SEQWATER'S RESPONSE TO QCA INFORMATION/DATA REQUEST

	Information Request to Seqwater		Seqwater's Response to Information Request
1.1	**Background**		
	Submissions from Seqwater provided to the Authority on 30 April 2012 (and updated on 16 May 2012 to correct some minor errors) have now been reviewed. Certain matters require clarification and further data is required in some areas (refer below).		
1.2	**Purpose**		
	Thus, this is a data request to Seqwater. It also lists the minor errors to be addressed (noting some, not all, were addressed in the 16 May 2012 updates). The requested clarification or further data is organised according to the sequence of Volume 1 chapter headings (indicating our timing / priority). **The Authority would appreciate that this request be met by COB 28 June 2012**.		
1.3	**Variances and/or Errors Identified in Seqwater's Submissions** The following inconsistencies or errors were identified:	**1.3**	**Variances and/or Errors Identified in Seqwater's Submissions**
(a)	Renewals expenditure in some NSPs was inconsistent with the corresponding data presented in "Irrigation Infrastructure Renewal Projections 2013-14 to 2046-47 Reports (by Tariff Group)" (Renewals Projections Reports) as follows: a. Central Lockyer Valley WSS – NSP (p31), Table 3-15: Forecast Renewals Expenditure to 2016-17 ($2012-13, $'000) for 2016-17 states $97,000. Whereas the Renewals Projections Report, Table 3: Summary of Renewals Projections (nominal or real not specified) for 2016-17 states $77,000; b. Lower Lockyer Valley WSS – NSP (p27), Table 3-12: Forecast Renewals Expenditure to 2016-17 ($2012-13, $'000) for 2013-14 states $216,000 and 2014-15 states zero. Whereas the Renewals Projections Report, Table 3: Summary of Renewals Projections (nominal or real not specified) for 2013-14 states $246,000 and 2014-15 states $20,000; c. Pie Creek WSS – NSP (p29), Table 3-16: Forecast Renewals Expenditure to 2016-17 ($2012-13, $'000) for 2013-14 states $311,000. Whereas the Renewals Projections Report, Table 3: Summary of Renewals Projections (nominal or real not specified) for 2013-14 states $259,000.	(a)	a. Central Lockyer Valley WSS NSP, page 31, Table 3.15 – agreed that $97,000 in 2016-17 should be $77,000. Difference relates to a late change in the renewals program not adjusted in the model. The correct version was provided with Seqwater's submission on 30 April. b. Lower Lockyer Valley WSS NSP, page 27, Table 3-12 – agreed that $216,000 in 2013-14 should be $246,000 and zero in 2014-15 should be $20,000. Difference relates to a late change in the renewals program not adjusted in the model. The correct version was provided with Seqwater's submission on 30 April. c. Mary Valley WSS NSP (not Pie Creek WSS NSP), page 29, Table 3-16 – agreed that $311,000 in 2013-14 should be $259,000. Difference relates to a late change in the renewals program not adjusted in the model. The correct version was provided with Seqwater's submission on 30 April. Necessary changes will be made in the updated NSPs.
(b)	The total scheme ARR balances presented in Seqwater's major submission (page 66, Table 6-6 in 2013-14 Irrigation pricing – Submission to the QCA) are expressed in the opposite sign terms (positive or negative) when compared to the NSPs, for example: a. page 14, paragraph 4 in Logan River WSS NSP states that the 30 June 2013 closing ARR balance (and it does not specify 'irrigation only' or 'total WSS' – but should); "...is negative (i.e. deficit) of $932,884." – whereas the major submission (refer above) Table 6-6 indicates positive $932,900 (rounded); and b. page 16, last paragraph in Warrill Valley WSS NSP states that the 30 June 2013 closing ARR balance (and it does not specify 'irrigation only' or 'total WSS' – but should); "...is negative (i.e. deficit) of $563,602." – whereas the major submission (refer above) Table 6-6 indicates positive $563,600 (rounded).	(b)	Renewal balances are expressed consistently in sign terms between the NSPs and the submission.
(c)	Reference to the table on Historical Prices (NSPs Section 2) currently it says (in error) "The table below shows the prices for the scheme from 2006-07 to 2011-12 in nominal terms." Instead we believe it should read: "The table below shows the prices for the scheme from 2006-07 to 2010-11 in real terms." This error is found at: Cedar Pocket Dam WSS (paragraph 6, p. 12); Central Brisbane River WSS (no error as no previous price path); Central Lockyer WSS (paragraph 2, p.17); Logan River WSS (paragraph 1, p. 14); Lower Lockyer Valley WSS (last paragraph, p. 13); Mary Valley WSS (last paragraph, p. 14); and Warrill	(c)	This will be addressed in the updated NSPs.

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	Valley WSS (paragraph 1, p. 16); and		
(d)	In NSPs relating to other schemes (e.g. Logan River WSS) the words "Cedar Pocket WSS" appeared in error (as this must have been the template NSP).	(d)	This will be addressed in the updated NSPs.
	Please provide a detailed explanation of why the errors identified in (a) and (b) above (renewals forecast and ARR balance (sign) discrepancies) occurred and what is the correct data/approach in each case. This should be comprehensive and include provision of the full source data set in the form of a usable Excel file/s. Refer Pricing Chapter request for full financial and pricing model below.		
1.4	**Regulatory Framework** In relation to the Regulatory Framework:	**1.4**	**Regulatory Framework**
(a)	Refer to **Attachment 1: Water Planning / Regulatory Framework Considerations** and confirm that each numbered item is correct (or provide the correct information, including a fulsome explanation of your diverging view);	(a)	See comments on QCA's Attachment 1.
(b)	Refer to **Attachment 2: Irrigation Cost Allocation and Recovery** and confirm that it is correct (or provide the correct information, including a fulsome explanation of your diverging view);	(b)	See comments on QCA's Attachment 2. The description of the interim arrangement in Attachment 2 is, by and large, accurate. However, the text in Attachment 2 does not recognise Seqwater's submission (p67-68), which Seqwater acknowledged the need to avoid double-recovery of renewals expenditure in mixed WSSs. In its submission, Seqwater proposed that the RAB for GSCs be reduced by the renewals expenditure incorporated into the ARR balance between 2008-09 and 2012-13. The text also states the approach to opex is "inconsistent with SunWater and requires resolution'. It is not clear why this should be of concern at all, given it was always intended for the interim arrangements to end once irrigation prices were set by the QCA. We suggest the language in the document is refined, and simply states that the re-setting of irrigation prices will enable the revenue offset arrangements to end from 2013-14. Instead, costs relating to irrigation services will not be allocated to GSCs. The text in the Attachment also asks when further information on ARR balances will be provided. This report is nearly completed and will be provided shortly.
(c)	What are the Service Standards for Lower Lockyer, Central Lockyer and Warrill Valley WSS;	(c)	Service standards for: • Lower Lockyer Valley WSS – see NSP page 12 and Appendix B • Central Lockyer Valley WSS – none – see NSP page 14 • Warrill Valley WSS – see NSP page 14 and Appendix B
(d)	Are there contracts between Seqwater and customers in the Lower Lockyer, Central Lockyer and Warrill Valley WSSs;	(d)	Contracts exist for irrigation users in the Lower Lockyer, Central Lockyer and Warrill Valley WSSs. These contracts were initially set in November 2000 under the transitional provisions of the Water Act 2000 (S1116). Please also refer to our email of 14 June, 2012.
(e)	Does Seqwater have a view on whether the drought tariff in Moreton Vale and Warrill should be continued? What are the appropriate opening ARR balances (1 July 2013) for these schemes; and	(e)	Seqwater has not proposed that drought tariff arrangements in Mortonvale and Warrill should be extended. Please refer to section 1.6 for information about opening ARR balances.
(f)	In relation to off stream storage costs, does Seqwater submit that no electricity costs be recovered during 2013-17 and that all of these costs be recovered in the next regulatory period? Or, does Seqwater submit that the average be recovered and that an adjustment be made in the next regulatory period?	(f)	We acknowledge our submission could be clearer on this matter. The electricity costs for pumping at offstream storages (specifically Lake Clarendon – Central Lockyer) include an allowance for electricity costs for pumping. As indicated in our submission, Seqwater can only pump during stream low events defined in the IROL. These events are uncertain, and when they occur, involve significant costs. The current assumption (annual cost of $100,000 per annum), is based on high-level assumptions – indeed this is all that can be done given the uncertainty of the pumping events. This assumption

