QUEENSLAND COMPETITION AUTHORITY

Draft Report

Seqwater
Irrigation Price Review: 2013-17
Volume 2
Cedar Pocket Dam Water Supply Scheme

December 2012

Level 19, 12 Creek Street Brisbane Queensland 4000
GPO Box 2257 Brisbane Qld 4001
Telephone (07) 3222 0555
Facsimile (07) 3222 0599

general.enquiries@qca.org.au
www.qca.org.au

SUBMISSIONS

This report is a draft only and is subject to revision. Public involvement is an important element of the decision-making processes of the Queensland Competition Authority (the Authority). Therefore submissions are invited from interested parties. The Authority will take account of all submissions received.

Written submissions should be sent to the address below. While the Authority does not necessarily require submissions in any particular format, it would be appreciated if two printed copies are provided together with an electronic version on disk (Microsoft Word format) or by e-mail. Submissions, comments or inquiries regarding this paper should be directed to:

Queensland Competition Authority
GPO Box 2257
Brisbane QLD 4001
Telephone: (07) 3222 0557
Fax: (07) 3222 0599
Email: water.submissions@qca.org.au

The **closing date** for submissions is **22 February 2013**.

Confidentiality

In the interests of transparency and to promote informed discussion, the Authority would prefer submissions to be made publicly available wherever this is reasonable. However, if a person making a submission does not want that submission to be public, that person should claim confidentiality in respect of the document (or any part of the document). Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available. It would also be appreciated if two copies of each version of these submissions (i.e. the complete version and another, excising confidential information) could be provided. Again, it would be appreciated if each version could be provided on disk. Where it is unclear why a submission has been marked "confidential", the status of the submission will be discussed with the person making the submission.

While the Authority will endeavour to identify and protect material claimed as confidential as well as exempt information and information disclosure of which would be contrary to the public interest (within the meaning of the *Right to Information Act 2009 (RTI)*), it cannot guarantee that submissions will not be made publicly available. As stated in s187 of the *Queensland Competition Authority Act 1997* (the QCA Act), the Authority must take all reasonable steps to ensure the information is not disclosed without the person's consent, provided the Authority is satisfied that the person's belief is justified and that the disclosure of the information would not be in the public interest. Notwithstanding this, there is a possibility that the Authority may be required to reveal confidential information as a result of a RTI request.

Public access to submissions

Subject to any confidentiality constraints, submissions will be available for public inspection at the Brisbane office of the Authority, or on its website at www.qca.org.au. If you experience any difficulty gaining access to documents please contact the office (07) 3222 0555.

Information about the role and current activities of the Authority, including copies of reports, papers and submissions can also be found on the Authority's website.

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GLOSSARY

Refer to Volume 1 for a comprehensive list of acronyms, terms and definitions.

EXECUTIVE SUMMARY

Ministerial Direction

In January 2012, the Authority was directed to recommend irrigation prices to apply to particular Seqwater water supply schemes (WSS) from 1 July 2013 to 30 June 2017 (the 2013-17 regulatory period). A copy of the Ministerial Direction forms Appendix A to Volume 1.

Summary of Price Recommendations

The Authority's recommended irrigation prices to apply to the Cedar Pocket Dam WSS for the 2013-17 regulatory period are outlined in **Table 1** together with actual prices since 1 July 2006.

Table 1: Prices for the Cedar Pocket Dam WSS (Nominal $/ML)

	Actual Prices							*Recommended Prices*			
	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Fixed (Part A)	8.20	9.72	11.52	13.27	14.94	15.48	15.68	9.70	11.99	14.39	16.91
Volumetric (Part B)	8.78	10.41	12.34	14.21	16.01	16.59	16.81	32.02	32.82	33.64	34.48

Source: Actual Prices (Seqwater 2012) and Recommended Prices (QCA 2012).

Draft Report

Volume 1 of this Draft Report addresses key issues relevant to the regulatory and pricing frameworks, renewals and operating expenditure and cost allocation, which apply to all schemes.

Volume 2, which comprises scheme specific reports, should be read in conjunction with Volume 1.

Consultation

The Authority has consulted extensively with stakeholders throughout this review. Consultation has included inviting submissions from, and meeting with, interested parties. The Authority also commissioned a consultant to undertake a review of Seqwater's proposed costs.

Comments on the Draft Report are due by **22 February 2013.** All submissions will be taken into account by the Authority in preparing its Final Report due by **30 April 2013**.

1. CEDAR POCKET DAM WATER SUPPLY SCHEME

1.1 Scheme Description

The Cedar Pocket Dam WSS is located near the town of Gympie. An overview of the key characteristics of this WSS is provided in **Table 1.1**.

Table 1.1: Key Scheme Information for the Cedar Pocket Dam WSS

	Cedar Pocket Dam WSS
Business Centre	Gympie
Irrigation Uses of Water	Pasture downstream of the dam for the dairy industry.
Urban water supplies	Nil

Source: Seqwater (2012ak).

The Cedar Pocket Dam WSS has 11 bulk customers. Medium and high priority water access entitlements (WAE) are outlined in **Table 1.2**.

Table 1.2: Water Access Entitlements

Customer Group	*Irrigation WAE (ML)*	*Total WAE (ML)*
Medium Priority	495	495
High Priority	0	0
Total	**495**	**495**

Source: Seqwater (2012ak).

1.2 Bulk Water Infrastructure

Bulk water services involve the management of storages and WAEs in accordance with regulatory requirements, and the delivery of water to customers in accordance with their WAE.

The full supply storage capacity and age of the key infrastructure are detailed in **Table 1.3**.

Table 1.3: Bulk Water Infrastructure in the Cedar Pocket Dam WSS

Storage Infrastructure	*Capacity (ML)*	*Age (years)*
Cedar Pocket Dam	730	28

Source: Seqwater (2012ak).

The characteristics of the bulk water assets are:

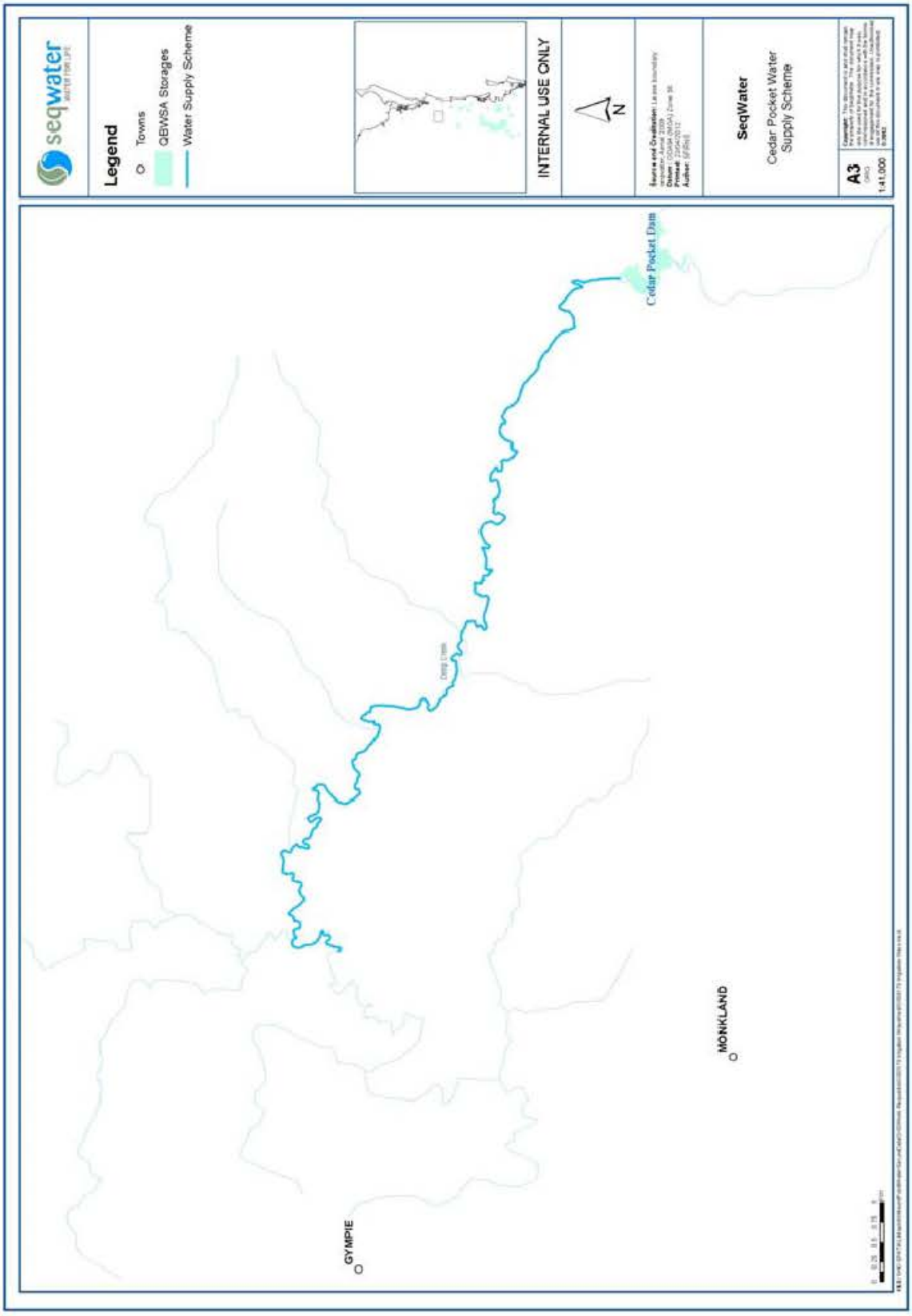
(a) concrete gravity dam with earth-fill embankment on the eastern abutment;

(b) a spillway consisting of a 50 metre wide concrete gravity wall, including a 10 metre wide cut-out section and two 20 metre wide overflow sections on either side of the cut out; and

(c) a single 450 mm diameter pipe reduced to 300 mm pipe, controlled by two gate valves operated from the outlet house.

The location of the Cedar Pocket Dam WSS and key infrastructure are shown in **Figure 1.1**.

Figure 1.1: Cedar Pocket Dam WSS Locality Map



Source: Seqwater (2012ak).

1.3 Network Service Plans

The Cedar Pocket Dam WSS network service plan (NSP) presents Seqwater's:

(a) existing service standards;

(b) forecast operating and renewals costs, including the proposed renewals annuity;

(c) risks relevant to the NSP; and

(d) proposed lower bound reference tariffs (cost-reflective prices).

Seqwater has also prepared additional papers on key aspects of the NSPs and this price review, which are available on the Authority's website.

1.4 Consultation

The Authority has consulted extensively with Seqwater and other stakeholders throughout this review on the basis of the NSPs and supporting information. To facilitate the review the Authority has:

(a) invited submissions from interested parties;

(b) met with stakeholders to identify and discuss relevant issues;

(c) published notes on issues arising from each round of consultation; and

(d) commissioned independent consultants to review aspects of Seqwater's submissions;

(e) published all reports and submissions on its website; and

(f) considered all submissions and reports in preparing this report for comment.

The Ministerial Direction forms Appendix A to Volume 1.

2. REGULATORY FRAMEWORK

2.1 Introduction

Under the Ministerial Direction, the Authority must recommend the appropriate regulatory arrangements, including price review triggers and other mechanisms, to manage the risks associated with identified allowable costs.

During the negotiations that preceded the 2006-11 price path, the Cedar Pocket Dam WSS was a tariff group in the Mary Valley WSS. The Tier 2 group for the Mary Valley WSS indicated that they were in favour of retaining the existing price cap regulatory arrangement. In the 2011-13 interim period, the price cap arrangement was continued.

2.2 Stakeholder Submissions

Seqwater

Seqwater submitted that the Cedar Pocket Dam WSS is regulated under the Mary Basin Resource Operations Plan (ROP) issued September 2011. Prior to this date, the scheme was regulated under the Interim Resource Operations Licence (IROL) (Upper Mary River WSS) issued in July 2008. A previous licence was granted to SunWater on 10 November 2000 for the Mary River WSS, which provided for three sub-schemes being the Mary Valley WSS, the Cedar Pocket WSS and the Lower Mary WSS. The 2008 IROL was issued as a result of the transfer of the Mary Valley WSS and the Cedar Pocket WSS from SunWater to the Queensland Bulk Water Supply Authority (that is, Seqwater) on 1 July 2008.

Under the ROP, when the Cedar Pocket Dam fills, customers can take up to 200% of their allocations.

Seqwater identified a range of generic risks considered relevant to allowable costs across all schemes (see Volume 1).

In summary, Seqwater considered that volume risk should be borne by customers through a tariff structure where the fixed charge recovers fixed costs and where the volumetric charge recovers costs that vary with demand. In the context of cost risk, Seqwater considered that it should not bear the risk associated with costs it is not able to control, such as unforeseen events and costs that are difficult to forecast. Accordingly, Seqwater considers that an end-of-period adjustment for such costs is appropriate (Seqwater 2012ak).

Other Stakeholders

Stakeholders variously noted that:

(a) Cedar Pocket Dam is a small scheme in comparison to most others and cannot achieve the economies of scale that larger schemes have (S. Tramacchi 2012);

(b) the scheme has historically been a dairying area. Following amalgamation in the 1970s and deregulation in the 1990s, the number of dairy farms has declined to 10 (down from 30), with dairying comprising less than 75% of total WAE (down from 95%) (S. Tramacchi 2012); and

(c) irrigators' allowable nominal volumes reset whenever there is a significant rainfall event. Hence, for a fixed charge on 100ML of WAE, irrigators could take 200ML in one year without penalty. Irrigators sought assurance that this arrangement would not be changed (Round 1 Consultations, June 2012).

Stakeholders also submitted that the trading of water allocations in the Cedar Pocket Dam WSS will not allow irrigators to manage the relatively high fixed (Part A) tariff proposed by Seqwater as there are only 11 customers and water cannot be traded out of the Cedar Pocket Dam WSS to the Mary Valley WSS (Round 1 Consultations 2012).

The Queensland Farmers' Federation (QFF 2012) noted that where cost-reflective prices are well in excess of current prices, desired levels of permanent trading (and associated benefits) will not be achieved. R. & E. Thefs (2012) submitted that water allocations will become a liability with no one willing to purchase allocations permanently.

Irrigators also questioned whether WAE could be surrendered (Round 1 Consultations 2012).

2.3 Authority's Analysis

The Authority has, in Volume 1, analysed the general nature of the risks confronting Seqwater and recommended that an adjusted price cap apply for all WSSs. The proposed allocation of risks and the means for addressing them are outlined in Table 2.1.

Table 2.1: Summary of Risks, Allocation and Authority's Recommended Response

Risk	*Nature of the Risk*	*Allocation of Risk*	*Authority's Recommended Response*
Short Term Volume Risk	Risk of uncertain usage resulting from fluctuating customer demand and/or water supply.	Seqwater does not have the ability to manage these risks and, under current legislative arrangements, these are the responsibility of customers. Allocate risk to customers.	Cost-reflective tariffs.
Long Term Volume Risk (Planning and Infrastructure)	Risk of matching storage capacity (or new entitlements from improving distribution loss efficiency) to future demand.	Seqwater has no substantive capacity to augment bulk infrastructure (for which responsibility rests with Government). Seqwater has some capacity to manage distribution system infrastructure and losses provided it can deliver its WAEs.	Seqwater should bear the risks, and benefit from the revenues, associated with reducing distribution (and bulk) system losses (where/when the loss can be permanently traded). .
Market Cost Risks	Risk of changing input costs.	Seqwater should bear the risk of its controllable costs. Customers should bear the risks of uncontrollable costs.	End of regulatory period adjustment for over- or under-recovery. Price trigger or cost pass through on application from Seqwater (or customers), in limited circumstances.
Risk of Government Imposts	Risk of governments modifying the water planning framework imposing costs on service provider.	Customers should bear the risk of changes in water legislation though there may be some compensation associated with National Water Initiative (NWI) related government decisions.	Cost variations may be immediately transferred to customers using a cost pass-through mechanism, depending on materiality.

Source: QCA (2012).

As noted in Volume 1, the Authority recommends that short term volume risk should be assigned to customers through a tariff structure that recovers fixed costs through fixed charges and any and all variable costs through volumetric charges.

In relation to issues raised by irrigators, the Authority accepts that the small scale of the scheme represents some risk in terms of the level of costs incurred in operating the scheme. However, the Authority's approach is intended to ensure that costs are minimised as much as possible, taking these circumstances into account.

The scheme's reliance on the dairying industry is also noted. Irrigators indicated that dairy farms in the area are efficiently operated enabling them to remain viable in an increasingly competitive market. The implications of recommended tariffs are further discussed in Chapter 6.

In relation to other issues raised by irrigators, the Authority notes that existing arrangements which allow customers to take up to twice their nominal allocation are established under Part 90 of the Mary Basin ROP (Department of Environment and Resource Management - DERM 2011). The Authority has no role in reviewing such arrangements and cannot provide assurance that such arrangements could be changed in future.

In regard to trading, the Authority considers that relatively high Part A charges generally promote water trading (as irrigators seek to sell entitlements not required in response to high fixed costs). The Authority's approach to tariff structures is reviewed in Chapter 3 and Chapter 6 below. The Authority acknowledges that the Mary Basin ROP (DERM 2011) does not provide for inter-scheme trading or a bulk water transfer agreement between Cedar Pocket Dam WSS and other sections of the Mary Valley.

