that impact on the successful delivery of the purpose and requirements of the consultancy as outlined in section 2 above.

At the conclusion of the consultancy, the consultant will be required to provide the Authority with a personal presentation on the findings of the analysis in addition to presenting three (3) copies of a written report. An electronic version of the final report is also required, saved in Microsoft© Word with any numeric data in Microsoft© Excel.

9. Confidentiality

Under no circumstances is the selected consultant to divulge any information obtained from the Authority for the purposes of this consultancy to any party other than with the express permission of the Authority.

10. Conflicts of Interest

For the purpose of this consultancy, the consultant is required to affirm that there is no, and will not be any, conflict of interest as a result of this consultancy.

11. Insurance

The consultant must hold all necessary work cover and professional indemnity insurance.

12. Quality Assurance

The consultant is required to include details of quality assurance procedures to be applied to all information and outputs provided to the Authority.

APPENDIX B

Fixed and Variable Cost Frameworks

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK (Page 1 of 1)

Major activities	Assets	Processes and sub-activities	Cost Drivers
Water harvesting and storage	Dams. Weirs. Catchment areas. Recreational facilities. Accommodation.	Releases. De-silting. Weed control. Inspections and reporting. Catchment area management. Facilities management. Planned maintenance. Unplanned maintenance.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset and catchment management strategy, resource scheduling and use of contract labour). 5. Applicable regulations (Including Dam safety regulations and Interim Resource Operating Plan (ROP) requirements. 6. SunWater's customer charter. 7. All applicable supply agreements and licenses. 8. Insurance and capital costs. 9. Volume of water pumped (water use).
Water Distribution	Distribution channels Drains Pump stations Pipe lines Water metering and other distribution related equipment	Pumping water. Weed control. Inspections and reporting. Planned maintenance. Unplanned maintenance.	1. Size and nature of the facility and equipment. 2. Energy prices and tariff structures. 3. Volume of water pumped (water use). 4. Prevailing operating conditions (weather). 5. Age and condition of the asset and related equipment. 6. Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour). 7. Applicable regulations. 8. Insurance and capital costs.
Water Accounting	Information Systems	Managing water allocation. Managing water entitlements. Customer water ordering.	1. Size of customer base. 2. Prevailing operating conditions (weather). *3. Volume of water pumped (water use).* 4. Workforce productivity. 5. Contractor terms & conditions. 6. Applicable regulations. 7. Insurance and capital costs.
Administration	Office facilities Equipment	Finance and accounting. Human Resources. Legal. ICT. Procurement. Regulatory Compliance. Company secretarial.	1. Workforce productivity. 2. Applicable regulations. 3. Insurance and capital costs.

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – WATER HARVESTING AND STORAGE (Page 1 of 2)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Large Dams	► Site facilities incorporating roads, recreation facilities, water and waste water, weather station, HV electrical system, signs and marker posts, buildings, houses, fencing, gates and marker buoys. ► Main dam wall incorporating abutments, spillway, galleries, ventilation system, lift, fish lock or fish way. ► Saddle dam(s). ► Outlet works including gates, etc. ► Intake structure. ► Electrical system and distribution network. ► Domestic water supply and treatment plant (not required for irrigation). ► Fixed or mobile instrumentation to measure dam conditions.	► Operating the outlet works (water releases). ► Conducting routine inspections of the galleries and lift. ► Monitoring the dam including inspection of the embankments, keeping the dam logbook, reporting observations and measurements, storage and flow data. ► Using instruments to measure dam conditions; ► Operating the intake structure. ► Operating the standby diesel generator and backup electrical system in case of failure. ► Managing the storage including monitoring data quality, blue algae levels, storage inspection and control of vegetation and noxious weeds. ► Operating the domestic water supply and water treatment plant (not required for irrigation). ► De-silting. ► Other inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Catchment area management. ► Weed control. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. Monitoring on-site security fencing. Inspections and reporting. ► Monitoring signs. ► Erecting temporary signs where necessary. ► Inducting visitors. ► Collecting rubbish. ► Cleaning of recreational facilities. ► Monitoring buildings.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset and catchment management strategy, resource scheduling and use of contract labour). 5. Applicable regulations (Including Dam safety regulations and Interim Resource Operating Plan (ROP) requirements. 6. SunWater's Standards of Service. 7. All applicable supply agreements and licenses. 8. Insurance and capital costs. *9. Volume of water pumped (water use).*

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – WATER HARVESTING AND STORAGE (Page 2 of 2)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Weirs	► Site facilities incorporating roads, recreation facilities, water and waste water, weather station, HV electrical system, signs and marker posts, buildings, houses, fencing, gates and marker buoys. ► Protection works. ► Weir structure. ► Hydraulic system. ► Electrical system. ► Control system. ► Instrumentation. ► Cathodic protection.	► Operating the outlet works (water releases). ► Conducting routine inspections of the galleries and lift. ► Monitoring the dam including inspection of the embankments, keeping the dam logbook, reporting observations and measurements, storage and flow data. ► Using instruments to measure dam conditions; ► Operating the intake structure. ► Operating the standby diesel generator and backup electrical system in case of failure. ► Managing the storage including monitoring data quality, blue algae levels, storage inspection and control of vegetation and noxious weeds. ► Operating the domestic water supply and water treatment plant (not required for irrigation). ► De-silting. ► Other inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Catchment area management. ► Weed control. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. Monitoring on-site security fencing. Inspections and reporting. ► Monitoring signs. ► Erecting temporary signs where necessary. ► Inducting visitors. ► Collecting rubbish. ► Cleaning of recreational facilities. ► Monitoring buildings.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset and catchment management strategy, resource scheduling and use of contract labour). 5. Applicable SunWater's Standards of Service. 6. All applicable supply agreements and licenses. 7. Insurance and capital costs. *8. Volume of water pumped (water use).*

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – WATER DISTRIBUTION (Page 1 of 2)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Channels (open).	► Channel flow meter(s). ► Channel meter outlet(s). ► Regulating gate(s). ► Siphon(s). ► Rock drop(s). ► Crossing(s). ► Drain(s). ► Fencing. ► Access road(s). ► Sign(s). ► Marker buoy(s).	► Customer liaison on delivery issues. ► Water delivery. ► Meter reading. ► Vegetation and weed control. ► Silt removal. ► Debris removal. ► Condition monitoring. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Renewal works.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour). 5. Applicable SunWater's Standards of Service. 6. All applicable supply agreements and licenses. 7. Insurance and capital costs. *8. Volume of water pumped (water use).*
Channels (piped).	► Air vent(s). ► Flow meter(s). ► Off-take(s). ► Pipe(s). ► Valve(s).	► Customer liaison on delivery issues. ► Water delivery. ► Meter reading. ► Debris removal. ► Condition monitoring. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Renewal works.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour). 5. Applicable SunWater's Standards of Service. 6. All applicable supply agreements and licenses. 7. Insurance and capital costs. *8. Volume of water pumped (water use).*

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – WATER DISTRIBUTION (Page 2 of 2)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Pump stations.	► Site facilities (incl. control building). ► Inlet works. ► Pump well. ► Pump unit. ► Compressed air system. ► Vacuum priming system. ► Electrical systems (HV, LV and ELV). ► Control equipment. ► Flow meter. ► Rising main.	► Customer liaison on delivery issues ► Water delivery. ► Meter reading. ► Debris removal. ► Condition monitoring. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Renewal works.	1. Size and nature of the facility. 2. Electricity tariffs 3. Age and condition of the asset and related equipment. 4. Prevailing operating conditions. 5. Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour). 6. Applicable SunWater's Standards of Service. 7. All applicable supply agreements and licenses. 8. Insurance and capital costs. *9. Volume of water pumped (water use).*
Pipelines.	► Air valves. ► Scour outlets. ► Meter outlets. ► Fish screen ► Flow meter. ► Valve pit. ► Manholes. ► Swab pit or station. ► Surge tank. ► Balancing storage. ► Cathodic protection.	► Customer liaison on delivery issues. ► Water delivery. ► Meter reading. ► Debris removal. ► Condition monitoring. ► Inspections and reporting. ► Planned maintenance. ► Unplanned maintenance. ► Renewal works.	1. Size and nature of the facility. 2. Age and condition of the asset and related equipment. 3. Prevailing operating conditions. 4. Workforce Productivity (including asset management strategy, resource scheduling and use of contract labour). 5. Applicable SunWater's Standards of Service. 6. All applicable supply agreements and licenses. 7. Insurance and capital costs. *8. Volume of water pumped (water use).*

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – WATER ACCOUNTING (Page 1 of 1)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Information Systems	► Office facilities ► Hardware ► Software ► Site facilities (incl. data centre & disaster recovery building).	► Customer liaison on delivery issues. ► Water delivery. ► Water sharing rules i.e. announced allocations, capacity sharing, carry over arrangements ► Environmental flows. ► Research and development. ► Periodic customer reporting ► Regulatory compliance reporting ► Management	1. Size and nature of the information system. 2. Number of customers. 3. Number of transactions. 4. Workforce Productivity (including information management strategy, resource scheduling and use of contract labour). 5. Applicable SunWater's Standards of Service. 6. All applicable supply agreements and licenses. 7. Insurance and capital costs. 8. *Volume of water pumped (water use).*

SUNWATER FIXED & VARIABLE COST ANALYSIS - QUANTITATIVE ANALYSIS FRAMEWORK – ADMINISTRATION (Page 1 of 1)

Major Assets	Component Assets	Processes and sub-activities	Cost Drivers
Office Facilities & Equipment	► Office facilities ► Office plant and equipment ► Hardware ► Software ► Site facilities (incl. data centre & disaster recovery building).	► Corporate governance ► Strategic planning ► Risk management ► Financial management ► Procurement ► HR management ► OHS management ► Performance monitoring ► Shareholder reporting ► Board reporting ► Management reporting ► Regulatory compliance reporting ► Ad hoc reporting	1. Regulatory and statutory obligations. 2. Size and nature of the information system. 3. Size of business and staff numbers. 4. Number of financial and non-financial transactions. 5. Workforce Productivity (including information management strategy, resource scheduling and use of contract labour). 6. All applicable supply agreements and licenses. *7. Insurance and capital costs.*

APPENDIX C

Regression Analysis Results
Selected Expenses versus Water Use
July 2007 to June 2011

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficien	Standard Error - Intercept	t-Stat - Intercept
Barker Barambah Water Supply	Cond. Monitoring	0.032543	0.446604032	1.1774182	1.513149111	0.4466	0.180396707	8937.713603	1804.904613	4.951903573
Barker Barambah Water Supply	Contractors	0.1201	0.134423174	-45.177471	28.82245101	0.13442	-0.346554402	95513.92836	34379.80726	2.778198483
Barker Barambah Water Supply	Customer Mgt	0.1532467	0.087847085	-1.5598421	0.864225923	0.08785	-0.391467353	3694.60809	1030.860306	3.584004611
Barker Barambah Water Supply	Dam Safety	0.0041864	0.786384429	2.06192564	7.495622341	0.78638	0.064702057	15291.79176	8940.879154	1.710323056
Barker Barambah Water Supply	Emergency maint	0.0849564	0.212446743	0.3404213	0.263331731	0.21245	0.291472887	283.2085501	314.1056314	0.901634743
Barker Barambah Water Supply	Enviro Mgt	0.1158639	0.14196463	-1.0414835	0.678112237	0.14196	-0.340387891	2871.314431	808.8613972	3.549822554
Barker Barambah Water Supply	Facility Mgt	0.0244412	0.510405326	-1.4827616	2.208009105	0.51041	-0.156336705	7117.648926	2633.742961	2.702484271
Barker Barambah Water Supply	Indirects	0.0599225	0.298255697	-6.9348193	6.474192223	0.29826	-0.244790819	28418.19329	7722.503568	3.679919736
Barker Barambah Water Supply	Labour	0.0968535	0.181672082	-24.137575	17.37315627	0.18167	-0.311213011	62937.19233	20722.93449	3.037079153
Barker Barambah Water Supply	Materials	0.0757514	0.240208787	-96.360164	79.33418008	0.24021	-0.275229728	208316.7517	94630.87714	2.20136131
Barker Barambah Water Supply	Metering	0.0021608	0.845704996	0.36817823	1.864874281	0.8457	0.046483903	8692.064624	2224.447127	3.907516847
Barker Barambah Water Supply	Other - Operations	0.2613021	0.021250532	-0.5869445	0.232607003	0.02125	-0.511177164	664.7999346	277.4567625	2.39604877
Barker Barambah Water Supply	Overheads	0.0963829	0.182793124	-23.727993	17.124461	0.18279	-0.310455998	63328.38369	20426.28743	3.100337441
Barker Barambah Water Supply	Sched/Deliver	0.1802496	0.062066817	12.4503629	6.258200732	0.06207	0.424558071	35453.95414	7464.866013	4.749442801
Barker Barambah Water Supply	Scheduled corr	0.0001078	0.965351462	-0.5109511	11.59998574	0.96535	-0.01038155	22138.09145	13836.61902	1.599963937
Barker Barambah Water Supply	Scheme Mgt	0.0169543	0.584272389	2.92086544	5.242303596	0.58427	0.130208694	42536.93349	6253.090244	6.802545914
Barker Barambah Water Supply	Servicing	0.0777605	0.233818575	-2.5240514	2.048822307	0.23382	-0.278855684	6316.324295	2443.862807	2.584565826
Barker Barambah Water Supply	Water Mgt	0.0600113	0.297886843	1.56498909	1.459889201	0.29789	0.24497202	4864.273389	1741.375476	2.793351265
Barker Barambah Water Supply	Weed Control	0.0378395	0.411181438	1.01505923	1.20644121	0.41118	0.194523793	4884.835677	1439.059304	3.394464471
Barker Barambah Water Supply	Workplace H&S	0.0626948	0.286988148	-0.3136155	0.285815614	0.28699	-0.250389314	725.9878412	340.9247085	2.12946678
Barker Barambah Water Supply	Electricity	0.1807244	0.061687259	0.72444009	0.363557295	0.06169	0.425116905	2072.953315	433.6560313	4.78017868
Barker Barambah Water Supply	Other Renewals	0	0.23709753	-6.3389817	5.183101748	0.2371	0	14922.45116	6182.473484	2.413670062
Bowen Broken Water Supply	Cond. Monitoring	7.345E-05	0.971393942	-3.2468055	89.29117445	0.97139	-0.00857029	13808.30012	1990.97581	6.935443443
Bowen Broken Water Supply	Contractors	0.047345	0.356768342	-24.817506	26.23932214	0.35677	-0.217589077	5960.300909	3402.703935	1.751636647
Bowen Broken Water Supply	Customer Mgt	0.0351645	0.42854368	22.0214567	27.18844696	0.42854	0.187521918	2010.106401	582.0644837	3.453408441
Bowen Broken Water Supply	Dam Safety	0.0095665	0.681634059	3.14446482	7.541303425	0.68163	0.09780853	6056.16908	1725.494649	3.509816205
Bowen Broken Water Supply	Emergency maint	0.0057975	0.749685855	23.5385665	72.65390509	0.74969	0.076141637	14588.27915	9892.759207	1.474642093
Bowen Broken Water Supply	Enviro Mgt	0.0141652	0.617234849	3.76765937	7.408435998	0.61723	0.119017528	13819.06058	2041.940483	6.767611837
Bowen Broken Water Supply	Facility Mgt	0.0415704	0.38856969	-4.9238667	5.572601959	0.38857	-0.203888214	30312.02482	1535.941127	19.73514759
Bowen Broken Water Supply	Indirects	0.1673326	0.073309599	12.9349006	6.80099318	0.07331	0.409063079	4936.492792	1874.51485	2.633477559
Bowen Broken Water Supply	Labour	0.061012	0.293765332	9.71760764	8.985565068	0.29377	0.247006128	6507.317943	2476.63462	2.627484043
Bowen Broken Water Supply	Materials	0.0032816	0.810417473	-10.415334	42.78401365	0.81042	-0.057285098	28432.26695	11792.28781	2.411089978
Bowen Broken Water Supply	Metering	0.0018637	0.856590096	0.12686878	0.692032571	0.85659	0.043170482	803.9672557	190.7405723	4.214977683
Bowen Broken Water Supply	Other - Operations	0.0088936	0.692490943	-2.5193273	6.268571904	0.69249	-0.094306115	3605.179784	1727.766933	2.086612329
Bowen Broken Water Supply	Overheads	0.0922772	0.192895304	12.2942409	9.08855486	0.1929	0.303771657	7270.95522	2505.021047	2.902552547
Bowen Broken Water Supply	Sched/Deliver	0.1158805	0.141934195	16.494787	10.73892177	0.14193	0.340412309	17732.24367	2959.901269	5.990822686
Bowen Broken Water Supply	Scheduled corr	0.0001647	0.95716905	4.52138926	83.02309821	0.95717	0.01283515	46484.20783	22883.13286	2.031374293
Bowen Broken Water Supply	Scheme Mgt	0.0193447	0.558673907	9.88567776	16.59001827	0.55867	0.13908539	52499.71604	4572.602089	11.48136554
Bowen Broken Water Supply	Servicing	0.0081328	0.705349055	-1.1762603	3.061778488	0.70535	-0.090182067	4557.546679	843.8986913	5.400585078
Bowen Broken Water Supply	Water Mgt	0.0017639	0.860445708	-1.0686118	5.991901227	0.86045	-0.041998685	6141.783172	1651.509939	3.718889622
Bowen Broken Water Supply	Weed Control	0.1176037	0.138815717	-5.1592158	3.33095503	0.13882	-0.342933972	5344.774241	918.0901238	5.82162263
Bowen Broken Water Supply	Workplace H&S	0.0132071	0.62948011	-0.346489	0.705930973	0.62948	-0.1149222	230.044917	194.5713012	1.182316794
Bowen Broken Water Supply	Electricity	0.047345	0.356768342	-24.817506	26.23932214	0.35677	-0.217589077	23511.75397	7232.178847	3.250991778
Bowen Broken Water Supply	Other Renewals	0	0.893050376	-0.674533	4.946714546	0.89305	0	2575.60768	1363.431727	1.889062451
Boyne Water Supply	Cond. Monitoring	0.0708899	0.256510972	-11.232683	9.584921314	0.25651	-0.266251633	4169.647633	1631.717471	2.555373528
Boyne Water Supply	Contractors	1	#NUM!	0	0	#NUM!	0	5162.169746	3841.745014	1.343704417
Boyne Water Supply	Customer Mgt	0.0582421	0.305345715	-12.530706	11.87655293	0.30535	-0.241334003	5041.988367	951.1690235	5.30083323
Boyne Water Supply	Dam Safety	0.0205573	0.546475994	2.23991393	3.644193404	0.54648	0.143378217	17938.23509	4830.177617	3.713783739
Boyne Water Supply	Emergency maint	0.0431347	0.379593817	19.2486408	21.36858354	0.37959	0.207688992	-186.5467485	340.3832511	-0.548049141
Boyne Water Supply	Enviro Mgt	0.0032215	0.812132479	-0.4388534	1.819519863	0.81213	-0.056757828	2979.44059	1505.564467	1.978952516
Boyne Water Supply	Facility Mgt	0.0449884	0.369313439	0.5518564	0.599299237	0.36931	0.212104764	-106.8283968	495.891061	-0.215427148
Boyne Water Supply	Indirects	0.0762804	0.23850731	6.73196584	5.521655233	0.23851	0.276189044	2189.810206	4568.901986	0.479285879
Boyne Water Supply	Labour	0.0906464	0.197074123	6.23580816	4.655298489	0.19707	0.301075454	887.056782	3852.033786	0.230282711
Boyne Water Supply	Materials	0.0067854	0.729904439	-0.851233	2.427428974	0.7299	-0.082373445	3852.492027	2008.579781	1.918017926
Boyne Water Supply	Metering	0.0010891	0.890143543	0.05672124	0.404887626	0.89014	0.033001853	607.5281015	335.024879	1.813382049
Boyne Water Supply	Other - Operations	0.1003329	0.173608689	0.5476683	0.386545364	0.17361	0.316753767	-353.7725372	319.8475465	-1.106066127
Boyne Water Supply	Overheads	0.0841851	0.21463012	6.77250109	5.265006705	0.21463	0.290146772	1215.644383	4356.537772	0.279039101
Boyne Water Supply	Sched/Deliver	0.0075154	0.71629351	1.92872744	5.224218556	0.71629	0.08669123	13110.95804	4322.787557	3.032986903
Boyne Water Supply	Scheduled corr	0.0790193	0.229912514	-11.917729	9.589939711	0.22991	-0.281103748	18309.13132	7935.210139	2.307327846
Boyne Water Supply	Scheme Mgt	0.0203624	0.548404298	-3.7108569	6.066757461	0.5484	-0.142696742	35727.78603	5019.94765	7.11716307
Boyne Water Supply	Servicing	0.0542448	0.323057384	-2.4794053	2.440178606	0.32306	-0.232905114	4201.805194	2019.129483	2.080998385
Boyne Water Supply	Water Mgt	0.0587662	0.303112513	2.74559944	2.589916022	0.30311	0.242417512	4033.603045	2143.029935	1.882196314
Boyne Water Supply	Weed Control	0.00234	0.839510628	-0.3015739	1.467726165	0.83951	-0.048373089	3708.413302	1214.472239	3.053518379
Boyne Water Supply	Workplace H&S	0.1490661	0.092685634	0.43358898	0.244174555	0.09269	0.386090825	-132.8465916	202.0426056	-0.657517711
Boyne Water Supply	Electricity	1	#NUM!	0	0	#NUM!	0	0	0	65535
Boyne Water Supply	Other Renewals	0	0.4113767	0.73423774	0.873044283	0.41138	0	216.4377713	722.4018143	0.299608565
Bundaberg Irrigation Distribution	Cond. Monitoring	0.018155	0.571141366	-1.8312871	3.174267591	0.57114	-0.134740488	195869.4021	30753.50382	6.369010934
Bundaberg Irrigation Distribution	Contractors	0.9239585	1.63355E-11	25.1286554	1.699151167	1.6E-11	0.961227615	119696.868	62052.21572	1.928970087
Bundaberg Irrigation Distribution	Customer Mgt	0.0401025	0.397256775	1.28488541	1.481682352	0.39726	0.200255972	-133.4269348	6743.791607	-0.019785151
Bundaberg Irrigation Distribution	Dam Safety	3.673E-05	0.979770096	0.04845312	1.884467865	0.97977	0.006060226	7944.054689	2406.130795	3.301588886
Bundaberg Irrigation Distribution	Emergency maint	0.0926184	0.192033166	-7.2935943	5.380858779	0.19203	-0.304332778	70575.48496	14801.83753	4.768021865
Bundaberg Irrigation Distribution	Enviro Mgt	5.024E-05	0.97634062	0.00065689	0.021843982	0.97634	0.007087841	385.5007297	375.2466439	1.027326256
Bundaberg Irrigation Distribution	Facility Mgt	0.1118061	0.149600337	0.08517421	0.05658391	0.1496	0.334374213	-376.992667	972.0261724	-0.387842095
Bundaberg Irrigation Distribution	Indirects	0.0658851	0.274643698	-1.2297959	1.091449	0.27464	-0.256680862	83939.78531	18749.44647	4.476920715
Bundaberg Irrigation Distribution	Labour	0.0315332	0.453861913	-0.7802357	1.019173594	0.45386	-0.177575791	83028.59038	17507.86409	4.742359773
Bundaberg Irrigation Distribution	Materials	0.0397288	0.399510687	-0.7887846	0.914042979	0.39951	-0.199320753	81613.27558	15701.87879	5.19767581
Bundaberg Irrigation Distribution	Metering	0.0443623	0.372744182	-0.1722916	0.188481069	0.37274	-0.210623505	16561.91687	3237.820279	5.115143969
Bundaberg Irrigation Distribution	Other - Operations	0.0258653	0.498178724	-0.1124747	0.162693346	0.49818	-0.160826775	358.3279474	2794.826127	0.128211177

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficient	Standard Error - Intercept	t-Stat - Intercept
Bundaberg Irrigation Distribution	Overheads	0.1419987	0.101476288	-2.2971511	1.330929484	0.10148	-0.376827189	116487.7581	22863.35974	5.094953647
Bundaberg Irrigation Distribution	Sched/Deliver	0.0490599	0.347986237	1.31863547	1.368364825	0.34799	0.221494624	184315.3781	23506.44239	7.841057995
Bundaberg Irrigation Distribution	Scheduled corr	0.0385694	0.40661698	-2.7987074	3.293508422	0.40662	-0.196390933	273235.5971	56577.50372	4.829403547
Bundaberg Irrigation Distribution	Scheme Mgt	0.0038866	0.794009572	-0.5457066	2.059159789	0.79401	-0.062342938	220493.7059	35373.25724	6.233344712
Bundaberg Irrigation Distribution	Servicing	0.0058289	0.749030131	0.15480622	0.476527861	0.74903	0.076347429	33123.68416	8186.029412	4.046367597
Bundaberg Irrigation Distribution	Water Mgt	0.0036434	0.800429887	0.02540188	0.099010518	0.80043	0.060360899	1037.281641	1700.851267	0.609860287
Bundaberg Irrigation Distribution	Weed Control	0.3100088	0.010774111	3.74805529	1.317966803	0.01077	0.556784365	204258.8237	22640.68044	9.021761702
Bundaberg Irrigation Distribution	Workplace H&S	0.0040561	0.789660822	-0.0886904	0.327568811	0.78966	-0.063687688	7550.036817	5627.137767	1.341718851
Bundaberg Irrigation Distribution	Electricity	0.9239585	1.63355E-11	25.1286554	1.699151167	1.6E-11	0.961227615	30433.84105	29188.85248	1.042652878
Bundaberg Irrigation Distribution	Other Renewals	0	0.56442719	-0.2073753	0.353218315	0.56443	0	3932.683387	6067.757533	0.648127972
Bundaberg Water Supply	Cond. Monitoring	0.0606236	0.295356684	-19.350816	17.95402536	0.29536	-0.246218685	22519.75878	7777.398073	2.895538916
Bundaberg Water Supply	Contractors	0.3373071	0.007248956	0.10238096	0.033824108	0.00725	0.580781473	27107.3568	12562.13948	2.157861472
Bundaberg Water Supply	Customer Mgt	0.0078274	0.71070184	3.43481657	9.11490713	0.7107	0.088472574	-3246.225009	3029.923157	-1.07138856
Bundaberg Water Supply	Dam Safety	0.2241065	0.035004929	7.17507568	3.146763129	0.035	0.47339889	39499.80338	9361.141899	4.219549688
Bundaberg Water Supply	Emergency maint	0.002588	0.831330003	-6.9041672	31.94705222	0.83133	-0.050872321	1410.512248	2996.874187	0.470661149
Bundaberg Water Supply	Enviro Mgt	0.1757922	0.065742241	3.97167996	2.027013351	0.06574	0.419275759	3361.415733	6546.634504	0.513457064
Bundaberg Water Supply	Facility Mgt	0.0552464	0.318503097	0.20960774	0.204304783	0.3185	0.235045436	67.8782218	659.8420973	0.102870402
Bundaberg Water Supply	Indirects	0.0012267	0.883454978	-0.9276883	6.239269944	0.88345	-0.03502398	44182.01482	20150.93777	2.192553782
Bundaberg Water Supply	Labour	7.515E-05	0.971064031	-0.135083	3.672575096	0.97106	-0.00866917	29185.93207	11861.29673	2.460602135
Bundaberg Water Supply	Materials	0.0061424	0.742582633	-6.0913991	18.26301414	0.74258	-0.078373712	64617.94446	58983.96204	1.095517192
Bundaberg Water Supply	Metering	0.223388	0.035339213	-2.0517052	0.901676748	0.03534	-0.472639365	15619.78506	2912.140714	5.363677992
Bundaberg Water Supply	Other - Operations	0.0467362	0.359955007	-3.5593219	3.788878814	0.35996	-0.216185643	10723.15548	12236.92225	0.876295139
Bundaberg Water Supply	Overheads	0.0002355	0.948802152	0.21237315	3.261635226	0.9488	0.015345351	30873.60906	10534.08637	2.930829307
Bundaberg Water Supply	Sched/Deliver	0.0460158	0.363774398	1.23381679	1.324132925	0.36377	0.214512908	28663.9698	4276.545238	6.70259946
Bundaberg Water Supply	Scheduled corr	0.0692923	0.262143495	-20.882637	18.03903333	0.26214	-0.263234297	132402.3396	58260.57237	2.272589064
Bundaberg Water Supply	Scheme Mgt	0.0410352	0.391706724	4.74343505	5.404803082	0.39171	0.202571418	123723.9437	17455.86448	7.087815321
Bundaberg Water Supply	Servicing	0.1144628	0.144554234	1.84093413	1.206905115	0.14455	0.338323577	757.9251889	3897.935189	0.194442738
Bundaberg Water Supply	Water Mgt	0.0023358	0.839651079	0.42904495	2.089969419	0.83965	0.048330223	29822.99028	6749.963391	4.418244746
Bundaberg Water Supply	Weed Control	0.2581959	0.022167858	1.5321831	0.612130931	0.02217	0.508129835	2929.7333	1976.996093	1.481911527
Bundaberg Water Supply	Workplace H&S	0.0221139	0.531503587	0.04585894	0.071878583	0.5315	0.148707323	46.75339132	232.1458857	0.201396597
Bundaberg Water Supply	Electricity	0.3373071	0.007248956	0.10238096	0.033824108	0.00725	0.580781473	1339.585302	109.2415454	12.26259934
Bundaberg Water Supply	Other Renewals	0	0.819431712	-0.103061	0.444921965	0.81943	0	1910.29419	1436.962162	1.329397697
Burdekin Irrigation Distribution	Cond. Monitoring	0.002391	0.837792659	-0.6960502	3.351178604	0.83779	-0.048897529	119375.4289	26361.73583	4.528359955
Burdekin Irrigation Distribution	Contractors	0.6745904	9.02959E-06	8.99432567	1.472405697	9E-06	0.821334505	400774.2419	95648.14308	4.190089102
Burdekin Irrigation Distribution	Customer Mgt	1.814E-05	0.985780888	-0.0232721	1.287801898	0.98578	-0.004259376	15.99591177	6915.53712	0.00231304
Burdekin Irrigation Distribution	Dam Safety	0.1781497	0.063772749	3.26072627	1.650752539	0.06377	0.422077778	0	0	65535
Burdekin Irrigation Distribution	Emergency maint	0.1832176	0.059730908	-4.8713618	2.424285147	0.05973	-0.428039267	30570.33875	11958.29346	2.556413158
Burdekin Irrigation Distribution	Enviro Mgt	0.0984012	0.178036988	0.04644406	0.033136017	0.17804	0.313689714	348.3999448	1781.23359	0.195594753
Burdekin Irrigation Distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Burdekin Irrigation Distribution	Indirects	0.0011369	0.887773198	-0.0411398	0.287418298	0.88777	-0.033718216	50034.71261	15450.23113	3.238444278
Burdekin Irrigation Distribution	Labour	0.0005409	0.922471242	-0.0276454	0.280109673	0.92247	-0.023256342	66102.08177	15057.3545	4.390019624
Burdekin Irrigation Distribution	Materials	0.0006207	0.916960218	-0.0804347	0.760703218	0.91696	-0.024914789	97072.09573	40891.76174	2.373879031
Burdekin Irrigation Distribution	Metering	0.1094129	0.154303201	0.27860351	0.187350233	0.1543	0.330776229	10873.3634	10071.05124	1.079665185
Burdekin Irrigation Distribution	Other - Operations	0.0458872	0.364461729	0.8558851	0.919884592	0.36446	0.214212954	-23457.23542	49448.59003	-0.474376224
Burdekin Irrigation Distribution	Overheads	0.0536363	0.325863768	-0.3335477	0.330233588	0.32586	-0.231595176	98788.10025	17751.77607	5.564969942
Burdekin Irrigation Distribution	Sched/Deliver	0.2760987	0.01734729	2.5544205	0.974907992	0.01735	0.525450954	342868.2334	52406.38449	6.542489752
Burdekin Irrigation Distribution	Scheduled corr	0.001747	0.861107656	-0.5997215	3.378954313	0.86111	-0.041797599	567539.3608	181636.4009	3.124590434
Burdekin Irrigation Distribution	Scheme Mgt	0.1932298	0.052461703	-3.8821884	1.869727216	0.05246	-0.439579096	512437.5516	100507.5804	5.098496549
Burdekin Irrigation Distribution	Servicing	0.0002302	0.949382085	-0.0344484	0.535130038	0.94938	-0.015171315	137271.1314	28766.02792	4.771987701
Burdekin Irrigation Distribution	Water Mgt	0.1331812	0.113625241	-0.0015534	0.000934112	0.11363	-0.364939974	108.1799622	50.2133992	2.15440428
Burdekin Irrigation Distribution	Weed Control	0.1010299	0.172040003	2.30715802	1.62214184	0.17204	0.31785196	296819.9144	87198.5763	3.403953676
Burdekin Irrigation Distribution	Workplace H&S	0.0003663	0.936171646	0.01634011	0.20120969	0.93617	0.019137718	14873.29896	10816.06928	1.375111288
Burdekin Irrigation Distribution	Electricity	0.6745904	9.02959E-06	8.99432567	1.472405697	9E-06	0.821334505	194523.3608	79149.47844	2.457670785
Burdekin Irrigation Distribution	Other Renewals	0	0.888830194	-0.002026	0.014289734	0.88883	0	1918.006284	768.1476809	2.496923875
Burdekin Water Supply	Cond. Monitoring	0.2661576	0.019887402	1.02480341	0.401084852	0.01989	0.515904655	11593.41332	3345.683128	3.465185695
Burdekin Water Supply	Contractors	0.0248984	0.506426435	0.01830354	0.026998417	0.50643	0.157792163	9098.803313	9052.231258	1.005144815
Burdekin Water Supply	Customer Mgt	0.1810255	0.061447755	2.5648452	1.285849889	0.06145	0.425470873	24197.03977	14619.50878	1.655119891
Burdekin Water Supply	Dam Safety	0.4813211	0.000691952	0.64051076	0.156719126	0.00069	0.6937731	15765.91541	5082.673873	3.101893965
Burdekin Water Supply	Emergency maint	0.1305919	0.117464379	0.94960973	0.57751417	0.11746	0.361374997	3791.322218	2630.476188	1.44130642
Burdekin Water Supply	Enviro Mgt	0.2743721	0.017765535	0.39086208	0.149821537	0.01777	0.523805449	20563.01551	9492.521058	2.166233331
Burdekin Water Supply	Facility Mgt	9.678E-05	0.967165042	-0.0031628	0.075772152	0.96717	-0.009837868	89036.12557	4800.836817	18.54595958
Burdekin Water Supply	Indirects	0.1688647	0.071878749	0.27008648	0.141231987	0.07188	0.410931462	5985.724608	8948.296984	0.668923329
Burdekin Water Supply	Labour	0.1761801	0.065414103	0.23964282	0.122142224	0.06541	0.419738174	6762.924321	7738.791472	0.873899283
Burdekin Water Supply	Materials	0.001717	0.862296718	0.02447251	0.139086961	0.8623	0.041436456	12357.75315	8812.390619	1.402315635
Burdekin Water Supply	Metering	0.0155745	0.600116693	-0.0121598	0.022786283	0.60012	-0.124797673	5725.82004	1443.712797	3.966038157
Burdekin Water Supply	Other - Operations	0.0676914	0.267932023	0.23262917	0.203489021	0.26793	0.260175727	936.5115919	12892.83137	0.072638163
Burdekin Water Supply	Overheads	0.1517975	0.089495282	0.23304702	0.129844858	0.0895	0.389611988	9068.975521	8226.821563	1.102366868
Burdekin Water Supply	Sched/Deliver	0.2704802	0.018743049	0.40172505	0.155504693	0.01874	0.520077077	70673.97681	9852.599318	7.173130108
Burdekin Water Supply	Scheduled corr	0.2711591	0.018568984	1.02874606	0.397535726	0.01857	0.520729432	52081.13713	25187.40844	2.06774497
Burdekin Water Supply	Scheme Mgt	0.1027993	0.168124577	1.39476539	0.971213503	0.16812	0.320623246	245088.3598	61534.97554	3.982911469
Burdekin Water Supply	Servicing	0.3774792	0.003948575	0.35602108	0.107763056	0.00395	0.614393346	21120.51511	6827.743868	3.093337347
Burdekin Water Supply	Water Mgt	0.015423	0.601909254	0.25833079	0.486497619	0.60191	0.124189263	70855.20675	30823.93211	2.298707592
Burdekin Water Supply	Weed Control	0.0034741	0.805035744	-0.0182255	0.072755791	0.80504	-0.058941357	5875.40296	4609.723645	1.274567287
Burdekin Water Supply	Workplace H&S	0.0080303	0.70713338	0.008229	0.021557334	0.70713	0.089611748	886.0311282	1365.848018	0.648704041
Burdekin Water Supply	Electricity	0.0248984	0.506426435	0.01830354	0.026998417	0.50643	0.157792163	16073.13563	1710.58877	9.396259297
Burdekin Water Supply	Other Renewals	0	0.032749634	0.02613903	0.011300593	0.03275	0	116.6998804	715.9926612	0.16299033
Callide Water Supply	Cond. Monitoring	0.0006886	0.912556714	-0.2782699	2.498644033	0.91256	-0.026240733	30047.52724	6882.416086	4.365839971
Callide Water Supply	Contractors	0.0832131	0.217417247	-0.2738822	0.214272275	0.21742	-0.288466802	7689.667619	7961.105367	0.965904515
Callide Water Supply	Customer Mgt	0.101146	0.171780073	-24.790825	17.41906937	0.17178	-0.318034589	-2890.122066	2180.466609	-1.325460364
Callide Water Supply	Dam Safety	0.4816577	0.000687722	17.2917172	4.228058385	0.00069	0.694015608	42863.71693	17637.28034	2.430290618

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficient	Standard Error - Intercept	t-Stat - Intercept
Callide Water Supply	Emergency maint	0.0039367	0.79271456	2.39193564	8.967885311	0.79271	0.062743199	87.60299605	116.8554204	0.749669941
Callide Water Supply	Enviro Mgt	0.0342696	0.434586601	-1.8812473	2.353872532	0.43459	-0.185120554	11870.75539	5219.879624	2.274143513
Callide Water Supply	Facility Mgt	0.114644	0.144216737	2.12486371	1.391804441	0.14422	0.338591138	8445.940162	3086.425259	2.736479731
Callide Water Supply	Indirects	0.0740316	0.24583644	2.37542106	1.980130117	0.24584	0.272087564	1829.248278	4391.079257	0.416582842
Callide Water Supply	Labour	0.0060794	0.743863455	0.88139743	2.656314642	0.74386	0.077970775	4081.052064	5890.566495	0.692811475
Callide Water Supply	Materials	0.0003254	0.939829697	0.08208644	1.072390824	0.93983	0.018038957	1705.721527	2378.102865	0.717261458
Callide Water Supply	Metering	0.0235987	0.517875132	-0.7279255	1.103622072	0.51788	-0.153618832	5019.966245	2447.360377	2.051175745
Callide Water Supply	Other - Operations	0.0140054	0.619240784	-1.4710783	2.909302153	0.61924	-0.118344467	6605.541353	6451.584282	1.023863452
Callide Water Supply	Overheads	0.0039454	0.792491831	0.75158398	2.814750053	0.79249	0.062812056	5615.779355	6241.908279	0.899689503
Callide Water Supply	Sched/Deliver	0.0677831	0.267596481	-1.8733025	1.637455222	0.2676	-0.260351881	10426.87277	3631.173325	2.87148859
Callide Water Supply	Scheduled corr	0.0005771	0.919924226	-0.2555343	2.506489644	0.91992	-0.024022691	11841.69973	5558.318915	2.130446257
Callide Water Supply	Scheme Mgt	0.169894	0.070932821	-14.146119	7.37019303	0.07093	-0.412181969	111714.3538	16343.92683	6.835221118
Callide Water Supply	Servicing	0.4493834	0.001218858	14.9368888	3.897086071	0.00122	0.670360679	-14611.76499	8642.065318	-1.690772339
Callide Water Supply	Water Mgt	0.0347154	0.431560775	-2.9696806	3.690965324	0.43156	-0.186320745	20821.50008	8184.977912	2.543867596
Callide Water Supply	Weed Control	0.2232258	0.035415086	5.66136016	2.489199817	0.03542	0.472467754	-1106.292419	5519.977496	-0.20041611
Callide Water Supply	Workplace H&S	0.0007253	0.910266449	-0.0081242	0.071079136	0.91027	-0.026930647	114.2218611	157.6230349	0.724652086
Callide Water Supply	Electricity	0.0832131	0.217417247	-0.2738822	0.214272275	0.21742	-0.288466802	1783.881919	475.1639971	3.754244702
Callide Water Supply	Other Renewals	0	0.885770635	-0.0640723	0.439728625	0.88577	0	900.3115907	975.1294753	0.923273897
Chinchilla Weir Water Supply	Cond. Monitoring	0.006066	0.744137631	-1.0360266	3.125806728	0.74414	-0.077884547	1001.518665	289.9140858	3.454536066
Chinchilla Weir Water Supply	Contractors	1	#NUM!	0	0	#NUM!	0	503.4885903	601.3441396	0.837271967
Chinchilla Weir Water Supply	Customer Mgt	0.0212979	0.539260435	-3.2962192	5.266678081	0.53926	-0.145937978	1581.260376	629.8682294	2.510462192
Chinchilla Weir Water Supply	Dam Safety	0.0395021	0.400886337	-1.9534477	2.270406405	0.40089	-0.198751378	667.5280891	371.3144182	1.79774352
Chinchilla Weir Water Supply	Emergency maint	0.0035265	0.80359673	-1.7879342	7.08392369	0.8036	-0.05938466	-55.39465128	164.8625608	-0.33600504
Chinchilla Weir Water Supply	Enviro Mgt	0.1246511	0.126778906	-2.7093949	1.692304721	0.12678	-0.353059643	5984.96232	1072.896847	5.578320353
Chinchilla Weir Water Supply	Facility Mgt	0.0001109	0.964847535	-0.0007263	0.016253212	0.96485	-0.010532627	5.696882862	10.3043029	0.55286446
Chinchilla Weir Water Supply	Indirects	0.0012487	0.882422684	-0.1018492	0.678936669	0.88242	-0.03533627	409.281143	430.4360804	0.950852314
Chinchilla Weir Water Supply	Labour	0.1153865	0.142841647	-1.2872382	0.840082658	0.14284	-0.33968584	1034.162791	532.6003192	1.941723942
Chinchilla Weir Water Supply	Materials	2.06E-06	0.995207966	0.03747917	6.15429802	0.99521	0.001435406	2182.973756	3901.736407	0.559487758
Chinchilla Weir Water Supply	Metering	0.0809641	0.224021072	1.14044799	0.905647525	0.22402	0.284541925	845.5517349	574.1675017	1.472656903
Chinchilla Weir Water Supply	Other - Operations	0.0393094	0.402061032	0.58571224	0.682482495	0.40206	0.198266025	-81.96890148	432.6840836	-0.18944284
Chinchilla Weir Water Supply	Overheads	0.0001512	0.958970127	-0.0409013	0.784043686	0.95897	-0.012294976	479.5317969	497.0724175	0.964712142
Chinchilla Weir Water Supply	Sched/Deliver	0.0264536	0.493266695	2.19527062	3.138973307	0.49327	0.162645673	2138.137245	1990.063918	1.074406317
Chinchilla Weir Water Supply	Scheduled corr	0.0103321	0.669805056	-1.3659624	3.151038293	0.66981	-0.101646767	3023.714204	1997.712946	1.513587931
Chinchilla Weir Water Supply	Scheme Mgt	0.0197	0.555049418	-1.6597599	2.759661835	0.55505	-0.140356539	9022.428513	1749.585902	5.156893699
Chinchilla Weir Water Supply	Servicing	0.0170219	0.583517823	-1.1693426	2.094467935	0.58352	-0.13046792	2881.499528	1327.862539	2.170028481
Chinchilla Weir Water Supply	Water Mgt	0.0218973	0.533543622	-0.36671	0.577675456	0.53354	-0.147977195	536.7269468	366.2379286	1.465514369
Chinchilla Weir Water Supply	Weed Control	1	#NUM!	0	0	#NUM!	0	0	0	65535
Chinchilla Weir Water Supply	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Chinchilla Weir Water Supply	Electricity	1	#NUM!	0	0	#NUM!	0	0	0	65535
Chinchilla Weir Water Supply	Other Renewals	0	0.437010269	0.00438994	0.005522413	0.43701	0	-0.527661738	3.501130606	-0.150711812
Cunnamulla Weir Water Supply	Cond. Monitoring	0.0032591	0.811057617	-0.7518399	3.099084744	0.81106	-0.057088259	-71.34154171	827.6356316	-0.086199215
Cunnamulla Weir Water Supply	Contractors	1	#NUM!	0	0	#NUM!	0	0	0	65535
Cunnamulla Weir Water Supply	Customer Mgt	0.0022553	0.84240659	1.04082139	5.16002531	0.84241	0.047489528	10.42121342	956.0056101	0.010900787
Cunnamulla Weir Water Supply	Dam Safety	0.0933644	0.190162825	3.60294577	2.646349094	0.19016	0.30555593	16.74378267	44.170266	0.379073621
Cunnamulla Weir Water Supply	Emergency maint	0.0683921	0.265380421	6.0800545	5.289138408	0.26538	0.261518777	1189.905861	1382.666602	0.860587693
Cunnamulla Weir Water Supply	Enviro Mgt	0.385137	0.003503969	3.49353966	1.040425528	0.0035	0.620594057	1117.917771	464.705737	2.405646589
Cunnamulla Weir Water Supply	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Cunnamulla Weir Water Supply	Indirects	0.0307156	0.459868674	0.62893202	0.832747808	0.45987	0.175258691	104.8295147	371.9465485	0.281840268
Cunnamulla Weir Water Supply	Labour	0.017387	0.579473804	-0.3824236	0.6776224	0.57947	-0.131859663	369.8937154	302.6598332	1.222143393
Cunnamulla Weir Water Supply	Materials	0.1079903	0.15717179	6.02375205	4.080591949	0.15717	0.328618831	-1149.685717	1822.595119	-0.630796004
Cunnamulla Weir Water Supply	Metering	0.0084698	0.699573478	0.23016761	0.586982358	0.69957	0.092031369	589.4835026	262.1754869	2.24843104
Cunnamulla Weir Water Supply	Other - Operations	0.0159739	0.595442331	-0.0287875	0.053255652	0.59544	-0.126387738	23.57615906	23.78662018	0.991152122
Cunnamulla Weir Water Supply	Overheads	0.0026849	0.82824435	-0.190206	0.864047242	0.82824	-0.051816319	383.4877538	385.9264306	0.99368098
Cunnamulla Weir Water Supply	Sched/Deliver	0.1577372	0.082928329	3.61964869	1.971454956	0.08293	0.397161472	1014.096082	880.5497402	1.151662462
Cunnamulla Weir Water Supply	Scheduled corr	0.0058203	0.749211011	0.18152269	0.559185312	0.74921	0.076290657	132.475475	249.7599451	0.530411211
Cunnamulla Weir Water Supply	Scheme Mgt	0.1448536	0.097829355	-8.4380631	4.832392303	0.09783	-0.380596316	7467.021171	2158.386512	3.45953847
Cunnamulla Weir Water Supply	Servicing	0.009136	0.688528241	0.5493915	1.348575752	0.68853	0.095582277	324.1016907	602.3409382	0.538070169
Cunnamulla Weir Water Supply	Water Mgt	0.1956796	0.050817385	-0.6673642	0.318910152	0.05082	-0.442356914	405.5522913	142.4411198	2.847157421
Cunnamulla Weir Water Supply	Weed Control	1	#NUM!	0	0	#NUM!	0	0	0	65535
Cunnamulla Weir Water Supply	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Cunnamulla Weir Water Supply	Electricity	1	#NUM!	0	0	#NUM!	0	0	0	65535
Cunnamulla Weir Water Supply	Other Renewals	0	#NUM!	0	0	#NUM!	0	0	0	65535
Dawson Irrigation Distribution	Cond. Monitoring	0.1264794	0.123834806	-22.870942	14.16689046	0.12383	-0.355639389	8199.246134	1442.763702	5.683013874
Dawson Irrigation Distribution	Contractors	0.6396234	2.31515E-05	6.44864697	1.140902256	2.3E-05	0.799764611	64457.3707	25397.92448	2.53789914
Dawson Irrigation Distribution	Customer Mgt	0.3000985	0.01240459	8.87061175	3.193036411	0.0124	0.547812466	1949.897169	2183.607779	0.892970426
Dawson Irrigation Distribution	Dam Safety	0.005435	0.757407176	-1.3492281	4.301968584	0.75741	-0.073722233	0	0	65535
Dawson Irrigation Distribution	Emergency maint	0.166659	0.073947483	-20.87448	11.00212007	0.07395	-0.40823891	325.3024467	617.370981	0.526915674
Dawson Irrigation Distribution	Enviro Mgt	0.0200102	0.551919234	-0.0306652	0.050581861	0.55192	-0.141457316	168.0563808	138.0705703	1.217177422
Dawson Irrigation Distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Dawson Irrigation Distribution	Indirects	0.0143256	0.615234176	0.37565577	0.734452616	0.61523	0.119689696	4595.531232	2004.795588	2.292269226
Dawson Irrigation Distribution	Labour	0.042101	0.385493181	-0.9546004	1.073244959	0.38549	-0.205185362	9005.43504	2929.578725	3.073969292
Dawson Irrigation Distribution	Materials	0.0364099	0.420333226	-1.2229995	1.482950679	0.42033	-0.190813678	8622.292448	4047.930273	2.130049647
Dawson Irrigation Distribution	Metering	1	#NUM!	0	0	#NUM!	0	0	0	65535
Dawson Irrigation Distribution	Other - Operations	0.1791	0.062995094	1.16013106	0.585420688	0.063	0.423202136	-1380.797086	1597.991193	-0.864083038
Dawson Irrigation Distribution	Overheads	0.1066993	0.15982354	-2.0358501	1.388441308	0.15982	-0.32664863	14073.85648	3789.953153	3.713464498
Dawson Irrigation Distribution	Sched/Deliver	0.6045373	5.47302E-05	11.5033321	2.192949346	5.5E-05	0.77751998	23182.3337	5985.975238	3.872774741
Dawson Irrigation Distribution	Scheduled corr	0.1284443	0.120748264	-23.129083	14.20078113	0.12075	-0.35839133	148693.8331	38763.10427	3.835962984
Dawson Irrigation Distribution	Scheme Mgt	0.0761741	0.238847946	-3.5960459	2.95175458	0.23885	-0.275996637	35485.29607	8057.244849	4.404147663
Dawson Irrigation Distribution	Servicing	0.0008108	0.905143743	-0.0329951	0.273011293	0.90514	-0.02847455	3907.958211	745.2241634	5.244003621
Dawson Irrigation Distribution	Water Mgt	0.0225624	0.527322394	0.08478305	0.131529967	0.52732	0.150207842	40.27851656	359.030238	0.112186976

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficien	Standard Error Intercept	t-Stat - Intercept
Dawson Irrigation Distribution	Weed Control	0.0023258	0.839991985	-0.8667641	4.231322593	0.83999	-0.048226185	81343.36238	11550.01246	7.042707762
Dawson Irrigation Distribution	Workplace H&S	0.0122937	0.641667455	0.01153415	0.024368106	0.64167	0.110877043	50.37862709	66.51630018	0.757387692
Dawson Irrigation Distribution	Electricity	0.6396234	2.31515E-05	6.44864697	1.140902256	2.3E-05	0.799764611	6338.790095	3114.25919	2.035408651
Dawson Irrigation Distribution	Other Renewals	0	0.355515441	-0.4631104	0.488337555	0.35552	0	2466.578196	1332.988616	1.850412049
Dawson Water Supply	Cond. Monitoring	0.0269056	0.489545791	-1.1290166	1.600367864	0.48955	-0.164029408	11369.77022	1906.217731	5.964570595
Dawson Water Supply	Contractors	0.0403885	0.395543272	-0.5945999	0.683136423	0.39554	-0.200968917	6080.249618	9126.30777	0.666233243
Dawson Water Supply	Customer Mgt	0.0451993	0.368167254	-2.4749226	2.681116268	0.36817	-0.212601381	2313.100996	1738.6853	1.330373585
Dawson Water Supply	Dam Safety	0.1244957	0.127032521	1.33150997	0.832262313	0.12703	0.352839417	7046.744988	2511.017824	2.806330135
Dawson Water Supply	Emergency maint	6.191E-05	0.973737233	-0.0635787	1.904570535	0.97374	-0.007868005	2835.86023	1655.736686	1.712748321
Dawson Water Supply	Enviro Mgt	0.051299	0.336932309	0.40110632	0.406568224	0.33693	0.226492847	16182.54592	2869.580089	5.639342837
Dawson Water Supply	Facility Mgt	0.1049013	0.163595385	0.21043702	0.14488748	0.1636	0.323884737	177.2861842	1022.623517	0.173364079
Dawson Water Supply	Indirects	0.017634	0.576768629	-0.200297	0.352370625	0.57677	-0.132792968	8001.992789	2487.050557	3.217462857
Dawson Water Supply	Labour	0.0182839	0.569765525	-0.1709628	0.295273279	0.56977	-0.135217913	6520.866	2084.054467	3.128932618
Dawson Water Supply	Materials	0.0101928	0.671917993	0.20546713	0.477237514	0.67192	0.100959417	5317.513874	3368.367682	1.578661944
Dawson Water Supply	Metering	0.0812469	0.223178567	-0.3851158	0.305246768	0.22318	-0.285038402	9192.634502	2154.447876	4.266816851
Dawson Water Supply	Other - Operations	0.0446261	0.371293397	0.05887171	0.064204064	0.37129	0.211248949	-134.391643	453.1556858	-0.29656837
Dawson Water Supply	Overheads	0.0131498	0.630229752	-0.1707738	0.34869947	0.63023	-0.114672513	7676.342167	2461.139353	3.119019716
Dawson Water Supply	Sched/Deliver	0.1796107	0.062581107	2.47185486	1.245175808	0.06258	0.423804971	15809.71685	8788.516895	1.798906122
Dawson Water Supply	Scheduled corr	0.0186925	0.565445104	-0.963272	1.645060651	0.56545	-0.136720407	50756.85312	11610.92532	4.371473565
Dawson Water Supply	Scheme Mgt	0.1509636	0.090457599	-4.4607354	2.493430639	0.09046	-0.388540309	126410.0908	17598.76569	7.182895266
Dawson Water Supply	Servicing	0.0788368	0.230474212	0.86172746	0.694284409	0.23047	0.280778955	12856.3523	4900.296179	2.623586785
Dawson Water Supply	Water Mgt	0.0571516	0.310056593	-0.8178354	0.78295427	0.31006	-0.239064009	13224.84046	5526.132765	2.393145627
Dawson Water Supply	Weed Control	0.0726854	0.250346764	0.29262398	0.246356199	0.25035	0.26960237	6849.317225	1738.795118	3.939116895
Dawson Water Supply	Workplace H&S	0.0015764	0.868004237	-0.0626082	0.371377965	0.868	-0.039704152	4066.097777	2621.205374	1.551232047
Dawson Water Supply	Electricity	0.0403885	0.395543272	-0.5945999	0.683136423	0.39554	-0.200968917	9082.529209	4821.613108	1.883711738
Dawson Water Supply	Other Renewals	0	0.70421699	-0.0720124	0.186690924	0.70422	0	1873.207815	1317.674441	1.421601389
Emerald Irrigation distribution	Cond. Monitoring	0.0006244	0.916718042	-0.2012907	1.898128868	0.91672	-0.024987693	22535.75375	3899.260754	5.779493902
Emerald Irrigation distribution	Contractors	0.0172349	0.581151841	0.22226157	0.395593289	0.58115	0.131281667	205764.6063	99685.99044	2.064127621
Emerald Irrigation distribution	Customer Mgt	0.3233806	0.008886835	2.8531064	0.972740457	0.00889	0.568665612	-1282.462731	1334.250438	-0.961185918
Emerald Irrigation distribution	Dam Safety	0.0395975	0.400306728	0.49335153	0.57268146	0.40031	0.198991144	0	0	65535
Emerald Irrigation distribution	Emergency maint	0.0797398	0.22770997	-9.1175524	7.300621199	0.22771	-0.282382336	8234.070064	6728.2865	1.223798966
Emerald Irrigation distribution	Enviro Mgt	0.1803178	0.062012109	0.1855054	0.093223138	0.06201	0.424638459	-599.0669193	1595.860487	-0.375388027
Emerald Irrigation distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Emerald Irrigation distribution	Indirects	0.0048422	0.770658713	-0.1187034	0.401098616	0.77066	-0.069585974	13952.88896	6866.293566	2.032084534
Emerald Irrigation distribution	Labour	0.0014664	0.872656207	-0.0763286	0.469467909	0.87266	-0.038293636	15290.54323	8036.688118	1.902592586
Emerald Irrigation distribution	Materials	0.1215323	0.131967623	-1.1951293	0.757348349	0.13197	-0.348614833	44803.35375	12964.83181	3.455760506
Emerald Irrigation distribution	Metering	0.0244432	0.510387412	0.04345117	0.0647012	0.51039	0.156343246	2543.186011	1107.60151	2.296120029
Emerald Irrigation distribution	Other - Operations	0.0232314	0.521190523	-0.1798626	0.274892393	0.52119	-0.152418487	1875.961534	4705.80499	0.39864838
Emerald Irrigation distribution	Overheads	0.0333676	0.440804265	-0.5615272	0.71236496	0.4408	-0.182668071	30746.91544	12194.77392	2.52131902
Emerald Irrigation distribution	Sched/Deliver	0.4073514	0.002459794	2.66769916	0.758428412	0.00246	0.63824089	82701.11015	12983.32111	6.369796254
Emerald Irrigation distribution	Scheduled corr	0.0009145	0.899290348	-0.212522	1.655721196	0.89929	-0.030240006	111969.7321	28343.82206	3.950410494
Emerald Irrigation distribution	Scheme Mgt	0.0008152	0.904889595	-0.1424948	1.175876838	0.90489	-0.028551174	73570.1614	20129.50244	3.654842519
Emerald Irrigation distribution	Servicing	0.0374335	0.413751654	-0.2394021	0.28613887	0.41375	-0.193477368	26370.71874	4898.330245	5.383613889
Emerald Irrigation distribution	Water Mgt	0.0046733	0.774594046	0.00322818	0.011104378	0.77459	0.068361351	91.42547039	190.0926962	0.480952042
Emerald Irrigation distribution	Weed Control	0.1451628	0.097442289	1.11292573	0.636566836	0.09744	0.381002331	67968.90467	10897.20732	6.237277375
Emerald Irrigation distribution	Workplace H&S	0.0299396	0.46568291	-0.004221	0.005663164	0.46568	-0.173030558	114.654975	96.94610854	1.182667121
Emerald Irrigation distribution	Electricity	0.0172349	0.581151841	0.22226157	0.395593289	0.58115	0.131281667	16640.51781	6772.049428	2.457235138
Emerald Irrigation distribution	Other Renewals	0	0.450818591	-0.1425862	0.184981909	0.45082	0	4580.794643	3166.652893	1.446573021
Eton Irrigation Distribution	Cond. Monitoring	0.0687569	0.264063104	3.36569936	2.919527166	0.26406	0.262215334	14026.12349	2853.810819	4.914875015
Eton Irrigation Distribution	Contractors	0.9358645	3.50817E-12	9.9995893	0.617005148	3.5E-12	0.967400882	50676.47182	23562.93938	2.15068549
Eton Irrigation Distribution	Customer Mgt	0.4659005	0.000912949	4.28980816	1.082595193	0.00091	0.682569062	2317.088018	1208.285172	1.917666518
Eton Irrigation Distribution	Dam Safety	0.500295	0.000486881	6.42101506	1.512555032	0.00049	0.707315361	0	0	65535
Eton Irrigation Distribution	Emergency maint	0.0053849	0.758496099	-1.7189537	5.506407328	0.7585	-0.073381592	0	0	65535
Eton Irrigation Distribution	Enviro Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Eton Irrigation Distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Eton Irrigation Distribution	Indirects	0.0476333	0.355272162	-0.1791062	0.188764905	0.35527	-0.218250496	5015.655729	990.9040169	5.061696838
Eton Irrigation Distribution	Labour	0.0395422	0.400642684	-0.261283	0.303517508	0.40064	-0.198852146	6602.640033	1593.287254	4.144036185
Eton Irrigation Distribution	Materials	0.0707134	0.257126469	-0.3303022	0.282227439	0.25713	-0.265919883	4760.663382	1481.526998	3.213349056
Eton Irrigation Distribution	Metering	0.0001636	0.957321559	-0.0139742	0.257517087	0.95732	-0.012789407	7203.039538	1351.812276	5.328431816
Eton Irrigation Distribution	Other - Operations	0.018711	0.565250847	0.35828357	0.611562505	0.56525	0.136788081	3990.992872	3210.341149	1.24316784
Eton Irrigation Distribution	Overheads	0.0274062	0.485478036	-0.379849	0.533354972	0.48548	-0.165548065	10434.87539	2799.797895	3.727010226
Eton Irrigation Distribution	Sched/Deliver	0.4321539	0.001634359	5.12813619	1.385540981	0.00163	0.657384158	36519.4545	7273.270011	5.02105029
Eton Irrigation Distribution	Scheduled corr	0.0687569	0.264063104	3.36569936	2.919527166	0.26406	0.262215334	92627.97507	15325.78947	6.043928454
Eton Irrigation Distribution	Scheme Mgt	0.0244396	0.51041886	-1.0053735	1.497169678	0.51042	-0.156331764	49645.29874	7859.254593	6.316794825
Eton Irrigation Distribution	Servicing	0.1960981	0.050541535	0.62994478	0.300629155	0.05054	0.442829625	10357.17078	1578.125111	6.56295924
Eton Irrigation Distribution	Water Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Eton Irrigation Distribution	Weed Control	0.5641929	0.000135112	5.82926887	1.207566773	0.00014	0.751127769	48737.17263	6339.010765	7.688450839
Eton Irrigation Distribution	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Eton Irrigation Distribution	Electricity	0.9358645	3.50817E-12	9.9995893	0.617005148	3.5E-12	0.967400882	3960.19777	3238.911802	1.222693921
Eton Irrigation Distribution	Other Renewals	0	0.219058567	0.24871224	0.195305875	0.21906	0	676.8565359	1025.240236	0.660193106
Eton Water Supply	Cond. Monitoring	0.0916901	0.194388457	126.95043	94.17889684	0.19439	0.302803811	30988.67051	4414.059996	7.020446152
Eton Water Supply	Contractors	0.0001948	0.953426466	7.37673827	124.5571233	0.95343	0.013957809	71959.52697	27230.69562	2.642588642
Eton Water Supply	Customer Mgt	0.0726361	0.250513894	-196.90729	165.8343206	0.25051	-0.269510833	4363.888482	1619.472684	2.694635435
Eton Water Supply	Dam Safety	0.02282	0.524946425	45.948488	70.87028686	0.52495	0.151062985	52128.68393	13955.0532	3.735470097
Eton Water Supply	Emergency maint	0.0439053	0.375274682	-512.89038	564.1315264	0.37527	-0.209535875	0	0	65535
Eton Water Supply	Enviro Mgt	0.2144332	0.039767832	82.6739092	37.29733192	0.03977	0.463069327	11602.14306	3197.64479	3.628340175
Eton Water Supply	Facility Mgt	0.0089387	0.691750133	8.26918313	20.52297705	0.69175	0.094544499	24389.87999	1759.514348	13.86171134
Eton Water Supply	Indirects	0.044902	0.369784461	-91.87391	99.87275737	0.36978	-0.211900934	31984.10563	8562.47849	3.735379384
Eton Water Supply	Labour	0.029158	0.471653895	-113.32197	154.125187	0.47165	-0.170757006	33010.72431	13213.74951	2.498210239
Eton Water Supply	Materials	0.0275852	0.484035683	-78.066154	109.2480978	0.48404	-0.166088062	17484.0034	9366.262754	1.866700076

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficient	Standard Error - Intercept	t-Stat - Intercept
Eton Water Supply	Metering	0.0027465	0.826314001	0.19128459	0.859122607	0.82631	0.052407249	289.4440111	73.65591012	3.929678021
Eton Water Supply	Other - Operations	0.1031778	0.167299288	-47.098057	32.72855264	0.1673	-0.321213004	5681.960871	2805.945639	2.024971829
Eton Water Supply	Overheads	0.0635844	0.283481069	-98.078449	88.71488447	0.28348	-0.252159407	35601.33184	7605.87081	4.68076999
Eton Water Supply	Sched/Deliver	0.0076726	0.713460039	-11.927714	31.97255968	0.71346	-0.087593332	20813.39951	2741.131433	7.59299582
Eton Water Supply	Scheduled corr	0.0916901	0.194388457	126.95043	94.17889684	0.19439	0.302803811	47689.49515	8074.321763	5.906315918
Eton Water Supply	Scheme Mgt	0.0522922	0.3321719	-126.92867	127.3626474	0.33217	-0.228674959	82163.43204	10919.29328	7.52461079
Eton Water Supply	Servicing	0.072796	0.249972854	-15.561594	13.09036583	0.24997	-0.269807302	7310.209378	1122.287787	6.513667406
Eton Water Supply	Water Mgt	0.0776734	0.234091559	15.2976773	12.42497263	0.23409	0.278699486	3037.997889	1065.24105	2.851934677
Eton Water Supply	Weed Control	0.0214819	0.537493439	-21.182927	33.69747188	0.53749	-0.14656721	22383.63609	2889.01484	7.747843932
Eton Water Supply	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Eton Water Supply	Electricity	0.0001948	0.953426466	7.37673827	124.5571233	0.95343	0.013957809	39588.77219	10678.76483	3.707242629
Eton Water Supply	Other Renewals	0	0.790102958	-10.892968	40.31898677	0.7901	0	4745.302441	3456.702969	1.372782818
Lower Fitzroy Water Supply	Cond. Monitoring	0.1585138	0.082105757	97.0941492	52.72866452	0.08211	0.398137913	9995.599407	1257.774565	7.94705163
Lower Fitzroy Water Supply	Contractors	5.288E-05	0.975726786	-0.0145465	0.471486527	0.97573	-0.007271784	1988.577548	1164.931162	1.707034384
Lower Fitzroy Water Supply	Customer Mgt	0.0053577	0.759088837	17.0562183	54.7761194	0.75909	0.073196227	45.70227615	36.31473702	1.258504946
Lower Fitzroy Water Supply	Dam Safety	0.1250254	0.12617045	20.8000915	12.96963152	0.12617	0.353589276	756.4967536	524.0072608	1.443676091
Lower Fitzroy Water Supply	Emergency maint	0.0011793	0.885715232	-3.4087015	23.38251344	0.88572	-0.034340397	-36.09863572	60.37318011	-0.597925033
Lower Fitzroy Water Supply	Enviro Mgt	0.0033544	0.808362808	-2.171778	8.823532937	0.80836	-0.057917132	6643.795891	905.0989676	7.340408208
Lower Fitzroy Water Supply	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Lower Fitzroy Water Supply	Indirects	0.0002647	0.945718997	0.37507075	5.432660846	0.94572	0.016270723	1129.830495	557.2706259	2.02743594
Lower Fitzroy Water Supply	Labour	0.0166757	0.58740396	1.92956032	3.492437327	0.5874	0.129134378	815.6410507	358.2466844	2.276758129
Lower Fitzroy Water Supply	Materials	0.0962541	0.183101413	6.66582331	4.814278598	0.1831	0.31024837	822.8231072	493.8383094	1.666179176
Lower Fitzroy Water Supply	Metering	2.721E-05	0.982586668	-0.0618986	2.796872226	0.98259	-0.00521634	1147.174981	286.8971173	3.998558759
Lower Fitzroy Water Supply	Other - Operations	0.5609448	0.000144803	4.46305951	0.930670505	0.00014	0.748962462	32.88720965	95.46617207	0.344490713
Lower Fitzroy Water Supply	Overheads	0.0534715	0.326629073	4.12605124	4.091701082	0.32663	0.231239119	1025.811416	419.7178671	2.444049911
Lower Fitzroy Water Supply	Sched/Deliver	0.0294433	0.469460816	25.2698299	34.19665727	0.46946	0.171590357	4801.243637	3507.819307	1.368726042
Lower Fitzroy Water Supply	Scheduled corr	0.1485908	0.093252228	93.008954	52.47611305	0.09325	0.385474816	18922.39778	5382.886434	3.515288315
Lower Fitzroy Water Supply	Scheme Mgt	0.0177295	0.575729153	-12.539928	22.00018458	0.57573	-0.133152096	13174.01707	2256.731458	5.837653845
Lower Fitzroy Water Supply	Servicing	0.1647812	0.075754588	10.6979087	5.676869585	0.07575	0.40593252	2142.01392	582.3210313	3.678407279
Lower Fitzroy Water Supply	Water Mgt	0.0005677	0.920576021	-2.0566639	20.33960316	0.92058	-0.023826557	3975.713705	2086.3926	1.905544386
Lower Fitzroy Water Supply	Weed Control	0.0041782	0.786589128	-0.333349	1.213001795	0.78659	-0.064638651	410.7218587	124.4271065	3.300903398
Lower Fitzroy Water Supply	Workplace H&S	0.006838	0.728896411	-0.1982769	0.563223319	0.7289	-0.082692358	59.98020193	57.7742326	1.038182581
Lower Fitzroy Water Supply	Electricity	5.288E-05	0.975726786	-0.0145465	0.471486527	0.97573	-0.007271784	245.9155611	48.36407043	5.084674613
Lower Fitzroy Water Supply	Other Renewals	0	0.631008287	1.02390507	2.09548966	0.63101	0	312.3187569	214.9508073	1.452977827
Lower Mary Irrigation Distribution	Cond. Monitoring	0.0224073	0.528761475	-1.9340817	3.011081436	0.52876	-0.149690772	33435.42078	6729.649829	4.968374527
Lower Mary Irrigation Distribution	Contractors	0.4976727	0.000511485	13.2253094	3.131778608	0.00051	0.705459226	7511.384162	3232.26826	2.323873997
Lower Mary Irrigation Distribution	Customer Mgt	0.0965455	0.182405072	-4.8786613	3.517641652	0.18241	-0.310717684	368.1359425	266.6216377	1.380742935
Lower Mary Irrigation Distribution	Dam Safety	0.0322323	0.448818622	-3.3846816	4.371411879	0.44882	-0.179533462	0	0	65535
Lower Mary Irrigation Distribution	Emergency maint	0.052558	0.330912401	-10.658142	10.66601137	0.33091	-0.229255379	6708.986147	1621.381314	4.137821306
Lower Mary Irrigation Distribution	Enviro Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Lower Mary Irrigation Distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Lower Mary Irrigation Distribution	Indirects	0.0783859	0.231868788	-1.0406986	0.841093654	0.23187	-0.279974779	9227.541227	1407.339047	6.556729346
Lower Mary Irrigation Distribution	Labour	0.0582615	0.305262672	-1.5773429	1.494734811	0.30526	-0.241374208	10853.45729	2501.027865	4.339598707
Lower Mary Irrigation Distribution	Materials	0.0336107	0.439116068	-5.0374021	6.366603326	0.43912	-0.183332153	21353.11716	10652.76075	2.004467919
Lower Mary Irrigation Distribution	Metering	0.1807991	0.061627777	-0.2696471	0.135287199	0.06163	-0.425204717	1836.7279	226.3659429	8.113976322
Lower Mary Irrigation Distribution	Other - Operations	0.0525749	0.330832578	0.0128726	0.012879919	0.33083	0.229292208	12.51822293	21.55100476	0.580864932
Lower Mary Irrigation Distribution	Overheads	0.0526604	0.33042891	-1.8259384	1.825410955	0.33043	-0.229478534	13915.10891	3054.323501	4.555872652
Lower Mary Irrigation Distribution	Sched/Deliver	0.0026139	0.830499005	0.29615772	1.363554775	0.8305	0.051126477	15303.74048	2281.53413	6.707653537
Lower Mary Irrigation Distribution	Scheduled corr	0.0833217	0.217104006	-3.6252466	2.834202321	0.2171	-0.288654903	31445.89921	4742.258577	6.630996327
Lower Mary Irrigation Distribution	Scheme Mgt	0.0956336	0.184593392	-4.9514506	3.588914294	0.18459	-0.30924687	28547.71338	6005.061624	4.753941785
Lower Mary Irrigation Distribution	Servicing	0.0106176	0.665524343	-0.3114313	0.708590059	0.66552	-0.103041698	4478.241942	1185.630701	3.777096811
Lower Mary Irrigation Distribution	Water Mgt	0.0050433	0.766068405	-0.0160486	0.053130547	0.76607	-0.071016542	100.2198056	88.89936748	1.127339918
Lower Mary Irrigation Distribution	Weed Control	0.1254795	0.12543618	-1.5974252	0.993992028	0.12544	-0.354230848	14969.3142	1663.172451	9.000458245
Lower Mary Irrigation Distribution	Workplace H&S	0.0394933	0.400939676	-0.4453981	0.517726431	0.40094	-0.198729322	1925.964323	866.2728802	2.223276714
Lower Mary Irrigation Distribution	Electricity	0.4976727	0.000511485	13.2253094	3.131778608	0.00051	0.705459226	5785.092831	5240.170701	1.103989385
Lower Mary Irrigation Distribution	Other Renewals	0	0.080989692	-0.3293368	0.178140776	0.08099	0	976.5363824	298.0696251	3.27620227
Lower Mary Water Supply	Cond. Monitoring	0.0283568	0.477898676	-0.8311134	1.146698283	0.4779	-0.168394658	1949.069093	799.9578156	2.436464843
Lower Mary Water Supply	Contractors	0.6397347	2.30855E-05	11.6482138	2.060318446	2.3E-05	0.799834166	768.9412526	435.2344477	1.766728844
Lower Mary Water Supply	Customer Mgt	0.0007566	0.908356225	0.54535373	4.671394388	0.90836	0.027506235	420.6829041	427.1515712	0.984856272
Lower Mary Water Supply	Dam Safety	0.0005322	0.923092097	0.10727665	1.095755934	0.92309	0.023069572	243.3606885	235.5598728	1.033116064
Lower Mary Water Supply	Emergency maint	0.1688914	0.071854016	6.11450866	3.197057261	0.07185	0.410964002	291.2575118	344.9796832	0.844274391
Lower Mary Water Supply	Enviro Mgt	0.2228299	0.035600948	0.84233498	0.370783112	0.0356	0.472048577	652.7331254	450.9474118	1.44747061
Lower Mary Water Supply	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Lower Mary Water Supply	Indirects	0.1089229	0.155285135	1.17292935	0.790740049	0.15529	0.330034634	904.2591972	961.7001619	0.940271441
Lower Mary Water Supply	Labour	0.2103825	0.041940112	1.7243039	0.787374039	0.04194	0.458674757	1367.749753	957.606411	1.428300539
Lower Mary Water Supply	Materials	0.0455045	0.366517448	1.20047273	1.295913452	0.36652	0.213317752	2853.763663	1576.093404	1.810656434
Lower Mary Water Supply	Metering	0.2878215	0.014740927	-1.0358925	0.384070784	0.01474	-0.53648997	4072.749397	467.1079141	8.719075987
Lower Mary Water Supply	Other - Operations	0.2178725	0.038007915	-0.0503057	0.02246562	0.03801	-0.466768152	47.14094459	27.32274733	1.725336915
Lower Mary Water Supply	Overheads	0.2049772	0.045015732	1.78071554	0.826599899	0.04502	0.452744047	1510.778716	1005.313007	1.50279436
Lower Mary Water Supply	Sched/Deliver	0.2288667	0.032864849	3.18292353	1.377093189	0.03286	0.478400187	1993.557177	1674.824418	1.190308164
Lower Mary Water Supply	Scheduled corr	0.031244	0.455972643	-0.8472014	1.111921431	0.45597	-0.176759795	3938.08483	1352.321817	2.912091471
Lower Mary Water Supply	Scheme Mgt	0.020411	0.547921775	-2.6328816	4.299169721	0.54792	-0.142867167	29638.7814	5228.661706	5.668521519
Lower Mary Water Supply	Servicing	0.086421	0.208368045	0.12085752	0.092619168	0.20837	0.29397447	-2.231699406	112.6436803	-0.019812025
Lower Mary Water Supply	Water Mgt	0.0999045	0.174580614	-1.1583501	0.819512027	0.17458	-0.316076744	6323.720408	996.6927184	6.344704131
Lower Mary Water Supply	Weed Control	0.0111639	0.65751884	0.24524659	0.544028529	0.65752	0.105659173	474.2081935	661.6489517	0.716706635
Lower Mary Water Supply	Workplace H&S	0.018707	0.565292651	0.06397596	0.109213902	0.56529	0.136773517	101.0678193	132.8262394	0.760902513
Lower Mary Water Supply	Electricity	0.6397347	2.30855E-05	11.6482138	2.060318446	2.3E-05	0.799834166	-3020.05958	2505.764801	-1.205244634
Lower Mary Water Supply	Other Renewals	0	0.08699661	0.28392307	0.156848671	0.087	0	61.07727353	190.7597724	0.320179002

