QUEENSLAND COMPETITION AUTHORITY

Final Report

SunWater
Irrigation Price Review: 2012-17

Volume 2

Maranoa River Water Supply Scheme

April 2012

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GLOSSARY

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

EXECUTIVE SUMMARY

Direction Notice

The Authority has been directed by the Minister for Finance and The Arts and the Treasurer for Queensland to recommend irrigation prices to apply to particular SunWater water supply schemes (WSS) from 1 July 2012 to 30 June 2017 (the 2012-17 regulatory period).

Summary of Price Recommendations

The Authority's recommended irrigation prices to apply to the Maranoa River WSS for the 2012-17 regulatory period are outlined in Table 1 together with actual prices since 1 July 2006.

Table 1: Prices for the Maranoa River WSS ($/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)	28.96	32.44	36.76	40.76	44.68	48.28	44.73	45.84	46.99	48.16	49.37
Volumetric (Part B)	0.00	0.00	0.00	0.00	0.00	0.00	54.69	56.05	57.46	58.89	60.36

Note: 2011-12 prices include the interim increase of $2/ML in addition to CPI. Source: Actual Prices (SunWater, 2011al) and Recommended Prices (QCA, 2012)

Final Report

Volume 1 of this Final 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 SunWater and other stakeholders throughout this review. Consultation has included: inviting submissions from, and meeting with, interested parties; the commissioning of independent reports and issues papers on key issues and publication of all relevant documents.

All submissions received on the Draft Report have been taken into account by the Authority in preparing its Final Report.

1. MARANOA RIVER WATER SUPPLY SCHEME

1.1 Scheme Description

The Maranoa River water supply scheme (WSS) is located near the town of Mitchell in Central South Queensland. It operates as an on demand water supply with customers pumping directly from the Neil Turner Weir storage. The Maranoa River WSS has a total of four bulk irrigation customers. Medium priority water access entitlements (WAE) are detailed in (Table 1.1). SunWater holds 5ML of WAE.

Table 1.1: Water Access Entitlements

Customer Group	*Irrigation WAE (ML)*	*Total WAE (ML)*
Medium Priority	800	805
High Priority	0	0
Total	**800**	**805**

Source: SunWater (2011)

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 sole piece of infrastructure in the scheme is the Neil Turner Weir, completed in 1984. The Neil Turner Weir is a concrete-faced cascading structure comprised of rock-filled precast units located on the Maranoa River with a full supply storage capacity of 1,470 ML. The location of the Maranoa River WSS and key infrastructure is shown in Figure 1.1.

1.3 Network Service Plans

The Maranoa River WSS network service plan (NSP) presents SunWater's:

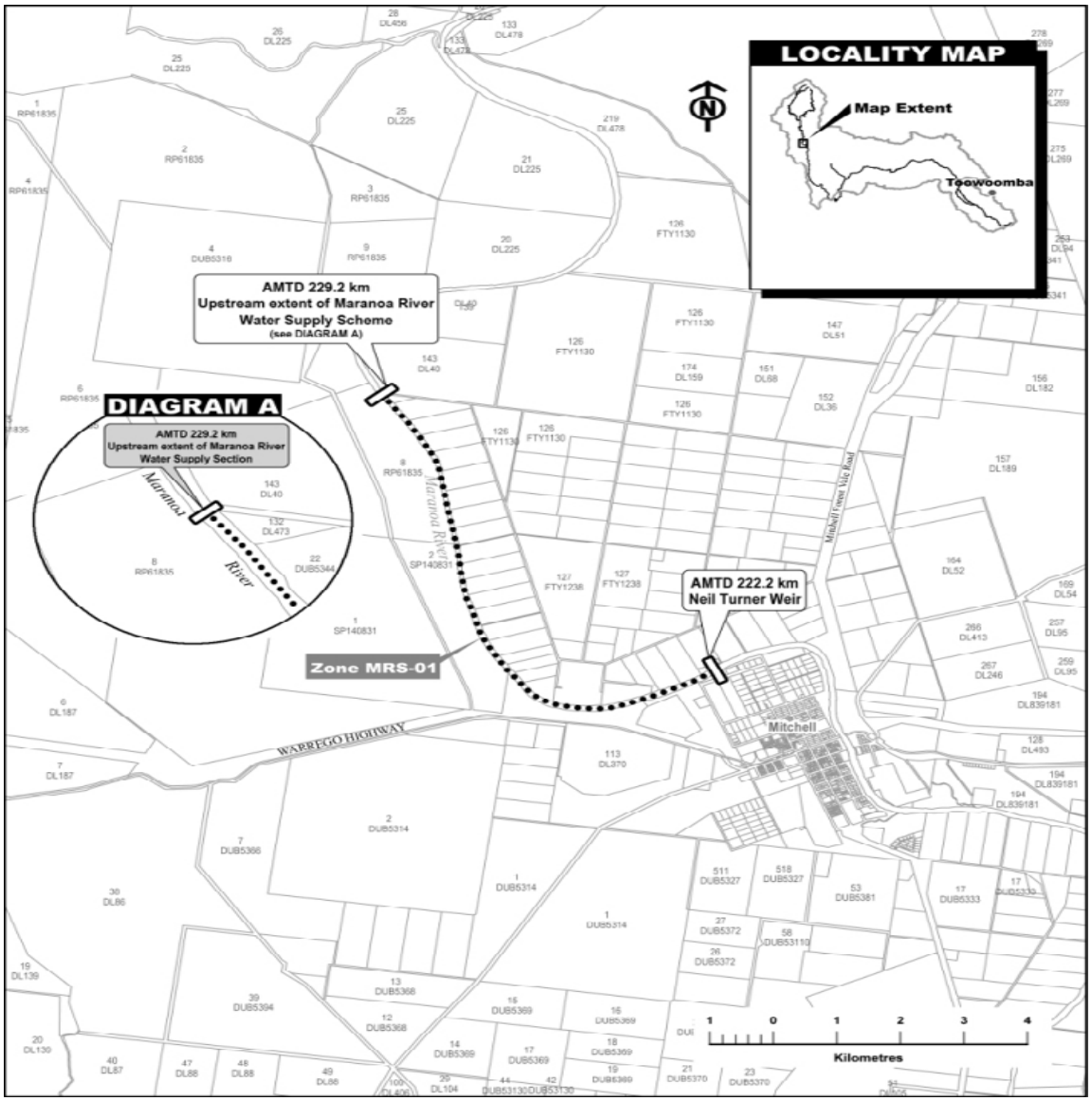
(a) existing service standards;

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

(c) risks relevant to the NSP and possible reset triggers.

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

Figure 1.1: Maranoa River WSS Locality Map



Source: SunWater (2011)

1.4 Consultation

The Authority has consulted extensively with SunWater 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 (two rounds of consultation prior to the Draft Report);

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

(d) commissioned independent consultants to prepare Issues Papers and review aspects of SunWater's submissions;

(e) published all issues papers and submissions on its website;

(f) considered all submissions and reports in preparing this Draft Report for comment; and

(g) in particular, after releasing the Draft Report:

  (i) considered issues arising from a third round of consultation in November and December 2011 and submissions on the Draft Report;

  (ii) obtained and reviewed additional information, particularly relating to past and future renewals expenditures, and non-direct and direct costs; and

  (iii) subjected SunWater's financial, renewals annuity and electricity models and the Authority's pricing module to independent external review.

The Authority has also received a number of submissions from stakeholders on matters such as capacity to pay, rate of return on existing assets, contributed assets, dam safety upgrades, nodal pricing, national metering standards and whether or not to recover recreation management costs from SunWater customers.

Following the amendment to the original Ministerial Direction of 19 March 2010 and further advice from the Minister of 23 September 2010 and 9 June 2011 these issues are outside the scope of the current investigation and have therefore not been addressed.

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 negotiations that preceded the 2006-11 price path, the Maranoa River WSS Tier 2 group were unable to consider an alternative to the existing price cap regulatory arrangement due to the 100% fixed tariff recommended by the Tier 1 group. In the 2011-12 interim price period the price cap arrangement was continued.

2.2 Draft Report

Stakeholder Submissions

SunWater

SunWater identified a range of generic risks considered relevant to allowable costs across all schemes (see Volume 1). SunWater also considered that it should not bear the risk of water availability (volume risk). The following are scheme specific risks identified by SunWater in the NSP associated with the Maranoa River WSS:

(a) possible developments driven by the Murray Darling Basin (MDB) Plan that are currently being developed. This plan, or subsequent changes over time, may have cost implications for the scheme or change the underlying assumptions used for forecasting;

(b) the introduction of schemes relating to the reduction of greenhouse gasses that may have implications for electricity prices, or energy efficiency regulation that results in a net increase in costs;

(c) metering costs related to changes in regulatory standards;

(d) damage to SunWater's assets, to the extent that such damage is not recoverable under insurances;

(e) levies or charges made in relation to the regulation of irrigation prices by the Authority; and

(f) outbreak of noxious weeds.

Other Stakeholders

Neil Turner Weir

Participants at the Round 1 consultation (May 2010) and Round 3 consultation (November 2011) submitted that, as a consequence of positioning of the weir at its current position, severe silting has occurred, which has severely compromised the take of allocation from the weir. Participants considered that silting continues to compromise pumping sites with significant additional costs being incurred by irrigators when pump sites need to be repositioned away from agricultural production.

Authority's Analysis

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

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.	SunWater 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.	SunWater has no substantive capacity to augment bulk infrastructure (for which responsibility rests with Government). SunWater does have some capacity to manage distribution system infrastructure and losses provided it can deliver its WAEs.	SunWater should bear the risks, and benefit from the revenues, associated with reducing distribution system losses.
Market Cost Risks	Risk of changing input costs.	SunWater 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 SunWater (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 (2011).

Consistent with the Authority's allocation of risks (Table 2.1), it is proposed that risks identified by SunWater in items (a) (b), (d) and (f) above will be dealt with an end-of-period adjustment, or price trigger or cost pass through upon application by SunWater or customers.

Metering upgrades (c) are outside the scope of the investigation. No levies or charges (e) are to be applied by the Authority as a result of this irrigation price review.

Neil Turner Weir Siltation

In the Draft Report, the Authority noted stakeholders' comments regarding the effects of siltation at the Neil Turner Weir.

SunWater (2011) had acknowledged that there is significant sand and silt accumulated within the storage. SunWater stated that sediment levels in the Maranoa River are such that high levels of sand and silt are mobile during high flows, which are then deposited in the weir pond as the velocity of the water slows in transit through the ponded area.

In general, the Authority notes that risks associated with the supply of WAE are considered to be volume risks. As discussed in Volume 1, the Authority considers that SunWater has no ability to manage supply risks and that legislative and contractual arrangements require supply risk to be held by customers.

Therefore, the Authority has recommended that short term volume risks are assigned to customers through a tariff structure that recovers all fixed costs through fixed charges and variable costs through the volumetric charges.

The Neil Turner Weir is listed in the Condamine and Balonne Resource Operations Plan (ROP) and as such SunWater has obligations in relation to its management and operation.

The existing legislative and contractual arrangements whereby customers pay a 100% fixed charge, allocates all the supply risk to customers. In its NSP, SunWater noted that irrigation water usage from 2003-2010 was on average 4% of WAE. This compares with use assumption adopted in the 2006-11 price paths of 0% of WAE.

In general, SunWater's customers can manage their water supply risks by holding surplus entitlements, sourcing alternative supplies and using temporary trade markets. However, for Maranoa River WSS, the Authority notes that:

(a) 2006-11 water trading data for Maranoa River WSS (see Chapter 3) suggests that irrigators in this scheme have a limited ability to manage supply risk using permanent or temporary trades; and

(b) determining the sustainable extraction rate from Neil Turner Weir is beyond the scope of this price review. It is a matter for DERM.