<table>
<tr><th></th><th>Information Request to Seqwater</th><th colspan="2">Seqwater's Response to Information Request</th></tr>
<tr><td></td><td></td><td></td><td>comprises around 6% of the total scheme lower bound cost, and the actual cost over the regulatory period could be much higher much lower.

Given the difficulty in forecasting these costs, and the implications for error for both users and Seqwater, Seqwater propose that an end of period adjustment is applied at these offstream storages, with the difference between actual pumping costs and that assumed in prices (ie the $100,000 per annum described above), being incorporated into lower bound costs to be recovered in the next regulatory period.

The basis for the $100,000 assumption will be set out in our response to item 1.7(m).</td></tr>
<tr><td>(g)</td><td>The Cedar Pocket WSS NSP (p.3) says that "...under the ROP, when the Cedar Pocket Dam spills, customers can take up to 200% of their allocations". The ROP commenced in September 2011. Have there been past instances where customers have taken in excess of 100% of WAE? What years and what is the water use data (present against relevant WAE please) and relate your response to the forecast water use for this WSS requested below in Section 1.8: Pricing.</td><td>(g)</td><td>A review of Seqwater water usage data found that:
In 2008-09 no irrigator exceeded 100% of nominal allocation;
In 2009-10 three irrigators exceeded 100% of nominal allocation as follows:
Nominal allocation of 80ML, usage of 80.078ML
Nominal allocation of 70ML, usage of 76.881ML
Nominal allocation of 80ML, usage of 124.632ML
In 2010-11 no irrigator exceeded 100% of nominal allocation.
2011-12 usage data is not yet available pending final meter readings.</td></tr>
<tr><td colspan="2">1.5 Pricing Framework
In relation to the Pricing Framework:</td><td colspan="2">1.5 Pricing Framework</td></tr>
<tr><td>(a)</td><td>Outline when Cedar Pocket become a separate WSS and detail why;</td><td>(a)</td><td>Please refer to p3 of the Cedar Pocket Dam NSP. Furthermore, the Cedar Pocket Dam WSS is referenced in the Mary Basin ROP, released in September 2011.</td></tr>
<tr><td>(b)</td><td>Please provide a list of all referrable infrastructure for the seven WSSs as identified by the Dam Safety Regulator;</td><td>(b)</td><td>Referable Dams:

<table><tr><th>WSS</th><th>Referable Dam</th></tr><tr><td>Cedar Pocket</td><td>Cedar Pocket Dam</td></tr><tr><td>Central Brisbane</td><td>Wivenhoe Dam, Somerset Dam</td></tr><tr><td>Central Lockyer</td><td>Clarendon Dam, Bill Gunn Dam</td></tr><tr><td>Logan River</td><td>Maroon Dam</td></tr><tr><td>Lower Lockyer</td><td>Atkinson Dam</td></tr><tr><td>Mary Valley</td><td>Borumba Dam</td></tr><tr><td>Warrill Valley</td><td>Moogerah Dam</td></tr></table></td></tr>
<tr><td>(c)</td><td>Provide an Excel summary of the prices that applied during 2011-12 and 2012-13 and document briefly how were these prices were determined including the exact CPI measure uses (e.g. Brisbane All Group) and the period. Show the calculations. Attach Gazette notice requiring CPI if applicable;</td><td>(c)</td><td>Refer attachment spreadsheet showing the calculation.
Prices were indexed to Brisbane All Groups March quarter, as per Direction Notice.</td></tr>
<tr><td>(d)</td><td>Explain the reasons for Seqwater requiring HP losses in Morton Vale and Pie Creek;</td><td>(d)</td><td>The QCA has asked for the reasons why Seqwater holds HP loss WAE at Mortonvale and Pie Creek. As noted by the QCA in its SunWater report, loss WAE is normally held by the service provider to allow it to deliver, in full, the water available to irrigators in a distribution system, under their WAE. That is the service provider is responsible for sourcing and managing losses in distribution systems.
Distribution loss WAE were initially granted to SunWater as owner of these schemes in 2000. The loss WAE have carried through to Seqwater. In Pie Creek, loss WAE have been established as formal water allocations while at Mortonvale, the WAE are IWA only.
The specifics for high priority loss in Pie Creek and Mortonvale are set out below.
<u>Mary Valley – Pie Creek</u>
Seqwater holds 60ML HP loss WAE in the Mary Valley scheme for Pie Creek, as well as medium priority WAE. The HP loss is required for the same reasons accepted by the QCA for SunWater (refer QCA final</td></tr>
</table>

