

Sydney Water Corporation Operational Audit 2012/13

Report to the Minister

Water — Compliance Report
December 2013

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Executive Summary

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) has completed the audit of Sydney Water Corporation's (Sydney Water) compliance with the requirements of its 2010-2015 operating licence (the licence). This audit covers the period from 1 July 2012 to 30 June 2013.

The audit is the main regulatory instrument that we use to assess compliance with the licence. We applied a risk based approach to the audit. Under this approach, we assess the risk of non-compliance with a licence obligation to determine an appropriate audit frequency for that requirement. We audit those clauses that we consider to be 'high risk' more frequently while low risk clauses are audited less frequently. We audit all requirements of the operating licence at least once during the 5-year term of the licence.

Further, in determining the scope of the audit we consult with the NSW Ministry of Health (NSW Health) and seek public submissions. This year, NSW Health identified the following areas of interest:¹

NSW Health advised that the audit of the management systems should include:

- ▼ the adequacy of the 'verification of water quality', which should consider:
 - whether the monitoring data are representative and reliable
 - sampling procedures
 - use of accredited labs
 - performance in inter-laboratory proficiency testing (where applicable)
 - Lab QA/QC procedures
- ▼ monitoring and management of critical / control points and the management of incidents.

We received no public comment and NSW Health's areas of interest were included in the audit.

¹ NSW Health, personal email Paul Byleveld, Manager Water Unit, NSW Health, to Peter Burgess Senior Analyst, IPART, 16 May 2013.

Adopting a risk based approach has improved the effectiveness and efficiency of the audit process, without increasing risks to the community. The approach allows audit resources to be targeted to areas of higher risk. It also reduces the overall burden of compliance for the utility.

To assist us in the 2012/13 operational audit of Sydney Water, we engaged a specialist auditing firm (Cardno (QLD) Pty Ltd).

Overview of audit findings

This year Sydney Water demonstrated a high level of compliance with its operating licence. The auditor found that Sydney Water:

- ▼ continued to deliver drinking water of an excellent standard to its customers throughout 2012/13
- ▼ has well developed procedures and processes in place to manage recycled water, and the performance of its water recycling plants in meeting water quality targets was excellent
- ▼ has a robust asset management system in place and has demonstrated that it implements this system to a very high standard, thereby providing its customers with an excellent standard of services
- ▼ is progressing delivery of the Priority Sewerage Program in accordance with the timeframe set out in the licence
- ▼ has robust procedures in place in the areas of customer hardship, debt, water flow restriction and disconnection and adequate systems to support these procedures.

The auditor noted that Sydney Water performed very well against the audited clauses and that except for the presence of few minor shortcomings would have achieved full compliance for all clauses.

In summary, the audit found that Sydney Water achieved:

- ▼ **Full Compliance** with requirements relating to drinking water quality.
- ▼ **High Compliance** with requirements relating to recycled water quality.
- ▼ **Full Compliance** with requirements relating to infrastructure performance.
- ▼ **High Compliance** with requirements relating to customer and consumer rights.

Sydney Water compliance is summarised in Table 1 below.

Table 1 Sydney Water's compliance in 2012/13, the third year of its 2010-2015 operating licence

Licence Part	Number of audited clauses ^a	Full	High
Part 2 – Water Quality	7	6	1
Part 3 - Infrastructure Performance	7	7	
Part 4 – Consumer and Customer Rights	4	2	2
Total	18	15	3

^a The 18 licence requirements audited this year were determined by IPART and advised to Sydney Water in letter of 21 May 2013.

Source: IPART, email of 9 May 2013 to Sydney Water re: 2012/13 audit scope. Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013.

Annual Statement of Compliance

In preparing this report we also reviewed Sydney Water's annual Statement of Compliance (Appendix D). This is an exception report certified by the Chief Executive Officer and the Chairman of the Board of Directors that lists any licence breaches that occurred during the year. Further, it outlines any remedial action that has been taken, or is in the process of being taken. This year Sydney Water identified no incidences of non-compliance.

IPART's Recommendations

IPART endorses most of the auditor's findings. There were 2 clauses for which the auditor did not award Full Compliance. The auditor made recommendations in relation to recycled water (clause 2.2) and the priority sewerage program (clause 3.6).

However, after considering additional information we have made the following 3 recommendations in order to improve compliance with the Operating Licence:

Recommendations

- 1 Sydney Water's internal processes for ensuring compliance of customers' operating recycled water schemes (classified *municipal use - restricted access and application*, or *municipal use - enhanced restrictions on access and application*) with their contract should be strengthened. At the moment, Sydney Water relies on the Annual Declarations from customers to manage the potential exposure risks or inappropriate uses of recycled water.
 - As a minimum, Annual Declarations forms need to be strengthened and all customers advised on how to properly complete their Annual Declarations.

Where appropriate, customers are to re-submit declarations for 2012/13 that have not been completed properly.

- Additional procedures, such as site inspections for signage and usage controls, should be considered.
- 2 The Recycled Water Quality Management Plan should be updated to fully reflect how Sydney Water's Liverpool recycled water plant is configured and how it is achieving breakpoint chlorination. It also needs to specify target limits, as well as critical limits. This should be given to NSW Health for endorsement.
- 3 Following the treatment plant verification program, the Recycled Water Quality Management Plans should be reviewed and updated, where appropriate, and submitted to NSW Health for endorsement.

Subject to the Minister's endorsement, IPART will request Sydney Water to implement these recommendations and report to us by 31 March 2014 on its progress.

1 Introduction and Scope

Sydney Water is a State Owned Corporation (SOC) owned by the NSW State Government. Its primary role is to supply potable water and manage wastewater systems to protect public health and the environment in Sydney, Illawarra and the Blue Mountains. These roles and responsibilities, as well as Sydney Water's objectives, are prescribed by the *State Owned Corporations Act 1989* (NSW), the *Sydney Water Act 1994* (NSW) (the Act) and the Operating Licence (the licence) issued to Sydney Water under Part 5 of the Act.

IPART has completed the annual operational audit of Sydney Water's compliance with the obligations outlined in its licence.

We do this by receiving and reviewing reports and engaging an auditor to undertake an audit (which includes interviewing utility staff and undertaking site visits). At the completion of the audit we publish the audit report and report our findings to the Minister.

Further, we also assess compliance by reviewing the annual Statement of Compliance prepared by the utility (Appendix D). This is an exception based report listing any licence breaches that occurred during the year and what remedial action has, or is being taken, to resolve the matter.

1.1 Purpose and Structure of this report

The purpose of this report is to inform the Minister for Finance and Services of Sydney Water's performance against its licence obligations for the audit period and to set out recommendations in response to these findings.

- ▼ Chapter 1 explains the scope of the audit and the process followed in undertaking the audit
- ▼ Chapter 2 presents a summary of the audit findings and recommendations
- ▼ Appendix A contains the table of compliance grades used for this Audit
- ▼ Appendix B contains the audit scope
- ▼ Appendix C provides the auditor's detailed audit report
- ▼ Appendix D provides Sydney Water's annual Statement of Compliance.

1.2 Audit scope

This audit covers the period from 1 July 2012 to 30 June 2013.

The audit scope for this year included obligations relating to:

- ▼ Water Quality (Part 2) – requirements relating to drinking water quality and the management of recycled water.
- ▼ Infrastructure Performance (Part 3) – requirements relating to the implementation of Sydney Water’s asset management framework, and the planning and delivery of the Priority Sewerage Program.
- ▼ Consumer and Customer Rights (Part 4) – requirements relating to customer hardship, debt, water flow restrictions and disconnections for non-payment.

1.3 The audit process

We engaged Cardno to assist with the 2012/13 audit of Sydney Water. The auditor was required to undertake the following tasks in accordance with our *Audit Guidelines for Public Water Utilities*, May 2013.

1. Liaise with NSW Health and other relevant departments to determine the agencies’ views on Sydney Water’s licence compliance and whether any licence obligations should receive special focus as part of the audit.
2. Receive stakeholder submissions and comments for inclusion in the audit scope.
3. Prepare an information request (questionnaire), setting out all information and evidence requirements, 2 weeks prior to the commencement of audit interviews.
4. Review reports and documents provided by Sydney Water in response to the questionnaire.
5. Conduct face-to-face interviews with Sydney Water staff at its offices.
6. Conduct site visits to view a physical asset or facility and assess the implementation of Sydney Water’s systems and procedures.
7. Assess the level of compliance achieved by Sydney Water against each of the obligations of the licence set out in IPART’s risk-based audit scope, providing supporting evidence for this assessment and reporting compliance according to IPART’s compliance grades (Appendix A).
8. Assess and report on progress by Sydney Water in addressing any comments made by the relevant Minister and/or recommendations endorsed by IPART pertaining to previous audits, providing supporting evidence for these assessments. In the case of Sydney Water there were no outstanding recommendations.

9. Verify the calculation of performance indicators associated with requirements of the relevant operating licence and undertake an assessment of any underlying trends in performance arising from these indicators.
10. Provide the drafts of the audit report to IPART and address comments from Sydney Water and IPART regarding the draft audit findings.
11. Prepare a final report on the findings of the audit.

As part of the audit process, we sought submissions from the public on any matter related to the operating licence prior to the commencement of the audit interviews. We advertised for public submissions in the Sydney Morning Herald and The Daily Telegraph on 29 May 2013. No submissions from the public were received.

We contacted NSW Health prior to the audit interview to seek its views on compliance or any other areas which should be reviewed as part of the audit.

NSW Health advised that the audit of the management systems should include:

- ▼ the adequacy of the 'verification of water quality', which should consider:
 - whether the monitoring data are representative and reliable
 - sampling procedures
 - use of accredited labs
 - performance in inter-laboratory proficiency testing (where applicable)
 - Lab QA/QC procedures
- ▼ monitoring and management of critical / control points and the management of incidents.

The auditor adopted an audit methodology that was consistent with the following Standard:

- ▼ ASAE 3000: Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

The guidelines contained within the above standard set out a systematic approach to defining the requirements of an audit, ensuring that it is conducted in accordance with an established and recognised audit protocol.

The auditor also carried out the audit according to our Audit Guidelines for Public Water Utilities.² Under this guideline, auditors can either make recommendations or suggest opportunities for improvement. Where we support an auditor's recommendation, we follow up the matter to ensure that it is addressed.

² IPART, *Audit Guideline – Public Water Utilities*, May 2013. This Audit Guideline is on our website (www.ipart.nsw.gov.au).

Where auditors have suggested opportunities for improvement we take a different approach. The utility can decide whether to implement an opportunity, based on its own assessment of whether the improvement is a prudent and efficient way to achieve its outcomes. We take this approach to balance improved performance with the investment required to improve it. That is, we want the utility to consider the pricing implications of continued improvement and value for money before the utility implements further improvement. As a consequence, we do not follow up these matters.

We held a project start up meeting with the auditors on 29 July 2013 to agree on the project milestones and timing of the audit, as well as to outline IPART's expectations of the audit. We also held an audit inception meeting with Sydney Water and Cardno on the first day of the audit interviews, 23 September 2013. At this meeting a mutual understanding and expectation of the audit was established and protocols for the conduct of the audit were agreed. All parties adhered to the agreed protocols throughout the audit.

The operating licence audit interviews were conducted from 23 September to 26 September 2013 at Sydney Water's offices in Parramatta. The auditor also undertook site visits at the following locations on 25 September 2013:

- ▼ Macarthur Water Filtration Plant
- ▼ Liverpool Water Recycling Plant
- ▼ Sydney Water's Customer Service Centre at Liverpool
- ▼ West Hoxton Priority Sewerage Project.

Sydney Water's compliance with the relevant requirements of the operating licence was assessed according to the compliance grades outlined in Appendix A.

Finally, prior to the audit, Sydney Water provided a Statement of Compliance (Appendix D of this report). This statement indicates that Sydney Water has fully complied with its licence in 2012/13 (including the clauses subsequently audited this year).

2 Summary of audit findings and recommendations

This chapter provides a summary of the auditor's findings and recommendations for each of the audited clauses and sub clauses of the licence. The 2012/13 audit is the third audit of the 2010-2015 licence.

For each of the audited licence clauses, we have included a table comparing Sydney Water's performance in audits since its first operational audit of the current licence in 2011.

The sources of data for these tables are the audit reports listed below:

- ▼ IPART, *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011.
- ▼ IPART, *Sydney Water Corporation Operational Audit 2011/12 - Report to the Minister*, November 2012.
- ▼ Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013 (Appendix C of this report).

Compliance grades in the tables are abbreviated according to the following convention:

- ▼ **Full** = Full Compliance; **High** = High Compliance; **Adeq** = Adequate Compliance; **NC** = Non-Compliant; **NR** = No requirement.

Following the table, we discuss those clauses where Sydney Water received less than Full Compliance and the auditor's reasoning for the grade. We also discuss the recommendations and opportunities for improvement to address the issues that have resulted in less than Full Compliance.

2.1 Water Quality

Part 2 of the licence outlines the obligations for managing water quality, including drinking water and recycled water. Under the risk based auditing framework, we consider that this Part of the licence poses a high risk with respect to both the likelihood and consequence of non-compliance. This year, 2 clauses were audited.

Sydney Water achieved Full Compliance for 1 of the 2 audited clauses in this Part of the licence and High Compliance for the other clause.

Table 2.1 Summary of compliance with Part 2 of the licence – Water Quality

2	Clause Requirement	Compliance Grading				
		2010/11 ^a	2011/12 ^b	2012/13	2013/14	2014/15
2.1	Drinking Water	High-Full	Full	Full		
2.2	Recycled Water (including stormwater)	Full	Full	High		

a 2010/11 compliance grades awarded to Sydney Water.

b 2011/12 compliance grades awarded to Sydney Water.

Sources: IPART, *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011. IPART, *Sydney Water Corporation Operational Audit 2011/12 - Report to the Minister*, November 2012. Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013.

The auditor found that Sydney Water continued to deliver drinking water of an excellent standard to its customers throughout 2012/13. Sydney Water has complied with the health requirements of the Australian Drinking Water Guidelines (2011) (ADWG). It has also complied with the aesthetic requirements specified by NSW Health and the Minister, the operating targets set out in the Fluoridation Code, as well as the specific issues which NSW Health required be addressed in the audit.³ Accordingly, the auditor awarded Sydney Water Full Compliance for clause 2.1.

The auditor did not make any recommendations in relation to drinking water quality.

In relation to recycled water, the auditor found that Sydney Water has well developed procedures and processes in place to manage recycled water schemes, and that the performance of its water recycling plants in meeting water quality targets was excellent. However, it was considered that Sydney Water did not provide sufficient input into the management of lower risk recycled water schemes to achieve Full Compliance. Instead, it relied too much on Annual Declarations from customers operating such recycled water schemes to manage potential water quality risks. As a result, the auditor awarded Sydney Water High Compliance for clause 2.2.

The auditor made 4 recommendations in relation to clause 2.2. However, after considering additional information, we have combined these recommendations into 3.

For full details of the auditor's recommendations see the auditor's report in Appendix C.

³ For further details on the ADWG's, NSW Health's and the Minister's requirements, and the actions taken by Sydney Water to address them, see Appendix C (Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013, pp 2-12).

Recommendations

- 1 Sydney Water's internal processes for ensuring compliance of customers' operating recycled water schemes (classified *municipal use - restricted access and application*, or *municipal use - enhanced restrictions on access and application*) with their contract should be strengthened. At the moment, Sydney Water relies on the Annual Declarations from customers to manage the potential exposure risks or inappropriate uses of recycled water.
 - As a minimum, Annual Declarations forms need to be strengthened and all customers advised on how to properly complete their Annual Declarations. Where appropriate, customers are to re-submit declarations for 2012-13 that have not been completed properly.
 - Additional procedures, such as site inspections for signage and usage controls, should be considered.
- 2 The Recycled Water Quality Management Plan should be updated to fully reflect how Sydney Water's Liverpool recycled water plant is configured and how it is achieving breakpoint chlorination. It also needs to specify target limits, as well as critical limits. This should be given to NSW Health for endorsement.
- 3 Following the treatment plant verification program, the Recycled Water Quality Management Plans should be reviewed and updated, where appropriate, and submitted to NSW Health for endorsement.

To help Sydney Water maintain its Full Compliance for drinking water quality, the auditor has noted 4 opportunities where it may be able to further improve its operations in this area. These include:

- ▼ Better utilisation of Sydney Water's Incident Recording and Learning (SWIRL) tool.
- ▼ The introduction of critical control point, target and critical level terminology throughout related documentation.
- ▼ Increased usage of Google maps for the presentation of water quality data.
- ▼ Updating of Sydney Water's Annual Drinking Water Quality Plan to clearly identify that the Woronora water supply system can be supplied from Potts Hill as well as Woronora.

For full details on these opportunities for improvement, see the auditor's report in Appendix C.

For recycled water, the auditor did not identify any opportunities for improvement.

2.2 Infrastructure Performance

Sydney Water has achieved Full Compliance with the 2 audited clauses for Infrastructure Performance.

Part 3 of the licence outlines the asset management framework, as well as system performance standards (for water continuity, water pressure and sewage overflows) and the Priority Sewerage Program. Under the risk-based auditing framework, we consider this part of the licence to be one that poses a moderate to high risk in terms of the likelihood and consequence of non-compliance.

Table 2.2 Summary of compliance with Part 3 of the licence – Infrastructure Performance

Clause	Requirement	Compliance Grading				
		2010/11 ^a	2011/12 ^b	2012/13	2013/14	2014/15
3	Infrastructure Performance					
3.1.1	Managing Assets	Full	Full	Full		
3.6	Priority Sewerage Program	Full	-	Full		

^a 2010/11 compliance grades awarded to Sydney Water.

^b 2011/12 compliance grades awarded to Sydney Water.

Sources: IPART, *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011. IPART, *Sydney Water Corporation Operational Audit 2011/12 - Report to the Minister*, November 2012. Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013.

Sydney Water's asset management practices have been subject to considerable scrutiny in recent years. Therefore, this audit focused principally on the implementation of the asset management framework to Sydney Water's sewer mains and water filtration plants.

The auditor found that Sydney Water has a robust asset management system in place and has demonstrated that it implements this system (in the many areas that were reviewed) to a very high standard, thereby providing its customers with an excellent standard of services. Based on this evidence, the auditor awarded Sydney Water Full Compliance for clause 3.1.1.

The auditor also found that Sydney Water is progressing delivery of the Priority Sewerage Program (in the areas specified in the licence) in accordance with the timeframe set out in the licence. It is also meeting the other requirements of this clause in relation to possible significant development in the Austral and Menangle and Menangle Park areas. As evidence of its performance in this area, Sydney Water presented a comprehensive suite of planning documents, servicing strategies and construction documents.

Based on its review of Sydney Water's management of the Priority Sewerage Program, the auditor awarded Sydney Water Full Compliance for clause 3.6.

The auditor did not make any recommendations in relation to the asset management clause (clause 3.1.1) but did note 1 opportunity for improvement. This related to Sydney Water achieving a better understanding of the current status of condition assessment information for all active assets. For full details on the opportunity for improvement, see the auditor's report in Appendix C.

The auditor made a recommendation relating to the Priority Sewerage Program (clause 3.6). However, as our audit guidelines state that no recommendations should be made when Full Compliance is achieved, the recommendation is seen as an opportunity for improvement. For full details on this, see the auditor's report in Appendix C.

2.3 Customer and Consumer Rights

Sydney Water achieved Full Compliance for 2 out of the 4 audited clauses and High Compliance for the remaining 2.

Section 4 of the licence covers the customer contract, the code of practice on debt and the Customer Council. It also includes specific practices and procedures relating to customer hardship, debt, water flow restriction and disconnection for non-payment. Under the risk based auditing framework, we consider that this part of the licence poses a low to moderate risk with respect to both the likelihood and consequence of non-compliance. This year only 1 clause in this part of the licence was audited.

Table 2.3 Summary of compliance with Part 4 of the licence – Customer and Consumer Rights

Clause	Requirement	Compliance Grading				
		2010/11 ^a	2011/12 ^b	2012/13	2013/14	2014/15
4	Infrastructure performance					
4.4	Practices and procedures relating to customer hardship, debt, water flow restriction and disconnection for non-payment	Full	-	High		

^a 2010/11 compliance grades awarded to Sydney Water.

^b 2011/12 compliance grades awarded to Sydney Water.

Sources: IPART, *Sydney Water Corporation Operational Audit 2010/11 - Report to the Minister*, November 2011. IPART, *Sydney Water Corporation Operational Audit 2011/12 - Report to the Minister*, November 2012. Cardno, *Independent Pricing and Regulatory Tribunal Operational Audit of Sydney Water Corporation*, November 2013.

The auditor found that Sydney Water has robust procedures in place in the areas of customer hardship, debt, water flow restriction and disconnection, and adequate systems to support these procedures. It was noted that staff were knowledgeable and well trained in the relevant procedures and systems. Sydney Water also undertook substantial quality assurance activities to test conformance with its procedures.

However, it was identified that in a very small number of instances Sydney Water had not followed its procedures relating to restrictions, which had resulted in some customers who either had fully or partly paid their outstanding water bills having their water supply restricted for short periods of time. This was because Sydney Water had not been providing contractors undertaking restrictions with the most current information regarding customer payments. It was noted that Sydney Water had already identified this problem and undertaken action to preclude a recurrence of these incidents.

The auditor also found that, in a few instances, Sydney Water had failed to implement water restrictions on customers for a considerable period of time after a 48 hour deadline for payment had elapsed.

Further, in some cases Sydney Water may not always have provided customers experiencing financial difficulty with all of the information available relating to hardship, restrictions and disconnections. This was because case managers assigned to help these customers were only providing the customers select information based on customers' particular circumstances.

In light of the actions already undertaken by Sydney Water, the auditor made no recommendations regarding this part of the licence.






The auditor noted 2 opportunities for improvement to assist Sydney Water, and its contractors, better manage water restriction operations. These opportunities for improvement are outlined in the auditor's report in Appendix C.



