

**Inquiry into Auditor-General Report  
to Parliament 14 : 2012-13**  
**Maintenance of water infrastructure assets**

**Report No. 9, 55<sup>th</sup> Parliament**

**Utilities, Science and Innovation Committee**

**December 2015**

## **Utilities, Science and Innovation Committee**

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### **Acknowledgements**

The Committee acknowledges the assistance provided by the Queensland Audit Office and Seqwater.

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## Abbreviations

Committee	Utilities, Science and Innovation Committee
DEWS	Department of Energy and Water Supply
GCDP	Gold Coast Desalination Plant
PoQA	<i>Parliament of Queensland Act 2001</i>
QAO	Queensland Audit Office
Auditor-General Report	Report to Parliament 14 : 2012-13 Maintenance of water infrastructure assets
SDIIC	State Development, Infrastructure and Industry Committee (2012-2015)
the grid	South East Queensland Water Grid
WCRWS	Western Corridor Recycled Water Scheme

## Chair's foreword

This Report presents a summary of the Utilities, Science and Innovation Committee's examination of the Auditor-General Report to Parliament 14 : 2012-13 Maintenance of water infrastructure assets.

The Committee's task was to consider the Auditor-General's findings in relation to whether South East Queensland water infrastructure assets are being managed and maintained effectively to contribute to a secure and sustainable water supply.

On behalf of the Committee, I thank the Committee's secretariat, the Queensland Audit Office and Seqwater for their assistance with the Committee's consideration of the Auditor-General Report.

I commend this Report to the House.



Mr Shane King MP

Chair

December 2015

## Recommendation

### Recommendation 1

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The Committee recommends that the Legislative Assembly note:

- the advice from Seqwater that it has implemented the recommendations made in the Auditor-General Report No. 14 : 2012-13 Maintenance of water infrastructure assets
- that over the last three years Seqwater has significantly reduced the operating costs of the South East Queensland manufactured water assets
- the contents of this report.

## 1. Introduction

### 1.1 Role of the Committee

The Utilities, Science and Innovation Committee (the Committee) is a portfolio committee of the Queensland Legislative Assembly (the House) which commenced on 27 March 2015 under the *Parliament of Queensland Act 2001* (PoQA) and the Standing Rules and Orders of the Legislative Assembly.<sup>1</sup>

The Committee's primary areas of responsibility include:

- Main Roads, Road Safety and Ports
- Energy and Water Supply
- Housing and Public Works
- Science, Information Technology and Innovation.

The Committee, under section 94(1) of the PoQA, has responsibility to assess the integrity, economy, efficiency and effectiveness of government financial management within its portfolio area. It can do this by examining government financial documents and considering reports of the Auditor-General.

The Committee may deal with the matter under section 94(1) of the PoQA by considering the matter, reporting on the matter and making recommendations about it to the House.

### 1.2 Role of the Auditor-General

One of the roles of the Queensland Audit Office (QAO) is to provide Parliament with independent assurance of public sector accountability and performance. This is achieved through reporting to Parliament on the results of its financial and performance audits.

A performance audit evaluates whether an agency or government program is achieving its objectives effectively, economically and efficiently, and is compliant with relevant legislation. It does not consider the merits of government policy. Rather, it focuses on how that policy is implemented.

The Auditor-General's Report No. 14 for 2012-13: Maintenance of water infrastructure assets (Auditor-General Report) was prepared under Part 3 Division 3 of the *Auditor-General Act 2009* and was tabled in the Legislative Assembly in accordance with section 67 of the Act.

### 1.3 Referral

When the Auditor-General Report was tabled in the House on 4 June 2013 it was referred to the State Development, Infrastructure and Industry Committee (SDIIC). The SDIIC was inquiring into the issues covered by the Report when the 54<sup>th</sup> Parliament was dissolved in January 2015.

On 5 May 2015, the Committee of the Legislative Assembly advised the House that it had resolved, in accordance with Standing Order 194B, to refer the Auditor-General Report to the Committee for consideration.

### 1.4 Examination process

The Committee requested a private briefing from the QAO which was held on 20 May 2015. Following the briefing the Committee requested an update from Seqwater on progress in relation to the implementation of the recommendations made in the Auditor-General Report and this was provided to the Committee on 8 July 2015 and can be found at Attachment A of this report.