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			report, p83). That is, periodic filling and re-filling of the channel and pipeline infrastructure at the start of the irrigation season and following the emptying of the channel – pipeline infrastructure for any maintenance shutdowns . The MP loss WAE is more related to the ongoing loss in delivering water to customers, once the channel has been filled. <u>Mortonvale</u> The grant of loss WAE at Mortonvale is entirely HP (184ML). This loss is also the only loss WAE for the pipeline. It is relied upon from time to time to cover losses that could occur through leakage or for maintenance needs in the future (eg flushing / scouring of the pipeline). This loss may not be required each year, however, Seqwater must have certainty that it can access WAE for these purposes when required. Indeed, when leaks or pipe bursts occur, these can involve 30 – 40ML/day of loss and it can take some days to identify the source of the leak and make repairs. While these events are less frequent, Seqwater must still have access to losses to cover these events, when they occur. It is also important to note that meter inaccuracy gives rise to a need for a loss allowance. In short, due to the practical limitations of meter accuracy, the sum of metered use at customer offtakes from a distribution system will never precisely match the metered diversions into the distribution system. Hence some allowance for this theoretical loss is required. At Mortonvale, the absence of any MP loss WAE means some HP loss is required for this purpose.
(e)	Explain the nature of Seqwater's distribution losses held in bulk schemes (clarifying that they are not to be considered as part of cost allocation if they are river/natural flows and or bulk transmission losses);	(e)	The QCA has asked Seqwater to explain the nature of the distribution losses held in various schemes. <u>Warrill and Lower Lockyer</u> The nature of distribution loss WAE in these schemes is more akin to a transmission loss – that is, a loss within the river system itself rather than a discrete distribution system. This is evidenced by the fact that customer WAE are located at or downstream of the 'distribution' infrastructure in the scheme. Indeed, the iROL identifies this distribution infrastructure as part of the bulk water scheme. This does not occur for normal distribution systems, as this infrastructure is not interrelated to the WAE serviced and operates discretely to the ROP – iROL (Pie Creek is an exception, as explained below). For example, the WAE relating to irrigators in the Emerald Distribution System are located at Fairbairn Dam, not within the distribution channels / pipelines. <u>Mary Valley (Pie Creek)</u> Pie Creek is not a distribution system, as WAE are located in Pie Creek and the streams supplemented by channel infrastructure. Pie Creek infrastructure is also named in the ROP as infrastructure providing the bulk water service. Accordingly, Pie Creek is technically part of the WSS and bulk water service because it is located within and managed under the ROP. Nonetheless, Seqwater accepts the nature of the loss WAE held for Pie Creek are more akin to those held for a distribution system. Indeed most customers have offtakes from the channel or pipeline infrastructure, rather than the supplemented streams. More importantly, Seqwater has accepted the continuation of past tariff groups, and Pie Creek has been kept separate to the Mary Valley scheme. This also implies it has historically been treated as a quasi-distribution system. Accordingly, Seqwater has allocated costs to the loss WAE and then included this into the lower bound cost base for Pie Creek, given Pie Creek irrigators are the direct beneficiaries / users of these losses. <u>Central Lockyer (Mortonvale)</u> Refer to (d) above.
(f)	Seqwater acknowledges that "...actual losses incurred under this WAE (for the Morton Vale pipeline) are likely to be well below the licensed (nominal) amount"? For the purposes of pricing for the Morton Vale pipeline, what amount does Seqwater consider more reasonable;	(f)	The QCA has asked for Seqwater's reasonable estimate of a loss allowances. The QCA has also asked for the average actual loss incurred under each scheme with a distribution loss WAE, and an estimate of the efficient nominal volume of HP and HP loss for pricing purposes. The QCA requested an estimate of efficient distribution loss and stated "in the absence of an estimate the Authority is likely to adopt its own approach as flagged for SunWater distribution schemes'. Seqwater presumes that the QCA intends to set what it believes to be an efficient loss allowance, with Seqwater bearing the costs of the difference between the actual losses held, and the QCA's efficient loss. In

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			its review of SunWater irrigation prices, the QCA recommended that a lower "efficient' loss should apply in five of SunWater's eight distribution systems. The QCA also noted that the ROPs would need to be amended to allow SunWater to trade the surplus, and that DERM should review ROPs by 30 June, 2014. The QCA recommended that any material impact on prices resulting from this review can be taken into account through either a within or end of period adjustment. It is important to note that loss allocations are to be reviewed prior to setting a ROP. That is, in the WSSs where iROLs are in place, the loss allowance is to be reviewed regardless. Seqwater assumes that in reviewing the loss, DEWS will determine an efficient allowance. This situation applies to three of the four WSSs with loss allocations. The fourth scheme, Mary Valley – Pie Creek, has formal water allocations established however there are also constraints that affect Seqwater's ability to trade any surplus. Seqwater response is set out below, first by schemes with IROLs and then the Mary Valley. <u>IROL Schemes</u> Warrill Valley, Lower Lockyer and Central Lockyer are managed under an IROL. The IROL specifies the loss WAE held by Seqwater in each scheme. The IROL also states that the volume of loss WAE held is subject to review prior to establishing the ROP. Seqwater is also explicitly prevented from trading loss WAE. The terms of the IROL typically state: > This (loss) allocation will not be permanently transferable. It will be reviewed through a Water Resource Plan and Resource Operations Plan. An appropriate water allocation will then be established. At such time, transferability will be subject to any provision of the Resource Operations Plan. It is therefore reasonable to expect that DERM will set an 'efficient' loss WAE in ROPs. Indeed, DERM are best placed to make this assessment given they undertake detailed hydrologic analysis as part of the ROP process. Seqwater submits that the loss set by DERM in the forthcoming ROPs should be accepted as efficient. This means that Seqwater should not bear holding costs of any of this loss WAE, but instead be able to pass this cost in full to WAE holders in the scheme (Warill and Lower Lower Lockyer) or customers of the Mortonvale Distribution system. The question remains as to what loss allowance is adopted for pricing purposes in the interim. This is discussed below, in response to QCA's questions about efficient losses. *Efficient Loss – Lower Lockyer and Warrill Valley* These losses are volatile according to climatic factors and pattern of demand and/or condition of the streams supplemented. For example, releases made in very dry conditions involve very significant losses while losses can be negligible (and indeed not may occur) in years when supplemented creeks and streams have continuing natural stream flow. Recent measurement of these losses is also problematic. For example, for the years preceding Seqwater's ownership of the Lower Lockyer scheme, the announced allocation was at zero or very low making assessments of losses irrelevant. Since that time, water use has been very low, despite announced allocations moving to 100%. In recent years, releases from Atkinson Dam into supplemented streams have been made by gravity, because the storage level is above the level required for pumping. These gravity releases are not measured. Hence there is little information upon which to conclude that the original assessment of losses in 2000, set under the current IROL, is not an efficient allowance. Moreover, DERM must review the losses in these schemes regardless, before a ROP is established. DERM will no doubt be attentive to the matters raised in the QCA's SunWater review, such as the pricing implications arising from setting losses. Seqwater submits that for Warrill and Lower Lockyer, the distribution loss should be passed through in full as will be the situation that would apply once ROPs are set. This could be achieved by either removing distribution loss IWA from the WAE base for pricing purposes (as Seqwater has already done), or assuming the current loss is efficient. Either way, the outcome is the same with Seqwater recovering its costs, as would

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be the case once the 'efficient' loss WA was set in a ROP anyway.