Appendices

A IPART Compliance Grades

Compliance grades for public utilities

Grades of compliance	Description
Full Compliance 	Sufficient evidence to confirm that the requirements have been fully met.
High Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from very few minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
Adequate Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from a number of minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes
Non compliant 	Sufficient evidence has not been provided to confirm that all major requirements are being met and the deficiency adversely impacts the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
No Requirement 	The requirement to comply with the licence condition does not occur within the audit period or there is no requirement for the utility to meet this assessment criterion.

B | 2012/13 Audit Scope

Sydney Water Corporation – Operating Licence 2010-2015

2012-13 Audit Scope

Peter Burgess



SYDNEY WATER CORPORATION – 2012-2013 AUDIT SCOPE

Key to Table 1

Requirement	Meaning
Audit	Clause to be audited for 2012-2013. Note for this year these subclauses are denoted Audit/SC so there is no confusion as to the need to also provide a statement of compliance.
SC	Clause where IPART will rely on the utilities statement of compliance. As below, all clauses require a Statement of Compliance unless there is a designation No requirement.
NR	No requirement (for audit or statement of compliance).

Auditors should note any Tribunal directions shown as comments column.

This scope is based on the audit schedule determined for the operating licence 2010 -2015 Trim Record Number D13/9968.

Recommendations from previous years

There are no outstanding recommendations

Statement of Compliance

By 1 September each year, the utility is required to provide a Statement of Compliance (SC) signed by the Managing Director and a Board Member for all licence clauses (no matter whether they are scheduled to be audited or not in that year). We may request evidence or an interview to assess compliance with any clause in more detail.

Table 1 – Audit scope 2012-2013 Sydney Water Corporation

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
2.1	Drinking Water		
	<p>(a) Sydney Water must manage Drinking Water quality to the satisfaction of NSW Health in accordance with the Australian Drinking Water Guidelines (unless NSW Health specifies otherwise).</p> <p>(b) Sydney Water must prepare, to the satisfaction of NSW Health, a Five Year Drinking Water Quality Management Plan covering the entire five year term of the Licence. The Five Year Drinking Water Quality Management Plan must be in operation by 31 December 2010 and include strategies for the comprehensive management of the quality of Drinking Water in Sydney Water's water supply system in accordance with the Australian Drinking Water Guidelines (unless NSW Health specifies otherwise).</p> <p>(c) The Five Year Drinking Water Quality Management Plan is to be revised for the period 1 July 2015 to 30 June 2020. Sydney Water must provide a draft revised Five Year Drinking Water Quality Management Plan to NSW Health by 31 December 2014.</p> <p>(d) Sydney Water is to implement procedures and processes for the appropriate management of the Drinking Water supply system under its control in light of its knowledge of the entire Drinking Water supply system (from the source to the consumer). Sydney Water must have adequate systems and processes in place to manage Drinking Water quality taking into account planning and risk management and their implementation across the entire Drinking Water supply system.</p> <p>(e) Sydney Water must comply with the fluoridation plant operating targets set out in the Fluoridation Code.</p> <p>(f) Sydney Water must report on Drinking Water quality monitoring in the manner and form outlined in the Reporting Manual.</p>	Audit/SC	<p>Audit each year will be a combination of risk based adequacy and implementation.</p> <p>Audit will also be informed by consultation with NSW Health and outcomes of previous audits</p>
2.2	Recycled Water (including stormwater)		
	<p>Sydney Water must manage Recycled Water quality in accordance with:</p> <p>(a) the Australian Guidelines for Water Recycling (unless NSW Health specifies otherwise) to the satisfaction of NSW Health; and/or</p> <p>(b) any other guidelines specified by NSW Health to the satisfaction of IPART.</p> <p>(c) Sydney Water must report on Recycled Water quality monitoring in the manner and form outlined in the Reporting Manual.</p>	Audit/SC	<p>Audit each year will be a combination of risk based adequacy and implementation.</p> <p>Audit will also be informed by consultation with NSW Health and outcomes of previous audits</p>

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
2.3	Changes to management of water quality		
	<p>(a) Sydney Water must notify NSW Health of any proposed changes to its processes for:</p> <p>(1) managing; or</p> <p>(2) reporting to NSW Health in relation to; Drinking Water quality under clause 2.1 or Recycled Water quality under clause 2.2 where such changes may have a material impact on public health.</p> <p>(b) Sydney Water must obtain NSW Health's approval for any changes notified under clause 2.3(a) before implementing them.</p>	SC	<p>Matter to be discussed with NSW Health to determine whether audit is required and in which areas.</p> <p>Prior notice of change IPART to be advised of any changes prior to finalisation of audit scopes.</p>
3.1.1	Managing Assets		
	Sydney Water must ensure that its Assets are managed consistently with the asset management framework described in clause 3.1.2.	Audit/SC	Audit primary focus is to be on implementation of the framework via site inspections.

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
3.1.2	Asset management framework		
	<p>Sydney Water's asset management framework must demonstrate:</p> <ul style="list-style-type: none"> (a) robust and transparent methodologies for determining and prioritising licensing and other regulatory requirements and current and future service levels as well as identifying the infrastructure needed to achieve those service levels and requirements; (b) robust, transparent and consistent processes, practices and programs to ensure sustainable delivery of service levels and regulatory requirements, based on sound risk management, including: <ul style="list-style-type: none"> (1) asset inventory; (2) asset planning incorporating both business and technical risk assessments; (3) maintenance of adequate records and robust and reliable data; (4) asset replacement, rehabilitation, augmentation, creation/acquisition and/or substitution (asset and non asset substitutions); (5) management of service provision, including contracts; (6) monitoring and condition assessment; (7) proactive and reactive maintenance; (8) operations; (9) training and resourcing; (10) contingency planning covering both emergency management and business continuity; and (11) asset rationalisation and disposal; (c) robust and transparent decision making processes that balance acceptable risk with cost and service provision to achieve prudent, efficient and effective operating and capital investment; (d) an approach that achieves the lowest cost of service delivery through the effective life cycle management of the asset base; and (e) robust and transparent processes of review and continuous improvement in asset management. 	NR	
3.2	Notification of significant changes to asset management framework		
	<p>Sydney Water must advise IPART of any significant changes to processes and methodologies established in accordance with clause 3.1.2 which may have a material impact on the asset management framework.</p>	SC	Prior notice of change IPART to be advised of any changes prior to finalisation of audit scopes.

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
3.3	System performance standards		
	<ul style="list-style-type: none"> (a) For the purposes of this clause 3.3 (except in relation to Uncontrolled Sewerage Overflows under clause 3.3.3), each separately billed or separately occupied part of multiple occupancy Property is considered to be a separate Property. (b) For the purposes of Uncontrolled Sewerage Overflows under clause 3.3.3, each multiple occupancy Property is counted as a single Property. (c) In the case of any ambiguity in the definition or application of any system performance standards, IPART's interpretation or assessment of the system performance standards will prevail. 	NR	Definition clause does not require audit
3.3.1	Water Pressure Standard		
	<ul style="list-style-type: none"> (a) Water Pressure Standard Sydney Water must ensure that no more than 6,000 Properties experience a Water Pressure Failure in a financial year in its Drinking Water supply system. (b) Water Pressure Failure <ul style="list-style-type: none"> (1) A Property is taken to have experienced a Water Pressure Failure at each of the following times: <ul style="list-style-type: none"> (A) when a person notifies Sydney Water that the Property has experienced a Water Pressure Failure and that Water Pressure Failure is confirmed by Sydney Water; or (B) when Sydney Water's systems identify that the Property has experienced a Water Pressure Failure. (2) A Property will not be taken to have experienced a Water Pressure Failure only because of a short term operational problem (such as a main break) which is remedied within 4 days of its occurrence or from abnormal demand (such as demand during fire fighting). (3) Clause 3.3.1(b)(1) does not limit the circumstances in which a Property will have experienced a Water Pressure Failure. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
3.3.2	Water Continuity Standard		
	<p>(a) Water Continuity Standard Sydney Water must ensure that:</p> <ol style="list-style-type: none"> (1) no more than 40,000 Properties experience an Unplanned Water Interruption exceeding 5 hours in a financial year; and (2) no more than 14,000 Properties experience 3 or more Unplanned Water Interruptions of more than 1 hour duration in a financial year, in its Drinking Water supply system. <p>(b) Unplanned Water Interruption</p> <ol style="list-style-type: none"> (1) In determining whether a Property experiences an Unplanned Water Interruption a best estimate is to be applied from the best available data, taking account of water pressure data where that data is available. (2) A Property is taken to have experienced a separate Unplanned Water Interruption for each period of 5 hours or more that the Unplanned Water Interruption exists. (3) Clause 3.3.2(b)(2) does not limit the circumstances in which a Property will have experienced an Unplanned Water Interruption under clause 3.3.2(b)(1). 	SC	
3.3.3	Sewage Overflow Standard		
	<p>Sydney Water must ensure that:</p> <ol style="list-style-type: none"> (a) no more than 14,000 Properties (other than Public Properties) experience an Uncontrolled Sewage Overflow in dry weather in a financial year; and (b) no more than 175 Properties (other than Public Properties) experience 3 or more Uncontrolled Sewage Overflows in dry weather in a financial year. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
3.4	Service quality and system performance indicators		
	<p>(a) Sydney Water must maintain record systems that are sufficient to enable it to measure accurately its performance against the Service Quality and System Performance Indicators.</p> <p>(b) In the case of any ambiguity in the definition or application of any indicators, IPART's interpretation or assessment of the indicators will prevail.</p>	SC	
3.5	Response time for water main breaks		
	<p>(a) Sydney Water's response to water main breaks and leaks (in the trunk and reticulation components of Sydney Water's Drinking Water supply system between water treatment plants and a Property), as measured from the time Sydney Water receives notification of a break or leak to the time Sydney Water stops the loss of water, will be as follows:</p> <p>(1) Priority 6 breaks/leaks 90% of jobs within 3 hours</p> <p>(2) Priority 5 breaks/leaks 90% of jobs within 6 hours</p> <p>(3) Priority 4 breaks/leaks 90% of jobs within 5 days</p> <p>(b) Categorisation of Priorities 4, 5 and 6 is set out in Schedule 3.</p>	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
3.6	Priority Sewerage Program	Audit/SC	
	(a) Sydney Water must continue with the planning and delivery of the Priority Sewerage Program such that wastewater services are provided to the requisite number of lots in the following areas by the dates specified below:		
	(1) Agnes Banks and Londonderry by 31		
	December 2012		
	(2) Glossodia, Freeman's Reach and		
	Wilberforce by 31 December 2012		
	(3) Yellow Rock and Hawkesbury Heights by		
	31 December 2012		
	(4) Appin by 30 June 2015		
	(5) Wilton and Douglas Park by 30 June 2014		
	(6) West Hoxton by 30 June 2014		
	(7) Bargo and Buxton by 30 June 2014		
	(8) Cowan by 30 June 2014		
	(9) Galston and Glenorie by 30 June 2015.		
	(b) Sydney Water will commence planning for		
	Yanderra by 30 June 2015.		
	(c) If either Sydney Water or a licensee under the		
	<i>Water Industry Competition Act 2006</i> provides		
	wastewater services to a significant		
	development (as determined by the Minister) in		
	an adjoining area to one of the following areas		
	in the Priority Sewerage Program:		
	(1) Austral		
	(2) Menangle and Menangle Park,		
	then Sydney Water must deliver the Priority		
	Sewerage Program in that area such that		
	wastewater services are made available to		
	customers within 24 months of wastewater		
	services being available to service the		
	significant development.		
	(d) Clause 3.6(b) does not apply where a licensee		
	under the <i>Water Industry Competition Act 2006</i>		
	provides wastewater services to the relevant		
	area of the Priority Sewerage Program.		
	(e) Should delays caused by consent authorities		
	impair Sydney Water's ability to meet the		
	timeframes set out in this clause 3.6, Sydney		
	Water must write to the Minister to advise of		
	the reasons for the delay.		
	(f) Sydney Water must provide an annual report		
	on its progress in implementing the Priority		
	Sewerage Program to IPART in accordance		
	with the <i>Reporting manual</i> .		

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
4.1	Customer Contract		
	<p>(a) Section 54 of the Act requires that the terms and conditions of a customer contract are set out in Sydney Water's operating licence. Sydney Water's customer contract is set out in Schedule 2 (Customer Contract).</p> <p>(b) The Customer Contract sets out the rights and obligations of Customers and Sydney Water in relation to the Services provided through systems required under the Licence. These rights and obligations are in addition to the rights and obligations conferred by the Act and any other law.</p> <p>(c) A copy of the Customer Contract, and any variations to it must be posted on Sydney Water's website for downloading by any person free of charge and provided to Customers free of charge upon request.</p>	SC	
4.2.1	Explaining the Customer Contract		
	<p>Sydney Water must prepare a pamphlet that:</p> <p>(a) provides a brief explanation of the Customer Contract;</p> <p>(b) summarises the key rights and obligations of Customers under the Customer Contract;</p> <p>(c) refers to the types of account relief available for Customers experiencing financial hardship; and</p> <p>(d) contains a list of Sydney Water's contact numbers in its Area of Operations.</p>	SC	
4.2.2	Explaining variation to Customer Contract		
	<p>The pamphlet prepared under clause 4.2.1 must be updated when changes are made to the Customer Contract and must be disseminated by Sydney Water free of charge to:</p> <p>(a) Customers, at least once annually with their quarterly or other bills; and</p> <p>(b) any other person on request.</p>	SC	
4.3	Consumers		
	<p>Sydney Water's obligations under the Customer Contract relating to complaint handling and complaint resolution procedures are extended to Consumers as if the Consumers were a party to the relevant Customer Contract.</p>	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
4.4	Practices and procedures relating to customer hardship, debt, water flow restriction and disconnection for non-payment		
	<p>(a) Sydney Water must have in place and comply with procedures relating to customer hardship, debt, water flow restriction and disconnection. These procedures must include:</p> <ol style="list-style-type: none"> (1) a customer hardship policy for residential Customers, that helps residential Customers in financial difficulty better manage their current and future bills; (2) a payment plan for residential Customers who are responsible for paying their bill and who are, in Sydney Water's opinion, experiencing financial difficulty; (3) conditions for disconnection of supply or water flow restriction in accordance with the disconnection procedure set out in the Customer Contract; and (4) provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential Customers experiencing financial difficulty. <p>(b) Sydney Water must set out the procedures relating to customer hardship, debt, water flow restriction and disconnection referred to in clause 4.4(a) in the Customer Contract.</p> <p>(c) Sydney Water must provide information on its procedures relating to customer hardship, debt, water flow restriction and disconnection free of charge to:</p> <ol style="list-style-type: none"> (1) residential Customers, at least once annually with their quarterly or other bills; (2) residential Customers who are identified as experiencing financial difficulty; and (3) any other person who requests it. <p>(d) Sydney Water must publish its procedures relating to customer hardship, debt, water flow restriction and disconnection on its website.</p> <p>(e) Sydney Water must advise residential Customers of their rights, including any rights to have a complaint or dispute referred to the Energy and Water Ombudsman NSW for resolution.</p>	Audit/SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
4.5.1	Customer Councils		
	<p>(a) In accordance with the Act, Sydney Water must have in place and regularly consult with a Customer Council to enable community involvement in issues relevant to the performance of Sydney Water's obligations under the Licence. Sydney Water may have one or more Customer Councils.</p> <p>(b) Sydney Water must consult with the Customer Council, in accordance with the terms of the relevant Customer Council Charter, on:</p> <ol style="list-style-type: none"> (1) the interests of Customers and Consumers of Sydney Water; (2) the Customer Contract; and (3) such other key issues related to Sydney Water's planning and operations as Sydney Water may determine. <p>(c) Sydney Water must appoint the members of a Customer Council, consistent with the Licence.</p> <p>(d) At all times, the membership of a Customer Council must include a representative for the interests of at least each of the following:</p> <ol style="list-style-type: none"> (1) business and consumer groups; (2) low income households; (3) people living in rural and urban fringe areas; (4) residential consumers; (5) environmental groups; (6) local government; and (7) people from culturally and linguistically diverse backgrounds. <p>(e) Sydney Water must provide a Customer Council with information within its possession or under its control (other than information or documents over which Sydney Water or another person claims confidentiality or privilege) necessary to enable that Customer Council to discharge the tasks assigned to it.</p>	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
4.5.2	Customer Council Charter		
	<p>(a) In consultation with members of each Customer Council, Sydney Water must maintain a customer council charter (Customer Council Charter) that addresses:</p> <ol style="list-style-type: none"> (1) the role of the Customer Council; (2) selection criteria on how members will be drawn from the community; (3) how the Customer Council will operate; (4) induction processes for new members; (5) a description of the type of matters that will be referred to the Customer Council; (6) procedures for the conduct of Customer Council meetings, including the appointment of a chairperson and the requirement to invite on an annual basis a co-chair of the Customer Council from Customer representatives; (7) communicating the outcome of the Customer Council's work to the public, including the publication of meeting agenda and minutes on Sydney Water's website; (8) procedures for tracking issues raised and ensuring appropriate follow-up of those issues; and (9) funding and resourcing of the Customer Council by Sydney Water including sitting fees and expenses for members. <p>(b) Either Sydney Water or the Customer Council may propose any amendments to the Customer Council Charter. However, such amendments will not be effective until they have been approved by both Sydney Water and the Customer Council.</p>	SC	
5.1	Internal Dispute Resolution Process		
	<ol style="list-style-type: none"> (a) Sydney Water must establish and maintain internal complaint handling procedures for receiving, responding to and resolving Complaints by Customers and Consumers against Sydney Water. (b) The internal complaints handling procedures of Sydney Water must be based on the Australian Standard AS/ISO 10002: 2004 MOD Customer Satisfaction – Guidelines for Complaint Handling, as amended or replaced from time to time. (c) Sydney Water must make available to Customers and Consumers information concerning its internal complaints handling procedures which explains how to make a Complaint and how the complaint handling procedure works. (d) Sydney Water must provide information of the nature described in clause 5.1(c) to Customers through their quarterly, or other, bills at least once annually. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
5.2	External Dispute Resolution Scheme		
	<ul style="list-style-type: none"> (a) Sydney Water must establish or be a member of an industry based dispute resolution scheme for the resolution by a dispute resolution body of disputes between Sydney Water and its Customers and between Sydney Water and Consumers. (b) Any industry based dispute resolution scheme so established by Sydney Water is subject to the Minister's approval. (c) Sydney Water must: <ul style="list-style-type: none"> (1) prepare a pamphlet that explains how the dispute resolution scheme operates and how it can be accessed; and (2) provide that pamphlet to Customers through their quarterly or other bills, at least once annually. 	SC	
6.1	Environment management		
	<ul style="list-style-type: none"> (a) Sydney Water must maintain an environmental management system certified to AS/NZS ISO 14001:2004 (as updated from time to time) to manage environmental risk of its business and service delivery. (b) Sydney Water must prepare a Five Year Environment Plan in accordance with the environmental management system in clause 6.1(a) by 30 September 2010. The Five Year Environment Plan must: <ul style="list-style-type: none"> (1) include Sydney Water's environmental objectives; (2) contain details of Sydney Water's program to meet the environmental objectives including targets and timetables; (3) endorse the principles of ecologically sustainable development; (4) be integrated into Sydney Water's business plans; and (5) be posted on Sydney Water's website for downloading by any person free of charge. A copy of the plan must be provided to any member of the public free of charge upon request. (c) Sydney Water must complete an annual progress report in accordance with the Reporting Manual, outlining details of Sydney Water's progress with the environmental objectives, targets and timetable. (d) Each year Sydney Water must review the Five Year Environment Plan by consulting with DECCW and peak environmental non-governmental organisations to determine whether any changes to the Five Year Environment Plan are required in the subsequent year and the nature of those amendments. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
6.2	Environment indicators		
	<p>Sydney Water must:</p> <ul style="list-style-type: none"> (a) monitor, record and compile data on the Environmental Performance Indicators; and (b) report on the Environmental Performance Indicators, <p>in accordance with its obligations under the Reporting Manual.</p>	SC	
7.1	Water Usage Level		
	<ul style="list-style-type: none"> (a) Sydney Water must reduce the quantity of Drinking Water it draws from all sources to a level of water usage equal to, or less than, 329 litres per person per day (the Water Usage Level) by 30 June 2011. (b) Thereafter, Sydney Water must continue to maintain the Water Usage Level for the remainder of the term of the Licence, to be measured at 30 June each year. (c) In calculating water usage for the purposes of the Water Usage Level, Sydney Water may make reasonable adjustments to account for the effects of weather on water usage using a methodology approved by IPART. (d) If Sydney Water fails to meet the Water Usage Level in a particular year, Sydney Water must demonstrate, to the satisfaction of IPART, that it would not have been reasonable to meet the Water Usage Level in that year. (e) Sydney Water must undertake a review of the water usage level as part of the end of term review of this Licence. 	SC	
7.2	Water Leakage		
	<ul style="list-style-type: none"> (a) Sydney Water must ensure that the level of water leakage from its Drinking Water supply system (the Water Leakage Level) does not exceed 105 megalitres per day. (b) When calculating the Water Leakage Level each year, Sydney Water must use the assumptions and methodology approved by IPART. (c) Sydney Water must complete a review by 31 December 2011 to determine the economic Water Leakage Level and submit a report on this review to IPART. The review must be conducted in a manner acceptable to IPART. (d) Following submission of the report from Sydney Water under clause 7.2(c), IPART must provide a recommendation to the Minister as to the economic Water Leakage Level. (e) Following review of the report submitted to IPART under clause 7.2(c) and consideration of IPART's recommendation under clause 7.2(d), the Minister may adjust the Water Leakage Level. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
7.3	Water efficiency programs		
	<ul style="list-style-type: none"> (a) Sydney Water must undertake and promote water efficiency programs. (b) Sydney Water must give due consideration to water efficiency and other water conservation measures as part of planning the future provision of its Services, including addressing water leakage. 	SC	
7.4	Water recycling program (including stormwater)		
	<ul style="list-style-type: none"> (a) Sydney Water must promote, foster and encourage the production and use of Recycled Water in the Area of Operations. (b) Sydney Water must: <ul style="list-style-type: none"> (1) meet any target relating to the production and/or use of Recycled Water set by the Minister from time to time consistent with the objectives of the Metropolitan Water Plan; and (2) implement any particular Recycled Water schemes indicated by the Minister so as to meet any target in clause 7.4(b)(1) above. (c) Sydney Water is not required to undertake any Recycled Water scheme where it is not financially viable to do so. 	SC	

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
7.5	Water Conservation Strategy Document and annual report		
	<p>(a) Sydney Water must prepare and submit to IPART and the Minister by 31 December 2010 a Five Year Water Conservation Strategy Document covering the term of the Licence. The Five Year Water Conservation Strategy Document must include details of:</p> <ol style="list-style-type: none"> (1) strategies relating to water leakage; (2) strategies relating to Recycled Water; (3) strategies relating to water efficiency; (4) how the water conservation strategies outlined in paragraphs (a)(1) – (a)(3) above contribute to the objectives and targets outlined in the Metropolitan Water Plan. <p>(b) The Five Year Water Conservation Strategy Document must provide an analysis of current and future programs and projects being undertaken, and expected to be undertaken, by Sydney Water. In particular, the Five Year Water Conservation Strategy Document must outline Sydney Water's water conservation objectives, targets and timetable for the entire term of the Licence.</p> <p>(c) Sydney Water must provide an annual report on its progress in implementing its water conservation strategies in accordance with the Reporting Manual. The annual report must include an explanation of how work done for the purpose of implementing the water conservation strategies undertaken during the year contribute to the objectives and targets outlined in the Metropolitan Water Plan.</p> <p>(d) The following documents must be placed on Sydney Water's website:</p> <ol style="list-style-type: none"> (1) the annual report on Sydney Water's progress in implementing its water conservation strategies required under clause 7.2(c); and (2) the Five Year Water Conservation Strategy Document. 	SC	
9	Reporting and maintaining records		
	<p>(a) Sydney Water must comply with its reporting obligations set out in the Reporting Manual and must report to IPART in accordance with the Reporting Manual.</p> <p>(b) Sydney Water must provide to NSW Health a copy of any report referred to in the Reporting Manual relating to water quality monitoring.</p> <p>(c) Sydney Water must maintain record systems that are sufficient to enable it to accurately report in accordance with clause 9(a).</p>	SC	IPART will discuss any issues in respect of (b) with NSW Health.

