

SEQWATER'S SEPTEMBER SUBMISSION / RESPONSE TO QCA REQUEST OF 31 AUGUST

31 August 2012

The Authority provides, herewith, another formal (consolidated) information request to Seqwater. [Questions outlined below prior to Seqwater responses.]

A response would be appreciated by Monday 3 September 2012.

From: Colin Nicolson [mailto:cnicolson@seqwater.com.au]
Sent: Thursday, 23 August 2012 9:02 AM
To: Angus MacDonald
Cc: Damian Scholz; Adam Kay-Spratley
Subject: FW: RE: (NEXT) QCA DATA REQUEST 14 AUGUST 2012

Angus

Our answers are under each question below.

QCA Question 1

In your email to Angus MacDonald dated 17 August 2012, you advised that you would be sending us a full submission detailing your methodology for estimating base-year opex together with the basis for the electricity cost forecasts by 24 August 2012. As this matter is now urgent, could you please advise when we can expect to receive this information.

Seqwater Response to Item 1

Calculation of Seqwater's forecast operational expenditure estimates for irrigation schemes

The QCA has asked Seqwater to:

Provide details and documentation of how the forecast operational expenditure estimates (including associated adjustments) were calculated;

In its Terms of Reference, the QCA has identified certain items of operating expenditure for detailed review, as follows:

1. Operations – Direct Labour and Contractors – in Cedar Pocket Tariff Group
2. Operations – Materials and Other – in Central Brisbane Tariff Group
3. Operations – Direct Labour and Contractors – in Central Brisbane Tariff Group
4. Repairs and Maintenance – Planned – in Central Lockyer Tariff Group
5. Repairs and Maintenance – Unplanned – in Central Lockyer Tariff Group
6. Operations – Direct Labour – in Logan Tariff Group
7. Operations – Direct Labour – in Lower Lockyer Tariff Group

8. Operations – Materials and Other – in Lower Lockyer Tariff Group
9. Operations – Direct Labour – in Mary Valley Tariff Group
10. Operations – Direct Labour – in Morton Vale Tariff Group
11. Repairs and Maintenance – Planned – in Pie Creek Tariff Group
12. Operations – Materials and Other – in Warrill Valley Tariff Group

The following information provides details of how Seqwater forecast its operational expenditure estimates, making particular reference to the items identified by the QCA for detailed review.

Seqwater's calculation of opex forecasts

By way of summary, Seqwater has used its proposed organisation-wide 2012-13 operating budget as a base year (which was itself a zero base build-up), determined which of those forecast costs relate to the irrigation schemes as opposed to urban water supply, and escalated those forecasts into the future years.

Budget forecasting within Seqwater for the 2012-13 base year was performed substantively at the team level, with team managers responsible for the initial build up of team budgets. Team budgets were prepared from a whole-of-asset-portfolio perspective, meaning that the costs associated with irrigation scheme assets were not considered separately to other assets; a single budgeting process was applied at an organisational level for all assets and activities in 2012-13. Similarly, there is no dedicated team within Seqwater responsible for the management of irrigation assets. Rather, irrigation assets are managed by relevant teams as part of Seqwater's portfolio of assets (for example, irrigation storages are operated by the Dam Operations team along with the water storages used for urban water supply and irrigation assets are maintained by the Infrastructure Maintenance team alongside all other assets.

Board approved budget parameters were provided to team managers to assist in the consistent preparation of the 2012-13 operating budget, as follows:

Zero based budgeting

Seqwater's 2012-13 budget parameters required a based process for all expenditure. Zero based budgeting is a method of budgeting in which all expenses must be justified. The process requires starting from a "zero base" and analysing the needs and costs regardless of whether the budget is higher or lower than the previous year's budget.

The advantages to zero based budgeting include:

- Efficient allocation of resources, as it is based on needs and benefits (identified in the Strategic and Operational Planning process) rather than history.
- Drives Managers to find cost effective ways to improve operations.
- Detects inflated budgets.

- Increases staff motivation by providing greater initiative and responsibility in decision-making.
- Increases communication and coordination within the organisation (Groups and Teams).
- Identifies and eliminates wasteful and obsolete operations.
- Identifies opportunities for outsourcing.
- Forces cost centers to identify their mission and their relationship to overall goals.
- It helps in identifying areas of wasteful expenditure and, if desired, it can also be used for suggesting alternative courses of action.