Efficient losses - Mortonvale

Seqwater has only recently (2011-12 year) repaired a meter which measures diversions into the Mortonvale Pipeline. The meter did not previously work, however was not required given supply and demand conditions in past years. Hence it has no historic data on losses, as it cannot compare metered diversions to customer's metered use from the pipeline (the difference being the loss).

Seqwater submits there is no information that would enable the QCA to undertake a separate assessment of the 'efficient' loss, and instead, as an interim measure, the QCA should rely on the original assessments implemented in the IROL.

Seqwater also submits that if the QCA does take a view that an efficient loss allowance should be set at less than 184ML, then the total iWA in the scheme should also be reduced by the same amount. This is because if a review of losses occurred under the ROP, Seqwater expects any surplus would be removed from the WAE base, rather than granted to Seqwater. This would result in Seqwater not holding surplus WAE for losses in any case, and hence should not bear the holding costs of any surplus from a QCA decision now about 'efficient' loss.

ROP schemes – Mary Valley (Pie Creek)

Seqwater owns 60ML of HP and 426ML of medium priority WAE under the Mary Valley ROP as distribution loss. This WAE is located in the Pie Creek zone of the scheme (Zone MVASE). The water allocation change rules in the ROP state that a change to the location of this loss is a prohibited change (S139(d)). That is, Seqwater cannot change the location of its HP loss to a different zone.

There is a meter at the Pie Creek pump station, and analysis reveals that there has been little difference between the metered diversions at the pump station and customer's metered in recent years. The table below provides the information for the first two years since Seqwater took ownership of the scheme. No data is available for the 2010-11 year.

Pie Creek				
	Customer meter readings	PS Diversions	Implied Loss	Distribution efficiency
2008-09	63	64	1.01	98%
2009-10	206	204	- 1.82	101%
2010-11	N/A	N/A	N/A	N/A

Losses over these two years are very low because of unusual climatic conditions in those years, namely rainfall and natural flows into the channel and supplemented streams substituting the need for diversions at the pump stations. This sample does not accord with operational experience or Seqwater's understanding of history in this scheme. While Seqwater does not have full records before 2008-09, it has conducted a search for historic information that would demonstrate the need for losses. Indeed, Seqwater expects that such information would have been relied upon when the losses were originally set in 2000 under the iROL, and affirmed in the ROP.

Seqwater has found records relating to the following periods:

- January 1978 – year to date efficiency was 43.9% (ie a loss of 66.1%);
- June 1983 – year to date efficiency of 74% (a loss of 26%);
- March 1985 – year to date efficiency of 89% (a loss of 11%).

This compares to an implied distribution efficiency from the loss WAE granted in the ROP, of 63%. It is important to note that the loss WAE are not granted on the basis of 'average' conditions, but are instead based on an assessment of the loss needs under a variety of scenarios, including very high loss years. That is, Seqwater must hold sufficient loss WAE to be able to meet its obligations to deliver water to customers in worse case or near worse-case scenarios (eg when physical losses are very high, and/or announced allocations are very low (reducing the medium priority loss available)).

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			Seqwater acknowledges it does not have a full historic records about losses. However, there is sufficient evidence from past years that shows losses do occur, and indeed that distribution efficiencies have in the past approached the levels implied by the loss WAE held (eg 66.1% in 1978). Seqwater therefore submits the loss allowance in the ROP should be accepted. Finally, Seqwater has very limited scope to deal with any 'surplus' HP loss WAE, given the constraints in the ROP that limit it to the Pie Creek zone. For example, Seqwater would be prevented from changing the WAE location and trading the WAE to another high priority user on the Mary River.
(g)	Does Seqwater's statement "...actual losses are not recorded... (p.57)" refer exclusively to Morton Vale pipeline? We note that the IROL states (Schedule 3 (A) (iii)) requires that water use for each grouping (Schedule 2.1) be reported. Has Seqwater recorded losses in the other schemes? If so, what are the actual distribution losses; and	(g)	The QCA has asked how Seqwater reports distribution losses in IROLs and ROPs. Seqwater has reported losses on the assumption that all the water available under the loss IWA (announced allocation) in each quarter, has been used.
(h)	Free Water Allocations (Central Brisbane River WSS): Seqwater's submission (p.61) states: 'Upon commencement of the (Moreton) ROP (in December 2009), the irrigators' historical entitlements were converted into allocations or other entitlements stated in the ROP. The provisions of the Water Act 2000 then took effect so that the conditions of supply of the allocated water....were those provided for under a supply scheme contract for the relevant allocation.' Using 2002 as the base year (with the introduction of the Water *(Transitional) Amendment Regulation (No.1) 2002)*, what gave these irrigators the authority to draw water from 2002 to 2009? What entitlement did they have (license, WAE. etc.)? Were there any conditions placed on these entitlements?	(h)	Free Water Allocations Prior to December 2009, these irrigators held authorisations that were directly managed by the then Department of Environment and Resource Management (DERM). Seqwater's obligation was simply to make water available free of charge (as set out in the Water (Transitional) Amendment Regulation (No.1) 2002) Accordingly, we suggest QCA contacts DERM directly to obtain details of these licenses as it does not hold this information.
1.6	**Renewals Annuities** In relation to the Renewals Annuity please provide::		
(a)	Forecast Renewals Expenditure – 2006-07 to 2010-11 (SunWater); and	(a)	Refer to the Indec Report
(b)	Actual Renewals Expenditure – 2006-07 to 2007-08 (SunWater) and 2008-09 to 2010-11 (Seqwater);	(b)	Refer to the Indec Report
(c)	Provide the expenditure and revenue data (actual and forecast) information used to calculate Seqwater's 30 June 2013 ARR balance ;	(c)	Refer to the Indec Report
(d)	Update the development of Seqwater's asset management framework, information systems, and business cases. Current advice is that these are 'works in progress' and 'under development'. Also, provide current documentation/systems/policies being applied;	(d)	Development of the Asset Management Framework is an ongoing process of continuous improvement aimed at strengthening asset management outcomes over time. There is no substantial change to the implementation since the Irrigation Scheme Renewals Projections were developed. Relevant aspects that are currently under active development are as follows: • Development and implementation of a new set of business case templates • Refinement of business case governance and approval processes • Governance of work programme delivery Policies that are under development are as follows: • Asset Performance Reliability and Efficiency Policy Information Systems (Technology 1): • Work flow for management of works requests • Asset register development specifically for irrigation schemes • Asset data Asset Management Plans are partially developed for the Irrigation Schemes. This has been limited to the development of preliminary condition and criticality data for Irrigation Meter fleets in the Central Lockyer,

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<tr><td></td><td></td><td></td><td>Lower Lockyer and Warrill Valley Water Supply Schemes. This work was commenced in order to understand the likely implications of the NWI Irrigation Meter Requirements. The work completed to develop the Irrigation Renewals Projections will be a substantial aspect of these Asset Management Plans. Similarly AMPs are in Draft for Seqwater Dams. These need further refinement before they will be formally endorsed.