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
10.1	Request for information and access – IPART		
	<p>(a) Sydney Water must comply with any reasonable request by IPART for information relating to the performance by Sydney Water of its obligations under clause 9.</p> <p>(b) As part of its obligations under clause 10.1(a), Sydney Water must provide IPART with physical and electronic access to the records kept by Sydney Water that enable it to comply with clause 9.</p> <p>(c) Sydney Water must provide IPART with such information as IPART reasonably requires to enable it to conduct any reviews of the Licence or obligations under the Licence as may be required by the Minister.</p>	SC	
10.2	Request for information and access – NSW Health		
	<p>Sydney Water must comply with any request by NSW Health for information relating to water quality. The information provided under this clause must be in the manner and form specified by NSW Health.</p>	SC	<p>IPART will seek confirmation from the NSW Health on Sydney Water's compliance with this clause. Should they identify any concerns this clause will be included in the audit.</p>

Licence Clause	Operating Licence Obligations	Requirement 2012/13	Comments
11	Memoranda of Understanding		
	<p>(a) In accordance with the Act, Sydney Water must maintain a memorandum of understanding with each of the following:</p> <ol style="list-style-type: none"> (1) the Water Administration Ministerial Corporation (WAMC); (2) NSW Health; and (3) DECCW, <p>for the term of the Licence.</p> <p>(b) The purpose of a memorandum of understanding is to form the basis for co-operative relationships between the parties to the memorandum. In particular:</p> <ol style="list-style-type: none"> (1) the memorandum of understanding with NSW Health is to recognise the role of NSW Health in providing advice to the Government of NSW in relation to: <ol style="list-style-type: none"> (A) the management of the supply of Drinking Water to ensure it is safe to drink; and (B) the management of the supply of Recycled Water in respect of its fitness for purpose and effects on health; (2) the memorandum of understanding with DECCW is to recognise DECCW as the environmental regulator of the State and to commit Sydney Water to environmental obligations; and (3) the memorandum of understanding with the WAMC, is to recognise the role of WAMC in regulating water access, use and management and Sydney Water's right to use water vested in the WAMC. <p>(c) Clause 11(a) does not limit the persons or regulatory agencies with whom Sydney Water may have a memorandum of understanding.</p>	SC	
12	End of term review of Licence		
	<p>(b) Sydney Water must, on the direction of the Minister, make available to the public on request and for downloading from its website, and free of charge, the report prepared by the Licence Reviewer at the conclusion of the review.</p>	NR	

C Operational Audit Report 2012/13 – Sydney Water Corporation

Operational Audit of Sydney Water Corporation

3604-07

Prepared for
Independent Pricing and Regulatory Tribunal

November 2013



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Executive Summary

Introduction

Cardno has conducted a detailed audit of Sydney Water's compliance against nominated clauses of its Operating Licence for the 2012-13 year (ending 30 June 2013) on behalf of the Independent Pricing and Regulatory Tribunal of NSW (IPART). This report documents the findings of our audit.

Audit Opinion






In forming our audit opinion we confirm that:

- ▶ We have seen sufficient evidence on which to base our conclusions
- ▶ Our audit findings accurately reflect our professional opinion
- ▶ We have noted the requirements of the *Audit Guideline – Public Water Utilities*, IPART, May 2013 and the audit deed when conducting the audit, determining audit findings and preparing the report
- ▶ The audit findings have not been unduly influenced by Sydney Water and/or any of its associates.

Overall Performance

Sydney Water has managed its resources in 2012-13 to achieve the following compliance levels in relation to its Operating Licence, as shown in Table 1.

Table 1 Summary of Compliance

Licence Part	Description	Compliance - Overall
2.1	Drinking Water Quality	Full Compliance 
2.2	Recycled Water Quality	High Compliance 
3.1.1	Managing Assets	Full Compliance 
3.6	Priority Sewerage Program	Full Compliance 
4	Customer and Consumer Rights	High Compliance 

Findings and Recommendations by Licence Part

Overall, Sydney Water performed very well against the audited clauses. We have made some recommendations in relation to recycled water and the priority sewerage program.

Drinking Water Quality

Sydney Water achieved Full Compliance in meeting its licence requirements for the quality of water supplied during the audit period. The drinking water supplied is of an excellent standard and complies with the requirements of NSW Health and the Australian Drinking Water Guidelines (ADWG) (2011).

Recommendations – Drinking Water Quality

There are no recommendations relating to this Clause.

Recycled Water Quality

Sydney Water has achieved High Compliance in meeting its licence requirements. Sydney Water has well developed procedures and processes in place to manage recycled water. The performance of plants in meeting water quality targets was considered to be excellent. However, our audit of the Liverpool recycled water scheme found that there were a few minor shortcomings with the management of the lower risk recycled water schemes.

Recommendations – Recycled Water Quality

- RW-2013| 1. Sydney Water's internal review processes for managing annual declarations from customers operating recycled water schemes classified municipal use, with restricted access and application, or municipal use, with enhanced restrictions on access and application need to be strengthened and all customers advised on how to complete the Annual Declaration and, where appropriate, asked to re-submit declarations for 2012-13.
- RW-2013| 2. Sydney Water should consider having some level of input into the management of recycled water at the two sites (Liverpool Golf Club and Warwick Farm Racecourse) and possibly other similar sites rather than fully relying on the Annual Declaration to manage the inappropriate use of recycled water or exposure risks.
- RW-2013| 3. The Liverpool RWQMP should be updated to fully reflect how the Liverpool plant is configured and how it is achieving breakpoint chlorination. It also needs to specify target limits as well as critical limits. Following verification of the plant the RWQMP should be updated and submitted to NSW Health.
- RW-2013| 4. Following the treatment plant verification program, relevant Recycled Water Quality Management Plans should be reviewed, updated where appropriate, and submitted to NSW Health.

Managing Assets

Sydney Water has achieved Full Compliance in meeting its licence requirements

Sydney Water's asset management practices have been subject to considerable scrutiny in recent years. Therefore, this audit focused on the implementation of this framework to the asset classes of sewer mains and water filtration plants. In practice, it was found to be difficult to separate out consideration of the framework itself from implementation of the framework.

We found that Sydney Water has demonstrated implementation of its asset management framework in the many areas that we tested.

Recommendations – Managing Assets

There are no recommendations relating to this Clause.

Priority Sewerage Program

Sydney Water has achieved Full Compliance in meeting its licence requirements.

Our review of planning documents (including feasibility studies, servicing strategies and business cases) and construction documents (including as constructed drawings, commissioning reports and certificates of availability) shows that Sydney Water is progressing delivery of the Priority Sewerage Program into the required areas in accordance with the timeframe set out in its licence.

We also found that Sydney Water is meeting the other requirements of this clause relating to reporting and acting on possible development in areas adjoining the Austral, Menangle and Menagle Park. areas.

Recommendations – Priority Sewerage Program

PSP-2013| 1. We recommend that for the 2013-14 Priority Sewerage Program Annual Report that Sydney Water provides a reconciliation (as far as is possible) between the details in Schedule 4 and the actual lots serviced in each scheme to date and planned for future.

Customer and Consumer Rights

Sydney Water has achieved High Compliance in meeting its licence requirements. Sydney Water has robust procedures in the areas of customer hardship, debt, water flow restriction and disconnection. It has adequate systems to support these procedures and we found staff to be knowledgeable and well trained in the relevant procedures and systems. We also found that substantial quality assurance was undertaken by Sydney Water to test its conformance with its own procedures.

The foundation documents are the Customer Contract, Payment assistance policy and Overdue payments and disconnections for non-payment policy. We found that the procedures in these documents are made readily available to customers as required under the licence.

Sydney Water identified that in a very small number of instances it has not followed its procedures relating to restrictions. We consider that constitutes 'very few minor shortcomings' in meeting the requirements of the clause and accordingly have awarded a grade of high compliance in this area. Sydney Water stated that it has improved its processes during 2012-13 to try to eliminate this possible error and we were provided evidence that suggests that this issue has largely been addressed.

For Clause (c)(2) which requires that information be provided to customers experiencing financial difficulty, we found that while Sydney Water has a comprehensive approach to assisting customers in financial difficulty, this may not always include providing these customers with the information detailed. This is because the case manager will decide what information to provide to customers based on their particular circumstances. While we appreciate why this approach is taken, it does not fully meet the requirement that information on procedures in these areas are provided to customers and therefore have awarded high compliance for this clause.

Recommendations – Customer and Consumer Rights

There are no recommendations relating to this Clause.

Abbreviations and Acronyms

Abbreviation/Acronym	Description
48HD	48 hour notice
Act	Sydney Water Act, 1994 (NSW).
ADWG (2004) and (2011)	Australian Drinking Water Guidelines (2004) and (2011), National Health and Medical Research Council and Natural Resource Management Ministerial Council
AGWR	Australian Guidelines for Water Recycling (2006), The Environment Protection and Heritage Council, the Natural Resources Management Ministerial Council and the National Health and Medical Research Council.
AOMS	Assets and Operations Maintenance System
AS	Australian Standard
ASAE	Australian Standard on Assurance Engagements
AWTP	Advanced Water Treatment Plant
BCS	Business Continuity System
BMIS	Business Management Information System
BOO	Build Own Operate
Capex	Capital Expenditure
CAR	Corrective Action Request
CCP	Critical Control Point
CCT	Chlorine Contact Tank
CCTV	Closed Circuit Television
CIS	Customer Information System
CMS	Complaints Management System
CMMS	Computerised Maintenance Management System
CPP	Contracting Partners Program
CRWMS	Customer Recycled Water Management System
Ct	Concentration x time
DA	Development Application
DAL	Department of Analytical Laboratories (Lidcombe)
DR	Debt Recovery
<i>E.coli</i>	<i>Escherichia coli</i>
EKAMS	Effluent Knowledge and Management System
EPA	Environment Protection Authority (NSW)
EWON	Energy and Water Ombudsman NSW
FRC	Free Residual Chlorine
FSQM	Field Services Quality Manual
GIS	Geographical Information System
GL	Gigalitre
HACCP	Hazard Analysis and Critical Control Point
HPC	Heterotrophic plate count bacteria

Abbreviation/Acronym	Description
IEC	International Electrotechnical Organisation
IICATS	Integrated Instrumentation, Control and Telemetry System
IPART	Independent Pricing and Regulatory Tribunal (NSW)
ISO	International Standards Organisation
IT	Information Technology
JOG	Joint Operational Group
kL	Kilolitre (1 thousand litres)
km	Kilometre
KPI	Key Performance Indicator
LRV	Log Reduction Value
LTV	Long term Trigger Value
ML	Megalitre (1 million litres)
MOU	Memorandum of Understanding
MPMS	Monitoring Process Monitoring System
M&R	Monitoring and Reporting
NATA	National Analytical Testing Authority
NDMA	N-Nitrosodimethylamine
NOM	Natural Organic Matter
NOW	NSW Office of Water.(within the Department of Primary Industries)
NPR	National Performance Report (published by the National Water Commission and the parties to the National Water Initiative).
NSW Health	NSW Department of Health
pa	Per annum
PAC	Powdered Activated Carbon
PAS	Payment Assistance Scheme
pH	A measure of the acidity of a solution related to the concentration of hydrogen ions.
PLC	Programmable Logic Controller
QA	Quality Assurance
QMS	Quality Management System
RWP	Recycled Water Plant
RWQMP	Recycled Water Quality Management Plan
RWMS	Recycled Water Management System
SAP	Systems, Applications and Products in Data Processing
SCA	Sydney Catchment Authority
SCADA	Supervisory Control and Data Acquisition
SDP	Sydney Desalination Plant Pty Ltd
SIP	Standard Incident Procedure
SLC	Strategic Liaison Committee
SLG	Strategic Liaison Group
SOP	Standing Operating Procedure
SPS	Sewage Pumping Station
STV	Short term Trigger Value

Abbreviation/Acronym	Description
SWGC	South West Growth Corridor
SWIRL	Sydney Water Incident Recording and Learning System
Sydney Water	Sydney Water Corporation
TC	Total Chlorine
TDS	Total Dissolved Solids
TOC	Total organic carbon
UV	Ultraviolet
WFP	Water Filtration Plant
WQ	Water Quality
WRP	Water Recycling Plant
WSAA	Water Services Association of Australia

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- Appendix E Detailed Audit Findings – Customers and Consumer Rights (clause 4.4)

1 Introduction

1.1 Objectives

The objective of this audit is to provide an independent assessment of Sydney Water's compliance with the relevant obligations under its Operating Licence for the period 1 July 2012 to 30 June 2013.

1.2 Audit Method

1.2.1 Audit Scope

IPART operates a risk-based approach to licence auditing. This approach matches the frequency of audit of each clause in the Licence to the level of risk (likelihood and consequence) of a potential breach of that clause.

For this operational audit of Sydney Water, the scope of the audit and the licence clauses to be assessed were pre-determined by IPART and provided in the audit Request for Quote (Reference 13/178).

This report details Sydney Water's compliance with those clauses nominated by IPART as requiring independent auditing in 2012-13. The clauses subject to this audit are summarised in Table 1-1.

Table 1-1 Auditable clauses for the 2012-13 Operational Audit of Sydney Water Corporation

Licence Section	Description	Clauses
2	Drinking Water	2.1,
2	Recycled Water	2.2
3.	Managing Assets	3.1.1
3	Priority Sewerage Program	3.6
4	Customer and Consumer Rights	4.4

The audit included a thorough audit questionnaire and desk top review of information provided by Sydney Water; a focused interview program; and a complementary site inspection program including a drinking water treatment plant (operated by a Build Own Operate (BOO) contractor – being Macarthur WFP), a recycled water treatment plant (Liverpool WRP), the Sydney Water Customer Service Centre and a priority sewerage scheme (West Hoxton).

1.2.2 Audit Standard

Our methodology is documented by a Local Work Instruction which is consistent with the Cardno Quality Management System. This Local Work Instruction has been prepared in accordance with the requirements of the following auditing standards:

- ▶ ASAE 3100, Standard on Assurance Engagements - Compliance Engagements
- ▶ ASAE 3000, Assurance Engagements Other than Audit or Reviews of Historical Financial Information.

1.2.3 Audit Steps

The steps involved in the audit process followed the requirements of the *Audit Guideline - Public Water Utilities, IPART, May 2013*. The steps included:

- ▶ A start-up meeting with IPART on the 29 July 2013

- ▶ Consultation with NSW Health on the 7 August 2013
- ▶ Issue of an audit questionnaire to Sydney Water on the 12 August 2013
- ▶ Receipt of the questionnaire response from Sydney Water on the 4 September 2013. The response was accompanied by a *Statement of Compliance* from Sydney Water
- ▶ On-site interviews of relevant Sydney Water staff from the 23 to 26 September 2013
- ▶ A site visit was undertaken on the 25 September to the Macarthur WFP, Sydney Water Customer Service Centre, Liverpool WRP and the West Hoxton Priority Sewerage Project. These sites were selected as being relevant to the audit scope
- ▶ A draft audit report was issued to Sydney Water and IPART on the 18 October 2013
- ▶ A revised draft report which addressed comments from Sydney Water and IPART was issued on the 8 November 2013
- ▶ Issue of a final report on the 27 November 2013.






1.2.4 Audit Team

The audit team included:

- ▶ Aneurin Hughes who undertook the audit of Drinking Water Quality and Recycled Water Quality. Aneurin is approved as a lead auditor for water quality on IPART's panel of approved auditors and technical professionals
- ▶ Stephen Walker who undertook the audit of infrastructure performance and retail supply. Stephen is approved as a lead auditor for both audit categories on IPART's panel of approved auditors and technical professionals.

1.2.5 Audit Grades

The table below describes the ratings used to assess compliance in this audit. These terms are consistent with compliance grades provided by IPART and range from 'Full Compliance' to 'Non Compliance'.

Grades of compliance	Description
Full Compliance 	Sufficient evidence to confirm that the requirements have been fully met.
High Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from very few minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
Adequate Compliance 	Sufficient evidence to confirm that the requirements have generally been met apart from a number of minor shortcomings which do not compromise the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes
Non compliant 	Sufficient evidence has not been provided to confirm that all major requirements are being met and the deficiency adversely impacts the ability of the utility to achieve defined objectives or assure controlled processes, products or outcomes.
No Requirement 	The requirement to comply with the licence condition does not occur within the audit period or there is no requirement for the utility to meet this assessment criterion.

1.3 Regulatory Regime

Sydney Water's water supply and wastewater service operations are regulated by various State Government agencies as outlined below:

- ▶ The NSW Government, which grants Sydney Water's Operating Licence under the *Sydney Water Act 1994*
- ▶ The Independent Pricing and Regulatory Tribunal (IPART), which recommends the conditions of Sydney Water's Operating Licence to the NSW Government, conducts periodic audits of performance against the Operating Licence and establishes Sydney Water's prices for providing services
- ▶ NSW Health, which regulates water quality in NSW via the Public Health Act. Sydney Water has entered into a Memorandum of Understanding with NSW Health to facilitate effective interaction on water quality management issues
- ▶ The NSW Office of Water (NOW), which regulates water use in NSW
- ▶ The Environment Protection Authority (EPA), which regulates environmental matters in NSW
- ▶ Sydney Water's first Operating Licence was issued in 1992 for a period of five years. The current Licence was issued in 2010 and applies until 30 June 2015. The Operating Licence specifies the minimum standards of service or performance that must be met by Sydney Water in relation to its operations.

A copy of the Licence is available from Sydney Water's website:

http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045161.pdf

Part 8 of the Licence provides that IPART (or its appointee) may undertake an operational audit of Sydney Water's performance against the requirements of the Licence each year.

The performance of Sydney Water for 2012-13 was audited against the specific requirements of the Licence identified by IPART in its audit scope.

1.4 Quality Assurance Process

Cardno has developed and maintains a quality system which is applied to the conception, planning, investigation, design, documentation, tender evaluation, procurement and contract administration phases of a project. The quality system is based on the requirements of *AS/NZS ISO9001 Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation and Servicing*. The Quality System, as described in the Company's Quality Manual and Procedures, has been designed to control the work and confirm the effectiveness of the planning and management of each project in meeting its obligations to clients. Cardno is third party accredited to ISO 9001/2008.

As part of its Quality Management system Cardno has developed a *Practice Note – Regulatory Audits* which is aligned with ASAE 3000. For this audit the project team followed the procedures set out in Cardno's Quality Management System and in particular the *Practice Note – Regulatory Audits*.

Draft and final audit reports were independently reviewed by both Lead Auditors.

2 Water Quality

2.1 Summary of Findings – Drinking Water

Sydney Water has been assessed as having demonstrated 'Full Compliance' with the requirements of this Part of the Licence. Supporting commentary for specific clauses is provided in Appendix A.

The quality of drinking water supplied to customers is of an excellent standard and complies with the health related requirements of the Australian Drinking Water Guidelines (ADWG 2011), the aesthetic related requirements specified by NSW Health and the Minister, and the operating targets set out in the Fluoridation Code.

Customer water quality complaints per 1000 properties were the lowest for the Australian major water utilities and have declined over the past five years. Sydney Water received 0.5 complaints per 1000 properties in 2011-12 and remained static in 2012-13, down from 0.9 complaints per 1000 properties in 2007-08. During 2011-12 the number of complaints received by the other major Australian water utilities ranged from 0.7 to 6.7 complaints per 1000 properties.

An independent Aquality review was finalised in October 2012 as part of Sydney Water's Five Year Drinking Water Quality Plan. It concluded that for all areas assessed Sydney Water would be at best practice among WSAA members having achieved a high score of between 97% and 100% against all 12 elements of the ADWG Framework with an overall average score of 98%.

Sydney Water commenced full implementation of the Australian Drinking Water Guidelines (ADWG) 2011 on 1 July 2012.

Sydney Water has a comprehensive suite of procedures, systems and processes in place to manage its drinking water system. These processes have third party accreditation to ISO9001 Quality Management Systems. A significant body of evidence was provided in response to the audit questionnaire and Sydney Water staff were able to proficiently respond to our further queries at the audit interviews.

