

Logan River Water Supply Scheme

Network Service Plan

Updated: 24 July 2012

1. Introduction

Review Context

The QCA has been directed by the Queensland Government to recommend irrigation prices for the Logan River Water Supply Scheme (the Scheme) for the four-year regulatory period 1 July 2013 to 30 June 2017. Prices are to recover the efficient operating, maintenance and administration costs, and an annuity to recover renewals and rehabilitation expenditure. This level of cost recovery is typically referred to as the lower bound (lower bound costs).

The QCA is required to provide a draft report including draft irrigation prices by 30 November 2012 and a final report with recommended price paths by April 2013.

The current irrigation prices were set when the Scheme was owned by SunWater, and commenced from 1 July 2006. The Scheme was transferred to Seqwater in 2008-09, along with the SunWater pricing arrangements. This is the first review of irrigation prices since the Scheme has been in Seqwater ownership.

This document is the Network Service Plan (NSP) for the Scheme. It sets out information relevant to the QCA's review, including Seqwater's expenditure proposals over the regulatory period and specific pricing proposals for the Scheme.

This is an update to the NSPs first made in April, 2012 and incorporates changes foreshadowed in that original NSP, as well as other amendments. The most significant change results from updates to renewals balances and additional renewals expenditure to capture a meter replacement program (distinct from upgrades to improve accuracy to meet forthcoming national standards, which is outside the scope of this review).

Forecast operating expenditure includes both direct and non-direct expenditure and is based on operating expenditure in a representative base year (2012-13) escalated forward over each year of the regulatory period on the basis of predetermined escalation factors. The base year adopts the costs presented to the QCA for its review of Grid Service Charges for the 2012-13 year. The QCA has since published a draft report recommending Grid Service Charges for the 2012-13 year however a final report is yet to be released. While Seqwater would prefer to wait until the 2012-13 base year is finalised, the QCA has requested that updated Network Service Plans are provided before the 2012-13 GSCs are released.

Accordingly, Seqwater has not updated the operating costs for the 2012-13 year as final information is not yet available. However, Seqwater submits that the operating costs that form the 2012-13 base year should be updated to reflect the QCA's final recommendations. This may affect both or either the direct costs, as well as the non-direct cost pool and the allocation of those costs.

Hence the operating costs in this NSP, along with the lower bound reference costs and reference tariffs should be considered interim and do not represent Seqwater's final cost base. Notwithstanding this situation, lower bound costs for each WSS have been provided, with those costs allocated to different priority groups (medium and high) within the Scheme.

About Seqwater

Seqwater owns different types of water supply assets and service types, namely:

- Storage assets - Seqwater owns 26 dams and 48 weirs which provide bulk water storage services to a range of water entitlement holders in South East Queensland, including irrigators, local governments, industrial users and the SEQ Water Grid Manager (WGM);
- Bulk distribution assets - Seqwater also provides distribution system services to irrigators from pipelines and channel systems;
- Water treatment assets - Seqwater provides drinking water to the WGM from 46 water treatment plants;
- A desalination plant - provides bulk drinking water to the WGM;
- An advanced recycled water scheme, which provides treated recycled water to the WGM;
- Groundwater - Seqwater provides drinking water to the WGM from 14 groundwater bore fields.

Seqwater owns, manages and operates physical assets with a book value of \$6.3 billion. Seqwater provides irrigation services to around 1,455 rural customers in seven water supply schemes.

Seqwater also owns unregulated assets such as its head office building at 240 Margaret Street, water entitlements held for trading in the Upper Mary Water Supply Scheme, and two hydro-electricity plants. No costs of these assets are attributed to regulated assets.

Seqwater's total regulated revenue allowance for 2011-12 was \$705M to \$709M, of which some \$3.3M relates to irrigation supplies. Of this \$3.3M, some \$1.9M is sourced directly from irrigation charges, with the balance sourced from a Community Service Obligation (CSO) payment.

Interpretation of terms used

For the purposes of this NSP, the following terms are defined as follows:

Water Access Entitlement (WAE) – means water allocations, interim water allocations or water licences.

Scheme background and context

The Scheme supplies water access entitlements owned by irrigators, industrial users, Seqwater and the South East Queensland Water Grid Manager (WGM). The Scheme was transferred to Seqwater from SunWater Limited on 1 July, 2008. The map in section 2 below presents an overview of the Scheme, including the locations of storages and monitoring/gauging stations.

The Scheme is regulated under the Logan River Water Supply Scheme Resource Operations Licence, issued on 7 December 2009. Seqwater must comply with the Logan Basin Resource Operations Plan as part of this Licence.

The scheme consists of bulk water supply assets only. No distribution systems are associated with this scheme. All irrigators take their water supply directly from the river systems.

Customers served

The Scheme supplies water to:

- Irrigation users;
- SEQ Water Grid Manager;
- Five other users; and
- Seqwater.

Further details are set out in section 2 below.

Asset base

The asset base of the scheme consists of bulk water storage assets. These assets are listed in section 2 below and details of individual assets can be found in Appendix A.

Organisational resourcing arrangements

Seqwater is well advanced in transitioning its resourcing arrangements from those inherited in July 2008. Key achievements include:

- replacing service level agreements with previous asset owners (e.g. Councils) with internal staff appointments;

- negotiating a single enterprise bargaining agreement (refer below) to standardise work conditions; and
- developing and refining the structure of the organisation and recruiting the necessary resources.

Seqwater has also substantially completed its procurement arrangements for external resources, including consultants and contractors. Seqwater continues to outsource many maintenance activities for its assets, usually with local suppliers. Seqwater has recently gone to market for a panel for maintenance services providers and is currently finalising the awarding of contracts.

Seqwater inherited 14 different enterprise agreements which required 47 separate payroll runs. Seqwater has since consolidated these into a single enterprise agreement, with a single payroll.

The enterprise agreement process also provided for more standardised work hours and overtime arrangements, and included the establishment of a 38 hour week.

The standardisation achieved through a single enterprise agreement has allowed more streamlined systems to be implemented, reducing the implementation costs for the payroll system and enabling a reduction in the number of staff required to administer the payroll from seven to two.

Seqwater's current enterprise agreement, which was certified on 2 November 2009, will expire on 30 June 2012. Seqwater is now meeting with all unions in regards to a replacement agreement.

Key systems and processes

Seqwater also inherited a diverse range of systems and business processes from previous asset owners. Since 2008-09, Seqwater has given priority to developing its systems so that they can support the business and enable more streamlined business processes.

Seqwater has completed a post implementation review across all modules of its Corporate Information System (CIS). As a result, Seqwater is committed to a series of continuous improvements for better business performance.

Seqwater is continuing with its program of end-to-end process reviews to identify improvements and generate cost savings in performing its business support and related activities.

Asset management

Asset management practice within Seqwater does not distinguish between irrigation and non-irrigation assets. Assets are managed as a portfolio and not on an industry sector basis.

Seqwater acquired the Logan River Water Supply Scheme from SunWater Limited. While the physical assets were transferred, much of the asset history was not. The staff members who also transferred to Seqwater were mostly operations rather than maintenance staff. This meant that corporate asset management knowledge was not transferred along with the assets.

Seqwater's maintenance and renewals program is evolving and moving towards industry best practice. However, this process is resource-intensive and relies on a long history of quality, consistent asset information before reaching full maturity.

Seqwater's maintenance tasks and associated expenditure follows two broad categories:

- Planned maintenance – which relates to regular maintenance items that arise from an annual maintenance schedule, as well as work that is added to the maintenance program as a result of new information or inspections carried out during the year; and
- Unplanned maintenance – relating to maintenance that is made in reaction to events and where corrective work needs to be carried out quickly (eg for compliance or service reasons).

Seqwater uses the Asset Management module within CIS to plan and schedule asset maintenance work. Work orders are produced on the system for each parcel of work required to be performed to capture the costs of performing the work.

Renewals and refurbishments are determined through a strategic asset management process. This process and its outcomes are documented in Facility Asset Management Plans (FAMPs), which are being rolled out across all assets. Irrigation assets are currently not as advanced in this process as the high-priority water treatment plants.

Procurement

Seqwater complies with the State Procurement Policy (SPP). Policies, procedures and processes consistent with, and supporting, the requirements of the SPP have been developed and are in operation. Where possible, procurement processes are system based using the Supply Chain Module in Seqwater's Corporate Information System (CIS).

Procurement activities are undertaken at all business sites.

Seqwater's Procurement Team monitors and analyses a range of performance indicators to identify opportunities to improve performance and minimise costs.

Seqwater is currently reviewing its "procure to pay" process to streamline the procurement of services and goods, management of delivery and payment for services.

Customer and Financial Management

Customer information management including invoicing and accounts receivable operations for the Scheme are carried out from Seqwater's Karalee office. Financial management including financial reporting and accounts payable processing is centralised in Seqwater's Finance group in the Margaret Street office. Accounts payable is carried out using the AP module in CIS.

