

RENEWALS EXPENDITURES AND ANNUITIES INFORMATION REQUEST

1. TIMING

The Authority requests that SunWater responds to the following by 24 February 2012.

2. PAST RENEWALS EXPENDITURES AND ANNUITIES

In relation to past renewals expenditures and annuities:

- a) SunWater to provide actual 2005/06 renewals expenditures for 30 irrigation service contracts (as previously requested 23/1/2012);

[Refer to SunWater's response to the email of 23/1/2012](#)

- b) provide the calculations that derived the 2006/07 to 2010/11 annuities. These should include the forecast renewals expenditures by item, forecast revenues and discount rate for each year of the 30-year planning period up to 2040/41;

[Refer to separate email on this question.](#)

- c) Indec reported that indirect costs were fully allocated to operating cost forecasts only – not renewals expenditure. However, the renewals data supplied from SunWater includes non-direct costs. SunWater is to outline the agreed method for recovering non-direct costs established prior to the 2006-11 price path;

[SunWater has prepared a separate submission addressing the INDEC report.](#)

- d) how did SunWater estimate the irrigation only portion of its past renewals expenditure for the 2000-06 and 2006-11 price paths? What ratios were used to allocate total renewals expenditure to the irrigation/non-irrigation sector? Provide the ratio for each service contract and supporting calculations;

[Refer to separate email on this question.](#)

- e) SunWater is to provide the discount rate (interest rate) used over 2000/01 – 2011/12 that applied to ARR balances;

2006-12

[SunWater adopted the same rate \(in equivalent pre-tax nominal terms\) to that used to calculate the renewals annuity, being 9.689% \(pre-tax nominal\) up to 30 June 2011 and 12.113 \(pre-tax nominal\) after that date.](#)

[Note that the balances described in SunWater's annual reports did not include interest on the balances, as this reporting was essentially performed for financial reporting purposes rather than pricing purposes](#)

[These calculations can be viewed in Ralph Donnet's APM on R1840 for each service contract.](#)

2000-2006

The Water Reform Unit did not hand-over sufficient information for SunWater to comprehensively answer this question. Review of the material at hand indicates that interest on annuity balances was never applied to the annuity, but rather off-set against or added to the lower bound cost each year.

Further information on this matter will need to be source from DERM.

- f) SunWater's submission provided some further detail on some past renewals items that the Authority did not consider to be prudent and/or efficient. The additional detail provided for many items is not sufficient for the Authority to review these items again. For the Authority to consider reviewing these items, SunWater needs to provide documentation and argument showing that the items are prudent and efficient. The following past items apply:

Given the ongoing review of past and future projects by SKM and the time constraints around this information request SunWater has not provided additional information on the projects below within this submission.

- (i) Fencing Program: SunWater need to demonstrate the instances where there is no adjoining land holder. SunWater also need to estimate the extra cost of a public safety fence, as opposed to a standard fence;
- (ii) Lower Mary WSS - Repair protection works and concrete crest, Mary Barrage;
- (iii) MacIntyre Brook WSS – Whetstone Weir;
- (iv) Mareeba-Dimbulah WSS – Tinaroo Falls Dam;
- (v) St George Distribution – Channel Meter Replacements;
- (vi) St George Distribution – Install 3 Diesel Motors;
- (vii) St George Distribution – Repair Access Cross (St George Main Channel);
- (viii) St George Distribution – Repair Crossing Channel B2;
- (ix) St George Distribution – Repair Access Crossing CHB – 2;
- (x) St George Distribution – Emergency Repairs Access Crossing AC06;
- (xi) St George Distribution – Emergency Repairs Access Crossing;
- (xii) St George WSS – Refurbish Beardmore Dam Gates 8,9,10 & 12;
- (xiii) St George WSS – Install Buoy Lines at Jack Taylor Weir and Beardmore Dam;
- (xiv) St George WSS – Removal of Contaminated Material, Jack Taylor Weir;
- (xv) St George WSS – Thuraggi Outlet Modifications;
- (xvi) Upper Burnett WSS – Wurumba Dam, Butterfly Valve;
- (xvii) Upper Condamine WW – Leslie Dam, replacement of the right hand guard rail;

- (xviii) Upper Condamine WSS – Yarramalong Pump Station, overhaul control system;
- (xix) Upper Condamine WSS – Leslie Dam, Replacement of hand guard valve; and
- (xx) Upper Condamine WSS – Yarramalong Pump Station, refurbish a pump and motor.