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficient	Standard Error - Intercept	t-Stat - Intercept
Macintyre Brook Water Supply	Cond. Monitoring	0.0490537	0.348017263	-2.9509602	3.062451025	0.34802	-0.221480726	13477.16416	2893.214389	4.658197545
Macintyre Brook Water Supply	Contractors	0.037957	0.410441616	-0.0104838	0.012440397	0.41044	-0.194825658	12468.79674	22335.77946	0.558243188
Macintyre Brook Water Supply	Customer Mgt	0.2893133	0.014436706	7.2855083	2.691401434	0.01444	0.537878535	3932.163351	1491.526115	2.636335571
Macintyre Brook Water Supply	Dam Safety	0.1634061	0.07710539	1.6312039	0.869951999	0.07711	0.404235144	23029.10068	7460.463279	3.086819117
Macintyre Brook Water Supply	Emergency maint	0.0328344	0.44454182	8.83636689	11.3037772	0.44454	0.181202559	9657.133888	6019.345706	1.604349436
Macintyre Brook Water Supply	Enviro Mgt	0.0449159	0.369708583	0.13527613	0.147029871	0.36971	0.211933759	7628.809592	715.0803	10.66846562
Macintyre Brook Water Supply	Facility Mgt	0.2930878	0.013692826	2.04484543	0.748528152	0.01369	0.541375807	17737.99691	3640.469321	4.872447847
Macintyre Brook Water Supply	Indirects	0.0064191	0.737041722	-0.5371359	1.575116884	0.73704	-0.080119222	24901.98183	7660.586554	3.250662552
Macintyre Brook Water Supply	Labour	0.024636	0.508703039	-1.3042078	1.934231383	0.5087	-0.156958725	28177.2444	9407.14119	2.995303656
Macintyre Brook Water Supply	Materials	0.020826	0.543838277	1.65014123	2.66693141	0.54384	0.144312168	24099.71607	12970.63037	1.85802196
Macintyre Brook Water Supply	Metering	0.0828386	0.218501729	0.69170978	0.542493065	0.2185	0.287816945	2478.074483	2638.416943	0.939227778
Macintyre Brook Water Supply	Other - Operations	0.0532637	0.32759766	1.84643777	1.834836951	0.3276	0.230789194	5280.138404	8923.736017	0.591695944
Macintyre Brook Water Supply	Overheads	0.0061581	0.742264622	-0.7092593	2.123747157	0.74226	-0.078473788	30362.73962	10328.85183	2.939604529
Macintyre Brook Water Supply	Sched/Deliver	0.1613344	0.079185162	2.53131063	1.360317084	0.07919	0.401664508	21864.29933	6615.906961	3.304807559
Macintyre Brook Water Supply	Scheduled corr	0.0287766	0.474610591	-2.1381689	2.927829989	0.47461	-0.169636569	25567.91	14239.51154	1.79556089
Macintyre Brook Water Supply	Scheme Mgt	0.0116567	0.650492392	-0.4880403	1.059218316	0.65049	-0.107966219	53395.05781	5151.512037	10.36492925
Macintyre Brook Water Supply	Servicing	0.0281536	0.479502701	0.47844528	0.662563954	0.4795	0.167790368	8482.416257	3222.38214	2.632343368
Macintyre Brook Water Supply	Water Mgt	0.0002444	0.947838611	0.15916034	2.399169145	0.94784	0.015634523	36223.77368	11668.36764	3.104442265
Macintyre Brook Water Supply	Weed Control	0.0656113	0.275677883	0.4544514	0.404227182	0.27568	0.256147111	6107.519423	1965.960335	3.106634103
Macintyre Brook Water Supply	Workplace H&S	0.0220534	0.532071828	0.06632355	0.104100183	0.53207	0.148503819	1840.289045	506.2916092	3.634840102
Macintyre Brook Water Supply	Electricity	0.037957	0.410441616	-0.0104838	0.012440397	0.41044	-0.194825658	317.1202702	60.50391677	5.241318035
Macintyre Brook Water Supply	Other Renewals	0	0.976205231	-0.0222105	0.734375042	0.97621	0	5842.951293	3571.635622	1.63593152
Maranoa Water Supply	Cond. Monitoring	0.0624944	0.287785506	168.571013	153.8909725	0.28779	0.249988737	2019.306141	1461.32916	1.381828404
Maranoa Water Supply	Contractors	1	#NUM!	0	0	#NUM!	0	0	0	65535
Maranoa Water Supply	Customer Mgt	0.3827099	0.003639667	139.285227	41.69448249	0.00364	0.618635535	-587.500387	223.8904777	-2.624052586
Maranoa Water Supply	Dam Safety	0.0088633	0.692991334	27.7527974	69.17343801	0.69299	0.094145145	47.81250171	147.1562698	0.324909715
Maranoa Water Supply	Emergency maint	0.0714443	0.25458919	39.4307385	33.50570327	0.25459	0.267290727	0	0	65535
Maranoa Water Supply	Enviro Mgt	0.0181448	0.571249997	-0.5186295	0.899224291	0.57125	-0.134702814	28.73598674	18.97857459	1.514127766
Maranoa Water Supply	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
Maranoa Water Supply	Indirects	0.0707753	0.256910406	25.0752962	21.41555435	0.25691	0.266036283	147.3021815	451.9858948	0.325899952
Maranoa Water Supply	Labour	0.0546846	0.321047486	5.1755402	5.071952332	0.32105	0.233847446	72.61144866	107.0460692	0.678319617
Maranoa Water Supply	Materials	0.0679306	0.267057697	4.10335681	3.582567454	0.26706	0.260635024	17.9774124	75.61186275	0.237759152
Maranoa Water Supply	Metering	0.1605781	0.07995811	-11.952298	6.44113233	0.07996	-0.400721915	755.0513817	135.943292	5.554164316
Maranoa Water Supply	Other - Operations	0.0015836	0.867704908	-0.2618846	1.549892166	0.8677	-0.039794954	29.82046991	32.71124278	0.911627544
Maranoa Water Supply	Overheads	0.0526525	0.330466359	5.07654522	5.075482466	0.33047	0.229461242	73.92551951	107.1205744	0.69011504
Maranoa Water Supply	Sched/Deliver	0.001245	0.882592724	0.08954298	0.597773712	0.88259	0.035284826	9.363368718	12.61631063	0.742163774
Maranoa Water Supply	Scheduled corr	0.0624944	0.287785506	168.571013	153.8909725	0.28779	0.249988737	1415.82002	3247.94529	0.435912521
Maranoa Water Supply	Scheme Mgt	0.0850291	0.212242375	50.7776387	39.26052806	0.21224	0.291597473	4251.821934	828.6129144	5.131252314
Maranoa Water Supply	Servicing	0.034534	0.432788679	3.02008608	3.763815705	0.43279	0.185833163	96.83430973	79.43719697	1.219004615
Maranoa Water Supply	Water Mgt	0.0137143	0.622932973	-0.4672549	0.933969945	0.62293	-0.117107876	27.15267951	19.71189886	1.377476604
Maranoa Water Supply	Weed Control	1	#NUM!	0	0	#NUM!	0	0	0	65535
Maranoa Water Supply	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Maranoa Water Supply	Electricity	1	#NUM!	0	0	#NUM!	0	0	0	65535
Maranoa Water Supply	Other Renewals	0	#NUM!	0	0	#NUM!	0	0	0	65535
Mareeba Irrigation Distribution	Cond. Monitoring	0.0587607	0.303136216	1.81388172	1.711115824	0.30314	0.242405986	4033.187045	5100.606372	0.790726975
Mareeba Irrigation Distribution	Contractors	0.7554824	6.56394E-07	2.80074668	0.37556102	6.6E-07	0.869184883	411134.8145	135704.7376	3.029627571
Mareeba Irrigation Distribution	Customer Mgt	0.0024326	0.836404041	0.59190785	2.825217748	0.8364	0.049321587	1769.427243	3878.114571	0.456259662
Mareeba Irrigation Distribution	Dam Safety	0.004161	0.787018786	0.34022754	1.240596411	0.78702	0.064505577	-6.36627E-16	6.33172E-16	-1.005456555
Mareeba Irrigation Distribution	Emergency maint	0.0594617	0.3001802	-6.8203272	6.393500632	0.30018	-0.243847606	3047.296924	5252.840823	0.580123599
Mareeba Irrigation Distribution	Enviro Mgt	0.0004633	0.928229295	0.02254677	0.246837688	0.92823	0.021524648	9443.447727	6017.314076	1.569379229
Mareeba Irrigation Distribution	Facility Mgt	0.1053961	0.162548156	-0.0554872	0.038103073	0.16255	-0.32464767	1961.114212	928.8620298	2.111308406
Mareeba Irrigation Distribution	Indirects	0.008258	0.703188366	0.27416646	0.708175754	0.70319	0.090873318	46745.37816	17263.63575	2.707736587
Mareeba Irrigation Distribution	Labour	0.0127557	0.635437777	0.34917452	0.724047241	0.63544	0.112941023	62272.34578	17650.54473	3.528069345
Mareeba Irrigation Distribution	Materials	0.0597007	0.299180307	2.04165548	1.909807872	0.29918	0.244337199	40166.23856	46556.56066	0.862740675
Mareeba Irrigation Distribution	Metering	0.0659237	0.274497992	0.17955948	0.15930976	0.2745	0.256756163	10025.50764	3883.591971	2.581503853
Mareeba Irrigation Distribution	Other - Operations	0.0120261	0.645340402	-0.3216636	0.687187803	0.64534	-0.109663729	17715.34291	16751.99956	1.057506171
Mareeba Irrigation Distribution	Overheads	0.0002375	0.948580217	-0.0581343	0.888970263	0.94858	-0.015411955	88265.87855	21670.97465	4.072999945
Mareeba Irrigation Distribution	Sched/Deliver	0.2943418	0.013453655	2.03803535	0.743783759	0.01345	0.542532759	163157.9165	18131.67397	8.998502667
Mareeba Irrigation Distribution	Scheduled corr	0.059408	0.300405376	1.75081882	1.642038267	0.30041	0.243737487	256333.8303	40028.97636	6.403706855
Mareeba Irrigation Distribution	Scheme Mgt	0.0195963	0.556102422	-1.7486403	2.915274252	0.5561	-0.139986859	220542.3087	71067.43275	3.103282335
Mareeba Irrigation Distribution	Servicing	0.0018109	0.858616077	-0.075133	0.41577095	0.85862	-0.042554629	28352.37677	10135.50407	2.79733268
Mareeba Irrigation Distribution	Water Mgt	0.0265757	0.492257395	0.17822739	0.254241863	0.49226	0.163020505	135.894713	6197.810211	0.021926246
Mareeba Irrigation Distribution	Weed Control	0.0030194	0.818023209	0.27203936	1.165149684	0.81802	0.054948664	99830.54636	28403.57018	3.514718246
Mareeba Irrigation Distribution	Workplace H&S	0.0334832	0.440000179	0.06759215	0.085595539	0.44	0.182984206	-342.6059392	2086.615084	-0.164192209
Mareeba Irrigation Distribution	Electricity	0.7554824	6.56394E-07	2.80074668	0.37556102	6.6E-07	0.869184883	-95.04233787	9155.281883	-0.010381148
Mareeba Irrigation Distribution	Other Renewals	0	0.908552085	0.0296828	0.254804285	0.90855	0	4835.292019	6211.520719	0.778439329
Mareeba Water Supply	Cond. Monitoring	0.0001228	0.963024145	-0.5420678	11.53128982	0.96302	-0.011079313	26128.7779	14917.65592	1.751533756
Mareeba Water Supply	Contractors	0.0690762	0.262916327	-0.1786399	0.154573492	0.26292	-0.2628235	847736.8778	819599.5987	1.034330518
Mareeba Water Supply	Customer Mgt	0.0217798	0.534655918	-11.312324	17.86929573	0.53466	-0.147579649	498.8278902	1864.995864	0.267468631
Mareeba Water Supply	Dam Safety	0.0170089	0.583662781	10.529522	18.86728017	0.58366	0.13041811	55730.76871	17048.70912	3.26891428
Mareeba Water Supply	Emergency maint	0.0030486	0.817157298	-150.18433	640.1368802	0.81716	-0.055214419	0	0	65535
Mareeba Water Supply	Enviro Mgt	0.1831924	0.059750399	3.9486022	1.965229653	0.05975	0.428009798	13052.43455	3472.976721	3.758284491
Mareeba Water Supply	Facility Mgt	0.0286899	0.475286264	2.06234719	2.828392908	0.47529	0.169381016	3183.136255	4998.368875	0.636835003
Mareeba Water Supply	Indirects	0.0004967	0.925692441	-3.5512288	37.54689251	0.92569	-0.022287457	108098.5726	66353.30556	1.629136208
Mareeba Water Supply	Labour	0.0180662	0.572092936	-26.993341	46.90596017	0.57209	-0.13441058	173150.8867	82892.75889	2.08885419
Mareeba Water Supply	Materials	0.0108821	0.661618035	34.9809276	78.60715856	0.66162	0.104317458	99057.55788	138915.4857	0.713077864
Mareeba Water Supply	Metering	0.0284058	0.477512982	0.75744429	1.044127729	0.47751	0.168540113	1077.583364	1845.194678	0.583994403
Mareeba Water Supply	Other - Operations	0.0134043	0.626916507	1.42667884	2.884944413	0.62692	0.115776956	1870.598382	5098.307352	0.366905769
Mareeba Water Supply	Overheads	0.0133094	0.628147602	-34.101931	69.20766463	0.62815	-0.115366314	238020.0575	122304.5906	1.946125295
Mareeba Water Supply	Sched/Deliver	0.005492	0.756174925	1.17134972	3.715267641	0.75617	0.074107876	14002.88115	6565.664228	2.132744025
Mareeba Water Supply	Scheduled corr	0.0001228	0.963024145	-0.5420678	11.53128982	0.96302	-0.011079313	24979.46561	20378.22961	1.225791744
Mareeba Water Supply	Scheme Mgt	0.0278686	0.481767408	-8.8604666	12.3346067	0.48177	-0.16693889	103083.8775	21797.86056	4.729082345

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficien	Standard Error - Intercept	t-Stat - Intercept
Mareeba Water Supply	Servicing	0.0363754	0.420557592	10.7348564	13.02297632	0.42056	0.190723269	3620.793854	23014.35536	0.157327624
Mareeba Water Supply	Water Mgt	0.0067717	0.730167021	-3.7030499	10.5705775	0.73017	-0.082290393	21550.96902	18680.44762	1.153664487
Mareeba Water Supply	Weed Control	0.0902	0.198235046	-2.8017521	2.097312002	0.19824	-0.300333221	14042.82101	3706.394186	3.788809367
Mareeba Water Supply	Workplace H&S	0.1071826	0.158825482	0.41280143	0.28081751	0.15883	0.327387497	-21.62316827	496.263972	-0.043571908
Mareeba Water Supply	Electricity	0.0690762	0.262916327	-0.1786399	0.154573492	0.26292	-0.2628235	1335.316489	273.1640747	4.888331273
Mareeba Water Supply	Other Renewals	0	0.644987146	-10.066911	21.4833816	0.64499	0	58790.6671	37965.68207	1.548521293
Nogoa Water Supply	Cond. Monitoring	0.0261482	0.495807007	0.43415082	0.62449691	0.49581	0.161703912	33292.54163	6060.367257	5.493485827
Nogoa Water Supply	Contractors	0.0128896	0.633656953	0.02667686	0.055025154	0.63366	0.113532464	24633.65445	11677.99076	2.109408626
Nogoa Water Supply	Customer Mgt	4.101E-05	0.97862384	0.10275584	3.782088683	0.97862	0.00640368	3905.506792	4028.913431	0.969369747
Nogoa Water Supply	Dam Safety	5.305E-05	0.975688299	-0.0125293	0.405461269	0.97569	-0.007283317	163621.0913	77419.93488	2.113423262
Nogoa Water Supply	Emergency maint	0.0003616	0.936574316	0.16285289	2.018107798	0.93657	0.019016751	2768.924418	1238.255899	2.236148781
Nogoa Water Supply	Enviro Mgt	0.0438079	0.375816862	0.10355689	0.114035239	0.37582	0.209303381	22631.88975	2649.196868	8.542924851
Nogoa Water Supply	Facility Mgt	3.586E-05	0.980011429	0.01114278	0.438605317	0.98001	0.005987916	94468.09076	10189.41028	9.271202963
Nogoa Water Supply	Indirects	0.000329	0.939499458	0.0318512	0.413833333	0.9395	0.018138136	39550.32952	9613.922711	4.113859733
Nogoa Water Supply	Labour	0.0060898	0.743651677	0.18521603	0.557716089	0.74365	0.078037385	40601.59113	12956.51884	3.133680554
Nogoa Water Supply	Materials	0.0003603	0.936694296	-0.065747	0.816298585	0.93669	-0.018980708	48723.74014	18963.7491	2.569309469
Nogoa Water Supply	Metering	0.0420457	0.385812616	-0.0656753	0.073888592	0.38581	-0.205050411	7839.826141	1716.534545	4.567240527
Nogoa Water Supply	Other - Operations	0.0132184	0.629332313	0.41795232	0.851159641	0.62933	0.114971442	-21631.93072	19773.61983	-1.093979297
Nogoa Water Supply	Overheads	0.0001676	0.956805735	0.0225145	0.409936907	0.95681	0.012944121	39741.45294	9523.403332	4.173030538
Nogoa Water Supply	Sched/Deliver	0.1746224	0.066741296	0.41223792	0.211245758	0.06674	0.41787849	30762.56937	4907.53215	6.268439704
Nogoa Water Supply	Scheduled corr	0.0316519	0.452999477	0.48550415	0.632954748	0.453	0.177909766	67019.81538	14704.41732	4.557801506
Nogoa Water Supply	Scheme Mgt	0.0700157	0.259575502	-0.700242	0.601522606	0.25958	-0.264604828	162607.1791	13974.20502	11.63623826
Nogoa Water Supply	Servicing	0.026145	0.495833245	0.12918219	0.185831408	0.49583	0.161694197	11868.74367	4317.121523	2.749226217
Nogoa Water Supply	Water Mgt	0.0209309	0.542814536	-0.4004367	0.645520671	0.54281	-0.144675204	29651.22069	14996.34113	1.977230341
Nogoa Water Supply	Weed Control	0.0070834	0.724254112	0.04017409	0.11211042	0.72425	0.084162816	5944.792832	2604.480656	2.282525239
Nogoa Water Supply	Workplace H&S	0.0686557	0.264427784	0.05830756	0.050618065	0.26443	0.262022284	895.491283	1175.927894	0.761518871
Nogoa Water Supply	Electricity	0.0128896	0.633656953	0.02667686	0.055025154	0.63366	0.113532464	1922.744921	1278.310691	1.504129578
Nogoa Water Supply	Other Renewals	0	0.419685863	-0.2002337	0.24244958	0.41969	0	15425.81064	5632.44024	2.738743774
Pioneer Water Supply	Cond. Monitoring	0.0252471	0.503426041	-2.2472365	3.291198991	0.50343	-0.158893327	16362.24656	1773.975644	9.223489968
Pioneer Water Supply	Contractors	0.0020659	0.849091988	-0.0052067	0.026972522	0.84909	-0.045452054	-45897.87294	49745.68025	-0.922650423
Pioneer Water Supply	Customer Mgt	4.713E-06	0.992752312	0.01749183	1.899067757	0.99275	0.002170988	5.447487786	847.9116919	0.006424593
Pioneer Water Supply	Dam Safety	0.0517709	0.334659795	-0.4510249	0.454964961	0.33466	-0.227532259	37123.6017	9377.569321	3.958765905
Pioneer Water Supply	Emergency maint	0.1719756	0.069056875	26.0872582	13.49212588	0.06906	0.41469937	0	0	65535
Pioneer Water Supply	Enviro Mgt	0.3075443	0.011159946	1.16277643	0.41124645	0.01116	0.554566735	9687.115003	2665.607716	3.634111256
Pioneer Water Supply	Facility Mgt	0.0284441	0.477211645	-0.0012753	0.001756811	0.47721	-0.168653796	13.1837698	11.38725459	1.157765437
Pioneer Water Supply	Indirects	0.1770628	0.064673522	3.29669693	1.675183973	0.06467	0.420788264	25717.635	10858.16868	2.368505755
Pioneer Water Supply	Labour	0.1225585	0.130236683	3.11170659	1.962454914	0.13024	0.350083608	32417.11279	12720.19481	2.548476125
Pioneer Water Supply	Materials	0.025469	0.501532341	0.5939568	0.865986029	0.50153	0.159589957	8450.460201	5613.128185	1.505481422
Pioneer Water Supply	Metering	0.1260566	0.124509297	0.03141129	0.019494331	0.12451	0.355044546	193.6000721	126.3579018	1.532156433
Pioneer Water Supply	Other - Operations	0.0092521	0.686650544	-0.2418404	0.589866729	0.68665	-0.096187853	5895.177205	3823.384501	1.541874013
Pioneer Water Supply	Overheads	0.1483641	0.093523719	4.06861142	2.297589894	0.09352	0.385180619	38737.82234	14892.46496	2.601169279
Pioneer Water Supply	Sched/Deliver	0.0753009	0.241668684	0.96776289	0.799342375	0.24167	0.2744101	13330.67301	5181.158895	2.572913373
Pioneer Water Supply	Scheduled corr	0.0252471	0.503426041	-2.2472365	3.291198991	0.50343	-0.158893327	82858.6343	21332.81739	3.884092419
Pioneer Water Supply	Scheme Mgt	0.0011519	0.887039323	0.20284649	1.4078887	0.88704	0.033940063	53243.42202	9125.620364	5.834498905
Pioneer Water Supply	Servicing	0.0071119	0.72372039	0.13312863	0.370759819	0.72372	0.084332061	4870.881277	2403.182409	2.02684626
Pioneer Water Supply	Water Mgt	0.0197282	0.554763379	-0.3059	0.508244986	0.55476	-0.140457014	7128.21406	3294.330581	2.163782257
Pioneer Water Supply	Weed Control	0.1307049	0.117294161	-0.3111463	0.189132518	0.11729	-0.361531274	6668.006006	1225.914775	5.439208453
Pioneer Water Supply	Workplace H&S	1	#NUM!	0	0	#NUM!	0	0	0	65535
Pioneer Water Supply	Electricity	0.0020659	0.849091988	-0.0052067	0.026972522	0.84909	-0.045452054	720.4126106	174.8298678	4.120649519
Pioneer Water Supply	Other Renewals	0	0.288905357	-7.1061074	6.502845131	0.28891	0	85856.62838	42149.99096	2.036931122
Proserpine Water Supply	Cond. Monitoring	0.0278925	0.481576493	-0.3586497	0.499053704	0.48158	-0.167010592	9239.819809	2751.146746	3.358533972
Proserpine Water Supply	Contractors	0.0109992	0.6599065	-0.0119118	0.026623055	0.65991	-0.104877292	1675.073516	1045.721382	1.601835389
Proserpine Water Supply	Customer Mgt	0.0178932	0.573955935	-0.8271115	1.44432023	0.57396	-0.13376537	5635.789118	1604.848032	3.511727594
Proserpine Water Supply	Dam Safety	0.0295845	0.468380764	-1.0298489	1.390221157	0.46838	-0.17200149	17387.23715	7591.682728	2.290300816
Proserpine Water Supply	Emergency maint	0.0011892	0.885237399	-0.1527486	1.043407384	0.88524	-0.034484889	0	0	65535
Proserpine Water Supply	Enviro Mgt	0.027212	0.487049569	-0.2532294	0.356867267	0.48705	-0.164960607	16193.42775	2498.278223	6.481835211
Proserpine Water Supply	Facility Mgt	0.000159	0.957919101	-0.0117554	0.219707205	0.95792	-0.012610189	19056.59397	1538.078093	12.38987412
Proserpine Water Supply	Indirects	0.0174587	0.578685193	-0.2322677	0.410696912	0.57869	-0.132131545	8044.725315	2875.117015	2.798051444
Proserpine Water Supply	Labour	0.0019586	0.853019107	-0.0481656	0.256269159	0.85302	-0.044256624	5176.006687	1794.033016	2.885123429
Proserpine Water Supply	Materials	0.0024076	0.837235043	0.0636486	0.30537439	0.83724	0.049067797	2697.14708	2137.798168	1.261647203
Proserpine Water Supply	Metering	0.0157588	0.597950306	0.06358326	0.118439361	0.59795	0.125533965	1708.572766	829.1443471	2.060645739
Proserpine Water Supply	Other - Operations	0.0011255	0.888332606	-0.056276	0.395149169	0.88833	-0.033549128	4283.654435	2766.273782	1.548528733
Proserpine Water Supply	Overheads	0.0012857	0.880702777	-0.043288	0.28436853	0.8807	-0.035856701	5562.050538	1990.744941	2.793954376
Proserpine Water Supply	Sched/Deliver	0.0041662	0.786887848	0.13667986	0.498071267	0.78689	0.064546129	29096.58313	3486.788271	8.344809283
Proserpine Water Supply	Scheduled corr	0.0278925	0.481576493	-0.3586497	0.499053704	0.48158	-0.167010592	16963.94309	3493.665898	4.855628326
Proserpine Water Supply	Scheme Mgt	0.0147019	0.610596339	-0.5106496	0.985335903	0.6106	-0.121251267	56641.67053	6897.923847	8.211408502
Proserpine Water Supply	Servicing	0.0042506	0.784787321	-0.1235937	0.445869906	0.78479	-0.065196907	7715.207647	3121.348409	2.471754715
Proserpine Water Supply	Water Mgt	0.1567481	0.083987875	0.54983512	0.300589482	0.08399	0.395914234	5538.651266	2104.301031	2.632062232
Proserpine Water Supply	Weed Control	0.0772537	0.235412345	-1.0497704	0.85514496	0.23541	-0.277945409	12067.4467	5986.511599	2.015772708
Proserpine Water Supply	Workplace H&S	0.0025658	0.832043595	-0.0191116	0.088815195	0.83204	-0.050654115	716.8665659	621.7579727	1.152967227
Proserpine Water Supply	Electricity	0.0109992	0.6599065	-0.0119118	0.026623055	0.65991	-0.104877292	971.032059	186.3768574	5.210046315
Proserpine Water Supply	Other Renewals	0	0.942342779	-0.0035829	0.048851839	0.94234	0	617.1652962	341.9912612	1.804623001
St George Irrigation Distribution	Cond. Monitoring	0.0738092	0.246575403	-1.101695	0.919856803	0.24658	-0.271678409	22108.26343	3016.557314	7.32897178
St George Irrigation Distribution	Contractors	0.4761061	0.000760574	0.42014237	0.103879539	0.00076	0.690004434	109872.3129	67975.01063	1.616363305
St George Irrigation Distribution	Customer Mgt	0.0043237	0.782988202	0.44298296	1.584467539	0.78299	0.065754657	2708.063521	1775.808507	1.524974967
St George Irrigation Distribution	Dam Safety	0.0194579	0.557514349	0.46358587	0.775673245	0.55751	0.13949166	0	0	65535
St George Irrigation Distribution	Emergency maint	0.0374475	0.41366274	-3.9141088	4.677325283	0.41366	-0.193513509	19777.03047	11185.26183	1.768132992
St George Irrigation Distribution	Enviro Mgt	0.0003057	0.941676371	0.00349244	0.047073392	0.94168	0.017484409	1654.7481	711.1720573	2.326790096
St George Irrigation Distribution	Facility Mgt	1	#NUM!	0	0	#NUM!	0	0	0	65535
St George Irrigation Distribution	Indirects	0.1109847	0.151197433	-0.1378509	0.091959498	0.1512	-0.333143624	4918.809236	1389.299182	3.540496748

Service Contract	Variable Cost	R Square	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficien	Standard Error - Intercept	t-Stat - Intercept
St George Irrigation Distribution	Labour	0.1226826	0.130028995	-0.213475	0.134554324	0.13003	-0.350260768	7046.237879	2032.810274	3.466254558
St George Irrigation Distribution	Materials	0.0230139	0.523171001	-0.6891705	1.058376041	0.52317	-0.151703165	25486.4681	15989.6585	1.593934486
St George Irrigation Distribution	Metering	0.0077913	0.711341438	0.03048707	0.081091393	0.71134	0.088268589	4131.947946	1225.106797	3.372724692
St George Irrigation Distribution	Other - Operations	0.0496853	0.344852437	-0.2898757	0.298810038	0.34485	-0.222902095	7139.474011	4514.341101	1.581509649
St George Irrigation Distribution	Overheads	0.1098077	0.153516868	-0.5668174	0.380392898	0.15352	-0.331372464	20507.16221	5746.872841	3.568403682
St George Irrigation Distribution	Sched/Deliver	0.0795094	0.228411659	1.17674723	0.943729089	0.22841	0.281974132	120529.1467	14257.6034	8.453675093
St George Irrigation Distribution	Scheduled corr	0.0740653	0.245724893	-0.6975106	0.581296078	0.24572	-0.272149395	79826.81251	8782.063661	9.08975562
St George Irrigation Distribution	Scheme Mgt	0.0038871	0.793998138	-0.4009087	1.51269596	0.794	-0.062346472	61270.56612	22853.40075	2.681026198
St George Irrigation Distribution	Servicing	0.0078531	0.710246825	0.05140396	0.136184519	0.71025	0.088617727	11866.87782	2057.438813	5.767791365
St George Irrigation Distribution	Water Mgt	0.0034428	0.805900071	0.08329798	0.334037251	0.8059	0.058675182	7010.462609	5046.544285	1.389161021
St George Irrigation Distribution	Weed Control	0.0515145	0.335892013	0.70368123	0.711688808	0.33589	0.226968149	59650.05777	10752.0017	5.547809557
St George Irrigation Distribution	Workplace H&S	0.0697079	0.260664497	-0.1703765	0.146704048	0.26066	-0.264022593	5519.239216	2216.365008	2.490221238
St George Irrigation Distribution	Electricity	0.4761061	0.000760574	0.42014237	0.103879539	0.00076	0.690004434	3538.911874	1569.383927	2.254968853
St George Irrigation Distribution	Other Renewals	0	0.275407296	0.13870681	0.123305582	0.27541	0	-2871.931602	1862.867326	-1.541672647
St George Water Supply	Cond. Monitoring	0.0715456	0.254239921	-0.6378	0.541548151	0.25424	-0.267480109	20390.83201	2511.77506	8.118096375
St George Water Supply	Contractors	0.0361081	0.422301565	1.11461565	1.357377021	0.4223	0.190021415	12728.09829	6295.70195	2.021712336
St George Water Supply	Customer Mgt	0.0725309	0.250870439	-0.6855312	0.577802002	0.25087	-0.269315683	9262.229276	2679.925424	3.456151874
St George Water Supply	Dam Safety	0.0116568	0.650491391	3.19632222	6.93711635	0.65049	0.107966548	21788.09033	32175.30299	0.677168148
St George Water Supply	Emergency maint	0.00738	0.71876075	0.13664298	0.373521661	0.71876	0.085906652	2674.185418	1732.445013	1.543590358
St George Water Supply	Enviro Mgt	0.0071698	0.722639754	-0.3140911	0.871169008	0.72264	-0.084674853	6798.923816	4040.602083	1.682651168
St George Water Supply	Facility Mgt	0.0148078	0.609303372	-0.3057597	0.587839376	0.6093	-0.121687467	22970.46639	2726.480151	8.424952731
St George Water Supply	Indirects	0.0041702	0.786787093	-0.4734158	1.72432441	0.78679	-0.064577335	24936.72708	7997.654579	3.118005014
St George Water Supply	Labour	0.0012184	0.883848627	-0.2375615	1.603203235	0.88385	-0.034904907	19776.80692	7435.877854	2.659646556
St George Water Supply	Materials	0.0025229	0.833436894	0.6956461	3.260289584	0.83344	0.050228175	23394.05732	15121.67303	1.547054831
St George Water Supply	Metering	0.0876299	0.205066162	-0.2312536	0.175878057	0.20507	-0.296023462	2859.583895	815.7467011	3.505480182
St George Water Supply	Other - Operations	0.0767094	0.237137359	-0.1272064	0.104020137	0.23714	-0.276964652	920.8659107	482.4597492	1.90868961
St George Water Supply	Overheads	0.003329	0.809076303	0.35262339	1.438112741	0.80908	0.057697612	18145.87258	6670.165362	2.720453182
St George Water Supply	Sched/Deliver	0.008311	0.702277446	-2.6330578	6.779286279	0.70228	-0.09116495	63174.00343	31443.26534	2.009142586
St George Water Supply	Scheduled corr	0.1405668	0.103356458	-7.0256722	4.094645239	0.10336	-0.374922417	83682.87991	18991.5297	4.406326464
St George Water Supply	Scheme Mgt	0.0419153	0.386566273	-3.2060506	3.61284886	0.38657	-0.204732261	116386.1991	16756.8916	6.945572119
St George Water Supply	Servicing	0.000744	0.909118114	0.05101961	0.440705299	0.90912	0.027276646	12231.51315	2044.051996	5.983954017
St George Water Supply	Water Mgt	0.0005116	0.924588172	0.09303514	0.969204434	0.92459	0.022619565	5894.515682	4495.303922	1.31126077
St George Water Supply	Weed Control	0.0056626	0.752527934	-0.1154963	0.360736948	0.75253	-0.075250276	10124.5797	1673.147747	6.051216766
St George Water Supply	Workplace H&S	0.1013416	0.171343318	0.2725874	0.191325596	0.17134	0.318341883	2981.672751	887.3945184	3.360030616
St George Water Supply	Electricity	0.0196794	0.555258346	-0.0658754	0.109588589	0.55526	-0.140283166	1779.836767	508.2869994	3.5016374
St George Water Supply	Other Renewals	0	0.308909461	0.37968538	0.362605268	0.30891	0	281.4602198	1681.813273	0.167355214
Three Moon Water Supply	Cond. Monitoring	0.071088	0.255822485	1.91777757	1.633996535	0.25582	0.266623323	3723.950821	1663.442786	2.238700875
Three Moon Water Supply	Contractors	0.0440489	0.374476933	0.21399846	0.234976632	0.37448	0.209878306	1489.243245	2309.972383	0.644701753
Three Moon Water Supply	Customer Mgt	0.0998056	0.17480576	-13.967167	9.886958816	0.17481	-0.315920279	-682.2998443	715.8853121	-0.953085407
Three Moon Water Supply	Dam Safety	0.6581158	1.42347E-05	22.9637563	3.901171326	1.4E-05	0.811243373	27243.58921	5749.860886	4.738130149
Three Moon Water Supply	Emergency maint	0.0002373	0.948609888	0.42529392	6.507207326	0.94861	0.015403051	140.3071458	132.3795874	1.059885052
Three Moon Water Supply	Enviro Mgt	0.0035753	0.802269695	0.4131115	1.62554256	0.80227	0.059793632	7276.191836	1873.242752	3.884275986
Three Moon Water Supply	Facility Mgt	0.0158822	0.59650836	-0.1302476	0.241658199	0.59651	-0.126024655	305.6301829	278.4820783	1.097486003
Three Moon Water Supply	Indirects	0.0450114	0.369188197	1.23970698	1.34592373	0.36919	0.212158986	929.6874918	1551.015601	0.599405635
Three Moon Water Supply	Labour	0.0010059	0.894402724	0.26981683	2.004218482	0.8944	0.031715326	1840.946599	2309.621314	0.797077247
Three Moon Water Supply	Materials	0.1087691	0.155594585	-2.0454183	1.380029116	0.15559	-0.329801599	2336.856788	1590.317967	1.469427396
Three Moon Water Supply	Metering	0.2699966	0.018867958	-1.7826524	0.690897709	0.01887	-0.519611923	4235.985698	796.1767088	5.320408964
Three Moon Water Supply	Other - Operations	0.0052593	0.761249841	0.01541321	0.049963115	0.76125	0.072520766	8.13501456	57.57649497	0.141290549
Three Moon Water Supply	Overheads	0.001214	0.884055018	0.32301891	2.183830103	0.88406	0.03484248	2165.387489	2516.602156	0.860440926
Three Moon Water Supply	Sched/Deliver	0.0727479	0.25013545	4.74510281	3.992988852	0.25014	0.269718163	2124.819478	4601.440533	0.461772669
Three Moon Water Supply	Scheduled corr	0.0786284	0.231117712	1.97505888	1.59357167	0.23112	0.280407492	719.2926799	1836.400137	0.391686248
Three Moon Water Supply	Scheme Mgt	0.145692	0.096783405	-8.612388	4.915602519	0.09678	-0.381696186	39903.6495	5664.64208	7.0443373
Three Moon Water Supply	Servicing	0.703107	3.88502E-06	22.214661	3.402457682	3.9E-06	0.838514743	-13678.05699	3920.924218	-3.488477774
Three Moon Water Supply	Water Mgt	0.0006628	0.914200733	-0.4116337	3.767275496	0.9142	-0.025745616	9182.431108	4341.332975	2.115117905
Three Moon Water Supply	Weed Control	0.0131859	0.629757669	-0.4300987	0.8769911	0.62976	-0.114829739	2158.947596	1010.627013	2.136245685
Three Moon Water Supply	Workplace H&S	0.0297379	0.467212332	1.05097615	1.414965944	0.46721	0.172446806	233.1022424	1630.578469	0.142956777
Three Moon Water Supply	Electricity	0.0440489	0.374476933	0.21399846	0.234976632	0.37448	0.209878306	1401.8419	270.7823734	5.177005734
Three Moon Water Supply	Other Renewals	0	0.292425086	0.56712514	0.522902575	0.29243	0	78.82503776	602.5824745	0.130812032
Upper Burnett Water Supply	Cond. Monitoring	0.1427796	0.100465491	-21.340982	12.32512623	0.10047	-0.377861837	7774.05386	1992.212541	3.902221123
Upper Burnett Water Supply	Contractors	0.1436219	0.099386387	-0.1354719	0.077971421	0.09939	-0.378974801	4836.131912	9422.808326	0.513236791
Upper Burnett Water Supply	Customer Mgt	0.1097937	0.15354473	-13.767087	9.239797673	0.15354	-0.331351302	3935.15383	2544.418771	1.546582612
Upper Burnett Water Supply	Dam Safety	0.0379228	0.410656958	1.18681965	1.408974923	0.41066	0.194737763	20141.0739	7852.368671	2.564967941
Upper Burnett Water Supply	Emergency maint	0.0213882	0.538392462	6.15988637	9.820980995	0.53839	0.146246947	813.1109924	1573.932974	0.516610939
Upper Burnett Water Supply	Enviro Mgt	0.0262015	0.495361859	1.00834033	1.448913205	0.49536	0.161868769	4550.554313	4651.971221	0.978199154
Upper Burnett Water Supply	Facility Mgt	0.1538701	0.087147312	-1.5930383	0.880503965	0.08715	-0.392262839	17193.91726	2827.001016	6.082034339
Upper Burnett Water Supply	Indirects	0.0379689	0.410367194	1.48189636	1.758175676	0.41037	0.19485604	8041.354015	5644.908621	1.424532186
Upper Burnett Water Supply	Labour	0.1567504	0.083985416	3.09628749	1.692695465	0.08399	0.395917115	5343.128268	5434.673767	0.983155291
Upper Burnett Water Supply	Materials	0.0025359	0.833013011	0.58282788	2.724497692	0.83301	0.050357743	8488.455116	8747.442432	0.970392796
Upper Burnett Water Supply	Metering	0.070203	0.258915523	-0.6109261	0.524045205	0.25892	-0.26495844	4793.949766	1682.53226	2.849246864
Upper Burnett Water Supply	Other - Operations	0.1740183	0.067263076	-0.3161477	0.162345988	0.06726	-0.417154976	821.7142345	521.2381686	1.576465969
Upper Burnett Water Supply	Overheads	0.0862311	0.208892047	2.58058151	1.980011078	0.20889	0.293651281	8175.731764	6357.147218	1.286069283
Upper Burnett Water Supply	Sched/Deliver	0.0925433	0.192222708	3.12789438	2.308640684	0.19222	0.30420927	22523.98049	7412.265953	3.038744243
Upper Burnett Water Supply	Scheduled corr	0.1475084	0.094555534	-21.626888	12.2544695	0.09456	-0.384068181	92568.54917	39344.96506	2.352741934
Upper Burnett Water Supply	Scheme Mgt	0.0991936	0.176206054	-11.512535	8.177273183	0.17621	-0.314950218	89083.43993	26254.46395	3.393077844
Upper Burnett Water Supply	Servicing	2.677E-05	0.982728057	0.01900925	0.86596095	0.98273	0.005173979	5264.879851	2780.308304	1.893631668
Upper Burnett Water Supply	Water Mgt	0.0032647	0.810897117	0.31726316	1.306625862	0.8109	0.057137608	7008.918032	4195.134591	1.670725427
Upper Burnett Water Supply	Weed Control	0.0003895	0.934177379	-0.0484207	0.578137878	0.93418	-0.019736886	4096.188318	1856.205576	2.206753589
Upper Burnett Water Supply	Workplace H&S	0.1609986	0.079527402	-2.6564016	1.429314387	0.07953	-0.401246315	11148.68079	4589.04603	2.42941141
Upper Burnett Water Supply	Electricity	0.1436219	0.099386387	-0.1354719	0.077971421	0.09939	-0.378974801	1726.971796	250.3399136	6.898507597
Upper Burnett Water Supply	Other Renewals	0	0.267137656	-3.0004252	2.620071024	0.26714	0	14724.21626	8412.163651	1.750348289

Service Contract	Variable Cost	R Squared	Significance of F	Coefficient	Standar Error	P Value	R (Correlation Coefficient	Intercept Coefficient	Standard Error - Intercept	t-Stat - Intercept
Upper Condamine Water Supply	Cond. Monitoring	0.0070759	0.724394925	-1.2115149	3.382678572	0.72439	-0.084118171	24601.42922	3695.591337	6.656966904
Upper Condamine Water Supply	Contractors	0.9254523	1.36544E-11	3.55677431	0.237935965	1.4E-11	0.962004325	27496.86596	7776.626057	3.535834918
Upper Condamine Water Supply	Customer Mgt	0.062816	0.286507128	1.84828743	1.682714237	0.28651	0.250631301	818.3557912	456.3344326	1.79332466
Upper Condamine Water Supply	Dam Safety	0.1643477	0.076177871	-1.6372145	0.87016235	0.07618	-0.405398228	20758.25126	6553.16632	3.167667391
Upper Condamine Water Supply	Emergency maint	0.0093365	0.685294907	-1.8676651	4.534552853	0.68529	-0.096625414	17546.91505	13994.86117	1.253811298
Upper Condamine Water Supply	Enviro Mgt	0.0789336	0.230176166	0.14193998	0.114283366	0.23018	0.280951231	8161.500264	629.787841	12.95912644
Upper Condamine Water Supply	Facility Mgt	0.0021422	0.846360712	-0.0815405	0.414801153	0.84636	-0.046284077	31311.16627	2285.868282	13.69771238
Upper Condamine Water Supply	Indirects	0.0080939	0.706024128	0.3938282	1.027605129	0.70602	0.08996624	19141.72127	5662.881973	3.38020841
Upper Condamine Water Supply	Labour	0.0023067	0.840639845	0.11825234	0.579659645	0.84064	0.048028492	14276.60204	3194.363341	4.469310632
Upper Condamine Water Supply	Materials	0.0183169	0.569413795	-1.3430759	2.317520681	0.56941	-0.135340046	28630.3717	12771.2929	2.241775514
Upper Condamine Water Supply	Metering	0.4401767	0.001427118	0.42018156	0.111689594	0.00143	0.663458121	1543.246125	615.4941944	2.507328484
Upper Condamine Water Supply	Other - Operations	0.0344474	0.433375944	-0.1008544	0.125854264	0.43338	-0.185600228	758.4268996	693.5522443	1.093539681
Upper Condamine Water Supply	Overheads	0.0111071	0.658339523	0.26835708	0.596830151	0.65834	0.105390309	16323.7575	3288.985823	4.963158365
Upper Condamine Water Supply	Sched/Deliver	0.2583249	0.022129059	2.31165255	0.923230354	0.02213	0.508256679	53615.31647	5087.697967	10.53822708
Upper Condamine Water Supply	Scheduled corr	0.02461	0.508929711	1.67656568	2.487811068	0.50893	0.156875841	22272.46875	13709.7218	1.624574814
Upper Condamine Water Supply	Scheme Mgt	0.0002109	0.951548387	-0.0537329	0.872073611	0.95155	-0.014521279	50394.59967	4805.785599	10.48623553
Upper Condamine Water Supply	Servicing	0.2470702	0.02576715	-0.8404028	0.345794638	0.02577	-0.497061584	12799.52834	1905.590162	6.716831667
Upper Condamine Water Supply	Water Mgt	6.818E-06	0.991283154	-0.0008365	0.07550821	0.99128	-0.002611077	599.8551172	416.1073843	1.441587292
Upper Condamine Water Supply	Weed Control	0.0464709	0.361355359	-0.1744555	0.186262235	0.36136	-0.215571172	4145.325731	1026.445884	4.038523408
Upper Condamine Water Supply	Workplace H&S	0.1776658	0.064172246	-0.4095319	0.207670011	0.06417	-0.42150419	5211.314962	1144.41893	4.553677701
Upper Condamine Water Supply	Electricity	0.9254523	1.36544E-11	3.55677431	0.237935965	1.4E-11	0.962004325	-997.9212726	1311.207241	-0.761070593
Upper Condamine Water Supply	Other Renewals	0	0.304608246	-0.089735	0.084917006	0.30461	0	1466.477234	467.9569673	3.133786516

APPENDIX D

Indicative Qualitative Analysis
SunWater's Cost Structures
(forecast data only)

Expense name		Classification	Relationship of cost to volumes of water delivered
Operations	Scheduling & Delivering Water	Semi-variable	Labour and contractor costs expected to vary with water volumes delivered
Operations	Electricity (Water Delivery)	Variable	Electricity costs associated with pumping water expected to vary with water delivered
Operations	Occupational Health and Safety	Semi-variable	OHS material costs expected to vary with water volumes delivered
Operations	Water Resource Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Environmental Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Scheme Management	Semi-variable	Labour and contractor costs expected to vary with water volumes delivered
Operations	Water Trading	Semi-variable	Labour and contractor costs expected to vary with water volumes delivered
Operations	Resource Operation Plans - Development	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Resource Operation Plans	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Environmental Management System	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Depots and Workshops	Semi-variable	Labour and contractor costs expected to vary with water volumes delivered and number of breakdowns and repairs
Operations	Dam Safety	Fixed	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities
Preventative Maintenance	Condition Monitoring	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities
Preventative Maintenance	Servicing	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Preventative Maintenance	Weed Control Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Corrective Maintenance	Emergency Corrective	Variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities
Corrective Maintenance	Scheduled Corrective	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities resulted from wear and tear
Refurbishments	Refurbishments - Dam Safety	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet existing compliance requirements
Refurbishments	Refurbishments - Water Resource Management	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet existing compliance requirements
Refurbishments	Refurbishments - Environmental	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet existing compliance requirements
Refurbishments	Refurbishments - Infrastructure	Semi-variable	Capital costs are expected to vary with water delivered due to wear and tear
Augmentations	Service Standards (Non-Regulatory)	Semi-variable	Capital costs are expected to remain fixed irrespective of water delivered as capital asset expenditure linked to meeting service standards
Augmentations	Growth	Variable	Capital costs are expected to vary with water delivered due to growth opportunities
Augmentations	Regulatory – Dam Safety	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet new compliance requirements
Augmentations	Regulatory – Water Resource Management	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet new compliance requirements
Augmentations	Regulatory – Environment	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet new compliance requirements
Augmentations	Regulatory – Other	Fixed	Capital costs are expected to remain fixed irrespective of water delivered
Augmentations	Resource Operation Plans	Fixed	Capital costs are expected to remain fixed irrespective of water delivered to meet new compliance requirements
Meters	Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Meters	Capital Expenditure	Fixed	Capital costs are expected to remain fixed irrespective of water delivered
Customer Service	Billing and Revenue Collection	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Customer Service	Customer Service and Account Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Recreational Facilities	Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Recreational Facilities	Capital Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Hydro Projects	Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Hydro Projects	Capital Expenditure	Fixed	Capital costs are expected to remain fixed irrespective of water delivered
Revenue Offsets	Revenue Offsets - Meters	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities

Expense name		Classification	Relationship of cost to volumes of water delivered
Revenue Offsets	CSO - Dam Safety	Fixed	Costs are expected to remain fixed irrespective of water delivered
Revenue Offsets	CSO - Resource Operating Plan Development	Fixed	Costs are expected to remain fixed irrespective of water delivered
Revenue Offsets	CSO - Rural Water Subsidy & Dam Safety	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Revenue Offsets	Revenue Offsets - Customer Contributions	Fixed	Costs are expected to remain fixed irrespective of water delivered
Revenue Offsets	Revenue Offsets - External Contracts	Fixed	Costs are expected to remain fixed irrespective of water delivered
Revenue Offsets	Revenue Offsets - Other	Semi-variable	Revenue offsets expected to vary with water volumes delivered
Non Cash	Bad Debt Write Offs	Semi-variable	Bad debt write offs expected to vary with water volumes delivered
Non Cash	Amortisation (i e. Weed Control, Office Rental etc)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Non Cash	Other	Fixed	Costs are expected to remain fixed irrespective of water delivered
Roads and Bridges	Roads & Bridges - Operational Expenditure	Fixed	Costs are expected to remain fixed irrespective of water delivered
Roads and Bridges	Roads & Bridges - Capital Expenditure	Fixed	Costs are expected to remain fixed irrespective of water delivered
Water and Waste Water Treatmen	Water & Wastew ater Treatment - Operational Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Water and Waste Water Treatmen	Water & Wastew ater Treatment - Capital Expenditure	Fixed	Capital costs are expected to remain fixed irrespective of water delivered
Operations - D	Drainage Services	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Operations - D	Occupational Health & Safety	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Operations - D	Drainage Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Operations - D	Environmental Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations - D	Environmental Management System	Fixed	Costs are expected to remain fixed irrespective of water delivered
Preventative Maintenance - D	Condition Monitoring/Inspections	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities
Preventative Maintenance - D	Servicing	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Preventative Maintenance - D	Weed Control Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Corrective Maintenance - D	Emergency Corrective	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities
Corrective Maintenance - D	Scheduled Corrective	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of inspections and related activities resulted from wear and tear
Refurbishments - D	Refurbishments	Semi-variable	Capital costs are expected to vary with water delivered due to wear and tear
Augmentations - D	Service Standards (Non-Regulatory)	Fixed	Capital costs are expected to remain fixed irrespective of water delivered as capital asset expenditure linked to meeting service standards
Augmentations - D	Grow th	Semi-variable	Capital costs are expected to vary with water delivered due to grow th opportunities
Augmentations - D	Augmentation - Other	Semi-variable	Capital costs are expected to vary with water delivered due to wear and tear
Customer Service - D	Billing and Revenue Collection	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Customer Service - D	Customer Service and Account Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Non Cash - D	Revenue Offsets	Semi-variable	Revenue offsets expected to vary with water volumes delivered
Non Cash - D	Amortisation (i e. Weed Control, Office Rental etc)	Fixed	Amortisation costs are expected to remain fixed irrespective of water delivered
Non Cash - D	Other	Fixed	Costs are expected to remain fixed irrespective of water delivered
Roads and Bridges - D	Roads & Bridges - Operational Expenditure	Fixed	Costs are expected to remain fixed irrespective of water delivered
Roads and Bridges - D	Roads & Bridges - Capital Expenditure	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Strategic Asset Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Dam Safety	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Occupational Health & Safety	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Water Resource Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Environmental Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Scheme Management	Semi-variable	Labour and contractor costs expected to vary with water volumes delivered
Operations	Water Trading	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Housing	Fixed	Costs are expected to remain fixed irrespective of water delivered
Operations	Depots and Workshops	Fixed	Costs are expected to remain fixed irrespective of water delivered

Expense name		Classification	Relationship of cost to volumes of water delivered
Business Support Services	Payroll/Human Resources/Industrial Relations	Semi-variable	Labour and contractor activities expected to vary with water volumes delivered and related HR transactions
Business Support Services	Accounting	Fixed	Costs are expected to remain fixed irrespective of water delivered
Business Support Services	Document Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Business Support Services	Office Operations and Administration	Semi-variable	Labour and contractor activities expected to vary with water volumes delivered and related HR transactions
Customer Service	Billing and Revenue Collection	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Customer Service	Customer Service and Account Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Customer Service	Irrigation Pricing	Fixed	Costs are expected to remain fixed irrespective of water delivered
Drainage Services	Drainage Services - Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Drainage Services	Drainage Services - Capital Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Recreational Facilities	Recreational Facilities - Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Recreational Facilities	Recreational Facilities - Capital Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Hydro Projects	Hydro Projects - Operating Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Hydro Projects	Hydro Projects - Capital Expenditure	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
External Contracts	External Contracts	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Non Cash	Bad Debt Write Offs/Revenue Offsets	Semi-variable	Bad debt write offs expected to vary with water volumes delivered
Infrastructure Management	Business Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Financial Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Business Planning and Reporting	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Resource Planning	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Environmental Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Workplace Health & Safety	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Business Improvement	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Maintenance Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Operations Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Water Information Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	External Contracts	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Business and Financial Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Water Resources (Strategy & Policy)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	SWMS Database (Management & Reporting)	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Water Products (Analysis and Development)	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	WRP/ROP Policy	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	ROL/ROL Audit, Compliance & Reporting	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Asset Management (Strategy & Policy)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Asset Standards (Perf Mgt, Analysis & Reporting)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	SAP-PM Database (Management & Reporting)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Refurbishment Program (Mgt & Reporting)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Dam Safety Management (Compliance & Reporting)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Property Management (Policy & Admin)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Environmental Management (Policy & Compliance)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Commercial Strategy & Policy	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Commercial Contracts (Pricing & Project Review)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Commercial Pricing & Economic Regulatory Mgt	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	Customer Services & Billing	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Customer Service Standards & Reporting	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Water Exchange (Admin & Support)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Management	SunWater Online(Admin & Support)	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	Irrigation Pricing	Fixed	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Infrastructure Management	BD Management	Fixed	Costs are expected to remain fixed irrespective of water delivered

Expense name		Classification	Relationship of cost to volumes of water delivered
Infrastructure Development	Refurbishment Projects (Renewals)	Semi-variable	Capital costs are expected to vary with water delivered due to wear and tear
Infrastructure Development	WSS Projects (Excl Renewals and Water Studies)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Development	O&M Projects (excl Renewals)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Development	Water Studies	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Development	New Developments	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Development	External Projects	Fixed	Costs are expected to remain fixed irrespective of water delivered
Infrastructure Development	Business Support	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Corporate GM's Office	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Finance	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Support Services	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Credit Management	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Corporate	Corporate Planning and Reporting	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Public Affairs	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Corporate	Non Scheme Costs	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Water Trading	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Human Resources	Semi-variable	Labour, contractor and material costs expected to vary with water volumes delivered and number of activities
Corporate	Payroll	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Industrial Relations, Training and Recruitment	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Finance Systems (SAP)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Asset Management Systems (SAP PM)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Customer Service Systems (SWMS/SOS)	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Network Infrastructure	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Information Management	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Other Systems	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	New Systems	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Legal Services	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Internal Audit	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	SunWater Board	Fixed	Costs are expected to remain fixed irrespective of water delivered
Corporate	Office of the Chief Executive	Fixed	Costs are expected to remain fixed irrespective of water delivered

APPENDIX E

Qualitative Analysis
SunWater's Cost Structures
(historical actual data only)

Cost element	Activity	Sub Activity	Expenditure Type	Relationship of cost to volumes of water delivered
Electricity	Electricity	Electricity	Electricity	Variable
Operations - Customer Mgt - Labour	Operations	Customer Mgt	Labour	Semi-variable
Operations - Customer Mgt - Materials	Operations	Customer Mgt	Materials	Semi-variable
Operations - Customer Mgt - Contractors	Operations	Customer Mgt	Contractors	Semi-variable
Operations - Customer Mgt - Other	Operations	Customer Mgt	Other	Semi-variable
Operations - Customer Mgt - Indirects	Operations	Customer Mgt	Indirects	fixed
Operations - Customer Mgt - Overheads	Operations	Customer Mgt	Overheads	fixed
Operations - Workplace H&S - Labour	Operations	Workplace H&S	Labour	Semi-variable
Operations - Workplace H&S - Materials	Operations	Workplace H&S	Materials	Semi-variable
Operations - Workplace H&S - Contractors	Operations	Workplace H&S	Contractors	Semi-variable
Operations - Workplace H&S - Other	Operations	Workplace H&S	Other	Semi-variable
Operations - Workplace H&S - Indirects	Operations	Workplace H&S	Indirects	fixed
Operations - Workplace H&S - Overheads	Operations	Workplace H&S	Overheads	fixed
Operations - Enviro Mgt - Labour	Operations	Enviro Mgt	Labour	Semi-variable
Operations - Enviro Mgt - Materials	Operations	Enviro Mgt	Materials	Semi-variable
Operations - Enviro Mgt - Contractors	Operations	Enviro Mgt	Contractors	Semi-variable
Operations - Enviro Mgt - Other	Operations	Enviro Mgt	Other	Semi-variable
Operations - Enviro Mgt - Indirects	Operations	Enviro Mgt	Indirects	fixed
Operations - Enviro Mgt - Overheads	Operations	Enviro Mgt	Overheads	fixed
Operations - Water Mgt - Labour	Operations	Water Mgt	Labour	Semi-variable
Operations - Water Mgt - Materials	Operations	Water Mgt	Materials	Semi-variable
Operations - Water Mgt - Contractors	Operations	Water Mgt	Contractors	Semi-variable
Operations - Water Mgt - Other	Operations	Water Mgt	Other	Semi-variable
Operations - Water Mgt - Indirects	Operations	Water Mgt	Indirects	fixed
Operations - Water Mgt - Overheads	Operations	Water Mgt	Overheads	fixed
Operations - Scheme Mgt - Labour	Operations	Scheme Mgt	Labour	Semi-variable
Operations - Scheme Mgt - Materials	Operations	Scheme Mgt	Materials	Semi-variable
Operations - Scheme Mgt - Contractors	Operations	Scheme Mgt	Contractors	Semi-variable
Operations - Scheme Mgt - Other	Operations	Scheme Mgt	Other	Semi-variable
Operations - Scheme Mgt - Indirects	Operations	Scheme Mgt	Indirects	fixed
Operations - Scheme Mgt - Overheads	Operations	Scheme Mgt	Overheads	fixed
Operations - Dam Safety - Labour	Operations	Dam Safety	Labour	fixed
Operations - Dam Safety - Materials	Operations	Dam Safety	Materials	fixed
Operations - Dam Safety - Contractors	Operations	Dam Safety	Contractors	fixed
Operations - Dam Safety - Other	Operations	Dam Safety	Other	fixed
Operations - Dam Safety - Indirects	Operations	Dam Safety	Indirects	fixed
Operations - Dam Safety - Overheads	Operations	Dam Safety	Overheads	fixed
Operations - Sched/Deliver - Labour	Operations	Sched/Deliver	Labour	Semi-variable
Operations - Sched/Deliver - Materials	Operations	Sched/Deliver	Materials	Semi-variable
Operations - Sched/Deliver - Contractors	Operations	Sched/Deliver	Contractors	Semi-variable
Operations - Sched/Deliver - Other	Operations	Sched/Deliver	Other	Semi-variable
Operations - Sched/Deliver - Indirects	Operations	Sched/Deliver	Indirects	fixed
Operations - Sched/Deliver - Overheads	Operations	Sched/Deliver	Overheads	fixed
Operations - Metering - Labour	Operations	Metering	Labour	Semi-variable
Operations - Metering - Materials	Operations	Metering	Materials	Semi-variable
Operations - Metering - Contractors	Operations	Metering	Contractors	Semi-variable
Operations - Metering - Other	Operations	Metering	Other	Semi-variable
Operations - Metering - Indirects	Operations	Metering	Indirects	fixed
Operations - Metering - Overheads	Operations	Metering	Overheads	fixed

Cost element	Activity	Sub Activity	Expenditure Type	Relationship of cost to volumes of water delivered
Operations - Facility Mgt - Labour	Operations	Facility Mgt	Labour	Semi-variable
Operations - Facility Mgt - Materials	Operations	Facility Mgt	Materials	Semi-variable
Operations - Facility Mgt - Contractors	Operations	Facility Mgt	Contractors	Semi-variable
Operations - Facility Mgt - Other	Operations	Facility Mgt	Other	Semi-variable
Operations - Facility Mgt - Indirects	Operations	Facility Mgt	Indirects	fixed
Operations - Facility Mgt - Overheads	Operations	Facility Mgt	Overheads	fixed
Operations - Other - Labour	Operations	Other	Labour	Semi-variable
Operations - Other - Materials	Operations	Other	Materials	Semi-variable
Operations - Other - Contractors	Operations	Other	Contractors	Semi-variable
Operations - Other - Other	Operations	Other	Other	Semi-variable
Operations - Other - Indirects	Operations	Other	Indirects	fixed
Operations - Other - Overheads	Operations	Other	Overheads	fixed
Prev. Maintenance - Cond. Monitoring - Labour	Prev. Maintenance	Cond. Monitoring	Labour	Semi-variable
Prev. Maintenance - Cond. Monitoring - Materials	Prev. Maintenance	Cond. Monitoring	Materials	Semi-variable
Prev. Maintenance - Cond. Monitoring - Contractors	Prev. Maintenance	Cond. Monitoring	Contractors	Semi-variable
Prev. Maintenance - Cond. Monitoring - Other	Prev. Maintenance	Cond. Monitoring	Other	Semi-variable
Prev. Maintenance - Cond. Monitoring - Indirects	Prev. Maintenance	Cond. Monitoring	Indirects	fixed
Prev. Maintenance - Cond. Monitoring - Overheads	Prev. Maintenance	Cond. Monitoring	Overheads	fixed
Prev. Maintenance - Servicing - Labour	Prev. Maintenance	Servicing	Labour	Semi-variable
Prev. Maintenance - Servicing - Materials	Prev. Maintenance	Servicing	Materials	Semi-variable
Prev. Maintenance - Servicing - Contractors	Prev. Maintenance	Servicing	Contractors	Semi-variable
Prev. Maintenance - Servicing - Other	Prev. Maintenance	Servicing	Other	Semi-variable
Prev. Maintenance - Servicing - Indirects	Prev. Maintenance	Servicing	Indirects	fixed
Prev. Maintenance - Servicing - Overheads	Prev. Maintenance	Servicing	Overheads	fixed
Prev. Maintenance - Weed Control - Labour	Prev. Maintenance	Weed Control	Labour	Semi-variable
Prev. Maintenance - Weed Control - Materials	Prev. Maintenance	Weed Control	Materials	Semi-variable
Prev. Maintenance - Weed Control - Contractors	Prev. Maintenance	Weed Control	Contractors	Semi-variable
Prev. Maintenance - Weed Control - Other	Prev. Maintenance	Weed Control	Other	Semi-variable
Prev. Maintenance - Weed Control - Indirects	Prev. Maintenance	Weed Control	Indirects	fixed
Prev. Maintenance - Weed Control - Overheads	Prev. Maintenance	Weed Control	Overheads	fixed
Corrective Maintenance - scheduled corr - Labour	Corrective Maintenance	scheduled corr	Labour	Semi-variable
Corrective Maintenance - scheduled corr - Materials	Corrective Maintenance	scheduled corr	Materials	Semi-variable
Corrective Maintenance - scheduled corr - Contractors	Corrective Maintenance	scheduled corr	Contractors	Semi-variable
Corrective Maintenance - scheduled corr - Other	Corrective Maintenance	scheduled corr	Other	Semi-variable
Corrective Maintenance - scheduled corr - Indirects	Corrective Maintenance	scheduled corr	Indirects	fixed
Corrective Maintenance - scheduled corr - Overheads	Corrective Maintenance	scheduled corr	Overheads	fixed
Corrective Maintenance - emergency maint - Labour	Corrective Maintenance	emergency maint	Labour	Semi-variable
Corrective Maintenance - emergency maint - Materials	Corrective Maintenance	emergency maint	Materials	Semi-variable
Corrective Maintenance - emergency maint - Contractors	Corrective Maintenance	emergency maint	Contractors	Semi-variable
Corrective Maintenance - emergency maint - Other	Corrective Maintenance	emergency maint	Other	Semi-variable
Corrective Maintenance - emergency maint - Indirects	Corrective Maintenance	emergency maint	Indirects	fixed
Corrective Maintenance - emergency maint - Overheads	Corrective Maintenance	emergency maint	Overheads	fixed
Renewals (exp+cap) - Labour	Renewals (exp+cap)	Labour	Labour	Semi-variable
Renewals (exp+cap) - Materials	Renewals (exp+cap)	Materials	Materials	Semi-variable
Renewals (exp+cap) - Contractors	Renewals (exp+cap)	Contractors	Contractors	Semi-variable
Renewals (exp+cap) - Other	Renewals (exp+cap)	Other	Other	Semi-variable
Renewals (exp+cap) - Indirects	Renewals (exp+cap)	Indirects	Indirects	fixed
Renewals (exp+cap) - Overheads	Renewals (exp+cap)	Overheads	Overheads	fixed

APPENDIX F

Historical Cost Analysis
Regions and Depots

South Region

Total yearly historical costs by expenditure type in South Region for the period 2007/8 to 2010/11 are illustrated in SR-1 below.

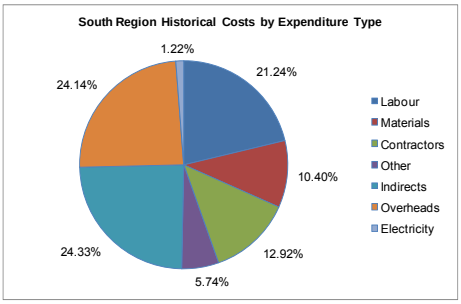

Figure SR-1

Total yearly water use and total labour hours in South Region for the period 2007/8 to 2010/11 are illustrated in SR-2 below. This analysis was also completed for activities and other expenditure types.

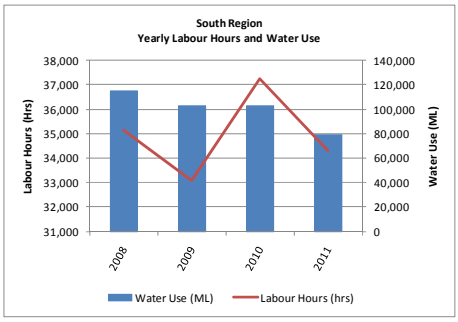

Figure SR-2

Total historical quarterly water use and operations and maintenance hours for South Region are illustrated in SR-3 below. This analysis was also completed for other expenditure types.

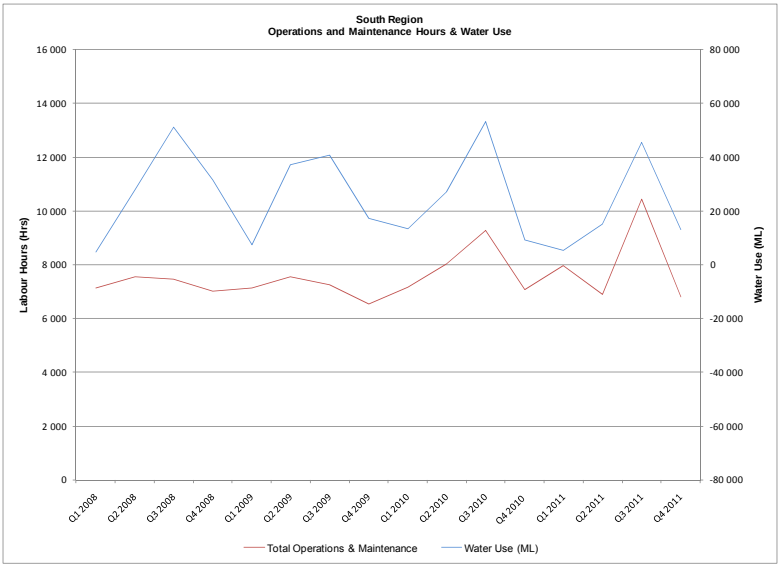

Figure SR-3

Total historical quarterly water use and total operations and maintenance expense for South Region are illustrated in SR-4 below. This analysis was also completed for other activities and expenditure types.

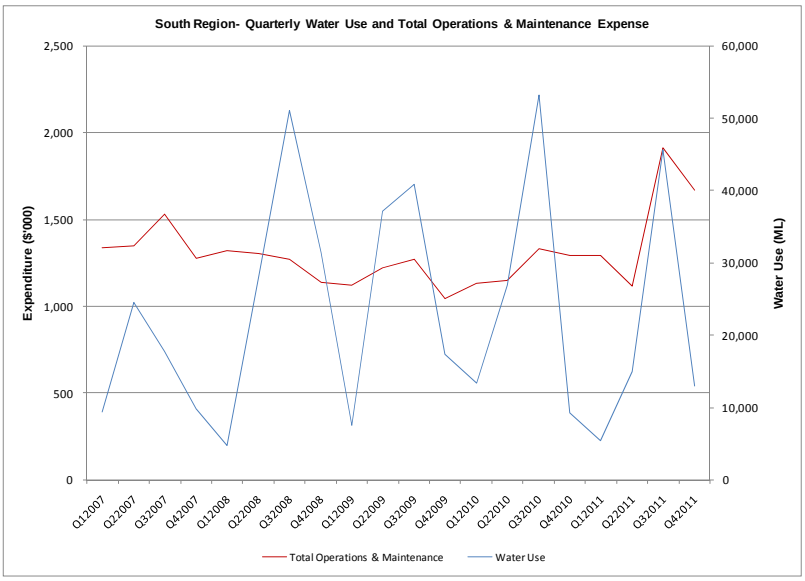

Figure SR-4

Total historical quarterly water use and total electricity expense for South Region are illustrated in SR-5 below. This analysis was also completed for other expenditure types.