Insurance

Seqwater's portfolio of assets is insured with differing premium and deductible arrangements in place for bulk water and channel distribution systems. This requires specialist management of the insurances held, including management of claims and renewals and providing information to insurers and brokers.

Insurance premiums are obtained for a portfolio of Seqwater assets.

Although insurance premiums have not been allocated directly to schemes previously, these costs will be properly allocated to each WSS in future.

2. Scheme details

The Scheme is located in the Logan River Basin and supplies bulk raw water to WAE in the nine zones that comprise the Scheme. The scheme stretches along a 101.4 km length of the Logan River and along 27 km of Burnett Creek. It was designed to supplement natural flows for the fertile alluvial areas along Burnett Creek and Logan River.

The Scheme was established following construction of Maroon Dam in 1974. Since that time, new storages were developed, namely Cedar Grove Weir, Bromelton Weir, South Maclean Weir and Bromelton Off-Stream Storage.

Most recently, Wyaralong Dam has been developed and a consultation process was commenced in 2010 to amend the ROP to include the Dam. The Dam was transferred to Seqwater in July 2011.

Infrastructure details

The table below sets out the bulk water assets that comprise the scheme.

Table 2-1. Bulk water assets

Dams	Maroon Dam, Wyaralong Dam
Weirs	Cedar Grove Weir, Bromelton Weir, South Maclean Weir
Off-stream storages	Bromelton Off-Stream Storage.
Other bulk water assets	Gauging stations

Seqwater has excluded Wyaralong Dam from the scheme assets considered for irrigation pricing purposes, on the basis that:

- the dam was developed with the stated intention that it would provide water for future urban and industrial demands in SEQ; and
- it is not included in the water sharing rules for irrigation at this stage.

Also excluded are Bromelton Off-Stream Storage and Cedar Grove Weir as these are drought mitigation assets constructed for the water grid and not for irrigation purposes.

For details of the assets, see Appendix A.

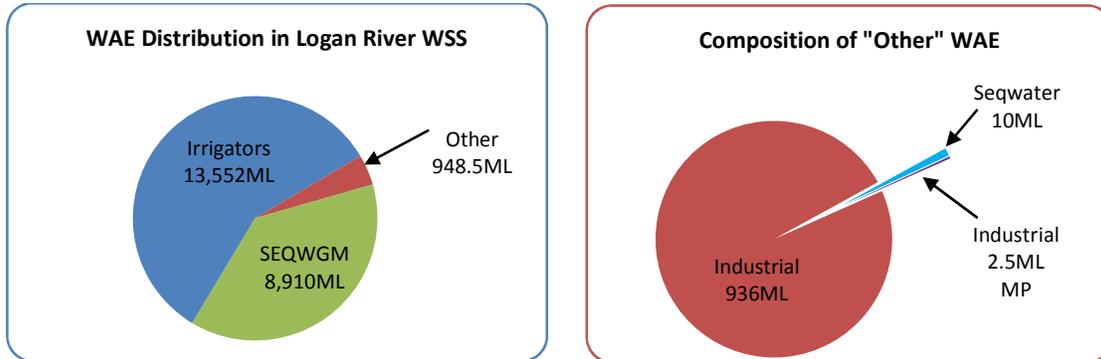
Customers and water entitlements serviced

The Scheme supplies water to:

- Irrigation users, comprising 136 customers who hold 13,552 ML of medium priority WAE;
- the SEQWGM, who holds 8,910 ML of high priority WAE; and
- Five other users (plus Seqwater), who together hold 948.5 ML of high priority WAE.

The following charts illustrate the distribution of WAE amongst classes of customers.

Figure 2-1. WAE Distribution



There are two different types of WAE in the scheme being medium priority (MP) and high priority (HP). The following table sets out the ownership (as at 30 November 2011) of WAE in the Logan River WSS, by priority:

Table 2-2. Ownership of Entitlements

Type of WA holder	No. of Seqwater customers	MP Vol (ML)	HP Vol (ML)
Irrigation	136	13,552	-
MP Industrial	1	2.5	-
HP Industrial	5	-	936
Seqwater (QBWSA)	7	-	10
SEQWGM	-	-	8,910
Totals	149	13,554.5	9,856

Source: Logan Basin Resource Operations Plan which was approved by the Governor in Council in December 2009 and Seqwater's customer information data.

Accordingly, medium priority WAE comprise 58% of all WAE issued in the Scheme.

Water availability and use

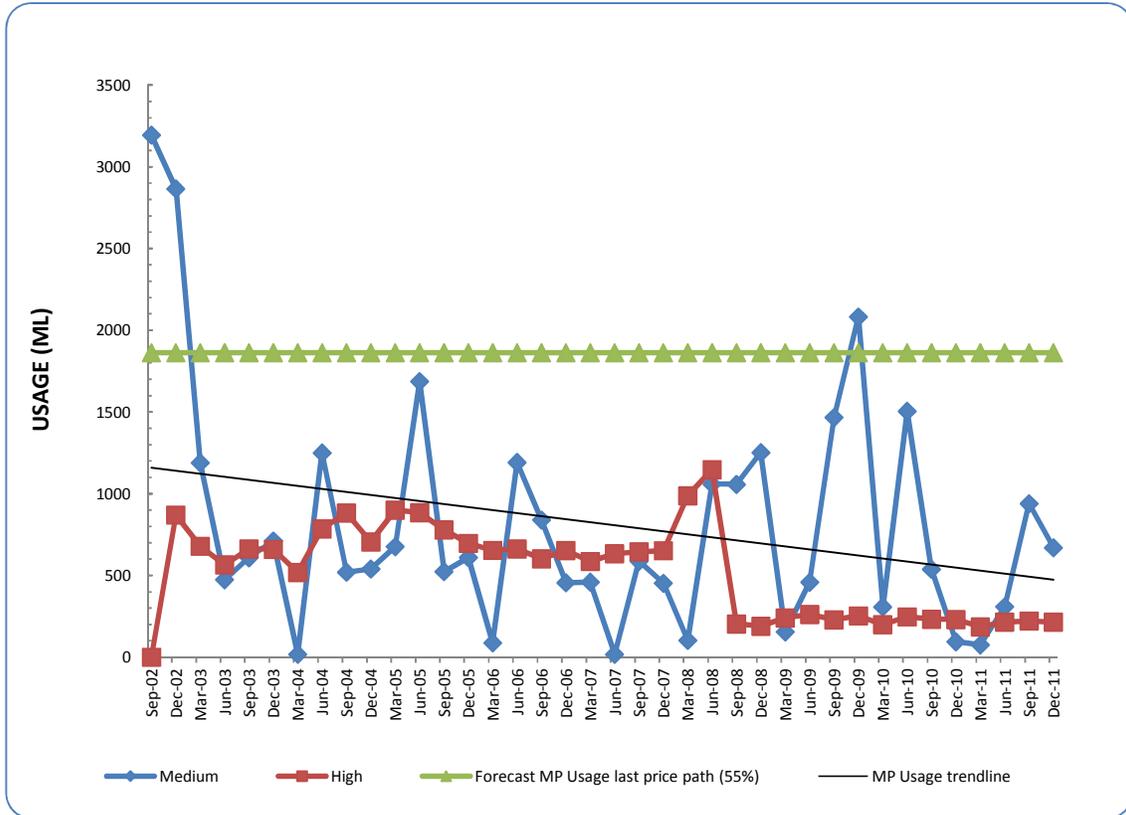
The announced allocation determines the percentage of nominal WAE volume that is available in a water year (1 July to 30 June). The following table sets out the announced allocation over the past four years for medium priority WAE.

Table 2-3. Announced allocations (%)

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
HP	0-50	100	0	0	0-100	100	100	100	100
MP	0	10	0	0	0-90	95-100	100	100	100

The current irrigation price paths adopted a usage forecast of 55% of the nominal amount of MP WAEs, equivalent to 7,454ML/annum. The comparison of MP forecast usage to actual quarterly usage for the last 9 years is illustrated in the graph below.

Figure 2-2. Actual Usage 2002-11



As can be seen from the graph above, the continuing drought conditions impacted the availability of water during 2004, and 2006 to 2008. The reduction in high priority usage from July, 2008 resulted from the transfer of Beaudesert Shire Council WAE to the SEQ Water Grid Manager under the SEQ water reforms.

Average annual usage comparison of Medium Priority water

The average annual usage comparison to MP forecast usage is set out in the table below:

Table 2-4. Forecast vs actual usage

Forecast annual usage for 2006-11 price path	7,454 ML/annum
Average actual annual usage for 2006-11 price path	2,707 ML/annum
Average actual annual usage for 9 years to December 2011	3,267 ML/annum

Temporary transfers

Temporary transfers or seasonal water assignments are useful for meeting additional short-term water needs. Under these transfers or assignments, some or all of the water that may be taken under a water entitlement in any water year can be assigned to another person or place.