The volumes of temporary water traded for the Cedar Pocket Dam WSS are identified below in Table 2.2.

Table 2.2: Volume of Water Traded in Cedar Pocket Dam WSS (ML)

	2008-09	***2009-10***	***2010-11***	***2011-12***
Temporary	10	10	10	15

Source: Seqwater (2012ak) and DNRM (2009, 2010, 2011, 2012)

The Authority also notes that under the current regulatory framework, WAE cannot be surrendered.

3. PRICING FRAMEWORK

Under the Ministerial Direction, the Authority is required to recommend Seqwater's irrigation prices (and tariff structures) to apply from 1 July 2013 to 30 June 2017, for each of the tariff groups in the seven relevant WSSs.

3.1 Tariff Groups

The Ministerial Direction specifically directs the Authority to adopt the tariff groups as proposed in Seqwater's NSPs.

Currently, there is one tariff group for the Cedar Pocket Dam WSS. Seqwater proposed in its NSP that this current bulk tariff group continue.

In accordance with the Ministerial Direction, the Authority will adopt the proposed tariff group for this WSS.

3.2 Tariff Structure

Previous Review 2006-11

In the 2006-11 price path, Cedar Pocket Dam was a tariff group of the Mary River WSS. The establishment of Cedar Pocket Dam as a WSS was brought about by the Mary Basin ROP establishing Cedar Pocket Dam tariff group as a distinct and separate WSS in September 2011.

In the 2006-11 price path, a case was identified for a 70:30 ratio of fixed to variable costs. For the Cedar Pocket Dam tariff group, fixed charges were set to recover 70% of revenue and variable charges were set to recover 30% of revenue, given the agreed forecast usage.

In addition, as a consequence of the previous review, Cedar Pocket Dam tariff group was given Category 3 status as the Government considered it was too onerous to achieve lower bound during 2006-11. Accordingly, Government provided a community service obligation (CSO) to ensure the water service provider achieved lower bound costs. A CSO was also provided to cover this shortfall during the 2011-13 interim period.

Stakeholder Submissions

Seqwater

Seqwater (2012aj) submitted that during the 2006-11 price path, the volumetric and fixed charges were set to recover a set percentage of lower bound costs, regardless of whether those costs were fixed or variable. This meant that the volumetric charge did not signal the marginal costs of taking water.

Seqwater agreed with the Authority's findings associated with the recent SunWater pricing review that a cost-reflective two-part tariff structure is appropriate. Specifically, the volumetric charge should be set to reflect those costs which are expected to vary with water use over the regulatory period with the fixed charge recovering the balance of costs.

Seqwater (2012ak) considered that all costs associated with the provision of irrigation services in the Cedar Pocket Dam WSS are fixed. Accordingly, Seqwater proposed to apply a single fixed tariff to Cedar Pocket Dam irrigation customers.

Other Stakeholders

Stakeholders variously noted that:

(a) Seqwater's proposed 100% fixed (Part A) tariff is unacceptable as significant charges would apply when water is not available and in those instances where water is available but not required. Accordingly, a greater percentage of variable charge (up to 85% of the total charge) is proposed (R. & E. Thefs 2012 and S. Tramacchi 2012);

(b) some adjustment to the current ratio of fixed/variable tariffs is justified on the basis that although some costs are fixed, some operating costs are modest particularly when usage is low as has occurred in the past 18 months (S. Tramacchi 2012); and

(c) Cedar Pocket Dam WSS tariffs should be the same as those in the Mary Valley WSS as they are in the same catchment (R. & E. Thefs 2012);

Authority's Analysis

The Authority has, in Volume 1, analysed the tariff structure and the efficiency implications of the tariff structure, to apply to Seqwater's schemes.

The Authority considers that, in general, aligning the tariff structure with fixed and variable costs will manage volume risk over the regulatory period and send efficient price signals. To signal the efficient level of water use, the Authority recommends that all, and only, variable costs be recovered through a volumetric charge, with fixed charges covering the balance of costs.

In response to submissions:

(a) while noting stakeholders' concerns regarding a high fixed charge, particularly in periods of low water availability, under current legislative and contractual arrangements (and the Ministerial Direction), customers must bear all the costs of water supply incurred by Seqwater, irrespective of whether it is made available (provided the costs of supply are efficient and prudent), and irrespective of whether there is a drought;

(b) this does not necessarily imply a zero variable charge as suggested by Seqwater and it is accepted that some costs will reduce during prolonged low water use periods; and

(c) the Authority notes that historically, the Cedar Pocket Dam and Mary Valley charges were the same, with different charges being introduced in the 2006-11 price path. Specifically, given the differences between these WSSs in the characteristics of supply (such as the type and age of infrastructure) and demand (such as the type and number of customers), prices will differ.

3.3 Water Use Forecasts

Previous Review 2006-11

During the 2006-11 price paths, water use forecasts played an essential role in the determination of the tariff structures and prices.

In the previous review, up to 25 years of historical data was collated for nominal WAEs, announced allocations and volumes delivered. The final water usage forecasts were based on the long term average actual usage level. Where there was a clear trend away from the

long term average, SunWater adjusted the forecast in the direction of that trend. Usage forecasts also took into account SunWater's assessment of future key impacts on water usage, such as changes in industry conditions, impact of trading and scheme specific issues (SunWater 2006a).

For the Cedar Pocket Dam WSS, SunWater (2006b) assumed a water usage forecast of 40% of WAE in the river system, equivalent to 198ML per year. Water usage for high and medium priority irrigation WAEs were (where appropriate) not separately identified (SunWater 2006b).

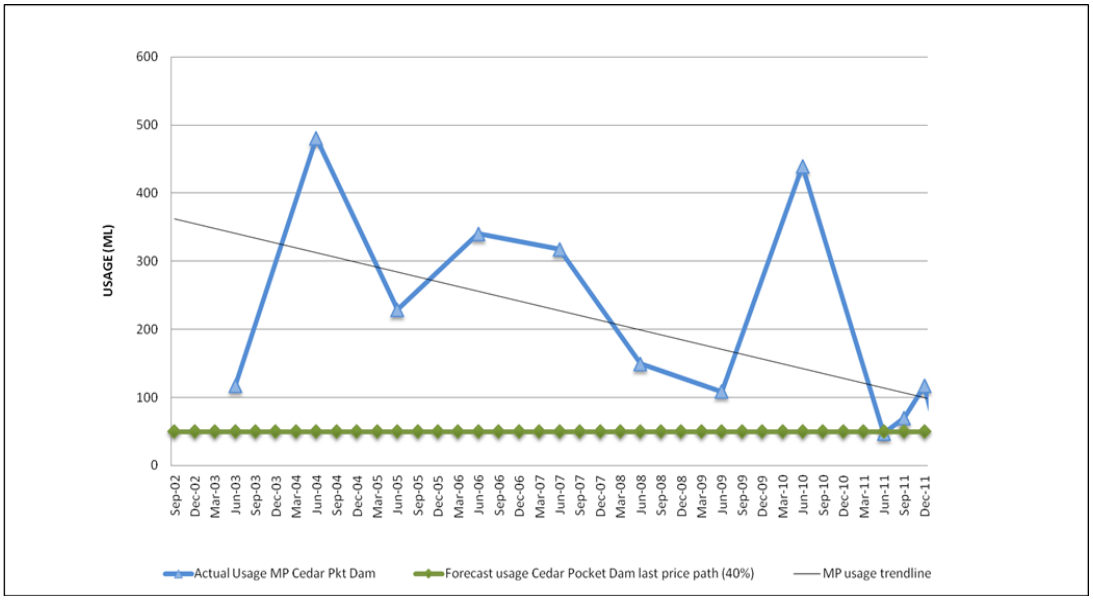
Stakeholder Submissions

Seqwater

Seqwater confirmed that the previous price path adopted a use forecast at 40% of the nominal amount of WAE, equivalent to 198ML/annum or 50ML/quarter. Seqwater noted that the average water use over the 2006-12 period was actually higher than forecast at 228ML per year. Announced allocations were below 100% over the 2005-06 to 2007-08. Over the nine years to December 2011, average actual water use was 255ML per year.

Figure 3.1 shows the historic usage information for the Cedar Pocket Dam WSS submitted by Seqwater (2012ak).

Figure 3.1: Water Usage for the Cedar Pocket Dam WSS



Source: Seqwater (2012ak).

Seqwater (2012ak) have not provided forecast water usage for the period 2013-17.

Other Stakeholders

No stakeholders commented on water use forecasts in the Cedar Pocket Dam WSS.

Authority's Analysis

The application of two-part tariffs removes the need for water use forecasts, where the fixed tariff reflects fixed costs and the volumetric tariff reflects variable costs. Water use data is,

however, required for the Seqwater irrigation review to address Government's requirement that current prices (that is, revenues) be maintained and to estimate the cost-reflective volumetric tariffs. Refer Chapter 6: Draft Prices of this report.

4. RENEWALS ANNUITY

4.1 Introduction

Ministerial Direction

Under the Ministerial Direction, the Authority is required to recommend a revenue stream that allows Seqwater to recover prudent and efficient expenditure on the renewal and rehabilitation of existing assets through a renewals annuity.

The Ministerial Direction also requires the Authority to have regard to the level of service provided by Seqwater to its customers.

Previous Review

In 2000-06 and 2006-13, a renewals annuity approach was used to fund asset replacement.

As discussed in Volume 1, the renewals annuity for each WSS was developed in accordance with the Standing Committee for Agriculture and Resource Management (SCARM) Guidelines (Ernst & Young 1997) and was based on two key components:

(a) a detailed asset management plan, based on asset condition, that defined the timing and magnitude of renewals expenditure; and

(b) an asset restoration reserve (ARR) to manage the balance of the unspent (or overspent) renewals annuity (including interest).

The determination of the renewals annuity was then based on the present value of the proposed renewals expenditure minus the ARR balance.

The allocation of the renewals annuity between high and medium priority users was based on water pricing conversion factors (WPCFs).

In the 2006-11 review, the Cedar Pocket Dam WSS was treated as a tariff group within the Mary Valley WSS, so that in effect, the Mary Valley WPCF was applied.

Issues

In general, a renewals annuity seeks to provide funds to meet renewals expenditure necessary to maintain the service capacity of infrastructure assets through a series of even charges. Seqwater's renewals expenditure and ARR balances include direct, indirect and overhead costs (unless otherwise specified).

The key issues for the 2013-17 regulatory period are:

(a) the establishment of the opening ARR balance (at 1 July 2013), which requires:

  (i) reviewing whether renewals expenditure in 2006-13 was prudent and efficient. This affects the opening ARR balance for the 2013-17 regulatory period; and

  (ii) the unbundling of the opening ARR balance for bulk and distribution systems (where applicable).

(b) the prudency and efficiency of Seqwater's forecast renewals expenditure;

(c) the methodology for apportioning renewals between medium and high priority WAEs (where applicable); and

(d) the methodology to calculate the renewals annuity.

The Authority's general approach to addressing these issues is outlined in Volume 1.

The Authority notes that Seqwater has estimated that it has under management about 74 bulk water storage assets relevant to entitlement holders in South East Queensland (SEQ), including irrigators, local government authorities, industrial users and the SEQ Water Grid Manager (WGM). Seqwater (2012ak) submitted that asset management practice within Seqwater does not distinguish between irrigation and non-irrigation assets - that is, assets are managed as a portfolio and not on an industry sector basis.

Seqwater submitted that renewals and refurbishments are determined through a strategic asset management process. This process and its outcomes are documented in the Facility Asset Management Plans (FAMPs) which are being rolled out across all assets.

Seqwater submitted that irrigation assets are currently not as advanced in this process as the high priority water treatment plants, although preliminary condition and criticality data for Irrigation Meter fleets in the Cedar Pocket Dam WSS have been collected. This information will form a substantial part of asset management plans for these assets.

Some of the assets were renewed during 2006-13. Others are eligible for renewal over the 2013-17 regulatory period. Depending on their asset life, some are renewed several times during the Authority's recommended 20-year planning period.

It was, therefore, not practicable within the timeframe for the review, nor desirable given the potential costs, to assess the prudency and efficiency of every individual asset.

The Authority engaged engineering consultants Sinclair Knight Merz (SKM) to review Seqwater's renewals items for prudency and efficiency. Across all schemes, 12 forecast and two past renewals items were reviewed. The findings of these detailed reviews were considered for application to other similar renewal items to determine the prudency and efficiency of this expenditure.

4.2 Seqwater's Opening ARR Balance (1 July 2013)

A renewals annuity approach requires ongoing accounting of renewals expenditure and revenue.

The opening ARR balance for 2013-17 (as at 1 July 2013) is based on the opening ARR balance for the current price path (1 July 2006), less renewals expenditure, plus renewals revenue and an annual adjustment for interest over the 2006-13 period.

Previous Review

The 2006-11 price paths were based on the opening ARR balance at 1 July 2006.

Seqwater submitted that the opening balance for the Cedar Pocket Dam WSS was negative $75,428.

In Volume 1, the Authority noted that the opening ARR balance in 1 July 2006 is not subject to review for the 2013-17 regulatory period.

Submissions

Seqwater

Seqwater engaged Indec Consulting (Indec 2012) to establish the 1 July 2013 opening ARR balances. Indec established opening bundled ARR balances for 1 July 2013 by:

(a) for the period 2000-06, applying urban and industrial revenue and expenditure to the previously approved irrigation only opening 2006 ARR balance. This established a closing ARR balance on a whole of scheme (or all sectors) basis at 30 June 2006;

(b) calculating balances based on all sectors actual renewals expenditure and revenue from 1 July 2006 to 30 June 2011;

(c) applying the available Seqwater actual and forecast renewals expenditure and revenue for 2011-12 and 2012-13 for all sectors; and

(d) applying Seqwater's proposed interest rate of 0% between 2000-06 and 9.69% over 2006-13.

Past Renewals Expenditure 2006-13

Actual direct renewals expenditure was below that initially forecast over the period in both tariff groups (Table 4.1).

Over the 2006-11 price path, forecast direct renewals expenditure was $129,541 compared to actual renewals expenditure of $4,928. Actual direct renewals expenditure was, therefore, substantially less than forecast over the period (Table 4.1 refers).

Table 4.1: Forecast and Actual Direct Renewal Expenditure 2006-11 (Nominal $)

Tariff Group	*Forecast 2006-11*	*Actual 2006-11*	*Variance*
Cedar Pocket Dam	129,541	4,928	124,613

Source: Indec (2012). Note: Nominal totals are used in this table. A broad comparison of nominal values over the period is considered reasonable in view of the distribution of costs over the period.

Annual amounts of actual direct and indirect renewals expenditure are shown in Table 4.2, allocated between direct and non-direct costs.

Table 4.2: Past (Actual) Renewals Expenditure 2006-11 (Nominal $)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*
Direct	0	218	0	4,710	0
Non-direct	0	244	0	1,435	0
Total	**0**	**462**	**0**	**6,145**	**0**

Source: Indec (2012).

Seqwater's forecast renewals expenditure for 2011-13 are based on a combination of actual renewals expenditure for 2011-12 and forecast expenditure for 2012-13. The relevant amounts are as shown in Table 4.3.

Table 4.3: Renewal Expenditure 2011-13 (Nominal $)

Tariff Group	*Actual 2011-12*	*Forecast 2012-13*	*Total*
Cedar Pocket Dam	51,847	0	51,847

Source: Indec (2012).

Opening ARR Balances 1 July 2013

Based on the steps noted above, Seqwater's submitted opening balance for 1 July 2013 is shown in Table 4.4, and compared to the 1 July 2006 balance.

Table 4.4: Opening ARR Balance, 1 July 2013 (Nominal $)

Tariff Group	*1 July 2006*	*Seqwater Proposed ARR Balance 1 July 2013*
Cedar Pocket Dam	(75,428)	15,579

Source: Indec (2012).

Other Stakeholders

Stakeholders during the Round 1 consultation in June (2012) submitted that any past expenditure on telemetry should not be included in prices.

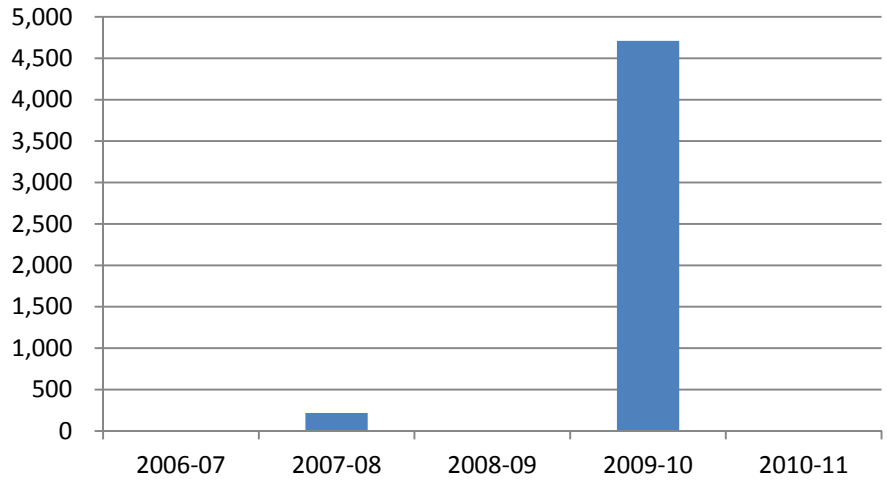
Authority's Analysis

The 1 July 2006 opening ARR balances for each (bundled) scheme were approved by Government and are therefore accepted by the Authority.