Seqwater has engaged a consultant to assist with the development of Business Cases required for delivery of the Renewals Works nominated in the Irrigation Renewals Projections. The Business Cases will not be for individual projects but for the programmes of work for each schemes covering the period of the price path.</td></tr>
<tr><td>(e)</td><td>Update Seqwater's investigation into alternative methodologies for calculating whole-of-scheme ARR balances;</td><td>(e)</td><td>A report from Indec setting out revised opening ARR balances is attached.

Please note that Indec have recommended including into the renewals expenditure:
operating cost items that are likely to have been considered renewals under the SunWater approach for renewals accounting; and
an allowance for corporate overhead, again consistent with the SunWater approach to renewals.
Seqwater proposes to adopt these recommendations, but we also draw the QCA's attention to the need to consider corresponding adjustments for Grid Service Charges as some of the operating costs included in the ARR balance will have already been recovered under those charges. Seqwater does not intend to double recover these costs.

We have not yet arrived at a formal position on the precise adjustment required, and in particular how such an adjustment should be carried forward (e.g. to the RAB or as an offset to 13-14 GSCs), but will do so in the near future.</td></tr>
<tr><td>(f)</td><td>Provide 1 July 2006 ARR balance and 1 July 2008 transfer balance;</td><td>(f)</td><td>Refer to the Indec Report</td></tr>
<tr><td>(g)</td><td>Clarify whether renewals expenditures are expressed in real or nominal terms (i.e. Table 2-10 Lower Lockyer), and if real, what is the base year;</td><td>(g)</td><td>The tables showing the renewals expenditures are actual dollars for the years 2006-07 to 2010-11, real dollars for 2011-12 and nominal dollars for 2012-13. Clarification has been added to the text immediately preceding the tables. It is not proposed to change the table heading.</td></tr>
<tr><td>(h)</td><td>Clarify the method used to unbundle ARR balances in the NSP (we note that further work is being done please provide or advise of an ETA);</td><td>(h)</td><td>Please refer to the Indec Report.</td></tr>
<tr><td>(i)</td><td>Quantify the proportion of total forecast renewals expenditure that is 'minor items';</td><td>(i)</td><td>No minor items below $10,000 have been forecast as renewals. These items tend to arise in an ad hoc manner and are not identified in the forecasting process.</td></tr>
<tr><td>(j)</td><td>Specify the current age of Seqwater's main assets;</td><td>(j)</td><td>We understand the intent of the question to provide asset age information relates to the construction date for major dams in each WSS. This information is provided in each NSP.</td></tr>
<tr><td>(k)</td><td>Clarification of renewals indexation methodology including:
(i) weights used to construct Cardno's suggested weighted composite index;
(ii) assumptions and factors used to project renewals expenditure over the regulatory period; and
(iii) confirm that the escalation rates of renewals and opex expenditure are the same;</td><td>(k)</td><td>(i) The Cardno weightings are set out below.

<table><tr><td>Weight</td><td>0.30</td><td>0.20</td><td>0.20</td><td>0.1</td><td>0.10</td><td>0.10</td></tr><tr><td>Dates</td><td>Roads and bridges</td><td>CPI</td><td>BPI</td><td>Concrete, cement and sand</td><td>Steel</td><td>Labour</td></tr></table>
(ii) We suggest a discussion in the first instance with our technical staff who compiled the renewals projection. We are happy to organise this as a first step to answering this question, and would follow up with any further information gaps in writing. We propose a meeting next week.</td></tr>
</table>

	Information Request to Seqwater		Seqwater's Response to Information Request
			(iii) We can confirm the escalation rates of renewals and opex are the same (refer to section 6.2 of our submission).
(l)	Confirm that the renewals expenditure does not include non-direct costs;	(l)	The QCA asked to confirm that the renewals expenditure does not include non-direct costs. We can confirm this is the case for the projected renewals expenditure from 1 July, 2013. Non-direct costs are allocated to direct operating costs only. Refer above for the treatment in the ARR balance calculation at 30 June, 2013.
(m)	How is capital expenditures shared between irrigation charges (renewals annuity) and grid service charge? In other words, for future capital expenditure, if an item is to be jointly shared between irrigators and non-irrigators (i.e. Urban and industrial users) does Seqwater draw an appropriate amount of funds from the relevant ARR and then off-set this amount against what non-irrigators are allocated (Refer to Attachment 2 and as part of your response clarify Seqwater's proposed solution to the issues identified here and in Attachment 2);	(m)	The QCA has asked about Seqwater's proposed treatment of future renewals expenditure at WSSs shared with the WGM (shared schemes). Seqwater does not see any reason to adopt a different approach to that for SunWater, where renewals expenditure is allocated to the ARR according to the cost allocators established (in this case the HUF). For example, assume the HUF percentage for high priority in a scheme was 80%, and there was an item of capital expenditure of $1M that was also considered renewals for irrigation pricing. Assume that the WGM held 500ML out of a total 1000ML of high priority in that scheme. The following would be allocated to the RAB for GSCs: 80% x $1M x (500/1000) = $0.4M. Now assume there is an item of operating cost of $0.2M was also a renewals cost for irrigation pricing, in the same shared scheme. The following operating cost would be assigned to GSCs (fixed operating charge): 80% x $0.2M x (500/1000) = $0.08M. This means that Seqwater will need to provide information as part of its GSC submission indicating which operating costs are to be considered renewals for the purpose of irrigation pricing, so the correct cost allocation % can be applied. Accordingly, the interim arrangements for dealing with irrigation cost allocation and revenues can cease from 1 July, 2013 and be replaced by the cost allocation approach decided for irrigation, and by default, grid service charges. Please also note our response to item 1.6(e) above regarding renewals expenditure up to 30 June, 2013. We note however that the GSCs are set via a separate process, and under the Market Rules. Hence we are relying on the QCA to recommend consistent arrangements for GSCs and for the Price Regulator (Minister) to accept that recommendation.
(n)	The Mary Valley NSP stated that a HUF was not established for Pie Creek as the features of WAE in that scheme were still under review by DERM. Please outline the nature, status, sought (and likely) outcomes and expected timing for the completion of DERM's review; and	(n)	The reference to a HUF and DERM review for Pie Creek in the Mary Valley NSP was incorrect. This has been removed from the updated NSP.
(o)	Identify at a component level and quantify for each by tariff group, the portion of each renewals cost component or sub-activity (that is, components of direct renewal expenditure) that could be considered to vary with water use over a four year period. We note that variable costs are likely to be included in volumetric charges.	(o)	**1. Introduction** The QCA has issued information requests to Seqwater, seeking, among other things, information about variable costs for each tariff group nominated for the irrigation pricing review. The questions raised were:

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- Identify, at a component level and quantify for each by tariff group, the portion of each renewals cost and operating cost component or sub-activity (that is, components of direct renewal expenditure) that could be considered to vary with water use over a four year period;
- Consider the extent to which labour and other costs are variable, particularly in relation to changes in water orders at the Mary Valley, Cedar Pocket and Pie Creek tariff groups; and
- If the variable charges were zero, could meters be read annually rather than quarterly, and quantify any cost savings from doing so.

In its email to Seqwater, the QCA noted that, absent any evidence from Seqwater about variable costs, the QCA may simply apply the average fixed and variable percentage adopted in its SunWater review, namely 93% (fixed) and 7% (variable) for bulk water schemes, and 67% (fixed) and 33% (variable) for distribution systems.

The QCA also stated via its email: "It is our view that some flexibility needs to be built into the cost base so that costs can, where possible, be reduced overall during extended periods of low water use. On this we concluded on scheme specific percentages of variable costs for SunWater tariff groups"

This paper addresses the above questions and points raised.

2. Variable operations and renewals costs

In its review of SunWater irrigation prices, the QCA engaged Indec to recommend fixed and variable costs. Indec examined how operations, maintenance and renewals expenditures could be reduced in times of low water demand. These are reproduced below.

Table 1. Summary of Indec cost reductions during times of low demand

Cost category	How costs can be reduced in times of low water demand	Indec overall assessment of % variable
Operations	Selective delegation of certain operational activities to water users	Bulk – 20% Distribution – 28% Electricity in distribution systems and bulk water segments such as Condamine North Branch are 100% variable.
	Re-allocation of operations personnel to other service contracts	
	Re-allocation of operations personnel to O&M or R&E (renewals) activities that would otherwise be carried out by contractors	
	Reduction of direct bookings by corporate staff during periods of low demand	
	Reduction in overtime and TOIL during periods of low demand	
Maintenance	Deferment of non-essential planned and unplanned maintenance activities	Bulk – 20% Distribution – 24% / 25%
	Re-allocation of maintenance personnel to other service contracts	
	Re-allocation of maintenance personnel to O&M or R&E (renewals) activities that would otherwise be carried out by contractors	
	Reduction in overtime and TOIL during periods of low demand	
Renewals	Deferment of lower priority refurbishment and enhancement activities	Bulk – 1% Distribution – 1%
	Re-allocation of operations and maintenance personnel to O&M or R&E (renewals) activities that would otherwise be carried out by contractors	
	Review of planned scope of refurbishments and enhancements in that budget year	
	Phasing of renewals and enhancements works over a longer period.	

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			The average variable cost for bulk water identified by Indec was 7% for SunWater bulk water schemes, and 33% for distribution systems. Operations and maintenance Seqwater has submitted that its operating costs are fixed, except for the Pie Creek tariff group (refer to forthcoming amendments to Seqwater's submission and NSPs). Seqwater adopted this approach on the basis that there should be a causal relationship between water deliveries and cost. We note that Indec did not conclude an automatic relationship exists between water demand and cost, apart from electricity based on its assessment of SunWater historic costs (its stage 2 analysis). Rather, Indec appears to have concluded there was evidence that, when faced with significantly lower demand, SunWater could employ strategies to reduce costs: *Historical costs of some activities and expenditure types have been shown to have directly or indirectly varied with water use. Indec acknowledges that such dependencies do not occur automatically, except for electricity expense which varies with water use in contract areas where a significant proportion of water supply is pumped. Any direct and indirect water use dependencies of activities and expense types highlighted in the foregoing analysis of historical costs are the result of past pro-active management by SunWater in response to variations in water use.* *Indec concluded that other historical costs by expense type including labour, materials, contractors and "other" did vary with water use to varying degrees. In drawing this conclusion, Indec acknowledges that some correlation analysis results did not meet the strict decision criteria required to establish beyond doubt whether historical costs were fixed, variable or semi-variable with a variation in customer water use.* *Indec has used an indirect inference on the variability of some expenses by type to that of water use, through the variability of other expense types in regards to that of water use. It should be noted that correlation does not necessarily imply causation.* *In summary, the stage 2 analysis of historical costs does demonstrate that SunWater has to some extent varied costs other than electricity expense with water use. However, the results of the historical cost analysis are somewhat inconsistent and tenuous...* Hence it is important to distinguish between two different approaches: 1. First, costs that vary with an additional unit of production or water supply (such as electricity); and 2. Second, costs reductions that could be achieved under certain water demand scenarios. In the first category, the cost relationship can be established from the incremental change in costs arising from the supply of an additional (or less) ML of water to a customer. However, establishing cost relationships for the second approach is not as easy. Indeed, Indec could only establish that certain costs were semi-variable, and these costs were almost entirely linked to the opportunities to re-allocate labour in schemes when water demand was low (refer Table 7.8 of theQCA Final SunWater report). Seqwater has examined variable costs in terms of the first approach – that is, costs that vary with an additional unit of production or supply. The cost relationship in this case is usually linear, which accords with the pricing structure, where customers pay an additional price per ML for each ML taken. If this cost is $5/ML, then the variable charge is set to $5/ML. In this way, the service provider is indifferent to the level of demand. We understand this is the intent of the variable charge, as described by the ACCC when it considered