The disadvantage to zero based budgeting is that the process may be more time-consuming, particularly when providing justification of every line item. However, the budget parameters adopted by Seqwater promoted the early submission of information by managers in preparation for the regulatory review (Grid Service Charges) process.

An example of budgeting for consulting costs using the zero based budget process is to provide supporting information showing the calculation of estimated hours by quoted rates, the purpose for the costs and the selection process of the supplier and their details. A traditional budgeting process may refer to prior year actual costs only for the basis of the budget proposal, whereas the zero based budget process requires a supporting calculation and explanation.

Zero based budgeting does not prevent analyses or use of past trends, benchmarks, or data as a base to formulate a new budget and provide justification. For example, the scheduled and reactive maintenance programs will use a combination of factors as listed above to generate and support a budget.

Variance Analysis

The budget parameters required Managers to include an explanation regarding historical comparisons even though their budget submissions were prepared using the zero based budget process. It was recommended that in conjunction with preparing the zero based budget proposal the variance analysis was documented. The variance analysis was to compare the 2012-13 Budget submission to the prior year (2010-11) actual expenditure, the prior year budget and the current year (2011-12) forecast.

Cost Allocation

Where an overhead cost could be directly attributed to an asset or class of assets, an irrigation scheme or service, the budget parameters required that the cost be allocated to those assets or schemes rather than to corporate overheads. All assets are assigned a location code through the works and assets module.

Cost Estimation and documentation retention

The budget parameters required that cost estimates included in the budget must reflect prudent and efficient costs that are expected to be incurred. Furthermore, the budget parameters required that the detailed cost and qualitative information used to inform the budget process must be retained by the relevant team manager for future reference. The budget parameters recommended that all

documentation be uploaded (in any format) to the CIS Budget Module and submitted as part of the Budget process.

Volumes

The budget parameters required that demand projections underpinning any planned capital expenditure or changes in operating costs were to be substantiated with a detailed assessment and aligned with WGM demand projections. If, due to the timing of the budget preparation, the projections were not available from the WGM, the 2010-11 actual volumes were to be adopted.

Projects, Sub-services and Work Orders

The structure of the groups and teams and their projects in the corporate information system (CIS) remained the same as the previous year for Seqwater, with only minor amendments to sub-services and work orders. WaterSecure had already been incorporated into the structure effective 1 July 2011.

New Expenditure Justification

During the planning phase of preparing the Strategic and Operating Plans, Seqwater's team managers were able to identify new projects and/or initiatives. Projects and/or initiatives that resulted in 2012-13 Budget requests were considered and prioritised by the Executive Leadership Team (ELT) and recommended to the Board separately.

A number of minimum information requirements were imposed for new expenditure justification. The minimum requirements were necessary regardless of value and applied to all projects and/or initiatives. The requirements included additional information about cost drivers (linking expenditure to identified categories of business needs), the demonstration of options assessment, a description of cost estimation (quantity, rates, past projects, industry benchmark, market quotes, past consultant reports or previous studies and any contingency) and a brief statement about project delivery and Seqwater's capacity to deliver the project/initiative in the proposed timeframes (in-house resources versus outsourced contractor).

Cost approvals and monitoring costs against budgets

Seqwater's budget is approved annually by the Executive Leadership Team (ELT) and the Board. Quarterly forecasts are also prepared and approved by the ELT and the Board.

Seqwater uses a system of delegations as a management process for the approval of costs. There is a Delegations Policy and Manual (available upon request) which states the approval limits for all officers and employees where applicable. Delegations and approvals are managed through the CIS accounting software.

Seqwater uses a system of monthly reporting as a management process for the monitoring and reporting against budgets. Monthly management reports are issued to all Seqwater Teams and there are monthly management meetings between Seqwater Team Leaders and the management accountants in the Finance Team in order to review monthly results. Seqwater also has a system of Key Performance Indicator (KPI) reporting that is established pursuant to the Strategic and Operational Plans that Seqwater must prepare for the Responsible Ministers as a matter of legislative compliance under the *South East Queensland Water (Restructuring) Act 2007*. Monthly performance against the KPI targets is also tracked and reported. Total company results (Income Statement, Balance Sheet, Cashflow, Capital Expenditure and Aged Debtors) are also reported monthly for review by the ELT and the Board, and are reported externally on a quarterly basis to Treasury.