3. OPENING ASSET RESTORATION RESERVE

- a) In creating the all-sectors opening ARR balances, uplift factors were used. Explain in full the method used to derive these factors and provide examples of their calculation

[Refer to separate email on this question](#)

4. FUTURE RENEWALS EXPENDITURE

In relation to future renewals expenditure forecasts:

- a) In relation to the flood repair cost estimates included in SunWater’s submission, details are required on SunWater’s likely insurance claim revenue. SunWater is to detail the nature of its insurance policy relating to flood events and provide a detailed estimate of revenue likely to be received, by year, and by service contract.

[Refer to separate email on this question.](#)

- b) Confirm that, following the Authority’s adjustments to remove items from forecast renewals expenditure, the model was not rerun to remove overheads and reallocate to other schemes. SunWater to comment on the impact or likely impact of doing so, in particular for the Lower Mary bulk and distribution schemes.

[SunWater can confirm that it has not re-run the SunWater Financial Model \(SFM\) with the Authority’s proposed adjustments to the forecast renewals expenditure and SunWater is not planning to re-run the SFM until after the QCA’s final determination. Similarly, SunWater has not re-run the SFM to account for items that need to be added to the renewals expenditure, such as the 2010/11 flood damage and other items which have been raised in earlier submissions. It is difficult to make general statements about the expected distribution of indirects and overheads \(I&OH\) without running the SFM based on a particular scenario due to the inter-relationship between I&OH cost allocation across SunWater’s business.](#)

[SunWater’s CAM has been extensively reviewed by Deloitte in their 137 page report on SunWater’s administration costs and justified 30 pages of discussion in the QCA’s draft report. After this extensive analysis, the QCA recommended that SunWater’s approach to I&OH cost allocation be largely accepted as proposed by SunWater. The distribution of I&OH is therefore driven by the proportion of direct labour in each service contract. This is a deterministic outcome that is fair and equitable - the I&OH to each service contract will be whatever it is. Hence, SunWater has not invested any time examining the nuances of I&OH distribution as a result of the QCA’s draft report.](#)

[One exception to the allocation of I&OH using direct labour was the QCA’s recommendation that Infrastructure Management \(IM\) and Infrastructure Development \(ID\) overheads be allocated to local resource centres rather than included in the total I&OH pool. SunWater has not modelled the impact of this recommendation but, for example, this subtle redistribution of I&OH may result in a larger proportion of I&OH being allocated to irrigation service](#)

contracts because ID and IM overheads are no longer being averaged into the overall I&OH pool.

If items are removed from the forecast renewals expenditure, as proposed by the QCA, then the indirects and overheads (I&OH) pool will need to be recovered over a smaller base of costs. This will necessitate a change to the I&OH rates in the SFM. Then when the SFM is recalculated, the I&OH pool will be redistributed across the remaining renewals and operating cost forecasts according to SunWater's Cost Allocation Methodology (CAM) as approved by the QCA. Given that the same pool of I&OH is being recovered over a smaller base, costs across all service contracts will increase accordingly (all things being equal). The QCA has a copy of SunWater's SFM and can review the impact of any of their proposed changes to forecast costs on I&OH allocation throughout SunWater.

- c) SunWater's submission provided additional detail on some future renewals items that the Authority did not consider prudent and/or efficient. The extra information provided for many items is not sufficient for the Authority to review these items again. For the Authority to consider reviewing these items, SunWater needs to provide documentation and argument showing that the items are prudent and efficient. The following future items apply:

Refer to SunWater's commentary on adjustments to future renewals expenditure at the end of this paper.