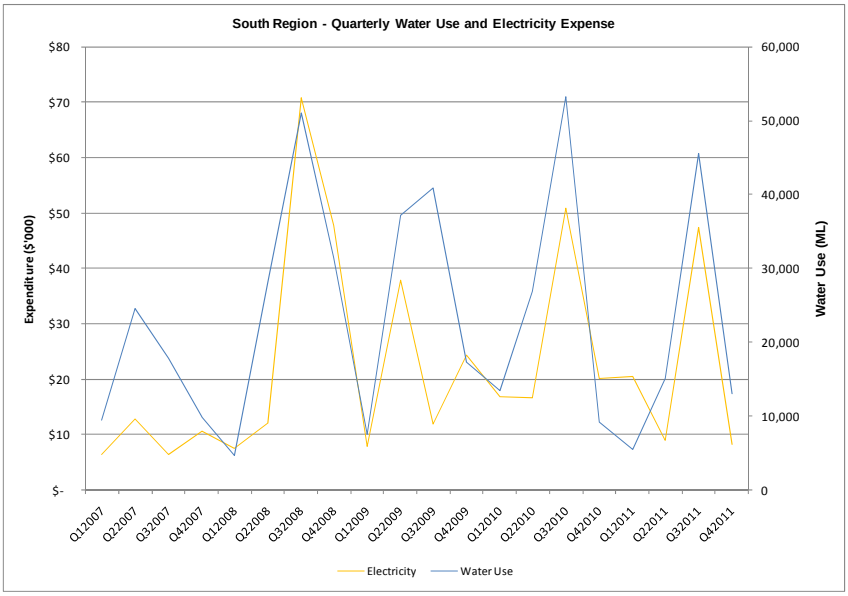

Figure SR-5

South Region incorporates the St George and Toowoomba depots. The two depots service one distribution and six bulk supply service contracts. Figures SR-4 and SR-5 show that water use is decidedly seasonal in South Region. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter and highest in the third quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between South Region historical water use and either expense or labour hours, whether by category or activity.

St George Depot

Total yearly historical costs by expenditure type in St George Depot for the period 2007/8 to 2010/11 are illustrated in SRSGD -1 below.

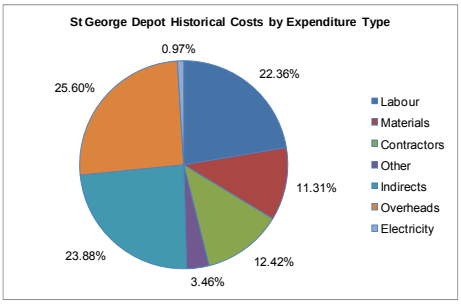

Figure SRSGD-1

Total yearly water use and total labour hours in St George Depot for the period 2007/8 to 2010/11 are illustrated in SRSGD-2 below. This analysis was also completed for activities and other expenditure types.

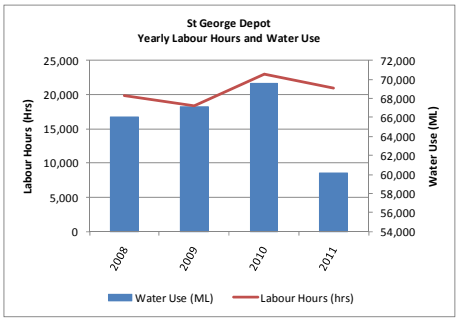

Figure SRSGD-2

Total historical quarterly water use and operations and maintenance hours for St George Depot are illustrated in SRSGD -3 below. This analysis was also completed for other expenditure types.

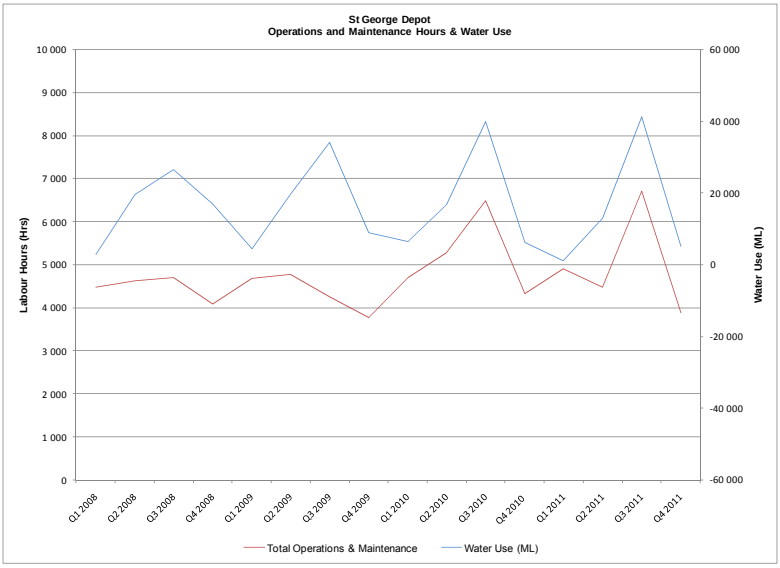

Figure SRSGD-3

Total historical quarterly water use and total operations and maintenance expense for St George Depot are illustrated in SRSGD-4 below. This analysis was also completed for other activities and expenditure types.

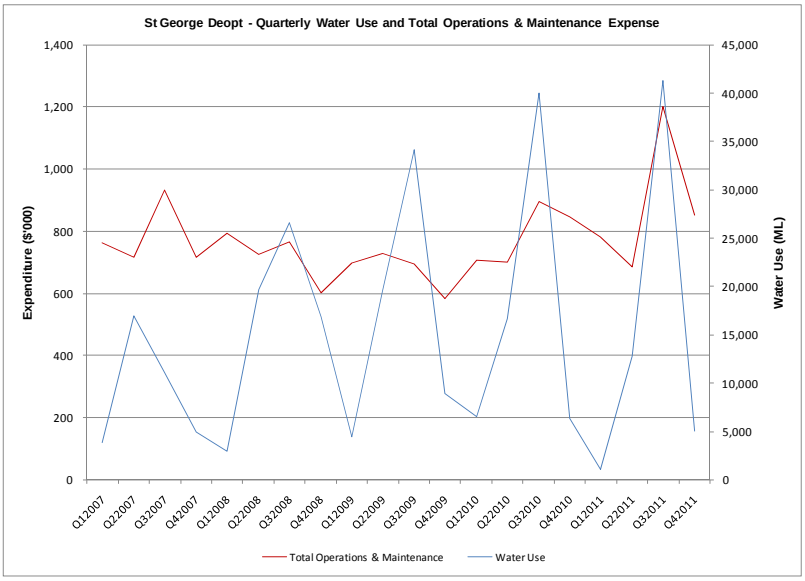

Figure SRSGD-4

Total historical quarterly water use and total electricity expense for St George Depot are illustrated in SRSGD-5 below. This analysis was also completed for other expenditure types.

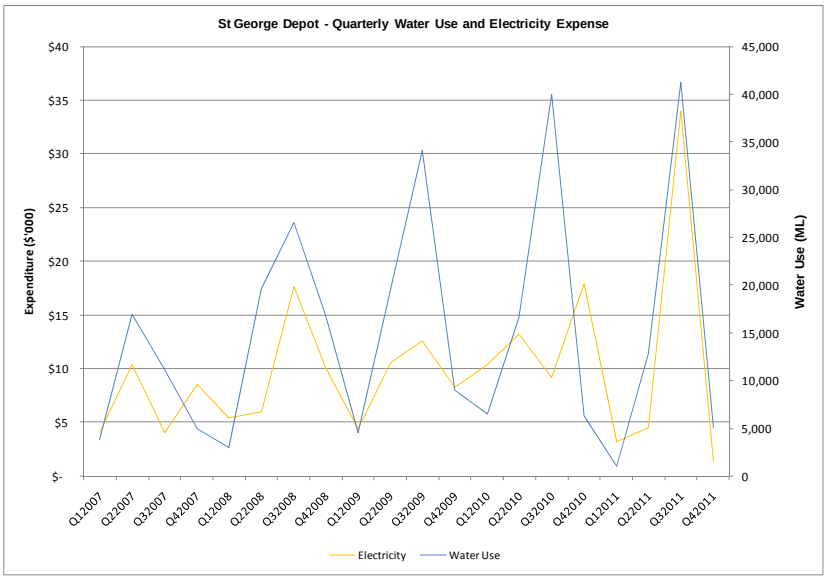

Figure SRSGD-5

St George depot incorporates three bulk supply contracts and one distribution service contract. Figures SRSGD-4 and SRSGD-5 show that water use is decidedly seasonal in the St George depot area. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter and highest in the third quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in St George depot, whether by category or activity.

Toowoomba Depot

Total yearly historical costs by expenditure type in Toowoomba Depot for the period 2007/8 to 2010/11 are illustrated in SRTD -1 below.

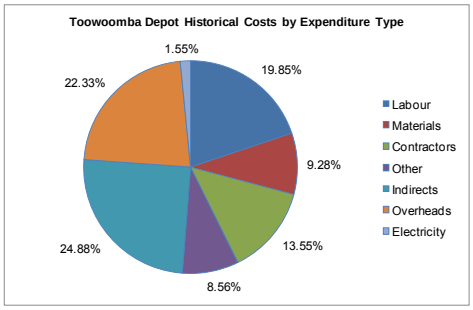

Figure SRTD-1

Total yearly water use and total labour hours in Toowoomba Depot for the period 2007/8 to 2010/11 are illustrated in SRTD-2 below. This analysis was also completed for activities and other expenditure types.

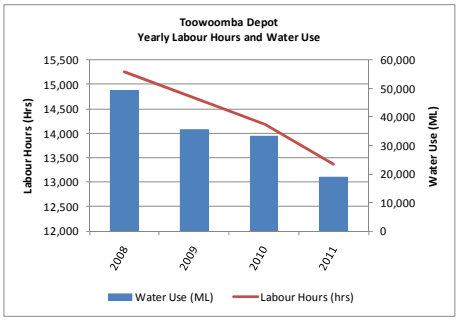

Figure SRTD-2

Total historical quarterly water use and operations and maintenance hours for Toowoomba Depot are illustrated in SRTD -3 below. This analysis was also completed for other expenditure types.

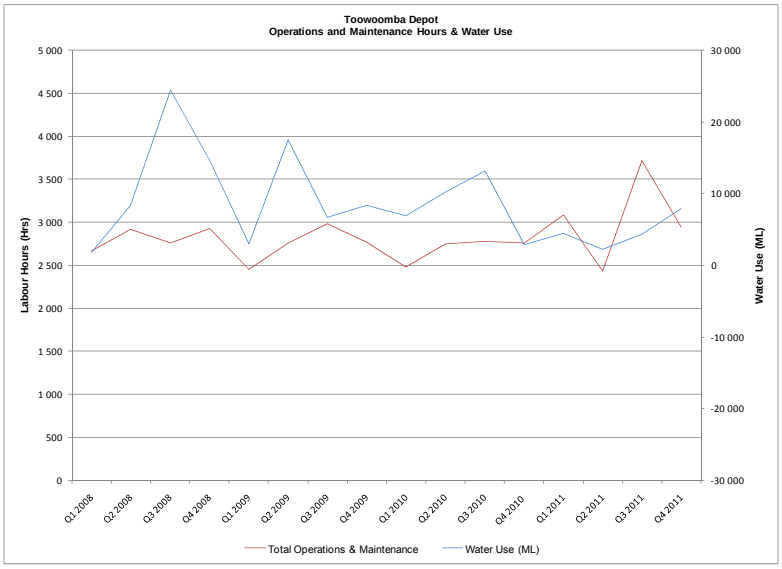

Figure SRTD-3

Total historical quarterly water use and total operations and maintenance expense for Toowoomba Depot are illustrated in SRTD-4 below. This analysis was also completed for other activities and expenditure types.

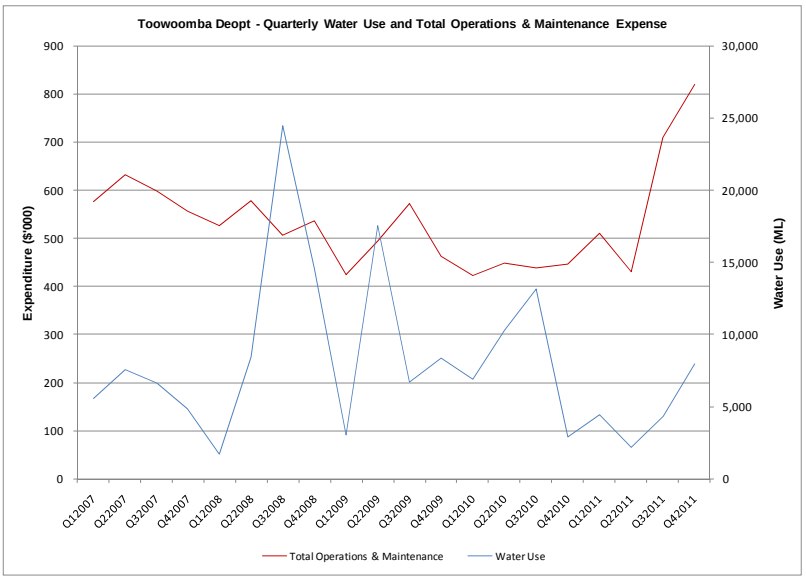

Figure SRTD-4

Total historical quarterly water use and total electricity expense for Toowoomba Depot are illustrated in SRTD-5 below. This analysis was also completed for other expenditure types.

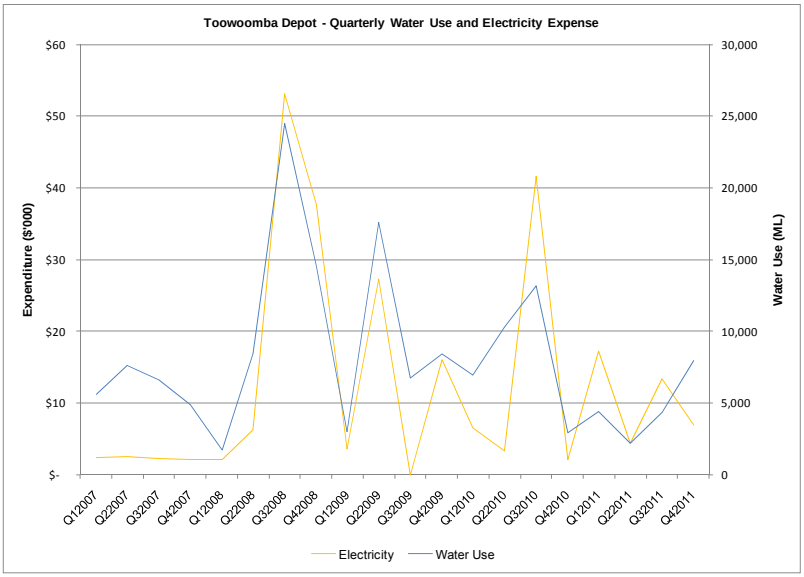

Figure SRTD-5

Toowoomba depot services three bulk supply service contracts. Figures SRSTD-4 and SRSTD-5 show that water use is moderately seasonal in the Toowoomba depot area. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first and fourth quarter and highest in the second and third quarter. Relatively strong correlations have been established between the four period moving averages of historical water use, labour hours and expense, and labour and material expense.

Central Region

Total yearly historical costs by expenditure type in Central Region for the period 2007/8 to 2010/11 are illustrated in CR-1 below.

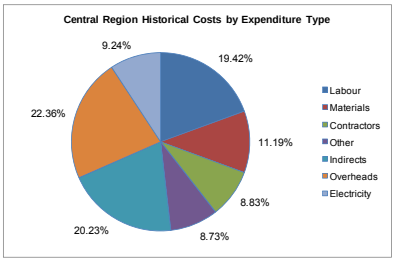

Figure CR-1

Total yearly water use and total labour hours in Central Region for the period 2007/8 to 2010/11 are illustrated in CR-2 below. This analysis was also completed for activities and other expenditure types.

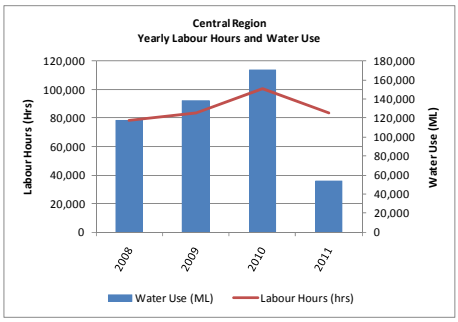

Figure CR-2

Total historical quarterly water use and operations and maintenance hours for Central Region are illustrated in CR-3 below. This analysis was also completed for other expenditure types.

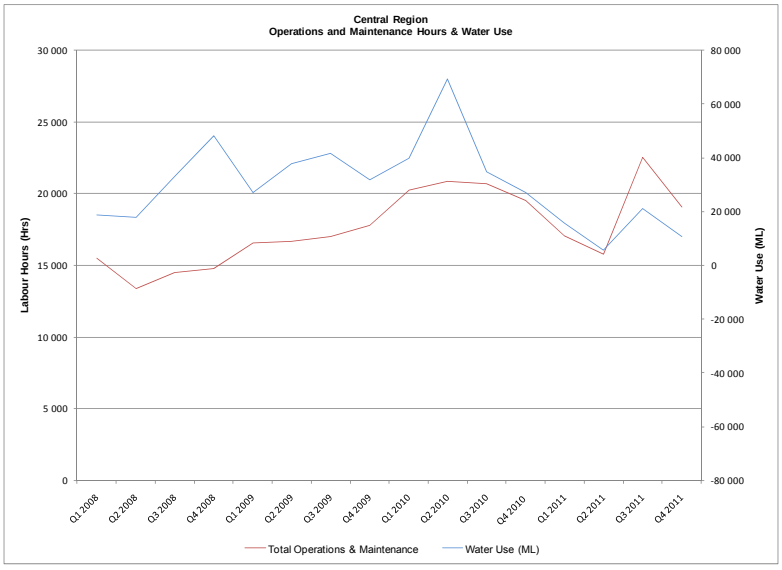

Figure CR-3

Total historical quarterly water use and total operations and maintenance expense for Central Region are illustrated in CR-4 below. This analysis was also completed for other activities and expenditure types. The increase in O&M expense in Q3 and Q4 2011 was due to a big increase in corrective maintenance expense which appears to have been carried out by contractors.

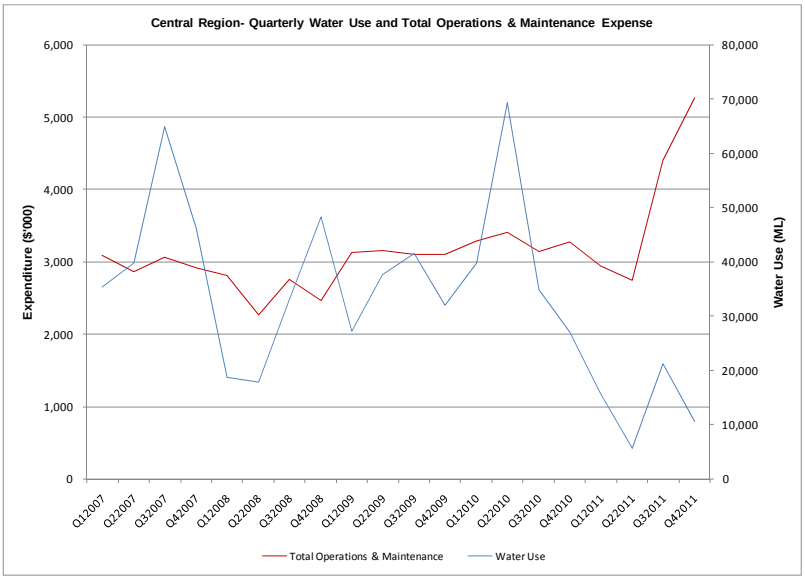

Figure CR-4

Total historical quarterly water use and total electricity expense for Central Region are illustrated in CR-5 below. This analysis was also completed for other expenditure types.

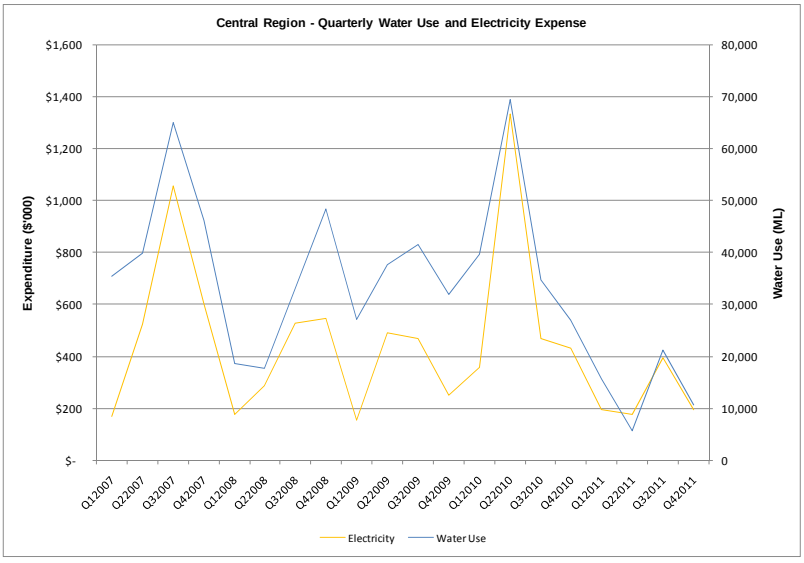

Figure CR-5

Central Region incorporates the Bundaberg and Biloela depots. The two depots service three distribution and nine bulk supply service contracts. Despite a low degree of predictability in demand, relatively strong correlations have been established between the four period moving averages of historical water use, labour hours and expense, and O&M hours and expense. The correlation was established after excluding the extreme weather period of Q2 to Q4 2011 from the analysis.

Bundaberg Depot

Total yearly historical costs by expenditure type in Bundaberg Depot for the period 2007/8 to 2010/11 are illustrated in BU-1 below.

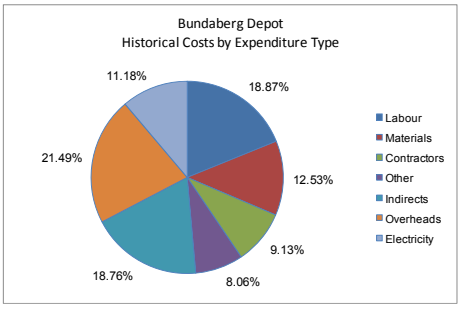

Figure BU-1

Total yearly water use and total labour hours in Bundaberg Depot for the period 2007/8 to 2010/11 are illustrated in BU-2 below. This analysis was also completed for activities and other expenditure types.

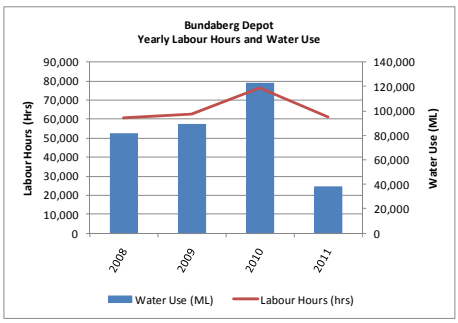

Figure BU-2

Total historical quarterly water use and operations and maintenance hours for Bundaberg Depot are illustrated in BU-3 below. This analysis was also completed for other expenditure types.

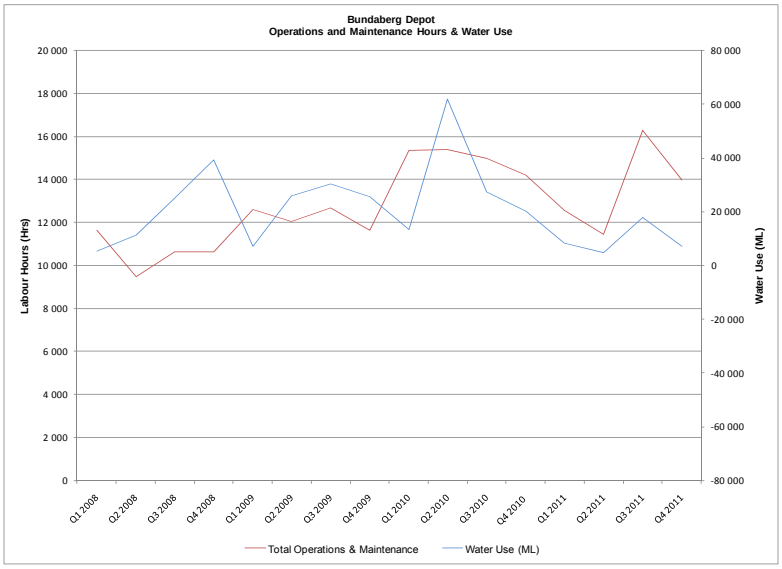

Figure BU-3

Total historical quarterly water use and total operations and maintenance expense for Bundaberg Depot are illustrated in BU-4 below. This analysis was also completed for other activities and expenditure types. The increase in O&M expense in Q3 and Q4 2011 was due to a big increase in corrective maintenance expense which appears to have been carried out by contractors.

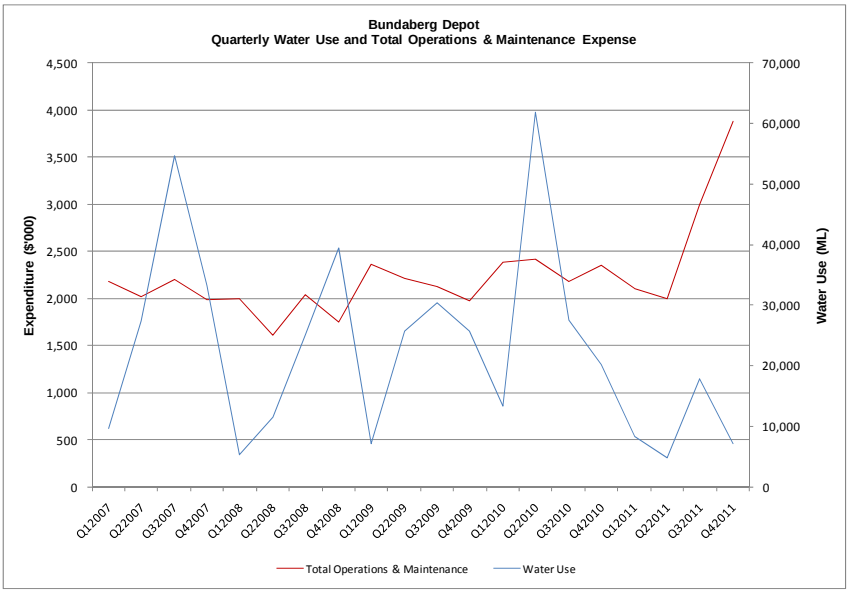

Figure BU-4

Total historical quarterly water use and total electricity expense for Bundaberg Depot are illustrated in BU-5 below. This analysis was also completed for other expenditure types.

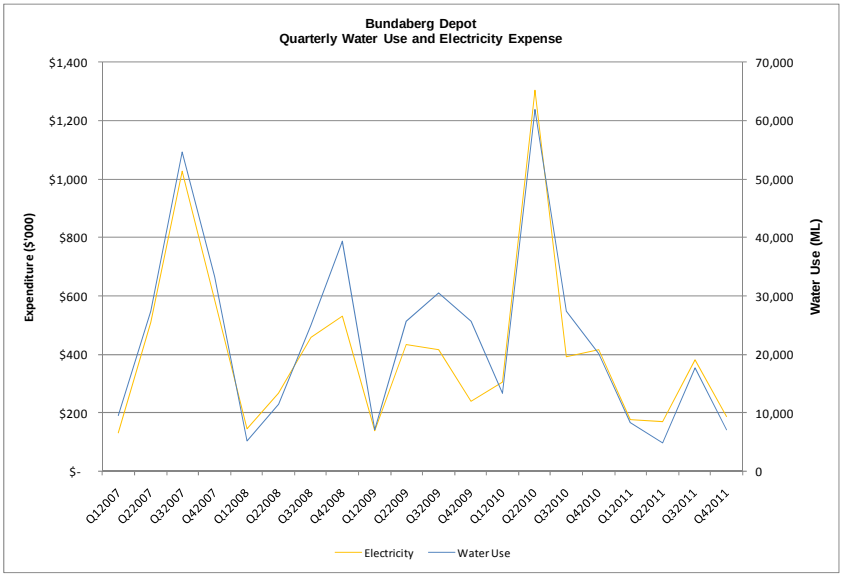

Figure BU-5

Bundaberg depot services five bulk supply and two distribution service contracts. Despite a low degree of predictability in demand, relatively strong correlations have been established between the four period moving averages of historical water use, labour hours and expense, and O&M expense.

Biloela Depot

Total yearly historical costs by expenditure type in Biloela Depot for the period 2007/8 to 2010/11 are illustrated in BIL-1 below.

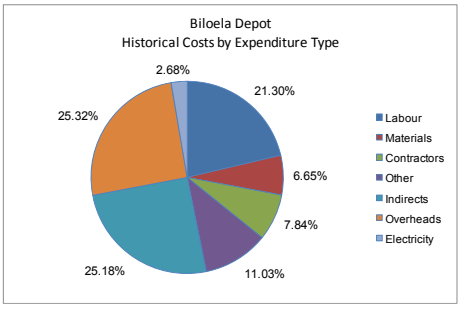

Figure BBIL-1

Total yearly water use and total labour hours in Biloela Depot for the period 2007/8 to 2010/11 are illustrated in BIL-2 below. This analysis was also completed for activities and other expenditure types.

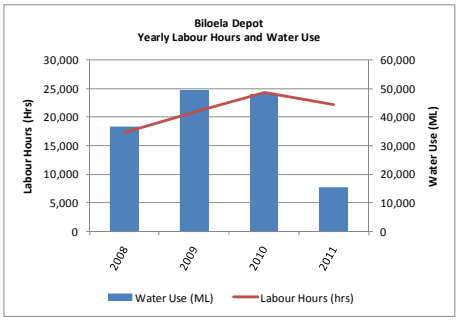

Figure BIL-2

Total historical quarterly water use and operations and maintenance hours for Biloela Depot are illustrated in BIL-3 below. This analysis was also completed for other expenditure types.

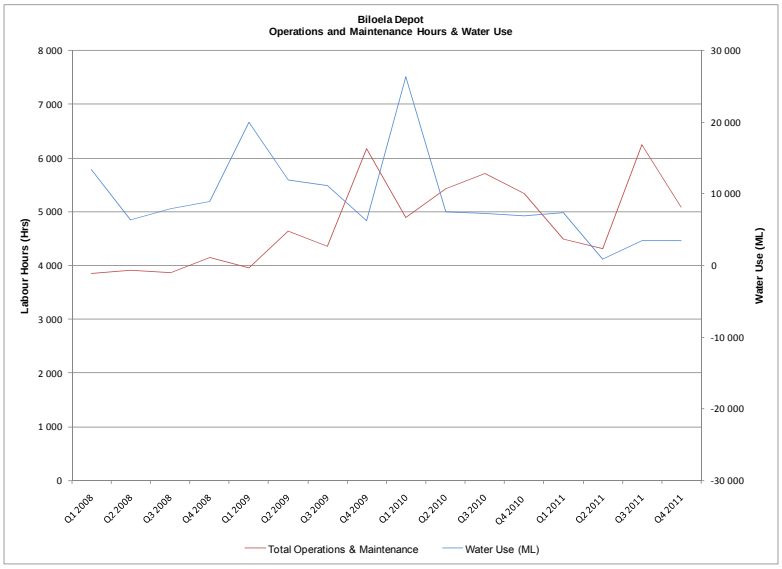

Figure BIL-3

Total historical quarterly water use and total operations and maintenance expense for Biloela Depot are illustrated in BIL-4 below. This analysis was also completed for other activities and expenditure types.

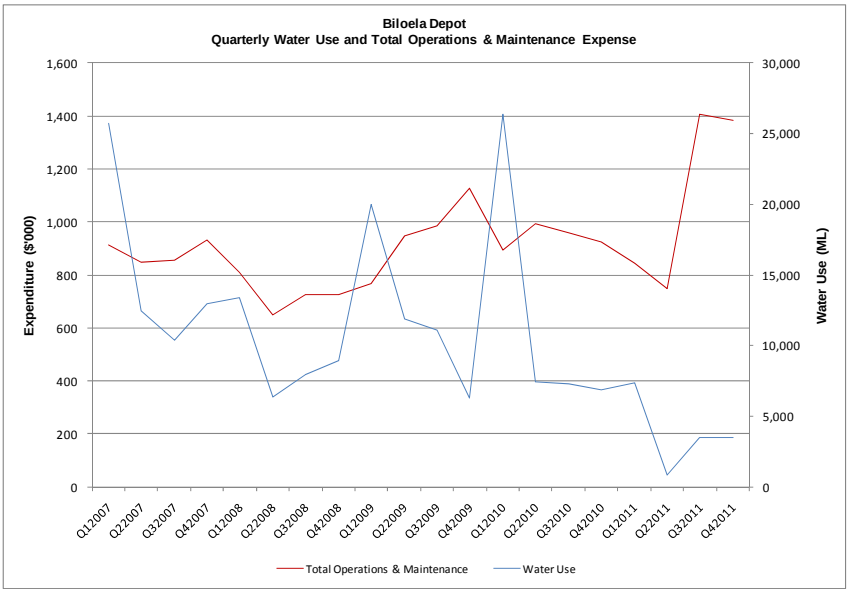

Figure BIL-4

Total historical quarterly water use and total electricity expense for Biloela Depot are illustrated in BIL-5 below. This analysis was also completed for other expenditure types.

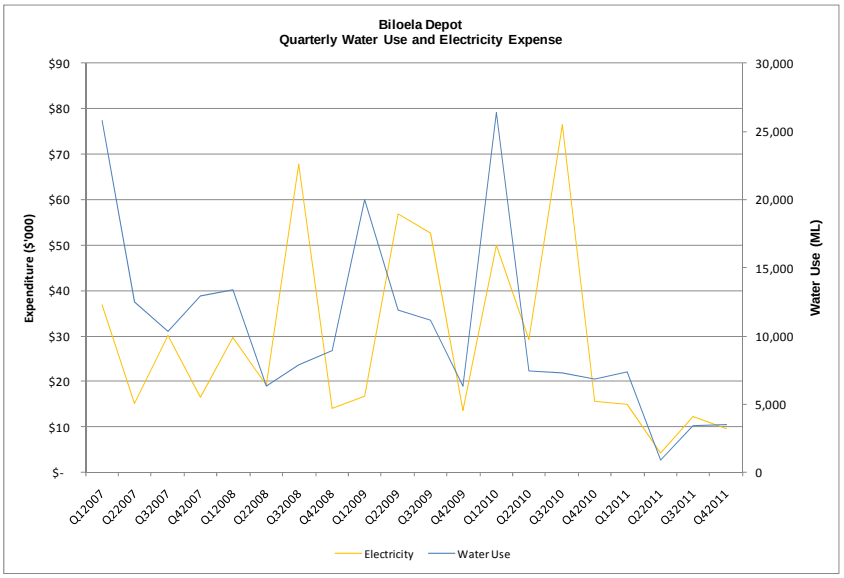

Figure BIL-5

Biloela depot services one distribution and four bulk supply service contracts. Figures BIL-4 and BIL-5 show that water use is decidedly seasonal in the Biloela depot area. For the period Q1 2007 to Q4 2011, water use is generally highest in the first quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Biloela depot, whether by category or activity.

North Region

Total yearly historical costs by expenditure type in North Region for the period 2007/8 to 2010/11 are illustrated in NR-1 below.

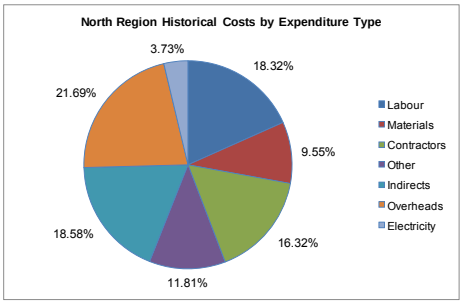

Figure NR-1

Total yearly water use and total labour hours in North Region for the period 2007/8 to 2010/11 are illustrated in NR-2 below. This analysis was also completed for activities and other expenditure types.

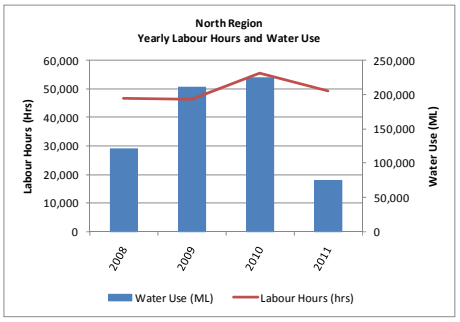

Figure NR-2

Total historical quarterly water use and operations and maintenance hours for North Region are illustrated in NR-3 below. This analysis was also completed for other expenditure types.

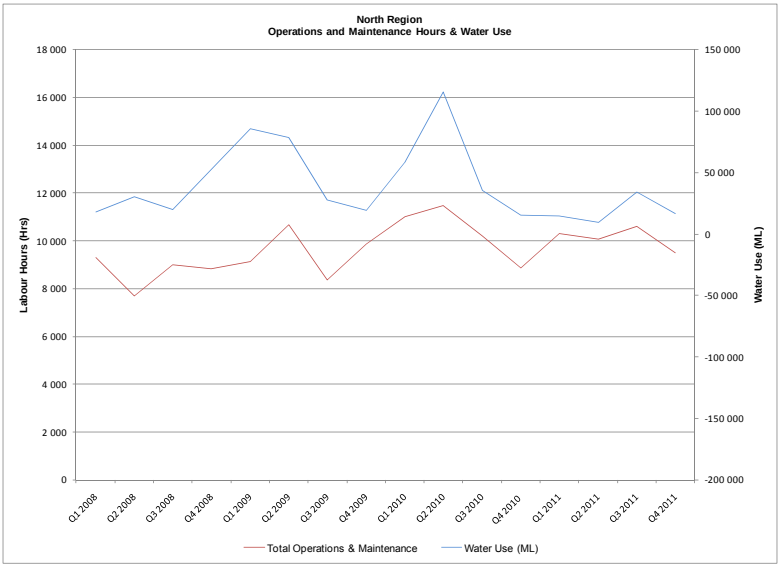

Figure NR-3

Total historical quarterly water use and total operations and maintenance expense for North Region are illustrated in NR-4 below. This analysis was also completed for other activities and expenditure types. The increase in O&M expense in Q3 and Q4 2011 was due to a big increase in corrective maintenance expense which appears to have been carried out by contractors.

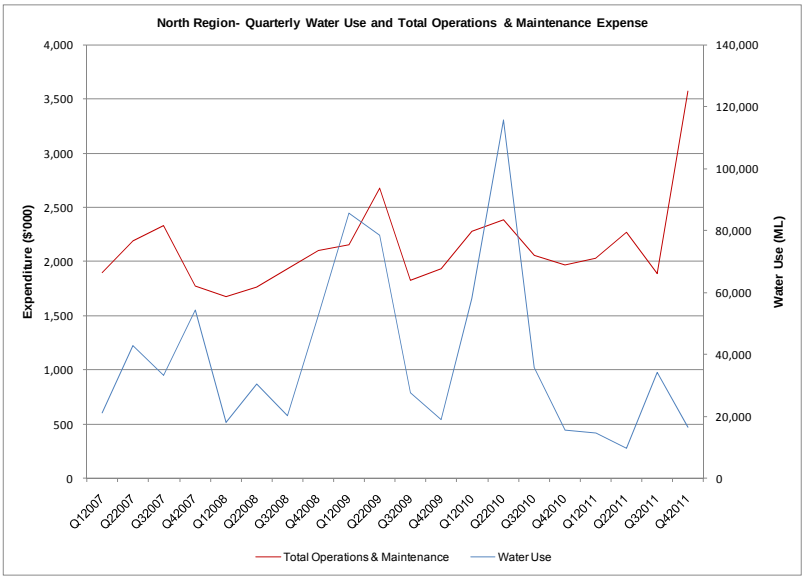

Figure NR-4

Total historical quarterly water use and total electricity expense for North Region are illustrated in NR-5 below. This analysis was also completed for other expenditure types.

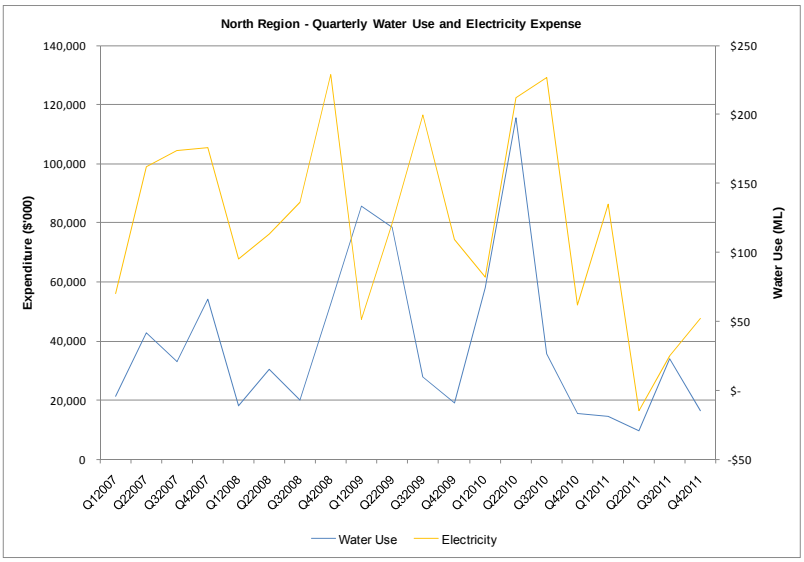

Figure NR-5

North Region incorporates the Moranbah, Eton and Emerald depots. The three depots service two distribution and four bulk supply service contracts. Despite a relatively low degree of predictability in demand, relatively strong correlations have been established between the four period moving averages of historical water use, and O&M hours and expense. The correlation was established after excluding the extreme weather period of Q2 to Q4 2011 from the analysis.

Moranbah Depot

Total yearly historical costs by expenditure type in Moranbah Depot for the period 2007/8 to 2010/11 are illustrated in MO-1 below.

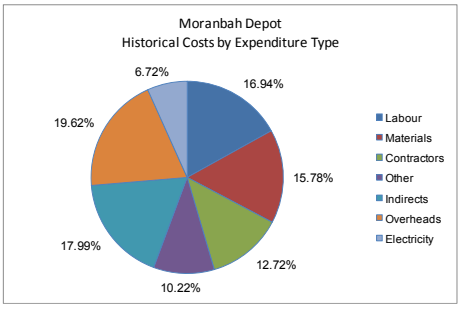

Figure MO-1

Total yearly water use and total labour hours in Moranbah Depot for the period 2007/8 to 2010/11 are illustrated in MO-2 below. This analysis was also completed for activities and other expenditure types.

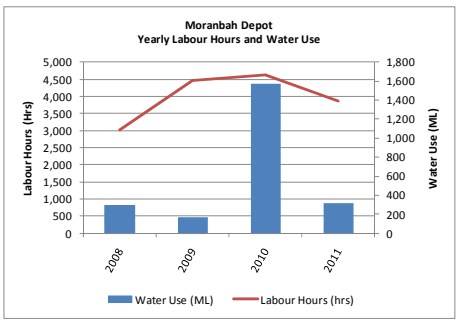

Figure MO-2

Total historical quarterly water use and operations and maintenance hours for Moranbah Depot are illustrated in MO-3 below. This analysis was also completed for other expenditure types.

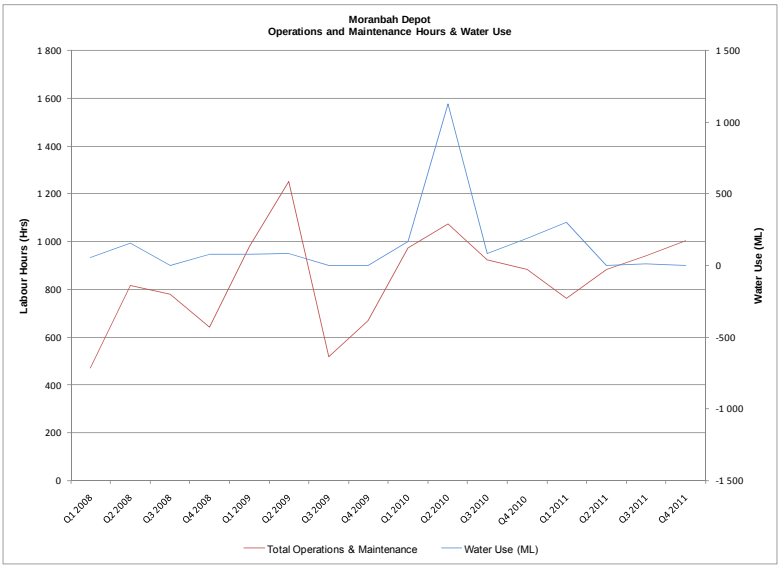

Figure MO-3

Total historical quarterly water use and total operations and maintenance expense for Moranbah Depot are illustrated in MO-4 below. This analysis was also completed for other activities and expenditure types.

Figure MO-4

Total historical quarterly water use and total electricity expense for Moranbah Depot are illustrated in MO-5 below. This analysis was also completed for other expenditure types.

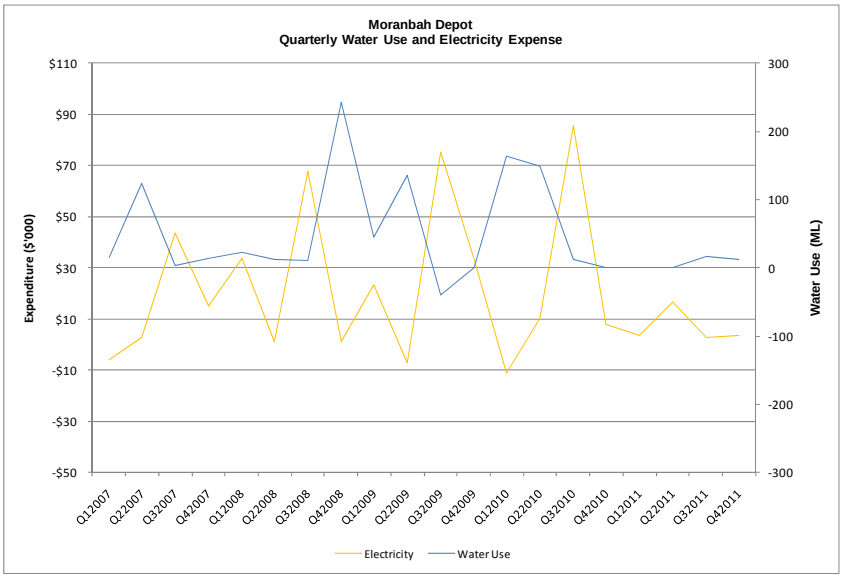

Figure MO-5

Moranbah depot services one bulk supply service contract. Figures MO-4 and MO-5 show that water use is decidedly seasonal in the Moranbah depot area. For the period Q1 2007 to Q4 2011, water use is generally highest in the half of any one year. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Moranbah depot, whether by category or activity.

Emerald Depot

Total yearly historical costs by expenditure type in Emerald Depot for the period 2007/8 to 2010/11 are illustrated in EM-1 below.

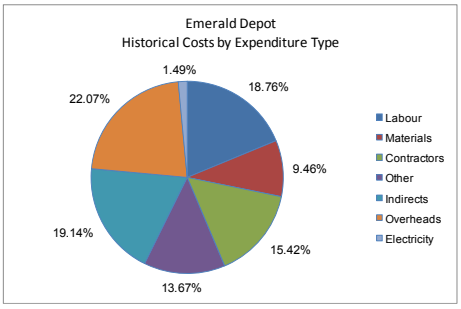

Figure EM-1

Total yearly water use and total labour hours in Emerald Depot for the period 2007/8 to 2010/11 are illustrated in EM-2 below. This analysis was also completed for activities and other expenditure types.

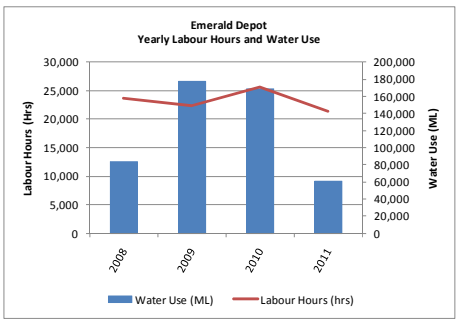

Figure EM-2

Total historical quarterly water use and operations and maintenance hours for Emerald Depot are illustrated in EM-3 below. This analysis was also completed for other expenditure types.

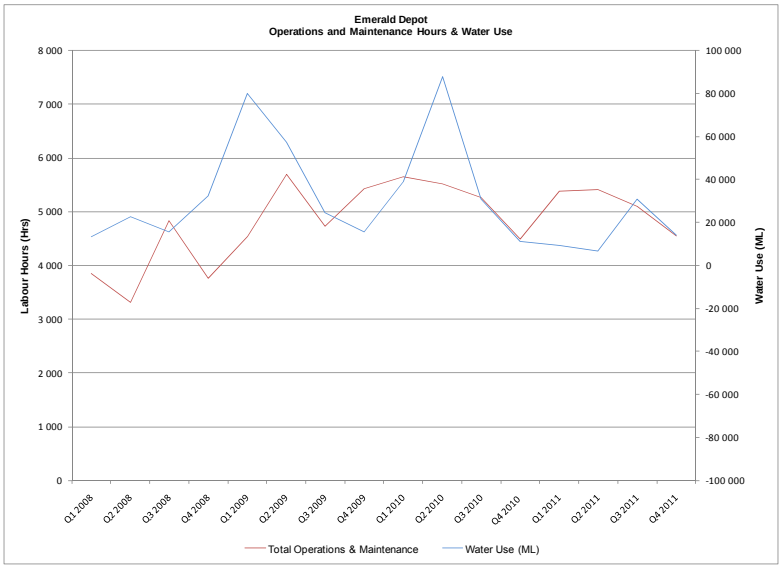

Figure EM-3

Total historical quarterly water use and total operations and maintenance expense for Emerald Depot are illustrated in EM-4 below. This analysis was also completed for other activities and expenditure types. The increase in O&M expense in Q3 and Q4 2011 was due to a big increase in corrective maintenance expense which appears to have been carried out by contractors.

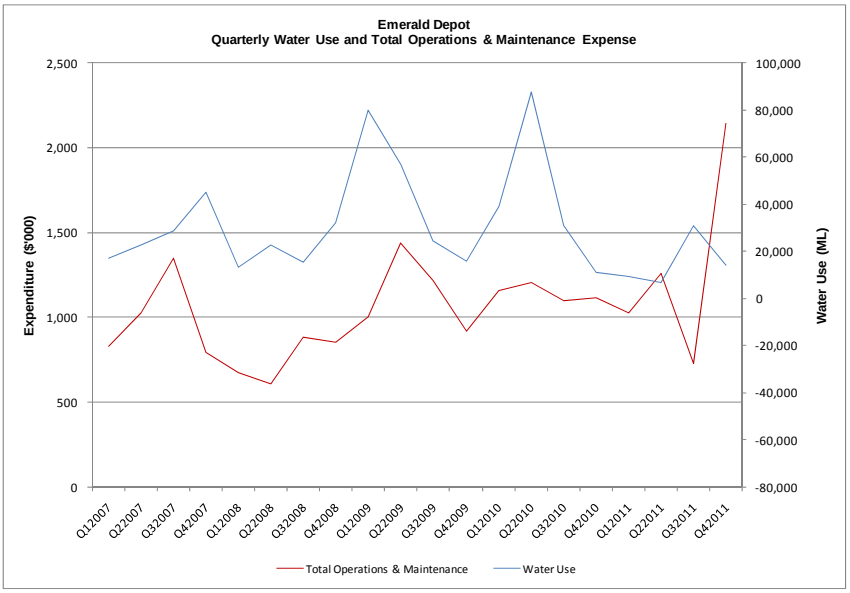

Figure EM-4

Total historical quarterly water use and total electricity expense for Emerald Depot are illustrated in EM-5 below. This analysis was also completed for other expenditure types.

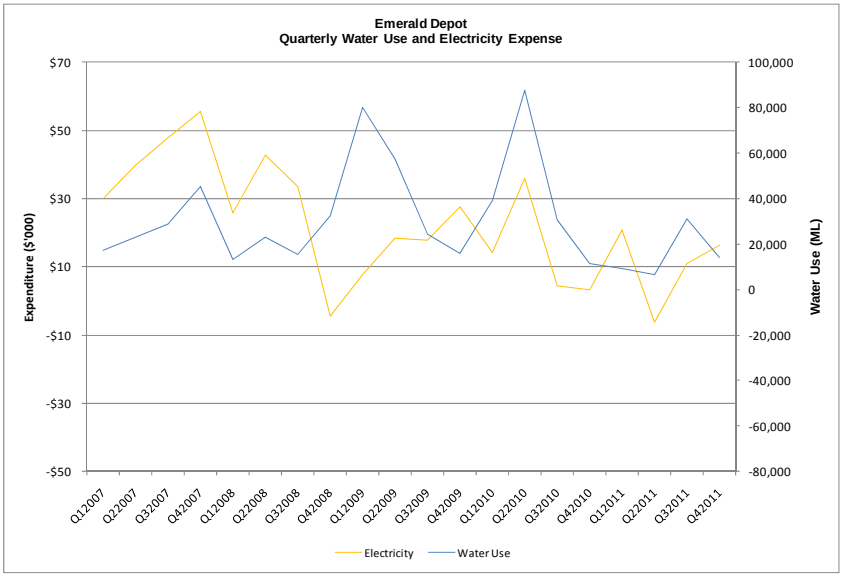

Figure EM-5

Emerald depot services one bulk supply and one distribution service contract. Despite a relatively low degree of predictability in demand, relatively strong correlations have been established between the four period moving averages of historical water use, and labour hours and expense. O&M expense was also found to vary with water use after removing the Q2 to Q4 2011 from the analysis.

Eton Depot

Total yearly historical costs by expenditure type in Eton Depot for the period 2007/8 to 2010/11 are illustrated in ET-1 below.

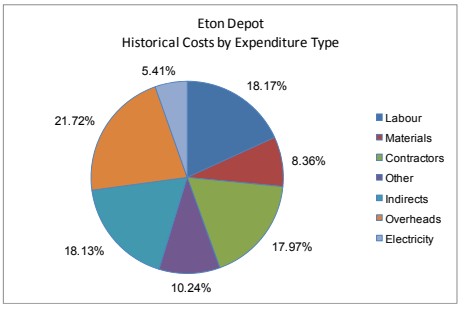

Figure ET-1

Total yearly water use and total labour hours in Eton Depot for the period 2007/8 to 2010/11 are illustrated in ET-2 below. This analysis was also completed for activities and other expenditure types.

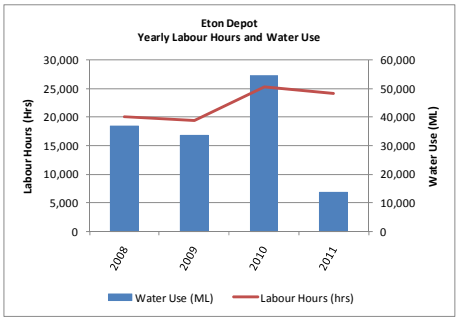

Figure ET-2

Total historical quarterly water use and operations and maintenance hours for Eton Depot are illustrated in ET-3 below. This analysis was also completed for other expenditure types.

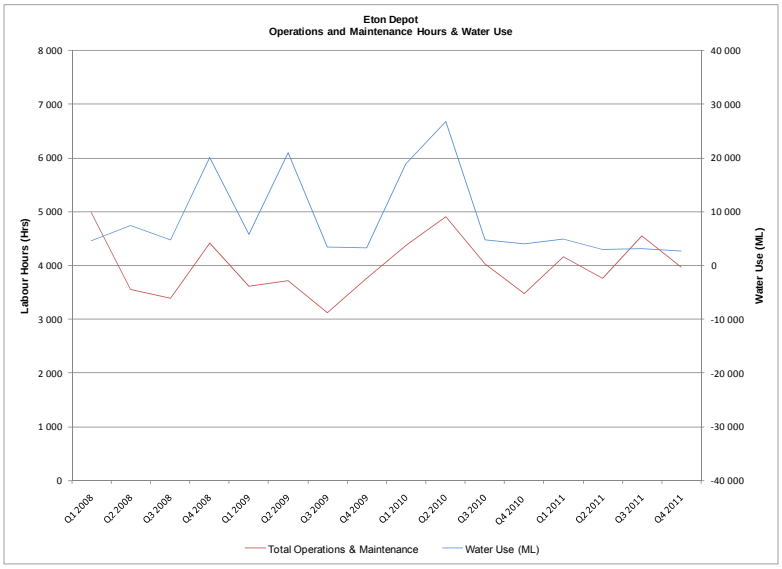

Figure ET-3

Total historical quarterly water use and total operations and maintenance expense for Eton Depot are illustrated in ET-4 below. This analysis was also completed for other activities and expenditure types. The increase in O&M expense in Q3 and Q4 2011 was due to a big increase in corrective maintenance expense which appears to have been carried out by contractors.

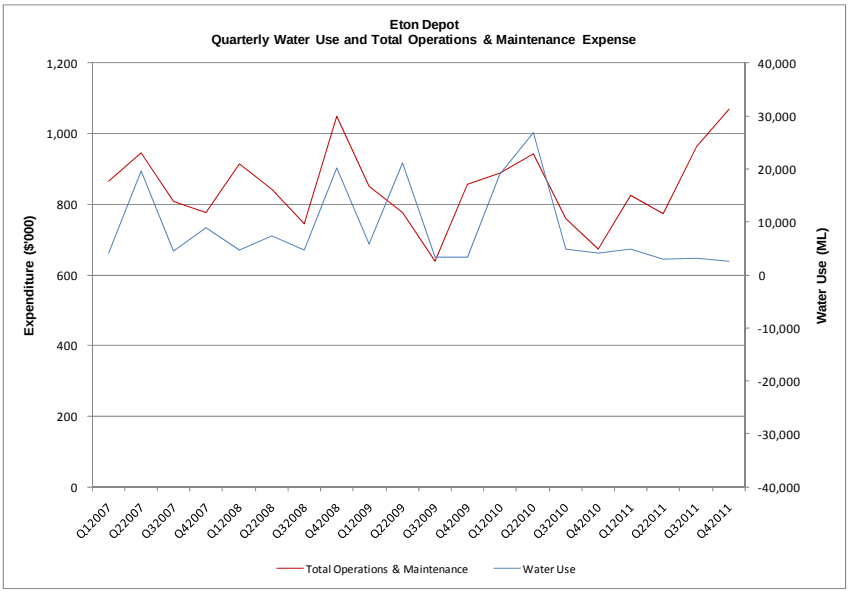

Figure ET-4

Total historical quarterly water use and total electricity expense for Eton Depot are illustrated in ET-5 below. This analysis was also completed for other expenditure types.

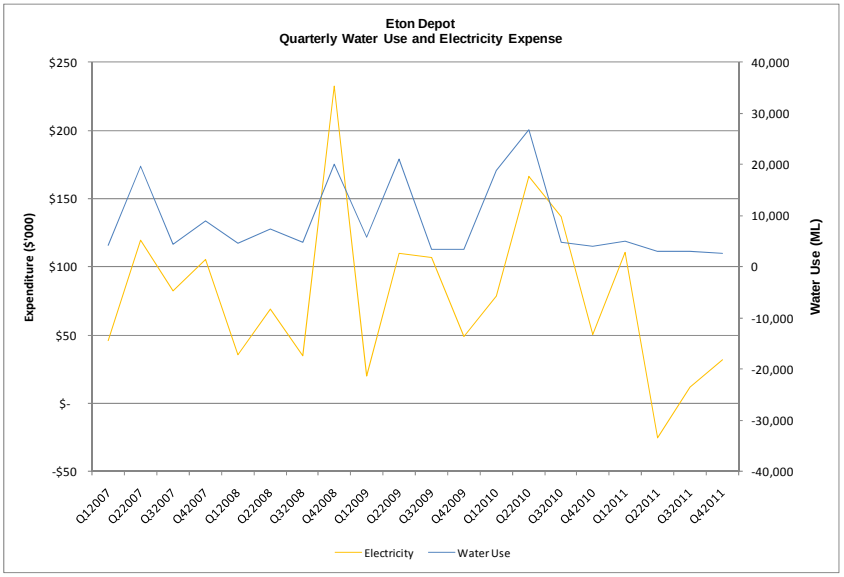

Figure ET-5

Eton depot services one distribution and two bulk supply service contracts. Despite a relatively low degree of predictability in demand, reasonable correlations have been established between the four period moving averages of historical water use, and labour hours and expense. O&M expense was also found to vary with water use, albeit moderately.

Far North Region

Total yearly historical costs by expenditure type in Far North Region for the period 2007/8 to 2010/11 are illustrated in FNR-1 below.

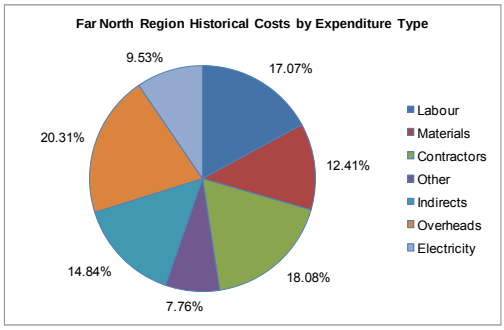

Figure FNR-1

Total yearly water use and total labour hours in Far North Region for the period 2007/8 to 2010/11 are illustrated in FNR-2 below. This analysis was also completed for activities and other expenditure types.

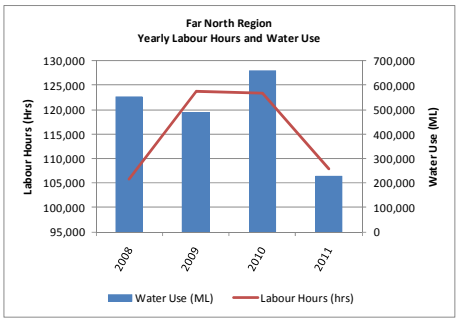

Figure FNR-2

Total historical quarterly water use and operations and maintenance hours for Far North Region are illustrated in NR-3 below. This analysis was also completed for other expenditure types.

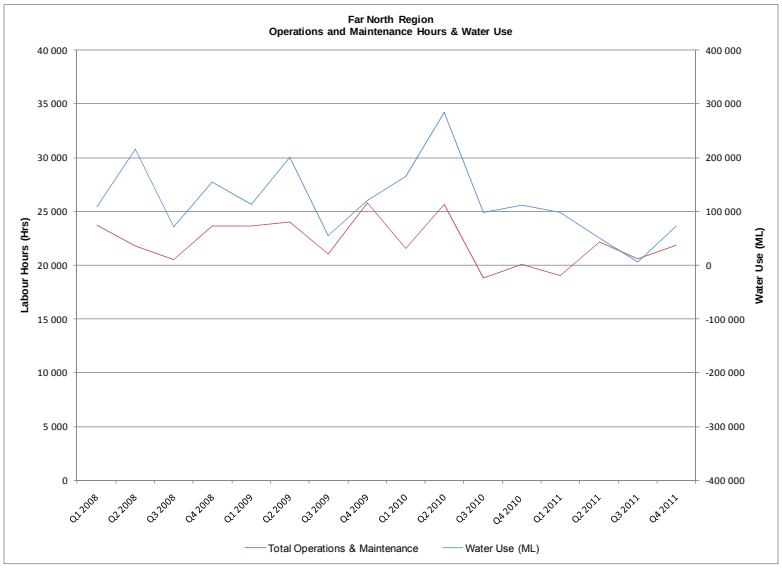

Figure FNR-3

Total historical quarterly water use and total operations and maintenance expense for Far North Region are illustrated in FNR-4 below. This analysis was also completed for other activities and expenditure types.

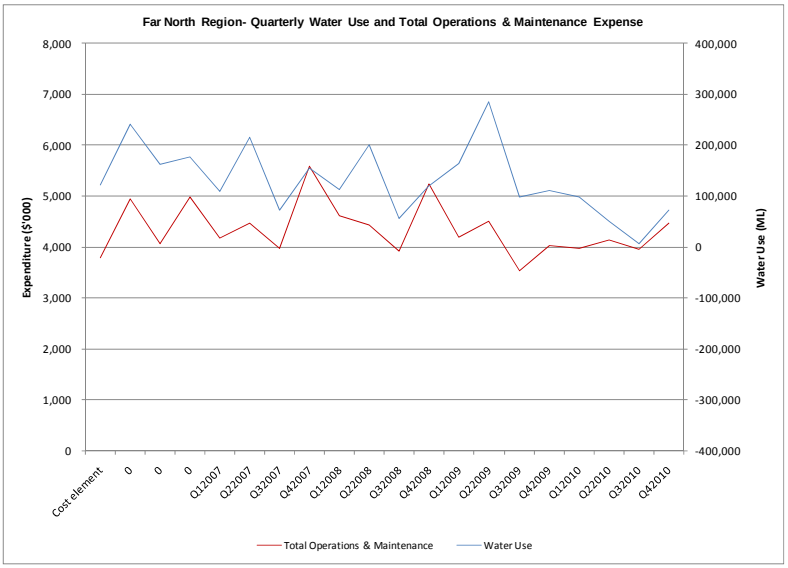

Figure FNR-4

Total historical quarterly water use and total electricity expense for Far North Region are illustrated in FNR-5 below. This analysis was also completed for other expenditure types.

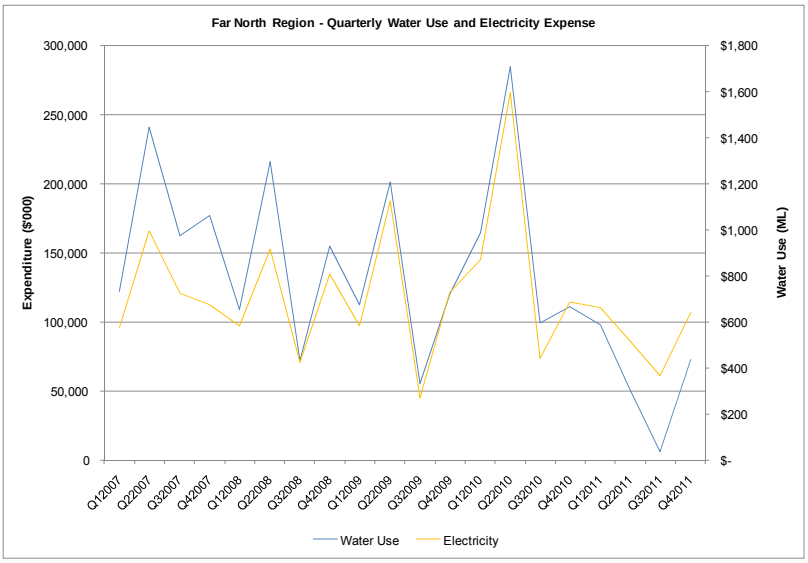

Figure FNR-5

Far North Region incorporates the Clare and Mareeba depots. The two depots service two distribution and three bulk supply service contracts. Figures FNR-4 and FNR-5 show that water use is reasonably seasonal in Far North Region. For the period Q1 2007 to Q1 2011, water use is generally lowest in the third quarter and highest in the second quarter. Despite the reasonable degree of predictability of the seasonality in demand, only total labour hours appeared to vary with water use, albeit weakly. Little or no correlation could be established between Far North Region historical water use and expense in any category or activity.

Clare Depot

Total yearly historical costs by expenditure type in Clare Depot for the period 2007/8 to 2010/11 are illustrated in CL-1 below.

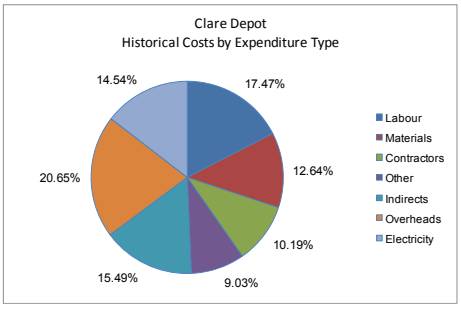

Figure CL-1

Total yearly water use and total labour hours in Clare Depot for the period 2007/8 to 2010/11 are illustrated in CL-2 below. This analysis was also completed for activities and other expenditure types.

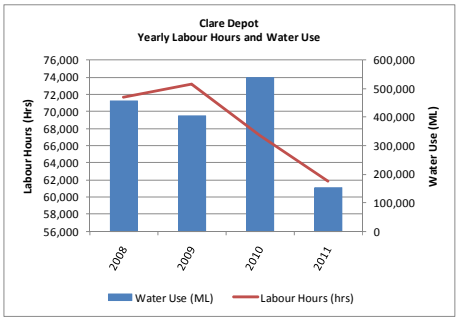

Figure CL-2

Total historical quarterly water use and operations and maintenance hours for Clare Depot are illustrated in CL-3 below. This analysis was also completed for other expenditure types.

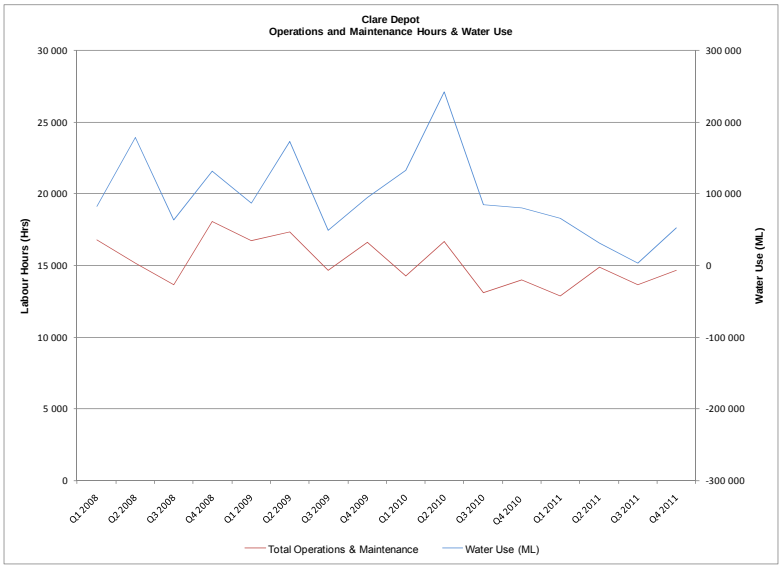

Figure CL-3

Total historical quarterly water use and total operations and maintenance expense for Clare Depot are illustrated in CL-4 below. This analysis was also completed for other activities and expenditure types.

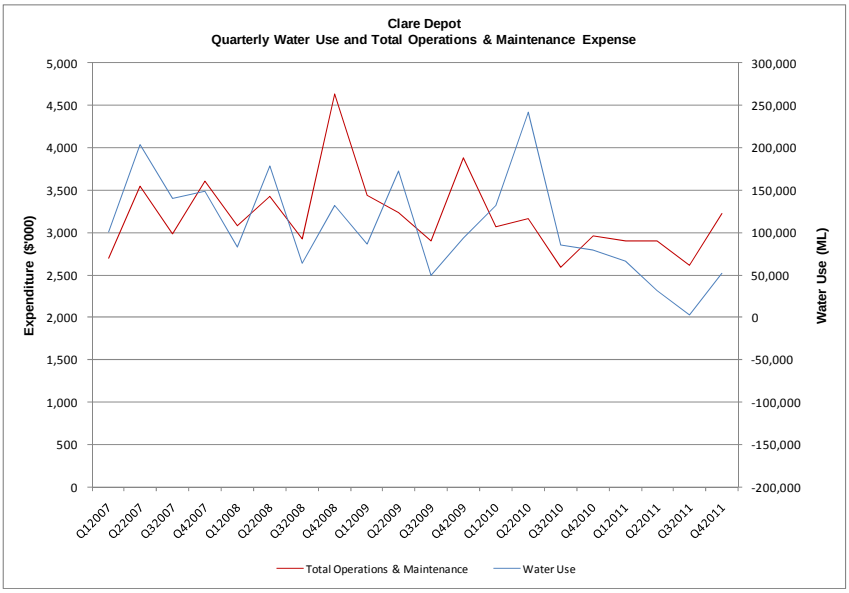

Figure CL-4

Total historical quarterly water use and total electricity expense for Clare Depot are illustrated in CL-5 below. This analysis was also completed for other expenditure types.