Renewals Expenditure 2006-13

The total direct renewals expenditure over 2006-13 is detailed in **Figure 4.1**.

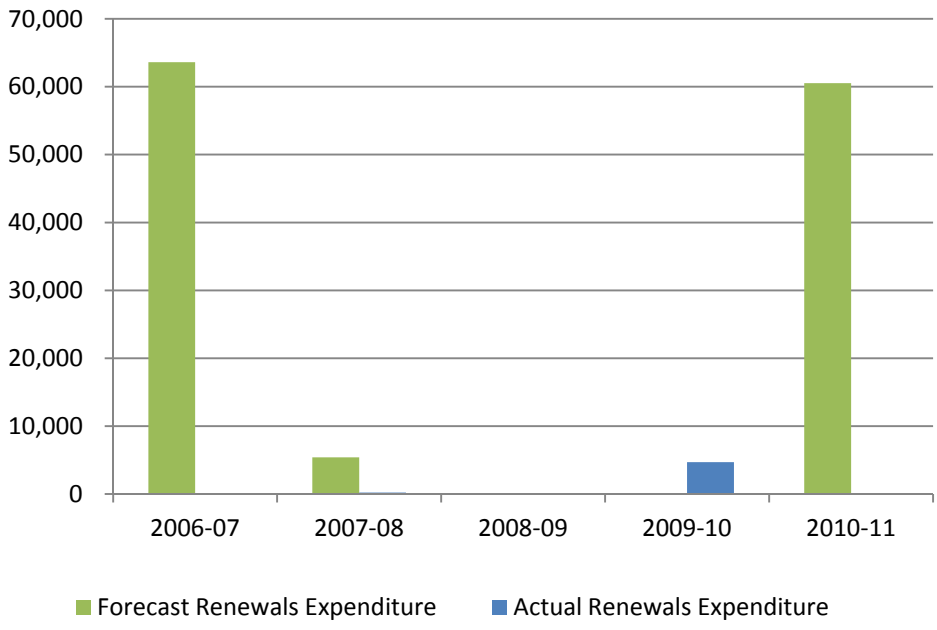
Figure 4.1: Past (Actual) Direct Renewals Expenditure 2006-11 (Nominal $)



Source: Seqwater (2012ak).

A comparison of forecast and actual direct renewals expenditure in the Cedar Pocket Dam WSS for 2006-11 is shown in **Figure 4.2**.

Figure 4.2: Comparison of Forecast and Actual Direct Renewals Expenditure 2006-11 (Nominal $)



Source: Indec (2012).

In relation to the prudency and efficiency of past renewals, the Authority notes that for the first two years of the 2006-11 price paths SunWater managed the renewals expenditure program. Relevant WSSs were transferred to Seqwater on 1 July 2008.

For the SunWater review, the Authority excluded from prices 4% of un-sampled renewals expenditure during 2006-11. This was on the basis that the Authority's review of a sample of past renewals items indicated cost savings of approximately 4%.

If the seven (now Seqwater and former SunWater) WSSs had been part of the SunWater review, the 4% cost reduction would have applied, as the same (SunWater) approach applied to asset planning and expenditure in the (now) Seqwater WSS.

The Authority recommends, therefore, that 4% of past renewals expenditure, for the two years that these WSSs remained under SunWater's management (1 July 2006 to 30 June 2008), be deducted from Seqwater's ARR balances.

The question remains whether any cost reductions should also apply for 2008-13, once the WSSs were transferred to Seqwater.

As previously outlined, the Authority engaged engineering consultants SKM to review Seqwater's renewals items for prudency and efficiency. The Authority has not specifically reviewed any past capital expenditure items in the Cedar Pocket Dam WSS.

As part of the SKM review, two past renewals items were selected with the findings considered for application to other renewals items.

These items were:

(a) recreational maintenance associated with the Mary Valley tariff group at a cost of $110,602 in 2008-09 and $123,293 in 2010-11; and

(b) infrastructure maintenance (reactive maintenance) associated with the Pie Creek tariff group at a cost of $31,015 in 2008-09 and $36,172 in 2010-11.

Although these items are defined as maintenance, the Authority considers that the nature of the expenditure is predominantly renewals related.

SKM found that based on the inability of Seqwater to substantiate renewals expenditure incurred in 2008-09 (the first year of operating the former SunWater schemes), expenditure incurred in this year could not be considered prudent or efficient.

Expenditure in 2009-11 was considered to be prudent and efficient.

In response to stakeholders' comments that past expenditure on telemetry not be included in prices, the Authority notes consultants SKM's conclusion that forecast renewals expenditure associated with Cedar Pocket Dam telemetry is prudent on the basis that it represents compliance with the Mary Basin ROP. SKM also commented that the existing gauging system is currently (and, therefore, has historically) been read manually and that forecast renewals expenditure associated with the gauging system provides for the automation of level recording and data transfer.

Therefore, the Authority concludes that gauges at Cedar Pocket Dam have historically been read manually, without the use of telemetry.

Conclusion

As outlined in Volume 1, Chapter 5: Renewals Annuity:

(a) a cost saving of 4% is to apply to past renewals, consistent with the Authority's approach to SunWater, for the period 2006-08 when SunWater operated the now Seqwater assets;

(b) as Seqwater has been unable to substantiate past renewals expenditure during its first year of operating the former SunWater schemes (2008-09), renewals expenditure in that year has been reduced to zero; and

(c) all renewals expenditure 2009 to 2013 is to be accepted, unadjusted.

Accordingly, based on this approach, the Authority recommends that past renewals expenditure be adjusted as shown below in **Table 4.5**.

Table 4.5: Review of Past (Direct) Renewals Expenditure 2006-13 (Nominal $)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*
Seqwater proposed	0	218	0	4,710	0	51,847	0
Authority Recommended	0	214	0	4,710	0	51,847	0

Source: Seqwater (2012ak) and QCA (2012).

Opening ARR Balance (at 1 July 2013)

Based on the Authority's assessment of the prudency and efficiency of past renewals expenditure, the recommended opening ARR balance for 1 July 2013 for Cedar Pocket Dam WSS is $15,593 compared to Seqwater's proposed $15,579.

4.3 Forecast Renewals Expenditure

To calculate a renewals annuity, it is necessary to determine if forecast renewals expenditure is prudent and efficient.

Prudency and Efficiency of Forecast Renewals Expenditure

Submissions

Seqwater

Seqwater submitted a summary of the significant proposed renewals expenditure items for the Cedar Pocket Dam WSS as presented below in Table 4.6.

Table 4.6: Forecast Renewals Expenditure 2013-17 (Real $'000)

Facility	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Repair of drainage - right hand embankment	0	18	0	0
Water flow-meters	7	7	6	6
Total	**7**	**25**	**6**	**6**

Source: Seqwater (2012ar). The Table contains items that have a higher than average value (HAV) and which would have an impact of 10% or greater on the annuity.

The major expenditure item incorporated in the above estimates is the repair of drainage on the right hand embankment of Cedar Pocket Dam at a cost of $18,000 in 2014-15.

Additional major expenditure items from 2017-18 onwards are:

(a) replacement of electrical reticulation to valves with an estimated cost of $27,000 in 2019-20;

(b) renewal of telemetry assets with an estimated cost of $34,000 in 2020-21, and again in 2030-31;

(c) renewal of electricity supply assets with an estimated cost of $30,000 in 2025-26; and

(d) refurbishment of outlet valves with an estimated cost of $28,000 in 2024-25.

As part of its renewals program, Seqwater is also seeking to recover the cost associated with water meters. Specifically, Seqwater's business case in this regard outlines costs for: replacing existing meters; moving meter locations to comply with Workplace Health and Safety (WHS) requirements; and modifying existing meter works to comply with the meter manufactures' specifications (to ensure accuracy).

For Cedar Pocket Dam WSS, the proposed metering costs are detailed below in Table 4.7.

Table 4.7: Seqwater's Proposed Metering Costs (Real $'000)

Tariff Groups	*Phase 1: 2012-13 to 2014-15*	*Phase 2: 2015-16 to 2021-22*	*Phase 3: 2022-23 to 2035-36*	*Total*
Cedar Pocket Dam	14	42	28	84

Source: SKM (2012). Note: Costs in each column are the sums of costs within the indicated range of years.

Seqwater's forecast renewal expenditure items greater than $10,000 in value, for the years 2013-14 to 2035-36 are provided in **Appendix A**.

Other Stakeholders

QFF (2012) queried whether costs associated with the repair of drainage on the right hand embankment of Cedar Pocket Dam (estimated at $18,000 in 2014-15), should be off-set through insurance.

Stakeholders (Round 1 Consultations June 2012) submitted that more details were required regarding Seqwater's proposed renewals expenditure on "electricity supply assets" in 2025-26 at $30,000.

Authority's Analysis

The Authority commissioned SKM to review Seqwater's procurement, asset performance and condition assessment policies and procedures and to determine whether they represented good industry practice.

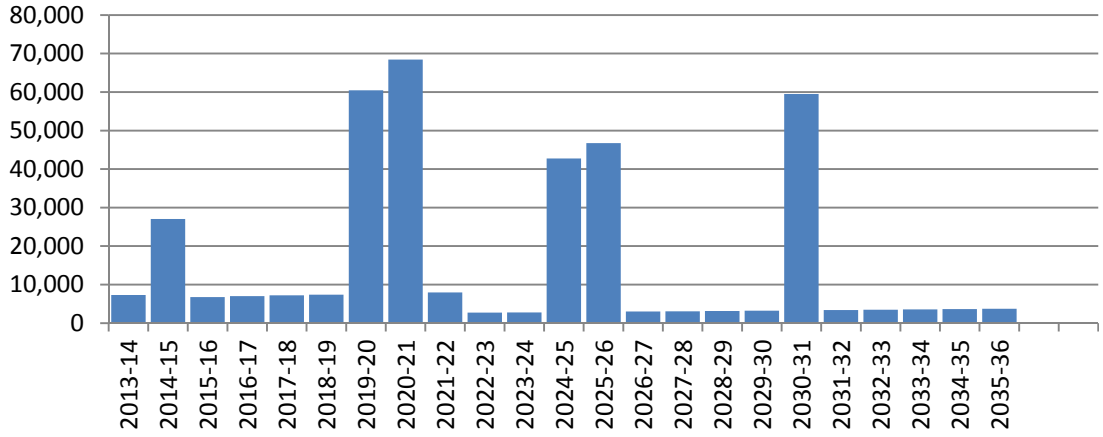
SKM concluded that although Seqwater may not currently have good asset condition information due to the lack of condition information transferred from previous operators, the policies and procedures Seqwater has adopted to assess the condition of its assets will rectify this situation over time. Accordingly, SKM consider Seqwater's approach represents good industry practice.

SKM concluded that Seqwater has made progress in developing robust asset management processes and procedures for comprehensive asset information.

Total Costs

Seqwater's proposed renewals expenditure for 2013-36 for the Cedar Pocket Dam WSS is shown below in **Figure 4.3**. The Authority has identified the direct cost component of this expenditure, which is reviewed below. The indirect and overheads component of expenditure relating to these items is reviewed in Chapter 5 – Operating Costs.

Figure 4.3: Forecast Renewals Expenditure (Direct) 2013-36 (Nominal $)



Source: Seqwater (2012).

The Authority notes QFF's submission that queried whether costs associated with the repair of drainage on the right hand embankment of Cedar Pocket Dam, should be off-set through insurance. Seqwater has confirmed that, for the purpose of pricing, no flood-related costs have been included on the expectation that insurance revenues would account for all flood-related damage costs.

The Authority notes the stakeholder submission requiring more details to be provided regarding the proposed renewal item, "electricity supply assets" in 2025-26. Seqwater has

subsequently described theses assets as a property pole, meter box (excluding the meters), cabling and a distribution board. In addition, Seqwater state:

> *The proposed renewals expenditure is scheduled based on the..."standard asset life" of 20 years for this type of equipment. It was installed in 2005 and will be 20 years old when the work is scheduled. The cost estimate is drawn from the estimated replacement costs as set out in Section 5.2.2 and Section 9 of the Irrigation Infrastructure Renewal Projections - 2013/14 to 2046/47 Report on Methodology. The renewal timing will be reviewed on an ongoing basis so that it is only delivered when condition warrants. The scope and cost estimate will be reviewed prior to commencement of work to ensure the delivery is efficient.*

Item Reviews

Consultants SKM reviewed the prudency and efficiency for a sample of items across all Seqwater WSSs. Those of relevance to Cedar Pocket Dam WSS are discussed below.

Items reviewed included:

(a) a specific item sampled in the Cedar Pocket Dam WSS (Item 1); and

(b) additional items reviewed in another WSSs where the conclusion was considered by SKM for possible application to Cedar Pocket Dam WSS (Items 2 and 3).

Item 1: Cedar Pocket Dam Telemetry

Seqwater

Seqwater submitted that this renewals item is recurring with costs of $34,000 scheduled to occur in 2020-21 and again in 2030-31.

Other Stakeholders

Stakeholders (Round 1 Consultations June 2012) submitted that any proposed expenditure on telemetry should not be included in prices.

Consultant's Review

Project Description

This project provides for the renewal of gauging and telemetry assets at Cedar Pocket Dam. The gauging station locations are at the headwater and tail-water levels. The tail-water gauge is currently read manually via a gauge board located a distance downstream of the dam due to the physical constraints of the stream. Seqwater proposes to install new air bubbler-style stream gauging stations during 2012-13 in order to better meet the compliance requirements of the Mary Basin ROP. The works nominated will be the replacement of both the upstream and downstream gauging equipment on a 10 year recurrence interval.

The project is recurring due to the anticipated deterioration over time of the electronic and communications equipment. SKM advised that this type of equipment can typically be expected to reach obsolescence after approximately 10 years service, beyond which it can be expected to suffer a reduction in reliability resulting from increased component failure and lack of service support.

SKM is not aware of any component of the costs being attributed to damage from the 2010-11 floods.

Project Status

This project is to be undertaken in 2020-21, and then again in 2030-31. In the Seqwater Asset Delivery Framework, the project would be classified as pre-implementation, in the Concept and Feasibility stage, meaning prior to Preliminary design. SKM reviewed the project cost estimates and found them to be reasonable. SKM considered the project is ready to proceed to the preliminary design phase.

Provided Documentation

The documents used for this review are:

(a) WMO010: Water Monitoring Data Collection Standards. Queensland Government, Department of Natural Resources and Water (Version 2.1) March 2007;

(b) Mary Basin ROP (Extract): ROL holder monitoring (page 183);

(c) SM Project Outline – Cedar Pocket Dam Telemetry Cost Estimate;

(d) Irrigation Infrastructure Renewal Projections – 2013-14 to 2046-47. Report on Methodology Seqwater, April 2012; and

(e) RFI001 Irrigation Request Response. QCA Irrigation Price Review 2013-17.

The documentation received by SKM was considered sufficient for the purposes of this prudency and efficiency assessment.

Prudency

The need for this project has been determined as being required to fulfil the regulatory obligations as specified in the ROP, which to date have not been met. This need is supported by reference to Attachment 7 of Seqwater's submission, Mary Basin ROP, which requires continuous time series data for the water level (headwater) and the stream flow (tail-water) to be provided to DNRM. The proposed telemetry equipment will fulfil these requirements.

The telemetry function is of limited value to the irrigators as it is not used for controlling water flow to irrigators. However, discussions with operators revealed it was occasionally useful during times of high river flows to assist in water harvesting, and could possibly be used for trending analysis. However, as the telemetry function is a ROL licence condition, it can reasonably be argued that it was the irrigators that triggered the need for a licence for the dam and hence they should pay for the necessary infrastructure to meet the licence condition. This is a position supported by SKM.

The automation of level recording and data transfer is required to efficiently manage data integrity and quality. All Seqwater stream-flow data is automatically recorded and transferred via radio link to a central database location. This is to ensure that the data is secure and errors or gaps that are a feature of a manual system are avoided.

In summary, the project supports the need for replacement of the telemetry system at Cedar Pocket Dam and as such is prudent both in terms of need and timing.

Policies and Procedures

The level of service required to be provided in accordance with the ROL is for continuous time series data for the water level (headwater) and the stream flow (tail-water). SKM interpreted this as a requirement for the provision or real-time data; hence the need for a

radio link to transmit the data. The proposed telemetry equipment will fulfil these requirements.

A cost breakdown and schedule has been provided which provides a time-frame and budget for future expenditure.

Timing of Asset Replacement/Refurbishment

The age of the existing manually-read gauging system is not clear. However the condition assessment by Seqwater has indicated replacement in 2020-21. As the expected life of the asset is 10 years, replacement is scheduled to be repeated in 2030-31.