The Committee also undertook a site visit to Seqwater's manufactured water assets. The site visit, which included a briefing from Seqwater, was conducted on 29 June 2015.

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<sup>1</sup> PoQA, section 88 and Standing Order 194.

## 2. Examination of the Auditor-General Report

### 2.1 Background<sup>2</sup>

The South East Queensland Water Grid (the grid), Australia's largest urban water security system, was set up in 2007 in response to the Millennium Drought (2001-2009). It is managed by the new Seqwater, a statutory authority that was established on 1 January 2013 through a merger of three State-owned water businesses, the SEQ Water Grid Manager, Linkwater and the former Seqwater.<sup>3</sup> The \$10 billion<sup>4</sup> network carries harvested and manufactured water to 3.6 million people<sup>5</sup> across 21,000 square kilometres. Its treatment facilities and two-way pipes are intended to guarantee water supply security, regardless of climate change and population growth.<sup>6</sup>

The grid operates bulk water assets, such as dams, weirs, water treatment plants, and pipelines. It includes the Gold Coast Desalination Plant (GCDP) and the Western Corridor Recycled Water Scheme (WCRWS) and has a 600 kilometre reverse flow pipeline network enabling drinking water to be transported to where it is needed most, from Noosa to Coolangatta.

### 2.2 Report objectives and recommendations

#### 2.2.1 Objective of the audit

The Auditor-General Report examined whether the grid assets were being managed and maintained effectively to contribute to a secure and sustainable water supply. Specifically, the audit evaluated whether there were:

- adequate strategies for planning and maintaining water infrastructure assets consistent with government objectives
- adequate arrangements in place to meet the long-term water asset maintenance requirements
- adequate monitoring and reporting of performance of key water infrastructure assets.

The Auditor-General Report also reviewed the systems for long term water asset maintenance, looking in detail at the cost effectiveness of the two manufactured water assets.<sup>7</sup>

#### 2.2.2 Audit conclusions and recommendations

The Auditor-General Report concluded:

- the grid assets were being managed and maintained in accordance with agreed levels of service to contribute to a secure and sustainable water supply for South East Queensland and that asset management strategies and plans were in place or in development and reflect good practice
- the decision to develop the manufactured water assets was an appropriate response to the severe drought circumstances at the time, and they have provided water security

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<sup>2</sup> Unless otherwise referenced, the information in this report is taken from the Auditor-General Report

<sup>3</sup> Seqwater is also responsible for the long term planning of the region's future water needs, a function formerly undertaken by the Queensland Water Commission.

<sup>4</sup> <http://www.seqwater.com.au/water-supply> [accessed 29 Sep 2015]

<sup>5</sup> Seqwater, [Annual Report 2013-14](#):4

<sup>6</sup> Auditor-General Report 14, 2012-13:4

<sup>7</sup> Auditor-General Report 14, 2012-13:47



- the cost-efficiency of these assets could not be demonstrated, due to limited comparative benchmarking data and inconsistent operation of the plants in any one mode for a sustained period of time
- no robust business case was developed for the GCDP, the decision on the capacity of the plant did not benefit from the rigorous cost-benefit analysis that is required to be applied to such large scale investments
- for the WCRWS, while there was a business case that set out the expected full costs of the scheme, less rigour was applied to estimating potential benefits and the benefits were overstated
- the cost of construction and operation of the manufactured water assets were significantly higher than first anticipated, which further cast doubt on their value for money.

The Auditor-General Report recommended that Seqwater:

- expand baseline data on operating and maintenance costs for benchmark reporting
- develop performance measures for cost effectiveness
- enhance existing performance measures to include timeliness, quality and cost
- investigate opportunities to reduce ongoing costs associated with the GCDP and WCRWS and that this should incorporate a net present value assessment of the whole-of-remaining life costs and benefits associated with each alternative
- include incentives for cost minimisation in contracts with plant operators and agree a long-term target operating cost at the time of engaging the operator.<sup>8</sup>

Prior to publication of the Report in 2013, the QAO sought Seqwater's comments on the Auditor-General Report and its recommendations. On 30 May 2013, Seqwater advised the QAO that the Report's recommendations were in line with Seqwater's integration priorities and provided a table which indicated the work underway on each of the recommendations as well as an end date for completion. This advice was included by the QAO at Appendix A of the Auditor-General Report.