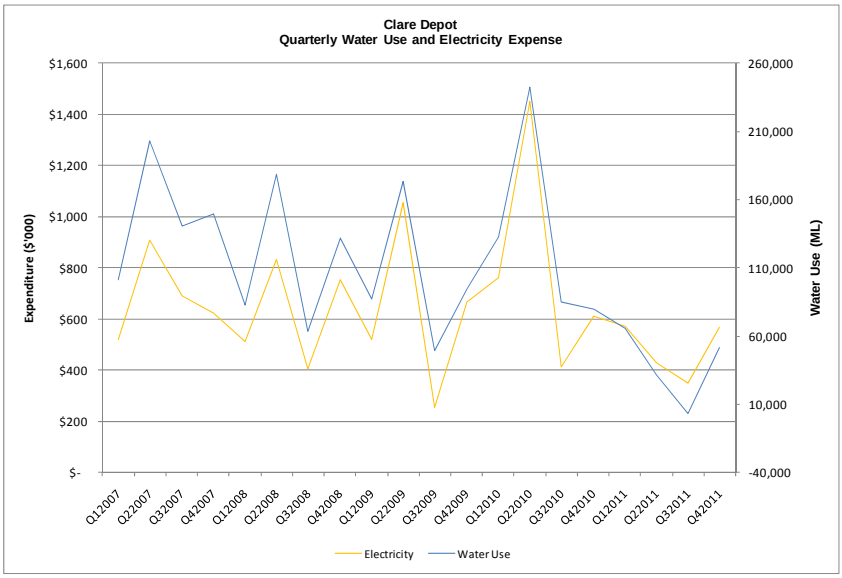

Figure CL-5

Clare depot services one distribution and two bulk supply service contracts. Figures CL-4 and CL-5 show that water use is reasonably seasonal in Far North Region. For the period Q1 2007 to Q1 2011, water use is generally lowest in the third quarter and highest in the second quarter. Despite the reasonable degree of predictability of the seasonality in demand, only total labour hours and expense appeared to vary with water use, albeit moderately.

Mareeba Depot

Total yearly historical costs by expenditure type in Mareeba Depot for the period 2007/8 to 2010/11 are illustrated in MA-1 below.

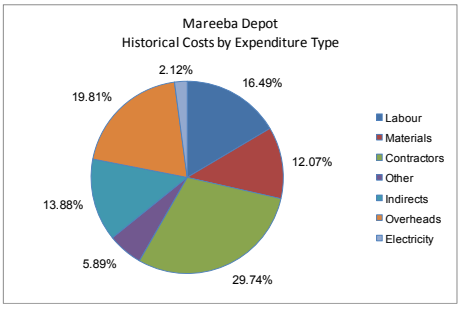

Figure MA-1

Total yearly water use and total labour hours in Mareeba Depot for the period 2007/8 to 2010/11 are illustrated in MA-2 below. This analysis was also completed for activities and other expenditure types.

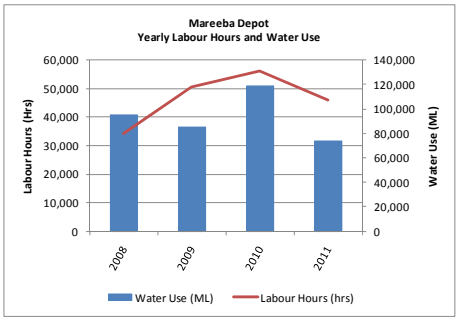

Figure MA-2

Total historical quarterly water use and operations and maintenance hours for Mareeba Depot are illustrated in MA-3 below. This analysis was also completed for other expenditure types.

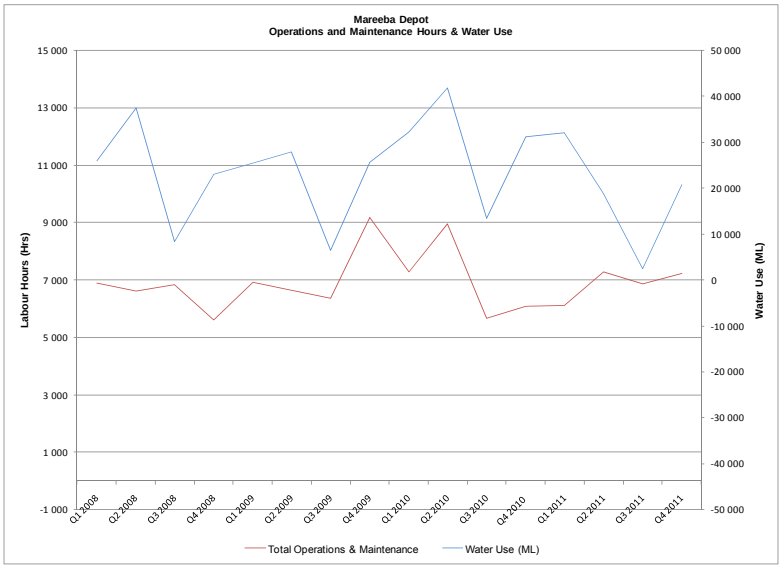

Figure MA-3

Total historical quarterly water use and total operations and maintenance expense for Mareeba Depot are illustrated in MA-4 below. This analysis was also completed for other activities and expenditure types.

Figure MA-4

Total historical quarterly water use and total electricity expense for Mareeba Depot are illustrated in MA-5 below. This analysis was also completed for other expenditure types.

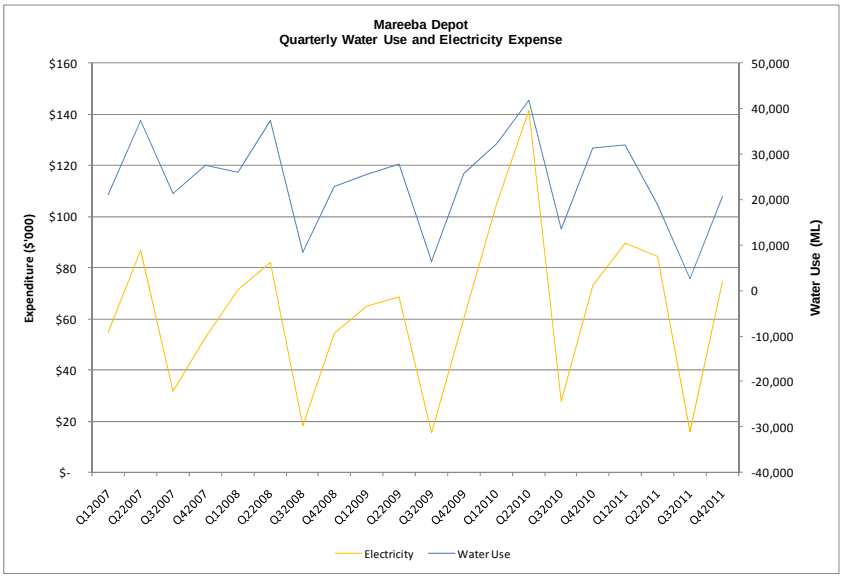

Figure MA-5

Mareeba depot services one bulk supply and one distribution service contract. Figures CL-4 and CL-5 show that water use is moderately seasonal in Mareeba depot area. For the period Q1 2007 to Q1 2011, water use is generally lowest in the third quarter and highest in the second quarter. Despite the apparent seasonality, little or no correlation could be established between historical water use and either expense or labour hours in Mareeba depot, whether by category or activity.

APPENDIX G

Historical Cost Analysis
Water Distribution Systems

Water Distribution – Totals

Historical total yearly distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDT-1 below.

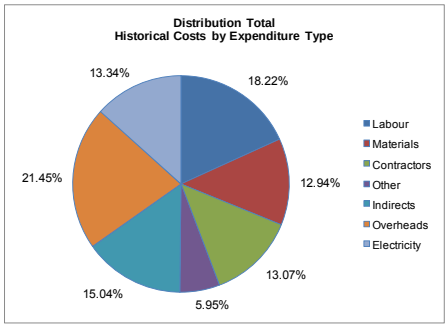

Figure WDT-1

Total yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDT-2 below. This analysis was also completed for activities and other expenditure types.

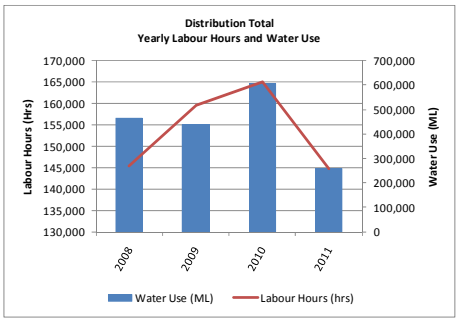

Figure WDT-2

Total historical quarterly distribution systems water use and operations and maintenance hours are illustrated in WDT-3 below. This analysis was also completed for other expenditure types.

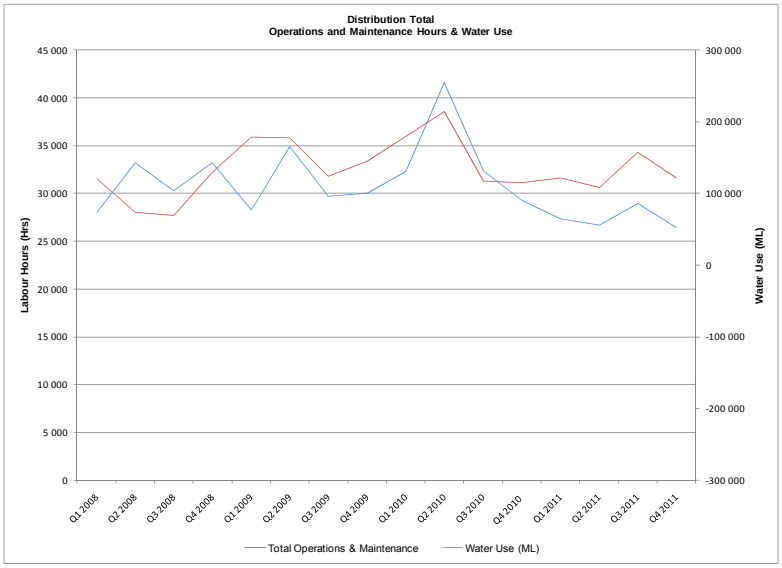

Figure WDT-3

Total historical quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDT-4 below. This analysis was also completed for other activities and expenditure types.

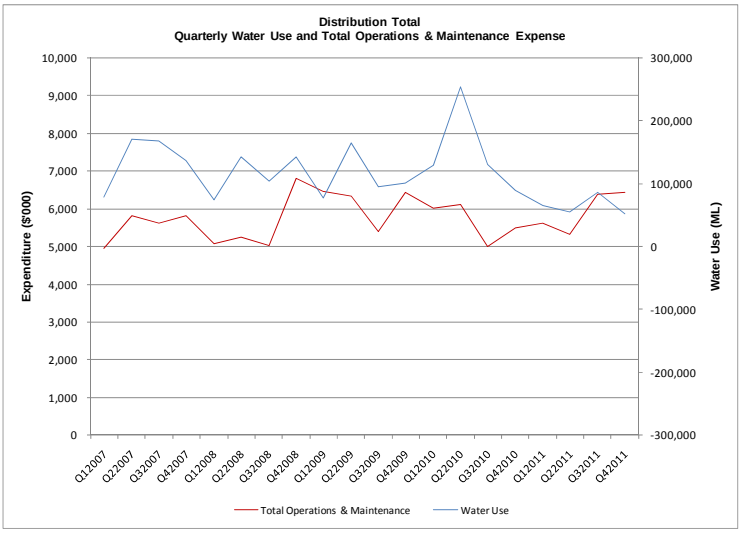

Figure WDT-4

Total historical quarterly distribution systems water use and total electricity expense are illustrated in WDT-5 below. This analysis was also completed for other expenditure types.

Figure WDT-5

SunWater services eight distribution service contracts. Figures WDT-4 and WTD-5 show that water use in distribution is moderately seasonal. For the period Q1 2008 to Q1 2011, water use is generally lowest in the first and fourth quarters and highest in the second quarter. Relatively good correlation has been established between the four period moving averages of historical water use and labour hours, and water use and labour hours for scheduling and delivering water.

Water Distribution – Burdekin Haughton

Historical Burdekin Haughton yearly water distribution costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDBH-1 below.

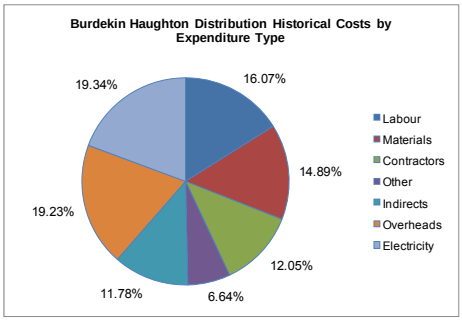

Figure WDBH-1

Burdekin Haughton yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDBH-2 below. This analysis was also completed for activities and other expenditure types.

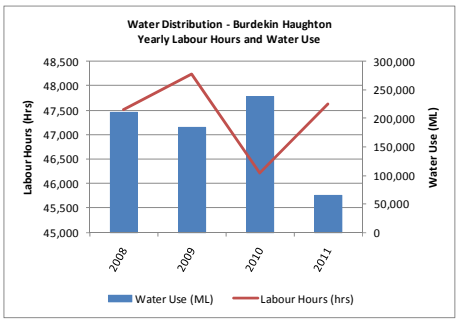

Figure WDBH-2

Burdekin Haughton historical quarterly distribution systems water use and operations and maintenance hours are illustrated in WDBH-3 below. This analysis was also completed for other expenditure types.

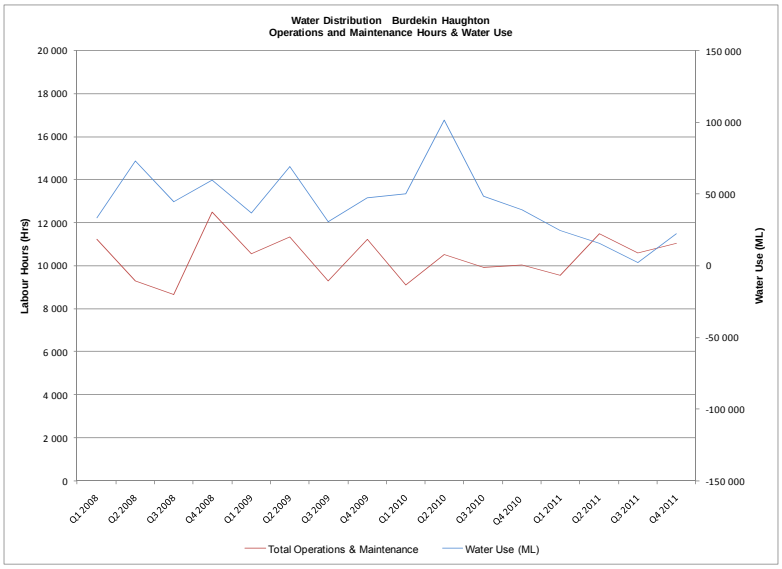

Figure WDBH-3

Burdekin Haughton historical quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDBH-4 below. This analysis was also completed for other activities and expenditure types.

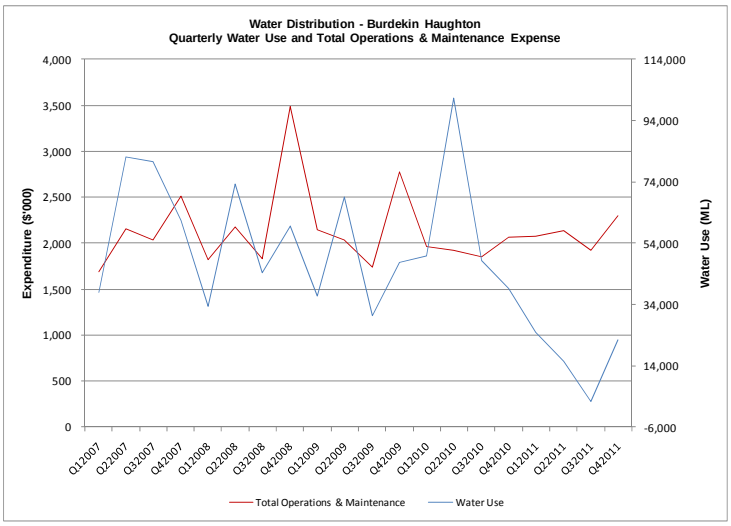

Figure WDBH-4

Burdekin Haughton historical quarterly distribution systems water use and total electricity expense are illustrated in WDBH-5 below. This analysis was also completed for other expenditure types.

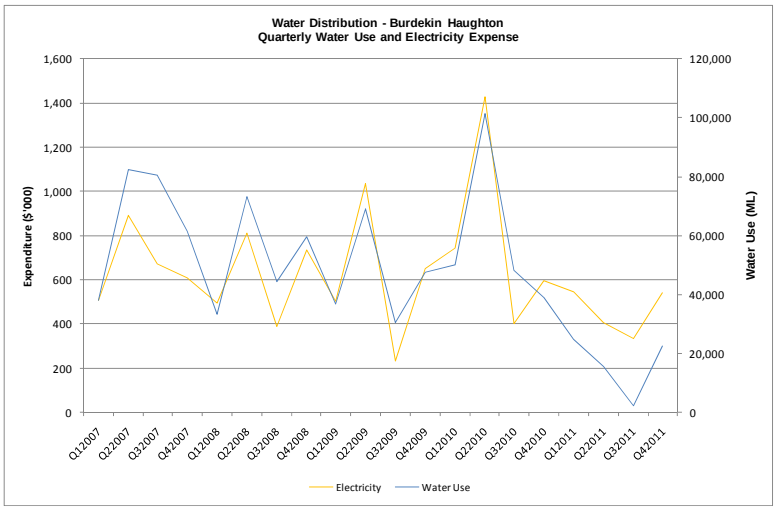

Figure WDBH-5

Figures WDBH-4 and WTBH-5 show that water use in Burdekin Houghton distribution is moderately seasonal. For the period Q1 2007 to Q1 2011, water use is generally lowest in the first quarter and highest in the second quarter. Relatively good correlation has been established between the four period moving averages of historical water use and labour hours and expense. O&M expense was also found to vary with water use after removing the Q2 to Q4 2011 from the analysis.

Water Distribution – Bundaberg

Historical Bundaberg yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDB-1 below.

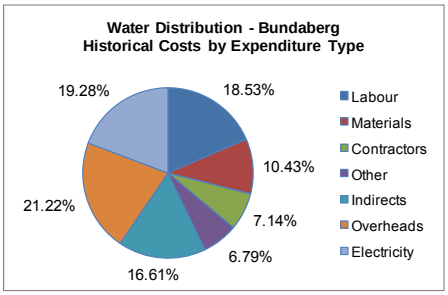

Figure WDB-1

Bundaberg yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDB-2 below. This analysis was also completed for activities and other expenditure types.

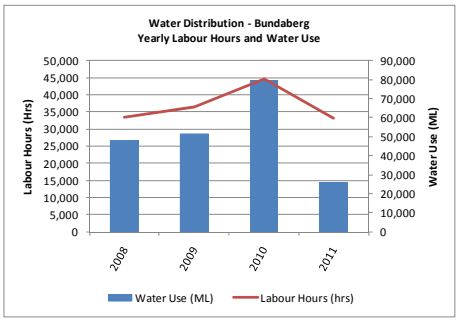

Figure WDB-2

Bundaberg historical quarterly distribution systems water use and operations and maintenance hours are illustrated in WDB-3 below. This analysis was also completed for other expenditure types.

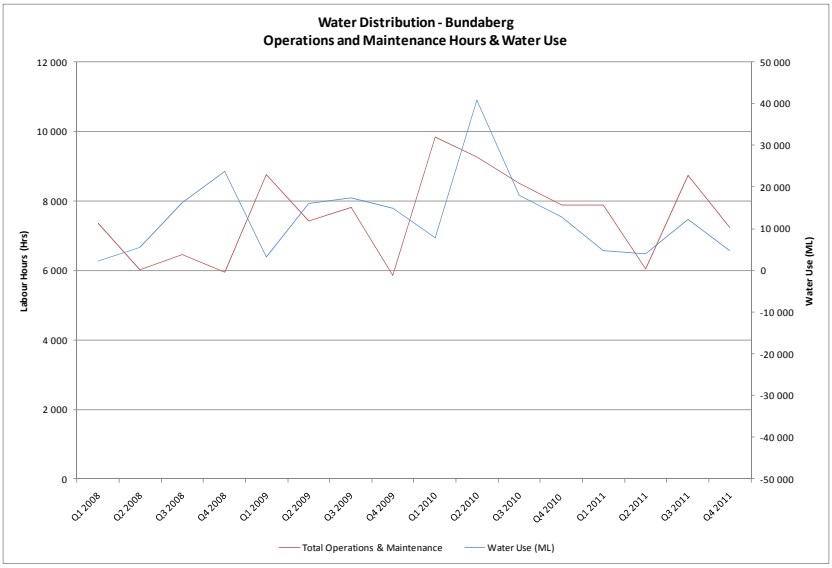

Figure WDB-3

Bundaberg historical quarterly distribution systems water use and total operations and maintenance expense is illustrated in WDB-4 below. This analysis was also completed for other activities and expenditure types.

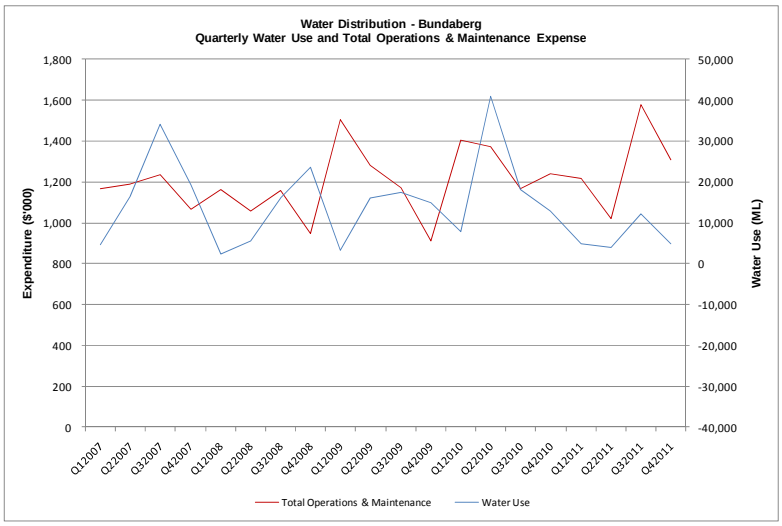

Figure WDB-4

Bundaberg historical quarterly distribution systems water use and total electricity expense are illustrated in WDB-5 below. This analysis was also completed for other expenditure types.

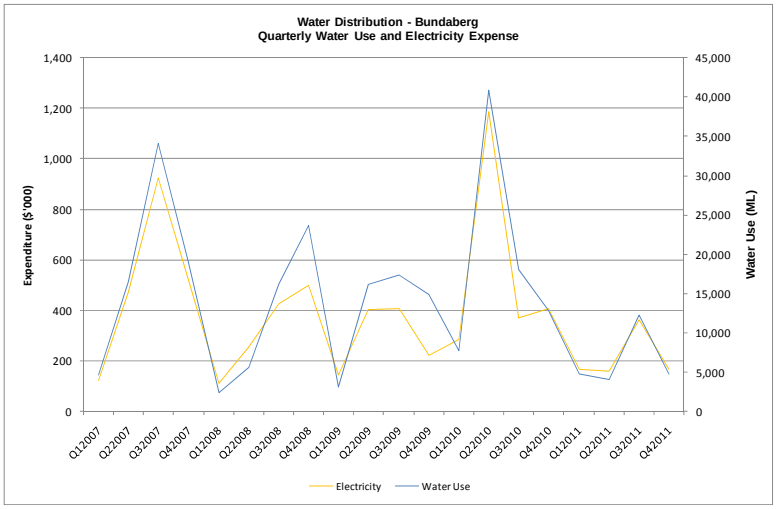

Figure WDB-5

Figures WDB-4 and WTB-5 show that water use in Bundaberg distribution is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in the last quarter and the second half of any year except for the 2009/10 year when water use in Q2 was almost three times the average. Good correlation has been established between the four period moving averages of historical water use and labour hours and labour expense. The four period moving average of O&M expense was also found to moderately vary with water use after removing the Q2 to Q4 2011 from the analysis.

Water Distribution – Mareeba Dimbulah

Historical Mareeba Dimbulah yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDMD-1 below.

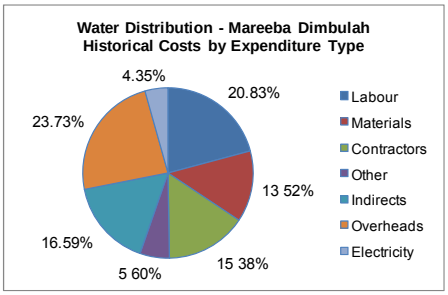

Figure WDMD-1

Mareeba Dimbulah yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDMD-2 below. This analysis was also completed for activities and other expenditure types.

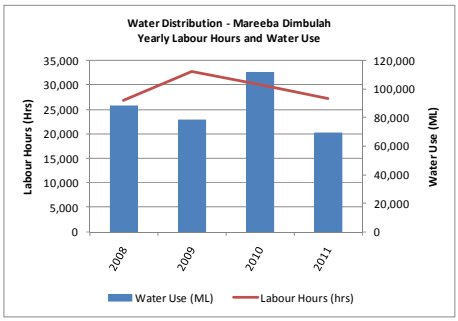

Figure WDMD-2

Mareeba Dimbulah historical quarterly distribution systems water use and operations and maintenance hours are illustrated in WDMD-3 below. This analysis was also completed for other expenditure types.

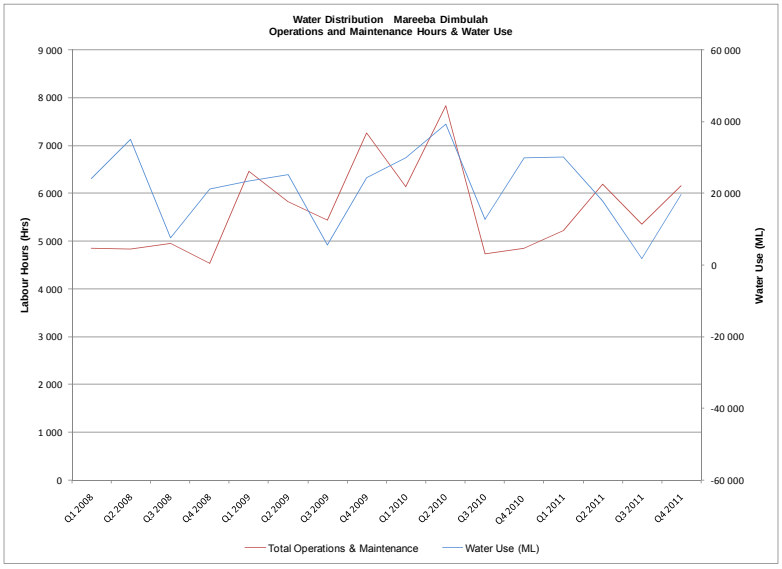

Figure WDMD-3

Mareeba Dimbulah historical quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDMD-4 below. This analysis was also completed for other activities and expenditure types.

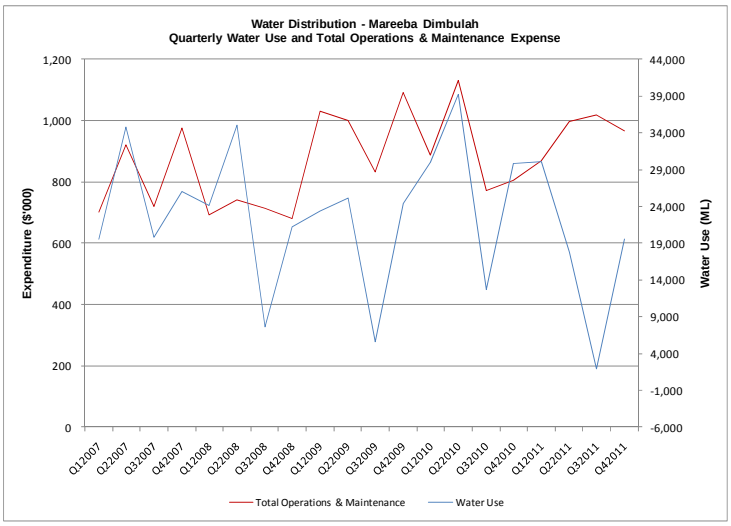

Figure WDMD-4

Mareeba Dimbulah historical quarterly distribution systems water use and total electricity expense are illustrated in WDMD-5 below. This analysis was also completed for other expenditure types.

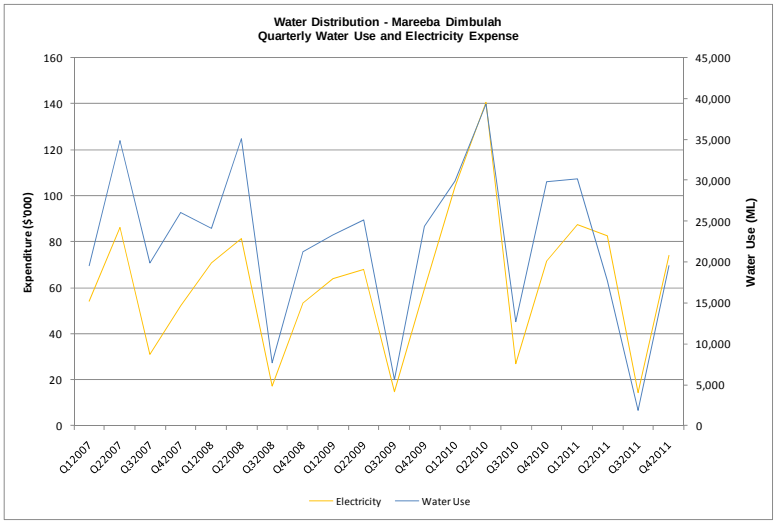

Figure WDMD-5

Figures WDB-4 and WTB-5 show that water use in Mareeba Dimbulah distribution is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in second half of any year. There was little correlation between water use and O&M labour and expense. This was partly explained by significant growth in scheme management hours and expense. However, good correlation has been established between historical water use and scheduling & delivering water and metering labour hours which accounts for a large share of O&M hours and expense.

Water Distribution – Eton

Historical Eton yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDE-1 below.

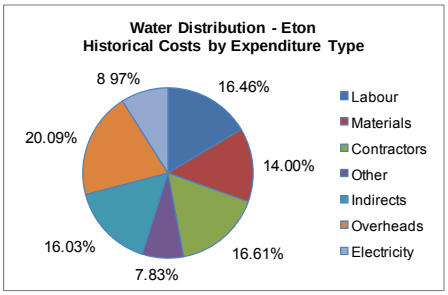

Figure WDE-1

Eton yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDE-2 below. This analysis was also completed for activities and other expenditure types.

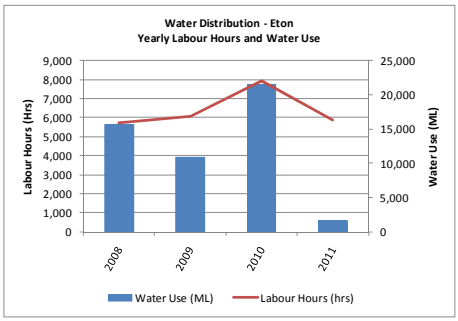

Figure WDB-2

Eton historical quarterly distribution systems water use and operations and maintenance hours are illustrated in WDE-3 below. This analysis was also completed for other expenditure types.

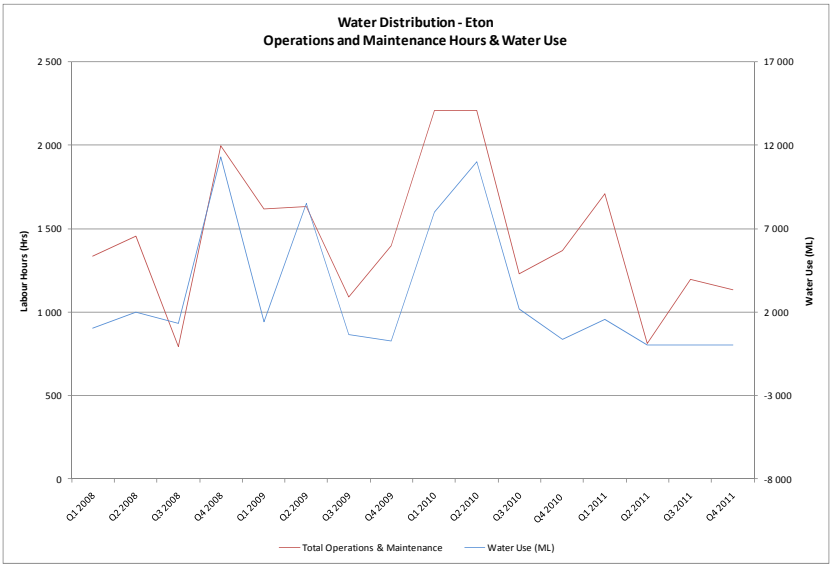

Figure WDE-3

Eton historical quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDE-4 below. This analysis was also completed for other activities and expenditure types.

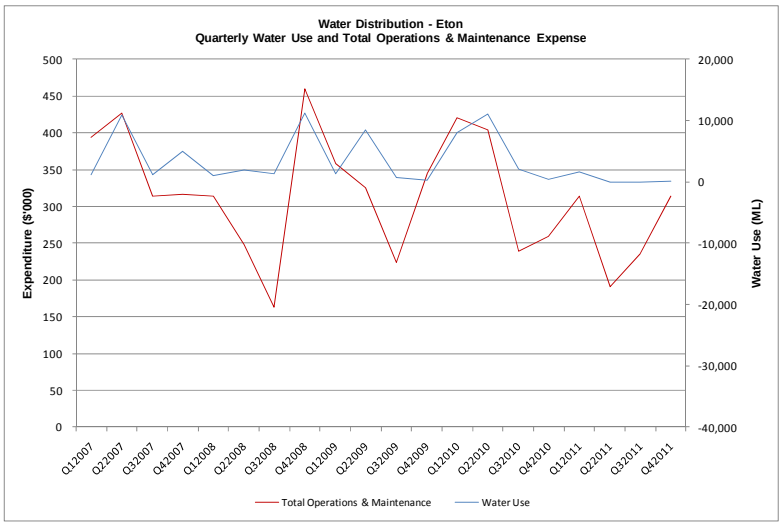

Figure WDE-4

Eton historical quarterly distribution systems water use and total electricity expense are illustrated in WDE-5 below. This analysis was also completed for other expenditure types.

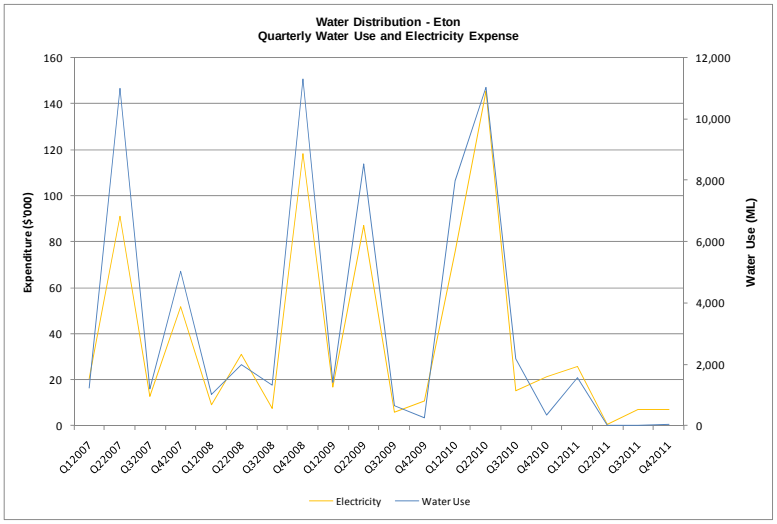

Figure WDE-5

Figures WDE-4 and WTE-5 show that water use in Eton distribution is moderately seasonal. For the period Q1 2007 to Q1 2011, water use was generally lowest in the second half of each year except in 2007/08 when water use was highest in the second half. Good correlation has been established between historical water use, and operations and maintenance hours. The four period moving averages of O&M hours and expense were also found to vary strongly with that of water use.

Water Distribution – Emerald

Historical Emerald yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDEM-1 below.

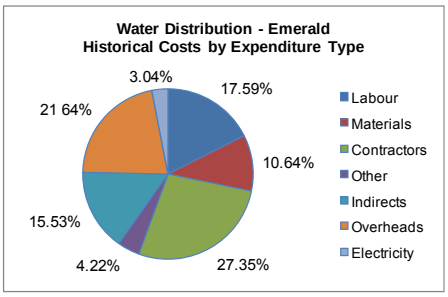

Figure WDEM-1

Emerald yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDEM-2 below. This analysis was also completed for activities and other expenditure types.

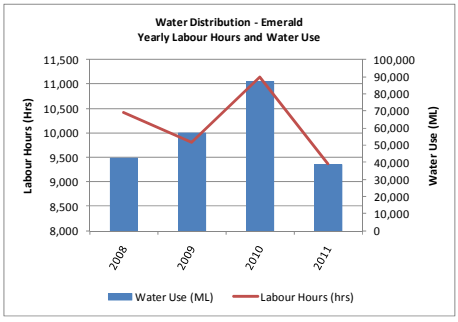

Figure WDEM-2

Historical Emerald quarterly distribution systems water use and operations and maintenance hours are illustrated in WDEM-3 below. This analysis was also completed for other expenditure types.

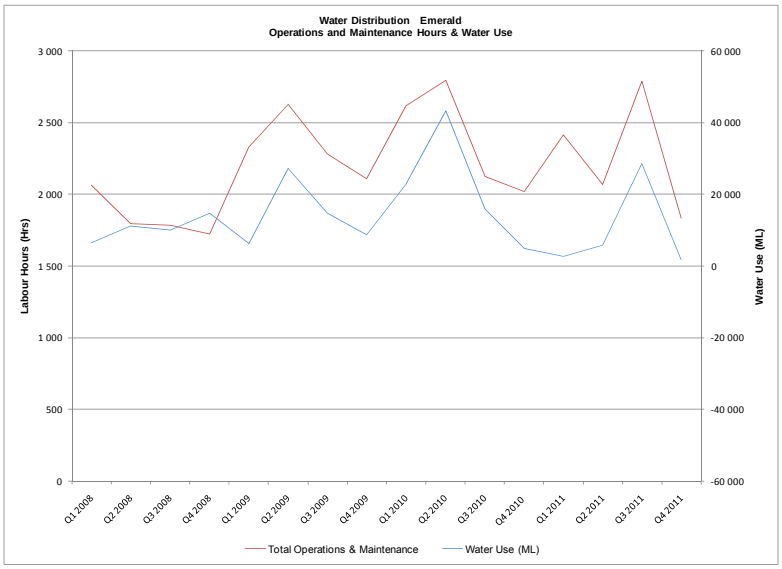

Figure WDEM-3

Historical Emerald quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDEM-4 below. This analysis was also completed for other activities and expenditure types.

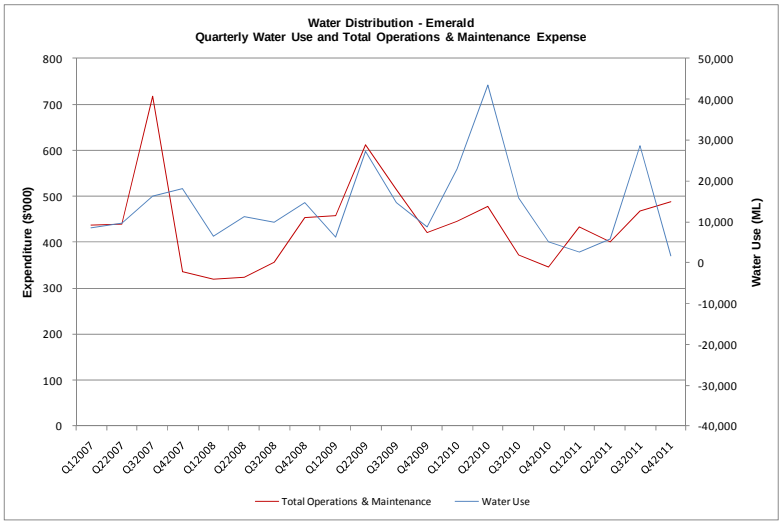

Figure WDEM-4

Historical Emerald quarterly distribution systems water use and total electricity expense are illustrated in WDEM-5 below. This analysis was also completed for other expenditure types.

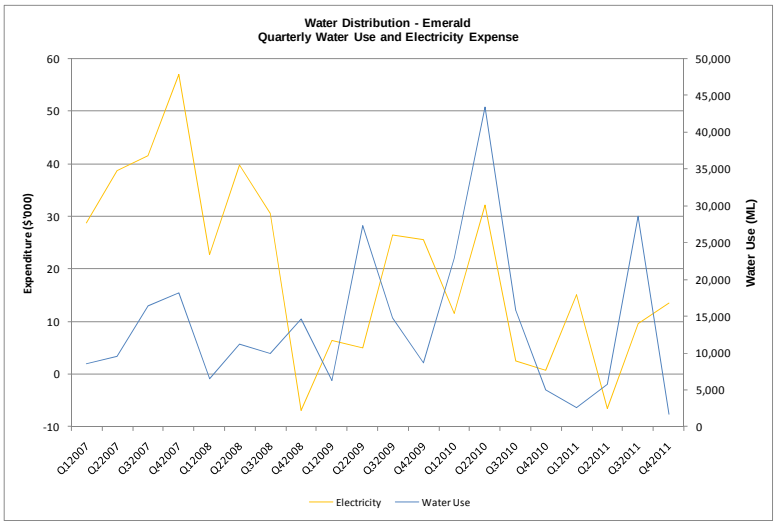

Figure WDEM-5

Figures WDE-4 and WTE-5 show that water use in Eton distribution is not very seasonal. Good correlation has, however, been established between four period moving averages of historical water use and total labour hours. Labour expense was also found to vary quite strongly with water use for the period Q1 2008 to Q4 2011.

Water Distribution – St George

Historical St George yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDSTG-1 below.

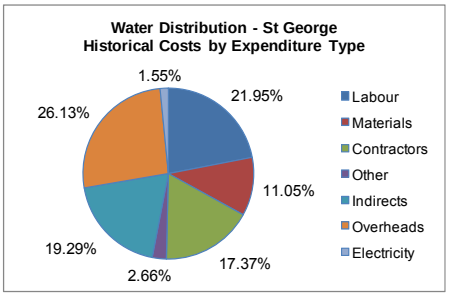

Figure WDSTG-1

St George yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDSTG-2 below. This analysis was also completed for activities and other expenditure types.

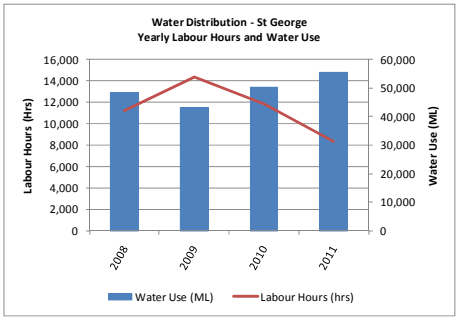

Figure WDSTG-2

Historical St George quarterly distribution systems water use and operations and maintenance hours are illustrated in WDSTG-3 below. This analysis was also completed for other expenditure types.

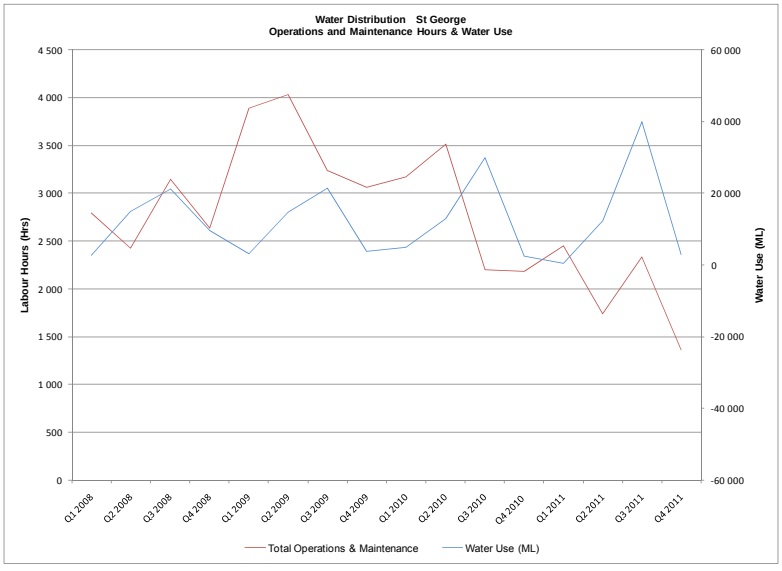

Figure WDSTG-3

Historical St George quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDSTG-4 below. This analysis was also completed for other activities and expenditure types.

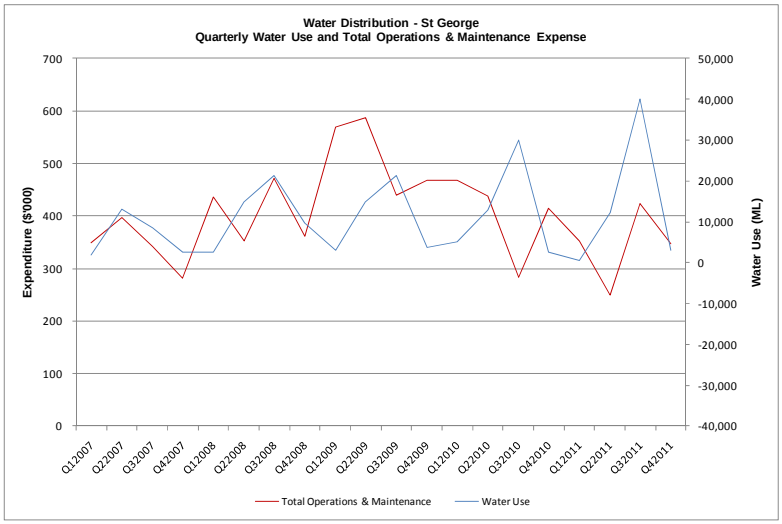

Figure WDSTG-4

Historical St George quarterly distribution systems water use and total electricity expense are illustrated in WDSTG-5 below. This analysis was also completed for other expenditure types.

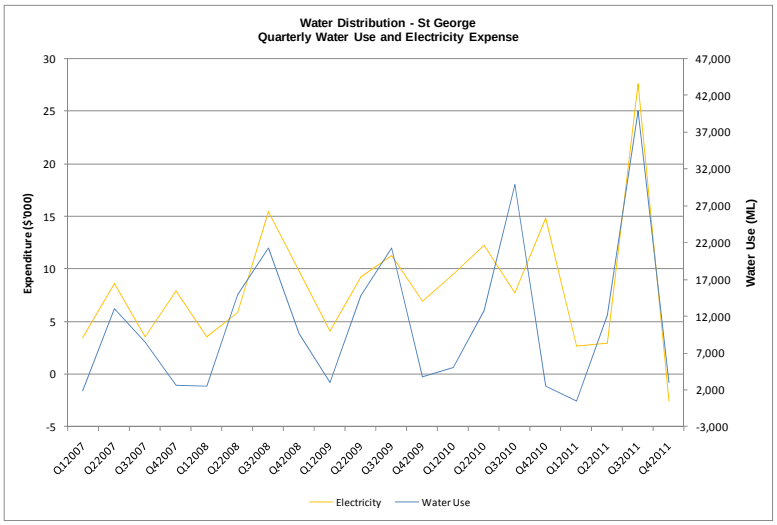

Figure WDSTG-5

Figures WDSTG-4 and WTSTG-5 show that water use in distribution is reasonably seasonal. For the period Q1 2007 to Q1 2011, water use is generally lowest in the first and fourth quarters and highest in the third quarter. A relatively weak correlation has been established between the four period moving averages of historical water use and labour hours. The four period moving averages of O&M hours and expense were also found to vary with that of water use, albeit weakly.

Water Distribution – Theodore

Historical Theodore yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDTH-1 below.

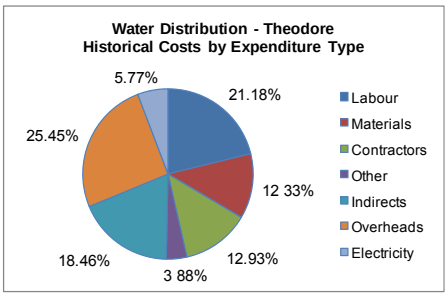

Figure WDTH-1

Theodore yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDTH-2 below. This analysis was also completed for activities and other expenditure types.

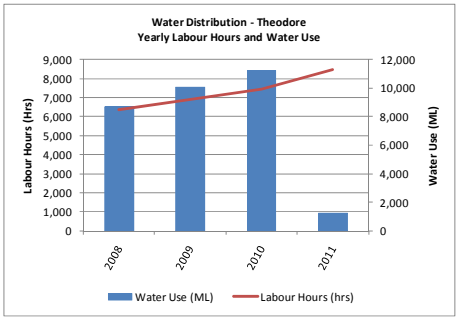

Figure WDTH-2

Historical Theodore quarterly distribution systems water use and operations and maintenance hours are illustrated in WDTH-3 below. This analysis was also completed for other expenditure types.

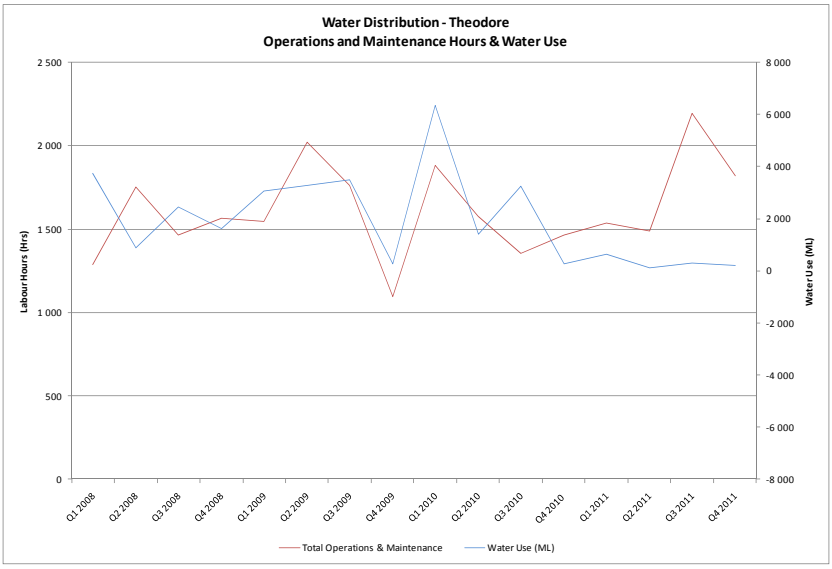

Figure WDTH-3

Historical Theodore quarterly distribution systems water use and total operations and maintenance, expense are illustrated in WDTH-4 below. This analysis was also completed for other activities and expenditure types.

Figure WDTH-4

Historical Theodore quarterly distribution systems water use and total electricity expense are illustrated in WDTH-5 below. This analysis was also completed for other expenditure types.

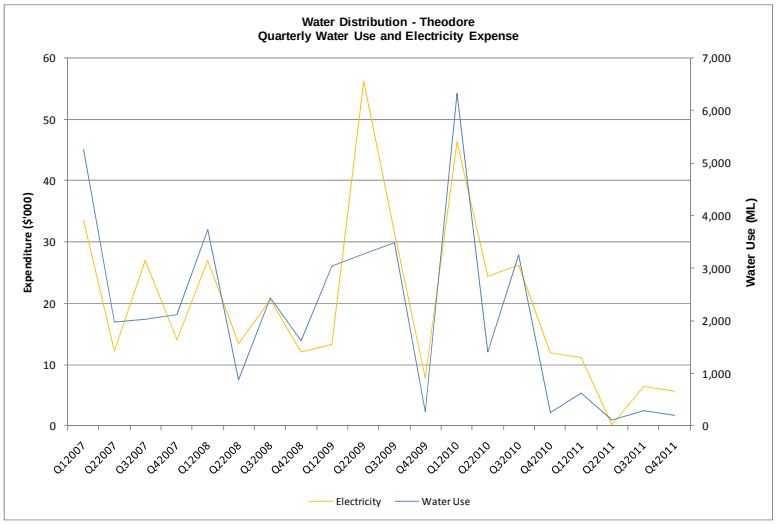

Figure WDTH-5

Figures WDTH-4 and WTTH-5 show that water use in distribution is reasonably seasonal. For the period Q1 2007 to Q1 2011, water use is generally lowest in the second and fourth quarters and highest in the first quarter. The correlation between the four period moving averages of historical water use and labour hours was weak. However, reasonable correlation has been established between water use and combined labour hours for scheduling and delivering water and scheme management. Relatively strong correlation has been established between water use and combined labour hours for scheduling and delivering water, and metering.

Water Distribution – Lower Mary

Historical Lower Mary yearly water distribution systems costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in WDLM-1 below.

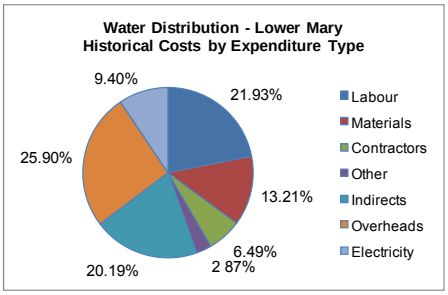

Figure WDLM-1

Lower Mary yearly distribution systems water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in WDLM-2 below. This analysis was also completed for activities and other expenditure types.

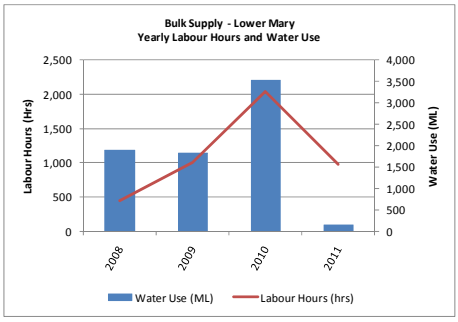

Figure WDLM-2

Historical Lower Mary quarterly distribution systems water use and operations and maintenance hours are illustrated in WDLM-3 below. This analysis was also completed for other expenditure types.

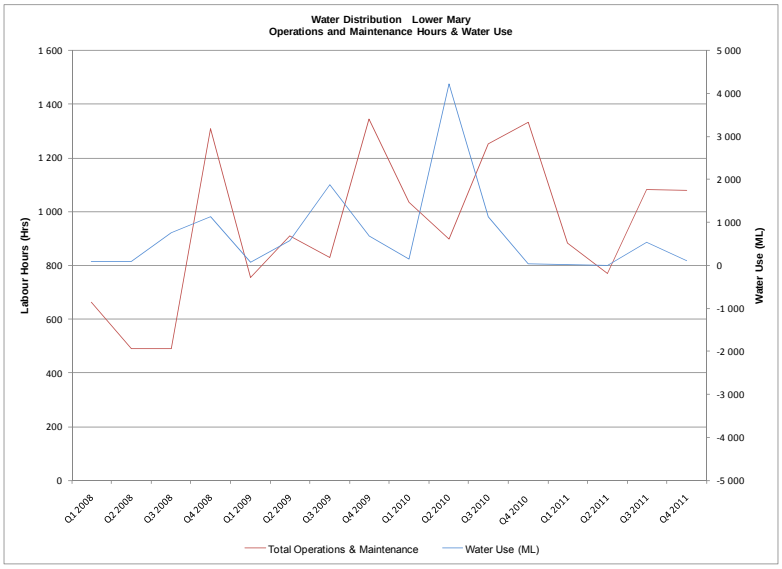

Figure WDLM-3

Historical Lower Mary quarterly distribution systems water use and total operations and maintenance expense are illustrated in WDLM-4 below. This analysis was also completed for other activities and expenditure types.

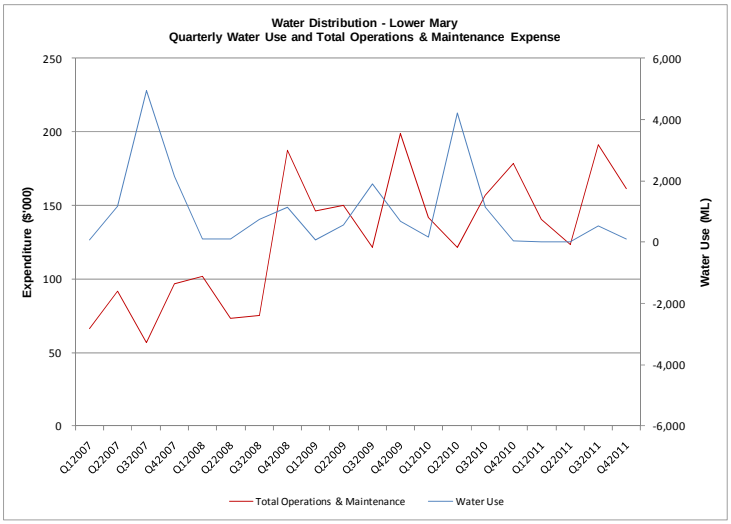

Figure WDLM-4

Historical Lower Mary quarterly distribution systems water use and total electricity expense are illustrated in WDLM-5 below. This analysis was also completed for other expenditure types.

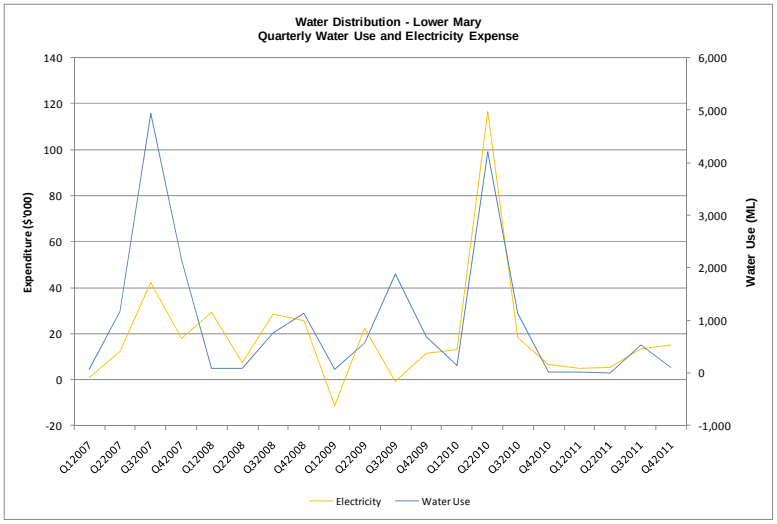

Figure WDLM-5

Figures WDLM-4 and WTLM-5 show that water use in distribution is reasonably seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter and the first half of any year except for the 2009/10 year when water use in Q2 was almost four times the average. The correlation between the four period moving averages of historical water use and labour hours was weak. However, moderate correlation has been established between water use and labour hours after removing Q2 to Q4 2011 from the analysis.

APPENDIX H

Historical Cost Analysis
Bulk Supply Systems

Bulk Supply – Totals

Historical yearly total Bulk Supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BS-1 below.

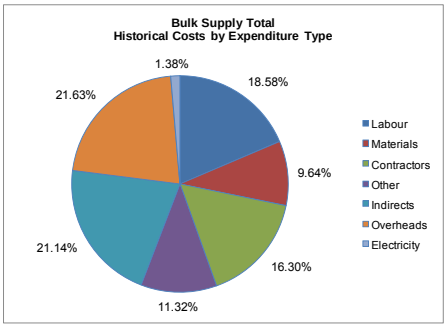

Figure BS-1

Yearly total Bulk Supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BS-2 below. This analysis was also completed for activities and other expenditure types.

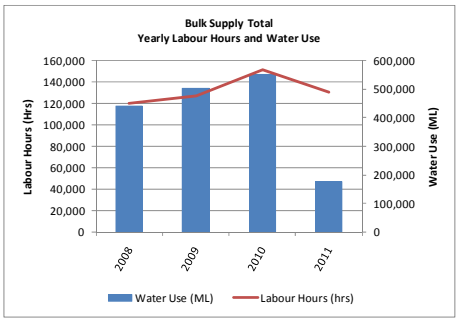

Figure BS-2

Historical quarterly total Bulk Supply water use and operations and maintenance hours are illustrated in BS-3 below. This analysis was also completed for other expenditure types.

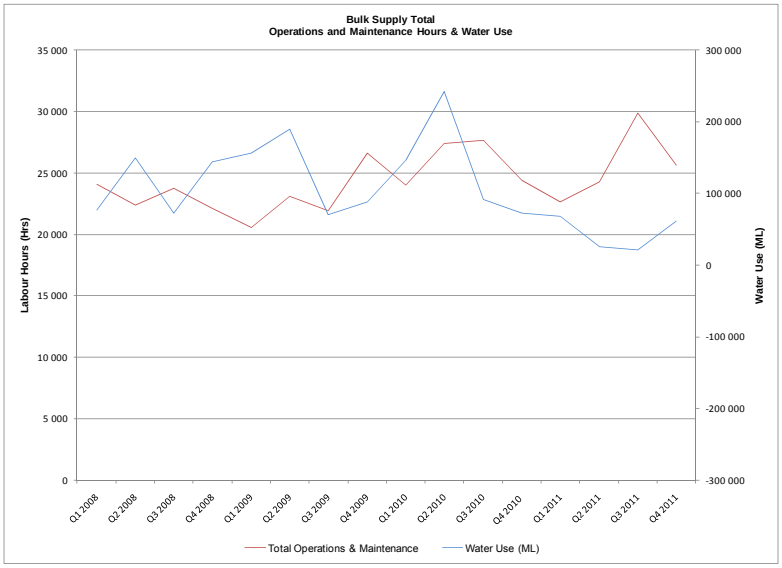

Figure BS-3

Historical quarterly total Bulk Supply water use and total operations and maintenance, and renewals expense for water distribution are illustrated in BS-4 below. This analysis was also completed for other activities and expenditure types.

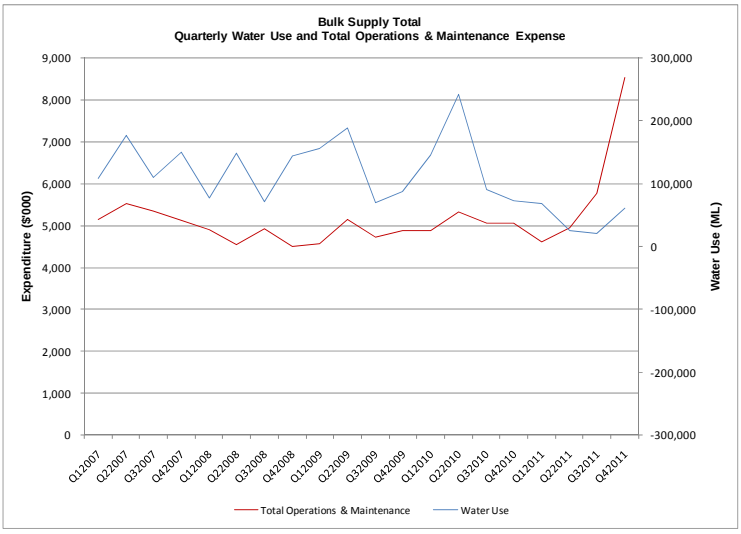

Figure BS-4

Historical quarterly total Bulk Supply water use and total electricity expense are illustrated in BS-5 below. This analysis was also completed for other expenditure types.

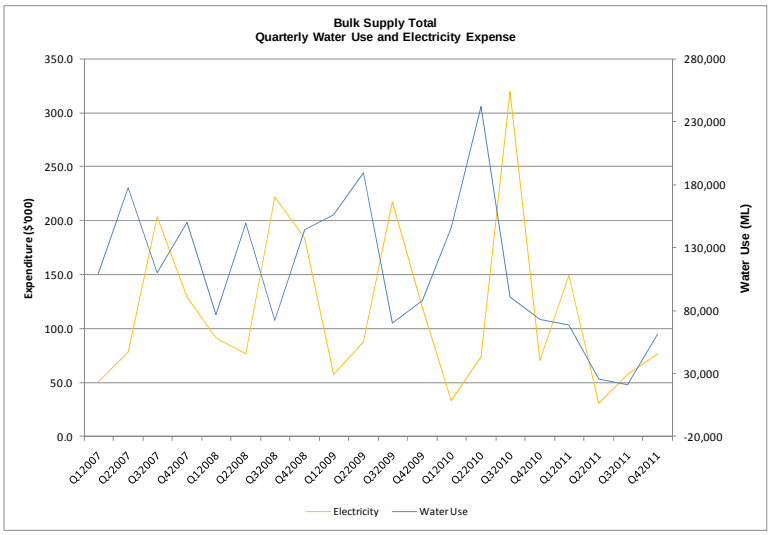

Figure BS-5

Figures BS-4 and BS-5 show that overall water use in bulk supply is moderately seasonal. For the period Q1 2007 to Q1 2011, water use is generally highest in the second quarter except in Q2 2011 when demand was unusually low. Water use was generally higher in the first half of each year than in the second half. Despite a moderate degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in overall bulk supply, whether by category or activity.

Bulk Supply - Burdekin Haughton

Historical yearly total Burdekin Haughton bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSBH-1 below.

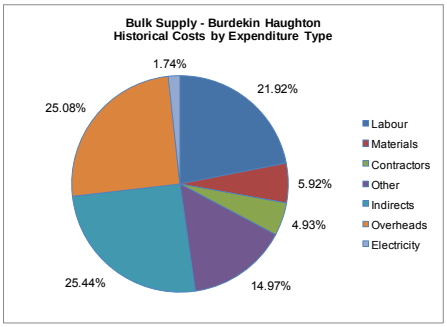

Figure BSBH-1

Yearly total Burdekin Haughton bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSBH-2 below. This analysis was also completed for activities and other expenditure types.

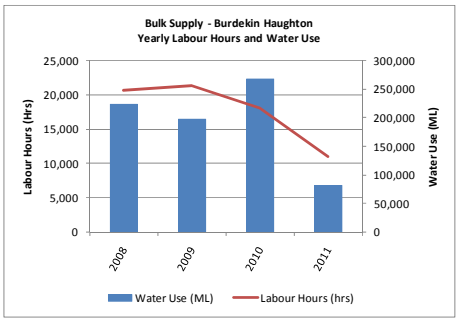

Figure BSBH-2

Historical quarterly total Burdekin Haughton bulk supply water use and operations and maintenance hours are illustrated in BSBH-3 below. This analysis was also completed for other expenditure types.

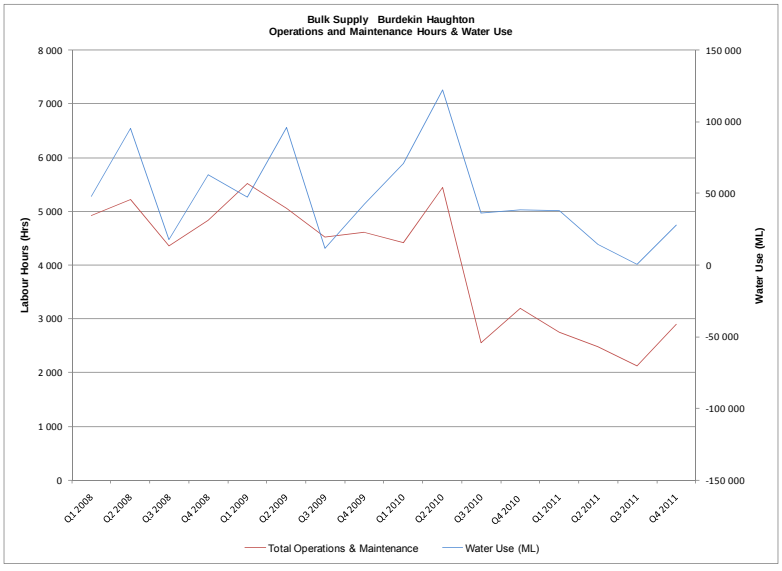

Figure BSBH-3

Historical quarterly total Burdekin Haughton bulk supply water use and total operations and maintenance expense are illustrated in BSBH-4 below. This analysis was also completed for other activities and expenditure types.

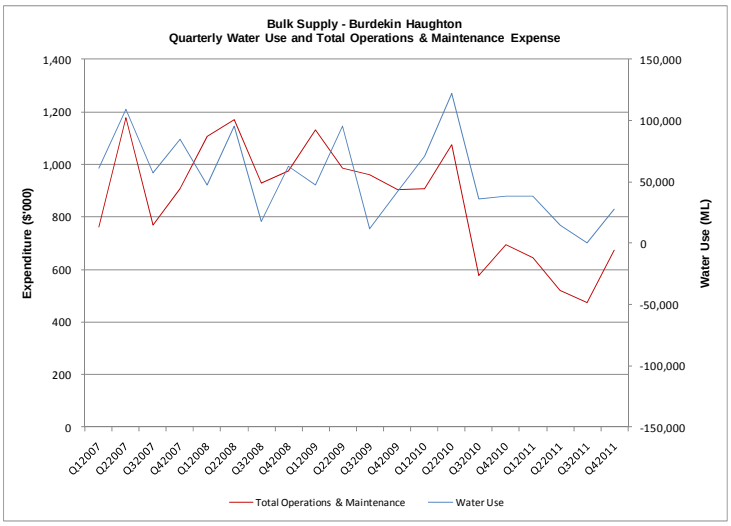

Figure BSBH-4

Historical quarterly total Burdekin Haughton bulk supply water use and total electricity expense are illustrated in BSBH-5 below. This analysis was also completed for other expenditure types.

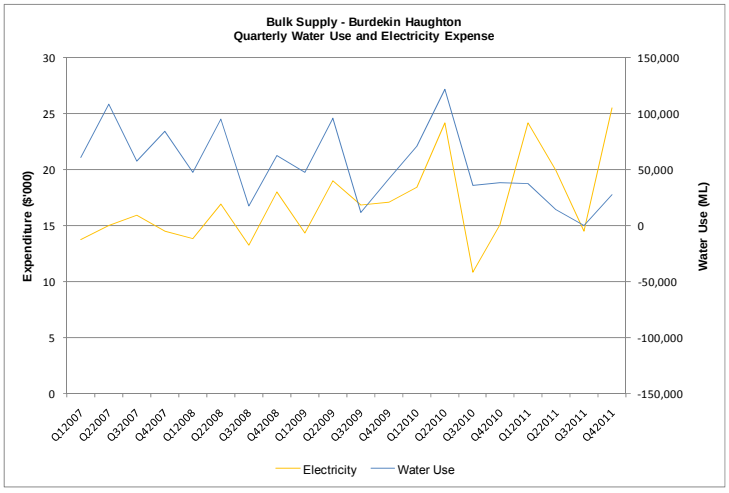

Figure BSBH-5

Figures BSBH-4 and BSBH-5 show that water use in Burdekin Haughton bulk supply is quite seasonal. For the period Q1 2007 to Q1 2011, water use is generally lowest in the third quarter and highest in the second quarter. Reasonable correlation has been established between four period moving averages of historical water use and total labour hours. Reasonable correlation between four-period moving averages of water use and labour expense, and operations and maintenance expense were also established for the period Q1 2007 to Q4 2011.

Bulk Supply – Bundaberg

Historical yearly total Bundaberg bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSB-1 below.

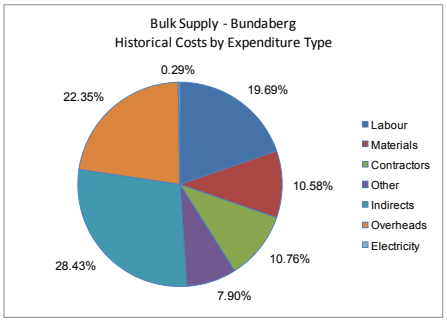

Figure BSB-1

Yearly total Bundaberg bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSB-2 below. This analysis was also completed for activities and other expenditure types.

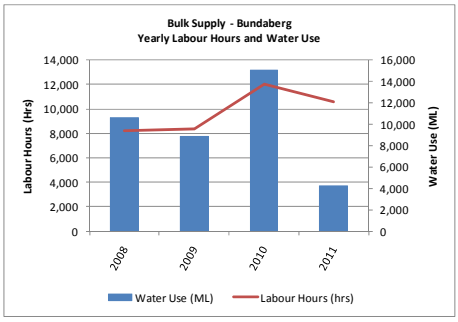

Figure BSB-2

Historical quarterly total Bundaberg bulk supply water use and operations and maintenance hours are illustrated in BSB-3 below. This analysis was also completed for other expenditure types.

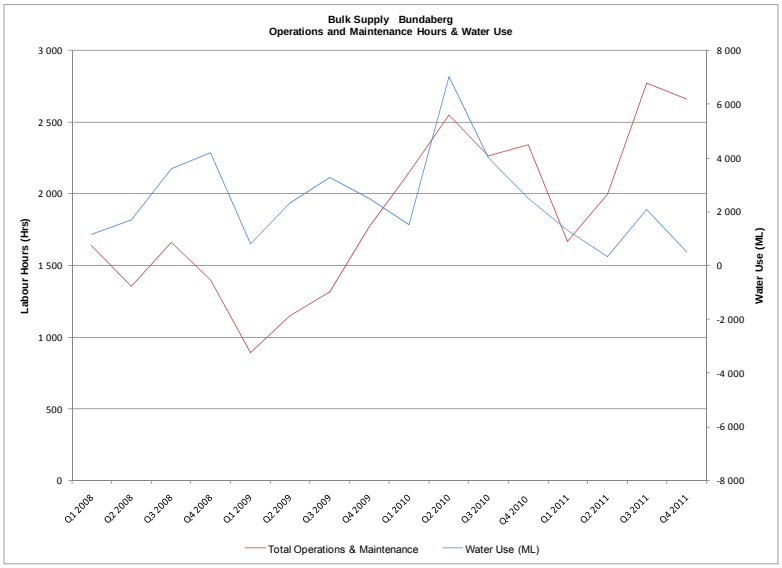

Figure BSB-3

Historical quarterly total Bundaberg bulk supply water use and total operations and maintenance expense are illustrated in BSB-4 below. This analysis was also completed for other activities and expenditure types.