The transfer of a volume of water from the amount available under the entitlement may only be assigned after the announced allocation. The volume assigned is not affected by any increase in the announced allocation during the water year, the benefits of which go to the holder of the entitlement and not the person to whom the temporary transfer of water has been assigned.

The following table sets out the volumes of temporary transfers by year from 1 July 2008 to 31 March 2012.

Table 2-5. Temporary transfers

Year	2008-09	2009-10	2010-11	2011-12
Volume in ML	201	126.5	302	21.8

Customer service standards

The current service standards were established in consultation with customer representatives in 2001 and were carried across to Seqwater from SunWater Limited. Although it is not intended that service standards should undergo major change during the price path period, they are to be periodically reviewed on an as-needs basis such as in response to requests by customer representatives or by Seqwater. This NSP is based on the existing service standards continuing throughout the regulatory 4 year period.

The document “*Water Supply Arrangements and Service Targets*” for Logan River is attached to this NSP in Appendix B. This document sets out the customer service standards for the Scheme.

2006 lower bound costs

The 2006 price review process conducted by SunWater with customer representatives established the lower bound cost for the Scheme. These lower bound costs are:

- Operations and maintenance costs;
- Administration costs, including a share of overhead; and
- The cost of asset renewals, via a renewals annuity.

The five year average lower bound cost recovery target established for this Scheme was \$306,669. The following table sets out the yearly targets and the five year average efficient lower bound costs:

Table 2-6. 2006 Lower Bound Costs (real, \$2005-06)

2005/06 IRRIGATION PRICE REVIEW LOGAN RIVER WATER SUPPLY SCHEME SCHEME IRRIGATION LOWER BOUND COSTS & REFERENCE IRRIGATION TARIFFS						
SCHEME IRRIGATION LOWER BOUND COSTS						
	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year
	2006/07	2007/08	2008/09	2009/10	2010/11	Average
Lower Bound Costs	318,342	334,303	326,091	312,412	289,446	316,119
Operations, maintenance & administration	1,184	1,184	1,184	1,184	1,184	1,184
Electricity	33,622	33,281	33,277	33,000	33,291	33,294
Asset refurbishment annuity	353,149	368,769	360,552	346,596	323,921	350,597
Total Lower Bound Costs	(36,688)	(43,520)	(44,979)	(51,120)	(43,183)	(43,898)
less Tier 1 Productivity Adjustment	316,461	325,249	315,573	295,476	280,738	306,699
Total Efficient Lower Bound Costs						
Community Service Obligations (CSO) & Revenue Offsets						
CSO Offsets						
CSO - Resource operating plan development costs	35,214	27,860	13,791	5,347	5,160	17,474
CSO - Rural water subsidy	-	-	-	-	-	-
Total CSO Offsets	35,214	27,860	13,791	5,347	5,160	17,474
Scheme related revenue offsets (a)	2,417	2,417	2,417	2,417	2,417	2,417
Total CSO & Revenue Offsets	37,631	30,277	16,208	7,764	7,577	19,891
TOTAL SCHEME IRRIGATION NET LOWER BOUND COSTS	278,830	294,972	299,365	287,712	273,162	286,808
<i>Irrigation share of scheme total net lower bound costs (%)</i>	39.5%	39.5%	39.5%	39.5%	39.5%	

Current pricing arrangements

The current prices were set with reference to the lower bound cost target above. For this Scheme the current prices were found to be sufficient to recover the 2006 lower bound target.

In the 2006-11 irrigation price review, the Logan River Tier 2 group opted to retain the price cap arrangement in preference to a revenue cap. The Tier 2 group did not opt to take up a drought tariff option.

Prices were increased based on the Brisbane – All Groups Consumer Price Index (CPI) each year.

The Scheme has only one nominated tariff group for 2013-14 to 2016-17 being River (including regulated section of Burnett Creek).

A two part tariff applied:

- Part A, a fixed charge payable per ML of nominal water entitlement (regardless of use); and
- Part B, which was a consumption charge.

The table below shows the prices for the scheme since 2006-07 to 2011-12 in real terms.

Table 2-7. 2006 – 11 Price Paths (real, \$2005-06)

2005/06 IRRIGATION PRICE REVIEW LOGAN RIVER WATER SUPPLY SCHEME SCHEME IRRIGATION LOWER BOUND COSTS & REFERENCE IRRIGATION TARIFFS							
FINAL IRRIGATION TARIFFS (based in 2005/06 dollars and subject to cumulative annual indexation on 1 July each year)							
	Last Yr 2005/06	Lower Bound Cost Tariff	Year 1 2006/07	Year 2 2007/08	Year 3 2008/09	Year 4 2009/10	Year 5 2010/11
RIVER (INCLUDING REGULATED SECTION OF BURNETT CREEK) (a)							
Part A	\$21.48	\$14.13	\$14.14	\$14.14	\$14.14	\$14.14	\$14.14
Part B	\$15.23	\$11.01	\$22.57	\$22.57	\$22.57	\$22.57	\$22.57
Total	\$36.71	\$25.14	\$36.71	\$36.71	\$36.71	\$36.71	\$36.71
<i>Irrigation customer nominal water allocations (ML)</i>		13,532	13,532	13,532	13,532	13,532	13,532
<i>Water usage forecast</i>		55%	55%	55%	55%	55%	55%
<i>Part A revenue share</i>		70%	53%	53%	53%	53%	53%
<i>Part B revenue share</i>		30%	47%	47%	47%	47%	47%

The current tariffs for 2012-13 are:

- Part A - \$17.49/ML; and
- Part B – \$27.93/ML.

Renewals accounting and forecast ARR balance

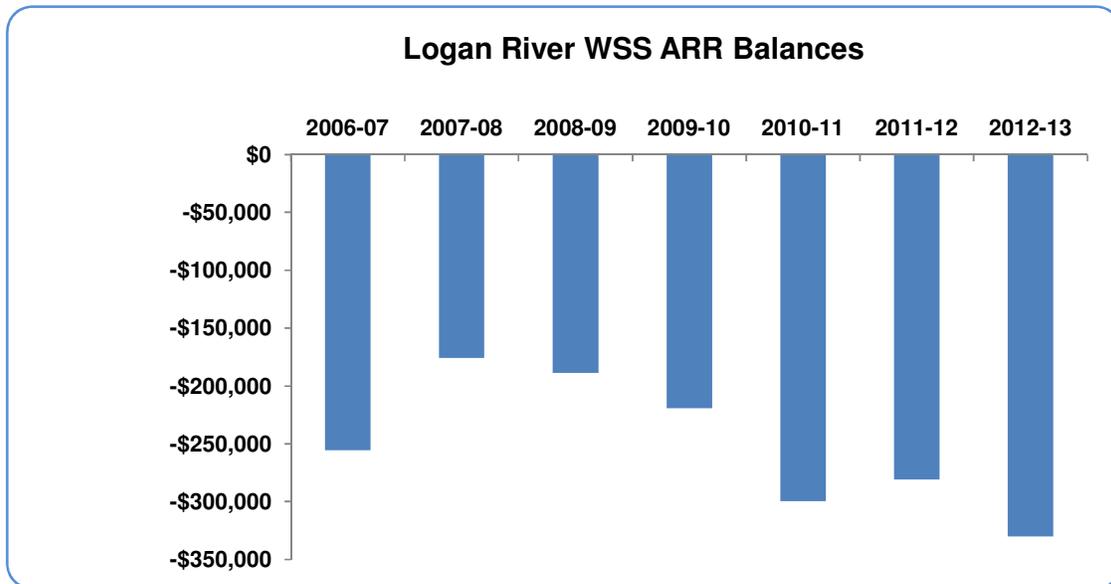
A renewals annuity approach applies to the current price paths, and is to continue to apply in accordance with the Ministerial Referral Notice.

The renewals annuity approach requires an accounting system to monitor renewals income and expenditure, to monitor the status of the renewals account or Asset Renewals Reserve (ARR). This balance can be either positive or negative, and is incorporated into the calculation of the renewals annuity itself. Interest is applied to the balance, at the same rate used to determine the original renewals annuity.

In order to calculate lower bound costs from 2013-14, a projected closing ARR balance at 30 June, 2013 must be made. This balance is forecast to be a deficit balance of \$330,063.

The following table shows the ARR balances from 2006-07 to 2012-13.

Table 2-8. Logan River WSS ARR Balances



Seqwater engaged Indec to calculate the respective annuity balances Indec performed the following steps:

- Obtained relevant data for the water supply schemes from SunWater dating back to 2001 when the existing annuity balances were established;
- Calculated a closing ARR balance on a total scheme basis as at 30 June 2006 for each scheme from the SunWater data set which calculated the irrigation only ARR Balances. Indec sought advice and guidance from SunWater to establish these balances;
- Established a closing balance at 30 June 2011 based on actual renewals expenditure and income data from SunWater and from Seqwater; and
- Forecast a closing total scheme balance at 30 June 2013 based on the budgeted renewals expenditure and irrigation income for the 2011-12 year and the estimated renewals income and expenditure for 2012-13.