Alignment with Seqwater's Grid Service Charges

As noted above, Seqwater's 2012-13 budget was prepared from a whole-of-asset-portfolio perspective, meaning that the costs associated with irrigation scheme assets were not considered separately to other assets; a single budgeting process was applied at an organisational level for all assets and activities in 2012-13.

Seqwater's organisation-wide 2012-13 operating budget is notable because it is a budget that has been separately assessed by the QCA in the area of urban Grid Service Charges (GSCs), meaning that the QCA has already reviewed the proposed expenditure in terms of prudence and efficiency.

Five of Seqwater's irrigation schemes jointly service rural irrigators as well as the urban residents and businesses supplied by Seqwater through the Water Grid Manager (WGM). The three exceptions are Cedar Pocket and the Central and Lower Lockyer Valley schemes, which exclusively supply irrigation customers. However, the current GSC pricing arrangements – as per the Ministerial Direction Notices – allow for the costs of all these irrigation schemes to be included in the GSCs paid by the WGM and for the irrigation revenues to be passed back to the WGM to offset the costs [less the renewals annuity component of pricing. Renewals expenditure in the Lower and Central Lockyer Valley schemes and the Cedar Pocket scheme are not included in Seqwater's capital expenditure proposals for the purposes of determining GSCs].

Hence, for 2012-13, prior to the 2013-14 to 2016-17 irrigation prices taking effect, all of Seqwater's proposed expenditure in all irrigation schemes was included in GSCs and was included in the QCA's review of Seqwater's 2012-13 GSCs.

Seqwater's Operational Cost Report

Seqwater's organisation-wide 2012-13 operating budget is presented in the form of its Operational Cost Report, which itemises all operating expenditure categorised according to work group and then by functional activity.

The organisation-wide Operational Cost Report includes all direct and all non-direct operational costs forecast for 2012-13. This report was the centrepiece of Seqwater's financial submissions when its regulatory budget was lodged with the QCA in relation to 2012-13 Grid Service Charges.

Furthermore, Seqwater's Operational Cost Report can be presented in an asset-specific format, which shows all *direct* costs associated with a particular asset. This is useful for the purposes of this review because Seqwater owns and operates many assets which are exclusively for urban water supply or are operated jointly for irrigation services as well as urban water supply.

Therefore, in relation to calculating direct costs:

1. For each of the relevant irrigation schemes, Seqwater has identified the assets that pertain to that scheme (including assets used jointly for irrigation services and urban water supply);
2. For each asset identified as pertaining to a particular irrigation scheme, Seqwater has reproduced its 2012-13 Operational Cost Report for the asset, detailing the direct costs forecast for that asset in 2012-13. These costs are explained in individual line items that describe the reason for the expenditure, the natural account code used by Seqwater and the budgeted amount in nominal dollars.

3. For each asset-specific Operational Cost Report, Seqwater has then reviewed the line items and manually removed any line items that pertain exclusively to urban water supply as opposed to irrigation services. For example, catchment management and water quality related activities that are conducted for the benefit of urban water supply and are not needed for irrigation services have been removed. In a small number of cases Seqwater identified that a line item was comprised of several activities, where some but not all of those activities pertained exclusively to urban water supply – in these cases that line item has been 100% removed and another line item was added detailing the smaller amount once the urban water supply activities were removed.
4. For the line items that remain, Seqwater has then escalated the 2012-13 forecast expenditure into the future years for 2013-14 to 2016-17. The escalation rates used are as follows:
 - Labour at 4.0%;
 - Contractors and materials at 4.0%;
 - Repairs and maintenance at 4.0%;
 - Energy (including fixed and variable) at 2.5%;
 - Insurance at 2.5%;
 - Rates at 2.5%; and
 - All other items at 2.5%.
5. This process results in an Operational Cost Report for each asset, for the 2013-14 to 2016-17 years, which excludes expenditure that is solely for the benefit of urban water supply.
6. For the assets that pertain to irrigation schemes that jointly provide irrigation services as well as urban water supply, the forecast expenditure in the amended Operational Cost Reports are then to be apportioned according to the Headworks Utilisation Factor (HUF) methodology explained in more detail in Seqwater’s other submissions to the QCA. For the assets that solely service irrigation schemes, the forecast expenditure in the amended Operational Cost Reports are not apportioned further.