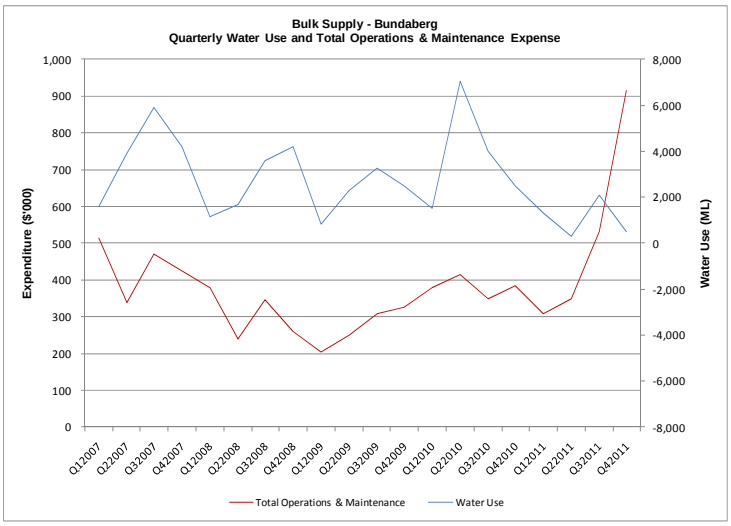

Figure BSB-4

Historical quarterly total Bundaberg bulk supply water use and total electricity expense are illustrated in BSB-5 below. This analysis was also completed for other expenditure types.

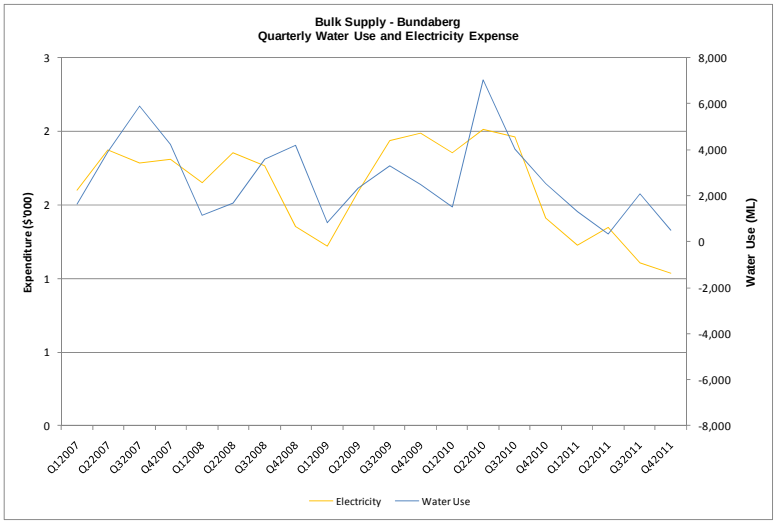

Figure BSB-5

Figures BSB-4 and BSB-5 show that water use in Bundaberg bulk supply is quite seasonal. For the period Q1 2007 to Q1 2011, water use is generally highest in the third quarter and lowest in the first quarter. Very good correlation has been established between the four-period moving averages of historical water use and total labour hours after excluding the last three quarters of 2010/11. Due to extreme weather conditions, water use during this period was unusually low and corrective maintenance unusually high. Good correlation between four-period moving averages of water use and labour expense, and water use and operations & maintenance expense were also established for the period Q1 2007 to Q1 2011.

Bulk Supply – Mareeba Dimbulah

Historical yearly total Mareeba Dimbulah bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSMD-1 below.

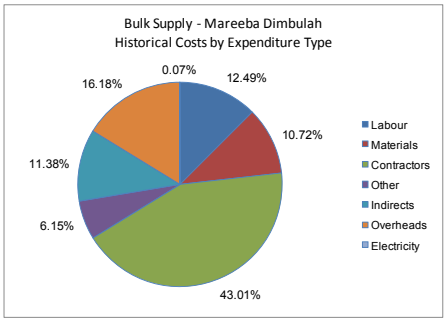

Figure BSMD-1

Yearly total Mareeba Dimbulah bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSMD-2 below. This analysis was also completed for activities and other expenditure types.

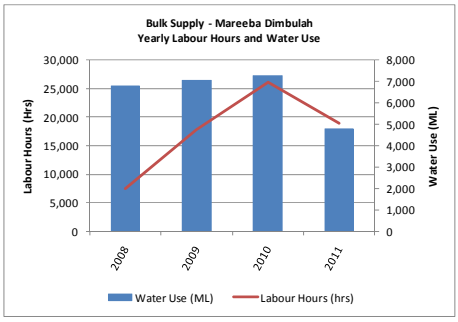

Figure BSMD-2

Historical quarterly total Mareeba Dimbulah bulk supply water use and operations and maintenance hours are illustrated in BSMD-3 below. This analysis was also completed for other expenditure types.

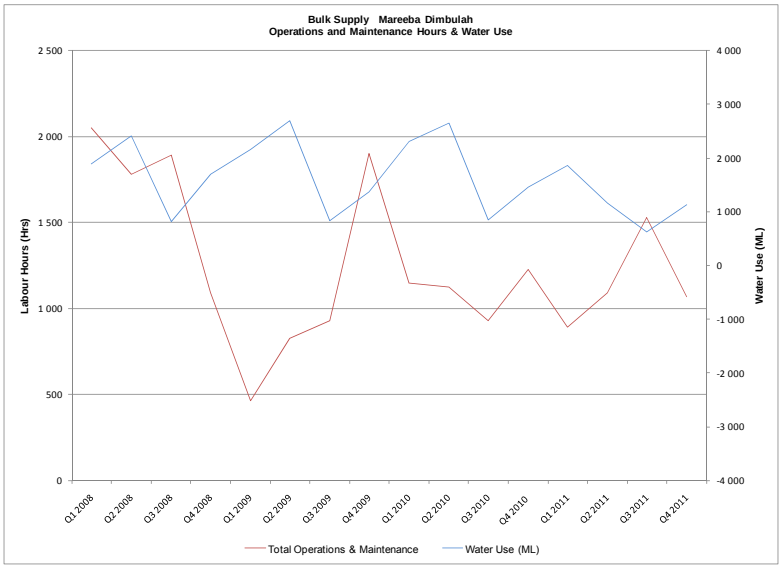

Figure BSMD-3

Historical quarterly total Mareeba Dimbulah bulk supply water use and total operations and maintenance expense are illustrated in BSMD-4 below. This analysis was also completed for other activities and expenditure types.

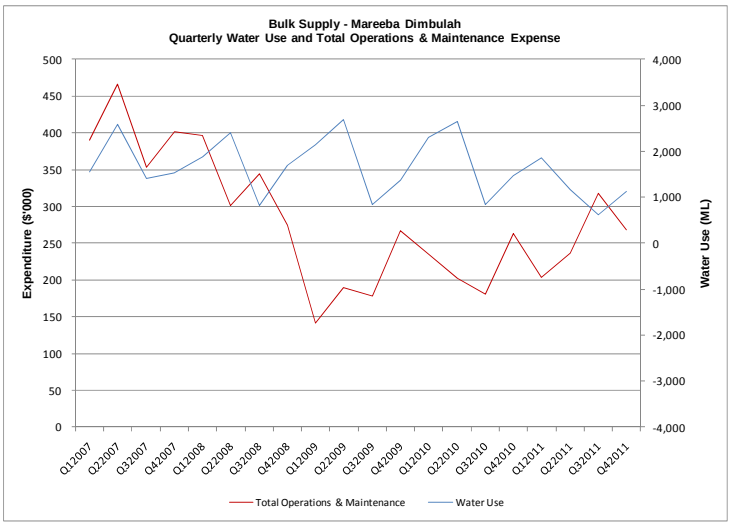

Figure BSMD-4

Historical quarterly total Mareeba Dimbulah bulk supply water use and total electricity expense are illustrated in BSMD-5 below. This analysis was also completed for other expenditure types.

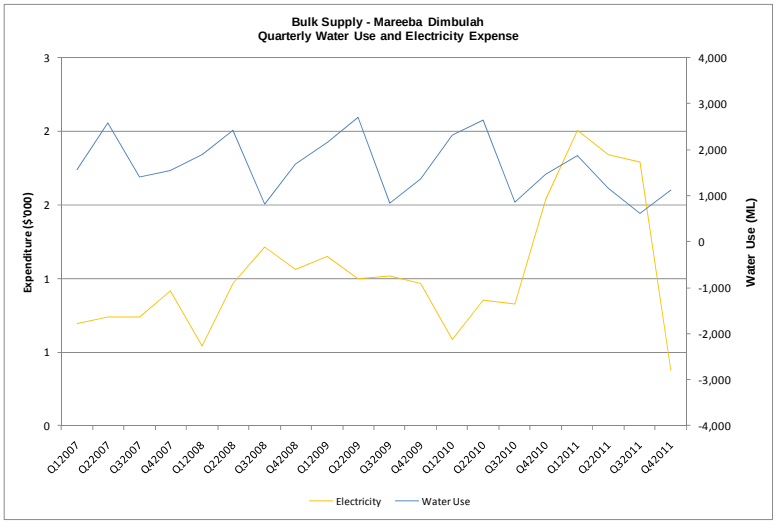

Figure BSMD-5

Figures BSMD-4 and BSMD-5 show that water use in Mareeba Dimbulah bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally highest in the first and second quarter and lowest in the third and fourth quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Mareeba Dimbulah bulk supply, whether by category or activity.

Bulk Supply – Eton Bulk

Historical yearly total Eton bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSE-1 below.

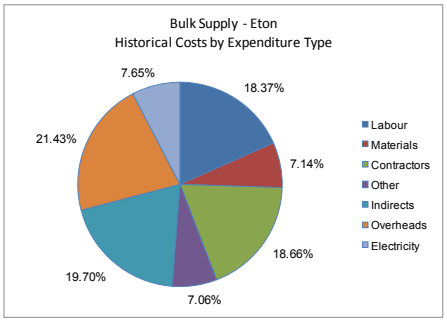

Figure BSE-1

Yearly total Eton bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSE-2 below. This analysis was also completed for activities and other expenditure types.

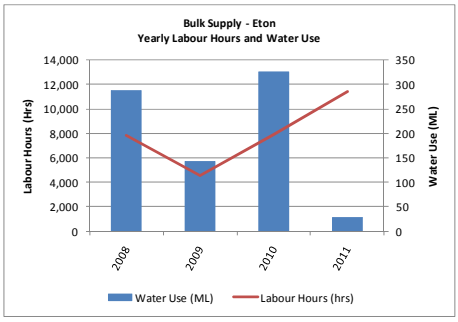

Figure BSE-2

Historical quarterly total Eton bulk supply water use and operations and maintenance hours are illustrated in BSE-3 below. This analysis was also completed for other expenditure types.

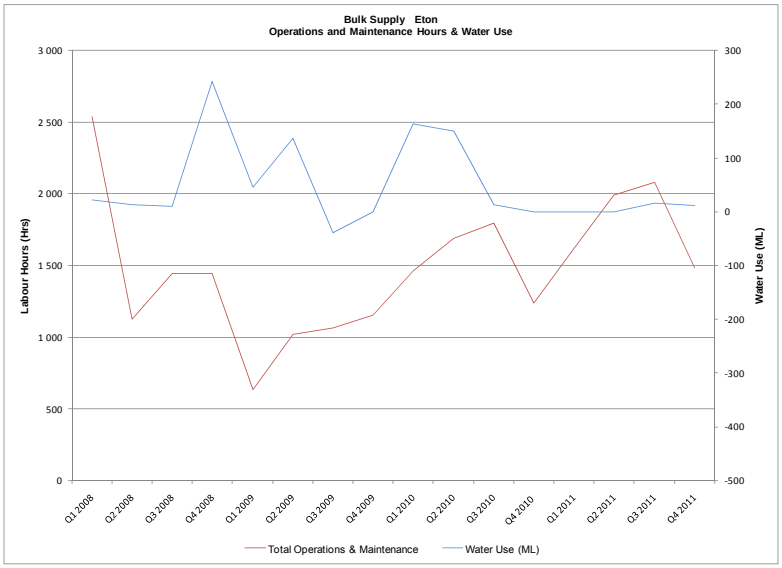

Figure BSE-3

Historical quarterly total Eton bulk supply water use and total operations and maintenance expense are illustrated in BSE-4 below. This analysis was also completed for other activities and expenditure types.

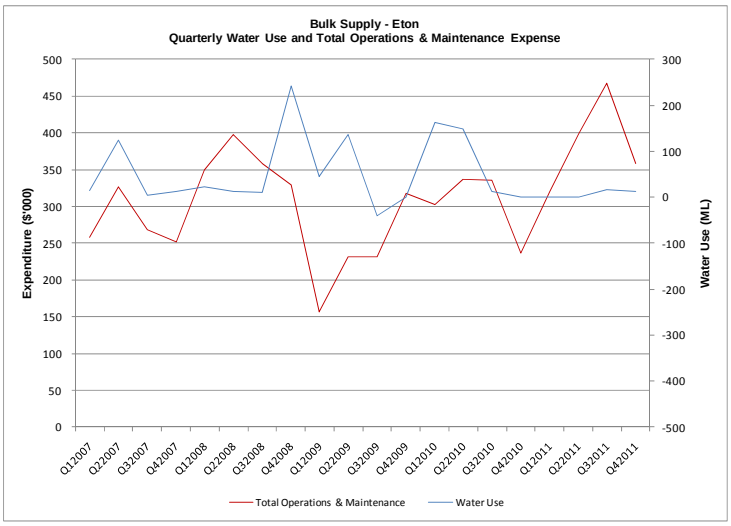

Figure BSE-4

Historical quarterly total Eton bulk supply water use and total electricity expense are illustrated in BSE-5 below. This analysis was also completed for other expenditure types.

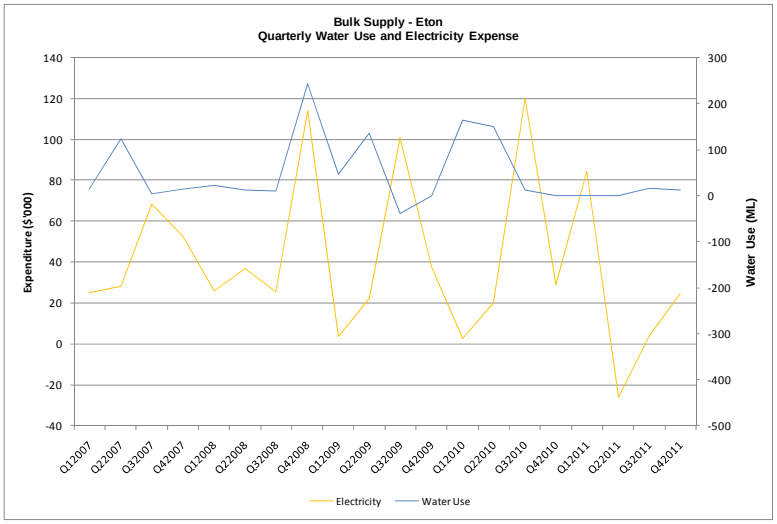

Figure BSE-5

Figures BSMD-4 and BSMD-5 show that water use in Eton bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally highest in the first and second quarter and lowest in the third and fourth quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Eton bulk supply, whether by category or activity.

Bulk Supply – Nogoa MacKenzie

Historical yearly total Nogoa MacKenzie bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSNM-1 below.

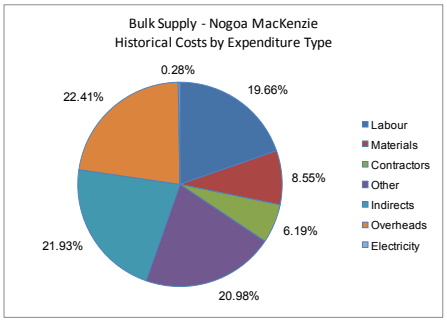

Figure BSNM-1

Yearly total Nogoa MacKenzie bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSNM-2 below. This analysis was also completed for activities and other expenditure types.

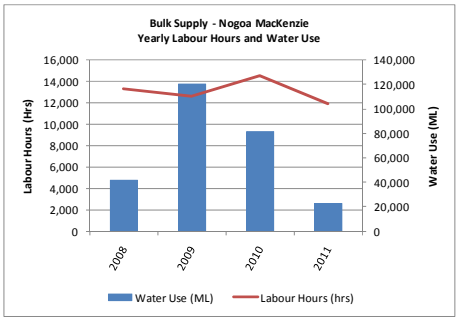

Figure BSNM-2

Historical quarterly total Nogoa MacKenzie bulk supply water use and operations and maintenance hours are illustrated in BSNM-3 below. This analysis was also completed for other expenditure types.

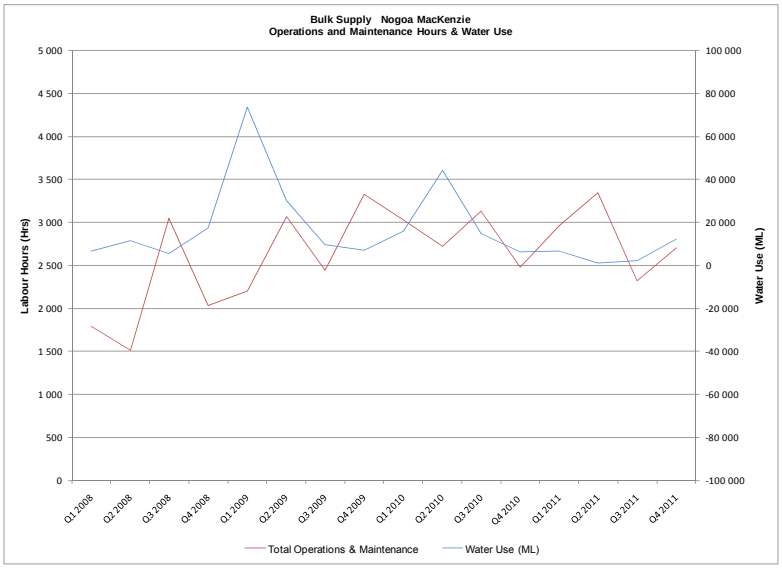

Figure BSNM-3

Historical quarterly total Nogoa MacKenzie bulk supply water use and total operations and maintenance expense are illustrated in BSNM-4 below. This analysis was also completed for other activities and expenditure types.

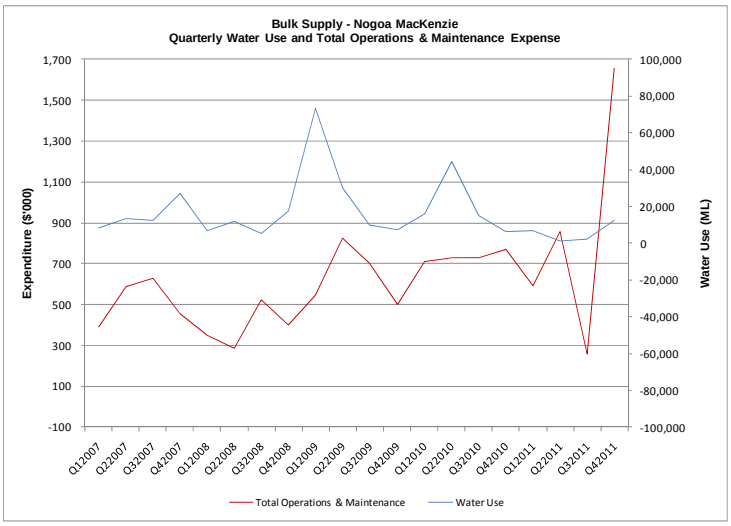

Figure BSNM-4

Historical quarterly total Nogoa MacKenzie bulk supply water use and total electricity expense are illustrated in BSE-5 below. This analysis was also completed for other expenditure types.

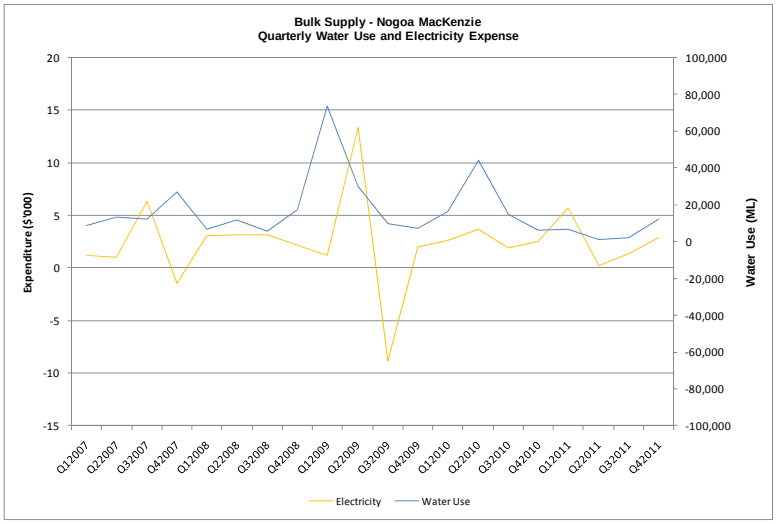

Figure BSNM-5

Figures BSNM-4 and BSNM-5 show that water use in Nogoa MacKenzie bulk supply is reasonably seasonal. Peak demand occurred in Q4 2006/7, 2007/08 and 2010/11. In 2008/09 peak demand occurred in Q1. Little or no correlation could be established between historical water use and either expense or labour hours in Nogoa MacKenzie bulk supply, whether by category or activity.

Bulk Supply – St George

Historical yearly total St George bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSSG-1 below.

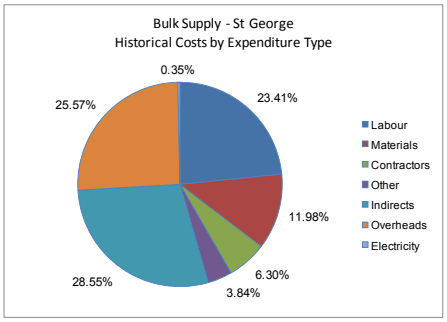

Figure BSSG-1

Yearly total St George bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSSG-2 below. This analysis was also completed for activities and other expenditure types.

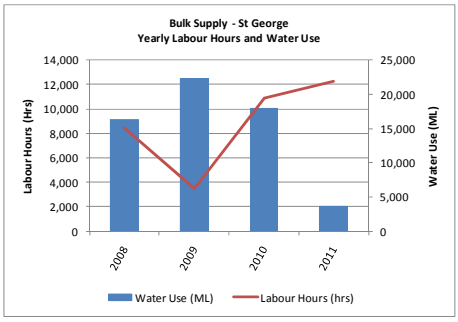

Figure BSSG-2

Historical quarterly total St George bulk supply water use and operations and maintenance hours are illustrated in BSSG-3 below. This analysis was also completed for other expenditure types.

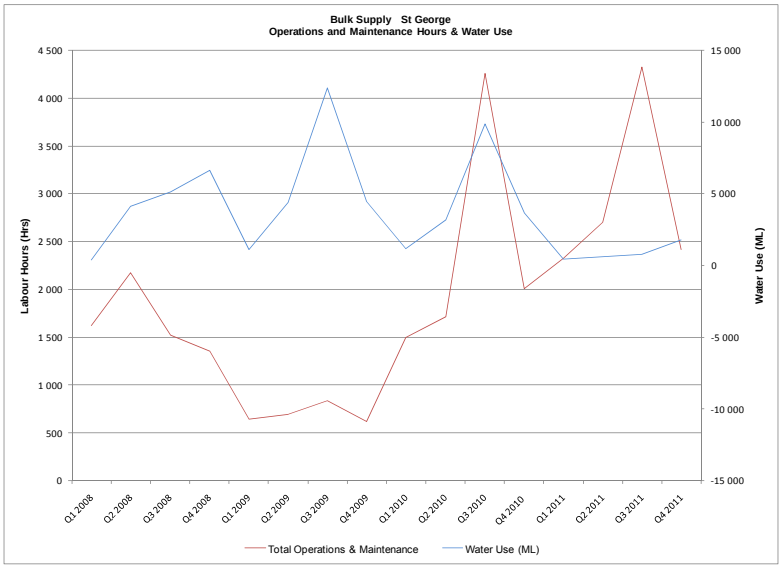

Figure BSSG-3

Historical quarterly total St George bulk supply water use and total operations and maintenance expense are illustrated in BSSG-4 below. This analysis was also completed for other activities and expenditure types.

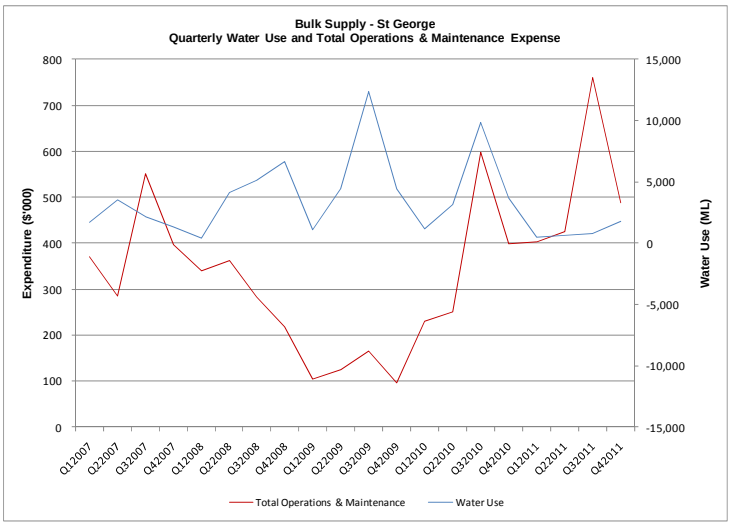

Figure BSSG-4

Historical quarterly total St George bulk supply water use and total electricity expense are illustrated in BSSG-5 below. This analysis was also completed for other expenditure types.

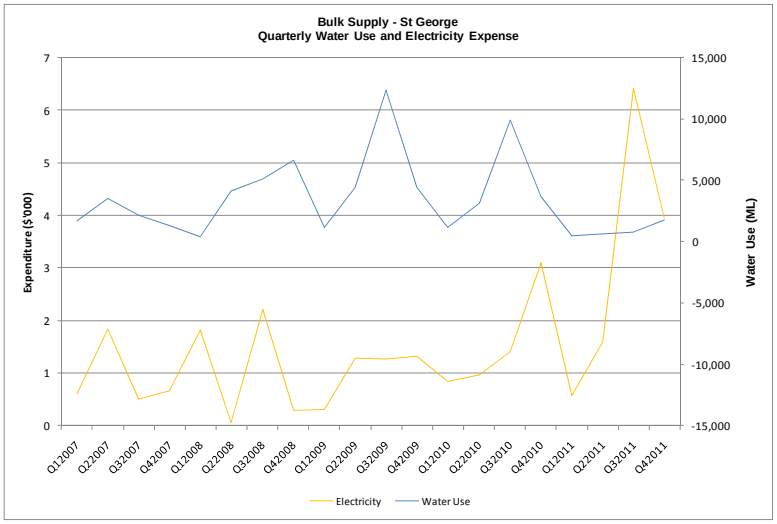

Figure BSSG-5

Figures BSNM-4 and BSNM-5 show that water use in St George bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in St George bulk supply, whether by category or activity.

Bulk Supply – Dawson Valley

Historical yearly total Dawson Valley bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSDV-1 below.

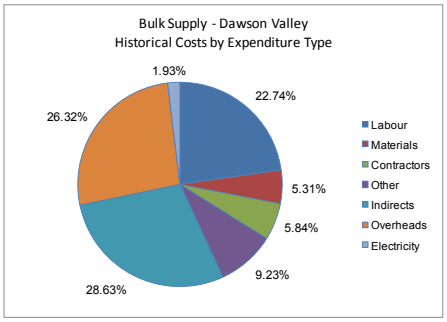

Figure BSDV-1

Yearly total Dawson Valley bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSDV-2 below. This analysis was also completed for activities and other expenditure types.

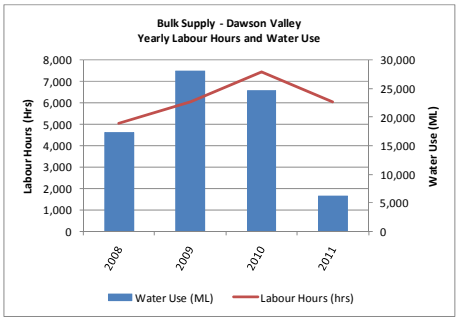

Figure BSDV-2

Historical quarterly total Dawson Valley bulk supply water use and operations and maintenance hours are illustrated in BSDV-3 below. This analysis was also completed for other expenditure types.

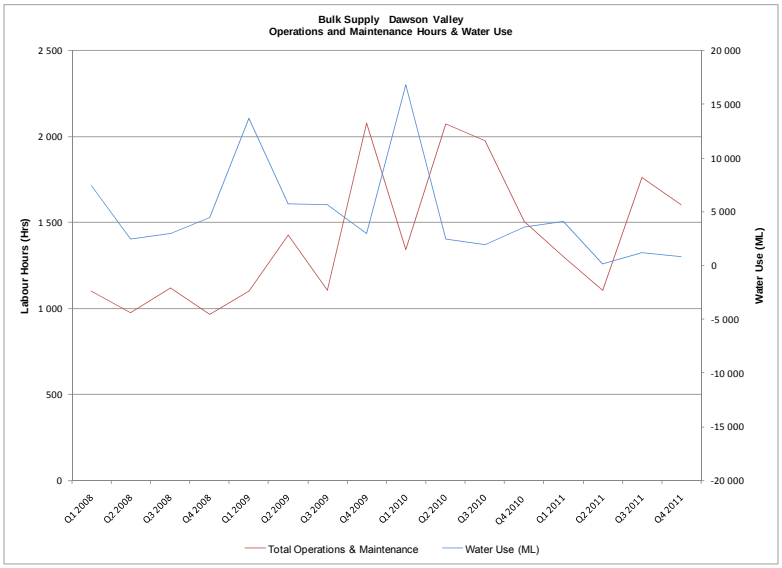

Figure BSDV-3

Historical quarterly total Dawson Valley bulk supply water use and total operations and maintenance expense are illustrated in BSDV-4 below. This analysis was also completed for other activities and expenditure types.

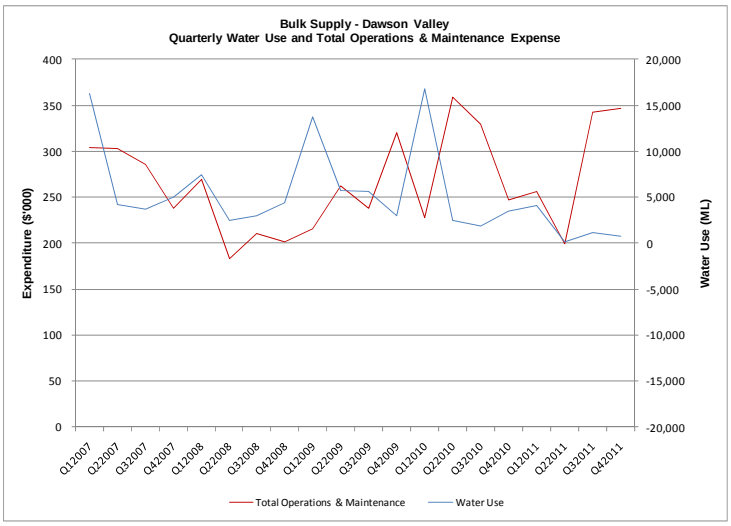

Figure BSDV-4

Historical quarterly total Dawson Valley bulk supply water use and total electricity expense are illustrated in BSDV-5 below. This analysis was also completed for other expenditure types.

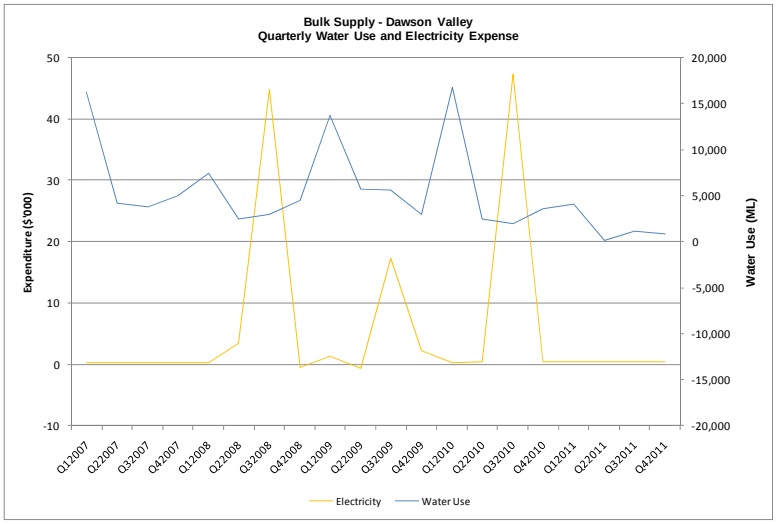

Figure BSDV-5

Figures BSDV-4 and BSDV-5 show that water use in Dawson Valley bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally highest in the first quarter. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Dawson Valley bulk supply, whether by category or activity.

Bulk Supply – Lower Mary

Historical yearly total Lower Mary bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSLM-1 below.

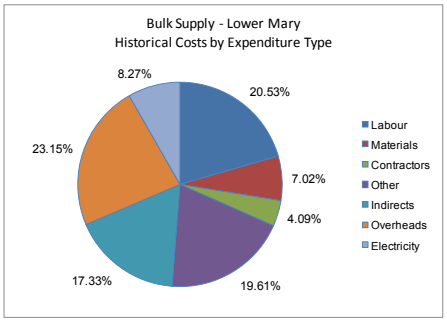

Figure BSLM-1

Yearly total Lower Mary bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSLM-2 below. This analysis was also completed for activities and other expenditure types.

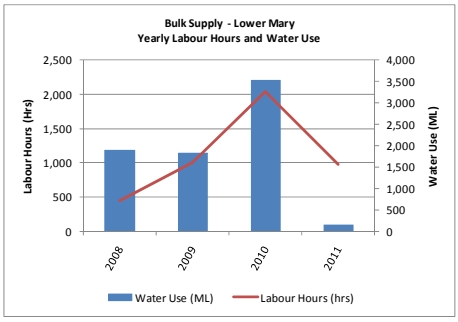

Figure BSLM-2

Historical quarterly total Lower Mary bulk supply water use and operations and maintenance hours are illustrated in BSLM-3 below. This analysis was also completed for other expenditure types.

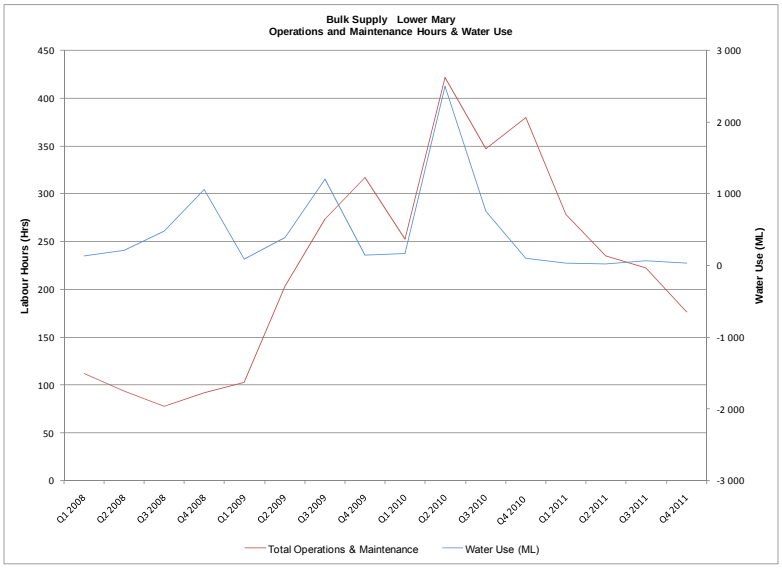

Figure BSLM-3

Historical quarterly total Lower Mary bulk supply water use and total operations and maintenance, and renewals expense are illustrated in BSLM-4 below. This analysis was also completed for other activities and expenditure types.

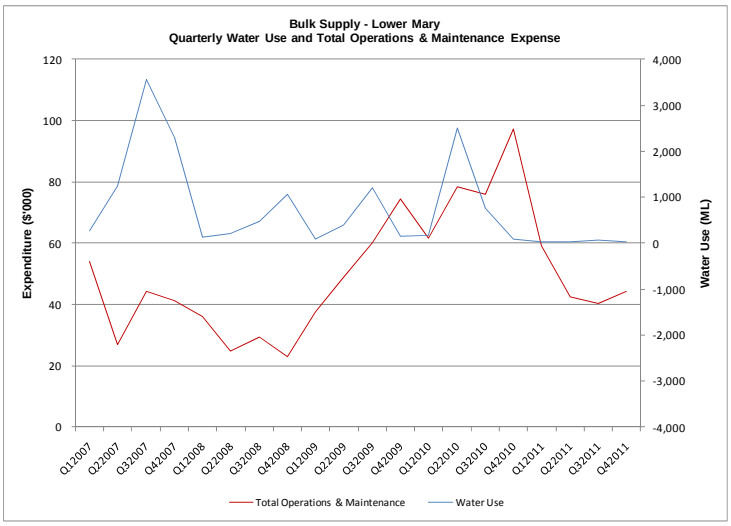

Figure BSLM-4

Historical quarterly total Lower Mary bulk supply water use and total electricity expense are illustrated in BSLM-5 below. This analysis was also completed for other expenditure types.

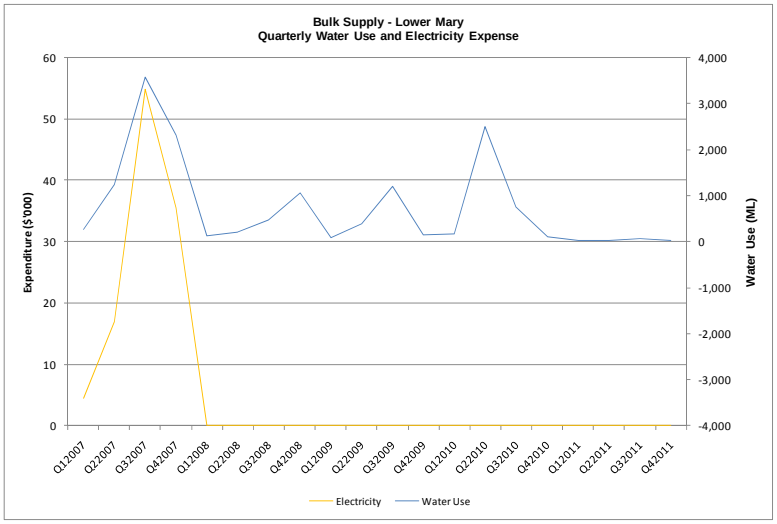

Figure BSLM-5

Figures BSLM-4 and BSLM-5 show that water use in Lower Mary bulk supply is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter. Generally, water use is lower in the first half than in the second half of any one year except in 2010 when water use was unusually high in Q2. Relatively good correlation has been established between the four period moving averages of historical water use and labour hours for the period Q1 2008 to Q1 2011. The last three quarters of 2011 (Q2 to Q4 2011) were excluded from the analysis as water use during this period was unusually low due to extreme weather conditions.

Bulk Supply – Barker Barambah

Historical yearly total Barker Barambah bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSAB-1 below.

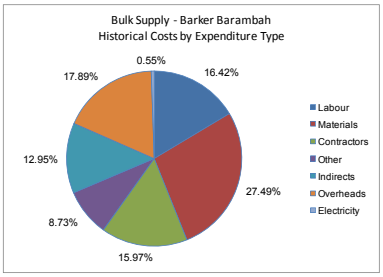

Figure BSAB-1

Yearly total Barker Barambah bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSAB-2 below. This analysis was also completed for activities and other expenditure types.

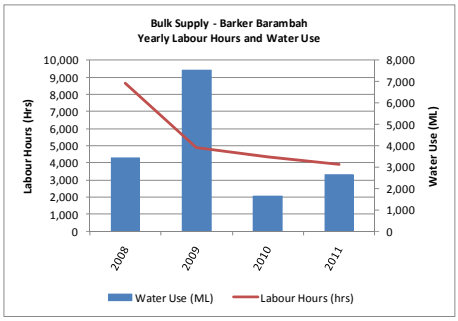

Figure BSAB-2

Historical quarterly total Barker Barambah bulk supply water use and operations and maintenance hours are illustrated in BSAB-3 below. This analysis was also completed for other expenditure types.

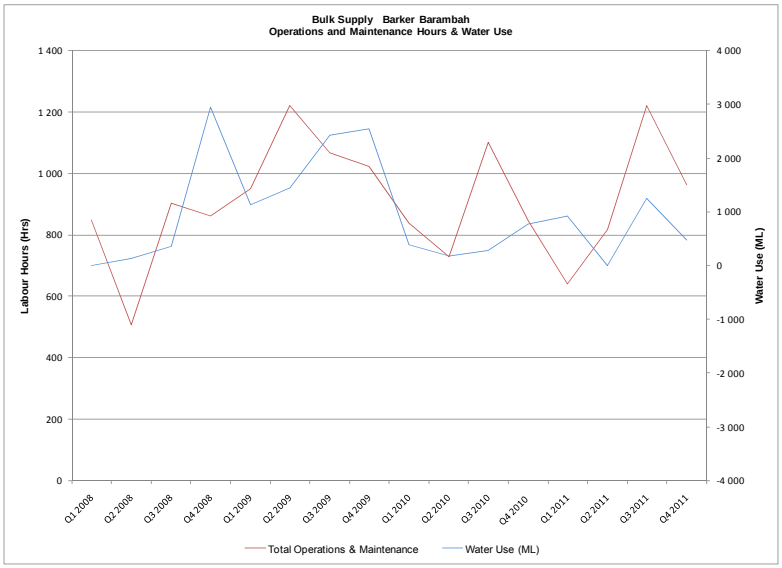

Figure BSAB-3

Historical quarterly total Barker Barambah bulk supply water use and total operations and maintenance expense are illustrated in BSAB-4 below. This analysis was also completed for other activities and expenditure types.

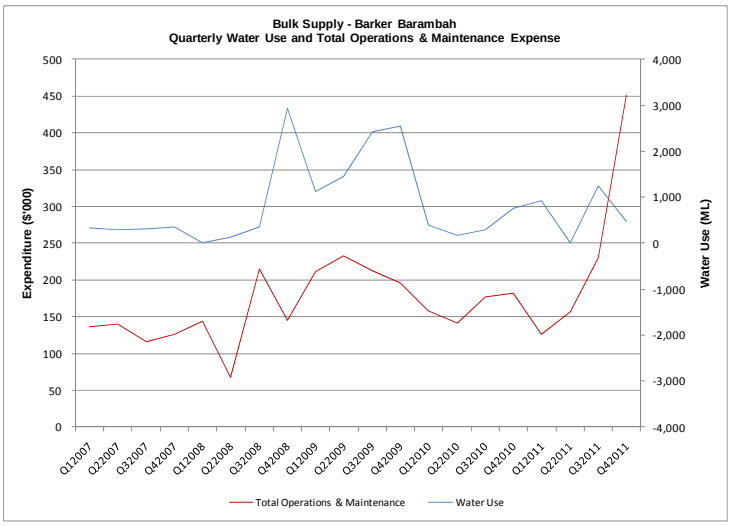

Figure BSAB-4

Historical quarterly total Barker Barambah bulk supply water use and total electricity expense are illustrated in BSBB-5 below. This analysis was also completed for other expenditure types.

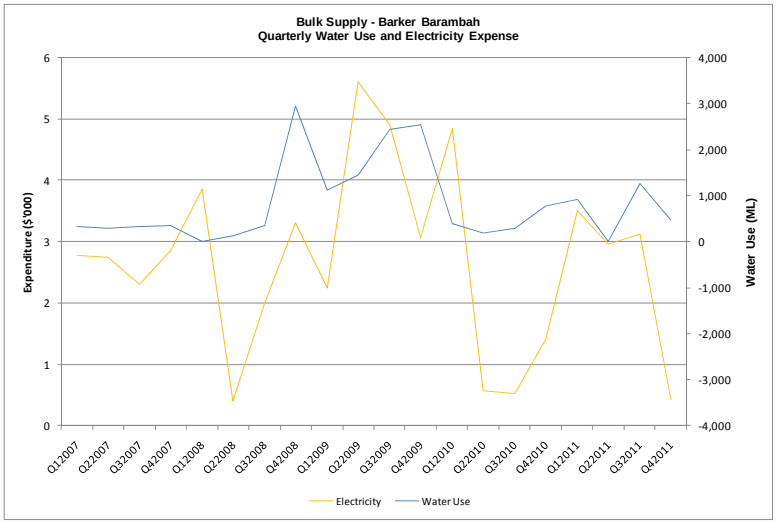

Figure BSAB-5

Figures BSAB-4 and BSAB-5 show that water use in Barker Barambah bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter and highest in the fourth quarter. Generally, water use is lower in the first half than in the second half of any one year. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Barker Barambah bulk supply, whether by category or activity.

Bulk Supply – Bowen Broken

Historical yearly total Bowen Broken bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSBB-1 below.

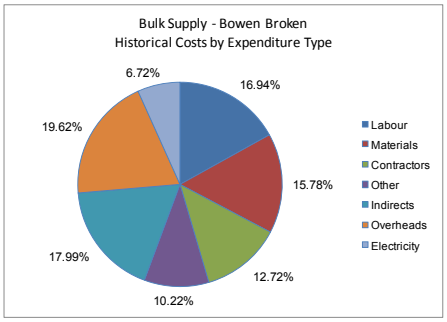

Figure BSBB-1

Yearly total Bowen Broken bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSBB-2 below. This analysis was also completed for activities and other expenditure types.

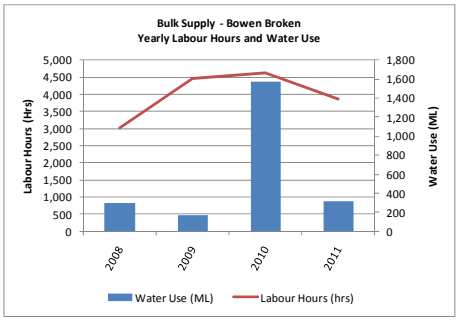

Figure BSBB-2

Historical quarterly total Bowen Broken bulk supply water use and operations and maintenance hours are illustrated in BSBB-3 below. This analysis was also completed for other expenditure types.

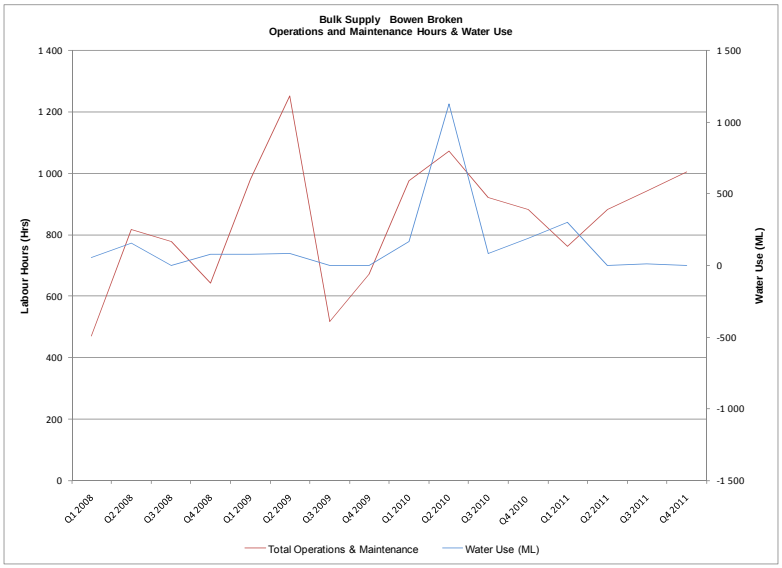

Figure BSBB-3

Historical quarterly total Bowen Broken bulk supply water use and total operations and maintenance expense are illustrated in BSBB-4 below. This analysis was also completed for other activities and expenditure types.

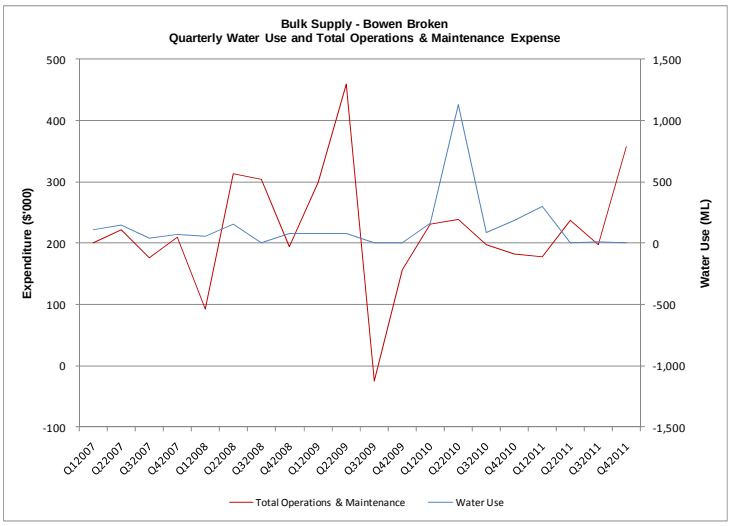

Figure BSBB-4

Historical quarterly total Bowen Broken bulk supply water use and total electricity expense are illustrated in BSBB-5 below. This analysis was also completed for other expenditure types.

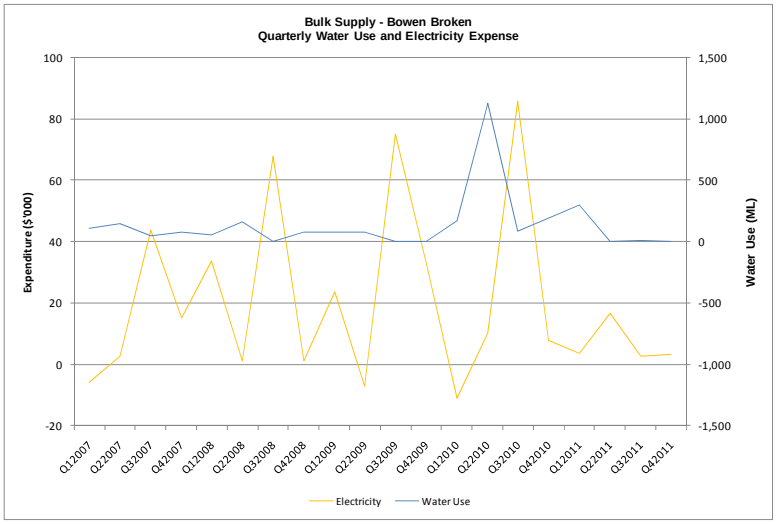

Figure BSBB-5

Figures BSBB-4 and BSBB-5 show that water use in Bowen Broken bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally highest in the first and second quarters and lowest in the third quarter. Water use is lower in the first half than in the second half of any one year. Despite the degree of predictability of the seasonality in demand, little or no correlation could be established between historical water use and either expense or labour hours in Bowen Broken bulk supply, whether by category or activity.

Bulk Supply – Boyne River Tarong

Historical yearly total Boyne River Tarong bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSBR-1 below.

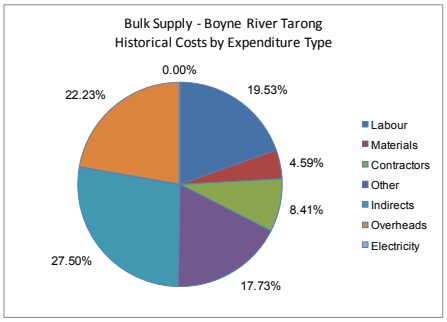

Figure BSBR-1

Yearly total Boyne River Tarong bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSBR-2 below. This analysis was also completed for activities and other expenditure types.

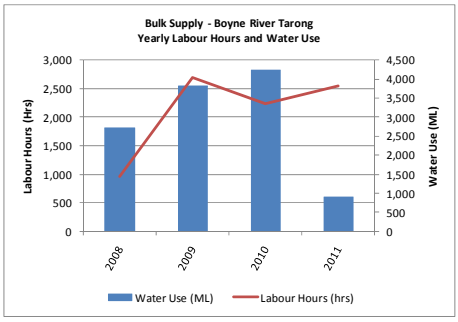

Figure BSBR-2

Historical quarterly total Boyne River Tarong bulk supply water use and operations and maintenance hours are illustrated in BSBR-3 below. This analysis was also completed for other expenditure types.

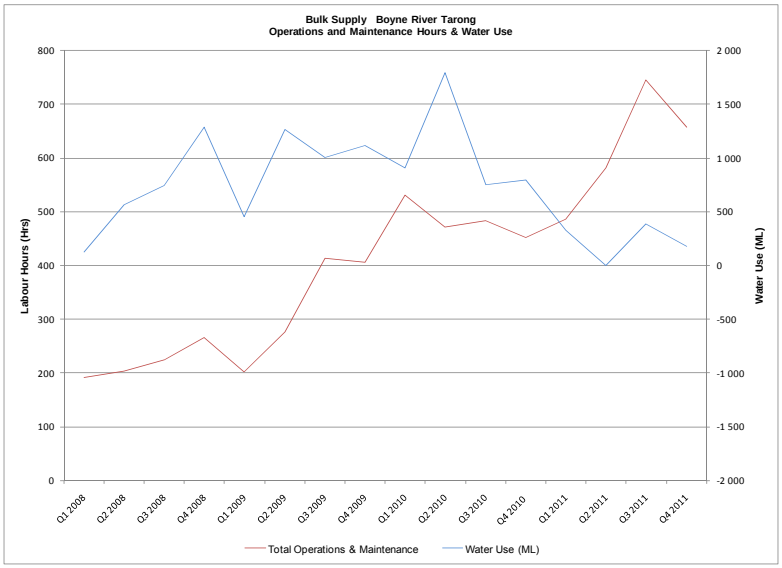

Figure BSBR-3

Historical quarterly total Boyne River Tarong bulk supply water use and total operations and maintenance, and renewals expense are illustrated in BSBR-4 below. This analysis was also completed for other activities and expenditure types.

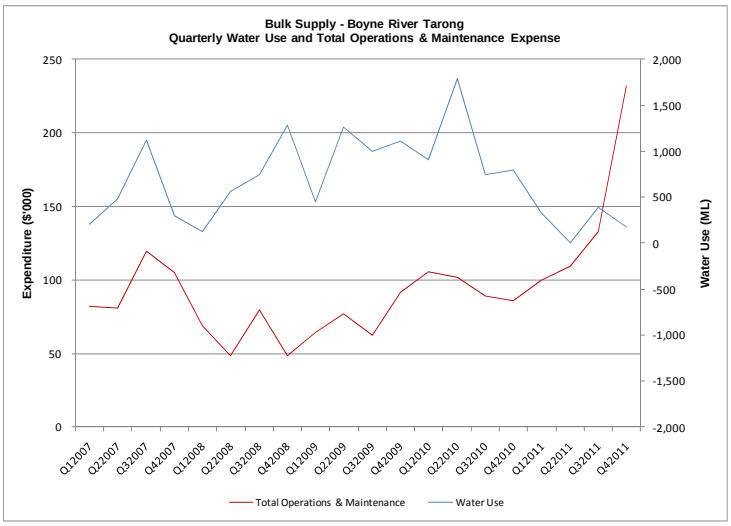

Figure BSBR-4

No electricity expense was incurred during the period July 2007 to June 2011 on the Boyne River Tarong bulk supply service contract.

Figures BSBR-4 and BSBR-5 show that water use in Boyne River Tarong bulk supply is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally lowest in the first quarter. Generally, water use is lower in the first half than in the second half of any one year except in 2010 when water use was unusually high in Q2. Relatively good correlation has been established between the four period moving averages of historical water use and labour hours for the period Q1 2008 to Q1 2011. The last three quarters of 2011 (Q2 to Q4 2011) were excluded from the analysis as water use during this period was unusually low due to extreme weather conditions.

Bulk Supply – Callide Valley

Historical yearly total Callide Valley bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSCV-1 below.

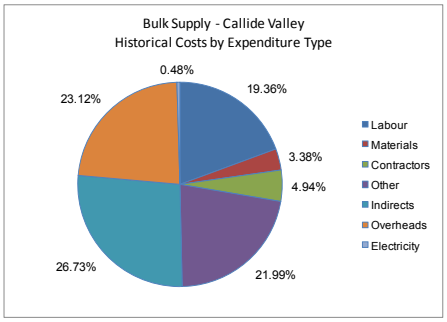

Figure BSCV-1

Yearly total Callide Valley bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSCV-2 below. This analysis was also completed for activities and other expenditure types.

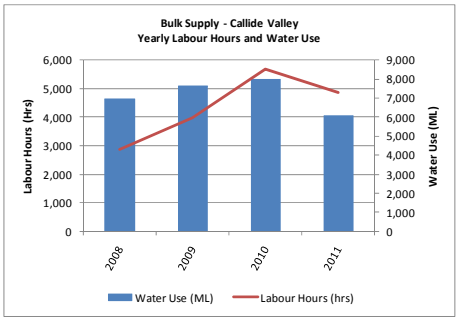

Figure BSCV-2

Historical quarterly total Callide Valley bulk supply water use and operations and maintenance hours are illustrated in BSCV-3 below. This analysis was also completed for other expenditure types.

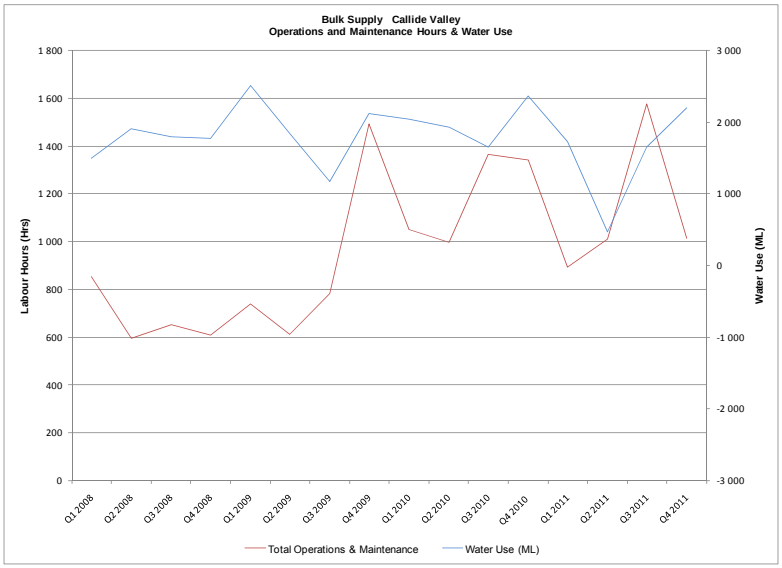

Figure BSCV-3

Historical quarterly total Callide Valley bulk supply water use and total operations and maintenance expense are illustrated in BSCV-4 below. This analysis was also completed for other activities and expenditure types.

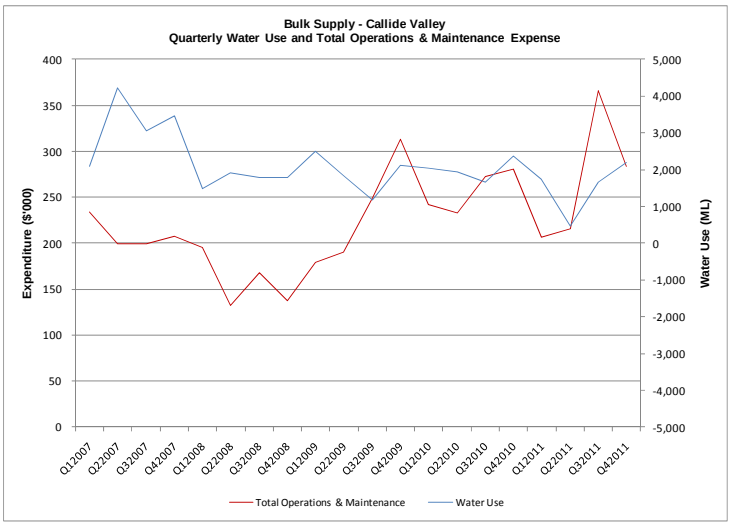

Figure BSCV-4

Historical quarterly total Callide Valley bulk supply water use and total electricity expense are illustrated in BSCV-5 below. This analysis was also completed for other expenditure types.

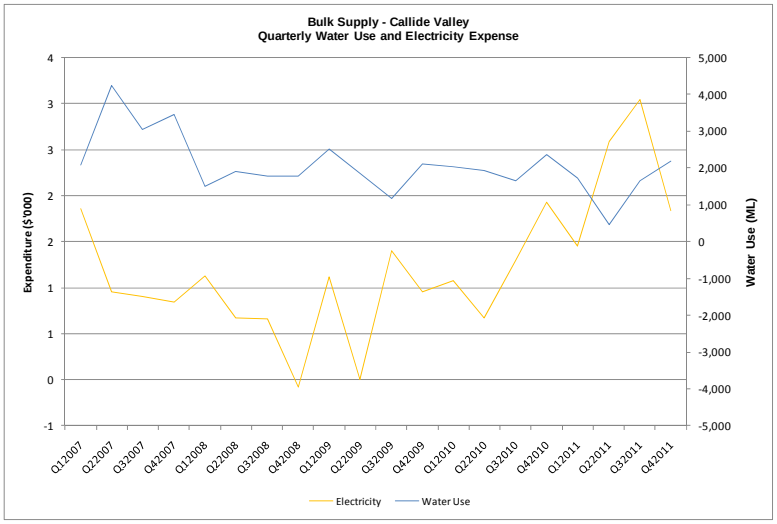

Figure BSCV-5

Figures BSCV-4 and BSCV-5 show that water use in Callide Valley bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in Callide Valley bulk supply, whether by category or activity.

Bulk Supply – Chinchilla Weir

Historical yearly total Chinchilla Weir bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSCW-1 below.

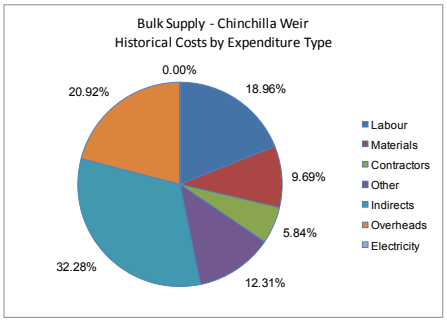

Figure BSCW-1

Yearly total Chinchilla Weir bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSCW-2 below. This analysis was also completed for activities and other expenditure types.

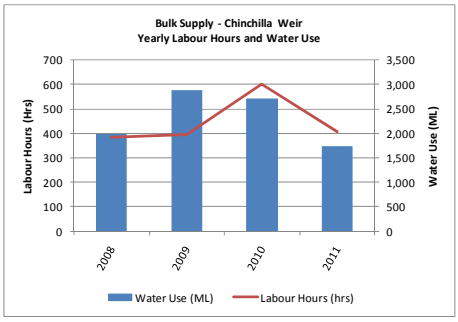

Figure BSCW-2

Historical quarterly total Chinchilla Weir bulk supply water use and operations and maintenance hours are illustrated in BSCW-3 below. This analysis was also completed for other expenditure types.

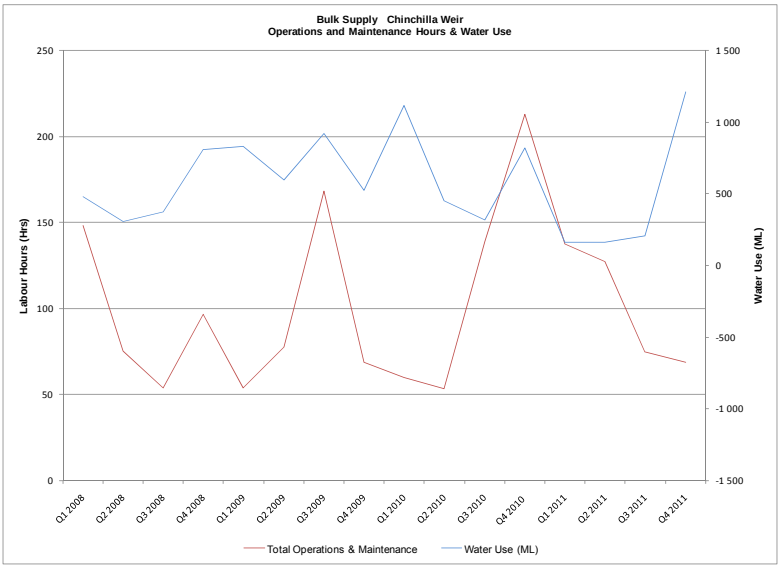

Figure BSCW-3

Historical quarterly total Chinchilla Weir bulk supply water use and total operations and maintenance expense are illustrated in BSCW-4 below. This analysis was also completed for other activities and expenditure types.

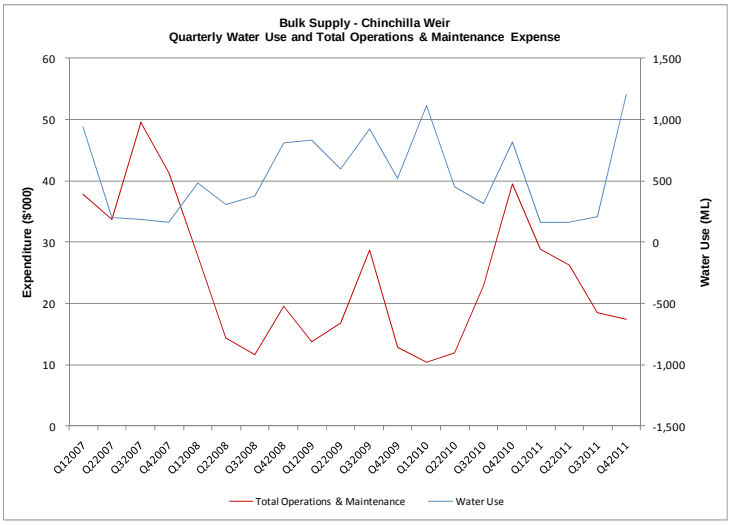

Figure BSCW-4

No electricity expense was incurred during the period July 2007 to June 2011 on the Chinchilla Weir bulk supply service contract.

Figures BSCW-4 and BSCW-5 show that water use in Chinchilla Weir bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in Callide Valley bulk supply, whether by category or activity.

Bulk Supply – Cunnamulla

Historical yearly total Cunnamulla bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSC-1 below.

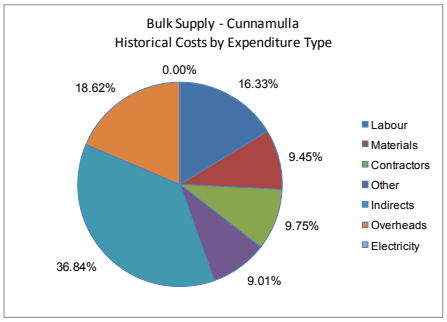

Figure BSC-1

Yearly total Cunnamulla bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSC-2 below. This analysis was also completed for activities and other expenditure types.

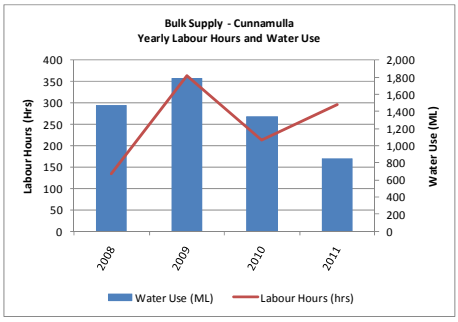

Figure BSC-2

Historical quarterly total Cunnamulla bulk supply water use and operations and maintenance hours are illustrated in BSC-3 below. This analysis was also completed for other expenditure types.

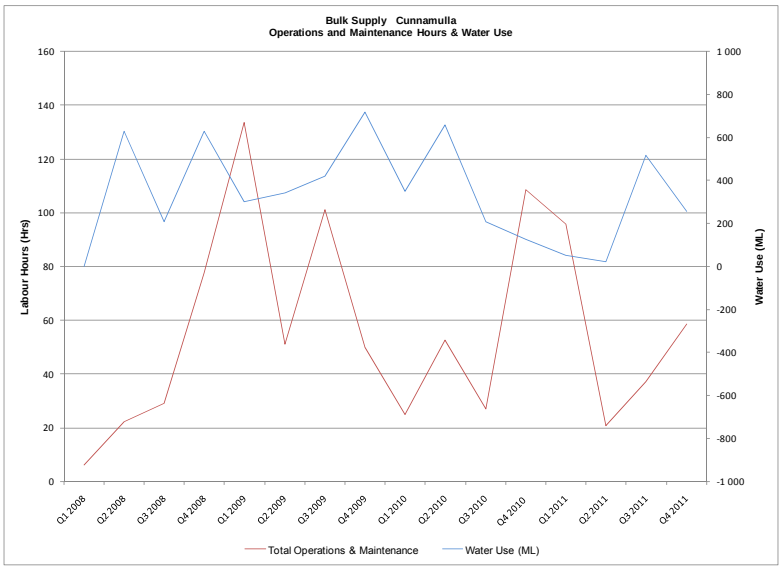

Figure BSC-3

Historical quarterly total Cunnamulla bulk supply water use and total operations and maintenance expense are illustrated in BSC-4 below. This analysis was also completed for other activities and expenditure types.

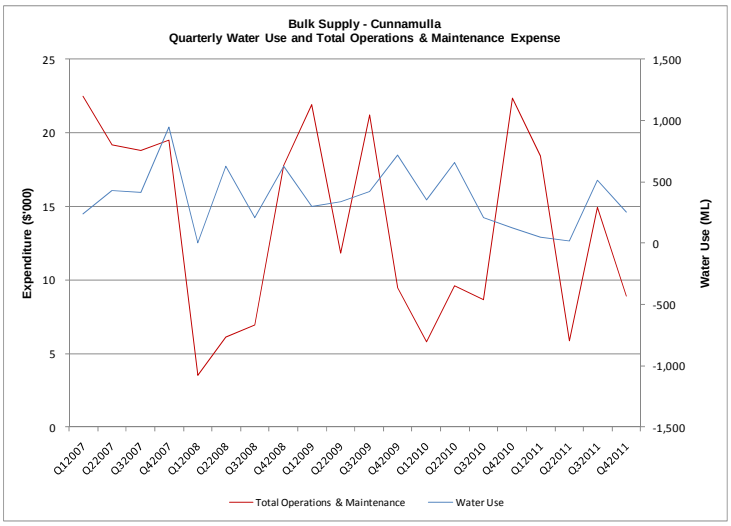

Figure BSC-4

No electricity expense was incurred during the period July 2007 to June 2011 on the Cunnamulla bulk supply service contract.

Figures BSLF-4 and BSLF-5 show that water use in Cunnamulla bulk supply is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is lower in the first half than in the second half of any one year except in 2010 when water use was unusually high in the first half. Little or no correlation could be established between historical water use and either expense or labour hours in Cunnamulla bulk Valley bulk supply, whether by category or activity.

Bulk Supply – Lower Fitzroy

Historical yearly total Lower Fitzroy bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSLF-1 below.

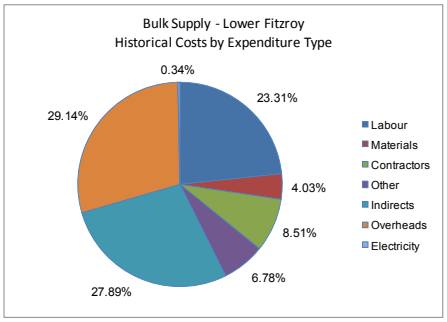

Figure BSLF-1

Yearly total Lower Fitzroy bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSLF-2 below. This analysis was also completed for activities and other expenditure types.

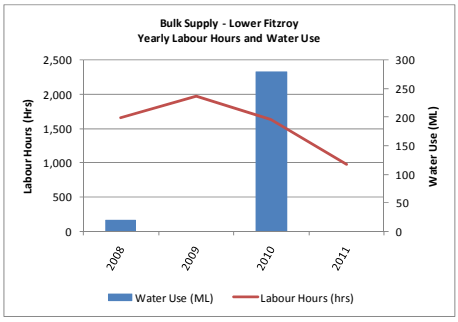

Figure BSLF-2

Historical quarterly total Lower Fitzroy bulk supply water use and operations and maintenance hours are illustrated in BSLF-3 below. This analysis was also completed for other expenditure types.

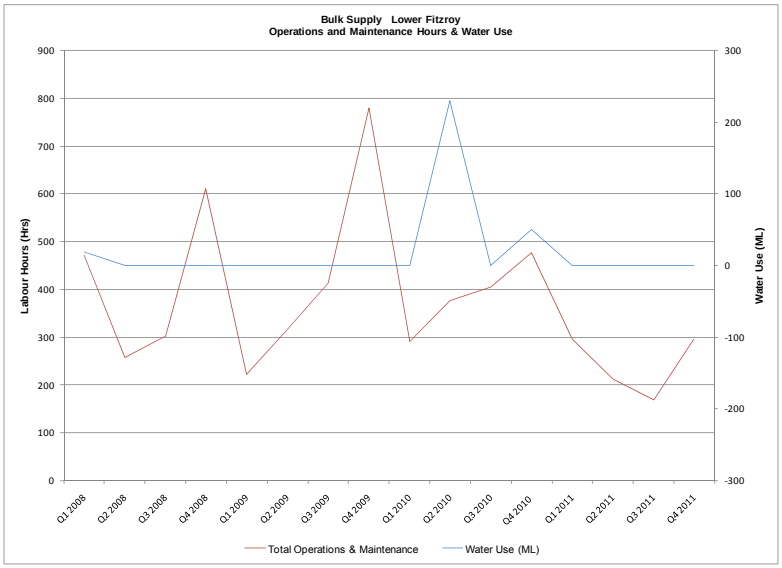

Figure BSLF-3

Historical quarterly total Lower Fitzroy bulk supply water use and total operations and maintenance expense are illustrated in BSLF-4 below. This analysis was also completed for other activities and expenditure types.