In calculating the closing ARR balance, Indec:

- Obtained actual renewals expenditure from SunWater from 2000-01 to 2007-08 for the Scheme, and included actual expenditure following the transfer of the assets to Seqwater in the 2008-09 year for the period ending 2010-11. Renewals expenditure for 2011-12 is based on actual and forecast data and 2012-13 is a forecast only;

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- Identified renewals expenditure from both capital and operating expenditure. This step was completed with the assistance of the Seqwater asset management engineers and respective scheme operators to identify renewals and rehabilitation expenditure on existing asset with a frequency of greater than 12 months;
- Renewals expenditure for the period 2008/09 to 2012/13 undertaken by Seqwater includes an allocation of overheads and indirect costs based on the SunWater average allocation rate for the period 2006/07 to 2007/08 of 28.6%;
- Obtained actual tariff revenue including CSOs for all customer sectors from SunWater for the period 2000/01 to 2007/08 inclusive;
- Obtained actual tariff revenue including CSOs from 2008/09 until 2010/11 sourced from Seqwater’s accounting system. A budget forecast and estimate was used for 2011/12 and 2012/13 respectively;
- Calculated the percentages of tariff revenues, including CSO, allocated to the ARR balance for the 2001 to 2006 period and the percentages for the 2006/07 to 2012/13 period. This allocation rate reflects the percentage of all customer sector renewals annuity to the total customer sector revenue target set for the 2007-11 irrigation price path. The percentages for the 2005/06 year are based on the 2004/05 year due to a one year extension to the price path and the 2011/12 and 2012/13 years have been based on the percentages applicable for the 2010/11 year due to a two year price path extension. These are shown in tables 2-9 and 2-10 below;

Table 2-9. Share of Irrigation Revenues Applicable to the ARR (%)

Water Supply Scheme	Tariff Group	2001	2002	2003	2004	2005	2006
Logan River	River	4.0	5.1	3.7	3.1	4.3	4.3

Table 2-10. Share of Irrigation Revenues Applicable to the ARR (%)

Water Supply Scheme	Tariff Group	2007	2008	2009	2010	2011	2012	2013
Logan River	River	12.1	11.3	11.1	11.5	12.2	12.2	12.2

- Applied interest to closing balances for the period 2006-07 to 2013-14 at the equivalent rate used to calculate the 2007-2011 price path annuities (9.69% nominal). No interest has been applied to balances between 2000-01 and 2005-06 based on advice from SunWater that the 2001-2006 price path made offsetting adjustments on the account that no interest would apply to ARR balances in that price path.

Table 2-11 below sets out irrigation renewals expenditure and revenue and the annual change applicable to the ARR for the financial years 2000-01 to 2005-06 and Table 2-12

sets out irrigation renewals expenditure and revenue and the annual change applicable to the ARR for the financial years 2006-07 to 2012-13:

Table 2-11. Annual Change in Irrigation ARR Balances (\$Nominal) 2001 - 2006

Tariff Group	Item	2001	2002	2003	2004	2005	2006
River	Expenditure	(20,069)	(17,505)	(256,506)	(185,670)	(131,497)	(16,217)
	Revenue	35,184	48,966	48,016	41,964	45,106	64,868
	Change	15,115	31,461	(208,490)	(143,706)	(86,391)	48,651

Table 2-12. Annual Change in Irrigation ARR Balances (\$Nominal) 2001 - 2006

Tariff Group	Item	2007	2008	2009	2010	2011	2012	2013
River	Expenditure	(56,045)	(76,943)	(57,136)	(77,181)	(122,900)	(22,933)	(96,736)
	Revenue	177,254	181,362	61,237	64,809	63,843	70,973	74,493
	Change	121,208	104,420	4,101	(12,373)	(59,057)	48,040	(22,243)

The full Indec report is provided as Attachment 4 to Seqwater’s main submission.

3. Proposed lower bound costs and reference tariffs

Lower bound costs

The following provides a summary of Seqwater's proposed lower bound costs for the scheme over the 1 July 2013 to 30 June 2017 forecast period. Lower bound costs include operating and renewals costs. None of the costs vary proportional to water demand. That is, the short run marginal cost in this scheme is \$0, and all costs are fixed.

In order to determine lower bound estimates for irrigation customers within the scheme, aggregate scheme costs are attributed to medium priority consistent with the QCA's approach adopted for SunWater.

Operating costs

Operating activities for this scheme include service provision, compliance, recreation, and other supporting activities:

- Service provision relates to:
 - scheduling and releasing bulk water from storages, surveillance of water levels and flows in the river, and quarterly meter reading; and
 - customer service and account management.
- Compliance requirements relates to:
 - Requirements set out in the Resource Operations Plan (ROP) and Resource Operations Licence;
 - Dam safety obligations under the *Water Act 2000*;
 - Environmental management obligations to comply with the ROP and *Environmental Protection Act 1994*; and
 - Land management, workplace health and safety obligations and other reporting obligations.
- Recreation relates to the operation and maintenance of recreation facilities in the Logan River scheme; and
- Other supporting activities cover a range of services including central procurement, human resources and legal services.

Operating cost forecasting approach

Seqwater has adopted an approach to forecasting whereby operating expenditure for schemes is derived for a representative base year (2012-13) and escalated forward over each year of the regulatory period on the basis of predetermined escalation factors.

The 2012-13 year was adopted as the base year as it provides the best and most current representation of the costs required to deliver Seqwater's service standards and obligations during the regulatory period. Aggregate operating costs for 2012-13 (including costs associated with both grid and irrigation services but excluding costs associated with unregulated activities) were derived as part of Seqwater's 2012-13 grid service charges submission to the QCA.¹ Seqwater has developed its 2012-13 budget on the basis of a zero base build-up, taking into account costs which could be reasonably anticipated at the time of budget development. In addition, the 2012-13 operating expenditure forecasts provided in the grid service charges submission have been reviewed by the QCA for prudence and efficiency.

Further details on the forecasting methodology are provided in the Irrigation Pricing submission provided to the QCA.

The following escalators have been applied to 2012-13 operating costs to derive forecasts for the regulatory period:

- direct labour, materials and contractors' costs and repairs and maintenance were escalated at 4% per annum over the regulatory period; and
- 'other' direct costs and all non-direct costs were escalated at forecast CPI (2.5% per annum).

Details of the direct and non-direct operating expenditure forecasts for the Logan River scheme are provided below.

Direct operating and maintenance costs

Direct costs are those costs that have been budgeted at the individual asset level.

Operations

Operations relates to the day-to-day costs of delivering water and meeting compliance obligations. The primary activities relate to dam operations and group support.

¹ Refer Chapter 1.

Dam operations are the largest contributor to direct operating costs. Dam Operations aims to deliver best practice management of dams and water sources while being fully compliant and effective in operating, maintaining and monitoring its water source infrastructure.

Dam operations must meet the regulatory requirements under various Acts including those relating to Dam Safety, Flood Management, Resource Operating Plans, and providing sufficient water to meet standards of service.

Dam operations are relatively labour intensive and expenditure is driven by:

- providing efficient service to irrigation customers in terms of information and management and delivery of service;
- developing robust and acceptable systems to monitor water flows to manage water sources, floods and regulations;
- developing an effective and technically capable and resilient flood operations centre utilising systems of quality standards;
- improving data management to ensure compliance on a wide variety of water management areas;
- ensuring security and safety at our water sources is meeting regulatory and community standards; and
- developing system operating plans to ensure the efficiency and operation of dams, weirs, bores and other water sources.

Group support has responsibility for the development and delivery of recreation and catchment maintenance services for all operational assets. The team ensures that asset management plans, processes, systems and practices are implemented in accordance with relevant regulatory requirements. The costs associated with catchment management activities (for water quality outcomes) are excluded from the lower bound cost base for irrigation.

Seqwater has responsibility for the ongoing management and maintenance of recreation sites transferred from SunWater. The use of Seqwater assets for recreational purposes is secondary to Seqwater's main function of water supply and treatment. However, recreation facilities must be managed in a sustainable and environmentally responsible manner to ensure that Seqwater's core responsibilities and accountabilities are not adversely impacted.

Direct operations costs are presented in terms of the type of cost: labour; contractors and materials; and "other".

- labour costs are derived on the basis of budgeted work in the scheme for 2012-13 and the related salary costs for routine activities. The costs represent all costs budgeted as employee costs for the scheme. In practice, a small proportion of this labour will be used for maintenance activities.² Consistent with the current Enterprise Bargaining Agreement for Seqwater and the recommendation of the QCA in its draft SunWater report, Seqwater has escalated internal labour costs at 4% per annum for the regulatory period 2013-14 to 2016-17;
- contractor and materials costs for 2012-13 are based on the quantities required in the work instructions for the scheme. As per the QCA’s draft SunWater report, contractor and material costs have been escalated at 4% per annum for the regulatory period; and
- “other” direct operating costs incorporate a range of expenses including plant and fleet hire, water quality monitoring expenses and fixed energy costs. These costs have been escalated at forecast CPI for the regulatory period.