Also note that for indirect operational costs, when creating Seqwater’s 2012-13 Operating Cost Reports by Location, Seqwater’s accounting system comprehensively captured only direct operating costs for each responsibility centre and, for the production-related ones, costed these and production overhead costs to the relevant production function. Seqwater’s accounting policies and practices in the build up of its 2012-13 budget did not involve allocating indirect costs (such as corporate costs, overheads or centralised technical and operational functions) in the Operating Cost Report to specific assets or activities.

Seqwater’s Operational Costs by Team

Seqwater’s Operational Cost Report itemises all operating expenditure according to work group and then by functional activity. For irrigation services, the following teams are responsible for the majority of operating costs:

Dam Operations - best practice management of dams and water sources while being fully compliant and effective in operating, maintaining and monitoring its water source infrastructure. Dam Operations must meet the regulatory requirements under various Acts including those relating to Dam Safety, Flood Management, Resource Operating Plans (ROPs) and interim Resource Operations

Licenses (iROLs), and providing sufficient water to meet standards of service. Key outputs are management of dams to ensure safe operation during normal water releases and flood releases, monitoring and ensuring dam safety compliance, maintain releases from dams to meet demand, meeting resource operation plan compliance, delivering water to irrigation customers, and ensuring water related data is recorded and stored.

- Dam Operations and Management
- Dam Safety Compliance
- ROP and iROL Compliance
- Irrigation Supply Services
- Water Data Records and Storage

Incident & Emergency – these FTEs, expenses and activities are separated in Seqwater’s 2012-13 Operational Cost Report, to give oversight of the expenses associated with incident and emergency activities relating specifically in this instance to the operation of Wivenhoe Dam, and given the significant flood and emergency mitigation role provided by Wivenhoe Dam (in addition to standard water storage services). For practical purposes and some internal administrative purposes, other than budget forecasting, the FTEs associated with these activities are generally treated within Seqwater as being within the Dam Operations team explained above.

- Incident & Emergency Services
- Management of Dam Releases

Group Support and Catchment Services - responsible for the development and delivery of recreation and catchment maintenance services. The team ensures that asset management plans, processes, systems and practices are implemented in accordance with relevant regulatory requirements including environmental protection laws and land ownership laws. This team also contributes to the effective development, implementation and management of the reporting systems within Seqwater’s Water Delivery Group, as well as the management of third party access and event approval at Seqwater sites and locations.

- Grounds maintenance (mowing/slashing)
- Terrestrial weed control
- Aquatic weed control
- Pest management
- Fire management (fire breaks/prescribed burns)
- Fauna management/rescues (fish/koala etc)
- Security control (illegal access)
- Lease inspections
- Dam embankment maintenance
- WTP grounds maintenance
- Compliance including regulatory obligations for declared weeds, WH&S obligations, public and infrastructure safety responsibilities, environmental compliance obligations, Water Quality, prudent land management and conservation outcomes.

Water Treatment Operations North - responsible for the operation of Seqwater's Northern Water Treatment Plants extending from Noosa in the North, Jimna to Lowood in the West and the Northern suburbs of Brisbane. The Northern Water Treatment Plant Operations is organized into 3 Sub-Regional areas covering Sunshine Coast, Moreton and Somerset Regions and is serviced by approximately 35 Operators, many of whom are trained and competent at operating several facilities to ensure the most efficient use of our operational workforce. The day to day management of these facilities is supported by 1 Team Leader for the North Region and 1 Coordinator per Sub-Region. With respect to irrigation services specifically, the activities of this team are limited to managing the Recreation WTPs which service visitors to the recreation sites located at the dams or water storages within the WSS.