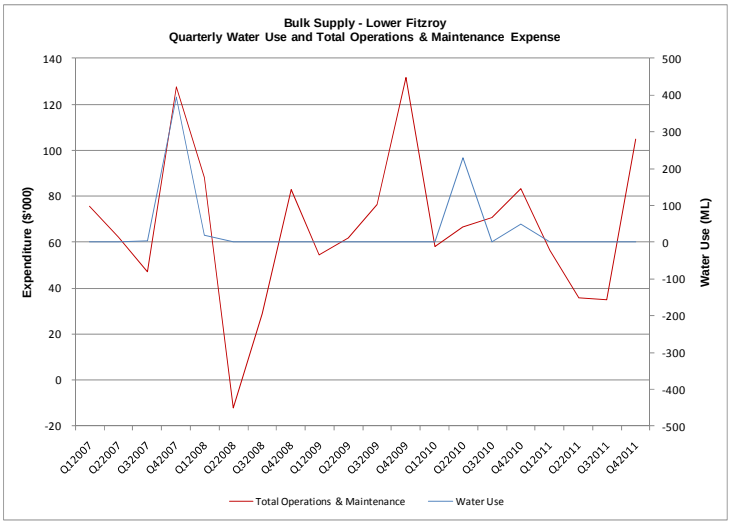

Figure BSLF-4

Electricity expense incurred during the period July 2007 to June 2011 on the Lower Fitzroy bulk supply service contract was negligible.

Figures BSLF-4 and BSLF-5 show that water use in Lower Fitzroy bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in Lower Fitzroy bulk supply, whether by category or activity.

Bulk Supply – Macintyre Brook

Historical yearly total Macintyre Brook bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSMB-1 below.

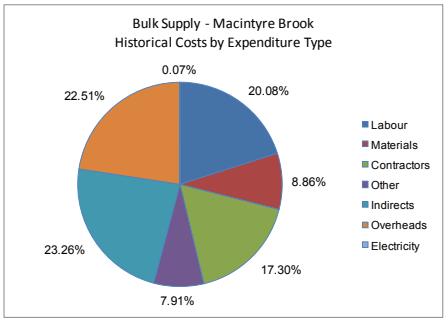

Figure BSMB-1

Yearly total Macintyre Brook bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSMB-2 below. This analysis was also completed for activities and other expenditure types.

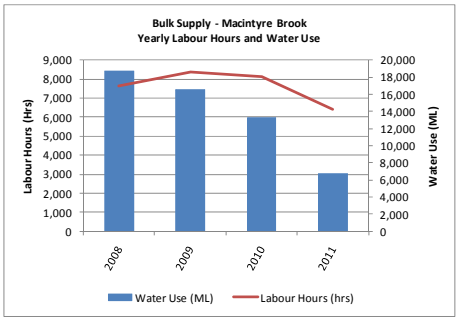

Figure BSMB-2

Historical quarterly total Macintyre Brook bulk supply water use and operations and maintenance hours are illustrated in BSMB-3 below. This analysis was also completed for other expenditure types.

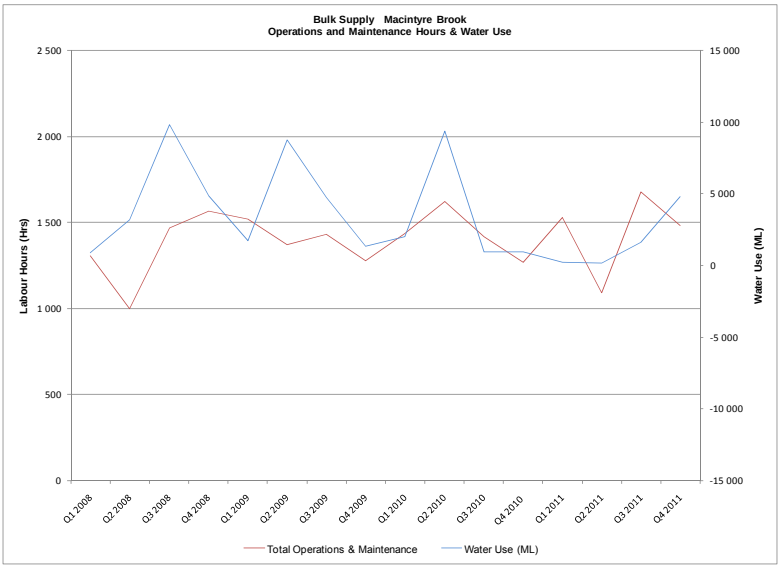

Figure BSMB-3

Historical quarterly total Macintyre Brook bulk supply water use and total operations and maintenance, and renewals expense are illustrated in BSMB-4 below. This analysis was also completed for other activities and expenditure types.

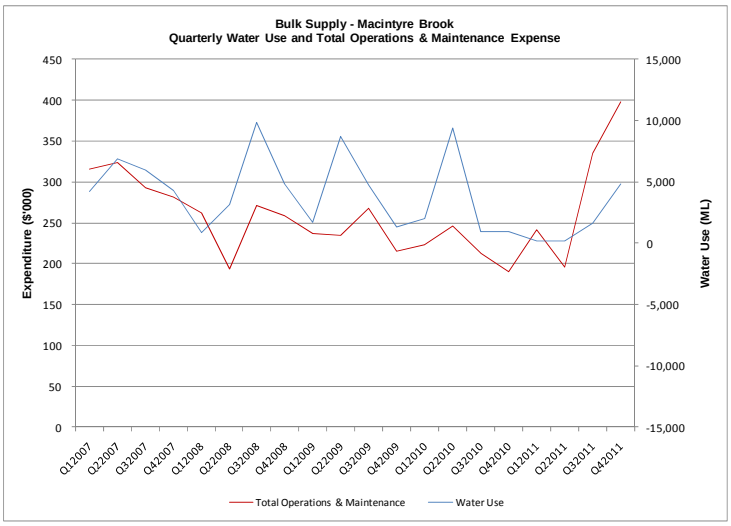

Figure BSMB-4

Electricity expense incurred during the period July 2007 to June 2011 on the Macintyre Brook bulk supply service contract was negligible.

Figures BSMB-4 and BSMB-5 show that water use in Macintyre Brook bulk supply is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is lowest in the first quarter. For the period Q1 2007 to Q4 2011, water use is generally water use is lower in the first half than in the second half of any one year. Little or no correlation could be established between historical water use and either expense or labour hours in Lower Fitzroy bulk supply, whether by category or activity.

Bulk Supply – Maranoa

Historical yearly total Maranoa bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSMA-1 below.

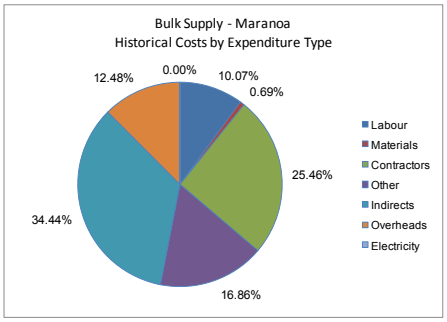

Figure BSMA-1

Yearly total Maranoa bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSMA-2 below. This analysis was also completed for activities and other expenditure types.

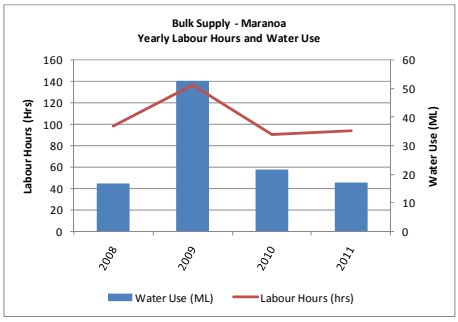

Figure BSMA-2

Historical quarterly total Maranoa bulk supply water use and operations and maintenance hours are illustrated in BSMA-3 below. This analysis was also completed for other expenditure types.

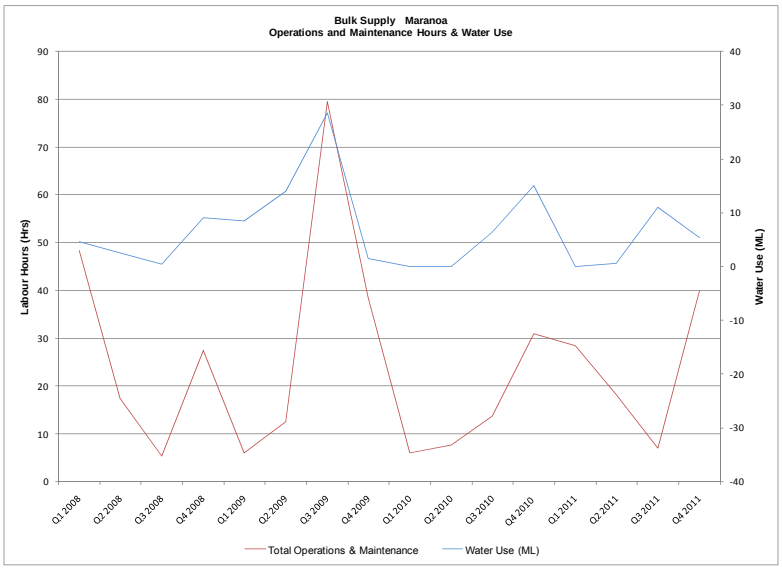

Figure BSMA-3

Historical quarterly total Maranoa bulk supply water use and total operations and maintenance expense are illustrated in BSMA-4 below. This analysis was also completed for other activities and expenditure types. The peak in Q3 2009 was primarily driven by higher than usual labour hours booked on scheme management and non-labour expense on corrective maintenance.

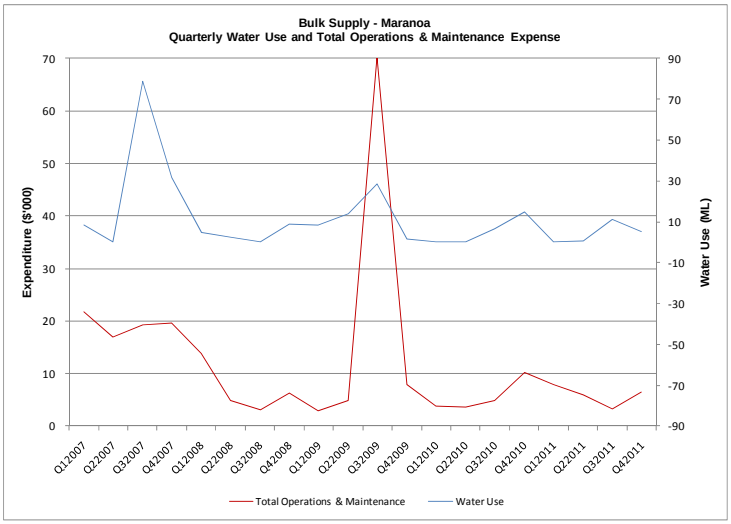

Figure BSMA-4

No electricity expense was incurred during the period July 2007 to June 2011 on the Maranoa bulk supply service contract.

Figures BSMA-4 and BSMA-5 show that water use in Maranoa bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is lowest in the first and second quarters. Good correlation has been established between the four period moving averages of historical water use and labour hours and expense for the period Q1 2008 to Q4 2011. Despite reasonable predictability, only weak correlation could be established between historical water use and either expense or labour hours in Maranoa bulk supply, whether by category or activity.

Bulk Supply – Pioneer River

Historical yearly total Pioneer River bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSPI-1 below.

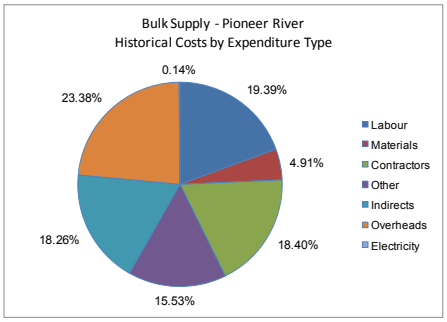

Figure BSPI-1

Yearly total Pioneer River bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSPI-2 below. This analysis was also completed for activities and other expenditure types.

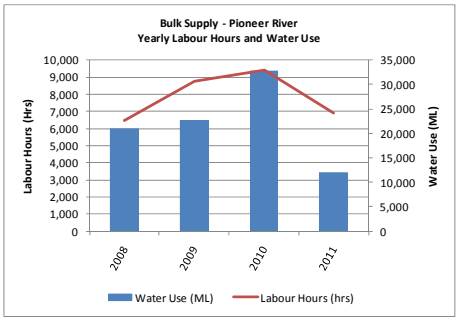

Figure BSPI-2

Historical quarterly total Pioneer River bulk supply water use and operations and maintenance hours are illustrated in BSPI-3 below. This analysis was also completed for other expenditure types.

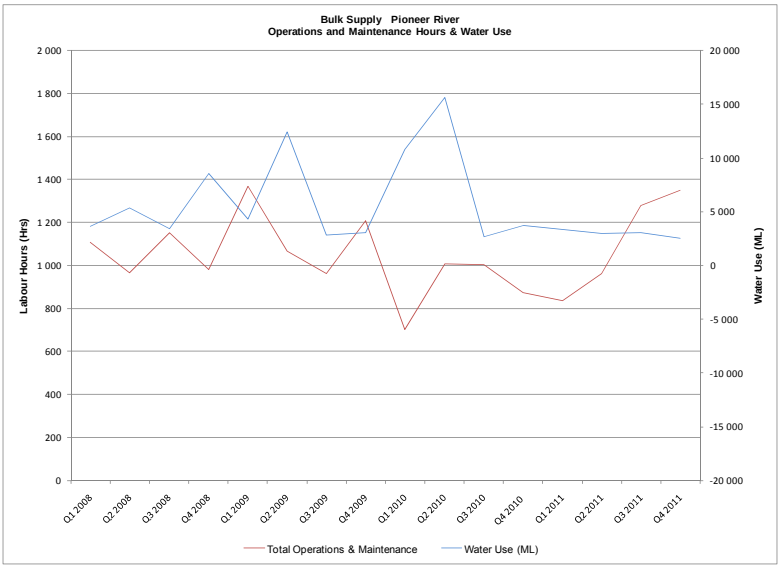

Figure BSPI-3

Historical quarterly total Pioneer River bulk supply water use and total operations and maintenance expense are illustrated in BSPI-4 below. This analysis was also completed for other activities and expenditure types.

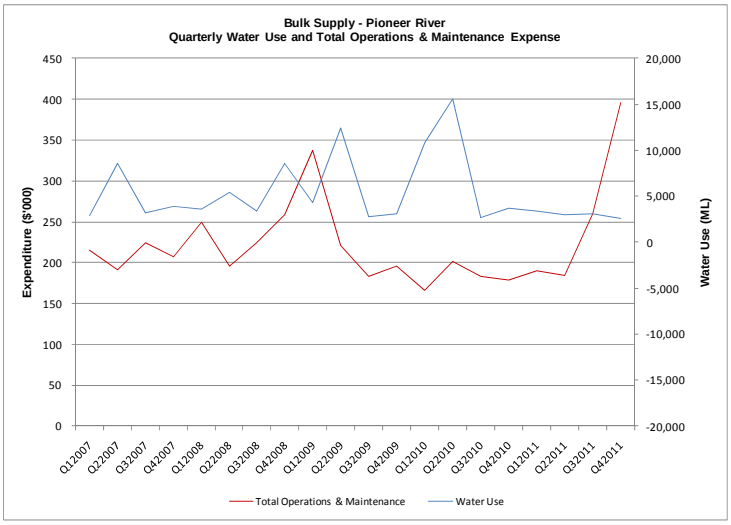

Figure BSPI-4

Electricity expense incurred during the period July 2007 to June 2011 on the Pioneer River supply service contract was negligible.

Figures BSPI-4 and BSPI-5 show that water use in Pioneer River bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is lowest in the third and fourth quarters. For the period Q1 2007 to Q4 2011, water use is generally water use is higher in the first half than in the second half of any one year. Good correlation has been established between the four period moving averages of historical water use and labour hours and expense for the period Q1 2008 to Q4 2011.

Bulk Supply – Proserpine River

Historical yearly total Proserpine River bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSPR-1 below.

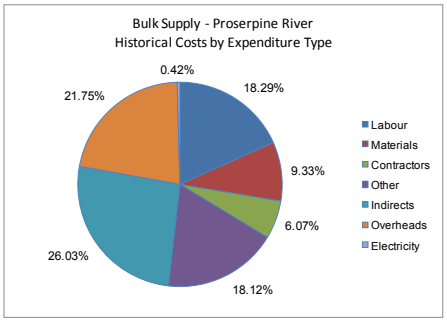

Figure BSPR-1

Yearly total Proserpine River bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSPR-2 below. This analysis was also completed for activities and other expenditure types.

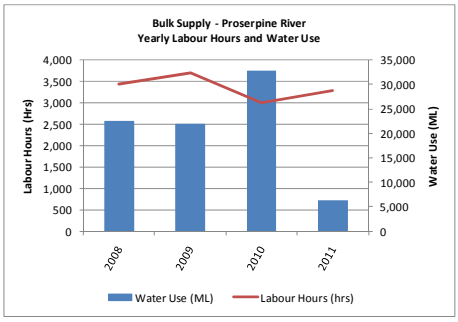

Figure BSPR-2

Historical quarterly total Proserpine River bulk supply water use and operations and maintenance hours are illustrated in BSPR-3 below. This analysis was also completed for other expenditure types.

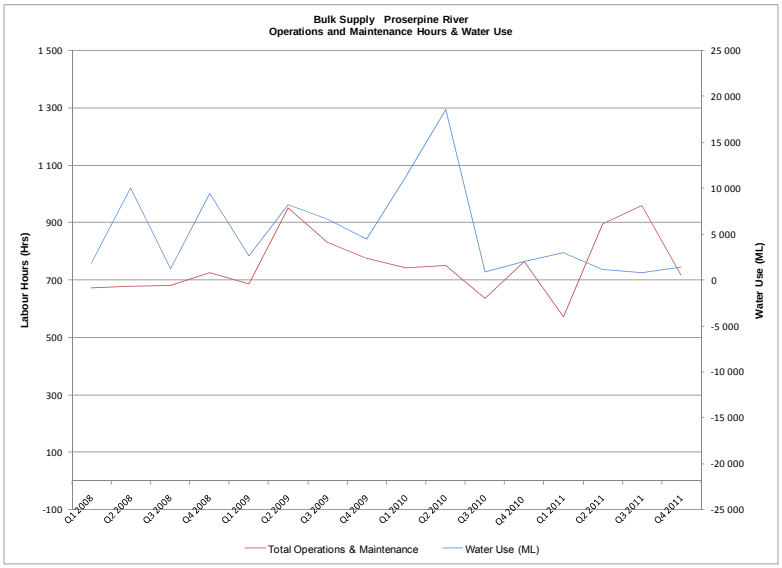

Figure BSPR-3

Historical quarterly total Pioneer River bulk supply water use and total operations and maintenance expense are illustrated in BSPR-4 below. This analysis was also completed for other activities and expenditure types.

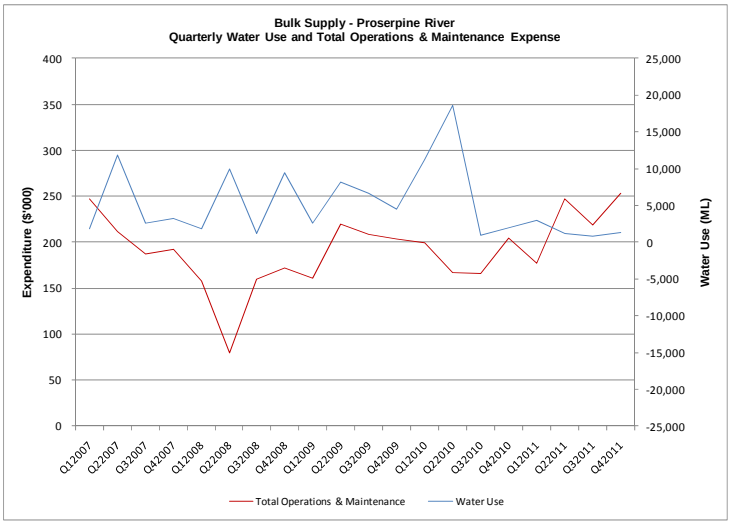

Figure BSPR-4

Electricity expense incurred during the period July 2007 to June 2011 on the Proserpine River supply service contract was negligible.

Figures BSPI-4 and BSPI-5 show that water use in Proserpine River bulk supply is quite seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is highest in the second quarter. For the period Q1 2007 to Q4 2011, water use is generally water use is higher in the first half than in the second half of any one year. Despite reasonable predictability, only weak correlation could be established between historical water use and either expense or labour hours in Proserpine River bulk supply, whether by category or activity.

Bulk Supply – Three Moon

Historical yearly total Three Moon bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSTM-1 below.

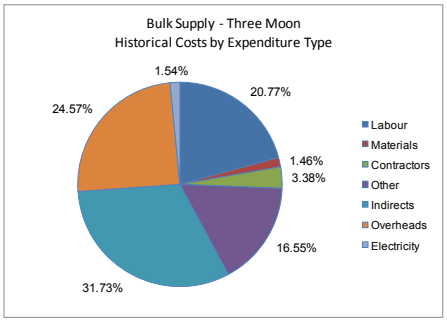

Figure BSTM-1

Yearly total Three Moon bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSTM-2 below. This analysis was also completed for activities and other expenditure types.

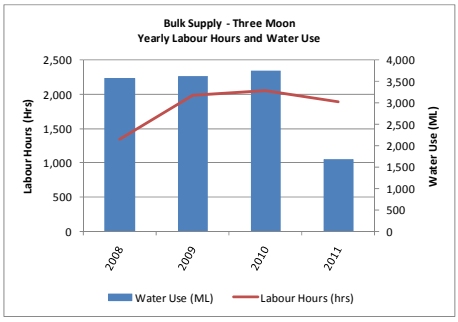

Figure BSTM-2

Historical quarterly total Three Moon bulk supply water use and operations and maintenance hours are illustrated in BSTM-3 below. This analysis was also completed for other expenditure types.

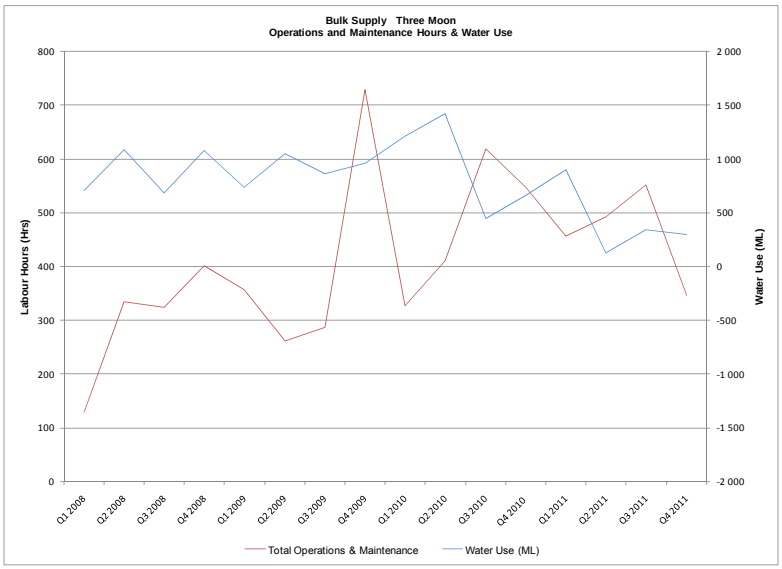

Figure BSTM-3

Historical quarterly total Three Moon bulk supply water use and total operations and maintenance expense are illustrated in BSTM-4 below. This analysis was also completed for other activities and expenditure types.

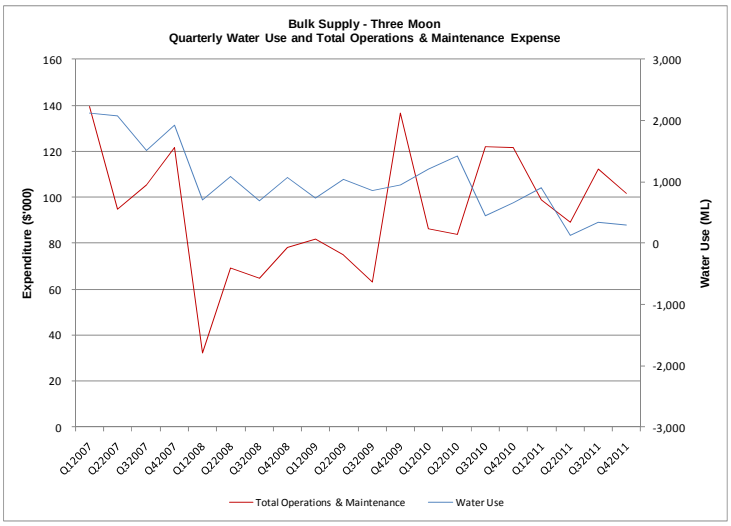

Figure BSTM-4

Historical quarterly total Three Moon bulk supply water use and total electricity expense are illustrated in BSTM-5 below. This analysis was also completed for other expenditure types.

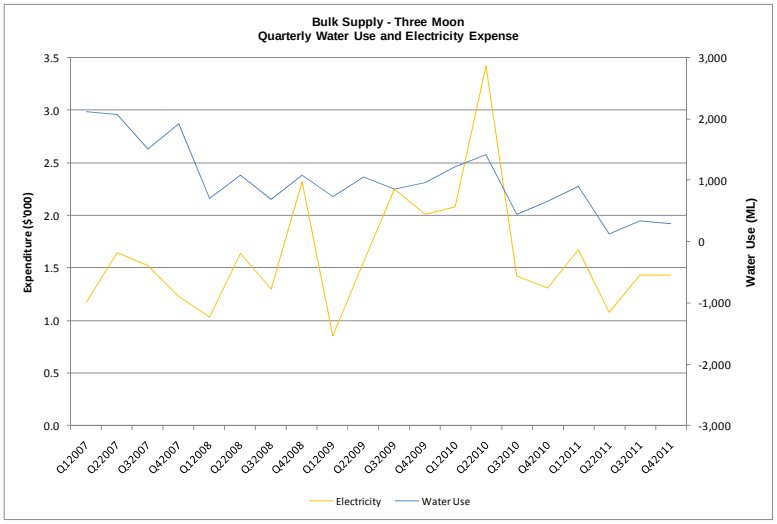

Figure BSCV-5

Figures BSCV-4 and BSCV-5 show that water use in Three Moon bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in Three Moon bulk supply, whether by category or activity.

Bulk Supply – Upper Burnett

Historical yearly total Upper Burnett bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSUB-1 below.

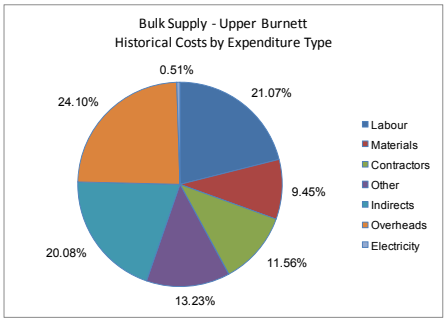

Figure BSUB-1

Yearly total Upper Burnett bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSUB-2 below. This analysis was also completed for activities and other expenditure types.

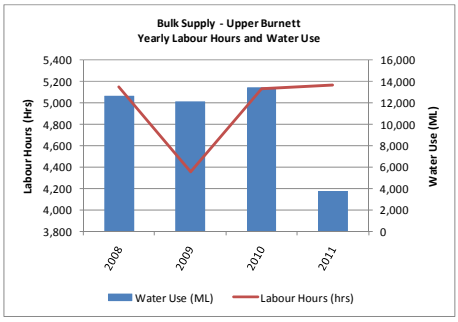

Figure BSUB-2

Historical quarterly total Upper Burnett bulk supply water use and operations and maintenance hours are illustrated in BSUB-3 below. This analysis was also completed for other expenditure types.

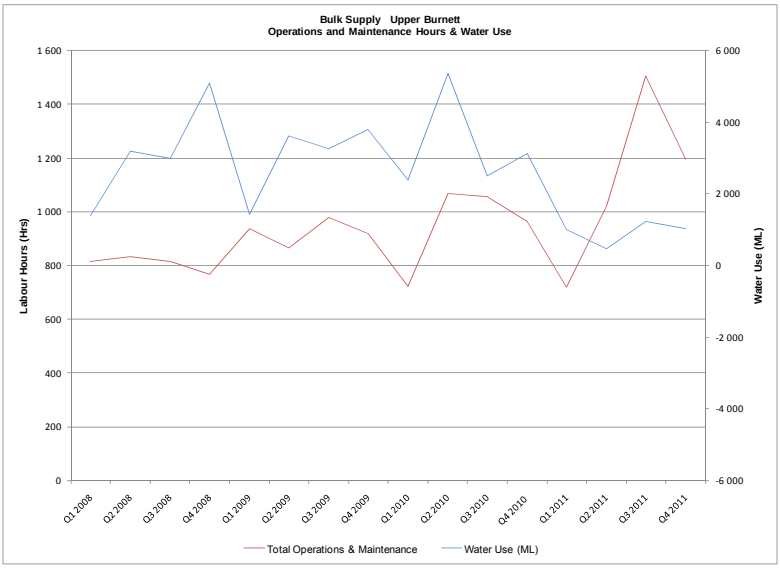

Figure BSUB-3

Historical quarterly total Upper Burnett bulk supply water use and total operations and maintenance, and renewals expense are illustrated in BSUB-4 below. This analysis was also completed for other activities and expenditure types.

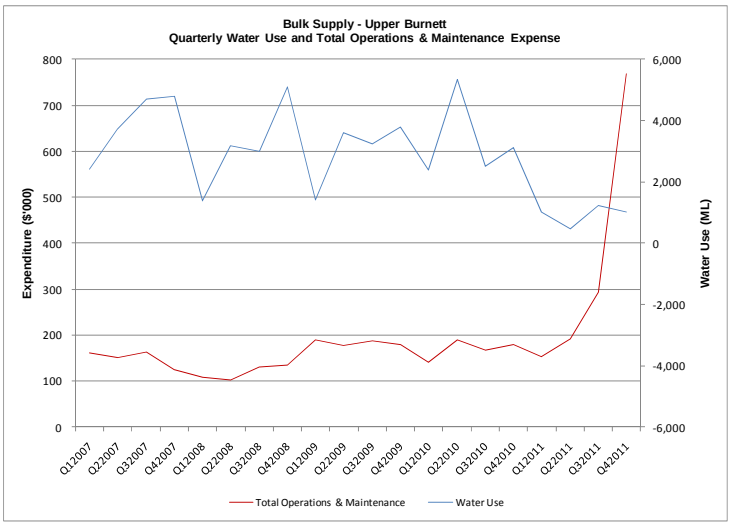

Figure BSUB-4

Historical quarterly total Upper Burnett bulk supply water use and total electricity expense are illustrated in BSUB-5 below. This analysis was also completed for other expenditure types.

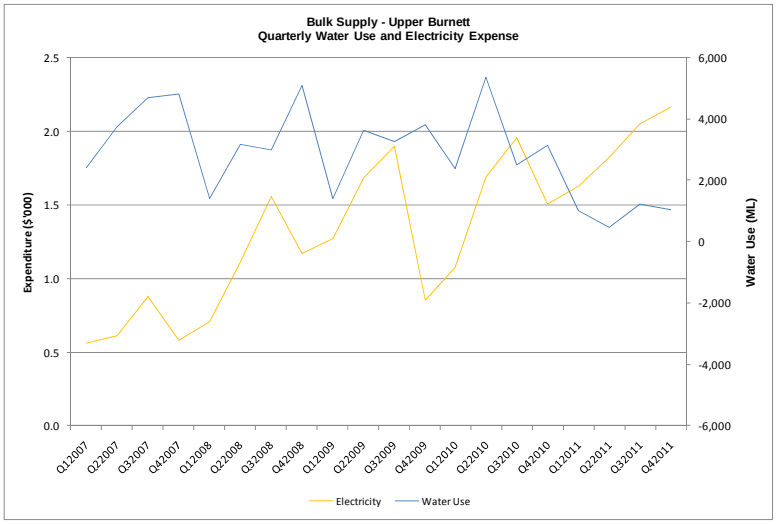

Figure BSUB-5

Figures BSMB-4 and BSMB-5 show that water use in Upper Burnett bulk supply is somewhat seasonal. For the period Q1 2007 to Q4 2011, water use is generally water use is lowest in the first quarter. For the period Q1 2007 to Q4 2011, water use is generally water use is lower in the first half than in the second half of any one year. However, little or no correlation could be established between historical water use and either expense or labour hours in Upper Burnett bulk supply, whether by category or activity.

Bulk Supply – Upper Condamine

Historical yearly total Upper Condamine bulk supply costs by expenditure type for the period 2007/8 to 2010/11 are illustrated in BSUC-1 below.

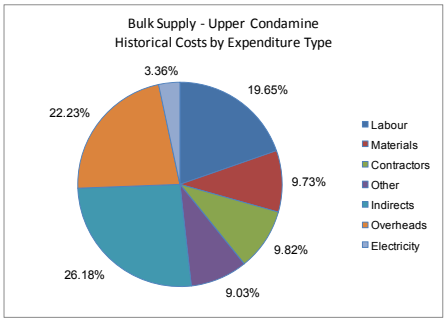

Figure BSUC-1

Yearly total Upper Condamine bulk supply water use and total labour hours for the period 2007/8 to 2010/11 are illustrated in BSUC-2 below. This analysis was also completed for activities and other expenditure types.

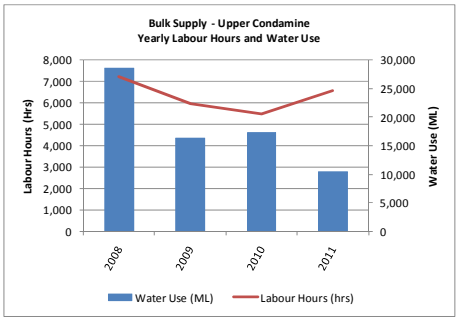

Figure BSUC-2

Historical quarterly total Upper Condamine bulk supply water use and operations and maintenance hours are illustrated in BSUC-3 below. This analysis was also completed for other expenditure types.

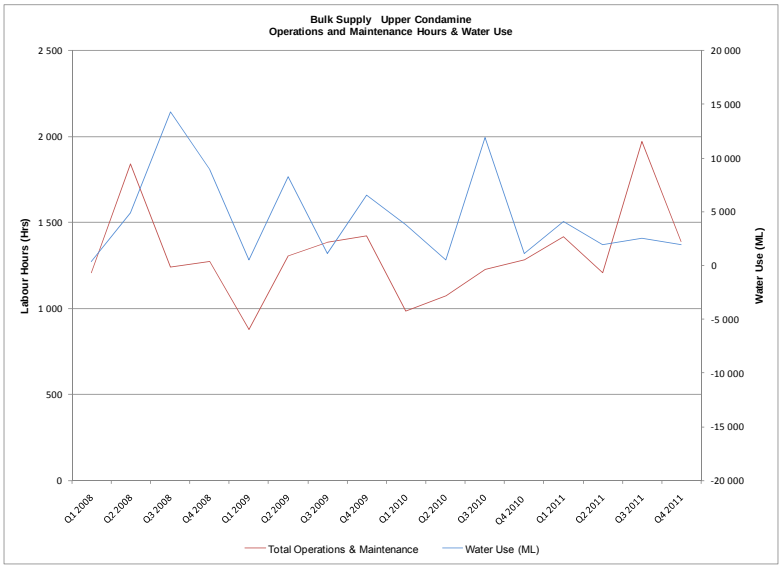

Figure BSUC-3

Historical quarterly total Upper Burnett bulk supply water use and total operations and maintenance, and renewals expense are illustrated in BSUC-4 below. This analysis was also completed for other activities and expenditure types.

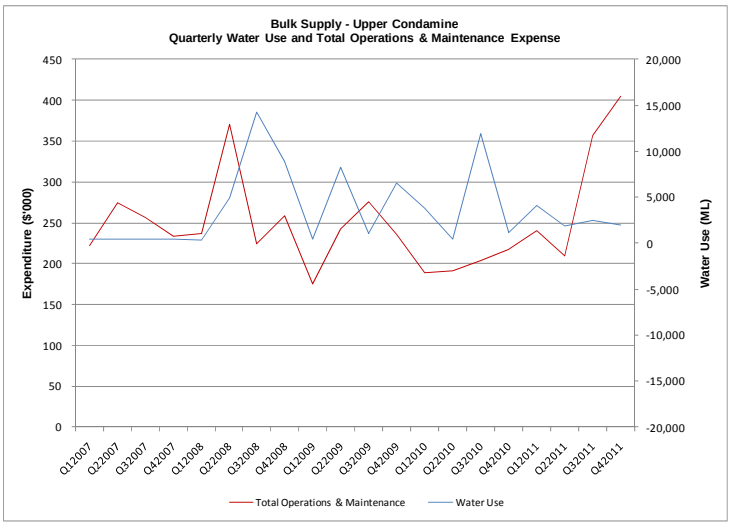

Figure BSUC-4

Historical quarterly total Upper Condamine bulk supply water use and total electricity expense are illustrated in BSUC-5 below. This analysis was also completed for other expenditure types.

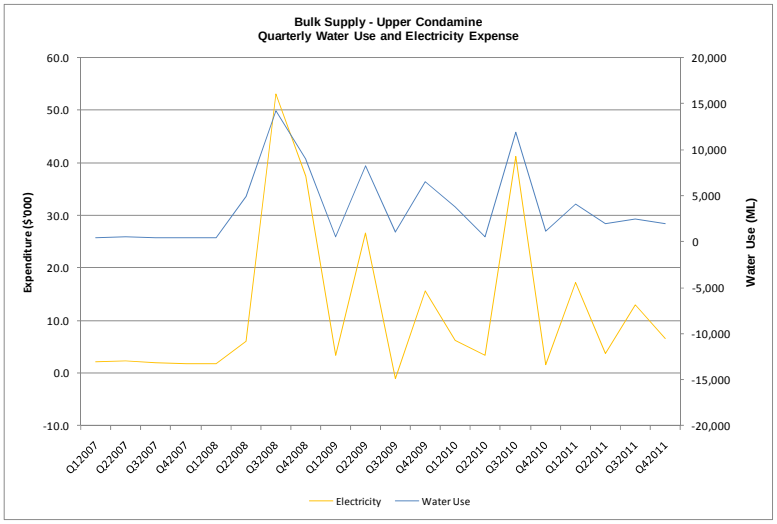

Figure BSUC-5

Figures BSUC-4 and BSUC-5 show that water use in Upper Condamine bulk supply is not very predictable. Little or no correlation could be established between historical water use and either expense or labour hours in Upper Condamine bulk supply, whether by category or activity.

APPENDIX I

Fixed/Variable Assessment
Water Distribution Systems

Water Distribution – Total

Service Contract	Total Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	8,904	8,339	10,154	9,925	11,304	11,042	11,433	11,530	11,560	11,434	11,175	11,426
Electricity	5,474	4,398	4,153	6,367	6,456	6,456	8,821	9,507	10,246	11,153	12,021	10,350
Preventative maintenance	7,325	6,596	7,388	7,256	7,519	7,503	7,748	7,840	7,901	7,878	7,744	7,822
Corrective maintenance	6,035	7,207	7,047	5,352	4,954	4,959	5,157	5,243	5,305	5,306	5,232	5,249
Revenue offsets	-2,688	-2,314	-2,309	-2,153	-2,045	-2,045	-2,045	-2,045	-2,039	-2,019	-2,004	-2,030
Operating costs	**25,051**	**24,226**	**26,433**	**26,747**	**28,189**	**27,912**	**31,114**	**32,075**	**32,973**	**33,752**	**34,168**	**32,816**
Renewal annuity spend	5,405	5,918	5,196	10,523	13,177	7,300	5,399	4,618	4,354	5,436	0	3,961
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**30,455**	**30,142**	**31,630**	**37,270**	**41,367**	**35,211**	**36,513**	**36,693**	**37,327**	**39,188**	**34,168**	**36,778**
Expenditure Type												
Labour	5,636	4,650	5,659	5,668	6,698	6,746	6,856	6,867	6,877	6,887	6,897	6,877
Electricity	5,474	4,398	4,153	6,367	6,456	6,456	8,821	9,507	10,246	11,153	12,021	10,350
Materials	2,213	3,780	3,523	3,228	2,735	2,775	2,815	2,857	2,897	2,941	2,941	2,890
Contractors	1,223	1,541	1,697	1,577	1,813	1,838	1,865	1,892	1,920	1,948	1,948	1,915
Other	1,434	2,205	2,118	2,202	2,103	2,103	2,103	2,103	2,103	2,103	2,103	2,103
Indirects & Overheads	11,759	9,967	11,596	9,864	10,431	10,040	10,697	10,897	10,968	10,739	10,261	10,712
Revenue offsets	-2,688	-2,314	-2,309	-2,153	-2,045	-2,045	-2,045	-2,045	-2,039	-2,019	-2,004	-2,030
Total Operating Costs	**25,051**	**24,226**	**26,433**	**26,747**	**28,189**	**27,912**	**31,112**	**32,078**	**32,972**	**33,752**	**34,167**	**32,816**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	6,419	15%	82%	100%	5,242	6,419	1,177	9%	6,419	15%
Electricity	10,350	25%	0%	100%	0	10,350	10,350	82%	10,350	25%
Preventative maintenance	7,822	19%	86%	100%	3,823	4,432	609	5%	4,432	11%
Corrective maintenance	5,249	13%	85%	100%	2,492	2,933	441	3%	2,933	7%
Revenue offsets	-2,030	-5%	100%	100%	-2,030	-2,030	0	0%	-2,030	-5%
Indirects & Overheads	10,712	n/a	100%	100%	10,712	10,712	0	0%	10,712	26%
Operating costs	**32,816**	**78%**	**62%**	**100%**	**20,240**	**32,816**	**12,577**	**99%**	**32,816**	**78%**
Renewal annuity	9,137	22%	99%	100%	9,061	9,137	76	1%	9,137	22%
Total Expenditure	**41,953**	**100%**	**70%**	**100%**	**29,301**	**41,953**	**12,653**	**100%**	**41,953**	**100%**
Proportion of Total Expenditure					**70%**	**100%**	**30%**			
Expenditure Type										
Labour	6,877	21%	84%	100%	5,754	6,877	1,123	9%		
Electricity	10,350	32%	0%	100%	0	10,350	10,350	82%		
Materials	2,890	9%	84%	100%	2,421	2,890	469	4%		
Contractors	1,915	6%	84%	100%	1,614	1,915	301	2%		
Other	2,103	6%	84%	100%	1,768	2,103	335	3%		
Indirects & Overheads	10,712	33%	100%	100%	10,712	10,712	0	0%		
Revenue offsets	-2,030	-6%	100%	100%	-2,030	-2,030	0	0%		
Total Operating Costs	**32,816**	**100%**			**20,240**	**32,816**	**12,577**	**100%**		

Recommeded

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	6,419	15%	72%	100%	4,600	6,419	1,819	13%	6,419	15%
Electricity	10,350	25%	0%	100%	0	10,350	10,350	74%	10,350	25%
Preventative maintenance	4,432	11%	76%	100%	3,380	4,432	1,052	7%	4,432	11%
Corrective maintenance	2,933	7%	75%	100%	2,199	2,933	734	5%	2,933	7%
Revenue offsets	-2,030	-5%	100%	100%	-2,030	-2,030	0	0%	-2,030	-5%
Indirects & Overheads	22,104	n/a	100%	100%	10,712	10,712	0	0%	10,712	26%
Operating costs	**32,816**	**78%**	**57%**	**100%**	**18,861**	**32,816**	**13,955**	**99%**	**32,816**	**78%**
Renewal annuity	9,137	22%	99%	100%	9,061	9,137	76	1%	9,137	22%
Total Expenditure	**41,953**	**100%**	**67%**	**100%**	**27,922**	**41,953**	**14,031**	**100%**	**41,953**	**100%**
Proportion of Total Expenditure					**67%**	**100%**	**33%**			
Expenditure Type										
Labour	6,877	21%	74%	100%	5,067	6,877	1,810	13%		
Electricity	10,350	32%	0%	100%	0	10,350	10,350	74%		
Materials	2,890	9%	74%	100%	2,132	2,890	758	5%		
Contractors	1,915	6%	74%	100%	1,422	1,915	492	4%		
Other	2,103	6%	74%	100%	1,558	2,103	545	4%		
Indirects & Overheads	10,712	33%	100%	100%	10,712	10,712	0	0%		
Revenue offsets	-2,030	-6%	100%	100%	-2,030	-2,030	0	0%		
Total Operating Costs	**32,816**	**100%**			**18,861**	**32,816**	**13,955**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	6,419	15%	62%	100%	3,958	6,419	2,461	16%	6,419	15%
Electricity	10,350	25%	0%	100%	0	10,350	10,350	67%	10,350	25%
Preventative maintenance	4,432	11%	66%	100%	2,946	4,432	1,486	10%	4,432	11%
Corrective maintenance	2,933	7%	65%	100%	1,906	2,933	1,028	7%	2,933	7%
Revenue offsets	-2,030	-5%	100%	100%	-2,030	-2,030	0	0%	-2,030	-5%
Indirects & Overheads	22,104	n/a	100%	100%	10,712	10,712	0	0%	10,712	26%
Operating costs	**32,816**	**78%**	**53%**	**100%**	**17,492**	**32,816**	**15,324**	**100%**	**32,816**	**78%**
Renewal annuity	9,137	22%	100%	100%	9,091	9,137	46	0%	9,137	22%
Total Expenditure	**41,953**	**100%**	**63%**	**100%**	**26,584**	**41,953**	**15,370**	**100%**	**41,953**	**100%**
Proportion of Total Expenditure					**63%**	**100%**	**37%**			
Expenditure Type										
Labour	6,877	21%	64%	100%	4,386	6,877	2,491	16%		
Electricity	10,350	32%	0%	100%	0	10,350	10,350	68%		
Materials	2,890	9%	64%	100%	1,845	2,890	1,046	7%		
Contractors	1,915	6%	64%	100%	1,232	1,915	683	4%		
Other	2,103	6%	64%	100%	1,348	2,103	755	5%		
Indirects & Overheads	10,712	33%	100%	100%	10,712	10,712	0	0%		
Revenue offsets	-2,030	-6%	100%	100%	-2,030	-2,030	0	0%		
Total Operating Costs	**32,816**	**100%**			**17,492**	**32,816**	**15,324**	**100%**		

Water Distribution – Burdekin

Service Contract	Burdekin Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	3,530	3,173	3,124	3,345	4,069	4,086	4,224	4,259	4,270	4,225	4,134	4,222
Electricity	2,680	2,433	2,421	3,167	3,276	3,276	4,511	4,862	5,240	5,704	6,148	5,293
Preventative maintenance	3,060	2,525	2,850	3,172	3,199	3,200	3,295	3,336	3,366	3,366	3,318	3,336
Corrective maintenance	1,825	3,616	2,710	1,257	1,419	1,415	1,463	1,480	1,490	1,485	1,458	1,475
Revenue offsets	-621	-616	-646	-631	-630	-630	-630	-630	-630	-630	-630	-630
Operating costs	**10,474**	**11,131**	**10,460**	**10,310**	**11,333**	**11,346**	**12,863**	**13,307**	**13,736**	**14,150**	**14,428**	13,697
Renewal annuity spend	1,432	1,249	1,405	2,714	3,309	2,778	1,365	839	555	1,228		997
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**11,907**	**12,379**	**11,864**	**13,024**	**14,642**	**14,124**	**14,228**	**14,146**	**14,291**	**15,378**	**14,428**	**14,494**
Expenditure Type												
Labour	2,106	1,698	1,787	1,669	2,228	2,284	2,317	2,317	2,317	2,317	2,317	2,317
Electricity	2,680	2,433	2,421	3,167	3,276	3,276	4,511	4,862	5,240	5,704	6,148	5,293
Materials	977	2,397	1,822	1,358	1,035	1,050	1,066	1,081	1,097	1,113	1,113	1,094
Contractors	547	861	818	894	1,014	1,029	1,044	1,059	1,075	1,091	1,091	1,072
Other	426	1,056	886	930	903	903	903	903	903	903	903	903
Indirects & Overheads	4,360	3,303	3,373	2,926	3,506	3,434	3,652	3,714	3,733	3,651	3,486	3,647
Revenue offsets	-621	-616	-646	-631	-630	-630	-630	-630	-630	-630	-630	-630
Total Operating Costs	**10,474**	**11,131**	**10,460**	**10,310**	**11,333**	**11,346**	**12,863**	**13,306**	**13,735**	**14,149**	**14,428**	**13,696**

Low

			%		Range					
Real dollars, $000	Price Path Average $	Price Path Average %	Low	High	Low	High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	2,518	15%	85%	100%	2,140	2,518	378	6%	2,518	15%
Electricity	5,293	32%	0%	100%	0	5,293	5,293	86%	5,293	32%
Preventative maintenance	3,336	20%	85%	100%	1,691	1,989	298	5%	1,989	12%
Corrective maintenance	1,475	9%	85%	100%	748	880	132	2%	880	5%
Revenue offsets	-630	-4%	100%	100%	-630	-630	0	0%	-630	-4%
Indirects & Overheads	3,647	n/a	100%	100%	3,647	3,647	n/a	n/a	3,647	22%
Operating costs	**13,697**	**83%**			**7,596**	**13,697**	**6,101**	**100%**	**13,697**	**83%**
Renewal annuity	2,816	17%	99%	100%	2,796	2,816	20	0%	2,816	17%
Total Expenditure	**16,513**	**100%**			**10,392**	**16,513**	**6,121**	**100%**	**16,513**	**100%**
Proportion of Total Expenditure					**63%**	**100%**	**37%**			
Expenditure Type										
Labour	2,317	17%	85%	100%	1,970	2,317	348	6%		
Electricity	5,293	39%	0%	100%	0	5,293	5,293	87%		
Materials	1,094	8%	85%	100%	930	1,094	164	3%		
Contractors	1,072	8%	85%	100%	911	1,072	161	3%		
Other	903	7%	85%	100%	768	903	135	2%		
Indirects & Overheads	3,647	27%	100%	100%	3,647	3,647	0	0%		
Revenue offsets	-630	-5%	100%	100%	-630	-630	0	0%		
Total Operating Costs	**13,696**	**100%**			**7,596**	**13,697**	**6,101**	**100%**		

Recommended

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	2,518	15%	75%	100%	1,888	2,518	629	9%	2,518	15%
Electricity	5,293	32%	0%	100%	0	5,293	5,293	79%	5,293	32%
Preventative maintenance	1,989	12%	75%	100%	1,492	1,989	497	7%	1,989	12%
Corrective maintenance	880	5%	75%	100%	660	880	220	3%	880	5%
Revenue offsets	-630	-4%	100%	100%	-630	-630	0	0%	-630	-4%
Indirects & Overheads	10,049	n/a	100%	100%	3,647	3,647	n/a	n/a	3,647	22%
Operating costs	**13,697**	**83%**			**7,057**	**13,697**	**6,640**	**100%**	**13,697**	**83%**
Renewal annuity	2,816	17%	99%	100%	2,796	2,816	20	0%	2,816	17%
Total Expenditure	**16,513**	**100%**			**9,853**	**16,513**	**6,659**	**100%**	**16,513**	**100%**
Proportion of Total Expenditure					**60%**	**100%**	**40%**			
Expenditure Type										
Labour	2,317	17%	75%	100%	1,738	2,317	579	9%		
Electricity	5,293	39%	0%	100%	0	5,293	5,293	80%		
Materials	1,094	8%	75%	100%	821	1,094	274	4%		
Contractors	1,072	8%	75%	100%	804	1,072	268	4%		
Other	903	7%	75%	100%	677	903	226	3%		
Indirects & Overheads	3,647	27%	100%	100%	3,647	3,647	0	0%		
Revenue offsets	-630	-5%	100%	100%	-630	-630	0	0%		
Total Operating Costs	**13,696**	**100%**			**7,057**	**13,697**	**6,640**	**100%**		

High

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	2,518	15%	65%	100%	1,636	2,518	881	12%	2,518	15%
Electricity	5,293	32%	0%	100%	0	5,293	5,293	74%	5,293	32%
Preventative maintenance	1,989	12%	65%	100%	1,293	1,989	696	10%	1,989	12%
Corrective maintenance	880	5%	65%	100%	572	880	308	4%	880	5%
Revenue offsets	-630	-4%	100%	100%	-630	-630	0	0%	-630	-4%
Indirects & Overheads	10,049	n/a	100%	100%	3,647	3,647	n/a	n/a	3,647	22%
Operating costs	13,697	**83%**			**6,519**	**13,697**	**7,178**	**100%**	**13,697**	**83%**
Renewal annuity	2,816	17%	100%	100%	2,802	2,816	14	0%	2,816	17%
Total Expenditure	**16,513**	**100%**			**9,320**	**16,513**	**7,192**	**100%**	**16,513**	**100%**
Proportion of Total Expenditure					**56%**	**100%**	**44%**			
Expenditure Type										
Labour	2,317	17%	65%	100%	1,506	2,317	811	11%		
Electricity	5,293	39%	0%	100%	0	5,293	5,293	74%		
Materials	1,094	8%	65%	100%	711	1,094	383	5%		
Contractors	1,072	8%	65%	100%	697	1,072	375	5%		
Other	903	7%	65%	100%	587	903	316	4%		
Indirects & Overheads	3,647	27%	100%	100%	3,647	3,647	0	0%		
Revenue offsets	-630	-5%	100%	100%	-630	-630	0	0%		
Total Operating Costs	**13,696**	**100%**			**6,518**	**13,697**	**7,178**	**100%**		

Water Distribution – Bundaberg

Service Contract	Bundaberg Distribution										
	Actuals				Forecast		Price path				
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Activity											
Operations	1,652	1,595	1,805	2,146	2,214	2,192	2,266	2,284	2,290	2,265	2,216
Electricity	2,046	1,292	1,179	2,245	2,300	2,300	3,065	3,303	3,560	3,875	4,177
Preventative maintenance	1,866	1,738	1,911	1,734	1,676	1,667	1,728	1,747	1,758	1,748	1,712
Corrective maintenance	1,151	998	1,151	1,281	968	962	997	1,008	1,015	1,008	988
Revenue offsets	-841	-311	-224	-113	-152	-152	-152	-152	-151	-151	-151
Operating costs	**5,874**	**5,312**	**5,822**	**7,293**	**7,007**	**6,970**	**7,904**	**8,190**	**8,472**	**8,745**	**8,942**
Renewal annuity spend	1,922	1,497	1,180	1,720	1,555	1,611	1,030	848	1,142	997	
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**7,796**	**6,809**	**7,002**	**9,014**	**8,562**	**8,580**	**8,934**	**9,038**	**9,614**	**9,742**	**8,942**
Expenditure Type											
Labour	1,179	940	1,145	1,399	1,426	1,447	1,469	1,469	1,469	1,469	1,469
Electricity	2,046	1,292	1,179	2,245	2,300	2,300	3,065	3,303	3,560	3,875	4,177
Materials	549	468	449	552	557	565	573	582	590	599	599
Contractors	103	140	215	217	146	148	150	152	154	156	156
Other	484	503	542	571	518	518	518	518	518	518	518
Indirects & Overheads	2,352	2,281	2,517	2,425	2,211	2,143	2,281	2,320	2,331	2,279	2,174
Revenue offsets	-841	-311	-224	-113	-152	-152	-152	-152	-151	-151	-151
Total Operating Costs	**5,874**	**5,312**	**5,822**	**7,293**	**7,007**	**6,970**	**7,904**	**8,192**	**8,471**	**8,745**	**8,942**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	1,234	12%	80%	100%	987	1,234	247	6%	1,234	12%
Electricity	3,596	35%	0%	100%	0	3,596	3,596	90%	3,596	35%
Preventative maintenance	1,739	17%	90%	100%	853	948	95	2%	948	9%
Corrective maintenance	1,003	10%	90%	100%	492	547	55	1%	547	5%
Revenue offsets	-151	-1%	100%	100%	-151	-151	0	0%	-151	-1%
Indirects & Overheads	2,277	n/a	100%	100%	2,277	2,277	n/a	n/a	2,277	22%
Operating costs	**8,451**	**82%**			**4,458**	**8,451**	**3,992**	**100%**	**8,451**	**82%**
Renewal annuity	1,895	18%	99%	100%	1,882	1,895	13	0%	1,895	18%
Total Expenditure	**10,346**	**100%**			**6,340**	**10,346**	**4,006**	**100%**	**10,346**	**100%**
Proportion of Total Expenditure					**61%**	**100%**	**39%**			
Expenditure Type										
Labour	1,469	17%	85%	100%	1,256	1,469	213	5%		
Electricity	3,596	43%	0%	100%	0	3,596	3,596	90%		
Materials	589	7%	85%	100%	503	589	85	2%		
Contractors	154	2%	85%	100%	131	154	22	1%		
Other	518	6%	85%	100%	443	518	75	2%		
Indirects & Overheads	2,277	27%	100%	100%	2,277	2,277	0	0%		
Revenue offsets	-151	-2%	100%	100%	-151	-151	0	0%		
Total Operating Costs	**8,451**	**100%**			**4,458**	**8,451**	**3,992**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	1,234	12%	70%	100%	864	1,234	370	9%	1,234	12%
Electricity	3,596	35%	0%	100%	0	3,596	3,596	84%	3,596	35%
Preventative maintenance	948	9%	80%	100%	758	948	190	4%	948	9%
Corrective maintenance	547	5%	80%	100%	438	547	109	3%	547	5%
Revenue offsets	-151	-1%	100%	100%	-151	-151	0	0%	-151	-1%
Indirects & Overheads	6,174	n/a	100%	100%	2,277	2,277	n/a	n/a	2,277	22%
Operating costs	**8,451**	**82%**			**4,185**	**8,451**	**4,265**	**100%**	**8,451**	**82%**
Renewal annuity	1,895	18%	99%	100%	1,882	1,895	13	0%	1,895	18%
Total Expenditure	**10,346**	**100%**			**6,067**	**10,346**	**4,279**	**100%**	**10,346**	**100%**
Proportion of Total Expenditure					**59%**	**100%**	**41%**			
Expenditure Type										
Labour	1,469	17%	75%	100%	1,109	1,469	360	8%		
Electricity	3,596	43%	0%	100%	0	3,596	3,596	84%		
Materials	589	7%	75%	100%	444	589	144	3%		
Contractors	154	2%	75%	100%	116	154	38	1%		
Other	518	6%	75%	100%	391	518	127	3%		
Indirects & Overheads	2,277	27%	100%	100%	2,277	2,277	0	0%		
Revenue offsets	-151	-2%	100%	100%	-151	-151	0	0%		
Total Operating Costs	**8,451**	**100%**			**4,185**	**8,451**	**4,265**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	1,234	12%	60%	100%	741	1,234	494	11%	1,234	12%
Electricity	3,596	35%	0%	100%	0	3,596	3,596	79%	3,596	35%
Preventative maintenance	948	9%	70%	100%	663	948	284	6%	948	9%
Corrective maintenance	547	5%	70%	100%	383	547	164	4%	547	5%
Revenue offsets	-151	-1%	100%	100%	-151	-151	0	0%	-151	-1%
Indirects & Overheads	6,174	n/a	100%	100%	2,277	2,277	n/a	n/a	2,277	22%
Operating costs	8,451	**82%**			**3,912**	**8,451**	**4,538**	**100%**	**8,451**	**82%**
Renewal annuity	1,895	18%	100%	100%	1,886	1,895	9	0%	1,895	18%
Total Expenditure	**10,346**	**100%**			**5,798**	**10,346**	**4,548**	**100%**	**10,346**	**100%**
Proportion of Total Expenditure					**56%**	**100%**	**44%**			
Expenditure Type										
Labour	1,469	17%	65%	100%	962	1,469	507	11%		
Electricity	3,596	43%	0%	100%	0	3,596	3,596	79%		
Materials	589	7%	65%	100%	385	589	203	4%		
Contractors	154	2%	65%	100%	101	154	53	1%		
Other	518	6%	65%	100%	339	518	179	4%		
Indirects & Overheads	2,277	27%	100%	100%	2,277	2,277	0	0%		
Revenue offsets	-151	-2%	100%	100%	-151	-151	0	0%		
Total Operating Costs	**8,451**	**100%**			**3,913**	**8,451**	**4,538**	**100%**		

Water Distribution – Mareeba Dimbulah

Service Contract	Mareeba Dimbulah Distribution											
	Actuals				Forecast		Price path					Price Path
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
Activity												
Operations	1,477	1,333	1,936	1,745	1,927	1,703	1,764	1,779	1,783	1,763	1,723	1,762
Electricity	223	222	206	343	252	252	310	334	360	392	422	364
Preventative maintenance	550	459	620	569	479	476	494	500	503	499	488	497
Corrective maintenance	1,284	1,027	1,389	1,264	1,274	1,294	1,364	1,406	1,442	1,461	1,459	1,426
Revenue offsets	-535	-559	-570	-562	-562	-562	-562	-562	-560	-557	-556	-559
Operating costs	**2,999**	**2,482**	**3,581**	**3,360**	**3,370**	**3,163**	**3,370**	**3,457**	**3,528**	**3,558**	**3,536**	3,490
Renewal annuity spend	1,494	1,647	1,621	2,629	1,915	953	1,366	1,459	1,666	1,918		1,602
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**4,493**	**4,128**	**5,203**	**5,988**	**5,285**	**4,116**	**4,736**	**4,916**	**5,194**	**5,476**	**3,536**	**4,772**
Expenditure Type												
Labour	886	713	999	969	1,096	1,039	1,064	1,075	1,085	1,095	1,105	1,085
Electricity	223	222	206	343	252	252	310	334	360	392	422	364
Materials	282	246	544	565	507	514	522	530	537	545	545	536
Contractors	118	108	127	30	51	51	52	53	54	54	54	53
Other	304	307	244	330	330	330	330	330	330	330	330	330
Indirects & Overheads	1,721	1,444	2,032	1,685	1,696	1,539	1,653	1,697	1,722	1,699	1,635	1,681
Revenue offsets	-535	-559	-570	-562	-562	-562	-562	-562	-560	-557	-556	-559
Total Operating Costs	**2,999**	**2,482**	**3,581**	**3,360**	**3,370**	**3,163**	**3,369**	**3,457**	**3,528**	**3,558**	**3,535**	**3,489**

Low

			%		Range					
Real dollars, $000	Price Path Average $	Price Path Average %	Low	High	Low	High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	958	17%	80%	100%	767	958	192	25%	958	17%
Electricity	364	7%	0%	100%	0	364	364	47%	364	7%
Preventative maintenance	497	9%	85%	100%	230	270	41	5%	270	5%
Corrective maintenance	1,426	26%	80%	100%	621	776	155	20%	776	14%
Revenue offsets	-559	-10%	100%	100%	-559	-559	0	0%	-559	-10%
Indirects & Overheads	1,681	n/a	100%	100%	1,681	1,681	n/a	n/a	1,681	30%
Operating costs	**3,490**	**63%**			**2,739**	**3,490**	**751**	**97%**	**3,490**	**63%**
Renewal annuity	2,090	37%	99%	100%	2,067	2,090	23	3%	2,090	37%
Total Expenditure	**5,580**	**100%**			**4,806**	**5,580**	**774**	**100%**	**5,580**	**100%**
Proportion of Total Expenditure					**86%**	**100%**	**14%**			
Expenditure Type										
Labour	1,085	31%	81%	100%	875	1,085	210	28%		
Electricity	364	10%	0%	100%	0	364	364	48%		
Materials	536	15%	81%	100%	432	536	104	14%		
Contractors	53	2%	81%	100%	43	53	10	1%		
Other	330	9%	81%	100%	266	330	64	8%		
Indirects & Overheads	1,681	48%	100%	100%	1,681	1,681	0	0%		
Revenue offsets	-559	-16%	100%	100%	-559	-559	0	0%		
Total Operating Costs	**3,489**	**100%**			**2,739**	**3,490**	**751**	**100%**		

Recommended

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	958	17%	70%	100%	671	958	288	30%	958	17%
Electricity	364	7%	0%	100%	0	364	364	37%	364	7%
Preventative maintenance	270	5%	75%	100%	203	270	68	7%	270	5%
Corrective maintenance	776	14%	70%	100%	543	776	233	24%	776	14%
Revenue offsets	-559	-10%	100%	100%	-559	-559	0	0%	-559	-10%
Indirects & Overheads	1,808	n/a	100%	100%	1,681	1,681	n/a	n/a	1,681	30%
Operating costs	**3,490**	**63%**			**2,538**	**3,490**	**951**	**98%**	**3,490**	**63%**
Renewal annuity	2,090	37%	99%	100%	2,067	2,090	23	2%	2,090	37%
Total Expenditure	**5,580**	**100%**			**4,605**	**5,580**	**974**	**100%**	**5,580**	**100%**
Proportion of Total Expenditure					**83%**	**100%**	**17%**			
Expenditure Type										
Labour	1,085	31%	71%	100%	767	1,085	318	33%		
Electricity	364	10%	0%	100%	0	364	364	38%		
Materials	536	15%	71%	100%	379	536	157	17%		
Contractors	53	2%	71%	100%	38	53	16	2%		
Other	330	9%	71%	100%	233	330	97	10%		
Indirects & Overheads	1,681	48%	100%	100%	1,681	1,681	0	0%		
Revenue offsets	-559	-16%	100%	100%	-559	-559	0	0%		
Total Operating Costs	**3,489**	**100%**			**2,538**	**3,490**	**951**	**100%**		

High

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	958	17%	60%	100%	575	958	383	33%	958	17%
Electricity	364	7%	0%	100%	0	364	364	31%	364	7%
Preventative maintenance	270	5%	65%	100%	176	270	95	8%	270	5%
Corrective maintenance	776	14%	60%	100%	465	776	310	27%	776	14%
Revenue offsets	-559	-10%	100%	100%	-559	-559	0	0%	-559	-10%
Indirects & Overheads	1,808	n/a	100%	100%	1,681	1,681	n/a	n/a	1,681	30%
Operating costs	3,490	**63%**			**2,338**	**3,490**	**1,152**	**99%**	**3,490**	**63%**
Renewal annuity	2,090	37%	100%	100%	2,080	2,090	10	1%	2,090	37%
Total Expenditure	**5,580**	**100%**			**4,418**	**5,580**	**1,162**	**100%**	**5,580**	**100%**
Proportion of Total Expenditure					**79%**	**100%**	**21%**			
Expenditure Type										
Labour	1,085	31%	61%	100%	658	1,085	427	37%		
Electricity	364	10%	0%	100%	0	364	364	32%		
Materials	536	15%	61%	100%	325	536	211	18%		
Contractors	53	2%	61%	100%	32	53	21	2%		
Other	330	9%	61%	100%	200	330	130	11%		
Indirects & Overheads	1,681	48%	100%	100%	1,681	1,681	0	0%		
Revenue offsets	-559	-16%	100%	100%	-559	-559	0	0%		
Total Operating Costs	**3,489**	**100%**			**2,338**	**3,490**	**1,152**	**100%**		

Water Distribution – Eton

Service Contract	Eton Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	553	445	463	465	682	675	699	705	707	699	683	699
Electricity	176	166	120	258	230	230	436	470	506	551	594	511
Preventative maintenance	497	340	362	431	608	607	627	634	639	637	626	633
Corrective maintenance	407	402	427	421	428	428	441	447	450	450	444	446
Revenue offsets	-12	-26	-14	-13	-4	-4	-4	-4	-4	-4	-4	-4
Operating costs	**1,621**	**1,327**	**1,358**	**1,562**	**1,944**	**1,935**	**2,199**	**2,252**	**2,298**	**2,333**	**2,343**	2,285
Renewal annuity spend	50	50	215	634	611	359	634	297	357	737		506
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**1,671**	**1,376**	**1,573**	**2,196**	**2,556**	**2,294**	**2,833**	**2,549**	**2,655**	**3,070**	**2,343**	**2,690**
Expenditure Type												
Labour	268	241	259	301	457	464	471	471	471	471	471	471
Electricity	176	166	120	258	230	230	436	470	506	551	594	511
Materials	137	282	212	268	231	235	238	242	245	249	249	245
Contractors	67	86	125	81	189	191	194	197	200	203	203	199
Other	121	120	129	139	125	125	125	125	125	125	125	125
Indirects & Overheads	865	457	527	528	717	695	739	752	756	739	705	738
Revenue offsets	-12	-26	-14	-13	-4	-4	-4	-4	-4	-4	-4	-4
Total Operating Costs	**1,621**	**1,327**	**1,358**	**1,562**	**1,944**	**1,935**	**2,199**	**2,253**	**2,299**	**2,334**	**2,343**	**2,286**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	409	14%	80%	100%	327	409	82	12%	409	14%
Electricity	511	17%	0%	100%	0	511	511	72%	511	17%
Preventative maintenance	633	21%	85%	100%	314	370	55	8%	370	13%
Corrective maintenance	446	15%	80%	100%	209	261	52	7%	261	9%
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%	-4	0%
Indirects & Overheads	738	n/a	100%	100%	738	738	n/a	n/a	738	25%
Operating costs	**2,285**	**78%**			**1,584**	**2,285**	**701**	**99%**	**2,285**	**78%**
Renewal annuity	660	22%	99%	100%	653	660	7	1%	660	22%
Total Expenditure	**2,945**	**100%**			**2,237**	**2,945**	**708**	**100%**	**2,945**	**100%**
Proportion of Total Expenditure					**76%**	**100%**	**24%**			
Expenditure Type										
Labour	471	21%	82%	100%	385	471	86	12%		
Electricity	511	22%	0%	100%	0	511	511	73%		
Materials	245	11%	82%	100%	200	245	45	6%		
Contractors	199	9%	82%	100%	163	199	36	5%		
Other	125	5%	82%	100%	102	125	23	3%		
Indirects & Overheads	738	32%	100%	100%	738	738	0	0%		
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**2,286**	**100%**			**1,584**	**2,285**	**701**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	409	14%	70%	100%	286	409	123	15%	409	14%
Electricity	511	17%	0%	100%	0	511	511	63%	511	17%
Preventative maintenance	370	13%	75%	100%	277	370	92	11%	370	13%
Corrective maintenance	261	9%	70%	100%	183	261	78	10%	261	9%
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%	-4	0%
Indirects & Overheads	1,547	n/a	100%	100%	738	738	n/a	n/a	738	25%
Operating costs	**2,285**	**78%**			**1,480**	**2,285**	**805**	**99%**	**2,285**	**78%**
Renewal annuity	660	22%	99%	100%	653	660	7	1%	660	22%
Total Expenditure	**2,945**	**100%**			**2,133**	**2,945**	**812**	**100%**	**2,945**	**100%**
Proportion of Total Expenditure					**72%**	**100%**	**28%**			
Expenditure Type										
Labour	471	21%	72%	100%	338	471	133	17%		
Electricity	511	22%	0%	100%	0	511	511	64%		
Materials	245	11%	72%	100%	176	245	69	9%		
Contractors	199	9%	72%	100%	143	199	56	7%		
Other	125	5%	72%	100%	90	125	35	4%		
Indirects & Overheads	738	32%	100%	100%	738	738	0	0%		
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**2,286**	**100%**			**1,480**	**2,285**	**805**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	409	14%	60%	100%	245	409	163	18%	409	14%
Electricity	511	17%	0%	100%	0	511	511	56%	511	17%
Preventative maintenance	370	13%	65%	100%	240	370	129	14%	370	13%
Corrective maintenance	261	9%	60%	100%	157	261	104	11%	261	9%
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%	-4	0%
Indirects & Overheads	1,547	n/a	100%	100%	738	738	n/a	n/a	738	25%
Operating costs	2,285	**78%**			**1,376**	**2,285**	**909**	**100%**	**2,285**	**78%**
Renewal annuity	660	22%	100%	100%	657	660	3	0%	660	22%
Total Expenditure	**2,945**	**100%**			**2,033**	**2,945**	**912**	**100%**	**2,945**	**100%**
Proportion of Total Expenditure					**69%**	**100%**	**31%**			
Expenditure Type										
Labour	471	21%	62%	100%	291	471	180	20%		
Electricity	511	22%	0%	100%	0	511	511	56%		
Materials	245	11%	62%	100%	151	245	93	10%		
Contractors	199	9%	62%	100%	123	199	76	8%		
Other	125	5%	62%	100%	77	125	48	5%		
Indirects & Overheads	738	32%	100%	100%	738	738	0	0%		
Revenue offsets	-4	0%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**2,286**	**100%**			**1,376**	**2,285**	**909**	**100%**		