Sydney Water has reviewed its response to water quality incidents and now has a better understanding of the influence of social media. It has updated its procedures so that it is better prepared and more responsive to incidents. Both Sydney Water and NSW Health will need to be highly responsive in the future to minimise any impact of misinformation arising through social media.

Sydney Water reported on drinking water quality monitoring in accordance with the Reporting Manual.

2.2 Recommendations – Drinking Water

There are no recommendations in relation to drinking water quality.

2.3 Opportunities for Improvement – Drinking Water

The following opportunities for improvement have been identified:

1. The Sydney Water Incident Recording and Learning (SWIRL) is a very useful knowledge management tool which was developed in July 2012. It will greatly assist Sydney Water in its continuous improvement process. Sydney Water should continue in its efforts to have relevant staff populate and utilise the investigation and learning components of the system
2. Sydney Water is encouraged to continue its development and listing of summary target and critical limits in its *Drinking Water Product Specifications* document and consider incorporating many of the criteria included in its document *Triggers, Notifications and Actions for Adverse Water Quality Results* (SOP). Sydney Water should introduce the critical control point, target and critical level terminology throughout its documentation.

3. Sydney Water is encouraged to continue to further develop the presentation of water quality data through Google maps (e.g. linking water quality complaints with maintenance activities such as valve shut off), water main breaks, re-zoning etc). Spatial presentation of water quality data will be a useful communication tool with senior management and regulators such as NSW Health.
4. Table 5 in the *Annual Drinking Water Quality Monitoring Plan* needs to clearly note that the Woronora system could be supplied from Potts Hill as well as Woronora.

2.4 Previous Recommendations – Drinking Water

There were no recommendations in the 2012 Audit Report.

2.5 Summary of Findings – Recycled Water

Sydney Water has been assessed as having demonstrated 'High Compliance' with the requirements of this Part of the Licence. Supporting commentary for specific clauses is provided in Appendix B.

A total of 14 Recycled Water Quality Management Plans (RWQMP) have been endorsed by NSW Health as meeting the requirements of the Australian Guidelines for Water Recycling (AGWR). Four of the plans were previously endorsed by NSW Health, namely; Rouse Hill, Wollongong stages 1 and 2, and St. Marys Advanced Water Treatment Plant (AWTP). 9 RWQMPs were submitted to NSW Health in September 2012 and endorsed by NSW Health on November 2012. The Hoxton Park RWQMP was endorsed by NSW Health in July 2013.

Sydney Water has undertaken on-ground verification of 8 Recycled Water Plants (RWPs) namely Rouse Hill, Quakers Hill, St Marys, Penrith, Wollongong (2 No.), Hoxton Park and Picton. Sydney Water is proposing to undertake verification of the remaining plants over the next few years. A rolling 5 year verification program for all plants is proposed.

Sydney Water has well developed procedures and processes in place to manage recycled water. The performance of plants in meeting water quality targets was considered to be excellent. While some subsections of subclause 2.2 (Recycled Water) were fully compliant, this subclause could only be assigned High Compliance due to shortcomings in the audit of sub clause 2.2a. Our audit of the Liverpool recycled water scheme found that there were a few minor shortcomings with the management of the lower risk recycled water schemes. These included:

- ▶ The inaccuracies observed in completing the annual declarations indicate that the communication between Sydney Water and recycled water irrigation scheme customers' needs to be reinforced
- ▶ Sydney Water does not appear to have applied the appropriate level of thoroughness in checking the signature of any of the annual declarations
- ▶ Most of the log reduction values (LRVs) quoted in the RWQMP were for off-site controls where Sydney Water has limited involvement and has no provision to audit or review under the Agreement
- ▶ Target, as well as critical limits, need to be applied at the critical control points (CCPs)
- ▶ The current RWQMP requires update to reflect plant reconfiguration and recent process optimisation which has allowed breakpoint chlorination to be achieved.

2.6 Recommendations – Recycled Water

- RW-2013| 1. Sydney Water's internal review processes for managing annual declarations from customers operating recycled water schemes classified *municipal use, with restricted access and application, or municipal use, with enhanced restrictions on access and application* need to be strengthened and all customers advised on how to complete the Annual Declaration and, where appropriate, asked to re-submit declarations for 2012-13.

- RW-2013| 2. Sydney Water should consider having some level of input into the management of recycled water at the two sites (Liverpool Golf Club and Warwick Farm Racecourse) and possibly other similar sites rather than fully relying on the Annual Declaration to manage water quality risks.
- RW-2013| 3. The Liverpool RWQMP should be updated to fully reflect how the Liverpool plant is configured and how it is achieving breakpoint chlorination. It also needs to specify target limits as well as critical limits. Following verification of the plant the RWQMP should be updated and submitted to NSW Health.
- RW-2013| 4. Following the treatment plant verification program, relevant Recycled Water Quality Management Plans should be reviewed, updated where appropriate, and submitted to NSW Health.

2.7 Opportunities for Improvement – Recycled Water

No further opportunities for improvement were identified beyond those listed in Section 2.6 – Recommendations.

2.8 Previous Recommendations – Recycled Water

There were no recommendations in the 2012 Audit Report.

3 Infrastructure Performance

3.1 Summary of Findings – Managing Assets

Sydney Water has been assessed as having demonstrated 'Full Compliance' with the requirements of this Part of the Licence. Supporting commentary for specific clauses is provided in Appendix C.

Sydney Water's asset management practices have been subject to considerable scrutiny in recent years. Therefore, this audit focused on the implementation of this framework to the asset classes of sewer mains and water filtration plants. In practice, it was found to be difficult to separate out consideration of the framework itself from implementation of the framework.

We found that Sydney Water has demonstrated implementation of its asset management framework in the many areas that we tested.

3.2 Recommendations – Managing Assets

There are no recommendations in relation to managing assets.

3.3 Opportunities for Improvement – Managing Assets

1. We suggest that understanding the current status of condition assessment information for all active assets is an area of opportunity for Sydney Water. We also suggest that condition assessment frequency be varied based on asset criticality.

3.4 Previous Recommendations – Managing Assets

There are no previous recommendations relating to managing assets.

3.5 Summary of Findings – Priority Sewerage Program

Sydney Water has been assessed as having demonstrated 'Full Compliance' with the requirements of this Part of the Licence. Supporting commentary for specific clauses is provided in Appendix D.

Our review of planning documents (including feasibility studies, servicing strategies and business cases) and construction documents (including as constructed drawings, commissioning reports and certificates of availability) shows that Sydney Water is progressing delivery of the Priority Sewerage Program into the required areas in accordance with the timeframe set out in its licence.

We also found that Sydney Water is meeting the other requirements of this clause relating to reporting and acting on possible development.

There is some inconsistency in Sydney Water's licence over the terminology in the clause that 'wastewater services are provided to the requisite number of lots'. The phrase 'requisite number of lots' is not defined in Sydney Water's licence or used elsewhere in the document. Further, Schedule 4 in the licence relating to the Priority Sewerage Program that details the 'estimated number of lots' for schemes or groupings of schemes is not referenced in Clause 3.6 of Sydney Water's licence, or anywhere else in the licence. IPART has advised that both the terms 'requisite' and 'estimated' are considered to have the same meaning.

3.6 Recommendations – Priority Sewerage Program

- PSP-2013| 1. We recommend that for the 2013-14 Priority Sewerage Program Annual Report that Sydney Water provides a reconciliation (as far as is possible) between the details in Schedule 4 and the actual lots serviced in each scheme to date and planned for future.

3.7 Opportunities for Improvement – Priority Sewerage Program

We did not identify any opportunities for improvement relating to the Priority Sewerage Program.

3.8 Previous Recommendations – Priority Sewerage Program

There are no previous recommendations relating to the Priority Sewerage Program.

4 Customer and Consumer Rights

4.1 Summary of Findings

Sydney Water has been assessed as having demonstrated 'High Compliance' with the requirements of this Part of the Licence. Supporting commentary for specific clauses is provided in Appendix E.

Sydney Water has robust procedures in the areas of customer hardship, debt, water flow restriction and disconnection. It has adequate systems to support these procedures and we found staff to be knowledgeable and well trained in the relevant procedures and systems. We also found that substantial quality assurance was undertaken by Sydney Water to test its conformance with its own procedures.

The foundation documents are the Customer Contract, Payment assistance policy and Overdue payments and disconnections for non-payment policy. We found that the procedures in these documents are made readily available to customers as required under the licence.

Sydney Water identified that in a very small number of instances it has not followed its procedures relating to restrictions. We consider that constitutes 'very few minor shortcomings' in meeting the requirements of the clause and accordingly have awarded a grade of high compliance for the relevant sub-clause (a). Sydney Water stated that it has improved its processes during 2012-13 to try to eliminate this possible error and we were provided evidence that suggests that this issue has largely been addressed.

For Clause (c)(2) which requires that information be provided to customers experiencing financial difficulty, we found that while Sydney Water has a comprehensive approach to assisting customers in financial difficulty, this may not always include providing these customers with the information detailed. This is because the case manager will decide what information to provide to customers based on their particular circumstances. While we appreciate why this approach is taken, it does not fully meet the requirement that information on procedures in these areas are provided to customers and therefore have awarded High Compliance for this clause.

While some subsections of subclause 4 (Customer and consumer rights) were fully compliant, this subclause could only be assigned High Compliance due to shortcomings in the audit of sub clauses 4a and 4c.

4.2 Recommendations

There are no recommendations relating to customer and consumer rights.

4.3 Opportunities for Improvement

The following opportunities for improvement have been identified:

1. Reduction of the time between issue of the 48HD notice and restriction of properties would avoid the possibility that customers affected perceive that Sydney Water does not act on its stated intentions.
2. Regular internal auditing of the contractor performing restrictions would provide additional assurance to Sydney Water over this area of its business.

4.4 Previous Recommendations

There are no previous recommendations relating to customer and consumer rights.

APPENDIX A

DETAILED AUDIT FINDINGS,
DRINKING WATER (LICENCE
CLAUSE 2.1)

Sub-clause	Requirement	Compliance Grade
2.1a	<p>Sydney Water must manage Drinking Water quality to the satisfaction of NSW Health in accordance with the Australian Drinking Water Guidelines (unless NSW Health specifies otherwise).</p> <p><i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i></p> <ul style="list-style-type: none"> ▪ verification of water quality ▪ monitoring / management of critical control points ▪ management of incidents <p><i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i></p>	<div>Full Compliance</div> <div></div>
Risk	Target for full compliance	
<p>Failure to meet the requirements of the ADWG (and NSW Health) could have a severe impact on the public health of 4.6 million customers in the Sydney region</p>	<p>Compliance with the twelve elements of the ADWG. In the case of this audit the focus was on:</p> <ul style="list-style-type: none"> ▪ verification of water quality ▪ monitoring / management of critical control points ▪ management of incidents 	
Evidence sighted		
<ul style="list-style-type: none"> ▪ Agreement/contract schedules ▪ ALS Group NATA Test Report & Quality Control information ▪ Analytical Services Customer Services Quality Manual (AN0005) ▪ Analytical Services Quality Manual (ANQM004) section 5.5 ▪ Annual Drinking Water Quality Monitoring Plan 2012-13 ▪ Sydney Water - Water and Wastewater Integrated Management System Audit Schedule 2012 - 2013 ▪ Aquality Audit Oct 2012 ▪ Biological Testing NATA Certificate ISO/IEC 17025 ▪ Chemical Testing NATA Certificate ISO/IEC 17025 ▪ Customer Complaint Policy ▪ Determination of Chlorine Residuals in the Field (FS075) – includes procedure & calibration ▪ Determination of pH (WC07) ▪ Drinking Water Ct and <i>Giardia</i> log inactivation performance review summary for 2011/12 ▪ Drinking Water Quality Operational Monitoring Plan 2012-13 ▪ Drinking Water Product Specification (draft) Sept 2012 ▪ Examples of control charts ▪ Exercise Replay Report Sydney Water ▪ Field Sampling Group Quality Manual (FSQM001) ▪ In House Training Guide for Analytical Procedures/Techniques/ Operations ▪ Management of Disinfection of Drinking Water – Standard Administrative Procedure IMS 0057 ▪ Monitoring Process Management System (MPMS) ISO 9001:2008 Certificate ▪ Monthly complaints spread sheet. ▪ Operational Plan – Macarthur Delivery System Reservoirs – illustrating detention times within the system ▪ Operations Reports for Macarthur WFP, May & June 2013 ▪ Phycology Laboratory Training Record (template) ▪ Presentation – Introduction to Sydney's drinking water supply ▪ Preservation and Transportation of Water Samples for Chemical and Biological Analysis (SAWI070) ▪ Quarterly Drinking Report: 1 April to 30 June 2013 ▪ Results from water quality audits ▪ Sample Collection (SAWI076) ▪ Sampling from Taps SOP (FS0147) ▪ SCA Water Quality Incident response ▪ SLG Agenda Item 9 Annual Exercise Program ▪ Suppliers Database in Lotus Notes 		

- Total Coliforms & E. coli by enzyme substrate (MI28)
- Training Assessment Form for Field Services Group (Sampling Procedures) Reticulation & Operational Runs
- Training Assessment Form for Field Sampling Group (Sampling Procedures)
- Training records FSG Staff competency assessments e.g. Project specific sampling requirements, tap sampling SOP, instrumentation. Training plan for groups WOQ5162 Managing water quality customer complaints.
- Water Quality Modelling As A Diagnostic Tool - Report
- Woronora Water Quality Review – up to end of Jan 2013 Minutes dated 21 February 2013
- WPIMS5228 Drinking Water Quality Event Management SOP
- WPIMS5274 Triggers, Notification & Actions for Adverse Water Quality Results
- 2600 Series Test Lists – Compliance Site Analytes 2012-13.

Summary of reason for grade

Sydney Water has performed extremely well in the delivery of drinking water quality. It has a comprehensive suite of procedures and processes that comply with the ADWG (2011) 12 element framework

Discussion and notes

Sydney Water has performed extremely well in 2012-13 with 100% of the 8436 samples taken having zero *E.coli* and 100% compliance with other health related characteristics apart from lead (99.7% - one sample in the Ryde Delivery System) and Trihalomethane (99.2% - 4 samples in the Prospect North Delivery System).

Sydney Water has been consistently meeting turbidity targets of <0.5NTU at all water filtration plants and the turbidity levels at customers' taps has remained low at an average of 0.13NTU in 2012-13.

Customer water quality complaints per 1000 properties were the lowest for the Australian major water utilities and have declined since 2007.

An independent Aquality review, finalised in October 2012 as part of Sydney Water's Five Year Drinking Water Quality Management Plan (5 Year Plan) concluded that for all areas assessed Sydney Water would be at best practice among WSAA members having achieved a high score of between 97% and 100% against all 12 elements of the ADWG Framework with an overall average score of 98%.

Critical Control Points

Critical control points, trigger levels and actions are identified in the DWQ Event Management Plan SOP (WPIMS5228) and Triggers, Notifications and Actions for Adverse Water Quality Events SOP (WPMIS5274). The Sydney Water IICATS system has alarm set points based on action triggers and CCPs. Alarms are monitored 24/7 by the Systems Operation Centre.

An independent Aquality audit undertaken in October 2012 noted that

The quality of the descriptions of preventive measures and associated risk management processes was excellent within Sydney Water and by all key contractors. The consistency with which specific fine details, such as target values, were used, and the approach used to set those values, was impressive. In general, the level and nature of control in place from treatment plant to meter appeared to be at industry best practice and, most impressively, the specific 'values' in key documents and systems were typically consistently documented and well understood by operators.

A potential weakness was in relation to the variable and often absent use of key ADWG jargon terms, e.g. 'critical control points', 'critical limits' and 'target criteria'. Whilst a non-issue from the perspective of meeting the intent of the ADWG and Aquality, and not affecting scoring for Aquality, there are ongoing 'compliance' risks to Sydney Water associated with not adopting a literal interpretation of the ADWG.

We were advised that Sydney Water was in the process of summarising its target and critical limits and we were provided with a final draft copy of the document *Drinking Water Product Specifications*. Table 1 in this draft document lists a number of KPIs including a number of target and critical limits for a number of water quality parameters. Attachment 2 in *WPIMS 5274 Triggers, Notifications and Actions for Adverse Water Quality Results (SOP)* also includes trigger levels for a greater number of treated water quality parameters within the distribution system, some of which should be included in Table 1 of the *Drinking Water Product Specifications* document. The development of the *Drinking Water Product Specifications* document provides a great opportunity of consistently listing target and critical limits for CCPs within the treatment plants and distribution system.

Operational and verification monitoring program

The Annual Drinking Water Quality Monitoring Plan sets out the compliance monitoring for assessing compliance against the Sydney Water Operating Licence in accordance with the Operating Licence –Reporting Manual and as agreed with NSW Health. Changes in monitoring from year to year are listed in the document.

In addition to compliance monitoring, Sydney Water carries out operational drinking water quality monitoring through the supply system to check and ensure that processes and equipment, that have been put in place to protect and enhance water quality, are operating effectively and to identify where improvements to water quality may be required.

The Annual Drinking Water Quality Monitoring Plan 2012-13 details the sampling regime to satisfy the relevant water quality monitoring requirements. Appendix 5 also describes the background to the selection of compliance sites. The specific yearly requirements, analysis, sampling frequency, routine and random sites (locations) is stored and managed through Excel spread sheets.

We viewed water quality results via iConnect through the Business Intelligence (Monitoring Business intelligence) portal. Sydney Water undertakes a comprehensive contract management process for the BOO plants to ensure compliance with contractual requirements. The process includes regular communication, monthly reporting, IICATS monitoring, safety reporting, regular review of calibration records and, as a minimum, monthly visits to the plants.

Sampling and Testing

Most of the analysis undertaken by Sydney Water is undertaken in-house at its Ryde laboratory. All procedures for sampling and water quality testing are documented and controlled via the BMIS Document Control database in Lotus Notes. These procedures and processes are NATA accredited. Sydney Water's Monitoring Process Management System (MPMS) is also quality systems accredited. All external laboratories used are NATA accredited.

Staff are recruited with relevant qualifications and technical expertise to conduct analytical work to an acceptable standard. Staff receive further in-house training to familiarise them with the tasks and responsibilities until competency is demonstrated. Sydney Water explained the approach taken to provide 'hands on' training to laboratory and sampling staff and the measures taken to ensure that staff were competent prior to undertaking any testing or sampling. Personal training needs are identified through individuals' personal development plans. Progress of training is recorded on appropriate laboratory training assessment forms.

The evidence provided and response to auditor queries indicated that processes for sampling, analysis and training were well developed and rigorous and compliant with a Quality Management System.

We reviewed the number of *E.coli* samples taken within each of Sydney Water's delivery systems as listed in Table 5 of the Annual Drinking Water Quality Monitoring Plan. We found that overall Sydney Water undertook 10% more samples than required by the ADWG with the percentage increase in sample numbers within individual systems varying between 0% and 81%. The exception was the Woronora system which appeared to have a lower than required number of samples. Sydney Water explained that the Sutherland area within the Woronora system could be supplied from Potts Hill as well as Woronora. This and other operational changes are noted on page 17 of the Annual Drinking Water Quality Monitoring Plan but it would be desirable for these matters to be clearly identified or cross-referenced in any tabulations.

The documentation provided in relation to sampling procedures and scheduling and laboratory practices supplemented by interview discussions demonstrated that Sydney Water has mature processes in place for water quality sampling and analysis.

Sydney Water is seeking to access and present information on its sampling sites (including results) through Google Maps. Examples of outputs currently available include:

- Monthly customer complaint location by type
- Customer complaints – cluster mapping
- Mapping of disinfection residuals.

We were able to track the location of a specific sampling point and the results from that location using the Google Mapping system.

Sydney Water proposes to expand this spatial presentation of data to be able to link water quality complaints with maintenance activities such as valve shut off, water main breaks, re-zoning etc.

Spatial presentation of water quality data will be a useful communication tool with senior management and regulators such as NSW Health.

Complaints and Incidents

The *National performance report 2011–12: urban water utilities*, National Water Commission indicates that Sydney Water has the lowest level of water quality complaints of any of the major Australian water utilities. It received 0.5 complaints per 1000 properties in 2011-12 down from 0.9 complaints per 1000 properties in 2007-08. During 2001-12 the number of complaints received by the other major Australian water utilities ranged from 0.7 to 6.7 complaints per 1000 properties.

The majority of the complaints related to water discolouration. Sydney Water stated that they had recently commenced a process whereby information on the colour of the water was requested from complainants. This information would assist in identifying the nature and source of the discolouration problem and allow incidents of white water caused by entrained air to be readily identified. It was proposed to map the locations of maintenance work as well as complaint locations to readily identify whether any operational activities (e.g. flow reversal, zone changes) are causing water quality complaints.

Sydney Water described how appropriate staff are now warned through emails or pagers that a certain level of complaints are being received within a zone (e.g. 4 in one hour, 10 within 24 hours). This will alert Sydney Water to any major potential incidents and allows them to take proactive action. Reports are issued within Sydney Water twice daily where 2 or more discoloured water complaints for the same zone are received in a 48 hour period.

We discussed the incident which resulted in a large number of taste and odour complaints in the Botany area (the "Botany incident" on the 28 December 2012). Sydney Water provided a number of documents in relation to the incident. Sydney Water explained the reason for the problem and stated that the principal finding from the experience was the power of social media and the need for Sydney Water to be better prepared and far more responsive given the speed of social media such as Twitter and Facebook. Sydney Water had identified the need to provide early advice to

customers and update this as more information becomes available, rather than wait for the results of any detailed investigations. Protocols existed between Sydney Water and NSW Health on which organisation is responsible for certain types of notifications (e.g. boil water alert which is a NSW Health responsibility). Both Sydney Water and NSW Health would need to be highly responsive in the future to minimise any impact of misinformation arising through social media.