- Water Treatment Operations and Management

Water Treatment Operations South - responsible for the operation of Seqwater's Southern Water Treatment Plants extending from the Western and Southern suburbs of Brisbane to Maroon and Mudgeeraba in the south and to Redlands and Stradbroke Island in the east. The Southern Water Treatment Plant Operations is organized into 4 Sub-Regional areas covering the Gold Coast, Scenic Rim, Mount Crosby and Redland Regions and is serviced by approximately 36 Operators, many of whom are trained and competent at operating several facilities to ensure the most efficient use of our operational workforce. The day to day management of these facilities is supported by 2 Team Leader for the South Region and 1 Coordinator per Sub-Region. With respect to irrigation services specifically, the activities of this team are limited to managing the Recreation WTPs which service visitors to the recreation sites located at the dams or water storages within the WSS.

- Water Treatment Operations and Management

Infrastructure Maintenance - responsible for the delivery of scheduled, planned and reactive maintenance of Seqwater's assets in a timely, effective and efficient manner that supports water production. To ensure the reliability of Seqwater Electrical, Mechanical, Civil and Control System assets and meet all compliance obligations.

- Maintenance of Assets

Water Quality & Environment - manages and implements the overarching global water quality for Seqwater and ensures alignment with the expectations of key stakeholders. This team is responsible for lab services, data management, implementation of drinking water management plans and environmental compliance.

- Catchment water quality
- Drinking water quality
- Environmental Management Unit
- Scientific laboratory services and data systems.

Seqwater's Operational Costs by Functional Activity

Seqwater's Operational Cost Report itemises all operating expenditure according to work group and then by functional activity. Functional activities align with natural account codes used in Seqwater's corporate information system (CIS) (for example, Labour, Fixed Energy, Materials & Consumables, Repairs & Maintenance).

Note that no single cost estimation methodology was mandated for universal use by budget managers in building Seqwater's 2012-13 budget, nor for any functional activity. As explained above, budget forecasting within Seqwater for the 2012-13 base year was performed substantively at the team level,

with team managers responsible for the initial build up of team budgets. A number of cost estimation methodologies were permissible under Seqwater's budget parameters, such as the use of quantity and rate estimates, using past projects as a basis for costs, industry benchmarks, market quotes, past consultant reports and previous studies.

Combined with the fact that irrigation services are not managed by a dedicated team within Seqwater (rather, irrigation assets are managed by all relevant teams as part of a portfolio of assets), it becomes clear why it is not possible within this paper to set out a single forecasting methodology that universally explains all budget line items. By way of example, the forecasting of materials and consumables in irrigation schemes was conducted on a line by line basis, with different methodologies being applied in the forecasting of energy, fleet & fuel and water quality monitoring.

Even forecasting a common cost such as labour was prepared in slightly different ways by different teams depending on the team's focus, with Dam Operations labour being calculated mostly on a site by site basis with some fixed dam operator positions at sites, while Catchment Management labour was calculated to achieve an efficient spread of labour resources across locations on a regional basis and across various activities (such as weed management, fire management, pest control etc).

For these reasons, this paper does not attempt to provide detailed about every cost type in every team and functional activity, other than providing some broad comments around the forecasting of major cost types such as labour and repairs and maintenance, and Seqwater has focused on providing the more detailed cost estimation analysis in response to the QCA's items of operating expenditure sampled for detailed review.

Furthermore, note that Seqwater's information responses focus on major components of the samples selected, rather than on minor cost types. A threshold of \$10,000 was applied, meaning that if a type of cost (by natural account description) did not exceed \$10,000 at any asset location in the relevant WSS sampled, then Seqwater did not provide additional information about cost estimation methodology for those costs. This threshold was applied for the purposes of fast-tracking information responses and also for the purposes of materiality, given that these costs are yet to be apportioned between irrigation services and urban water supply purposes. In practice this still means that there are still many line items explained that are less than \$10,000 in value, however these belong to natural account descriptions where, at any location in the relevant WSS, the costs are more than \$10,000 in total. Seqwater is of course happy to provide additional information on request if requested.

Notes on forecasting labour costs

Labour costs associated with irrigation assets are sometimes portions only of the salaries associated with whole FTE positions (Seqwater allocates many staff in its operational areas across asset locations and sometimes across activities in accordance with groups of assets in sub-regional geographic areas).

Salaries are determined in compliance with the Industrial Award applying to Seqwater and also take into account any applicable changes in increments throughout the period in question.