Seqwater's standard useful asset life for telemetry components and level measurement equipment is 10 years (refer to Appendix C of Seqwater's submission supporting document: Report on Methodology). Seqwater's standard asset refurbishment for telemetry has yet to be determined (refer to Appendix D of Seqwater's submission supporting document: Report on Methodology). Accordingly, SKM believes that standard asset lives, in keeping with industry standards, should be used.

As discussed, this type of equipment can normally be expected to reach obsolescence after approximately 10 years service, beyond which it can be expected to suffer a reduction in reliability due to increased component failure and a lack of service support. Although in some cases equipment life may be extended, in SKM's experience 10 years is considered typical. On this basis the timing of the asset replacement is considered appropriate.

Scope of Works

There are a number of methods of level gauging but the method generally adopted by Seqwater involves use of a bubbler tube through which low pressure air is supplied. The outlet of the tube is near the bottom of the stream channel, and the air pressure required to achieve a minimum air flow can be used to infer the water level. This is a very simple method of fluid level measurement, appropriate for the level of accuracy required in this particular application. It is also robust, with no electronic field sensors, has minimal moving parts and, provided the electronic components are appropriately housed (as is the case at Cedar Pocket Dam), should offer very reliable service.

Other methods available include use of ultrasonic, float sensors and electrical capacitance devices, all of which involve more complex field-mounted sensors which are susceptible to damage through deterioration, storm or vandalism.

Although Seqwater has yet to undertake options analysis, SKM understands a bubbler system is favoured to maintain commonality with similar equipment used elsewhere. SKM considered this method of stream gauging selected by Seqwater is appropriate for the application.

Telemetry equipment is required for the transmission of the water levels to Seqwater central locations and for this information to be made continuously available to stakeholders via the internet. Seqwater has chosen a simple radio link (with battery back-up) to achieve this. Alternatives would include connection to a telephone landline (not yet available at Cedar Pocket Dam) but this would be susceptible to washout during floods. Alternatively a microwave link could be used but this would require expensive towers to achieve *line-of-sight* links needed for repeater stations.

SKM believes this method of telemetry selected by Seqwater is appropriate for the application.

Efficiency

The work will involve replacement with similar equipment, which will mean very little modification of adjacent infrastructure or buildings/enclosures. The equipment will provide the same functionality, accuracy and performance as the existing system.

From SKM's previous experience with similar equipment the proposed costs are considered reasonable.

The proposed works will be relatively straightforward involving like-for-like direct replacement of existing equipment with a system of similar capability. The works will need to comply with standard electrical installation techniques, in particular the Australian Wiring Rules AS/NZS 3000. The system will use existing allocated radio frequencies for the telemetry link and will not require additional licensing.

Project Cost

Seqwater has provided a breakdown of the cost estimate for the replacement works. The major supply components of the cost have been verified independently by SKM by means of market quotes. Other cost components (such as install and design costs) have been estimated by SKM from historic, benchmark costs from similar projects. The summary of the cost comparison is outlined below in **Table 4.8.**

Table 4.8: Cedar Pocket Dam Telemetry – Cost Estimate (Real $'000)

Item	*Seqwater Estimate*	*SKM Estimate*
Design	3,500	5,500
Procurement	2,000	2,500
Supply and Installation - Campbell Scientific CR1000 Data Logger (x 2)	8,600	7,600
Supply and Installation - HW Air Force Compressor Bubblers (x 2)	9,000	15,500
McVan Tipping Bucket Rain Gauge	2,100	2,100
Ancillaries	1,800	1,800
Seqwater Internal Costs	7,000	8,500
Total	**34,000**	**43,500**

Source: SKM (2012).

Both the SKM estimate and the Seqwater estimate are for cost of a single installation project. As the variance between the SKM estimate and the Seqwater estimate is less than 30%, the Seqwater estimate is accepted as valid and hence efficient.

Conclusion

SKM assessed the project as prudent as the primary driver of the replacement of the stream gauging and telemetry has been demonstrated and an appropriate decision making process has been documented.

The project is assessed as efficient as the scope is appropriate, the standards of works are consistent with industry practice and the costs are consistent with prevailing market conditions.

Authority's Analysis

Based on the SKM analysis, the Authority concludes that the expenditure (scheduled to occur in 2020-21 and in 2030-31) is both prudent and efficient. The Authority notes that the proposed works are consistent with Seqwater's requirements outlined in the Mary Basin ROP – namely, the requirement for continuous, real time, water level measurements associated with water level (headwater) and stream flow (tail-water).

By inference, expenditure of a similar magnitude on the same project in previous years is also considered prudent and efficient.

Item 3: Metering Replacements

Seqwater

Seqwater submitted that expenditure of $14,000 in 2013-14 to 2014-15, $42,000 in the 2015-16 to 2021-22 period and $28,000 in later years is required to replace water meters in the Cedar Pocket Dam WSS.

Other Stakeholders

No other stakeholders made comment regarding this item.

Consultant's Review

SKM reviewed the metering requirements in the Central Lockyer and Mary Valley WSSs. The results of this review were considered for application to all WSSs except Central Brisbane River WSS. The detailed SKM review is provided in Volume 1.

Project Description

This project involves renewal of water meters in Seqwater's irrigation schemes including Cedar Pocket Dam WSS. Metering is required for management of water supplies, reporting and billing purposes. Seqwater has advised that it has two types of meters: river meters and groundwater meters. Most meters are river meters with groundwater meters only in the Central Lockyer Water Supply Scheme.

Prudency

SKM's conclusions in regard to the prudency of meter replacement costs across the two reviewed schemes (and inferred for Cedar Pocket Dam WSS) were:

(a) meters are required to comply with monitoring requirements outlined in the ROP (or IROL: in relevant schemes). Management of health and safety risks is also a legitimate driver for the project;

(b) in condition assessments of meters in the reviewed schemes, the vast majority of meters (over 80%) were found to be in need of refurbishment or replacement. SKM considered the standard asset life of 15 to 20 years to be reasonable and in keeping with industry practice;

(c) Seqwater's proposed high level scope of works with installation modifications to meet manufacture's guidelines was considered appropriate to achieve the desired outcome of providing flow measurements to meet the requirements of the relevant ROP; and

(d) the installation of lower cost mechanical meters was supported (rather than National Water Initiative compliant magnetic flow meters) on the grounds there are very few high use irrigators and use levels change frequently.

Across the two reviewed schemes, SKM noted that Seqwater had identified 700 active meters (of 1400 WAE holders), but proposed that 775 meters be replaced over a seven-year staged programme. SKM speculated this discrepancy may be due to an allowance for the number of meters to increase over time as part of a re-uptake of water licences. However, this is not specifically stated by Seqwater and no justification has been provided for this assumption. Accordingly, the additional 75 meters were considered not to be prudent.

In summary, SKM found that:

(a) for the first 3 years, 2012-13 to 2014-15, the proposed replacements at 95 meters per year to meet workplace health and safety standards is prudent;

(b) for the 7 years, 2015-16 to 2021-22, meter replacements at 70 per year were considered prudent for the first 6 years, but not the final year; and

(c) for 2022-23 onwards, ongoing renewal at 70 per year was considered only partially prudent, that is, meter replacement was not required for all years. On the basis that the fleet of at least 700 active water meters will have been replaced during the first 10 years of the program, and the useful asset life of the meters is 15 to 20 years, there should be no planned replacements until after these assets have passed their useful lives. SKM considered the renewal of meters from 2022-23 to 2027-28 not to be prudent.

Overall, SKM considered the meter replacement program to be partially prudent.

Efficiency

SKM estimated the costs of a single meter installation based on Seqwater's proposed standard installation and compared this with Seqwater's estimate of a single meter.

The comparison is shown in **Table 4.9**.

Table 4.9: Comparison of Meter Installation Costs

Item	*Seqwater ($)*	*SKM ($)*	*Difference*
Parts – new flow meter	600	875	46%
Contractors - installation	4,000	5,700	43%
Management costs	2,000	1,600	(20%)
Total	**6,600**	**8,175**	**24%**

Source: SKM (2012).

SKM considered that the lower cost proposed by Seqwater could be explained by the bulk purchasing of meters and the cost savings from appointing a single contractor on the overall project. SKM considered Seqwater's proposed cost to be efficient.

A comparison of Seqwater's proposed costs and SKM's revised costs for Cedar Pocket Dam WSS are outlined below in **Table 4.10**.

Table 4.10: SKM's Estimated Partially Prudent and Efficient Metering Costs Compared (Real $'000)

	2013-14 to 2014-15	*2015-16 to 2021-22*	*2022-23 to 2035-36*	*Total*
Seqwater proposed costs	14	42	28	84
SKM revised costs	13	34	14	61

Source: SKM (2012).

Authority's Analysis

The Authority notes the outcome of the SKM review that expenditure associated with Item 3: Metering is efficient but only partially prudent on the basis of the proposed timing of replacement. A more realistic estimate of the number of meters to be replaced has also been proposed by SKM.

The Authority, based on the SKM analysis, concludes that the expenditure associated with metering at Cedar Pocket Dam be adopted as outlined, above, in **Table 4.10**.

Item 3: Cedar Pocket Dam – Embankment Refurbishment

Seqwater

Seqwater submitted that expenditure of $18,000 in 2015 is proposed for the refurbishment of Cedar Pocket Dam embankment.

Other Stakeholders

No other stakeholders made comment regarding this item.

Consultant's Review

SKM reviewed a dam embankment related project at Clarendon Dam in the Central Lockyer Valley WSS. This involved replacement of riprap (a layer of rock) on the lake side of the embankment to absorb and disperse the wave energy for a total cost over a six-year period of $312,000.

While the Clarendon Dam was considered prudent and efficient, SKM considered that the conclusions could not be applied to the Cedar Pocket Dam embankment project as it was unclear whether the works included or excluded renewal of riprap.

SKM therefore considered that there was insufficient information to conclude on this project.

Conclusion

Sampled Items

In summary, one item was directly sampled (that is, Cedar Pocket Dam telemetry) and was found to be prudent and efficient.

In addition, proposed expenditure on meter replacements was found to be prudent and efficient in the case of installations made in 2013-14 and 2014-15 but partially prudent in later years. SKM's revised cost estimates have been adopted.

In the case of another item, the Cedar Pocket Dam embankment refurbishment, it was considered that conclusions reached for a similar project at Clarendon Dam in the Central Lockyer WSS could not be applied. This item was, therefore, categorised as a non-sampled item and subject to the appropriate implied cost saving (see below).

Non-Sampled Forecast Renewals Expenditure

As discussion in Volume 1, due to time limitations, the Authority was unable to comprehensively review all past or forecast renewals expenditure for prudency and efficiency. Accordingly, the Authority drew on the results of consultant reviews, as detailed below.

The direct (non-metering) forecast renewals cost savings identified by SKM are summarised in Table 4.11.

Table 4.11: Summary of SKM Findings on Forecast (Non-Metering) Renewals

Items Sampled	*Value (Real $'000)*	*Variance with SKM Estimate ($,000)*	*Portion of Costs Reviewed (%)*	*Average Saving Identified (%)*
11	5,079	(652)	54	12.84

Source: QCA(2012). Note: Number of items sampled excludes sampled items for which insufficient information was available to reach a conclusion.

The 11 forecast renewals items reviewed account for an average across the schemes of some 21% of the total forecast irrigation renewals expenditure being directly reviewed with SKM's findings also applying to similar asset, taking the sample size to in excess of 50%.

The reviews identified systematic errors in Seqwater's renewals expenditure forecasting approach. Hence, the Authority considers it likely that the non-sampled renewals expenditure proposed by Seqwater will be similarly overstated.

In summary, the net variance between Seqwater's initially submitted (non-metering) forecast renewals costs and the efficient SKM cost estimate of $0.65 million is the appropriate basis for the Authority's cost savings to be applied to non-sampled items.

The net variance of $0.65 million, expressed as a portion of Seqwater's initially submitted sampled forecast irrigation renewal expenditure of $5.08 million, results in a 12.8% (or 13%) implied cost saving that the Authority will apply to non-sampled items.

In total, the Authority recommends the direct renewals expenditure be adjusted as shown in below in **Table 4.12**.

Table 4.12: Review of Forecast (Direct) Renewals Expenditure 2013-37 (Real $'000)

Item	*Year*	*Seqwater*	*Authority's Findings*	*Recommended*
Sampled Items				
1. Cedar Pocket Dam Telemetry	2020-21 & 2030-31	68	Prudent and efficient.	68
2. Metering	2013-14 to 2014-15	14	Partially prudent.	13
	2015-16 to 2021-22	42	Partially prudent.	34
	2022-23 to 2035-36	28	Partially prudent.	14
Results Applied from Other Reviews				
3. Cedar Pocket Dam Embankment	2015	18	Results could not be applied to assess prudency or efficiency.	16
4. Metering	2013-14 to 2014-15	14	Partially prudent.	13
	2015-16 to 2021-22	42	Partially prudent.	34
	2022-23 to 2035-36	28	Partially prudent.	14
Non-Sampled Items				13% saving applied

Source: Seqwater (2012k), SKM (2012) and QCA (2011).

4.4 Seqwater's Consultation with Customers and Reporting

Submissions

Seqwater

Seqwater made no submission regarding this topic.

Other Stakeholders

QFF noted that although Seqwater has evaluated potential projects against criticality and other criteria, conducted workshops with local staff and site, and inspected sites, it [Seqwater] has yet to consult with irrigators about forecast renewals expenditures.

QFF submitted that irrigators are concerned about the lack of consultation that has occurred since schemes were transferred to Seqwater in 2008-09 and considered that structured consultation will achieve scheme efficiencies. Irrigators are keen to consider costs associated with consultation options, such as comparing:

(a) Seqwater's current consultation agenda;

(b) the annual reporting of costs to irrigators only when there are significant variations in operating and renewals forecasts; and

(c) formal advisory committees being established (similar to SunWater's approach) with quarterly meetings.

Authority's Analysis

In Volume 1, the Authority noted customers' concerns about the lack of involvement in the planning of future renewals expenditure and that this has been raised by irrigators and their representatives.

The Authority recommended that there be a legislative requirement for SunWater to consult with its customers about any changes to its service standards and proposed renewals expenditure program. The Authority considers that this approach also be adopted by Seqwater.

In addition, Seqwater should also be required to submit renewals expenditure programs to irrigators for comment whenever they are amended and that irrigators' comments be documented and published on Seqwater's website and provided to the Authority.

4.5 Allocation of Headworks Renewals Costs

Given that the Cedar Pocket Dam WSS contains only medium priority WAEs, the allocation of headworks renewals costs according to WAE is not applicable in this scheme.

Accordingly, 100% of renewals costs will be apportioned to medium priority WAE.

4.6 Calculating the Renewals Annuity

In Volume 1, the Authority recommends an indexed rolling annuity, calculated for each year of the 2013-17 regulatory period.

For the Cedar Pocket Dam WSS the recommended renewals annuity for the 2013-17 regulatory period is shown in Table 4.13. The renewals annuity for 2006-13 and Seqwater's proposed annuity for 2013-17 is also presented for comparison.

Table 4.13: Cedar Pocket Dam WSS Renewals Annuity (Nominal $)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Seqwater (April NSP)	64,009	60,349	43,913	47,695	44,161	47,831	50,699	10,104	10,246	10,393	11,794
Seqwater (Nov NSP)	21,764	29,933	21,715	23,930	21,740	23,547	24,959	14,088	14,150	14,212	14,277
Authority											
High Priority	-	-	-	-	-	-	-	0	0	0	0
Medium Priority	-	-	-	-	-	-	-	12,448	12,298	12,149	12,003
Distribution Loss	-	-	-	-	-	-	-	0	0	0	0
Total Authority	-	-	-	-	-	-	-	12,448	12,298	12,149	12,003
Irrigation Only								12,448	12,298	12,149	12,003

Source: Seqwater (2012b), Seqwater (2012ak) and (QCA (2012). Note: Includes indirect and overhead costs relating to renewals expenditure, which is discussed in Chapter 5.

5. OPERATING COSTS

5.1 Background

Ministerial Direction

The Ministerial Direction requires the Authority to recommend a revenue stream that allows Seqwater to recover efficient operational, maintenance and administrative (that is, indirect and overhead) costs to ensure the continuing delivery of water services.

Issues

To determine Seqwater's allowable operating costs for 2013-17, the Authority considered the following:

(a) Seqwater's direct operating expenditure forecasting methodology;

(b) the prudency and efficiency of Seqwater's proposed direct and non-direct operating expenditures;

(c) appropriate allocation of non-direct operating costs to irrigation tariff groups;

(d) the appropriate method/s of allocating total (direct and non-direct) operating costs (for a tariff group) between different priority WAEs (where they exist);

(e) the most suitable cost escalation rates; and

(f) opportunities to improve Seqwater's budgeting and consultation with irrigators in relation to operating expenditure.

5.2 Historical Operating Costs

Previous Review 2006-11

The 2006-11 price paths were recommended by SunWater after consultation with irrigators during 2005-06. The Queensland Government subsequently approved those prices.

For the 2006-11 price paths, Indec identified annual cost savings of between $3.8 million and $5.5 million across all SunWater schemes (2010-11 dollars), or 7.5% to 9.9% of total annual costs, which were to be achieved during the 2006-11 price paths (SunWater, 2006a).