As outlined in the Draft Report, irrigators notified the Authority that they have made formal submissions to the Minister for Energy and Water Utilities seeking a solution to the challenges associated with Neil Turner Weir. As also outlined in the Draft Report, SunWater informed the Authority that it is endeavouring to work collaboratively with DERM to explore options for a potential resolution to irrigators' concerns.

Pending resolution of this matter, consistent with legislative and contractual arrangements, the Authority proposes to apply its adjusted price caps with a two-part tariff wherein the fixed component reflects fixed costs and the volumetric component reflect variable costs.

Submissions in Response to the Draft Report

Participants at the Round 3 consultation (IA November 2011) and C Cicero (2011) reiterated concerns regarding the severe silting. C Cicero submitted the Maranoa River WSS was extremely dysfunctional and, as a consequence, cannot be considered viable.

N Mobbs (2011) submitted copies of letters sent to Kate Jones MP, (then) Minister for Environment and Resource Management, requesting the Maranoa River WSS to be decommissioned due to the scheme providing no benefit to irrigators. N Mobbs considers this would allow irrigators to surrender their WAE. N Mobbs submitted that the sole beneficiaries of the Maranoa River WSS are tourists and if costs are to be allocated, then a more appropriate approach would be to allocate these costs to the broader community.

Authority's Response to Submissions Received on the Draft Report

In response to the submissions received from C Cicero and N Mobbs, the Authority notes the Draft Report's acknowledgement that SunWater and DERM are working collaboratively to consider options for a resolution to irrigators' concerns. The Authority also notes that

resolution of issues relating to siltation and cost allocation to other scheme beneficiaries is outside the scope of the Authority's review as prescribed by the Ministerial Direction.

The Authority notes that DERM (S. Goudie, pers. comm. February 10, 2012) has confirmed that structured consultation with irrigators will take place to seek a long-term resolution to the challenges being experienced at Neil Turner Weir.

In conclusion, the Authority has reviewed the positions of stakeholders regarding the allocation of risk and considers that no compelling case has been put forward to change the approach outlined in the Authority's Draft Report.

3. PRICING FRAMEWORK

3.1 Tariff Structure

Introduction

For the 2006-11 price path, it was generally agreed to adopt a 70:30 ratio of fixed costs to variable costs. However, due to historically low water usage in the Maranoa River WSS, the Part A fixed charge was set at 100% of total revenues in this scheme to apportion costs to all allocation holders.

Draft Report

Stakeholder Submissions

SunWater (2011d) submitted that the fixed charge should recover fixed costs and the variable charge should recover variable costs.

No other stakeholders have commented on this matter.

Authority's Analysis

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

The Authority notes that under current legislative and contractual arrangements (and the Ministerial Direction), customers must bear all the costs of water supply incurred by SunWater, irrespective of whether it is made available or not (provided the costs of supply are efficient and prudent).

Moreover, the Authority also recognises that tariff structures are only part of a mix of institutional arrangements in Queensland designed to direct water to its highest and best use from the overall community perspective. In addition to these institutional arrangements, normal commercial profit motives and water trading are relevant to ensuring water is directed to its highest and best use.

The volumes of permanent and temporary water traded (across all sectors, separately from land) for the Maranoa River WSS are identified in Table 3.1.

Table 3.1: Permanent and Temporary Water Traded (ML)

	2002-03	*2003-04*	*2004-05*	*2005-06*	*2006-07*	*2007-08*	*2008-09*	*2009-10*
Permanent water traded	0	0	0	0	0	0	0	0
Temporary water traded	0	15	0	0	0	0	0	0

Source: SunWater Annual Reports (2003 - 2010) and Queensland Valuation Services (2010).

The Authority's analysis of whether service delivery costs are fixed or variable is addressed in a subsequent chapter as are the cost allocation rules.

3.2 Water Use Forecasts

Introduction

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

In the previous review, 16 years of historical irrigation water use data was available for the Maranoa WSS. This data revealed that the average irrigation water usage over this period has been approximately 1% of the total irrigation nominal allocations with the highest irrigation water usage in any one year being around 2.4% (SunWater, 2006b).

For the Maranoa River WSS, SunWater (2006b) assumed a water usage forecast of 0% of WAE.

Draft Report

Stakeholder Submissions

SunWater

The available supply of water is determined by the announced allocations which are set according to rules outlined in the ROP.

SunWater (2011d) has noted that demand forecasts are not relevant for price setting under SunWater's proposed tariff regime.

SunWater's usage forecasts for 2012-17 are made with regard to historic averages over an eight-year period and the usage forecast applied for the 2006-11 price path.

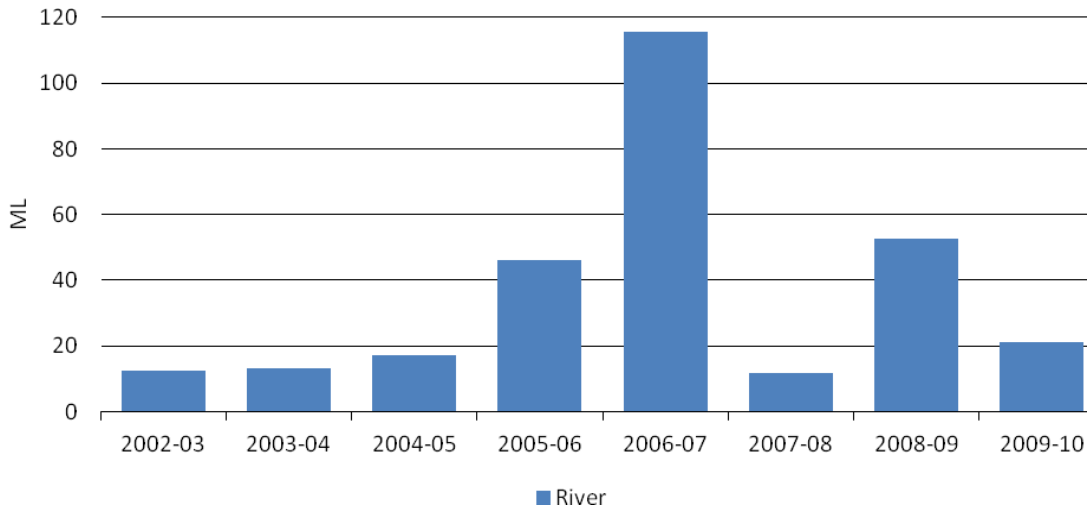
Based on the last eight years of observations, SunWater has forecast use as follows:

(a) at a whole scheme level (all sectors) – an average of 5% of total WAE (including SunWater's WAE); and

(b) for the irrigation sector only – an average of 5% of irrigation WAE. Projected usage is higher than the previous eight year average (4%) due to the impact of past drought. The forecast usage compares with the use assumption adopted in the 2006-11 price paths of 0% of WAE.

Figure 3.1 shows the historic usage information for the Maranoa River WSS submitted by SunWater (2011). The river category includes all irrigation and other usage sourced from the river.

Figure 3.1: Water Usage for the Maranoa River WSS



Source: SunWater (2011).

Other Stakeholders

No other stakeholders have commented on this matter.

Authority's Draft Report Analysis

The Authority has considered past water use in calculating cost-reflective volumetric charges that recover variable costs (see Chapter 6 – Draft Prices).

Under the Ministerial Direction, the Authority must recommend prices that maintain revenues in real terms where current prices are above the level required to recover prudent and efficient costs. For this purpose, the Authority has considered forecast irrigation water use (see Chapter 6 – Draft Prices).

No submissions were received in regard to water use forecasts in the Maranoa River WSS. The Authority proposes no changes to its Draft Report recommendations.

3.3 Tariff Groups

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

The 2006-11 SunWater Irrigation Price Paths Final Report (SunWater, 2006b) nominated one tariff group, the River tariff group, for the Maranoa River WSS.

SunWater proposed in its NSP that the current tariff group continue.

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

4. RENEWALS ANNUITY

4.1 Background

Ministerial Direction

Under the Ministerial Direction, the Authority is required to recommend a revenue stream that allows SunWater 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 SunWater to its customers.

Previous Review

In 2000-06 and 2006-11, a renewals annuity approach was used to fund asset replacement for SunWater WSSs.

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).

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. SunWater's renewals expenditure and ARR balances include direct, indirect and overhead costs (unless otherwise specified).

The key issues for the 2012-17 regulatory period are:

(a) the establishment of the opening ARR balance (at 1 July 2012), which requires:

  (i) an assessment of whether renewals expenditure in 2007-11 was prudent and efficient. This affects the opening ARR balance for the 2012-17 regulatory period; and

  (ii) the extension of the opening ARR balance (calculated for 1 July 2011) to 1 July 2012 to account for the adjusted timelines specified in the amended Ministerial Direction;

(b) the prudence and efficiency of SunWater's forecast renewals expenditure;

(c) the methodology for apportioning renewals expenditure between medium and high priority WAEs; 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 SunWater has estimated that it has under management about 50,000 assets relevant to irrigators and, given this number of assets, has developed an asset planning methodology designed to cost-effectively identify assets requiring renewal or refurbishment.

Some of the assets were renewed during the 2006-11 price paths. Others are eligible for renewal over the 2012-17 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 initially relied on its four principal scheme consultants: Arup, Aurecon, GHD and Halcrow to identify and comment upon SunWater's renewals expenditure items. However, the Authority's four consultants expressed concerns about the lack of timely information relating to the past and proposed expenditures at the time of their reviews.

Subsequently, the Authority liaised directly with SunWater to obtain further information, and commissioned Sinclair Knight Merz (SKM) to address material expenditure items (that is, those renewals items which represented more than 5% of the present value of forecast expenditure) and/or those of particular concern (usually in response to customers' submissions). Across all schemes, a total of 36 past and forecast renewals items were reviewed by SKM in the Draft Report.

An additional six past renewals items across the schemes were reviewed for the Final Report, bringing the total proportion of past items reviewed to 34%. A further 14 forecast renewals items were reviewed, increasing the proportion reviewed from13% in the Draft Report to 29%.

The size of the sample is sufficiently large to determine and apply separate cost savings to past (and forecast) non-sampled items.

The Authority's assessment of the prudency and efficiency of proposed renewals expenditures therefore draws upon the contributions of all of these sources as detailed below.

4.2 SunWater's Opening ARR Balance (1 July 2006)

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

SunWater submitted that the opening balance for the Maranoa River WSS was negative $38,000.

In Volume 1, the Authority noted that the opening ARR balance at 1 July 2006 is not subject to review for the 2012-17 regulatory period.

The Draft Report opening balance of $38,000 remains unchanged for the Final Report.

4.3 Past Renewals Expenditure

Draft Report

As noted in Volume 1, the Authority has reviewed the prudency and efficiency of selected renewals expenditures over the 2006-11 price paths. The Authority has also sought to compare the original expenditure forecasts underlying the 2006-11 price path with actual expenditure, to establish the accuracy of SunWater's forecasts.

Submissions

SunWater (2011) submitted actual renewals expenditure for the Maranoa River WSS for 2006-11 (Table 4.1) in real (2010-11 dollars) terms. This expenditure included indirect and overhead costs which are subject to a separate review by the Authority (see Chapter 5). SunWater advised that it was unable to provide the forecast renewals expenditure for this period that was approved for the 2005-06 review.

These estimates reflect SunWater's most recent information (including that received by the Authority in September 2011 relating to renewals expenditure) and differ from SunWater's NSP.

Table 4.1: Past (Actual) Renewals Expenditure 2006-11 (Real $'000)

	2006-07	***2007-08***	***2008-09***	***2009-10***	***2010-11***
Past (Actual) Renewals Expenditure	4	-	-	3	-

Note: The estimates reflect the most recent information provided by SunWater to the Authority in September 2011. Source: SunWater (2011 an).