We viewed the "Botany incident" on SWIRL (Sydney Water Incident Recording and Learning System). SWIRL was set up in July 2012 and includes all incidences (e.g. safety) as well as water quality incidences. SCA can input and view incidences while NSW Health can also access SWIRL. A number of tabs (e.g. incident details, WQ details) within SWIRL had been populated with data on the "Botany incident" but other tabs (e.g. lessons learnt, investigation) had not been completed. It was explained that the system was relatively new and maintaining SWIRL required some cultural change within Sydney Water. Sydney Water proposed to implement a reminder system for completion of all relevant incident information. We consider that SWIRL is a very useful knowledge management tool and when fully utilised will greatly assist Sydney Water in its continuous improvement process.

We were provided a copy of the minutes of the Strategic Liaison Group (SLG) meeting of the 19 June 2013 which summarised key learnings from the Botany taste and odour and the Macarthur turbidity exceedance incidents. The SLG consists of executive management from Sydney Water, SCA and NSW Health.

Water Age

Sydney Water uses a model to predict water age through its systems. A demonstration on the model was provided; it is used to identify areas of longer water age which potentially could suffer from nitrification. Sydney Water uses the model as one means of taking proactive action to minimise any water quality problems arising from long detention times.

Communication with SCA and SDP

MOUs and communication protocols are in place with both SCA and SDP. SDP is currently non-operational as significant dam water volumes exist. This situation will continue until dam volumes reduce to 70% of storage capacity.

Sydney Water explained the process for SCA communication in relation to changes in supply quality. This process is well developed. We were advised that SCA/ Sydney Water were developing a financial model to allow Sydney Water to access the most cost-effective water source.

Aquality Review

The audit indicated that some treatment plants within the network had poor coverage and slow internet speed following a change of telecommunication service provider. Sydney Water advised that the new service provider had quickly responded to this deficiency in service and communication performance had improved.

We discussed the issue highlighted in the Aquality audit of the possibility of untreated water being able to by-pass a treatment plant. We were advised that the Warragamba WFP was the last remaining water filtration plant where this possibility could occur and this was being addressed through the installation of a spacer in the pipework.

Recommendations

There are no recommendations in relation to this sub-clause

Opportunities for Improvement

The Sydney Water Incident Recording and Learning (SWIRL) is a very useful knowledge management tool which was developed in July 2012. It will greatly assist Sydney Water in its continuous improvement process. Sydney Water should continue in its efforts to have relevant staff populate and utilise the investigation and learning components of the system

Sydney Water is encouraged to continue its development and listing of summary target and critical limits in its Drinking Water Product Specifications document and consider incorporating many of the criteria included in its document Triggers, Notifications and Actions for Adverse Water Quality Results (SOP). Sydney Water should introduce the critical control point, target and critical level terminology throughout its documentation.

Sydney Water is encouraged to continue to further develop the presentation of water quality data through Google maps (e.g. linking water quality complaints with maintenance activities such as valve shut off), water main breaks, re-zoning etc). Spatial presentation of water quality data will be a useful communication tool with senior management and regulators such as NSW Health.

Table 5 in the Annual Drinking Water Quality Monitoring Plan needs to clearly note that the Woronora system could be supplied from Potts Hill as well as Woronora.

Sub-clause	Requirement	Compliance Grade
	Sydney Water must prepare, to the satisfaction of NSW Health, a Five Year Drinking Water Quality Management Plan covering the entire five year term of the Licence. The Five Year Drinking Water Quality Management Plan must be in operation by 31 December 2010 and include strategies for the comprehensive management of the quality of Drinking Water in Sydney Water's water supply system in accordance with the Australian Drinking Water Guideline	Full Compliance
2.1b	<p><i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i></p> <ul style="list-style-type: none">▪ <i>verification of water quality</i>▪ <i>monitoring / management of critical control points</i>▪ <i>management of incidents</i> <p><i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i></p>	
Risk	Target for full compliance	
Non-compliance with this clause may increase public health risks to Sydney Water's customers	Demonstrated of the implementation of the Five Year Plan	
Evidence sighted		
<ul style="list-style-type: none">▪ 5 year Drinking Water Quality Management Plan 2010-2015▪ Aquality Report October 2012▪ Drinking Water Quality Folio of Progress▪ Drinking water quality improvement actions 2012-13▪ Implementation of the Five Year Drinking Water Quality Management Plan Annual Report 2012-13▪ Evidence as provided for Sub-clause 2.1a		
Summary of reason for grade		
The strategies and improvement actions within the Plan are being implemented. Sydney Water's excellent water quality results for 2012-13 along with low customer water quality complaints indicates that the strategies within the 5 year Drinking Water Quality Management Plan are appropriate and effective		
Discussion and notes		
<p>Sydney Water provides an update on actions in relation to the 5 year Drinking Water Quality Management Plan in the Implementation of the Five Year Drinking Water Quality Management Plan Annual Report 2012-13. A final draft copy of this document was provided at audit.</p> <p>The annual report provided a comprehensive review of the current status in implementation of the 5 Year Plan. We noted that: Sydney Water has implemented ADWG 2011.</p> <p>Sydney Water stated that treatment of raw water quality was currently the most challenging for decades with raw water of high colour/ low turbidity now being prevalent.</p> <p>Sydney Water advised that all 90 filters within the treatment plants supplying Sydney now had on-line turbidity monitoring as required under ADWG 2011. The data, including alarms, from the BOO WFPs as well as the Sydney Water plants could be accessed through IICATS. The >0.5 NTU for >1 minute limit from each filter was a challenging target and 12 exceedences had been reported to NSW Health in 2012-13.</p> <p>The audit team visited the Macarthur WFP. Raw water into the Macarthur Water Treatment Plant can be quite variable as it was sourced directly from a weir which was subject to rapid change in river water quality. The plant is currently operating at around 30% of its design capacity and operates 24 hours per day to provide a stable treatment environment. We found the plant to be well operated and maintained. Key points noted were the availability of multi-skilled staff for plant operation, use of technology to monitor plant performance, the use of the SAP system to manage maintenance and the optimisation of maintenance and renewals. Sydney Water are currently working with the plant owner and operator, Trillity on improvement options to consistently achieve the required water targets. The upgrade will include the installation by SCA of a hydrocarbon monitoring point at Broughton's Pass.</p> <p>Sydney Water has developed a position paper on Ct. A copy of the spreadsheet was provided.</p> <p>Sydney Water is continuing to further develop its critical control points summary (refer to discussion for Sub-clause 2.1).</p> <p>An independent Aquality review was finalised in October 2012 as part of its Five Year Drinking Water Quality Management Plan (5 Year Plan). The results of the review were very positive and are discussed elsewhere in this report. During the audit we discussed a number of the matters listed in the Annual Report (also refer to the discussion for sub-clause 2.1) and we found that the response and evidence provided was consistent with the information provided</p>		

in the report

We discussed how Sydney Water was addressing the issue of emerging contaminants. We were advised that Sydney Water had undertaken a review of pesticides in association with SCA and algal toxins had been incorporated into exception reporting through *WPMIS5228 Drinking Water Quality Event Management SOP*.

Sydney Water had monitored N-Nitrosodimethylamine (NDMA) in the system and the levels were below detection levels.

We were advised that Sydney Water was forming a working group to review chlorate levels in the water supply.

Sydney Water's excellent water quality results for 2012-13 along with low customer water quality complaints indicates that the strategies within the *5 year Drinking Water Quality Management Plan* are appropriate and effective.

Recommendations

There are no recommendations in relation to this sub-clause.

Opportunities for Improvement

No opportunities for improvement have been identified in relation to this sub-clause.

Sub-clause	Requirement	Compliance Grade
2.1c	The Five Year Drinking Water Quality Management Plan is to be revised for the period 1 July 2015 to 30 June 2020. Sydney Water must provide a draft revised Five Year Drinking Water Quality Management Plan to NSW Health by 31 December 2014.	No Requirement
	<i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i>	
	<ul style="list-style-type: none">▪ verification of water quality▪ monitoring / management of critical control points▪ management of incidents	
	<i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i>	
Risk	Target for full compliance	
Non-compliance with this clause may increase public health risks to Sydney Water's customers	Draft revised Five Year Drinking Water Quality Management Plan submitted to NSW Health by 31 December 2014.	
Evidence sighted		
No evidence was requested or provided as Sydney Water does not have to provide a draft revised Plan until December 2014		
Summary of reason for grade		
There was no discussion on this matter as Sydney Water does not have to provide a draft revised Plan until December 2014		
Discussion and notes		
There was no discussion on this matter as Sydney Water does not have to provide a draft revised Plan until December 2014		
Recommendations		
There are no recommendations in relation to this sub-clause		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
2.1d	<p>Sydney Water is to implement procedures and processes for the appropriate management of the Drinking Water supply system under its control in light of its knowledge of the entire Drinking Water supply system (from the source to the consumer). Sydney Water must have adequate systems and processes in place to manage Drinking Water quality taking into account planning and risk management and their implementation across the entire Drinking Water supply system.</p> <p><i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i></p> <ul style="list-style-type: none">▪ verification of water quality▪ monitoring / management of critical control points▪ management of incidents <p><i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i></p>	Full Compliance
Risk	Target for full compliance	
Non-compliance with this clause may increase public health risks to Sydney Water's customers.	Sydney Water needs to demonstrate that it has adequate systems in place to manage drinking water quality throughout its network.	
Evidence sighted		
<ul style="list-style-type: none">▪ Asset Management Cascade System Plan▪ Asset Management Plan for Water Filtration Plants▪ Audit Summary Report – Internal QMS Audit – Water Quality Group, 22 Aug 2012▪ Business Review Report – EMS & QMS▪ Copy of presentation at May JOG.▪ JOG meeting May 2013▪ Quarterly Drinking Report: 1 April to 30 June 2013▪ Quarterly Drinking Report: 1 January to 31 March 2013▪ Quarterly Drinking Report: 1 July to 30 September 2012▪ Quarterly Drinking Report: 1 October to 31 December 2012▪ Quarterly Drinking Water Quality Monitoring Report for NSW Health: 3rd Quarter 1 January to 31 March 2013▪ Quarterly Drinking Water Quality Monitoring Report for NSW Health: 1st Quarter 1 July to 30 September 2012▪ Quarterly Drinking Water Quality Monitoring Report for NSW Health: 2nd Quarter 1 October to 31 December 2012▪ Quarterly Drinking Water Quality Monitoring Report for NSW Health: 4th Quarter 1 April to 30 June 2013▪ Sydney Water Incident Recording and Learning System (SWIRL)▪ Evidence as provided for Sub-clause 2.1a		
Summary of reason for grade		
The systems and processes that Sydney Water has in place are comprehensive and ensures that Sydney Water is well informed of the performance of its drinking water supply and is able to respond proactively to any trends, potential or actual incidents.		
Discussion and notes		
Refer to the discussion for Sub-clause 2.1.		
Sydney Water has a comprehensive suite of procedures and processes in place to manage its drinking water system. A significant body of evidence was provided in response to the audit questionnaire and Sydney Water were able to proficiently respond to our further queries at the audit interviews.		
Processes include:		
<ul style="list-style-type: none">▪ a rigorous regulatory framework including a reporting protocols to NSW Health and IPART▪ compliance with the ADWG 12 element framework and a catchment to tap approach▪ a comprehensive risk management process▪ an extensive on-line real time monitoring process –on-line through IICATS and treatment plant SCADA systems		

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- CCPs and trigger points with actions for responding to events outside the required trigger levels
 - Comprehensive operational and verification monitoring
 - Comprehensive documentation and processes that are compliant with ISO 9001
 - MOUs and communication protocols with SCA and NSW Health.

Quarterly Drinking Water Quality Reports are published quarterly on the website. The reports cover water quality results and performance from inflows, storages, WFPs and the customer supply systems (customers' taps) for the quarter and the rolling 12 months. Sydney Water monitors and reports performance on individual delivery systems basis as well as an overall combined system basis to NSW Health quarterly.

Details of the extent and nature of any exception from the health guideline values and aesthetic that have been agreed with NSW Health and an analysis of the risk to public health posed is provided as part of the quarterly and annual reports to NSW Health and IPART.

Incidents are also reported via the secure Incident Reporting (SWIRL) website and a summary is included in quarterly reports as per the Drinking Water Quality Incident Management SOP (WPIMS5228).

Sydney Water in association with SCA and NSW Health has undertaken catchment to tap risk reviews including a mid-term review.

MoUs and communication protocols exist with SCA and SDP.

Sydney Water aims to continuously improve its water quality management. Improvements can come from a variety of sources including complaints, incidents changing guidelines, annual reports etc.

Sydney Water investigates all significant and major water quality incidents. Actions arising are captured and tracked as part of the Annual Strategic Issues Agenda for the SLG. An update against progress is given to the Strategic Liaison group annually or as required.

Recommendations

There are no recommendations in relation to this sub-clause

Opportunities for Improvement

No opportunities for improvement have been identified in relation to this sub-clause.

Sub-clause	Requirement	Compliance Grade
2.1e	<p>Sydney Water must comply with the fluoridation plant operating targets set out in the Fluoridation Code.</p> <p><i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i></p> <ul style="list-style-type: none"> verification of water quality monitoring / management of critical control points management of incidents <p><i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i></p>	<div>Full Compliance</div> <div></div>
Risk	Target for full compliance	
Fluoride over dosing can have detrimental health impacts in the longer term. Under-dosing will reduce the effectiveness of the program to maintain dental health.	Achievement of all operating targets set out in the Fluoridation Code.	
Evidence sighted		
<ul style="list-style-type: none"> Monthly fluoride report (summary for 2012-13 and for June 2013) Operations reports Macarthur WFP May & June 2013 SDP Supply Agreements (Table of Contents) Sydney Water Incident and Recording System (SWIRL) WFP Agreements (Table of Contents) WPIMS5228 DWQ Event Management SOP 		
Summary of reason for grade		
Sydney Water has achieved full compliance against the Fluoridation Code		
Discussion and notes		
<p>For the period 01 July 2012 to 30 June 2013, Sydney Water recorded 100% compliance against the Fluoridation Code. For the year the fluoride levels within the distribution system ranged between 1.0 and 1.2 mg/L.</p> <p>Incidents are also reported via the secure Incident Reporting (SWIRL) website and a summary is included in quarterly reports as per the Drinking Water Quality Event Management SOP (WPIMS5228). There were no incidents reported in 2012-13.</p> <p>Each of the WFPs has on-line fluoride monitoring to supplement the daily grab sample.</p> <p>Operating protocols and procedures in place for early warning and incident notification.</p>		
Recommendations		
There are no recommendations in relation to this sub-clause		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
2.1f	<p>Sydney Water must report on Drinking Water quality monitoring in the manner and form outlined in the Reporting Manual.</p> <p><i>Audit of this clause should be a combination of risk based adequacy and implementation. At NSW Health's request, the auditor should also consider:</i></p> <ul style="list-style-type: none"> verification of water quality monitoring / management of critical control points management of incidents <p><i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i></p>	<div>Full Compliance</div> <div></div>
Risk	Target for full compliance	
If Sydney Water cannot report on drinking water quality monitoring then public confidence in drinking water quality may erode.	Reports to be provided as required in the Reporting Manual.	
Evidence sighted		
<ul style="list-style-type: none"> Drinking Water Quality Folio of Progress Quarterly public reports on drinking water quality (2012-13) Quarterly report on drinking water quality to NSW Health Quarterly report on drinking water quality to NSW Health Implementation of the Five Year Drinking Water Quality Management Plan 2010-2015 (18 Sept 2013) Five-year Drinking Water quality management Plan 2010-2015, December 2010 Sydney Water Incident Recording and Learning System (SWIRL) 		
Summary of reason for grade		
Sydney Water has complied with all requirements set out in the Reporting Manual		
Discussion and notes		
<p>The <i>Reporting Manual for Sydney Water</i>, IPART, June 2013 requires Sydney Water to provide the following reports</p> <ul style="list-style-type: none"> Quarterly public report on drinking water quality Quarterly report on drinking water quality to NSW Health Monthly report on fluoride to NSW Health (Annual summary and June 2013 results) Annual Report on Implementation of the 5 Year Drinking Water Quality Management Plan Immediate Notification of Incidents 5 Year Drinking Water Quality Plan Significant changes of management of water quality <p>The Drinking Water Quality Folio of Progress includes a Reporting Manual checklist which lists when the reports were issued. We were provided with copies of the reports and were able to view SWIRL through which incidents are recorded.</p>		
Recommendations		
There are no recommendations in relation to this sub-clause		
Improvement Opportunities		
No opportunities for improvement have been identified in relation to this sub-clause.		

APPENDIX B

DETAILED AUDIT FINDINGS,
RECYCLED WATER (INCLUDING
STORMWATER) (LICENCE
CLAUSE 2.2)

Sub-clause	Requirement	Compliance Grade
2.2a	Sydney Water must manage Recycled Water quality in accordance with the Australian Guidelines for Water Recycling (unless NSW Health specifies otherwise) to the satisfaction of NSW Health.	<div>High Compliance</div>
	Audit of this clause should be a combination of risk based adequacy and implementation.	
	At NSW Health's request, the auditor should also consider:	
	<ul style="list-style-type: none">▪ verification of water quality▪ monitoring / management of critical control points▪ management of incidents	
	The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.	
Risk	Target for full compliance	
Non-compliance will increase public health and environmental risks associated with the use of recycled water.	Compliance with the requirements of the Australian Guidelines for Water Recycling.	
Evidence sighted		
<ul style="list-style-type: none">▪ Annual Recycled Water Quality Management Report▪ Castle Hill Country Club, Annual Declaration Form, Recycled Water use for the twelve months to 20th 2013▪ Evidence of notification to NSW Health of <i>Cryptosporidium</i> detected at the Rouse Hill and Wollongong Recycled Water Plants▪ Five Year Recycled Water Quality Management Plan 2009-2014, Nov 2009,▪ Gerringong RWQMP Draft rev2▪ Irrigation Water Quarterly Report▪ Recycled Water Supply to Liverpool Golf Course Reporting Period: 01/04/2013 – 30/06/2013▪ Liverpool Golf Club, Annual Declaration Form, Recycled Water use for the twelve months to June 30, 2014▪ Liverpool Golf Club Water Quality Report 2012-13, Fourth Quarter▪ Minutes JOG - item 16 - remaining schemes and Hoxton Park▪ Minutes JOG - item 21 Hoxton Park and Quakers Hill▪ Notification of Plant Recycled Water Production Interruptions SOP▪ Picton Farm Quarterly Report 2012-2013, Fourth Quarter▪ Picton Water Recycling Farm, Annual Report and Nutrient Balance, GHD, Oct 2013▪ Presentation - Introduction to Sydney's Recycled Water Supply▪ Quarterly Recycled Water Quality Monitoring Report for NSW Health 2012-13, Third Quarter 1 Jan 2013 – 31 March 2013▪ Recycled Water Treatment Detailed Verification Monitoring for Pathogen Reduction Document No. PAMWP00, 26 August 2013▪ Rosehill and Camellia Recycled Water Project: Project Agreement, Effluent Quality Event, Schedule 11 Effluent Quality Event▪ RWQMP Bombo V1.6-Fina▪ RWQMP Castle Hill V1..7-Final▪ RWQMP Hoxton Park V1.0- Final▪ RWQMP Hoxton Park V1.0-Sign off▪ RWQMP Liverpool V1.6-Final▪ RWQMP Penrith V1.7-Final▪ RWQMP Picton V1.7- Final▪ RWQMP Quakers Hill V1.7-Final▪ RWQMP Richmond V1.7-Final▪ RWQMP St Marys V1.7-Final▪ RWQMP West Camden V1.6-Final▪ Sign-off copies for RWMQPs▪ Status Update on St Marys Water Recycling Initiative▪ Treatment Notification and Reporting		

- Wastewater Treatment and Water Recycling Plant Asset Management Plan
- West Camden – Elizabeth Macarthur Agricultural Institute Water Quality Report 2012-13 Fourth Quarter Wollongong City Council, Annual Declaration Form, Recycled Water use for the twelve months to 30th 2013

Summary of reasons for grade

Sydney Water has well developed procedures and processes in place to manage recycled water. The performance of plants in meeting water quality targets was considered to be excellent. However, our audit of the Liverpool recycled water scheme found that there were a few minor shortcomings with the management of the lower risk recycled water schemes. These included:

- The inaccuracies observed in completing the annual declarations indicate that the communication between Sydney Water and recycled water irrigation scheme customers' needs to be reinforced
- Sydney Water does not appear to have applied the appropriate level of thoroughness in checking the signature of any of the annual declarations
- Most of the LRVs quoted were for off-site controls where Sydney Water had limited involvement and has no provision to audit or review under the Agreement
- Target as well as critical limits need to be applied at the CCPs
- The current Liverpool RWQMP requires update to reflect plant reconfiguration and recent process optimisation which has allowed breakpoint chlorination to be achieved.

Discussion and notes

A total of 14 Recycled Water Quality Management Plans (RWQMPs) have been endorsed by NSW Health as meeting the requirements of the Australian Guidelines for Water Recycling (AGWR). Four of the plans were previously endorsed by NSW Health, namely; Rouse Hill, Wollongong Stage 1, 2 and St. Marys Advanced Water Treatment Plant (AWTP). 9 RWQMPs were submitted to NSW Health in September 2012 and endorsed by NSW Health on November 2012. The Hoxton Park RWQMP was endorsed by NSW Health in July 2013.

Sydney Water provided copies of the RWQMPs and also provided evidence of sign-off by NSW Health.

Sydney Water noted that the RWQMP for Quakers Hill Scheme – Ashlar will be revised to reflect the change of asset conditions. It has been communicated to NSW Health through item 21 in the Joint Operational Group (JOG) meeting minutes dated 20 February 2013.

The RWQMP for Gerringong – Geroa scheme is currently being prepared. This scheme is operated by Veolia and we were advised that a draft has been prepared.

Sydney Water has undertaken on-ground verification of 8 Recycled Water Plants (RWPs) namely Rouse Hill, Quakers Hill, St Marys, Penrith, Wollongong (2 No.), Hoxton Park and Picton. Sydney Water is proposing to undertake verification of the remaining plants over the next few years. A rolling 5 year verification program for all plants is proposed. Sydney Water has prepared a procedure, *Recycled Water Treatment Detailed Verification Monitoring for Pathogen Reduction* which sets out the process for on-ground verification.