Given the ongoing review of past and future projects by SKM and the time constraints around this information request SunWater has not provided additional information on the projects below within this submission.

- (i) Bowen Broken Rivers – Gattonvale Pump Station;
- (ii) Boyne River and Tarong WSS - Boondooma Dam – Replace Water Level Recorder;
- (iii) Bundaberg Distribution - Bingera Distribution - Replace Screens;
- (iv) Bundaberg WSS - Ben Andersen Barrage – Replace Hydraulic Control System;
- (v) Bundaberg WSS - Ben Andersen Barrage – Replace Hydraulic Control System;
- (vi) Callide Valley WSS - LBC/7 14CVA-Refurbish Electrical Installation;
- (vii) Chinchilla Weir WSS- Various projects from 2012 to 2016 and beyond 2016;
- (viii) Dawson Valley WSS - Moura Off-stream Storage Pump Station – refurbish PUN 2;
- (ix) Dawson Valley WSS- Moura Off-stream Storage – repairs to spillway return slopes and batters;
- (x) Dawson Valley WSS - Neville Hewitt Weir – replace hydraulic system;
- (xi) Emerald Distribution WSS - Selma Distribution – concrete lining;

- (xii) Eton Distribution - Replacement of Starter Pump Units - Victoria Plains Pump Station;
- (xiii) Eton Distribution - Replacement of switchboard at Brightly Pump Station No 2;
- (xiv) Eton Distribution - Repair fencing at Oakenden distribution;
- (xv) Eton WSS - Replacement of switchboard – Mirani Pump Station 1;
- (xvi) Eton WSS - Refurbishment pump unit 1 – Mirani Pump Station 3;
- (xvii) Lower Fitzroy WSS - Replace hydraulic system;
- (xviii) Lower Fitzroy WSS - Refurbish fish lock fill and Drn valves;
- (xix) Lower Fitzroy WSS - Undertake facility review;
- (xx) Lower Mary Distribution - Refurbishment of Walker Point Balancing Storage;
- (xxi) Lower Mary Distribution - Electrical Component upgrade at Walker Point Pump Station;
- (xxii) Lower Mary Distribution - Electrical Component Upgrade at Copenhagen Bend Pump Station;
- (xxiii) Macintyre Brook WSS – Coolmunda Dam;
- (xxiv) Macintyre Brook WSS – Whetstone Weir;
- (xxv) Macintyre Brook WSS - Macintyre Brook Gauging Stations;
- (xxvi) Macintyre Brook WSS – Various items;
- (xxvii) Maranoa River WSS - Study: five year comprehensive dam inspection;
- (xxviii) Maranoa River WSS - Refurbish: Inspect and repair damage and corrosion;
- (xxix) Maranoa River WSS - Enhance: Spillway safety rails and sign boards;
- (xxx) Mareeba-Dimbulah Distribution - West Barron Distribution – refurbishment of bracing beams;
- (xxxii) Mareeba-Dimbulah Distribution - Southedge Irrigation – pipeline replacement;
- (xxxiii) Nogoia Mackenzie - Replace level transmitter and RTU – SunWater to provide SAP data;
- (xxxiiii) Nogoia-Mackenzie WSS - Bedford Weir outlet works gate refurbishment;
- (xxxv) St George Distribution - Buckinbah Pump Station;
- (xxxvi) St George Distribution - Selected channels & drains 2012-16;
- (xxxvii) St George Distribution - Various items beyond 2016;
- (xxxviii) St George Distribution - EJ Beardmore Dam Renewals Projects 2012-16;