Forecast operations costs are provided below.

Table 3-1. Forecast direct operations costs (\$000, Nominal)

Cost	2013-14	2014-15	2015-16	2016-17
Labour	418.4	435.1	452.5	470.7
Contractors and materials	49.0	51.0	53.0	55.1
Other	99.3	101.8	104.3	106.9
TOTAL	566.7	587.9	609.9	632.7

Repairs and maintenance

Repairs and maintenance is performed at the scheme in accordance with Seqwater’s maintenance system. This system identifies the maintenance requirements for each asset, and then sets out a schedule for maintenance over the year(s) for that asset. In addition, maintenance requirements are developed through Facilities Asset Management Plans and as a result of scheduled inspections.

There is also unplanned maintenance which is required in response to asset breakdown or failure, or where new information emerges about asset condition (e.g. via regular

² Repairs and maintenance are budgeted as a separate line item, and exclude labour. Most maintenance work is delivered via contractors. Seqwater has sought to minimise the manipulation of data from its financial system when presenting information in this NSP and forecasting lower bound costs. While there are minor shortcomings in this approach, Seqwater does not believe there is a material impact on the pricing outcomes given the overall proportion of labour costs that might relate to future repairs and maintenance is small (on average, 3% across all schemes).

inspections). Expenditure on unplanned maintenance for 2012-13 is derived based on past experience.

Seqwater have set a target ratio of 71:29 for planned maintenance to unplanned maintenance in 2012-13. This ratio has been applied for the forecast period.

Repairs and maintenance for 2012-13 has been escalated at 4% per annum over the regulatory period.

The table below presents a summary of forecast repairs and maintenance costs.

Table 3-2. Forecast repairs and maintenance by expenditure type (\$000, Nominal)

Type	2013-14	2014-15	2015-16	2016-17
Planned	79.5	82.7	86.0	89.4
Unplanned	32.5	33.8	35.1	36.5
TOTAL	112.0	116.5	121.1	126.0

Dam safety inspections

Routine dam safety inspections are carried out to identify and plan maintenance requirements and to provide information for management planning of water delivery assets. These costs are included in forecast operations expenditure.

In addition, more thorough periodic dam safety inspections are carried out on a 5 yearly basis. Costs associated with these inspections have been added to forecast direct operating expenditure in the year in which the expenditure is expected to be incurred. Forecast dam safety inspections expenditure is provided below.

Table 3-3. Forecast dam safety inspections (\$000, Nominal)

Dam	2013-14	2014-15	2015-16	2016-17
Maroon				27.6
Total	-	-	-	27.6

These inspections are based on the dam safety compliance requirements for the dams and the cost estimates are based on actual historic cost of inspection.

The table below presents consolidated forecast repairs and maintenance costs for the Logan River scheme.

Table 3-4. Total repairs and maintenance forecast (\$000, Nominal)

Type	2013-14	2014-15	2015-16	2016-17
Planned	79.5	82.7	86.0	89.4
Unplanned	32.5	33.8	35.1	36.5
Dam safety inspections	-	-	-	27.6
TOTAL	112.0	116.5	121.1	153.6

Rates

Seqwater incurs rates in relation to its land portfolio, including storages. Seqwater has forecast rates expenses for the Logan River scheme based on 2011-12 actual rates, and has forecast these to increase annually by CPI for the regulatory period.

Table 3-5. Forecast rates cost (\$000, Nominal)

Year	2013-14	2014-15	2015-16	2016-17
Cost	57.6	59.1	60.5	62.1

Metering

Consistent with the Referral Notice to the QCA, capital expenditure (renewals) costs for meter upgrades to meet national metering standards have been excluded. Similarly, operating costs associated with complying with the new standards have not been included in the cost estimates. However, costs for normal meter refurbishments (like-for-like) and costs to address identified safety risks associated with meter locations have been included.

Non-direct costs

Non-direct costs are common costs which are not directly attributable to the operations and management of a specific scheme and include both indirect and overhead costs associated with the provision of corporate and other business services. In the absence of suitably disaggregated data at the project level, allocations of non-direct costs to renewals / capital expenditure were not examined. All non-direct costs were therefore allocated to operating expenditure only.

Non-direct costs for 2012-13 were derived at the aggregate level for all schemes and allocated to individual schemes based on the proportion of direct costs attributable to the individual scheme. These costs were then escalated forward to derive forecast non-direct costs for the regulatory period.

Non-direct costs are categorised by the type of expenditure:

- Water delivery includes non-direct costs associated with dam operations, infrastructure maintenance, environmental management and recreation and catchment maintenance services;
- Asset delivery costs are associated with project planning and managing the delivery of projects;
- Corporate costs include business services, organisational development and the office of the CEO. These include costs associated with the provision of IT services, finance, procurement, legal and risk, governance and compliance activities; and
- Other costs primarily reflect costs associated with the North Quay facilities and flood control centres.

As discussed, the Logan River scheme was allocated a portion of 2012-13 total business non-direct costs on the basis of direct costs attributable to the scheme. This estimate was escalated by CPI to derive forecasts for each year of the regulatory period.

Forecast non-direct operating costs are provided below.

Table 3-6. Forecast non-direct operating cost (\$000, Nominal)

Type	2013-14	2014-15	2015-16	2016-17
Water Delivery	71.8	73.6	75.4	77.3
Asset Delivery	32.1	32.9	33.7	34.5
Corporate	256.5	262.9	269.5	276.2
Other	21.7	22.2	22.8	23.3
TOTAL	382.0	391.6	401.4	411.4

In addition to non-direct operating costs, Seqwater has allocated costs to the Logan River scheme associated with the use of non-infrastructure assets, insurance and working capital.

Non-infrastructure assets

The Logan River scheme utilises a range of non-infrastructure assets (buildings and plant and equipment). These assets are not included in the renewals expenditure forecasts. However, it is necessary for costs associated with the use of these assets to be attributed to the Scheme. Seqwater has used depreciation costs as a proxy for the cost associated with use of these assets. However, these depreciation costs are not captured for the WSS. Accordingly, aggregate non-infrastructure depreciation for 2012-13 has been allocated to facilities on the basis of direct costs and escalated forward over the forecast period.

Table 3.7 provides a breakdown of forecast non-infrastructure asset costs allocated to the Logan River scheme over the forecast period.

Table 3-7. Forecast non-infrastructure operating cost (\$000, Nominal)

Year	2013-14	2014-15	2015-16	2016-17
Cost	31.9	32.7	33.6	34.4

Insurance

Seqwater’s annual insurance premium cost for 2012-13 is forecast at \$6.96 million. The major components to the premium include industrial special risks, machinery breakdown, public liability, professional indemnity, contract works and directors and officers insurance.³

Seqwater is in the process of placing insurances, and proposes to update this forecast once new premiums are set.

Seqwater has allocated its 2012-13 premium to the Logan River scheme using the replacement value of scheme assets. This value has been escalated by CPI to determine a premium for each year of the forecast period. The table below shows the forecast premiums for the Logan River scheme.

Table 3-8. Forecast insurance cost (\$000, Nominal)

Year	2013-14	2014-15	2015-16	2016-17
Cost	166.9	171.1	175.3	179.7

³ Seqwater also notes the QCA canvassed concerns raised by irrigators about the insurance costs attributable to irrigation services, and accepted SunWater’s proposed scope of insurances as reasonable (including professional indemnity). Refer to QCA (2011).pp 106-107

Working capital

The QCA has already adopted a methodology for calculating Seqwater's working capital in Grid Service Charges. Seqwater has calculated the working capital allowance using this methodology and the values submitted to the QCA for 2012-13⁴, at \$5.538M.

Seqwater has allocated a portion of this working capital allowance to the Logan River scheme on the basis of revenue attributable to the scheme. The 2012-13 working capital allowance has then been escalated by CPI to provide a forecast for each year of the regulatory period.

Table 3-9. Forecast working capital (\$000, Nominal)

Year	2013-14	2014-15	2015-16	2016-17
Cost	11.1	11.3	11.6	11.9

Total operating costs for the forecast period are provided below.

Table 3-10. Total operating cost forecast (\$000, Nominal)

Cost	2013-14	2014-15	2015-16	2016-17
Direct				
Operations	566.7	587.9	609.9	632.7
Repairs and maintenance	112.0	116.5	121.1	126.0
Dam safety	-	-	-	27.6
Rates	57.6	59.1	60.5	62.1
Non-direct	-	-	-	-
Operations	382.0	391.6	401.4	411.4
Non-infrastructure	31.9	32.7	33.6	34.4
Insurance	166.9	171.1	175.3	179.7
Working capital	11.1	11.3	11.6	11.9
Total	1,328.2	1,370.1	1,413.4	1,485.8

Revenue offsets

Seqwater receives revenue from other sources, including property leases, recreation fees and the provision of town water supplies. The estimated revenue from these sources for the

⁴ Seqwater (2012). p146

Logan River scheme for the regulatory period is provided in Table 3.11. These forecasts are based on expected revenue received in 2012-13 escalated by CPI for the regulatory period.