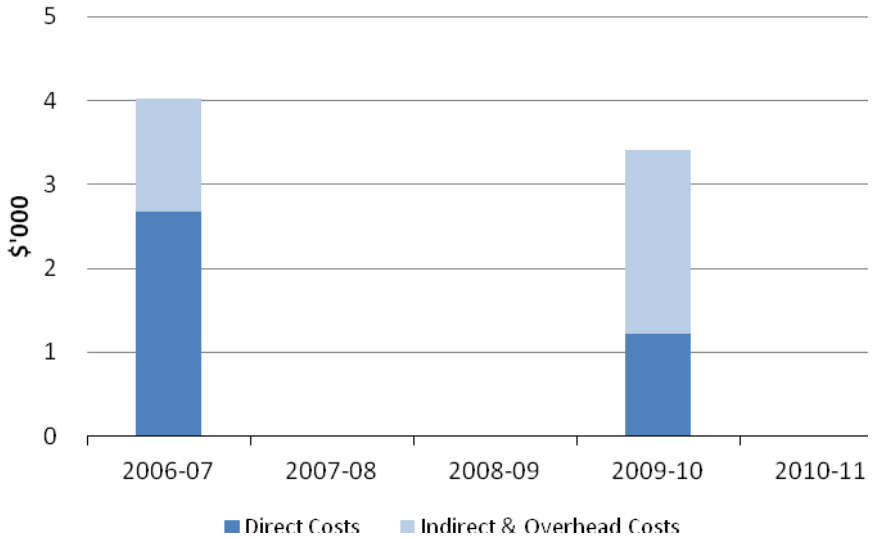
No other stakeholders have commented on these items.

Authority's Analysis

Total Renewals Expenditure

The total direct renewals expenditure over 2006-11 is detailed in Figure 4.1 below. Indirect and overhead costs are addressed in a following chapter.

Figure 4.1: Past (Actual) Renewals Expenditure 2006-11 (Real $'000)



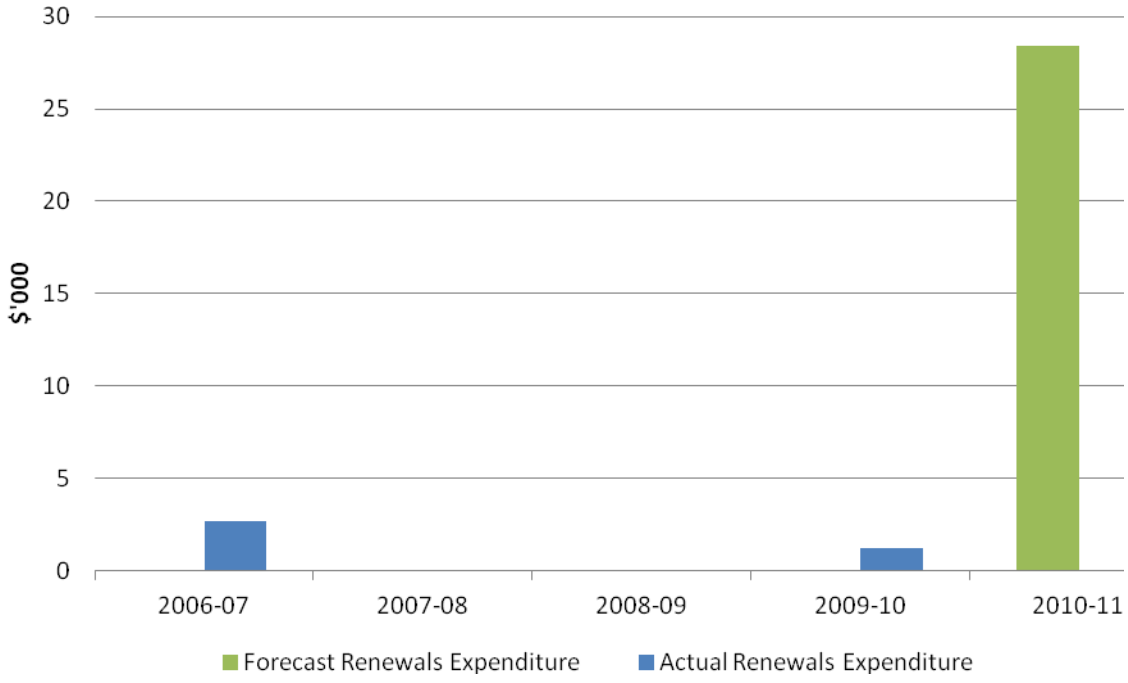
Source: Indec (2011d)

Comparison of Forecast and Actual Costs

The Authority was able to source details of forecast direct renewals expenditure from Indec, who undertook the analysis for the 2005-06 review.

A comparison of forecast and actual direct renewals expenditure in the Maranoa River WSS for 2006-11 is shown in Figure 4.2.

Figure 4.2: Direct Renewals Expenditure 2006-11 (Real $'000)



Source: Forecast Indec (2011d and Actual SunWater (2011k)

Actual renewals expenditure was $24,000 (direct costs) less than forecast over this period.

Review of Past Renewal Items

GHD was appointed to review the prudency and efficiency of past renewals projects.

In the absence of forecast renewals expenditure for 2006-11 from SunWater (at the time of GHD's review), GHD sought to identify variances between annually budgeted and actual expenditure for certain projects.

GHD report that during the previous five year period, there were no renewals expenditure items above $10,000. The two major projects undertaken by SunWater were refurbishing the rock protection on the downstream section of Neil Turner Weir and installing a buoy line. No detailed analysis of these projects was undertaken as insufficient information was available to do so.

Conclusion

Draft Report

The Authority notes GHD's finding that there was insufficient information to review past renewals expenditure items for this scheme. As noted in Volume 1, after consideration of all consultants' reviews, the Authority recommended that a 10% saving be applied to all non-sampled and sampled items for which there was insufficient information.

In total, the Authority recommends that past renewals expenditure be adjusted as summarised in Table 4.2.

Final Report

As outlined in Volume 1, the Authority undertook further sampling of past renewals expenditures across SunWater's schemes. The larger sample of items reviewed indicated that a lower average level of savings for past renewals expenditures could have been achieved. (A separate level of savings was calculated for forecast renewals expenditures – see further below).

After consideration of this further work, the Authority recommended that a 4% saving be applied to all non-sampled and sampled items for which there was insufficient information.

The Authority's recommended expenditure is summarised in Table 4.2.

Table 4.2: Review of Past Renewals Expenditure 2006-11 (Real $'000)

Item	*Year*	*SunWater*	*Authority's Draft Report Findings*	*Draft Recommended ($'000)*	*Authority's Final Report Finings*	*Final Recommended ($'000)*
Past Renewals Items	Various		Insufficient Information	10% saving applied	Insufficient Information	4% saving applied

Source: SunWater (2011), GHD (2011) and SKM (2011).

4.4 Opening ARR Balance (at 1 July 2012)

Draft Report

Stakeholder Submissions

SunWater indicated that the renewals opening ARR balance for 1 July 2011 was negative $10,000 for the Maranoa River WSS. This estimate reflects the most recent information provided by SunWater to the Authority in September 2011 and differs from the NSP.

No other stakeholders have commented on this matter.

Authority's Analysis

Based on the Authority's assessment of the prudency and efficiency of past renewals expenditure, the recommended opening ARR balance for 1 July 2011 for the Maranoa River WSS was negative $9,000.

The Authority calculated the opening ARR balance at 1 July 2011 by:

(a) adopting the opening balance as at 1 July 2006;

(b) adding 2006-11 renewals annuity revenue;

(c) subtracting prudent and efficient 2006-11 renewals expenditure; and

(d) adjusting interest over the period consistent with the Authority's recommendations detailed in Volume 1.

To establish the Draft Report's closing ARR balance as at 30 June 2012 of negative $5,000, the Authority:

(a) added forecast 2011-12 renewals annuity revenue;

(b) subtracted forecast 2011-12 renewals expenditure; and

(c) adjusted for interest over the year.

The closing ARR balance for 30 June 2012 was the opening ARR balance for 1 July 2012.

Final Report

The Authority revised its Draft Report estimate of the 30 June 2012 ARR to apply the 4% saving (previously 10%) to non-sampled items and sampled items for which there was insufficient information.

The resulting revised ARR as at 1 July 2011 is negative $10,000 and as at 1 July 2012 is negative $6,000.

4.5 Forecast Renewals Expenditure

Draft Report

Planning Methodology

The Authority reviewed SunWater's Asset Management Planning Methodology in Volume 1 and recommended improvements to their current approach, including:

(a) high-level options analysis for all material renewals expenditures expected to occur over the Authority's recommended planning period (20 years), with a material renewals expenditure being defined as one which accounts for 10% or more in present value terms of total forecast renewals expenditure;

(b) detailed options analysis (which also takes into account trade-offs and impacts on operational expenditures) for all material renewals expenditures expected to occur within the first five years of each planning period; and

(c) SunWater to adopt the Authority's consultants' suggested improvements for forecasting renewals expenditure.

Submissions Received from Stakeholders on the Draft Report

SunWater submitted that:

(a) the costs of undertaking options analysis (and associated activities including consultation) are excessive ($445,000 annually for all schemes);

(b) these costs are to be allocated exclusively to the irrigation sector; and

(c) although some of the Authority's consultant's suggested improvements have merit, they all involve additional cost. SunWater sought to implement only those that demonstrate a net-benefit.

Authority's Response to Submissions Received on the Draft Report

In response to SunWater, and as outlined in Volume 1, the Authority considers that:

(a) the cost of the options analyses is acceptable when compared to SunWater's total renewals expenditure ($14.5 million in 2011-12). In addition, SunWater's estimated $445,000 does not include the savings associated with options analyses;

(b) the cost of carrying out options analyses should be met by all water users (including irrigators and non-irrigators where they exist) in the relevant service contract; and

(c) SunWater should review its renewals planning process (taking into account the Authority's consultants' suggested improvements) and provide a copy of the review to Government and the Authority by 30 June 2014.

As noted in Volume 1, the Authority has not, therefore, amended its draft recommendations regarding SunWater undertaking high-level and detailed options analyses. The Authority has, however, modified its draft recommendation as noted in (c) above.

Prudency and Efficiency of Forecast Renewals Expenditure

Stakeholder Submissions

SunWater

SunWater's proposed 2011-16 renewals expenditure for the Maranoa WSS in real (2011 dollar) terms is presented in Table 4.3 as provided in its NSP (submitted prior to the Government's announced interim prices for 2011-12).

Table 4.3: Forecast Renewals Expenditure 2011-16 (Real $'000)

Facility	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*
Neil Turner Weir	-	-	-	10	15
Total	-	-	-	10	15

Source: SunWater (2011)

The major expenditure item from 2016-17 is the replacement of the trash rack, screens and signage in 2034-35 at an estimated cost of $64,000.