Submissions

Seqwater

Seqwater (2012aj) submitted that, as it has not previously assigned components of operating expenditure (in particular non-direct costs) to irrigation schemes, it has not been possible for it to make a comparison between total forecast and historical operating expenditures.

Similarly, Seqwater considers that the lower bound cost benchmarks developed for the 2006 price review by SunWater are not directly comparable to Seqwater's historic costs or forecasts for the current 2013-17 regulated price review. In particular, the published SunWater cost information:

(a) does not disaggregate operating costs for each tariff group within schemes where relevant. In the 2006-11 review, Cedar Pocket Dam was part of the Mary Valley WSS;

(b) provides aggregate operations, maintenance and administration data, with no break down between direct and non-direct costs; and

(c) applies a productivity adjustment to proposed lower bound costs, but does not identify the adjustment applicable to operating expenditure.

Moreover, these lower bound costs were developed more than six years ago under very different conditions. Seqwater argues that, while comparisons with the 2006 benchmarks may be of interest where data is disaggregated, there is little value in attempting to explain departures from the 2006 data since Seqwater provided no input to these forecasts and did not have the financial systems to gather and report this data due to the circumstances surrounding its formation.

Authority's Analysis

Although the Authority acknowledges Seqwater's view that the lower bound cost benchmarks developed for the 2006 price review by SunWater are not directly comparable to Seqwater's forecasts for the current 2013-17 regulated price review, the Authority nevertheless considers that the relationship between the operating costs incurred by Seqwater in its irrigation schemes in more recent years and the derivation of its 2012-13 budgets should be explicitly analysed. In particular, the Authority noted the efficiency targets imposed by the Minister for Energy and Water Supply for the 2012-13 Grid Service Charges.

The lower bound cost benchmarks developed for the 2006 price review by SunWater are not directly comparable to either Seqwater's historic costs, or its 2012-13 budget and forecasts for the current 2013-17 regulated price review.

For information, historical forecast costs are provided in Table 5.1.

Table 5.1: Actual and Forecast Total Operating Expenditure 2006-11 (Nominal $)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*
Forecast	30,361	38,001	36,317	37,446	37,605
Actual	59,247	41,175	n.a	n.a	n.a
Variance	28,886	3,174	n.a	n.a	n.a

Source: SunWater (2006b), Seqwater (2012s) and Seqwater (2012ba).

5.3 Forecast Total Operating Costs

Operating Cost Characteristics

Operating activities

Seqwater (2012aj) advised that its operating activities include:

(a) scheduling and releasing bulk water from storages, surveillance of water levels and flow rates in water courses and quarterly meter reading;

(b) customer service and account management;

(c) operating and maintaining recreational facilities; and

(d) complying with:

(i) requirements set out in the relevant IROLs, ROLs and ROPs;

(ii) dam safety obligations including under the *Water Act 2000*;

(iii) the *Environmental Protection Act 1994*; and

(iv) land management, workplace health and safety and other reporting obligations.

Operating cost classifications

Seqwater defines its operating costs as either direct or non-direct. Direct costs are those directly attributed to particular irrigation schemes. Non-direct costs are those common to all schemes, and therefore need to be allocated to tariff groups using an appropriate cost allocator.

Direct Operating Costs

Direct costs are those costs that have been budgeted at the individual asset level in the scheme and include:

(a) operations relating to the day-to-day costs of delivering water and meeting compliance obligations. Operations activities include:

(i) dam operations, which relate to managing dams and weirs. It is the largest direct cost category and activities include providing information and services to customers, monitoring water flows, meeting regulatory requirements for compliance, safety, and flood management, and developing system operating plans for infrastructure; and

(ii) group support and catchment management, which include delivering catchment maintenance services (including recreation areas) for operational assets. Activities include implementation of asset management plans and meeting compliance obligations (recreation services, public safety, catchment conservation);

(b) repairs and maintenance, which relate to maintaining assets that support irrigation water supply including:

(i) scheduled maintenance generated by the corporate information system (CIS);

(ii) planned maintenance, which comprises scheduled inspections and strategic maintenance; and

(iii) reactive maintenance, which results from unplanned breakdowns.

Seqwater has set a target ratio of 71:29 planned to unplanned maintenance in 2012-13, and this ratio has been applied for the forecast period. In this context, 'planned' includes scheduled and planned maintenance activities.

Contractors deliver most maintenance activities. Contractors are generally selected from Seqwater's panel of providers and supervised by Seqwater staff. Seqwater currently employs 49 full-time contractors plus ad-hoc contractors depending on workload; and

(c) other (direct) costs including:

(i) local government rates payable on Seqwater's land including storages; and

(ii) detailed dam safety inspections conducted every five years, in addition to the costs of routine (annual) dam safety inspections (included in operations expenditure).

Seqwater also disaggregates its direct operations costs into the following cost types: labour, contractors and materials, and other.

(a) labour costs are the direct labour costs arising from budgeted operations activities for 2012-13 (base year). Total irrigation direct labour (for Seqwater employees) has been submitted under the category 'direct operations costs'; however, in practice a small proportion of this 'operations' labour will be used for maintenance activities[1];

(b) contractors and materials costs are based on the quantities required in the work instructions for 2012-13; and

(c) other direct operations costs include plant and fleet hire, water quality monitoring and fixed energy costs.

Non-Direct Costs

Non-direct costs are classified by type of expenditure:

(a) water delivery costs of dam operations, infrastructure maintenance, environmental management and recreation and catchment maintenance services;

(b) asset delivery costs of project planning and managing the delivery of projects;

(c) corporate costs of business services, organisational development and the office of the CEO; including the costs of IT services, finance, procurement, legal and risk, governance and compliance activities; and

(d) other costs mainly associated with the North Quay facilities and flood control centres.

Seqwater categorises its other non-direct operating costs as follows:

(a) non-infrastructure costs of assets such as buildings, plant and equipment. Seqwater uses aggregate depreciation costs as a proxy for the costs associated with the sue of these assets;

[1] Repairs and maintenance are budgeted as a separate line item, and exclude labour. Seqwater has minimised the manipulation of data from its financial system when presenting forecast costs. While there are shortcomings to this approach, Seqwater does not believe there is a material impact on prices, given the overall proportion of labour costs that relate to repairs and maintenance is small (on average, 3% across all schemes).

(b) insurance premium costs including industrial special risks, machinery breakdown, public liability, professional indemnity, contract works and directors and officers insurance; and

(c) a working capital allowance to provide for the economic cost arising from the timing difference between accounts receivable and accounts payable.

Forecast Operating Costs

Stakeholder Submissions

Seqwater

Seqwater submitted that it 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. 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, Seqwater noted that the 2012-13 operating expenditure forecasts provided in the grid service charges submission have been reviewed by the QCA for prudency and efficiency.

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

(a) direct labour, materials and contractors' costs and repairs and maintenance were escalated at 4% per annum over the regulatory period; and

(b) 'other' direct costs and all non-direct costs were escalated at forecast CPI (2.5% per annum).

Seqwater provided two versions of its Cedar Pocket Dam WSS NSP that described both direct and non-direct budgeted operating costs for 2012-13. Specifically, Seqwater provided:

(a) an original version in April 2012 (Seqwater 2012b); and

(b) a version in November 2012 (Seqwater 2012ak) with revised operating costs compiled in response to the Authority's review of Grid Service Charges, the Minister's subsequent decision regarding these charges and further analysis by Seqwater of bulk water costs.

Total operating costs outlined in the two NSPs have been compared (Table 5.2 refers).

This comparison shows that the total costs for the scheme are about 10% higher than originally proposed.

Table 5.2: Seqwater's Forecast Operating Costs for the 2012-13 Base Year (Nominal $)

	April NSP	*November NSP*	*Variance*
Direct Operating Costs			
Operations			
Labour	44,178	56,951	12,773
Contractors	0	0	0
Materials	3,000	3,000	0
Electricity	100	100	0
Other	2,000	2,000	0
Sub-Total	**49,278**	**62,051**	**12,773**
Repairs and Maintenance			
Planned	9,940	9,940	0
Unplanned	4,060	4,060	0
Sub-Total	**14,000**	**14,000**	**0**
Dam Safety	0	0	0
Rates	0	0	0
Total Direct Operating Costs	**63,278**	**76,051**	**12,773**
Non Direct Operating Costs			
Operations			
Water Delivery	6,778	7,826	1,048
Asset Delivery	3,026	3,855	829
Corporate	24,216	24,165	(50)
Other	2,064	666	(1,398)
Sub-Total	**36,083**	**36,512**	**429**
Non-Infrastructure Asset	3,015	3,747	732
Insurance	10,095	8,935	(1,160)
Working Capital	946	946	0
Total Non-Direct Operating Costs	**50,140**	**50,140**	**0**
Total Operating Costs	**113,418**	**126,191**	**12,773**

Source: Seqwater (2012b) and Seqwater (2012ak).

Details submitted by Seqwater of the total direct and non-direct operating expenditure forecasts for the Cedar Pocket Dam WSS consistent with the November NSP are provided in Table 5.3.

Table 5.3: Seqwater's Operating Costs by Activity (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Direct Operating Costs					
Operations	62,051	64,502	67,049	69,698	72,452
Repairs and Maintenance	14,000	14,560	15,142	15,748	16,378
Dam Safety	0	0	0	0	27,595
Rates	0	0	0	0	0
Non-Direct Operating Costs					
Operations	36,512	37,425	38,360	39,319	40,302
Non-infrastructure	3,747	3,841	3,937	4,035	4,136
Insurance	8,935	9,158	9,387	9,622	9,683
Working Capital	946	970	994	1,019	1,044
Total	**126,191**	**130,455**	**134,870**	**139,442**	**171,770**

Source: Seqwater (2012ak).

The total operating costs by type are detailed in Table 5.4 for the Cedar Pocket Dam WSS.

Table 5.4: Seqwater's Operating Costs by Type Cedar Pocket Dam WSS (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Labour	56,951	59,229	61,598	64,062	66,625
Contractors and Materials	3,000	3,120	3,245	3,375	3,510
Electricity	100	103	105	108	110
Others	2,000	2,050	2,101	2,154	2,208
Planned Repairs and Maintenance	9,940	10,338	10,751	11,181	11,628
Unplanned Repairs and Maintenance	4,060	4,222	4,391	4,567	4,750
Dam Safety	0	0	0	0	27,595
Rates	0	0	0	0	0
Non-Direct	50,140	51,394	52,678	53,995	55,345
Total	**126,191**	**130,455**	**134,870**	**139,442**	**171,770**

Source: Seqwater (2012ak).

Other Stakeholders

R.J. Thefs and E.R. Thefs (2012) submitted that as farmers have had to become more cost efficient, so should Seqwater.

S. Tramacchi (2012) submitted that it is recognised that Cedar Pocket Dam WSS is small in comparison and cannot achieve the economies of scale of other schemes. However, it could be more efficiently operated, reducing costs and tariffs.

Authority's Analysis

In Volume 1, the Authority concluded that given the changes that have occurred in recent years, it is reasonable for Seqwater to adopt zero-based budgeting for 2012-13 as the base year for 2013-17 forecast costs.

The Authority recommends that Seqwater upgrade its policies, procedures, and information systems for the budgeting, incurrence and management of operating costs in its irrigation sector. In particular, the gathering, recording, documentation and analysis of operating cost information relevant to Seqwater's irrigation sector needs to be improved.

The Authority also recommended that Seqwater improve its consultation and communication processes with irrigation customers in relation to the forecasting and incurrence of operating costs.

In response to submissions, the Authority acknowledges that one of the objectives of this investigation is to establish, as far as practicable, the efficient cost base for pricing purposes. The Authority's review appears in the following sections.

For the purposes of the analysis of the prudency of operating costs, the Authority has reviewed Seqwater's November revised NSP data.

5.4 Prudency and Efficiency of Direct Operating Costs

Introduction

Seqwater forecast its direct operating costs for the 2013-17 regulatory period by extrapolating 2012-13 (base year) budgeted expenditure across the 2013-17 regulatory period.

Accordingly, the Authority focused its review on 2012-13 budgeted operating expenditure and the method of extrapolation.

Stakeholder Submissions

Seqwater

Seqwater's submission provided details of the key cost components in direct operating costs.

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.

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

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

(a) providing efficient service to irrigation customers in terms of information and management and delivery of service;

(b) developing robust and acceptable systems to monitor water flows to manage water sources, floods and regulations;

(c) developing an effective and technically capable and resilient flood operations centre utilising systems of quality standards;

(d) improving data management to ensure compliance on a wide variety of water management areas;

(e) ensuring security and safety at our water sources is meeting regulatory and community standards; and

(f) 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.

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.

The costs associated with catchment management activities (for water quality outcomes) are excluded from the lower bound cost base for irrigation.

Seqwater presented direct operations costs for the above activities in terms of the type of cost: labour; contractors and materials; and "other".

(a) 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. 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;

(b) 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

(c) "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.

Seqwater submitted that 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 (FAMPs) 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 inspections). Expenditure on unplanned maintenance for 2012-13 is derived based on past experience.

Seqwater 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.

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. Seqwater has allowed for inspection of Cedar Pocket Dam in 2016-17.

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

Seqwater's proposed direct operating costs by activity as submitted in November 2012 NSPs are detailed in Table 5.5.

Table 5.5: Seqwater Direct Operating Costs by Activity Cedar Pocket Dam WSS (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations	62,051	64,502	67,049	69,698	72,452
Repairs and Maintenance	14,000	14,560	15,142	15,748	16,378
Dam Safety Inspections	0	0	0	0	27,595
Rates	0	0	0	0	0
Total	**76,051**	**79,062**	**82,192**	**85,446**	**116,425**

Source: Seqwater (2012ak).

Direct operating costs by type are outlined in Table 5.6.

Table 5.6: Seqwater Direct Operating Costs by Type Cedar Pocket Dam WSS (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Labour	56,951	59,229	61,598	64,062	66,625
Contractors and Materials	3,000	3,120	3,245	3,375	3,510
Electricity	100	103	105	108	110
Other	2,000	2,050	2,101	2,154	2,208
Planned Repairs and Maintenance	9,940	10,338	10,751	11,181	11,628
Unplanned Repairs and Maintenance	4,060	4,222	4,391	4,567	4,750
Dam Safety	0	0	0	0	27,595
Rates	0	0	0	0	0
Total	**76,051**	**79,062**	**82,192**	**85,446**	**116,425**

Source: Seqwater (2012ak).

Other Stakeholders

Stakeholder's comments regarding individual direct operating costs are outlined below under specific item reviews.

Authority's Analysis

The Authority engaged SKM to review the prudency and efficiency of Seqwater's proposed direct operating expenditure for this scheme.

SKM reviewed a sample of items, taking account of comments received from stakeholders in regard to specific costs.

Item 1: Direct Labour and Contractors

Stakeholder Submissions

Seqwater

Seqwater originally submitted an estimate for direct labour and contractors of $45,939 for 2013-14, escalated from the budgeted 2012-13 base forecast of $44,172 by 4%. Seqwater subsequently revised the forecast estimate up slightly to $46,100.

In November 2012, Seqwater again revised its estimate of direct labour costs for the Cedar Pocket Dam WSS to $56,951.

Other Stakeholders

QFF (2012) submitted that labour costs and other direct operating costs are high in the Cedar Pocket Dam WSS.

In Round 1 consultations, irrigators questioned whether it is possible for irrigators themselves to operate releases to reduce operating costs.

S. Tramacchi (2012) submitted that labour costs of $49,500 for direct operations related to items that seem to have little relevance to the Cedar Pocket Dam WSS.

Consultant's Review

The 2012-13 base forecast was built up from a zero base (i.e. using a bottom up method). While this review was to assess the costs related to direct labour and contractors, Seqwater has informed SKM that there are no contractor costs included in their forecasts. Accordingly, this review relates to internal Seqwater staff costs only.

Subsequent to SKM's review, SKM was provided with additional information indicating the Seqwater has provided a revised submission that increased the original forecast from $45,939 to $46,100. No further information was, however, provided to support this increase in the labour cost forecast. Actual costs in 2011-12 were $16,149. Seqwater increased the 2012-13 amount again to $56,951 in its November 2012 revision of cost estimates, but SKM's analysis was based on the earlier estimates.

The labour resources required to operate the Cedar Pocket Dam WSS mainly relate to the operation of assets such as Cedar Pocket Dam (including the catchment and surrounding areas associated with the dam). Seqwater noted in its response to SKM's request for information that the cost forecast for 2013-14 was $45,939 rather than the $49,000 that the Authority had initially been advised in Seqwater's submission. Another $3,000 had been budgeted for materials rather than contractors which may have been included in the initial estimate provided to the Authority.

Provided documentation

The documents used for this review are:

(a) Seqwater, 2013-14 Irrigation Pricing, Submission to the Queensland Competition Authority, July 2012;

(b) Seqwater, Cedar Pocket Dam Water Supply Scheme, Network Service Plan;

(c) Seqwater, Information Request Response – QCA Irrigation Price Review 2013-17, RFI 012, Cedar Pocket Dam WSS, Operations – Direct Labour, 14 Aug 2012;

(d) Seqwater, Budget 2012-13, Salaries and Wages, Dam Operations;

(e) Seqwater, Budget 2012-13, Salaries and Wages, Group Support;

(f) Seqwater, Opex – Irrigation Updated YTD.xlsx;

(g) Seqwater, Opex – Irrigation Salaries Queries.xlsx; and

(h) Seqwater Enterprise Bargaining Certified Agreement 2009 – 2012.