The procedure states the following:

It is not possible to assess each of the reference pathogens in the Australian Guidelines for Water Recycling (Cryptosporidium, Campylobacter and rotavirus/adenovirus) either because there is no routine method available, the cost is prohibitive or they are not present in sufficient concentrations to assess each stage of the treatment process. For this reason, the detailed verification monitoring undertaken and accepted to date has relied on the indicator microorganisms already present in wastewater. These include:

- *E.coli* (bacteria)
- *Clostridium perfringens* spores (protozoa)
- F-specific RNA bacteriophage (MS2; viruses)

We reviewed the *Annual report on recycled water quality management 2012-13* which indicated that all recycled water schemes, except the Rouse Hill residential and Wollongong industrial schemes, achieved full compliance with health and environmental performance requirements. Overall Sydney Water's compliance with recycled water targets was considered to be excellent.

Cryptosporidium oocysts were detected in the recycled water supply of the Rouse Hill residential (1 incident) and Wollongong stage 2 industrial (two incidents) recycled water schemes. On all three occasions, the level of UV treatment at both plants at the time met the requirements of the plant critical control points and was adequate to inactivate oocysts. As a result, the detection of *Cryptosporidium* oocysts was not considered to pose a risk to public health.

The *Annual report on recycled water quality management 2012-13* outlines recycled water scheme performance against short term trigger values and long term trigger values (LTVs). Iron and fluoride concentrations at Liverpool were the only parameters that often exceed their respective LTVs. These exceedences are not considered to be significant. Sydney Water explained that the reason for non-compliance for iron was due to the use of ferrous chloride for odour control and ferric chloride for phosphorus reduction. It would be difficult for Sydney Water to comply with the AGWR long term average limit for fluoride (1.0 mg/L) in catchments with low infiltration/inflow given that the average fluoride level in the drinking water supply is in the order of 1.1mg/L.

We viewed EKAMS and were able to confirm the recycled water quality results for 2012-13 for Liverpool WRP. Sydney Water explained that a number of sampling regimes existed to meet various regulatory and operational requirements and the sampling regime had been set up to meet these requirements as efficiently as possible. All sample results could be accessed by sample point number.

Sydney Water described the communication procedure with customers and referred to the *Notification of Plant Recycled Water Production Interruptions SOP*. Following the recent organisational changes, the process now involves the Sydney Water Customer Service Group contacting the customer rather than the Recycled Water Operations Team as indicated in the SOP. It is anticipated that Sydney Water will update its procedures to align with the revised organisational responsibilities.

The *Recycled Water Quality Event Management SOP* sets out the procedure for responding to a recycled water quality event or incidence. We found that *Appendix 2 - Notifiable Events to NSW Health* could be confusing to operators. It was explained that this SOP was supported by more detailed local documents and during the site visit to Liverpool WRP we were provided with a hardcopy of the document *Treatment Notification and Reporting*.

We further discussed the two *Cryptosporidium* non-compliance events, one each at Rouse Hill and Wollongong. Sydney Water showed the recording of the incidents in SWIRL (which can be accessed by NSW Health). We were advised that the incidents had been reported by email to NSW Health; a copy of the relevant email for Rouse Hill was provided.

From our review of the documentation provided and interviews we found that overall, Sydney Water had well developed procedures and processes in place to manage recycled water. The performance of plants in meeting water quality targets was considered to be very good.

The audit then focussed on an example of a lower risk water recycling scheme and we discussed the Liverpool RWQMP in detail. This discussion was followed up by a visit to the Liverpool WRP where further discussions were held. Our audit found that:

- There had been a number of changes to plant operation since the RWQMP was prepared. The plant had recently undergone process optimisation with any influent exceeding the plant capacity now being by-passed into the oxidation pond for transfer and discharge through the Malabar outfall. This had resulted in a more stable plant operation with the ability to achieve complete nitrification resulting in breakpoint chlorination being attained. This optimisation had resulted in the production of an excellent quality of effluent in 2012-13 as shown in Table 2 below. Plant performance has improved over the past 10 years with the 2009 upgrade resulting in an improvement (see Tables 3 & 4) but the most significant improvement in relation to recycled water quality has been through recent optimisation (see Table 2).

Table 2 Effluent quality 2012 - 2013

	units	Average	50%ile	80%ile	90%ile	Max	Target
BOD	mg/L	3.3	3		6	8	<20
Suspended solids	mg/L	3.8	4		7	15	<30
Faecal coliforms	cfu/100mL	11.4	1		8	410	<1000

Table 3 Effluent quality 2008 - 2011

	units	Average	50%ile	80%ile	90%ile	Max	Target
BOD	mg/L	11.4	6	16	26	121	<20
Suspended solids	mg/L	14.6	10	23	30	59	<30
Faecal coliforms	cfu/100mL	285	<0.1	25	162	5300	<1000

Table 4 Effluent quality 2001 - 2011

	units	Average	50%ile	80%ile	90%ile	Max	Target
BOD	mg/L	10.8	7	15	23	121	<20
Suspended solids	mg/L	18.4	10	21	28	410	<30
Faecal coliforms	cfu/100mL	455	1	26	380	22000	<1000

- Less than 2% of the effluent is recycled to Liverpool Golf Club and Warwick Farm Racecourse
- The LRVs cited in the RWQMP for the plant processes were quite conservative, however many of the LRVs quoted were for off-site controls where Sydney Water had limited involvement
- Each of the users had signed an Agreement with Sydney Water and users were required to submit an Annual Declaration stating that they had complied with the requirements of the Agreement. We found that both the Liverpool Golf Club and the Warwick Farm Racecourse had incorrectly signed the Annual Declaration for the future year rather than for the past year, as required. We were provided with copies of Annual Declarations from the Castle Hill Country Club and Wollongong City Council which had been correctly signed. This indicated that there had not been a universal misunderstanding of the requirements for signing the Annual Declaration. However, we also noted that the Annual Declarations signed by the Castle Hill Country Club and Wollongong City Council had not been witnessed by either a JP, solicitor or commissioner of declarations as required for a statutory declaration under the Oaths Act 1900 (NSW). In summary, none of the four Annual Declarations were fully compliant
- The inaccuracies observed in completing the annual declarations indicate that the communication between Sydney Water and recycled water irrigation scheme customers' needs to be reinforced. Furthermore, Sydney Water, in this instance, does not appear to have applied the appropriate level of thoroughness in checking the signature of any of

the annual declarations

- The Sydney Water agreement with recycled water users does not include any provision for Sydney Water to audit or review the operation of the recycled water schemes by its customers
- The RWQMP states that the customers have a Recycled Water Management System (RWMS). Whether this exists for the Liverpool Golf Club or Warwick Farm Racecourse is unknown as Sydney Water does not have a copy. It was inferred from discussions that in this instance the RWQMP was taken to be the Recycled Water Agreement
- The Liverpool RWQMP highlighted the challenge of achieving breakpoint chlorination and refers to critical limits of <1 mg/L and > 5 mg/L for total chlorine. These levels are no longer applicable as the plant is now able to achieve breakpoint chlorination. A free chlorine on-line analyser is currently being installed at the outlet of CCT (chlorine contact tank)
- A critical limit of >40mg/L for suspended solids is specified at the outlet from the secondary clarifiers and the supply from Glenfield. Where the critical levels are exceeded the recycled water supply is shut off. We would question whether the critical limit has been set too high for suspended solids since it is unlikely that a satisfactory level of disinfection can be achieved at this level. The AGWR notes a water quality objective of 30mg/L for suspended solids for a secondary treatment plant. We would also question whether there is a need to connect the Glenfield effluent to the recycled water supply
- We would recommend that target, as well as critical limits, are specified at critical control points. This will instigate action well before critical limits are reached. It is understood from on-site discussions that this is proposed once the SCADA system is fully operational
- We noted that the improvement Actions 1 and 2 in the RWQMP had been completed, Action 3 is shortly to be completed and Action 4 (treatment validation) is to be completed this financial year
- During our initial review of the Liverpool RWQMP and discussions with Sydney Water staff we had a number of concerns that Sydney Water may not be applying the same level of rigour to the management of its lower risk recycled water schemes that it applies to its other higher risk recycled water plants. However, discussions on site allayed a number of our concerns. We noted the excellent quality of effluent produced in 2012-13 as a result of recent plant optimisation. However there are some areas that warrant further attention. These include:
 - The inaccuracies observed in completing the annual declarations indicate that the communication between Sydney Water and recycled water irrigation scheme customers' needs to be reinforced
 - Sydney Water's internal review processes need to be strengthened and all customers advised on how to complete the Annual Declaration and asked to re-submit declarations for 2012-13
 - The need for Sydney Water to have some level of input into the management of recycled water at the two sites (Liverpool Golf Club and Warwick Farm Racecourse) and possibly other similar sites rather than just relying on the Annual Declaration. This could involve a low-key annual visit to the sites to discuss operational issues with staff and identify possible issues of concern with Sydney Water providing high level advice only. Some increased level of Sydney Water involvement will certainly reduce the likelihood of risks associated with inappropriate use of recycled water or exposure to recycled water. Sydney Water's legal liability for this advice could be reduced by having a short deed prepared that states that any advice from Sydney Water does not abrogate the customer's responsibility to adequately manage the recycled water system to meet the requirements of the Agreement and that the customer indemnifies Sydney Water for any claims, loss or damage arising from third party claims in relation to the use of the recycled water. It is recommended that Sydney Water considers the feasibility of taking this approach with its other schemes where recycled water is classified *municipal use, with restricted access and application, or municipal use, with enhanced restrictions on access and application*
 - The current RWQMP does not fully reflect how the Liverpool plant is configured and how it is achieving breakpoint chlorination. It also needs to specify target limits as well as critical limits. While NSW Health has already endorsed the Plan it is anticipated that it would need to be informed any material changes that impact on recycled water management. It is recommended that following verification of the plant the RWQMP is updated taking note of the observations made in this audit
 - It is further recommended that Sydney Water follows up the treatment plant validation program with a review and update of each RWQMP and submits updated RWQMPs to NSW Health.

Sydney Water does not operate any stormwater harvesting schemes on its trunk stormwater network.

Recommendations

- RW-2013| 1. Sydney Water's internal review processes for managing annual declarations from customers operating recycled water schemes classified *municipal use, with restricted access and application, or municipal use, with enhanced restrictions on access and application* need to be strengthened and all customers advised on how to complete the Annual Declaration and, where appropriate, asked to re-submit declarations for 2012-13.
- RW-2013| 2. Sydney Water should consider having some level of input into the management of recycled water at the two sites (Liverpool Golf Club and Warwick Farm Race Course) and possibly other similar sites rather than fully relying on the Annual Declaration to manage the inappropriate use of recycled water or exposure risks.
- RW-2013| 3. The Liverpool RWQMP should be updated to fully reflect how the Liverpool plant is configured and how it

is achieving breakpoint chlorination. It also needs to specify target limits as well as critical limits. Following verification of the plant the RWQMP should be updated and submitted to NSW Health.

RW-2013| 4. Following the treatment plant verification program, relevant Recycled Water Quality Management Plans should be reviewed, updated where appropriate, and submitted to NSW Health.

Opportunities for Improvement

No further opportunities for improvement were identified beyond those listed above under Recommendations.

Sub-clause	Requirement	Compliance Grade
2.2b	Sydney Water must manage Recycled Water quality in accordance with: any other guidelines specified by NSW Health to the satisfaction of IPART. <i>Audit of this clause should be a combination of risk based adequacy and implementation.</i> <i>At NSW Health's request, the auditor should also consider:</i> <ul style="list-style-type: none">▪ verification of water quality▪ monitoring / management of critical control points▪ management of incidents <i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i>	No Requirement
Risk	Target for full compliance	
Non-compliance will increase public health and environmental risks associated with the use of recycled water.	Compliance with the requirements of any other guidelines specified by NSW.	
Evidence sighted		
There was no evidence provided as NSW Health has not specified any other guidelines apart from the Australian Guidelines for Water Recycling.		
Summary of reasons for grade		
There was no discussion on this matter as NSW Health has not specified any other guidelines.		
Discussion and notes		
No additional requirements for recycled water quality were specified by NSW Health for the period 1 July 2012 to 30 June 2013.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
2.2c	Sydney Water must report on Recycled Water quality monitoring in the manner and form outlined in the Reporting Manual.	Full Compliance
	<i>Audit of this clause should be a combination of risk based adequacy and implementation.</i>	
	<i>At NSW Health's request, the auditor should also consider:</i>	
	<ul style="list-style-type: none">▪ verification of water quality▪ monitoring / management of critical control points▪ management of incidents	
	<i>The audit will be informed by further consultation with NSW Health, the outcomes of previous audits and further discussion with IPART.</i>	
Risk	Target for full compliance	
If Sydney Water cannot report on recycled water quality then public confidence in the use of recycled water quality may be eroded.	Reports have been provided as required in the Reporting Manual.	
Evidence sighted		
<ul style="list-style-type: none">▪ Recycled Water Quality Folio of Progress▪ Annual Recycled Water Quality Management Report 2012-13▪ Quarterly Recycled Water Quality Monitoring report for NSW Health 2012-13, Third Quarter 1 Jan 2013 – 31 March 2013▪ Five Year Recycled Water Quality Management Plan 2009-2014, Nov 2009,▪ Sydney Water Incident Recording and Learning System (SWIRL)▪ Copy of email (dated 6 February 2013) from Sydney Water to NSW Health - Positive <i>Cryptosporidium</i> detection at Rous Hill WRP.		
Summary of reasons for grade		
Sydney Water has complied with all the requirements set out in the Reporting Manual.		
Discussion and notes		
Sydney Water's compliance to these requirements is detailed in the Recycled Water Quality Folio of Progress.		
The <i>Reporting Manual for Sydney Water</i> , IPART, June 2013 requires Sydney Water to provide the following reports		
<ul style="list-style-type: none">▪ Quarterly Report on Recycled Water Quality to NSW Health▪ Annual Report on Recycled Water Quality Management▪ Immediate Notification of Incidents▪ Significant changes of management of water quality		
The Recycled Water Quality Folio of Progress includes a Reporting Manual checklist which lists when the reports were issued. We were provided with copies of the reports and were able to view SWIRL through which incidents are recorded. We were also provided with a copy of an email sent to NSW Health regarding a positive <i>Cryptosporidium</i> detection at Rous Hill WRP.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

APPENDIX C

DETAILED AUDIT FINDINGS,
MANAGING ASSETS (LICENCE
CLAUSE 3.1.1)

Sub-clause	Requirement	Compliance Grade
3.1.1	<p>Sydney Water must ensure that its assets are managed consistently with the asset management framework described in clause 3.1.2.</p> <p><i>The primary focus of the audit is to be on implementation of the framework, via site inspections.</i></p>	<div>Full Compliance</div> <div></div>
Risk	Target for full compliance	
Assets are poorly managed leading to higher costs and failure to meet required service levels.	An effective asset management system is in place and implemented across all asset classes.	
Evidence sighted		
<ul style="list-style-type: none"> 2013/18 capital program board paper 2013 Compliance Accountability Register update Approved Task Assignment – SWGC detailed planning for 2nd release precincts wastewater Approved Task Assignment - Water servicing strategy review for Turner Road and Oran Park Precinct Asset Management and data and information improvements Asset Management, Cascade Water Delivery System, Cascade Water Filtration Plant, System Plan, Volume 1, Paul Rabaud, December 2008 Avoid fail sewer CapBid submission Balgowlah Heights Waterways WO 70459866 plans pages 1-41 BCS Training & attendance record Blue Mountains WFP – Scenario Schedule, 29/05/2013 Business Impact Analysis 2013 – Infrastructure Delivery Division Business Continuity Management Integration and Governance Business Continuity Management policy Business Continuity Management overview presentation Business continuity management steering committee charter Canterbury-Bankstown Submain, Sewer Traverse Inspection Report, June 2013 Cascade Water Filtration Plant, Emergency Plan, and, Manifest, March 2008 Clause 3.1.2b10 Managing Assets Compliance Accountability Register Compliance Accountability Register, 2013 Compliance Accountability Register – current at 21/6/13 Contingency Plan/SIP Schedule 2012-15 CPP operations and facilities maintenance training strategy April 15 2012 v1.0 Criticality Analysis Assessment Detailed Equipment Condition Report, WP0058 - Water Pumping Station – North, J Nikolovski 12/09/2012 Detailed Equipment Condition Report, WP0058 - Water Pumping Station – North, R Bezold, 29/11/2012 Drawing, West Hoxton Wastewater Scheme Gravity Reticulation Mains Gravity Reticulation Mains – SNWH, February 2013 Drawings, Sewer Rehab information update samples Emergency Action Plan, Chemical Spills/Leaks – Chlorine, 20/09/2011 Emergency Action Plan, Chemical Spills/Leaks – Ferric Chloride Solution, 20/09/2011 Emergency Action Plans – Bushfire, 20/09/2011 Emergency response plan Exhibit M - KPIs and Margin Abatement Payments (copy located in Volume 2 Exhibit M - KPIs and Margin Abatement Payments (copy located in Volume 2), Version control for Exhibit M - KPIs and Margin Abatement Payments Incident, Dangerous Event and Near Miss Reporting and Investigation, 19/05/2011 Liverpool WRP planned maintenance completion report Loss of PLC Control, Heath Botham, 20/08/2012 Macarthur Water Supply Project, Operation Reports, 1 May - 31 May 2013 Macarthur Water Supply Project, Operation Reports, 1 June - 30 June 2013 Maintenance Related Clauses For Capital And Operational Projects Version 5, Fredrick Rodrigo, 20/08/2011 		

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- Missing Lone Worker, Yuva Upadhyaya and William Wolf 08/12/2012
 - North Richmond PM Forecast
 - North Richmond WFP – Dual Media Filter No. 3 condition assessment report
 - Post-Incident Review – Incident, North Richmond WFP Dirty water events, February 2013
 - Process diagram North Richmond WFP
 - Sewer Mains Asset Management Plan 2011-12, June 2012
 - Schedule of level 1 condition assessment for treatment facilities completed in 2012
 - SW Water Filtration Major Asset Damage/ Failure, Standard Incident Procedure
 - South West Growth Corridor (SWGC) 2nd release precincts wastewater infrastructure Business Case
 - SWGC Water Servicing Strategy Review for Turner Road and Oran Park – December 2012
 - Training program for O&M contractor staff
 - Transition and implementation risks
 - Update of Maximo for Replacement of an Asset
 - Water and Wastewater Training Attendance Sheet
 - Water Product Plan, Cascade WFP 41 Business Continuity Plan
 - Western Sydney Growth areas projections update
 - WFP CapBid submission
-

Summary of reason for grade

Sydney Water has a robust asset management system in place and has demonstrated that it implements this system in the areas that we reviewed.

Discussion and notes

Sydney Water's asset management practices have been subject to considerable scrutiny in recent years including:

- Sydney Water Operating Licence Audit Report 2011/12 (GHD)
- Report on 2010/11 Audit of Asset Management Obligations – Sydney Water Corporation (Atkins/Cardno)
- Detailed Review of Sydney Water Corporation's Operating and Capital Expenditure, 2011 (Atkins/Cardno).

The 2010/11 report by Atkins/Cardno was in particular a comprehensive review of asset management at Sydney Water. All of these reviews found that Sydney Water has a robust asset management framework in place which it implements in managing its infrastructure. Recognising this body of work, the scope of this audit was restricted to focusing on *implementation* of Sydney Water's asset management framework and in particular implementation with respect to water filtration plants and sewer gravity mains.

In practice, it was found to be difficult to separate out consideration of the framework itself from implementation of the framework. This is because it is necessary to know the elements of the framework before examining how they are implemented. Also, the focus on only two asset classes did reduce the scope to some extent but it was found to still be necessary to consider whole of business aspects of the asset management framework which are common to all or many asset classes.

Operating Licence requirement

The audit scope makes reference to Clause 3.1.1 which requires that "Sydney Water must ensure that its Assets are managed consistently with the asset management framework described in clause 3.1.2." Therefore, it is not possible to audit Clause 3.1.1 without reference to Clause 3.1.2. Clause 3.1.2 states:

Sydney Water's asset management framework must demonstrate:

(a) robust and transparent methodologies for determining and prioritising licensing and other regulatory requirements and current and future service levels as well as identifying the infrastructure needed to achieve those service levels and requirements

(b) robust, transparent and consistent processes, practices and programs to ensure sustainable delivery of service levels and regulatory requirements, based on sound risk management, including:

- (1) asset inventory*
 - (2) asset planning incorporating both business and technical risk assessments*
 - (3) maintenance of adequate records and robust and reliable data*
 - (4) asset replacement, rehabilitation, augmentation, creation/acquisition and/or substitution (asset and non asset substitutions)*
 - (5) management of service provision, including contracts*
 - (6) monitoring and condition assessment*
 - (7) proactive and reactive maintenance*
 - (8) operations*
 - (9) training and resourcing*
-

(10) contingency planning covering both emergency management and business continuity

(11) asset rationalisation and disposal

(c) robust and transparent decision making processes that balance acceptable risk with cost and service provision to achieve prudent, efficient and effective operating and capital investment

(d) an approach that achieves the lowest cost of service delivery through the effective life cycle management of the asset base

We have approached auditing this clause by considering the following areas:

- Asset management framework, compliance and service levels
- Lifecycle management strategies:
 - Asset planning
 - Monitoring, condition assessment, asset replacement, rehabilitation and augmentation
 - Operation and maintenance
 - Asset rationalisation and disposal
- Support systems and processes:
 - Training and resources
 - Contingency planning
- Continual improvement

We have structured our discussion using the above framework and our findings in each area are set out as follows.

Asset management framework, compliance and service levels

Sydney Water advised that its asset management framework has not changed in 2012-13 compared with that described in previous reviews. The framework is set out in the document 'Strategic Framework for Asset Management'.

We requested Sydney Water to provide its current compliance register. This document, the 'Compliance Accountability Register' is stated to be 'the mechanism by which Sydney Water documents accountability for developing and maintaining the tools used to comply with its legislative obligations.' The important features of this register are that it lists all known applicable legislation, the division responsible for compliance with that legislation, the individual who is their key contact, and compliance results. Importantly, General Managers also have to sign an undertaking to demonstrate their awareness of and commitment to meet the compliance requirements. We believe that the structure and governance of this compliance register demonstrate sound implementation in this area.