SunWater's forecast renewal expenditure items greater than $10,000 in value, for the years 2011-36 and in 2010-11 dollar terms are provided in **Appendix A.**

Other Stakeholders

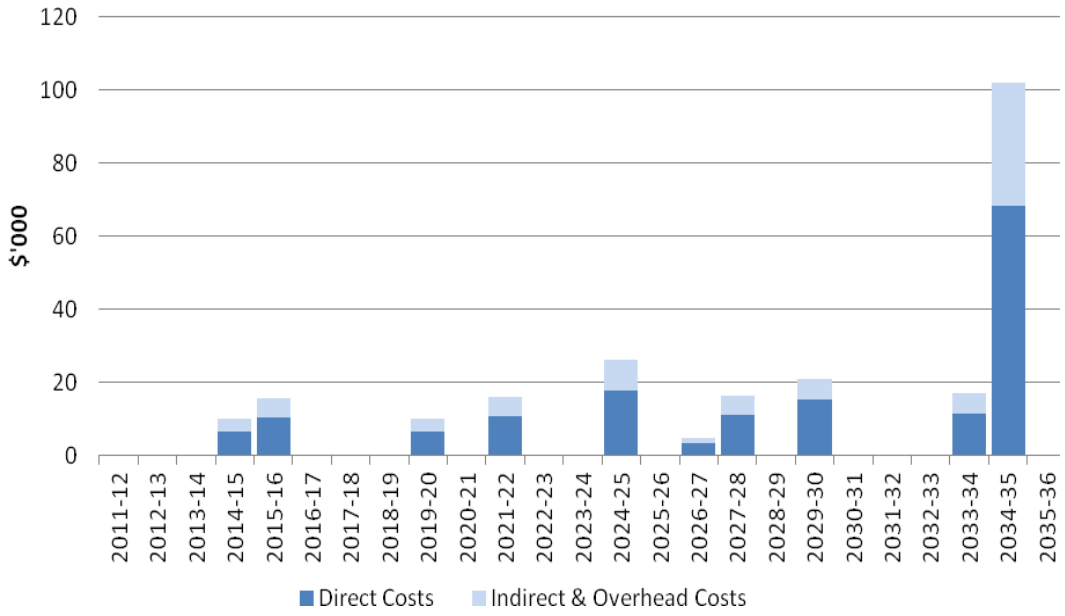
No other stakeholders have commented on these items.

Authority's Draft Report Analysis

Total Costs

SunWater's proposed renewals expenditure for 2011-36 for the Maranoa River WSS in real (2011 dollar) terms is shown in Figure 4.3. This reflects the most recent renewals information provided by SunWater to the Authority in September 2011, and differs from the NSP. The Authority has identified the direct cost component of this expenditure. The indirect and overheads component of expenditure relating to these projects are further reviewed in Chapter 5 – Operating Costs.

Figure 4.3: Forecast Renewals Expenditure 2012-36 (Real $'000)



Source: SunWater (2011am)

Item Review

GHD reviewed the prudency and efficiency of the total costs (including indirect and overhead costs) of a sample of items.

As noted in Volume 1, GHD adopted a different approach to the other scheme consultants and undertook a high level process review of a large number of projects rather than a more detailed review of a smaller number of projects.

GHD found SunWater's asset planning process to generally meet good industry practice (as did the other consultants in general). Nevertheless, as a result of the lack of detailed review of any specific renewals expenditure items, in the Draft Report the Authority has applied a general 10% cost saving to SunWater's proposed renewals expenditure items reviewed by GHD.

Neil Turner Weir 2011-2016

SunWater proposed the following renewals projects for Neil Turner Weir over 2011-16 (Table 4.4).

Table 4.4: Proposed Renewals Expenditure 2011-16 (Real $'000)

Facility	*Description*	*Driver*	*Cost Estimate ($'000)*	
			2014-15	*2015-16*
Neil Turner Weir	Refurbish: Inspect and repair damage and corrosion	Condition		15.4
	Study: 5 year comprehensive dam inspection	Compliance	9.9	

Note: Costs include indirect and overhead costs. Source: GHD (2011)

No other stakeholders have commented on these items.

GHD's Review

GHD noted that the proposed refurbishment of the Neil Turner Weir is a planned maintenance inspection to review the condition of the weir. GHD assessed this proposed expenditure as prudent (as it is based on preserving the assets).

GHD noted the dam inspection is a recurrent study and the timing and cost of the works appear to be prudent.

However, GHD suggested that whether these works could be done at the same time could be investigated to determine whether cost savings could be possible by combining the items.

Notwithstanding the above, GHD generally concluded that the forecast works were prudent and efficient.

Authority's Analysis

As noted above, the Authority has applied a general 10% cost saving to renewals items reviewed by GHD.

Neil Turner Weir From 2015-16

SunWater proposed the following renewals projects for Neil Turner Weir beyond 2015-16 (Table 4.5).

Table 4.5: Proposed Renewals Expenditure from 2015-16

Facility	*Description*	*Driver*	*Value ($'000)*	*Year*
Neil Turner Weir	Refurbish: Inspect and repair damage and corrosion	Condition	20	2022
	Enhance: Spillway safety rails and sign boards	Compliance	44	2035

Note: Costs include indirect and overhead costs. Source: GHD (2011)

No other stakeholders have commented on these items.

GHD's Review

GHD noted that the proposed inspection of Neil Turner Weir is driven by the planned maintenance condition inspection cycle and required to confirm the preservation of the asset. The spillway safety rails and signs are a requirement and must be completed under statutory compliance obligations.

GHD generally concluded that the proposed expenditure was prudent and efficient.

Conclusion

Draft Report

As outlined in the Draft Report, a total of four items for the Maranoa WSS were sampled. As also discussed previously, the Authority considered that insufficient information was provided by SunWater for GHD and the Authority to adequately assess the prudency and efficiency of this forecast expenditure. Accordingly, the Authority recommended applying a 10% cost saving to forecast renewals items.

The Authority recommended that forecast renewals expenditure be adjusted as shown in Table 4.6.

Final Report

As outlined in Volume 1, the Authority undertook further sampling of past renewals expenditures across SunWater's schemes. After consideration of this further work, the Authority recommended that a 20% saving be applied to all non-sampled and sampled items for which there was insufficient information.

The Authority's recommended expenditure is summarised in Table 4.6.

Table 4.6: Review of Forecast Renewals Expenditure 2011-12 to 2035-36 (Real $'000)

Item	*Year*	*SunWater ($'000)*	*Authority's Draft Report Findings*	*Draft Recommended ($'000)*	*Authority's Final Report Findings*	*Final Recommended ($'000)*
Sampled Projects						
Study: five year comprehensive dam inspection	2014-15	9.9	Insufficient Information	10% saving applied	Insufficient Information	20% saving applied
Refurbish: Inspect and repair damage and corrosion	2015-16	15.4	Insufficient Information	10% saving applied	Insufficient Information	20% saving applied
Refurbish: Inspect and repair damage and corrosion	2021-22	20.0	Insufficient Information	10% saving applied	Insufficient Information	20% saving applied
Enhance: Spillway safety rails and sign boards	2034-35	44.0	Insufficient Information	10% saving applied	Insufficient Information	20% saving applied
Non Sampled Projects				**10% saving applied**		20% saving applied

Source: SunWater (2011), GHD (2011), SKM (2011) and QCA (2011)

4.6 SunWater's Consultation with Customers

Draft Report

Submissions

SunWater (2011b) submitted that through Irrigators Advisory Committees (IACs), customers are:

(a) able to offer suggestions on planned asset maintenance which are considered by SunWater in the context of asset management planning;

(b) consulted on various operational and other aspects of service provision, including the timing of shutdowns and managing supply interruptions; and

(c) provided with information about renewals expenditure, particularly where supply interruptions may result.

Nonetheless, SunWater noted opportunities for greater consultation with irrigators do exist.

Stakeholders at the Round 1 consultation commented that they were uncertain as to what costs are currently being, and are forecast to be, incurred by SunWater.

Authority's Analysis

In the Draft Report, the Authority noted the concerns of irrigators and their representatives about the lack of involvement in the planning of future renewals expenditure.

Accordingly, 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. SunWater should also be required to submit the service standards and renewals expenditure program to irrigators for comment whenever they are amended and that irrigators' comments be documented and published on SunWater's website and provided to the Authority.

Submissions Received from Stakeholders on the Draft Report

SunWater (2011as) submitted that the nature and extent of stakeholder consultation is ultimately a matter for SunWater and its customers. SunWater submitted that costs (potentially significant) would be involved in implementing the Authority's recommendations and that the Authority had failed to establish that the benefits of what was being recommended outweighed the costs.

SunWater considers that although it is crucial that SunWater retains ultimate control over decisions regarding renewals expenditure, opportunities to improve information provided to customers that does not involve legislative amendment do exist.

Authority's Response to Submissions Received on the Draft Report

In response to SunWater's concerns that excessive costs will be incurred undertaking consultation, the Authority considers that SunWater's estimated costs ($445,000 annually for all schemes) is modest compared to total renewals spend (approximately 3%) and immaterial in the context of prices.

In addition, the Authority agrees that SunWater maintain ultimate control over its renewals annuity program. However, the Authority considers that customer consultation has not been adequate under current legislation (despite explicit recommendations of the past price review) and, as a consequence, SunWater should be more formally obliged to undertake consultation.

The Authority proposes no change to its recommendation.

4.7 Allocation of Headworks Renewals Costs According to WAE Priority

Given that the Maranoa River WSS contains only medium priority water access entitlements, 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 WAEs.

4.8 Calculating the Renewals Annuity

Draft Report

In Volume 1, the Authority recommends an indexed rolling annuity, calculated for each year of the 2012-17 regulatory period.

For the Maranoa River WSS the recommended renewals annuity for the 2012-17 regulatory period in real (2010-11) terms is shown below in Table 4.7. The table shows the total renewals annuity recommended by the Authority. Also presented for comparison is SunWater's total renewals annuity for 2006-11 and SunWater's proposed total annuity for 2012-16.

Final Report

For the Final Report, changes to the Authority's recommended forecast renewals annuity arise due to the revised assessment.

The revised renewals annuities are compared to the Draft Report recommendations in Table 4.7.

Table 4.7: Maranoa River WSS Renewals Annuity (Real $'000)

	Actual						*Recommended*				
	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Draft Report											
Total SunWater	10	11	11	10	10	8	8	7	8	9	9
Total Authority (medium priority)	-	-	-	-	-	-	5	5	5	8	8
Final Report											
Total Authority (medium priority)							5	5	5	7	7

Note: Includes indirect and overhead costs relating to renewals expenditure, which is discussed in Chapter 5.
Source: Actuals (SunWater 2011) and Recommended (QCA, 2011).

5. OPERATING COSTS

5.1 Background

Ministerial Direction

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

Issues

To determine SunWater's allowable operating costs for 2012-17, the Authority considered the following:

(a) the scope of operating activities for this scheme;

(b) the extent to which previously anticipated cost savings (identified prior to the 2006-11 price paths) have been incorporated into SunWater's total cost estimates for the purpose of 2012-17 prices;

(c) the prudency and efficiency of SunWater's proposed operating expenditures including direct and non-direct costs and escalation factors; and

(d) the most appropriate methodologies for allocating operating costs to service contracts[1] and to different priority customer groups (within each service contract).

5.2 Total Operating Costs

Operating costs are generally classified by SunWater as either non-direct or direct.

Non-direct costs are classified as either:

(a) overhead costs – allocated to all of SunWater's 62 service contracts for services that support the whole business (for example, Board, CEO and human resource management costs); and

(b) indirect costs – allocated to more than one service contract (but not all service contracts) for specialised services pertaining to a particular type of asset or group of service contracts (for example, asset management strategy and systems).

Direct costs are those readily attributable to a service contract (for example, labour and materials employed directly to service a scheme asset) and have been classified as operations, preventive maintenance (PM), corrective maintenance (CM), electricity and other costs.

In its NSP, SunWater described the scope of its operating activities for this scheme to include service provision, compliance, insurance, recreation and other supporting activities (these were not classified by direct and indirect costs). SunWater noted that:

(a) a Service Manager and 10 staff are located at the St George depot and are responsible for the day-to-day water supply management and delivery of the programmed works for all users in the region.

[1] SunWater refers to each bulk scheme and each distribution system as a service contract. Consequently, SunWater has 22 irrigation bulk service contracts and eight irrigation distribution system service contracts.