Furthermore, the amounts presented for salaries/wages are inclusive of on-costs such as superannuation, leave entitlements, payroll tax and overtime (i.e. the amounts cannot be translated fairly into an hourly wage or a take-home pay without first making adjustments to remove these on-costs).

Also note that the information responses prepared by Seqwater focus on the Salaries & Wages components of the labour cost samples selected, rather than on the other line items such as Protective Items, Uniforms, Recruitment Fees and Conferences & Seminars, because these line items are comparatively minor amounts (never exceeding \$10,000 at any asset location, and that is prior to apportionment between irrigation services and urban water supply services).

Notes on forecasting repairs and maintenance costs

For the purposes of preparing its 2012-13 budget, Seqwater followed a methodology involving a three way split between maintenance types:

- scheduled maintenance, which is periodic maintenance scheduled in advance;
- planned maintenance, which is maintenance undertaken to improve the condition (to a desired level of condition) of an asset that is operational in the immediate term or work arising from safety audits, environmental audits or process improvements; and
- reactive maintenance, which is maintenance undertaken to reinstate the operation and/or performance of an asset that has ceased to either operate or perform as designed and needs to be repaired or replaced immediately.

The first two types of repairs and maintenance – scheduled and planned – are counted by Seqwater as incorporating the “planned” aspects of repairs and maintenance because this work can be scheduled with some degree of flexibility. The third type of repairs and maintenance – reactive – is counted by Seqwater as incorporating the “unplanned” aspects of repairs and maintenance because this work generally is generally urgent and cannot be scheduled with any flexibility.

Under this three way split, Seqwater estimated that of all maintenance costs, 38.5% will be scheduled maintenance, 32.5% will be planned maintenance and 29% will be reactive maintenance. These percentages are based on industry standards and are targeted by Seqwater in its pursuit of best practice in repairs and maintenance. A report providing further background information on Seqwater’s approach to asset maintenance has previously been provided to SKM in the benchmarking phase of its *Grid Service Charges Review 2012-13*.

Notes on the use of historical data in forecasting costs

In the QCA’s recent review of SunWater’s operational expenditure forecasts for irrigation schemes, the QCA determined that some of SunWater’s proposed opex forecasts could not be found to be prudent or efficient, on the basis that SunWater’s forecasting methodology was inadequate in parts.

One notable concern related to SunWater’s view about a “typical year”, used to create an average or typical conditions given the climatic and seasonal volatility in its operating environmental. Specifically, SunWater used the ‘typical year’ concept to set certain parameters including:

- (a) the pattern of water use;
- (b) the climate and rainfall in each scheme;
- (c) environmental conditions and impacts on water quality, weed growth, erosion and other impacts on infrastructure;
- (d) asset performance and the likelihood of major breakdowns or system failures; and
- (e) the within year trend of overall workload,

which it then used in its methodology for forecasting operating expenditure in its network service plans. As noted in SunWater’s paper, *Supplementary information – Response to issues – operating*

cost forecasts (September 2011), its view on a typical year “did not involve a rigid process of determining a precise ‘typical year’ but rather that [the above] forecasting parameters were set”.

The method used by Seqwater to forecast opex is very different to that used by SunWater. Where historic information is relevant and has been used in forecasting, Seqwater has had reference only to actual costs in specifically defined periods, for example an escalation of the previous year’s actual costs or an average of the previous three year’s actual costs. Seqwater has not used an undefined concept of a ‘typical year’ in its operating cost forecasts.

Notes on forecasting electricity

For the purposes of forecasting electricity for its 2012-13 dam operations budget, 2010-11 actual costs were used as 2011-12 actuals were incomplete at the time the budget was prepared. The electricity budgets for recreation facilities were based on 2010-11 actual expenditure and year to date trends in 2011-12 actual expenditure.

Electricity costs relating to water grid assets such as urban supply water treatment plants, Western Corridor Recycled Water Scheme and the Gold Coast Desalination Plant were excluded from the base data for irrigation pricing.

QCA Question 2

Also, as already discussed, in your core submission you mention that Seqwater is in the process of placing insurances. Could you please advise if you are yet in a position to update your insurance premium cost estimates, including any savings from the merger with WaterSecure, and if not when we can expect to receive this information.

Seqwater Response to Item 2

No response as yet.

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Business Analyst

Economic Regulation

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