SKM noted that while the Cedar Pocket Dam does not have any public areas open for recreational use, it does have areas associated with the dam that are maintained. To assist with undertaking the review of costs, SKM had requested from Seqwater evidence of historical costs for contracted area maintenance including the cost of mowing services. In Seqwater's operating structure Catchment Services is responsible for the maintenance of the areas surrounding the dams. While Catchment Services (Group Support) had charged against Cedar Pocket Dam for the provision of some labour services in the past, this cost has not been included in any forecast. While the reason is not clear, the cost of maintaining the areas surrounding the dam may have been included with other operating expenditure categories like repairs and maintenance rather than identified as labour costs.

Prudency

Cedar Pocket Dam is a referable dam under the *Water Supply (Safety and Reliability) Act 2008*. To adequately satisfy Seqwater's regulatory obligations at Cedar Pocket Dam, labour resources are needed to comply with various legislative requirements including obligations relating to dam safety and dam management.

Consequently the operating expenditure item is seen as prudent.

Efficiency

Seqwater's operating cost projections of labour are not based on any water demand cost drivers but are rather based on the 2012-13 budget. In SKM's view, the method for the development of budget costs based on a previous budget is not satisfactory as actual costs may vary significantly from budget. SKM prefers that forecast costs be based on actual costs, taking into consideration the trend exhibited by recent actual expenditure. Seqwater has indicated that the budgeted cost is typically higher than actual (or recorded) costs because of unforeseen events or incorrect recording of time by staff. In SKM's view, while this could explain some variations, this cannot be the reason why there is an almost 3 fold increase in costs since 2011-12. Accordingly, additional information relating to actual historical expenditure was sought from Seqwater.

SKM was advised by Seqwater that the actual expenditure values are correct as incurred, although Seqwater subsequently revised the forecast direct labour cost in November 2012 (Table 5.7). However, SKM's detailed review is limited to the available information provided by Seqwater at the time which is consistent with their original cost forecast.

Table 5.7: Historic and Budget Labour Costs Compared – Cedar Pocket Dam

Item	*2009-10 Actual ($)*	*2010-11 Actual ($)*	*2011-12 Actual ($)*	*2012-13 Budget – April 2012*	*2012-13 Revised*	*2012-13 Budget Revised – November 2012*
Direct Labour	48,696	15,933	16,149	44,172	44,325	56,951

Source: SKM (2012) and Seqwater (2012ak).

SKM also sought from Seqwater information regarding the estimated quantity of FTEs assigned to the assets. Seqwater advised that costs related to base salaries and on-costs for a Dam Operations Officer 1 (5%), a Dam Operations Officer 2 (40%) and a Dam Operations Supervisor (20%). Total labour costs were estimated at $44,178.

The information provided by Seqwater in this case is consistent with the original submission to the Authority rather than Seqwater's revised submission. Overall, the proposed budget of $45,939 for labour cost for 2013-14 is significantly higher than the historical actual expenditure of 2010-11 and 2011-12 although about 10% less than the actual 2009-10 labour cost.

Delivery of Service

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

Dam operations are relatively labour intensive and the expenditure is required to:

(a) deliver services to irrigation customers in terms of information and management and delivery of irrigation service;

(b) develop systems to monitor water flows to manage water sources, floods and regulations;

(c) develop flood operations centre;

(d) undertake data management to ensure compliance on a wide variety of water management areas;

(e) ensure security and safety at water sources in meeting regulatory and community standards; and

(f) develop system operating plans for the operation of dams, weirs, bores and other water sources.

Cedar Pocket Dam is an unmanned site located approximately 45 minute drive from the Pie Creek Depot where the staff member who operates the dam is based. The site is also sometimes serviced by staff based at Borumba Dam approximately 1 hour and 15mins away.

The dam is attended at least 3 times a week by a staff member whose duties vary depending on the state of the storage. As a minimum the operator will carry out a dam safety inspection which involves walking the embankment, checking equipment and recording data from dam instruments. A dam safety inspection takes on average 1.5 to 2.5 hours.

The frequency of these inspections increase as spillway discharges increase and as directed by the Seqwater Dam Safety Team. An operator is required to take visual readings of instruments to verify automated equipment and to act as an early warning for potential dam safety emergencies. The data gathered from instruments at the dam must be reported both internally and externally. It takes 2.5 hours per week to input the data and 1 hour to validate the data.

The Mary Basin ROP requires Seqwater to notify customers when their allocations are effectively topped up by spillway flows. Water ordering across the system is ad hoc and the system has to be monitored by the operator which involves the operator monitoring flows in certain sections of the system by eye as the only flow gauge is at the head of the system.

All meters in the system must be read quarterly which involves driving and walking to metering locations. Meter reading takes one operator 1 to 2 days and may take longer during wet conditions.

In Seqwater's operating model, Group Support (catchment management) has responsibility for the development and delivery of catchment maintenance services for all operational assets. The team of rangers and bio security officers ensures that asset management plans, processes, systems and practices are implemented in accordance with relevant regulatory requirements. In its forecast of costs however, Seqwater has not provided any labour costs associated with Group Support or Catchment Management. This could be due to a change in the way the allocation has been made with such costs included under Repairs and Maintenance or other related categories. However, SKM cannot be certain that this is the case.

When SunWater managed these facilities prior to the transfer of the infrastructure to Seqwater, dam operators were responsible for daily maintenance activities like mowing and minor repairs. Under Seqwater's operating model, these maintenance activities have been separated from dam operations and Group Support has been made responsible for provision of these services. Seqwater has informed SKM that grounds maintenance activities such as slashing and mowing are now managed by the rangers and much of this activity is contracted out to third parties from their panel of contractors. In addition, Seqwater has endeavoured to separate operations and maintenance activities between the operations and maintenance teams such that the minor asset maintenance previously undertaken by the operators is now only undertaken by the maintenance teams or their contractors.

Efficiencies and Economies of Scale

The services provided by the operators of the dam, water treatment plant and irrigation scheme are likely to be difficult to contract to third party operators given that they are small and the operators are required to know their assets intimately. These operators also do not allocate all their time to the Cedar Pocket Dam WSS but also provide services to other dams and WSSs within the Seqwater region including assets belonging to the Mary Valley WSS (including Pie Creek).

SKM indicated anecdotal evidence of a systemic underutilisation of operational staff, due to changes in working practices, compared to the SunWater operating model when they were responsible for some minor maintenance of the dam and surrounding facilities including ground maintenance. With the transfer of the assets to Seqwater and the consequent change in operating model, these dam operators have had their work load reduced.

Group Support (rangers) is responsible for managing contracts for ground maintenance, of which there are two. One is for dam grounds maintenance and the other is for catchment grounds maintenance. Because of the slope of the ground, specialised equipment is required. This together with the remoteness of the dam determines the ground maintenance costs.

Seqwater has submitted that a significant amount of time is required for data input and validation. However, SKM understands that Cedar Pocket Dam is equipped with telemetry equipment and only the tail-water flow below the spillway needs to be monitored manually.

Benchmarking

The initial data provided by Seqwater for Cedar Pocket Dam WSS does not allow SKM to directly comment on the reasonableness of the labour costs. However based on the cost data submitted for the Mary Valley WSS, SKM considered that the rates applied are reasonable.

SKM indicated that under normal circumstances, to comply with dam safety requirements, an onsite inspection of the dam is required 3 times a week. Given the distance from other Seqwater assets, SKM estimates that the onsite dam inspection could take 2.5 hours, three times a week.

When water releases are required for irrigation purposes, a visit every day to manage the release and check water levels at the dam may be required. Given the distance of the dam from the operating base where the operators are located, SKM expects that it would take approximately 3 hours to manage the release and check water levels per visit. SKM expects that a visit for the sole purpose of managing releases may occur 2 times a week, on average. Therefore, 0.35 FTEs are required to operate the Cedar Pocket Dam (i.e. 2.5 to 3 hours five days a week on average). SKM acknowledged that some excess capacity may be necessary during normal operations to address peak requirements. Outside peak requirements, this excess may thus be utilised in non-core activity like mowing and minor maintenance work.

Seqwater also indicated that time is spent away from the dam to manage ROP compliance activities, and other activities including managing staff, quarterly meter readings and recording data and customer contacts. These activities are largely undertaken by the Dam Operations Supervisor.

While there is a large increase in the 2012-13 budget of labour cost from the labour cost incurred in 2010-11 and 2011-12, the budget for 2012-13 is about 10% less than that incurred in 2009-10. While the documents submitted to SKM do not detail the reasons for this expenditure pattern, SKM understands from its discussions with Seqwater that the years of 2010-11 and 2011-12 may be unusual with first the drought and its end in 2010-11 and subsequently the floods of 2011-12. Labour resources had been allocated more to manage the drought asset and subsequently the floods rather than irrigation asset like Cedar Pocket Dam WSS. With the return to normal weather patterns expected and thus a requirement for irrigation water releases, the expected labour costs are more likely to reflect costs incurred in the years prior to 2010-11.

Seqwater has allowed for 0.65 FTE in its budget. This comprises of:

(a) Dam Operations Officer 1 - 5%;

(b) Dam Operations Officer 2 - 40%; and

(c) Dam Operations Supervisor - 20%.

In SKM's view, dam operations would require 0.35 FTE. Assuming that only 5% of the Dam Operations Supervisor's time is spent on dam operations and the remainder on other activities including managing ROP compliance requirements, managing staff, meter readings and customer contacts, the allocation of costs to the Cedar Pocket Dam WSS is over estimated by 0.15FTE.

SKM recommended reducing Dam Operations Officer 1 and 2's allocation to a total of 30% with the Supervisor contributing 5%. In addition, SKM accepted that the other 15% of Dam Operations Supervisor's time for his other supervisory activities is efficient. The resulting allocation to Cedar Pocket Dam Operations is as follows:

(a) Dam Operations Officer 1 - 3%;

(b) Dam Operations Officer 2 - 27%; and

(c) Dam Operations Supervisor - 20%.

Based on this analysis, SKM recommended a revised total labour budget for 2012-13 of $37,707, which escalates to a revised forecast of $39,215 in 2013-14. These revised figures represented a 15% reduction compared to those originally submitted by Seqwater.

Seqwater provided subsequent information regarding direct labour costs and the Authority endorsed the consideration by SKM of this information.

SKM reviewed this information and, as a result, concluded that SKM's initial recommendation did not fully include:

(a) the time required to manage releases during drier periods (given the last two years have been characterised by significant inflow events); and

(b) the time required for accurate weekly data input and validation given the manual nature of telemetry.

Taking this into consideration and assuming that in a typical year the dam spills 50% of the time while the other 50% of time requires daily visits to release water and a 38 hour working week, SKM concluded that a 0.6 FTE is required based on average hours required per week (Table 5.8 refers).

Table 5.8: FTE Calculation Based on Revised Data

Activity	***Spilling - Time Required***	***Release – Time Required***
Travel (including return)	4.5 hours (3 visits per week @ 1.5 hours)	10.5 hours (7 visits per week @ 1.5 hours)
Site inspections	6 (3 visits per week @ 2 hours)	-
Dam release (including inspections)	-	17.5 hours (7 visits per week @ 2.5 hours)
Weekly data input	3.5 (1 visit @ 3.5 hours)	3.5 hours (1 visit @ 3.5 hours)
Total (weekly)	**14 hours**	**31.5 hours**

Source: SKM (2012). Note - calculation is: [(14 + 31.5) / 2] / 38 = 0.6 FTE (rounded).

Accordingly, SKM revised its recommendation for direct labour cost to reflect the allocation of 0.6 FTE (Table 5.9 refers). However, Seqwater responded that, by reducing the allocation of 0.65 FTE to 0.6 FTE to Cedar Pocket Dam WSS, Seqwater will be unable to recover 0.05 FTE that is dedicated to irrigation assets. Given that the difference is small and relatively immaterial, SKM recommended that the Authority accepts the cost allocation proposed by Seqwater.

Table 5.9: Revised 2012-13 Labour Cost Budget (Nominal $)

Position	*Allocated*	*Salaries Applied*
Dam Operations		
Operations Officer 1	5%	
Operations Officer 2	35%	
Operations Supervisor	20%	
Total Labour Cost for 2012-13		**42,774**
Recommended Labour Cost 2012-13		**44,170**

Source: SKM (2012).

Based on Seqwater's salary rates and on-costs, SKM estimated a revised total labour budget of $42,774 for 2012-13. However, because the difference was not material, SKM recommended a forecast of $44,170 for 2012-13, as proposed by Seqwater.

Conclusion

The operating expenditure item is assessed as prudent as the need for the expenditure has been demonstrated. SKM recommended the revised estimate for direct labour costs be accepted as efficient.

Authority's Analysis

The Authority recognises the reasoning behind SKM's recommendation and agrees that it may be difficult for Seqwater to manage staff resources to eliminate a small amount of under-utilisation. The Authority proposes to accept SKM's recommendation.

In response to stakeholder comment about the potential for irrigators to operate releases themselves, the Authority considers that such an option is not consistent with the requirements of the ROL. The issue of local management is otherwise a policy matter outside of the Authority's remit.

The issue of labour costs raised by S. Tramacchi (2012) was directed to SKM, as noted above. SKM found labour costs to be prudent and efficient.

Conclusion

Sampled Operating Cost Items

For the Cedar Pocket Dam WSS, the Authority sampled one direct operating cost item, direct labour costs. Seqwater initially submitted an estimate for direct labour costs in April 2012 of $44,000. SKM initially reduced this to $38,000. Seqwater subsequently revised the 2012-13 forecast to $57,000 in November 2012 submissions due to a correction of cost allocation issues.

SKM reviewed the information available at the time of its initial review and recommended an amount to $44,000 (2012-13).

The Authority accepts SKM's estimated cost.

Unsampled Operating Costs

For unsampled items, as outlined in Volume 1 the Authority reviewed in detail approximately 55% of proposed direct operating expenditure for prudency and efficiency. At issue is how to address scheme specific direct operating expenditure not reviewed in detail. Accordingly, the Authority drew upon the results of the SKM review which identified an average saving across all sampled operating cost items.

As outlined in Volume 1, the Authority considered there was merit in applying an average, uniform saving to unsampled direct operating expenditure (excluding electricity and rates) of 4.9%[2] (or 5% rounded).

Based on this methodology, the Authority's recommended direct operating expenditure is outlined below (Table 5.10 refers).

Table 5.10: Review of Budgeted 2012-13 Direct Operating Expenditure (Real $'000)

	Seqwater (April NSP)	*Seqwater Revised Cost*	*Seqwater (November NSP)*	*Authority's Recommended*
Sampled Item				
Direct Labour	44	47	57	44
Unsampled Items				5% saving to apply

Source: SKM (2012) Seqwater (2012b), Seqwater (2012ak) and QCA (2012).

In addition to the efficiency adjustments for the 2012-13 year, the Authority also considers it appropriate to reduce forecast direct operating costs by a further 1.5% per annum in real terms as a general productivity gain, applied cumulatively for each of the 4 years of the regulatory period (2013-14 to 2016-17). Details are provided in Volume 1.

Cost Information Issues

Seqwater (2012aj) submitted that the April NSPs did not properly allocate direct operating costs between related tariff groups due to overlaps within certain operational areas. That is, for the Mary Valley operational area, Mary Valley WSS is linked operationally to Pie Creek tariff group and Cedar Pocket Dam WSS (the latter was previously a bulk tariff group within the Mary Valley WSS, but is now a WSS in its own right).

In each of these operational areas, Seqwater did not initially accurately allocate costs to each tariff group. Seqwater budgets, in the absence of economic regulation and therefore the apparent need to allocate costs carefully for irrigation pricing purposes, had previously been developed more generally for an operational area.

The Authority's irrigation review has caused Seqwater to substantially revise its forecast operating costs in these tariff groups.

Seqwater's revised direct labour costs are shown in Table 5.11, together with the Authority's decision as reviewed above.

[2] The Authority chose not to include a large reduction in Repairs & Maintenance costs in the Central Lockyer WSS that were included in the original sample in error.

Table 5.11: Direct Labour Costs – Mary Valley Operational Area ($2012-13)

Tariff Group	*April Seqwater Forecast*	*Revised Seqwater Forecast*	*Change in Seqwater Forecast*	*SKM Final Estimate*	*QCA Decision*	*QCA Variation to April*
Mary Valley (Sampled)	404,000	224,000	(180,000)	224,000	224,000	(45%)
Pie Creek (Unsampled)	22,000	56,000	34,000	n.a.	53,200	142%
Cedar Pocket Dam (Sampled)	44,000	57,000	13,000	44,000	44,000	0%
Sub-Total	**470,000**	**337,000**	**(133,000)**	**n.a.**	**321,200**	**(32%)**

Source: QCA (2012).

The Authority has adopted SKM's final estimate for Mary Valley and Cedar Pocket Dam WSSs – these revised costs were sampled / reviewed by SKM.

Seqwater (2012aj) submitted that similar cost allocation issues had arisen for repairs and maintenance costs submitted in April 2012 for the Mary Valley operational area. Table 5.12 refers.