(b) service provision relates to:

(i) water delivery – scheduling and releasing bulk water from storages, surveillance of water levels and flows in the river, and quarterly meter reading; and

(ii) customer service and account management – managing enquiries about accounts and major transactions; providing up to date online data on WAE, water balances and water usage; and managing transactions such as temporary trades, transfers and other scheme specific transactions;

(c) compliance requirements to provide the bulk service include those relating to:

(i) the ROP and ROL – a major part of which is gathering and reporting data at quarterly and annual intervals on water sharing rules, ROP amendments and modifications; water accounting and reporting on stream flow and other data;

(ii) routine dam safety inspections are carried out quarterly on the Neil Turner Weir. They also include annual condition inspections to identify and plan maintenance requirements and to provide information for management planning of water deliver assets;

(iii) environmental management to comply with the ROP and *Environmental Protection Act 1994* which require SunWater to deal with risks such as fish deaths, chemical usage, pollution, contaminants and approvals for instream works; and

(iv) land management (weed and pest control, rates and land tax, security and trespass and access to land owned by SunWater) as well as other obligations in relation to workplace health and safety, financial reporting and taxation and irrigation pricing;

(d) insurance is obtained on a portfolio basis and allocated to the scheme;

(e) SunWater has sought to transfer the management and cost of recreation activities to private operators or Government. There are no recreational facilities managed by SunWater in this scheme; and

(f) other supporting activities include central procurement, human resources and legal services.

Previous Review

For the 2006-11 price paths, Indec identified annual cost savings of between $3.8 million and $5.5 million (2010-11 dollars) or 7.5% to 9.9% of total annual costs, which SunWater was to achieve during the 2006-11 price paths (SunWater, 2006a). See Volume 1.

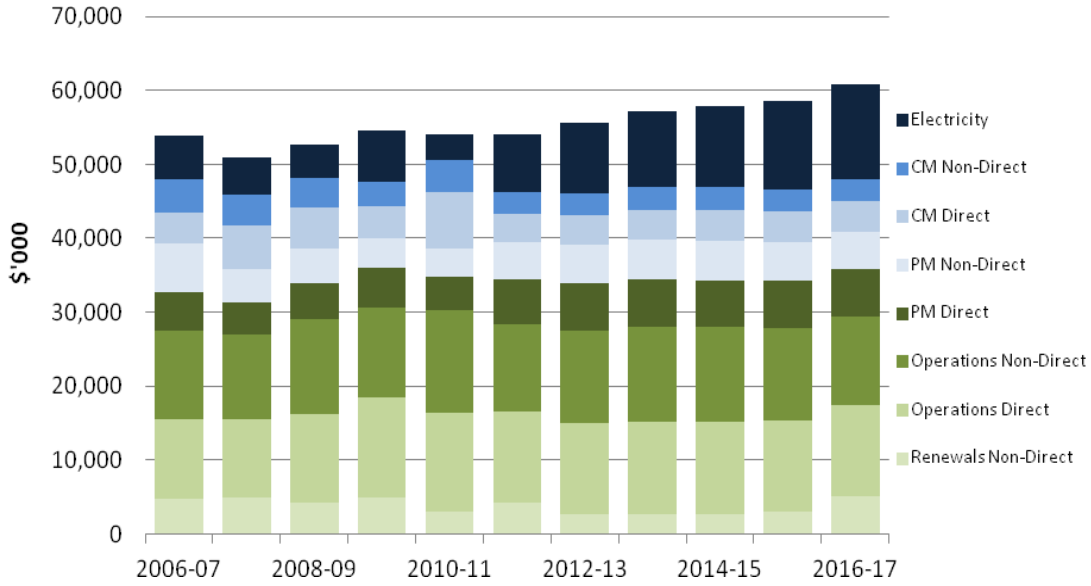
Draft Report

Stakeholder Submissions

SunWater

SunWater's past and forecast total operating costs for its irrigation service contracts (all sectors) are summarised in Figure 5.1 below. SunWater's allocation of non-direct costs to activities (including renewals) is also identified. These estimates reflect SunWater's most recent positions, including information received in October 2011, and differ from its NSP as noted in Volume 1.

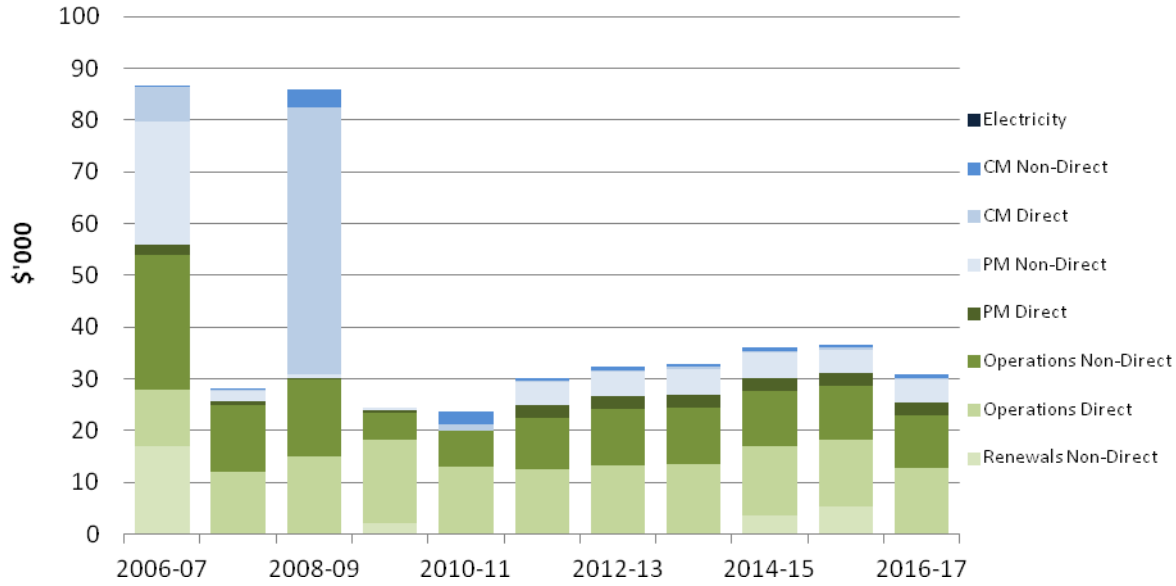
Figure 5.1: SunWater's Total Operating Costs (Real $'000)



Note: Renewals direct costs are discussed in the previous chapter. Renewals non-direct costs are the non-direct operating costs allocated to renewals. Totals vary from NSP due to the inclusion of renewals non-direct costs, SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter) and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao)

Expenditure by activity in Maranoa River WSS (all sectors) is shown in Figure 5.2 and Tables 5.1 and 5.2.

Figure 5.2: Total Operating Costs – Maranoa River WSS (Real $'000)



Note: Renewals direct costs are discussed in the previous chapter. Renewals non-direct costs are the non-direct operating costs allocated to renewals. Totals vary from NSP due to the inclusion of renewals non-direct costs, SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter) and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao).

Table 5.1: Expenditure by Activity (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations	37	25	30	21	20	22	24	24	24	23	23
Electricity	0	0	0	0	0	0	0	0	0	0	0
Preventive maintenance	26	3	1	1	0	7	7	7	7	7	7
Corrective maintenance	7	0	55	0	4	1	1	1	1	1	1
Renewals non-direct	17	0	0	2	0	0	0	0	4	5	0
Total operating costs	**87**	**28**	**86**	**24**	**24**	**30**	**32**	**33**	**36**	**37**	**31**

Note: Renewals direct costs are discussed in the previous chapter. Renewals non-direct costs are the non-direct operating costs allocated to renewals. Totals vary from NSP due to the inclusion of renewals non-direct costs, SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter) and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap)

Table 5.2: Expenditure by Type (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Labour	4	5	6	3	4	8	8	8	8	8	8
Electricity	0	0	0	0	0	0	0	0	0	0	0
Contractors	8	0	51	3	2	0	0	0	0	0	0
Materials	0	0	0	0	0	1	1	1	1	1	1
Other	8	8	9	10	8	7	8	8	8	7	7
Non-direct	67	15	19	8	10	15	16	17	20	21	15
Total Operating Costs	**87**	**28**	**86**	**24**	**24**	**30**	**32**	**33**	**36**	**37**	**31**

Note: Renewals direct costs are discussed in the previous chapter. Non-direct costs include the non-direct operating costs allocated to renewals. Totals vary from NSP due to the inclusion of renewals non-direct costs, SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter), and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap)

In its NSP, SunWater submitted that the operating costs for this scheme averaged $47,000 per year over the period of the current price path. [Operating costs as defined in the NSP exclude the indirect and overhead costs allocated to renewals expenditure.] The projected efficient average operating costs in the NSP for 2011-16 are $31,000 per annum.

Other Stakeholders

No other stakeholders have commented on this matter.

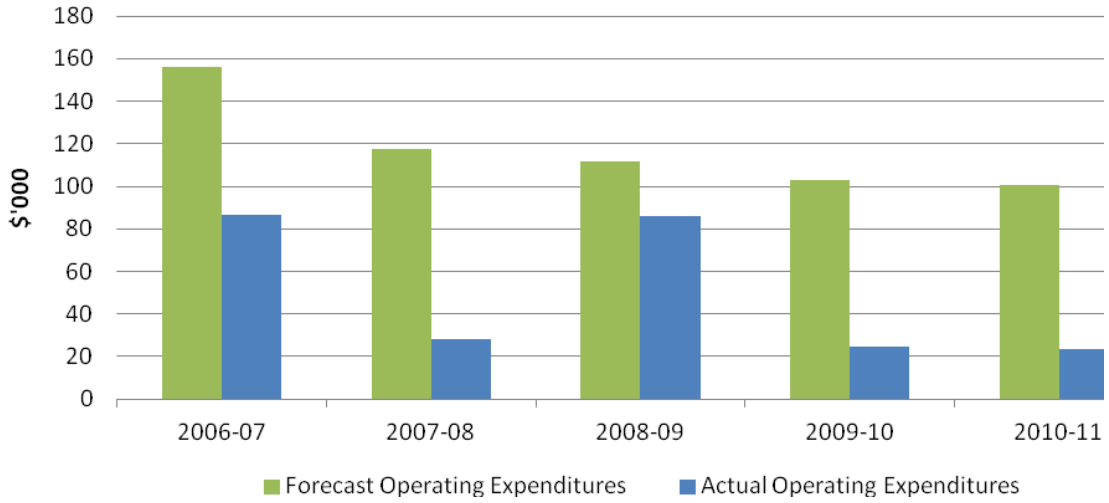
Authority's Analysis

The Authority sought to review the extent to which previously anticipated cost savings (identified prior to the 2006-11 price paths) have been incorporated into SunWater's total cost estimates for the purpose of 2012-17 prices.

In Volume 1, the Authority noted that during the beginning of the 2006-11 price paths, SunWater's total operating costs increased above those previously forecast. In response, in July 2009 SunWater instigated a program to reduce costs by $10 million (the Smarter Lighter Faster Initiative (SLFI)). SunWater submitted that these savings should be fully realised by 30 June 2012.

In 2011, the Authority engaged Indec to assess whether SunWater achieved the cost savings forecast in 2005-06. A comparison of forecast and actual total operating costs for the Maranoa River WSS is shown in Figure 5.3 below. For this scheme, SunWater's actual operating costs were less than Indec's forecast efficient operating costs by $339,000 over the period.