	Information Request to Seqwater		Seqwater's Response to Information Request
			irrigation tariff structures in the Murray Darling Basin:[1] *The value assigned to an additional ML of water consumed by a bulk water customer within the basin reflects the market price of water (assuming that customer can trade their water) plus the cost of the storage and delivery services at the margin. Hence, the variable component of the bulk water charge should be set with reference to the marginal cost of storage and delivery.* *As a result, the structure of delivery charges should reflect the underlying cost of providing the service, that is, volumetric charges should recover variable costs and fixed charges should recover fixed costs…* *A pricing structure where the volumetric charge exceeds the actual variable cost of supply will generally result in under utilisation of the service, since the price for delivery of an additional unit (ML) of water exceeds the marginal cost of delivery.* In contrast, the QCA applied the Indec variable cost percentages to SunWater's cost base to calculate an amount of variable cost (the Indec percentage), and then divided that amount by a forecast of water use over the regulatory period. This approach assumes that the savings arising from Indec's strategies (which are fundamentally linked to cost reduction strategies above) are linear to water use, and if average water use over the regulatory period is, for example, 10% lower than forecast, then SunWater should have been able to employ these strategies to reduce costs by 10%. However, the above strategies are only feasible (if at all) under prolonged periods of low demand. Secondly, if water demand is higher than the assumed forecast, revenues will be greater than the proposed cost base without any evidence that costs will in fact increase if this is the case. Seqwater does not believe that costs (apart from electricity for Pie Creek) vary with additional ML supplied. Moreover, Seqwater has not examined its operating and maintenance costs in terms of cost reduction strategies in times of lower water demand. Even though there is not sufficient information within the Indec report for Seqwater to understand the specifics of Indec's assumptions and considerations, Seqwater does not agree that the Indec strategies represent the optimal approach. In many cases these strategies involve shifting costs geographically or over time. These approaches are not of themselves costless – for example deferring maintenance activities may not be the least cost approach over the regulatory period. Such deferral may create a future spike in maintenance work once water demand returns to 'normal' (eg increases in corrective maintenance costs in the meantime, potential higher costs of delivering the catch-up maintenance due to greater peak in workload, possible increase to supply interruptions etc). The Indec strategies also assume that: • operations and maintenance staff have the skills and qualifications to perform other work (e.g. renewals); • programs of maintenance or renewals work with contractors can be interrupted (costlessly) and replaced with suitably qualified internal resources. • staff can be moved to different locations (again, costlessly) and can then be called back at short notice when demands return to 'normal'; and • customers can in fact be assigned tasks previously conducted by staff (refer meter readings below). While Indec has not presented evidence that its strategies are the least cost way of providing service over the medium to long term, Seqwater acknowledges that the QCA has already accepted the Indec recommendations and is unlikely to change its view. Accordingly, Seqwater expects that the QCA will, as it has already indicated, look to apply the Indec findings to Seqwater's water supply schemes servicing irrigators.

[1] ACCC (2010) ACCC pricing principles for pricing approvals for determinations under the Water Charges (Infrastructure) rules, Draft. pp44-45.

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			Accordingly, this paper focuses on the factors that the QCA need to consider if it is to adapt the Indec findings to Seqwater (refer below). Renewals Seqwater has submitted that renewals costs are fixed. This would appear to accord with the QCA's own findings. For example in the SunWater Final Report the QCA stated: *The Authority also found renewals to be fixed costs in relation to water use.* Seqwater concurs with the Authority's assessment, and assumes that the QCA would ensure the renewals annuity was recovered from the fixed charges entirely. **Application of the Indec Analysis to O&M costs** Bulk water schemes The QCA raised the option of applying Indec's average variable cost percentage for bulk water schemes of 7% absent any better information. Noting that the % variable cost appears to be based on implementing cost reduction strategies during times of reduced water demand, it is important to consider demand at a whole-of-scheme level and across both priority groups. Periods of very low water demand usually occur more often for medium priority demands than high priority demands, given the water sharing rules which preference supply to high priority, and the fact that most medium priority demands are for irrigation and therefore more sensitive to rainfall (as a substitute to irrigation). Four of Seqwater bulk water schemes have a substantial portion of high priority WAE: • Logan River – 42% High Priority • Mary Valley – 32% High Priority • Warrill Valley – 28% High Priority • Central Brisbane – 98% High Priority In times of low irrigation (medium priority) demand, high priority demand may remain at 'normal' levels either because water remains available to that WAE, and/or high priority users' pattern of demand is less sensitive to climatic conditions. Accordingly, the opportunities in these schemes to employ Indec's strategies to reduce costs during low levels of irrigation demand are significantly compromised. For example, operations and maintenance would need to continue to ensure continuity of supply to high priority customers even if medium priority demand was very low.[2] The Indec analysis does not consider this dimension, nor does the QCA's application of the Indec variable cost percentages. Rather, the approach adopted for SunWater assumes that if medium priority (irrigation) demand is low, then so too is all demand and consequently cost savings strategies can be employed. Seqwater submits that, if the QCA is to apply the Indec findings to its WSSs, it does so having regard to the

[2] The QCA's approach to assigning costs as between high and medium priority already takes account of the differentials in water availability between the two – for example through the HUF.

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			fact that low demands by irrigators in the above WSSs do not create the circumstances that would enable Seqwater to adopt the Indec strategies to reduce costs above.[3] This means that the percentage of variable costs in these schemes will be far closer to 0% than the 7% average adopted for SunWater. For Pie Creek, please refer to Seqwater's separate information to be provided calculating the variable electricity cost and variable charge. <u>Distribution systems</u> The QCA raised the option of applying Indec's average variable cost percentage for distribution systems of 33% absent any better information. The Mortonvale Pipeline is the only distribution system. This pipeline is a gravity structure, meaning there is no pumping and hence no electricity costs. Indec concluded that the variable cost percentage for distribution systems excluding electricity was 11.6%:[4] *The variable proportion of the average total price path costs excluding electricity ranges from 7.3% to 15.9%. The variable proportion of the average total water distribution price path costs excluding electricity for the recommended overall ratio is $3.681 million per annum or 11.6%.* Accordingly, if the QCA is to simply adopt the Indec averages, the relevant percentage for the Mortonvale Pipeline is 11.6%, not 33%. **3. Meter reading costs** The QCA has asked if the variable charge were zero, could meters be read annually rather than quarterly, and quantify any cost savings from doing so. Seqwater has very clear obligations under its ROL and IROLs to read meters quarterly and report water use on a quarterly basis. For example, the S3.1A of the Lower Lockyer IROL states that Seqwater must implement and maintain a water quantity monitoring program which measures and records: *iii) diversions of water by each customer of the Licensee; diversions to channel distribution systems; diversions to watercourses used for water distribution and drainage; aggregate use by water users from each channel distribution system; water use for each grouping of interim water allocation in SCHEDULE 2.1; and releases from distribution systems to supplement watercourses or for other purposes; on a quarterly basis.* ROPs contain similar provisions. For example, in the Mary Valley ROP, Seqwater (Chapter 13, S212) must record the water taken by WAE holders each quarter. The same applies for Central Brisbane (refer Chapter 9, S155 of the Morton ROP). Accordingly, meters cannot be read only annually if the variable charge was zero. They must be read quarterly in accordance with Seqwater's compliance obligations.
1.7	**Operating Expenditure** In relation to the operating expenditure please provide:		
(a)	Forecast Operating Expenditure – 2006-07 to 2010-11 (SunWater); and	(a)	Forecast operating expenditure for 2006-07 to 2010-11 is not available and cannot be supplied.