- (xxxviii) St George WSS - EJ Beardmore Dam WTP Renewals Projects 2012-16;
- (xxxix) St George WSS - Jack Taylor Renewals Projects 2012-16;
- (xl) St George WSS - Moolabah Weir Renewals Projects 2012-16;
- (xli) Theodore Distribution - Gibber Gunyah Pump Station -Replace Suction Pipe Pump Number 2;
- (xlii) Theodore Distribution - Gibber Gunyah Pump Station -Replace Suction Pipe Pump Number 3;
- (xliii) Theodore Distribution - Gibber Gunyah Pump Station -Replace Submersible Pump, Flygt;
- (xliv) Theodore Distribution - Theodore Drainage – Replace Structure;
- (xlv) Theodore Distribution - Theodore Irrigation Distribution – 11DVAXX DVAXX Replace Siphon CHD TH;
- (xlvi) Theodore Distribution - Theodore Pump Station – Replace Concrete Structure;
- (xlvii) Upper Burnett WSS - Claude Wharton Weir - replace hydraulic actuator;
- (xlviii) Upper Condamine WSS - Leslie Dam;
- (xlix) Upper Condamine WSS - Yarralong Pump Station;
- (l) Upper Condamine WSS - Yarralong Weir;
- (li) Upper Condamine WSS - Nangwee Weir;
- (lii) Upper Condamine WSS – Wando Weir; and
- (liii) Upper Condamine WSS - Leslie Dam Water Treatment Plan.

5. SCHEME SPECIFIC

In relation to Pioneer River WSS:

- a) Confirm that the only High Priority A allocation for irrigation is distribution loss held by PVWater.

[SunWater's SWIMS database shows that in the Pioneer scheme, two High Priority A allocations for irrigation distribution loss are held by PVWater. These are for 30ML and 3 ML. All other High Priority A allocations have a purpose of 'any'.](#)

- b) What was the Water Pricing Conversion Factor used in the 2006-11 review?

[Refer to separate email on this question.](#)

- c) Currently there is no cost allocation for Mirani Weir between Pioneer WSS and Eton WSS. SunWater submitted that there is no case for allocating a share of Mirani Weir costs to Eton WSS. PVWater have provided a formal submission to the Authority which proposes two methodologies (see PVWater submission, section 'Mirani Weir – Cost Allocation'). The Authority requests SunWater to:

- (i) provide comment on the merits of applying the cost allocation methodologies proposed by PVWater; and
- (ii) advise whether there would be any service quality impact on Eton WSS if Mirani Weir was removed.

(i) SunWater has already addressed this query in our previous response to the PVWB submission (<http://www.qca.org.au/files/W-SunWater-Sub-ResponseToPVWB-Sub-OnPioneerRiverWaterSupplySchemeNSP-0911.pdf>). In summary, SunWater believes that there is little practical merit in the PVWB's proposal to allocate a share of the Mirani Weir costs to the Eton WSS. The storage volume of Mirani Weir is included in the announced allocation formulae (Table 10A of the Pioneer Valley ROP) for the Pioneer River WSS. Hence the full benefit of the Mirani Weir storage accrues to the Pioneer scheme allocation holders and not to any in the Eton scheme.

(ii) The diversion to the Eton scheme along the Mirani Diversion channel is governed by the rules in Section 90 of the Pioneer Valley ROP. In simple terms the diversion is allowed when there is a significant inflow to Mirani Weir and the weir is spilling. Hence in practice, only run-of-the-river flows in the Pioneer River are allowed to be diverted i.e. there is no practical impact on the diversion volume to Eton WSS from the storage capacity afforded by the Mirani Weir. There are possibly some minor benefits to the operations of the diversion pumps but these indirect benefits would be difficult to quantify and are not likely to be significant when compared to the benefits which Pioneer River scheme customers directly derive from Mirani Weir. SunWater's earlier submission on this matter discussed incidental "pumping pool" benefits that apply to any pump within the ponded area of a weir.

- d) PVWater noted that \$98,000 is included for replacement of rupture discs on the Palm Tree Creek Pipeline in 2017-18. PVWater's understanding was that these discs will not be required with the proposed outlet arrangements and these costs should be removed. SunWater to confirm whether this expenditure is necessary.