Figure 5.3: Forecast and Actual SunWater Operating Expenditure 2006-11 (Real $'000)



Source: SunWater (2011ap) and Indec (2011f)

Indec did not, however, infer from its analysis that SunWater should alter its costs over the 2012-17 regulatory period to the level of efficient costs determined for 2011. Indec observed that further analysis would be required to justify and support such an inference (see Volume 1). The Authority has engaged other consultants to address potential scheme specific cost savings.

Following the Draft Report, further information was received from SunWater about how savings from SLFI are taken into account in its operating cost estimates. This information is set out in Volume 1.

5.3 Non-Direct Costs

Introduction

Since structural reforms were implemented, SunWater has become a more centrally organised business. SunWater's strategic operational management (for example, Finance, Strategy and Stakeholder Relationships) is provided centrally. This arrangement seeks to ensure that appropriate systems and processes are in place, are being applied in a consistent manner, are addressing key regulatory compliance and business requirements; and to ensure a high degree of flexibility across SunWater's workforce.

Some specialist operations staff with expertise in key operational areas may be located either in Brisbane or regional locations. Their specialist expertise is applied to technical problems and issues in support of local operators.

Operational works planning and maintenance scheduling is provided by regional management, although all staff positions and budgets are managed centrally. For example, spare capacity in one region will be diverted (and billed) to regions with higher demand. Similarly, staff may be assigned to either irrigation or non-irrigation service contracts.

The nature of these non-direct activities is detailed in Volume 1.

As noted above, SunWater categorises non-direct costs as either overheads or indirect costs.

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.

Draft Report

Stakeholder Submissions

SunWater

As noted in Volume 1, SunWater submitted that it will incur $23.5 million in total non-direct costs in 2012-13 (Table 5.3). SunWater's approach to the forecasting of non-direct operating expenditures is detailed in Volume 1.

In brief, SunWater forecast non-direct costs for 2010-11 and then escalated these forward using indices applied to the components of these costs. The costs in 2010-11 were based on actual costs over the past four years (excluding spurious costs) and adjustments for known or expected changes in costs. In particular, SunWater proposed that salaries and wage costs generally will rise by 4% per annum. However, SunWater has forecast that its total salaries and wages will rise by only 2.5% per annum, with the difference (1.5% per annum) being accounted for by (unspecified) productivity improvements.

SunWater proposed that total direct labour costs (DLCs) be used to allocate non-direct costs between service contracts.

Total non-direct costs and those allocated to the Maranoa River WSS are in Table 5.3 below.

Table 5.3: SunWater's Actual and Proposed Non-Direct Costs (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
SunWater	27,831	25,097	25,872	24,579	25,152	23,770	23,512	24,244	24,055	23,708	25,089
Maranoa River	67	15	19	8	10	15	16	17	20	21	15

Source: SunWater (2011)

The non-direct costs for this scheme include a portion of SunWater's total overhead costs (for example, HR, ICT and finance), as well as a share of Infrastructure Management costs for each region (South, Central, North and Far North) and a share of the overhead costs of SunWater's Infrastructure Development Unit.

Other Stakeholders

No other stakeholders have commented on this matter.

Authority's Analysis

As noted in Volume 1, the ratio of non-direct to total costs reflects the structure of the organisation. A more centralised organisation can be expected to have a higher ratio of non-direct to direct costs.

In seeking to establish prudency and efficiency, the Authority commissioned Deloitte Touche Tohmatsu (Deloitte) to review SunWater's non-direct costs. Deloitte carried out benchmarking to assess where potential efficiencies within SunWater may be achieved. Deloitte identified savings of $495,314 (in 2010-11 real terms) per annum in finance, human resources, information technology, and health, safety, environmental and quality areas (for the whole of SunWater).

Deloitte was unable to draw any definitive conclusions from an attempt to benchmark against Pioneer Valley Water Board (PVWater) and other Australian rural water service providers. Deloitte noted that PVWater's non-direct costs were higher than those of SunWater as a percentage of total operating costs – but that there are differences between PVWater and SunWater which made the comparisons unreliable.[2]

The Authority accepted that $495,314 of full time equivalent staff costs were not efficient and should be excluded from SunWater's total non-direct costs (of which an amount of $297,189 relates to irrigation service contracts under SunWater's proposed cost allocation methodology). See Volume 1.

In addition, the Authority recommended that SunWater's forecast total non-direct operating costs should be reduced by a compounding 1.5% per annum (based on the Authority's view that non-labour productivity gains are achievable in line with labour productivity gains).

The Authority also reviewed the allocation of non-direct costs to irrigation service contracts.

SunWater's proposed use of DLCs is on the basis that it best reflects activity and effort; is a proxy for other drivers; and provides consistency across service contracts.

Deloitte reviewed SunWater's proposal and identified alternative cost allocation bases (CABs). On the basis of this analysis, the Authority concludes that no alternative CAB is superior to DLC and that the introduction of any alternative would likely be costly and complex.

On this basis, the Authority therefore accepted SunWater's proposed DLC methodology with two exceptions recommended by Deloitte:

(a) the overhead component of Infrastructure Management (Regions) should be allocated directly to the service contracts serviced by each relevant resource centre (South, Central, North and Far North), on the basis of DLC from each respective resource centre (that is, targeted DLC); and

(b) the overhead component of the Infrastructure Development unit should be allocated (on the basis of DLC) to service contracts receiving services from that unity (that is, targeted DLC).

This adjustment ensured that schemes are paying for the overhead costs from those resource centres that are most directly related to their schemes and not, for example, for Infrastructure Management overhead costs from the other three regions.

Proportion of Non-direct to Total Costs

The Authority also notes that in many schemes, irrigators considered that the non-direct costs allocated to their schemes appeared to be high, and in some cases much higher than the

[2] For example, PVWater have only four FTE staff. For the benchmarking exercise, PVWater needed to estimate the proportions of staff time spend on administration versus operations and maintenance activities, which varies considerably depending on weather conditions and workloads. Deloitte found it difficult to compare PVWater's estimated apportionments with SunWater, who have around 500 staff assigned to specific projects or centralised functions.

SunWater-wide average ratio of non-direct to total costs. The reason for the wide variation of non-direct to total cost ratios across service contracts is because non-direct costs are allocated on the basis of DLC. It follows that if a service contract has a relatively high proportion of labour costs it will attract a relatively high proportion of non-direct costs.

In addition, the greater the indirect resources absorbed by a particular scheme, the higher will be the ratio of non-direct costs to direct labour costs. Together, these factors result in a relatively high non-direct to total cost ratio for irrigation service contracts.

The Authority's draft and final recommended level of non-direct costs to be recovered from the Maranoa River WSS (from all customers) is set out below Table 5.4. The allocation of these costs between high and medium priority customers is discussed below.

Table 5.4: Recommended Non-Direct Costs (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
SunWater	67	15	19	8	10	15	16	17	20	21	15
Authority Draft							16	16	19	19	14
Authority Final							16	16	19	19	14

Source: SunWater (2011ap)

Insurance and labour utilisation rates (which affect non-direct and direct costs) are addressed in Volume 1.

5.4 Direct Costs

Introduction

SunWater classified its operational activities into operations, preventive maintenance, corrective maintenance and electricity. SunWater's operating costs were forecast using this classification. The nature of these activities and costs are identified further below.

With the exception of electricity, SunWater has disaggregated each of the above activities into the following cost types:

(a) labour – direct labour costs attributed directly to jobs, not including support labour costs such as asset management, scheduling and procurement, which are included in administration costs;

(b) materials – direct materials costs attributed directly to jobs including pipes, fittings, concrete, chemicals, plant and equipment hire;

(c) contractors – direct contractor costs attributed directly to jobs, including weed control contractors, commercial contractors and consultants; and

(d) other – direct costs attributed directly to service contracts, including insurance, local government rates, land tax and miscellaneous costs.

Draft Report

Stakeholder Submissions

SunWater

SunWater estimated the costs of each activity in 2010-11, based on actual costs over the past four years (excluding spurious costs) with adjustments for known or expected changes in costs. Adjustments were also made to preventive maintenance in line with the Parsons Brinckerhoff (PB, 2010) review. These estimates were then escalated forward for the 2012-17 pricing period. Further details are outlined in Volume 1.

SunWater's forecast direct operating expenditure by activity is set out in Table 5.5 below. These estimates reflect SunWater's most recent positions and differ from the NSP.

Table 5.5: Direct Operating Expenditures by Activity (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations	11	12	15	16	13	13	13	13	13	13	13
Electricity	0	0	0	0	0	0	0	0	0	0	0
Preventive maintenance	2	1	0	0	0	2	2	2	2	2	2
Corrective maintenance	7	0	52	0	1	0	0	0	0	0	0
SunWater Direct Operating costs	**20**	**13**	**67**	**16**	**14**	**15**	**16**	**16**	**16**	**16**	**15**

Note: Totals vary from NSP due to SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter), and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao)

Table 5.6 presents the same operating costs developed by SunWater on a functional basis.

Table 5.6: Direct Operating Expenditures by Type (Real $'000)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Labour	4	5	6	3	4	8	8	8	8	8	8
Electricity	0	0	0	0	0	0	0	0	0	0	0
Contractors	8	0	51	3	2	0	0	0	0	0	0
Materials	0	0	0	0	0	1	1	1	1	1	1
Other	8	8	9	10	8	7	8	8	8	7	7
SunWater Direct Operating Costs	**20**	**13**	**67**	**16**	**14**	**15**	**16**	**16**	**16**	**16**	**15**

Note: Totals vary from NSP due to SunWater's revised approach to insurance, exclusion of revenue offset (which is dealt with in the following chapter), and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao)

Authority's Analysis

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

GHD noted that there were substantial information deficiencies relating to the information provided by SunWater. GHD reported that sampling was not possible due to the level of aggregation in SunWater's Systems, Applications and Products (SAP) Works Management System (WMS). GHD also reported that, where possible, information was gathered via direct interviews and information sessions with analysis undertaken of the information made available. Comparisons against published benchmarks were made, where possible.

In Volume 1, the Authority recommended that SunWater undertake a review of its planning policies, processes and procedures to better achieve its strategic objectives. The Authority also recommended that SunWater needed to improve the usefulness of its information systems. In particular, SunWater needs to document and access relevant information necessary to:

(a) attain greater operating efficiency;

(b) achieve greater transparency;

(c) facilitate future price reviews; and

(d) promote more meaningful stakeholder engagement.

GHD's review of specific cost categories for this scheme and the Authority's conclusions and views on cost escalation are outlined below.

Review of Direct Operating Expenditure

Item 1: Operations

Draft Report

Stakeholder Submissions

SunWater noted that operations relate to the day-to-day operational activity (other than maintenance) enabling water delivery, customer management, asset management planning, financial and ROP reporting, workplace health and safety compliance, and environmental and land management.

SunWater's operating expenditure forecasts have been developed on the basis of detailed work instructions and operational manuals for each scheme.

SunWater's proposed operations costs are set out in Table 5.5 above.

Stakeholders at the Round 1 consultation were uncertain as to what costs are being incurred by SunWater.

Authority's Analysis

GHD stated that SunWater have explained the changes in the budgets as a change in operational philosophy. Contractors have previously been used to complete the maintenance tasks for the Maranoa River scheme. SunWater have concluded that it would be more cost efficient to utilise SunWater Personnel for the management of this scheme.

Water allocations in the Maranoa River WSS are managed on a yearly basis. GHD advised customer orders are not automated and it is unlikely that this will be changed in the foreseeable future. GHD considered that the number of customers in the scheme does not justify the expense of online or IVR services for this scheme. Customers draw their water directly from the weir pond. As such, there are no water release requirements to fulfil customer orders. The only water releases will be to maintain environmental flows and will be set and checked during routine inspections.

GHD considered that the direct costs associated with this scheme are small are appropriate to meet the requirements of the Condamine and Balonne ROP management requirements for this scheme. GHD did not identify any efficiency gains.