Water Distribution – Emerald

Service Contract	Emerald Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	653	635	954	890	823	814	846	853	856	846	825	845
Electricity	166	86	64	47	95	95	135	145	157	170	184	158
Preventative maintenance	462	425	508	539	599	600	617	625	630	631	623	625
Corrective maintenance	820	387	523	206	279	279	288	291	294	293	288	291
Revenue offsets	-418	-529	-570	-558	-427	-427	-427	-427	-424	-407	-395	-416
Operating costs	**1,683**	**1,004**	**1,479**	**1,123**	**1,369**	**1,361**	**1,459**	**1,487**	**1,513**	**1,533**	**1,525**	1,503
Renewal annuity spend	291	1,177	171	1,615	1,218	345	290	237	210	194		233
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**1,973**	**2,181**	**1,650**	**2,738**	**2,588**	**1,706**	**1,749**	**1,724**	**1,723**	**1,727**	**1,525**	**1,690**
Expenditure Type												
Labour	442	306	424	421	457	464	471	471	471	471	471	471
Electricity	166	86	64	47	95	95	135	145	157	170	184	158
Materials	146	170	242	127	193	196	198	201	204	207	207	203
Contractors	325	229	237	232	235	238	242	245	249	253	253	248
Other	30	108	123	119	101	101	101	101	101	101	101	101
Indirects & Overheads	991	634	960	735	716	694	738	751	755	738	704	737
Revenue offsets	-418	-529	-570	-558	-427	-427	-427	-427	-424	-407	-395	-416
Total Operating Costs	**1,683**	**1,004**	**1,479**	**1,123**	**1,369**	**1,361**	**1,458**	**1,487**	**1,513**	**1,533**	**1,525**	**1,503**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	491	23%	80%	100%	393	491	98	31%	491	23%
Electricity	158	8%	0%	100%	0	158	158	50%	158	8%
Preventative maintenance	625	30%	90%	100%	327	363	36	12%	363	17%
Corrective maintenance	291	14%	90%	100%	152	169	17	5%	169	8%
Revenue offsets	-416	-20%	100%	100%	-416	-416	0	0%	-416	-20%
Indirects & Overheads	737	n/a	100%	100%	737	737	n/a	n/a	737	35%
Operating costs	**1,503**	**71%**			**1,194**	**1,503**	**310**	**99%**	**1,503**	**71%**
Renewal annuity	604	29%	99%	100%	600	604	4	1%	604	29%
Total Expenditure	**2,107**	**100%**			**1,793**	**2,107**	**314**	**100%**	**2,107**	**100%**
Proportion of Total Expenditure					**85%**	**100%**	**15%**			
Expenditure Type										
Labour	471	31%	85%	100%	401	471	70	23%		
Electricity	158	11%	0%	100%	0	158	158	51%		
Materials	203	14%	85%	100%	173	203	30	10%		
Contractors	248	17%	85%	100%	212	248	37	12%		
Other	101	7%	85%	100%	86	101	15	5%		
Indirects & Overheads	737	49%	100%	100%	737	737	0	0%		
Revenue offsets	-416	-28%	100%	100%	-416	-416	0	0%		
Total Operating Costs	**1,503**	**100%**			**1,194**	**1,503**	**310**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	491	23%	70%	100%	344	491	147	35%	491	23%
Electricity	158	8%	0%	100%	0	158	158	38%	158	8%
Preventative maintenance	363	17%	80%	100%	291	363	73	17%	363	17%
Corrective maintenance	169	8%	80%	100%	135	169	34	8%	169	8%
Revenue offsets	-416	-20%	100%	100%	-416	-416	0	0%	-416	-20%
Indirects & Overheads	766	n/a	100%	100%	737	737	n/a	n/a	737	35%
Operating costs	**1,503**	**71%**			**1,091**	**1,503**	**412**	**99%**	**1,503**	**71%**
Renewal annuity	604	29%	99%	100%	600	604	4	1%	604	29%
Total Expenditure	**2,107**	**100%**			**1,691**	**2,107**	**416**	**100%**	**2,107**	**100%**
Proportion of Total Expenditure					**80%**	**100%**	**20%**			
Expenditure Type										
Labour	471	31%	75%	100%	354	471	117	28%		
Electricity	158	11%	0%	100%	0	158	158	38%		
Materials	203	14%	75%	100%	153	203	50	12%		
Contractors	248	17%	75%	100%	187	248	62	15%		
Other	101	7%	75%	100%	76	101	25	6%		
Indirects & Overheads	737	49%	100%	100%	737	737	0	0%		
Revenue offsets	-416	-28%	100%	100%	-416	-416	0	0%		
Total Operating Costs	**1,503**	**100%**			**1,091**	**1,503**	**412**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	491	23%	60%	100%	295	491	197	38%	491	23%
Electricity	158	8%	0%	100%	0	158	158	31%	158	8%
Preventative maintenance	363	17%	70%	100%	254	363	109	21%	363	17%
Corrective maintenance	169	8%	70%	100%	118	169	51	10%	169	8%
Revenue offsets	-416	-20%	100%	100%	-416	-416	0	0%	-416	-20%
Indirects & Overheads	766	n/a	100%	100%	737	737	n/a	n/a	737	35%
Operating costs	1,503	**71%**			**989**	**1,503**	**515**	**99%**	**1,503**	**71%**
Renewal annuity	604	29%	100%	100%	601	604	3	1%	604	29%
Total Expenditure	**2,107**	**100%**			**1,590**	**2,107**	**518**	**100%**	**2,107**	**100%**
Proportion of Total Expenditure					**75%**	**100%**	**25%**			
Expenditure Type										
Labour	471	31%	65%	100%	307	471	164	32%		
Electricity	158	11%	0%	100%	0	158	158	31%		
Materials	203	14%	65%	100%	133	203	71	14%		
Contractors	248	17%	65%	100%	162	248	86	17%		
Other	101	7%	65%	100%	66	101	35	7%		
Indirects & Overheads	737	49%	100%	100%	737	737	0	0%		
Revenue offsets	-416	-28%	100%	100%	-416	-416	0	0%		
Total Operating Costs	**1,503**	**100%**			**989**	**1,503**	**515**	**100%**		

Water Distribution – St George

Service Contract	St George Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	704	767	1,280	799	820	812	844	852	855	846	825	844
Electricity	23	35	32	44	42	42	44	48	51	56	60	52
Preventative maintenance	400	517	434	308	331	330	341	345	348	346	340	344
Corrective maintenance	265	337	350	487	237	235	244	247	248	246	240	245
Revenue offsets	-206	-201	-204	-212	-202	-202	-202	-202	-202	-202	-202	-202
Operating costs	**1,186**	**1,455**	**1,891**	**1,426**	**1,228**	**1,216**	**1,271**	**1,290**	**1,300**	**1,292**	**1,263**	1,283
Renewal annuity spend	114	49	245	305	2,616	715	473	38	99	223		208
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**1,300**	**1,504**	**2,136**	**1,731**	**3,844**	**1,931**	**1,744**	**1,328**	**1,399**	**1,515**	**1,263**	**1,450**
Expenditure Type												
Labour	434	407	611	454	454	460	467	467	467	467	467	467
Electricity	23	35	32	44	42	42	44	48	51	56	60	52
Materials	49	122	130	253	86	88	89	90	91	93	93	91
Contractors	3	42	58	45	104	106	107	109	110	112	112	110
Other	51	57	61	59	49	49	49	49	49	49	49	49
Indirects & Overheads	833	994	1,203	784	696	674	718	730	734	717	684	717
Revenue offsets	-206	-201	-204	-212	-202	-202	-202	-202	-202	-202	-202	-202
Total Operating Costs	**1,186**	**1,455**	**1,891**	**1,426**	**1,228**	**1,216**	**1,272**	**1,291**	**1,300**	**1,292**	**1,263**	**1,284**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	422	27%	80%	100%	338	422	84	48%	422	27%
Electricity	52	3%	0%	100%	0	52	52	29%	52	3%
Preventative maintenance	344	22%	85%	100%	146	172	26	15%	172	11%
Corrective maintenance	245	16%	90%	100%	110	123	12	7%	123	8%
Revenue offsets	-202	-13%	100%	100%	-202	-202	0	0%	-202	-13%
Indirects & Overheads	716	n/a	100%	100%	716	716	n/a	n/a	716	46%
Operating costs	**1,283**	**82%**			**1,109**	**1,283**	**174**	**98%**	**1,283**	**82%**
Renewal annuity	283	18%	99%	100%	280	283	3	2%	283	18%
Total Expenditure	**1,566**	**100%**			**1,389**	**1,566**	**177**	**100%**	**1,566**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	467	36%	83%	100%	387	467	80	46%		
Electricity	52	4%	0%	100%	0	52	52	30%		
Materials	91	7%	83%	100%	76	91	16	9%		
Contractors	110	9%	83%	100%	91	110	19	11%		
Other	49	4%	83%	100%	41	49	8	5%		
Indirects & Overheads	717	56%	100%	100%	717	717	0	0%		
Revenue offsets	-202	-16%	100%	100%	-202	-202	0	0%		
Total Operating Costs	**1,284**	**100%**			**1,109**	**1,283**	**174**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	422	27%	70%	100%	296	422	127	51%	422	27%
Electricity	52	3%	0%	100%	0	52	52	21%	52	3%
Preventative maintenance	172	11%	75%	100%	129	172	43	17%	172	11%
Corrective maintenance	123	8%	80%	100%	98	123	25	10%	123	8%
Revenue offsets	-202	-13%	100%	100%	-202	-202	0	0%	-202	-13%
Indirects & Overheads	567	n/a	100%	100%	716	716	n/a	n/a	716	46%
Operating costs	**1,283**	**82%**			**1,037**	**1,283**	**246**	**99%**	**1,283**	**82%**
Renewal annuity	283	18%	99%	100%	280	283	3	1%	283	18%
Total Expenditure	**1,566**	**100%**			**1,317**	**1,566**	**249**	**100%**	**1,566**	**100%**
Proportion of Total Expenditure					**84%**	**100%**	**16%**			
Expenditure Type										
Labour	467	36%	73%	100%	340	467	126	51%		
Electricity	52	4%	0%	100%	0	52	52	21%		
Materials	91	7%	73%	100%	66	91	25	10%		
Contractors	110	9%	73%	100%	80	110	30	12%		
Other	49	4%	73%	100%	36	49	13	5%		
Indirects & Overheads	717	56%	100%	100%	717	717	0	0%		
Revenue offsets	-202	-16%	100%	100%	-202	-202	0	0%		
Total Operating Costs	**1,284**	**100%**			**1,037**	**1,283**	**246**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	422	27%	60%	100%	253	422	169	53%	422	27%
Electricity	52	3%	0%	100%	0	52	52	16%	52	3%
Preventative maintenance	172	11%	65%	100%	112	172	60	19%	172	11%
Corrective maintenance	123	8%	70%	100%	86	123	37	12%	123	8%
Revenue offsets	-202	-13%	100%	100%	-202	-202	0	0%	-202	-13%
Indirects & Overheads	567	n/a	100%	100%	716	716	n/a	n/a	716	46%
Operating costs	1,283	**82%**			**965**	**1,283**	**318**	**100%**	**1,283**	**82%**
Renewal annuity	283	18%	100%	100%	282	283	1	0%	283	18%
Total Expenditure	**1,566**	**100%**			**1,247**	**1,566**	**319**	**100%**	**1,566**	**100%**
Proportion of Total Expenditure					**80%**	**100%**	**20%**			
Expenditure Type										
Labour	467	36%	63%	100%	294	467	173	54%		
Electricity	52	4%	0%	100%	0	52	52	16%		
Materials	91	7%	63%	100%	57	91	34	11%		
Contractors	110	9%	63%	100%	69	110	41	13%		
Other	49	4%	63%	100%	31	49	18	6%		
Indirects & Overheads	717	56%	100%	100%	717	717	0	0%		
Revenue offsets	-202	-16%	100%	100%	-202	-202	0	0%		
Total Operating Costs	**1,284**	**100%**			**966**	**1,283**	**318**	**100%**		

Water Distribution – Theodore

Service Contract	Theodore Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	267	284	388	341	532	525	547	553	554	547	532	547
Electricity	87	73	109	109	119	119	153	165	178	194	209	180
Preventative maintenance	332	361	455	332	386	384	398	402	405	402	394	400
Corrective maintenance	201	339	333	212	203	201	209	212	213	211	206	210
Revenue offsets	-55	-62	-56	-58	-55	-55	-55	-55	-55	-55	-53	-55
Operating costs	**833**	**995**	**1,229**	**936**	**1,185**	**1,174**	**1,252**	**1,277**	**1,295**	**1,299**	**1,288**	1,282
Renewal annuity spend	12	80	148	516	1,412	271	73	470	229	110		221
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**844**	**1,076**	**1,377**	**1,452**	**2,596**	**1,445**	**1,325**	**1,747**	**1,524**	**1,409**	**1,288**	**1,459**
Expenditure Type												
Labour	243	239	276	271	381	386	392	392	392	392	392	392
Electricity	87	73	109	109	119	119	153	165	178	194	209	180
Materials	49	58	75	47	72	73	74	75	76	77	77	76
Contractors	55	67	70	44	59	60	61	62	63	63	63	62
Other	6	35	121	44	27	27	27	27	27	27	27	27
Indirects & Overheads	447	584	633	478	582	564	600	611	614	600	572	599
Revenue offsets	-55	-62	-56	-58	-55	-55	-55	-55	-55	-55	-53	-55
Total Operating Costs	**833**	**995**	**1,229**	**936**	**1,185**	**1,174**	**1,252**	**1,277**	**1,295**	**1,298**	**1,287**	**1,282**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	263	16%	75%	100%	197	263	66	22%	263	16%
Electricity	180	11%	0%	100%	0	180	180	60%	180	11%
Preventative maintenance	400	25%	80%	100%	154	193	39	13%	193	12%
Corrective maintenance	210	13%	90%	100%	91	101	10	3%	101	6%
Revenue offsets	-55	-3%	100%	100%	-55	-55	0	0%	-55	-3%
Indirects & Overheads	600	n/a	100%	100%	600	600	n/a	n/a	600	37%
Operating costs	**1,282**	**80%**			**988**	**1,282**	**294**	**99%**	**1,282**	**80%**
Renewal annuity	322	20%	99%	100%	319	322	3	1%	322	20%
Total Expenditure	**1,604**	**100%**			**1,307**	**1,604**	**297**	**100%**	**1,604**	**100%**
Proportion of Total Expenditure					**81%**	**100%**	**19%**			
Expenditure Type										
Labour	392	31%	79%	100%	312	392	81	27%		
Electricity	180	14%	0%	100%	0	180	180	61%		
Materials	76	6%	79%	100%	60	76	16	5%		
Contractors	62	5%	79%	100%	50	62	13	4%		
Other	27	2%	79%	100%	21	27	6	2%		
Indirects & Overheads	599	47%	100%	100%	599	599	0	0%		
Revenue offsets	-55	-4%	100%	100%	-55	-55	0	0%		
Total Operating Costs	**1,282**	**100%**			**988**	**1,282**	**294**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	263	16%	65%	100%	171	263	92	26%	263	16%
Electricity	180	11%	0%	100%	0	180	180	51%	180	11%
Preventative maintenance	193	12%	70%	100%	135	193	58	16%	193	12%
Corrective maintenance	101	6%	80%	100%	81	101	20	6%	101	6%
Revenue offsets	-55	-3%	100%	100%	-55	-55	0	0%	-55	-3%
Indirects & Overheads	683	n/a	100%	100%	600	600	n/a	n/a	600	37%
Operating costs	**1,282**	**80%**			**932**	**1,282**	**350**	**99%**	**1,282**	**80%**
Renewal annuity	322	20%	99%	100%	319	322	3	1%	322	20%
Total Expenditure	**1,604**	**100%**			**1,251**	**1,604**	**353**	**100%**	**1,604**	**100%**
Proportion of Total Expenditure					**78%**	**100%**	**22%**			
Expenditure Type										
Labour	392	31%	69%	100%	272	392	120	34%		
Electricity	180	14%	0%	100%	0	180	180	51%		
Materials	76	6%	69%	100%	53	76	23	7%		
Contractors	62	5%	69%	100%	43	62	19	5%		
Other	27	2%	69%	100%	19	27	8	2%		
Indirects & Overheads	599	47%	100%	100%	599	599	0	0%		
Revenue offsets	-55	-4%	100%	100%	-55	-55	0	0%		
Total Operating Costs	**1,282**	**100%**			**932**	**1,282**	**350**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	263	16%	55%	100%	145	263	118	30%	263	16%
Electricity	180	11%	0%	100%	0	180	180	45%	180	11%
Preventative maintenance	193	12%	65%	100%	125	193	67	17%	193	12%
Corrective maintenance	101	6%	70%	100%	71	101	30	8%	101	6%
Revenue offsets	-55	-3%	100%	100%	-55	-55	0	0%	-55	-3%
Indirects & Overheads	683	n/a	100%	100%	600	600	n/a	n/a	600	37%
Operating costs	1,282	**80%**			**886**	**1,282**	**396**	**100%**	**1,282**	**80%**
Renewal annuity	322	20%	100%	100%	320	322	2	0%	322	20%
Total Expenditure	**1,604**	**100%**			**1,206**	**1,604**	**398**	**100%**	**1,604**	**100%**
Proportion of Total Expenditure					**75%**	**100%**	**25%**			
Expenditure Type										
Labour	392	31%	61%	100%	240	392	152	38%		
Electricity	180	14%	0%	100%	0	180	180	45%		
Materials	76	6%	61%	100%	46	76	29	7%		
Contractors	62	5%	61%	100%	38	62	24	6%		
Other	27	2%	61%	100%	17	27	10	3%		
Indirects & Overheads	599	47%	100%	100%	599	599	0	0%		
Revenue offsets	-55	-4%	100%	100%	-55	-55	0	0%		
Total Operating Costs	**1,282**	**100%**			**886**	**1,282**	**396**	**100%**		

Water Distribution – Lower Mary

Service Contract	Lower Mary Distribution											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	68	107	204	194	237	235	243	245	245	243	237	243
Electricity	73	91	22	154	142	142	167	180	194	211	227	196
Preventative maintenance	158	231	248	171	241	239	248	251	252	249	243	249
Corrective maintenance	82	101	164	224	146	145	151	152	153	152	149	151
Revenue offsets	0	-10	-25	-6	-13	-13	-13	-13	-13	-13	-13	-13
Operating costs	**381**	**520**	**613**	**737**	**753**	**747**	**796**	**815**	**831**	**842**	**843**	825
Renewal annuity spend	90	169	211	390	541	268	168	430	96	29		181
Dam safety upgrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Expenditure	**471**	**689**	**825**	**1,127**	**1,294**	**1,015**	**964**	**1,245**	**927**	**871**	**843**	**970**
Expenditure Type												
Labour	78	106	158	184	199	202	205	205	205	205	205	205
Electricity	73	91	22	154	142	142	167	180	194	211	227	196
Materials	24	37	49	58	54	54	55	56	57	58	58	57
Contractors	5	8	47	34	15	15	15	15	15	16	16	15
Other	12	19	12	10	50	50	50	50	50	50	50	50
Indirects & Overheads	190	270	351	303	307	297	316	322	323	316	301	316
Revenue offsets	0	-10	-25	-6	-13	-13	-13	-13	-13	-13	-13	-13
Total Operating Costs	**381**	**520**	**613**	**737**	**753**	**747**	**795**	**815**	**831**	**843**	**844**	**826**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	123	10%	75%	100%	93	123	31	12%	123	10%
Electricity	196	15%	0%	100%	0	196	196	77%	196	15%
Preventative maintenance	249	19%	85%	100%	108	127	19	7%	127	10%
Corrective maintenance	151	12%	90%	100%	69	77	8	3%	77	6%
Revenue offsets	-13	-1%	100%	100%	-13	-13	0	0%	-13	-1%
Indirects & Overheads	316	n/a	100%	100%	316	316	n/a	n/a	316	24%
Operating costs	**825**	**64%**			**572**	**825**	**253**	**99%**	**825**	**64%**
Renewal annuity	467	36%	100%	100%	465	467	2	1%	467	36%
Total Expenditure	**1,292**	**100%**			**1,037**	**1,292**	**256**	**100%**	**1,292**	**100%**
Proportion of Total Expenditure					**80%**	**100%**	**20%**			
Expenditure Type										
Labour	205	25%	82%	100%	169	205	36	14%		
Electricity	196	24%	0%	100%	0	196	196	77%		
Materials	57	7%	82%	100%	47	57	10	4%		
Contractors	15	2%	82%	100%	13	15	3	1%		
Other	50	6%	82%	100%	41	50	9	3%		
Indirects & Overheads	316	38%	100%	100%	316	316	0	0%		
Revenue offsets	-13	-2%	100%	100%	-13	-13	0	0%		
Total Operating Costs	**826**	**100%**			**572**	**825**	**253**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	123	10%	65%	100%	80	123	43	15%	123	10%
Electricity	196	15%	0%	100%	0	196	196	68%	196	15%
Preventative maintenance	127	10%	75%	100%	95	127	32	11%	127	10%
Corrective maintenance	77	6%	80%	100%	62	77	15	5%	77	6%
Revenue offsets	-13	-1%	100%	100%	-13	-13	0	0%	-13	-1%
Indirects & Overheads	510	n/a	100%	100%	316	316	n/a	n/a	316	24%
Operating costs	**825**	**64%**			**539**	**825**	**286**	**99%**	**825**	**64%**
Renewal annuity	467	36%	100%	100%	465	467	2	1%	467	36%
Total Expenditure	**1,292**	**100%**			**1,004**	**1,292**	**288**	**100%**	**1,292**	**100%**
Proportion of Total Expenditure					**78%**	**100%**	**22%**			
Expenditure Type										
Labour	205	25%	72%	100%	148	205	57	20%		
Electricity	196	24%	0%	100%	0	196	196	68%		
Materials	57	7%	72%	100%	41	57	16	5%		
Contractors	15	2%	72%	100%	11	15	4	1%		
Other	50	6%	72%	100%	36	50	14	5%		
Indirects & Overheads	316	38%	100%	100%	316	316	0	0%		
Revenue offsets	-13	-2%	100%	100%	-13	-13	0	0%		
Total Operating Costs	**826**	**100%**			**539**	**825**	**286**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	123	10%	55%	100%	68	123	56	17%	123	10%
Electricity	196	15%	0%	100%	0	196	196	61%	196	15%
Preventative maintenance	127	10%	65%	100%	82	127	44	14%	127	10%
Corrective maintenance	77	6%	70%	100%	54	77	23	7%	77	6%
Revenue offsets	-13	-1%	100%	100%	-13	-13	0	0%	-13	-1%
Indirects & Overheads	510	n/a	100%	100%	316	316	n/a	n/a	316	24%
Operating costs	825	**64%**			**507**	**825**	**319**	**99%**	**825**	**64%**
Renewal annuity	467	36%	100%	100%	465	467	2	1%	467	36%
Total Expenditure	**1,292**	**100%**			**971**	**1,292**	**321**	**100%**	**1,292**	**100%**
Proportion of Total Expenditure					**75%**	**100%**	**25%**			
Expenditure Type										
Labour	205	25%	62%	100%	128	205	77	24%		
Electricity	196	24%	0%	100%	0	196	196	61%		
Materials	57	7%	62%	100%	35	57	21	7%		
Contractors	15	2%	62%	100%	10	15	6	2%		
Other	50	6%	62%	100%	31	50	19	6%		
Indirects & Overheads	316	38%	100%	100%	316	316	0	0%		
Revenue offsets	-13	-2%	100%	100%	-13	-13	0	0%		
Total Operating Costs	**826**	**100%**			**507**	**825**	**319**	**100%**		

APPENDIX J

Fixed/Variable Assessment
Bulk Water Supply Systems

Bulk Supply - Totals

Service Contract	Total Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	13,862	13,636	14,651	15,749	12,571	12,716	13,278	13,573	13,385	13,049	12,929	13,243
Electricity	465	573	482	497	525	525	636	684	738	804	866	746
Preventative maintenance	4,359	2,299	2,139	2,090	3,569	3,602	3,798	3,895	3,838	3,743	3,705	3,796
Corrective maintenance	2,722	2,815	2,372	2,366	1,815	1,815	1,882	1,926	1,909	1,878	1,863	1,892
Revenue offsets	-450	-727	-750	-725	-539	-559	-539	-539	-539	-539	-539	-539
Operating costs	**20,958**	**18,595**	**18,902**	**19,979**	**17,940**	**18,096**	**19,055**	**19,539**	**19,331**	**18,935**	**18,824**	**19,137**
Renewal annuity spend	5,876	6,186	5,699	7,504	10,794	7,265	3,598	4,098	4,370	4,588	0	3,331
Dam safety upgrade	4,846	1,927	2,967	14,861	6,966	10,097	30,017	0	2,563	9,271	0	8,370
Total Expenditure	**31,680**	**26,708**	**27,566**	**42,345**	**35,699**	**35,459**	**52,670**	**23,637**	**26,264**	**32,794**	**18,824**	**30,838**
Expenditure Type												
Labour	4,333	4,056	4,294	4,839	4,791	4,874	4,947	4,947	4,947	4,947	4,947	4,947
Electricity	465	573	482	497	525	525	636	684	738	804	866	746
Materials	1,319	947	837	756	714	721	733	741	750	764	765	751
Contractors	923	845	837	1,085	917	912	874	886	899	874	874	881
Other	3,074	2,762	3,228	3,784	2,212	2,217	2,217	2,217	2,217	2,217	2,217	2,217
Indirects & Overheads	11,284	10,132	9,963	9,735	9,325	9,405	10,191	10,606	10,316	9,875	9,694	10,136
Revenue offsets	-450	-727	-750	-725	-539	-559	-539	-539	-539	-539	-539	-539
Total Operating Costs	**20,958**	**18,595**	**18,902**	**19,979**	**17,940**	**18,096**	**19,059**	**19,542**	**19,328**	**18,942**	**18,824**	**19,139**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	6,109	24%	90%	100%	5,498	6,109	611	59%	6,109	24%
Electricity	746	3%	89%	100%	661	746	84	8%	746	3%
Preventative maintenance	3,796	15%	90%	100%	1,606	1,784	178	17%	1,784	7%
Corrective maintenance	1,892	7%	90%	100%	812	902	90	9%	902	4%
Revenue offsets	-539	-2%	100%	100%	-539	-539	0	0%	-539	-2%
Indirects & Overheads	10,135	n/a	100%	100%	10,135	10,135	0	0%	10,135	39%
Operating costs	**19,137**	**75%**	**95%**	**100%**	**18,173**	**19,137**	**964**	**93%**	**19,137**	**75%**
Renewal annuity spend	6,548	25%	99%	100%	6,476	6,548	72	7%	6,548	25%
Total Expenditure	**25,685**	**100%**	**96%**	**100%**	**24,649**	**25,685**	**1,036**	**100%**	**25,685**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	4,947	26%	90%	100%	4,452	4,946	495	46%		
Electricity	746	4%	0%	100%	546	746	200	18%		
Materials	751	4%	90%	100%	675	750	75	7%		
Contractors	881	5%	90%	100%	793	881	88	8%		
Other	2,217	12%	90%	100%	1,995	2,217	222	21%		
Indirects & Overheads	10,136	53%	100%	100%	10,136	10,136	0	0%		
Revenue offsets	-539	-3%	100%	100%	-539	-539	0	0%		
Total Operating Costs	**19,139**	**100%**			**18,059**	**19,138**	**1,079**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	6,109	24%	80%	100%	4,887	6,109	1,222	64%	6,109	24%
Electricity	746	3%	89%	100%	661	746	84	4%	746	3%
Preventative maintenance	1,784	7%	80%	100%	1,427	1,784	357	19%	1,784	7%
Corrective maintenance	902	4%	80%	100%	721	902	180	9%	902	4%
Revenue offsets	-539	-2%	100%	100%	-539	-539	0	0%	-539	-2%
Indirects & Overheads	10,135	n/a	100%	100%	10,135	10,135	0	0%	10,135	39%
Operating costs	**19,137**	**75%**	**90%**	**100%**	**17,293**	**19,137**	**1,843**	**96%**	**19,137**	**75%**
Renewal annuity spend	6,548	25%	99%	100%	6,476	6,548	72	4%	6,548	25%
Total Expenditure	**25,685**	**100%**	**93%**	**100%**	**23,769**	**25,685**	**1,916**	**100%**	**25,685**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	4,947	26%	80%	100%	3,957	4,946	989	51%		
Electricity	746	4%	0%	100%	546	746	200	10%		
Materials	751	4%	80%	100%	600	750	150	8%		
Contractors	881	5%	80%	100%	705	881	176	9%		
Other	2,217	12%	80%	100%	1,773	2,217	443	23%		
Indirects & Overheads	10,136	53%	100%	100%	10,136	10,136	0	0%		
Revenue offsets	-539	-3%	100%	100%	-539	-539	0	0%		
Total Operating Costs	**19,139**	**100%**			**17,179**	**19,138**	**1,959**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	6,109	24%	70%	100%	4,276	6,109	1,833	66%	6,109	24%
Electricity	746	3%	89%	100%	661	746	84	3%	746	3%
Preventative maintenance	1,784	7%	70%	100%	1,249	1,784	535	19%	1,784	7%
Corrective maintenance	902	4%	70%	100%	631	902	271	10%	902	4%
Revenue offsets	-539	-2%	100%	100%	-539	-539	0	0%	-539	-2%
Indirects & Overheads	9,002	n/a	100%	100%	10,135	10,135	0	0%	10,135	39%
Operating costs	**19,137**	**75%**	**86%**	**100%**	**16,414**	**19,137**	**2,723**	**98%**	**19,137**	**75%**
Renewal annuity spend	6,548	25%	99%	100%	6,483	6,548	65	2%	6,548	25%
Total Expenditure	**25,685**	**100%**	**89%**	**100%**	**22,896**	**25,685**	**2,788**	**100%**	**25,685**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	4,947	26%	70%	100%	3,463	4,946	1,484	52%		
Electricity	746	4%	0%	100%	546	746	200	7%		
Materials	751	4%	70%	100%	525	750	225	8%		
Contractors	881	5%	70%	100%	617	881	264	9%		
Other	2,217	12%	70%	100%	1,552	2,217	665	23%		
Indirects & Overheads	10,136	53%	100%	100%	10,136	10,136	0	0%		
Revenue offsets	-539	-3%	100%	100%	-539	-539	0	0%		
Total Operating Costs	**19,139**	**100%**			**16,300**	**19,138**	**2,838**	**100%**		

Bulk Supply - Burdekin Haughton

Service Contract	Burdekin Haughton Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	2,605	3,635	3,248	2,321	2,356	2,373	2,494	2,555	2,514	2,453	2,430	2,489
Electricity	59	62	67	69	75	75	98	106	114	124	134	115
Preventative maintenance	464	241	299	256	332	335	353	362	357	349	345	353
Corrective maintenance	538	309	430	661	239	226	221	226	224	220	218	222
Revenue offsets	-81	-84	-99	-98	-95	-95	-95	-95	-95	-95	-95	-95
Operating costs	**3,586**	**4,164**	**3,946**	**3,209**	**2,907**	**2,914**	**3,071**	**3,154**	**3,114**	**3,051**	**3,032**	3,084
Renewal annuity spend	379	442	267	294	564	824	464	253	262	283		316
Dam safety upgrade	0	0	0	358	0	1,333	10,160	0	0	0		2,540
Total Expenditure	**3,965**	**4,607**	**4,213**	**3,861**	**3,470**	**5,071**	**13,695**	**3,407**	**3,376**	**3,334**	**3,032**	**5,369**
Expenditure Type												
Labour	672	981	981	749	808	820	832	832	832	832	832	832
Electricity	59	62	67	69	75	75	98	106	114	124	134	115
Materials	210	178	167	246	109	111	113	114	116	118	118	116
Contractors	110	105	79	174	90	76	62	63	64	65	65	64
Other	945	608	448	527	329	329	329	329	329	329	329	329
Indirects & Overheads	1,670	2,315	2,302	1,543	1,590	1,598	1,732	1,805	1,754	1,678	1,650	1,724
Revenue offsets	-81	-84	-99	-98	-95	-95	-95	-95	-95	-95	-95	-95
Total Operating Costs	**3,586**	**4,164**	**3,946**	**3,209**	**2,907**	**2,914**	**3,071**	**3,154**	**3,114**	**3,051**	**3,033**	**3,085**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	1,089	27%	90%	100%	980	1,089	109	77%	1,089	27%
Electricity	115	3%	100%	100%	115	115	0	0%	115	3%
Preventative maintenance	353	9%	90%	100%	139	155	15	11%	155	4%
Corrective maintenance	222	6%	90%	100%	87	97	10	7%	97	2%
Revenue offsets	-95	-2%	100%	100%	-95	-95	0	0%	-95	-2%
Indirects & Overheads	1,724	n/a	100%	100%	1,724	1,724	n/a	n/a	1,724	43%
Operating costs	**3,084**	**77%**			**2,950**	**3,084**	**134**	**95%**	**3,084**	**77%**
Renewal annuity	920	23%	99%	100%	913	920	7	5%	920	23%
Total Expenditure	**4,004**	**100%**			**3,863**	**4,004**	**141**	**100%**	**4,004**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	832	27%	90%	100%	749	832	83	33%		
Electricity	115	4%	0%	100%	0	115	115	46%		
Materials	116	4%	90%	100%	104	116	12	5%		
Contractors	64	2%	90%	100%	57	64	6	3%		
Other	329	11%	90%	100%	296	329	33	13%		
Indirects & Overheads	1,724	56%	100%	100%	1,724	1,724	0	0%		
Revenue offsets	-95	-3%	100%	100%	-95	-95	0	0%		
Total Operating Costs	**3,085**	**100%**			**2,835**	**3,085**	**249**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	1,089	27%	80%	100%	871	1,089	218	79%	1,089	27%
Electricity	115	3%	100%	100%	115	115	0	0%	115	3%
Preventative maintenance	155	4%	80%	100%	124	155	31	11%	155	4%
Corrective maintenance	97	2%	80%	100%	78	97	19	7%	97	2%
Revenue offsets	-95	-2%	100%	100%	-95	-95	0	0%	-95	-2%
Indirects & Overheads	1,724	n/a	100%	100%	1,724	1,724	n/a	n/a	1,724	43%
Operating costs	3,084	**77%**			**2,816**	**3,084**	**268**	**97%**	**3,084**	**77%**
Renewal annuity	920	23%	99%	100%	913	920	7	3%	920	23%
Total Expenditure	**4,004**	**100%**			**3,729**	**4,004**	**275**	**100%**	**4,004**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	832	27%	80%	100%	666	832	166	43%		
Electricity	115	4%	0%	100%	0	115	115	30%		
Materials	116	4%	80%	100%	93	116	23	6%		
Contractors	64	2%	80%	100%	51	64	13	3%		
Other	329	11%	80%	100%	263	329	66	17%		
Indirects & Overheads	1,724	56%	100%	100%	1,724	1,724	0	0%		
Revenue offsets	-95	-3%	100%	100%	-95	-95	0	0%		
Total Operating Costs	**3,085**	**100%**			**2,701**	**3,085**	**383**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	1,089	27%	70%	100%	762	1,089	327	79%	1,089	27%
Electricity	115	3%	100%	100%	115	115	0	0%	115	3%
Preventative maintenance	155	4%	70%	100%	108	155	46	11%	155	4%
Corrective maintenance	97	2%	70%	100%	68	97	29	7%	97	2%
Revenue offsets	-95	-2%	100%	100%	-95	-95	0	0%	-95	-2%
Indirects & Overheads	1,361	n/a	100%	100%	1,724	1,724	n/a	n/a	1,724	43%
Operating costs	3,084	**77%**			**2,682**	**3,084**	**402**	**98%**	**3,084**	**77%**
Renewal annuity	920	23%	99%	100%	911	920	9	2%	920	23%
Total Expenditure	**4,004**	**100%**			**3,593**	**4,004**	**411**	**100%**	**4,004**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	832	27%	70%	100%	582	832	250	48%		
Electricity	115	4%	0%	100%	0	115	115	22%		
Materials	116	4%	70%	100%	81	116	35	7%		
Contractors	64	2%	70%	100%	45	64	19	4%		
Other	329	11%	70%	100%	230	329	99	19%		
Indirects & Overheads	1,724	56%	100%	100%	1,724	1,724	0	0%		
Revenue offsets	-95	-3%	100%	100%	-95	-95	0	0%		
Total Operating Costs	**3,085**	**100%**			**2,567**	**3,085**	**517**	**100%**		

Bulk Supply – Bundaberg

Real dollars, $000	Actuals 2007	2008	2009	2010	Forecast 2011	2012	Price path 2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	1,228	839	807	1,148	655	660	688	701	693	679	672	687
Electricity	7	7	7	7	8	8	10	10	11	12	13	11
Preventative maintenance	296	256	144	124	292	295	312	319	314	306	302	311
Corrective maintenance	192	116	134	243	116	117	122	125	124	122	121	123
Revenue offsets	-10	-17	-33	-49	-24	-24	-24	-24	-24	-24	-24	-24
Operating costs	**1,713**	**1,200**	**1,060**	**1,473**	**1,047**	**1,056**	**1,108**	**1,131**	**1,118**	**1,095**	**1,084**	1,107
Renewal annuity spend	302	450	722	625	1,021	823	387	486	571	531		494
Dam safety upgrade	1,190	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**3,205**	**1,650**	**1,782**	**2,098**	**2,067**	**1,879**	**1,495**	**1,617**	**1,689**	**1,626**	**1,084**	**1,502**
Expenditure Type												
Labour	352	249	213	410	287	292	296	296	296	296	296	296
Electricity	7	7	7	7	8	8	10	10	11	12	13	11
Materials	51	24	33	41	39	39	40	40	41	42	42	41
Contractors	43	40	93	59	49	49	50	51	52	52	52	51
Other	167	162	185	192	145	145	145	145	145	145	145	145
Indirects & Overheads	1,101	735	560	812	543	547	591	613	598	573	560	587
Revenue offsets	-10	-17	-33	-49	-24	-24	-24	-24	-24	-24	-24	-24
Total Operating Costs	**1,713**	**1,200**	**1,060**	**1,473**	**1,047**	**1,056**	**1,108**	**1,131**	**1,119**	**1,096**	**1,084**	**1,108**

Real dollars, $000	Actuals 2007	2008	2009	2010	Forecast 2011	2012	Price path 2013	2014	2015	2016	2017	Price Path
Activity												
Operations	38%	51%	45%	55%	32%	35%	46%	43%	41%	42%		43%
Electricity	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%		1%
Preventative maintenance	9%	16%	8%	6%	14%	16%	21%	20%	19%	19%		20%
Corrective maintenance	6%	7%	8%	12%	6%	6%	8%	8%	7%	8%		8%
Revenue offsets	0%	-1%	-2%	-2%	-1%	-1%	-2%	-1%	-1%	-1%		-1%
Operating costs	53%	73%	59%	70%	51%	56%	74%	70%	66%	67%		69%
Renewal annuity spend	9%	27%	41%	30%	49%	44%	26%	30%	34%	33%		31%
Total Expenditure	**63%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**		**100%**
Expenditure Type												
Labour	21%	21%	20%	28%	27%	28%	27%	26%	26%	27%		27%
Electricity	0%	1%	1%	0%	1%	1%	1%	1%	1%	1%		1%
Materials	3%	2%	3%	3%	4%	4%	4%	4%	4%	4%		4%
Contractors	3%	3%	9%	4%	5%	5%	5%	5%	5%	5%		5%
Other	10%	14%	17%	13%	14%	14%	13%	13%	13%	13%		13%
Indirects & Overheads	64%	61%	53%	55%	52%	52%	53%	54%	53%	52%		53%
Revenue offsets	-1%	-1%	-3%	-3%	-2%	-2%	-2%	-2%	-2%	-2%		-2%
Total Operating Costs	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**		**100%**

Minimum

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	327	19%	90%	100%	294	327	33	54%	327	19%
Electricity	11	1%	100%	100%	11	11	0	0%	11	1%
Preventative maintenance	311	18%	90%	100%	133	148	15	25%	148	9%
Corrective maintenance	123	7%	90%	100%	53	58	6	10%	58	3%
Revenue offsets	-24	-1%	100%	100%	-24	-24	0	0%	-24	-1%
Indirects & Overheads	587	n/a	100%	100%	587	587	n/a	n/a	587	34%
Operating costs	**1,107**	**64%**			**1,054**	**1,107**	**53**	**89%**	**1,107**	**64%**
Renewal annuity	620	36%	99%	100%	613	620	7	11%	620	36%
Total Expenditure	**1,727**	**100%**			**1,667**	**1,727**	**60**	**100%**	**1,727**	**100%**
Proportion of Total Expenditure					**97%**	**100%**	**3%**			
Expenditure Type										
Labour	296	27%	90%	100%	266	296	30	46%		
Electricity	11	1%	0%	100%	0	11	11	17%		
Materials	41	4%	90%	100%	37	41	4	6%		
Contractors	51	5%	90%	100%	46	51	5	8%		
Other	145	13%	90%	100%	130	145	14	22%		
Indirects & Overheads	587	53%	100%	100%	587	587	0	0%		
Revenue offsets	-24	-2%	100%	100%	-24	-24	0	0%		
Total Operating Costs	**1,108**	**100%**			**1,043**	**1,107**	**65**	**100%**		

Optimal

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	327	19%	80%	100%	262	327	65	58%	327	19%
Electricity	11	1%	100%	100%	11	11	0	0%	11	1%
Preventative maintenance	148	9%	80%	100%	118	148	30	26%	148	9%
Corrective maintenance	58	3%	80%	100%	47	58	12	10%	58	3%
Revenue offsets	-24	-1%	100%	100%	-24	-24	0	0%	-24	-1%
Indirects & Overheads	587	n/a	100%	100%	587	587	n/a	n/a	587	34%
Operating costs	1,107	**64%**			**1,001**	**1,107**	**107**	**94%**	**1,107**	**64%**
Renewal annuity	620	36%	99%	100%	613	620	7	6%	620	36%
Total Expenditure	**1,727**	**100%**			**1,614**	**1,727**	**113**	**100%**	**1,727**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	296	27%	80%	100%	237	296	59	50%		
Electricity	11	1%	0%	100%	0	11	11	10%		
Materials	41	4%	80%	100%	33	41	8	7%		
Contractors	51	5%	80%	100%	41	51	10	9%		
Other	145	13%	80%	100%	116	145	29	25%		
Indirects & Overheads	587	53%	100%	100%	587	587	0	0%		
Revenue offsets	-24	-2%	100%	100%	-24	-24	0	0%		
Total Operating Costs	**1,108**	**100%**			**990**	**1,107**	**118**	**100%**		

Bulk Supply – Mareeba Dimbulah

Service Contract	Mareeba Dimbulah Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	769	802	663	781	793	798	790	806	795	778	772	788
Electricity	3	4	4	4	4	4	6	6	7	8	8	7
Preventative maintenance	583	347	85	86	180	182	193	198	195	189	187	192
Corrective maintenance	258	167	13	8	23	23	24	25	24	24	24	24
Revenue offsets	-74	-77	-78	-75	-78	-78	-78	-78	-78	-78	-78	-78
Operating costs	**1,539**	**1,242**	**687**	**804**	**922**	**929**	**935**	**957**	**943**	**921**	**913**	934
Renewal annuity spend	101	47	91	39	238	350	0	101	0	89		48
Dam safety upgrade	0	100	2,967	14,427	5,965	213	0	0	0	0		0
Total Expenditure	**1,640**	**1,389**	**3,745**	**15,270**	**7,125**	**1,492**	**935**	**1,058**	**943**	**1,010**	**913**	**972**
Expenditure Type												
Labour	416	280	215	202	248	252	256	256	256	256	256	256
Electricity	3	4	4	4	4	4	6	6	7	8	8	7
Materials	82	50	46	5	13	13	14	14	14	14	14	14
Contractors	25	21	12	18	57	58	18	18	18	19	19	18
Other	148	197	196	243	184	184	184	184	184	184	184	184
Indirects & Overheads	938	768	291	407	493	496	535	558	542	519	510	533
Revenue offsets	-74	-77	-78	-75	-78	-78	-78	-78	-78	-78	-78	-78
Total Operating Costs	**1,539**	**1,242**	**687**	**804**	**922**	**929**	**935**	**958**	**943**	**922**	**913**	**934**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	370	37%	90%	100%	333	370	37	77%	370	37%
Electricity	7	1%	100%	100%	7	7	0	0%	7	1%
Preventative maintenance	192	19%	90%	100%	81	90	9	19%	90	9%
Corrective maintenance	24	2%	90%	100%	10	11	1	2%	11	1%
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%	-78	-8%
Indirects & Overheads	533	n/a	100%	100%	533	533	n/a	n/a	533	53%
Operating costs	**934**	**94%**			**887**	**934**	**47**	**98%**	**934**	**94%**
Renewal annuity	62	6%	98%	100%	61	62	1	2%	62	6%
Total Expenditure	**996**	**100%**			**947**	**996**	**48**	**100%**	**996**	**100%**
Proportion of Total Expenditure					**95%**	**100%**	**5%**			
Expenditure Type										
Labour	256	27%	90%	100%	230	256	26	54%		
Electricity	7	1%	100%	100%	7	7	0	0%		
Materials	14	1%	90%	100%	13	14	1	3%		
Contractors	18	2%	90%	100%	17	18	2	4%		
Other	184	20%	90%	100%	166	184	18	39%		
Indirects & Overheads	533	57%	100%	100%	533	533	0	0%		
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%		
Total Operating Costs	**934**	**100%**			**887**	**934**	**47**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	370	37%	80%	100%	296	370	74	78%	370	37%
Electricity	7	1%	100%	100%	7	7	0	0%	7	1%
Preventative maintenance	90	9%	80%	100%	72	90	18	19%	90	9%
Corrective maintenance	11	1%	80%	100%	9	11	2	2%	11	1%
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%	-78	-8%
Indirects & Overheads	533	n/a	100%	100%	533	533	n/a	n/a	533	53%
Operating costs	934	**94%**			**839**	**934**	**94**	**99%**	**934**	**94%**
Renewal annuity	62	6%	98%	100%	61	62	1	1%	62	6%
Total Expenditure	**996**	**100%**			**900**	**996**	**96**	**100%**	**996**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	256	27%	80%	100%	205	256	51	54%		
Electricity	7	1%	100%	100%	7	7	0	0%		
Materials	14	1%	80%	100%	11	14	3	3%		
Contractors	18	2%	80%	100%	15	18	4	4%		
Other	184	20%	80%	100%	147	184	37	39%		
Indirects & Overheads	533	57%	100%	100%	533	533	0	0%		
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%		
Total Operating Costs	**934**	**100%**			**840**	**934**	**94**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	370	37%	70%	100%	259	370	111	78%	370	37%
Electricity	7	1%	100%	100%	7	7	0	0%	7	1%
Preventative maintenance	90	9%	70%	100%	63	90	27	19%	90	9%
Corrective maintenance	11	1%	70%	100%	8	11	3	2%	11	1%
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%	-78	-8%
Indirects & Overheads	401	n/a	100%	100%	533	533	n/a	n/a	533	53%
Operating costs	934	**94%**			**792**	**934**	**142**	**100%**	**934**	**94%**
Renewal annuity	62	6%	99%	100%	61	62	1	0%	62	6%
Total Expenditure	**996**	**100%**			**854**	**996**	**142**	**100%**	**996**	**100%**
Proportion of Total Expenditure					**86%**	**100%**	**14%**			
Expenditure Type										
Labour	256	27%	70%	100%	179	256	77	54%		
Electricity	7	1%	100%	100%	7	7	0	0%		
Materials	14	1%	70%	100%	10	14	4	3%		
Contractors	18	2%	70%	100%	13	18	6	4%		
Other	184	20%	70%	100%	129	184	55	39%		
Indirects & Overheads	533	57%	100%	100%	533	533	0	0%		
Revenue offsets	-78	-8%	100%	100%	-78	-78	0	0%		
Total Operating Costs	**934**	**100%**			**792**	**934**	**142**	**100%**		

Bulk Supply – Eton

Service Contract	Eton Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	657	1,027	574	679	534	537	560	572	564	553	549	560
Electricity	175	202	163	172	172	172	237	255	275	299	323	278
Preventative maintenance	227	273	197	248	409	414	434	444	440	432	429	436
Corrective maintenance	204	153	162	277	286	289	302	309	307	302	300	304
Revenue offsets	-3	-3	0	-1	-2	-2	-2	-2	-2	-2	-2	-2
Operating costs	**1,260**	**1,652**	**1,097**	**1,375**	**1,400**	**1,410**	**1,531**	**1,578**	**1,584**	**1,584**	**1,599**	1,575
Renewal annuity spend	416	337	302	491	212	523	197	83	433	606		330
Dam safety upgrade	0	0	0	67	1,001	8,551	19,857	0	0	0		4,964
Total Expenditure	**1,676**	**1,990**	**1,399**	**1,933**	**2,612**	**10,484**	**21,585**	**1,661**	**2,017**	**2,190**	**1,599**	**5,810**
Expenditure Type												
Labour	245	311	172	283	283	287	291	291	291	291	291	291
Electricity	175	202	163	172	172	172	237	255	275	299	323	278
Materials	55	108	76	95	88	90	91	92	94	95	95	93
Contractors	121	167	131	106	156	158	161	163	165	168	168	165
Other	107	116	139	150	137	137	137	137	137	137	137	137
Indirects & Overheads	560	751	417	570	566	569	616	642	624	598	588	614
Revenue offsets	-3	-3	0	-1	-2	-2	-2	-2	-2	-2	-2	-2
Total Operating Costs	**1,260**	**1,652**	**1,097**	**1,375**	**1,400**	**1,410**	**1,531**	**1,578**	**1,584**	**1,586**	**1,600**	**1,576**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	295	14%	90%	100%	266	295	30	40%	295	14%
Electricity	278	13%	100%	100%	278	278	0	0%	278	13%
Preventative maintenance	436	21%	90%	100%	207	230	23	31%	230	11%
Corrective maintenance	304	15%	90%	100%	144	161	16	22%	161	8%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	613	n/a	100%	100%	613	613	n/a	n/a	613	29%
Operating costs	**1,575**	**75%**			**1,507**	**1,575**	**69**	**93%**	**1,575**	**75%**
Renewal annuity	521	25%	99%	100%	516	521	5	7%	521	25%
Total Expenditure	**2,096**	**100%**			**2,022**	**2,096**	**74**	**100%**	**2,096**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	291	18%	90%	100%	262	291	29	42%		
Electricity	278	18%	100%	100%	278	278	0	0%		
Materials	93	6%	90%	100%	84	93	9	14%		
Contractors	165	10%	90%	100%	148	165	16	24%		
Other	137	9%	90%	100%	123	137	14	20%		
Indirects & Overheads	614	39%	100%	100%	614	614	0	0%		
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**1,576**	**100%**			**1,507**	**1,575**	**69**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	295	14%	80%	100%	236	295	59	41%	295	14%
Electricity	278	13%	100%	100%	278	278	0	0%	278	13%
Preventative maintenance	230	11%	80%	100%	184	230	46	32%	230	11%
Corrective maintenance	161	8%	80%	100%	128	161	32	23%	161	8%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	613	n/a	100%	100%	613	613	n/a	n/a	613	29%
Operating costs	1,575	**75%**			**1,438**	**1,575**	**137**	**96%**	**1,575**	**75%**
Renewal annuity	521	25%	99%	100%	516	521	5	4%	521	25%
Total Expenditure	**2,096**	**100%**			**1,954**	**2,096**	**142**	**100%**	**2,096**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	291	18%	80%	100%	233	291	58	42%		
Electricity	278	18%	100%	100%	278	278	0	0%		
Materials	93	6%	80%	100%	75	93	19	14%		
Contractors	165	10%	80%	100%	132	165	33	24%		
Other	137	9%	80%	100%	110	137	27	20%		
Indirects & Overheads	614	39%	100%	100%	614	614	0	0%		
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**1,576**	**100%**			**1,438**	**1,575**	**137**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	295	14%	70%	100%	207	295	89	42%	295	14%
Electricity	278	13%	100%	100%	278	278	0	0%	278	13%
Preventative maintenance	230	11%	70%	100%	161	230	69	33%	230	11%
Corrective maintenance	161	8%	70%	100%	112	161	48	23%	161	8%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	962	n/a	100%	100%	613	613	n/a	n/a	613	29%
Operating costs	1,575	**75%**			**1,369**	**1,575**	**206**	**98%**	**1,575**	**75%**
Renewal annuity	521	25%	99%	100%	516	521	5	2%	521	25%
Total Expenditure	**2,096**	**100%**			**1,885**	**2,096**	**211**	**100%**	**2,096**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	291	18%	70%	100%	204	291	87	42%		
Electricity	278	18%	100%	100%	278	278	0	0%		
Materials	93	6%	70%	100%	65	93	28	14%		
Contractors	165	10%	70%	100%	115	165	49	24%		
Other	137	9%	70%	100%	96	137	41	20%		
Indirects & Overheads	614	39%	100%	100%	614	614	0	0%		
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**1,576**	**100%**			**1,370**	**1,575**	**206**	**100%**		

Bulk Supply – Nogoa MacKenzie

Service Contract	Nogoa-Mackenzie Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	1,415	1,140	2,079	2,541	1,717	1,730	1,825	1,869	1,841	1,798	1,782	1,823
Electricity	7	12	8	11	12	12	14	15	16	17	19	16
Preventative maintenance	371	92	148	167	245	247	261	268	263	256	254	260
Corrective maintenance	274	305	333	215	184	186	195	200	198	194	193	196
Revenue offsets	-21	-114	-190	-161	-54	-54	-54	-54	-54	-54	-54	-54
Operating costs	**2,046**	**1,434**	**2,379**	**2,773**	**2,103**	**2,120**	**2,241**	**2,298**	**2,264**	**2,211**	**2,194**	2,242
Renewal annuity spend	1,492	1,176	440	883	2,303	1,417	104	328	535	250		304
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**3,538**	**2,610**	**2,819**	**3,656**	**4,407**	**3,537**	**2,345**	**2,626**	**2,799**	**2,461**	**2,194**	**2,485**
Expenditure Type												
Labour	433	332	552	571	591	599	611	611	611	611	611	611
Electricity	7	12	8	11	12	12	14	15	16	17	19	16
Materials	114	63	158	56	75	76	77	78	79	80	80	79
Contractors	138	63	-130	157	94	95	97	98	100	101	101	99
Other	310	263	553	952	224	224	224	224	224	224	224	224
Indirects & Overheads	1,063	814	1,427	1,186	1,163	1,168	1,272	1,326	1,288	1,233	1,212	1,266
Revenue offsets	-21	-114	-190	-161	-54	-54	-54	-54	-54	-54	-54	-54
Total Operating Costs	**2,046**	**1,434**	**2,379**	**2,773**	**2,103**	**2,120**	**2,241**	**2,298**	**2,264**	**2,212**	**2,193**	**2,242**

Low

	Price Path Average	Price Path Average	%		Range		Variable	% of total variable	Price Path Average	Price Path Average
Real dollars, $000	$	%	Low	High	Low	High	Costs	costs	$	%
Activity										
Operations	810	30%	90%	100%	729	810	81	75%	810	30%
Electricity	16	1%	100%	100%	16	16	0	0%	16	1%
Preventative maintenance	260	10%	90%	100%	104	116	12	11%	116	4%
Corrective maintenance	196	7%	90%	100%	78	87	9	8%	87	3%
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%	-54	-2%
Indirects & Overheads	1,266	n/a	100%	100%	1,266	1,266	n/a	n/a	1,266	46%
Operating costs	**2,242**	**82%**			**2,140**	**2,242**	**101**	**94%**	**2,242**	**82%**
Renewal annuity	485	18%	99%	100%	479	485	6	6%	485	18%
Total Expenditure	**2,727**	**100%**			**2,619**	**2,727**	**108**	**100%**	**2,727**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	611	27%	90%	100%	550	611	61	60%		
Electricity	16	1%	100%	100%	16	16	0	0%		
Materials	79	4%	90%	100%	71	79	8	8%		
Contractors	99	4%	90%	100%	89	99	10	10%		
Other	224	10%	90%	100%	202	224	22	22%		
Indirects & Overheads	1,266	56%	100%	100%	1,266	1,266	0	0%		
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%		
Total Operating Costs	**2,242**	**100%**			**2,140**	**2,242**	**101**	**100%**		

Recommended

	Price	Price	%		Range		Variable	% of total	Price	Price
Real dollars, $000	Path	Path	Low	High	Low	High	Costs	variable	Path	Path
Activity										
Operations	810	30%	80%	100%	648	810	162	78%	810	30%
Electricity	16	1%	100%	100%	16	16	0	0%	16	1%
Preventative maintenance	116	4%	80%	100%	93	116	23	11%	116	4%
Corrective maintenance	87	3%	80%	100%	70	87	17	8%	87	3%
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%	-54	-2%
Indirects & Overheads	1,266	n/a	100%	100%	1,266	1,266	n/a	n/a	1,266	46%
Operating costs	2,242	**82%**			**2,039**	**2,242**	**203**	**97%**	**2,242**	**82%**
Renewal annuity	485	18%	99%	100%	479	485	6	3%	485	18%
Total Expenditure	**2,727**	**100%**			**2,518**	**2,727**	**209**	**100%**	**2,727**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	611	27%	80%	100%	489	611	122	60%		
Electricity	16	1%	100%	100%	16	16	0	0%		
Materials	79	4%	80%	100%	63	79	16	8%		
Contractors	99	4%	80%	100%	80	99	20	10%		
Other	224	10%	80%	100%	179	224	45	22%		
Indirects & Overheads	1,266	56%	100%	100%	1,266	1,266	0	0%		
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%		
Total Operating Costs	**2,242**	**100%**			**2,039**	**2,242**	**203**	**100%**		

High

	Price	Price	%		Range		Variable	% of total	Price	Price
Real dollars, $000	Path	Path	Low	High	Low	High	Costs	variable	Path	Path
Activity										
Operations	810	30%	70%	100%	567	810	243	79%	810	30%
Electricity	16	1%	100%	100%	16	16	0	0%	16	1%
Preventative maintenance	116	4%	70%	100%	81	116	35	11%	116	4%
Corrective maintenance	87	3%	70%	100%	61	87	26	8%	87	3%
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%	-54	-2%
Indirects & Overheads	975	n/a	100%	100%	1,266	1,266	n/a	n/a	1,266	46%
Operating costs	2,242	**82%**			**1,938**	**2,242**	**304**	**98%**	**2,242**	**82%**
Renewal annuity	485	18%	99%	100%	480	485	5	2%	485	18%
Total Expenditure	**2,727**	**100%**			**2,418**	**2,727**	**309**	**100%**	**2,727**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	611	27%	70%	100%	428	611	183	60%		
Electricity	16	1%	100%	100%	16	16	0	0%		
Materials	79	4%	70%	100%	55	79	24	8%		
Contractors	99	4%	70%	100%	70	99	30	10%		
Other	224	10%	70%	100%	157	224	67	22%		
Indirects & Overheads	1,266	56%	100%	100%	1,266	1,266	0	0%		
Revenue offsets	-54	-2%	100%	100%	-54	-54	0	0%		
Total Operating Costs	**2,242**	**100%**			**1,938**	**2,242**	**304**	**100%**		

Bulk Supply – St George

Service Contract	St George Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	1,197	815	312	1,121	550	599	627	642	634	621	616	628
Electricity	4	4	4	6	7	7	9	9	10	11	12	10
Preventative maintenance	191	168	157	120	208	210	222	229	225	218	216	222
Corrective maintenance	180	211	20	216	129	130	137	141	139	135	133	137
Revenue offsets	-19	-39	-11	-26	-12	-12	-12	-12	-12	-12	-12	-12
Operating costs	**1,551**	**1,160**	**482**	**1,438**	**881**	**933**	**983**	**1,009**	**996**	**973**	**965**	985
Renewal annuity spend	969	408	200	416	1,001	712	642	593	615	460		578
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**2,520**	**1,568**	**682**	**1,854**	**1,883**	**1,646**	**1,625**	**1,602**	**1,611**	**1,433**	**965**	**1,447**
Expenditure Type												
Labour	324	288	117	430	243	262	266	266	266	266	266	266
Electricity	4	4	4	6	7	7	9	9	10	11	12	10
Materials	390	33	12	35	82	83	85	86	87	88	88	87
Contractors	14	11	9	89	21	21	22	22	22	23	23	22
Other	58	53	67	83	62	62	62	62	62	62	62	62
Indirects & Overheads	781	809	283	820	479	510	553	577	560	536	527	551
Revenue offsets	-19	-39	-11	-26	-12	-12	-12	-12	-12	-12	-12	-12
Total Operating Costs	**1,551**	**1,160**	**482**	**1,438**	**881**	**933**	**985**	**1,010**	**995**	**974**	**966**	**986**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	278	16%	90%	100%	250	278	28	53%	278	16%
Electricity	10	1%	100%	100%	10	10	0	0%	10	1%
Preventative maintenance	222	13%	90%	100%	88	98	10	19%	98	6%
Corrective maintenance	137	8%	90%	100%	55	61	6	12%	61	3%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	550	n/a	100%	100%	550	550	n/a	n/a	550	31%
Operating costs	**985**	**56%**			**942**	**985**	**44**	**84%**	**985**	**56%**
Renewal annuity	771	44%	99%	100%	763	771	8	16%	771	44%
Total Expenditure	**1,756**	**100%**			**1,704**	**1,756**	**52**	**100%**	**1,756**	**100%**
Proportion of Total Expenditure					**97%**	**100%**	**3%**			
Expenditure Type										
Labour	266	27%	90%	100%	239	266	27	61%		
Electricity	10	1%	100%	100%	10	10	0	0%		
Materials	87	9%	90%	100%	78	87	9	20%		
Contractors	22	2%	90%	100%	20	22	2	5%		
Other	62	6%	90%	100%	56	62	6	14%		
Indirects & Overheads	551	56%	100%	100%	551	551	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**986**	**100%**			**942**	**986**	**44**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	278	16%	80%	100%	222	278	56	58%	278	16%
Electricity	10	1%	100%	100%	10	10	0	0%	10	1%
Preventative maintenance	98	6%	80%	100%	79	98	20	21%	98	6%
Corrective maintenance	61	3%	80%	100%	49	61	12	13%	61	3%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	550	n/a	100%	100%	550	550	n/a	n/a	550	31%
Operating costs	985	**56%**			**898**	**985**	**87**	**91%**	**985**	**56%**
Renewal annuity	771	44%	99%	100%	763	771	8	9%	771	44%
Total Expenditure	**1,756**	**100%**			**1,660**	**1,756**	**96**	**100%**	**1,756**	**100%**
Proportion of Total Expenditure					**95%**	**100%**	**5%**			
Expenditure Type										
Labour	266	27%	80%	100%	213	266	53	61%		
Electricity	10	1%	100%	100%	10	10	0	0%		
Materials	87	9%	80%	100%	69	87	17	20%		
Contractors	22	2%	80%	100%	18	22	4	5%		
Other	62	6%	80%	100%	50	62	12	14%		
Indirects & Overheads	551	56%	100%	100%	551	551	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**986**	**100%**			**898**	**986**	**87**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	278	16%	70%	100%	195	278	83	60%	278	16%
Electricity	10	1%	100%	100%	10	10	0	0%	10	1%
Preventative maintenance	98	6%	70%	100%	69	98	29	21%	98	6%
Corrective maintenance	61	3%	70%	100%	42	61	18	13%	61	3%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	435	n/a	100%	100%	550	550	n/a	n/a	550	31%
Operating costs	985	**56%**			**854**	**985**	**131**	**94%**	**985**	**56%**
Renewal annuity	771	44%	99%	100%	763	771	8	6%	771	44%
Total Expenditure	**1,756**	**100%**			**1,617**	**1,756**	**139**	**100%**	**1,756**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	266	27%	70%	100%	186	266	80	61%		
Electricity	10	1%	100%	100%	10	10	0	0%		
Materials	87	9%	70%	100%	61	87	26	20%		
Contractors	22	2%	70%	100%	16	22	7	5%		
Other	62	6%	70%	100%	43	62	19	14%		
Indirects & Overheads	551	56%	100%	100%	551	551	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**986**	**100%**			**855**	**986**	**131**	**100%**		

Bulk Supply – Dawson Valley

Service Contract	Dawson Valley Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	598	587	722	910	592	598	628	642	633	618	610	626
Electricity	1	48	20	48	41	41	35	37	40	44	47	41
Preventative maintenance	269	140	147	104	184	186	196	200	197	193	190	195
Corrective maintenance	260	132	161	142	84	85	90	92	91	88	87	90
Revenue offsets	-14	-11	-14	-14	-5	-5	-5	-5	-5	-5	-5	-5
Operating costs	**1,114**	**897**	**1,036**	**1,190**	**896**	**904**	**944**	**966**	**956**	**938**	**929**	947
Renewal annuity spend	180	219	124	130	345	118	160	199	153	89		150
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**1,295**	**1,116**	**1,160**	**1,320**	**1,241**	**1,022**	**1,104**	**1,165**	**1,109**	**1,027**	**929**	**1,067**
Expenditure Type												
Labour	228	179	258	335	263	267	271	271	271	271	271	271
Electricity	1	48	20	48	41	41	35	37	40	44	47	41
Materials	63	34	31	25	23	23	23	24	24	25	25	24
Contractors	15	49	14	27	10	10	11	11	11	11	11	11
Other	122	139	100	103	72	72	72	72	72	72	72	72
Indirects & Overheads	699	459	627	665	492	495	536	556	542	520	508	532
Revenue offsets	-14	-11	-14	-14	-5	-5	-5	-5	-5	-5	-5	-5
Total Operating Costs	**1,114**	**897**	**1,036**	**1,190**	**896**	**904**	**943**	**966**	**955**	**938**	**929**	**946**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	260	27%	90%	100%	234	260	26	63%	260	27%
Electricity	41	4%	100%	100%	41	41	0	0%	41	4%
Preventative maintenance	195	20%	90%	100%	73	81	8	20%	81	8%
Corrective maintenance	90	9%	90%	100%	33	37	4	9%	37	4%
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%	-5	-1%
Indirects & Overheads	533	n/a	100%	100%	533	533	n/a	n/a	533	55%
Operating costs	**947**	**97%**			**909**	**947**	**38**	**92%**	**947**	**97%**
Renewal annuity	25	3%	87%	100%	22	25	3	8%	25	3%
Total Expenditure	**972**	**100%**			**930**	**972**	**41**	**100%**	**972**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	271	29%	90%	100%	244	271	27	72%		
Electricity	41	4%	100%	100%	41	41	0	0%		
Materials	24	3%	90%	100%	22	24	2	6%		
Contractors	11	1%	90%	100%	10	11	1	3%		
Other	72	8%	90%	100%	65	72	7	19%		
Indirects & Overheads	532	56%	100%	100%	532	532	0	0%		
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%		
Total Operating Costs	**946**	**100%**			**909**	**946**	**38**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	260	27%	80%	100%	208	260	52	66%	260	27%
Electricity	41	4%	100%	100%	41	41	0	0%	41	4%
Preventative maintenance	81	8%	80%	100%	65	81	16	21%	81	8%
Corrective maintenance	37	4%	80%	100%	30	37	7	9%	37	4%
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%	-5	-1%
Indirects & Overheads	533	n/a	100%	100%	533	533	n/a	n/a	533	55%
Operating costs	947	**97%**			**871**	**947**	**76**	**96%**	**947**	**97%**
Renewal annuity	25	3%	87%	100%	22	25	3	4%	25	3%
Total Expenditure	**972**	**100%**			**893**	**972**	**79**	**100%**	**972**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	271	29%	80%	100%	217	271	54	72%		
Electricity	41	4%	100%	100%	41	41	0	0%		
Materials	24	3%	80%	100%	19	24	5	6%		
Contractors	11	1%	80%	100%	9	11	2	3%		
Other	72	8%	80%	100%	58	72	14	19%		
Indirects & Overheads	532	56%	100%	100%	532	532	0	0%		
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%		
Total Operating Costs	**946**	**100%**			**871**	**946**	**76**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	260	27%	70%	100%	182	260	78	69%	260	27%
Electricity	41	4%	100%	100%	41	41	0	0%	41	4%
Preventative maintenance	81	8%	70%	100%	57	81	24	21%	81	8%
Corrective maintenance	37	4%	70%	100%	26	37	11	10%	37	4%
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%	-5	-1%
Indirects & Overheads	414	n/a	100%	100%	533	533	n/a	n/a	533	55%
Operating costs	947	**97%**			**833**	**947**	**114**	**100%**	**947**	**97%**
Renewal annuity	25	3%	99%	100%	25	25	0	0%	25	3%
Total Expenditure	**972**	**100%**			**858**	**972**	**114**	**100%**	**972**	**100%**
Proportion of Total Expenditure					**88%**	**100%**	**12%**			
Expenditure Type										
Labour	271	29%	70%	100%	190	271	81	72%		
Electricity	41	4%	100%	100%	41	41	0	0%		
Materials	24	3%	70%	100%	17	24	7	6%		
Contractors	11	1%	70%	100%	8	11	3	3%		
Other	72	8%	70%	100%	50	72	22	19%		
Indirects & Overheads	532	56%	100%	100%	532	532	0	0%		
Revenue offsets	-5	-1%	100%	100%	-5	-5	0	0%		
Total Operating Costs	**946**	**100%**			**833**	**946**	**114**	**100%**		

Bulk Supply – Lower Mary

Service Contract	Lower Mary Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	136	103	183	293	190	192	202	207	204	199	196	202
Electricity	112	0	0	0	0	0	0	0	0	0	0	0
Preventative maintenance	21	3	14	10	70	71	75	77	76	74	73	75
Corrective maintenance	10	5	23	8	13	13	13	13	13	13	13	13
Revenue offsets	0	-4	-5	-9	-2	-2	-2	-2	-2	-2	-2	-2
Operating costs	**279**	**107**	**215**	**302**	**271**	**273**	**288**	**295**	**291**	**284**	**280**	288
Renewal annuity spend	57	28	29	112	81	80	12	29	22	0		16
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**336**	**135**	**244**	**415**	**352**	**353**	**300**	**324**	**313**	**284**	**280**	**300**
Expenditure Type												
Labour	44	14	40	79	87	88	89	89	89	89	89	89
Electricity	112	0	0	0	0	0	0	0	0	0	0	0
Materials	2	0	5	4	9	9	9	9	9	9	9	9
Contractors	5	1	12	11	2	2	2	2	2	2	2	2
Other	70	55	60	62	14	14	14	14	14	14	14	14
Indirects & Overheads	45	40	103	155	162	163	176	183	178	171	167	175
Revenue offsets	0	-4	-5	-9	-2	-2	-2	-2	-2	-2	-2	-2
Total Operating Costs	**279**	**107**	**215**	**302**	**271**	**273**	**288**	**295**	**290**	**283**	**279**	**287**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	80	26%	90%	100%	72	80	8	68%	80	26%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	75	25%	90%	100%	27	30	3	25%	30	10%
Corrective maintenance	13	4%	90%	100%	5	5	1	4%	5	2%
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%	-2	-1%
Indirects & Overheads	175	n/a	100%	100%	175	175	n/a	n/a	175	58%
Operating costs	**288**	**96%**			**276**	**288**	**11**	**98%**	**288**	**96%**
Renewal annuity	13	4%	99%	100%	13	13	0	2%	13	4%
Total Expenditure	**301**	**100%**			**289**	**301**	**12**	**100%**	**301**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	89	31%	90%	100%	80	89	9	78%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	9	3%	90%	100%	8	9	1	8%		
Contractors	2	1%	90%	100%	2	2	0	2%		
Other	14	5%	90%	100%	13	14	1	12%		
Indirects & Overheads	175	61%	100%	100%	175	175	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**287**	**100%**			**276**	**287**	**11**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	80	26%	80%	100%	64	80	16	69%	80	26%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	30	10%	80%	100%	24	30	6	26%	30	10%
Corrective maintenance	5	2%	80%	100%	4	5	1	4%	5	2%
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%	-2	-1%
Indirects & Overheads	175	n/a	100%	100%	175	175	n/a	n/a	175	58%
Operating costs	288	**96%**			**265**	**288**	**23**	**99%**	**288**	**96%**
Renewal annuity	13	4%	99%	100%	13	13	0	1%	13	4%
Total Expenditure	**301**	**100%**			**278**	**301**	**23**	**100%**	**301**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	89	31%	80%	100%	71	89	18	78%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	9	3%	80%	100%	7	9	2	8%		
Contractors	2	1%	80%	100%	2	2	0	2%		
Other	14	5%	80%	100%	11	14	3	12%		
Indirects & Overheads	175	61%	100%	100%	175	175	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**287**	**100%**			**264**	**287**	**23**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	80	26%	70%	100%	56	80	24	69%	80	26%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	30	10%	70%	100%	21	30	9	26%	30	10%
Corrective maintenance	5	2%	70%	100%	4	5	2	4%	5	2%
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%	-2	-1%
Indirects & Overheads	112	n/a	100%	100%	175	175	n/a	n/a	175	58%
Operating costs	288	**96%**			**253**	**288**	**34**	**100%**	**288**	**96%**
Renewal annuity	13	4%	99%	100%	13	13	0	0%	13	4%
Total Expenditure	**301**	**100%**			**266**	**301**	**34**	**100%**	**301**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	89	31%	70%	100%	62	89	27	78%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	9	3%	70%	100%	6	9	3	8%		
Contractors	2	1%	70%	100%	1	2	1	2%		
Other	14	5%	70%	100%	10	14	4	12%		
Indirects & Overheads	175	61%	100%	100%	175	175	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**287**	**100%**			**253**	**287**	**34**	**100%**		