Table 3-11. Forecast revenue offset (\$000)

Year	2013-14	2014-15	2015-16	2016-17
Revenue	25.0	25.6	26.2	26.9

To ensure that Seqwater is not overcompensated for the provision of services, this revenue has been removed from the estimate of scheme costs for the regulatory period.

Renewals

The renewals outlays for the irrigation schemes consist of the same cost elements as their operating costs, namely direct labour, materials and contractors’ services, other direct costs (such as rates and land taxes) and miscellaneous administrative costs and non-direct (indirect and overhead) costs.

Seqwater has adopted the same rates for escalation of renewals expenditure as for operating expenditure.

Accordingly, renewal expenditure has been escalated for direct labour, materials and contractors costs at 4% per annum for the years 2013-14 to 2016-17 and forecast inflation thereafter for the remainder of the planning period. All other direct costs and non-direct costs are escalated at forecast inflation for both the regulatory period and the remainder of the planning period.

Inflation is forecast to increase at 2.5% per annum over the forecast period and beyond.

Renewals forecast

Seqwater has proposed a rolling 20 year renewals annuity, consistent with the approach adopted for SunWater’s irrigation pricing in the QCA’s draft report.

Seqwater has defined renewals as non-maintenance expenditure that is required to maintain the service capacity of the assets.

Seqwater has based its renewals forecast on the more significant and predictable renewals expenditure items. Seqwater has not attempted to include minor renewals projects (less than \$10,000), or renewals on water treatment plants at recreation areas, or make any allowance or contingency for renewals expenditure arising from damage or changes in law. This approach has been adopted to focus the renewals forecasting effort on more material items of expenditure.

Seqwater identified renewals needs and the schedule of projects through a range of processes, including:

- the existing Facility Asset Management Plans (FAMPs);
- the existing asset maintenance program;
- reports from site safety inspections and dam safety management program; and
- advice from operators.

Seqwater then evaluated potential projects against criticality and other criteria, and conducted workshops with local staff as well as site inspections to validate and adjust the scope and timing of projects. In many cases, Seqwater has revised the timing of major renewals jobs to a later time where there was not sufficient evidence that the asset required renewal, or renewal of the asset could be deferred at an acceptable risk of failing to meet service standards or compliance obligations.

Forecast renewals expenditure for the regulatory period is provided below.

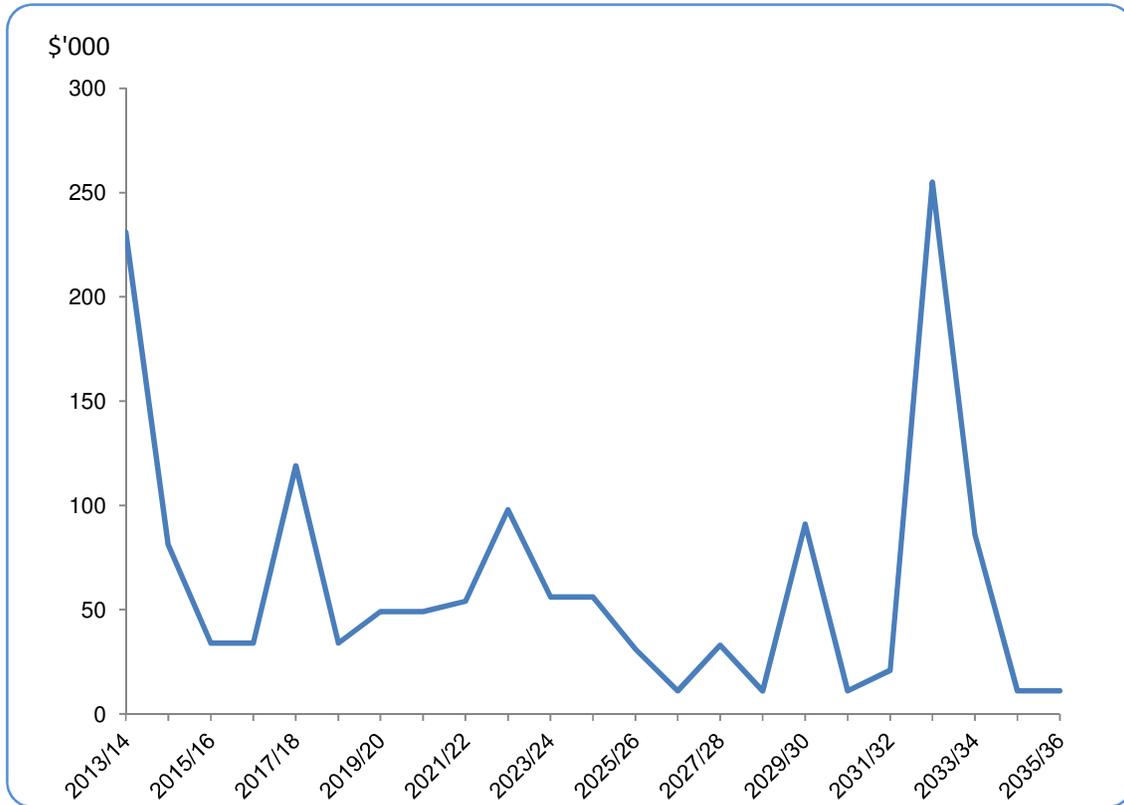
Table 3-12. Forecast renewals expenditure to 2016-17 (\$2012-13, \$000)

	2013-14	2014-15	2015-16	2016-17
Renewals expenditure	231.0	81.0	34.0	34.0

This excludes any dam safety or NWI meter upgrade expenditure, in accordance with the Referral Notice. However, costs for normal meter refurbishments (like-for-like) and costs to address identified safety risks associated with meter locations have been included.

The figure below shows the long term renewals profile over a 24 year period.

Figure 3-1: Logan River renewals profile (\$2012-13)



The major projects that have a material 10% impact on the annuity are described below:

Table 3-13. Major renewals projects (\$2012-13)

Asset	Description of Work	Timing of Work	Project Value \$'000	Significance*
Maroon Dam	Refurbish gantry cane and hoist	2013-14	40	HAV
Maroon Dam	Refurbish main wall embankment	2013-14	40	HAV
Bromelton Weir	Replace telemetry	2013-14	35	HAV
Water meters	Water meter renewal	2013-14	66	HAV
Water meters	Water meter renewals	2014-15	66	HAV
Water meters	Water meter renewals	2015-16	34	HAV
Water meters	Water meter renewals	2016-17	34	HAV

* HAV – Higher than Average Value (for period from 2013/14 to 2016/17)
 IA – Project has an impact on the annuity of greater than 10%

Total Lower Bound Costs

The total lower bound costs for the Logan River scheme are set out in the table below.

Table 3-14. Total Lower Bound costs (\$000, Nominal)

Cost	2013-14	2014-15	2015-16	2016-17
Direct operations*	599.3	621.3	644.2	695.4
Repairs and maintenance	112.0	116.5	121.1	126.0
Non-direct opex**	591.9	606.7	621.9	637.4
Renewals annuity	110.9	113.2	113.6	114.0
TOTAL	1,414.2	1,457.8	1,500.8	1,572.8

* Incorporates revenue offset ** Incorporates operations, non-infrastructure costs, insurance and working capital.

Cost allocation to medium priority

Seqwater proposes that renewals, insurance and maintenance costs are allocated to medium priority using the Headworks Utilisation Factor (HUF).

Seqwater commissioned Parsons Brinckerhoff (PB) to calculate the HUF percentage for the scheme, using the methodology endorsed by the QCA for irrigation pricing in SunWater schemes.

PB calculated a HUF for medium priority customers of 16%.

Seqwater has assigned working capital costs between medium and high priority customers proportional to lower bound revenue.

The balance of costs have been allocated to medium priority based on a 50:50 split between the HUF (16%) and the nominal ML entitlements attributable to medium priority customers (57.9%).

The table below presents the outcomes of this cost allocation.

Table 3-15. Total Lower Bound costs allocated to medium priority (\$000, Nominal)

Cost	2013-14	2014-15	2015-16	2016-17
Direct operations*	221.5	229.6	238.0	257.0
Repairs and maintenance	17.9	18.6	19.4	20.2
Non-direct opex**	183.3	187.9	192.6	197.4
Renewals annuity	17.7	18.1	18.2	18.2
TOTAL	440.4	454.2	468.1	492.7

* Incorporates revenue offset ** Incorporates operations, non-infrastructure costs, insurance and working capital.

A comparison against the lower bound costs allocated to irrigation in the SunWater 2006 Irrigation Pricing Review is provided below. To facilitate comparison with Seqwater’s forecast costs, SunWater’s 2010-11 lower bound cost estimates have been indexed forward to \$2013-14 by actual and forecast inflation.