GHD did not recommend any adjustment to SunWater's proposed operations costs for this scheme.

In the Draft Report the Authority noted that GHD did not recommend any adjustment to costs.

The Authority noted that the consultants engaged to review operations costs in other SunWater schemes (Halcrow (2011), Arup (2011) and Aurecon (2011)) also did not recommend any adjustment to operations costs.

On the basis of the consultants' reviews, the Authority did not specifically adjust SunWater's operations cost forecast. In response to stakeholder comments regarding recreation facilities, SunWater does not own or manage any recreation facilities in this scheme

Item 2: Preventive and Corrective Maintenance

Draft Report

Stakeholder Submissions

SunWater defines preventive maintenance as maintaining the ongoing operational performance and service capacity of physical assets as close as possible to designed standards. Preventive maintenance is cyclical in nature with a typical interval of 12 months or less.

Preventive maintenance includes:

(a) condition monitoring – the inspection, testing or measurement of physical assets to report and record its condition and performance for determination of preventive maintenance requirements; and

(b) servicing – planned maintenance activities normally expected to be carried out routinely on physical assets.

Preventive maintenance costs are based on the updated work instructions developed for operating the scheme and an estimate of the resources required to implement that scope of work.

SunWater submitted that even with sound preventive maintenance practices, unexpected failures can still occur or other incidents can arise that require reactive corrective maintenance.

SunWater identifies two types of corrective maintenance activities:

(a) emergency breakdown maintenance which refers to maintenance that has to be carried out immediately to restore normal operation or supply to customers or to meet a regulatory obligation (e.g. rectify a safety hazard); and

(b) non-emergency maintenance which refers to maintenance that does not have to be carried out immediately to restore normal operations, but needs to be scheduled in advance of the planned maintenance cycle.

SunWater has forecast corrective maintenance based on past experience. This provision includes a portion of labour costs in the scheme for such events, as well as additional materials and plant hire.

SunWater's corrective maintenance forecast does not include any costs of damage arising from events covered by insurance.

SunWater's proposed preventive and corrective maintenance costs are set out in Table 5.5 above.

Stakeholders at the Round 1 consultation raised concern that they were paying too much for maintenance costs considering the $40/ML (approximately) water charge is characterised by poor reliability.

Authority's Analysis

Considering the expectations for compliance with Australian and Queensland Government regulation and initiatives, the management water allocations, corrective and preventive maintenance, GHD considered that these costs are efficient. SunWater has forecast the required expenditure using the current cost requirements as the basis. Considering the regulatory requirements are unlikely to change, the management and administration costs of this scheme

would be consistent with the actual expenditure incurred in the current price period. Allowing for anomalies such as floods, the method for calculating the forecast using actual historical cost is considered robust.

GHD noted that preventive and corrective maintenance is forecast as 87/13% ratio for a total budget of $8,000 annually. GHD considered that for such a small budget the expectation would be that preventive maintenance would be heavily weighted to reduce the potential for corrective maintenance activity. GHD considered that this is considered consistent with the requirements for weed management, compliance inspections and reactive responses as required.

GHD stated that assessment of the distribution of preventive to corrective maintenance is problematic and would usually be conducted against system losses, unaccounted for water and non-revenue water evaluating reductions in these loses against the maintenance expenditure. GHD stated that the complication of natural watercourses being used as the transport mechanism, actions by other irrigators and so on make it extremely difficult to make this assessment. In the Maranoa River WSS case, the irrigators all take water directly from the weir pond adding another element of complexity to this assessment. However, GHD, applying engineering and operational management judgement, considered this ratio to be reasonable.

GHD stated that dams and weirs are generally long-lived assets that combined with appropriate periodic maintenance programs can be retained in service indefinitely. The maintenance and inspection program is relatively static from year to year. GHD considered that the forecast provided by SunWater reflects a static program of work to maintain the assets in this scheme.

In the Draft Report the Authority noted that GHD did not recommend any adjustment to SunWater's proposed preventive and corrective maintenance costs for this scheme.

In Volume 1, the Authority accepted that most of its consultants considered that there is scope for SunWater to achieve further efficiencies once the balance of preventive and corrective maintenance is optimised. The Authority considered that this potential for efficiency could be addressed via the broad efficiency measures imposed on SunWater schemes (noted further below).

In Volume 1, the Authority also recommended that SunWater implement PB's earlier recommendations that:

(a) SunWater's maintenance plans and work instructions; and associated labour inputs and unit costs should be audited, including a review of sub-contracted maintenance activities;

(b) maintenance practices and costs need to be examined to identify the optimum mix of preventive and corrective maintenance activities for each scheme; and

(c) a Reliability Centred Maintenance (RCM) approach to formulating maintenance activity requirements should be adopted.

In the Draft Report the Authority noted that GHD did not recommend any specific adjustment to costs.

Final Report

No submissions on these matters were received in response to the Draft Report and the Authority has not identified any other grounds to alter its approach. No changes are therefore proposed for the Final Report.

Item 3: Electricity

Draft Report

Stakeholder Submissions

SunWater advised that there are no electricity costs for this scheme.

No other stakeholders commented on this item.

Authority's Analysis

For the Draft Report, the Authority noted that there are no electricity costs for this scheme.

Item 4: Other – Materials and Contractors

Draft Report

Stakeholder Submissions

Materials and contractor costs are based on the quantities required in the work instructions for the scheme. SunWater advised that the unit cost of materials and contractors are based on current unit costs, with adjustments made where those costs are expected to change in real terms. Materials and contractors costs are direct costs associated with operations, corrective and preventive maintenance activities.

No other stakeholders have commented on these items.

Authority's Analysis

GHD considered the contractor and materials costs to be appropriate. In the Maranoa River WSS the contract cost line has been forecast as $0. From this, GHD concluded that SunWater do not forecast the need for any maintenance outside of the capability of their own personnel. GHD also considered materials to be appropriate. SunWater have advised that the main expense in this cost line is poisons for weed management.

GHD made no recommendations for adjustment to SunWater's proposed materials and contractors costs for this scheme.

For the Draft Report, the Authority noted that GHD did not recommend any adjustment to costs.

Item 5: Cost Escalation

Draft Report

As noted in Volume 1, the Authority's consultants were required to examine the appropriateness of SunWater's proposed cost escalation methods.

Direct Labour

The consultants generally agreed that SunWater's labour escalation forecast using the general inflation rate (2.5%) underestimated the likely actual movement in the cost of labour.

Evidence cited included the growth in both the Labour Price Index for the Electricity, Gas, Water and Waste Services Industry and the Labour Price Index for Queensland, which have averaged around 4% per annum in recent years, and recent forecasts by Deloitte suggesting an

average increase in the labour costs facing Queensland's utilities sector of 4.3% per annum between 2011-12 and 2017-18.

The Authority recommended that labour costs be escalated at 4% per annum.

Direct Materials and Contractors

Most consultants agreed that SunWater's proposed escalation factor of 4% per annum for this component of cost was appropriate. Evidence in support included the historical analysis of Australian Bureau of Statistics (ABS) construction cost data and forecasts of industry trends. However, both Halcrow and GHD considered that SunWater had not provided sufficient rationale for its proposed escalation factor of 4% per annum for direct materials and contractor services, and that these costs should be escalated at the general rate of inflation.

The Authority recommended that direct materials and contractor costs be escalated at 4% per annum.

Other Costs

The Authority accepted SunWater's proposal to escalate other direct costs and all non-direct costs by the general inflation rate as these costs are primarily administrative and management functions.

Final Report

No submissions on these matters were received in response to the Draft Report and the Authority has not identified any other grounds to alter its approach. No changes are therefore proposed for the Final Report.

Conclusion

Draft Report

A comparison of SunWater's and the Authority's direct operating costs for the Maranoa River WSS is set out in Table 5.7.

The Authority's proposed costs include all specific adjustments and the Authority's proposed cost escalations as noted above. In the Draft Report, the Authority applied a minimum 2.43% saving to direct operating costs (excluding electricity) in 2012-13. A further 0.75% saving arising from labour productivity is also applied, compounding annually.

Final Report

As noted in Volume 1, in the Draft Report the Authority inadvertently understated cost saving percentage estimates. These have been corrected and as a result, the Authority has now applied a minimum 4.5% saving to direct operating costs (excluding electricity) in 2012-13. A further 0.75% saving arising from labour productivity is also applied.

The Authority's final recommended direct costs are shown in Table 5.7 and are compared to the Draft Report recommendations.

Table 5.7: Direct Operating Costs (Real $'000)

	SunWater					*Authority*				
	2012-13	***2013-14***	***2014-15***	***2015-16***	***2016-17***	***2012-13***	***2013-14***	***2014-15***	***2015-16***	***2016-17***
Draft Report										
Operations	13	13	13	13	13	13	13	13	13	13
Preventive maintenance	0	0	0	0	0	2	2	2	2	2
Corrective maintenance	2	2	2	2	2	0	0	0	0	0
Electricity	0	0	0	0	0	0	0	0	0	0
Direct Operating Costs	16	16	16	16	15	15	15	15	15	15
Final Report										
Operations						12	12	12	12	12
Preventive maintenance						2	2	2	2	2
Corrective maintenance						0	0	0	0	0
Electricity						0	0	0	0	0
Direct Operating Costs						15	15	15	15	15

Note: Totals vary from NSP due to the SunWater's revised approach to insurance and electricity, exclusion of revenue offset (which is dealt with in the following chapter), and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao)

5.5 Cost Allocation According to WAE Priority

Given that the Maranoa River WSS contains only medium priority water access entitlements, the allocation of operating costs according to WAE is not applicable in this scheme.

Accordingly, 100% of operating expenditure will be apportioned to medium priority water access entitlements.

This has not changed from the Draft Report to the Final Report.

5.6 Summary of Operating Costs

SunWater's proposed operating costs by activity and type are set out in Table 5.8. The Authority's draft recommended operating costs are set out in Table 5.9, and final recommended operating costs are provided in Table 5.10.

Table 5.8: SunWater's Proposed Operating Costs for Activity by Type (Real '000)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations					
Labour	5	5	5	5	5
Materials	1	1	1	1	1
Contractors	0	0	0	0	0
Other	8	8	8	7	7
Non-direct	11	11	11	10	10
Preventive Maintenance					
Labour	2	2	2	2	2
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-direct	5	5	5	5	5
Corrective Maintenance					
Labour	0	0	0	0	0
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-direct	1	1	1	1	1
Electricity	0	0	0	0	0
Total	**32**	**33**	**33**	**31**	**31**

Note: Totals vary from NSP due to SunWater's revised approach to insurance and electricity, exclusion of revenue offset (which is dealt with in the following chapter), and rounding. The estimates also reflect the most recent information provided by SunWater to the Authority in October 2011. Source: SunWater (2011ap) and SunWater (2011ao)

Table 5.9: The Authority's Draft Recommended Operating Costs (Real '000)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations					
Labour	5	5	5	5	5
Materials	0	1	1	1	1
Contractors	0	0	0	0	0
Other	7	7	7	7	7
Non-direct	10	11	10	11	9
Preventive Maintenance					
Labour	2	2	2	2	2
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-direct	5	5	5	4	4
Corrective Maintenance					
Labour	0	0	0	0	0
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-direct	1	1	1	1	1
Electricity	0	0	0	0	0
Total	**31**	**31**	**31**	**30**	**29**

Source: QCA (2011)

Table 5.10: The Authority's Final Recommended Operating Costs (Real $'000)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Operations					
Labour	5	5	5	5	5
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	7	7	7	7	7
Non-Direct	11	11	11	10	10
Preventive Maintenance					
Labour	2	2	2	2	2
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-Direct	5	5	5	4	4
Corrective Maintenance					
Labour	0	0	0	0	0
Materials	0	0	0	0	0
Contractors	0	0	0	0	0
Other	0	0	0	0	0
Non-Direct	1	1	1	1	1
Electricity	0	0	0	0	0
Total	**31**	**31**	**31**	**30**	**29**

Source: QCA (2012)

6. RECOMMENDED PRICES

6.1 Background

Ministerial Direction

The Ministerial Direction requires the Authority to recommend SunWater's irrigation prices for water delivered from 22 SunWater bulk water schemes and eight distribution systems and, for relevant schemes, for drainage, drainage diversion and water harvesting.