Sydney Water advised that it has updated its capital prioritisation methodology in 2012. This methodology is set out in a Board Paper which we were provided with and Sydney Water also presented an internal presentation on the framework of this revised methodology. The methodology applies more sophisticated criteria to quantitatively and qualitatively assess the benefits of proposed capital works. The new methodology was first used in 2012-13 to develop the 2013-18 five year program and was being used for the second time in late 2013 to develop the 2014-19 program. In rolling out the methodology, Sydney Water has also refreshed its capital development process in the way that it collects information on capital works, facilitates management review of proposed works and gains sign-off of the proposed program.

To demonstrate implementation of the new prioritisation methodology, we were provided with:

- The 2013-18 capital program Board paper
- Avoid fail sewers 'CapBid' submission
- WFP renewals 'CapBid' submission.

Based on the evidence provided, we are satisfied that Sydney Water is implementing this capital prioritisation methodology as set out in its procedures. Sydney Water stated that the benefits of the revised approach is that it has increased senior management review and critique of capital submissions and the basis for making decisions is more transparent. We agree that the methodology provides a transparent and robust framework for setting out project benefits. From our limited review we caution that the approach may have a bias towards favouring capital expenditure as its prioritisation is based on aggregate benefits, not aggregate benefits divided by costs. Sydney Water stated that it believes that this issue is avoided as project sponsors are required to disaggregate works into their smallest logical components (project elements that can be undertaken separately).

Lifecycle management strategies

Asset planning

The Growth Servicing Plan and the Metropolitan Development Plan are the basis for growth planning for Sydney Water. Area plans are developed for new areas and Service Plans created for existing areas. Options reports are developed to service the growth identified and the outcomes of these reports are added to the investment program. The Detail Planning procedure, Growth Servicing Strategy Guidelines (water, wastewater) and Sustainability Planning Guidelines provide a robust framework for Sydney Water's asset planning.

To test the implementation of this planning framework, we reviewed the following asset planning documents:

- Approved Task Assignment – SWGC detailed planning for 2nd release precincts wastewater
- Approved Task Assignment - Water servicing strategy review for Turner Road and Oran Park Precinct
- Western Sydney Growth areas projections update

- SWGC 2nd release precincts wastewater infrastructure Business Case
- SWGC Water Servicing Strategy Review for Turner Road and Oran Park – December 2012.

We found that these documents demonstrate that Sydney Water is implementing its asset management framework in planning for new assets.

Monitoring, condition assessment, asset replacement, rehabilitation and augmentation

Sydney Water manages the monitoring, condition assessment and rehabilitation/replacement of assets based on asset criticality, in line with good practice.

Sydney Water provided to us the following examples of condition assessment/performance monitoring:

- Canterbury-Bankstown submain sewer traverse inspection report
- WP0058 detailed equipment condition report
- North Richmond WFP – Dual Media Filter No. 3 condition assessment report.

We also received and reviewed the asset management plans prepared by Sydney Water for sewer mains, water mains and water filtration plants. Sydney Water has previously updated these plans annually but is likely to reduce this review frequency. These AMPs contain summary information on asset condition and performance. During a live demonstration of Maximo, we also interrogated the condition assessment information held in that system.

We found that Sydney Water undertakes condition assessment and performance monitoring targeted at its critical assets and we found reasonable information on these assets for the small scope of assets reviewed by us. In the demonstration of Maximo we found that a screw conveyor at the inlet works of Liverpool WRP was recorded as having last been condition assessed in January 2007. We queried Sydney Water as to whether this asset should have been inspected more recently than 6 years ago. Sydney Water replied that the asset may have been inspected but the information not recorded in Maximo and that in future it was intended that all active assets be visually conditioned assessed annually. This suggests that understanding the current status of condition assessment information for all active assets is an area of opportunity for Sydney Water. We also suggest that condition assessment frequency be varied based on asset criticality although we appreciate that annual inspections may provide a useful baseline.

We reviewed the avoid fail sewer replacement program in detail at the audit and post audit. This included querying work orders and reviewing CCTV work packages sent to contractors.

We found that the information provided at audit and in response to our queries demonstrate that Sydney Water has implemented its asset management framework in monitoring, condition assessing, replacing and rehabilitating its assets.

Operation and maintenance

Sydney Water has recently entered into a significant contract for operation and maintenance of its mechanical and electrical assets. The contractor is required to use Sydney Water's CMMS (Maximo) to ensure that asset data is kept current and available to Sydney Water for planning and asset management. Recognising that this contract had only recently commenced, we requested and reviewed the following documents to test implementation of Sydney Water's asset management framework:

- Schedule of completed planned maintenance activities at Liverpool WRP for July 2013
- Calibration Records for June 2013 for the on-line Turbidity Meters on the Raw Water and Filter 5 at Macarthur WFP
- Macarthur WFP Operations report for May 2013
- Macarthur WFP Operations report for June 2013.

We also requested Sydney Water to provide:

- Response times for breakdown maintenance activities under O&M contracts, sorted by priority, for the Southern region from 1 July 2013
- % complete for planned maintenance activities in the southern region since 1 July 2013.

Sydney Water advised that it could not provide the above statistics due to problems setting up its data collection and reporting interfaces with its O&M contractors. We accept that this is reasonable given that the contract is recently commenced but would expect that Sydney Water would be able to readily report on measures such as these in 12 months' time. We also note that the report on planned maintenance at Liverpool WRP shows that a reasonable number of activities were not completed as planned. Sydney Water notes that maintenance was impacted by resources being required to deal with issues in other areas of its operations at that time.

Asset rationalisation and disposal

To test the implementation of Sydney Water's asset disposal procedures, we requested, and were provided with, a schedule of all assets that were disposed of during 2012-13, including the written down value.

Support systems and processes:

Training and resources

We discussed training as it related to the transition to the new operations and maintenance contractor. We were provided a presentation outlining the strategy for training the new operations and maintenance contractor staff to ensure that they had the capability required to manage Sydney Water's assets. We were also provided with a training program which demonstrated that considerable significant resources were committed to training staff over an intensive six week period just prior to, and immediately after, commencement of the contract. These documents demonstrate that Sydney Water has facilitated its contractor to undertake training to implement its asset management framework.

Contingency planning

We reviewed Sydney Water's contingency planning framework which is set out in the following documents provided to us:

- Business Continuity Management policy
- Business Continuity Management overview presentation
- Business Continuity Management Integration and Governance
- Business continuity management steering committee charter.

We then sought to test the implementation of this framework by requesting and reviewing evidence of where activation exercises had been undertaken and opportunities for improvement identified. Sydney Water provided to us the following:

- Personal logsheet recording attendance and minutes of activation exercise at Liverpool WRP on 11/1/13
- Debrief for major fire and emergency activation scenario 30/8/12
- Overflow at Fairfield WWTP scenario 2/2/13
- CARs for emergency exercises.

On the basis of the above evidence, we are satisfied that Sydney Water is implementing its framework for contingency planning.

Recommendations

There are no recommendations in relation to this sub-clause

Opportunities for Improvement

1. We suggest that understanding the current status of condition assessment information for all active assets is an area of opportunity for Sydney Water. We also suggest that condition assessment frequency be varied based on asset criticality.
-

APPENDIX D

DETAILED AUDIT FINDINGS, PRIORITY
SEWERAGE PROGRAM (LICENCE
CLAUSE 3.6)

Sub-clause	Requirement	Compliance Grade
3.6a	<p>Sydney Water must continue with the planning and delivery of the Priority Sewerage Program such that wastewater services are provided to the requisite number of lots in the following areas by the dates specified below:</p> <ol style="list-style-type: none"> 1) Agnes Banks and Londonderry by 31 December 2012 2) Glossodia, Freeman's Reach and Wilberforce by 31 December 2012 3) Yellow Rock and Hawkesbury Heights by 31 December 2012 4) Appin by 30 June 2015 5) Wilton and Douglas Park by 30 June 2014 6) West Hoxton by 30 June 2014 7) Bargo and Buxton by 30 June 2014 8) Cowan by 30 June 2014 9) Galston and Glenorie by 30 June 2015. 	<div>Full Compliance</div> <div></div>
Risk	Target for full compliance	
Failure to deliver the priority sewerage schemes would lead to increased public health and environmental risks due to inadequate collection and treatment of sewage.	To achieve full compliance, the public utility needs to demonstrate that planning, construction and commissioning is proceeding in accordance with the required timetable. Evidence to demonstrate this will include: planning reports, construction drawings and commissioning/handover reports and certificates.	
Evidence sighted		
<i>Agnes Banks and Londonderry</i>		
<ul style="list-style-type: none"> Agnes Banks and Londonderry Basis of Design Memo Concept Finalisation Dynamic Modelling – Agnes Banks & Londonderry Pressure Sewerage Scheme Memo Londonderry Town Final Commissioning Report Agnes Banks Town Final Commissioning Report Agnes Banks and Londonderry Sewerage Scheme – Business Case Certificate of Availability – Agnes Banks Certificate of Availability – Londonderry Londonderry Commissioning Checklist Agnes Banks and Londonderry Sewerage Scheme Process Design Report Agnes Banks and Londonderry Sewerage Servicing Strategy Agnes Banks and Londonderry Monthly Progress Report July 2013 		
<i>Glossodia, Freeman's Reach and Wilberforce</i>		
<ul style="list-style-type: none"> Three Towns Sewerage Scheme Planning Review and Pre-Design Report Glossodia, Freeman's Reach and Wilberforce sewerage scheme preferred option and procurement delivery approval business case Certificate of availability – 'Three towns' Freemans Reach final commissioning report Freemans Reach Town Final Commissioning Report Freemans Reach SP1166 Needs Specification Glossodia Final Commissioning Report Glossodia SP1167 Needs Specification Three Town Monthly Progress Report July 2013 Glossodia, Freeman's Reach and Wilberforce Sewerage Servicing Strategy Area Plan Glossodia, Freeman's Reach and Wilberforce Target Outturn Cost Wilberforce Final Commissioning Report Wilberforce SP1168 Needs Specification Yellow Rocks and Hawkesbury Heights 		
Summary of reason for grade		
Sydney Water has provided sufficient evidence that its planning and construction of the priority sewerage schemes is proceeding in line with (in advance of, in fact) the required program		

Discussion and notes

Our review of planning documents (including feasibility studies, servicing strategies and business cases) and construction documents (including as constructed drawings, commissioning reports and certificates of availability) shows that Sydney Water is progressing delivery of the Priority Sewerage Program into the required areas in accordance with the timeframe set out in its licence.

The licence program requires that sewerage infrastructure should be available in Agnes Banks, Londonderry, Glossodia, Freeman's Reach, Wilberforce, Yellow Rock and Hawkesbury Heights by 31 December 2012. We were provided evidence in the form of commissioning reports and certificates of availability that confirm that these schemes have been completed on time.

Currently, Sydney Water is delivering sewerage infrastructure to Wilton, Douglas Park, West Hoxton, Bargo, Buxton and Cowan, with all these schemes required by 30 June 2014. We reviewed planning documents which showed that these schemes had all been investigated and preferred options determined and developed. These schemes are being jointly progressed as 'Priority Sewerage Program Stage 3'. The July 2013 monthly report for the overall program provides the following update on the status of each scheme:

- Cowan: Construction works well progressed with estimate for overall completion November 2013
- West Hoxton: Construction nearing completion with anticipated finish during September 2013
- Bargo and Buxton: Works commenced with 17% of reticulation complete in Bargo and reticulation to start to be installed during August 2013 at Buxton. It was noted that the design of the transfer main was on hold pending the completion of a servicing strategy
- Douglas Park Scheme: It was noted that there is continued uncertainty over the Douglas Park scheme with potential for a different servicing option for effluent management. To ensure that the Operating Licence timeframe is met Sydney Water has separated the property and reticulation works from effluent management. Construction on the reticulation and property works is due to commence in early 2014 and these works will be completed by June 2014
- Wilton Scheme: Construction at Wilton is due to commence in October 2013. This scheme will be completed by June 2014.

While the above points highlight potential risks to Sydney Water's ability to deliver the Bargo/Buxton and Douglas Park schemes in line with the required program, at this point in time Sydney Water has undertaken the necessary planning and project development to deliver these schemes on time. To achieve this Sydney Water has separated the property and reticulation works from effluent management and these works will be completed by June 2014.

We visited the West Hoxton scheme and saw that reticulation works had recently been completed. The progress was in line with that reported by Sydney Water and recorded in its monthly report.

There is some inconsistency in Sydney Water's licence over the terminology in the clause that 'wastewater services are provided to the requisite number of lots'. The phrase 'requisite number of lots' is not defined in Sydney Water's licence or used elsewhere in the document. Sydney Water advised us that it was not aware of a requisite number of lots required in each scheme and we have not been able to find any other document that makes reference to a 'requisite number of lots' for each Priority Sewerage Program area. Attached to Sydney Water's licence is a schedule (Schedule 4) relating to the Priority Sewerage Program that details the 'estimated number of lots' for schemes or groupings of schemes.

However, this schedule is not referenced in Clause 3.6 of Sydney Water's licence, or anywhere else in the licence. While it is obvious that this schedule relates to Clause 3.6, that link is not made explicit in the licence. Also, the terminology in Clause 3.6 which refers to 'requisite number of lots' and that in Schedule 4 which refers to 'estimated number of lots' is inconsistent and a source of confusion. It makes more sense to refer to an 'estimated number of lots' because land use and circumstances can change over time that could make achieving a 'requisite' number a sub-optimal outcome in some situations. IPART has advised that the terms 'requisite' and 'estimated' have the same meaning.

Further, the grouping of schemes in Clause 3.6 is different to that in Schedule 4. For example, West Hoxton and Austral are grouped together in Schedule 4 but only West Hoxton has a delivery date in Clause 3.6. This means that it is not possible to determine from the licence alone how many lots are 'estimated' for West Hoxton by itself which makes comparison against the table in Schedule 4 meaningless.

We recommend that for the 2013-14 Priority Sewerage Program Annual Report that Sydney Water provides a reconciliation (as far as is possible) between the details in Schedule 4 and the actual lots serviced in each scheme to date and planned for future. We also recommend that IPART provides guidance to Sydney Water regarding the inconsistent use of the phrases 'requisite' and 'estimated'

Recommendations

- PSP-2013| 1. We recommend that for the 2013-14 Priority Sewerage Program Annual Report that Sydney Water provides a reconciliation (as far as is possible) between the details in Schedule 4 and the actual lots serviced in each scheme to date and planned for future.

Opportunities for Improvement

No opportunities for improvement have been identified in relation to this sub-clause

Sub-clause	Requirement	Compliance Grade
3.6b&d	b) Sydney Water will commence planning for Yanderra by 30 June 2015.	Full compliance
	d) Clause 3.6(b) does not apply where a licensee under the Water Industry Competition Act 2006 provides wastewater services to the relevant area of the Priority Sewerage Program.	
Risk	Target for full compliance	
Failure to deliver the priority sewerage schemes would lead to increased public health and environmental risks due to inadequate collection and treatment of sewage.	To achieve full compliance, the public utility needs to demonstrate that planning, construction and commissioning is proceeding in accordance with the required timetable. Evidence to demonstrate this will include: planning reports, construction drawings and commissioning/handover reports and certificates.	
Evidence sighted		
<ul style="list-style-type: none">20130823_TAB_Operating Licence clause Priority Sewerage Program for auditorsPriority Sewerage Program Annual Report 2012-13		
Summary of reason for grade		
Planning for this scheme is not required to commence for another two years. Sydney Water advised that it will commence planning in 2014/15.		
Discussion and notes		
In its 2012-13 Annual Report for the Priority Sewerage Program, Sydney Water notes that 'planning for Yanderra will commence by 2015'. We were advised that planning will commence in the 2014/15 financial year.		
Sydney Water advised that it was not aware of a WICA licence application being made for the Yanderra PSP area and that it has checked the WICA section of IPART's website on 22 August 2013. We also checked IPART's website in October 2013 and did not find any evidence of a WICA application for this area.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
3.6c	<p>If either Sydney Water or a licensee under the <i>Water Industry Competition Act 2006</i> provides wastewater services to a significant development (as determined by the Minister) in an adjoining area to one of the following areas in the Priority Sewerage Program:</p> <ol style="list-style-type: none"> 1) Austral 2) Menangle and Menangle Park, <p>then Sydney Water must deliver the Priority Sewerage Program in that area such that wastewater services are made available to customers within 24 months of wastewater services being available to service the significant development.</p>	<div>Full compliance</div> <div></div>
Risk	Target for full compliance	
Failure to deliver the priority sewerage schemes would lead to increased public health and environmental risks due to inadequate collection and treatment of sewage.	To achieve full compliance, the public utility needs to demonstrate that planning, construction and commissioning is proceeding in accordance with the required timetable. Evidence to demonstrate this will include: planning reports, construction drawings and commissioning/handover reports and certificates. However, this is only required where significant development is determined to occur.	
Evidence sighted		
<ul style="list-style-type: none"> 20130823_TAB_Operating Licence clause Priority Sewerage Program for auditors Priority Sewerage Program Annual Report 2012-13 		
Summary of reason for grade		
Significant development adjoining these areas is yet to occur.		
Discussion and notes		
<p>Sydney Water advised that no significant developments have been approved adjoining Austral or Menangle and Menangle Park.</p> <p>Sydney Water advised that for Austral:</p> <ul style="list-style-type: none"> Servicing Austral is subject to the timing of urban growth in the South West Growth Centre. The existing Austral village is part of the broader Austral precinct in the SWGC. The precinct has a potential for 7,600 lots and was rezoned in March 2013. Sydney Water is planning to deliver new sewers to the initial development area in the Austral precinct by 2016. The initial development area does not adjoin the existing village. Sydney Water will monitor significant development adjoining Austral village to determine when to start planning for the delivery of wastewater services to the Austral village. <p>Sydney Water advised that for Menangle and Menangle Park:</p> <ul style="list-style-type: none"> Servicing Menangle and Menangle Park is subject to the timing of urban growth in the Menangle Park urban release area. The Menangle Park release area has yet to be rezoned. Sydney Water will monitor development to determine when to start planning for servicing Menangle and Menangle Park villages. 		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		



Sub-clause	Requirement	Compliance Grade
3.6e	Should delays caused by consent authorities impair Sydney Water's ability to meet the timeframes set out in this clause 3.6, Sydney Water must write to the Minister to advise of the reasons for the delay.	Full compliance
Risk	Target for full compliance	
Failure to deliver the priority sewerage schemes would lead to increased public health and environmental risks due to inadequate collection and treatment of sewage.	Provision of evidence that Sydney Water has written to the Minister if delays caused by a consent authority have occurred where the delays impair Sydney Water's ability to meet the timeframes required	
Evidence sighted		
<ul style="list-style-type: none"> Priority Sewerage Program Annual Report 2012-13 		
Summary of reason for grade		
Full compliance is awarded because there has been no need for Sydney Water to write to the Minister.		
Discussion and notes		
Sydney Water advised us at audit, and has also recorded in the 2012-13 Annual Report for the Priority Sewerage Program, that no delays by consent authorities have occurred that have required them to write to the Minister.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
3.6f	Sydney Water must provide an annual report on its progress in implementing the Priority Sewerage Program to IPART in accordance with the <i>Reporting manual</i> .	Full Compliance
Risk	Target for full compliance	
Failure to deliver the priority sewerage schemes would lead to increased public health and environmental risks due to inadequate collection and treatment of sewage.	Annual Report provided to IPART.	
Evidence sighted		
<ul style="list-style-type: none"> Priority Sewerage Program Annual Report 2012-13 		
Summary of reason for grade		
Sydney Water has provided an annual report on its progress in implementing the Priority Sewerage Program to IPART.		
Discussion and notes		
We have reviewed the Annual Report for 2012-13 provided by Sydney Water to IPART regarding the Priority Sewerage Program and found that it adequately described Sydney Water's progress in implementing sewerage infrastructure in each area.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

APPENDIX E

DETAILED AUDIT FINDINGS – CUSTOMERS AND CONSUMER RIGHTS (CLAUSE 4.4)

Practices and procedures relating to customer hardship, debt, water flow restriction and disconnection for non-payment

Sub-clause	Requirement	Compliance Grade	
4.4a	Sydney Water must have in place and comply with procedures relating to customer hardship, debt, water flow restriction and disconnection. These procedures must include:	High compliance	
	1) a customer hardship policy for residential Customers, that helps residential Customers in financial difficulty better manage their current and future bills		
	2) a payment plan for residential Customers who are responsible for paying their bill and who are, in Sydney Water's opinion, experiencing financial difficulty		
	3) conditions for disconnection of supply or water flow restriction in accordance with the disconnection procedure set out in the Customer Contract		
	4) provisions for self-identification, identification by community welfare organisations and identification by Sydney Water of residential Customers experiencing financial difficulty.		
Risk	Target for full compliance		
Failure to develop and implement appropriate policies may lead to a perception that Sydney Water is an uncaring public utility.	Procedures relating to customer hardship, debt, water flow restriction and disconnection are in place and followed by staff. Processes for monitoring and reporting compliance with these procedures should be in place.		
Evidence sighted			
<ul style="list-style-type: none">▪ 48HD and restriction exclusion rules▪ 48HD exclusions and data integrity – reporting code▪ Additional water use policy -internal document▪ Additional water use policy – Sydney Water website▪ AMBA collections invoices – August 2013▪ AMBA training document for checking 48HD lists – Exto edition▪ BillAssist Case Coordination Procedure -internal document▪ BillAssist Case Management Policy -internal document▪ BillAssist case review and exits SOP -internal document▪ BillAssist case review procedure -internal document▪ BillAssist customer confidential information privacy procedure -internal document▪ BillAssist- Information sheet▪ BillAssist outbound call review process SOP - internal document▪ BillAssist program entry and exit procedure - internal document▪ BillAssist Property details▪ Centrepay - Information sheet▪ Centrepay procedure - internal document▪ CMS Activity detailed reports for:<ul style="list-style-type: none">– 1-2CI7H3– 1-2PHWYT– 1-33SBEX– 1-109ZPG– 1-2NS6WY– 1-2F81FE– 1-2P4XAR– 1-2H1ZG5– 1-10F02C– 1-2FPIB8– 1-2FI6KT– 1-23E4CU– 1-1YLDR9– 1-24EM31			

– 1-2RKWMV

- Concealed water leak allowance procedure -internal document
- Credit Management Notice Flow
- Credit Recovery Automatic Workflow
- Customer Contract
- Customer Contact Centre – Training Agenda
- Customer risk of harm to self or others procedure - internal document
- Daily activities in debt recovery
- Debt recovery protocols - Information sheet
- DR Rec Daily Statistics Report for June – Sep 2013
- Federal and State Government programs – Information sheet
- Hardship – the social context. Working with customers in hardship
- How to make legal referral
- How to refer to BillAssist - debt recovery protocols - internal document
- Interest on overdue charges procedure - internal document
- New Debt Recovery Segments Support Document
- New Debt Recovery Segments User Guide
- Our Contract with You - SW website
- Overdue bill notice
- Overdue payments and disconnection for non-payment policy - internal document
- Overdue payments and disconnection for non-payment policy – Sydney Water website
- Overdue payments and disconnection for non-payment procedure - internal document
- Payment Assistance Policy - internal document
- Payment Assistance Policy – Sydney Water website
- Payment assistance scheme (PAS) procedure _internal document
- Payment Assistance Scheme SOP - internal document
- PAS Agency listing at February 2013
- Pensioner concessions procedure - internal document
- Phone advice in NSW – Information sheet
- PlumbAssist Assessment Procedure - internal document
- PlumbAssist payback by customer work instruction - internal document
- PlumbAssist Work Instruction - internal document
- Q and As for Contact Centre Staff BillAssist
- Referring customers to BillAssist - Information sheet
- Restriction scratching business rules
- The Social Context of Hardship Participant Training Workbook
- SOP – 48HD and restriction lists for distribution to contractors
- SOP – Checking billing addresses and location details with councils
- SOP – Entering new rates through FMIS
- SOP – Properties with restricted supply
- SOP – Restore of water supply
- SOP, Training guide and process manual – BARM – 48HD exclusions and data integrity
- Sydney Water hardship indicators – Information sheet
- Training agenda for payment assistance program case co-ordinators
- Training document for Amba payment reconciliation for 48HD notices
- Training document for Dr Rec Skilltech Daily File Upload
- Training document for 48HD Notices and Restrictions Status
- Water Wrap Delivery Schedule 2012
- Water Wrap Delivery Schedule 2013
- Water wrap, business update and Your water production - Procedure
- Weekly EWON cases report for the period 16/09/2013 to 22/09/2013
- Working with older Australian information sheet

Summary of reason for grade

Sydney Water has robust procedures in the areas of customer hardship, debt, water flow restriction and disconnection. The documents provided were found to be satisfactory. Sydney Water has adequate systems to support these procedures and we found staff to be knowledgeable and well trained in the relevant procedures and systems. However, Sydney Water identified that in a very small number of instances it has not followed its procedures relating to restrictions.