The NSP was based on the infrastructure as at September 2010. Once the modifications are made to the infrastructure a new forwarded works plan will be developed based on the new configuration. So whilst it is true that the rupture discs will not be in the forward program, SunWater will add in the costs of servicing, refurbishing and replacing the new kit. To just remove the rupture discs without adding the new work is an example of cherry picking and SunWater's view is that the costing should remain in place in lieu of an alternative.

SunWater views this request as another example of the Authority accessing the renewals profile as a schedule of works, when in affect it should be reviewed as a funding strategy.

In relation to Chinchilla Weir Water Supply Scheme:

- a) SunWater submitted that the use of Chinchilla Weir as a storage for Coal Seam Gas (CSG) water is minimised. However, if the CSG water materially uses any of the storage capacity of the Weir, then some costs should be allocated to the CSG water. SunWater's submission specifies that it expects that 9,750 ML will be drawn by irrigators from the Weir Pool and 16,300 ML will be drawn downstream of the Weir. This indicates that this water will need to be stored, prior to irrigators accessing it.
- b) The storage costs of the Weir could be allocated directly to CSG water drawn from the Weir Pool (9,750 ML), CSG water drawn from downstream of the Weir (16,300 ML)

and supplemented WAE volumes (2,690 ML). If cost were allocated equally to each ML, then 90.6% of costs would be allocated to the CSG water.

- c) If SunWater disagree with this allocation approach, then SunWater needs to provide a detailed quantification of the storage capacity of the Chinchilla Weir used by CSG water and supplemented WAE.

The approval conditions for the CSG water are such that the CSG water cannot materially use any of the capacity of the weir.

The Department of Environment and Resource Management have amended the Condamine & Balonne Resource Operations Plan (ROP) to contain the water management and water accounting rules which SunWater must follow in regard to management of water volumes associated with coal seam gas (CSG) water in the Chinchilla Weir Water Supply Scheme. There are key principles inherent in these water rules, the main one being that the normal operations of the Chinchilla Weir scheme are not affected by the CSG water transit. Hence the CSG water is considered to sit in the airspace of the weir, as reflected in ROP Section 213 (5). In addition, Section 213 (6) effectively means that the first water spilled from the weir is CSG water.

Since SunWater is required to ensure that no CSG water leaves the Chinchilla Weir Water Supply Scheme, SunWater must keep the CSG volumes in the weir to an operational minimum so that there is no possibility of large volumes of CSG water being pushed out of the weir by high flow river conditions (i.e. CSG water must quickly transit through the weir and not be stored in the weir.).

Specific reply are given to each of the queries, below:

(a) As described above, CSG water volumes will not be stored in the weir to any significant or material extent. SunWater's supply contracts with the CSG water customers, require them to take water at specified intervals (often daily) to ensure this.

(b) The 9, 750 ML of CSG water mentioned in the question would be an annual estimate. The volumes of CSG water transiting through the weir are expected to be about 63ML/day must be taken at specified intervals (often daily) by SunWater's CSG water customers and will not be stored in the weir to any significant or material extent.

(c.) The cost allocation approach assumes that up to 9,750 ML of CSG water would be stored in Chinchilla Weir. SunWater disagrees with the cost allocation approach since CSG water is not stored in the weir to any significant or material extent.

In relation to Callide Valley WSS:

- a) Irrigators submitted that the 'Replace Switchboard – Main Switch House and Callide Dam' item has not actually occurred and should be removed from the annuity calculation. SunWater to advise why this expenditure should be included.

Condition assessment conducted after the renewals profile was assembled in October 2010 has indicated the work should be deferred to 2016.

In relation to Boyne River and Tarong WSS:

- a) SunWater to provide documentation from the dam safety inspections that demonstrate that the Replacement of Sealer in Upstream Slope at Boondooma Dam is required in 2017.

This information cannot be provided until detailed inspections are completed. These are schedule by June 2012.

In relation to Bundaberg Distribution:

- a) Bucca Weir – Refurbishment of Trash Racks and Guides. The Authority concluded that there was insufficient information to conclude whether the item was prudent and efficient. Further information from SunWater will be required for this item to be reassessed.