## **2.3 Efficiencies achieved since the Auditor-General Report was tabled in 2013**

### **2.3.1 Seqwater 2013 review**

The strategic audit was substantively conducted between January and July 2012. In mid-2012, the then Minister for Energy and Water Supply requested a review of all options to make the plants more cost effective and to improve the return on the assets over their life. The audit was temporarily halted in order to consider the findings of the review and the review report was made available to the QAO in November 2012.

The Department of Energy and Water (DEWS) advised the SDIIC at a public briefing held on 16 October 2013, that the review, which was led by the new Seqwater, recommended a series of changes to lower the cost of bulk water supply in the future and that the Government accepted the recommendations that the recycled water plant go into care and maintenance shut down mode and that the desalination plant be put into a hot standby mode and only be used for emergency purposes.<sup>9</sup>

The DEWS website provided details of the Government's decision to place the water assets in 'care and maintenance' mode, stating the Government decided to:

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<sup>8</sup> Auditor-General Report 14, 2012-13:4

<sup>9</sup> DEWS, SDIIC transcript, Public briefing on the Auditor-General Report, 16 Oct 2013:11

- continue to operate the GCDP in standby mode, with use strictly limited to providing critical water supply security during emergencies
- shut down the WCRWS as soon as practical with Seqwater continuing to care for and maintain the assets so that the scheme can be used when water levels fall below critical levels, providing a drought response. Moving to a 'care and maintenance' mode for the scheme should lead to future savings in bulk water costs.<sup>10</sup>

The Auditor-General Report referred to these operational changes in Appendix B of the report:

*At present, the Western Corridor Recycled Water Scheme and the Gold Coast Desalination Plant are operating well below capacity, following a decision by the Queensland Government to use these sources as emergency options while sufficient climate-dependent water from dams is readily available.*<sup>11</sup>

### 2.3.2 Operating costs

During 2011-12, (the figures available when the strategic audit was undertaken) operation of the grid cost \$76 million a month.<sup>12</sup>

The Auditor-General Report points out that, based on Seqwater's projections, if the GCDP operated at full capacity, its operating costs would equal \$1,021 per megalitre, but with the plant operating below capacity the costs were much higher, for example, in 2011-12, operating costs were \$4,403 per megalitre.<sup>13</sup> In 2011-12, due to reduced volume of recycled water produced, the operating and maintenance costs of the WCRWS equalled \$4,419 per megalitre, instead of the planned \$1,135 per megalitre at full production levels as estimated in the business case.<sup>14</sup>

In 2013, it was estimated that:

- a full shut down of the WCRWS for care and maintenance would save \$257.9 million over 15 years (in 2012 dollars) including costs to shut down and restart.<sup>15</sup> In other words, reducing the operating costs from around \$30 million to around \$11 million per year.<sup>16</sup>
- reducing the capacity of the GCDP to 33% would provide a \$9 million saving per year, reducing the operating costs from \$24.5 million to about \$15 million.<sup>17</sup>

The final Government decision was to maintain the GCDP at 100% but only running in hot standby to ensure that South East Queensland would have sufficient water in cases of emergency, such as the 2013 floods.<sup>18</sup>

In late 2013, Seqwater advised that it had already reduced its combined operating and capital costs by \$50 million in 2012-13 and was estimating a further \$80-odd million for 2013-14.<sup>19</sup>

Since the Ministerial review in mid-2012, Seqwater has focused on reducing costs and driving efficiencies with both assets. In its 2013-14 Annual Report, Seqwater reported a reduction of \$95 million in its operating expenses over the previous two years with a forecast return to profitability in

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<sup>10</sup> <http://www.dews.qld.gov.au/policies-initiatives/water-sector-reform/bulk-water-prices>, updated 19 August 2013 (accessed 10 May 2015)