Bulk Supply – Barker Barambah

Service Contract	Barker Barambah Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	348	398	690	541	529	539	561	572	566	515	509	545
Electricity	11	10	16	7	19	19	18	20	21	23	25	21
Preventative maintenance	136	61	83	54	103	104	110	112	111	108	107	110
Corrective maintenance	14	65	54	48	48	48	51	52	51	50	50	51
Revenue offsets	-11	-20	-28	-28	-19	-19	-19	-19	-19	-19	-19	-19
Operating costs	**498**	**514**	**815**	**622**	**680**	**691**	**721**	**737**	**730**	**677**	**672**	707
Renewal annuity spend	144	185	124	161	173	558	42	184	6	28		65
Dam safety upgrade	3,656	1,827	0	0	0	0	0	0	0	0		0
Total Expenditure	**4,298**	**2,526**	**939**	**783**	**853**	**1,249**	**763**	**921**	**736**	**705**	**672**	**759**
Expenditure Type												
Labour	127	119	175	148	176	179	181	181	181	181	181	181
Electricity	11	10	16	7	19	19	18	20	21	23	25	21
Materials	21	23	16	8	18	18	19	19	19	19	19	19
Contractors	34	44	24	41	46	47	47	48	49	11	11	33
Other	114	108	158	150	105	110	110	110	110	110	110	110
Indirects & Overheads	202	229	454	296	334	337	364	377	368	351	343	361
Revenue offsets	-11	-20	-28	-28	-19	-19	-19	-19	-19	-19	-19	-19
Total Operating Costs	**498**	**514**	**815**	**622**	**680**	**691**	**720**	**736**	**729**	**676**	**670**	**706**

Low

			%		Range					
Real dollars, $000	Price Path Average $	Price Path Average %	Low	High	Low	High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	266	28%	90%	100%	239	266	27	47%	266	28%
Electricity	21	2%	0%	100%	0	21	21	38%	21	2%
Preventative maintenance	110	11%	90%	100%	48	53	5	9%	53	6%
Corrective maintenance	51	5%	90%	100%	22	25	2	4%	25	3%
Revenue offsets	-19	-2%	100%	100%	-19	-19	0	0%	-19	-2%
Indirects & Overheads	361	n/a	100%	100%	361	361	n/a	n/a	361	38%
Operating costs	**707**	**74%**			**652**	**707**	**56**	**98%**	**707**	**74%**
Renewal annuity	246	26%	100%	100%	245	246	1	2%	246	26%
Total Expenditure	**953**	**100%**			**897**	**953**	**57**	**100%**	**953**	**100%**
Proportion of Total Expenditure					**94%**	**100%**	**6%**			
Expenditure Type										
Labour	181	26%	90%	100%	163	181	18	33%		
Electricity	21	3%	0%	100%	0	21	21	38%		
Materials	19	3%	90%	100%	17	19	2	3%		
Contractors	33	5%	90%	100%	30	33	3	6%		
Other	110	16%	90%	100%	99	110	11	20%		
Indirects & Overheads	361	51%	100%	100%	361	361	0	0%		
Revenue offsets	-19	-3%	100%	100%	-19	-19	0	0%		
Total Operating Costs	**706**	**100%**			**651**	**707**	**56**	**100%**		

Recommended

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	266	28%	80%	100%	212	266	53	58%	266	28%
Electricity	21	2%	0%	100%	0	21	21	23%	21	2%
Preventative maintenance	53	6%	80%	100%	43	53	11	12%	53	6%
Corrective maintenance	25	3%	80%	100%	20	25	5	5%	25	3%
Revenue offsets	-19	-2%	100%	100%	-19	-19	0	0%	-19	-2%
Indirects & Overheads	361	n/a	100%	100%	361	361	n/a	n/a	361	38%
Operating costs	707	**74%**			**617**	**707**	**90**	**99%**	**707**	**74%**
Renewal annuity	246	26%	100%	100%	245	246	1	1%	246	26%
Total Expenditure	**953**	**100%**			**862**	**953**	**91**	**100%**	**953**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	181	26%	80%	100%	145	181	36	40%		
Electricity	21	3%	0%	100%	0	21	21	24%		
Materials	19	3%	80%	100%	15	19	4	4%		
Contractors	33	5%	80%	100%	27	33	7	7%		
Other	110	16%	80%	100%	88	110	22	24%		
Indirects & Overheads	361	51%	100%	100%	361	361	0	0%		
Revenue offsets	-19	-3%	100%	100%	-19	-19	0	0%		
Total Operating Costs	**706**	**100%**			**617**	**707**	**90**	**100%**		

High

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	266	28%	70%	100%	186	266	80	63%	266	28%
Electricity	21	2%	0%	100%	0	21	21	17%	21	2%
Preventative maintenance	53	6%	70%	100%	37	53	16	13%	53	6%
Corrective maintenance	25	3%	70%	100%	17	25	7	6%	25	3%
Revenue offsets	-19	-2%	100%	100%	-19	-19	0	0%	-19	-2%
Indirects & Overheads	346	n/a	100%	100%	361	361	n/a	n/a	361	38%
Operating costs	707	**74%**			**583**	**707**	**125**	**98%**	**707**	**74%**
Renewal annuity	246	26%	99%	100%	244	246	2	2%	246	26%
Total Expenditure	**953**	**100%**			**826**	**953**	**127**	**100%**	**953**	**100%**
Proportion of Total Expenditure					**87%**	**100%**	**13%**			
Expenditure Type										
Labour	181	26%	70%	100%	127	181	54	44%		
Electricity	21	3%	0%	100%	0	21	21	17%		
Materials	19	3%	70%	100%	13	19	6	5%		
Contractors	33	5%	70%	100%	23	33	10	8%		
Other	110	16%	70%	100%	77	110	33	27%		
Indirects & Overheads	361	51%	100%	100%	361	361	0	0%		
Revenue offsets	-19	-3%	100%	100%	-19	-19	0	0%		
Total Operating Costs	**706**	**100%**			**582**	**707**	**125**	**100%**		

Bulk Supply – Bowen Broken

Service Contract	Bowen Broken Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	578	405	500	636	473	477	497	507	502	492	487	497
Electricity	56	104	125	93	102	102	119	129	139	151	163	140
Preventative maintenance	101	80	76	100	183	185	194	198	196	193	190	194
Corrective maintenance	123	421	287	117	203	206	213	217	217	216	214	215
Revenue offsets	-6	-12	-22	-12	-12	7	-12	-12	-12	-12	-12	-12
Operating costs	**853**	**999**	**965**	**934**	**949**	**976**	**1,011**	**1,039**	**1,042**	**1,040**	**1,042**	1,035
Renewal annuity spend	15	91	475	287	203	75	149	162	255	236		201
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**868**	**1,090**	**1,440**	**1,220**	**1,152**	**1,051**	**1,160**	**1,201**	**1,297**	**1,276**	**1,042**	**1,195**
Expenditure Type												
Labour	145	128	166	208	202	205	208	208	208	208	208	208
Electricity	56	104	125	93	102	102	119	129	139	151	163	140
Materials	15	216	55	54	42	42	43	43	44	45	45	44
Contractors	66	125	195	77	141	143	145	147	149	152	152	149
Other	139	123	141	92	86	86	86	86	86	86	86	86
Indirects & Overheads	437	315	306	423	387	390	422	437	427	410	400	419
Revenue offsets	-6	-12	-22	-12	-12	7	-12	-12	-12	-12	-12	-12
Total Operating Costs	**853**	**999**	**965**	**934**	**949**	**976**	**1,011**	**1,038**	**1,041**	**1,040**	**1,042**	**1,034**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	267	20%	90%	100%	240	267	27	52%	267	20%
Electricity	140	10%	100%	100%	140	140	0	0%	140	10%
Preventative maintenance	194	14%	90%	100%	94	104	10	20%	104	8%
Corrective maintenance	215	16%	90%	100%	104	116	12	23%	116	9%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	419	n/a	100%	100%	419	419	n/a	n/a	419	31%
Operating costs	**1,035**	**76%**			**986**	**1,035**	**49**	**95%**	**1,035**	**76%**
Renewal annuity	318	24%	99%	100%	315	318	3	5%	318	24%
Total Expenditure	**1,353**	**100%**			**1,302**	**1,353**	**51**	**100%**	**1,353**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	208	20%	90%	100%	187	208	21	43%		
Electricity	140	14%	100%	100%	140	140	0	0%		
Materials	44	4%	90%	100%	40	44	4	9%		
Contractors	149	14%	90%	100%	134	149	15	31%		
Other	86	8%	90%	100%	77	86	9	18%		
Indirects & Overheads	419	41%	100%	100%	419	419	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**1,034**	**100%**			**986**	**1,035**	**49**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	267	20%	80%	100%	214	267	53	53%	267	20%
Electricity	140	10%	100%	100%	140	140	0	0%	140	10%
Preventative maintenance	104	8%	80%	100%	83	104	21	21%	104	8%
Corrective maintenance	116	9%	80%	100%	93	116	23	23%	116	9%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	419	n/a	100%	100%	419	419	n/a	n/a	419	31%
Operating costs	1,035	**76%**			**937**	**1,035**	**97**	**97%**	**1,035**	**76%**
Renewal annuity	318	24%	99%	100%	315	318	3	3%	318	24%
Total Expenditure	**1,353**	**100%**			**1,253**	**1,353**	**100**	**100%**	**1,353**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	208	20%	80%	100%	166	208	42	43%		
Electricity	140	14%	100%	100%	140	140	0	0%		
Materials	44	4%	80%	100%	35	44	9	9%		
Contractors	149	14%	80%	100%	119	149	30	31%		
Other	86	8%	80%	100%	69	86	17	18%		
Indirects & Overheads	419	41%	100%	100%	419	419	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**1,034**	**100%**			**937**	**1,035**	**97**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	267	20%	70%	100%	187	267	80	54%	267	20%
Electricity	140	10%	100%	100%	140	140	0	0%	140	10%
Preventative maintenance	104	8%	70%	100%	73	104	31	21%	104	8%
Corrective maintenance	116	9%	70%	100%	81	116	35	23%	116	9%
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%	-12	-1%
Indirects & Overheads	615	n/a	100%	100%	419	419	n/a	n/a	419	31%
Operating costs	1,035	**76%**			**889**	**1,035**	**146**	**98%**	**1,035**	**76%**
Renewal annuity	318	24%	99%	100%	315	318	3	2%	318	24%
Total Expenditure	**1,353**	**100%**			**1,203**	**1,353**	**149**	**100%**	**1,353**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	208	20%	70%	100%	146	208	62	43%		
Electricity	140	14%	100%	100%	140	140	0	0%		
Materials	44	4%	70%	100%	31	44	13	9%		
Contractors	149	14%	70%	100%	104	149	45	31%		
Other	86	8%	70%	100%	60	86	26	18%		
Indirects & Overheads	419	41%	100%	100%	419	419	0	0%		
Revenue offsets	-12	-1%	100%	100%	-12	-12	0	0%		
Total Operating Costs	**1,034**	**100%**			**888**	**1,035**	**146**	**100%**		

Bulk Supply – Boyne River & Tarong

Service Contract	Boyne River & Tarong Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	278	192	214	313	251	253	263	268	265	260	257	263
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Preventative maintenance	92	41	49	44	89	90	94	97	95	93	92	94
Corrective maintenance	15	10	27	22	23	23	25	25	25	25	24	25
Revenue offsets	-4	-19	-18	-15	-15	-15	-15	-15	-15	-15	-15	-15
Operating costs	**381**	**224**	**272**	**364**	**348**	**351**	**367**	**375**	**370**	**363**	**358**	367
Renewal annuity spend	102	15	312	67	213	163	30	200	124	9		91
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**483**	**239**	**584**	**431**	**561**	**514**	**397**	**575**	**494**	**372**	**358**	**439**
Expenditure Type												
Labour	70	34	56	88	97	98	100	100	100	100	100	100
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Materials	5	13	12	8	14	14	14	14	14	14	15	14
Contractors	3	7	12	7	5	5	5	6	6	6	6	6
Other	84	91	69	102	64	64	64	64	64	64	64	64
Indirects & Overheads	224	97	141	173	183	184	199	207	202	193	189	198
Revenue offsets	-4	-19	-18	-15	-15	-15	-15	-15	-15	-15	-15	-15
Total Operating Costs	**381**	**224**	**272**	**364**	**348**	**351**	**367**	**376**	**371**	**362**	**359**	**367**

Low

	Price Path Average	Price Path Average	%		Range		Variable	% of total variable	Price Path Average	Price Path Average
Real dollars, $000	$	%	Low	High	Low	High	Costs	costs	$	%
Activity										
Operations	126	30%	90%	100%	114	126	13	62%	126	30%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	94	22%	90%	100%	41	45	5	22%	45	11%
Corrective maintenance	25	6%	90%	100%	11	12	1	6%	12	3%
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%	-15	-4%
Indirects & Overheads	198	n/a	100%	100%	198	198	n/a	n/a	198	47%
Operating costs	**367**	**87%**			**348**	**367**	**18**	**90%**	**367**	**87%**
Renewal annuity	57	13%	96%	100%	55	57	2	10%	57	13%
Total Expenditure	**424**	**100%**			**403**	**424**	**20**	**100%**	**424**	**100%**
Proportion of Total Expenditure					**95%**	**100%**	**5%**			
Expenditure Type										
Labour	100	27%	90%	100%	90	100	10	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	14	4%	90%	100%	13	14	1	8%		
Contractors	6	2%	90%	100%	5	6	1	3%		
Other	64	17%	90%	100%	58	64	6	35%		
Indirects & Overheads	198	54%	100%	100%	198	198	0	0%		
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%		
Total Operating Costs	**367**	**100%**			**348**	**367**	**18**	**100%**		

Recommended

	Price Path	Price Path	%		Range		Variable Costs	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High				
Activity										
Operations	126	30%	80%	100%	101	126	25	65%	126	30%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	45	11%	80%	100%	36	45	9	23%	45	11%
Corrective maintenance	12	3%	80%	100%	10	12	2	6%	12	3%
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%	-15	-4%
Indirects & Overheads	198	n/a	100%	100%	198	198	n/a	n/a	198	47%
Operating costs	367	**87%**			**330**	**367**	**37**	**95%**	**367**	**87%**
Renewal annuity	57	13%	96%	100%	55	57	2	5%	57	13%
Total Expenditure	**424**	**100%**			**385**	**424**	**39**	**100%**	**424**	**100%**
Proportion of Total Expenditure					**91%**	**100%**	**9%**			
Expenditure Type										
Labour	100	27%	80%	100%	80	100	20	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	14	4%	80%	100%	11	14	3	8%		
Contractors	6	2%	80%	100%	5	6	1	3%		
Other	64	17%	80%	100%	51	64	13	35%		
Indirects & Overheads	198	54%	100%	100%	198	198	0	0%		
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%		
Total Operating Costs	**367**	**100%**			**330**	**367**	**37**	**100%**		

High

	Price Path	Price Path	%		Range		Variable Costs	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High				
Activity										
Operations	126	30%	70%	100%	89	126	38	68%	126	30%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	45	11%	70%	100%	32	45	14	24%	45	11%
Corrective maintenance	12	3%	70%	100%	8	12	4	6%	12	3%
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%	-15	-4%
Indirects & Overheads	169	n/a	100%	100%	198	198	n/a	n/a	198	47%
Operating costs	367	**87%**			**311**	**367**	**55**	**99%**	**367**	**87%**
Renewal annuity	57	13%	99%	100%	56	57	1	1%	57	13%
Total Expenditure	**424**	**100%**			**368**	**424**	**56**	**100%**	**424**	**100%**
Proportion of Total Expenditure					**87%**	**100%**	**13%**			
Expenditure Type										
Labour	100	27%	70%	100%	70	100	30	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	14	4%	70%	100%	10	14	4	8%		
Contractors	6	2%	70%	100%	4	6	2	3%		
Other	64	17%	70%	100%	45	64	19	35%		
Indirects & Overheads	198	54%	100%	100%	198	198	0	0%		
Revenue offsets	-15	-4%	100%	100%	-15	-15	0	0%		
Total Operating Costs	**367**	**100%**			**312**	**367**	**55**	**100%**		

Bulk Supply – Callide Valley

Service Contract	Callide Valley Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	444	433	723	796	572	575	598	609	601	590	586	597
Electricity	5	2	3	5	5	5	7	7	8	9	9	8
Preventative maintenance	326	130	184	192	260	263	278	286	281	273	270	278
Corrective maintenance	66	69	23	28	34	34	36	37	36	35	35	36
Revenue offsets	-1	-84	-21	-18	-9	-9	-9	-9	-9	-9	-9	-9
Operating costs	**839**	**550**	**913**	**1,002**	**863**	**868**	**910**	**930**	**917**	**898**	**891**	909
Renewal annuity spend	92	84	51	182	244	189	316	142	444	434		334
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**931**	**634**	**963**	**1,185**	**1,107**	**1,057**	**1,226**	**1,072**	**1,361**	**1,332**	**891**	**1,176**
Expenditure Type												
Labour	131	107	168	228	216	219	222	222	222	222	222	222
Electricity	5	2	3	5	5	5	7	7	8	9	9	8
Materials	24	20	66	14	13	13	13	14	14	14	14	14
Contractors	19	14	31	57	14	14	15	15	15	15	15	15
Other	183	189	259	267	194	194	194	194	194	194	194	194
Indirects & Overheads	478	301	406	449	429	431	467	487	473	452	445	465
Revenue offsets	-1	-84	-21	-18	-9	-9	-9	-9	-9	-9	-9	-9
Total Operating Costs	**839**	**550**	**913**	**1,002**	**863**	**868**	**909**	**930**	**917**	**897**	**890**	**909**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	292	23%	90%	100%	263	292	29	56%	292	23%
Electricity	8	1%	100%	100%	8	8	0	0%	8	1%
Preventative maintenance	278	22%	90%	100%	122	136	14	26%	136	11%
Corrective maintenance	36	3%	90%	100%	16	18	2	3%	18	1%
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%	-9	-1%
Indirects & Overheads	465	n/a	100%	100%	465	465	n/a	n/a	465	36%
Operating costs	**909**	**71%**			**865**	**909**	**45**	**85%**	**909**	**71%**
Renewal annuity	378	29%	98%	100%	370	378	8	15%	378	29%
Total Expenditure	**1,287**	**100%**			**1,235**	**1,287**	**52**	**100%**	**1,287**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	222	24%	90%	100%	200	222	22	50%		
Electricity	8	1%	100%	100%	8	8	0	0%		
Materials	14	2%	90%	100%	12	14	1	3%		
Contractors	15	2%	90%	100%	14	15	2	3%		
Other	194	21%	90%	100%	175	194	19	44%		
Indirects & Overheads	465	51%	100%	100%	465	465	0	0%		
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%		
Total Operating Costs	**909**	**100%**			**864**	**909**	**45**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	292	23%	80%	100%	233	292	58	60%	292	23%
Electricity	8	1%	100%	100%	8	8	0	0%	8	1%
Preventative maintenance	136	11%	80%	100%	109	136	27	28%	136	11%
Corrective maintenance	18	1%	80%	100%	14	18	4	4%	18	1%
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%	-9	-1%
Indirects & Overheads	465	n/a	100%	100%	465	465	n/a	n/a	465	36%
Operating costs	909	**71%**			**820**	**909**	**89**	**92%**	**909**	**71%**
Renewal annuity	378	29%	98%	100%	370	378	8	8%	378	29%
Total Expenditure	**1,287**	**100%**			**1,191**	**1,287**	**97**	**100%**	**1,287**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	222	24%	80%	100%	178	222	44	50%		
Electricity	8	1%	100%	100%	8	8	0	0%		
Materials	14	2%	80%	100%	11	14	3	3%		
Contractors	15	2%	80%	100%	12	15	3	3%		
Other	194	21%	80%	100%	155	194	39	44%		
Indirects & Overheads	465	51%	100%	100%	465	465	0	0%		
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%		
Total Operating Costs	**909**	**100%**			**820**	**909**	**89**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	292	23%	70%	100%	204	292	88	64%	292	23%
Electricity	8	1%	100%	100%	8	8	0	0%	8	1%
Preventative maintenance	136	11%	70%	100%	95	136	41	30%	136	11%
Corrective maintenance	18	1%	70%	100%	12	18	5	4%	18	1%
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%	-9	-1%
Indirects & Overheads	444	n/a	100%	100%	465	465	n/a	n/a	465	36%
Operating costs	909	**71%**			**776**	**909**	**134**	**97%**	**909**	**71%**
Renewal annuity	378	29%	99%	100%	374	378	4	3%	378	29%
Total Expenditure	**1,287**	**100%**			**1,150**	**1,287**	**137**	**100%**	**1,287**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	222	24%	70%	100%	156	222	67	50%		
Electricity	8	1%	100%	100%	8	8	0	0%		
Materials	14	2%	70%	100%	10	14	4	3%		
Contractors	15	2%	70%	100%	11	15	5	3%		
Other	194	21%	70%	100%	136	194	58	44%		
Indirects & Overheads	465	51%	100%	100%	465	465	0	0%		
Revenue offsets	-9	-1%	100%	100%	-9	-9	0	0%		
Total Operating Costs	**909**	**100%**			**775**	**909**	**134**	**100%**		

Bulk Supply – Chinchilla Weir

Service Contract	Chinchilla Weir Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	109	66	52	75	49	50	51	52	52	51	51	51
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Preventative maintenance	33	8	3	5	11	12	12	13	12	12	12	12
Corrective maintenance	20	0	16	4	8	8	8	8	8	8	8	8
Revenue offsets	-1	-5	-4	-5	-4	-4	-4	-4	-4	-4	-4	-4
Operating costs	**161**	**69**	**68**	**80**	**64**	**65**	**67**	**69**	**68**	**67**	**67**	68
Renewal annuity spend	0	4	45	24	29	18	0	0	38	164		51
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**161**	**73**	**113**	**103**	**93**	**82**	**67**	**69**	**106**	**231**	**67**	**108**
Expenditure Type												
Labour	28	15	16	21	17	18	18	18	18	18	18	18
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Materials	1	3	2	1	2	2	2	2	2	2	2	2
Contractors	3	2	5	9	5	5	5	5	5	5	5	5
Other	14	11	13	13	11	11	11	11	11	11	11	11
Indirects & Overheads	116	43	36	40	33	33	36	37	36	35	34	36
Revenue offsets	-1	-5	-4	-5	-4	-4	-4	-4	-4	-4	-4	-4
Total Operating Costs	**161**	**69**	**68**	**80**	**64**	**65**	**68**	**69**	**68**	**67**	**66**	**68**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	26	32%	90%	100%	23	26	3	62%	26	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	12	15%	90%	100%	6	6	1	15%	6	8%
Corrective maintenance	8	10%	90%	100%	4	4	0	10%	4	5%
Revenue offsets	-4	-5%	100%	100%	-4	-4	0	0%	-4	-5%
Indirects & Overheads	36	n/a	100%	100%	36	36	n/a	n/a	36	45%
Operating costs	**68**	**85%**			**64**	**68**	**4**	**87%**	**68**	**85%**
Renewal annuity	12	15%	95%	100%	11	12	1	13%	12	15%
Total Expenditure	**80**	**100%**			**75**	**80**	**4**	**100%**	**80**	**100%**
Proportion of Total Expenditure					**95%**	**100%**	**5%**			
Expenditure Type										
Labour	18	27%	90%	100%	16	18	2	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	2	3%	90%	100%	2	2	0	6%		
Contractors	5	7%	90%	100%	5	5	0	14%		
Other	11	16%	90%	100%	10	11	1	31%		
Indirects & Overheads	36	53%	100%	100%	36	36	0	0%		
Revenue offsets	-4	-6%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**68**	**100%**			**64**	**68**	**4**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	26	32%	80%	100%	21	26	5	67%	26	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	6	8%	80%	100%	5	6	1	16%	6	8%
Corrective maintenance	4	5%	80%	100%	3	4	1	10%	4	5%
Revenue offsets	-4	-5%	100%	100%	-4	-4	0	0%	-4	-5%
Indirects & Overheads	36	n/a	100%	100%	36	36	n/a	n/a	36	45%
Operating costs	68	**85%**			**60**	**68**	**7**	**93%**	**68**	**85%**
Renewal annuity	12	15%	95%	100%	11	12	1	7%	12	15%
Total Expenditure	**80**	**100%**			**72**	**80**	**8**	**100%**	**80**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	18	27%	80%	100%	14	18	4	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	2	3%	80%	100%	2	2	0	6%		
Contractors	5	7%	80%	100%	4	5	1	14%		
Other	11	16%	80%	100%	9	11	2	31%		
Indirects & Overheads	36	53%	100%	100%	36	36	0	0%		
Revenue offsets	-4	-6%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**68**	**100%**			**60**	**68**	**7**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	26	32%	70%	100%	18	26	8	71%	26	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	6	8%	70%	100%	4	6	2	17%	6	8%
Corrective maintenance	4	5%	70%	100%	3	4	1	11%	4	5%
Revenue offsets	-4	-5%	100%	100%	-4	-4	0	0%	-4	-5%
Indirects & Overheads	32	n/a	100%	100%	36	36	n/a	n/a	36	45%
Operating costs	68	**85%**			**57**	**68**	**11**	**99%**	**68**	**85%**
Renewal annuity	12	15%	99%	100%	12	12	0	1%	12	15%
Total Expenditure	**80**	**100%**			**69**	**80**	**11**	**100%**	**80**	**100%**
Proportion of Total Expenditure					**86%**	**100%**	**14%**			
Expenditure Type										
Labour	18	27%	70%	100%	13	18	5	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	2	3%	70%	100%	1	2	1	6%		
Contractors	5	7%	70%	100%	4	5	2	14%		
Other	11	16%	70%	100%	8	11	3	31%		
Indirects & Overheads	36	53%	100%	100%	36	36	0	0%		
Revenue offsets	-4	-6%	100%	100%	-4	-4	0	0%		
Total Operating Costs	**68**	**100%**			**57**	**68**	**11**	**100%**		

Bulk Supply – Cunnamulla

Service Contract	Cunnamulla Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	54	28	43	45	37	37	39	40	40	39	39	39
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Preventative maintenance	25	4	3	1	6	6	6	6	6	6	6	6
Corrective maintenance	0	3	18	0	8	8	8	8	8	8	8	8
Revenue offsets	0	-3	0	-1	-2	-19	-2	-2	-2	-2	-2	-2
Operating costs	**79**	**32**	**64**	**45**	**49**	**32**	**51**	**52**	**52**	**51**	**51**	51
Renewal annuity spend	6	0	25	0	32	0	0	19	0	25		11
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**85**	**32**	**89**	**45**	**81**	**32**	**51**	**71**	**52**	**76**	**51**	**60**
Expenditure Type												
Labour	6	6	15	11	14	14	14	14	14	14	14	14
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Materials	1	2	2	2	4	4	4	4	4	4	4	4
Contractors	3	5	8	8	5	5	5	5	5	5	5	5
Other	4	4	5	4	3	3	3	3	3	3	3	3
Indirects & Overheads	65	17	35	21	26	26	28	29	29	28	27	28
Revenue offsets	0	-3	0	-1	-2	-19	-2	-2	-2	-2	-2	-2
Total Operating Costs	**79**	**32**	**64**	**45**	**49**	**32**	**52**	**53**	**53**	**52**	**51**	**52**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	19	34%	90%	100%	17	19	2	71%	19	34%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	6	11%	90%	100%	3	3	0	11%	3	5%
Corrective maintenance	8	14%	90%	100%	3	4	0	14%	4	7%
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%	-2	-4%
Indirects & Overheads	28	n/a	100%	100%	28	28	n/a	n/a	28	49%
Operating costs	**51**	**91%**			**49**	**51**	**3**	**96%**	**51**	**91%**
Renewal annuity	5	9%	98%	100%	5	5	0	4%	5	9%
Total Expenditure	**56**	**100%**			**54**	**56**	**3**	**100%**	**56**	**100%**
Proportion of Total Expenditure					**95%**	**100%**	**5%**			
Expenditure Type										
Labour	14	27%	90%	100%	12	14	1	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	4	8%	90%	100%	4	4	0	15%		
Contractors	5	10%	90%	100%	4	5	0	19%		
Other	3	6%	90%	100%	3	3	0	12%		
Indirects & Overheads	28	54%	100%	100%	28	28	0	0%		
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**52**	**100%**			**49**	**52**	**3**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	19	34%	80%	100%	15	19	4	72%	19	34%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	3	5%	80%	100%	2	3	1	11%	3	5%
Corrective maintenance	4	7%	80%	100%	3	4	1	15%	4	7%
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%	-2	-4%
Indirects & Overheads	28	n/a	100%	100%	28	28	n/a	n/a	28	49%
Operating costs	51	**91%**			**46**	**51**	**5**	**98%**	**51**	**91%**
Renewal annuity	5	9%	98%	100%	5	5	0	2%	5	9%
Total Expenditure	**56**	**100%**			**51**	**56**	**5**	**100%**	**56**	**100%**
Proportion of Total Expenditure					**91%**	**100%**	**9%**			
Expenditure Type										
Labour	14	27%	80%	100%	11	14	3	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	4	8%	80%	100%	3	4	1	15%		
Contractors	5	10%	80%	100%	4	5	1	19%		
Other	3	6%	80%	100%	2	3	1	12%		
Indirects & Overheads	28	54%	100%	100%	28	28	0	0%		
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**52**	**100%**			**47**	**52**	**5**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	19	34%	70%	100%	13	19	6	73%	19	34%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	3	5%	70%	100%	2	3	1	11%	3	5%
Corrective maintenance	4	7%	70%	100%	3	4	1	15%	4	7%
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%	-2	-4%
Indirects & Overheads	24	n/a	100%	100%	28	28	n/a	n/a	28	49%
Operating costs	51	**91%**			**44**	**51**	**8**	**99%**	**51**	**91%**
Renewal annuity	5	9%	99%	100%	5	5	0	1%	5	9%
Total Expenditure	**56**	**100%**			**49**	**56**	**8**	**100%**	**56**	**100%**
Proportion of Total Expenditure					**86%**	**100%**	**14%**			
Expenditure Type										
Labour	14	27%	70%	100%	10	14	4	54%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	4	8%	70%	100%	3	4	1	15%		
Contractors	5	10%	70%	100%	3	5	1	19%		
Other	3	6%	70%	100%	2	3	1	12%		
Indirects & Overheads	28	54%	100%	100%	28	28	0	0%		
Revenue offsets	-2	-4%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**52**	**100%**			**44**	**52**	**8**	**100%**		

Bulk Supply – Lower Fitzroy

Service Contract	Lower Fitzroy Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	109	76	169	165	138	141	149	152	149	144	144	148
Electricity	1	1	1	1	1	1	1	2	2	2	2	2
Preventative maintenance	61	43	59	55	84	86	91	93	91	88	89	90
Corrective maintenance	142	69	97	57	42	43	45	46	45	44	44	45
Revenue offsets	0	-1	0	0	0	0	0	0	0	0	0	0
Operating costs	**313**	**188**	**327**	**278**	**265**	**272**	**286**	**293**	**287**	**278**	**279**	285
Renewal annuity spend	3	6	61	19	158	68	24	63	12	47		37
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**315**	**194**	**388**	**296**	**423**	**340**	**310**	**356**	**299**	**325**	**279**	**314**
Expenditure Type												
Labour	73	43	82	76	82	83	84	84	84	84	84	84
Electricity	1	1	1	1	1	1	1	2	2	2	2	2
Materials	35	-26	13	15	11	11	11	11	11	12	12	11
Contractors	17	3	6	10	10	10	10	10	11	11	11	11
Other	11	19	23	24	15	15	15	15	15	15	15	15
Indirects & Overheads	176	149	201	151	147	152	165	171	165	155	156	162
Revenue offsets	0	-1	0	0	0	0	0	0	0	0	0	0
Total Operating Costs	**313**	**188**	**327**	**278**	**265**	**272**	**286**	**293**	**288**	**279**	**280**	**285**

Low

	Price Path Average	Price Path Average	%		Range		Variable	% of total variable	Price Path Average	Price Path Average
Real dollars, $000	$	%	Low	High	Low	High	Costs	costs	$	%
Activity										
Operations	63	21%	90%	100%	57	63	6	50%	63	21%
Electricity	2	1%	100%	100%	2	2	0	0%	2	1%
Preventative maintenance	90	30%	90%	100%	35	39	4	31%	39	13%
Corrective maintenance	45	15%	90%	100%	17	19	2	15%	19	6%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	162	n/a	100%	100%	162	162	n/a	n/a	162	54%
Operating costs	**285**	**94%**			**273**	**285**	**12**	**96%**	**285**	**94%**
Renewal annuity	18	6%	97%	100%	18	18	0	4%	18	6%
Total Expenditure	**303**	**100%**			**290**	**303**	**13**	**100%**	**303**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	84	29%	90%	100%	75	84	8	69%		
Electricity	2	1%	100%	100%	2	2	0	0%		
Materials	11	4%	90%	100%	10	11	1	9%		
Contractors	11	4%	90%	100%	10	11	1	9%		
Other	15	5%	90%	100%	13	15	1	12%		
Indirects & Overheads	162	57%	100%	100%	162	162	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**285**	**100%**			**273**	**285**	**12**	**100%**		

Recommended

	Price Path	Price Path	%		Range		Variable	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High	Costs			
Activity										
Operations	63	21%	80%	100%	50	63	13	51%	63	21%
Electricity	2	1%	100%	100%	2	2	0	0%	2	1%
Preventative maintenance	39	13%	80%	100%	31	39	8	31%	39	13%
Corrective maintenance	19	6%	80%	100%	15	19	4	16%	19	6%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	162	n/a	100%	100%	162	162	n/a	n/a	162	54%
Operating costs	285	**94%**			**260**	**285**	**24**	**98%**	**285**	**94%**
Renewal annuity	18	6%	97%	100%	18	18	0	2%	18	6%
Total Expenditure	**303**	**100%**			**278**	**303**	**25**	**100%**	**303**	**100%**
Proportion of Total Expenditure					**92%**	**100%**	**8%**			
Expenditure Type										
Labour	84	29%	80%	100%	67	84	17	69%		
Electricity	2	1%	100%	100%	2	2	0	0%		
Materials	11	4%	80%	100%	9	11	2	9%		
Contractors	11	4%	80%	100%	8	11	2	9%		
Other	15	5%	80%	100%	12	15	3	12%		
Indirects & Overheads	162	57%	100%	100%	162	162	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**285**	**100%**			**261**	**285**	**24**	**100%**		

High

	Price Path	Price Path	%		Range		Variable	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High	Costs			
Activity										
Operations	63	21%	70%	100%	44	63	19	52%	63	21%
Electricity	2	1%	100%	100%	2	2	0	0%	2	1%
Preventative maintenance	39	13%	70%	100%	27	39	12	32%	39	13%
Corrective maintenance	19	6%	70%	100%	13	19	6	16%	19	6%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	123	n/a	100%	100%	162	162	n/a	n/a	162	54%
Operating costs	285	**94%**			**248**	**285**	**36**	**100%**	**285**	**94%**
Renewal annuity	18	6%	99%	100%	18	18	0	0%	18	6%
Total Expenditure	**303**	**100%**			**266**	**303**	**36**	**100%**	**303**	**100%**
Proportion of Total Expenditure					**88%**	**100%**	**12%**			
Expenditure Type										
Labour	84	29%	70%	100%	59	84	25	69%		
Electricity	2	1%	100%	100%	2	2	0	0%		
Materials	11	4%	70%	100%	8	11	3	9%		
Contractors	11	4%	70%	100%	7	11	3	9%		
Other	15	5%	70%	100%	10	15	4	12%		
Indirects & Overheads	162	57%	100%	100%	162	162	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**285**	**100%**			**249**	**285**	**36**	**100%**		

Bulk Supply – Macintyre Brook

Service Contract	Macintyre Brook Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	996	763	825	689	657	661	695	712	701	684	677	694
Electricity	1	1	1	1	1	1	2	2	2	2	2	2
Preventative maintenance	178	142	91	162	179	177	188	193	190	184	182	187
Corrective maintenance	9	70	19	20	37	35	37	38	37	36	36	37
Revenue offsets	-19	-34	-15	-13	-11	-33	-11	-11	-11	-11	-11	-11
Operating costs	**1,165**	**941**	**922**	**859**	**863**	**841**	**911**	**934**	**919**	**895**	**886**	909
Renewal annuity spend	269	831	1,024	868	364	224	357	198	0	188		186
Dam safety upgrade	0	0	0	0	0	0	0	0	558	5,449		1,502
Total Expenditure	**1,435**	**1,772**	**1,946**	**1,727**	**1,227**	**1,065**	**1,268**	**1,132**	**1,477**	**6,532**	**886**	**2,259**
Expenditure Type												
Labour	241	230	251	237	257	258	262	262	262	262	262	262
Electricity	1	1	1	1	1	1	2	2	2	2	2	2
Materials	35	24	15	15	14	14	14	14	14	15	15	14
Contractors	251	20	27	23	18	18	18	19	19	19	19	19
Other	91	118	126	116	82	82	82	82	82	82	82	82
Indirects & Overheads	565	581	518	480	503	501	543	566	550	526	517	540
Revenue offsets	-19	-34	-15	-13	-11	-33	-11	-11	-11	-11	-11	-11
Total Operating Costs	**1,165**	**941**	**922**	**859**	**863**	**841**	**910**	**934**	**918**	**895**	**886**	**909**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	285	23%	90%	100%	257	285	29	71%	285	23%
Electricity	2	0%	100%	100%	2	2	0	0%	2	0%
Preventative maintenance	187	15%	90%	100%	69	77	8	19%	77	6%
Corrective maintenance	37	3%	90%	100%	14	15	2	4%	15	1%
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%	-11	-1%
Indirects & Overheads	541	n/a	100%	100%	541	541	n/a	n/a	541	44%
Operating costs	**909**	**74%**			**871**	**909**	**38**	**94%**	**909**	**74%**
Renewal annuity	320	26%	99%	100%	317	320	3	6%	320	26%
Total Expenditure	**1,229**	**100%**			**1,189**	**1,229**	**40**	**100%**	**1,229**	**100%**
Proportion of Total Expenditure					**97%**	**100%**	**3%**			
Expenditure Type										
Labour	262	29%	90%	100%	236	262	26	69%		
Electricity	2	0%	100%	100%	2	2	0	0%		
Materials	14	2%	90%	100%	13	14	1	4%		
Contractors	19	2%	90%	100%	17	19	2	5%		
Other	82	9%	90%	100%	74	82	8	22%		
Indirects & Overheads	540	59%	100%	100%	540	540	0	0%		
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%		
Total Operating Costs	**909**	**100%**			**871**	**909**	**38**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	285	23%	80%	100%	228	285	57	73%	285	23%
Electricity	2	0%	100%	100%	2	2	0	0%	2	0%
Preventative maintenance	77	6%	80%	100%	62	77	15	20%	77	6%
Corrective maintenance	15	1%	80%	100%	12	15	3	4%	15	1%
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%	-11	-1%
Indirects & Overheads	541	n/a	100%	100%	541	541	n/a	n/a	541	44%
Operating costs	909	**74%**			**834**	**909**	**75**	**97%**	**909**	**74%**
Renewal annuity	320	26%	99%	100%	317	320	3	3%	320	26%
Total Expenditure	**1,229**	**100%**			**1,151**	**1,229**	**78**	**100%**	**1,229**	**100%**
Proportion of Total Expenditure					**94%**	**100%**	**6%**			
Expenditure Type										
Labour	262	29%	80%	100%	210	262	52	69%		
Electricity	2	0%	100%	100%	2	2	0	0%		
Materials	14	2%	80%	100%	12	14	3	4%		
Contractors	19	2%	80%	100%	15	19	4	5%		
Other	82	9%	80%	100%	66	82	16	22%		
Indirects & Overheads	540	59%	100%	100%	540	540	0	0%		
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%		
Total Operating Costs	**909**	**100%**			**833**	**909**	**75**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	285	23%	70%	100%	200	285	86	73%	285	23%
Electricity	2	0%	100%	100%	2	2	0	0%	2	0%
Preventative maintenance	77	6%	70%	100%	54	77	23	20%	77	6%
Corrective maintenance	15	1%	70%	100%	11	15	5	4%	15	1%
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%	-11	-1%
Indirects & Overheads	368	n/a	100%	100%	541	541	n/a	n/a	541	44%
Operating costs	909	**74%**			**796**	**909**	**113**	**97%**	**909**	**74%**
Renewal annuity	320	26%	99%	100%	317	320	3	3%	320	26%
Total Expenditure	**1,229**	**100%**			**1,113**	**1,229**	**116**	**100%**	**1,229**	**100%**
Proportion of Total Expenditure					**91%**	**100%**	**9%**			
Expenditure Type										
Labour	262	29%	70%	100%	183	262	79	69%		
Electricity	2	0%	100%	100%	2	2	0	0%		
Materials	14	2%	70%	100%	10	14	4	4%		
Contractors	19	2%	70%	100%	13	19	6	5%		
Other	82	9%	70%	100%	57	82	25	22%		
Indirects & Overheads	540	59%	100%	100%	540	540	0	0%		
Revenue offsets	-11	-1%	100%	100%	-11	-11	0	0%		
Total Operating Costs	**909**	**100%**			**796**	**909**	**113**	**100%**		

Bulk Supply – Maranoa

Service Contract	Maranoa Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	37	25	30	21	22	22	23	24	23	23	23	23
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Preventative maintenance	26	3	1	1	7	7	7	7	7	7	7	7
Corrective maintenance	7	0	55	0	1	1	1	1	1	1	1	1
Revenue offsets	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs	**70**	**28**	**86**	**22**	**30**	**30**	**31**	**32**	**31**	**31**	**31**	31
Renewal annuity spend	20	0	0	3	17	0	0	0	10	15		6
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**89**	**28**	**86**	**26**	**47**	**30**	**31**	**32**	**41**	**46**	**31**	**36**
Expenditure Type												
Labour	4	5	6	3	8	8	8	8	8	8	8	8
Electricity	0	0	0	0	0	0	0	0	0	0	0	0
Materials	0	0	0	0	1	1	1	1	1	1	1	1
Contractors	8	0	51	3	0	0	0	0	0	0	0	0
Other	8	8	9	10	7	7	7	7	7	7	7	7
Indirects & Overheads	50	15	19	6	15	15	16	17	16	16	15	16
Revenue offsets	0	0	0	0	0	0	0	0	0	0	0	0
Total Operating Costs	**70**	**28**	**86**	**22**	**30**	**30**	**32**	**33**	**32**	**32**	**31**	**32**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	12	32%	90%	100%	10	12	1	71%	12	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	7	19%	90%	100%	3	4	0	22%	4	10%
Corrective maintenance	1	3%	90%	100%	0	1	0	3%	1	1%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	16	n/a	100%	100%	16	16	n/a	n/a	16	43%
Operating costs	**31**	**86%**			**30**	**31**	**2**	**96%**	**31**	**86%**
Renewal annuity	5	14%	99%	100%	5	5	0	4%	5	14%
Total Expenditure	**36**	**100%**			**35**	**36**	**2**	**100%**	**36**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	8	25%	90%	100%	7	8	1	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	1	3%	90%	100%	1	1	0	6%		
Contractors	0	0%			0	0	0	0%		
Other	7	22%	90%	100%	6	7	1	44%		
Indirects & Overheads	16	50%	100%	100%	16	16	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**32**	**100%**			**30**	**32**	**2**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	12	32%	80%	100%	9	12	2	73%	12	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	4	10%	80%	100%	3	4	1	22%	4	10%
Corrective maintenance	1	1%	80%	100%	0	1	0	3%	1	1%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	16	n/a	100%	100%	16	16	n/a	n/a	16	43%
Operating costs	31	**86%**			**28**	**31**	**3**	**98%**	**31**	**86%**
Renewal annuity	5	14%	99%	100%	5	5	0	2%	5	14%
Total Expenditure	**36**	**100%**			**33**	**36**	**3**	**100%**	**36**	**100%**
Proportion of Total Expenditure					**91%**	**100%**	**9%**			
Expenditure Type										
Labour	8	25%	80%	100%	6	8	2	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	1	3%	80%	100%	1	1	0	6%		
Contractors	0	0%			0	0	0	0%		
Other	7	22%	80%	100%	5	7	1	44%		
Indirects & Overheads	16	50%	100%	100%	16	16	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**32**	**100%**			**28**	**32**	**3**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	12	32%	70%	100%	8	12	3	74%	12	32%
Electricity	0	0%	100%	100%	0	0	0	0%	0	0%
Preventative maintenance	4	10%	70%	100%	2	4	1	22%	4	10%
Corrective maintenance	1	1%	70%	100%	0	1	0	3%	1	1%
Revenue offsets	0	0%	100%	100%	0	0	0	0%	0	0%
Indirects & Overheads	16	n/a	100%	100%	16	16	n/a	n/a	16	43%
Operating costs	31	**86%**			**27**	**31**	**5**	**99%**	**31**	**86%**
Renewal annuity	5	14%	99%	100%	5	5	0	1%	5	14%
Total Expenditure	**36**	**100%**			**31**	**36**	**5**	**100%**	**36**	**100%**
Proportion of Total Expenditure					**87%**	**100%**	**13%**			
Expenditure Type										
Labour	8	25%	70%	100%	5	8	2	50%		
Electricity	0	0%	100%	100%	0	0	0	0%		
Materials	1	3%	70%	100%	1	1	0	6%		
Contractors	0	0%			0	0	0	0%		
Other	7	22%	70%	100%	5	7	2	44%		
Indirects & Overheads	16	50%	100%	100%	16	16	0	0%		
Revenue offsets	0	0%	100%	100%	0	0	0	0%		
Total Operating Costs	**32**	**100%**			**27**	**32**	**5**	**100%**		

Bulk Supply – Pioneer River

Service Contract	Pioneer River Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	423	472	486	514	482	485	508	519	512	500	496	507
Electricity	3	4	2	3	3	3	4	4	5	5	6	5
Preventative maintenance	139	87	97	83	217	219	231	238	234	228	225	231
Corrective maintenance	265	355	337	129	175	176	184	188	187	185	184	186
Revenue offsets	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10
Operating costs	**821**	**909**	**913**	**719**	**867**	**874**	**917**	**939**	**928**	**908**	**901**	919
Renewal annuity spend	224	810	825	2,220	2,857	66	129	61	107	271		142
Dam safety upgrade	0	0	0	9	0	0	0	0	2,005	3,223		1,307
Total Expenditure	**1,045**	**1,718**	**1,738**	**2,948**	**3,724**	**940**	**1,046**	**1,000**	**3,040**	**4,402**	**901**	**2,078**
Expenditure Type												
Labour	203	198	208	168	224	227	230	230	230	230	230	230
Electricity	3	4	2	3	3	3	4	4	5	5	6	5
Materials	41	94	38	34	46	46	47	48	48	49	49	48
Contractors	32	95	126	37	53	54	55	56	56	57	57	56
Other	110	110	143	147	109	109	109	109	109	109	109	109
Indirects & Overheads	440	416	405	340	443	445	483	503	489	468	460	481
Revenue offsets	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10
Total Operating Costs	**821**	**909**	**913**	**719**	**867**	**874**	**918**	**940**	**927**	**908**	**901**	**919**

Low

	Price Path Average	Price Path Average	%		Range		Variable	% of total variable	Price Path Average	Price Path Average
Real dollars, $000	$	%	Low	High	Low	High	Costs	costs	$	%
Activity										
Operations	243	17%	90%	100%	219	243	24	51%	243	17%
Electricity	5	0%	100%	100%	5	5	0	0%	5	0%
Preventative maintenance	231	16%	90%	100%	100	111	11	23%	111	8%
Corrective maintenance	186	13%	90%	100%	80	89	9	19%	89	6%
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%	-10	-1%
Indirects & Overheads	480	n/a	100%	100%	480	480	n/a	n/a	480	33%
Operating costs	**919**	**64%**			**874**	**919**	**44**	**93%**	**919**	**64%**
Renewal annuity	520	36%	99%	100%	517	520	3	7%	520	36%
Total Expenditure	**1,439**	**100%**			**1,391**	**1,439**	**47**	**100%**	**1,439**	**100%**
Proportion of Total Expenditure					**97%**	**100%**	**3%**			
Expenditure Type										
Labour	230	25%	90%	100%	207	230	23	52%		
Electricity	5	1%	100%	100%	5	5	0	0%		
Materials	48	5%	90%	100%	43	48	5	11%		
Contractors	56	6%	90%	100%	51	56	6	13%		
Other	109	12%	90%	100%	98	109	11	25%		
Indirects & Overheads	481	52%	100%	100%	481	481	0	0%		
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%		
Total Operating Costs	**919**	**100%**			**874**	**919**	**44**	**100%**		

Recommended

	Price Path	Price Path	%		Range		Variable	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High	Costs			
Activity										
Operations	243	17%	80%	100%	195	243	49	53%	243	17%
Electricity	5	0%	100%	100%	5	5	0	0%	5	0%
Preventative maintenance	111	8%	80%	100%	89	111	22	24%	111	8%
Corrective maintenance	89	6%	80%	100%	71	89	18	19%	89	6%
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%	-10	-1%
Indirects & Overheads	480	n/a	100%	100%	480	480	n/a	n/a	480	33%
Operating costs	919	**64%**			**830**	**919**	**89**	**97%**	**919**	**64%**
Renewal annuity	520	36%	99%	100%	517	520	3	3%	520	36%
Total Expenditure	**1,439**	**100%**			**1,347**	**1,439**	**92**	**100%**	**1,439**	**100%**
Proportion of Total Expenditure					**94%**	**100%**	**6%**			
Expenditure Type										
Labour	230	25%	80%	100%	184	230	46	52%		
Electricity	5	1%	100%	100%	5	5	0	0%		
Materials	48	5%	80%	100%	39	48	10	11%		
Contractors	56	6%	80%	100%	45	56	11	13%		
Other	109	12%	80%	100%	87	109	22	25%		
Indirects & Overheads	481	52%	100%	100%	481	481	0	0%		
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%		
Total Operating Costs	**919**	**100%**			**830**	**919**	**89**	**100%**		

High

	Price Path	Price Path	%		Range		Variable	% of total variable	Price Path	Price Path
Real dollars, $000			Low	High	Low	High	Costs			
Activity										
Operations	243	17%	70%	100%	170	243	73	53%	243	17%
Electricity	5	0%	100%	100%	5	5	0	0%	5	0%
Preventative maintenance	111	8%	70%	100%	78	111	33	24%	111	8%
Corrective maintenance	89	6%	70%	100%	62	89	27	19%	89	6%
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%	-10	-1%
Indirects & Overheads	438	n/a	100%	100%	480	480	n/a	n/a	480	33%
Operating costs	919	**64%**			**786**	**919**	**133**	**96%**	**919**	**64%**
Renewal annuity	520	36%	99%	100%	515	520	5	4%	520	36%
Total Expenditure	**1,439**	**100%**			**1,300**	**1,439**	**138**	**100%**	**1,439**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	230	25%	70%	100%	161	230	69	52%		
Electricity	5	1%	100%	100%	5	5	0	0%		
Materials	48	5%	70%	100%	34	48	14	11%		
Contractors	56	6%	70%	100%	39	56	17	13%		
Other	109	12%	70%	100%	76	109	33	25%		
Indirects & Overheads	481	52%	100%	100%	481	481	0	0%		
Revenue offsets	-10	-1%	100%	100%	-10	-10	0	0%		
Total Operating Costs	**919**	**100%**			**786**	**919**	**133**	**100%**		

Bulk Supply – Proserpine River

Service Contract	Proserpine River Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	493	513	660	617	603	607	632	645	638	627	622	633
Electricity	3	3	3	4	4	4	5	6	6	7	7	6
Preventative maintenance	273	-3	77	65	134	135	141	145	144	142	141	143
Corrective maintenance	57	60	52	48	49	50	51	52	53	53	52	52
Revenue offsets	-170	-170	-173	-170	-169	-169	-169	-169	-169	-169	-169	-169
Operating costs	**656**	**402**	**619**	**564**	**621**	**627**	**660**	**679**	**672**	**660**	**653**	665
Renewal annuity spend	141	136	133	17	114	56	40	190	44	44		80
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**797**	**538**	**752**	**581**	**735**	**684**	**700**	**869**	**716**	**704**	**653**	**728**
Expenditure Type												
Labour	129	122	152	134	164	167	169	169	169	169	169	169
Electricity	3	3	3	4	4	4	5	6	6	7	7	6
Materials	103	20	46	58	62	63	64	64	65	66	66	65
Contractors	-12	5	75	80	95	96	98	99	101	102	102	100
Other	133	123	160	179	133	133	133	133	133	133	133	133
Indirects & Overheads	469	300	356	279	332	334	362	377	366	351	345	360
Revenue offsets	-170	-170	-173	-170	-169	-169	-169	-169	-169	-169	-169	-169
Total Operating Costs	**656**	**402**	**619**	**564**	**621**	**627**	**662**	**679**	**671**	**659**	**653**	**665**

Low

			%		Range					
Real dollars, $000	Price Path Average $	Price Path Average %	Low	High	Low	High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	357	41%	90%	100%	322	357	36	73%	357	41%
Electricity	6	1%	100%	100%	6	6	0	0%	6	1%
Preventative maintenance	143	16%	90%	100%	72	81	8	17%	81	9%
Corrective maintenance	52	6%	90%	100%	27	29	3	6%	29	3%
Revenue offsets	-169	-19%	100%	100%	-169	-169	0	0%	-169	-19%
Indirects & Overheads	360	n/a	100%	100%	360	360	n/a	n/a	360	42%
Operating costs	**665**	**77%**			**618**	**665**	**47**	**96%**	**665**	**77%**
Renewal annuity	202	23%	99%	100%	200	202	2	4%	202	23%
Total Expenditure	**867**	**100%**			**818**	**867**	**49**	**100%**	**867**	**100%**
Proportion of Total Expenditure					**94%**	**100%**	**6%**			
Expenditure Type										
Labour	169	25%	90%	100%	152	169	17	36%		
Electricity	6	1%	100%	100%	6	6	0	0%		
Materials	65	10%	90%	100%	59	65	7	14%		
Contractors	100	15%	90%	100%	90	100	10	21%		
Other	133	20%	90%	100%	120	133	13	28%		
Indirects & Overheads	360	54%	100%	100%	360	360	0	0%		
Revenue offsets	-169	-25%	100%	100%	-169	-169	0	0%		
Total Operating Costs	**665**	**100%**			**618**	**665**	**47**	**100%**		

Recommended

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	357	41%	80%	100%	286	357	71	75%	357	41%
Electricity	6	1%	100%	100%	6	6	0	0%	6	1%
Preventative maintenance	81	9%	80%	100%	64	81	16	17%	81	9%
Corrective maintenance	29	3%	80%	100%	24	29	6	6%	29	3%
Revenue offsets	-169	-19%	100%	100%	-169	-169	0	0%	-169	-19%
Indirects & Overheads	360	n/a	100%	100%	360	360	n/a	n/a	360	42%
Operating costs	665	**77%**			**571**	**665**	**93**	**98%**	**665**	**77%**
Renewal annuity	202	23%	99%	100%	200	202	2	2%	202	23%
Total Expenditure	**867**	**100%**			**771**	**867**	**96**	**100%**	**867**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	169	25%	80%	100%	135	169	34	36%		
Electricity	6	1%	100%	100%	6	6	0	0%		
Materials	65	10%	80%	100%	52	65	13	14%		
Contractors	100	15%	80%	100%	80	100	20	21%		
Other	133	20%	80%	100%	106	133	27	28%		
Indirects & Overheads	360	54%	100%	100%	360	360	0	0%		
Revenue offsets	-169	-25%	100%	100%	-169	-169	0	0%		
Total Operating Costs	**665**	**100%**			**571**	**665**	**93**	**100%**		

High

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	357	41%	70%	100%	250	357	107	75%	357	41%
Electricity	6	1%	100%	100%	6	6	0	0%	6	1%
Preventative maintenance	81	9%	70%	100%	56	81	24	17%	81	9%
Corrective maintenance	29	3%	70%	100%	21	29	9	6%	29	3%
Revenue offsets	-169	-19%	100%	100%	-169	-169	0	0%	-169	-19%
Indirects & Overheads	305	n/a	100%	100%	360	360	n/a	n/a	360	42%
Operating costs	665	**77%**			**525**	**665**	**140**	**99%**	**665**	**77%**
Renewal annuity	202	23%	99%	100%	200	202	2	1%	202	23%
Total Expenditure	**867**	**100%**			**725**	**867**	**142**	**100%**	**867**	**100%**
Proportion of Total Expenditure					**84%**	**100%**	**16%**			
Expenditure Type										
Labour	169	25%	70%	100%	118	169	51	36%		
Electricity	6	1%	100%	100%	6	6	0	0%		
Materials	65	10%	70%	100%	46	65	20	14%		
Contractors	100	15%	70%	100%	70	100	30	21%		
Other	133	20%	70%	100%	93	133	40	28%		
Indirects & Overheads	360	54%	100%	100%	360	360	0	0%		
Revenue offsets	-169	-25%	100%	100%	-169	-169	0	0%		
Total Operating Costs	**665**	**100%**			**525**	**665**	**140**	**100%**		

Bulk Supply – Three Moon

Service Contract	Three Moon Creek Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	253	198	311	368	218	220	230	234	231	226	224	229
Electricity	6	6	7	8	9	9	9	10	11	12	13	11
Preventative maintenance	183	30	35	33	83	83	88	90	89	86	85	88
Corrective maintenance	26	16	1	12	13	13	13	14	14	13	13	13
Revenue offsets	-4	-4	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2
Operating costs	**463**	**246**	**351**	**418**	**320**	**323**	**338**	**346**	**343**	**335**	**333**	339
Renewal annuity spend	4	62	87	30	52	117	58	127	124	0		77
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**467**	**308**	**438**	**448**	**372**	**440**	**396**	**473**	**467**	**335**	**333**	**401**
Expenditure Type												
Labour	75	52	77	96	89	90	92	92	92	92	92	92
Electricity	6	6	7	8	9	9	9	10	11	12	13	11
Materials	11	5	2	3	4	4	4	4	4	4	4	4
Contractors	2	3	6	17	3	3	4	4	4	4	4	4
Other	47	47	88	96	50	50	50	50	50	50	50	50
Indirects & Overheads	326	138	172	200	167	168	182	189	184	177	173	181
Revenue offsets	-4	-4	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2
Total Operating Costs	**463**	**246**	**351**	**418**	**320**	**323**	**339**	**347**	**343**	**337**	**334**	**340**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	104	23%	90%	100%	93	104	10	64%	104	23%
Electricity	11	2%	100%	100%	11	11	0	0%	11	2%
Preventative maintenance	88	20%	90%	100%	36	40	4	24%	40	9%
Corrective maintenance	13	3%	90%	100%	5	6	1	4%	6	1%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	180	n/a	100%	100%	180	180	n/a	n/a	180	41%
Operating costs	**339**	**76%**			**324**	**339**	**15**	**92%**	**339**	**76%**
Renewal annuity	106	24%	99%	100%	105	106	1	8%	106	24%
Total Expenditure	**445**	**100%**			**429**	**445**	**16**	**100%**	**445**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	92	27%	90%	100%	83	92	9	61%		
Electricity	11	3%	100%	100%	11	11	0	0%		
Materials	4	1%	90%	100%	4	4	0	3%		
Contractors	4	1%	90%	100%	4	4	0	3%		
Other	50	15%	90%	100%	45	50	5	33%		
Indirects & Overheads	181	53%	100%	100%	181	181	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**340**	**100%**			**325**	**340**	**15**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	104	23%	80%	100%	83	104	21	67%	104	23%
Electricity	11	2%	100%	100%	11	11	0	0%	11	2%
Preventative maintenance	40	9%	80%	100%	32	40	8	25%	40	9%
Corrective maintenance	6	1%	80%	100%	5	6	1	4%	6	1%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	180	n/a	100%	100%	180	180	n/a	n/a	180	41%
Operating costs	339	**76%**			**309**	**339**	**30**	**96%**	**339**	**76%**
Renewal annuity	106	24%	99%	100%	105	106	1	4%	106	24%
Total Expenditure	**445**	**100%**			**414**	**445**	**31**	**100%**	**445**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	92	27%	80%	100%	73	92	18	61%		
Electricity	11	3%	100%	100%	11	11	0	0%		
Materials	4	1%	80%	100%	3	4	1	3%		
Contractors	4	1%	80%	100%	3	4	1	3%		
Other	50	15%	80%	100%	40	50	10	33%		
Indirects & Overheads	181	53%	100%	100%	181	181	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**340**	**100%**			**310**	**340**	**30**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	104	23%	70%	100%	73	104	31	68%	104	23%
Electricity	11	2%	100%	100%	11	11	0	0%	11	2%
Preventative maintenance	40	9%	70%	100%	28	40	12	26%	40	9%
Corrective maintenance	6	1%	70%	100%	4	6	2	4%	6	1%
Revenue offsets	-2	0%	100%	100%	-2	-2	0	0%	-2	0%
Indirects & Overheads	159	n/a	100%	100%	180	180	n/a	n/a	180	41%
Operating costs	339	**76%**			**294**	**339**	**45**	**98%**	**339**	**76%**
Renewal annuity	106	24%	99%	100%	105	106	1	2%	106	24%
Total Expenditure	**445**	**100%**			**399**	**445**	**46**	**100%**	**445**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	92	27%	70%	100%	64	92	28	61%		
Electricity	11	3%	100%	100%	11	11	0	0%		
Materials	4	1%	70%	100%	3	4	1	3%		
Contractors	4	1%	70%	100%	3	4	1	3%		
Other	50	15%	70%	100%	35	50	15	33%		
Indirects & Overheads	181	53%	100%	100%	181	181	0	0%		
Revenue offsets	-2	-1%	100%	100%	-2	-2	0	0%		
Total Operating Costs	**340**	**100%**			**295**	**340**	**45**	**100%**		

Bulk Supply – Upper Burnett

Service Contract	Upper Burnett Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	439	375	632	549	507	511	534	545	538	526	520	533
Electricity	3	5	6	6	7	7	8	8	9	10	10	9
Preventative maintenance	117	58	76	64	130	131	138	141	139	136	134	138
Corrective maintenance	20	26	26	56	32	32	34	35	34	34	33	34
Revenue offsets	-2	-12	-20	-9	-8	-8	-8	-8	-8	-8	-8	-8
Operating costs	**578**	**451**	**720**	**666**	**667**	**673**	**706**	**721**	**712**	**698**	**689**	705
Renewal annuity spend	280	275	148	374	160	324	227	270	237	165		225
Dam safety upgrade	0	0	0	0	0	0	0	0	0	599		150
Total Expenditure	**858**	**725**	**868**	**1,041**	**827**	**997**	**933**	**991**	**949**	**1,462**	**689**	**1,005**
Expenditure Type												
Labour	164	131	158	169	190	192	195	195	195	195	195	195
Electricity	3	5	6	6	7	7	8	8	9	10	10	9
Materials	12	9	12	11	12	12	12	12	12	13	13	12
Contractors	16	16	24	22	15	15	15	15	15	16	16	15
Other	98	88	146	131	96	96	96	96	96	96	96	96
Indirects & Overheads	286	212	391	334	356	359	388	402	393	376	368	385
Revenue offsets	-2	-12	-20	-9	-8	-8	-8	-8	-8	-8	-8	-8
Total Operating Costs	**578**	**451**	**720**	**666**	**667**	**673**	**706**	**720**	**712**	**698**	**690**	**705**

Low

			%		Range					
Real dollars, $000	Price Path Average $	Price Path Average %	Low	High	Low	High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	241	25%	90%	100%	217	241	24	68%	241	25%
Electricity	9	1%	100%	100%	9	9	0	0%	9	1%
Preventative maintenance	138	14%	90%	100%	56	62	6	18%	62	6%
Corrective maintenance	34	4%	90%	100%	14	15	2	4%	15	2%
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%	-8	-1%
Indirects & Overheads	385	n/a	100%	100%	385	385	n/a	n/a	385	40%
Operating costs	**705**	**73%**			**673**	**705**	**32**	**91%**	**705**	**73%**
Renewal annuity	257	27%	99%	100%	254	257	3	9%	257	27%
Total Expenditure	**962**	**100%**			**927**	**962**	**35**	**100%**	**962**	**100%**
Proportion of Total Expenditure					**96%**	**100%**	**4%**			
Expenditure Type										
Labour	195	28%	90%	100%	176	195	20	61%		
Electricity	9	1%	100%	100%	9	9	0	0%		
Materials	12	2%	90%	100%	11	12	1	4%		
Contractors	15	2%	90%	100%	14	15	2	5%		
Other	96	14%	90%	100%	86	96	10	30%		
Indirects & Overheads	385	55%	100%	100%	385	385	0	0%		
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%		
Total Operating Costs	**705**	**100%**			**673**	**705**	**32**	**100%**		

Recommended

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	241	25%	80%	100%	193	241	48	72%	241	25%
Electricity	9	1%	100%	100%	9	9	0	0%	9	1%
Preventative maintenance	62	6%	80%	100%	50	62	12	19%	62	6%
Corrective maintenance	15	2%	80%	100%	12	15	3	5%	15	2%
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%	-8	-1%
Indirects & Overheads	385	n/a	100%	100%	385	385	n/a	n/a	385	40%
Operating costs	705	**73%**			**641**	**705**	**64**	**95%**	**705**	**73%**
Renewal annuity	257	27%	99%	100%	254	257	3	5%	257	27%
Total Expenditure	**962**	**100%**			**895**	**962**	**67**	**100%**	**962**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	195	28%	80%	100%	156	195	39	61%		
Electricity	9	1%	100%	100%	9	9	0	0%		
Materials	12	2%	80%	100%	10	12	2	4%		
Contractors	15	2%	80%	100%	12	15	3	5%		
Other	96	14%	80%	100%	77	96	19	30%		
Indirects & Overheads	385	55%	100%	100%	385	385	0	0%		
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%		
Total Operating Costs	**705**	**100%**			**641**	**705**	**64**	**100%**		

High

			%		Range					
Real dollars, $000	Price Path	Price Path	Low	High	Low	High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	241	25%	70%	100%	169	241	72	74%	241	25%
Electricity	9	1%	100%	100%	9	9	0	0%	9	1%
Preventative maintenance	62	6%	70%	100%	44	62	19	19%	62	6%
Corrective maintenance	15	2%	70%	100%	11	15	5	5%	15	2%
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%	-8	-1%
Indirects & Overheads	320	n/a	100%	100%	385	385	n/a	n/a	385	40%
Operating costs	705	**73%**			**610**	**705**	**96**	**97%**	**705**	**73%**
Renewal annuity	257	27%	99%	100%	254	257	3	3%	257	27%
Total Expenditure	**962**	**100%**			**864**	**962**	**98**	**100%**	**962**	**100%**
Proportion of Total Expenditure					**90%**	**100%**	**10%**			
Expenditure Type										
Labour	195	28%	70%	100%	137	195	59	61%		
Electricity	9	1%	100%	100%	9	9	0	0%		
Materials	12	2%	70%	100%	9	12	4	4%		
Contractors	15	2%	70%	100%	11	15	5	5%		
Other	96	14%	70%	100%	67	96	29	30%		
Indirects & Overheads	385	55%	100%	100%	385	385	0	0%		
Revenue offsets	-8	-1%	100%	100%	-8	-8	0	0%		
Total Operating Costs	**705**	**100%**			**610**	**705**	**96**	**100%**		

Bulk Supply – Upper Condamine

Service Contract	Upper Condamine Bulk Supply											
	Actuals				Forecast		Price path					
Real dollars, $000	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Price Path Average
Activity												
Operations	696	744	728	626	646	651	684	700	689	673	667	683
Electricity	8	98	45	52	55	55	54	58	62	68	73	63
Preventative maintenance	247	95	114	116	163	164	174	179	176	170	169	174
Corrective maintenance	42	253	84	55	68	69	72	74	73	72	72	73
Revenue offsets	-1	-5	-7	-8	-6	-6	-6	-6	-6	-6	-6	-6
Operating costs	**993**	**1,186**	**965**	**842**	**927**	**934**	**978**	**1,005**	**994**	**977**	**975**	986
Renewal annuity spend	680	580	214	262	413	560	260	410	378	654		426
Dam safety upgrade	0	0	0	0	0	0	0	0	0	0		0
Total Expenditure	**1,673**	**1,766**	**1,178**	**1,104**	**1,340**	**1,494**	**1,238**	**1,415**	**1,372**	**1,631**	**975**	**1,326**
Expenditure Type												
Labour	223	232	216	193	245	249	252	252	252	252	252	252
Electricity	8	98	45	52	55	55	54	58	62	68	73	63
Materials	48	54	30	26	33	33	33	34	34	35	35	34
Contractors	10	49	27	53	28	28	29	29	30	30	30	30
Other	111	130	140	141	90	90	90	90	90	90	90	90
Indirects & Overheads	593	628	513	385	482	484	525	547	532	509	500	523
Revenue offsets	-1	-5	-7	-8	-6	-6	-6	-6	-6	-6	-6	-6
Total Operating Costs	**993**	**1,186**	**965**	**842**	**927**	**934**	**977**	**1,004**	**994**	**978**	**974**	**985**

Low

Real dollars, $000	Price Path Average $	Price Path Average %	% Low	% High	Range Low	Range High	Variable Costs	% of total variable costs	Price Path Average $	Price Path Average %
Activity										
Operations	298	18%	90%	100%	269	298	30	27%	298	18%
Electricity	63	4%	0%	100%	0	63	63	57%	63	4%
Preventative maintenance	174	10%	90%	100%	68	76	8	7%	76	5%
Corrective maintenance	73	4%	90%	100%	29	32	3	3%	32	2%
Revenue offsets	-6	0%	100%	100%	-6	-6	0	0%	-6	0%
Indirects & Overheads	523	n/a	100%	100%	523	523	n/a	n/a	523	31%
Operating costs	**986**	**59%**			**882**	**986**	**104**	**94%**	**986**	**59%**
Renewal annuity	687	41%	99%	100%	680	687	7	6%	687	41%
Total Expenditure	**1,673**	**100%**			**1,562**	**1,673**	**110**	**100%**	**1,673**	**100%**
Proportion of Total Expenditure					**93%**	**100%**	**7%**			
Expenditure Type										
Labour	252	26%	90%	100%	227	252	25	24%		
Electricity	63	6%	0%	100%	0	63	63	61%		
Materials	34	3%	90%	100%	31	34	3	3%		
Contractors	30	3%	90%	100%	27	30	3	3%		
Other	90	9%	90%	100%	81	90	9	9%		
Indirects & Overheads	523	53%	100%	100%	523	523	0	0%		
Revenue offsets	-6	-1%	100%	100%	-6	-6	0	0%		
Total Operating Costs	**985**	**100%**			**882**	**986**	**104**	**100%**		

Recommended

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	298	18%	80%	100%	239	298	60	40%	298	18%
Electricity	63	4%	0%	100%	0	63	63	42%	63	4%
Preventative maintenance	76	5%	80%	100%	61	76	15	10%	76	5%
Corrective maintenance	32	2%	80%	100%	25	32	6	4%	32	2%
Revenue offsets	-6	0%	100%	100%	-6	-6	0	0%	-6	0%
Indirects & Overheads	523	n/a	100%	100%	523	523	n/a	n/a	523	31%
Operating costs	**986**	**59%**			**842**	**986**	**144**	**95%**	**986**	**59%**
Renewal annuity	687	41%	99%	100%	680	687	7	5%	687	41%
Total Expenditure	**1,673**	**100%**			**1,522**	**1,673**	**151**	**100%**	**1,673**	**100%**
Proportion of Total Expenditure					**91%**	**100%**	**9%**			
Expenditure Type										
Labour	252	26%	80%	100%	202	252	50	35%		
Electricity	63	6%	0%	100%	0	63	63	44%		
Materials	34	3%	80%	100%	27	34	7	5%		
Contractors	30	3%	80%	100%	24	30	6	4%		
Other	90	9%	80%	100%	72	90	18	12%		
Indirects & Overheads	523	53%	100%	100%	523	523	0	0%		
Revenue offsets	-6	-1%	100%	100%	-6	-6	0	0%		
Total Operating Costs	**985**	**100%**			**841**	**986**	**144**	**100%**		

High

Real dollars, $000	Price Path	Price Path	% Low	% High	Range Low	Range High	Variable Costs	% of total variable	Price Path	Price Path
Activity										
Operations	298	18%	70%	100%	209	298	90	47%	298	18%
Electricity	63	4%	0%	100%	0	63	63	33%	63	4%
Preventative maintenance	76	5%	70%	100%	53	76	23	12%	76	5%
Corrective maintenance	32	2%	70%	100%	22	32	10	5%	32	2%
Revenue offsets	-6	0%	100%	100%	-6	-6	0	0%	-6	0%
Indirects & Overheads	463	n/a	100%	100%	523	523	n/a	n/a	523	31%
Operating costs	986	**59%**			**801**	**986**	**185**	**96%**	**986**	**59%**
Renewal annuity	687	41%	99%	100%	680	687	7	4%	687	41%
Total Expenditure	**1,673**	**100%**			**1,481**	**1,673**	**192**	**100%**	**1,673**	**100%**
Proportion of Total Expenditure					**89%**	**100%**	**11%**			
Expenditure Type										
Labour	252	26%	70%	100%	176	252	76	41%		
Electricity	63	6%	0%	100%	0	63	63	34%		
Materials	34	3%	70%	100%	24	34	10	6%		
Contractors	30	3%	70%	100%	21	30	9	5%		
Other	90	9%	70%	100%	63	90	27	15%		
Indirects & Overheads	523	53%	100%	100%	523	523	0	0%		
Revenue offsets	-6	-1%	100%	100%	-6	-6	0	0%		
Total Operating Costs	**985**	**100%**			**801**	**986**	**185**	**100%**		