Refer to notes above concerning future renewal projects and the commentary below.

Adjustment to future renewals expenditure

SunWater does not accept the QCA's continued application of a 10% reduction to future renewals expenditure based on the Authority's assessment of the findings of its consultants (Draft report, p.129).

SunWater does not accept the adjustment on two grounds:

1. There is no justification for extrapolating from the consultants' samples of projects to the population, and
2. The assessments made by consultants fail to understand our approach to determining renewals requirements and are inconsistent to the approach adopted by QCA on previous reviews.

Extrapolation

To extrapolate the findings from a sample across the population, that sample must be representative. There is no evidence that the consultant's samples are at all representative. In fact, the QCA's own consultants did not feel that extrapolation from their samples to the population was justified. Halcrow in its report (p242) notes that:

"It should be noted that extrapolation of the proposed adjustments across the whole of the Renewal and Rehabilitation program is not considered appropriate".

Further, we note that extrapolation from a sample of projects to an entire capital works program goes against established practice in economic regulation in Australia. For example, IPART (http://www.ipart.nsw.gov.au/files/12248e06-4a82-4bfc-a4e7-9f5d00db66a2/FINAL_REPORT_-_p15), has rejected formal linkages between sampling and the entire investment program, preferring to use the project samples as a guide only.

Misconception of renewals approach and inconsistency in assessing renewals expenditure

We are concerned that it appears that there continues to be fundamental misconceptions as to how our future renewals profile translates into a capital works program. The renewals profile must be assessed as a funding strategy and not a rigid program of works.

We believe that these misconceptions have affected the judgement of the QCA's consultants and led to the QCA applying inconsistent criteria in assessing our renewals expenditure.

This is demonstrated by considering the principles adopted by the QCA in assessing the renewals forecasts of the SEQ distribution retail entities, as set out on p.21 of the SKM assessment report ([SKM - SEQ Interim Price Monitoring: Assessment of Capital and Operating Expenditure \(Feb 11\)](#)) (emphasis added):

(Renewals) relates to those capital projects triggered by the need to replace aged assets. Ideally, the assessment should be based on not only age of the asset, but the condition of the asset and its ability to meet future service delivery requirements without experiencing excessive maintenance costs. As such, the ability to draw accurate and current information from a robust asset database is key to justifying capital project expenditure against this criteria.

We agree that this is a reasonable set of principles for judging how renewals expenditure forecasts have been developed. That is the key components of a renewals forecasting include:

- Condition based, not age alone
- Accurate and current information in a robust asset database

With regard to the above criteria , we note the following:

Criterion	Comment
Condition as well as age	<ul style="list-style-type: none"> ▪ “SunWater uses condition assessments to adjust the frequency of replacement and refurbishment of assets” (Halcrow report, p11) ▪ “..the second stage relates to an assessment of the condition of the asset against the condition that asset is expected to be in according to the standard asset condition decay curve (SKM report, p.9)
Accurate and current, robust asset database	<ul style="list-style-type: none"> ▪ We consider that SunWater has robust procedures and processes in place for utilising the information available in the SAP WMS to enable it to plan the replacement and or refurbishment of a large portfolio of assets over a 25 years period. In many ways we consider the processes adopted (and continually being refined by SunWater) to represent best practice in asset management. SunWater’s asset management methods, as outlined in its Asset Management Planning Methodology Paper, represent a very detailed approach to the management of their assets supported by good probability analysis and appropriate assumptions. (SKM report, p.23)

Therefore, it is evident that SunWater has satisfied the criteria adopted by QCA for the review of the renewals forecast of the SEQ distribution-retail entities. We do not understand why different rules have seemingly been applied to this review. We note the areas for improvement to our renewals forecasting detailed. However, we do not believe that these shortcomings have been judged to materially affect our renewals annuity forecasting approach which has been assessed as being fundamentally sound.