<sup>11</sup> Auditor-General Report 14, 2012-13:47

<sup>12</sup> Auditor-General Report 14, 2012-13:1

<sup>13</sup> Auditor-General Report 14, 2012-13:3

<sup>14</sup> Auditor-General Report 14, 2012-13:3

<sup>15</sup> Auditor-General Report 14, 2012-13:32

<sup>16</sup> Seqwater, SDIIC transcript, Public briefing on the Auditor-General Report, 16 Oct 2013:16

<sup>17</sup> Seqwater, SDIIC transcript, Public briefing on the Auditor-General Report, 16 Oct 2013:16

<sup>18</sup> Seqwater, SDIIC transcript, Public briefing on the Auditor-General Report, 16 Oct 2013:17

<sup>19</sup> Seqwater, SDIIC transcript, Public briefing on the Auditor-General Report, 16 Oct 2013:17

2017-18, to be followed by a gradual reduction in the \$9.6 billion debt load incurred in building the bulk water network and capitalising the subsequent annual losses.<sup>20</sup>

Seqwater, in its 2014:15 Annual Report advised that it delivered an actual operating cost result of \$232.9 million in 2014-15 which is a \$127 million or 35% reduction compared to the pre-merger budgets of the previous water entities, which totalled \$360 million.<sup>21</sup>

In 2015, Seqwater advised the Committee that:

- the GCDP currently operates in a state of readiness ('hot standby') that is able to deliver 33% of capacity within 24 hours and 100% within 72 hours and this has generated savings of 15% against 2011-12 actual costs, despite rising unit rate costs of electricity
- the WCRWS was decommissioned on 31 March 2015 and is now in care and maintenance mode. The management focus is on cost optimisation in its current state and that this has reduced operating costs by more than 60% in 2014-15 against 2011-12 actual costs.<sup>22</sup>

Seqwater has continued to review options to reduce operating and capital costs of the bulk water system as part of an overall operational efficiency focus which is designed to put further downward pressure on bulk water prices and, in particular, is investigating:

- additional opportunities to further reduce operating costs for the WCRWS
- further operational efficiencies for the GCDP while maintaining the balance between a high state of availability and minimum ongoing operation and maintenance costs.<sup>23</sup>

### **2.3.3 Implementation of the recommendations made in the Auditor-General Report**

Seqwater has provided the Committee with written advice on implementation of the Auditor-General Report recommendations which indicates that, by June 2015, the recommendations had been implemented (see Attachment A of this report).

### **2.4 The South East Queensland water security program**

On 6 July 2015, Seqwater released [Water for Life](#) – a 30 year plan for providing safe, secure and cost-effective drinking water in South East Queensland. Seqwater advised the Committee that the water security program is underpinned by rigorous modelling and assessment, which demonstrates there are many options and differing approaches available to maintain South East Queensland's water security.

*The Program needs to be able to adapt to the extremes of large floods and long droughts, with climate predictions showing the weather is likely to become more variable in future.*

*Our initial assessment has shown that our existing manufactured water assets form an integral part of maintaining our water security, importantly the assessment shows no new water sources will be required until beyond 2030 outside of severe drought conditions or a sharp increase in water use...*

*In the case of the GCDP, our initial modelling shows the plant may well be required to meet peak demand on the Gold Coast from 2020. The WCRWS forms a significant drought response measure for the region and is required to supply when combined dam levels reach 40%. Remobilisation will be required earlier than this so that the WCRWS is ready to supply if storages reach the 40% operational trigger.<sup>24</sup>*

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<sup>20</sup> Seqwater, [Annual Report 2013-14:11](#)

<sup>21</sup> Seqwater, [Annual Report 2014-15:1](#)

<sup>22</sup> Seqwater, Presentation to USIC, 29 Jun 2015 and letter to USIC dated 8 Jul 2015:1

<sup>23</sup> Seqwater, letter to USIC dated 8 Jul 2015:1

<sup>24</sup> Seqwater, letter to USIC dated 8 Jul 2015:2

## 2.5 Committee comment and recommendation

### Committee Comment

The Committee notes the conclusions and recommendations made by the Auditor-General in 2013, and in particular:

- that while the decision to develop manufactured water assets was an appropriate response to the severe drought circumstances at the time and they have provided water security, the cost-efficiency of the water infrastructure assets could not be demonstrated and no robust business case was developed for the Gold Coast Desalination Plant
- the recommendations that Seqwater expand baseline data on operating and maintenance costs for benchmark reporting, enhance performance measures and investigate opportunities to reduce ongoing costs for the desalination plant and the recycled water plant.