Table 3-16. Total Lower Bound Costs allocated to medium priority (\$000, Nominal)

Lower bound cost	SunWater 2006 LBC (\$2013-14)	2013-14	2014-15	2015-16	2016-17
	358.0	440.4	454.2	468.1	492.7

Seqwater does not have detailed information about the 2006 lower bound costs, and hence has not been able to provide any meaningful comparisons or analysis.

Proposed tariffs

Tariff groups

The Referral Notice requires the QCA to adopt the tariff groups as proposed in Seqwater’s NSPs.

Seqwater proposes the current tariff groupings continue for the Scheme. That is, a single tariff group will continue to apply.

Tariff structure

A two part tariff structure currently applies, with a Part A charge levied per ML of customer WAE, and a Part B charge levied against metered water use.

As discussed, Seqwater considers that all costs in the scheme are fixed. Accordingly, Seqwater proposes to apply a single Part A tariff.

Lower bound reference tariffs

Lower bound reference tariffs for Logan River irrigation customers are provided below.

Table 3-17. Logan River Lower Bound reference tariffs (\$/ML Nominal)

	Part	2013-14	2014-15	2015-16	2016-17
Fixed component based on WAE	A	32.92	33.74	34.59	35.45
Variable component based on usage	B	-	-	-	-

Price path

The Referral Notice requires that any prices rises for customers already above lower bound costs be restricted to increases in inflation. This appears likely to apply in practice for the Logan River tariff group, although this will depend on how the QCA determines equivalent prices through tariff re-balancing for the scheme. In its main submission, Seqwater identified that the fixed-charge equivalent for the 2012-13 charge was \$32.85, only \$0.07 (0.2%) below the lower bound reference tariff for 2013-14. Using this approach, if the 2012-13 price was increased by a measure of inflation that was above 0.2%, then the resulting 2013-14 price would be above the lower bound reference tariff.

Supporting documentation

- Irrigation Infrastructure Renewal Projections - 2013-14 to 2046-47 – Logan River Tariff Group

Appendix A – Asset details

Logan Basin Resource Operations Plan

Attachment 5 Logan River Water Supply Scheme

Table 1 **Maroon Dam, Burnett Creek—AMTD 23.5 km**

Description of water infrastructure	
Description	Dam, earth and rockfill construction
Full supply level (FSL)	EL 207.14 m AHD
Total storage capacity level	EL 217.52 m AHD
Minimum operating level	EL 185.81 m AHD
Storage capacity	
Full supply volume	44 319 ML*
Total storage capacity	86 398 ML
Minimum operating volume	2 190 ML
Storage curves	A3-203833, A3-203834
Spillway arrangement	
Description of works	Rectangular, ungated and unlined channel cut through rock. The spillway crest is a reinforced concrete control structure.
Spillway level	217.52 m AHD
Spillway width	186 m at dam wall, narrowing to 150 m downstream
Spillway length	330 m
Discharge characteristics	Capacity 4,800 m ³ /s. Drawing no: A3-211564
River inlet/outlet works	
Description of works	Two 1070 mm cone valves and one 305 mm cone valve (low flow outlet). The inlet tower for the outlet works has four portals, each 3.05 m wide by 4.57 m high. These share a common sill elevation of EL 185.81 m AHD.
Inlet	The submerged inlet tower is a reinforced concrete structure. The rooftop of the tower is at 191.98 m AHD, 15.2 m below FSL. The invert level of the inlet conduit is at 174.53 m AHD.
Cease to flow levels	Inlet level EL 185.81 m AHD

*Volume above EL 207.14 m AHD is used for flood mitigation.

Logan Basin Resource Operations Plan

Table 2 Bromelton Weir, Logan River—AMTD 113.2 km

Description of water infrastructure	
Description	Weir. Sheet pile with concrete rockfill and rock mattresses.
Full supply level	EL 40.7 m AHD
Minimum operating level	EL 37.62 m AHD
Storage capacity	
Full supply volume	390 ML
Minimum operating volume	50 ML
Storage curves	A3-105947, A3-105946
Spillway arrangement	
Description of works	Nil
Spillway level	Nil
Spillway width	Nil
Discharge characteristics	Nil
River inlet/outlet works	
Description of works	Outlet works consists of a 600 mm diameter pipe.
Inlet	Invert level of 600 mm outlet pipe at intake is EL 37.60 m AHD.
Discharge characteristics	Sluice gate maximum discharge rate of up to 115 ML/day.

Logan Basin Resource Operations Plan

Table 3 Bromelton Off-stream Storage, Logan River—AMTD 100 km

Description of water infrastructure	
Description	Single ring tank storage with earth embankment
Full supply level	EL 44.5 m AHD
Minimum operating level	EL 36.5 m AHD
Storage capacity	
Full supply volume	8 678 ML
Minimum operating volume	1131 ML
River inlet/outlet works	
Description of works	Two by 100 mm centrifugal pumps and five by 500 mm electro-submersible pumps.
Inlet	Multiple pump sets at AMTD 100.9 km with a combined maximum harvesting capacity of 249.8 ML/day.
Discharge characteristics	Gravity feed to river with maximum discharge rate of up to 115 ML/day.

Logan Basin Resource Operations Plan

Table 4 Cedar Grove Weir, Logan River—AMTD 81.2 km

Description of water infrastructure	
Description	Sheet pile weir with concrete rockfill and rock mattresses.
Full supply level	EL 20.5 m AHD
Minimum operating level	EL 16.51 m AHD
Storage capacity	
Full supply volume	1 144 ML
Minimum operating volume	100 ML
Storage curves	A3-209911
Spillway arrangement	
Description of works	Weir
Spillway level	Crest EL 20.5 m AHD
Spillway width	47.2 m (full width of weir)
River inlet/outlet works	
Description of works	Outlet works consist of a 1035 mm diameter pipe with 600 mm butterfly valve
Inlet	Invert level of 1035 mm outlet pipe at intake is EL 16.5 m AHD.
Discharge characteristics	Approximate maximum discharge rate of 200 ML/day.

Logan Basin Resource Operations Plan

Table 5 South Maclean Weir, Logan River—AMTD 72.2 km

Description of water infrastructure	
Description	Earth/rockfill weir
Full supply level	EL 11.0 m AHD
Minimum operating level	EL 9.11 m AHD
Storage capacity	
Full supply volume	154 ML
Minimum operating volume	10 ML
Storage curves	Nil
Spillway arrangement	
Description of works	Nil
Spillway level	Nil
Spillway width	Nil
Discharge characteristics	Nil
River inlet/outlet works	
Description of works	Outlet works consist of a 400 mm outlet pipe with knife gate style valve.
Discharge characteristics	Approximate maximum discharge capacity of 46.57 ML/day.

Table 6 Infrastructure operating levels—Logan River Water Supply Scheme

Infrastructure	Full supply level	Nominal operating level	Minimum operating level
Maroon Dam	207.14 m AHD	Not Applicable	185.81 m AHD
Bromelton Weir	40.7 m AHD	Not Applicable	37.62 m AHD
Bromelton Off-stream Storage	44.5 m AHD	Not Applicable	36.5 m AHD
Cedar Grove Weir	20.5 m AHD	17.87 m AHD	16.51 m AHD
South Maclean Weir	11.0 m AHD	9.56 m AHD	9.11 m AHD

Appendix B – Customer service standards



Water Supply Arrangements and Service Targets

LOGAN RIVER WATER SUPPLY SCHEME

Water Supply Arrangements

This is referred to as Seqwater Rules in the River/Groundwater contract

To manage the water delivery to our customers, arrangements for the taking of water in the Scheme have been discussed with the Customer council and are outlined below. These arrangements are aimed at achieving the efficient delivery of water to customers in the Scheme that best meets their needs.

River Supplies

Taking Water from the Scheme

In the Logan River Water Supply Scheme, customers must place water orders using the telephone ordering system at least 48 hours before taking water. This allows Seqwater to make timely releases from Maroon Dam and to minimise losses.

To place an order, phone 5463 6161

Note, Water orders for Monday must be recorded by 12 noon on the Friday preceding the weekend

The water ordering system assists Seqwater to deliver water to customers in an efficient and timely way and enables customers to plan and manage their water use. Customers who take without ordering may reduce Seqwater's ability to supply customers who have ordered according to the above requirements.

Orders may not be available:

- During interruptions to supply (both scheduled and unscheduled)
- During periods of low demand for water, when water losses or operational circumstances make it impractical to supply (eg during times when there is minimal irrigation demand)

Customers requiring water during these times should contact the water officer to obtain information regarding water delivery.

Rain Shutdown

Customers must notify the water officer as soon as possible of any rain event that substantially lessens their water requirements. To conserve water, the water officer may shutdown the system when there is widespread general rain.



Water Supply Arrangements and Service Targets

Access to Storage

Storages are currently operated in the following operating range:

Maroon Dam – 19 metres below Full Supply Level (Dead Storage)

Bromelton Weir – operated to dead storage

This range may change in the future if required, for example under Seqwater's Interim Resource Operations Licence (IROPL) or Resource Operations Licence (ROL) and for other licence changes. Customers will be informed if such a change occurs. Customers should note that they are responsible for locating and maintaining pumps to take water.