Table 5.12: Repairs and Maintenance – Mary Valley Operational Area ($2012-13)

Tariff Group	*April Seqwater Forecast*	*Revised Seqwater Forecast*	*Change in Seqwater Forecast*	*SKM Final Estimate*	*QCA Decision*	*QCA Variation to April*
Mary Valley (Unsampled)	208,000	203,000	(5,000)	n.a.	192,850	(7%)
Pie Creek (Sampled)	66,000	71,000	5,000	71,000	71,000	8%
Cedar Pocket Dam (Unsampled)	14,000	14,000	0	n.a.	13,300	(5%)
Sub-Total	**288,000**	**288,000**	**0**	**n.a.**	**277,150**	**(3.5%)**

Source: QCA (2012).

Cedar Pocket Dam WSS repairs and maintenance costs remain unchanged at $14,000 for 2012-13 and the Authority's 5% cost reduction has been applied as these were not sampled / reviewed by SKM.

Cost Escalation

Seqwater

Seqwater proposed that where its costs rise in line with inflation, it has adopted the mid-point of the Reserve Bank of Australia's (RBA's) target range for consumer price inflation at the time of its submission, being 2.5% per annum.

For direct labour costs, Seqwater proposed an annual increase of 4% over the 2013-17 period. This aligned with the Authority's SunWater recommendations and was in line with historic growth in labour cost indices over the past 5 to 10 years.

Similarly, Seqwater proposed a 4% escalation for materials and contractors costs, also consistent with the SunWater report and growth in relevant ABS construction cost indices over the last 10 years.

Seqwater submitted that electricity costs comprise only a small proportion of total operating costs of the irrigation water supply schemes and are difficult to forecast.

Seqwater proposed that electricity costs associated with the assumed pumping in the 2012-13 budget be escalated by inflation (2.5%) for the regulatory period (from 2013-14) with a proposed settlement at the end of the regulatory period to reflect the actual electricity costs incurred.

Seqwater has proposed that other direct operating cost categories (that is, other than direct labour and contractors & materials) and all non-direct costs, be escalated from the 2012-13 base year in line with inflation.

Authority's Analysis

The Authority's analysis of cost escalation is detailed in Volume 1.

The Authority recommends that for the regulatory period 2013-17:

(a) the costs of direct and non-direct labour should be escalated by 3.6% per annum, rather than 4% proposed by Seqwater;

(b) the cost of direct materials should be escalated by 4% per annum;

(c) other direct costs and non-direct costs should be escalated by 2.5% per annum; and

(d) electricity should be escalated by 2.5% per annum. However, should Seqwater sustain material electricity cost changes above the escalated level, consideration should be given to an application by Seqwater to the Authority for an end-of-period adjustment.

Summary of Direct Operating Costs

A comparison of Seqwater's and the Authority's direct operating costs for the Cedar Pocket Dam WSS is set out in Table 5.13.

The Authority's proposed costs include all specific adjustments and the Authority's proposed cost escalations as noted above.

Table 5.13: Direct Operating Costs (Nominal $)

	Seqwater				*Authority*			
	2013-14	***2014-15***	***2015-16***	***2016-17***	***2013-14***	***2014-15***	***2015-16***	***2016-17***
Operations	64,502	67,049	69,698	72,452	50,022	51,025	52,036	53,054
Repairs and Maintenance – Planned	10,338	10,751	11,181	11,628	10,763	11,023	11,287	11,554
Repairs and Maintenance - Unplanned	4,222	4,391	4,567	4,750	2,861	2,930	3,000	3,071
Dam Safety	0	0	0	27,595	0	0	0	24,643
Rates	0	0	0	0	0	0	0	0
Total	**79,062**	**82,192**	**85,446**	**116,425**	**63,646**	**64,979**	**66,323**	**93,322**

Source: Seqwater (2012ak).

5.5 Prudency and Efficiency of Non-Direct Operating Costs

Introduction

Seqwater (2012aj) advised that all non-direct costs were assigned to operating expenditure as it does not have sufficiently disaggregated data at the renewals project level for it to allocate non-direct costs to individual renewals projects.

The prudency and efficiency of Seqwater's overall non-direct costs were reviewed for the Authority by SKM as part of the 2012-13 grid services charges (GSC) review.

For this investigation, Seqwater made adjustments to the aggregate non-direct cost estimates that it submitted to the Authority's GSC investigation to exclude costs not relevant to the provision of irrigation services. The costs remaining after these adjustments were made were then allocated to irrigation tariff groups using the total direct costs as the cost allocator (see Volume 1).

Previous Review

As noted above, in the previous review, Indec reviewed SunWater's non-direct costs for 2006-11. Non-direct costs were allocated to schemes on the basis of total direct costs.

Stakeholders

Seqwater

Seqwater submitted that 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 (except for insurance costs which were allocated by asset replacement value). These costs were then escalated forward to derive forecast non-direct costs for the regulatory period.

Total non-direct costs and those allocated to the Cedar Pocket Dam WSS are in Table 5.14.

Table 5.14: Seqwater's Actual and Proposed Non-Direct Costs (Nominal $'000)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Seqwater	9,479	9,716	9,959	10,208	10,463
Cedar Pocket Dam WSS	50	51	53	54	55

Source: Seqwater (2012aj) and Seqwater (2012ak).

As noted in Volume 1, Seqwater initially submitted non-direct forecasts in April 2012, and subsequently revised them in November 2012 following the Authority's review of Grid Service Charges and the Minister's subsequent decision and further analysis by Seqwater of bulk water costs.

A comparison of the alternative estimates for the Cedar Pocket Dam WSS is provided in Table 5.15 for non-direct operations costs.

Table 5.15: Non-Direct Operations Costs – Cedar Pocket Dam WSS, 2012-13 Forecasts (Nominal $'

Cost	*April NSP*	*November NSP*	*Variance ($)*	*Variance (%)*
Water Delivery	6,778	7,826	1,048	15%
Asset Delivery	3,026	3,855	829	27%
Business Services	16,728	15,641	(1,086)	(6%)
Organisational Development	6,817	7,364	547	8%
Executive	671	1,160	489	73%
Other	2,064	666	(1,398)	(68%)
Total Non-Direct Operations Costs	**36,083**	**36,512**	**428**	**1%**

Source: Seqwater (2012b) and Seqwater (2012ak).

Corporate functions have been defined as comprising the office of the CEO and the Organisational Development and Business Services groups. Corporate costs represent almost half the non-direct operating costs allocated to irrigation schemes in 2012-13.

The major component of corporate costs relates to Information, Communication and Technology (ICT). The major functions involved in ICT relate to services support, database administration, monitor and maintenance of various servers and network infrastructure, demand management, application management, strategy maintenance and development, business analysis and subject matter expert advice.

Seqwater's submitted non-direct operating costs for the Cedar Pocket Dam WSS are detailed in Table 5.16 below (November 2012 NSP).

Table 5.16: Seqwater's Forecast Non-Direct Costs Cedar Pocket Dam WSS (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations					
Water Delivery	7,826	8,022	8,222	8,428	8,638
Asset Delivery	3,855	3,951	4,050	4,151	4,255
Business Services	15,641	16,032	16,433	16,844	17,265
Organisational Development	7,364	7,548	7,737	7,930	8,128
Executive	1,160	1,189	1,219	1,249	1,280
Other	666	683	700	717	735
Sub-Total	**36,512**	**37,425**	**38,360**	**39,319**	**40,302**
Non-Infrastructure Assets	3,747	3,841	3,937	4,035	4,136
Insurance	8,935	9,158	9,387	9,622	9,863
Working Capital	946	970	994	1,019	1,044
Total	**50,140**	**51,393**	**52,678**	**53,995**	**55,345**

Source: Seqwater (2012aj) and Seqwater (2012ak).

In addition to operations related non-direct costs, Seqwater identified costs associated with the use of non-infrastructure assets, insurance and working capital.

The Cedar Pocket Dam 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.

Seqwater's annual insurance premium cost for 2012-13 is forecast at $6.2 million. The major components to the premium include industrial special risks, machinery breakdown, public liability, professional indemnity, contract works and directors and officers insurance.

Seqwater has allocated its 2012-13 premium to the Cedar Pocket Dam WSS 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.

In regard to working capital, Seqwater indicated that 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 2012-13, at $5.538 million.

Seqwater has allocated a portion of this working capital allowance to the Cedar Pocket Dam WSS 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.

Seqwater proposed that all non-direct costs be escalated from the 2012-13 base year in line with its estimate of inflation, based on the mid-point of the Reserve Bank of Australia's (RBA's) target range for consumer price inflation at the time of its submission, being 2.5% per annum.

Other Stakeholders

S. Tramacchi (2012) submitted that the non-direct operating cost appears largely irrelevant and excessive at $37,000. The estimate of $10,300 for insurance is not clearly explained and the method by which it is determined does not seem to relate to specific risks and liabilities.

G. Rozynski (2012), and D. Burnett (2012) commented that recreational costs should not be passed on to irrigators as they are a financial burden and are used by the general public, and if recreation costs are included then community access should be restricted to save costs.

Authority's Analysis

The Authority (QCA 2012b) assessed Seqwater's non-direct operating costs as part of its 2012-13 GSC Review. That review concluded that Seqwater's operating costs (including non-direct costs) should be reduced by 2.5% to reflect a general efficiency gain.

The Government subsequently increased the general efficiency gain to 3.0% and removed Seqwater's proposed recruitment of 62.5 Full Time Equivalents (FTEs) for vacant and new positions, both to apply to the 2012-13 year.

Seqwater (2012aj) has taken these adjustments into account in its revised submission to the Authority. As these costs have been approved by Government, the Authority does not propose a further reduction for 2012-13. However, as the implications of the merger are currently being considered by Government, further adjustments to the Authority's estimates of non-direct costs may be necessary for the Final Report.

The Authority notes that Seqwater adjusted its aggregate non-direct costs to exclude those costs not relevant to the provision of irrigation services, including costs associated with technical warranty and development, water treatment operations including catchment and water quality management, and costs associated with planning and policy for major non-irrigation capital projects. The Authority accepts these adjustments, noting that specific cost attribution may remain problematic in some cases.

In addition to the above adjustments for the 2012-13 year, the Authority also considers it appropriate to apply a productivity adjustment to the established efficient cost base for 2012-13 for anticipated future efficiency gains brought about by technological, organisational, and operational improvements in service delivery. The Authority recommends a reduction in forecast non-direct operating costs by a further 1.5% per annum in real terms as a general productivity gain, applied cumulatively for each of the four years of the regulatory period (2013-14 to 2016-17).

In regard to working capital, the largest portion of irrigators' payments to Seqwater arises from fixed Part A and C charges paid in advance, whereas GSC charges are paid in arrears. This means that, for irrigation activities, Seqwater would not suffer an economic cost resulting from the timing difference between receivables and payables. Seqwater was requested to provide further substantiation of its proposal. However, as further evidence was

not forthcoming, the Authority has not incorporated a working capital allowance is justified in this instance.

The Authority accepts Seqwater's proposed escalation of 2.5% per year for 2013-17 for non-direct costs.

In relation to specific comments, the Authority notes that insurance costs are allocated between schemes on the basis of asset replacement value. Costs will be relatively higher as a proportion of total non-direct costs where asset values are relatively higher. The Authority notes that the proposed efficiency reduction will also apply to insurance.

In response to the stakeholders who commented that recreation costs should not be passed on to irrigators, the Authority notes that the Ministerial Direction explicitly requires that Seqwater be allowed to recover efficient recreation costs.

The Authority's recommended level of non-direct costs to be recovered from the Cedar Pocket Dam WSS (from all customers) is set out in Table 5.17. The allocation of these costs between high and medium priority customers is discussed below.

Table 5.17: Recommended Non-Direct Costs (Nominal $)

	Seqwater				*Authority*			
	2013-14	***2014-15***	***2015-16***	***2016-17***	***2013-14***	***2014-15***	***2015-16***	***2016-17***
Non-Direct Operations	37,425	38,360	39,319	40,302	30,555	31,007	31,459	31,909
Non-Infrastructure	3,841	3,937	4,035	4,136	3,114	3,143	3,172	3,200
Insurance	9,158	9,387	9,622	9,863	9,021	9,105	9,189	9,270
Working Capital	970	994	1,019	1,044	0	0	0	0
Total	**51,394**	**52,678**	**53,995**	**55,345**	**42,689**	**43,256**	**43,820**	**44,380**

Source: Seqwater (2012ak).

5.6 Allocation of Non-Direct Operating Costs

It is necessary to determine the method to allocate non-direct costs across Seqwater's business, including irrigation tariff groups. By definition, non-direct costs do not directly apply to specific activities within schemes, and thereby cannot be allocated according to their relevance to individual service contract activities.

Seqwater's submissions describe a two stage process for cost assignment:

(a) Stage 1 – Seqwater attributes its directs costs to the tariff groups in which they are incurred, and allocates its non-direct costs to tariff groups using the preferred cost allocation methodology for this stage; and

(b) Stage 2 – Seqwater allocates all of the fixed costs assigned to tariff groups in Stage 1 above (which at this point include direct and non-direct costs), between medium and high priority WAE within each tariff groups using the preferred cost allocation methodology for this stage.

Stage 1 - Allocation of Costs to Tariff Groups

Stakeholder Submissions

Seqwater

Seqwater (2012aj) proposed to allocate non-direct costs to tariff groups using total direct costs (TDC) (with the exception of insurance premium costs and working capital) because:

(a) TDC represents a reasonable driver of the non-direct operating costs of Seqwater's irrigation activities;

(b) it is relatively simple to administer, identify and extract from the reporting system;

(c) it allows regular comparison between forecast and actual outcomes, and to update allocations where appropriate; and

(d) it results in cost allocations consistent with expectations about non-direct cost incurrence.

Seqwater noted that the Authority used direct labour costs (DLC) as the cost allocator in the recent SunWater review. Seqwater's comparisons of cost allocations using both DLC and TDC showed use of DLC resulted in significantly more costs being allocated to schemes than considered reasonable.

For those components of its non-direct costs which are not allocated using TDC, Seqwater proposes to allocate:

(a) insurance premium costs to tariff groups on the basis of the replacement value of insured assets; and

(b) working capital allowance to tariff groups according to forecast revenue.

Authority's Analysis

In the Authority's SunWater review, analysis by Deloitte was largely ambivalent on which of these two measures DLC or TDC (out of the several considered and rejected) would be most suitable to allocate non-direct costs. Both were relatively highly ranked.

Although the DLC approach was adopted for SunWater, the Authority concluded that this did not necessarily apply for other entities. The Authority considered the approach proposed by Seqwater was fair and reasonable, having regard to Seqwater's particular cost accounting systems and procedures.

Stage 2 - Allocation of Costs between Priority Groups

Previous Review

For the 2006-11 price paths, all costs were apportioned between medium and high priority customers according to WPCFs in both bulk and distribution systems.

Stakeholder Submissions

Seqwater

Seqwater submitted that for Cedar Pocket Dam WSS, no stage 2 cost allocations are required as all water allocations in these tariff groups are medium priority.

As the scheme consists of medium priority customers only, Seqwater (2012f) has proposed to assign all operating costs to these users on the basis of their current nominal WAEs.

Authority's Analysis

The Authority recommends that as all customers are effectively allocated medium priority water allocations, all fixed operating costs should be allocated on the basis of current nominal WAEs as this reflects the relative share of costs for users of water of the same reliability.

The effect for the Cedar Pocket Dam WSS is detailed in the following section (as it takes into account other factors relevant to establishing total costs).

5.7 Summary of Operating Costs

Seqwater's proposed operating costs by activity and type are set out in Table 5.18**.** The Authority's recommended operating costs are set out in Table 5.19. (The non-direct costs allocated to renewals are not included in these tables.)

Table 5.18: Seqwater's Proposed Operating Costs (Nominal $)

	2013-14	*2014-15*	*2015-16*	*2016-17*
Direct Operations				
Labour	59,229	61,598	64,062	66,625
Contractors and Materials	3,120	3,245	3,375	3,510
Electricity	103	105	108	110
Other	2,050	2,101	2,154	2,208
Repairs and Maintenance				
Planned	10,338	10,751	11,181	11,628
Unplanned	4,222	4,391	4,567	4,750
Dam Safety	0	0	0	27,595
Rates	0	0	0	0
Non-Direct Costs				
Non-Direct Operations	37,425	38,360	39,319	40,302
Non-Infrastructure	3,841	3,937	4,035	4,136
Insurance	9,158	9,387	9,622	9,863
Working Capital	970	994	1,019	1,044
Total	**130,455**	**134,870**	**139,442**	**171,770**

Source: Seqwater (2012ak).

Table 5.19: Authority's Recommended Operating Costs (Nominal $)

	2013-14	*2014-15*	*2015-16*	*2016-17*
Direct Operations				
Labour	45,082	45,993	46,912	47,838
Contractors and Materials	2,920	2,990	3,062	3,134
Electricity	102	105	108	110
Other	1,918	1,936	1,954	1,971
Repairs and Maintenance				
Planned	10,763	11,023	11,287	11,554
Unplanned	2,861	2,930	3,000	3,071
Dam Safety	0	0	0	24,643
Rates	0	0	0	0
Non-Direct Costs				
Non-Direct Operations	30,555	31,007	31,459	31,909
Non-Infrastructure	3,114	3,143	3,172	3,200
Insurance	9,021	9,105	9,189	9,270
Working Capital	0	0	0	0
Total	**106,336**	**108,234**	**110,143**	**136,702**

Source: QCA (2012).