The following evidence, presented during the course of the Committee's inquiry, has provided sufficient reassurance for the Committee to conclude that the issues raised by the Auditor-General in the Report have been significantly ameliorated since 2013:

- the desalination plant now operates in 'hot standby' mode which has generated savings of 15% against 2011-12 actual costs
- the recycled water plant has been decommissioned and is currently in 'care and maintenance mode' which has reduced operating costs by more than 60% compared to 2011-12 actual costs
- Seqwater continues to review options to reduce operating and capital costs of the bulk water system as part of an overall operational efficiency focus designed to put further downward pressure on bulk water prices
- water security for South East Queensland is assured as the desalination plant can gear up to 33% capacity within 24 hours and 100% within 72 hours; and the recycled water plant can be recommissioned if the combined level of key water grid storages falls to 40%
- Seqwater has advised that, as of June 2015, it has implemented all the recommendations made by the Queensland Audit Office in its 2013 Report.

### Recommendation 1

The Committee recommends that the Legislative Assembly note:

- the advice from Seqwater that it has implemented the recommendations made in the Auditor-General Report No. 14 : 2012-13 Maintenance of water infrastructure assets
- that over the last three years Seqwater has significantly reduced the operating costs of the South East Queensland manufactured water assets
- the contents of this report.

## **Appendix A – Seqwater update on implementation of QAO recommendations**

## Attachment A

### Detailed responses to recommendations by the Queensland Audit Office in Report No. 14: 2012–13

Recommendation	Agree / disagree	Timeframe for implementation	Update
1. expand baseline data on operating and maintenance costs for benchmark reporting	Agree	June 2014	<p>Seqwater was established from 1 January 2013 as a merger between all State-owned water businesses in SEQ. Following the merger a whole of business functional benchmark report was prepared, which was used in informing the development of the 2013–14 budget. This has contributed to a 22% reduction in operating costs from 2012–13.</p> <p>The merger has also ensured a whole of water cycle approach is included in these data sets from catchment to supply of treated water. This will ensure we are able to benchmark the most cost-effective solutions across the whole water supply chain. Seqwater has three tiers of benchmarking information programs implemented which in whole or part address operations and maintenance costs and performance:</p> <ul style="list-style-type: none"> <li>• Internal operations and maintenance performance across the Seqwater water treatment plant fleet via system dashboards which include an overall operational efficiency measure.</li> <li>• Peer industry operations and maintenance benchmarking through a confidential program across bulk water treatment and transport services in Australia and New Zealand. This program was initiated and led by Seqwater, with detailed qualitative information and quantitative performance measures captured and interrogated.</li> <li>• Independent benchmarking study by the Water Services Association of Australia (WSAA). The WSAA study is whole of business in that it covers 100% of Seqwater's operating expenditure across all activities (i.e. including finance, ICT, human resources, planning, etc.). There are 16 industry participants in this study and the exercise covers the entire water value chain, not just bulk water services.</li> </ul>
2. develop performance measures for cost effectiveness	Agree	June 2015	<p>As part of Seqwater's strategic planning process, a key outcome area for the organisation is focused on business efficiency and Key Performance Indicators are currently being refined that will measure cost effectiveness from a whole of business perspective.</p> <p>In the area of Asset Maintenance, new and refined specifications are being developed for all core infrastructure assets as part of an Integrated Master Plan. Those specifications provide detail about the supply required from the asset over time, and the ability to develop activity based cost measures. The specifications will be a key input to the maintenance planning process, enabling existing plans to be refined over time based on risks and performance.</p> <p>The Integrated Master Plan will improve planning with greater cross sector collaboration and partnerships providing the most cost effective whole of community solutions. Solutions may occur at any stage in the supply chain, from the Catchment through to the Customer.</p> <p>The draft 2015–16 review of the Seqwater Strategic Plan reflects significant progress towards</p>