[3] Notwithstanding Seqwater's comments above about whether these savings can in fact be achieved.
[4] Indec (2011) p53

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(b)	Actual Operating Expenditure – 2006-07 to 2007-08 (SunWater) and 2008-09 to 2010-11 (Seqwater);	(b)	Actual operating expenditure for 2006-07 to 2007-08 (SunWater) is attached. Actual operating expenditure for 2008-09 is attached. Please note that in the 2008-09 year, irrigation costs were not attributed to individual schemes. Consequently, this report provides total irrigation operating costs only. Operating costs for 2009-10 to 2011-12 plus budget for 2012-13 is attached.
(c)	Provide details and documentation of how the forecast operational expenditure estimates (including associated adjustments) were calculated;	(c)	**To be provided early next week. Still OUTSTANDING**
(d)	Provide historical operational expenditure data, at the scheme level. Seqwater has outlined why this data was not provided (page 82, core submission), however the authority considers that the data will still be relevant at this stage of the review;	(d)	See (b) above
(e)	Can repairs and maintenance costs be provided at a further degree of disaggregation (i.e. Labour, contractors and materials)? If so, please provide;	(e)	Seqwater can provide disaggregated information for maintenance costs, however this will take some time to produce and will be provided separately. We are currently aiming to have this information available late next week.
(f)	Can non-direct costs be provided at a further degree of disaggregation (i.e. Labour, contractors and materials)? If so, please provide;	(f)	The QCA has asked for further cost disaggregation for non-direct costs. Seqwater has provided a version of the Operating Cost Report for 2012-13 to QCA (refer email 8 June, 2012). This is the same data was provided to the Authority for the review of grid service charges. In this report, which reports costs by work team, costs are first split into employee costs and other supplies and services. Where costs exist for other supplies and services, a break up is provided by natural account type.
(g)	As per renewals data request, clarify whether non-direct costs are all allocated to opex or if renewals also includes non-direct costs (NSP states both);	(g)	The reference in NSPs to forecast renewals costs being inclusive of non-directs is an error, and will be amended in each NSP.
(h)	Confirm that operational expenditure tables are nominal (e.g. See section 3, lower Lockyer). If real, what is the base year;	(h)	The NSPs will be amended to explicitly state that the operational expenditure tables are nominal.
(i)	Please clarify the water years in each scheme, for example, in Lower Lockyer: on p7 they say its 1/4 – 31/3, but on p10 its 1/7 – 30/6;	(i)	It is confirmed that the water year for the Lower Lockyer Valley WSS runs from 1 April to 30 March. The NSP will be amended accordingly. The water year for all other schemes runs from 1 July to 30 June.
(j)	Also in relation to Lower Lockyer on page 10 (as discussed) there is a paragraph that pertains to Central Lockyer (not Lower Lockyer) please amend/correct (as you suggested);	(j)	The NSP for Lower Lockyer Valley WSS will be amended to correct the reference to Central Lockyer.
(k)	Please clarify in writing the difference between 'dam safety' listed under dam operations and 'dam safety inspections' (listed as a separate cost category), that is, expand on the definition and nature of items under: **a.** "Operations: Dam Operations (including responding to regulatory requirements associated with dam safety); **b.** Dam safety inspections;"	(k)	Under the 'Operations' heading in NSPs, there is a statement that "Dam operations must meet the regulatory requirements under various Acts including those relating to Dam Safety, Flood Management, Flood Management, Resource Operations Plans...". The range of activities required to meet dam safety requirements includes the operation of dams to meet safety requirements, such as the operation of gated structures during flood events and routine inspections. This is different to periodic dam safety inspections, usually required at 5-yearly intervals, and are based on specific compliance requirements. It is these periodic costs that are captured separately in the lower bound cost base in NSPs.
(l)	Please clarify in writing the difference between 'planned maintenance' and 'scheduled maintenance' (listed as separate cost categories), that is, expand on the definition/nature.	(l)	The NSPs will be updated to provide consistent terminology for planned and scheduled maintenance.
(m)	Provide a detailed electricity submission, including individual scheme data; and	(m)	We are preparing proposed variable electricity costs and variable charge at Pie Creek. Our submission will include workings and assumptions about how this charge was derived. Electricity costs at Central Lockyer relate to pumping into Lake Clarendon as required under the IROL. Pumping occurs when streamflows reach certain thresholds. The frequency of pumping is therefore very difficult to predict. The factors that influence this cost are more to do with assumptions around frequency of pumping than the unit cost of electricity of the kWh / ML at the pump station. Given the unpredictability of pumping, Seqwater has instead sought a specific review mechanism to so that it can recover the actual

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			electricity costs of pumping. This would require an unders and overs adjustment of the difference between actual costs and the $100,000 per annum allowance (up or down) into prices in the next regulatory period. Seqwater will provide further information on the basis for its $100,000 assumption in its supplementary submission on forecasting operating costs. However, in all other schemes the cost is immaterial (based on the model provided earlier to QCA). • Lower Lockyer – 2.5%; • Logan River – 0.5%; • Warrill Valley – 0.6%; • Mary Valley – 1.6%; • Central Brisbane – 1.6% • Cedar Pocket – 0.1%. We are therefore not proposing to provide a detailed submission setting out electricity cost forecasting assumptions in these tariff groups, however we can do so if the QCA still believes this is warranted.
(n)	Identify at a component level and quantify for each by tariff group, the portion of each operating cost component or sub-activity (that is, components of direct opex) that could be considered to vary with water use over a four year period. We note that variable costs are likely to be included in volumetric charges.	(n)	See Seqwater's submission on Variable Costs above Section 1.6 (o).
1.8	**Pricing**	**1.8**	**Pricing**
(a)	Please provide the Seqwater financial and pricing model/s (including fully functional Excel spreadsheets for the Authority's use) in relation to Seqwater's proposed irrigation costs, cost allocations and cost-reflective prices.	(a)	Refer to emails to QCA (Angus MacDonald) 8 June, 2012 that contain the pricing model and supporting spreadsheets. Note: updates will be provided and accompany the updated NSPs.
(b)	Please also provide in Excel usable format the current relevant water access entitlements (WAE) data (including those relevant WAE, if any, held by Seqwater and irrigation customers) in terms of nominal volumes and reliability / priority.	(b)	Please refer to tables in NSPs and in Chapter 3 of the submission . We can provide this in excel format if required.
(c)	Please provide the Excel data for figure 2-1 Water Usage in each NSP including historical water use and WAE for 2000 to 2012.	(c)	Excel worksheets used to produce Figure 2.1 in each NSP are attached.