Discussion and notes

Overview

Sydney Water has in place a strong framework and substantial policies for managing recovery of its revenue while ensuring that customers are treated fairly and provided with assistance that they may need. Sydney Water advised that it had undertaken a comprehensive review of its customer service practices in 2011 and many of its current practices were updated at this time. Sydney Water received the Customer Service Institute of Australia's premier award for customer service excellence in October 2013 which is a notable achievement and underscores Sydney Water's commitment to this area.

Sydney Water uses two systems in this area of its business. 'Access Mainframe' is a customer database used for recording customer details and billing. The 'CMS' system is used for recording customer contacts (enquiries and complaints) and customer related activities (e.g. restrictions and disconnections). In some areas the functionality of the systems overlap and we were informed that the systems are able to update each other.

Sydney Water has customer service staff who are trained across the general aspects of customer service, as well as staff who have undergone further training to join the 'BillAssist' team. The BillAssist team adopt a case management approach to providing customers in hardship with access to assistance that they need. Assistance may include Sydney Water's own programs as well as assistance provided by external agencies.

Training and quality assurance

Sydney Water makes considerable investment in its customer service staff so that they understand its procedures, but also so that they have sufficient skills and exposure to appropriate approaches for interacting with customers, including those in hardship. We were provided with the training schedule for an individual joining the BillAssist team. This program included numerous training sessions on each day over a three week period. By the third week the new starter was allowed to undertake outbound calls monitored by their 'buddy'. We also reviewed the training materials for an internal course assisting customer services staff on the 'social context of hardship'. We were informed that all Contact Centre staff including BillAssist team members had completed this training. Additional training and staff development activities include monthly presentations by external experts on areas of interest and targeted training activities in areas such as mental health awareness.

Sydney Water also has considerable quality assurance activities around its customer service activities which include:

- Team leaders overseeing a team of operators and providing on the spot guidance and 'listening in' to calls as required
- Review of activity reports generated by CMS and listening to the associated call recordings for around 30 calls each week to determine that Sydney Water's procedures were followed. This relates to the general customer service team
- Review of around four to eight calls per month answered by the BillAssist team. The comprehensiveness of assistance given, tone and timeliness of assistance are reviewed and feedback is provided to the operator on both the good practices observed and the areas for improvement
- Payment Assistance Scheme (PAS) arrangements are internally audited and can also be reviewed based on exceptions
- The activities of external agencies that work with Sydney Water to deliver PAS are also audited by Sydney Water.

The training and quality assurance undertaken by Sydney Water provides additional surety that its procedures are understood by staff and are being followed. We note that an opportunity for further quality assurance is regular auditing of Sydney Water's restrictions contractor. Sydney Water advised that it intends to undertake these audits soon.

Customer Hardship Policy

Sydney Water's 'Payment Assistance Policy' is the guiding document that meets the licence requirement that Sydney Water have in place "a customer hardship policy for residential Customers, that helps residential Customers in financial difficulty better manage their current and future bills". The important elements of this policy are the 'guiding principles' and 'Payment Assistance Program options'.

The five guiding principles in the policy are:

1. Making it easy for customers to ask for help when having payment difficulties.
2. Support for customers who are unable to pay water bills.
3. Protection from water flow restrictions and debt recovery activity for customers experiencing financial hardship who are unable to pay their water bills.
4. Providing a respectful and confidential service.
5. Being proactive in identifying and addressing payment difficulties early.

This audit requires us to assess whether relevant policies are in place and also whether Sydney Water complies with them. Through our audit activities described above and following our visit to the Customer Service Centre and trailing of

customer records, we found that Sydney Water in most instances complies with these guiding principles and is concerned to make sure that its processes, systems and people have sufficient capability and capacity to achieve compliance at all times.

We found that Sydney Water takes considerable steps to meet the guiding principles relating to making it easy for customers to access support, supporting customers, being respectful and being proactive. While all customer service staff are trained to meet these principles, Sydney Water's BillAssist team plays a significant role by directing customers to assistance through a case management approach. This proactive program is likely to provide significant benefit to customers who are experiencing hardship.

The Payment Assistance Program options detailed in the policy are:

- Government-sponsored support
 - Pensioner concessions
 - Payment Assistance Scheme – subsidies for customers identified as experiencing financial crisis
- Sydney Water sponsored support
 - Flexible payment arrangements
 - Centrepay - direct billing for customers with income support
 - PlumbAssist – essential or emergency plumbing for customers in hardship
 - BillAssist – case management for customers with longer term payment difficulties
 - Referral to external assistance options including financial counselling.

We were provided considerable background information relating to the procedures and implementation of each of the above programs.

Payment Plans

Sydney Water makes payment plans available to its customers where they are identified as experiencing financial hardship. There are a number of payment plan options available as outlined in the section above. These include:

- Flexible payment arrangements – the most prevalent form of payment arrangement which is put in place by Sydney Water and allows customers to change the amount and frequency of payments and defer payments for a short period
- Payment Assistance Scheme – which is supported by the State Government and provides a payment to customers to assist with paying the water bill. While not strictly a 'plan' this scheme is closely linked with flexible arrangements above as the PAS payment will typically only cover part of the amount owing and a flexible arrangement will be entered into for the remainder of the amount
- Other arrangements as identified by BillAssist staff – BillAssist staff are able to provide a range of additional flexible payment arrangements to customers identified as being in persistent hardship. This may include, for example, no interest loans.

Through our discussion with Sydney Water staff, review of systems and procedures, and trailing of records, we confirm that Sydney Water does offer the above payment plans to customers in accordance with its procedures.

Conditions for disconnection or restriction

Procedures for disconnection or restriction are set out in Section 6 of the Customer Contract. This is supplemented by a policy on "Overdue payments and disconnection for non-payment". There is also an 'Overdue payments and disconnection for non-payment' internal procedure which staff are trained on and use as a reference when acting in these areas.

We were provided with the 'Credit Management Notice Flow' which is a flowchart setting out the actions to be taken to recover debts owed to Sydney Water. The key steps in the process are:

- Issue of account
- 28 Day notice
- 7 day notice
- Typically then a 48 hour notice issued if the 7 day notice is not responded to
- Typically then if the 48 hour notice isn't responded to, restriction.

Sydney Water undertakes considerable screening before moving from the 7 day notice to the 48 hour notice. In this screening it seeks to identify customers that may be in hardship or for which other factors mean that the customer shouldn't be restricted. This includes identifying customers who have made payments on their accounts. In some circumstances, Sydney Water will undertake legal action rather than restrict a customer. A contractor is responsible for delivering the 48 hour notice (by hand) and undertaking the restrictions. Sydney Water provides the contractor with a list of the properties to be restricted and the contractor then informs Sydney Water when it has made the restriction.

Sydney Water stated that it had identified that in some instances that its contractor undertaking restrictions had not properly followed procedures, leading to a small number of customers to be restricted where the customers had paid their bill in part or fully. This had occurred because of the contractor making restrictions not having the most up to date information on whether customers had made payment or not.

We requested Sydney Water to quantify this issue and were provided with a report that identified 14 instances where the date of customer restriction was very soon after the date where the customer had made payment. This would have substantially impacted the customers in question unfairly. However, we note that typically the service would be quickly

restored as when the customer alerted Sydney Water to the restriction being made. The frequency of customers being incorrectly restricted, given that Sydney Water made a total of 8,169 restrictions in 2012-13 is very low at 0.2%. Therefore, we consider that this constitutes 'very few minor shortcomings' in meeting the requirements of the clause and accordingly have awarded a grade of high compliance in this area.

Sydney Water stated that it has improved its processes during 2012-13 to try to eliminate this possible error by providing its restrictions contractor with an updated list of properties to be restricted at 7.30am each morning. This report will then be based on the best available information. The evidence provided to us supports that Sydney Water has improved its procedures as the number of instances of customers being incorrectly declined as the year progressed.

Provision for identification of customers in hardship

We confirm that Sydney Water identifies customers in hardship through self-identification, identification by welfare agencies and identification by Sydney Water itself. Sydney Water works closely with welfare agencies and has also commenced auditing the compliance of welfare agencies against Sydney Water's procedures for identification and referral of customers in hardship.

Visit to Customer Service Centre and trailing of records

Our review of procedures was complemented with a visit to Sydney Water's Customer Service Centre. Here we interviewed staff responsible for receiving customer queries and managing many of the processes outlined in this clause. We found that the staff we spoke to were knowledgeable about the relevant procedures and readily responded to our queries.

The CMS and Access Mainframe systems were demonstrated to us. The use of two systems appears awkward but we did not identify any deficiencies that lessened Sydney Water's ability to comply with this clause. We trailed the activity history for a sample of customers (4865792, 4456862 and 4067416) for which activities included entering into payment arrangements, restriction and referral of a complaint to EWON. We found that the activities undertaken were consistent with the procedures outlined by Sydney Water.

However, we identified that for customer 4865792 that the 48 hour notice of deadline for payment prior to restriction was issued on 14 June 2013 but that the property wasn't restricted until 14 August 2013, two months later. While the 48 hour notice does not specify that the customer's property will be restricted soon after the 48hour deadline has elapsed, we believe that the notice creates a reasonable expectation for customers that Sydney Water will act quickly to restrict the property. By not restricting the property for a considerable period after issue of the notice, we believe that the professionalism of Sydney Water's processes is undermined. We acknowledge that this will only be experienced by a small number of customers but recommend that Sydney Water reduce the time taken between issuing a 48 hour notice and restricting a property.

We also trailed activities to Maximo where we observed the service request relating to investigation of a water quality complaint.

Recommendations

There are no recommendations in relation to this sub-clause.

Opportunities for Improvement

The following opportunities for improvement have been identified:

1. Reduction of the time between issue of the 48HD notice and restriction of properties would avoid the possibility that customers affected perceive that Sydney Water does not act on its stated intentions.
 2. Regular internal auditing of the contractor performing restrictions would provide additional assurance to Sydney Water over this area of its business.
-

Sub-clause	Requirement	Compliance Grade
4.4b	Sydney Water must set out the procedures relating to customer hardship, debt, water flow restriction and disconnection referred to in clause 4.4(a) in the Customer Contract.	Full compliance
Risk	Target for full compliance	
Customers are not adequately informed of their rights and responsibilities and the assistance available to them.	Procedures relating to customer hardship, debt, water flow restriction and disconnection are included in the Customer Contract	
Evidence sighted		
▪ Customer Contract		
Summary of reason for grade		
We witnessed procedures relating to customer hardship, debt, water flow restriction and disconnection in the Customer Contract		
Discussion and notes		
These areas are covered in the following areas of the Customer Contract:		
▪ Hardship <ul style="list-style-type: none">Section 5 - What can I do if I am unable to pay my account?Section 6 - Disconnection or restriction of water and wastewater services		
▪ Debt <ul style="list-style-type: none">Section 5 - What can I do if I am unable to pay my account?Section 6 - Disconnection or restriction of water and wastewater services		
▪ Restriction and disconnection <ul style="list-style-type: none">Section 6 - Disconnection or restriction of water and wastewater services		
Recommendations		
There are no recommendations in relation to this sub-clause		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause		

Sub-clause	Requirement	Compliance Grade
4.4c	<p>Sydney Water must provide information on its procedures relating to customer hardship, debt, water flow restriction and disconnection free of charge to:</p> <ol style="list-style-type: none"> 1) residential Customers, at least once annually with their quarterly or other bills; 2) residential Customers who are identified as experiencing financial difficulty; and 3) any other person who requests it. 	<div>High compliance</div> <div> <div></div> <div></div> </div>
Risk	Target for full compliance	
Customers are not adequately informed of their rights and responsibilities and the assistance available to them.	Procedures relating to customer hardship, debt, water flow restriction and disconnection are made available to residential customers at least once annually, residential customers who are identified as experiencing financial difficulty and any other person who requests them.	
Evidence sighted		
<ul style="list-style-type: none"> ▪ 'Our contract with you' brochure ▪ Customer Contract ▪ Waterwrap issue for 2nd Quarter 2013 		
Summary of reason for grade		
<p>The 'our contract with you' brochure provided once a year with bills meets Clause (c)(1). Our assessment of Sydney Water's procedures, staff training and monitoring provides confidence that Clause (c)(3) is met. For Clause (c)(2) which requires that information be provided to customers experiencing financial difficulty, we found that while Sydney Water has a comprehensive approach to assisting customers in financial difficulty, this may not always include providing these customers with the information detailed.</p>		
Discussion and notes		
<p>Sydney Water detailed that that it provides information on its procedures relating to customer hardship, debt, water flow restriction and disconnection in each of the cases as follows:</p> <ul style="list-style-type: none"> ▪ Residential customers were posted a brochure titled 'Our contract with you' with their July 2012 quarterly bill. We received a copy of the brochure which was sourced from the July 2012 bill run. This brochure includes a section titled "How do I pay my bill" which contains information on hardship. It also contains a section titled "Will Sydney Water disconnect my water supply?" which contains information on restriction and disconnection. The brochure notes that the full customer contract can be accessed on Sydney Water's website. Additionally, information about hardship and debt was provided under the heading "Need help paying your bill?" in the 2nd Quarter 2013 issue of the Waterwrap Newsletter. ▪ Customers who are identified as being in hardship are assisted through a comprehensive case management process. This includes customer service staff providing information that identified as being of benefit to customers who are identified as experiencing financial difficulty. ▪ Where customers request this information it is provided to them free of charge ▪ On all Sydney Water bills. <p>We have reviewed the 'our contract with you' brochure and the 2nd Quarter 2013 issue of the Waterwrap newsletter and found that these meet the requirements of part (1) of this clause. Our assessment of Sydney Water's procedures, staff training and monitoring provides confidence that Clause (c)(3) is met, although fully testing this part of the clause is difficult.</p> <p>For Clause (c)(2) which requires that information be provided to customers experiencing financial difficulty, we found that while Sydney Water has a comprehensive approach to assisting customers in financial difficulty, this may not always include providing these customers with the information detailed. This is because the case manager will decide what information to provide to customers based on their particular circumstances. While we appreciate why this approach is taken, it does not fully meet the requirement that information on procedures in these areas are provided to customers and therefore have awarded high compliance for this clause.</p>		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
4.4d	Sydney Water must publish its procedures relating to customer hardship, debt, water flow restriction and disconnection on its website.	Full compliance
Risk		
Target for full compliance		
Customers are not adequately informed of their rights and responsibilities and the assistance available to them.	Procedures relating to customer hardship, debt, water flow restriction and disconnection are published on Sydney Water's website.	
Evidence sighted		
Customer hardship:		
<ul style="list-style-type: none"> Payment assistance policy (<a hardship"="" href="http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047442.pdf#search=">http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047442.pdf#search="hardship") Customer contract (<a hardship"="" href="http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search=">http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search="hardship") Financial assistance web page (http://www.sydneywater.com.au/SW/accounts-billing/paying-your-bill/financial-assistance/index.htm) 		
Debt:		
<ul style="list-style-type: none"> Payment assistance policy (<a hardship"="" href="http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047442.pdf#search=">http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047442.pdf#search="hardship") Customer contract (<a hardship"="" href="http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search=">http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search="hardship") Financial assistance web page (http://www.sydneywater.com.au/SW/accounts-billing/paying-your-bill/financial-assistance/index.htm) Overdue payments and disconnections for non-payment policy (http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047441.pdf#search="restriction") 		
Water flow restriction and disconnection:		
<ul style="list-style-type: none"> Customer contract (<a hardship"="" href="http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search=">http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045061.pdf#search="hardship") Overdue payments and disconnections for non-payment policy (http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq3/~edisp/dd_047441.pdf#search="restriction") 		
Summary of reason for grade		
We were able to locate procedures in each of the required areas on Sydney Water's website.		
Discussion and notes		
The documents and web pages listed in 'evidence sighted' were accessed at audit and following the audit. We consider that this material demonstrates that Sydney Water has made available on its website its procedures relating to customer hardship, debt, water flow restriction and disconnection.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

Sub-clause	Requirement	Compliance Grade
4.4e	Sydney Water must advise residential Customers of their rights, including any rights to have a complaint or dispute referred to the Energy and Water Ombudsman NSW for resolution.	Full compliance
Risk	Target for full compliance	
Customers do not receive appropriate support to resolve complaints or disputes	Sufficient information is provided to customers regarding their rights, including information about referring complaints or disputes to the Energy and Water Ombudsman NSW.	
Evidence sighted		
<ul style="list-style-type: none"> 'Our contract with you' brochure Customer Contract (accessed online) Sydney Water website, including http://www.sydneywater.com.au/SW/Contactus/index.htm Overdue bill notice 		
Summary of reason for grade		
The evidence provided by Sydney Water demonstrates that it provides sufficient information to customers about their rights and their right to have complaints and disputes referred to the Energy and Water Ombudsman.		
Discussion and notes		
Sydney Water detailed that residential customers are advised of their rights, including their right to have complaints and disputes referred to the Energy and Water Ombudsman through the following main avenues:		
<ul style="list-style-type: none"> The Customer Contract which is available on Sydney Water's website and made available to all new customers 'Our contract with you' brochure which is a summary of important points from the Customer Contract including information about customer rights and the right of customers to refer complaints to the Energy and Water Ombudsman of NSW. The contact details for the Ombudsman are on the back of this brochure. This brochure is provided to customers once per year with a bill and we were provided with an original copy for Sydney Water's 2012-13 billing cycle. Sydney Water's website which includes information on customer rights (and the Customer Contract) as well as the contact details for the Ombudsman. 		
We reviewed this information and tested the availability of documents on Sydney Water's website. We are satisfied that Sydney Water provides sufficient information to its customers about their rights and right to have complaints and disputes referred to the Energy and Water Ombudsman of NSW.		
Recommendations		
There are no recommendations in relation to this sub-clause.		
Opportunities for Improvement		
No opportunities for improvement have been identified in relation to this sub-clause.		

D | Sydney Water's Statement of Compliance

Annual Compliance and Performance Report 2013
For 2012-13
Submitted by Sydney Water Corporation
ABN: 49 776 225 038



To: The Chief Executive Officer
Independent Pricing and Regulatory Tribunal of NSW
PO Box Q290
QVB Post Office NSW 1230

Sydney Water reports as follows:

1. This report documents compliance during 2012-13 with all obligations to which Sydney Water is subject by virtue of its Operating Licence.
2. This report has been prepared by Sydney Water with all due care and skill in full knowledge of conditions to which it is subject and in compliance with Sydney Water's Operating Licence and Reporting Manual.
3. Schedule A provides information on all obligations with which Sydney Water did not fully comply during 2012-13.
4. Other than the information provided in Schedule A, Sydney Water has complied with all conditions to which it is subject.
5. The compliance reports have been approved by the Managing Director and the Chairman of the Board of Directors of Sydney Water.

DATE: 29/8/13

Signed:

Name: Kevin Young

Designation: Managing Director

DATE: 29/8/13

Signed:

Name: Dr Thomas G Parry

Designation: Chairman

Schedule A Non Compliances

There are no exceptions to report by Sydney Water for the 2010-2015 Operating Licence in 2012-13.