Waterharvesting

Waterharvesting is announced and charged for by the Department of Environment and Resource Management (DERM). Some customers waterharvest through a pump metered by Seqwater. To account for the water taken as waterharvesting, customers must advise Seqwater's Maroon Dam Office of their start and stop meter readings. These readings are recorded so that Seqwater can record this use as waterharvesting. The phone number for Seqwater's maroon Dam office is 5163 6161.

If no meter reads are received by Seqwater then all water taken will be treated as Announced Allocation.

Changes to the volume or location for taking water

Customers wishing to:

- Have multiple delivery points; or
- Transfer water to another customer

must first obtain Seqwater's approval. For their own benefit, customers should obtain Seqwater's approval before finalising any dealing with another party (eg. A temporary transfer).

Seqwater may require operational and other issues to be resolved before granting its approval. These will be discussed with customers during the application and approval process.

Application forms are available from the Seqwater Business Centre in Karalee.

Changes to Customers' Pumping Arrangements

Customers must obtain approval from both Seqwater and The Department of Environment & Resource Management or any other approvals necessary, before proceeding with any changes to their pumps, including changing size/capacity of the pump. Customers are advised to contact Seqwater to clarify any requirements before lodging applications to the Department of Environment & Resource Management.



Water Supply Arrangements and Service Targets

Stopping or restricting supply

Seqwater may suspend or restrict supply in a number of circumstances, including:

- during maintenance of Seqwater's assets;
 - if supply could cause Seqwater to break the law;
 - during a peak demand period, when rosters or rations may apply;
 - when the demand for water is so small it is impractical to supply it;
 - infrastructure limitations which make delivery impractical;
 - when there is a need to make special releases to maximise efficiency at times of limited supply;
- or
- during rain shutdown.

Customers who require water all year round should make arrangements for on-farm water storage to provide their requirements during interruptions.

Credit Water

Credit Water enables customers to take streamflows that are below waterharvesting thresholds, but would otherwise not contribute to storage in the scheme. Seqwater is able to provide this product to its customers in lieu of announced allocation under certain circumstances.

During defined streamflow and other circumstances, Seqwater may announce that Credit Water is available in the scheme or to a defined part of the scheme. Customers wishing to take credit water must telephone or fax to Seqwater their start meter readings so the water taken can be recorded as credit water.

At the end of the Credit Water event, Seqwater will announce via local radio and /or newspaper that Credit Water has ended. Customers must telephone or fax their end meter readings within two business days of this announcement.

Water Charges

Water taken as credit water attracts the normal consumption charge. There are no other charges associated with credit water.

Maximum volume taken as Credit Water

Customers' combined water use as credit water and allocation water cannot exceed the customers' total water allocation amount. Where water use from these two products exceeds the customers' water allocation, the excess amount may be deducted from the customers' available allocation water in the next water year.



Water Supply Arrangements and Service Targets

Customers are responsible for monitoring their water use under both Credit Water and allocation water against their water allocation amount. Customers can obtain specific information on the use of Credit Water by contacting the Karalee Business Centre.

General

Complaints and dispute Resolution

Seqwater's aim is to resolve problems and complaints quickly and effectively. Where a customer has a concern that is not able to be resolved, customers can choose to initiate a formal dispute resolution process by writing to the Business Manager.

If through discussions, resolution cannot be reached either party may request the commencement of negotiations in good faith on a dispute resolution procedure, other than litigation or arbitration. If agreement is reached to proceed to the next phase, independent mediation services of the disputes Resolution Centres of Queensland can be used.

Billing Arrangements

Invoices are sent quarterly with the exception of minimum charge invoices, which are sent annually and all invoices must be paid within 30 days. Payments are allocated to the customer's oldest debt first, unless an invoice is in dispute.

Notices

Correspondence should be sent to the Karalee Business Centre as detailed below.

Seqwater
P O Box 7437
NORTH IPSWICH QLD 4305
Facsimile: 07 3884 5512

Communication – Contact Arrangements

The Karalee Business Centre has staff available for enquiries and business transactions (billing, temporary transfers, etc.) between the hours of 8.30am and 4.30pm Monday to Friday Phone: 1800 077 005

Water operations enquiries can be made between the hours of 7.30am and 4.30pm Monday to Friday at Maroon – Office: 07 5463 6161 or Mobile: 0409 044 793. The office may, at times, be unattended and during these hours a message service is available.

Emergency water supply problems can be directed to the duty office. These numbers are:

- 5463 0154 (Mobile: 0409 044 793)
- 5463 6136



Water Supply Arrangements and Service Targets

Further information about Seqwater can be obtained from our website:

www.seqwater.com.au

As described under clause 3 of the standard contract:

- 3(d) Seqwater shall, at approximately annual intervals, during this Agreement publish a report comparing the performance of Seqwater with the Service Targets;
- 3(e) Seqwater shall publish Service Targets for the Regulated Area and revise these from time to time after considering changes in customer needs determined through customer consultation, and changes in industry practice and procedures.

We are committed to publishing service targets and to reporting to customers on our performance against the targets. Following discussion and consultation with the Customer Council, this document contains service targets that have been set for the Logan River Water Supply Scheme.

Planned Shutdowns

Planned shutdowns have been included as a target and Seqwater recognises that the following are important service issues for you:

- That you will be notified about a shutdown so that you can plan ahead;
- The timing of the shutdown should suit most customers;
- The duration of the shutdown should minimise the impact on customers, while enabling Seqwater to perform maintenance on the scheme.

Definition: A Planned Shutdown occurs when a customer's supply is interrupted or restricted due to the performance of work that is planned in advance.

Planned Shutdowns – Timing

Delivery Type	Service	Scheme Target
River		The timing of all planned shutdowns will be set following consultation with the Customer Council (for a shutdown affecting a large part of the scheme) or customer groups or individuals (for shutdowns affecting small areas).



Water Supply Arrangements and Service Targets

Planned Shutdowns – Duration

Delivery Service Type	Scheme Target
River	Seqwater will complete all planned shutdowns within the period notified to customers (unless later varied by agreement with the groups originally consulted with), unless something occurs that is beyond Seqwater's control, such as adverse weather conditions.

Planned Shutdowns – Notice

Delivery Service Type	Scheme Target
River	<p>For shutdowns planned to exceed 2 weeks, at 8 weeks written notice by letter will be provided to each customer affected by the annual shutdown.</p> <p>For shutdowns planned to exceed 3 days, at least 2 weeks written notice by letter, fax, telephone, or verbal advice will be provided to each customer affected by the shutdown.</p> <p>For shutdowns planned to be less than 3 days, at least 5 days notice will be provided at least verbally to each customer affected.</p> <p>Each notice will state the start date, and anticipated shutdown duration.</p> <p>A courtesy reminder will be placed in the local newspaper one week before the planned shutdowns commence.</p>

Unplanned Shutdown

Unplanned shutdowns have been included as a target and Seqwater recognises that the information provided to you about an interruption and the period of time taken to resume supply are important to you.

Definition: An Unplanned Shutdown is an unforeseen or not planned mechanical or operational failure of Seqwater's water delivery infrastructure that stops or restricts the supply of water to a customer for more than 2 hours (including emergency repairs). It does not include events that are beyond Seqwater's control (eg. power failure or storm) and does not include interruptions to supply caused by errors in estimating water demand and releases, or people taking water without authorisation.



Water Supply Arrangements and Service Targets

Unplanned Shutdown – Duration

Delivery Type	Service	Service Target
River		<p>Unplanned Shutdowns will be fixed so that at least partial supply can be resumed to those customers requiring water within:</p> <ul style="list-style-type: none"> • 48 hours of Seqwater being notified of the event. <p>Some events may interrupt supply greater than the above standard and are excluded from these targets. Seqwater will publish these events from time to time.</p>

Unplanned Shutdown – Notice

Delivery Service Type	Scheme Target
River	Seqwater will notify all affected customers requiring water verbally or by telephone, radio announcement or fax of the likely duration of the interruption to supply within 24 hours of learning of the event, or by the end of the first business day following the event, whichever is the earlier.

Unplanned Shutdown – Meter Repairs

Delivery Service Type	Scheme Target
River	Faults causing restrictions to supply will be repaired within one working day of Seqwater being notified.



Water Supply Arrangements and Service Targets

Total frequency of interruption to supply

Frequency of interruptions to supply

Delivery Type	Service	Scheme Target
River		No customer will experience more than six planned or unplanned interruptions per water year (as defined above).

Complaints

Seqwater will provide an initial response to all complaints within five working days of receiving a complaint by the customer:

- in writing; or
- by telephone to a Business Centre

Seqwater will either resolve a customer's complaint, or provide a written response providing reasons why the complaint has not or cannot be resolved within 21 days of receiving the complaint.

¹ This includes other events described as Events of Force Majeure in your contract.