Prices are to apply from 1 July 2012 to 30 June 2017.

Recommended prices and tariff structures are to provide a revenue stream that allows SunWater 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 the tariff structures, the Authority is to have regard to the fixed and variable nature of the underlying costs. The Authority is to adopt tariff groups as proposed in SunWater'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 SunWater'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 2012-17, 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

In the 2006-11 price paths, real price increases over the five years were capped at $10/ML for relevant schemes (including the Maranoa River WSS). The cap applied to the sum of Part A and Part B real prices. In each year of the price path, the prices were indexed by CPI. Interim prices in 2011-12 were increased by CPI with additional increases in some schemes.

For this scheme, prices over the 2006-11 price path increased in real terms towards lower bound costs. However, this scheme did not achieve lower bound costs at the conclusion of the 2006-11 price path.

6.2 Approach to Calculating Prices

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

(a) identified the total prudent and efficient costs of the scheme;

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

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

(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.

For the Draft Report, the Authority adopted a 20 year price model mainly to promote long term price stability. Under this approach, prices are above costs for the first ten years of the 20 year model and below costs for the last ten years. Over the 20 year period, costs are fully recovered.

Some stakeholders raised concerns about estimated cost reflective prices exceeding lower bound costs over the 2012-17 price period.

In the Final Report, the Authority has adopted a five year pricing model for the purpose of developing prices. The Authority has retained the rolling 20 year renewals annuity planning period and used the relevant five years of the smoothed renewals annuity. For non-renewals costs the five year model now incorporates only five years of such costs, rather than 20 years. Such an approach also has the advantage of removing from prices the inaccuracies associated with longer term forecasts in non-capital costs.

6.3 Total Costs

Draft Report

The Authority's estimate of prudent and efficient total costs for the Maranoa River WSS for the 2012-17 regulatory period is outlined in Table 6.1. Total costs since 2006-07 are also provided. Total costs reflect the costs for the service contract (all sectors) and do not include any adjustments for the Queensland Government's pricing policies.

Table 6.1: Total Costs for the Maranoa River WSS (Real $'000)

	Actual Costs						*Future Costs*				
	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
SunWater's Submitted Costs	80	39	97	33	34	38	40	40	41	40	40
Renewals Annuity	10	11	11	10	10	8	8	7	8	9	9
Operating Costs	70	28	86	22	24	30	32	33	33	31	31
Revenue offsets	0	0	0	0	0	0	0	0	0	0	0
Authority's Total Costs – Draft	-	-	-	-	-	-	36	37	36	38	37
Renewals Annuity	-	-	-	-	-	-	5	5	5	8	8
Operating Costs	-	-	-	-	-	-	31	31	31	30	29
Revenue offsets	-	-	-	-	-	-	0	0	0	0	0
Return on Working Capital	-	-	-	-	-	-	0	0	0	0	0
Authority's Total Costs – Final	-	-	-	-	-	-	36	36	36	37	36
Renewals Annuity	-	-	-	-	-	-	5	5	5	7	7
Operating Costs	-	-	-	-	-	-	31	31	31	30	29
Revenue offsets	-	-	-	-	-	-	0	0	0	0	0
Return on Working Capital	-	-	-	-	-	-	0	0	0	0	0

Note: Costs are presented for the total service contract (all sectors). Costs reflect SunWater's latest data provided to the Authority in October 2011 and may differ from the NSP. Source: Actual Costs (SunWater, 2011ap), Draft Costs (QCA, 2011), Final Costs (QCA, 2012).

6.4 Fixed and Variable Costs

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

Draft Report

SunWater submitted that all of its operating costs are fixed in the Maranoa River WSS.

As noted in Volume 1, the Authority engaged Indec to determine which of SunWater's costs are most likely to vary with water use. Indec identified:

(a) costs that would be *expected* to vary with water use. Indec expected that electricity pumping costs would generally be variable and non-direct costs would be fixed;

(b) all other activities and expenditure types (costs) would be expected to be semi-variable, including: labour, material, contractor and other direct costs, maintenance, operations and renewals expenditures;

(c) costs that *actually* varied with water use in 2006-11, by activity and by type:

  (i) by activity, Indec found that operations, preventive and corrective maintenance and renewals were semi-variable. Electricity was generally highly variable with water use in five distribution systems and two bulk schemes. In three distribution systems electricity pumping costs were semi-variable due to gravity feed;

  (ii) by type, Indec found that labour, materials, contractors and other direct costs were semi-variable. Non-direct costs were fixed;

(d) costs that *should* vary with water use under Indec's proposed optimal (prudent and efficient) management approach (as outlined in Volume 1). On average across all SunWater's bulk schemes, Indec considered 93% of costs would be fixed and 7% variable. However, Indec proposed that scheme-specific tariff structures should be applied to reflect the relevant scheme costs.

For Maranoa River WSS, Indec recommended 91% of costs should be fixed and 9% variable under optimal management. The Authority notes that this ratio differs from the current tariff structure which reflects the recovery of 100% of costs in the fixed charge and 0% of costs in the volumetric charge.

In general, the Authority accepts Indec's recommended tariff structure, for the reasons outlined in Volume 1. Accordingly, for this particular scheme, the Authority recommends that the Part B volumetric charge will have a non-zero value in accordance with the variable costs incurred in maintaining the scheme. No change is proposed from the Draft Report.

6.5 Allocation of Costs According to WAE Priority

Fixed Costs

The method of allocating fixed costs to priority groups is outlined in Chapter 4 – Renewals Annuity and Chapter 5 – Operating Costs. The outcome is summarised in Table 6.2. These costs are translated into the fixed charge using the relevant WAE for each priority group.

Table 6.2: Allocation of Fixed Costs According to WAE Priority (Real $'000)

	2012-13	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Draft Report					
Net Fixed Costs	33	33	33	34	33
High Priority	0	0	0	0	0
Medium Priority	33	33	33	34	33
Final Report					
Net Fixed Costs	33	34	33	35	34
High Priority	0	0	0	0	0
Medium Priority	33	34	33	35	34

Note: Net fixed costs are net of revenue offsets and return on working capital. Source: Actual Costs (SunWater, 2011ap), Draft Costs (QCA, 2011), Final Costs (QCA, 2012).

Variable Costs

Volumetric tariffs are calculated using SunWater's forecast usage data, based on the eight year historical average water use data for all sectors. However, consistent with SunWater's assumed typical year for operating cost forecasts, the Authority has removed from the eight years of data, the three lowest water-use years for each service contract.

6.6 Cost-Reflective Prices

Cost-reflective prices reflect the Authority's estimates of prudent and efficient costs, recommended tariff structures, and the allocation of costs to different priority groups. These prices (Table 6.3) have not been adjusted to reflect the Queensland Government's pricing policies (see below).

The cost-reflective prices in the Draft Report are contrasted with its Authority's final cost-reflective prices below.

Table 6.3: Cost Reflective Prices for the Maranoa River WSS ($/ML)

	Actual Prices						*Cost Reflective Prices*				
	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*
Draft Report											
Fixed (Part A)	28.96	32.44	36.76	40.76	44.68	48.28	43.43	44.51	45.62	46.76	47.93
Volumetric (Part B)	0	0	0	0	0	0	68.12	69.82	71.57	73.36	75.19
Final Report											
Fixed (Part A)	28.96	32.44	36.76	40.76	44.68	48.28	43.87	44.97	46.10	47.25	48.43
Volumetric (Part B)	0	0	0	0	0	0	54.69	56.05	57.46	58.89	60.36

Source: Actual Prices (SunWater, 2011al), Draft Cost Reflective Prices (QCA, 2011) and Final Cost-Reflective Prices (QCA, 2012)

6.7 Queensland Government Pricing Policies

As noted above, the Queensland Government has directed 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 SunWater'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 2012-17, 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.

As noted in the Draft Report, to identify the relevant price path (if any), the Authority must first identify whether current prices recover prudent and efficient costs. To do so, given changes to tariff structure, the Authority has compared current revenues with revenues arising from cost-reflective tariffs, if implemented (see Volume 1). The Authority has calculated these current revenues using the relevant 2010-11 prices, current irrigation WAE and the five-year average (irrigation only) water use during 2006-11 (see Table 6.4).

For this scheme in the Draft Report, current prices are below the level required to recover prudent and efficient costs (Table 6.4).

For the Final Report, current prices are now above this level, due to changes in cost-reflective tariffs. Therefore, the Authority is required to recommend prices that maintain these revenues in real terms for the 2012-17 regulatory period.

Table 6.4: Comparison of Current Revenues – Current Prices and Cost-Reflective Prices ($2012-13)

Tariff and Priority Group	*2010-11 Prices (indexed to 2012-13)*		*Irrigation WAE (ML)*	*Water Use (ML)*	*Current Revenue*	*Revenue from Cost-Reflective Tariffs*	*Difference*
	Fixed	*Variable*					
River -Draft	$46.94	-	800	43	$37,554	$37,662	-$108
River - Final	$46.94	-	800	43	$37,554	$37,462	$92

Source: SunWater (2011al), SunWater (2011ao), QCA (2011) and QCA (2012).

6.8 The Authority's Recommended Prices

The Authority's draft and final recommended prices to apply to the Maranoa River WSS for 2012-17 are outlined in Table 6.5, together with actual prices since 2006-07. In calculating the recommended prices, a 10-year average irrigation water use has been adopted (see Volume 1).

Table 6.5: Draft Prices for the Maranoa River WSS ($/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*
Draft Report											
Fixed (Part A)	28.96	32.44	36.76	40.76	44.68	48.28	43.43	44.51	45.62	46.76	47.93
Volumetric (Part B)	0.00	0.00	0.00	0.00	0.00	0.00	68.12	69.82	71.57	73.36	75.19
Final Report											
Fixed (Part A)	28.96	32.44	36.76	40.76	44.68	48.28	44.73	45.84	46.99	48.16	49.37
Volumetric (Part B)	0.00	0.00	0.00	0.00	0.00	0.00	54.69	56.05	57.46	58.89	60.36

Note: 2011-12 prices include the interim price increase of $2/ML in addition to CPI. Source: Actual Prices (SunWater, 2011am), Draft Recommended Prices (QCA, 2011) and Final Recommended Prices (QCA, 2012).

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).

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APPENDIX A: FUTURE RENEWALS LIST

Below are listed SunWater's forecast renewal expenditure items greater than $10,000 in value, for the years 2011-12 to 2035-36 in 2010-11 dollar terms.

Asset	*Year*	*Description*	*Value ($'000)*
Neil Turner Weir	2015-16	Refurbish: Inspect and repair for damage and corrosion	15
	2021-22	Refurbish: Inspect and repair for damage and corrosion	15
	2024-25	Refurbish: Inspect and repair for damage and corrosion	15
	2027-28	Refurbish: Inspect and repair for damage and corrosion	15
	2033-34	Refurbish: Inspect and repair for damage and corrosion	15
	2034-35	Replace Trash Racks/Screens	40
		Enhance: Spillway Safety Rails & Sign Boards	24
		Refurbish: Refurbish gate vlave	15