Recommendation	Agree / disagree	Timeframe for implementation	Update
			<p>developing clear measurements of asset performance and cost effectiveness and include the following KPI's:</p> <ul style="list-style-type: none"> <li>• Operational expenditure against budget</li> <li>• Variable operating cost of water supplied from major WTPs</li> <li>• Capital expenditure (CAPEX) spend against budget</li> <li>• Capital efficiencies achieved (against estimated costs of approved projects)</li> <li>• Scheduled maintenance tasks delivered on time</li> </ul> <p>These KPI's flow through to the Strategic Asset Management Plan and Asset Class Plans to inform asset class and asset maintenance plans.</p> <p>The Integrated Master Plan is developed as part of the South East Queensland's Water Security Program and provides projected demand and supply planning for the region which will inform asset performance targets over time and allow for improved cross sector water supply planning.</p> <p>An investigation of Seqwater forecast operating costs from FY15–28 was completed by the Queensland Competition Authority (QCA) in FY15 as part of recommending to Government bulk water prices for the FY16–18 period. The QCA recommended Seqwater's forecast operating expenditure for FY15–28 be reduced by \$131M (1.2%), with these values (at a minimum) being adopted in Seqwater's forecast expenditures. Furthermore, the QCA recommended Seqwater report a forecast of FY28 price path debt updated for actual costs, forecast costs and forecast revenue on an annual basis to QTT and DEWS.</p>
<p>3. enhance existing performance measures to include timeliness, quality and cost</p>	<p>Agree</p>	<p>June 2015</p>	<p>As outlined above, specifications are being developed for all core assets as part of an Integrated Master Plan. Those specifications will provide detail about the supply required from the asset over time.</p> <p>Consistent with this approach, Seqwater has announced a new structure based on a separation of asset owner, manager and operator responsibilities. Specifications will be made by the asset owner group, which will be responsible for the Integrated Master Plan. The asset manager group will be responsible for managing infrastructure to achieve those specifications as cost effectively as possible</p> <p>Seqwater has developed Service Specifications and Planning Criteria, which underpin planning assessments and have been used in the recent QCA submission and development of the Water Security Program.</p> <p>Service specifications provide the overall customer expectations of the system such as the acceptable frequency of service interruptions or the maximum level of risk to which the customer may be exposed (e.g. drought security risk).</p> <p>The planning criteria are a set of assessment parameters which implement the adopted service specification to enable a structured process for planning to progress allow the assessment of portfolios of options in using a consistent approach. This enables a balance between water users' requirement for a safe, secure, reliable, quality water supply and the desire for this service to be provided at minimal cost.</p> <p>The application of planning criteria is an efficient way of assessing system performance and capability to</p>

Recommendation	Agree / disagree	Timeframe for implementation	Update
			<p>inform future investment; however, they are not intended to preclude the identification of innovative options or to diminish the goal of least-cost planning in promoting efficiency during planning. Actual infrastructure delivery will still be underpinned by appropriate planning investigations to ensure that all investment decisions meet the underlying service objectives in a demonstrably prudent and efficient manner.</p> <p>The service specifications and planning criteria were used as key assessment parameters to develop a 15 year System Operating Strategy, which is used for operational and asset investment planning, and was used in the recent QCA regulatory submission. The 15 year System Operating Strategy will be extended to cover 30 years as part of the Water Security Program.</p> <p>The System Operating Strategy seeks to minimise major capital investment and overall variable operating costs by utilising existing asset capabilities, subject to system constraints (such as adopted minimum flows to achieve water quality objectives).</p> <p>This approach for development of the System Operating Strategy is optimal for the business as currently the system is operating within its capability and hence there are no high-value, complicated life cycle based decisions to be made, and the short term the System Operating Strategy is focussed on utilising existing capacity (business as usual).</p> <p>The combination of the Service Specifications/Planning Criteria and the System Operating Strategy have enhanced existing performance of the system so that investment is made at the right time, at the right place and to meet agreed system performance measures. The Water Security Program will provide further improvements.</p>
<p>4. investigate opportunities to reduce the ongoing costs associated with the GCDP and WCRWS—this should incorporate a net present value assessment of the whole of-remaining life costs and benefits associated with each alternative</p>	<p>Agree</p>	<p>GCDP “hot standby” mode from July 2013.</p> <p>WCRWS placed in “care and maintenance” from March 2015.</p>	<p>Seqwater will continually review options to reduce the operating and capital costs of the bulk water supply system, including the GCDP and WCRWS. The reviews will be undertaken as part of the Water Security Program and Annual Operating Plan, as well as on an asset specific basis as appropriate.</p> <p>In addition to the broader corporate measures outlined in (1) - (3) above, specific cost reduction opportunities have been, and continue to be, investigated and implemented for the GCDP and WCRWS.</p> <p>Following a Ministerial Review of Operating Arrangements for the WCRWS and GCDP in late 2012, options were considered to make the plants more cost-effective and improve the return on the assets over their life. The review considered a number of options including a full shutdown of both assets as well as alternative operating options and alternative uses of the assets. All options were modelled using an Adjusted Lifecycle Costing Methodology providing a present value of lifecycle costs. Key recommendations at the time of the final report:</p> <ul style="list-style-type: none"> <li>• Shutdown of WCRWS, placing all assets under appropriate care and maintenance as part of a Readiness Plan to preserve their value and ensure they are ready to restart at capacity when the combined level of key Water Grid storages reaches 40%.</li> <li>• Bring the GCDP to a stand-by mode at a reduced capacity of 33% available within 24 hours. A section of the plant was to be decommissioned and placed under appropriate care and maintenance to ensure the production of the GCDP would be able to be returned to 100% when</li> </ul>