The Authority's recommended operating costs for 2013-14 are 18% lower than Seqwater's proposed amount, as defined in its November NSP.

6. DRAFT PRICES

6.1 Background

Ministerial Direction

The Ministerial Direction requires the Authority to recommend irrigation prices to apply to Seqwater's water supply schemes. Prices are to apply for the four year regulatory period from 1 July 2013 to 30 June 2017.

Recommended prices and tariff structures are to provide a revenue stream that allows Seqwater to recover:

(a) prudent and efficient expenditure on renewing and rehabilitating existing assets through a renewals annuity; and

(b) efficient operational, maintenance and administrative costs to ensure the continuing delivery of water services.

In considering tariff structures, the Authority is to have regard to the fixed and variable nature of underlying costs. The Authority is to adopt tariff groups as proposed in Seqwater's network service plans and not to investigate additional nodal pricing arrangements.

The Ministerial Direction also requires that:

(a) where current prices are above the level required to recover prudent and efficient costs, current prices are to be maintained in real terms;

(b) where cost-reflective prices are above current prices, the Authority must consider recommending price paths to moderate price impacts on irrigators, whilst having regard to Seqwater's commercial interests; and

(c) for certain schemes or segments of schemes [hardship schemes], prices should increase in real terms at a pace consistent with 2006-11 price paths, until such time as the scheme reaches the level required to recover prudent and efficient costs.

Price paths may extend beyond 2013-17, provided the Authority gives its reasons. The Authority must also give its reasons if it does not recommend a price path, where real price increases are recommended by the Authority.

Previous Review

Finalising the Mary Basin ROP in September 2011 coincided with the Cedar Pocket Dam WSS being established. Prior to this, Cedar Pocket Dam was a tariff group of the Mary River WSS.

In the 2006-11 price paths, real price increases over the five years were capped at $10/ML for relevant schemes (including the Upper Mary River WSS). The cap applied to the sum of Part A and Part B real prices. In each year of the price path, prices were indexed by CPI.

For the Cedar Pocket Dam tariff group, although prices over 2006-11 increased by an average of $2/ML per annum in real terms (plus CPI), the recovery of lower bound costs was not achieved.[3]

6.2 Approach to Calculating Prices

In order to calculate Seqwater's irrigation prices in accordance with the Ministerial Direction, the Authority has:

(a) identified the total prudent and efficient costs associated with each tariff group;

(b) identified the fixed and variable components of total costs;

(c) allocated the fixed and variable costs to each priority group (where appropriate);

(d) calculated cost-reflective irrigation prices;

(e) compared the cost-reflective irrigation prices with current irrigation prices; and

(f) implemented the Government's pricing policies in recommended irrigation prices.

6.3 Total Costs

Based on the methodology outlined in previous chapters, the Authority has determined total efficient costs for all sectors for each tariff group. This is comprised of prudent and efficient renewals costs used as a basis for estimating the renewals annuity, and efficient direct and non-direct operating costs. In many schemes, external revenue sources can offset some of these costs. However, no revenue offsets were identified for Cedar Pocket Dam WSS.

Summary of Total Costs

The Authority's estimate of prudent and efficient total costs for the Cedar Pocket WSS for the 2013-17 regulatory period is outlined in Table 6.1. Total costs for 2012-13 are also provided. Total costs reflect the costs for the specific tariff group (all sectors) and do not include any adjustments for Queensland Government's pricing policies.

[3] The average annual increase of $2/ML in real terms was comprised of a $0.25 increase in the first year, a $2.50 increase in each of the next three years, and a $2.25 increase in the last year.

Table 6.1: Comparison of Total Costs – Cedar Pocket Dam (Nominal $)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Seqwater (April NSP)					
Renewals Annuity	9,858	10,104	10,246	10,393	11,794
Direct Operating	63,278	65,778	68,376	71,078	101,483
Non-Direct Operating	49,194	50,423	51,684	52,976	54,301
Less Revenue Offsets	0	0	0	0	0
Return on Working Capital	946	970	994	1,019	1,044
Total	**123,275**	**127,275**	**131,300**	**135,466**	**168,622**
Seqwater (November NSP)					
Renewals Annuity	13,745	14,088	14,150	14,212	14,277
Direct Operating	76,051	79,062	82,192	85,446	116,425
Non-Direct Operating	49,194	50,424	51,684	52,977	54,301
Less Revenue Offsets	0	0	0	0	0
Return on Working Capital	946	970	994	1,019	1,044
Total	**139,936**	**144,543**	**149,020**	**153,654**	**186,047**
Authority					
Renewals Annuity	-	12,448	12,298	12,149	12,003
Direct Operating	-	63,646	64,979	66,323	92,322
Non-Direct Operating	-	42,689	43,256	43,820	44,380
Less Revenue Offsets	-	0	0	0	0
Return on Working Capital	-	0	0	0	0
Total	**-**	**118,784**	**120,532**	**122,292**	**148,704**

Source: Seqwater (2012b), Seqwater (2012ak) and QCA (2012).

6.4 Fixed and Variable Costs

The Ministerial Direction requires the Authority to have regard to the fixed and variable nature of Seqwater's costs in recommending tariff structures for each of the irrigation schemes.

Previous Review 2006-11

For the 2006-11 price paths:

(a) the volumetric charge (previously referred to as the variable charge) was not directly linked to variable costs. Rather, it reflected variable costs together with the balance of fixed costs not recovered by the Part A tariff. The proportion of the fixed charge reflected in Part B was determined in consultation with customers; and

(b) for many schemes (including the Cedar Pocket Dam), a 70% fixed (Part A) and 30% variable (Part B) tariff structure was considered appropriate because it reflected the existing (past) tariff structures.

Stakeholder Submissions

Seqwater

Seqwater (2012s) submitted that all operations (including electricity), maintenance and renewal costs for the Cedar Pocket Dam WSS do not vary with water use (that is, they are 100% fixed costs).

Other Stakeholders

S. Tramacchi (2012) submitted that, in contrast to Seqwater's submission, not all costs associated with the Cedar Pocket Dam WSS are fixed. Accordingly, a 60% fixed tariff is suggested given a 100% fixed tariff cannot be justified.

Authority's Analysis

The Authority noted that SunWater and Seqwater schemes share similar characteristics. Most of the costs associated with operating a bulk WSS are fixed and do not vary with water use. The Authority therefore sought to, where appropriate, apply the Indec findings to Seqwater schemes. Volume 1 provides further details on this analysis.

In summary, the Authority considers that some costs in both bulk schemes and distribution systems will vary with water use. Accordingly, the Authority will apply the specific average findings determined for the SunWater Review to Seqwater schemes (Table 6.2 refers).

Table 6.2: Recommended Variable Costs

Activity	*Variable in Bulk*
Labour	20%
Contractors	20%
Repairs and Maintenance	20%
Materials and Other	20%
Dam Safety	0%
Rates	0%
Electricity (pumping)	na
Non-Directs	0%
Renewal Annuity	0%

Source: Indec (2011).

The Authority notes that Cedar Pocket Dam WSS constitutes a bulk scheme and that applying the average findings determined for the SunWater Review (as outlined in Table 6.2), is consistent with S. Tramacchi's (2012) submission that not all costs associated with the Cedar Pocket Dam WSS are fixed.

6.5 Allocation of Costs According to WAE Priority

The Authority has identified in earlier chapters its preferred approach to allocating costs between medium and high priority WAE. Given only medium priority irrigation WAE is provided for by Cedar Pocket Dam WSS, there is no high priority revenue requirement (Table 6.3 refers).

Table 6.3: Authority's Recommended Allocation of Fixed Revenue Requirement between High and Medium Priority WAE 2013-14 (Nominal $'000)

Tariff Group	*High Priority Fixed Revenue Requirement*	*Medium Priority Fixed Revenue Requirement*	*High Priority Irrigation Share of Fixed Revenue Requirement*	*Medium Priority Irrigation Share of Fixed Revenue Requirement*
Cedar Pocket Dam	0	119	0	119

Source: QCA (2012).

6.6 Variable Charges

On the basis of its analysis of the share of total costs, the Authority has estimated total variable costs for Cedar Pocket Dam. To convert this estimate of total variable costs to a volumetric tariff requires the Authority to consider how such costs vary with each ML of usage.

The Authority notes that Seqwater's forecast total costs were developed using a zero-based budgeting approach that assumed a typical year but also assumed that all costs (except some electricity) were fixed.

Moreover, the Authority notes that usage in each Seqwater scheme is highly variable between each year with no discernible year to year consistency (other than when there is no supply in which case variable costs and volumetric charges would be zero). It is more variable than for SunWater where the Authority adopted the highest five of the eight years of usage as a basis for establishing the per ML volumetric charge. A simple ten year average would also be misleading given the large number of recent low use years due to drought and floods.

As the notion of typical costs relates to management practices which seek to ensure services are made available when required, the Authority has adopted a water use estimate based on the average of those years that exceed the ten year average for each tariff group. A longer term estimate (say the past 15 years) would fail to recognise structural changes occurring in water use, while a shorter period (say the most recent five years) would reflect the most recent years of flood and drought.

Table 6.4 shows total variable costs (all sectors), the typical all sectors' average water use and the resulting volumetric charge for Cedar Pocket Dam WSS.

Table 6.4: Derivation of Cost Reflective Volumetric Tariffs (2013-14 Nominal)

Tariff Group	*Total Variable Costs ($'000)*	*Authority's Estimate of Typical Water Use (ML)*	*Volumetric Tariff ($/ML)*
Cedar Pocket	13	395	32.02

Source: QCA (2012). Note: The volumetric charge is derived by taking the NPV of total variable costs divided by the typical water use.

6.7 Cost Reflective Fixed and Volumetric Tariffs

The Authority derived cost-reflective fixed and volumetric tariffs for each tariff group on the basis of assessed efficient costs identified above, and the recommended tariff structures.

These prices are cost reflective only and do not take account of the Government's pricing policies. This is discussed in the next section.

Table 6.5 presents current tariffs, the Tier 1 reference (lower bound) tariff, Seqwater's (April and November) proposed tariffs and the Authority's cost reflective tariffs.

Table 6.5: Cost-Reflective Tariffs (Nominal $/ML)

Tariff Group	*Actual*	*Seqwater (April)*	*Seqwater (November)*	*Cost Reflective*
	2012-13	*2013-14*	*2013-14*	*2013-14*
Cedar Pocket				
Fixed (Part A)	15.68	271.65	306.07	221.93
Fixed (Part B)	16.81	0.0	0.0	32.02

Source: Seqwater (2012b), Seqwater (2012ak) and QCA (2012)

6.8 Queensland Government Pricing Policies and Draft Prices

Under the Ministerial Direction, where current prices are already above the level required to recover efficient allowable costs, prices are to be maintained in real terms using an appropriate measure of inflation (as recommended by the Authority).

Where prices are below efficient cost recovery, prices are to be set to increase in real terms at a pace consistent with the 2006-11 prices until such time as the WSS reaches efficient costs, whereupon prices are maintained in real terms. This applies to the Cedar Pocket Dam WSS.

In addition, for tariff groups where the Authority's calculated tariffs that would otherwise result in a price increase for irrigators higher than the Authority's measure of inflation:

(a) the Authority must consider phasing in the price increase in order to moderate price impacts on irrigators but at the same time have regard for Seqwater's legitimate commercial interests;

(b) the price path may be longer than one price path period provided the Authority gives its reason for the longer timeframe; and

(c) the Authority must give its reasons if the recommendation is not to phase in the new prices.

Authority's Analysis

The Authority has estimated a current revenue level in each scheme to be used as a benchmark for establishing revenue targets over the 2013-17 period. Current revenue is calculated as:

$$(current\ fixed\ charges \times WAE) + (current\ variable\ charges \times average\ water\ use\ over\ the\ 2006-12\ period)$$

Table 6.6 compares the current revenue with the revenue that would be required to achieve efficient cost recovery.

Table 6.6: 2013-14 Irrigation Revenues (Nominal $'000)

Tariff Group	*Current Revenue*	*Revenue Based on QCA Cost Reflective Prices*	*Revenue Difference*	*Current Cost Recovery %*
Cedar Pocket	11.6	116.6	105.0	10%

Source: QCA (2012).

Current revenue is calculated using variable charge revenues based on average water use during 2006-11.

Table 6.7 below summarises the total current revenue consistent with the Government's requirements. The split between variable revenues, based on a 10 year average irrigation water use, and the balance to be recouped through fixed charges is also shown.

Table 6.7: Revenue Maintenance Requirement (Nominal $'000)

Tariff Group	*Total Revenue Requirement*	*Fixed Revenue*	*Variable Revenue*
Cedar Pocket	12.6	4.8	7.8

Source: QCA (2012).

Given current revenues are below the assessed level of efficient costs (that is, charges are below lower bound), the Authority is required to recommend a price path for the four-year regulatory period (from 1 July 2013 to 30 June 2017).

The Authority proposes a price path set at an average pace similar to that applied over 2006-11, that is, an average of $2/ML per year. This level of increase was previously considered as being reasonable. It is also proposed to escalate all such charges at CPI (2.5% per annum from July 2013) in accordance with past practice.

The $2/ML increase would typically be applied to the fixed charges (Part A).

As noted above, the Authority generally recommends that the cost-reflective volumetric tariffs apply from 1 July 2013 and that current revenues be maintained by adjusting the fixed charge.

Water Prices

On the basis of the previously described analysis and principles, and the Minister's Direction to at least maintain real (2006-11) revenues, the Authority recommends prices as outlined below (Table 6.8 refers).

The Authority's recommended prices are presented in nominal terms for 2013-17.

Table 6.8: Recommended Water Prices 2006-17 (Nominal $/ML)

Tariff Group	Past Prices							Recommended Prices			
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Cedar Pocket											
Fixed (Part A)	8.20	9.72	11.52	13.27	14.94	15.48	15.68	9.70	11.99	14.39	16.91
Fixed (Part B)	8.78	10.41	12.34	14.21	16.01	16.59	16.81	32.02	32.82	33.64	34.48

Source: QCA (2012).

The Cedar Pocket Dam WSS does not reach the cost reflective revenue requirement during the 2013-17 period.

6.9 Impact of Recommended Prices

The impact of any change in prices on the total cost of water to a particular irrigator, can only be accurately assessed by taking into account the individual irrigator's water usage and nominal WAE (see Volume 1).

Stakeholder Submissions

R.J. & E.R. Thefs (2012) and S. Tramacchi (2012) submitted that due to higher water prices being proposed by Seqwater (at $271.65 per ML):

(a) water allocations would become worthless (or a liability) and untradeable;

(b) tighter profit margins and reduced faming enterprise viability would result, possibly forcing farmers out of the industry; and

(c) if irrigators exited the industry, Cedar Pocket Dam WSS could become less viable. Accordingly, there needs to be a proper balance between prices and irrigators' viability, otherwise Seqwater could end up with an asset that has no value.

Authority's Analysis

In response to stakeholders concerns regarding the impact of recommended prices, the Authority notes that the Ministerial Direction requires prices to increase in real terms at a pace consistent with 2006-11 prices until such time as the Cedar Pocket Dam WSS reaches efficient costs. As a consequence, Seqwater's proposed lower bound reference tariffs (as outlined in Seqwater's NSPs) and the Authority's cost-reflective tariffs (at least in the medium-term) are avoided.

In addition, the Authority's recommended tariffs are predominantly volumetric, with initially no fixed charges and small fixed charges in the later part of the regulatory period. This charge structure should ameliorate the risks associated with holding an allocation and the limited scope for trading in the scheme.

The Authority is also required to consider (if appropriate) arrangements that moderate price impacts on irrigators while having regard to the legitimate commercial interests of Seqwater. As outlined above, the Authority has taken steps to ensure the effects of its recommended prices have been moderated.

Compared to Seqwater's proposed approach, the Authority's recommended prices should not result in any significant impact on the value of water allocations.

The Authority also notes that the capacity of irrigators to pay cost-reflective charges is beyond the scope of the Ministerial Direction. In the Authority's SunWater review, the original Ministerial Direction was amended to exclude consideration of capacity to pay from the Authority's brief. The same approach is considered to apply to the Seqwater irrigation review.

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APPENDIX A: FUTURE RENEWALS LIST

Below are listed Seqwater's forecast renewal expenditure items submitted by Seqwater in June 2012 and formed the basis of the April NSPs, for the years 2013-14 to 2035-36 in 2012-13 dollar terms.

Asset	*Year*	*Description*	*Total*
Cedar Pocket Dam	2014/15	Refurbish Embankment	18
	2019/20	Refurbish Outlet Valve	15
		Replace Elect Reticulation To Valves	27
	2020/21	Replace Fence	13
	2020/21	Replace Telemetry	34
	2024/25		28
	2030/31	Replace Telemetry	34
	2025/26	Replace Electricity Supply	30
Water Flowmeters	2025/26	Replace Flowmeters	35
Total			**234**