Recommendation	Agree / disagree	Timeframe for implementation	Update
			<p>the level of combined dam storages reached 60%.</p> <p><b>WCRWS Update</b></p> <p>The care and maintenance state was achieved on 31 March 2015 and the focus is now concentrated on managing down future costs for the scheme in its dormant state. Seqwater has achieved &gt;60% reduction in operating costs in 2014–15 against 2011–12 actual costs (excl shutdown project costs), and O&amp;M resourcing has halved. Investigation of further opportunities are continuing, which include asset reuse and other operational efficiencies.</p> <p><b>GCDP Update</b></p> <p>Following the Australia Day 2013 weather event, significant water supply risks were highlighted at the system level. Subsequently a revised recommendation was adopted by the Minister in 2013 to maintain GCDP at a standby mode of 100% capacity. This is the currently implemented operating regime. Seqwater is actively managing the scope and costs in this operating regime to establish an optimised cost baseline. Through the efforts to date Seqwater have achieved 15% efficiency savings against 2011–12 actual costs, despite rising unit rate costs for energy in particular. Further operational efficiencies continue to be investigated whilst maintaining the balance between a high state of availability and minimum ongoing operations and maintenance costs.</p>
<p>5. include incentives for cost minimisation in contracts with plant operators and agree a long-term target operating cost at the time of engaging the operator.</p>	<p>Agree</p>	<p>August 2013 for new operation and maintenance contract and by June 2015 for other operating contracts.</p>	<p>Achieving operational cost savings is a key priority of Seqwater and reviewing the structure of operating contracts is ongoing. Following the merger the opportunity has been taken to further reduce asset related costs by releasing a revised network operations and maintenance tender to the market with a view to improving Seqwater asset knowledge, establishing benchmark Key Performance Indicators and preparing for a more incentivised performance based contracts.</p> <p>For the manufactured water assets, Seqwater is on-track to establish optimised baseline costs as benchmark Key Performance Indicators and preparing for a more incentivised contracting phase. The focus to date has been on minimising the current cost base of both manufactured water assets before transitioning to a performance-based regime. Once these options are fully explored and all operational risks are well understood, consideration will be given to an incentive mechanism that rewards sustainable cost savings achieved. This will involve a determination of whether such a regime is practicable and sufficiently understood to carry an acceptable level of risk with regard to over-rewarding or incentivising undesirable outcomes. To this end Seqwater will be considering next steps in this approach by December 2015.</p> <p>The separate network operations &amp; maintenance contract was let in 2013, and has seen significant reductions in the O&amp;M cost associated with those assets. Seqwater's future asset maintenance delivery model will build upon the outcomes and learnings from the current network contract.</p>